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17	QTSP1	QUANTITY TABULATION - SITE PREPARATION / TESC / EXISTING UTILITIES
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51	SFZ1	STRUCTURE FREE ZONE
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PLAN REFERENCE NO.

SHEET OF SHEETS

NOTE: ALL SHEET REFERENCES, FIRST NOS. OF STRUCTURE CODE DESIGNATIONS AND MATCH LINE SHEET REFERENCES, ETC., THROUGHOUT THE PLANS, REFER TO THE ENTRY IN THE PLAN REFERENCE NUMBER BOX.

PROJECT LICENSED PROFESSIONAL CERTIFICATES

Mikkel Lamay Jan 11, 2024 AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	Julie Heilman Jan 11, 2024 AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	Lindsey Jungbluth Jan 11, 2024 AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.	AS A LICENSED PROFESSIONAL IN DIRECT RESPONSIBLE CHARGE OF DEVELOPING THIS CONTRACT, I CERTIFY THAT ALL PLANS THAT CONTAIN MY STAMP HAVE BEEN DEVELOPED UNDER MY SUPERVISION.
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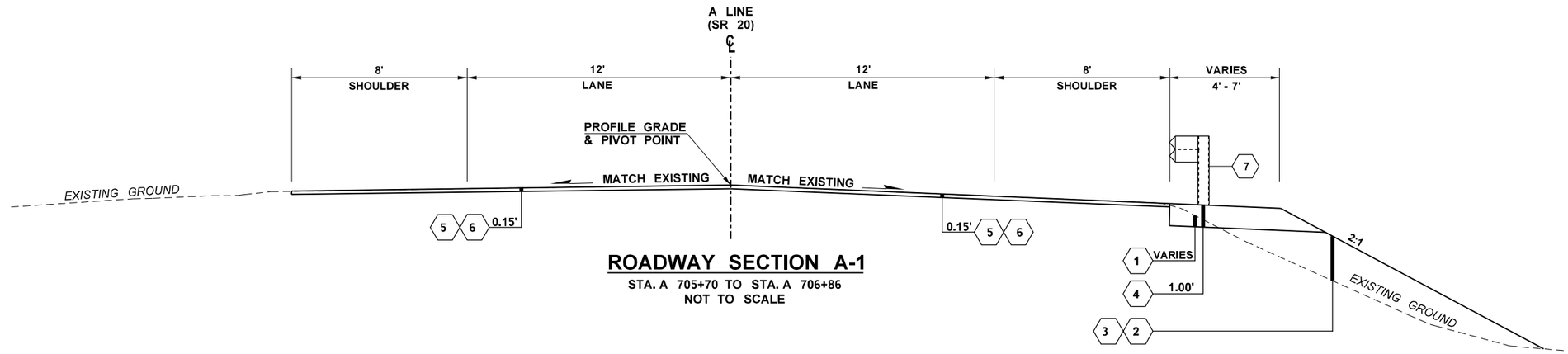
NOTES:

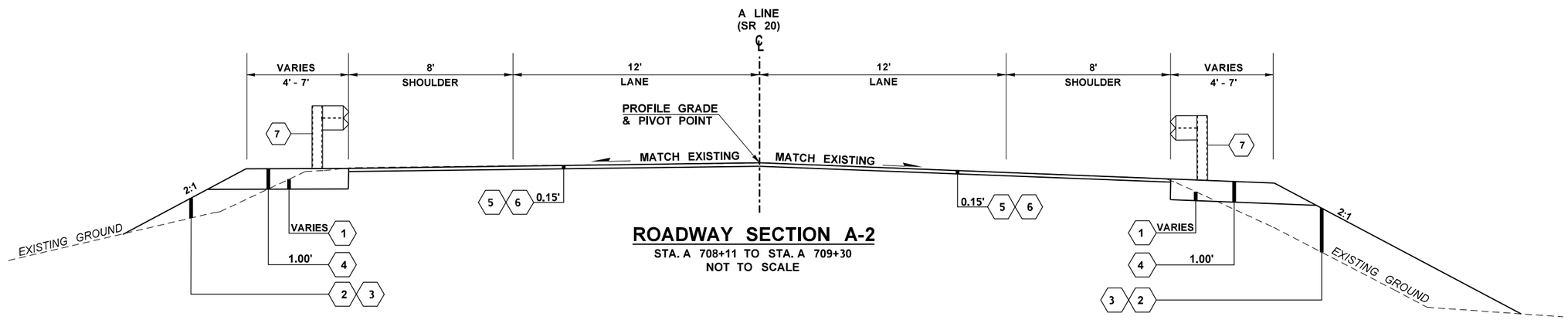
THIS PLAN SET WAS DEVELOPED ELECTRONICALLY UNDER THE DIRECT SUPERVISION OF THE LICENSED PROFESSIONALS THAT HAVE AFFIXED THEIR SIGNATURE TO THIS PAGE.

THIS SHEET SERVES AS THE CERTIFICATION BY THE ABOVE LICENSED PROFESSIONALS OF ALL SHEETS IN THIS PLAN SET WHERE THEIR STAMPS AND SIGNATURES APPEAR.



ROADWAY SECTION A-1

STA. A 705+70 TO STA. A 706+86
NOT TO SCALE



ROADWAY SECTION A-2

STA. A 708+11 TO STA. A 709+30
NOT TO SCALE

LEGEND

1. ROADWAY EXCAVATION INCL. HAUL
2. GRAVEL BORROW INCL. HAUL
3. EMBANKMENT COMPACTION
4. CRUSHED SURFACING BASE COURSE
5. PLANING BITUMINOUS PAVEMENT
6. HMA CLASS 1/2 IN, PG 58H-22
7. BEAM GUARDRAIL TYPE 31 (SEE NOTE 6)

GENERAL NOTES:

1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS AND COURSES SHALL NOT EXCEED THE DEPTHS DEFINED IN THE STANDARD SPECIFICATIONS.
2. SEE SUPER ELEVATION DIAGRAM ON ROADWAY PROFILE PLANS FOR ROADWAY CROSS SLOPES. SHOULDER CROSS SLOPES TO MATCH LANE SLOPES UNLESS OTHERWISE NOTED.
3. ROADWAY EXCAVATION INCL. HAUL, EMBANKMENT COMPACTION, AND GRAVEL BORROW INCL. HAUL ARE INCLUDED IN LUMP SUM EARTHWORK.
4. SEE STANDARD PLAN C-22.40 FOR GUARDRAIL TERMINAL PAD WIDENING REQUIREMENTS.
5. FOR GUARDRAIL LOCATION, SEE PAVING/PAVEMENT MARKING PLAN SHEET PV1.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0060_XL0000_PS_RS.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	8:12:37 AM				10	WASH	
DATE	12/27/2023				JOB NUMBER		
PLOTTED BY	MarrEm				23A021		
DESIGNED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

P.E. STAMP BOX DATE

MIKKEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED
PROFESSIONAL ENGINEER

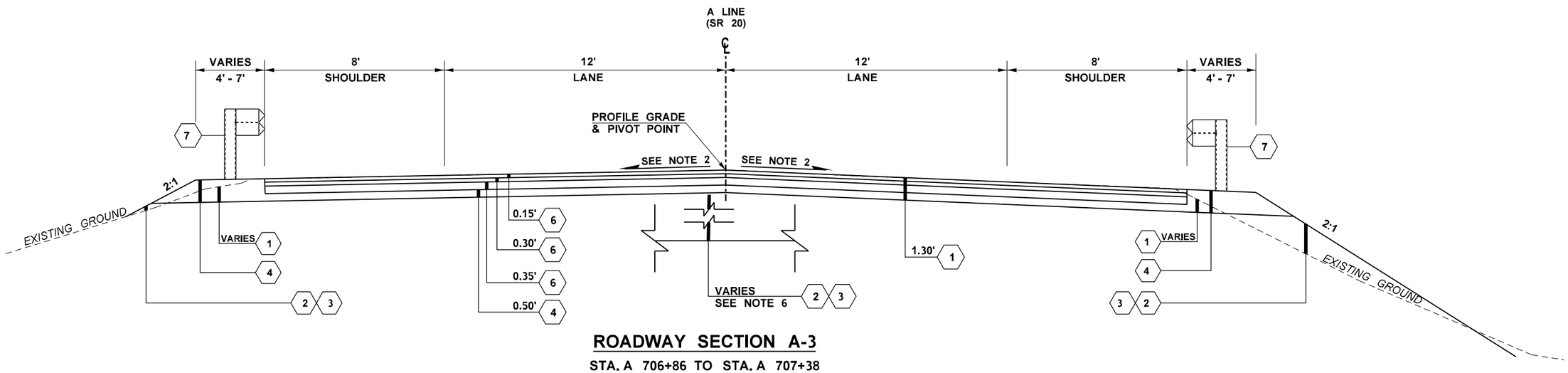
SEE SHEET CT1
P.E. STAMP BOX DATE

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

ROADWAY SECTIONS

Plot 1
PLAN REF NO
RS1
SHEET 8 OF 55 SHEETS



ROADWAY SECTION A-3

STA. A 706+86 TO STA. A 707+38
STA. A 707+61 TO STA. A 708+11
NOT TO SCALE

LEGEND

1. ROADWAY EXCAVATION INCL. HAUL
2. GRAVEL BORROW INCL. HAUL
3. EMBANKMENT COMPACTION
4. CRUSHED SURFACING BASE COURSE
6. HMA CLASS 1/2 IN, PG 58H-22
7. BEAM GUARDRAIL TYPE 31 (SEE NOTE 6)

GENERAL NOTES:

1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS AND COURSES SHALL NOT EXCEED THE DEPTHS DEFINED IN THE STANDARD SPECIFICATIONS.
2. SEE SUPER ELEVATION DIAGRAM ON ROADWAY PROFILE PLANS FOR ROADWAY CROSS SLOPES. SHOULDER CROSS SLOPES TO MATCH LANE SLOPES UNLESS OTHERWISE NOTED.
3. ROADWAY EXCAVATION INCL. HAUL, EMBANKMENT COMPACTION, AND GRAVEL BORROW INCL. HAUL ARE INCLUDED IN LUMP SUM EARTHWORK.
4. SEE STANDARD PLAN C-22.40 FOR GUARDRAIL TERMINAL PAD WIDENING REQUIREMENTS.
5. FOR GUARDRAIL LOCATION, SEE PAVING/PAVEMENT MARKING PLAN SHEET PV1.
6. DEPTH OF EMBANKMENT WILL VARY BASED ON THE CONTRACTOR'S SELECTED METHOD OF SHORING OR EXTRA EXCAVATION USED TO INSTALL THE NEW STRUCTURE.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0060_XL0000_PS_RS.dgn					
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DATE	12/27/2023					
PLOTTED BY	MarrEm					
DESIGNED BY	R. BAILEY					
ENTERED BY	R. BAILEY					
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

P.E. STAMP BOX — DATE

MIKEL PETER LAMAY — STATE OF WASHINGTON — 35141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE

P.E. STAMP BOX

Washington State Department of Transportation

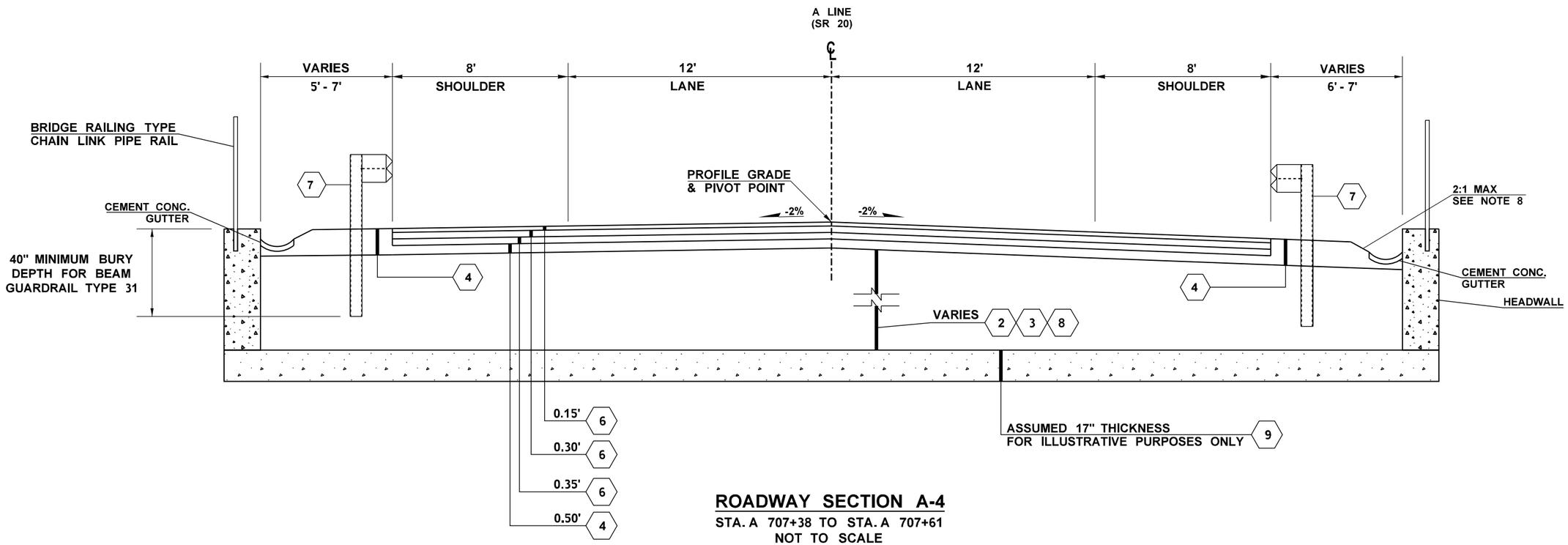
SR 20
UNT TO COAL CREEK
FISH PASSAGE

ROADWAY SECTIONS

Plot 2

PLAN REF NO RS2

SHEET 9 OF 55 SHEETS



ROADWAY SECTION A-4

STA. A 707+38 TO STA. A 707+61
NOT TO SCALE

LEGEND

- (2) GRAVEL BORROW INCL. HAUL
- (3) EMBANKMENT COMPACTION
- (4) CRUSHED SURFACING BASE COURSE
- (6) HMA CLASS 1/2 IN, PG 58H-22
- (7) BEAM GUARDRAIL TYPE 31
- (8) GRAVEL BORROW FOR STRUCTURAL EARTH WALL INCL. HAUL
- (9) CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1

GENERAL NOTES:

1. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS AND COURSES SHALL NOT EXCEED THE DEPTHS DEFINED IN THE STANDARD SPECIFICATIONS.
3. ROADWAY EXCAVATION INCL. HAUL, EMBANKMENT COMPACTION, AND GRAVEL BORROW INCL. HAUL ARE INCLUDED IN LUMP SUM EARTHWORK.
5. FOR GUARDRAIL LOCATION, SEE PAVING/PAVEMENT MARKING PLAN SHEET PV1.
7. BEAM GUARDRAIL TYPE 31 POSTS OVER CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1 SHALL NOT IMPACT STRUCTURE.
8. SLOPE BEYOND CSBC GUARDRAIL PAD SHALL BE NO MORE THAN 2:1 UP TO THE HEADWALL OR WINGWALL.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0060_XL0000_PS_RS.dgn					
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DATE	12/27/2023					FED.AID PROJ.NO.
PLOTTED BY	MarrEm				JOB NUMBER 23A021	
DESIGNED BY	R. BAILEY					
ENTERED BY	R. BAILEY					
CHECKED BY	E. MARR				CONTRACT NO.	LOCATION NO.
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

P.E. STAMP BOX DATE

NICKEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 DATE

P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

ROADWAY SECTIONS

Plot 3

PLAN REF NO RS3

SHEET 10 OF 55 SHEETS

QUANTITY TABULATION - TEMPORARY BYPASS PLAN

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.

THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION ➢ \ UNIT OF MEASURE ➢	TEMPORARY BARRIER	BARRIER DELINEATOR	RAISED PAVEMENT MARKER TYPE 2	TEMPORARY PAVEMENT MARKING - SHORT DURATION	TEMPORARY IMPACT ATTENUATOR		TEMPORARY GEOSYNTHETIC RETAINING WALL									SEE GENERAL NOTES
		L.F.	EACH	HUND	L.F.	EACH		S.F.									
TB1-1	N 300+62.2 (9.0' RT)					1											2
TB1-2	N 300+83.2 (9.0' LT)					1											2
TB1-3	N 303+90.0 (9.0' LT)					1											2
TB1-4	N 304+14.0 (9.0' RT)					1											2
TB1-5	N 300+58.0 (9.0' RT) TO N 304+09.8 (9.0' RT)	354	18														3, 4
TB1-6	N 300+87.2 (9.0' LT) TO N 303+86.0 (9.0' LT)	291	15														3, 4
TB1-7	N 300+51.6 (6.0' RT) TO N 304+23.0 (6.0' RT)			0.4	380												1,5
TB1-8	N 300+48.4 (6.0' LT) TO N 304+24.8 (6.0' LT)			0.4	370												1,5
TB1-9	N 300+86.0 (13.5' RT) TO N 303+44.0 (13.5' RT)							271									
	SHEET TOTAL	645	33	0.8	750			271									
	PROJECT TOTAL	645	33	0.8	750			271									

GENERAL NOTES:

1. EDGE LINE WHITE (PAINT LINE)

2. TEMPORARY IMPACT ATTENUATORS SHALL BE ABSORB 350 TL-3, QUADGUARD CZ (6-BAY), OR SLED TL-3.

3. BARRIER DELINEATORS SHALL BE WHITE IN COLOR.

4. TEMPORARY BARRIER SHALL BE PINNED.

5. RAISED PAVEMENT MARKERS SHALL BE 10 FT ON CENTER. SEE STANDARD PLAN M-20.30 FOR LONGITUDINAL MARKING SUPPLEMENT WITH RAISED PAVEMENT MARKERS.

DESIGNED BY	R. BAILEY				
ENTERED BY	R. BAILEY				
CHECKED BY	E. MARR				
PROJ. ENGR.	M. LAMAY				
REGION ADM.	B. NIELSEN				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	

JOB NUMBER
23A021

CONTRACT NO.

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

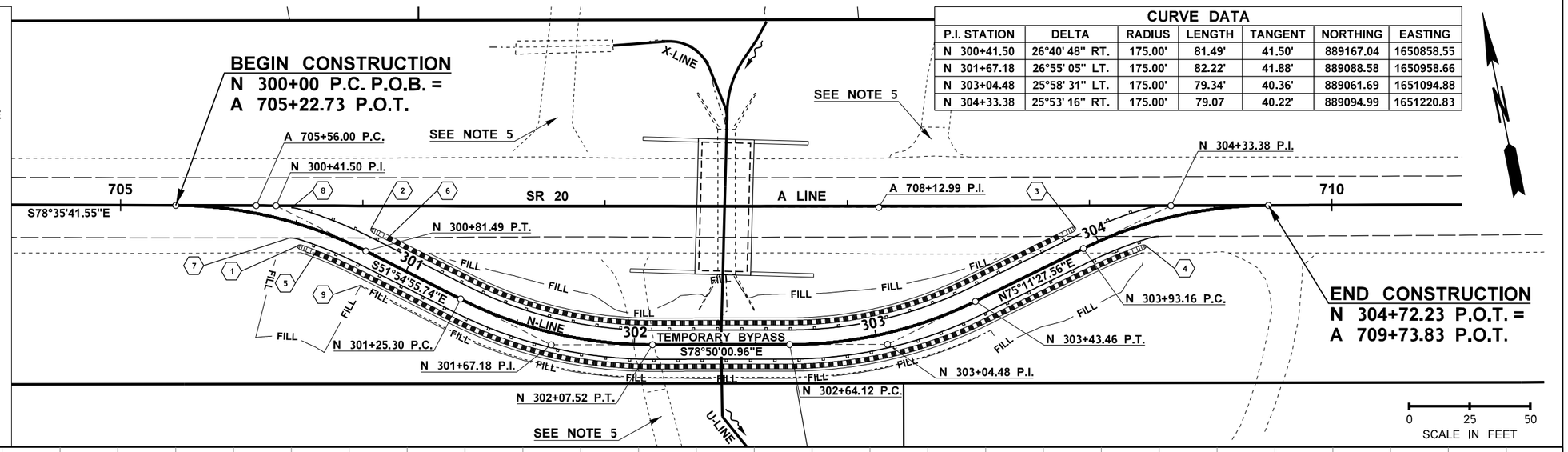
QUANTITY TABULATION - TEMPORARY BYPASS PLAN

QTTB1

SHEET 11 OF 55 SHEETS

LEGEND

- WSDOT RIGHT OF WAY
- PROPERTY LINE
- 705 — CONSTRUCTION CENTERLINE
- TEMPORARY EASEMENT
- EXISTING STREAM CENTERLINE
- EXISTING CULVERT
- EXISTING PAVEMENT EDGE
- EXISTING DRIVEWAY EDGE
- EXISTING LANE EDGE
- CUT — CUT LINE
- FILL — FILL LINE
- EDGE OF BYPASS PAVEMENT
- WHITE EDGE LINE
- TEMPORARY TRAFFIC BARRIER
- TEMPORARY RETAINING WALL
- IMPACT ATTENUATOR
- RAISED PAVEMENT MARKER TYPE 2
- FLOW DIRECTION
- # — QUANTITY TABULATION NOTE
- CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1



CURVE DATA

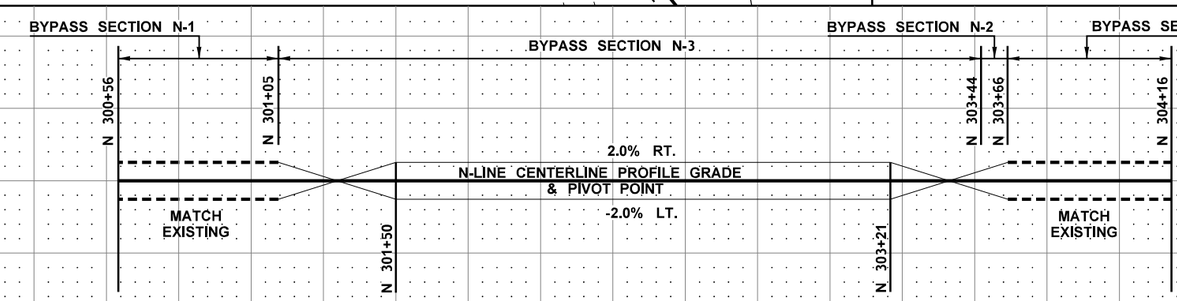
P.I. STATION	DELTA	RADIUS	LENGTH	TANGENT	NORTHING	EASTING
N 300+41.50	26°40' 48" RT.	175.00'	81.49'	41.50'	889167.04	1650858.55
N 301+67.18	26°55' 05" LT.	175.00'	82.22'	41.88'	889088.58	1650958.66
N 303+04.48	25°58' 31" LT.	175.00'	79.34'	40.36'	889061.69	1651094.88
N 304+33.38	25°53' 16" RT.	175.00'	79.07	40.22'	889094.99	1651220.83

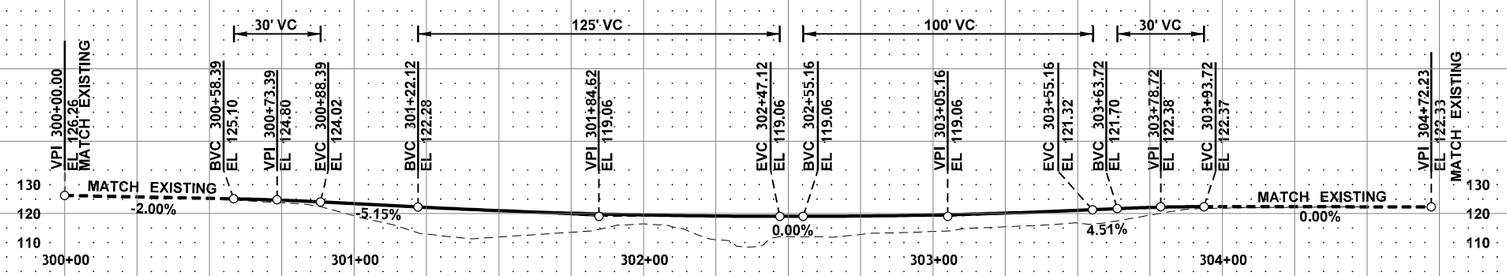
GENERAL NOTES:

1. TEMPORARY BARRIER SHALL BE PINNED.
2. REMOVAL OF TEMPORARY ROADWAY IS INCLUDED IN THE LUMP SUM BID ITEM EARTHWORK. SEE SPECIAL PROVISIONS.
3. ROADWAY EXCAVATION INCL. HAUL, EMBANKMENT COMPACTION AND GRAVEL BORROW INCL. HAUL ARE INCLUDED IN THE LUMP SUM BID ITEM EARTHWORK. SEE SPECIAL PROVISIONS.
4. SEE SHEET TB2 FOR BYPASS SECTION DETAILS.
5. SEE TRAFFIC CONTROL PLAN SHEETS TC1, TC2, AND TC3 FOR PRIVATE DRIVEWAY ACCESS DURING CONSTRUCTION.

* QUANTITIES SHOWN FOR INFORMATION ONLY.

** FOR ADDITIONAL QUANTITIES, SEE ROADWAY PROFILE SHEET RP1





N 300+47 — N 304+16

*ROADWAY EXCAVATION INCL. HAUL	1733 C.Y.
*GRAVEL BORROW INCL. HAUL	2,731 TON
*EMBANKMENT COMPACTION	1,476 C.Y.
CRUSHED SURFACING BASE COURSE	341.9 TON
**HMA CL. 1/ 2" PG 58H-22	118.9 TON
TEMPORARY GEOSYNTHETIC RETAINING WALL	973 S.F.

DATUM

(NAVD) 88.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0070_XL0000_PS_TB.dgn				
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DATE	12/26/2023				
PLOTTED BY	MarrEm				
DESIGNED BY	R. BAILEY				
ENTERED BY	R. BAILEY				
CHECKED BY	E. MARR				
PROJ. ENGR.	M. LAMAY				
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY	

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

P.E. STAMP BOX — DATE

MICHAEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE — P.E. STAMP BOX

Washington State Department of Transportation

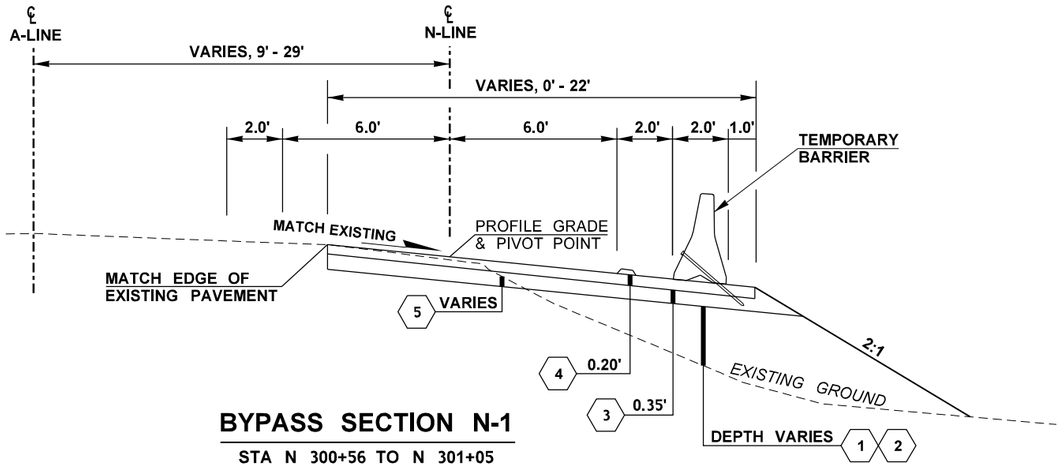
SR 20
UNT TO COAL CREEK
FISH PASSAGE

TEMPORARY BYPASS PLAN

Plot 1

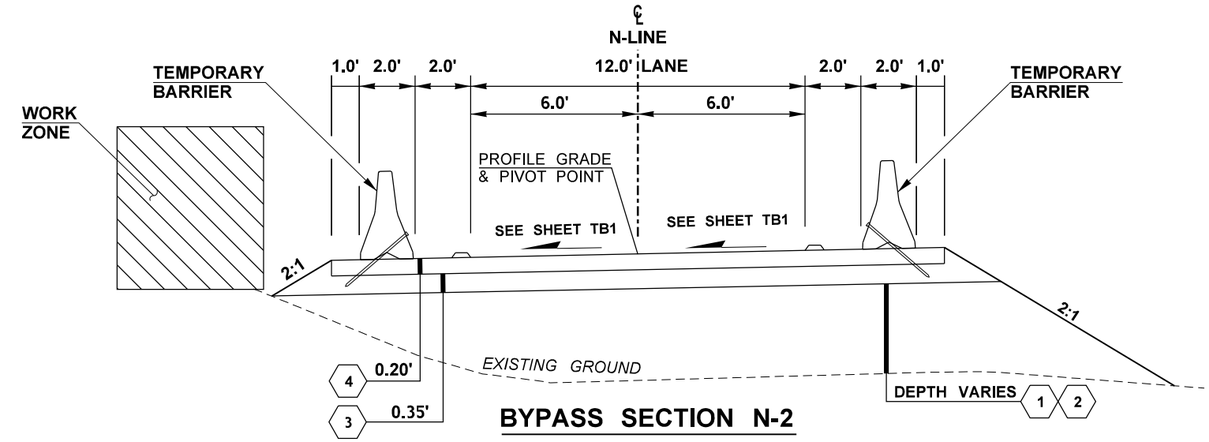
PLAN REF NO TB1

SHEET 12 OF 55 SHEETS



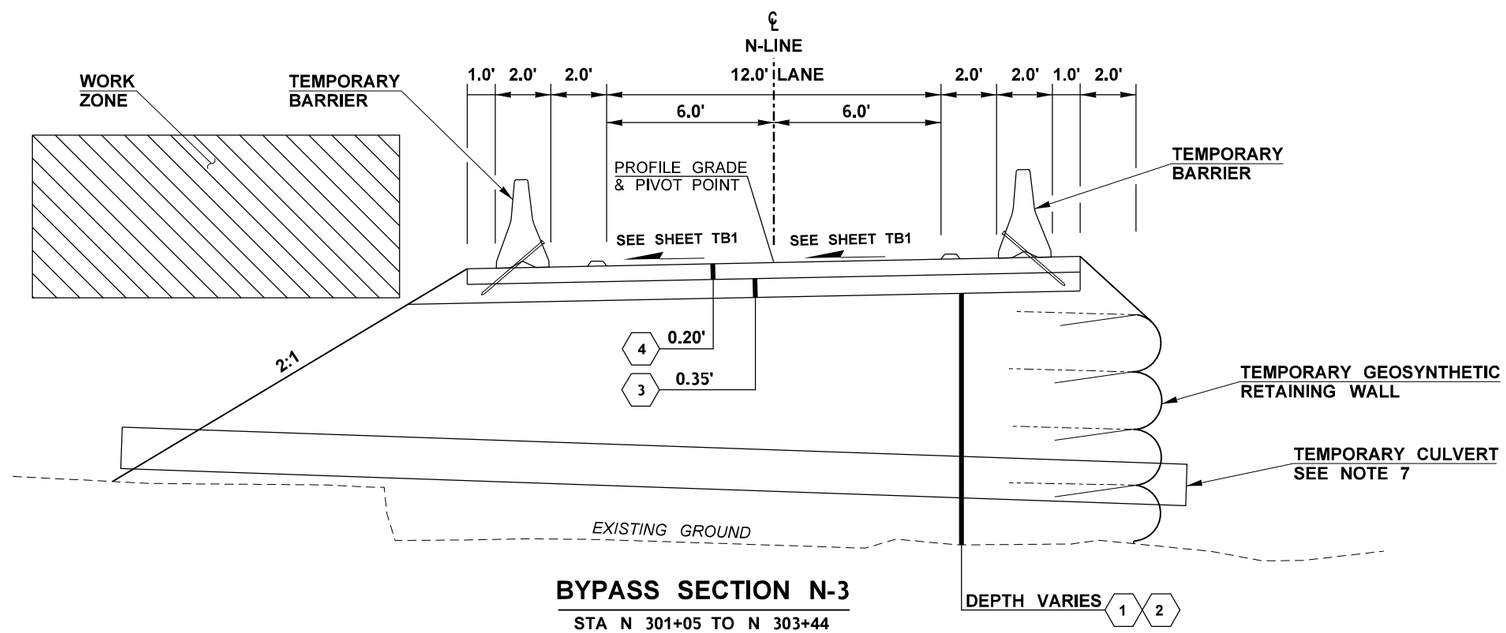
BYPASS SECTION N-1

STA N 300+56 TO N 301+05
STA N 303+66 TO N 304+16
NOT TO SCALE



BYPASS SECTION N-2

STA N 303+44 TO N 303+66
NOT TO SCALE



BYPASS SECTION N-3

STA N 301+05 TO N 303+44
NOT TO SCALE

LEGEND

1. GRAVEL BORROW INCL. HAUL
2. EMBANKMENT COMPACTION
3. CRUSHED SURFACING BASE COURSE
4. HMA CLASS 1/2 IN, PG 58H-22
5. ROADWAY EXCAVATION INCL. HAUL

GENERAL NOTES:

1. TEMPORARY BARRIER SHALL BE PINNED.
2. REMOVAL OF TEMPORARY ROADWAY IS INCLUDED IN THE LUMP SUM BID ITEM EARTHWORK. SEE SPECIAL PROVISIONS.
3. ROADWAY EXCAVATION INCL. HAUL IS INCLUDED IN THE LUMP SUM BID ITEM EARTHWORK. SEE SPECIAL PROVISIONS.
6. ALL SURFACING AND PAVING DEPTHS ARE COMPACTED DEPTHS AND COURSES SHALL NOT EXCEED THE DEPTHS DEFINED IN THE STANDARD SPECIFICATIONS.
7. TEMPORARY CULVERT MAY BE NECESSARY FOR FACILITATION OF TEMPORARY STREAM DIVERSION. CONTRACTOR SHALL DERMINE TYPE, SIZE, AND LOCATION.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0070_XL0000_PS_TB.dgn						
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DATE	12/26/2023						
PLOTTED BY	MarrEm				JOB NUMBER 23A021		
DESIGNED BY	R. BAILEY						
ENTERED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

DATE
P.E. STAMP BOX

MICHEL PETER LAMAY, STATE OF WASHINGTON, 43141, REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

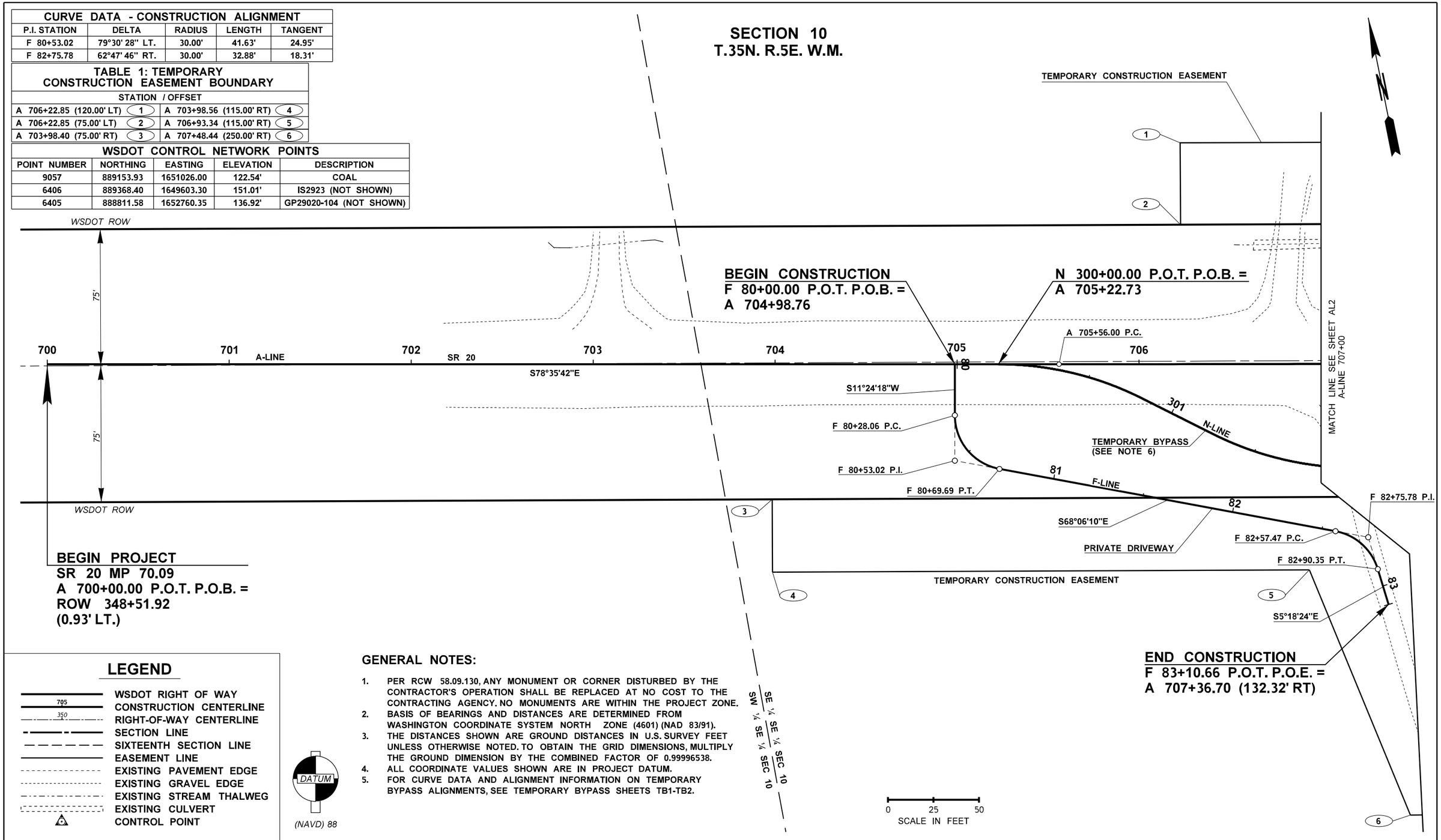
TEMPORARY BYPASS PLAN

Plot 2
PLAN REF NO TB2
SHEET 13 OF 55 SHEETS

CURVE DATA - CONSTRUCTION ALIGNMENT				
P.I. STATION	DELTA	RADIUS	LENGTH	TANGENT
F 80+53.02	79°30' 28" LT.	30.00'	41.63'	24.95'
F 82+75.78	62°47' 46" RT.	30.00'	32.88'	18.31'

TABLE 1: TEMPORARY CONSTRUCTION EASEMENT BOUNDARY			
STATION / OFFSET			
A 706+22.85 (120.00' LT)	1	A 703+98.56 (115.00' RT)	4
A 706+22.85 (75.00' LT)	2	A 706+93.34 (115.00' RT)	5
A 703+98.40 (75.00' RT)	3	A 707+48.44 (250.00' RT)	6

WSDOT CONTROL NETWORK POINTS				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
9057	889153.93	1651026.00	122.54'	COAL
6406	889368.40	1649603.30	151.01'	IS2923 (NOT SHOWN)
6405	888811.58	1652760.35	136.92'	GP29020-104 (NOT SHOWN)



LEGEND

- WSDOT RIGHT OF WAY
- 705 CONSTRUCTION CENTERLINE
- 350 RIGHT-OF-WAY CENTERLINE
- SECTION LINE
- SIXTEENTH SECTION LINE
- EASEMENT LINE
- EXISTING PAVEMENT EDGE
- EXISTING GRAVEL EDGE
- EXISTING STREAM THALWEG
- EXISTING CULVERT
- CONTROL POINT

DATUM

(NAVD) 88

GENERAL NOTES:

1. PER RCW 58.09.130, ANY MONUMENT OR CORNER DISTURBED BY THE CONTRACTOR'S OPERATION SHALL BE REPLACED AT NO COST TO THE CONTRACTING AGENCY. NO MONUMENTS ARE WITHIN THE PROJECT ZONE.
2. BASIS OF BEARINGS AND DISTANCES ARE DETERMINED FROM WASHINGTON COORDINATE SYSTEM NORTH ZONE (4601) (NAD 83/91).
3. THE DISTANCES SHOWN ARE GROUND DISTANCES IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED. TO OBTAIN THE GRID DIMENSIONS, MULTIPLY THE GROUND DIMENSION BY THE COMBINED FACTOR OF 0.99996538.
4. ALL COORDINATE VALUES SHOWN ARE IN PROJECT DATUM.
5. FOR CURVE DATA AND ALIGNMENT INFORMATION ON TEMPORARY BYPASS ALIGNMENTS, SEE TEMPORARY BYPASS SHEETS TB1-TB2.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0090_XL0000_PS_AL.dgn					
TIME	3:06:27 PM			REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	12/26/2023			JOB NUMBER 23A021		
PLOTTED BY	MarrEm					
DESIGNED BY	R. BAILEY			CONTRACT NO.		LOCATION NO.
ENTERED BY	R. BAILEY					
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

P.E. STAMP BOX DATE

MICHAEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 DATE

P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

ALIGNMENT / RIGHT OF WAY PLAN

Plot 2

PLAN REF NO AL1

SHEET 14 OF 55 SHEETS

CURVE DATA - CONSTRUCTION ALIGNMENT				
P.I. STATION	DELTA	RADIUS	LENGTH	TANGENT
A 708+12.99	0°25' 15" LT.	70,000.00'	513.98'	256.99'

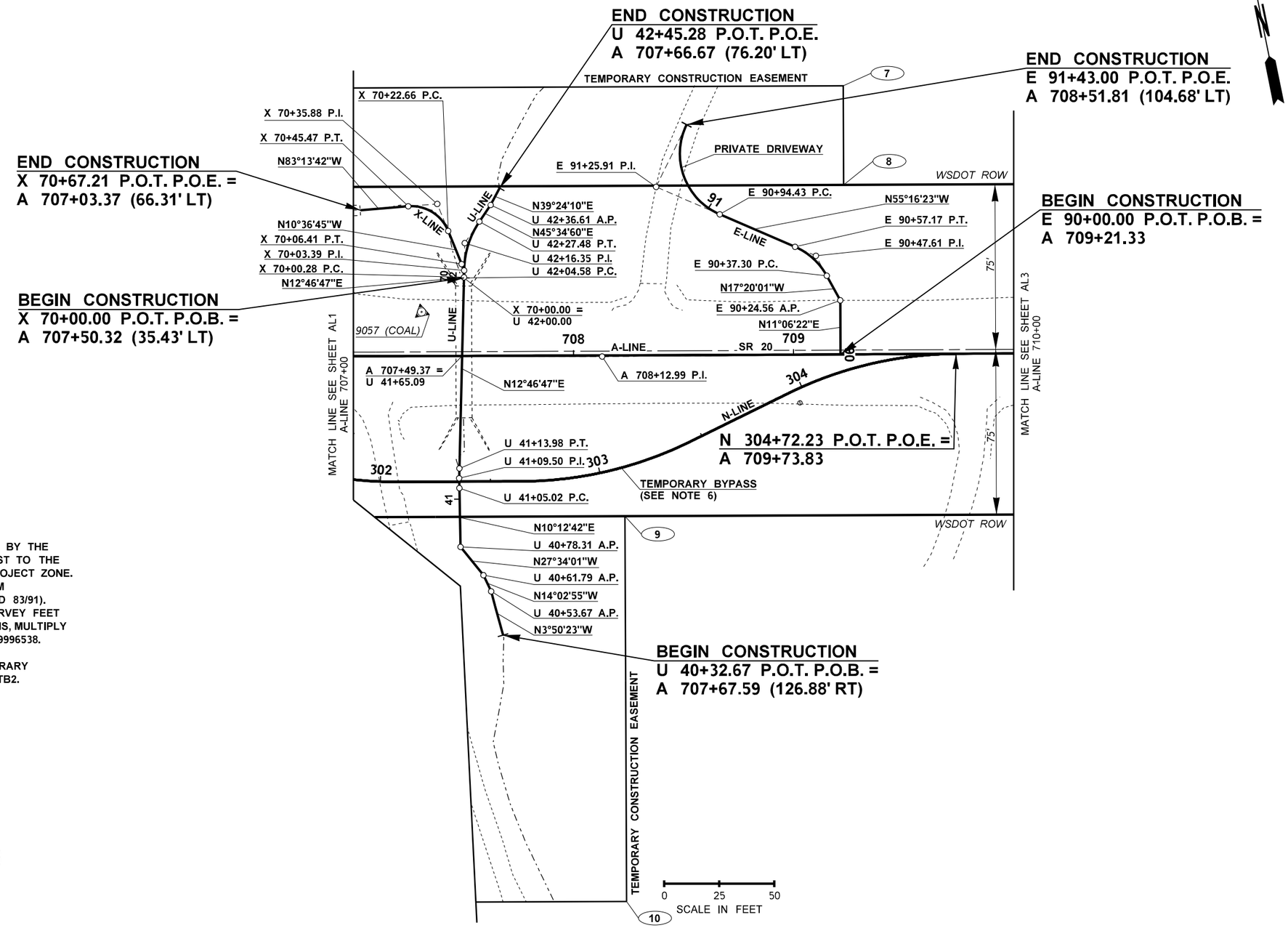
CURVE DATA - CONSTRUCTION ALIGNMENT				
P.I. STATION	DELTA	RADIUS	LENGTH	TANGENT
X 70+04.05	22°57' 21" LT.	15.00'	6.01'	3.05'
X 70+31.70	58°31' 48" LT.	25.00'	25.54'	14.01'
X 70+48.12	17°06' 21" LT.	20.00'	5.97'	3.01'

CURVE DATA - CONSTRUCTION ALIGNMENT				
P.I. STATION	DELTA	RADIUS	LENGTH	TANGENT
E 90+47.61	37°56' 22" LT.	30.00'	19.87'	10.31'
E 91+25.91	92°45' 50" RT.	30.00'	48.57'	31.48'

CURVE DATA - STREAM ALIGNMENT				
P.I. STATION	DELTA	RADIUS	LENGTH	TANGENT
U 41+09.50	2°34' 05" RT.	200.00'	8.96'	4.48'
U 42+16.35	32°48' 13" RT.	40.00'	22.90'	11.77'

TABLE 2: TEMPORARY CONSTRUCTION EASEMENT BOUNDARY			
STATION / OFFSET			
A 709+22.75 (120.00' LT)	7	A 708+23.12 (75.00' RT)	9
A 709+22.75 (75.00' LT)	8	A 708+23.18 (250.00' RT)	10

SE ¼ SE ¼ SECTION 10
T.35N. R.5E. W.M.



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5. FOR CURVE DATA AND ALIGNMENT INFORMATION ON TEMPORARY BYPASS ALIGNMENTS, SEE TEMPORARY BYPASS SHEETS TB1-TB2.

LEGEND

- WSDOT RIGHT OF WAY
- 705 CONSTRUCTION CENTERLINE
- 350 RIGHT-OF-WAY CENTERLINE
- SECTION LINE
- SIXTEENTH SECTION LINE
- EASEMENT LINE
- EXISTING PAVEMENT EDGE
- EXISTING GRAVEL EDGE
- EXISTING STREAM THALWEG
- EXISTING CULVERT
- CONTROL POINT

DATUM

(NAVD) 88

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0090_XL0000_PS_AL.dgn					
TIME	3:06:36 PM					
DATE	12/26/2023					
PLOTTED BY	MarrEm					
DESIGNED BY	R. BAILEY					
ENTERED BY	R. BAILEY					
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

P.E. STAMP BOX — DATE

MIKKEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE — P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

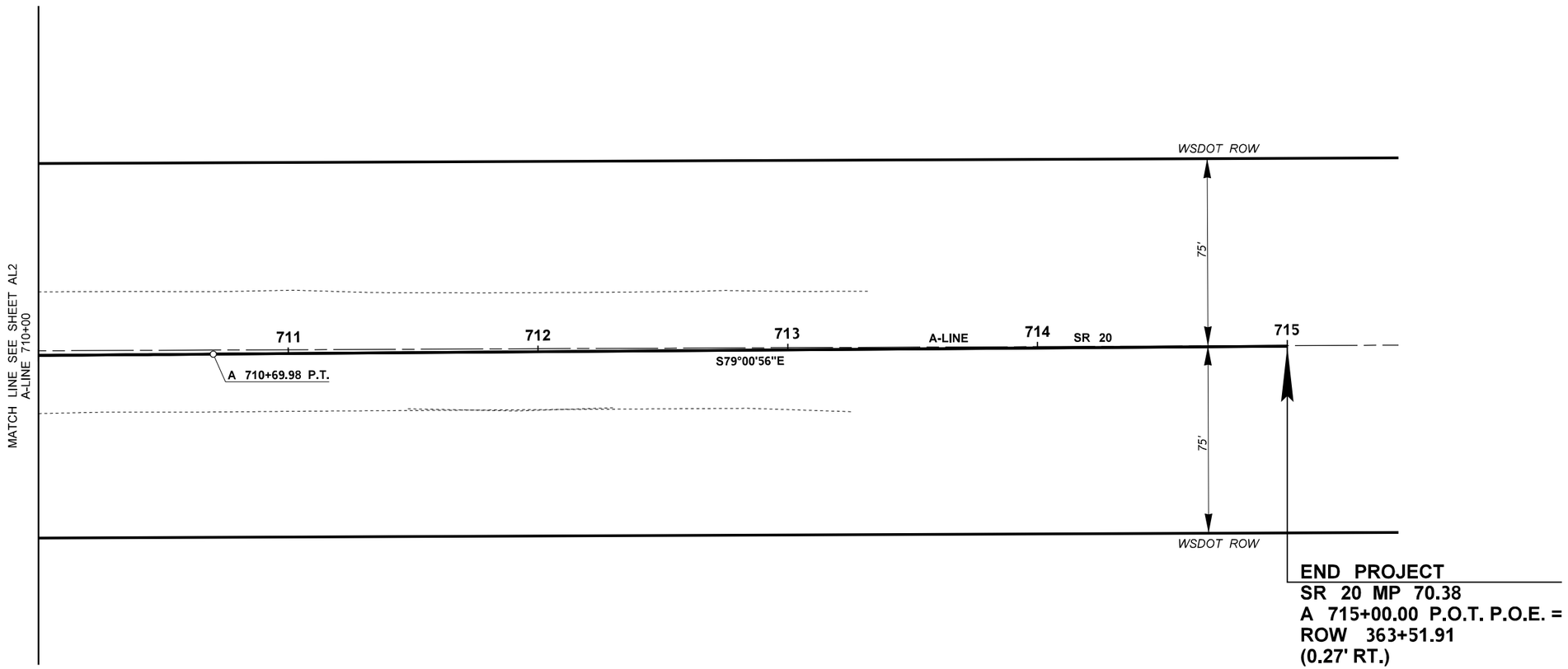
ALIGNMENT / RIGHT OF WAY PLAN

Plot 3

PLAN REF NO AL2

SHEET 15 OF 55 SHEETS

SECTION 10
T.35N. R.5E. W.M.



GENERAL NOTES:

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4. ALL COORDINATE VALUES SHOWN ARE IN PROJECT DATUM.

LEGEND

- WSDOT RIGHT OF WAY
- 705 CONSTRUCTION CENTERLINE
- 350 RIGHT-OF-WAY CENTERLINE
- SECTION LINE
- SIXTEENTH SECTION LINE
- EASEMENT LINE
- EXISTING PAVEMENT EDGE
- EXISTING GRAVEL EDGE
- EXISTING STREAM THALWEG
- EXISTING CULVERT
- CONTROL POINT

DATUM

(NAVD) 88

0 25 50
SCALE IN FEET

SE ¼ SE ¼ SEC 10
NE ¼ NE ¼ SEC 15

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0090_XL0000_PS_AL.dgn						
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PLOTTED BY	MarrEm						
DESIGNED BY	R. BAILEY						
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

DATE
P.E. STAMP BOX

MICHAEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED
PROFESSIONAL ENGINEER

SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

ALIGNMENT / RIGHT OF WAY PLAN

Plot 4
PLAN REF NO
AL3
SHEET 16 OF 55 SHEETS

QUANTITY TABULATION - SITE PREPERATION/ TESC/ EXISITNG UTILITES

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.

THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION ➢ \ UNIT OF MEASURE ➢	REMOVING GUIDE POST	REMOVING PAINT LINE		HIGH VISIBILITY FENCE	HIGH VISIBILITY SILT FENCE											SEE GENERAL NOTES
		EACH	L.F.		L.F.	L.F.											
SP2-1	A 705+71.83 (0.00') to A 709+26.88 (0.00')		355														
SP2-2	A 705+71.83 (12.00' RT) to A 709+26.88 (12.00' RT)		355														
SP2-3	A 705+71.83 (12.00' LT) to A 709+26.88 (12.00' LT)		355														
SP2-4	A 709+04.63 (22.09' RT)	1															
SP2-5	A 709+27.22 (25.66' LT)	1															
SP2-6	A 706+32.0 (25.0' LT) to A 706+78.0 (84.0' LT)				86												1
SP2-7	A 706+93.0 (87.0' LT) to A 707+62.0 (76.0' LT)				78												1
SP2-8	A 706+89.0 (76.0' LT) to A 707+62.0 (76.0' LT)				116												1
SP2-9	707+70.0 (76.0' LT) to A 708+55.0 (122.0' LT)				223												1
SP2-10	A 708+62.0 (1144.0' RT) to A 710+39.0 (25.0' RT)					377											2
SP2-11	707+41.0 (132.0' RT) to A 707+62.0 (128.0' RT)					21											2
SP2-12	A 707+72.0 (127.0' RT) to A 709+57.0 (24.0' RT)					268											2
	SHEET TOTAL	2	1070		503	666											
	PROJECT TOTAL																

GENERAL NOTES:

1. SEE STANDARD PLAN I-10.10 HIGH VISIBILITY FENCE.

2. SEE STANDARD PLAN I-30.17 HIGH VISIBILITY SILT FENCE.

DESIGNED BY	C. LOY				
ENTERED BY	C. LOY				
CHECKED BY	E. MARR				
PROJ. ENGR.	M. LAMAY				
REGION ADM.	B. NIELSEN				
		DATE	DATE	REVISION	BY

REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	

JOB NUMBER
23A021

CONTRACT NO.

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

QUANTITY TABULATION - SITE PREPERATION/ TESC/ EXISITNG UTILITES

QTSP1

SHEET 17 OF 55 SHEETS

LEGEND

705	WSDOT RIGHT OF WAY
	CONSTRUCTION CENTERLINE
	TEMPORARY EASEMENT
OHW	ORDINARY HIGH WATER LINE
	EXISTING DITCH LINE
	EXISTING STREAM THALWEG
	EXISTING CULVERT
	EXISTING DRIVEWAY EDGE
	EXISTING PAVEMENT EDGE
	EXISTING LANE EDGE
	EXISTING NO PASS CENTERLINE
	EXISTING SKIP CENTERLINE
BCL BCL	EXISTING UNDERGROUND COMM LINE
BF BF	EXISTING UNDERGROUND FIBER OPTIC LINE
BT BT	EXISTING UNDERGROUND TELEPHONE LINE
BP BP	EXISTING UNDERGROUND POWER LINE
OP OP	EXISTING OVERHEAD POWER LINE
OT OT	EXISTING OVERHEAD TELEPHONE LINE
BF BF	ABANDONED UNDERGROUND FIBER OPTIC LINE
BP BP	ABANDONED UNDERGROUND POWER LINE
	EXISTING SEWER DRAINFIELD
	EXISTING FENCE
	EXISTING GUARDRAIL
CG CG	CLEAR & GRUB
HVF HVF	HIGH VISIBILITY FENCE
HVS HVS	HIGH VISIBILITY SILT FENCE
	EXISTING BUILDING
	EXISTING TREE LINE
	EXISTING TREE TO REMAIN
	EXISTING TREE TO BE REMOVED
	EXISTING WELL
	GUIDE POST / UTILITY MARKER
MB	EXISTING MAILBOX
UOBJN	EXISTING TIRES
	BORING HOLE
	EXISTING GATE
P	EXISTING POWER POLE
	EXISTING UTILITY POLE
	EXISTING GUY ANCHOR
T	EXISTING TELEPHONE BOX
E	EXISTING ELECTRICAL BOX
??	QUANTITY TABULATION NOTE
WB	WETLAND
	BARK OR WOOD CHIP MULCH 12" DEPTH

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0110_XL0000_PS_SP.dgn
TIME	1:54:49 PM
DATE	12/26/2023
PLOTTED BY	loycurt
DESIGNED BY	C. LOY
ENTERED BY	C. LOY
CHECKED BY	E. MARR
PROJ. ENGR.	M. LAMAY
REGIONAL ADM.	B. NIELSEN

REVISION | DATE | BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

DATE
P.E. STAMP BOX

MICHAEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER

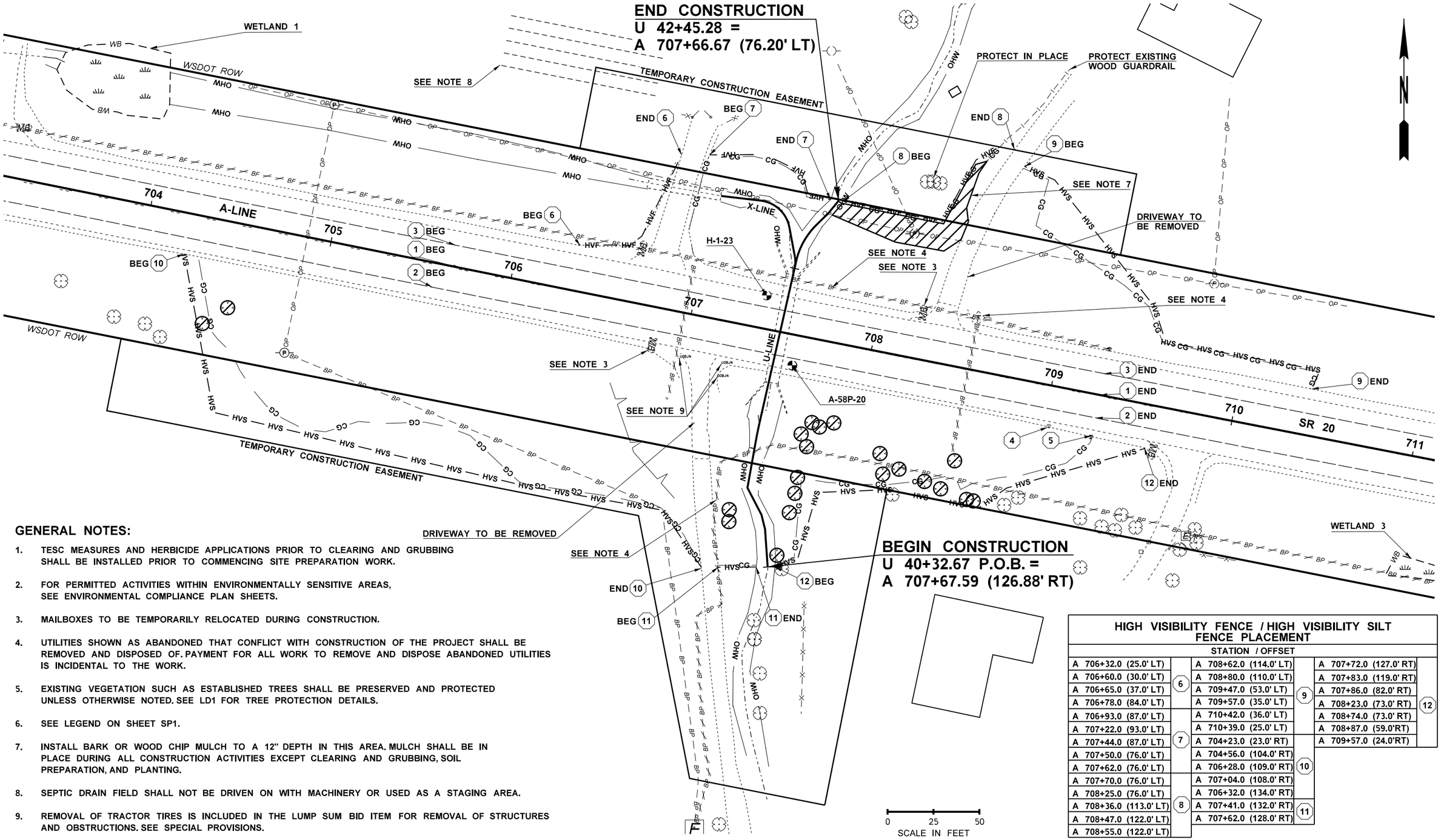
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

SITE PREPARATION / TESC / EXISTING UTILITIES PLAN

Plot 1
PLAN REF NO
SP1
SHEET 18 OF 55 SHEETS



GENERAL NOTES:

1. TESC MEASURES AND HERBICIDE APPLICATIONS PRIOR TO CLEARING AND GRUBBING SHALL BE INSTALLED PRIOR TO COMMENCING SITE PREPARATION WORK.
2. FOR PERMITTED ACTIVITIES WITHIN ENVIRONMENTALLY SENSITIVE AREAS, SEE ENVIRONMENTAL COMPLIANCE PLAN SHEETS.
3. MAILBOXES TO BE TEMPORARILY RELOCATED DURING CONSTRUCTION.
4. UTILITIES SHOWN AS ABANDONED THAT CONFLICT WITH CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AND DISPOSED OF. PAYMENT FOR ALL WORK TO REMOVE AND DISPOSE ABANDONED UTILITIES IS INCIDENTAL TO THE WORK.
5. EXISTING VEGETATION SUCH AS ESTABLISHED TREES SHALL BE PRESERVED AND PROTECTED UNLESS OTHERWISE NOTED. SEE LD1 FOR TREE PROTECTION DETAILS.
6. SEE LEGEND ON SHEET SP1.
7. INSTALL BARK OR WOOD CHIP MULCH TO A 12" DEPTH IN THIS AREA. MULCH SHALL BE IN PLACE DURING ALL CONSTRUCTION ACTIVITIES EXCEPT CLEARING AND GRUBBING, SOIL PREPARATION, AND PLANTING.
8. SEPTIC DRAIN FIELD SHALL NOT BE DRIVEN ON WITH MACHINERY OR USED AS A STAGING AREA.
9. REMOVAL OF TRACTOR TIRES IS INCLUDED IN THE LUMP SUM BID ITEM FOR REMOVAL OF STRUCTURES AND OBSTRUCTIONS. SEE SPECIAL PROVISIONS.

HIGH VISIBILITY FENCE / HIGH VISIBILITY SILT FENCE PLACEMENT

STATION / OFFSET					
A 706+32.0 (25.0' LT)	6	A 708+62.0 (114.0' LT)	9	A 707+72.0 (127.0' RT)	12
A 706+60.0 (30.0' LT)		A 708+80.0 (110.0' LT)		A 707+83.0 (119.0' RT)	
A 706+65.0 (37.0' LT)		A 709+47.0 (53.0' LT)		A 707+86.0 (82.0' RT)	
A 706+78.0 (84.0' LT)		A 709+57.0 (35.0' LT)		A 708+23.0 (73.0' RT)	
A 706+93.0 (87.0' LT)	7	A 710+42.0 (36.0' LT)		A 708+74.0 (73.0' RT)	
A 707+22.0 (93.0' LT)		A 710+39.0 (25.0' LT)		A 708+87.0 (59.0'RT)	
A 707+44.0 (87.0' LT)		A 704+23.0 (23.0' RT)	10	A 709+57.0 (24.0'RT)	
A 707+50.0 (76.0' LT)		A 704+56.0 (104.0' RT)			
A 707+62.0 (76.0' LT)		A 706+28.0 (109.0' RT)			
A 707+70.0 (76.0' LT)	8	A 707+04.0 (108.0' RT)			
A 708+25.0 (76.0' LT)		A 706+32.0 (134.0' RT)			
A 708+36.0 (113.0' LT)		A 707+41.0 (132.0' RT)	11		
A 708+47.0 (122.0' LT)		A 707+62.0 (128.0' RT)			
A 708+55.0 (122.0' LT)					

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TIME	1:55:02 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	12/26/2023						
PLOTTED BY	loycurt				JOB NUMBER 23A021		
DESIGNED BY	C. LOY						
ENTERED BY	C. LOY				CONTRACT NO.		LOCATION NO.
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

P.E. STAMP BOX — DATE

MIKEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER

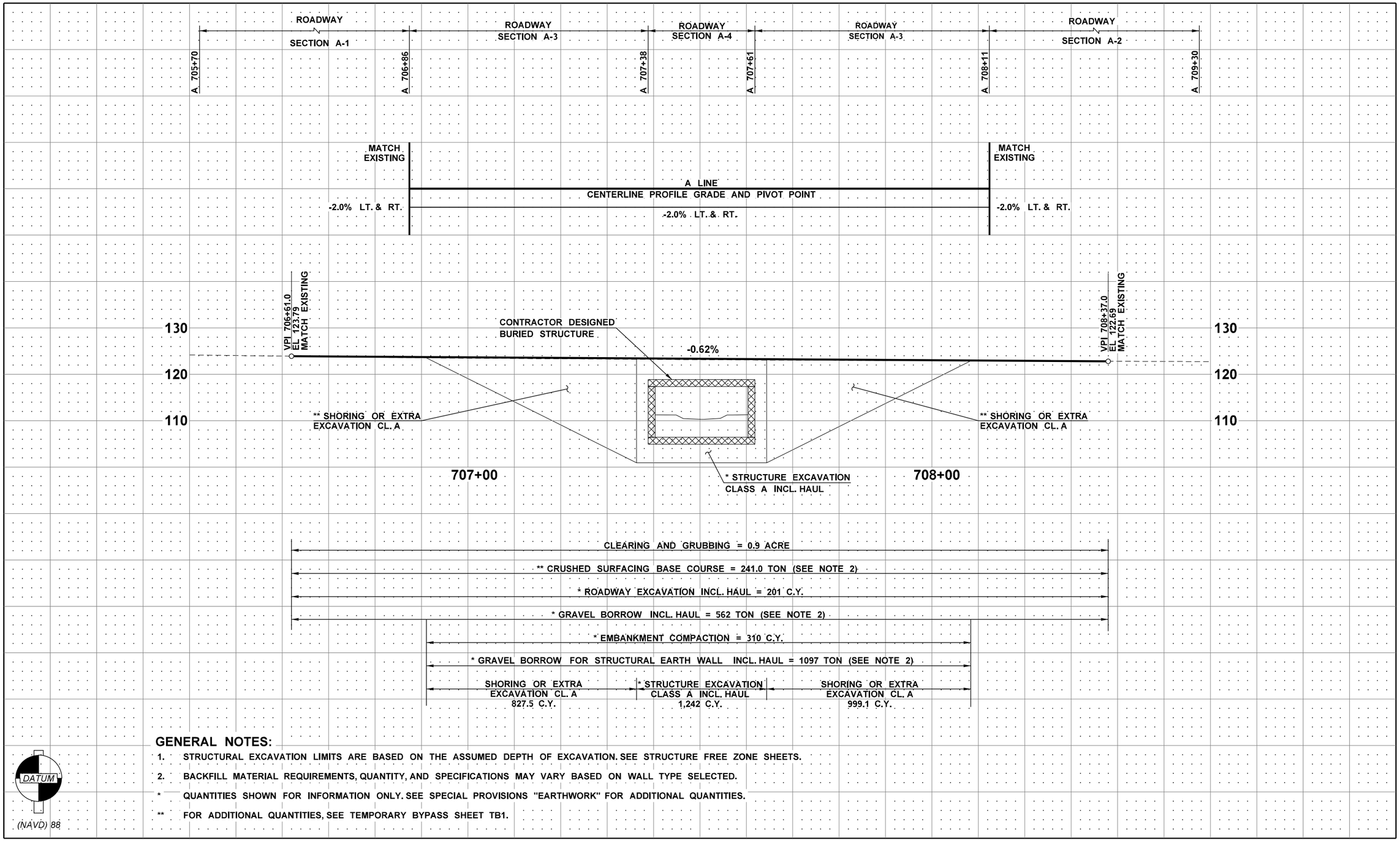
SEE SHEET CT1 — DATE — P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

SITE PREPARATION / TESC / EXISTING UTILITIES PLAN

Plot 2
PLAN REF NO SP2
SHEET 19 OF 55 SHEETS



GENERAL NOTES:

1. STRUCTURAL EXCAVATION LIMITS ARE BASED ON THE ASSUMED DEPTH OF EXCAVATION. SEE STRUCTURE FREE ZONE SHEETS.
2. BACKFILL MATERIAL REQUIREMENTS, QUANTITY, AND SPECIFICATIONS MAY VARY BASED ON WALL TYPE SELECTED.

* QUANTITIES SHOWN FOR INFORMATION ONLY. SEE SPECIAL PROVISIONS "EARTHWORK" FOR ADDITIONAL QUANTITIES.

** FOR ADDITIONAL QUANTITIES, SEE TEMPORARY BYPASS SHEET TB1.

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DATE	12/27/2023				JOB NUMBER 23A021		
PLOTTED BY	MarrEm						
DESIGNED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

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Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

ROADWAY PROFILE

Plot 1

PLAN REF. NO. RP1

SHEET 20 OF 55 SHEETS

IMPACTS SUMMARY

SENSITIVE AREA	UNT to COAL CREEK SQ.FT. (ACRE)	LEGEND	WORK SUMMARY PERMITTED WORK ACTIVITIES
DOE CATEGORY	CAT. F		
TOTAL AREA	21072.14 (0.48)		
TEMPORARY STREAM IMPACT	1170.12 (0.03)		EXCAVATION, FISH EXCLUSION, TEMPORARY STREAM DIVERSION, EQUIPMENT OPERATIONS.
PERMANENT STREAM IMPACT	1157.11 (0.03)		EXCAVATION, FILL, CLEARING, CLEARING AND GRUBBING, EQUIPMENT OPERATIONS, AND PLANTING.
TEMPORARY BUFFER IMPACT	15789.41 (0.36)		EXCAVATION, FILL, CLEARING AND GRUBBING, AND EQUIPMENT OPERATIONS.

LEGEND

40	CONSTRUCTION CENTERLINE	HVF — HVF — HVF	HIGH VISIBILITY FENCE
	WSDOT RIGHT OF WAY	HVS — HVS — HVS	HIGH VISIBILITY SILT FENCE
	TEMPORARY CONSTRUCTION EASEMENT	CG — CG	CLEARING AND GRUBBING
	EXISTING PAVEMENT EDGE		FLOW DIRECTION
	EXISTING GRAVEL EDGE		PROPOSED STREAM DIVERSION
	EXISTING STREAM CENTERLINE		TEMPORARY COFFER DAM
	EXISTING CULVERT		PIPE
OHW	EXISTING ORDINARY HIGH WATER		WINGWALL
	EXISTING WETLAND BOUNDARY		CONTRACTOR DESIGNED BURIED STRUCTURE
	EXISTING DITCH LINE		CLEARING AND GRUBBING
	STREAM BUFFER		EXISTING TREE
	WETLAND BUFFER		EXISTING TREELINE

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DATE	12/26/2023					FED.AID PROJ.NO.
PLOTTED BY	MarrEm					
DESIGNED BY	C. LOY				JOB NUMBER 23A021	
ENTERED BY	C. LOY					
CHECKED BY	R. BAILEY				CONTRACT NO.	LOCATION NO.
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P.E. STAMP BOX DATE

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SEE SHEET CT1 DATE

P.E. STAMP BOX

Washington State Department of Transportation

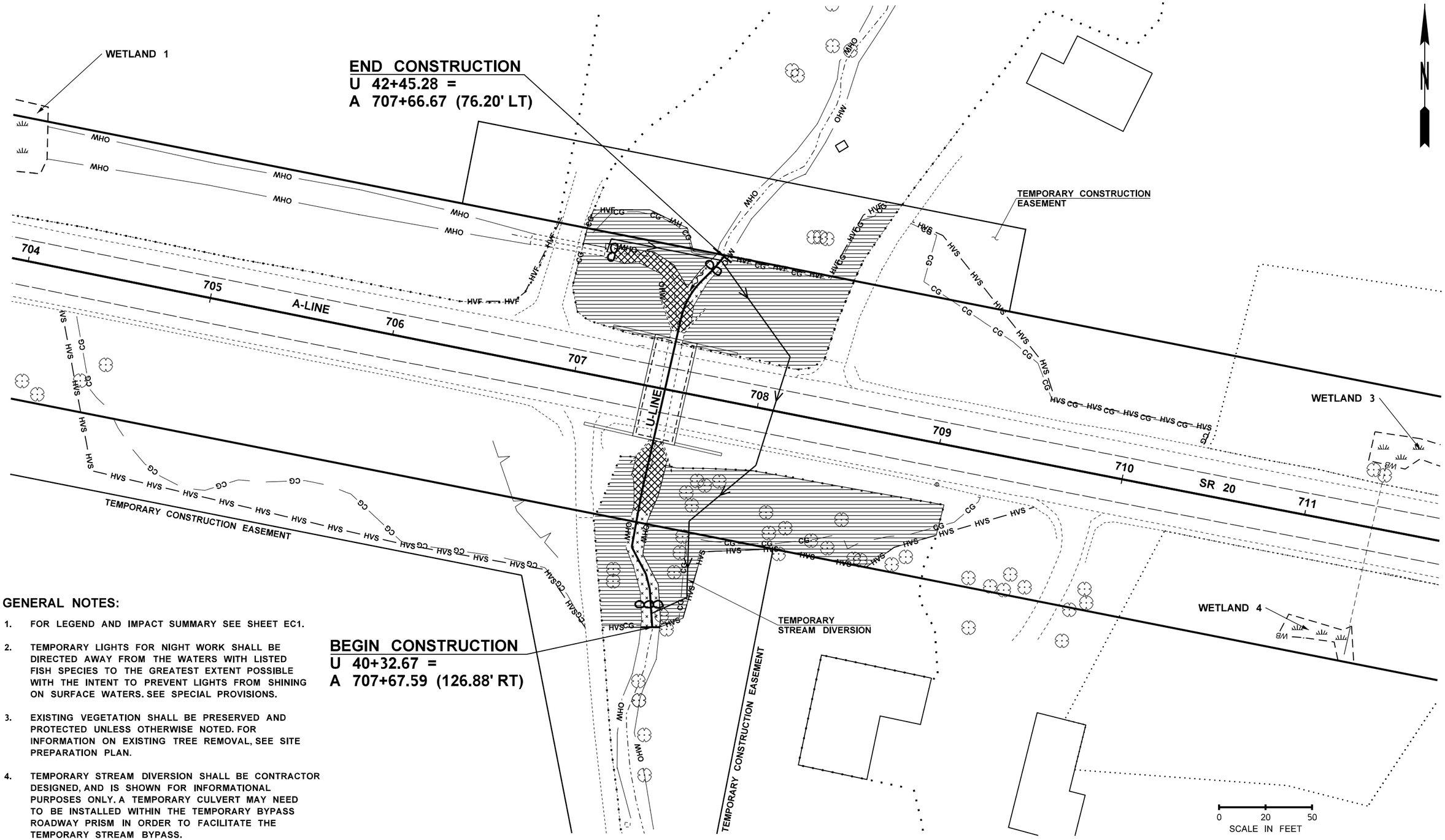
SR 20
UNT TO COAL CREEK
FISH PASSAGE

ENVIRONMENTAL COMPLIANCE PLAN

Plot 1

PLAN REF NO EC1

SHEET 21 OF 55 SHEETS



GENERAL NOTES:

1. FOR LEGEND AND IMPACT SUMMARY SEE SHEET EC1.
2. TEMPORARY LIGHTS FOR NIGHT WORK SHALL BE DIRECTED AWAY FROM THE WATERS WITH LISTED FISH SPECIES TO THE GREATEST EXTENT POSSIBLE WITH THE INTENT TO PREVENT LIGHTS FROM SHINING ON SURFACE WATERS. SEE SPECIAL PROVISIONS.
3. EXISTING VEGETATION SHALL BE PRESERVED AND PROTECTED UNLESS OTHERWISE NOTED. FOR INFORMATION ON EXISTING TREE REMOVAL, SEE SITE PREPARATION PLAN.
4. TEMPORARY STREAM DIVERSION SHALL BE CONTRACTOR DESIGNED, AND IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. A TEMPORARY CULVERT MAY NEED TO BE INSTALLED WITHIN THE TEMPORARY BYPASS ROADWAY PRISM IN ORDER TO FACILITATE THE TEMPORARY STREAM BYPASS.

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TIME	4:54:38 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	12/26/2023						
PLOTTED BY	MarrEm						
DESIGNED BY	C. LOY				JOB NUMBER 23A021		
ENTERED BY	C. LOY						
CHECKED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

P.E. STAMP BOX — DATE

MIKEL PETER LAMAY — STATE OF WASHINGTON — 35141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE — P.E. STAMP BOX

Washington State Department of Transportation

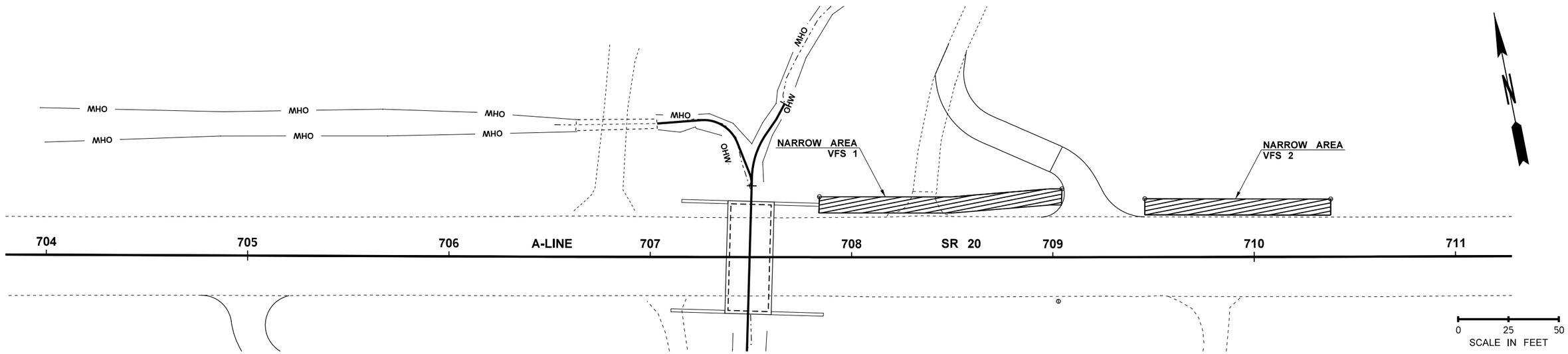
SR 20
UNT TO COAL CREEK
FISH PASSAGE

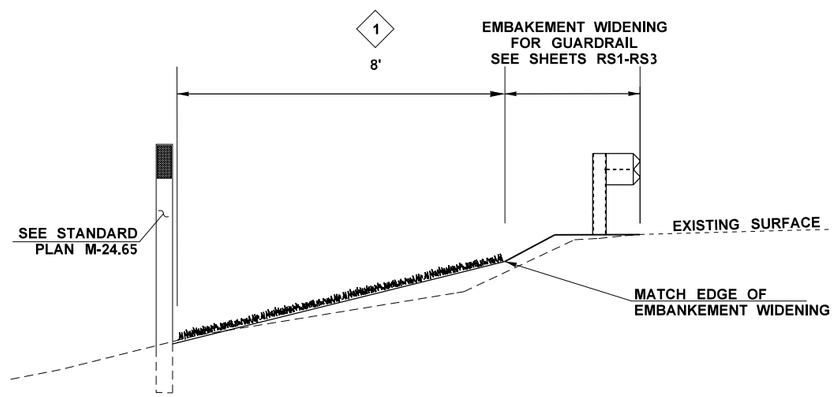
ENVIRONMENTAL COMPLIANCE PLAN

Plot 2

PLAN REF NO EC2

SHEET 22 OF 55 SHEETS

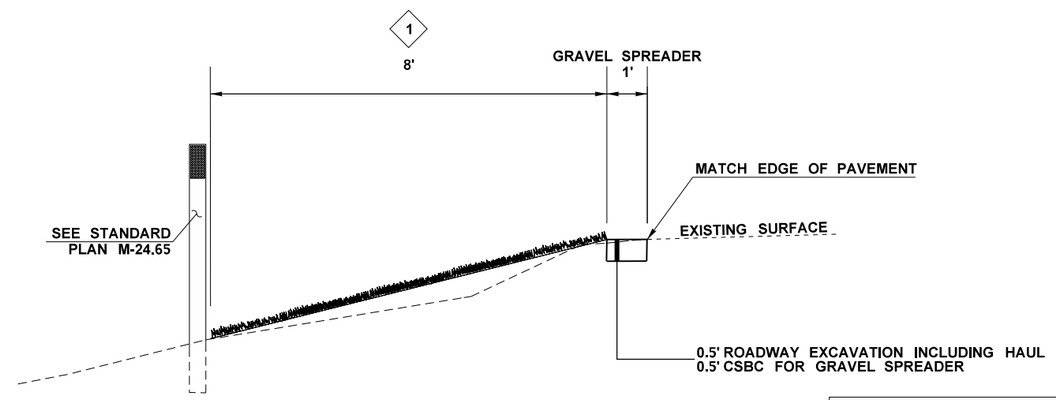




DETAIL VIEW - NARROW AREA VEGETATED FILTER STRIP (VFS) 1

STA. A 707+84 TO STA. A 709+04

NOT TO SCALE



DETAIL VIEW - NARROW AREA VEGETATED FILTER STRIP (VFS) 2

STA. A 709+46 TO STA. A 710+38

NOT TO SCALE

LEGEND

- 705 — CONSTRUCTION CENTERLINE
- OHW — ORDINARY HIGH WATER LINE
- STREAM THALWEG
- EXISTING CULVERT
- EXISTING DRIVEWAY EDGE
- EXISTING PAVEMENT EDGE
- PROPOSED DRIVEWAY EDGE
- PROPOSED GUARDRAIL
- VEGETATED FILTER STRIP
- PROPOSED CULVERT

GENERAL NOTES:

1. SEE LANDSCAPE SHEETS FOR ADDITIONAL PLANTING AND PREPARATION INFORMATION.

CONSTRUCTION NOTES:

1 VEGETATED FILTER STRIP
RE-GRADE EXISITNG GROUND TO A CONSISTENT SLOPE FROM EDGE OF GRAVEL SPREADER TO MATCH EXISTING GROUND AT 8'. ALL COSTS ASSOCIATED WITH GRADING ARE INCIDENTAL TO THE CONTRACT.

VFS 2 QUANTITIES	
CRUSHED SURFACING BASE COURSE (TONS)	3.3
*ROADWAY EX. INCL. HAUL (C.Y.)	2.2
FLEXIBLE GUIDE POST	4

* QUANTITES SHOWN FOR INFORMATIONAL PURPOSES ONLY

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DESIGNED BY	C. LOY
ENTERED BY	C. LOY
CHECKED BY	E. MARR
PROJ. ENGR.	M. LAMAY
REGIONAL ADM.	B. NIELSEN

REVISION | DATE | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER 23A021

CONTRACT NO. | LOCATION NO.

P.E. STAMP BOX — DATE

MIKEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE — P.E. STAMP BOX

Washington State Department of Transportation

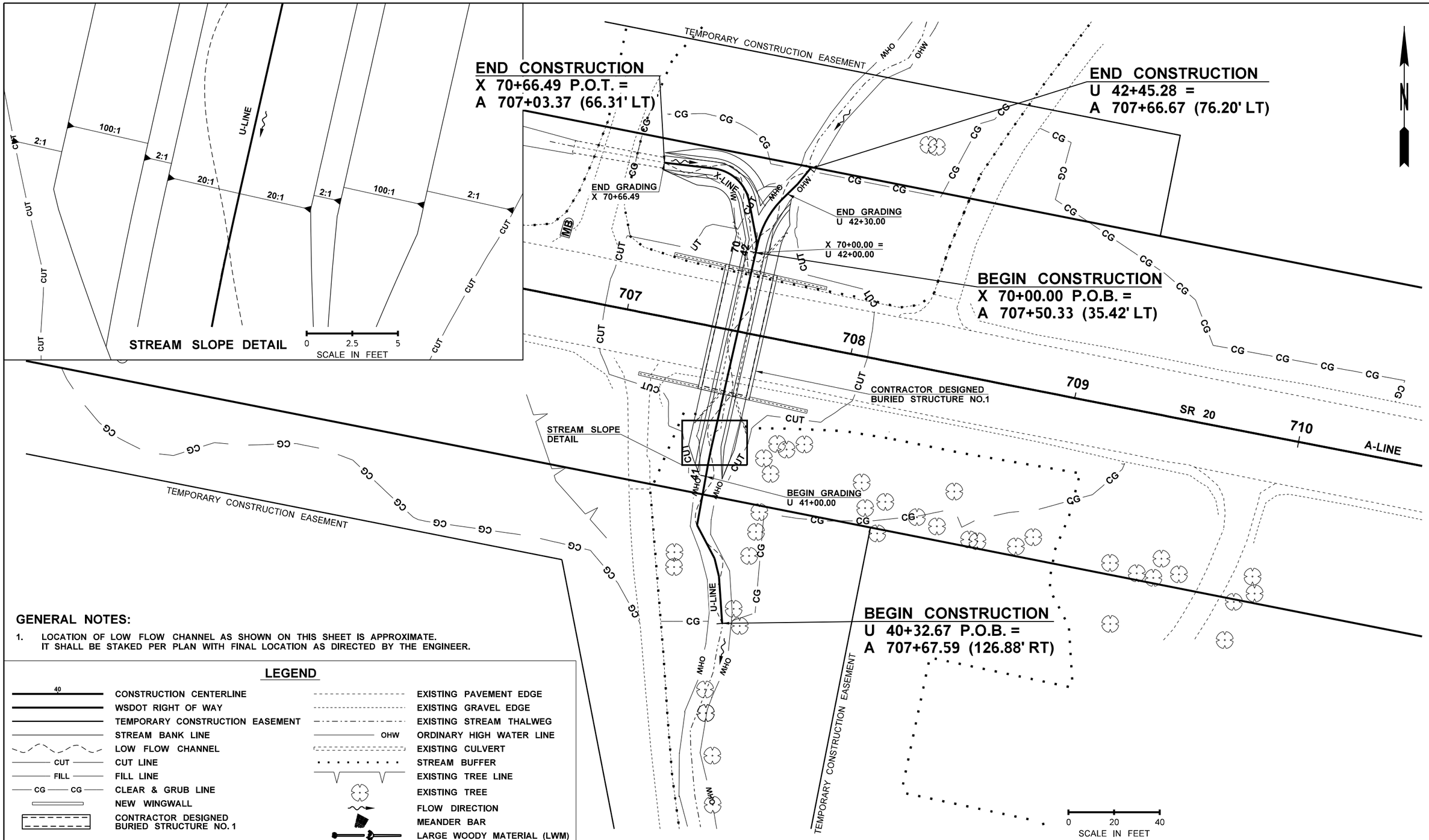
SR 20
UNT TO COAL CREEK
FISH PASSAGE

DRAINAGE PLAN

Plot 1

PLAN REF NO DP1

SHEET 23 OF 55 SHEETS



GENERAL NOTES:

1. LOCATION OF LOW FLOW CHANNEL AS SHOWN ON THIS SHEET IS APPROXIMATE. IT SHALL BE STAKED PER PLAN WITH FINAL LOCATION AS DIRECTED BY THE ENGINEER.

LEGEND

40	CONSTRUCTION CENTERLINE		EXISTING PAVEMENT EDGE
	WSDOT RIGHT OF WAY		EXISTING GRAVEL EDGE
	TEMPORARY CONSTRUCTION EASEMENT		EXISTING STREAM THALWEG
	STREAM BANK LINE	OHW	ORDINARY HIGH WATER LINE
	LOW FLOW CHANNEL		EXISTING CULVERT
CUT	CUT LINE		STREAM BUFFER
FILL	FILL LINE		EXISTING TREE LINE
CG CG	CLEAR & GRUB LINE		EXISTING TREE
	NEW WINGWALL		FLOW DIRECTION
	CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1		MEANDER BAR
			LARGE WOODY MATERIAL (LWM)

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DESIGNED BY	R. BAILEY					
ENTERED BY	R. BAILEY					
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

JULIE HEILMAN STATE OF WASHINGTON 41819 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

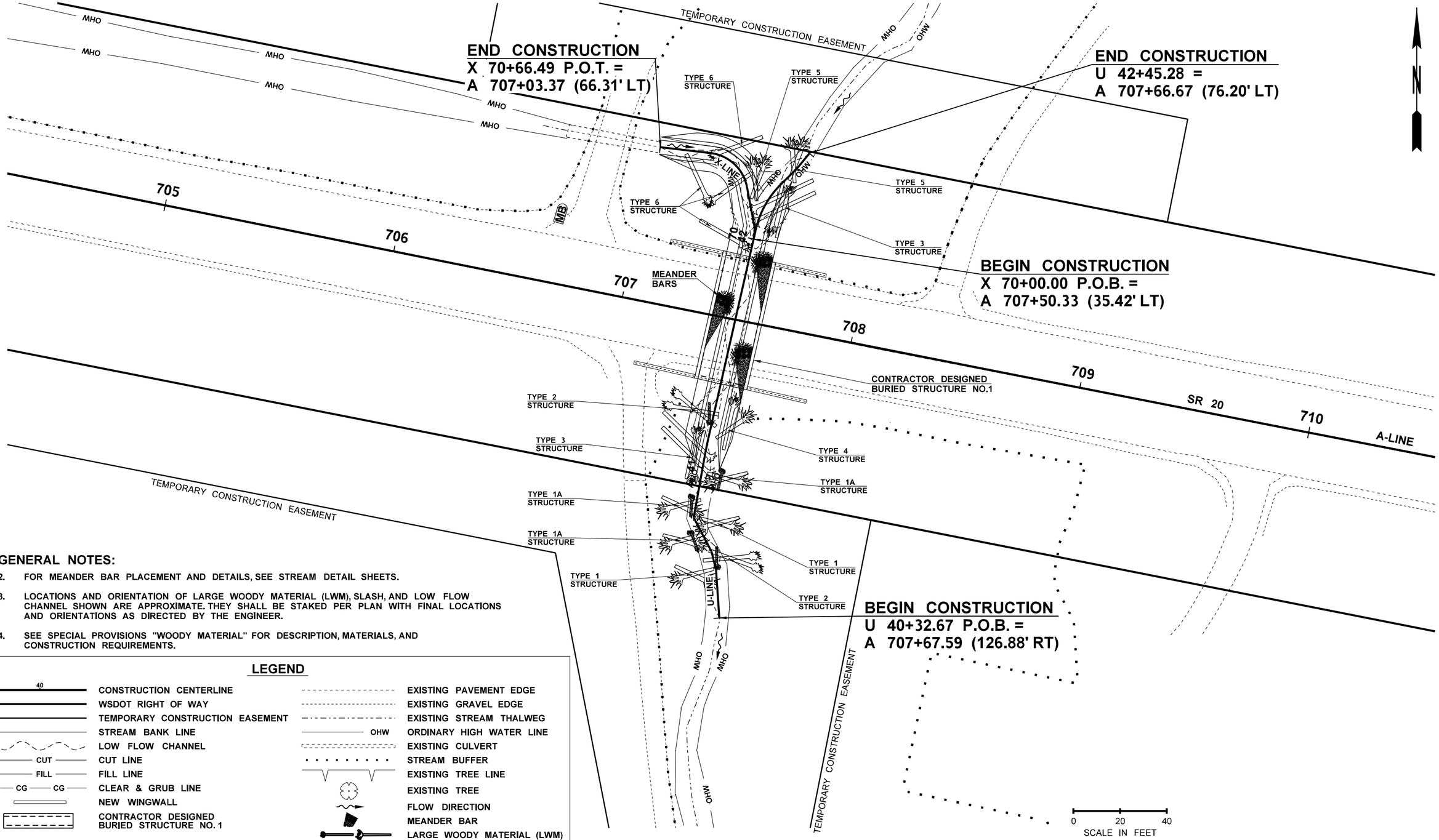
MIKAEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

STREAM PLAN

Plot 1
PLAN REF NO
CR1
SHEET 24 OF 55 SHEETS



GENERAL NOTES:

2. FOR MEANDER BAR PLACEMENT AND DETAILS, SEE STREAM DETAIL SHEETS.
3. LOCATIONS AND ORIENTATION OF LARGE WOODY MATERIAL (LWM), SLASH, AND LOW FLOW CHANNEL SHOWN ARE APPROXIMATE. THEY SHALL BE STAKED PER PLAN WITH FINAL LOCATIONS AND ORIENTATIONS AS DIRECTED BY THE ENGINEER.
4. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.

LEGEND

40	CONSTRUCTION CENTERLINE		EXISTING PAVEMENT EDGE
	WSDOT RIGHT OF WAY		EXISTING GRAVEL EDGE
	TEMPORARY CONSTRUCTION EASEMENT		EXISTING STREAM THALWEG
	STREAM BANK LINE	OHW	ORDINARY HIGH WATER LINE
	LOW FLOW CHANNEL		EXISTING CULVERT
CUT	CUT LINE		STREAM BUFFER
FILL	FILL LINE		EXISTING TREE LINE
CG CG	CLEAR & GRUB LINE		EXISTING TREE
	NEW WINGWALL		FLOW DIRECTION
	CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1		MEANDER BAR
			LARGE WOODY MATERIAL (LWM)

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0210_XL0000_PS_CR.dgn					
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ENTERED BY	R. BAILEY					
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

P.E. STAMP BOX — SEE SHEET CT1 — DATE

P.E. STAMP BOX — SEE SHEET CT1 — DATE

Washington State Department of Transportation

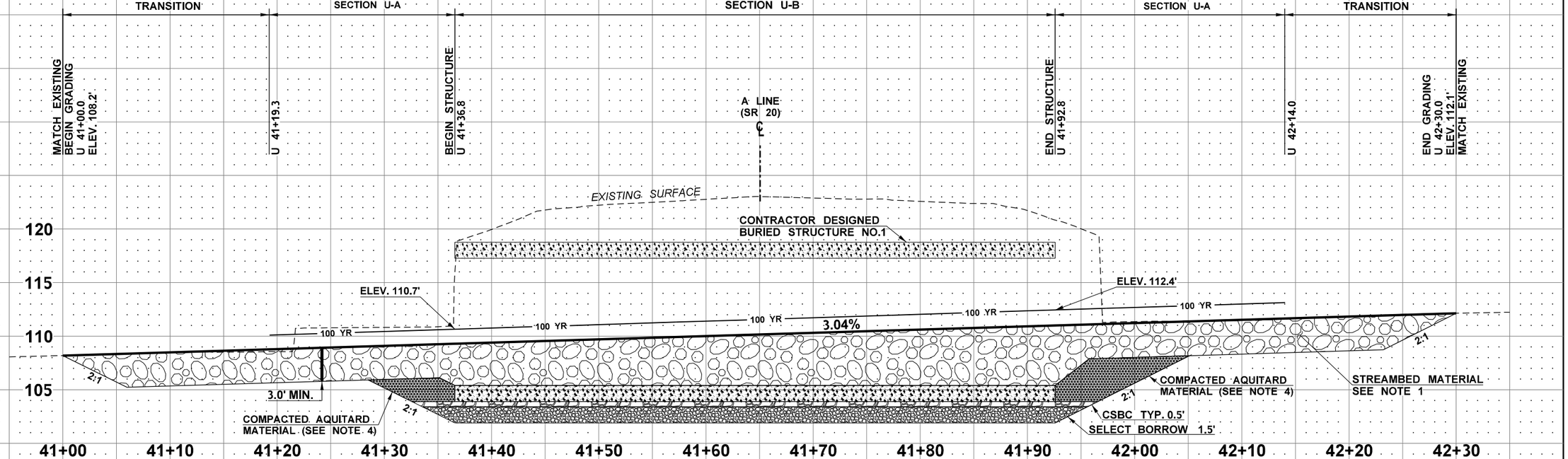
SR 20
UNT TO COAL CREEK
FISH PASSAGE

STREAM PLAN

Plot 2

PLAN REF NO CR2

SHEET 25 OF 55 SHEETS



* CHANNEL EXCAVATION INCL. HAUL = 1,415 C.Y.

STREAMBED SEDIMENT = 90 TONS

STREAMBED COBBLES 4 IN. = 120 TONS

STREAMBED COBBLES 6 IN. = 60 TONS

STREAMBED COBBLES 8 IN. = 30 TONS

STREAMBED COBBLES 12 IN. = 33 TONS

STREAMBED BOULDER TYPE ONE = 101 EACH

SLASH = 6 C.Y.

* SELECT BORROW INCL. HAUL = 895 TONS

CRUSHED SURFACING BASE COURSE = 298 TONS

* GRAVEL BORROW FOR STRUCTURAL EARTH WALL = 1,074 C.Y.

DATUM

(NAVD) 88

GENERAL NOTES:

1. SEE STRUCTURE FREE ZONE SHEETS. ALL REVISED INFORMATION SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
2. BACKFILL MATERIAL REQUIREMENTS, QUANTITY, AND SPECIFICATIONS MAY VARY BASED ON WALL TYPE SELECTED.
3. SEE STREAM DETAILS SHEET CD1 FOR STREAMBED MATERIAL CONSTRUCTION.
4. BACKFILL AND COMPACT WITH NATIVE SILTY MATERIAL OR AS DIRECTED BY THE ENGINEER TO PREVENT SUBSURFACE FLOWS. SEE SPECIAL PROVISIONS FOR AQUITARD MATERIAL. FOR MORE DETAILS, SEE STREAM DETAIL SHEETS.

* QUANTITIES SHOWN FOR INFORMATION ONLY. SEE SPECIAL PROVISIONS "EARTHWORK" FOR ADDITIONAL QUANTITIES.

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PLOTTED BY	BaileRV
DESIGNED BY	R. BAILEY
ENTERED BY	R. BAILEY
CHECKED BY	E. MARR
PROJ. ENGR.	M. LAMAY
REGIONAL ADM.	B. NIELSEN

REVISION	DATE	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

JULIE HEILMAN — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

MICHAEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

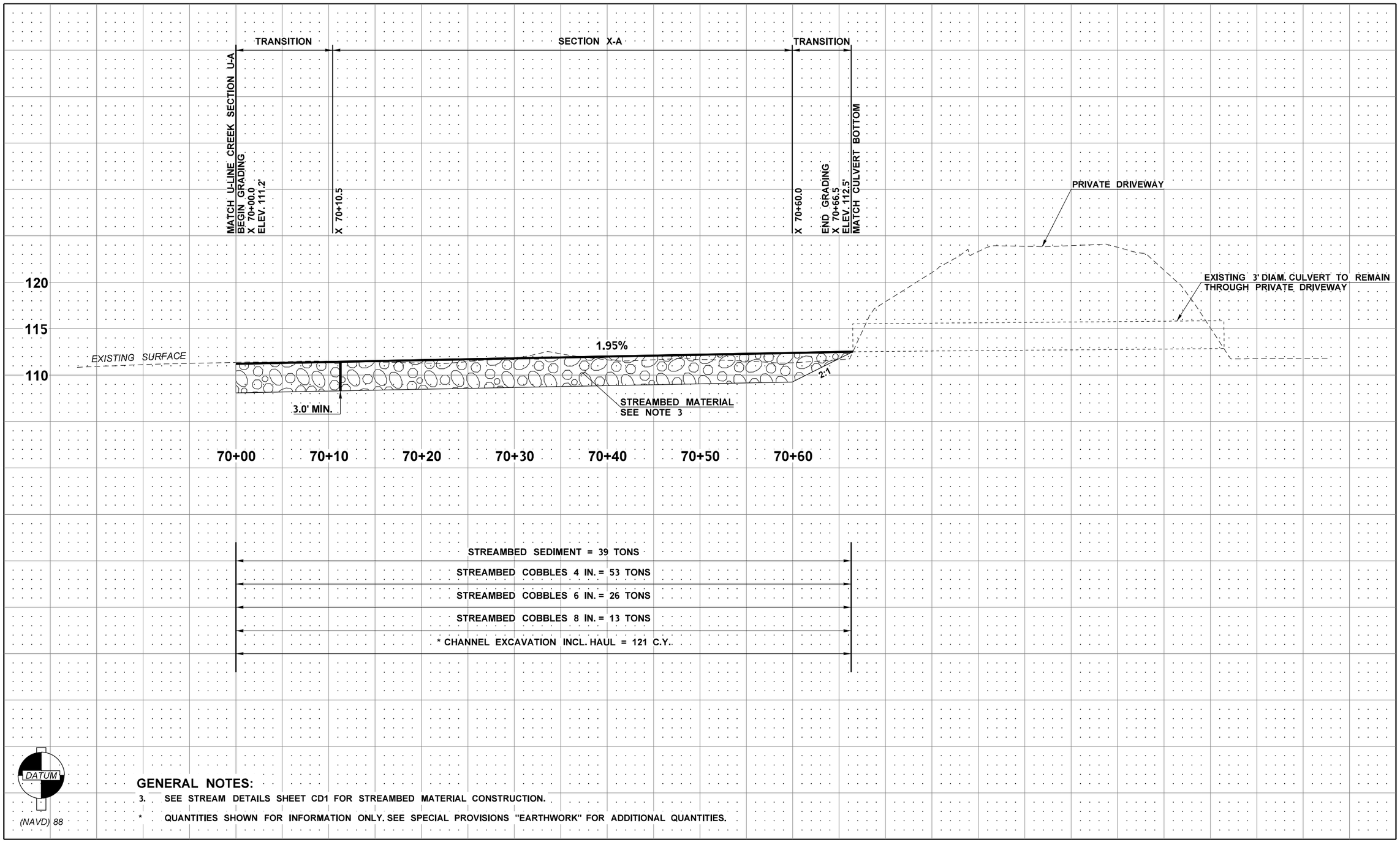
Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

STREAM PROFILE

Plot 1
PLAN REF NO
CP1

SHEET
26
OF
55
SHEETS



GENERAL NOTES:

3. SEE STREAM DETAILS SHEET CD1 FOR STREAMBED MATERIAL CONSTRUCTION.

* QUANTITIES SHOWN FOR INFORMATION ONLY. SEE SPECIAL PROVISIONS "EARTHWORK" FOR ADDITIONAL QUANTITIES.

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DESIGNED BY	R. BAILEY					
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CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

JULIE HEILMAN — STATE OF WASHINGTON — 47819 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

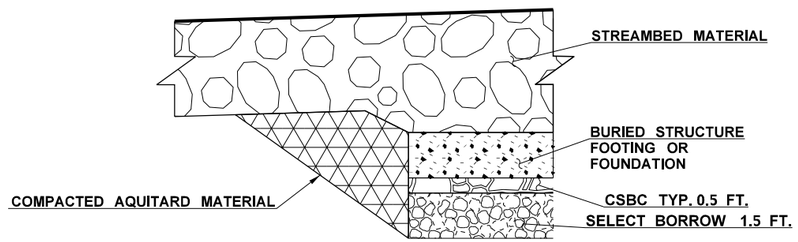
MIKKEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

STREAM PROFILE

Plot 2
PLAN REF NO
CP2
SHEET 27 OF 55 SHEETS

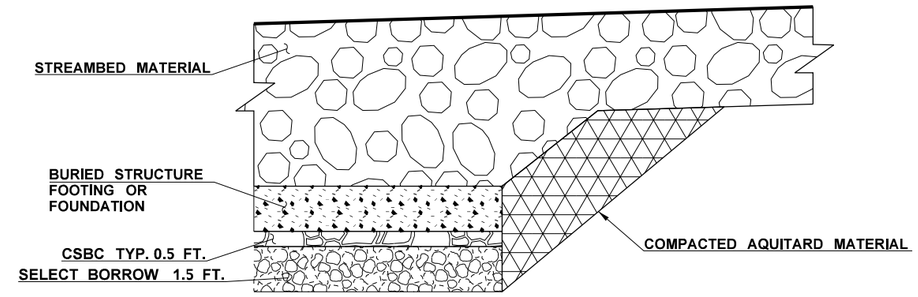


COMPACTED AQUITARD MATERIAL
DOWNSTREAM / OUTLET

NOT TO SCALE

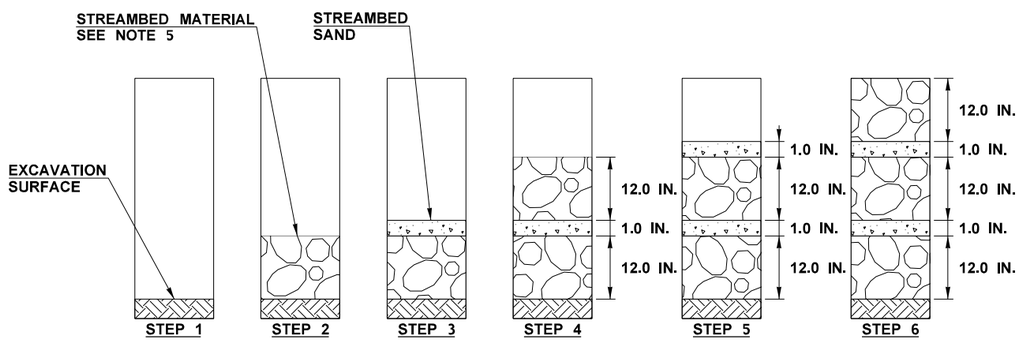
DETAIL NOTES:

1. BACKFILL AND COMPACT WITH SILTY MATERIAL CAPABLE OF PREVENTING SUBSURFACE FLOWS, AS ACCEPTED AND DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISIONS "AQUITARD" FOR MORE DETAILS.



COMPACTED AQUITARD MATERIAL
UPSTREAM / INLET

NOT TO SCALE



STREAMBED MATERIAL PLACEMENT
SEQUENCE OF WORK

NOT TO SCALE

STREAMBED CHANNEL PREPARATION

STEP 1

EXCAVATE CHANNEL TO ACCOMODATE STREAMBED MATERIAL.

STEP 2

PLACE 12.0 IN. LIFT OF STREAMBED MATERIAL.

STEP 3

PLACE A LAYER OF STREAMBED SAND UNIFORMLY OVER STREAMBED MATERIAL. APPLY WATER TO STREAMBED SAND. SEE GENERAL NOTE 2.

STEP 4

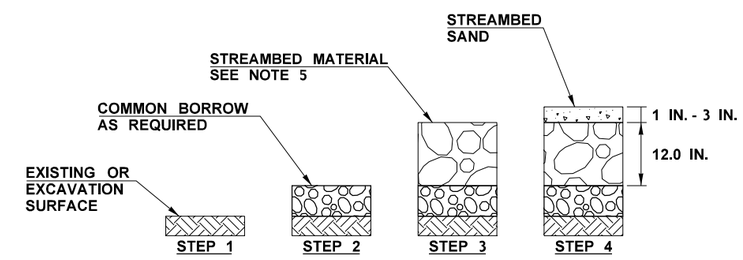
(REPEAT STEP 2)

STEP 5

(REPEAT STEP 3)

STEP 6

PLACE REMAINING ~12.0 IN. LIFT OF STREAMBED MATERIAL. GRADE AS SHOWN IN STREAMBED SECTION DETAILS. SEE GENERAL NOTE 4.



STREAMBED MATERIAL PLACEMENT
ALTERNATIVE - FLOOD PLAIN EXTENSION

NOT TO SCALE

GENERAL NOTES:

1. SLASH FROM TREES TO BE INCORPORATED INTO STREAMBED MIX (NOT SHOWN) WHERE INDICATED IN THE SPECIAL PROVISIONS AND AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL APPLY STREAMBED SAND AND WATER AT A RATE OF 30 GALLONS PER MINUTE TO EACH LIFT TO FACILITATE FILLING THE INTERSTITAL VOIDS OF THE BLENDED STREAMBED AGGREGATE. SEE STANDARD SPECIFICATION 8-30 "WATER CROSSINGS" FOR MORE DETAILS.
3. SEE STANDARD SPECIFICATIONS 8-30 "WATER CROSSINGS" FOR MIXING AND PLACEMENT OF STREAMBED AGGREGATES. FINAL INSTALLATION WILL PROVIDE A BLENDED AND WELL GRADED MIX OF STREAMBED SEDIMENTS AND STREAMBED COBBLES.
4. FOR AREAS OF STREAM CHANNEL THAT EXCEED 3.0 FEET IN DEPTH, ADDITIONAL LAYERS MAY BE REQUIRED. REPEAT STEPS AS NECESSARY.
5. STREAMBED MATERIAL IS TO CONSIST OF 30% STREAMBED SEDIMENT BY VOLUME, 40% STREAMBED COBBLES 4 IN. BY VOLUME, 20% STREAMBED COBBLES 6 IN. BY VOLUME, AND 10% STREAMBED COBBLES 8 IN. BY VOLUME.

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PLOTTED BY	bailerv				JOB NUMBER 23A021	
DESIGNED BY	R. BAILEY					
ENTERED BY	R. BAILEY				CONTRACT NO.	LOCATION NO.
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

JULIE HEILMAN, STATE OF WASHINGTON, 41819, REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

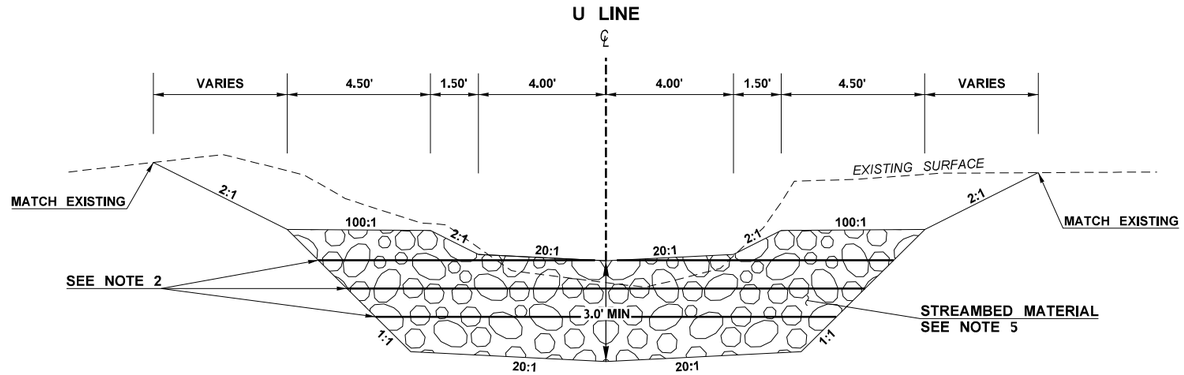
MIKKEL PETER LAMAY, STATE OF WASHINGTON, 52141, REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

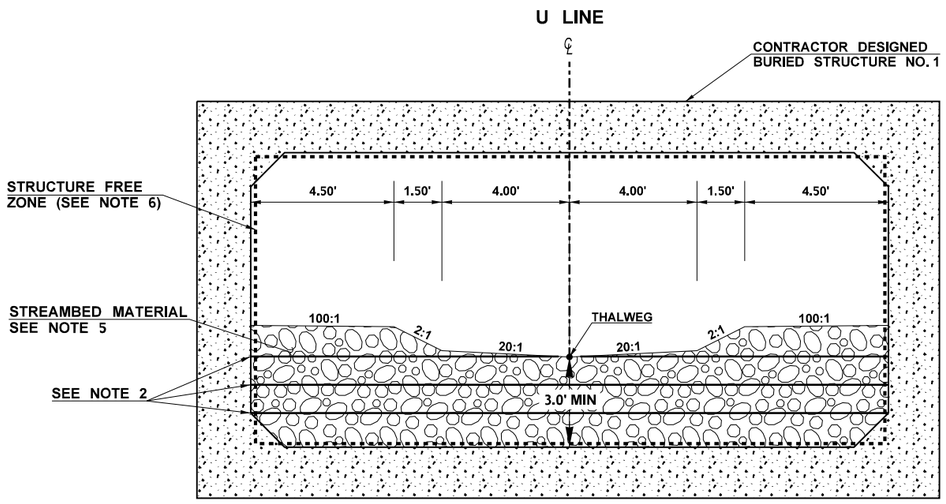
STREAM DETAILS

Plot 1
PLAN REF NO
CD1
SHEET 28 OF 55 SHEETS



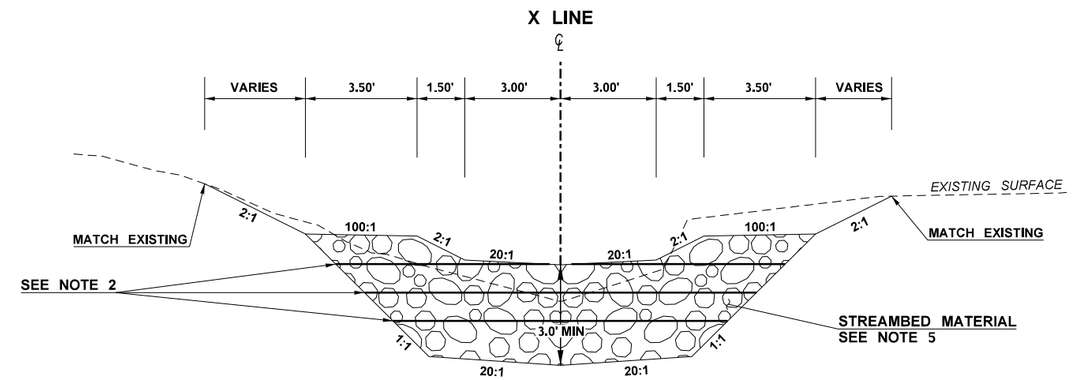
CREEK SECTION U-A

U 41+00.0 TO U 41+36.8
U 41+92.8 TO U 42+30.0
TRANSITION TO MATCH EXISTING CONDITIONS



CREEK SECTION U-B

U 41+36.8 TO U 41+92.8
NOT TO SCALE



CREEK SECTION X-A

X 70+10.5 TO X 70+66.5
X 70+00 TO X 70+10.5 TRANSITION TO MATCH WITH CREEK SECTION U-A

GENERAL NOTES:

1. SLASH FROM TREES TO BE INCORPORATED INTO STREAMBED MIX (NOT SHOWN) WHERE INDICATED IN THE SPECIAL PROVISIONS AND AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR SHALL APPLY STREAMBED SAND AND WATER AT A RATE OF 30 GALLONS PER MINUTE TO EACH LIFT TO FACILITATE FILLING THE INTERSTITAL VOIDS OF THE BLENDED STREAMBED AGGREGATE. SEE STANDARD SPECIFICATION 8-30 "WATER CROSSINGS" FOR MORE DETAILS.
3. SEE STANDARD SPECIFICATIONS 8-30 "WATER CROSSINGS" FOR MIXING AND PLACEMENT OF STREAMBED AGGREGATES. FINAL INSTALLATION WILL PROVIDE A BLENDED AND WELL GRADED MIX OF STREAMBED SEDIMENTS AND STREAMBED COBBLES.
4. FOR AREAS OF STREAM CHANNEL THAT EXCEED 3.0 FEET IN DEPTH, ADDITIONAL LAYERS MAY BE REQUIRED. REPEAT STEPS AS NECESSARY.
5. STREAMBED MATERIAL IS TO CONSIST OF 30% STREAMBED SEDIMENT BY VOLUME, 40% STREAMBED COBBLES 4 IN. BY VOLUME, 20% STREAMBED COBBLES 6 IN. BY VOLUME, AND 10% STREAMBED COBBLES 8 IN. BY VOLUME.
6. SEE STRUCTURE FREE ZONE SHEET FOR STRUCTURE FREE ZONE DETAILS.

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DESIGNED BY	R. BAILEY						
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN — STATE OF WASHINGTON — 47819 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

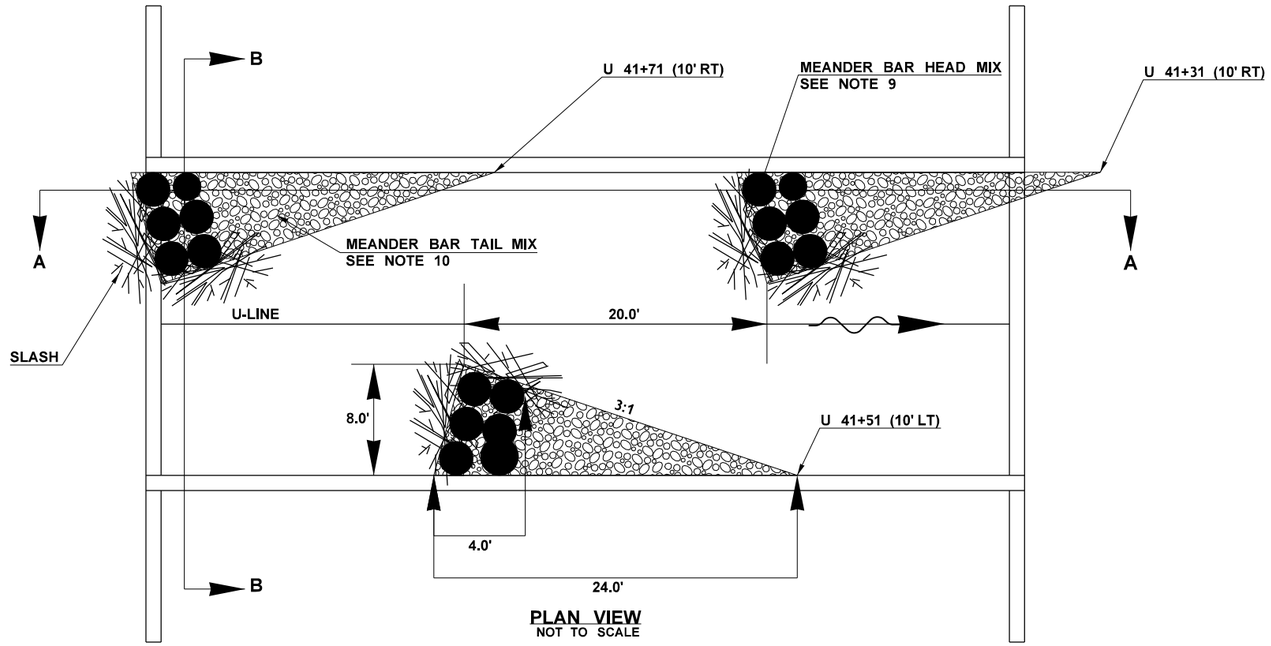
MIKAEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

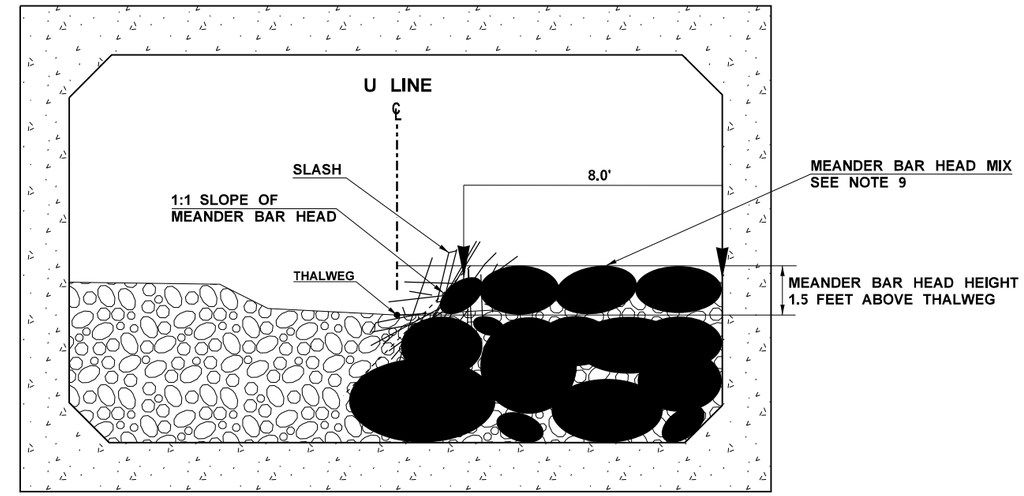
SR 20
UNT TO COAL CREEK
FISH PASSAGE

STREAM DETAILS

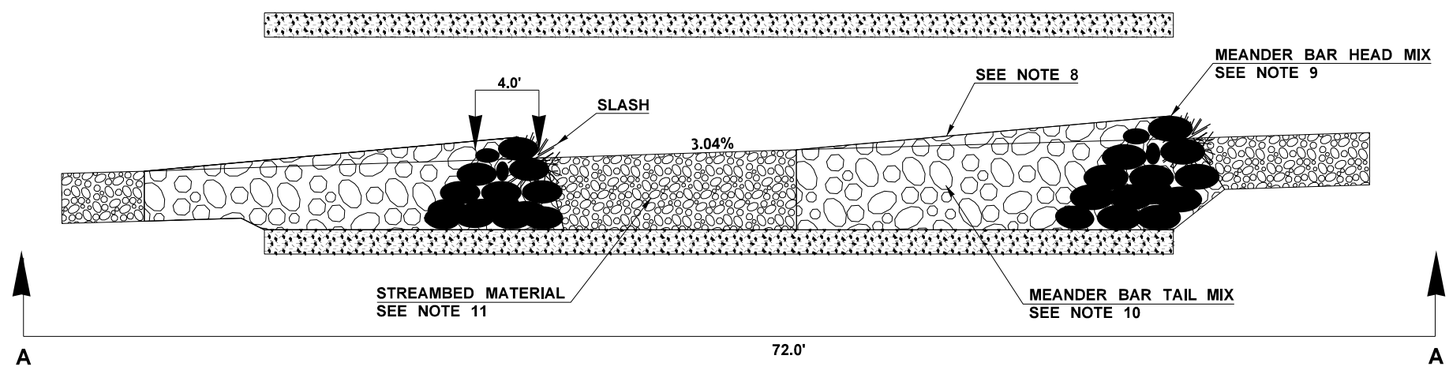
Plot 2
PLAN REF NO
CD2
SHEET 29 OF 55 SHEETS



PLAN VIEW
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION A-A
NOT TO SCALE

GENERAL NOTES:

6. ALL STREAMBED MATERIAL SHALL BE INSTALLED IN 1-FOOT LIFTS, OR AS NOTED ABOVE FLOOD PLAIN EXTENSION, AND FOLLOW DETAIL(S) "STREAMBED MATERIAL PLACEMENT." SEE CD1.
7. FOR STRUCTURE FREE ZONE INFORMATION, SEE STRUCTURE FREE ZONE SHEET SFZ1.
8. SLOPE MEANDER BAR MATERIAL FROM TOP OF BOULDERS TO MATCH STREAMBED GRADE OVER LENGTH OF MEANDER BAR.
9. MEANDER BAR HEAD MIX IS TO CONSIST OF 20% STREAMBED SEDIMENT BY VOLUME AND 80% STREAMBED BOULDER TYPE ONE BY VOLUME.
10. MEANDER BAR TAIL MIX IS TO CONSIST OF 20% STREAMBED SEDIMENT BY VOLUME AND 80% STREAMBED COBBLES 12 IN. BY VOLUME.
11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.

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PLOTTED BY	bailerv						
DESIGNED BY	F. BRESSAN				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. ESPINOZA						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HELMAN — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

MICHAEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

MEANDER BAR DETAILS

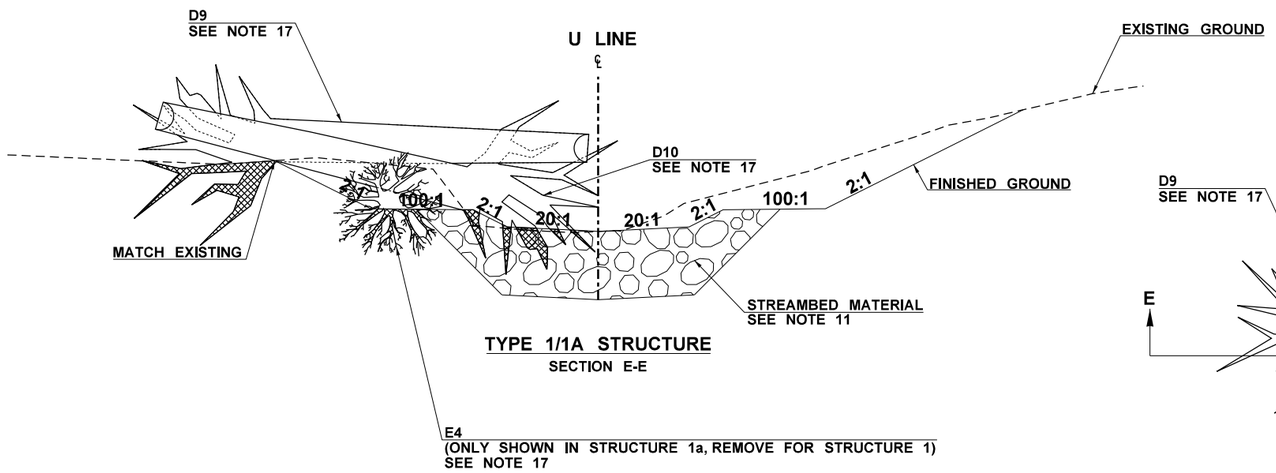
Plot 3
PLAN REF NO
CD3
SHEET 30 OF 55 SHEETS

LARGE WOODY MATERIAL (LWM) LOCATION TABLE

LWM NO.	TYPE	IN STREAM FEATURE	STATION	OFFSET (FT.)	ANGLE (DEG)	LENGTH (FT.)	DIAMETER AT BREAST HEIGHT (FT.)
D1	1	ROOT WAD	U 40+50.0	5.0 LT	240	20	1.25
D2	1	STEM	U 40+52.0	15.0 LT	120	20	1.25
B1	2	STEM	U 40+54.0	16.0 RT	250	25	1.5
B2	2	STEM	U 40+56.0	15.0 RT	290	25	1.5
E1	2	ALL	U 40+56.0	1.0 RT	175	10	1.0
D3	1A	ROOT WAD	U 40+68.0	5.0 LT	240	20	1.25
D4	1A	STEM	U 40+73.0	13.0 LT	120	20	1.25
E2	1A	ALL	U 40+72.0	4.0 LT	5	10	1.0
D5	1	STEM	U 40+68.0	12.0 RT	240	20	1.25
D6	1	ROOT WAD	U 40+72.0	4.0 RT	120	20	1.25
D7	1A	ROOT WAD	U 40+81.0	2.0 LT	240	20	1.25
D8	1A	STEM	U 40+81.0	11.0 LT	120	20	1.25
E3	1A	ALL	U 40+86.0	2.0 LT	5	10	1.0
D9	1A	STEM	U 40+97.0	16.0 RT	240	20	1.25
D10	1A	ROOT WAD	U 40+96.0	7.0 RT	120	20	1.25
E4	1A	ALL	U 40+99.0	9.0 RT	355	10	1.0
C1	3	ALL	U 40+97.0	3.0 LT	182	25	1.25
C2	3	ALL	U 41+12.0	5.0 LT	2	25	1.25
A1	3	ALL	U 40+99.0	3.0 RT	220	30	1.5
A2	3	ROOT WAD	U 41+06.0	2.0 RT	220	30	1.5
C3	4	ALL	U 41+28.0	7.0 RT	2	25	1.25
D11	4	STEM	U 41+24.0	13.0 RT	320	20	1.25
B3	2	STEM	U 41+23.0	18.0 LT	110	25	1.5
B4	2	STEM	U 41+28.0	15.0 LT	70	25	1.5
E5	2	ALL	U 41+21.0	1.0 LT	185	10	1.0
C4	3	ALL	U 42+10.0	6.0 RT	182	25	1.25
C5	3	ALL	U 42+25.0	6.0 RT	2	25	1.25
A3	3	ROOT WAD	U 42+09.0	1.0 RT	140	30	1.5
A4	3	ROOT WAD	U 42+14.0	3.0 LT	140	30	1.5
D12	5	STEM	U 42+27.0	10.0 LT	10	20	1.25
D13	5	STEM	U 42+25.0	13.0 LT	30	20	1.25
D14	5	ALL	U 42+43.0	4.0 LT	20	20	1.25
D15	5	ALL	U 42+41.0	6.0 LT	40	20	1.25
B5	6	ROOT WAD	U 41+97.0	5.5 LT	250	25	1.5
B6	6	STEM	X 70+20.0	15.0 LT	120	25	1.5
B7	6	ROOT WAD	X 70+42.0	1.0 RT	45	25	1.5
B8	6	STEM	X 70+22.0	18.0 LT	80	25	1.5

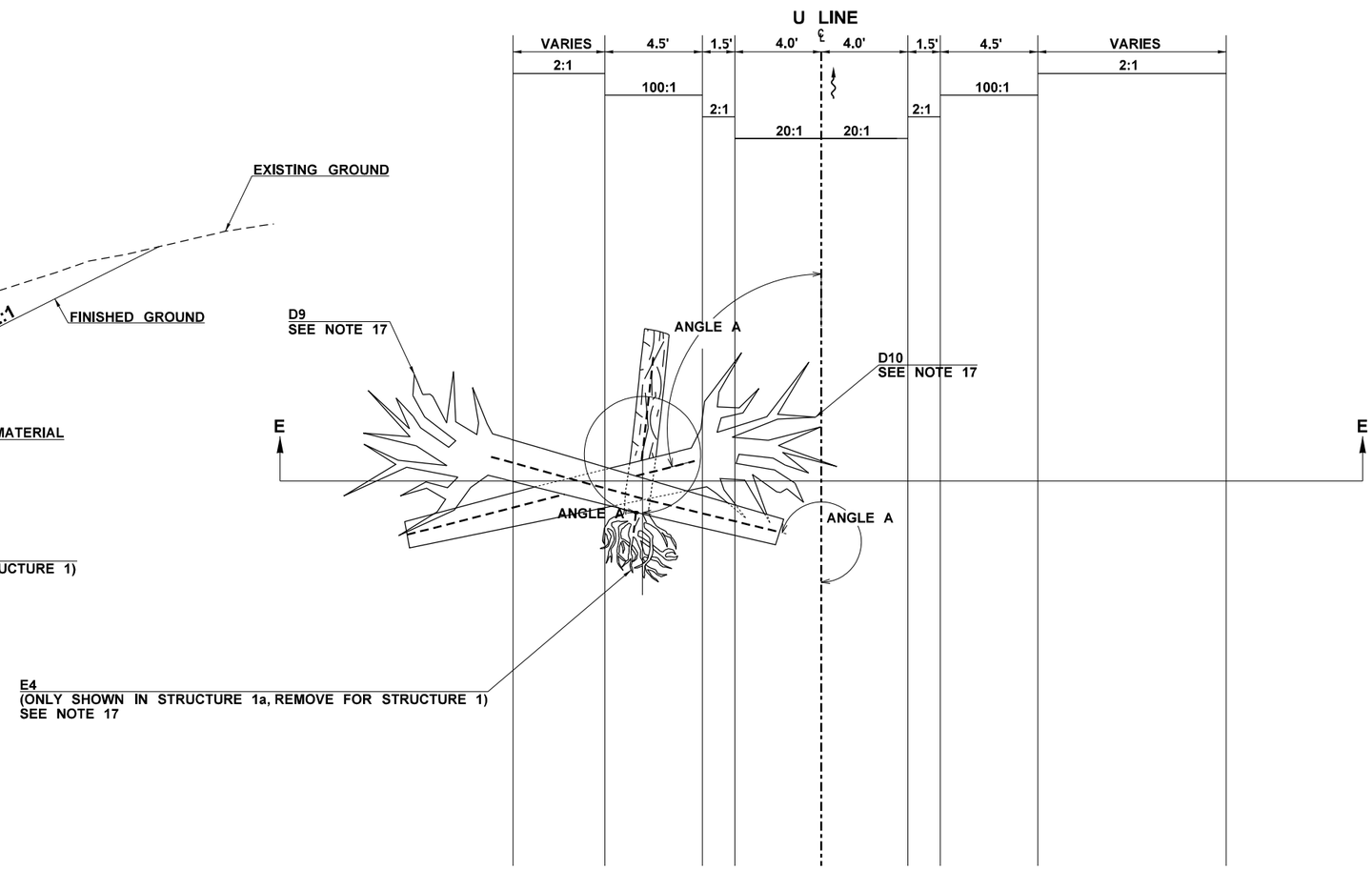
GENERAL NOTES:

12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR).
14. DELTA ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. WIDTH/DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.



TYPE 1/1A STRUCTURE

SECTION E-E



WOODY MATERIAL TYPE 1/1A STRUCTURE PLAN VIEW

GENERAL NOTES:

11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.
12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR). IF LOG TYPE DOES NOT CONTAIN A ROOT WAD, POINT OF REFERENCE IS THE END OF LOG AT THE LARGEST DIAMETER END SECTION.
14. ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.
17. REFER TO TABLE ON SHEET CD4 FOR PLACEMENT OF LWM NOS. D1, D2, D3, D4, D5, D6, D7, D8, E1, E2, AND E3.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0230_XL0000_PS_CD.dgn						
TIME	10:21:48 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	1/8/2024				10	WASH	
PLOTTED BY	bailerv				JOB NUMBER		
DESIGNED BY	F. BRESSAN				23A021		
ENTERED BY	R. ESPINOZA						
CHECKED BY	E. MARR				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN, STATE OF WASHINGTON, 41819, REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

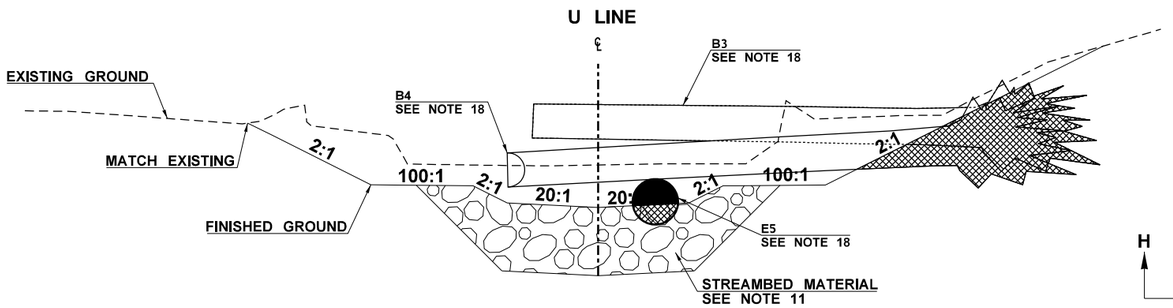
MICHAEL PETER LAMAY, STATE OF WASHINGTON, 52141, REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

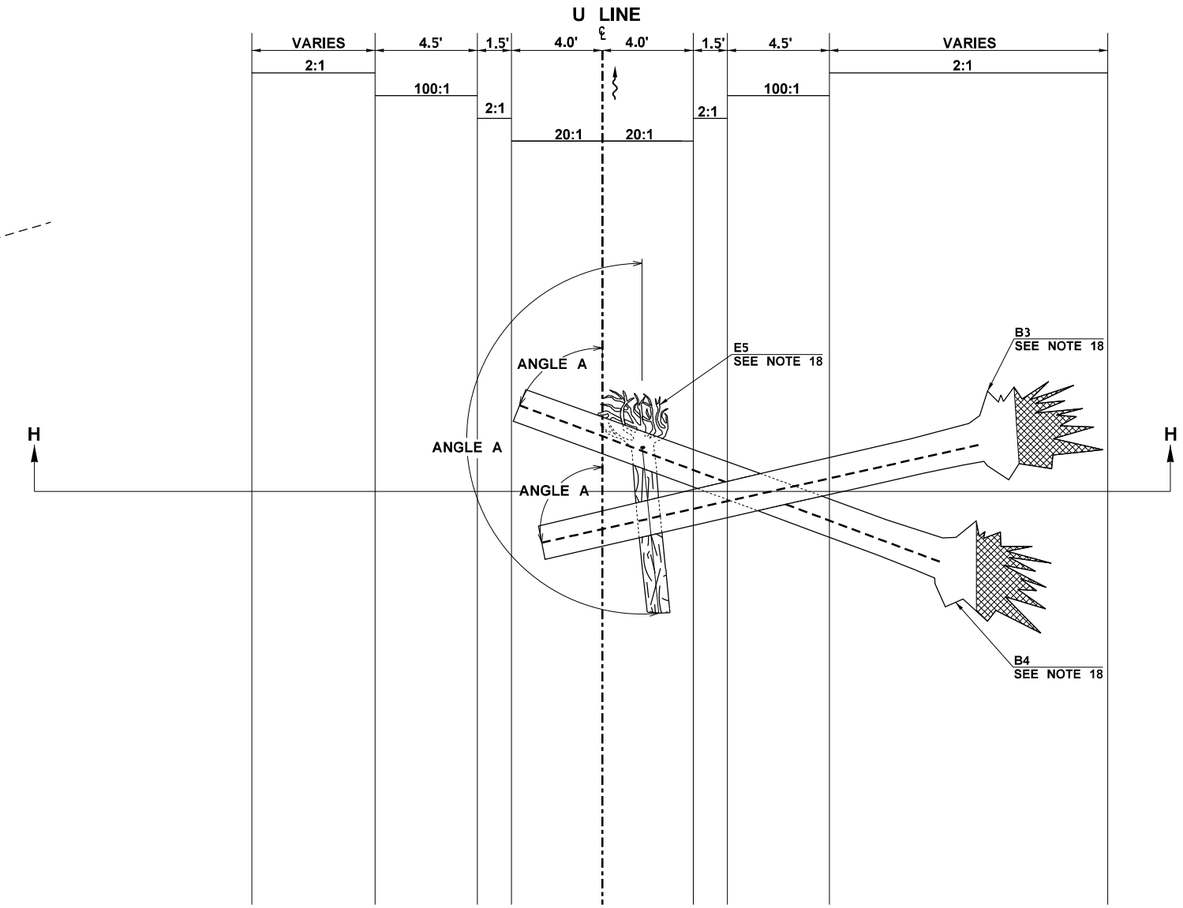
WOODY MATERIAL DETAILS

Plot 5
PLAN REF NO
CD5
SHEET 32 OF 55 SHEETS



TYPE 2 STRUCTURE

SECTION H-H



WOODY MATERIAL TYPE 2 STRUCTURE PLAN VIEW

GENERAL NOTES:

11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.
12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR). IF LOG TYPE DOES NOT CONTAIN A ROOT WAD, POINT OF REFERENCE IS THE END OF LOG AT THE LARGEST DIAMETER END SECTION.
14. ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.
18. REFER TO TABLE ON SHEET CD4 FOR PLACEMENT OF LWM NOS. B1, B2, AND E1.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0230_XL0000_PS_CD.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	10:22:05 AM				10	WASH	
DATE	1/8/2024				JOB NUMBER 23A021		
PLOTTED BY	bailerv						
DESIGNED BY	F. BRESSAN				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. ESPINOZA						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN · STATE OF WASHINGTON · 41819 · REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

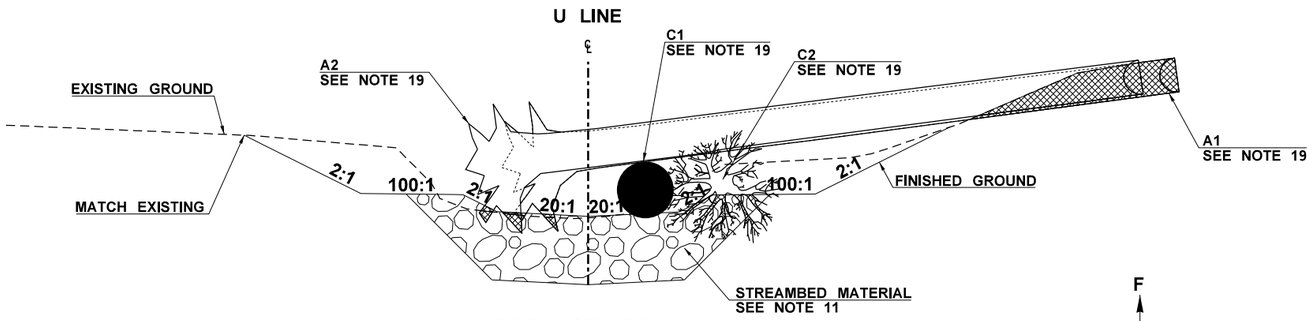
MICHAEL PETER LAMAY · STATE OF WASHINGTON · 52141 · REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

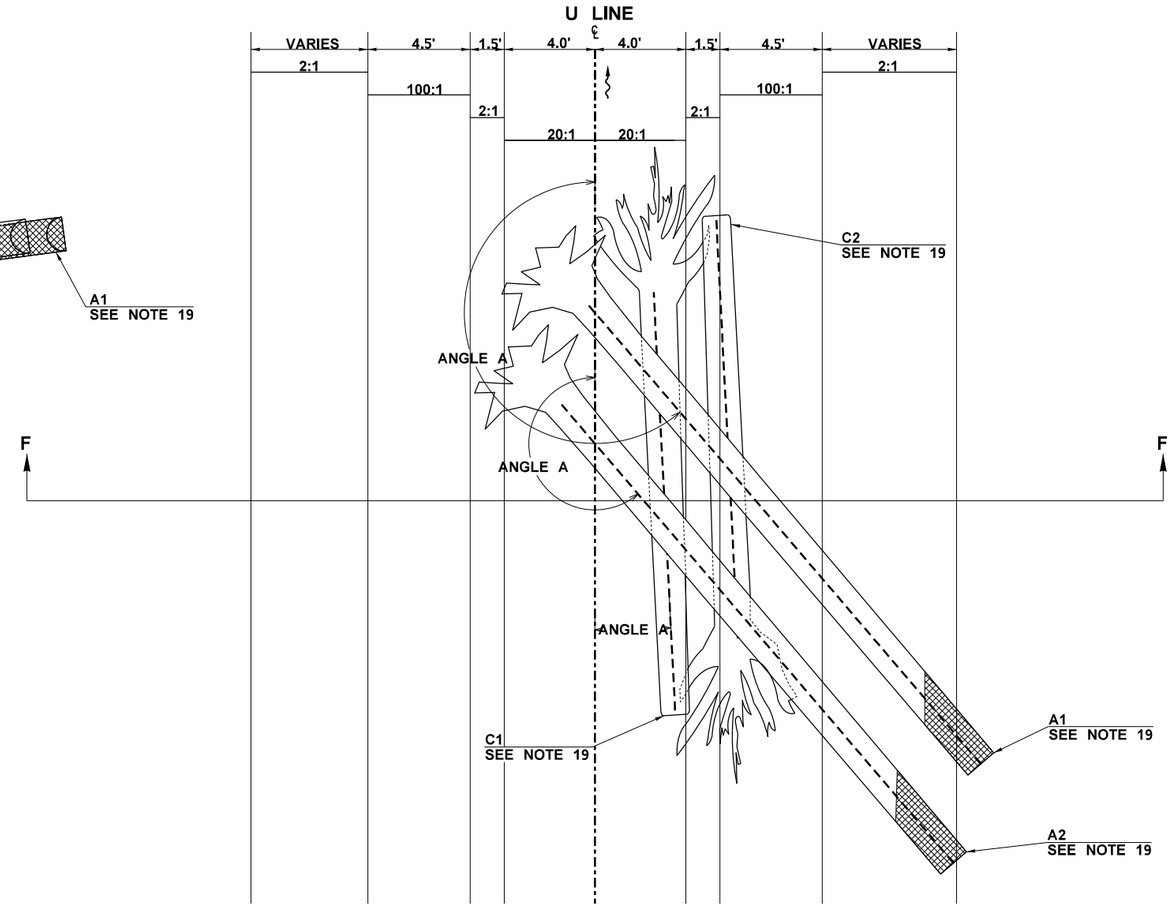
WOODY MATERIAL DETAILS

Plot 6
PLAN REF NO
CD6
SHEET 33 OF 55 SHEETS



TYPE 3 STRUCTURE

SECTION F-F



WOODY MATERIAL TYPE 3 STRUCTURE PLAN VIEW

GENERAL NOTES:

11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.
12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR). IF LOG TYPE DOES NOT CONTAIN A ROOT WAD, POINT OF REFERENCE IS THE END OF LOG AT THE LARGEST DIAMETER END SECTION.
14. ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.
19. REFER TO TABLE ON SHEET CD4 FOR PLACEMENT OF LWM NOS. A3, A4, C4, AND C5.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0230_XL0000_PS_CD.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	10:22:18 AM				10	WASH	
DATE	1/8/2024				JOB NUMBER		
PLOTTED BY	bailerv				23A021		
DESIGNED BY	F. BRESSAN				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. ESPINOZA						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN — STATE OF WASHINGTON — 41819 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

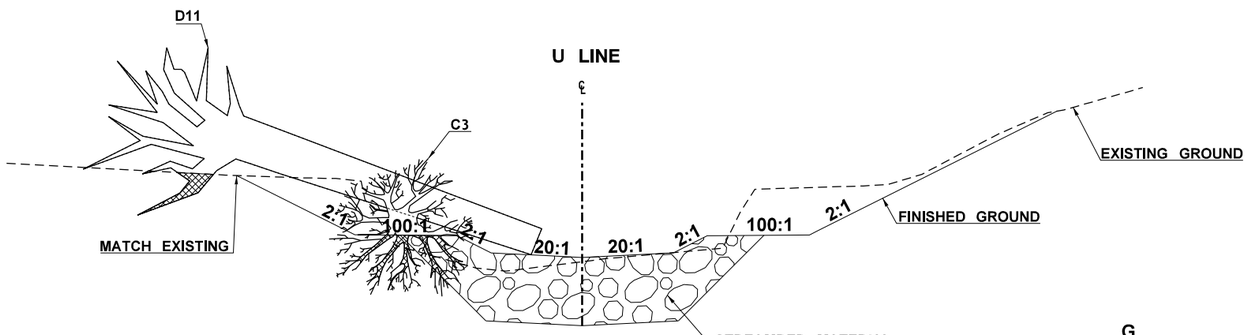
MICHAEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

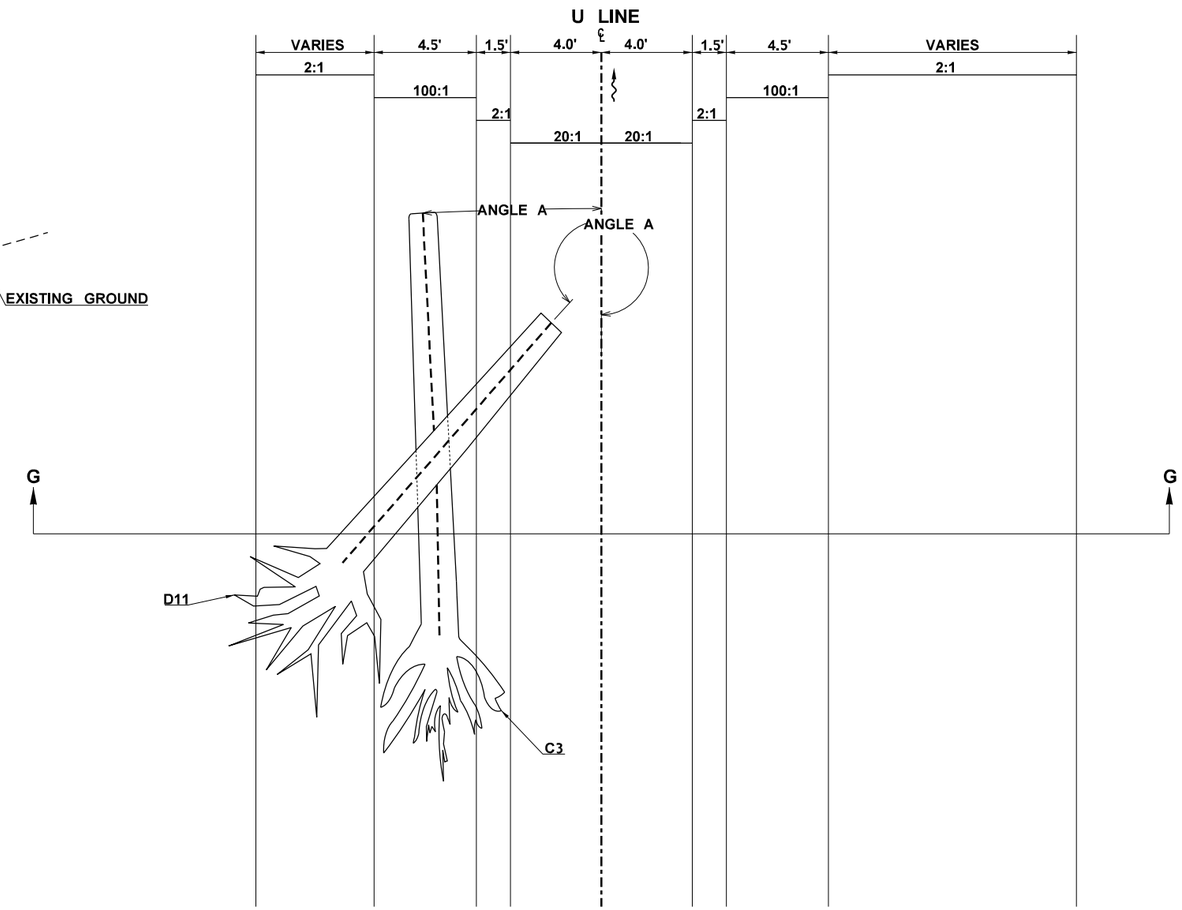
WOODY MATERIAL DETAILS

Plot 7
PLAN REF NO
CD7
SHEET 34 OF 55 SHEETS



TYPE 4 STRUCTURE

SECTION G-G



WOODY MATERIAL TYPE 4 STRUCTURE PLAN VIEW

GENERAL NOTES:

11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.
12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR). IF LOG TYPE DOES NOT CONTAIN A ROOT WAD, POINT OF REFERENCE IS THE END OF LOG AT THE LARGEST DIAMETER END SECTION.
14. ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0230_XL0000_PS_CD.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	10:22:32 AM				10	WASH	
DATE	1/8/2024				JOB NUMBER		
PLOTTED BY	bailerv				23A021		
DESIGNED BY	F. BRESSAN				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. ESPINOZA						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN STATE OF WASHINGTON 41819 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

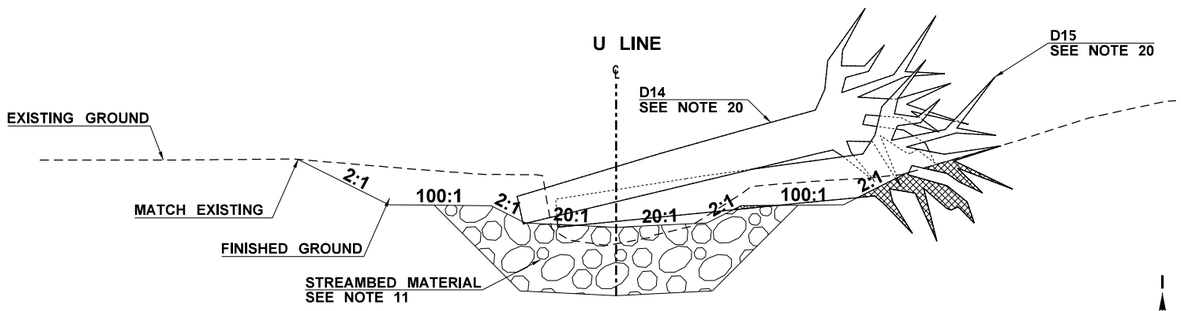
MIKKEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

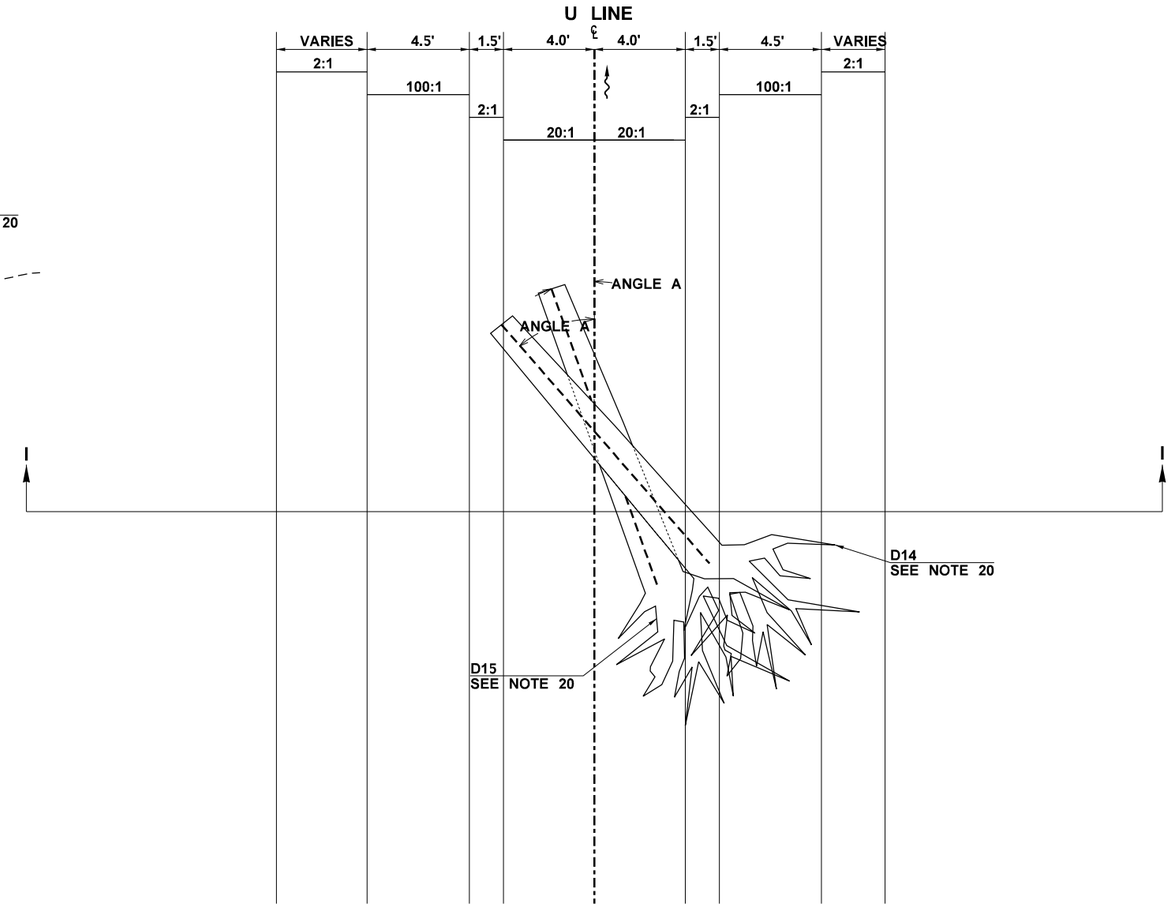
WOODY MATERIAL DETAILS

Plot 8
PLAN REF NO
CD8
SHEET 35 OF 55 SHEETS



TYPE 5 STRUCTURE

SECTION I-I



WOODY MATERIAL TYPE 5 STRUCTURE PLAN VIEW

GENERAL NOTES:

11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.
12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR). IF LOG TYPE DOES NOT CONTAIN A ROOT WAD, POINT OF REFERENCE IS THE END OF LOG AT THE LARGEST DIAMETER END SECTION.
14. ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.
20. REFER TO TABLE ON SHEET CD4 FOR PLACEMENT OF LWM NOS. D12 AND D13.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0230_XL0000_PS_CD.dgn						
TIME	10:34:01 AM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	1/8/2024						
PLOTTED BY	bailerv				JOB NUMBER 23A021		
DESIGNED BY	F. BRESSAN						
ENTERED BY	R. ESPINOZA				CONTRACT NO.		LOCATION NO.
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN STATE OF WASHINGTON 41819 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

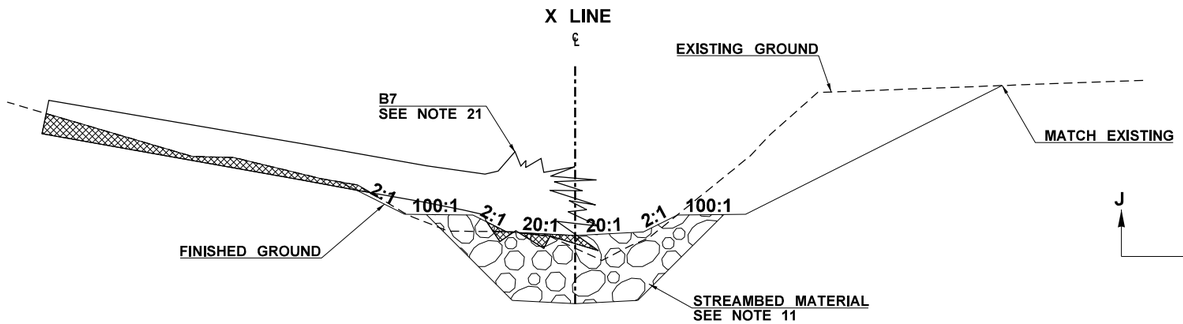
MICHAEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

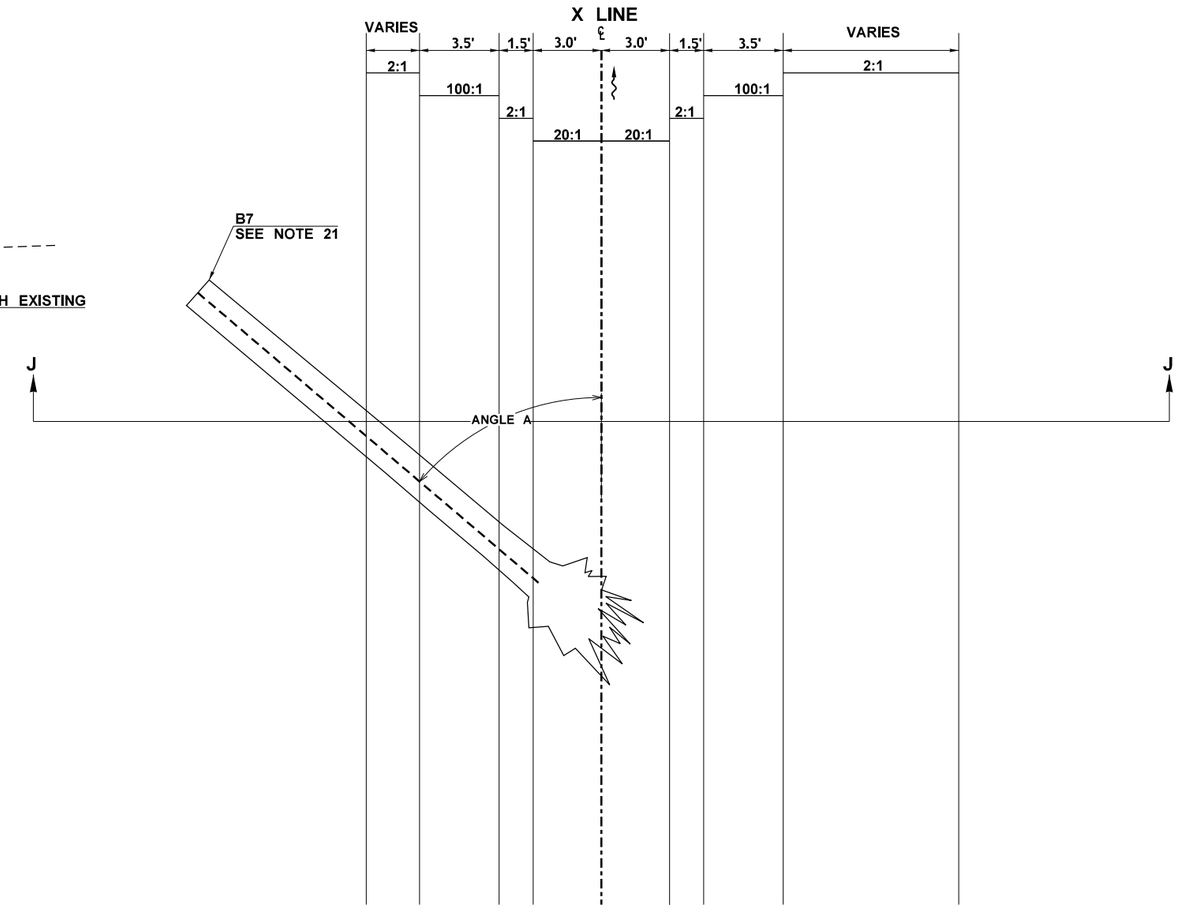
WOODY MATERIAL DETAILS

Plot 9
PLAN REF NO
CD9
SHEET 36 OF 55 SHEETS



TYPE 6 STRUCTURE

SECTION J-J



WOODY MATERIAL TYPE 6 STRUCTURE PLAN VIEW

GENERAL NOTES:

11. SEE CD1 FOR STREAMBED MATERIAL DETAILS.
12. LWM PLACEMENT SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
13. LWM POINT OF REFERENCE IS LOCATED IN THE CENTER OF THE LOG JUST ABOVE THE ROOT WAD (COLLAR). IF LOG TYPE DOES NOT CONTAIN A ROOT WAD, POINT OF REFERENCE IS THE END OF LOG AT THE LARGEST DIAMETER END SECTION.
14. ANGLE IS MEASURED FROM THE END OF LOG OPPOSITE OF THE POINT OF REFERENCE AND AS THE POINT OF REFERENCE IS PLACED IN RELATION TO THE THALWEG.
15. DIAMETER OF LWM IS MEASURED AT BREAST HEIGHT (DBH).
16. SEE SPECIAL PROVISIONS "WOODY MATERIAL" FOR DESCRIPTION, MATERIALS, AND CONSTRUCTION REQUIREMENTS.
21. REFER TO TABLE ON SHEET CD4 FOR PLACEMENT OF LWM NOS. B5, B6, AND B8.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0230_XL0000_PS_CD.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	10:23:00 AM				10	WASH	
DATE	1/8/2024				JOB NUMBER		
PLOTTED BY	bailerv				23A021		
DESIGNED BY	F. BRESSAN				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. ESPINOZA						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

JULIE HEILMAN STATE OF WASHINGTON 41819 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

MIKAEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
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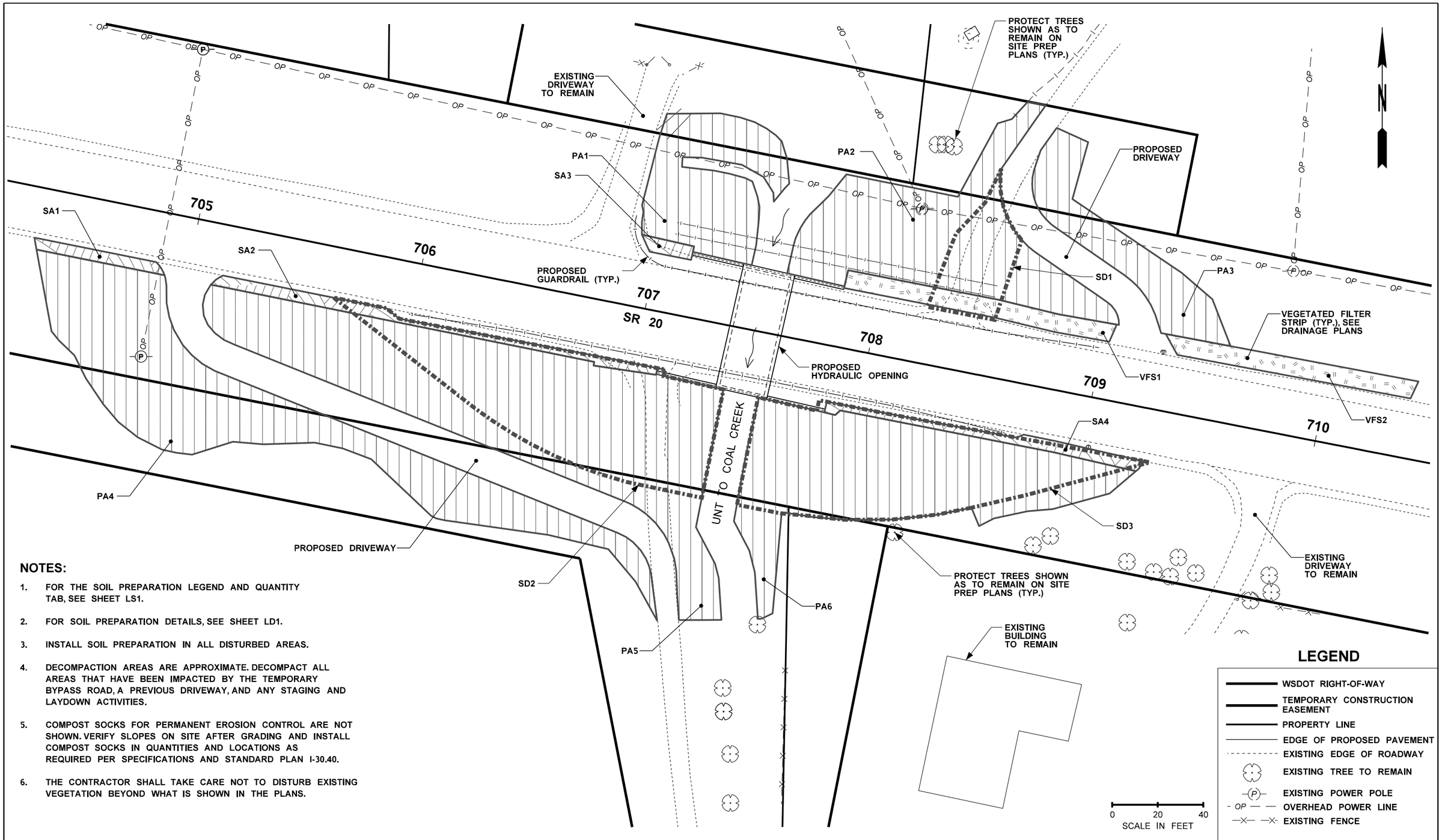
Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

WOODY MATERIAL DETAILS

Plot 10
PLAN REF NO
CD10
SHEET 37 OF 55 SHEETS



NOTES:

1. FOR THE SOIL PREPARATION LEGEND AND QUANTITY TAB, SEE SHEET LS1.
2. FOR SOIL PREPARATION DETAILS, SEE SHEET LD1.
3. INSTALL SOIL PREPARATION IN ALL DISTURBED AREAS.
4. DECOMPACTION AREAS ARE APPROXIMATE. DECOMPACT ALL AREAS THAT HAVE BEEN IMPACTED BY THE TEMPORARY BYPASS ROAD, A PREVIOUS DRIVEWAY, AND ANY STAGING AND LAYDOWN ACTIVITIES.
5. COMPOST SOCKS FOR PERMANENT EROSION CONTROL ARE NOT SHOWN. VERIFY SLOPES ON SITE AFTER GRADING AND INSTALL COMPOST SOCKS IN QUANTITIES AND LOCATIONS AS REQUIRED PER SPECIFICATIONS AND STANDARD PLAN I-30.40.
6. THE CONTRACTOR SHALL TAKE CARE NOT TO DISTURB EXISTING VEGETATION BEYOND WHAT IS SHOWN IN THE PLANS.

LEGEND

- WSDOT RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PROPERTY LINE
- EDGE OF PROPOSED PAVEMENT
- EXISTING EDGE OF ROADWAY
- EXISTING TREE TO REMAIN
- EXISTING POWER POLE
- OP — — OVERHEAD POWER LINE
- EXISTING FENCE

FILE NAME	\\wsdot.loc\nw\CAE_DATA\412006\MS8384 SR 20 Childs_UNT to Coal Creek\CAD\ContractPlans\0000_MS8384_PS_LS.dgn
TIME	11:30:12 AM
DATE	1/3/2024
PLOTTED BY	Koepps
DESIGNED BY	B. HADDOX
ENTERED BY	B. HADDOX
CHECKED BY	L. JUNGBLUTH
PROJ. ENGR.	M. LAMAY
REGIONAL ADM.	B. NIELSEN

REVISION | DATE | BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

STATE OF WASHINGTON — LINDSEY A. JUNGBLUTH — NO. 1483 — EXP. 11/05/2025 — LICENSED LANDSCAPE ARCHITECT

SEE SHEET CT1
DATE

Washington State Department of Transportation

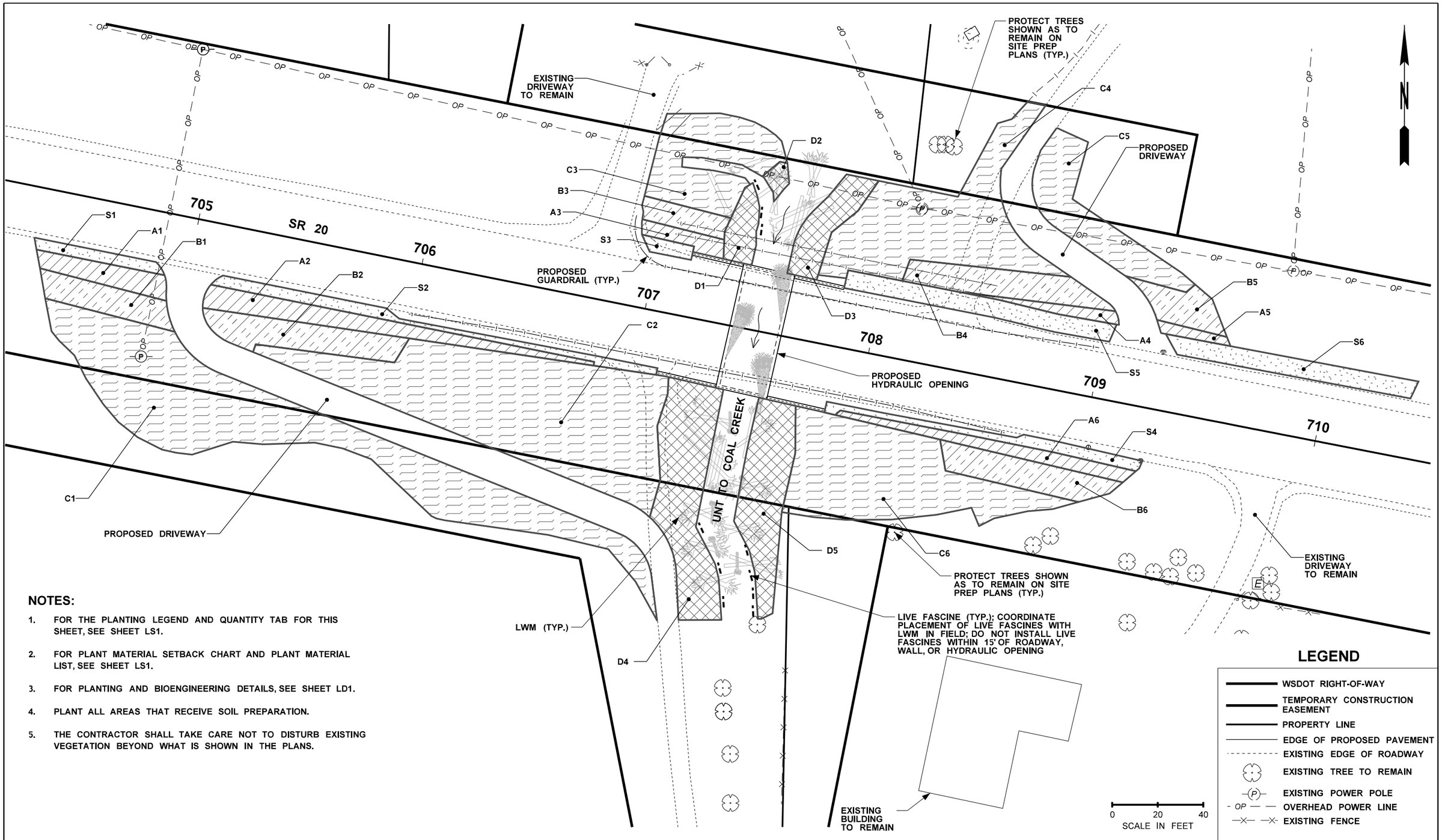
SR 20
UNT TO COAL CREEK
FISH PASSAGE

SOIL PREPARATION PLAN

Plot 1

LP1

SHEET 38 OF 55 SHEETS



NOTES:

1. FOR THE PLANTING LEGEND AND QUANTITY TAB FOR THIS SHEET, SEE SHEET LS1.
2. FOR PLANT MATERIAL SETBACK CHART AND PLANT MATERIAL LIST, SEE SHEET LS1.
3. FOR PLANTING AND BIOENGINEERING DETAILS, SEE SHEET LD1.
4. PLANT ALL AREAS THAT RECEIVE SOIL PREPARATION.
5. THE CONTRACTOR SHALL TAKE CARE NOT TO DISTURB EXISTING VEGETATION BEYOND WHAT IS SHOWN IN THE PLANS.

LEGEND

- WSDOT RIGHT-OF-WAY
- TEMPORARY CONSTRUCTION EASEMENT
- PROPERTY LINE
- EDGE OF PROPOSED PAVEMENT
- EXISTING EDGE OF ROADWAY
- EXISTING TREE TO REMAIN
- EXISTING POWER POLE
- OP — — OVERHEAD POWER LINE
- —X— —X— EXISTING FENCE

FILE NAME	\\wsdot.loc\nw\CAE_DATA\412006\MS8384 SR 20 Childs_UNT to Coal Creek\CAD\ContractPlans\0000_MS8384_PS_LS.dgn				REGION NO.	STATE	FED.AID PROJ.NO.
TIME	11:30:28 AM				10	WASH	
DATE	1/3/2024				JOB NUMBER 23A021		
PLOTTED BY	Koepps						
DESIGNED BY	B. HADDOX				CONTRACT NO.		LOCATION NO.
ENTERED BY	B. HADDOX						
CHECKED BY	L. JUNGBLUTH						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

STATE OF WASHINGTON LINDSEY A. JUNGBLUTH NO. 1483 EXP. 11/05/2025 LICENSED LANDSCAPE ARCHITECT

SEE SHEET CT1
DATE

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

PLANTING PLAN

Plot 2

LP2

SHEET 39 OF 55 SHEETS

PLANT MATERIAL SETBACK CHART

THIS CHART SUPPLEMENTS SECTION 8.02.3(7) OF THE STANDARD SPECIFICATIONS. SETBACKS APPLY UNLESS OTHERWISE ADJUSTED BY ENGINEER DURING PLANT STAKING OR LAYOUT. DISTANCES BELOW ARE TO THE STEM OR TRUNK OF THE PLANT BEING INSTALLED.

	GUARDRAIL BARRIER	EDGE OF ROADWAY	WALLS	FENCE	SIGNS & LIGHTING	EXISTING TREE TRUNK	EXISTING VEGETATION MASS	OVERHEAD POWER	STRUCTURE	ACCESS ROAD	SIDEWALK
GROUNDCOVER *	5'	5'	3'	1.5'	1.5'	5'	5'	-	5'	5'	3'
SMALL SHRUB **	5'	10'	5'	3'	6'	5'	5'	-	5'	5'	5'
TALL SHRUB ***	10'	15'	10'	3'	6'	10'	10'	10'	10'	15'	10'
DECIDUOUS TREE	15'	20'	15'	10'	15'	15'	10'	20'	10'	15'	15'
EVERGREEN TREE	15'	20'	15'	10'	15'	15'	10'	20'	10'	15'	15'

PLANT MATERIAL LIST

COMMON NAME	BOTANICAL NAME	QUANTITY	SIZE	ROOT CONDITION	REMARKS
EVERGREEN TREES					
SITKA SPRUCE	PICEA SITCHENSIS	22	MIN 18" HT	NO. 2 CONT.	SECTION 9-14.7(2), SINGLE LEADER
DOUGLAS FIR	PSEUDOTSUGA MENZIESII	66	MIN 18" HT	NO. 2 CONT.	SECTION 9-14.7(2), SINGLE LEADER
WESTERN RED CEDAR	THUJA PLICATA	76	MIN 18" HT	NO. 2 CONT.	SECTION 9-14.7(2), SINGLE LEADER
SHRUBS					
VINE MAPLE***	ACER CIRCINATUM	96	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
BITTER CHERRY***	PRUNUS EMARGINATA VAR. MOLLIS	40	MIN 18" HT	NO. 2 CONT.	SECTION 9-14.7(2)
BLACK HAWTHORN***	CRATAEGUS DOUGLASII	97	MIN 18" HT	NO. 2 CONT.	SECTION 9-14.7(2)
KINNIKINNICK*	ARCTOSTAPHYLOS UVA-URSI	237	MIN 6" HT	NO. 1 CONT.	SECTION 9-14.7(2), FULL CONTAINER; SEE CLUSTER PLANTING LAYOUT DETAIL
SALAL**	GAULTHERIA SHALLON	360	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), FULL CONTAINER
CREEPING OREGON GRAPE*	MAHONIA REPENS	312	MIN 6" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
PACIFIC NINEBARK***	PHYSOCARPUS CAPITATUS	92	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
BALDHIP ROSE**	ROSA GYMNOCARPA	123	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE CANE MIN.
NOOTKA ROSE***	ROSA NUTKANA	84	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE CANE MIN.
CLUSTERED ROSE**	ROSA PISOCARPA	55	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE CANE MIN.
THIMBLEBERRY***	RUBUS PARVIFLORUS	329	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
SALMONBERRY***	RUBUS SPECTABILIS	305	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
RED ELDERBERRY***	SAMBUCUS RACEMOSA	170	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
SNOWBERRY***	SYMPHORICARPOS ALBUS	303	MIN 12" HT	NO. 1 CONT.	SECTION 9-14.7(2), THREE STEM MIN.
LIVE FASCINES					
RED-OSIER DOGWOOD	CORNUS STOLONIFERA	5	5 FT	12" DIAM. FASCINE	SECTION 8-02.3(15)A, 9-14.7(1), LIVE CUTTING
SITKA WILLOW	SALIX SITCHENSIS	5	5 FT	12" DIAM. FASCINE	SECTION 8-02.3(15)A, 9-14.7(1), LIVE CUTTING
LIVE STAKES (FOR ANCHORING LIVE FASCINES)					
RED-OSIER DOGWOOD	CORNUS STOLONIFERA	15	3 FT	LIVE STAKE	9-14.7(1), LIVE CUTTING
SITKA WILLOW	SALIX SITCHENSIS	15	3 FT	LIVE STAKE	9-14.7(1), LIVE CUTTING

NOTE: For Pollinator Seed Mix, see specifications.

SOIL PREPARATION QUANTITIY TAB - LP1

SYMBOL	ITEM	QTY (SY)					
SD - SOIL DECOMPACTION		SD1	SD2	SD3			
	SOIL DECOMPACTION, 18" DEPTH	150	665	665			
PA - PLANTING AREA SOIL PREPARATION		PA1	PA2	PA3	PA4	PA5	PA6
	SOIL AMENDMENT, 3" DEPTH BARK OR WOOD CHIP MULCH, 3" DEPTH	330	585	240	835	1160	725
SA - SEEDING AREA SOIL PREPARATION		SA1	SA2	SA3	SA4		
	FINE COMPOST, 3" DEPTH	30	80	15	60		
VFS - VEGETATED FILTER STRIP SOIL PREPARATION		VFS1	VFS2				
	FINE COMPOST, 3" DEPTH	105	95				
LIVE FASCINES							
	LIVE FASCINES	10					

PLANTING QUANTITY TAB - LP2

SYMBOL	ITEM	FT O.C.	QTY					
PLANTING MIX A (4' O.C. TRIANGULAR SPACING)			A1	A2	A3	A4	A5	A6
	KINNIKINNICK*	2	45	90	21	18	12	51
	SALAL**	4	11	22	5	4	3	12
	CREEPING OREGON GRAPE*	4	17	34	8	7	5	20
PLANTING MIX B (4' O.C. TRIANGULAR SPACING)			B1	B2	B3	B4	B5	B6
	SALAL**	4	8	12	4	11	6	11
	CREEPING OREGON GRAPE*	4	8	12	4	11	6	11
	BALDHIP ROSE**	4	19	28	10	27	14	25
	THIMBLEBERRY***	4	11	16	6	15	8	14
	SNOWBERRY***	4	8	12	4	11	6	11
PLANTING MIX C (4' O.C. TRIANGULAR SPACING)			C1	C2	C3	C4	C5	C6
	BLACK HAWTHORN***	8	23	23	8	20	10	13
	DOUGLAS FIR	8	24	23	1	4	1	13
	WESTERN RED CEDAR	8	24	23	1	4	1	13
	VINE MAPLE***	8	23	22	8	20	10	13
	SALAL**	4	70	68	21	37	17	38
	CREEPING OREGON GRAPE*	4	47	46	14	25	11	26
	NOOTKA ROSE***	4	23	23	7	12	6	13
	THIMBLEBERRY***	4	46	46	14	25	11	26
	SALMONBERRY***	4	70	69	21	37	16	38
	RED ELDERBERRY***	4	47	46	14	25	12	26
	SNOWBERRY***	4	70	68	21	37	16	39
PLANTING MIX D (4' O.C. TRIANGULAR SPACING)			D1	D2	D3	D4	D5	
	BITTER CHERRY***	8	5	3	8	17	7	
	SITKA SPRUCE	8	1	0	1	10	10	
	WESTERN RED CEDAR	8	0	0	1	4	5	
	PACIFIC NINEBARK***	4	7	2	14	40	29	
	CLUSTERED ROSE**	4	5	1	8	24	17	
	THIMBLEBERRY***	4	7	2	13	40	29	
	SALMONBERRY***	4	4	1	8	24	17	
SEEDING AREA S			S1	S2	S3	S4	S5	S6
	SEEDING, FERTILIZING, AND MULCHING POLLINATOR SEED MIX	-	30	80	15	60	105	95

FILE NAME	\\wsdot.loc\nw\CAE_DATA\412006\MS8384 SR 20 Childs_UNT to Coal Creek\CAD\ContractPlans\0000_MS8384_PS_LS.dgn				
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DATE	1/3/2024				
PLOTTED BY	Koepps	JOB NUMBER 23A021			
DESIGNED BY	B. HADDOX				
ENTERED BY	B. HADDOX				
CHECKED BY	L. JUNGBLUTH	CONTRACT NO.		LOCATION NO.	
PROJ. ENGR.	M. LAMAY				
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY	

STATE OF WASHINGTON LINDSEY A. JUNGBLUTH NO. 1483 EXP. 11/05/2025 LICENSED LANDSCAPE ARCHITECT

SEE SHEET CT1
DATE

Washington State Department of Transportation

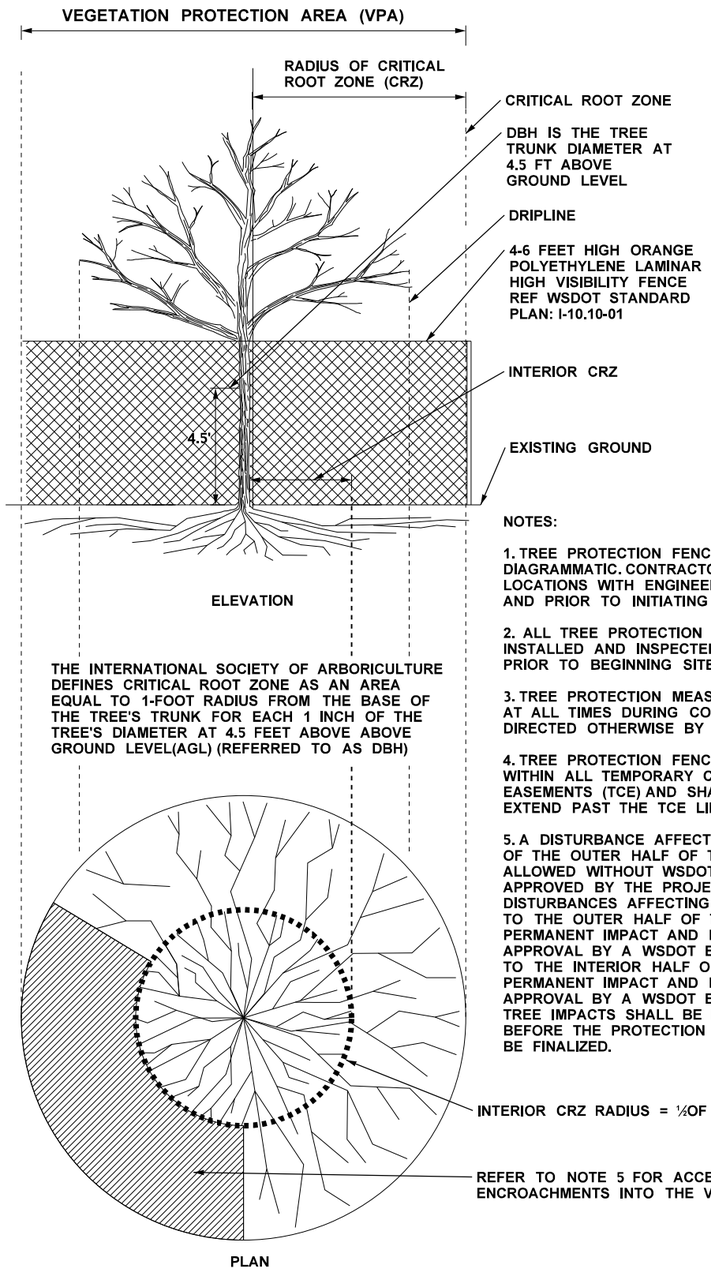
SR 20
UNT TO COAL CREEK
FISH PASSAGE

LANDSCAPE SCHEDULE

Plot 3

LS1

SHEET 40 OF 55 SHEETS



NOTES:

1. TREE PROTECTION FENCING SHOWN ON PLANS IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY LOCATIONS WITH ENGINEER PRIOR TO INSTALLATION AND PRIOR TO INITIATING CONSTRUCTION.

2. ALL TREE PROTECTION MEASURES SHALL BE INSTALLED AND INSPECTED BY WSDOT ENGINEER PRIOR TO BEGINNING SITE DISTURBING ACTIVITIES.

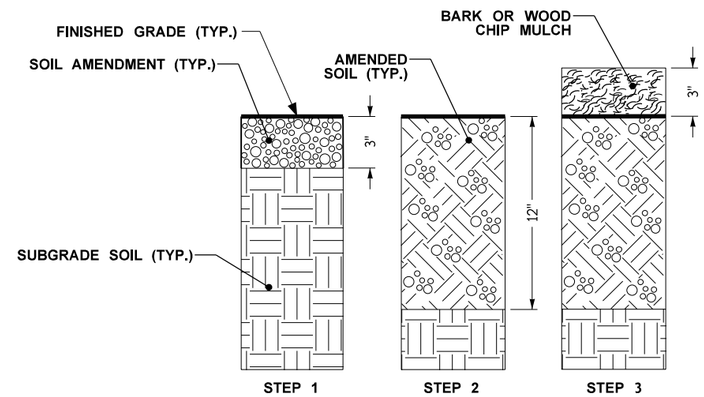
3. TREE PROTECTION MEASURES SHALL REMAIN INTACT AT ALL TIMES DURING CONSTRUCTION UNLESS DIRECTED OTHERWISE BY WSDOT ENGINEER.

4. TREE PROTECTION FENCING SHALL REMAIN WITHIN ALL TEMPORARY CONSTRUCTION EASEMENTS (TCE) AND SHALL NOT EXTEND PAST THE TCE LINE.

5. A DISTURBANCE AFFECTING 30 PERCENT OR LESS OF THE OUTER HALF OF THE CRZ, PER TREE, IS ALLOWED WITHOUT WSDOT CONCURRENCE IF APPROVED BY THE PROJECT ARBORIST. ANY DISTURBANCES AFFECTING GREATER THAN 30 PERCENT TO THE OUTER HALF OF THE CRZ IS CONSIDERED A PERMANENT IMPACT AND REQUIRES REVIEW AND APPROVAL BY A WSDOT ENGINEER. ANY DISTURBANCES TO THE INTERIOR HALF OF THE CRZ IS CONSIDERED A PERMANENT IMPACT AND REQUIRES REVIEW AND APPROVAL BY A WSDOT ENGINEER. ALL PERMANENT TREE IMPACTS SHALL BE REVIEWED BY WSDOT BEFORE THE PROTECTION OR REMOVAL STATUS CAN BE FINALIZED.

TREE PROTECTION

NOT TO SCALE



STEP 1

PLACE SOIL AMENDMENT.

STEP 2

INCORPORATE SOIL AMENDMENT TO DEPTH SHOWN.

STEP 3

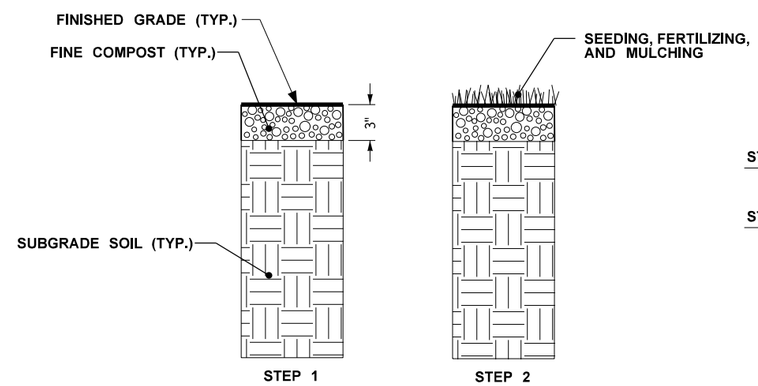
INSTALL BARK OR WOOD CHIP MULCH. DO NOT INSTALL BARK OR WOOD CHIP MULCH IN ANY LOCATION BELOW OHWM.

NOTE: COMPLETE SOIL PREPARATION PRIOR TO PLANTING.

PLANTING AREA SOIL PREPARATION

SECTION VIEW

NOT TO SCALE



STEP 1

PLACE FINE COMPOST.

STEP 2

INSTALL SEEDING, FERTILIZING, AND MULCHING.

SEEDING AREA SOIL PREPARATION

SECTION VIEW

NOT TO SCALE

FILE NAME	\\wsdot.loc\nw\CAE_DATA\412006\MS8384 SR 20 Childs_UNT to Coal Creek\CAD\ContractPlans\0000_MS8384_PS_LS.dgn						
TIME	11:18:04 AM				REGION NO.	STATE	FED.AID PROJ.NO.
DATE	1/3/2024				10	WASH	
PLOTTED BY	Koepps				JOB NUMBER		
DESIGNED BY	B. HADDOX				23A021		
ENTERED BY	B. HADDOX				CONTRACT NO.		LOCATION NO.
CHECKED BY	L. JUNGBLUTH						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

STATE OF WASHINGTON LINDSEY A. JUNGBLUTH LICENSED LANDSCAPE ARCHITECT NO. 1483 EXP. 11/05/2025

SEE SHEET CT1

DATE

Washington State Department of Transportation

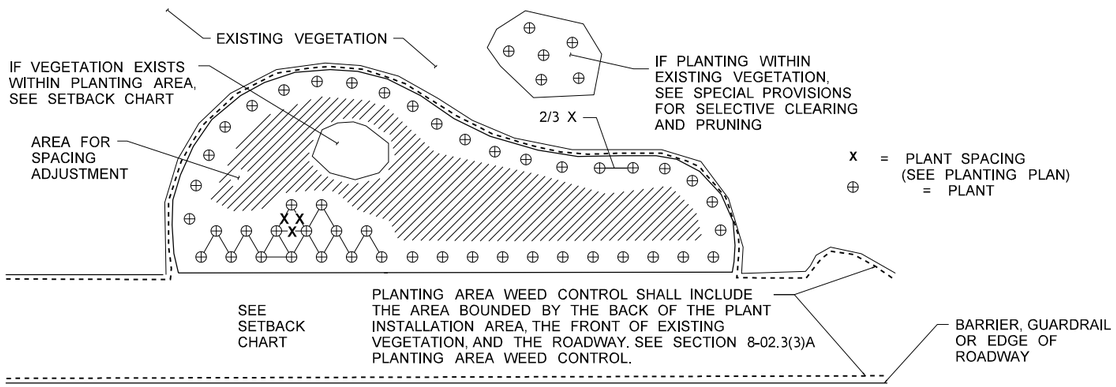
SR 20
UNT TO COAL CREEK
FISH PASSAGE

LANDSCAPE DETAILS

Plot 4

LD1

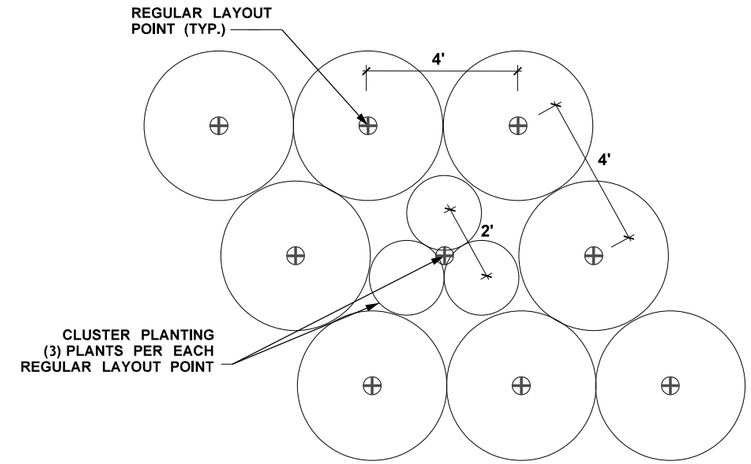
SHEET 41 OF 55 SHEETS



PLANTING AREA LAYOUT, SETBACK, AND WEED CONTROL

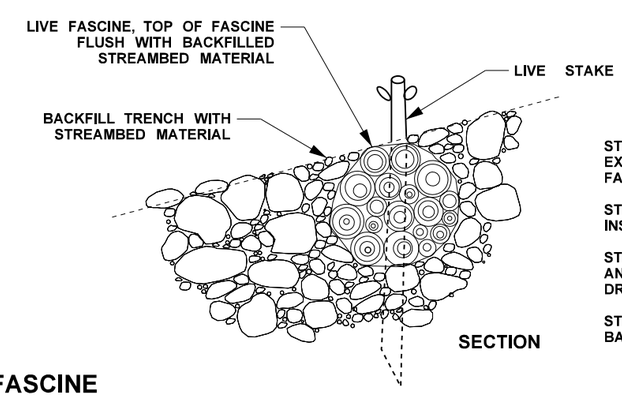
PLAN VIEW

NOT TO SCALE



KINNIKINNICK CLUSTER PLANTING LAYOUT

NOT TO SCALE



STEP 1
EXCAVATE TRENCH DEEP ENOUGH TO BURY LIVE FASCINE FLUSH WITH STREAMBED MATERIAL.

STEP 2
INSTALL FASCINE IN THE BOTTOM OF THE TRENCH.

STEP 3
ANCHOR FASCINES WTH 3 FT. LONG, LIVE STAKES, DRIVEN A MINIMUM OF 2 FT. INTO THE GROUND.

STEP 4
BACKFILL TRENCH WITH STREAMBED MATERIAL.

LIVE FASCINE

NOT TO SCALE

FILE NAME	\\wsdot.loc\nw\CAE_DATA\412006\MS8384 SR 20 Childs_UNT to Coal Creek\CAD\ContractPlans\0000_MS8384_PS_LS.dgn						
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DATE	1/3/2024				10	WASH	
PLOTTED BY	Koepps				JOB NUMBER		
DESIGNED BY					23A021		
ENTERED BY					CONTRACT NO.		LOCATION NO.
CHECKED BY							
PROJ. ENGR.							
REGIONAL ADM.		REVISION	DATE	BY			

STATE OF WASHINGTON LINDSEY A. JUNGKLUTH NO. 1483 EXP. 11/05/2025 LICENSED LANDSCAPE ARCHITECT

SEE SHEET CT1
DATE

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

LANDSCAPE DETAILS

Plot 5

LD2

SHEET 42 OF 55 SHEETS

QUANTITY TABULATION - PAVING/ PAVEMENT MARKINGS

NOTE:
THE FIRST NUMBER OF THE "CODE" BELOW REFERS TO THE SHEET NO. OR THE SHEET REFERENCE NO. SHOWING THE CONSTRUCTION FEATURE.

THE SECOND NUMBER REFERS TO THE CONSTRUCTION FEATURE FOUND ON THAT SHEET.

CODE	LOCATION ↓ \ UNIT OF MEASURE →	BEAM GUARDRAIL TYPE 31	BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL	BEAM GUARDRAIL ANCHOR TYPE 11	FLEXIBLE GUIDE POST	PAINT LINE		CENTERLINE RUMBLE STRIP	SHOULDER RUMBLE STRIP TYPE 2	MAILBOX SUPPORT TYPE 1	RECESSED PAVEMENT MARKER						SEE GENERAL NOTES
		L.F.	EACH	EACH	EACH	L.F.		MI.	MI.	EACH	HUND						
PV1-1	A 706+88.28 (39.53' LT) to A 708+99.01 (22.13' LT)	175	1	1													8,9,10,11
PV1-2	A 705 +98.74 (22.39' RT) to 708+65.69 (22.8' RT)	175	2														8,9
PV1-3	A 705+71.83 (0.00') to A 709+26.88					355		0.1			0.2						1,3,4,6
PV1-4	A 705+71.83 (12.00' RT) to A 709+26.88 (12.00' RT)					355			0.1								1,2,5
PV1-5	A 705+71.83 (12.00' LT) to A 709+26.88 (12.00' LT)					355			0.1								1,2,5
PV1-6	A 706+67.24 (29.13' LT)									1							12
PV1-7	A 704+78.94 (21.94' RT)									1							12
PV1-8	A 709+33.14 (27.19' LT)									1							12
PV1-9	A 709+04.63 (22.09' RT)				1												7
	SHEET TOTAL	350	3	1	1	1065		0.1	0.2	3	0.2						

GENERAL NOTES:

1. SEE STANDARD PLAN M-20.10 FOR LONGITUDINAL MARKING PATTERNS.

2. EDGE LINE WHITE (PAINT LINE).

3. YELLOW CENTERLINE (PAINT LINE).

4. SEE STANDARD PLAN M-65.10 CENTERLINE RUMBLE STRIP DETAILS.

5. SEE STANDARD PLAN M-60.20 FOR SHOULDER RUMBLE STRIP DETIALS.

6. SEE STANDARD PLAN M-20.30 FOR RECESSED PAVEMENT MARKER DETAILS.

7. SEE STANDARD PLAN M-40.10 FOR FLEXIBLE GUIDE POST GUARDRAIL MOUNT DETAILS. GUIDEPOSTS SHALL BE WHITE IN COLOR.

8. SEE STANDARD PLAN C-20.10 FOR BEAM GUARDRAIL TYPE 31.

9. SEE STANDARD PLAN C-22.40 FOR BEAM GUARDRAIL TYPE 31 NON-FLARED TERMINAL (ALL POSTED SPEEDS).

10. SEE STANDARD PLAN C-23.70 FOR BEAM GUARDRAIL ANCHOR TYPE 11.

11. SEE STANDARD PLAN C-20.42 FOR GUARDRAIL PLACEMENT STRONG POST.

12. CONTRACTOR SHALL PROVIDE FOR TEMPORARY RELOCATION OF THE MAILBOX DURING CONSTRUCITON UNTIL TIME THAT THE PERMANENT MAILBOX CAN BE INSTALLED. ALL COSTS FOR TEMPORRARY RELOCATION SHALL BE INCLUDED IN THE BID ITEM. SEE STANDARD PLANS,

DESIGNED BY	C. LOY					
ENTERED BY	C. LOY					
CHECKED BY	E. MARR					
PROJ. ENGR.	M. LAMAY					
REGION ADM.	B. NIELSEN					
		DATE	DATE	REVISION	BY	

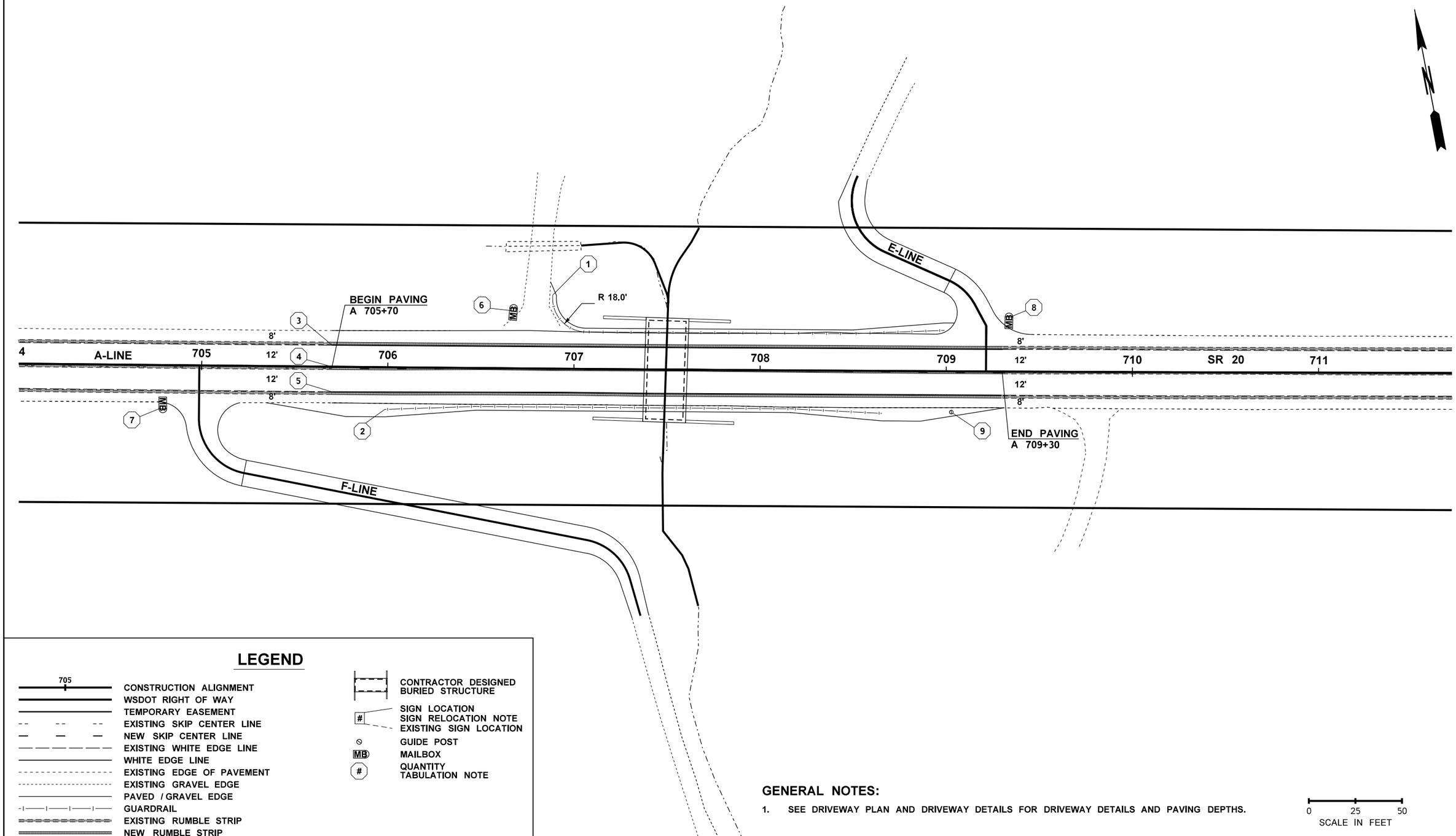
REGION NO.	STATE	FED. AID PROJ. NO.
10	WASH	
JOB NUMBER		
23A021		
CONTRACT NO.		

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

QUANTITY TABULATION - PAVING/ PAVEMENT MARKINGS

QTPV1



LEGEND

705	CONSTRUCTION ALIGNMENT
	WSDOT RIGHT OF WAY
	TEMPORARY EASEMENT
	EXISTING SKIP CENTER LINE
	NEW SKIP CENTER LINE
	EXISTING WHITE EDGE LINE
	WHITE EDGE LINE
	EXISTING EDGE OF PAVEMENT
	EXISTING GRAVEL EDGE
	PAVED / GRAVEL EDGE
	GUARDRAIL
	EXISTING RUMBLE STRIP
	NEW RUMBLE STRIP
	CONTRACTOR DESIGNED BURIED STRUCTURE
#	SIGN LOCATION SIGN RELOCATION NOTE EXISTING SIGN LOCATION
	GUIDE POST
MB	MAILBOX
#	QUANTITY TABULATION NOTE

GENERAL NOTES:

1. SEE DRIVEWAY PLAN AND DRIVEWAY DETAILS FOR DRIVEWAY DETAILS AND PAVING DEPTHS.

0 25 50
SCALE IN FEET

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0311_XL0000_PS_PV.dgn			
TIME	12:35:16 PM			
DATE	12/26/2023			
PLOTTED BY	loycurt			
DESIGNED BY	C. LOY			
ENTERED BY	C. LOY			
CHECKED BY	E. MARR			
PROJ. ENGR.	M. LAMAY			
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY

REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER 23A021		
CONTRACT NO.		LOCATION NO.

DATE
P.E. STAMP BOX

MICHEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED
PROFESSIONAL ENGINEER

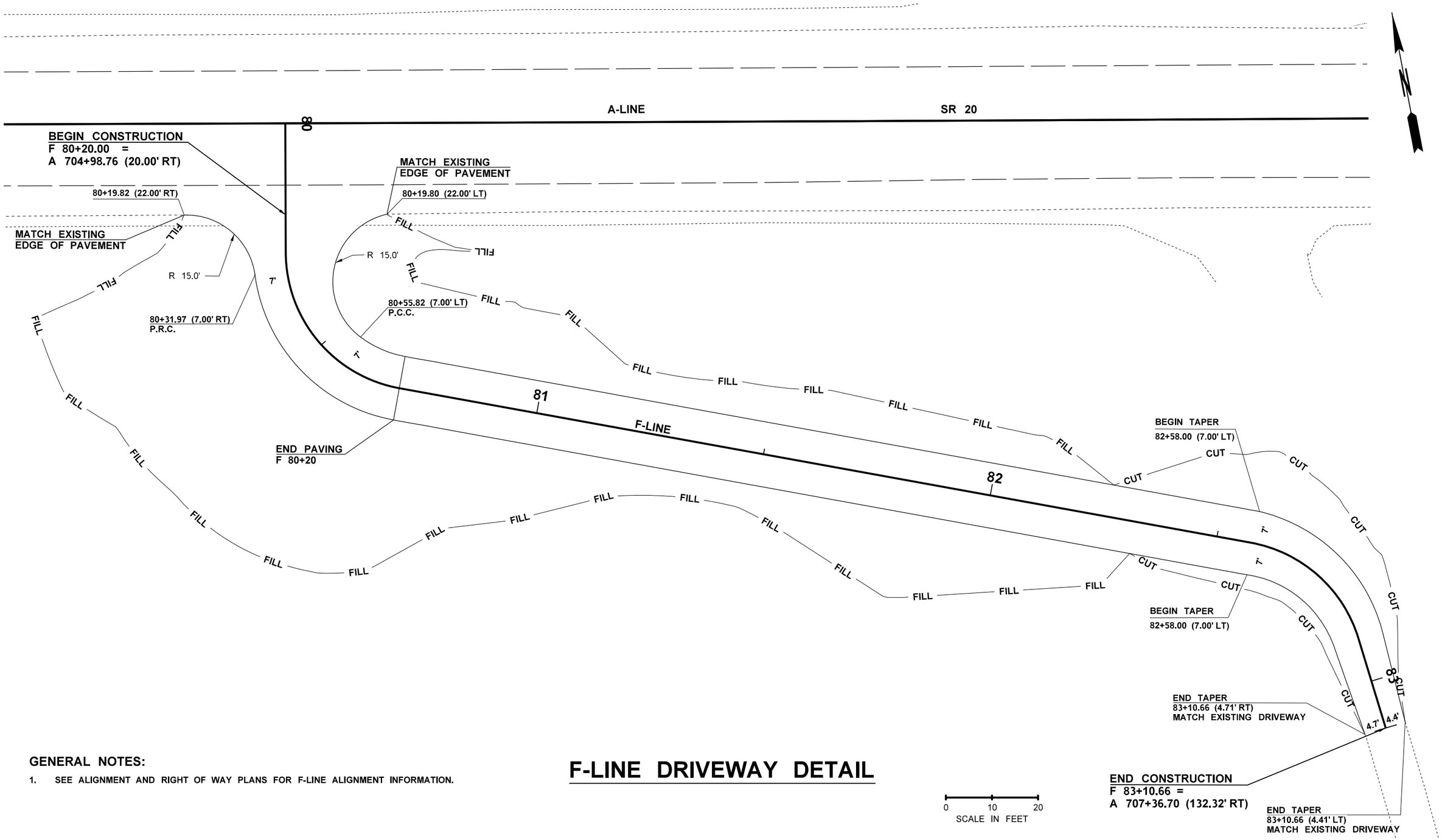
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

PAVING / PAVEMENT MARKING PLAN

Plot 1
PLAN REF NO
PV1
SHEET 44 OF 55 SHEETS



GENERAL NOTES:

1. SEE ALIGNMENT AND RIGHT OF WAY PLANS FOR F-LINE ALIGNMENT INFORMATION.

F-LINE DRIVEWAY DETAIL

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0311_XL0000_PS_PV.dgn						
TIME	12:35:29 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	12/26/2023						
PLOTTED BY	loycurt				JOB NUMBER 23A021		
DESIGNED BY	C. LOY						
ENTERED BY	C. LOY						
CHECKED BY	E. MARR				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

P.E. STAMP BOX — DATE

MIKKEL PETER LAMAY — STATE OF WASHINGTON — 53141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE

P.E. STAMP BOX

Washington State Department of Transportation

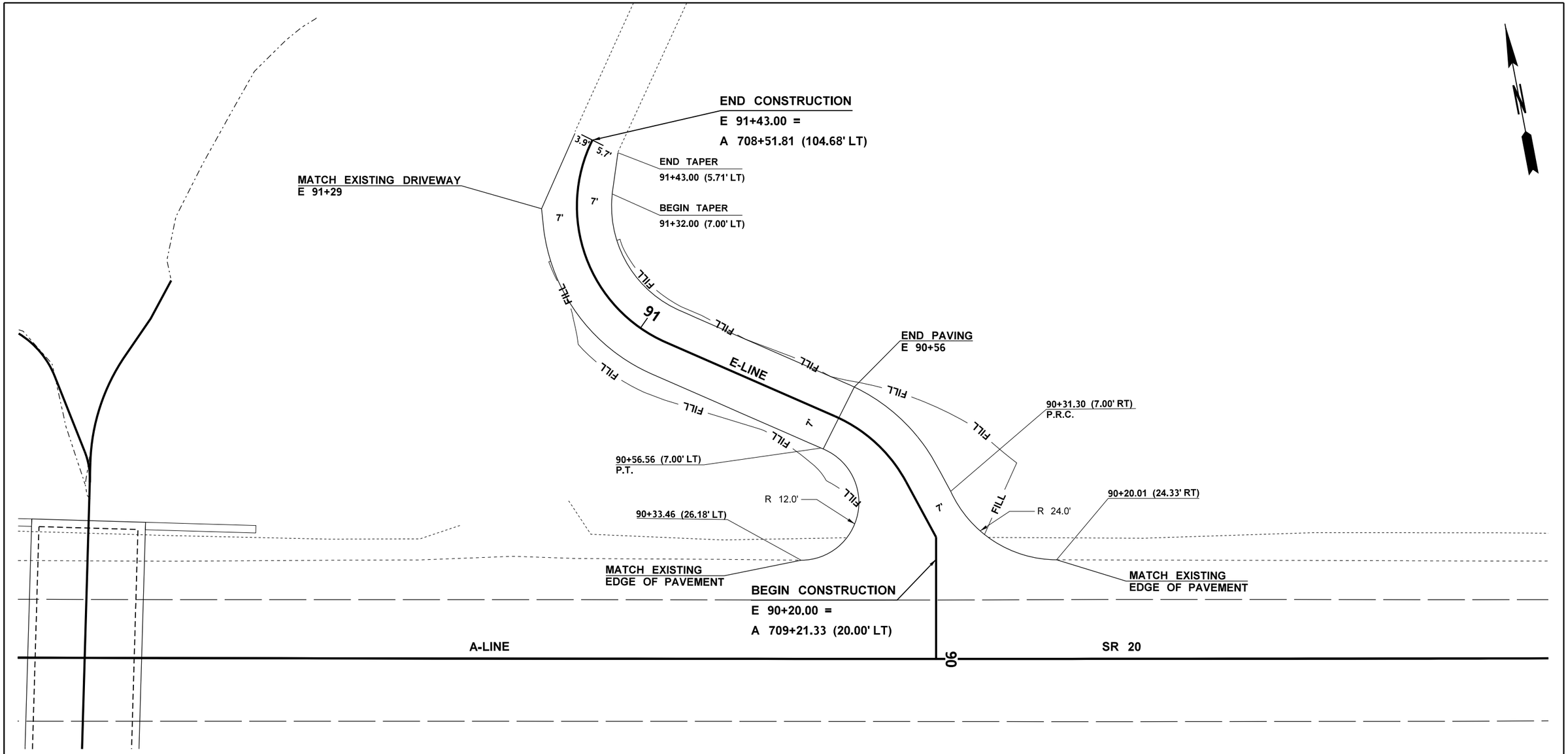
SR 20
UNT TO COAL CREEK
FISH PASSAGE

DRIVEWAY PLAN

Plot 2

PLAN REF NO DW1

SHEET 45 OF 55 SHEETS



GENERAL NOTES:

1. SEE ALIGNMENT AND RIGHT OF WAY PLANS FOR E-LINE ALIGNMENT INFORMATION.

E-LINE DRIVEWAY DETAIL

0 10 20
SCALE IN FEET

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0311_XL0000_PS_PV.dgn						
TIME	12:35:41 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	12/26/2023						
PLOTTED BY	loycurt				JOB NUMBER 23A021		
DESIGNED BY	C. LOY						
ENTERED BY	C. LOY						
CHECKED BY	E. MARR				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

P.E. STAMP BOX DATE

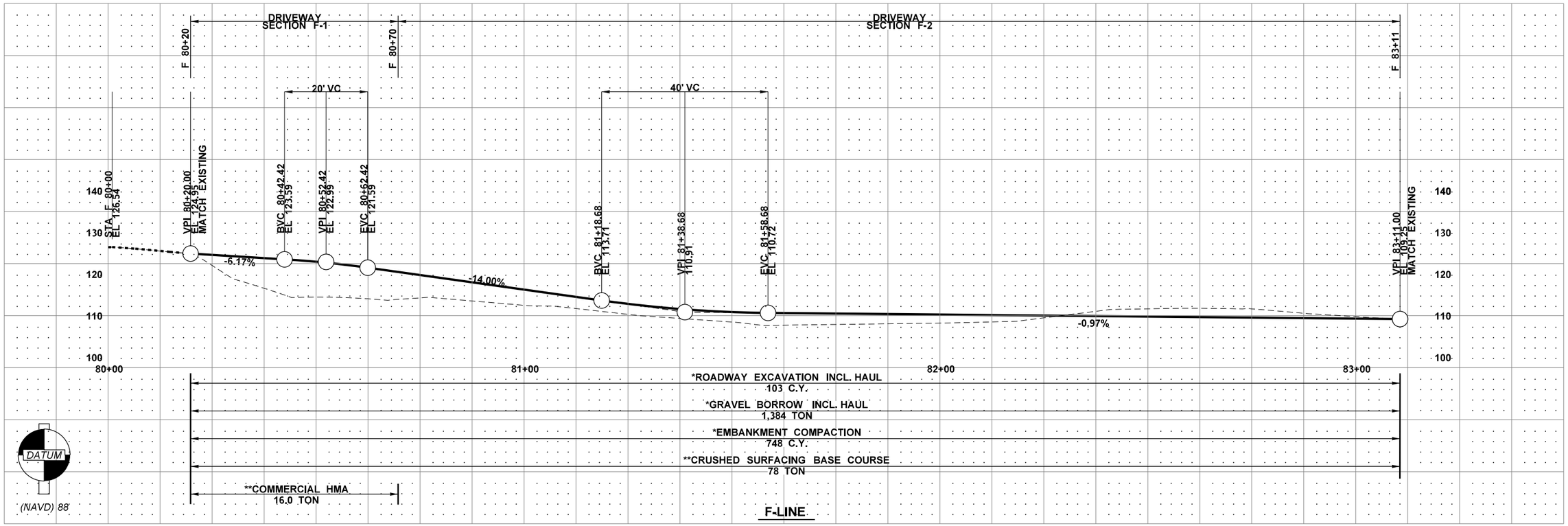
MIKAEL PETER LAMAY STATE OF WASHINGTON 52141 REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
P.E. STAMP BOX DATE

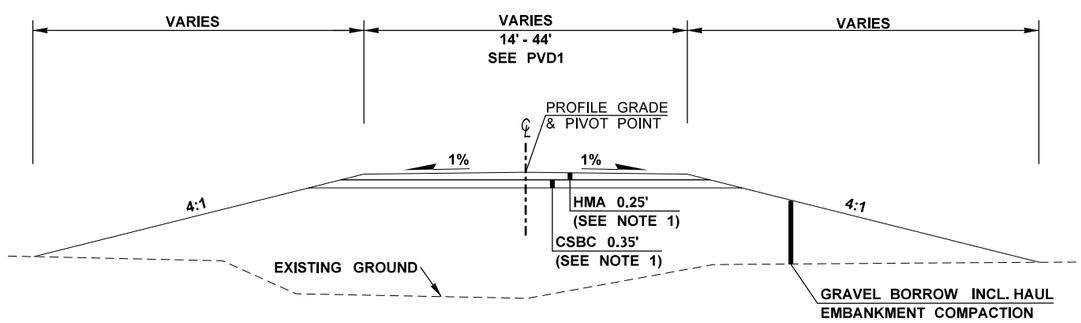
Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

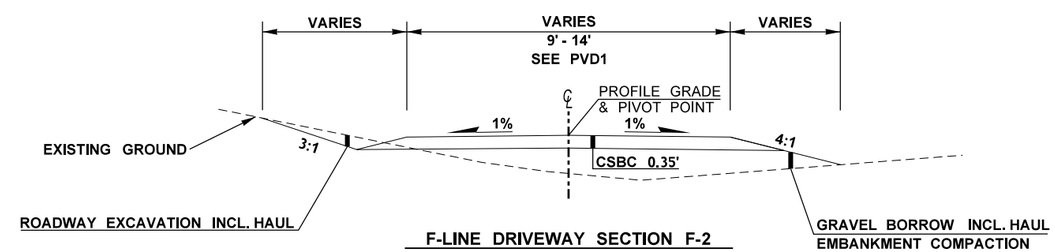
DRIVEWAY PLAN

Plot 3
PLAN REF NO DW2
SHEET 46 OF 55 SHEETS





F-LINE DRIVEWAY SECTION F-1
STA. F 80+20 TO STA. F 80+70
NOT TO SCALE



F-LINE DRIVEWAY SECTION F-2
STA. F 80+70 TO F 83+11
NOT TO SCALE

DETAIL NOTE:

1. FINAL DRIVEWAY ENTRANCE SHALL BE 0.25' OF COMMERCIAL HMA AND 0.35' CSBC.

* QUANTITIES SHOWN FOR INFORMATION ONLY.

** FOR ADDITIONAL QUANTITIES, SEE SHEETS TB1 AND RP1.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0311_XL0000_PS_PV.dgn						
TIME	12:35:57 PM				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
DATE	12/26/2023						
PLOTTED BY	loycurt				JOB NUMBER 23A021		
DESIGNED BY	C. LOY						
ENTERED BY	C. LOY						
CHECKED BY	E. MARR				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

DATE
P.E. STAMP BOX

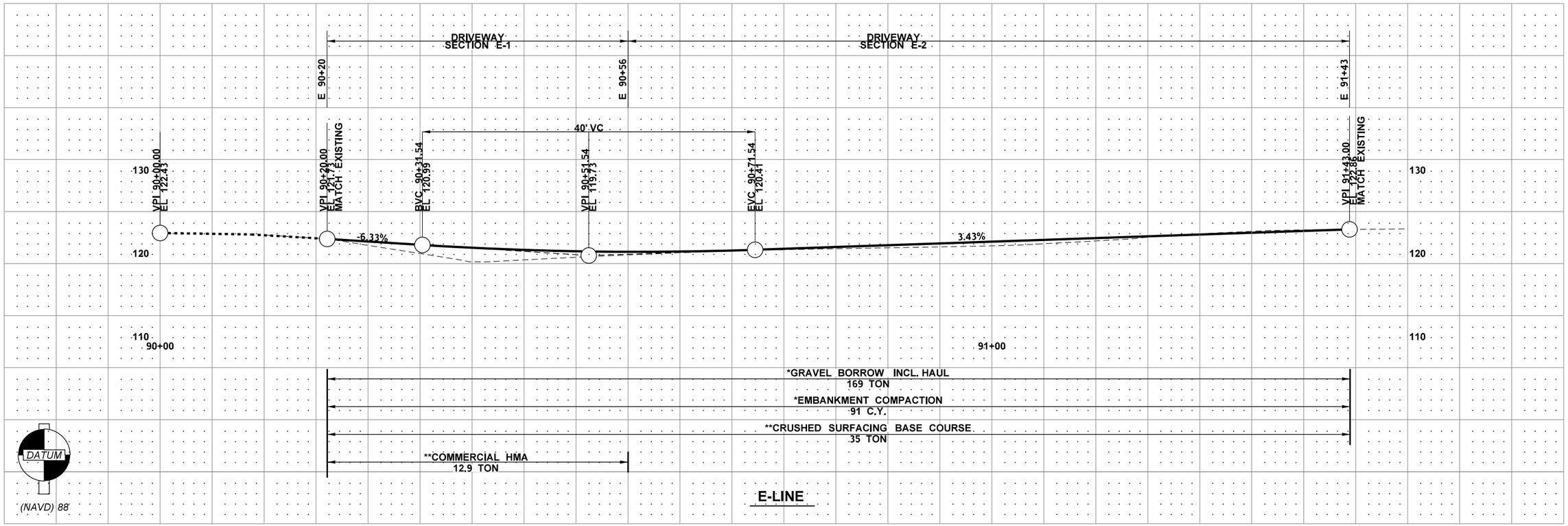
MIKEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

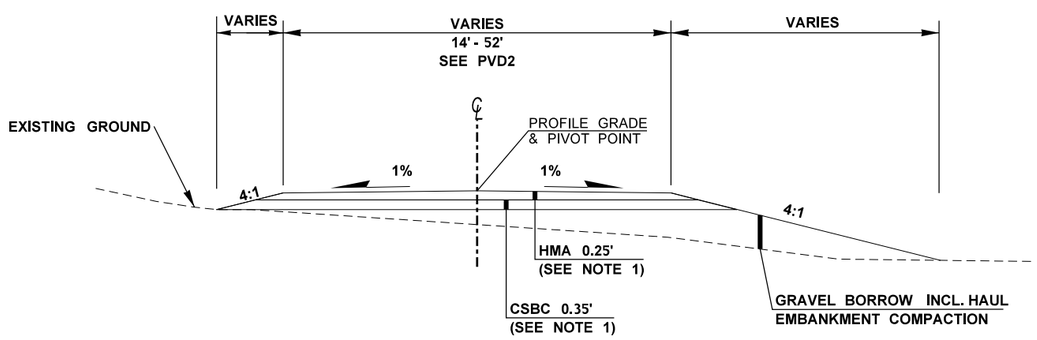
Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

DRIVEWAY DETAILS

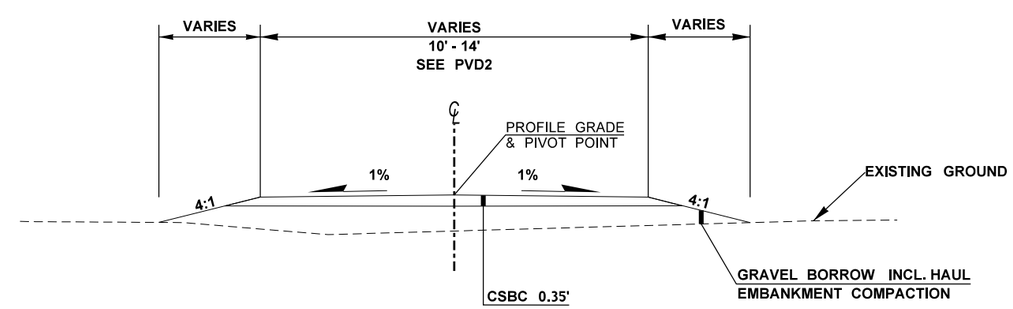
Plot 4
PLAN REF. NO. DWD1
SHEET 47 OF 55 SHEETS





E-LINE DRIVEWAY SECTION E-1

STA. E 90+20 to STA. E 90+56
NOT TO SCALE



E-LINE DRIVEWAY SECTION E-2

STA. E 90+56 TO STA. E 91+43
NOT TO SCALE

DETAIL NOTE:

1. FINAL DRIVEWAY ENTRANCE SHALL BE 0.25' OF COMMERCIAL HMA AND 0.35' CSBC.

* QUANTITIES SHOWN FOR INFORMATION ONLY.

** FOR ADDITIONAL QUANTITIES, SEE SHEETS TB1 AND RP1.

FILE NAME	T:\412358\XL0000_Childs _UNT to Coal Creek_CAD\Sheets\UNT Coal\0311_XL0000_PS_PV.dgn				REGION NO. 10	STATE WASH	FED.AID PROJ.NO.
TIME	12:36:12 PM						
DATE	12/26/2023				JOB NUMBER 23A021		
PLOTTED BY	loycurt						
DESIGNED BY	C. LOY						
ENTERED BY	C. LOY				CONTRACT NO.		LOCATION NO.
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

DATE
P.E. STAMP BOX

MICHAEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

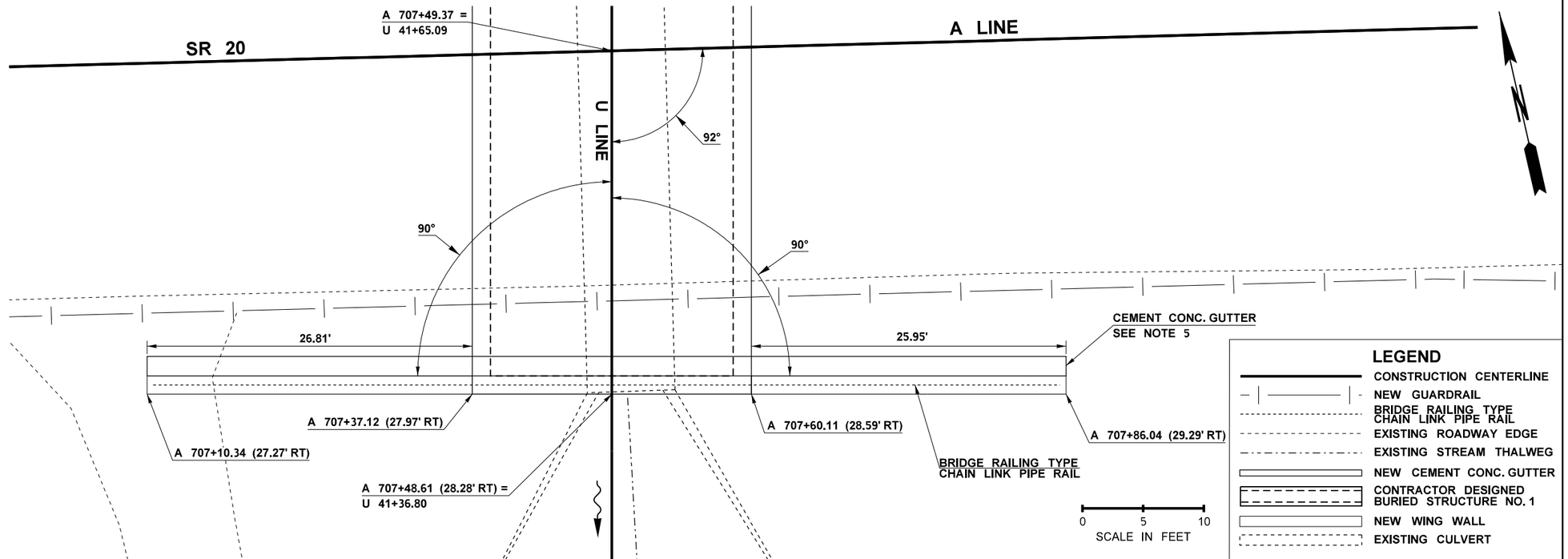
SR 20
UNT TO COAL CREEK
FISH PASSAGE

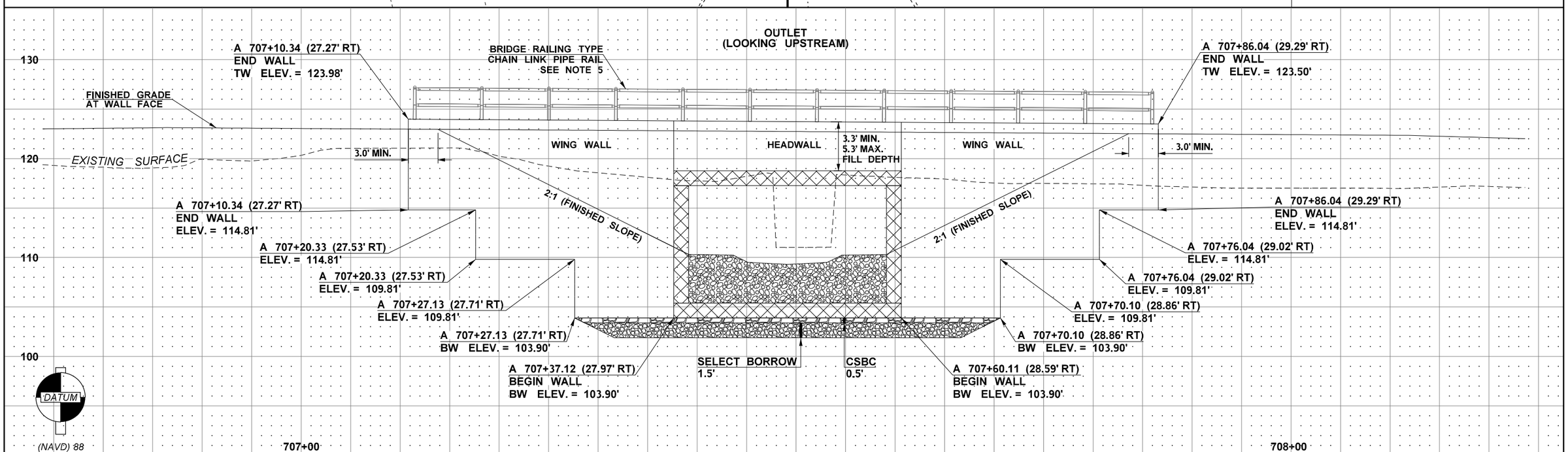
DRIVEWAY DETAILS

Plot 5
PLAN REF. NO.
DWD2
SHEET 48 OF 55 SHEETS

GENERAL NOTES:

1. WALL TYPES SHALL BE STRUCTURAL EARTH WALLS ONLY.
2. HEADWALLS, WINGWALLS, TRAFFIC BARRIERS, BRIDGE RAILINGS, AND/OR FALL PROTECTION ARE INCLUDED, WHERE APPLICABLE, IN THE LUMP SUM BID ITEM FOR CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
3. FOUNDATION ELEMENTS FOR WALL AND STRUCTURES ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
4. CONTRACTOR SHALL PROVIDE A PHYSCIAL BARRIER AT ALL JOINTS BETWEEN THE WINGWALL AND STRUCTURE TO PREVENT LOSS OF BACKFILL MATERIAL.
5. SEE STANDARD PLAN L-5.10 FOR BRIDGE RAILING TYPE CHAIN LINK PIPE RAIL. SEE STANDARD PLAN D-20.10 FOR CEMENT CONCRETE GUTTER DETAIL.





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DATE	12/27/2023				JOB NUMBER 23A021		
PLOTTED BY	MarrEm						
DESIGNED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

DATE
P.E. STAMP BOX

MICHAEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED
PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

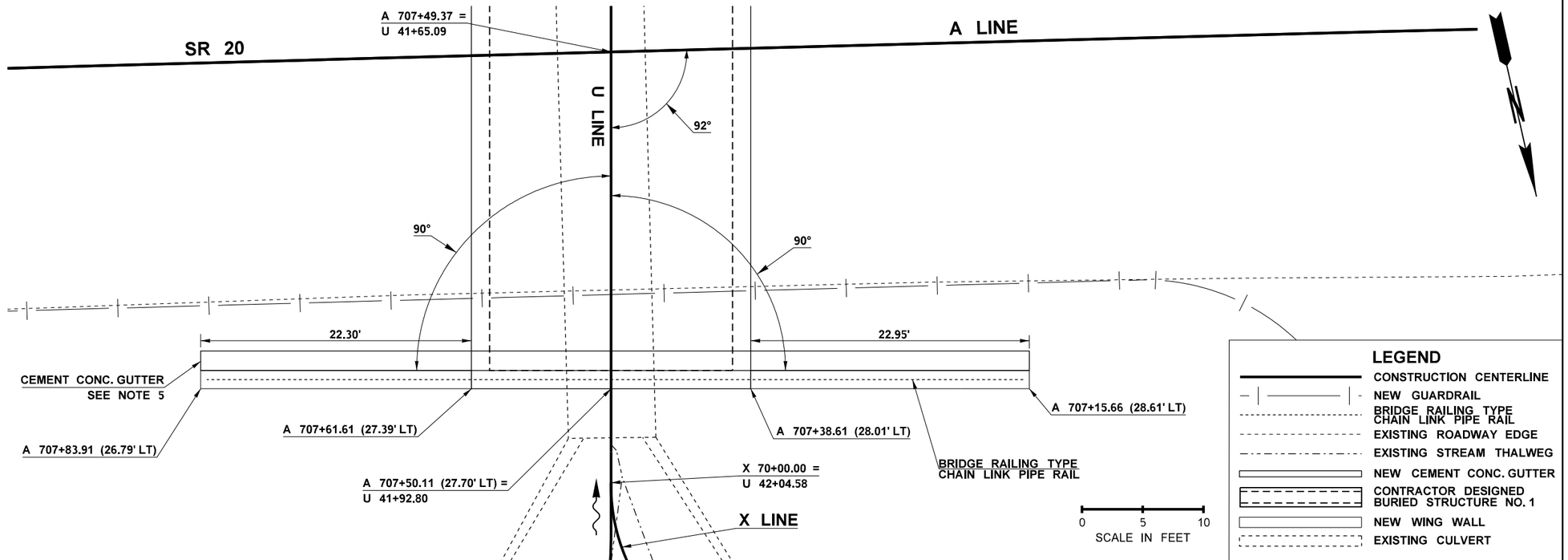
SR 20
UNT TO COAL CREEK
FISH PASSAGE

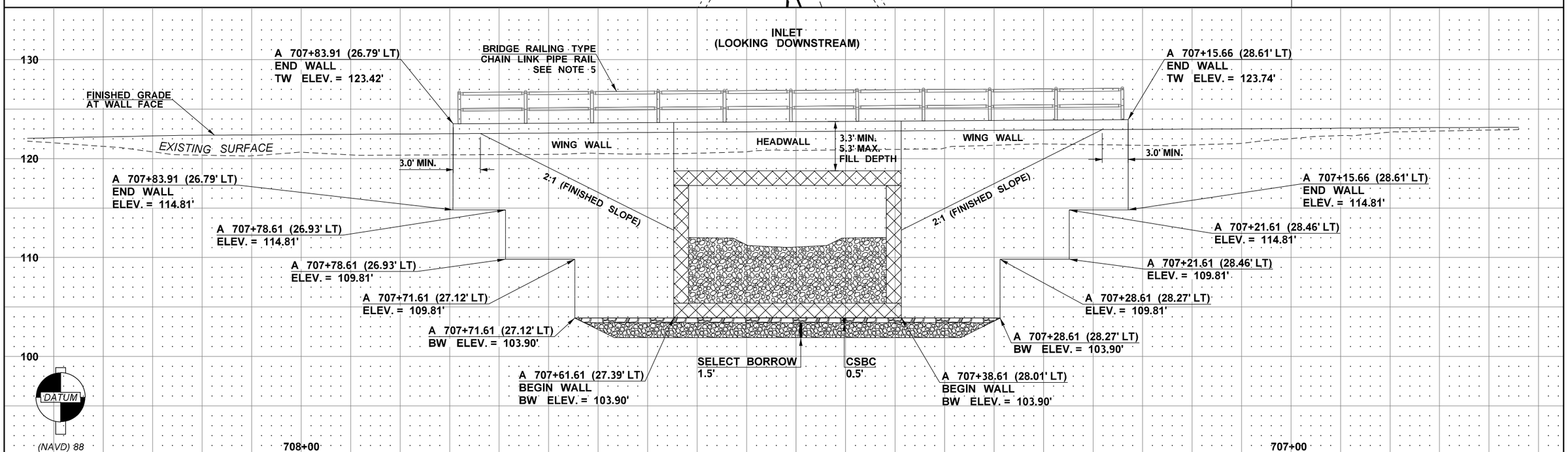
WALL DETAILS

Plot 1
PLAN REF NO
WD1
SHEET 49 OF 55 SHEETS

GENERAL NOTES:

1. WALL TYPES SHALL BE STRUCTURAL EARTH WALLS ONLY.
2. HEADWALLS, WINGWALLS, TRAFFIC BARRIERS, BRIDGE RAILINGS, AND/OR FALL PROTECTION ARE INCLUDED, WHERE APPLICABLE, IN THE LUMP SUM BID ITEM FOR CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
3. FOUNDATION ELEMENTS FOR WALL AND STRUCTURES ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
4. CONTRACTOR SHALL PROVIDE A PHYSCIAL BARRIER AT ALL JOINTS BETWEEN THE WINGWALL AND STRUCTURE TO PREVENT LOSS OF BACKFILL MATERIAL.
5. SEE STANDARD PLAN L-5.10 FOR BRIDGE RAILING TYPE CHAIN LINK PIPE RAIL. SEE STANDARD PLAN D-20.10 FOR CEMENT CONCRETE GUTTER DETAIL.





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DATE	12/27/2023				JOB NUMBER 23A021		
PLOTTED BY	MarrEm						
DESIGNED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

DATE
P.E. STAMP BOX

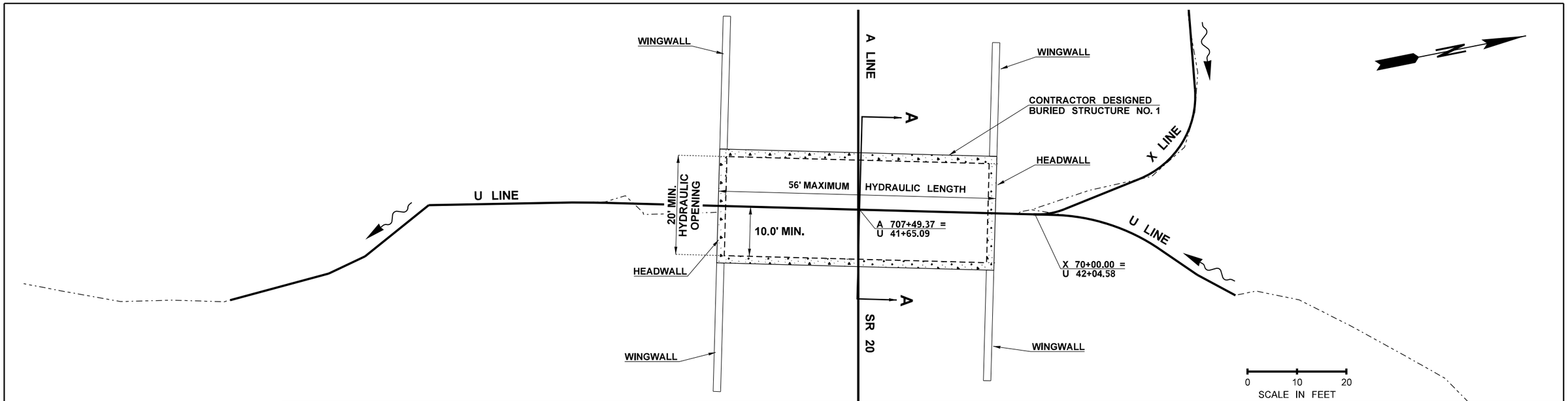
MIKKEL PETER LAMAY
STATE OF WASHINGTON
52141
REGISTERED
PROFESSIONAL ENGINEER
SEE SHEET CT1
DATE
P.E. STAMP BOX

Washington State
Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

WALL DETAILS

Plot 3
PLAN REF NO
WD2
SHEET 50 OF 55 SHEETS



LEGEND

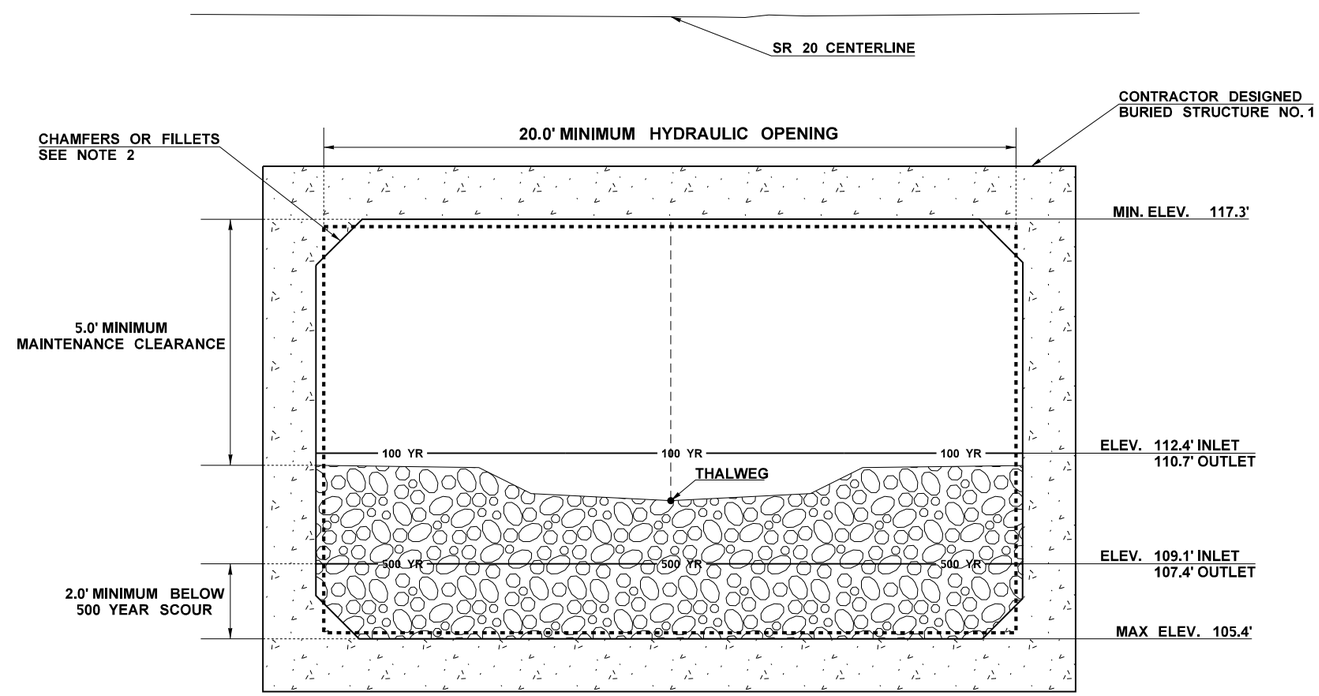
- CONSTRUCTION CENTERLINE
- STRUCTURE FREE ZONE LIMITS
- 100 YR — DESIGN 100-YR WATER SURFACE ELEVATION
- 500 YR — 500-YR SCOUR ELEVATION
- EXISTING THALWEG
- SR 20 ROADWAY
- FLOW DIRECTION
- WINGWALL
- CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1
- STREAMBED MATERIAL

GENERAL NOTES:

1. CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1 SHALL BE A CONCRETE BOX STRUCTURE OR A CONCRETE SPLIT BOX STRUCTURE.
2. CHAMFERS OR FILLETS MAY ENROACH INTO THE SFZ, PROVIDED BOTH OF THE FOLLOWING ARE TRUE: (1) THE SUM OF ALL CHAMFER/FILLET AREAS IN A GIVEN CROSS SECTION IS LESS THAN 2% OF THE AREA CALCULATED AS THE SFZ WIDTH, MULTIPLIED BY THE SFZ HEIGHT, AND (2) ALL CHAMFERS/FILLETS ABOVE THE STREAMBED MUST BE ENTIRELY ABOVE THE ELEVATION OF THE 100-YEAR FLOOD PLUS 1 FOOT.
3. NO PART OF THE CONTRACTOR DESIGNED BURIED STRUCTURE NO. 1 SHALL ENCROACH UPON THE STRUCTURE FREE ZONE, FOR WHICH THE HORIZONTAL AND VERTICAL LIMITS ARE DEFINED BY THIS PLAN SHEET.

DATUM

(NAVD) 88



SECTION A-A

NOT TO SCALE

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TIME	11:18:41 AM				10	WASH	
DATE	12/26/2023				JOB NUMBER		
PLOTTED BY	MarrEm				23A021		
DESIGNED BY	R. BAILEY				CONTRACT NO.		LOCATION NO.
ENTERED BY	R. BAILEY						
CHECKED BY	E. MARR						
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

P.E. STAMP BOX — DATE

MIKKEL PETER LAMAY — STATE OF WASHINGTON — 52141 — REGISTERED PROFESSIONAL ENGINEER

SEE SHEET CT1 — DATE — P.E. STAMP BOX

Washington State Department of Transportation

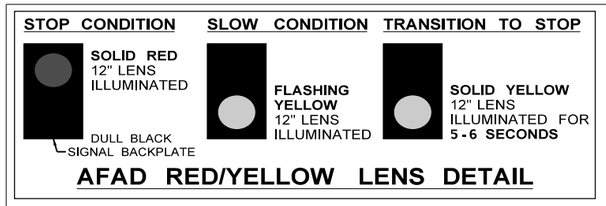
SR 20
UNT TO COAL CREEK
FISH PASSAGE

STRUCTURE FREE ZONE

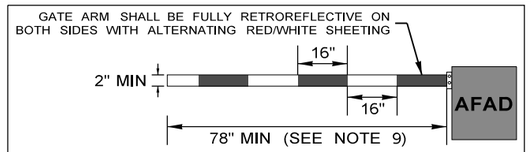
Plot 1

PLAN REF NO
SFZ1

SHEET 51 OF 55 SHEETS



AFAD RED/YELLOW LENS DETAIL



AFAD GATE ARM DETAIL

SINGLE LANE CLOSURE
ALTERNATING ONE-WAY
FLAGGER/AFAD CONTROLLED
NOT TO SCALE

5 CALENDAR DAYS BEFORE CONSTRUCTION BEGINS

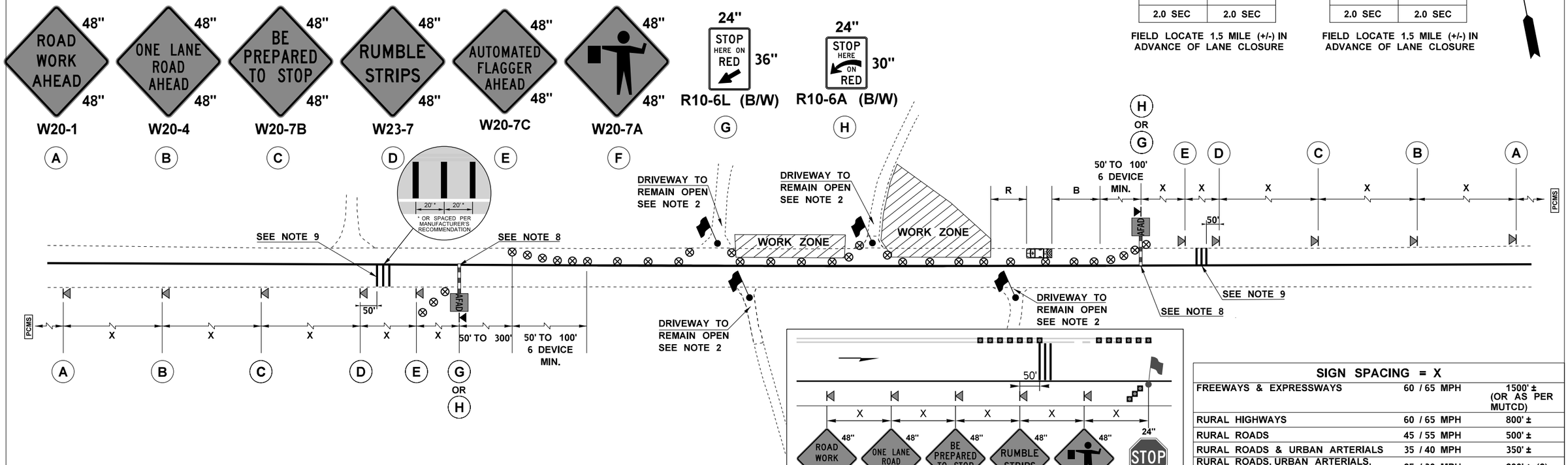
PCMS MESSAGE #1	
PHASE 1	PHASE 2
ROAD WORK	STARTS XX / XX
2.0 SEC	2.0 SEC

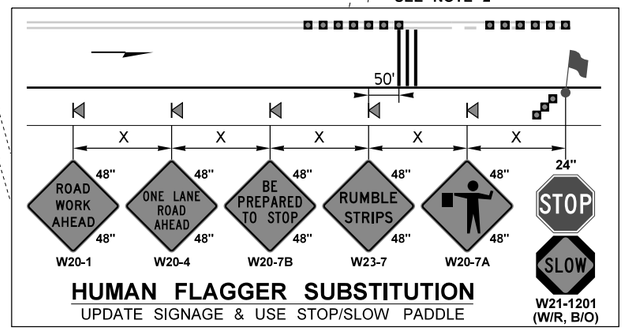
FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE

DURING CONSTRUCTION

PCMS MESSAGE #2	
PHASE 1	PHASE 2
FLAGGER AHEAD	PREPARE TO STOP
2.0 SEC	2.0 SEC

FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE





HUMAN FLAGGER SUBSTITUTION

UPDATE SIGNAGE & USE STOP/SLOW PADDLE

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	60 / 65 MPH	1500' ± (OR AS PER MUTCD)
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

LEGEND

- WORK ZONE
- FLAGGING STATION
- TRAFFIC SAFETY DRUMS (SEE SPECIAL PROVISIONS)
- CLASS A SIGN
- CLASS B SIGN
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED ATTENUATOR
- AFAD — AUTO FLAGGER ASSIST DEVICE
- TEMP. PORTABLE RUMBLE STRIPS (SEE NOTE 9)

GENERAL NOTES:

1. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.
2. MAINTAIN ACCESS FOR BUSINESSES AND RESIDENCES WITHIN WORK AREA.
3. TRANSPORTABLE ATTENUATOR (TA) IS REQUIRED
4. NIGHT WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGING STATIONS. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
5. "FLAGGER AHEAD" SIGN SHOULD ONLY BE POSTED WHEN FLAGGERS ARE PRESENT.
6. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
7. BICYCLE AND PEDESTRIAN TRAFFIC SHALL BE ACCOMMODATED AT ALL TIMES, WHICH MAY INCLUDE ESCORTING BICYCLES AND PEDESTRIANS THROUGH THE WORK AREA AS NEEDED.
8. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) MAY BE SUBSTITUTED FOR FLAGGER.
9. AVOID PLACING TEMPORARY TRANVERSE RUMBLE STRIPS WITHIN HORIZONTAL CURVES, ADJUST SIGN SPACING IF NEEDED. USE OF THE FOLLOWING RUMBLE STRIPS:
   * PSS Roadquake 2 of 2F Temporary Portable Rumble Strip (Black)
   * Traffic Alert High Speed Rumble Strip (Black)

CHANNELIZATION DEVICE SPACING (feet)

MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

FILE NAME	C:\Users\DoanTun\OneDrive - Washington State Department of Transportation\Documents\SR 20 UNT to Coal Creek\0470_XL0000_PS_TC.dgn
TIME	1:24:39 PM
DATE	12/27/2023
PLOTTED BY	Doantun
DESIGNED BY	C. LOY
ENTERED BY	C. LOY
CHECKED BY	E. MARR
PROJ. ENGR.	M. LAMAY
REGIONAL ADM.	B. NIELSEN

REVISION | DATE | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.

JOB NUMBER 23A021

CONTRACT NO. | LOCATION NO.

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

TRAFFIC CONTROL PLAN

Plot 1

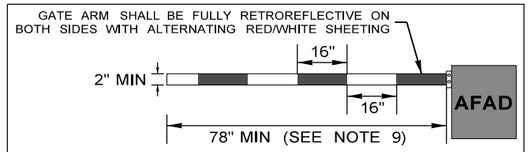
PLAN REF NO TC1

SHEET 52 OF 55 SHEETS

STOP CONDITION	SLOW CONDITION	TRANSITION TO STOP
SOLID RED 12" LENS ILLUMINATED	FLASHING YELLOW 12" LENS ILLUMINATED	SOLID YELLOW 12" LENS ILLUMINATED FOR 5-6 SECONDS

DULL BLACK SIGNAL BACKPLATE

AFAD RED/YELLOW LENS DETAIL



AFAD GATE ARM DETAIL

SINGLE LANE CLOSURE
ALTERNATING ONE-WAY FLAGGER/AFAD CONTROLLED
NOT TO SCALE

5 CALENDAR DAYS BEFORE CONSTRUCTION BEGINS

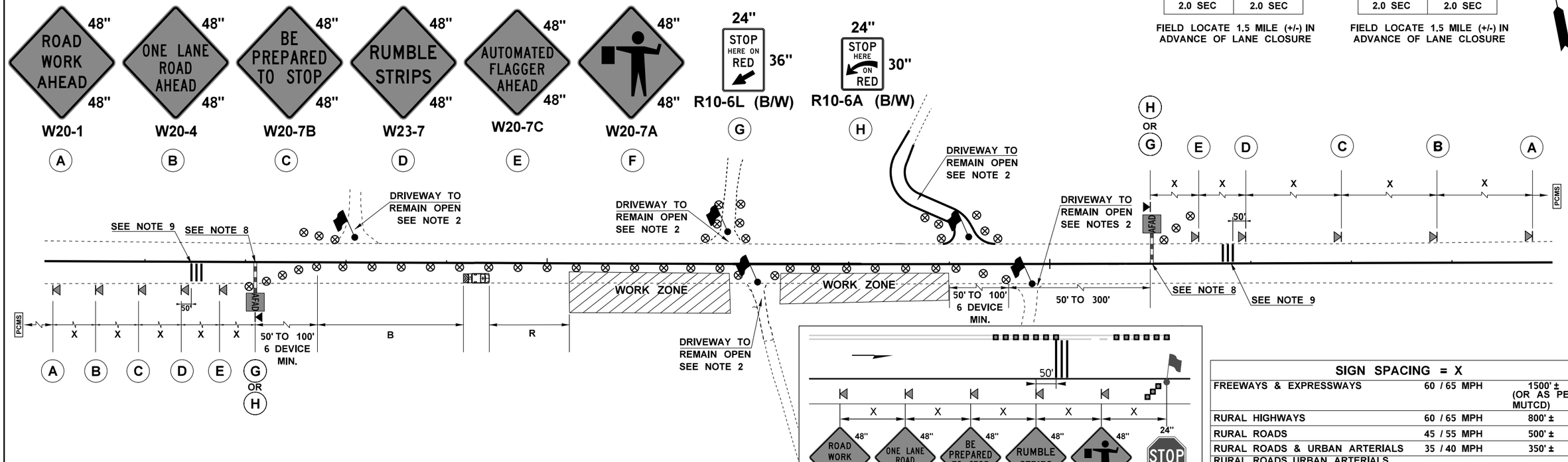
PCMS MESSAGE #1	
PHASE 1	PHASE 2
ROAD WORK	STARTS XX / XX
2.0 SEC	2.0 SEC

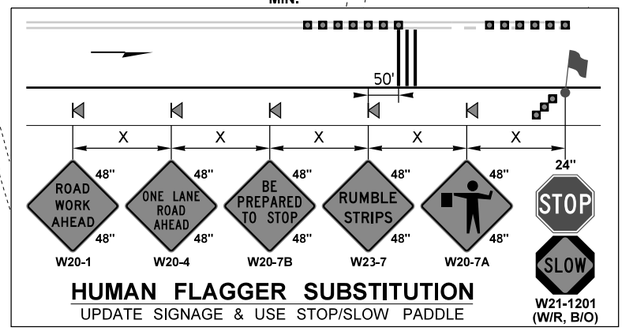
FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE

DURING CONSTRUCTION

PCMS MESSAGE #2	
PHASE 1	PHASE 2
FLAGGER AHEAD	PREPARE TO STOP
2.0 SEC	2.0 SEC

FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE





HUMAN FLAGGER SUBSTITUTION
UPDATE SIGNAGE & USE STOP/SLOW PADDLE

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	60 / 65 MPH	1500' ± (OR AS PER MUTCD)
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

LEGEND

- WORK ZONE
- FLAGGING STATION
- TRAFFIC SAFETY DRUMS (SEE SPECIAL PROVISIONS)
- CLASS A SIGN
- CLASS B SIGN
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED ATTENUATOR
- AFAD — AUTO FLAGGER ASSIST DEVICE
- TEMP. PORTABLE RUMBLE STRIPS (SEE NOTE 9)

GENERAL NOTES:

1. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.
2. MAINTAIN ACCESS FOR BUSINESSES AND RESIDENCES WITHIN WORK AREA.
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8. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) MAY BE SUBSTITUTED FOR FLAGGER.
9. AVOID PLACING TEMPORARY TRANVERSE RUMBLE STRIPS WITHIN HORIZONTAL CURVES, ADJUST SIGN SPACING IF NEEDED. USE OF THE FOLLOWING RUMBLE STRIPS:
   * PSS Roadquake 2 of 2F Temporary Portable Rumble Strip (Black)
   * Traffic Alert High Speed Rumble Strip (Black)

CHANNELIZATION DEVICE SPACING (feet)

MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

FILE NAME	C:\Users\DoanTun\OneDrive - Washington State Department of Transportation\Documents\SR 20 UNT to Coal Creek\0470_XL0000_PS_TC.dgn					
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DESIGNED BY	C. LOY				JOB NUMBER 23A021	
ENTERED BY	C. LOY					
CHECKED BY	E. MARR				CONTRACT NO.	LOCATION NO.
PROJ. ENGR.	M. LAMAY					
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY		

P.E. STAMP BOX DATE

P.E. STAMP BOX DATE

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

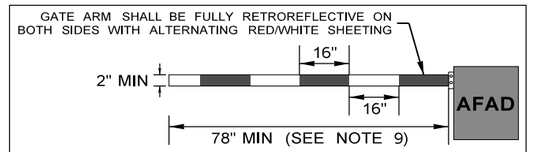
TRAFFIC CONTROL PLAN

Plot 2
PLAN REF NO TC2
SHEET 53 OF 55 SHEETS

SINGLE LANE CLOSURE
ALTERNATING ONE-WAY
FLAGGER/AFAD CONTROLLED
NOT TO SCALE

STOP CONDITION — SOLID RED 12" LENS ILLUMINATED
SLOW CONDITION — FLASHING YELLOW 12" LENS ILLUMINATED
TRANSITION TO STOP — SOLID YELLOW 12" LENS ILLUMINATED FOR 5-6 SECONDS
DULL BLACK SIGNAL BACKPLATE

AFAD RED/YELLOW LENS DETAIL



AFAD GATE ARM DETAIL

5 CALENDAR DAYS BEFORE CONSTRUCTION BEGINS

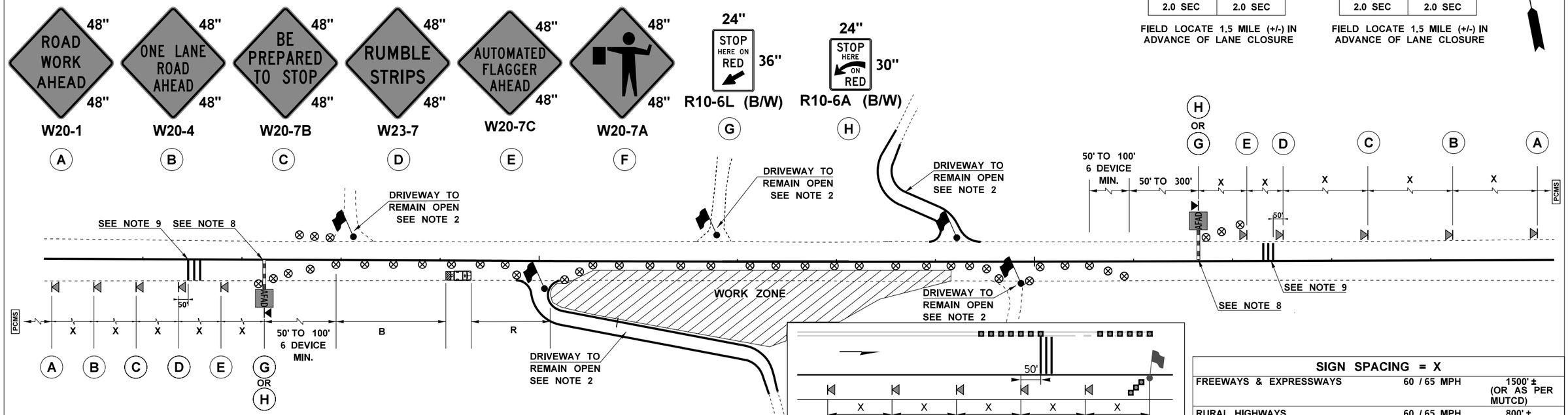
PCMS MESSAGE #1	
PHASE 1	PHASE 2
ROAD WORK	STARTS XX / XX
2.0 SEC	2.0 SEC

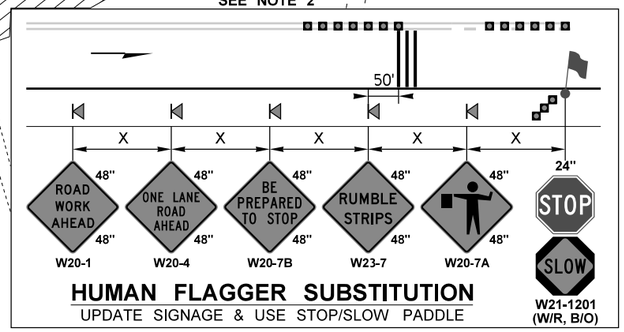
FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE

DURING CONSTRUCTION

PCMS MESSAGE #2	
PHASE 1	PHASE 2
FLAGGER AHEAD	PREPARE TO STOP
2.0 SEC	2.0 SEC

FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE





HUMAN FLAGGER SUBSTITUTION
UPDATE SIGNAGE & USE STOP/SLOW PADDLE

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	60 / 65 MPH	1500' ± (OR AS PER MUTCD)
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
URBAN STREETS	25 MPH OR LESS	100' ± (2)

(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

LEGEND

- WORK ZONE
- FLAGGING STATION
- TRAFFIC SAFETY DRUMS (SEE SPECIAL PROVISIONS)
- CLASS A SIGN
- CLASS B SIGN
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED ATTENUATOR
- AFAD — AUTO FLAGGER ASSIST DEVICE
- TEMP. PORTABLE RUMBLE STRIPS (SEE NOTE 9)

GENERAL NOTES:

1. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.
2. MAINTAIN ACCESS FOR BUSINESSES AND RESIDENCES WITHIN WORK AREA.
3. TRANSPORTABLE ATTENUATOR (TA) IS REQUIRED
4. NIGHT WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGING STATIONS. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
5. "FLAGGER AHEAD" SIGN SHOULD ONLY BE POSTED WHEN FLAGGERS ARE PRESENT.
6. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
7. BICYCLE AND PEDESTRIAN TRAFFIC SHALL BE ACCOMMODATED AT ALL TIMES, WHICH MAY INCLUDE ESCORTING BICYCLES AND PEDESTRIANS THROUGH THE WORK AREA AS NEEDED.
8. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) MAY BE SUBSTITUTED FOR FLAGGER.
9. AVOID PLACING TEMPORARY TRANVERSE RUMBLE STRIPS WITHIN HORIZONTAL CURVES, ADJUST SIGN SPACING IF NEEDED. USE OF THE FOLLOWING RUMBLE STRIPS:
   * PSS Roadquake 2 of 2F Temporary Portable Rumble Strip (Black)
   * Traffic Alert High Speed Rumble Strip (Black)

CHANNELIZATION DEVICE SPACING (feet)

MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
LENGTH (feet)	155	200	250	305	360	425	495	570	645	730

TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R

HOST VEHICLE WEIGHT 9,900 TO 22,000 lbs.			HOST VEHICLE WEIGHT > 22,000 lbs.		
< 45 MPH	45-55 MPH	> 55 MPH	< 45 MPH	45-55 MPH	> 55 MPH
100'	123'	172'	74'	100'	150'

PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

FILE NAME	C:\Users\DoanTun\OneDrive - Washington State Department of Transportation\Documents\SR 20 UNT to Coal Creek\0470_XL0000_PS_TC.dgn
TIME	1:28:26 PM
DATE	12/27/2023
PLOTTED BY	Doantun
DESIGNED BY	C. LOY
ENTERED BY	C. LOY
CHECKED BY	E. MARR
PROJ. ENGR.	M. LAMAY
REGIONAL ADM.	B. NIELSEN

REVISION | DATE | BY

REGION NO. 10 | STATE WASH | FED.AID PROJ.NO.
JOB NUMBER 23A021
CONTRACT NO. | LOCATION NO.

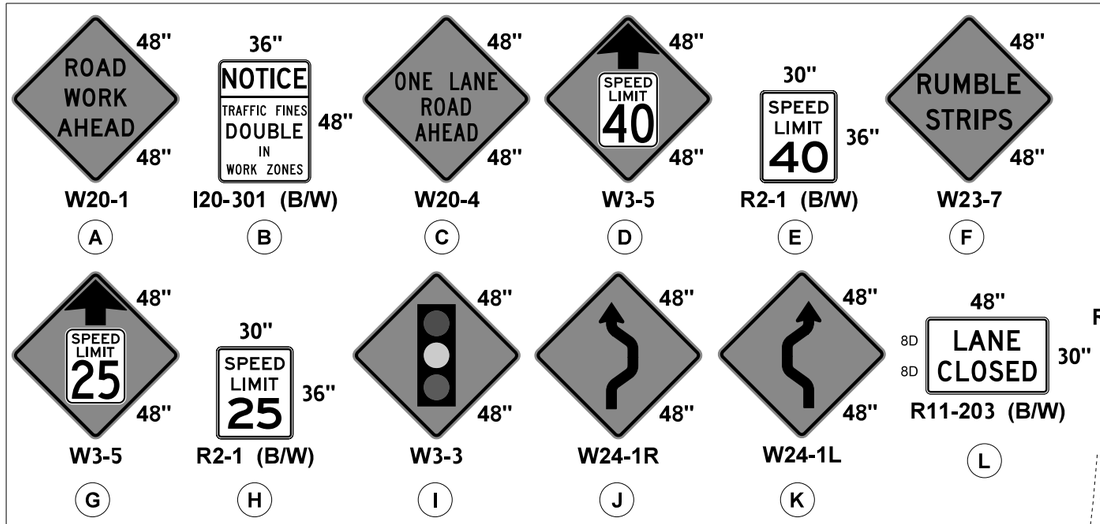
P.E. STAMP BOX — DATE
P.E. STAMP BOX — DATE

Washington State Department of Transportation

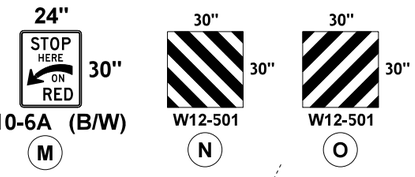
SR 20
UNT TO COAL CREEK
FISH PASSAGE

TRAFFIC CONTROL PLAN

Plot 3
PLAN REF NO TC3
SHEET 54 OF 55 SHEETS



SINGLE LANE BYPASS
ALTERNATING ONE-WAY SIGNAL OR FLAGGER CONTROLLED
NOT TO SCALE



5 CALENDAR DAYS BEFORE CONSTRUCTION BEGINS

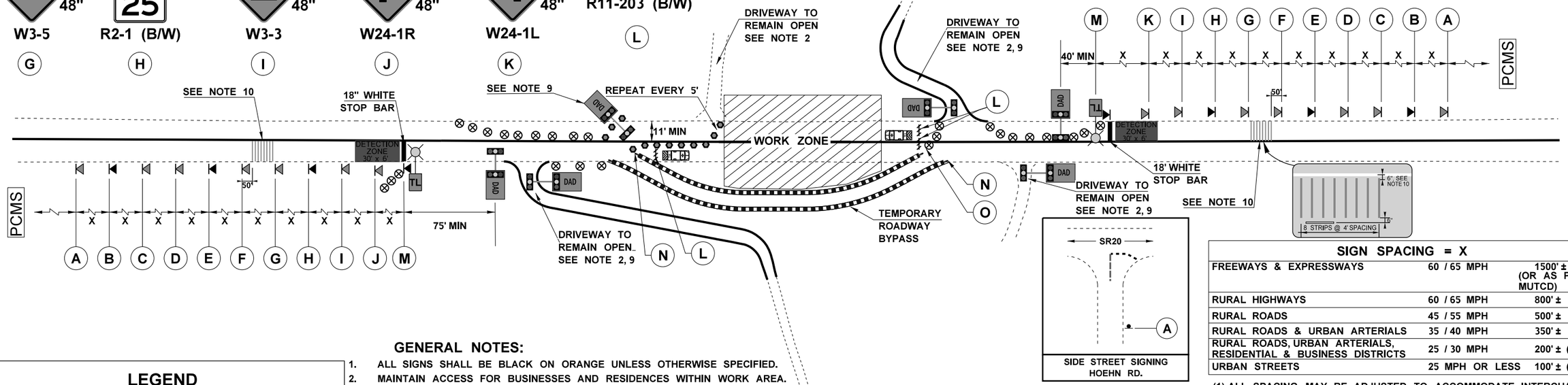
PCMS MESSAGE #1	
PHASE 1	PHASE 2
LANE CLOSED W SIGNAL	BEGINS MONDAY XX / XX
2.0 SEC	2.0 SEC

FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE

DURING CONSTRUCTION

PCMS MESSAGE #2	
PHASE 1	PHASE 2
LANE CLOSURE W SIGNAL	1.5 MILES AHEAD
2.0 SEC	2.0 SEC

FIELD LOCATE 1.5 MILE (+/-) IN ADVANCE OF LANE CLOSURE



SIDE STREET SIGNING HOEHN RD.

SIGN SPACING = X		
FREEWAYS & EXPRESSWAYS	60 / 65 MPH	1500' ± (OR AS PER MUTCD)
RURAL HIGHWAYS	60 / 65 MPH	800' ±
RURAL ROADS	45 / 55 MPH	500' ±
RURAL ROADS & URBAN ARTERIALS	35 / 40 MPH	350' ±
RURAL ROADS, URBAN ARTERIALS, RESIDENTIAL & BUSINESS DISTRICTS	25 / 30 MPH	200' ± (2)
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(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.
(2) THIS SPACING MAY BE REDUCED IN URBAN AREAS TO FIT ROADWAY CONDITIONS.

LEGEND

- WORK ZONE
- FLAGGING STATION
- TRAFFIC SAFETY DRUMS (SEE SPECIAL PROVISIONS)
- CLASS A SIGN
- CLASS B SIGN
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED ATTENUATOR
- TEMPORARY IMPACT ATTENUATOR
- TYPE 3 BARRICADE
- TEMPORARY LIGHTING
- DAD — DRIVEWAY ASSISTANCE DEVICE (DAD)
- TEMP. PORTABLE RUMBLE STRIPS (SEE NOTE 10)
- TALL CHANNELIZING DEVICE 42

GENERAL NOTES:

1. ALL SIGNS SHALL BE BLACK ON ORANGE UNLESS OTHERWISE SPECIFIED.
2. MAINTAIN ACCESS FOR BUSINESSES AND RESIDENCES WITHIN WORK AREA.
3. TRANSPORTABLE ATTENUATOR (TA) IS REQUIRED
4. NIGHT WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGING STATIONS. SEE STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS.
5. "FLAGGER AHEAD" SIGN SHOULD ONLY BE POSTED WHEN FLAGGERS ARE PRESENT.
6. SEE SPECIAL PROVISIONS FOR WORK HOUR RESTRICTIONS.
7. BICYCLE AND PEDESTRIAN TRAFFIC SHALL BE ACCOMMODATED AT ALL TIMES, WHICH MAY INCLUDE ESCORTING BICYCLES AND PEDESTRIANS THROUGH THE WORK AREA AS NEEDED.
8. SEE TEMPORARY BYPASS SHEETS FOR STRIPING AND ALIGNMENT INFORMATION.
9. DRIVEWAY TEMPORARY SIGNALS SHALL BE DRIVEWAY ASSITANCE DEVICES (DAD). WHEN ALTERNATING ONE-WAY TRAFFIC IS CONTROLLED BY TEMPORARY SIGNAL. DRIVEWAYS SHALL BE CONTROLLED BY FLAGGER ALTERNATING ONE-WAY TRAFFIC IS CONTROLLED BY FLAGGER.
10. SECURE TEMPORARY RUMBLE STRIPS TO PAVEMENT VIA ADHESIVE (DO NOT USE PRIMER). AVOID PLACING TEMP. WITHIN HORIZONTAL CURVES, ADJUST SIGN SPACING IF NEEDED. USE THE FOLLOWING:
    * Advanced Traffic Marking (ATM) Self-Adhesive Rumble Strips (1/4" x 4", Orange)
    * Stop-Painting (1/4" x 4", Orange)
    * Seton (1/4" x 4", Orange)

TL-3 APPROVED TEMPORARY IMPACT ATTENUATOR LIST
ASBORB 350 TL-3
QUADGUARD CZ* (6-BAY)
SLED TL-3
* ATTENUATOR IS WIDER THAN 2.0'. TL-3 ATTENUATORS APPROVED FOR ALL SPEEDS.

(1) SEE QUANTITY TABULATION - TEMPORARY BYPASS FOR INFORMATION

CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50/70	40	80
35/45	30	60
25/30	20	40

BUFFER DATA

LONGITUDINAL BUFFER SPACE = B

SPEED (MPH)	25	30	35	40	45	50	55	60	65	70
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PROTECTIVE VEHICLE (WORK VEHICLE) = R

NO SPECIFIED DISTANCE REQUIRED

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TIME	1:37:48 PM				10	WASH	
DATE	12/27/2023				JOB NUMBER 23A021		
PLOTTED BY	Doantun						
DESIGNED BY	C. LOY						
ENTERED BY	C. LOY						
CHECKED BY	E. MARR				CONTRACT NO.		LOCATION NO.
PROJ. ENGR.	M. LAMAY						
REGIONAL ADM.	B. NIELSEN	REVISION	DATE	BY			

DATE
P.E. STAMP BOX

DATE
P.E. STAMP BOX

Washington State Department of Transportation

SR 20
UNT TO COAL CREEK
FISH PASSAGE

TRAFFIC CONTROL PLAN

Plot 4
PLAN REF NO
TC4
SHEET 55 OF 55 SHEETS