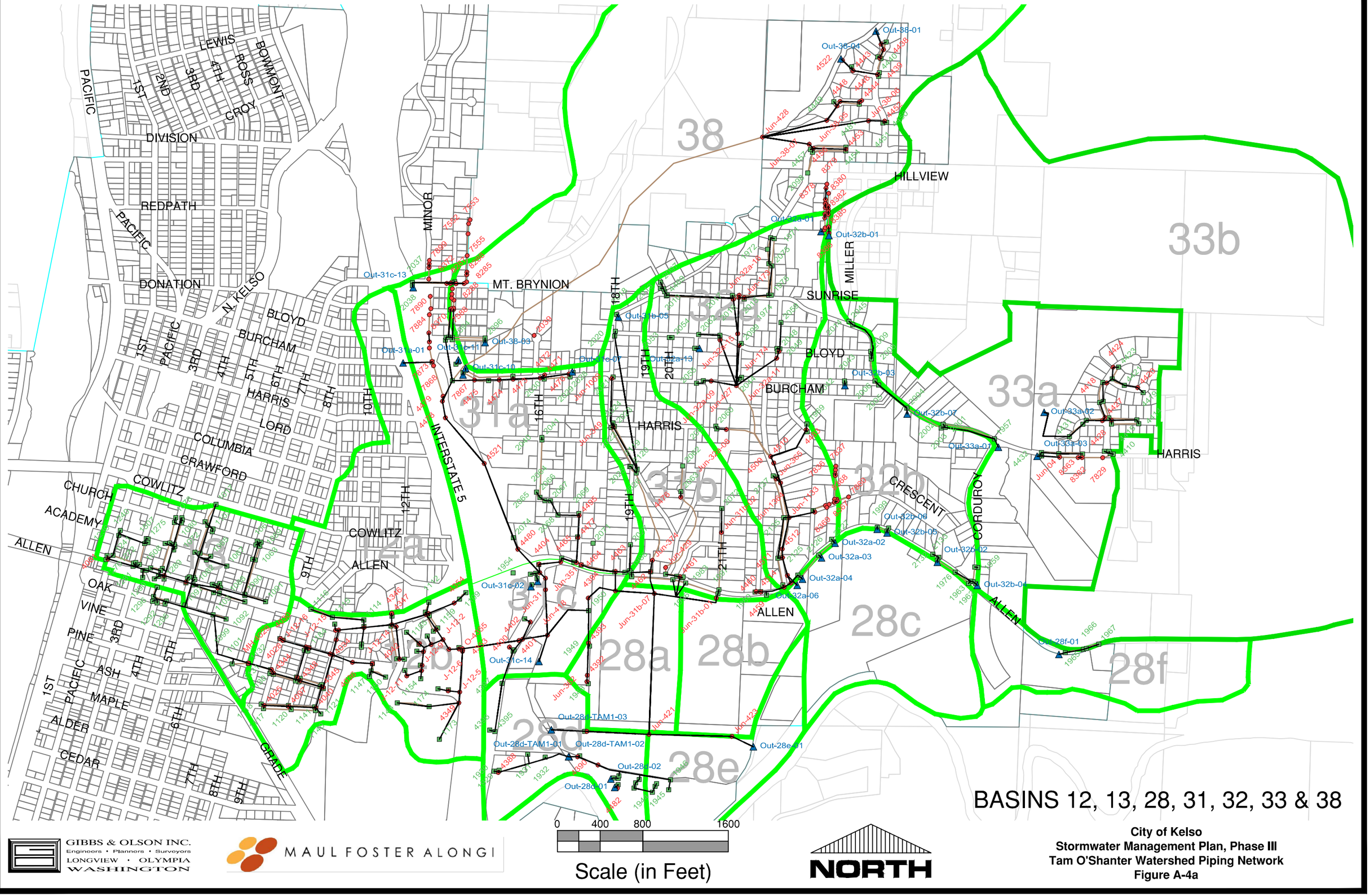

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City of Kelso
Stormwater Management Plan, Phase III
Tam O'Shanter Watershed Piping Network
Figure A-4a

STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
2040	0.49	22.48
4410	0.32	24.73
2005	0.40	6.21
2007	0.35	21.69
2008	0.40	15.61
1957	0.35	8.57
1958	0.45	20.93
1949	0.54	8.58
1972	0.32	6.29
2017	0.37	7.09
1942	0.46	4.72
1944	0.46	1.47
1946	0.46	1.11
2020	0.25	8.98
1103	0.11	4.07
2062	0.31	5.75
1955	0.40	0.83
4467	-	7.79
J-13-2	-	5.42

BASINS 12, 13, 28, 31, 32, 33 & 38

City of Kelso
Stormwater Management Plan, Phase III
Tam O'Shanter Watershed Areas of Concern, 25-Year Storm
Figure A-4b

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STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
2040	0.63	35.57
4410	0.41	39.29
2005	0.50	9.54
2007	0.42	30.56
2008	0.50	23.67
1957	0.43	20.67
1958	0.57	31.71
1948	0.98	5.28
1949	0.98	28.56
1972	0.38	9.53
2017	0.45	18.01
1942	0.59	14.73
1944	0.59	6.09
1946	0.59	5.26
2020	0.33	13.62
1103	0.16	9.38
2062	0.36	8.71
1955	0.47	5.76
4467	-	19.80
J-13-2	-	13.48
4480	-	31.63
4521	-	6.58
Jun-31c-05	-	7.27

BASINS 12, 13, 28, 31, 32, 33 & 38

City of Kelso
Stormwater Management Plan, Phase III
Tam O'Shanter Watershed Areas of Concern, 100-Year Storm
Figure A-4c

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0 400 800 1600
Scale (in Feet)

NORTH

South Kelso
Watershed

0 300 600 1200

Scale (in Feet)

NORTH

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MAUL FOSTER ALONGI

City of Kelso
Stormwater Management Plan, Phase III
South Kelso Watershed Area
Figure A-5

INTERSTATE 5

THREE RIVERS MALL

11

10

1

COWEEMAN RIVER

GRADE

MILL

ASH

CHESTNUT

ALLEN

6TH

6TH

PACIFIC

ALDER

COWLITZ RIVER

NORTH

0 250 500 1000

Scale (in Feet)

BASINS 1, 10 & 11

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City of Kelso
Stormwater Management Plan, Phase III
South Kelso Watershed Piping Network
Figure A-5a

BASIN 10 ADVERSE GRADES

PIPE	SLOPE (FT/FT)	EXIST. SIZE	PROP. SIZE	LENGTH (FT)
P-10-137	-0.0222	8-inch	+	45
P-10-142	-0.0032	8-inch	+	38
P-10-156	-0.0023	8-inch	+	39
P-10-203	-0.0050	6-inch	+	78
P-10-308	-0.0150	6-inch	+	24
P-10-402	-0.0053	8-inch	+	40
P-10-403	-0.0054	8-inch	+	135
P-10-510	-0.0700	6-inch	+	3
P-10-612	-0.0011	12-inch	**	54
P-10-613	-0.0004	12-inch	**	24
P-10-633	-0.0061	6-inch	+	31

** See Basin 10 Undersized Pipes
+ 12-inch minimum diameter required

BASIN 10 UNDERSIZED PIPES

PIPE	EXIST. SIZE	PROP. SIZE	LENGTH (FT)
P-10-100	36-inch	54-inch	128
P-10-101	36-inch	54-inch	127
P-10-102	36-inch	54-inch	64
P-10-103	36-inch	66-inch	118
P-10-104	36-inch	66-inch	163
P-10-105	36-inch	66-inch	172
P-10-106	36-inch	66-inch	59
P-10-107	36-inch	60-inch	346
P-10-108	36-inch	60-inch	731
P-10-109	36-inch	60-inch	479
P-10-110	36-inch	60-inch	6
P-10-111	36-inch	60-inch	155
P-10-112	36-inch	60-inch	229
P-10-113	16-inch	36-inch	70
P-10-114	18-inch	36-inch	381
P-10-115	18-inch	36-inch	330
P-10-116	18-inch	36-inch	44
P-10-117	12-inch	36-inch	5
P-10-118	12-inch	36-inch	145
P-10-119	12-inch	30-inch	133
P-10-120	10-inch	30-inch	128
P-10-121	12-inch	24-inch	115
P-10-122	12-inch	24-inch	147
P-10-123	10-inch	18-inch	28
P-10-124	10-inch	18-inch	102
P-10-125	10-inch	18-inch	21
P-10-126	10-inch	18-inch	89
P-10-127	10-inch	18-inch	18
P-10-300	24-inch	36-inch	95
P-10-301	24-inch	36-inch	129
P-10-302	24-inch	24-inch	119
P-10-304	18-inch	24-inch	36
P-10-500	16-inch	36-inch	54
P-10-501	16-inch	30-inch	164
P-10-502	16-inch	30-inch	65
P-10-503	12-inch	30-inch	32
P-10-504	12-inch	30-inch	226
P-10-505	10-inch	18-inch	44
P-10-506	8-inch	18-inch	219
P-10-600	12-inch	24-inch	133
P-10-601	12-inch	24-inch	48
P-10-602	12-inch	24-inch	106
P-10-603	12-inch	24-inch	145
P-10-604	12-inch	24-inch	166
P-10-605	12-inch	24-inch	198
P-10-606	12-inch	24-inch	35
P-10-607	12-inch	24-inch	132
P-10-608	8-inch	24-inch	79
P-10-609	10-inch	30-inch	21
P-10-610	10-inch	30-inch	102
P-10-611	12-inch	30-inch	19
P-10-612	12-inch	18-inch	54
P-10-613	12-inch	18-inch	24
P-10-614	12-inch	18-inch	72
P-10-615	12-inch	18-inch	186
P-10-616	12-inch	18-inch	24
TOTAL			7,260

BASIN 11 ADVERSE GRADES

PIPE	SLOPE (FT/FT)	EXIST. SIZE	PROP. SIZE	LENGTH (FT)
P-11-102	-0.0078	48-inch	***	9
P-11-106	-0.0045	32-inch	***	201
P-11-114	-0.0051	15-inch	++	432

*** See Basin 11 Undersized Pipes
++ Further evaluation required

BASIN 11 UNDERSIZED PIPES

PIPE	EXIST. SIZE	PROP. SIZE	LENGTH (FT)
P-11-100	36-inch	60-inch	16
P-11-101	36-inch	60-inch	131
P-11-102	48-inch	60-inch	9
P-11-103	48-inch	60-inch	85
P-11-104	32-inch	42-inch	193
P-11-105	32-inch	42-inch	123
P-11-106	32-inch	42-inch	201
P-11-107	32-inch	48-inch	251
P-11-108	32-inch	48-inch	277
P-11-109	24-inch	48-inch	357
P-11-110	24-inch	42-inch	134
P-11-111	24-inch	30-inch	210
P-11-112	21-inch	30-inch	293
P-11-200	21-inch	42-inch	100
P-11-300	36-inch	36-inch	416
P-11-301	32-inch	36-inch	113
P-11-302	32-inch	36-inch	178
P-11-303	24-inch	24-inch	174
P-11-304	24-inch	30-inch	98
P-11-400	24-inch	60-inch	135
P-11-401	24-inch	48-inch	165
P-11-402	12-inch	24-inch	208
TOTAL			3,867

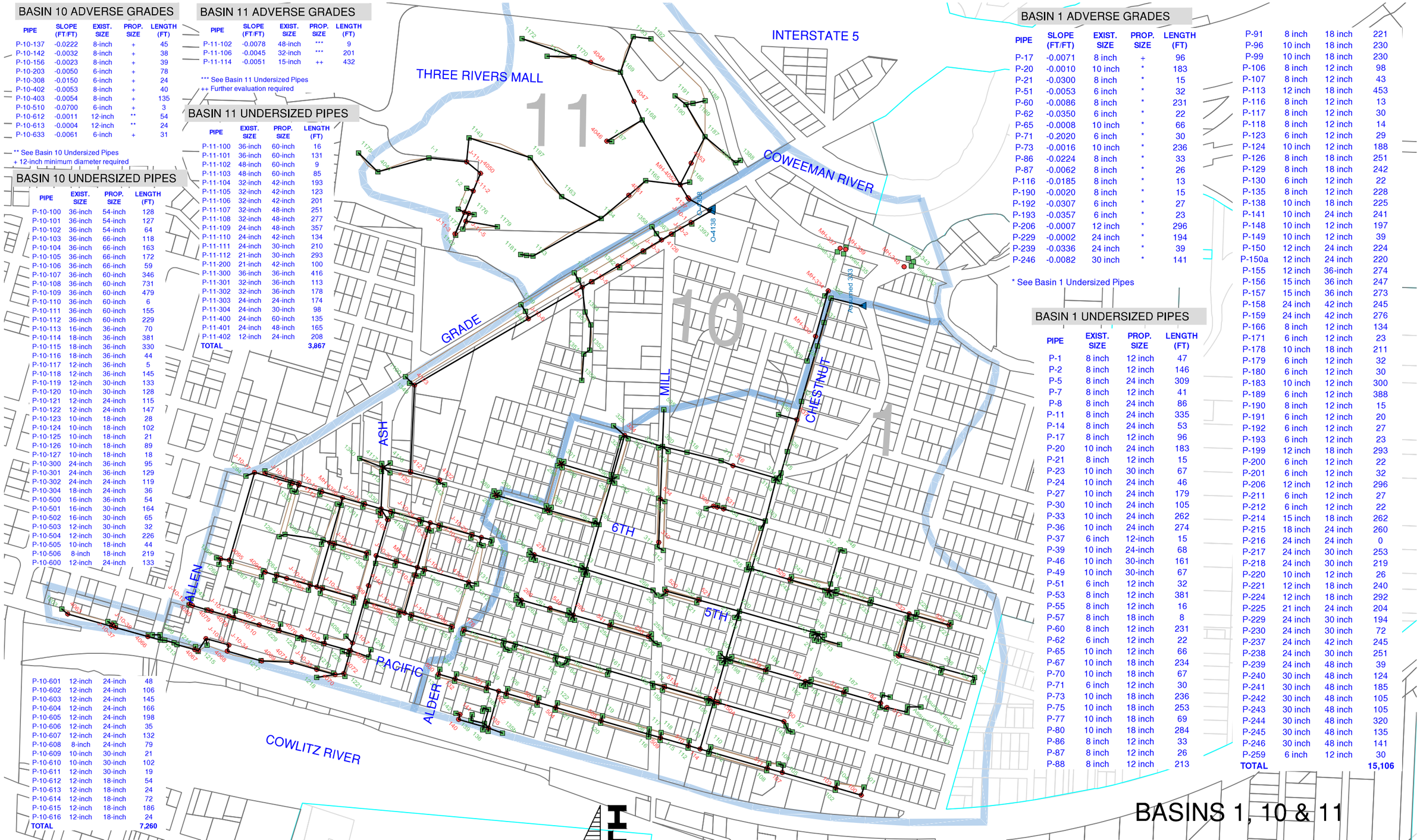
BASIN 1 ADVERSE GRADES

PIPE	SLOPE (FT/FT)	EXIST. SIZE	PROP. SIZE	LENGTH (FT)
P-17	-0.0071	8 inch	+	96
P-20	-0.0010	10 inch	*	183
P-21	-0.0300	8 inch	*	15
P-51	-0.0053	6 inch	*	32
P-60	-0.0086	8 inch	*	231
P-62	-0.0350	6 inch	*	22
P-65	-0.0008	10 inch	*	66
P-71	-0.2020	6 inch	*	30
P-73	-0.0016	10 inch	*	236
P-86	-0.0224	8 inch	*	33
P-87	-0.0062	8 inch	*	26
P-116	-0.0185	8 inch	*	13
P-190	-0.0020	8 inch	*	15
P-192	-0.0307	6 inch	*	27
P-193	-0.0357	6 inch	*	23
P-206	-0.0007	12 inch	*	296
P-229	-0.0002	24 inch	*	194
P-239	-0.0336	24 inch	*	39
P-246	-0.0082	30 inch	*	141

* See Basin 1 Undersized Pipes

BASIN 1 UNDERSIZED PIPES

PIPE	EXIST. SIZE	PROP. SIZE	LENGTH (FT)
P-1	8 inch	12 inch	47
P-2	8 inch	12 inch	146
P-5	8 inch	24 inch	309
P-7	8 inch	12 inch	41
P-8	8 inch	24 inch	86
P-11	8 inch	24 inch	335
P-14	8 inch	24 inch	53
P-17	8 inch	12 inch	96
P-20	10 inch	24 inch	183
P-21	8 inch	12 inch	15
P-23	10 inch	30 inch	67
P-24	10 inch	24 inch	46
P-27	10 inch	24 inch	179
P-30	10 inch	24 inch	105
P-33	10 inch	24 inch	262
P-36	10 inch	24 inch	274
P-37	6 inch	12-inch	15
P-39	10 inch	24-inch	68
P-46	10 inch	30-inch	161
P-49	10 inch	30-inch	67
P-51	6 inch	12 inch	32
P-53	8 inch	12 inch	381
P-55	8 inch	12 inch	16
P-57	8 inch	18 inch	8
P-60	8 inch	12 inch	231
P-62	6 inch	12 inch	22
P-65	10 inch	12 inch	66
P-67	10 inch	18 inch	234
P-70	10 inch	18 inch	67
P-71	6 inch	12 inch	30
P-73	10 inch	18 inch	236
P-75	10 inch	18 inch	253
P-77	10 inch	18 inch	69
P-80	10 inch	18 inch	284
P-86	8 inch	12 inch	33
P-87	8 inch	12 inch	26
P-88	8 inch	12 inch	213
P-91	8 inch	18 inch	221
P-96	10 inch	18 inch	230
P-99	10 inch	18 inch	230
P-106	8 inch	12 inch	98
P-107	8 inch	12 inch	43
P-113	12 inch	18 inch	453
P-116	8 inch	12 inch	13
P-117	8 inch	12 inch	30
P-118	8 inch	12 inch	14
P-123	6 inch	12 inch	29
P-124	10 inch	12 inch	188
P-126	8 inch	18 inch	251
P-129	8 inch	18 inch	242
P-130	6 inch	12 inch	22
P-135	8 inch	12 inch	228
P-138	10 inch	18 inch	225
P-141	10 inch	24 inch	241
P-148	10 inch	12 inch	197
P-149	10 inch	12 inch	39
P-150	12 inch	24 inch	224
P-150a	12 inch	24 inch	220
P-155	12 inch	36-inch	274
P-156	15 inch	36 inch	247
P-157	15 inch	36 inch	273
P-158	24 inch	42 inch	245
P-159	24 inch	42 inch	276
P-166	8 inch	12 inch	134
P-171	6 inch	12 inch	23
P-178	10 inch	18 inch	211
P-179	6 inch	12 inch	32
P-180	6 inch	12 inch	30
P-183	10 inch	12 inch	300
P-189	6 inch	12 inch	388
P-190	8 inch	12 inch	15
P-191	6 inch	12 inch	20
P-192	6 inch	12 inch	27
P-193	6 inch	12 inch	23
P-199	12 inch	18 inch	293
P-200	6 inch	12 inch	22
P-201	6 inch	12 inch	32
P-206	12 inch	12 inch	296
P-211	6 inch	12 inch	27
P-212	6 inch	12 inch	22
P-214	15 inch	18 inch	262
P-215	18 inch	24 inch	260
P-216	24 inch	24 inch	0
P-217	24 inch	30 inch	253
P-218	24 inch	30 inch	219
P-220	10 inch	12 inch	26
P-221	12 inch	18 inch	240
P-224	12 inch	18 inch	292
P-225	21 inch	24 inch	204
P-229	24 inch	30 inch	194
P-230	24 inch	30 inch	72
P-237	24 inch	42 inch	245
P-238	24 inch	30 inch	251
P-239	24 inch	48 inch	39
P-240	30 inch	48 inch	124
P-241	30 inch	48 inch	185
P-242	30 inch	48 inch	105
P-243	30 inch	48 inch	105
P-244	30 inch	48 inch	320
P-245	30 inch	48 inch	135
P-246	30 inch	48 inch	141
P-259	6 inch	12 inch	30
TOTAL			15,106



NORTH

0 250 500 1000

Scale (in Feet)

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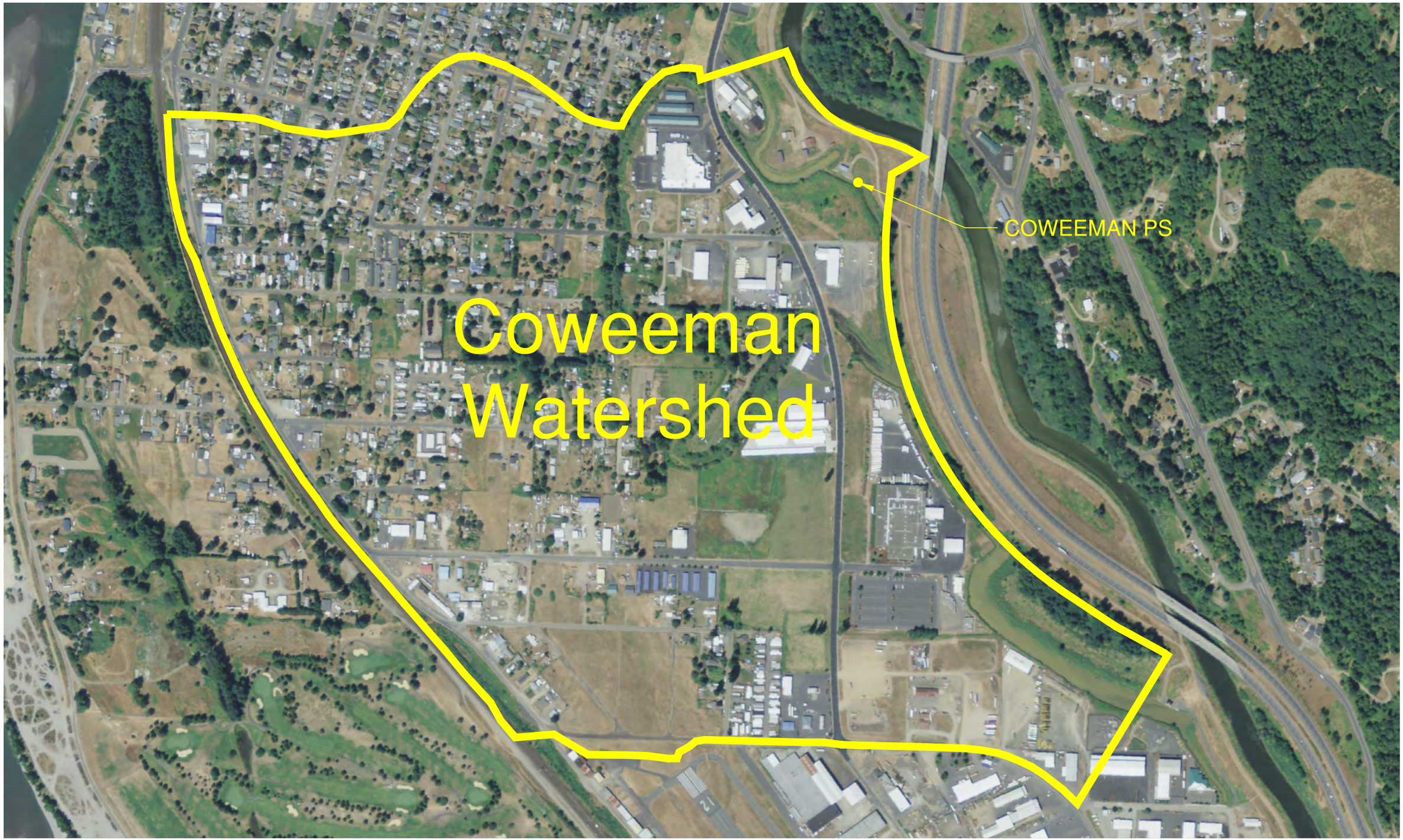
BASINS 1, 10 & 11

City of Kelso
Stormwater Management Plan, Phase III
South Kelso Watershed
Undersized Pipes, 25-Year Storm
Figure A-5b



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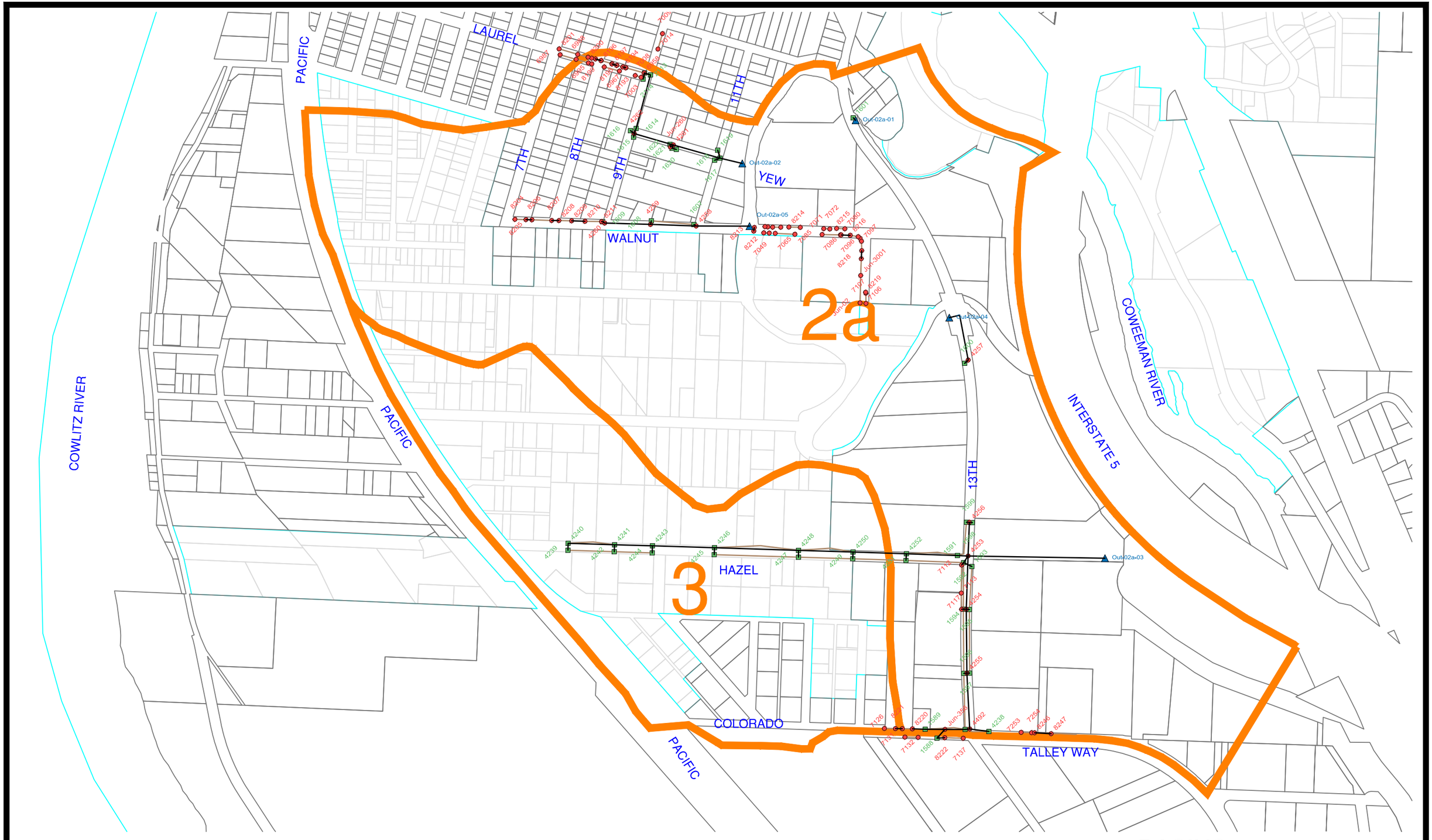
Scale (in Feet)

NORTH

City of Kelso
Stormwater Management Plan, Phase III
Coweeman Watershed Area
Figure A-6



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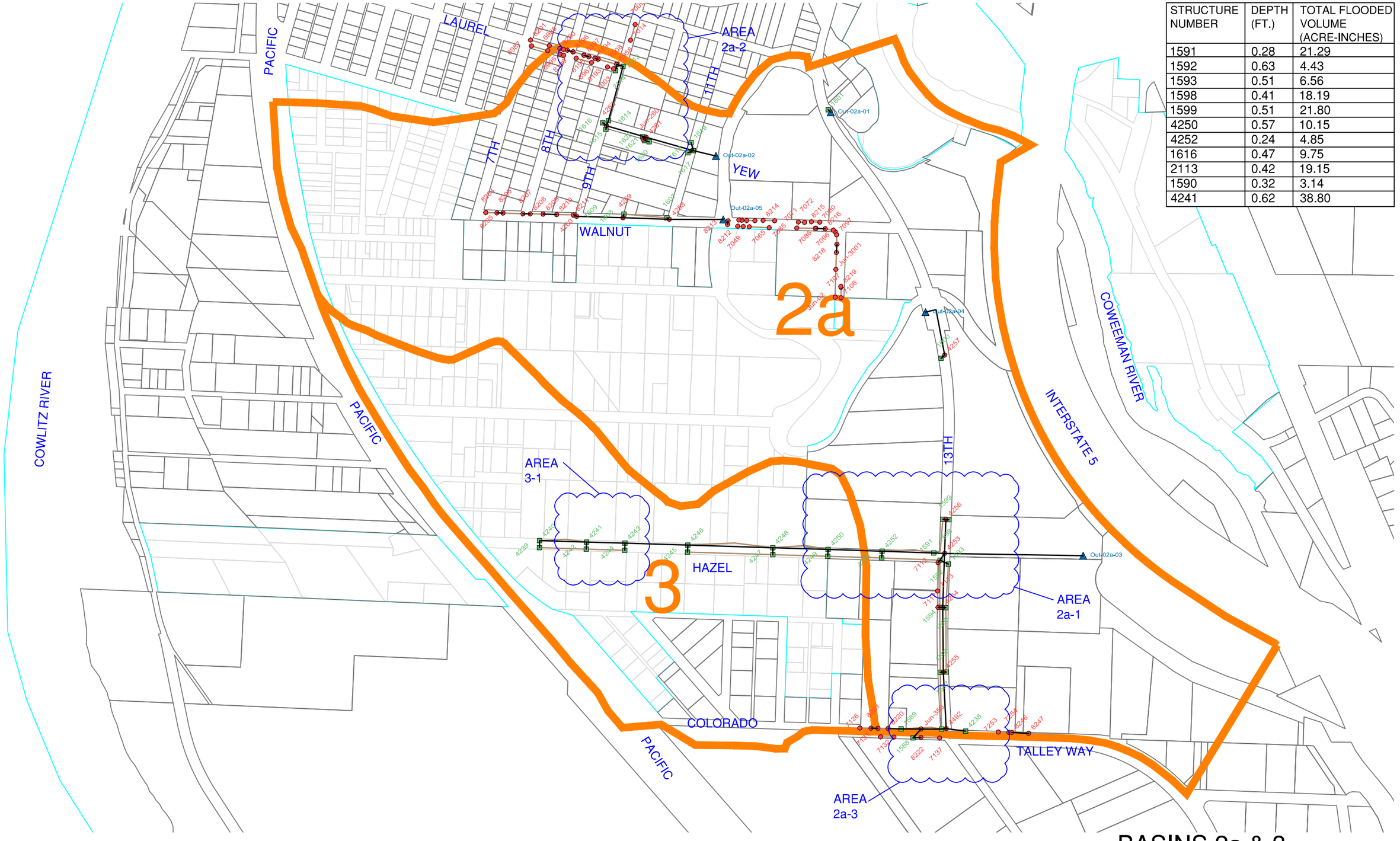
BASINS 2a & 3

City of Kelso
Stormwater Management Plan, Phase III
Coweeman Watershed Piping Network
Figure A-6a

STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
1591	0.28	21.29
1592	0.63	4.43
1593	0.51	6.56
1598	0.41	18.19
1599	0.51	21.80
4250	0.57	10.15
4252	0.24	4.85
1616	0.47	9.75
2113	0.42	19.15
1590	0.32	3.14
4241	0.62	38.80



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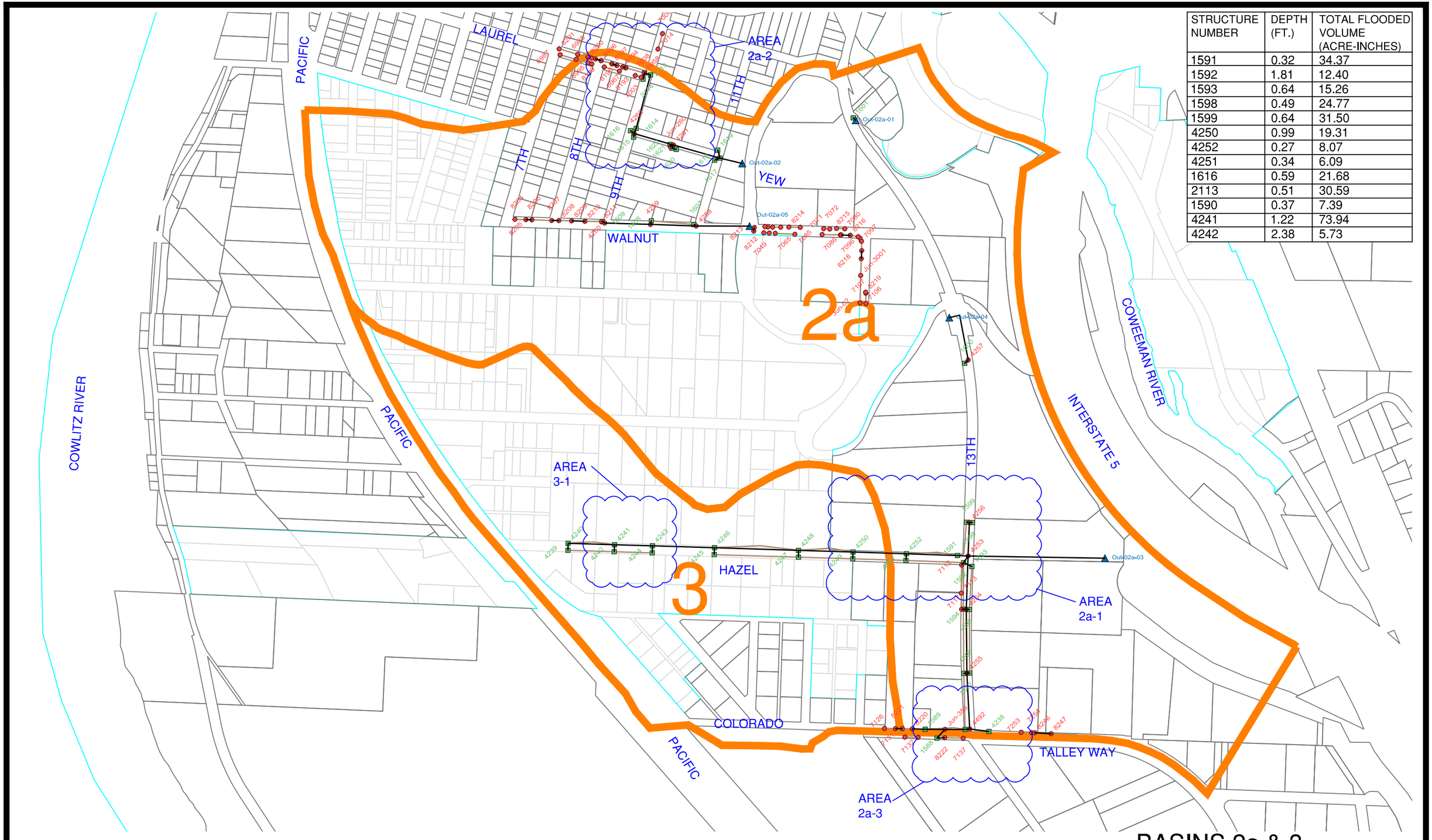
0 250 500 1000
Scale (in Feet)

NORTH

BASINS 2a & 3

City of Kelso
Stormwater Management Plan, Phase III
Coweeman Watershed
Areas of Concern, 25-Year Storm
Figure A-6b

STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
1591	0.32	34.37
1592	1.81	12.40
1593	0.64	15.26
1598	0.49	24.77
1599	0.64	31.50
4250	0.99	19.31
4252	0.27	8.07
4251	0.34	6.09
1616	0.59	21.68
2113	0.51	30.59
1590	0.37	7.39
4241	1.22	73.94
4242	2.38	5.73



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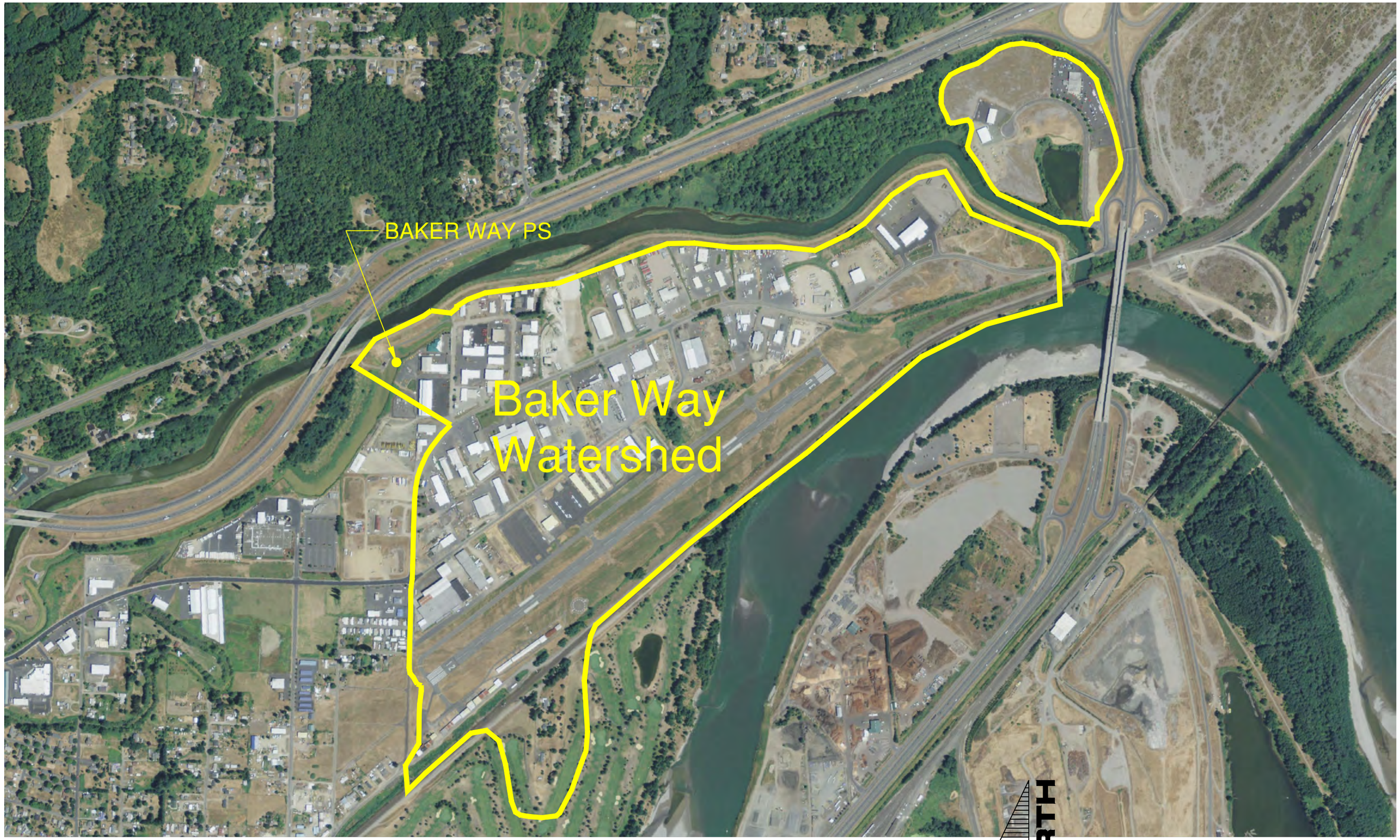
0 250 500 1000
Scale (in Feet)

NORTH

BASINS 2a & 3

City of Kelso
Stormwater Management Plan, Phase III
Coweeman Watershed
Areas of Concern, 100-Year Storm
Figure A-6c



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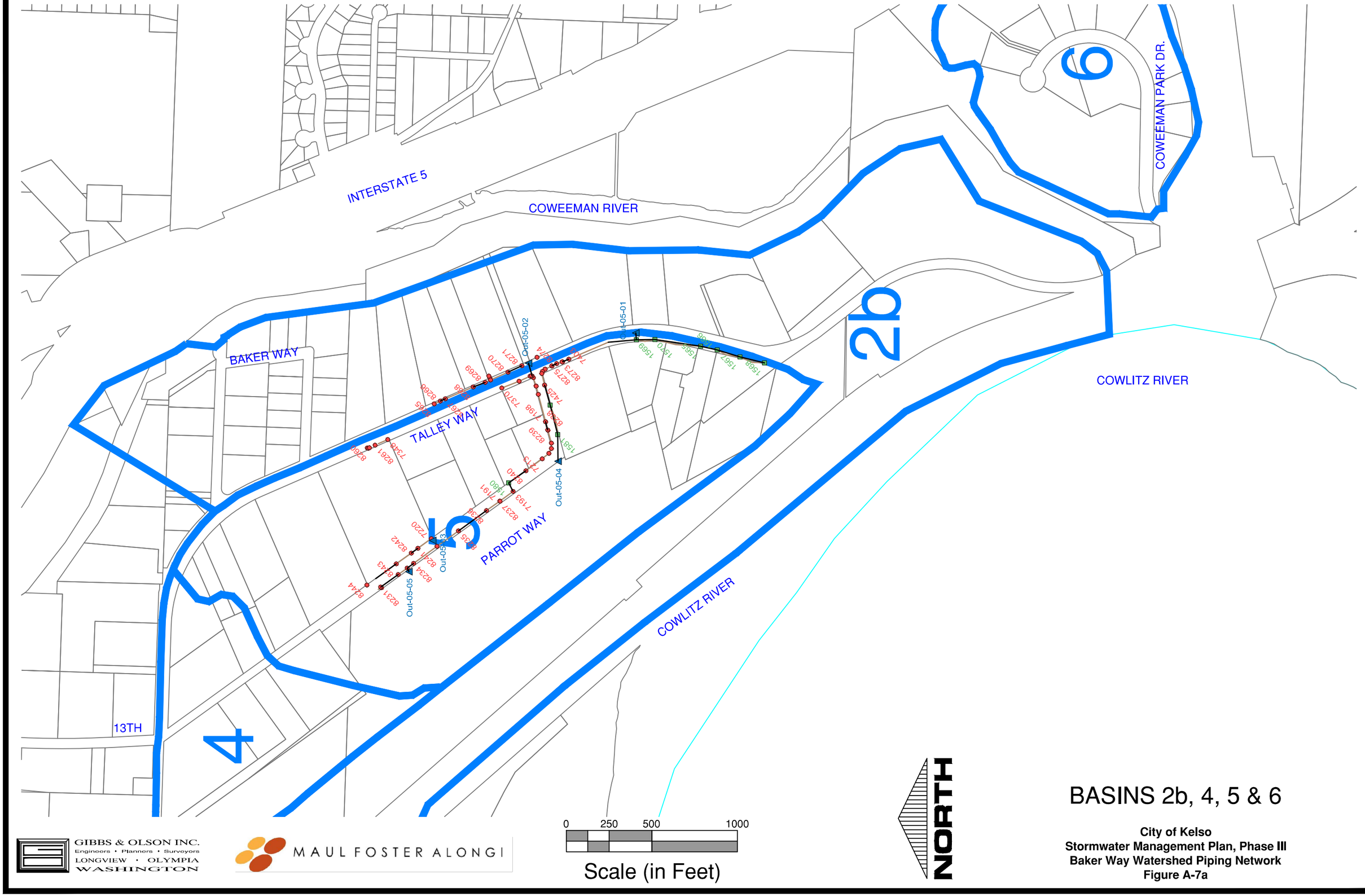
0 350 750 1500

Scale (in Feet)

NORTH

City of Kelso
Stormwater Management Plan, Phase III
Baker Way Watershed Area
Figure A-7



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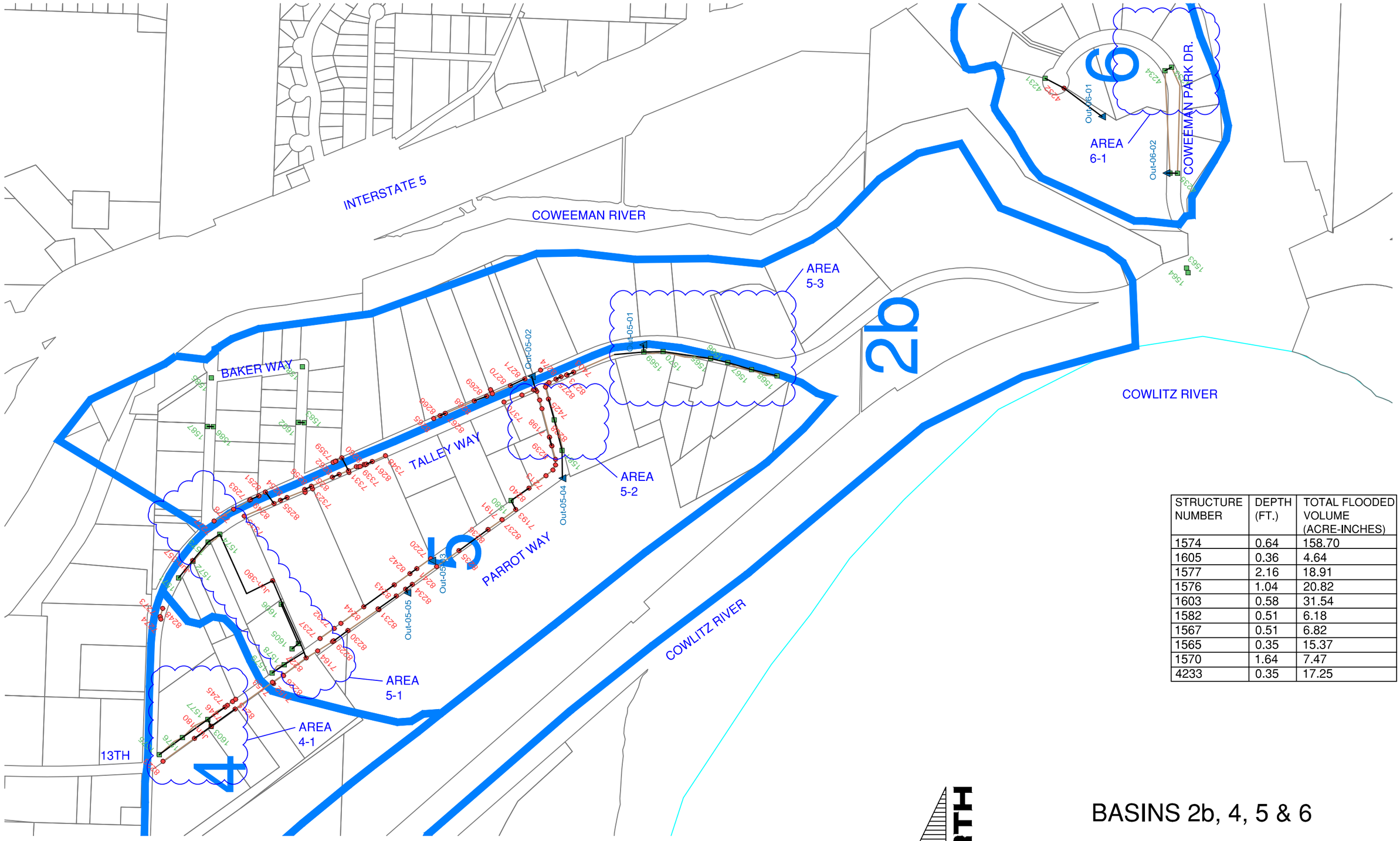
BASINS 2b, 4, 5 & 6

City of Kelso
Stormwater Management Plan, Phase III
Baker Way Watershed Piping Network
Figure A-7a



STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
1574	0.64	158.70
1605	0.36	4.64
1577	2.16	18.91
1576	1.04	20.82
1603	0.58	31.54
1582	0.51	6.18
1567	0.51	6.82
1565	0.35	15.37
1570	1.64	7.47
4233	0.35	17.25

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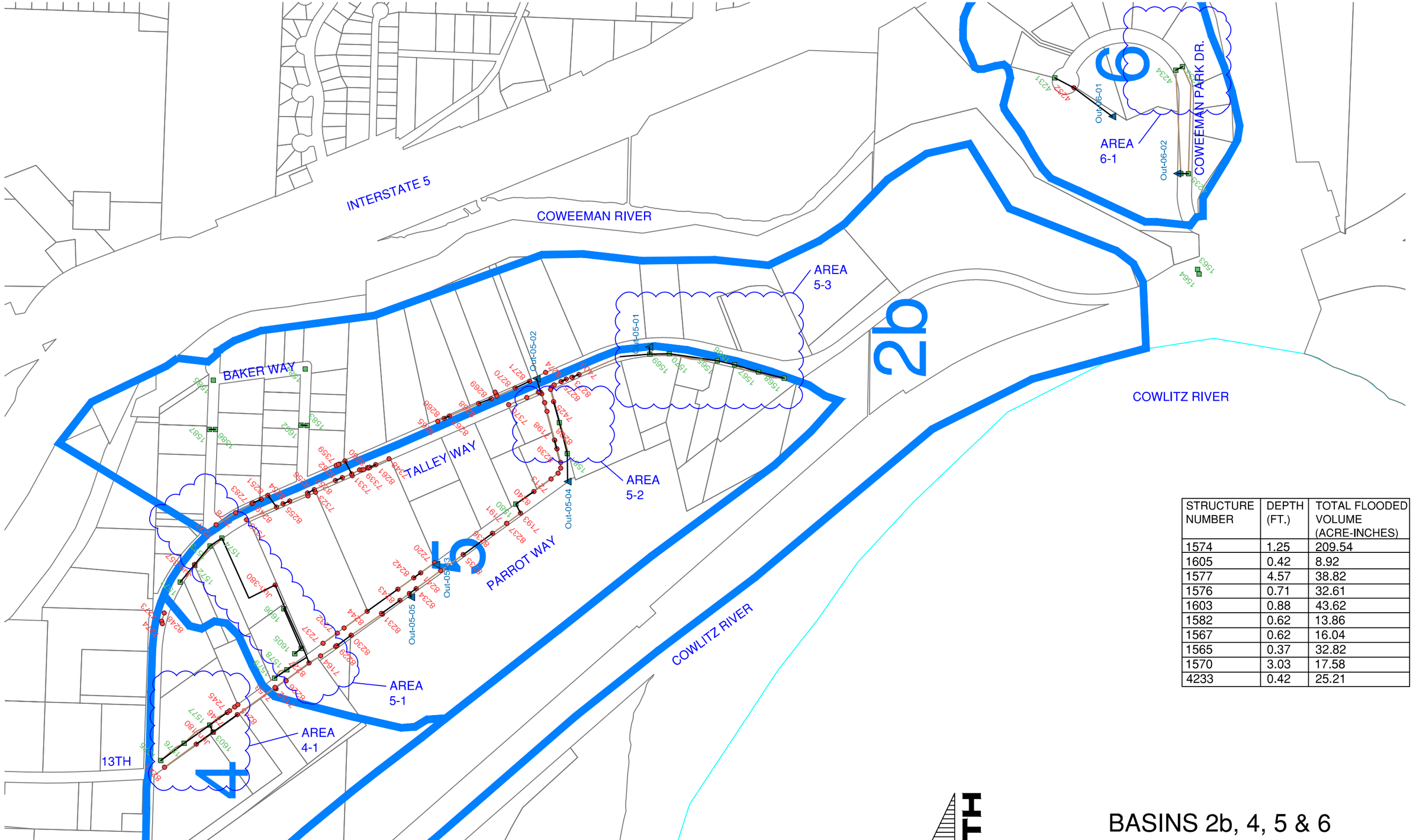
BASINS 2b, 4, 5 & 6

City of Kelso
Stormwater Management Plan, Phase III
Baker Way Watershed
Areas of Concern, 25-Year Storm
Figure A-7b



STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
1574	1.25	209.54
1605	0.42	8.92
1577	4.57	38.82
1576	0.71	32.61
1603	0.88	43.62
1582	0.62	13.86
1567	0.62	16.04
1565	0.37	32.82
1570	3.03	17.58
4233	0.42	25.21

0 250 500 1000

Scale (in Feet)

NORTH

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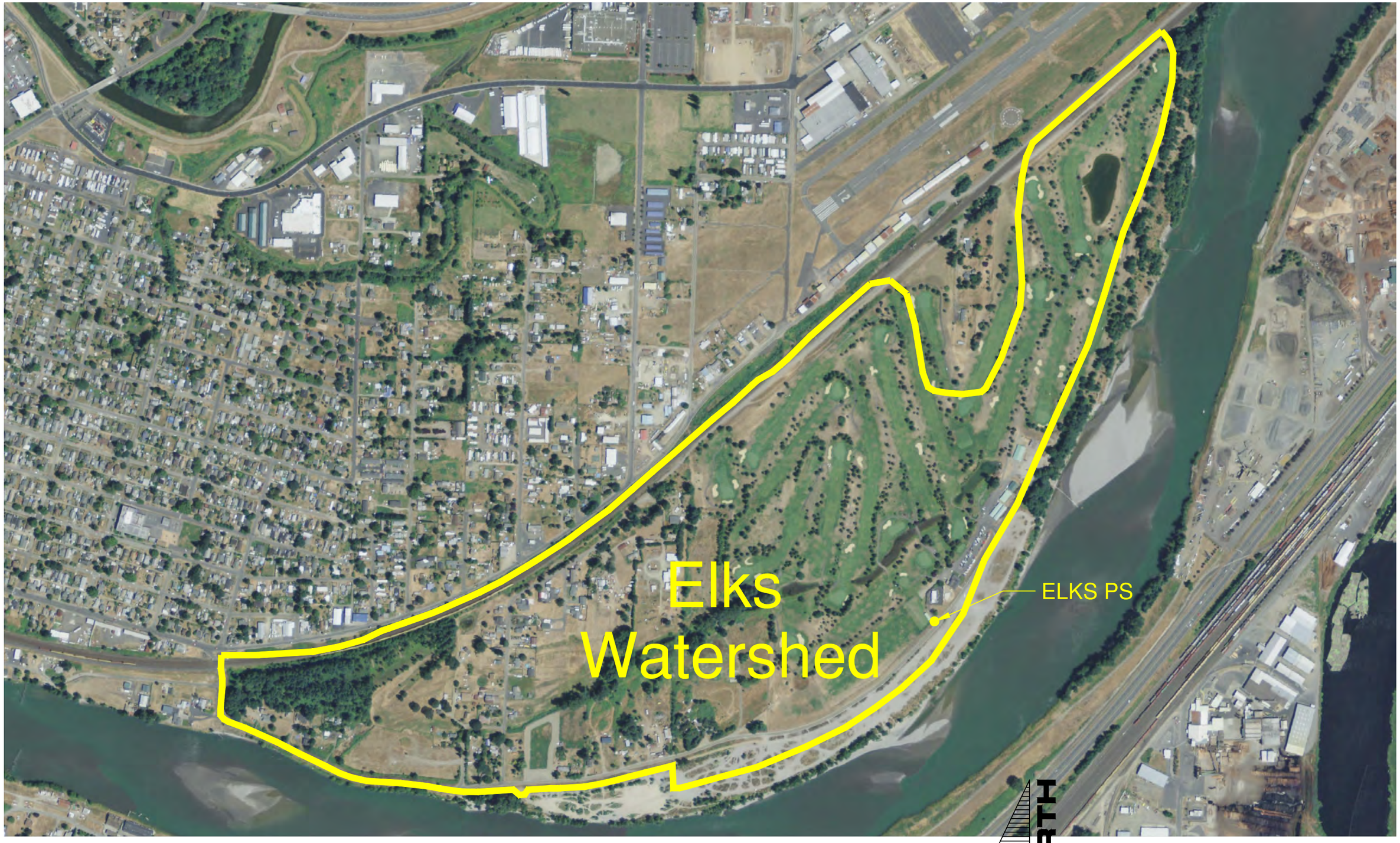
BASINS 2b, 4, 5 & 6

City of Kelso
Stormwater Management Plan, Phase III
Baker Way Watershed
Areas of Concern, 100-Year Storm
Figure A-7c



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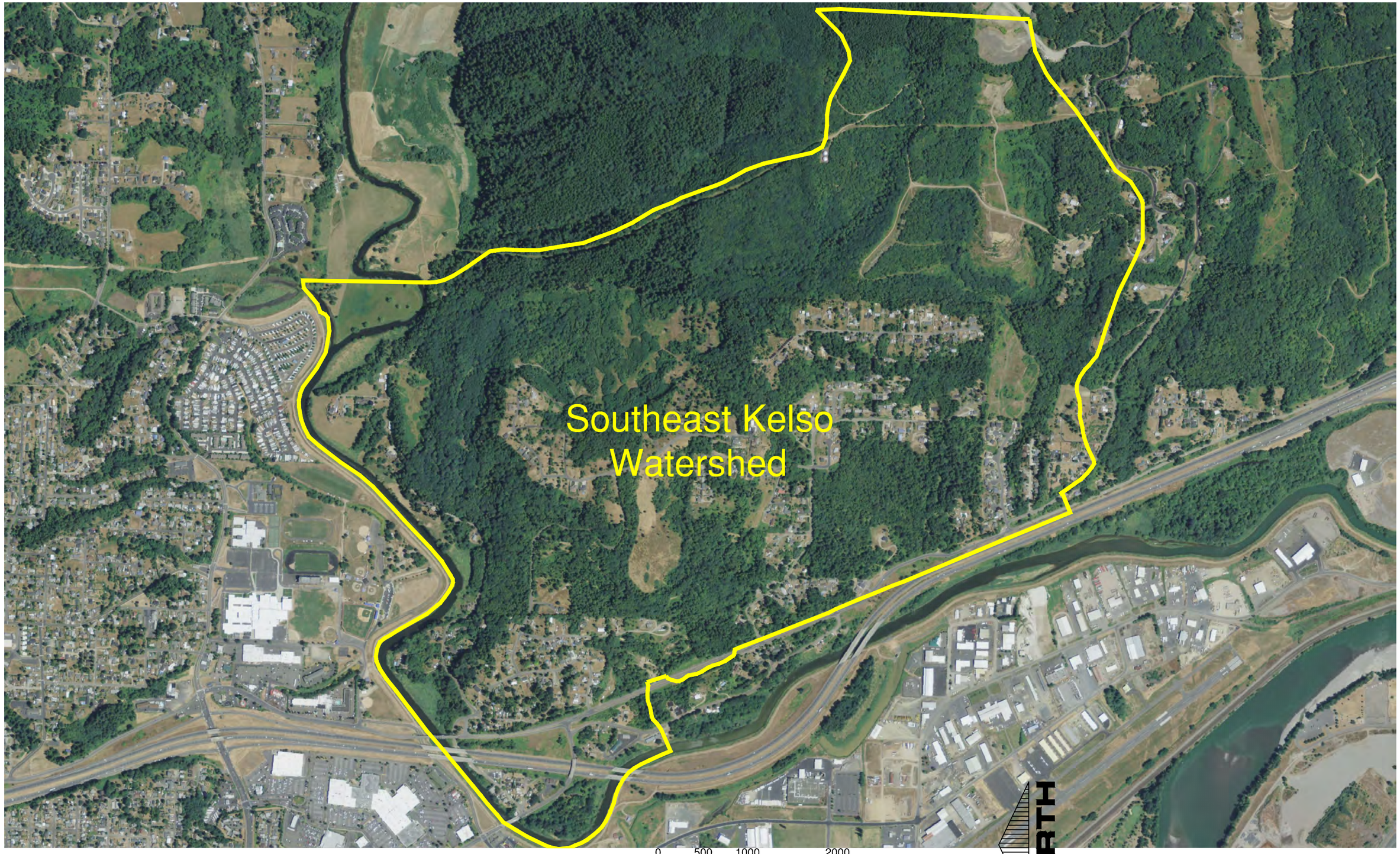
0 300 600 1200

Scale (in Feet)

NORTH

City of Kelso
Stormwater Management Plan, Phase III
Elks Watershed Area
Figure A-8



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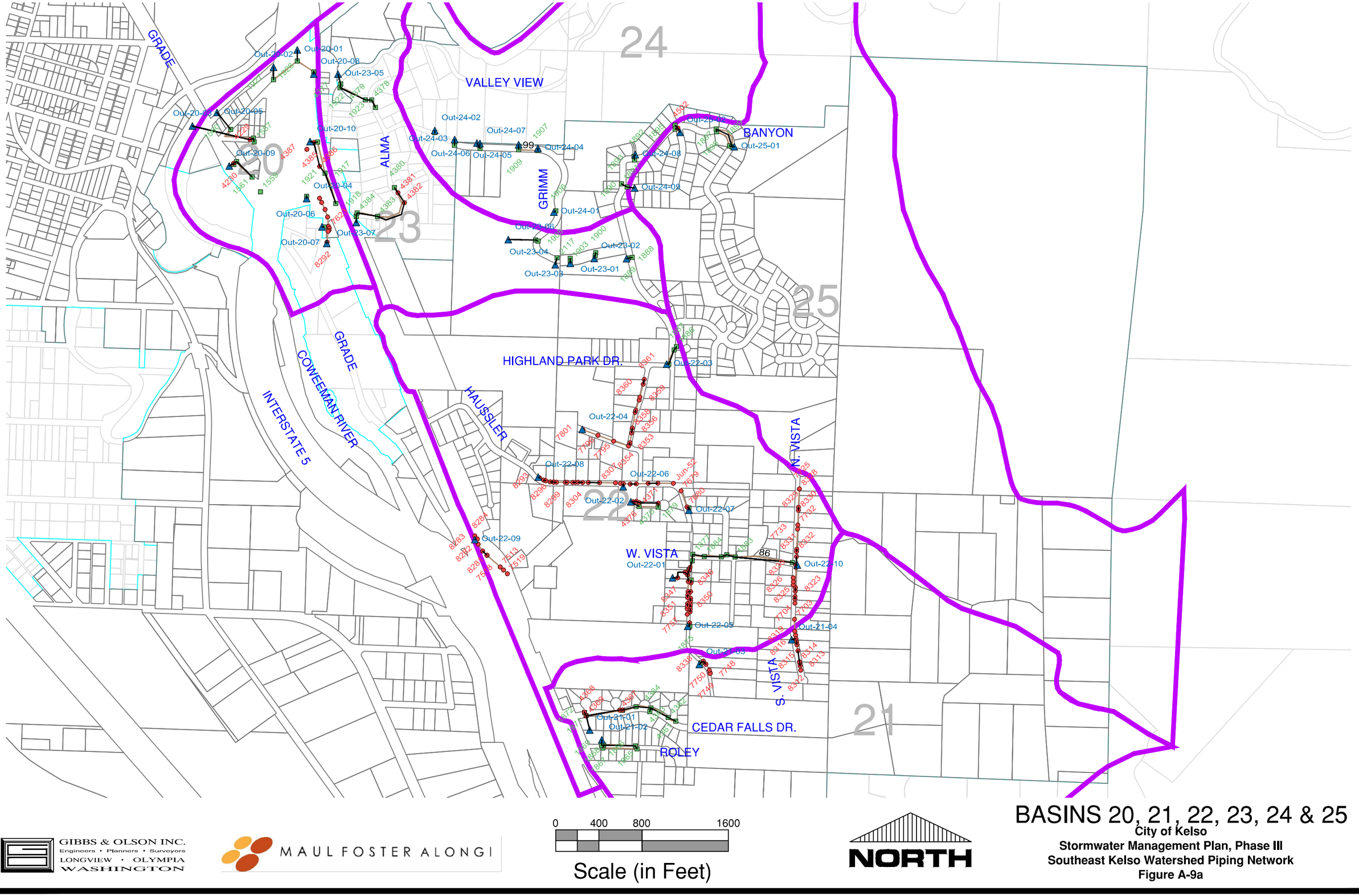
City of Kelso
Stormwater Management Plan, Phase III
Southeast Kelso Watershed Area
Figure A-9



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MAUL FOSTER ALONGI

BASINS 20, 21, 22, 23, 24 & 25

City of Kelso
Stormwater Management Plan, Phase III
Southeast Kelso Watershed Piping Network
Figure A-9a

STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
1877	0.21	3.21
8320	-	13.35
8312	-	6.01

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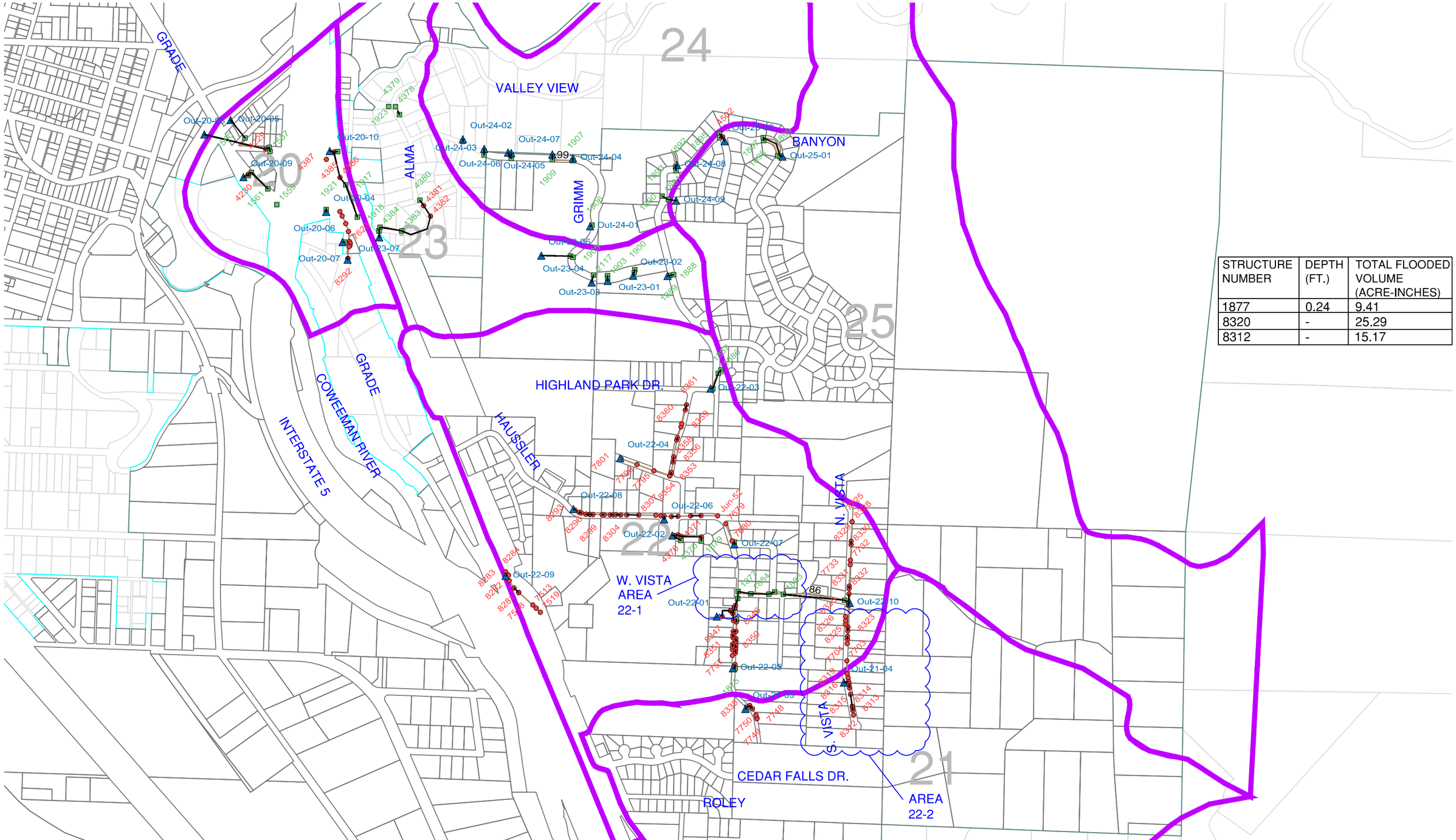
MAUL FOSTER ALONGI

0 400 800 1600
Scale (in Feet)

NORTH

BASINS 20, 21, 22, 23, 24 & 25

City of Kelso
Stormwater Management Plan, Phase III
Southeast Kelso Watershed
Areas of Concern, 25-Year Storm
Figure A-9b



STRUCTURE NUMBER	DEPTH (FT.)	TOTAL FLOODED VOLUME (ACRE-INCHES)
1877	0.24	9.41
8320	-	25.29
8312	-	15.17

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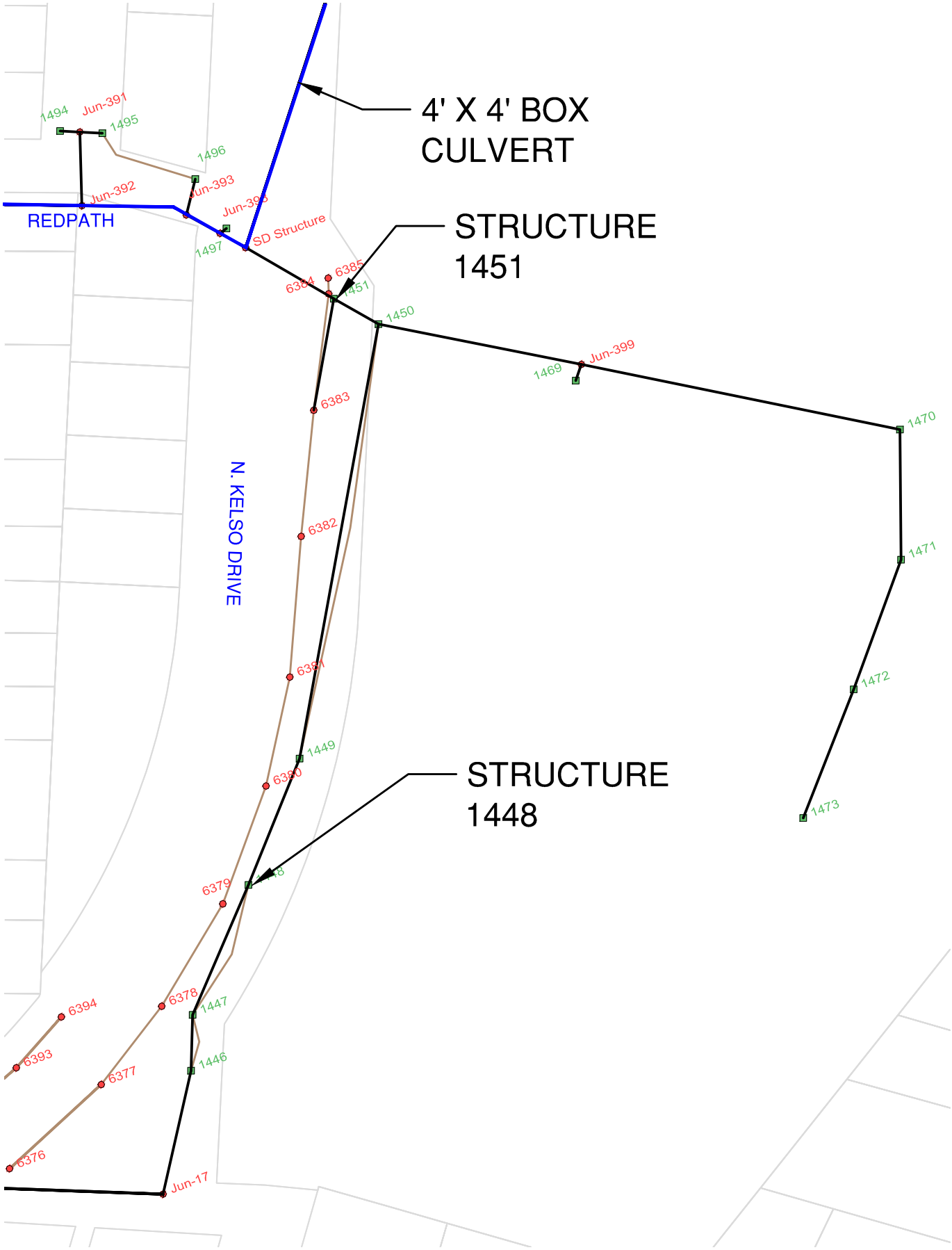
MAUL FOSTER ALONGI

0 400 800 1600
Scale (in Feet)

NORTH

BASINS 20, 21, 22, 23, 24 & 25

City of Kelso
Stormwater Management Plan, Phase III
Southeast Kelso Watershed
Areas of Concern, 100-Year Storm
Figure A-9c



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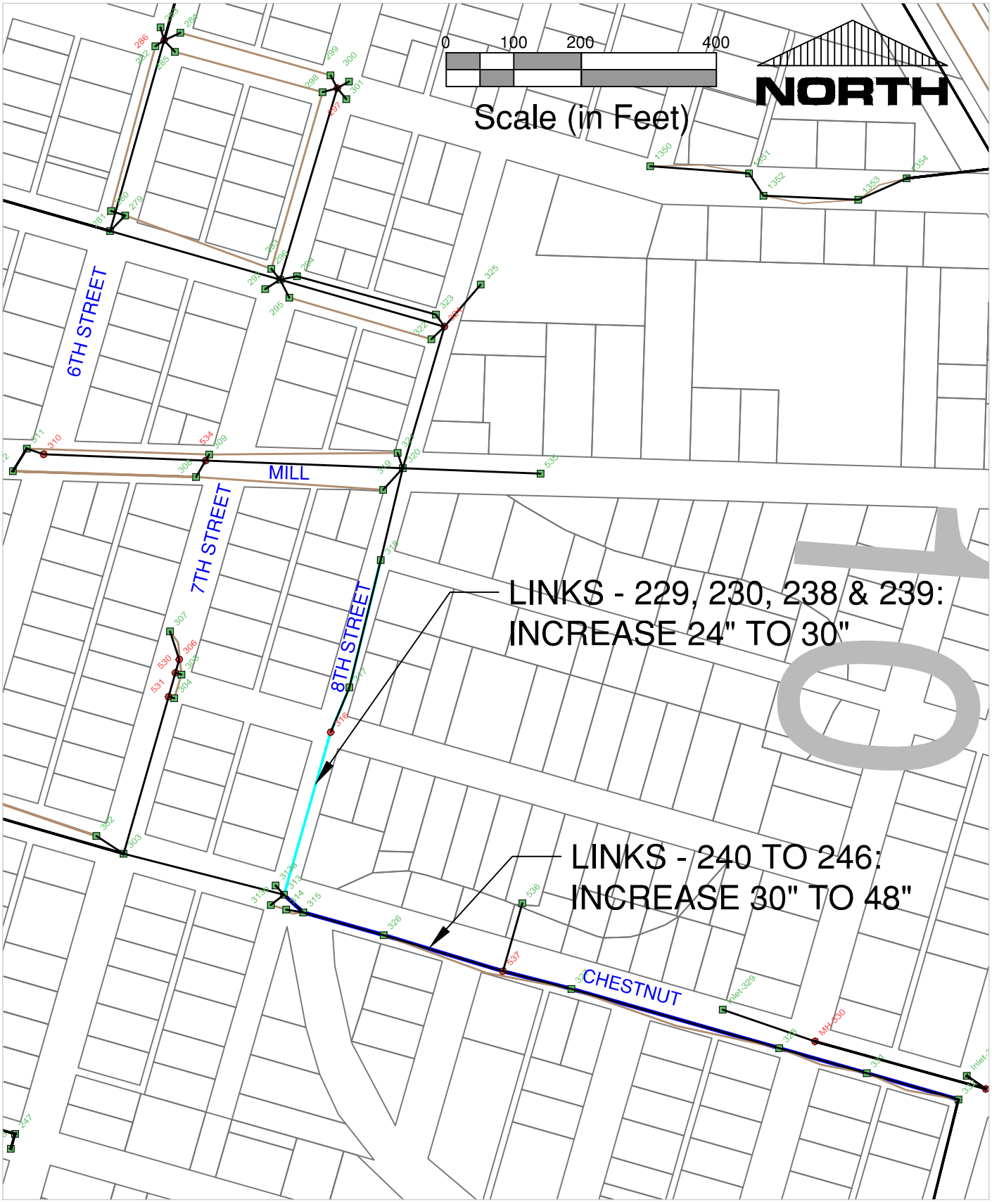
City of Kelso
Stormwater Management Plan, Phase III
CIP Priority Project, Area 15a-1
Figure A-10a



REPLACE EXIST. PIPE W/ 48" HDPE AT MINIMUM 0.5% SLOPE.

REPLACE EXIST. PIPE w/ 30" HDPE AT MINIMUM 0.5% SLOPE.

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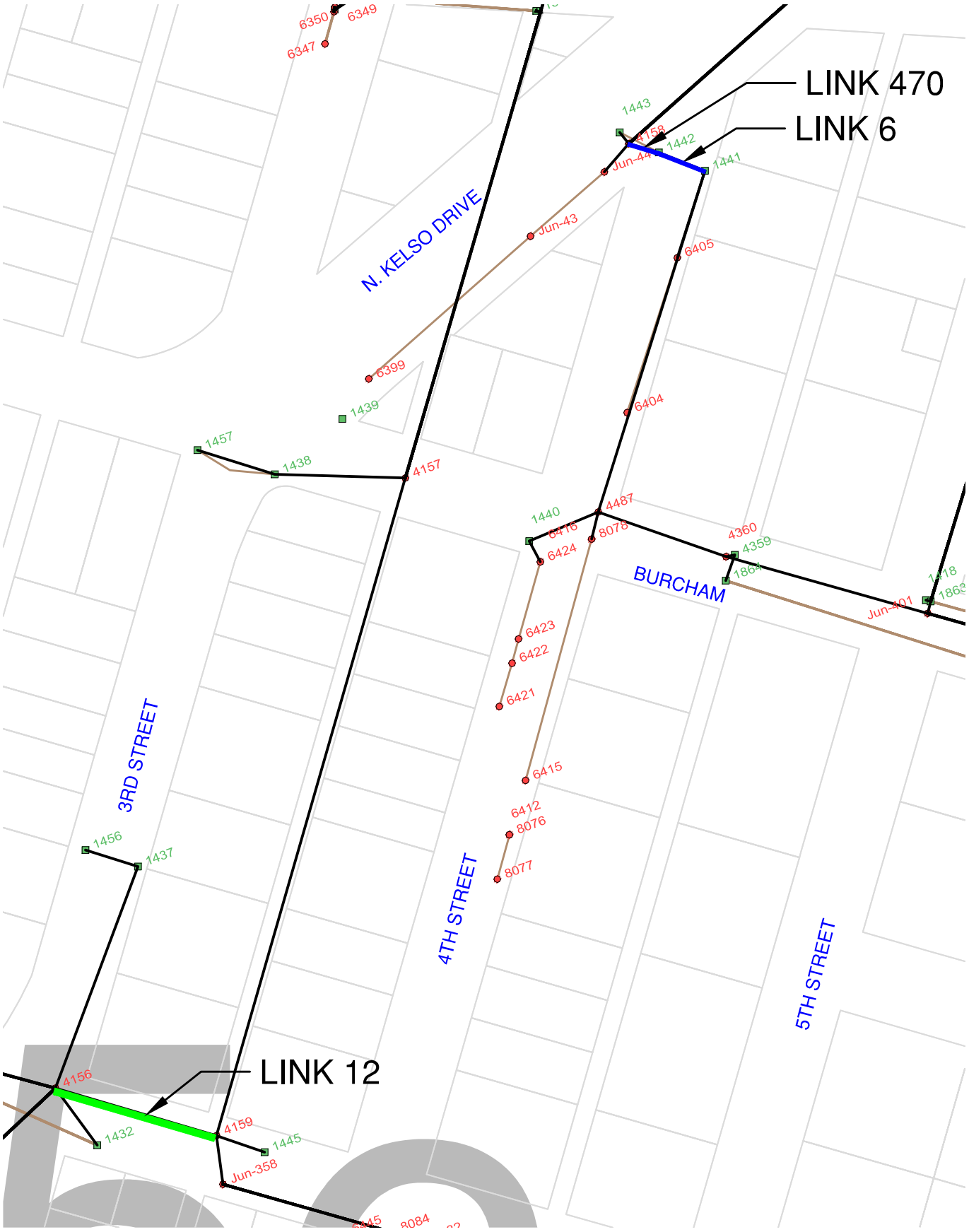
City of Kelso
Stormwater Management Plan, Phase III
South Kelso Watershed
CIP Priority Project, Area Basin 1
Figure A-10b



REPLACE EXIST. PIPE W/ 18" HDPE PIPE

REPLACE W/ 12" HDPE PIPE W/ POSITIVE SLOPE

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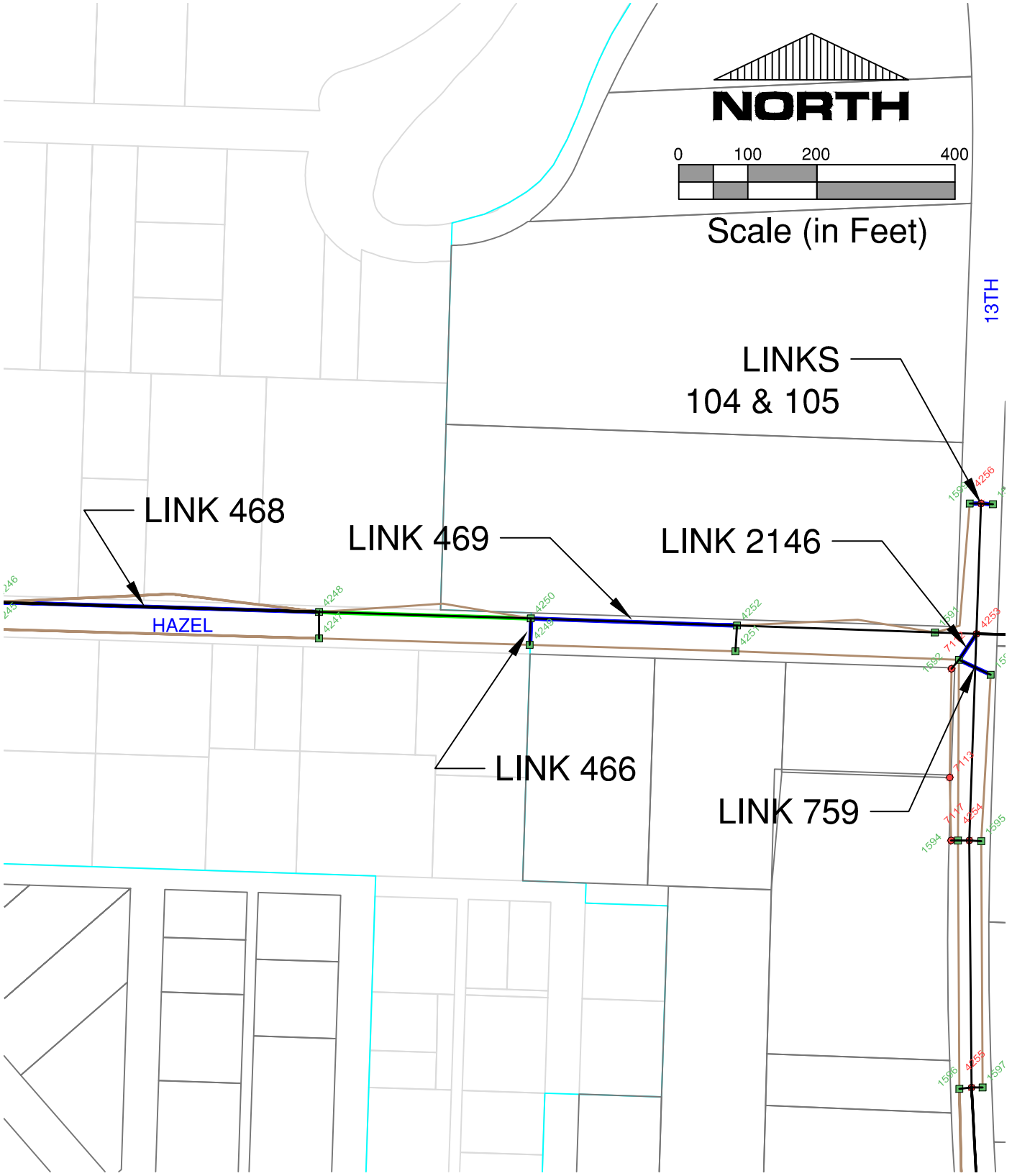
City of Kelso
Stormwater Management Plan, Phase III
CIP Priority Project, Area 15c-1
Figure A-10c



REPLACE EXIST. PIPE W/ 12" HDPE AT MINIMUM 0.5% SLOPE.

VERIFY EXIST. 12" PIPE W/ POSITIVE SLOPE

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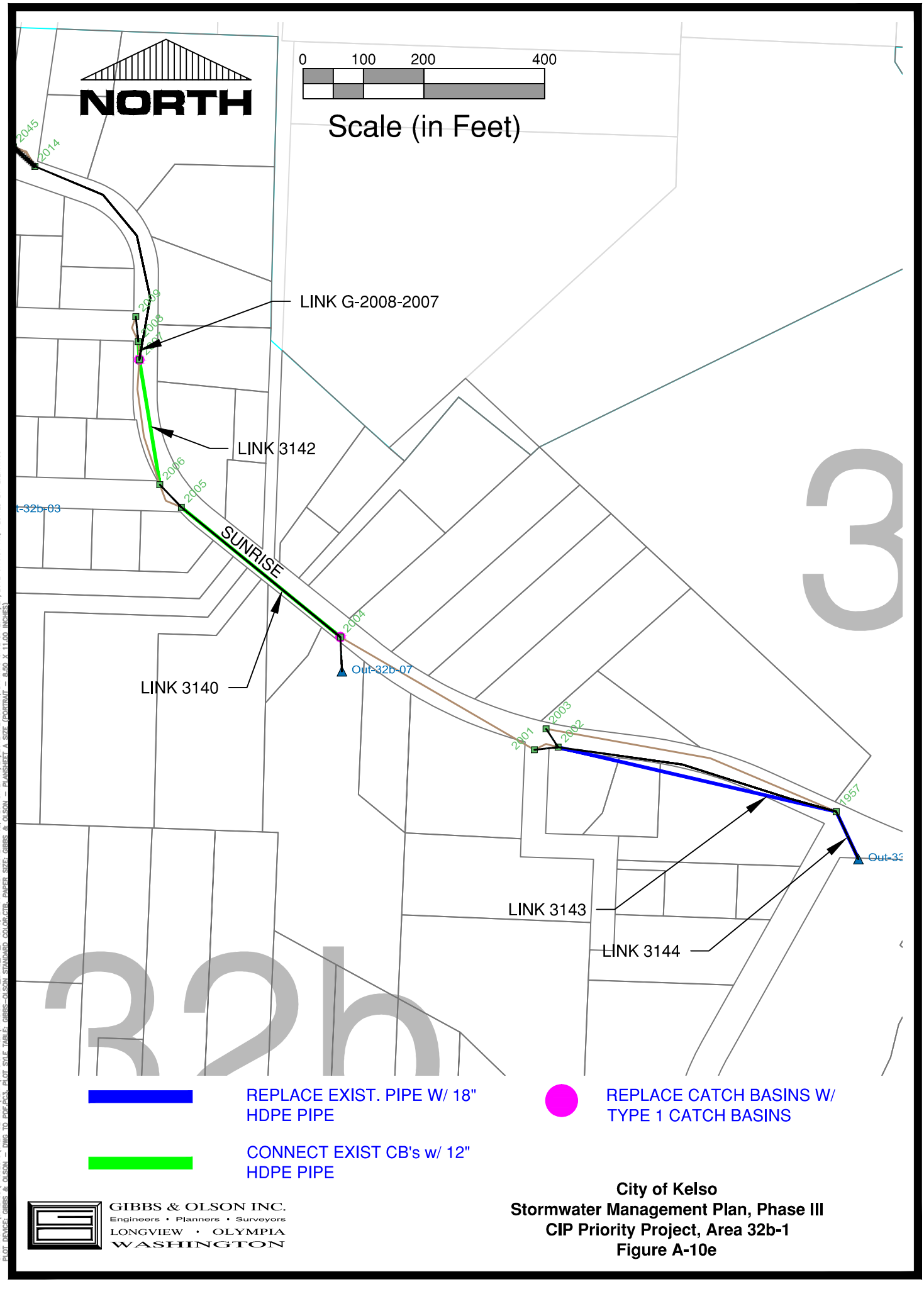
City of Kelso
Stormwater Management Plan, Phase III
Coweeman Watershed
CIP Priority Project, 2a-1
Figure A-10d



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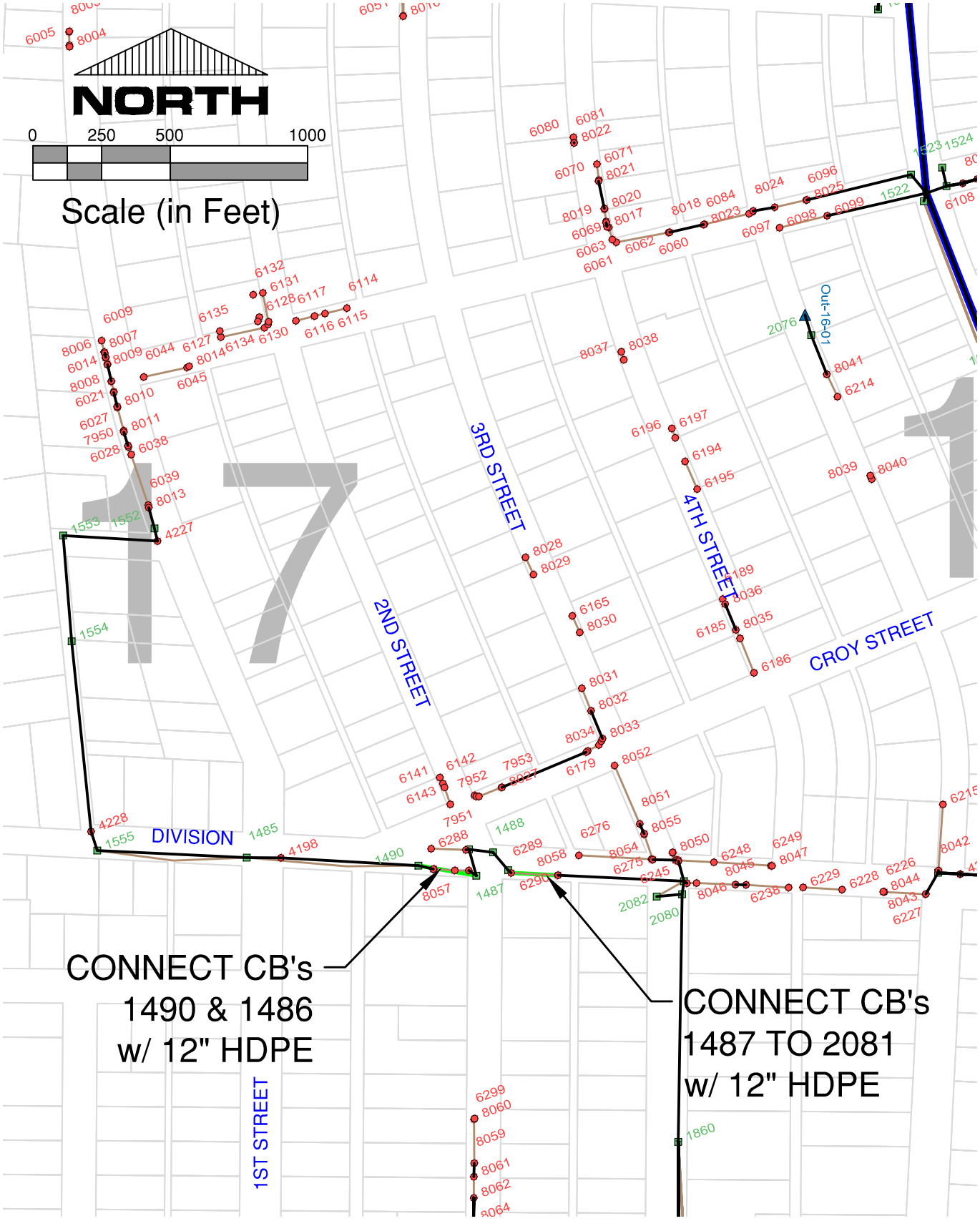
City of Kelso
Stormwater Management Plan, Phase III
CIP Priority Project, Area 32b-1
Figure A-10e



CONNECT EXISTING CB's W/ 12" HDPE PIPE AT MINIMUM 0.5% SLOPE.

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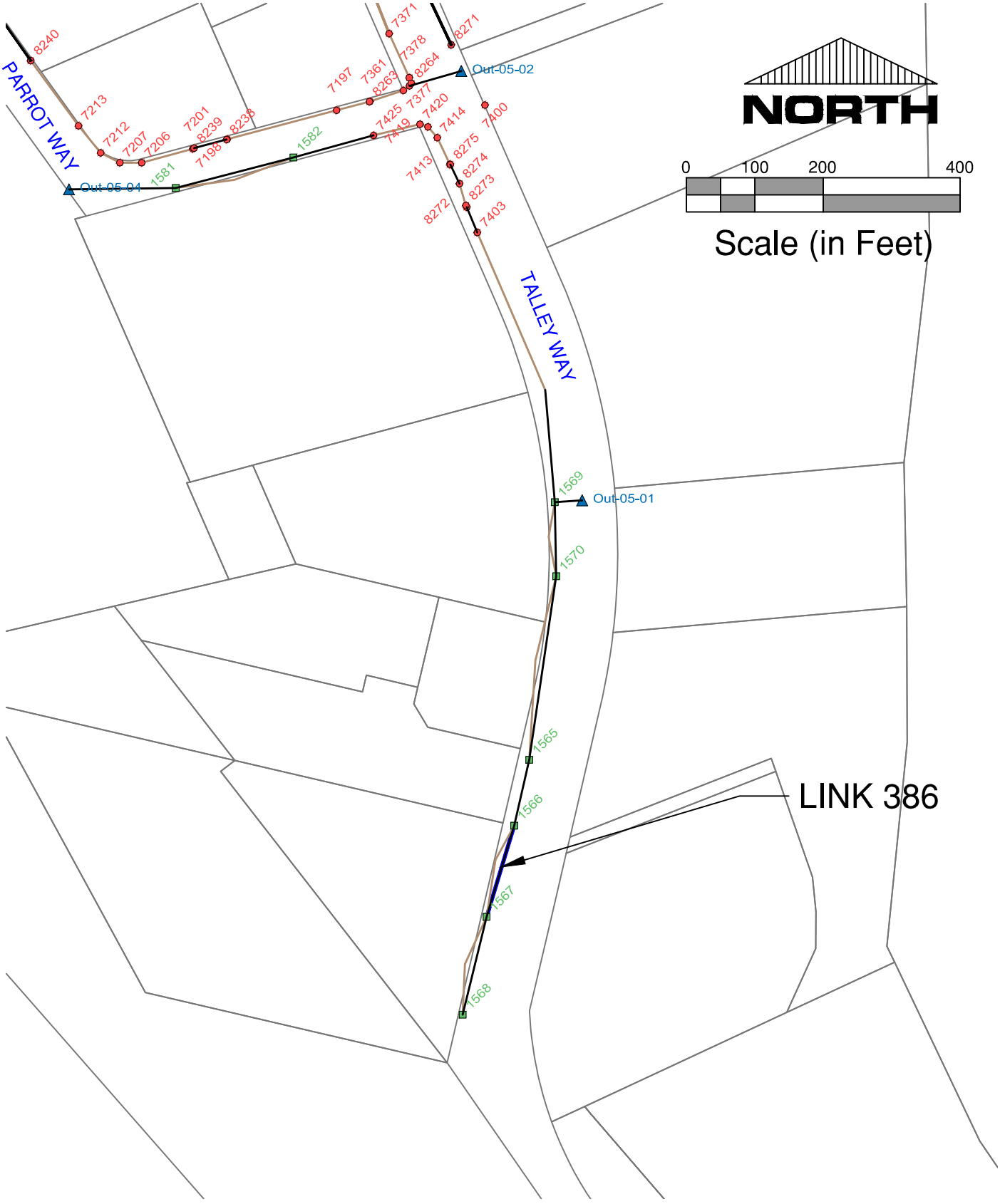
City of Kelso
Stormwater Management Plan, Phase III
CIP Priority Project, Area 17-1
Figure A-10f



REPLACE EXIST. PIPE W/ 18"
HDPE AT MINIMUM 0.5% SLOPE.

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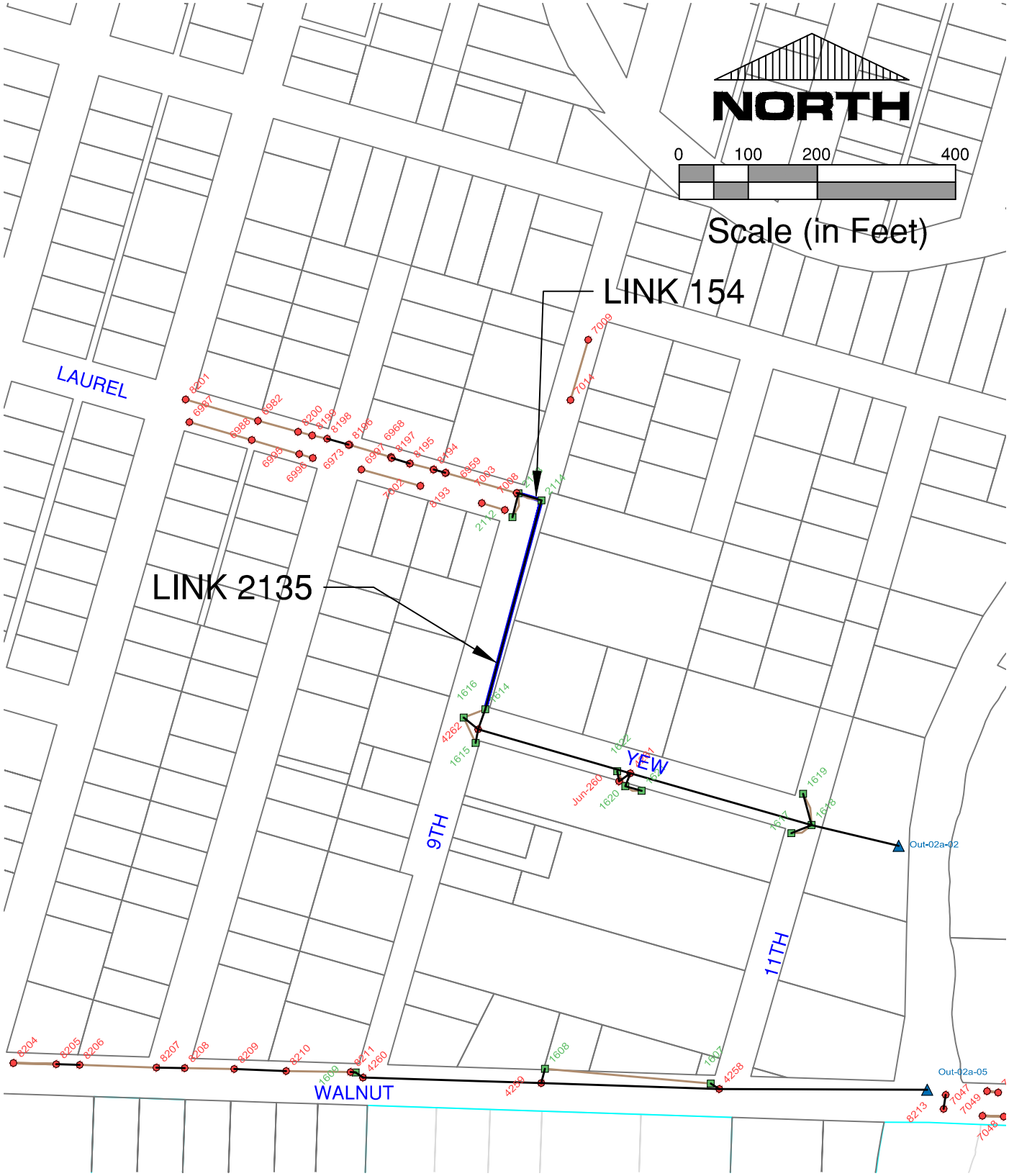
City of Kelso
Stormwater Management Plan, Phase III
CIP Priority Project, Area 32b-1
Figure A-10g



REPLACE EXIST. PIPE W/ 12" HDPE AT MINIMUM 0.5% SLOPE.

VERIFY EXIST. 12" PIPE W/ POSITIVE SLOPE

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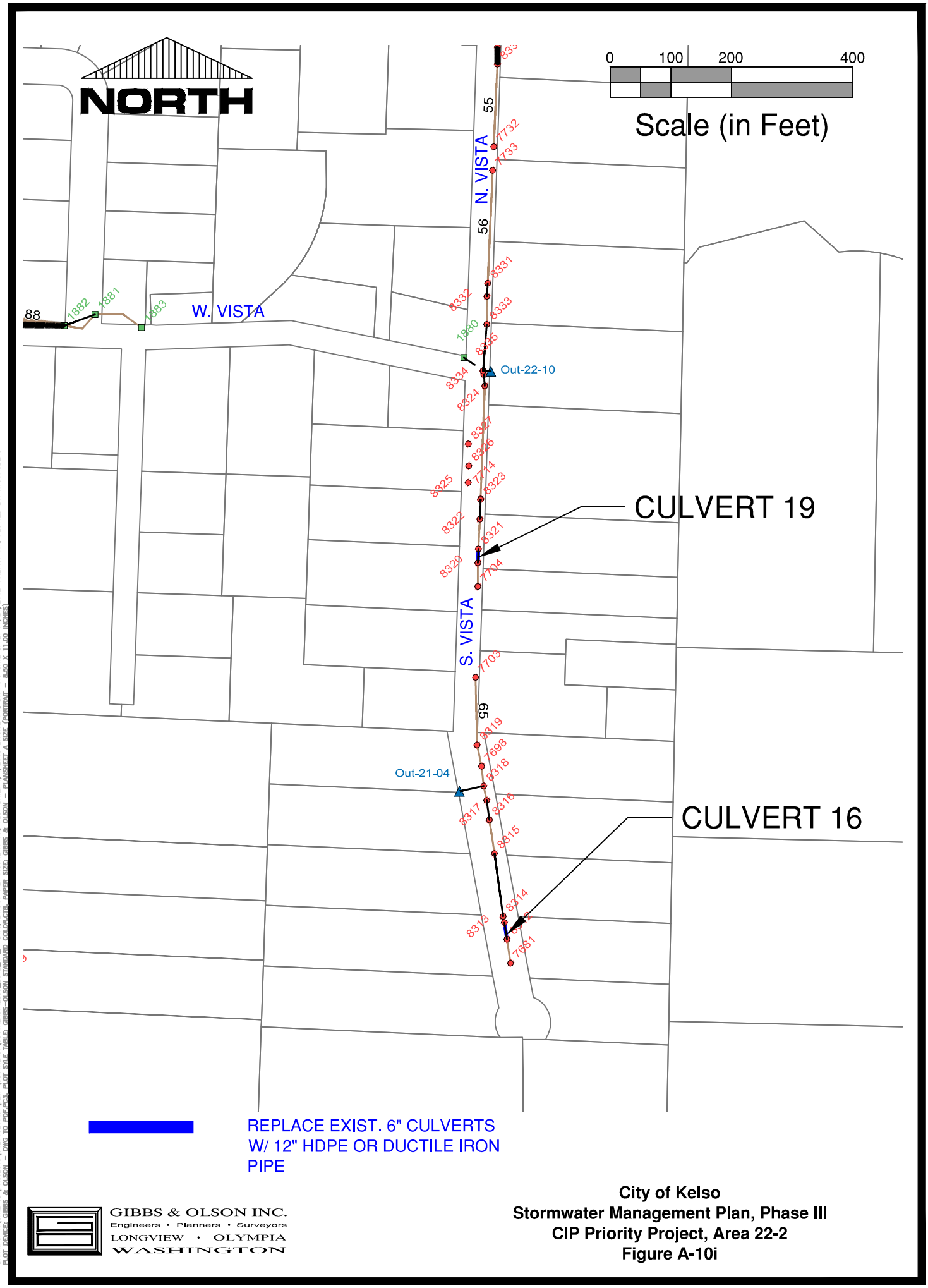
City of Kelso
Stormwater Management Plan, Phase III
Coweeman Watershed
CIP Priority Project, 2a-2
Figure A-10h



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City of Kelso
Stormwater Management Plan, Phase III
CIP Priority Project, Area 22-2
Figure A-10i

APPENDIX B

CAPITAL IMPROVEMENT PROJECT INFORMATION

CITY OF KELSO
2013-2018 CAPITAL IMPROVEMENT PROGRAM

D-01 NPDES Permit Implementation

D-02 Burcham Street Canyon Upgrade

D-03 Chestnut Street Drainage

D-04 Operations Stormwater Upgrades

D-05 Minor Road Pipe Replacement

D-06 Outfall Restoration at Grade St. Bridge

D-07 S. 9th Avenue Drainage

D-08 304 Harris St. Stormwater System

D-09 Harris Street Drainage

D-10 Cedar Street Drainage

D-11 Redpath Investigation

D-12 Division Street Drainage System Evaluation

D-13 Talley Way Drainage Pipe

D-14 S. 9th Ave. Drainage Pipe Upgrade

D-15 S. 8th Ave. Drainage Pipe Upgrade

D-16 N. 4th Ave. Drainage Pipe Upgrade

D-17 Hazel St. Drainage Pipe Upgrade

D-18 Allen Street Flood Prevention Improvements

D-19 Riverside Drive Flood Prevention Improvements

D-20 N. 20th Ave Drainage

D-21 Sunrise Street Drainage Pipe Replacement

D-22 S. Vista Way Culvert Replacement

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 08**
Project Title: 304 HARRIS ST STORMWATER SYSTEM RENOVATION Location: Harris Street from N. 3rd Ave to N. 4th Ave	Year Submitted: 2010 Department Priority: 08 Urgent Project: No

DESCRIPTION: The discharge pipe from the catch basin in the alley at 304 Harris Street is clogged or plugged, likely due to prior sanitary sewer revisions in Harris Street. Videos and locates of the stormwater system on this block needs to be performed. Routing of the catch basin pipe needs to be determined. Discharge of the catch basin at 4th and Harris may need to be rerouted. Possible installation of catch basin at SW corner of 3rd and Harris to tightline storm pipe and fill in ditch.

JUSTIFICATION: Stormwater backs up in catch basin and causes flooding to two parcels. Sanitary sewer installation on Harris Street blocked storm line and the storm line should be repaired/rerouted.

PROJECT STATUS:	**LAND STATUS**:
☒ Concept/Preliminary Planning	☐ No Land Involved
☐ Preliminary Design	☒ City Owned
☐ Final Plans & Specifications	☐ Partially Owned
☐ Prior Construction	☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS		**PROPOSED METHOD OF FINANCING (Percent)**	
Planning, Design, Engineering:	$7,000	Current Revenue:	100%
Land Purchase:		General Obligation Bonds:	
Construction:	$33,000	Revenue Bonds:	
Equipment & Furniture:		Reserve Funds:	
Miscellaneous:		Special Assessment:	
Contingency Allowance (10%)		State Aid:	
		Federal Aid:	
TOTAL CIP		Private Sector:	
CAPITAL COST:	**$40,000**	Unknown:	
		Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering					**$7,000**		**$7,000**
Land Acquisition							
Construction					**$33,000**		**$33,000**
Other							
TOTAL COST					**$40,000**		**$40,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: DRAINAGE	CIP Reference Number: **D - 08**

Project Title: 304 HARRIS ST STORMWATER SYSTEM RENOVATION	Department Priority: 08
Funding Source	*All costs to be funded from Drainage Fund revenues.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removal of standing water protects health by removal of mosquito breeding areas.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*Two Parcels.*
Feasibility, including Public Support and Project Readiness	*Public generally supports drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	*Adheres to the state Phase I Municipal Stormwater Permit requirements*
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan.*
Implications of Deferring the Project	*Continued standing water and flooding.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 18**
Project Title: ALLEN STREET FLOOD PREVENTION IMPROVEMENTS Location: Allen St. - Intersection of Corduroy Rd. 800' East	Year Submitted: 2009 Department Priority: 18 Urgent Project: No

DESCRIPTION: Raise approximately 800 linear feet of roadway 8-feet and install a pump station to prevent future flooding.

JUSTIFICATION: This roadway floods during high river events causing residents and emergency services to detour around area.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$190,000
Land Purchase:	
Construction:	$830,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$1,020,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$190,000**	**$190,000**
Land Acquisition								
Construction							**$830,000**	**$830,000**
Other								
TOTAL COST							**$1,020,000**	**$1,020,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 18**

Project Title: ALLEN STREET FLOOD PREVENTION IMPROVEMENTS	Department Priority: 18
Funding Source	*No funding has been secured. A match from the Drainage Fund may be required.*
Potential Funding Sources	*Potential grant funds include WA Military Department Flood Mitigation Assistance Program, and Department of Ecology Flood Control Assistance Account Program, a CDBG Planning Grant could be used to develop plans. If City funds are used for design a PWTF Construction Loan could be used to complete the project*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*This project will allow access to the area by emergency service providers during flood events without having to use a lengthy detour.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	*This roadway was underwater during the recent flooding (January 2009).*
Number of City Residents Served	*Drivers using Allen Street and residents of Archdiocese housing.*
Feasibility, including Public Support and Project Readiness	*Adjacent residents will support improvements that help to minimize flood impacts.*
Amount of Public Disruption and Inconvenience Caused	*Noise, dust, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	
Implications of Deferring the Project	*Continued roadway flooding and property isolation during episodes of high river flows.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 02**
Project Title: BURCHAM STREET CANYON UPGRADE Location: Across from Rotary Park	Year Submitted: 2005 Department Priority: 02 Urgent Project: No

DESCRIPTION: Improving access, grate and 40 linear feet of retaining wall with ecology blocks.

JUSTIFICATION: This inlet is the transition from the open drainage system to a closed (piping) system plugs during heavy rains in the fall with leaves and debris and can cause flooding at adjacent residences. This inlet is difficult to access in good weather and dangerous to access in foul weather.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$16,000
Land Purchase:	
Construction:	$64,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$80,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering	**$16,000**						**$16,000**
Land Acquisition							
Construction	**$64,000**						**$64,000**
Other							
TOTAL COST	**$80,000**						**$80,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 02**

Project Title: BURCHAM STREET CANYON UPGRADE	Department Priority: 02
Funding Source	*All costs to be paid from the Drainage Fund.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Increased safety to staff during maintenance activities.*
Environmental, Aesthetics, or Social Effects	*Allows the drainage way to continue functioning without flooding adjacent areas.*
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	
Feasibility, including Public Support and Project Readiness	*Adjacent property owners will support a project that decreases their risk of flooding.*
Amount of Public Disruption and Inconvenience Caused	*Noise and dust during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan.*
Implications of Deferring the Project	*Adjacent areas will continue to flood and downstream areas will be subjected to heavier lows as plugs clear.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 10**
Project Title: CEDAR STREET DRAINAGE Location: S. 7TH Ave to Grade Street	Year Submitted: 2005 Department Priority: 10 Urgent Project: No

DESCRIPTION: Installation of 5 catch basins and 225 linear feet of piping along Cedar Street.

JUSTIFICATION: Existing system is inadequate and there is standing water on the roadway during rain events.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$15,000
Land Purchase:	
Construction:	$85,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$100,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering					**$15,000**		**$15,000**
Land Acquisition							
Construction					**$85,000**		**$85,000**
Other							
TOTAL COST					**$100,000**		**$100,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 10**

Project Title: CEDAR STREET DRAINAGE	Department Priority: 10
Funding Source	*All project funds to be paid from Drainage Fund revenues.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removal of standing water from roadways reduces accident potential.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All.*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan.*
Implications of Deferring the Project	*Continued standing water and increased pavement deterioration.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 03**
Project Title: CHESTNUT STREET DRAINAGE Location: S. Pacific Ave to S. 13th Ave	Year Submitted: 2008 Department Priority: 03 Urgent Project: No

DESCRIPTION: This project will consist of a review of the existing piping to determine the system needs and development of project scopes (2011) and construction improvements.

JUSTIFICATION: This street is severely potholed and al least one section of pipe has failed and the existing pipe is full of debris. This project will provide a plan of what is needed and begin implementation of the plan to minimize drainage problems in the area and to protect the pavement section.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$60,000
Land Purchase:	
Construction:	$249,290
Equipment & Furniture:	
Miscellaneous: record drawings	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$309,290**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering	**$20,000**	**$40,000**					**$60,000**
Land Acquisition							
Construction		**$249,290**					**$249,290**
Other							
TOTAL COST	**$20,000**	**$289,290**					**$309,290**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 03**

Project Title: CHESTNUT STREET DRAINAGE	Department Priority: 03
Funding Source	*All costs to be paid from the Drainage Fund.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Improved drainage increases roadway safety.*
Environmental, Aesthetics, or Social Effects	*Proper conveyance of surface water is environmentally sound.*
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All.*
Feasibility, including Public Support and Project Readiness	*Support of this project is expected by all the citizens who reside in the project area.*
Amount of Public Disruption and Inconvenience Caused	*Minimal traffic disruption during the construction phase only.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 12**
Project Title: DIVISION STREET DRAINAGE SYSTEM EVALUATION Location: Sub-basin 17-1, Repath Watershed, Division St. near N. 2nd & N. 3rd Ave.	Year Submitted: 2012 Department Priority: 12 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: A mix of pipe and ditches results in poor drainage; however, the area needs a detailed survey and site specific hydrologic modeling to determine the necessary improvements to resolve flooding issues.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:	**LAND STATUS**:
☒ Concept/Preliminary Planning ☐ Preliminary Design ☐ Final Plans & Specifications ☐ Prior Construction	☐ No Land Involved ☒ City Owned ☐ Partially Owned ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS		**PROPOSED METHOD OF FINANCING (Percent)**	
Planning, Design, Engineering:	$10,000	Current Revenue:	
Land Purchase:		General Obligation Bonds:	
Construction:		Revenue Bonds:	
Equipment & Furniture:		Reserve Funds:	
Miscellaneous:		Special Assessment:	
Contingency Allowance (10%)		State Aid:	
		Federal Aid:	
TOTAL CIP		Private Sector:	
CAPITAL COST:	**$10,000**	Unknown:	100%
		Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$10,000**	**$10,000**
Land Acquisition								
Construction								
Other								
TOTAL COST							**$10,000**	**$10,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 12**

Project Title: DIVISION STREET DRAINAGE SYSTEM EVALUATION	Department Priority: 12
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Sources	*Drainage Fund when the project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Would remove the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan and Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 09**
Project Title: HARRIS ST. DRAINAGE Location: N. 8TH AVE to I-5	Year Submitted: 2005 Department Priority: 09 Urgent Project: No

DESCRIPTION: Install 750 linear feet of 12-inch drainage system and 5 catch basins on the south side of the roadway.

JUSTIFICATION: Residents have filled in ditch line creating no place for storm water to flow.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$10,000
Land Purchase:	
Construction:	$40,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$50,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering					**$10,000**		**$10,000**
Land Acquisition							
Construction					**$40,000**		**$40,000**
Other							
TOTAL COST					**$50,000**		**$50,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 09**

Project Title: HARRIS ST. DRAINAGE	Department Priority: 09
Funding Source	*Project costs to be paid from Drainage Fund revenue.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Efficient storm water collection improves driving safety and removes potential mosquito breeding grounds.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*Approximately 24 homes.*
Feasibility, including Public Support and Project Readiness	*Residents would support removal of potential flooding.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, parking closures and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan.*
Implications of Deferring the Project	*Continued flooding potential, and standing water in ditch and shoulder.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 17**
Project Title: HAZEL ST DRAINAGE PIPE UPGRADE Location: Sub-basin 2a-1, Coweeman Watershed, S. 13th Ave & Hazel Street	Year Submitted: 2012 Department Priority: 17 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace 770 lineal feet of undersized pipe with 12-inch pipe.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$6,880
Land Purchase:	
Construction:	$45,850
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	$5,270
TOTAL CIP CAPITAL COST:	**$58,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$6,880**	**$6,880**
Land Acquisition								
Construction							**$51,120**	**$51,120**
Other								
TOTAL COST							**$58,000**	**$58,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE
2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 17**

Project Title: HAZEL ST DRAINAGE PIPE UPGRADE	Department Priority: 17
Funding Source	*A funding source for this project has not been obtained.*
Potential Funding Sources	*Drainage Fund when project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan and Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 05**
Project Title: MINOR ROAD PIPE REPLACEMENT Location: Allen St. to Burcham St.	Year Submitted: 2012 Department Priority: 05 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace existing 48-inch CMP with new 48-inch pipe.

JUSTIFICATION: Existing pipe is deteriorating and approaching failure.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$100,000
Land Purchase:	
Construction:	$400,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$500,000**

PROPOSED METHOD OF FINANCING (Percent) *

Current Revenue:	10%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	80%
Federal Aid:	
Private Sector:	
Unknown:	
Other: CDID	10%

*Predicted Funding Amounts

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering			**$100,000**					**$100,000**
Land Acquisition								
Construction			**$400,000**					**$400,000**
Other								
TOTAL COST			**$500,000**					**$500,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 05**

Project Title: MINOR RD PIPE REPLACEMENT	Department Priority: 05
Funding Source	*WSDOT (CHAP), Diking District, and Drainage Fund.*
Potential Funding Sources	
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	
Amount of Public Disruption and Inconvenience Caused	*Dust and noise during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	
Implications of Deferring the Project	*The pipe will continue deteriorating and could collapse causing a sinkhole and/or upstream flooding.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 20**
Project Title: N. 20TH AVE DRAINAGE Location: Burcham St. to Harris St.	Year Submitted: 2005 Department Priority: 20 Urgent Project: No

DESCRIPTION: Improve access to canyon and pipe inlet. Install neighborhood grate. Turn back to private.

JUSTIFICATION: Currently grate is hard to access and clean. This project would allow easier access, decrease pipe plugging and improve safety.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☐ City Owned
- ☒ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$10,000
Land Purchase:	
Construction:	$90,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$100,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$10,000**	**$10,000**
Land Acquisition								
Construction							**$90,000**	**$90,000**
Other								
TOTAL COST							**$100,000**	**$100,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 20**

Project Title: N. 20TH AVE DRAINAGE	Department Priority: 20
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Source	*Drainage Fund when this project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	*Decrease insurance claims.*
Health and Safety Effects	
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*6 homes.*
Feasibility, including Public Support and Project Readiness	*Residents will support.*
Amount of Public Disruption and Inconvenience Caused	*Dust and noise during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan.*
Implications of Deferring the Project	*Continued uncontrolled storm runoff.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 16**
Project Title: N. 4TH AVE DRAINAGE PIPE UPGRADE Location: Sub-basin 15c-1, Redpath Watershed, Donation Street and N. 4th Ave.	Year Submitted: 2012 Department Priority: 16 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace 160 lineal feet of 12-inch pipe with 18-inch pipe.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$3,700
Land Purchase:	
Construction:	$24,500
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	$2,800
TOTAL CIP CAPITAL COST:	**$31,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$3,700**	**$3,700**
Land Acquisition								
Construction							**$27,300**	**$27,300**
Other								
TOTAL COST							**$31,000**	**$31,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 16**

Project Title: N. 4TH AVE DRAINAGE PIPE UPGRADE	Department Priority: 16
Funding Source	*A funding source for this project has not been obtained.*
Potential Funding Sources	*When this project becomes a higher priority Drainage Funds will be used.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan and Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 22**
Project Title: N VISTA WAY CULVERT REPLACEMENT Location: Sub-basin 22-2, Southeast Kelso Watershed, North Vista Way	Year Submitted: 2012 Department Priority: 22 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace several culverts with 12-inch culvert pipe.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$1,000
Land Purchase:	
Construction:	$3,500
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	$500
TOTAL CIP CAPITAL COST:	**$5,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$1,000**	**$1,000**
Land Acquisition								
Construction							**$4,000**	**$4,000**
Other								
TOTAL COST							**$5,000**	**$5,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE
2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 22**

Project Title: N. VISTA WAY CULVERT REPLACEMENT	Department Priority: 22
Funding Source	*A funding source for this project has not been obtained.*
Potential Funding Sources	*Drainage Fund when the project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construciton.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan and the Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 01**
Project Title: NPDES PERMIT IMPLEMENTATION Location: Entire City	Year Submitted: 2005 Department Priority: 01 Urgent Project: Yes

DESCRIPTION: Implement permit requirements including completion of mapping, code update and development of programs.

JUSTIFICATION: Permit is a federal mandate. The final program will help protect the waterways from pollution by preventing pollution from entering stormwater runoff.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$150,000
Land Purchase:	
Construction:	
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$150,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$150,000**
Land Acquisition							
Construction							
Other							
TOTAL COST	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$150,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 01**

Project Title: NPDES PERMIT IMPLEMENTATION	Department Priority: 01
Funding Source	*All funds to come from the Drainage Fund.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	
Environmental, Aesthetics, or Social Effects	*Program to address water quality issues within the community.*
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All.*
Feasibility, including Public Support and Project Readiness	
Amount of Public Disruption and Inconvenience Caused	
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	*NPDES permit required by Federal and State Law.*
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	
Implications of Deferring the Project	*If not complete the city will be out of compliance with State and Federal Law.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 04**
Project Title: OPERATIONS STORMWATER UPGRADES	Year Submitted: 2010
Location: Operations Maintenance Facility	Department Priority: 04 Urgent Project: No

DESCRIPTION: Install cover over equipment washpad, installation of compost boom, and disconnection of building floor drains from stormwater system that includes connection to the oil/water separator.

JUSTIFICATION: Disconnect illicit discharges to the storm drain and sanitary sewer systems as outlined in the Operations Maintenance Facility Stormwater Pollution Prevention Plan (SWPPP)

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$2,000
Land Purchase:	
Construction:	$18,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$20,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering	**$2,000**						**$2,000**
Land Acquisition							
Construction	**$18,000**						**$18,000**
Other							
TOTAL COST	**$20,000**						**$20,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 04**

Project Title: OPERATIONS STORMWATER UPGRADES	Department Priority: 04
Funding Source	*All costs to be funded from current revenues. Costs are to be split between drainage, water, sewer and street funds.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Pollution control and treatment of stormwater runoff helps to create clean waters for swimming and fishing.*
Environmental, Aesthetics, or Social Effects	*Pollution control and treatment of stormwater runoff increases the water quality of surface waters.*
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All.*
Feasibility, including Public Support and Project Readiness	*Site is ready for installation and project components are feasible. Public support is not necessary for this project.*
Amount of Public Disruption and Inconvenience Caused	*None anticipated.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	*Adheres to the state Phase II Municipal Stormwater Permit requirements.*
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Operations Maintenance Facility Stormwater Pollution Prevention Plan.*
Implications of Deferring the Project	*Potential fines for not implementing Permit requirements.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 06**
Project Title: OUTFALL RESTORATION AT GRADE STREET BRIDGE Location: South End of Grade Street Bridge	Year Submitted: 2010 Department Priority: 06 Urgent Project: No

DESCRIPTION: Install a 48-inch diameter drop manhole and approximately 40 linear feet of 18-inch pipe with a rip-rap outfall to the Coweeman River. From the drop manhole, the discharge stormwater pipe will be lower in order to pass under the bridge abutment and in between the abutment piers. A pier analysis may be required by a geotechnical engineer.

JUSTIFICATION: The 18-inch concrete stormwater pipe was plugged with concrete near the south bridge abutment, likely during the construction of the bridge. At this location the last pipe section is displaced. Stormwater in the pipe has been exfiltrating and may be the cause of subsidence at the south end of the bridge.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$4,000
Land Purchase:	
Construction:	$14,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$18,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering			**$4,000**				**$4,000**
Land Acquisition							
Construction			**$14,000**				**$14,000**
Other							
TOTAL COST			**$18,000**				**$18,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 06**

Project Title: OUTFALL RESTORATION AT GRADE STREET BRIDGE	Department Priority: 06
Funding Source	*Cost to be paid with Drainage Fund revenues.*
Benefit to the Local Economy and Tax Base	*Repairs to pavement that addressed subsidence will not be required.*
Health and Safety Effects	*Improve driver safety at south end of the bridge.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Residents impacted would support.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise and traffic impacts during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	
Implications of Deferring the Project	*Continued subsidence at the south end of the bridge.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 11**
Project Title: REDPATH INVESTIGATION Location: Sub-basin 15a-1. N. Kelso Ave and Redpath St.	Year Submitted: 2012 Department Priority: 11 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Investigate alternative solutions for a major drainage district deficiency in the box culvert to the Redpath Pump Station.

JUSTIFICATION: This project ranks highest in the volume of flooding that occurs in the immediate vicinity of the location. The District's box culvert is the major cause of the flooding and solutions need to be investigated in conjunction with the District.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$15,000
Land Purchase:	
Construction:	
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$15,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering						**$15,000**		**$15,000**
Land Acquisition								
Construction								
Other								
TOTAL COST						**$15,000**		**$15,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE
2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 11**

Project Title: REDPATH INVESTIGATION	Department Priority: 11
Funding Source	*Drainage Fund.*
Potential Funding Sources	
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and minor traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan and Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 19**
Project Title: RIVERSIDE DRIVE FLOOD PREVENTION IMPROVEMENTS Location: Riverside Dr. - Approx. from the north property line of Parcel #2127801 to the south property line of Parcel #21277.	Year Submitted: 2009 Department Priority: 19 Urgent Project: No

DESCRIPTION: Raise approximately 300 linear feet of roadway 2-feet to prevent future flooding.

JUSTIFICATION: This roadway floods during high river events isolating residents from town and preventing access by emergency vehicles.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$20,000
Land Purchase:	
Construction:	$81,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$101,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$20,000**	**$20,000**
Land Acquisition								
Construction							**$81,000**	**$81,000**
Other								
TOTAL COST							**$101,000**	**$101,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 19**

Project Title: RIVERSIDE DRIVE FLOOD PREVENTION IMPROVEMENTS	Department Priority: 19
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Sources	*Drainage Fund as this project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	*This project will allow for additional development in the area.*
Health and Safety Effects	*This project will allow access to the area by emergency service providers during flood events.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	*This roadway was underwater during the recent flooding (January 2009).*
Number of City Residents Served	*Approximately 2 dozen directly served.*
Feasibility, including Public Support and Project Readiness	*Adjacent residents will support improvements that help to minimize flood impacts.*
Amount of Public Disruption and Inconvenience Caused	*Noise, dust, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	
Implications of Deferring the Project	*Continued roadway flooding and property isolation during episodes of high river flows.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 15**
Project Title: S. 8TH AVE DRAINAGE PIPE UPGRADE Location: S. 8th Ave - Coweeman Lane to Chestnut St., Vicinity of Inlet 536 (Basin 1)	Year Submitted: 2012 Department Priority: 15 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: 517 lineal feet of 24-inch and 163 feet of 30-inch pipe need to be replaced with 30-inch and 48-inch pipe, respectively. Some of the 48-inch pipe will likely have to be arch pipe to compensate for shallow depth of cover.

JUSTIFICATION: Predicted flooding during the 25 year, 24-hour storm in this area is significant.

PROJECT STATUS:	**LAND STATUS**:
☒ Concept/Preliminary Planning ☐ Preliminary Design ☐ Final Plans & Specifications ☐ Prior Construction	☐ No Land Involved ☒ City Owned ☐ Partially Owned ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS		**PROPOSED METHOD OF FINANCING (Percent)**	
Planning, Design, Engineering:	$10,000	Current Revenue:	
Land Purchase:		General Obligation Bonds:	
Construction:	$66,000	Revenue Bonds:	
Equipment & Furniture:		Reserve Funds:	
Miscellaneous:		Special Assessment:	
Contingency Allowance (10%)	$7,600	State Aid:	
		Federal Aid:	
TOTAL CIP		Private Sector:	
CAPITAL COST:	**$83,600**	Unknown:	100%
		Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$10,000**	**$10,000**
Land Acquisition								
Construction							**$66,000**	**$66,000**
Other							**$7,600**	**$7,600**
TOTAL COST							**$83,600**	**$83,600**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 15**

Project Title: S. 8TH AVE DRAINAGE PIPE UPGRADE	Department Priority: 15
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Sources	*Drainage Fund monies will be used when this project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan and Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 07**
Project Title: S. 9TH AVE DRAINAGE Location: 1200 Block	Year Submitted: 2005 Department Priority: 07 Urgent Project: No

DESCRIPTION: Install drainage system.

JUSTIFICATION: Currently there is no system and rainwater puddles in yards.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☐ City Owned
- ☐ Partially Owned
- ☒ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$20,000
Land Purchase:	
Construction:	$80,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$100,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	100%
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	TOTAL
Planning, Design, Engineering			**$15,000**	**$5,000**			**$20,000**
Land Acquisition							
Construction				**$80,000**			**$80,000**
Other							
TOTAL COST			**$15,000**	**$85,000**			**$100,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE
2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 07**

Project Title: S. 9TH AVE DRAINAGE	Department Priority: 07
Funding Source	*All costs shall be paid from Drainage Fund revenues.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removal potential mosquito breeding ground.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*Approximately two dozen residents.*
Feasibility, including Public Support and Project Readiness	
Amount of Public Disruption and Inconvenience Caused	*Dust, noise and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	
Implications of Deferring the Project	*Continued standing water.*
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 14**
Project Title: S. 9TH AVE DRAINAGE PIPE UPGRADE Location: Sub-basin 2a-2, Coweeman Watershed, S. 9th Ave at Yew Street	Year Submitted: 2012 Department Priority: 14 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace 770 lineal feet of pipe with 12-inch diameter pipe.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$3,400
Land Purchase:	
Construction:	$22,600
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	$2,600
TOTAL CIP CAPITAL COST:	**$28,600**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$3,400**	**$3,400**
Land Acquisition								
Construction							**$25,200**	**$25,200**
Other								
TOTAL COST							**$28,600**	**$28,600**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE
2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 14**

Project Title: S. 9TH AVE DRAINAGE PIPE UPGRADE	Department Priority: 14
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Sources	*Drainage Fund when the project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan and the Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 21**
Project Title: SUNRISE STREET DRAINAGE PIPE REPLACEMENT Location: Catch Basin 1957 on Corduroy Rd and Sunrise St.	Year Submitted: 2012 Department Priority: 21 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace 562 lineal feet of pipe with 18-inch and replace existing basin with large energy-dissipating manhole.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:

- ☒ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☒ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$9,000
Land Purchase:	
Construction:	$60,000
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	$6,900
TOTAL CIP CAPITAL COST:	**$75,900**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$9,000**	**$9,000**
Land Acquisition								
Construction							**$66,900**	**$66,900**
Other								
TOTAL COST							**$75,900**	**$75,900**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE
2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D - 21**

Project Title: SUNRISE STREET DRAINAGE PIPE REPLACEMENT	Department Priority: 21
Funding Source	*A funding source for this project has not been obtained.*
Potential Funding Sources	*Drainage Fund when the project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to Comprehensive Plan and Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 13**
Project Title: TALLEY WAY DRAINAGE PIPE UPGRADE Location: Sub-basin 5-3, Baker Way Watershed, Talley Way south of Parrott Way.	Year Submitted: 2012 Department Priority: 13 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: Replace 140 lineal feet of pipe with 18-inch diameter pipe.

JUSTIFICATION: Predicted flooding during the 25-year, 24-hour storm in this area is significant.

PROJECT STATUS:	**LAND STATUS**:
☒ Concept/Preliminary Planning ☐ Preliminary Design ☐ Final Plans & Specifications ☐ Prior Construction	☐ No Land Involved ☒ City Owned ☐ Partially Owned ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS		**PROPOSED METHOD OF FINANCING (Percent)**	
Planning, Design, Engineering:	$3,200	Current Revenue:	
Land Purchase:		General Obligation Bonds:	
Construction:	$21,400	Revenue Bonds:	
Equipment & Furniture:		Reserve Funds:	
Miscellaneous:		Special Assessment:	
Contingency Allowance (10%)	$2,500	State Aid:	
		Federal Aid:	
TOTAL CIP		Private Sector:	
CAPITAL COST:	**$27,100**	Unknown:	100%
		Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering							**$3,200**	**$3,200**
Land Acquisition								
Construction							**$23,900**	**$23,900**
Other								
TOTAL COST							**$27,100**	**$27,100**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 13**

Project Title: TALLEY WAY DRAINAGE PIPE UPGRADE	Department Priority: 13
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Sources	*Drainage Fund as the project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	*Removes the potential for significant flooding.*
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*Public will support drainage improvements.*
Amount of Public Disruption and Inconvenience Caused	*Dust, noise, and traffic delays during construction.*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Conforms to the Comprehensive Plan and the Stormwater Management Plan.*
Implications of Deferring the Project	
Other	

City of Kelso

CAPITAL IMPROVEMENT PROJECT REQUEST FORM

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 23**
Project Title: Stormwater Management Plan Update Location: System-wide	Year Submitted: 2013 Department Priority: 13 Urgent Project: ☐ Yes ☒ No

DESCRIPTION: The Stormwater Management Plan is to be updated on a five-year cycle. Cost is included in the 2017 fiscal year as the work may begin in 2017.

JUSTIFICATION: Public Works requirement to update plan on a five-year cycle.

PROJECT STATUS:

- ☐ Concept/Preliminary Planning
- ☐ Preliminary Design
- ☐ Final Plans & Specifications
- ☐ Prior Construction

LAND STATUS:

- ☐ No Land Involved
- ☐ City Owned
- ☐ Partially Owned
- ☐ Not Yet Acquired

TOTAL ESTIMATED CAPITAL COSTS

Planning, Design, Engineering:	$30,000
Land Purchase:	
Construction:	
Equipment & Furniture:	
Miscellaneous:	
Contingency Allowance (10%)	
TOTAL CIP CAPITAL COST:	**$30,000**

PROPOSED METHOD OF FINANCING (Percent)

Current Revenue:	
General Obligation Bonds:	
Revenue Bonds:	
Reserve Funds:	
Special Assessment:	
State Aid:	
Federal Aid:	
Private Sector:	
Unknown:	100%
Other:	

CAPITAL IMPROVEMENT PROJECT'S COST PER YEAR

	2012	2013	2014	2015	2016	2017	Unfunded	TOTAL
Planning, Design, Engineering						**$30,000**	**$30,000**	**$30,000**
Land Acquisition								
Construction								
Other								
TOTAL COST						**$30,000**	**$30,000**	**$30,000**

Maintenance and Operation Costs							

City of Kelso

DEPARTMENTAL CAPITAL IMPROVEMENT PROJECT EVALUATION GUIDE

2012 - 2017

Department: **DRAINAGE**	CIP Reference Number: **D – 23**

Project Title: Stormwater Management Plan Update	Department Priority: 13
Funding Source	*A funding source for this project has not been secured.*
Potential Funding Sources	*Drainage Fund as the project becomes a higher priority.*
Benefit to the Local Economy and Tax Base	
Health and Safety Effects	
Environmental, Aesthetics, or Social Effects	
Responds to an Urgent Need or Opportunity	
Number of City Residents Served	*All*
Feasibility, including Public Support and Project Readiness	*The 2013 SMP can be readily updated.*
Amount of Public Disruption and Inconvenience Caused	*None*
Conforms to Legal or Contractual Obligations	
Responds to State and/or Federal Mandate	
Benefits to other Capital Projects	
Conforms to Adopted Plans and Programs	*Plan update is needed to set current priorities for system improvement.*
Implications of Deferring the Project	*System improvements and changes to the system's performance will not be captured in the plan, which will make the plan obsolete.*
Other	

APPENDIX C

MODELING OUTPUT DATA SHEETS (ON CD)
STORMWATER PIPE PROFILE GRAPHS (ON CD)
SPREADSHEET-SOUTH KELSO WATERSHED (ON CD)

STORMWATER PROFILE GRAPH LEGEND

The stormwater pipe profile sheets included on the CD indicate the Area, CB numbers, storm event and watershed at the top of the sheet. The profiles indicate the nodes (manholes or other junction point) and links (pipes) in the stretch of the profile represented. The color legend is as follows:

Green Shading– Color for the top of the ground surface and the background color for soil around the pipe. The ground surface does not represent a surveyed surface and was created by connecting the rim elevations between structures.

Blue Shading– Color indicating the water level in the pipes and manholes under the given storm event

Red – Color of the line indicating the hydraulic profile for the top of the potentiometric water surface under the given storm event

INTERPRETATION OF PROFILE GRAPHS

There are two types of pipe profiles included in this report: Areas of Concern and Major Trunkline profiles. The titles of the profiles showing Areas of Concern list the area name and the flooded structures within that area, such as "Area 15c-1 = CB 1500 & 1501." The titles of major trunkline profiles list the street in which the profile follows and then approximate beginning and end nodes along that street, such as "Parrot Way | #8240 to Talley Way." The storm event and basin name are listed underneath the profile title, for example, "25-Year Storm Event, Baker Way" is one of the major trunkline profile subtitles. The elevation is shown the on y-axis on the left side of profile sheet. Stationing is located along the bottom of the profile diagram. The stationing always begins at 1+00 for each of the independently generated profiles and continues until it reaches the last structure in the profile.

APPENDIX D

STORM CHECKLIST

STORM CHECKLIST

	Check the following locations during or after large rainstorm events.	Comments
W	**Stormwater Pond at Main Street and SW 1st Avenue** Inspect: Check stormwater pond/treatment facility to see if flooding. Maintenance: Clear outlet structure outlets	
W	**SW 1st Ave (Hwy 411) and Catlin St.** Inspection: Check to see if standing water/flooding in street. Maintenance: Remove debris from catch basin grates.	Ponding occurs on Catlin just east of 1st. Could flood Cowlitz County maintenance shop. An upgraded stormwater system is scheduled for installation here in 2013 as part of the Main Street realighnment project.
W	**SW 7th Avenue and Lincoln Street** Inspection: Check to see if flooding is in roadway. Maintenance: Remove debris from catch basin grates and vactor CBs and flush storm pipes.	Floods every 2-3 years and may be because of sedimentation in the pipe or because of pipe capacity. Pipes were cleaned December 2012. Bark mulch has clogged CB in the past. Newer installed cinders may reduce this problem.
W	**Long Avenue at Cowlitz Way** Inspection: Check to see if catch basin grates are clogged. Maintenance: Clear catch basin grates if clogged.	Localized flooding if catch basin grates clogged with leaves. No property damage. Cowlitz Way bridge dumps lots of debris to this CB and CB's along the east side of Long Ave. to 413 Long. Ponding at the CB at 300 Long can extend across the road.
N	**Allen Street from 1st Ave. to 5th Ave.** Inspection: Check to see if flooding is in street and if catch basins are flowing. Maintenance: Clear catch basin grates if clogged.	Floods 1-3 times per year and has flooded Tim's Bar. Other properties can receive flooding. Flooding occurs due to a pipe capacity issue. Catch basin grates clog generally on first flush after fall leaves drop.
N	**Academy Street and 5th Avenue** Inspection: Check to see if catch basin grates on the east side of 5th Ave. are clogged. Maintenance: Remove debris from catch basins.	
N	**Cowlitz Way and North 3rd Avenue** Inspection: Check to see if NE and NW catch basins are flooding to the street. Maintenance: Remove debris from catch basin grates and clean storm pipes if clogged.	Floods 2-3 times per year. Can either be a debris or possibly a storm pipe capacity problem. Leaves in the Fall causes clogging. Since storm pipes cleaned in 2012, catch basin has been working well.
N	**N. 1st and Harris Street** Inspection: Check to see if catch basin grates on SW and SE corners are clogged with debris. Maintenance: Clear catch basin grates if clogged.	Catch basins get clogged with leaves weekly in Fall. Localized flooding. No property damage.
N	**800 North Pacific Ave. (in alley near Rhododendron Park)** Inspection: Check to see if catch basin in this low spot is plugged and alley is flooding. Maintenance: Remove debris from catch basin.	Flooding occurred in basement at 802 Harris until installation of catch basin about 2009.
N	**804 N. 4th ditch** Inspection: Check for sedimentation in ditch and upstream culvert. Maintenance: Back hoe to clean out sedimentation in ditch.	Sediment from intermittent stream fills the ditch and blocks 804 N. 4th culvert. Flooded onto road and property damage hasn't been seen in the past.
N	**304 Harris Street** Inspection: Check for flooding at catch basin in alley by house. Maintenance: Clear catch basin grate if clogged and vactor pipe to north if necessary.	Flooding has not been observed since March 2009 vactor of catch basin and stormline approximately 30 feet to south. Jetting in 2012 showed connection from CB to MH in 4th Ave. Needs more investigation with camera to verify pipe locations and good connections.
N	**500 block of Burcham Street (west end of street)** Inspection: Check to see if catch basin grate on southwest side is clogged with debris. Maintenance: Remove debris from catch basins.	Catch basin grate clogging has caused water to go over curb and down the hill. The street sweeper can not reach this catch basin and so it must be manually cleaned.
N	**1200 block of Harris** Inspection: Check for clogging in ditches, culverts and catch basins from 8th to 12th. Maintenance: Clear any blockage.	Culverts in ditches cause flooding. Outfall to I-5: Outfall eroding bank, storm pipe broken; Check for WSDOT ROW.

STORM CHECKLIST

	Check the following locations during or after large rainstorm events.	Comments
NE	**1905 Allen Street** Inspection: Check to see if inlet grate from creek to storm pipe is clogged. Maintenance: Clear inlet grate if clogged.	Flooding every few years at 1905 Allen Street, such as into the garage, is runoff from adjacent driveway to west. Flooding on Allen Street: may be an undersized pipe problem. In early 2000's, the high school parking lot was upgraded but this flooding is still an issue.
NE	**Allen Street and Bates Road** Inspection: Check to see if catch basin grate at northwest corner is clogged. Maintenance: Clear grate if clogged.	
NE	**Allen Street and Swanson Road** Inspection: Check to see if leaves clog the catch basin grate. Maintenance: Clear grate if clogged.	Flooding causes ponding that reaches centerline of Allen Street.
NE	**400 Block of 23rd Avenue** Inspect: All state grates on street from 400 to 608 N. 23rd for clogging on grates. Maintenance: Clear grate of debris.	23rd Avenue was completely covered with runoff in January 2009 Storm. Next to church. Outlet pipes on state grate catch basin need cleaning.
NE	**Allen Street at N 23rd Avenue** Inspect: Check to see if north & south catch basins on Allen Street, across from church, are clogged. Maintenance: Clear grate of debris.	Clogged grate on south side caused flooding during storm of 2009.
NE	**Allen Street at Corduroy** Inspection: Check to see if tributary to Coweeman River has flooded roadway. Maintenance: If Allen Street is flooded, place road closed signs in road.	Allen Street flooded in storm of January 2009.
NE	**Bloyd (Little) Canyon - 2100 block of Bloyd** Inspection: Check inlet structure/grate for clogging with sediment and debris. Maintenance: Clear debris from inlet structure grate.	Creek enters storm pipe here with inlet grate. Water used to go over road and continue down canyon. Maintenance near inlet has stopped flooding at this location, however, downstream problems at privately installed culverts. Grate is cleaned 2-3 times per week during storms.
NE	**Burcham (Big) Canyon - across from Rotary Park** Inspection: Check to see if inlet structure grate is clogged with debris. Maintenance: Clear debris from inlet structure grate.	Floods several times per year, no property damage. CIP project for design/construct new intake structure in 2013.
NE	**Reservoir Road at Mt. Brynion Road** Inspection: Check to see if catch basin grate is clogged with gravel. Maintenance: Clear catch basin grate.	Grate becomes clogged with gravel. This catch basin is in the County. Check with Larry Higgins to see if the County will inspect/maintain this catch basin. The City likely installed this CB as part of installing the road to the reservoir.
NE	**1306 Minor Road** Inspection: Check for clogging at CB on east side of road and catch basin grate. Maintenance: Clear catch basin grate if plugged.	Blocked CB causes stormwater to cross the road and down drainage ditch. Two City catch basin in extended right-of-way to east. East CB needs maintenance/replacement. No flooding or property damage.
NE	**Teresa Way at Florence Avenue** Inspection: Check to see if catch basin at NE corner is clogged. Maintenance: Clear any clogging.	Flooding issues haven't been a problem for quite awhile.
NE	**Florence Avenue** Inspection: Check for clogging in manhole on west side of road and check catch basin at NE corner and manhole at SE corner of intersection. Maintenance: Clear any clogging.	Stormwater surcharges out of manhole and down bank to 1600 block of Minor Road. Maybe an undersized pipe is the problem. Flooding issues haven't been a problem for quite awhile.
S	**Train Depot - So. 1st Avenue and Ash Street** Inspection: Check to see if flooding in basement walkway of train depot. Maintenance: See if flapper valve in manhole at SE corner works properly.	Flooding in train depot basement has occurred. In January 2013, a flapper valve installed in manhole at SE corner of intersection for flooding.

STORM CHECKLIST

	Check the following locations during or after large rainstorm events.	Comments
S	**1000 Block of Oak Street (cul-de-sac)** Inspection: Check to see if two catch basins are flooding. Maintenance: Remove any debris from catch basins. Place barricades in street.	Capacity issue. Flooding by surcharging catch basin in storm of January 2009.
S	**900 block Cedar Street** Inspection: Check to see if road is flooded. Maintenance: If flooded, place road closed signs on the street.	Flooding issues. Road floods during storm from curb to curb. Between 8th & 9th, Cedar Street floods on south side. Pipe pumps water to road at 909 Cedar. Investigate storm system for blockage between 9th - 11th Avenues and potential need for capacity upgrade.
S	**Elm Street and S 7th Avenue** Inspection: Check catch basins at NW and SW corners at intersection. Maintenance: Remove debris from catch basin grates. May need upsizing of pipes.	Likely a capacity issue. Storm pipes were cleaned and TV'd but unsuccessful. Needs more investigation. Flooding can get 12+ inches deep and floods during every significant rainfall. Has flooded basement at 1112 So. 7th Ave. May get property damage.
S	**Riverside Drive** Inspection: Check to see if the road is flooded due to rising waters from the Cowlitz River. Maintenance: Place road closed signs in road.	Rising Cowlitz River floods onto Riverside Drive at S-curve. Flooding occurs less than once every 10 years. May have property damage if it floods. Riverside Drive Flood Prevention Improvements project is a CIP project to address the issue.
S	**Coweeman Drive** Inspection: Check to see if road is flooded. Maintenance: If flooded, place road closed signs on the street.	A sag in the road causes ponding on the road. A catch basin with outfall to river would help.
SE	**Haussler Road culverts** Inspection: Check to see if all culvert inlets along road are clogged. Maintenance: Clear clogged inlets.	Culvert inlets at Kelso Drive plug more often than those up the hill and must be cleared monthly during wet season. Flooding occurs over roadway but no property damage.
SE	**136 West Vista Way culvert** Inspection: Check to see if all culvert inlet is clogged. Maintenance: Clear clogged inlet.	Stormwater can flood 128 W. Vista Way basement. June 2010 culvert blockage/flooding resulted in claim. Ditch rehabilitation upstream from culvert in Nov. 2011 may have solved culvert blocking.
SE	**101 Roley Court** Inspection: Check for flooding at catch basin on north side of road and drain pipe to gully. Maintenance: Remove debris from catch basin. Repair drain pipe is necessary.	Catch basin at road sag has caused flooding at house gargage in the past. Its drain pipe that outfalls to gully has deteriorated and is scheduled for replacement in 2013.
SE	**122 Roley Court - gully culvert** Inspection: Check to see if culvert in creek bed is plugged with debris and sediment. Maintenance: If clogged, clear culvert inlet.	Culvert becomes clogged less than once every 10 years. If culvert gets blocked, an area of the canyon will flood but with no property damage. A waterline crosses the canyon here and is the reason for the culvert. Culvert is becoming rusted and may fail.
SE	**Carroll Road culverts** Inspection: Check to see if all culvert inlets along road are clogged. Maintenance: Clear clogged inlets.	Leaves and limbs plug culvert inlets and stormwater floods over road but no property damage. Clogging can occur as often as weekly.
SE	**Old Highway 99 south to City Limits** Inspection: Check to see if all culvert inlets and catch basins along road are clogged and if intermitent streams discharge sediment into ditch/road, especially across from U-Neek Trailers. Maintenance: Clear clogged inlets and catch basin grates. Excavate sediment to ditch flowline & remove sediment from road.	Flooding and sedimentation occurs in street. No property damage. An intermittent stream discharges lots of soil/rocks/debris into ditch across from U-Neek Trailers. Ditch maintenance here in 2009/2010 removed excess debris.

APPENDIX E

GRANT AND LOAN PROGRAMS

Summary of Some Grant and Loan Programs for Drinking Water and Wastewater Projects

Updated 2-1-13

Please contact Cathi Read at cathi.read@commerce.wa.gov if you would like to update your program information or if you would like an electronic copy of this document

PLANNING

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
CDBG-POG Community Development Block Grant – Planning-Only Grant Program	• Comprehensive plans • Infrastructure plans • Feasibility studies • Community action plans • Low-income housing assessments	Projects must principally benefit low- to moderate-income people in non-entitlement cities and counties. • Cities or towns with fewer than 50,000 people • Counties with fewer than 200,000 people	Grant • Up to $24,000 for a single jurisdiction • Up to $35,000 for single jurisdiction projects that address urgent public health and safety needs • Up to $40,000 for multiple jurisdictions/joint application	2013 applications accepted beginning May 2013 through April 2014 on a fund-available basis. **Contacts:** Phyllis Cole, 360-725-4001 phyllis.cole@commerce.wa.gov Jon Galow, 509-847-5021 Jon.galow@commerce.wa.gov
PWTF PLANNING Public Works Trust Fund – Planning Program	• Single or multiple system plans covering eligible systems • Updates to existing capital facilities plans • Environmental studies • Cultural/historical project reviews •	Counties, cities, and special-purpose districts that meet certain requirements (contact Client Service Representative). No school or port districts	No planning funding is currently available.	Note: Availability of future funds is dependent on approval by the Governor and Legislature. **Contact:** Isaac Huang, Client Service Representative, 360-725-3162, isaac.huang@commerce.wa.gov
CERB PLANNING AND FEASIBILITY GRANTS Community Economic Revitalization Board – Project-Specific Planning Program	Project-specific feasibility and pre-development studies that advance community economic development goals for industrial sector business development.	Eligible statewide • Counties, cities, towns, port districts, special districts • Federally recognized tribes • Municipal corporations, quasi-municipal corporations w/ economic development purposes	Grant • Up to $50,000 per application • Requires 25 percent matching funds	Applications accepted year-round. The Board meets six times a year. **Contacts:** Janea Eddy, 360-725-3151 janea.eddy@commerce.wa.gov Chris Gagnon, 360-725-3158 Christina.gagnon@commerce.wa.gov
RCAC RURAL COMMUNITY ASSISTANCE CORPORATION Feasibility and Pre-Development Loans	Water and/or wastewater planning; environmental work; and other work to assist in developing an application for infrastructure improvements	Non-profit organizations, public agencies, tribes, and low-income rural communities with a 50,000 population or less, or 10,000 or less if guaranteed by USDA Rural Development financing	• Maximum $50,000 for feasibility loan • Maximum $350,000 for pre-development loan • 1 year term • 5.5% interest rate	Applications accepted anytime Contact: Josh Griff 720-951-2163 jgriff@rcac.org Applications available on-line at www.rcac.org

PLANNING – continued

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
ECOLOGY: INTEGRATED WATER QUALITY FUNDING PROGRAM State Water Pollution Control Revolving Fund Centennial Clean Water Fund	Planning projects associated with publicly-owned wastewater and stormwater facilities. The integrated program also funds planning and implementation of nonpoint source pollution control activities.	Counties, cities, towns, conservation districts, or other political subdivision, municipal or quasi-municipal corporations, and tribes <u>Preconstruction Set-aside</u> Jurisdictions listed above with a population of 25,000 or less and a MHI (median household income) below the statewide average receive priority for loan funds. <u>Preconstruction Set-aside (Distressed Communities)</u> Jurisdictions listed above with a population of 25,000 or less and a MHI below 80% of the statewide average.	Loan, at either: (SFY 2014 interest rates) • 2.3% interest for 6-20 year term, or • 1.1% interest for 5 year term <u>Pre-Construction Set-aside (Distressed Communities)</u> 50% forgivable principal loan and 50% loan, at either: (SFY 2014 interest rates) • 2.3% interest for 6-20 year term, or • 1.1% interest for 5 year term	State Fiscal Year 2015 application cycle closes on November 1, 2013. Applications typically accepted September 1 through first Friday in November. **Contact:** David Dunn 360-407-6503 david.dunn@ecy.wa.gov http:/www.ecy.wa.gov/programs/wq/funding/funding.html
RD PRE-DEVELOPMENT GRANTS (PPD) U.S. Dept. of Agriculture Rural Development – Rural Utilities Service – Water and Waste Disposal Direct Loans and Grants	Water and/or sewer planning; environmental work; and other work to assist in developing an application for infrastructure improvements	Low-income, small communities and systems serving areas under 10,000 population.	Loans; Grants in some cases, depending on funding availability. Maximum $25,000 grant Requires minimum 25% match	Applications accepted year-round, on a fund-available basis. **Contact:** Gene Dobry 360-704-7733 eugene.dobry@wa.usda.gov http://www.rurdev.usda.gov/wa
RD 'SEARCH' GRANTS: SPECIAL EVALUATION ASSISTANCE FOR RURAL COMMUNITIES U.S. Dept. of Agriculture Rural Development – Rural Utilities Service – Water and Waste Disposal Direct Loans and Grants	Water and/or sewer planning; environmental work; and other work to assist in developing an application for infrastructure improvements.	Low-income, small communities and systems serving areas under 2,500 population.	Maximum $30,000 grant. No match required.	Applications accepted year-round, on a fund-available basis **Contact:** Gene Dobry 360-704-7733 eugene.dobry@wa.usda.gov http://www.rurdev.usda.gov/wa

PRE-CONSTRUCTION

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
PWTF PRE-CON Public Works Trust Fund – Pre-Construction Program	Low-interest pre-construction loans are available to fund activities that prepare a specific project for construction.	Counties, cities, special purpose districts, and quasi-municipal organizations that meet certain requirements. School districts and port districts are not eligible.	• The Public Works Board has requested $22.5 million for FY 2013-15. • Availability of future funds is dependent on approval by the Governor and Legislature. • Loan terms to be made available once program is funded.	Check the Public Works Board website periodically at http://www.pwb.wa.gov to obtain the latest information on program details. You can also contact your region's Client Services Representative for current information, or **Contact:** Terry Dale Client Service Representative 360-725-3155 terry.dale@commerce.wa.gov

PRE-CONSTRUCTION - continued

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
ECOLOGY: INTEGRATED WATER QUALITY FUNDING PROGRAM State Water Pollution Control Revolving Fund Centennial Clean Water Fund	Design projects associated with publicly-owned wastewater and stormwater facilities. The integrated program also funds planning and implementation of nonpoint source pollution control activities.	Counties, cities, towns, conservation districts, or other political subdivision, municipal or quasi-municipal corporations, and tribes <u>Preconstruction Set-aside</u> Jurisdictions listed above with a population of 25,000 or less and a MHI (median household income) below the statewide average receive priority for loan funds. <u>Preconstruction Set-aside (Distressed Communities)</u> Jurisdictions listed above with a population of 25,000 or less and a MHI below 80% of the statewide average.	Loan, at either: (SFY 2014 interest rates) • 2.3% interest for 6-20 year term, or • 1.1% interest for 5 year term <u>Pre-Construction Set-aside (Distressed Communities)</u> 50% forgivable principal loan and 50% loan, at either: (SFY 2014 interest rates) • 2.3% interest for 6-20 year term, or • 1.1% interest for 5 year term	State Fiscal Year 2015 application cycle closes on November 1, 2013. Applications typically accepted September 1 through first Friday in November. **Contact:** David Dunn 360-407-6503 david.dunn@ecy.wa.gov http:/www.ecy.wa.gov/programs/wq/funding/funding.html
RCAC RURAL COMMUNITY ASSISTANCE CORPORATION Feasibility and Pre-Development Loans	Water and/or wastewater planning; environmental work; and other work to assist in developing an application for infrastructure improvements	Non-profit organizations, public agencies, tribes, and low-income rural communities with a 50,000 population or less, or 10,000 or less if guaranteed by USDA Rural Development financing	• Maximum $50,000 for feasibility loan • Maximum $350,000 for pre-development loan • 1 year term • 5.5% interest rate	Applications accepted anytime Contact: Josh Griff 720-951-2163 jgriff@rcac.org Applications available on-line at www.rcac.org

CONSTRUCTION and DESIGN/CONSTRUCTION

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
CDBG-GP Community Development Block Grant – General Purpose Grant Program	Final design and construction of wastewater, drinking water, side connections, stormwater, streets, bridge, community facility, economic development, and housing rehabilitation projects.	Projects must principally benefit low- to moderate-income people in non-entitlement cities and counties. • Cities or towns with fewer than 50,000 people • Counties with fewer than 200,000 people	Grant • Up to $250,000 - $1,000,000, depending on project type, financial need, and past grant awards • No match required, but local contribution and gap financing preferred	Applications due once a year. Due date January 31, 2013. **Contact:** Kaaren Roe 360-725-3018 kaaren.roe@commerce.wa.gov
PWTF Public Works Trust Fund – Construction Program	New construction, replacement, and repair of existing infrastructure for domestic water, sanitary sewer, stormwater, solid waste, road or bridge projects, and reasonable growth.	Counties, cities, special purpose districts, and quasi-municipal organizations that meet certain requirements (contact a Client Service Representative for more information). No school districts or port districts. NEW: • Affordability Index: Affordability Index (AI) is a measure of the consumers' financial ability to pay for utility services. Applicants that qualify for AI terms can receive lower cost loan terms • Performance based incentives: Projects that meet contract incentives can qualify for slightly lower interest rate or longer repayment term.	Loan (pending Legislature approval) • $5 million per jurisdiction for the 2015 funding year • Must complete work within 60 months Interest rates are set by loan term: • 10 years – 0.5% • 15 years – 0.75% • 20 years – 1.0% • 25 years – 1.5% • 30 years – 2.0% • Standard loan term is 1% interest at 20 years. • The repayment term cannot exceed the life of the improvement. • No local match is required.	2015 Application Cycle opens March 15, 2013 and closes in May 2013. Please visit http://www.pwb.wa.gov for information. **Contact:** Isaac Huang, Client Service Representative 360-725-3162 isaac.huang@commerce.wa.gov
RD U.S. Dept. of Agriculture Rural Development - Rural Utilities Service - Water and Waste Disposal Direct Loans and Grants	Pre-construction and construction associated with building, repairing, or improving drinking water, solid waste facilities and wastewater facilities	• Cities or towns with fewer than 10,000 population • Counties, special purpose districts, non-profit corporations or tribes unable to get funds from other sources at reasonable rates and terms	Loans; Grants in some cases • Interest rates vary (currently 1.875 – 3.125%) • Up to 40-year loan term • No pre-payment penalty	Applications accepted year-round on a fund-available basis **Contact:** Gene Dobry 360-704-7733 eugene.dobry@wa.usda.gov http://www.rurdev.usda.gov/wa

CONSTRUCTION AND DESIGN/CONSTRUCTION – continued

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
DWSRF Drinking Water State Revolving Fund	Drinking water system infrastructure projects aimed at increasing public health protection. The program now includes dedicated funding for subsidy. There is a limited amount of principal forgiveness for communities with high affordability index numbers and water system restructuring/ consolidation projects.	Community and non-community water systems (includes for-profit and non-profit systems, but not federal or state-owned systems); both privately- and publicly-owned systems are eligible	Loan • 1 percent loan fee (water systems receiving subsidy are not subject to loan fees) • $12 million per jurisdiction per year • $24 million for jointly-owned projects • 1 to 1.5 percent interest rate • Loan repayment period: 20 years or life of the project, whichever is less • No local match required	Applications due March 1, 2013 **Contact:** Karen Klocke 360-236-3116 karen.klocke@doh.wa.gov www.doh.wa.gov/ehp/dw/our_main_pages/dwsrf.htm
ECOLOGY: INTEGRATED WATER QUALITY FUNDING PROGRAM State Water Pollution Control Revolving Fund Centennial Clean Water Fund	Construction projects associated with publicly-owned wastewater and stormwater facilities. The integrated program also funds planning and implementation of nonpoint source pollution control activities.	Counties, cities, towns, conservation districts, or other political subdivision, municipal or quasi-municipal corporations, and tribes Hardship Assistance Jurisdictions listed above with a population of 25,000 or less	Loan, at either: (SFY 2014 interest rates) • 2.3% interest for 6-20 year term, or • 1.1% interest for 5-year term Hardship assistance for the construction of wastewater treatment facilities may be available in the form of a reduced interest rate, grant subsidy, or loan forgiveness. Hardship assistance is based on impact to residential ratepayers and the community MHI. Hardship funding is only available for the portion of a facility serving existing residential need.	State Fiscal Year 2015 application cycle closes on November 1, 2013. Applications typically accepted September 1 through first Friday in November. **Contact:** David Dunn 360-407-6503 david.dunn@ecy.wa.gov http:/www.ecy.wa.gov/programs/wq/funding/funding.html

CONSTRUCTION and DESIGN/CONSTRUCTION – continued

Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
CERB Community Economic Revitalization Board - Construction Program	Projects must support significant job creation or significant private investment in the state. • Bridges, roads and railroad spurs, domestic and industrial water, sanitary and storm sewers • Electricity, natural gas and telecommunications • General purpose industrial buildings, port facilities • Acquisition, construction, repair, reconstruction, replacement, rehabilitation	• Counties, cities, towns, port districts, special districts • Federally-recognized tribes • Municipal and quasi-municipal corporations with economic development purposes.	Loans; grants in unique cases • Public facility projects required by private sector expansion and job creation • Projects without a committed business allowed for rural areas • $1 million maximum per project, per policy • Interest rates: 3% for non-distressed and 2.5% for distressed counties • 20-year term maximum • Requires 10% minimum match • Applicants must demonstrate gap in public project funding and need for CERB assistance • CERB is authority for funding approvals	Applications accepted year-round. The Board meets six times a year. **Contacts:** Janea Eddy 360-725-3151 janea.eddy@commerce.wa.gov Chris Gagnon 360-725-3158 Christina.gagnon@commerce.wa.gov
RCAC **RURAL COMMUNITY ASSISTANCE CORPORATION** Construction Loans	Water, wastewater, solid waste and stormwater facilities that primarily serve low-income rural communities. Can include pre-development costs.	Non-profit organizations, public agencies, tribes, and low-income rural communities with a 50,000 population or less, or 10,000 populations or less if using Rural Development financing as the takeout	• Maximum $2 million with commitment letter for permanent financing • Security in permanent loan letter of conditions • 1-3 year term: 5.5% interest rate • 1% loan fee	Applications accepted anytime **Contact:** Josh Griff 720-951-2163 jgriff@rcac.org Applications available on-line at www.rcac.org
RCAC **RURAL COMMUNITY ASSISTANCE CORPORATION** Intermediate Term Loan	Water, wastewater, solid waste and stormwater facilities that primarily serve low-income rural communities.	Non-profit organizations, public agencies, tribes, and low-income rural communities with a 50,000 population or less.	• For smaller capital needs, normally not to exceed $100,000 • Maximum 20 year term • 5% interest rate • 1% loan fee	Applications accepted anytime **Contact:** Josh Griff 720-951-2163 jgriff@rcac.org Applications available on-line at www.rcac.org

EMERGENCY

Project Phase/Program	Eligible Projects	Eligible Applicants	Funding Available	How To Apply
PWTF Public Works Trust Fund – Emergency Program	Projects necessary due to natural disaster, or immediate/emergent threat to public health and safety For domestic water systems, sanitary sewer, stormwater, solid waste, roads and bridges	Counties, cities, special purpose districts, and quasi-municipal organizations that meet certain requirements (contact a Client Service Representative for more information). No school or port districts.	No emergency funding is currently available.	Note: Availability of future funds is dependent on approval by the Governor and Legislature. **Contact:** Isaac Huang Client Service Representative 360-725-3162 Isaac.huang@commerce.wa.gov
CDBG - IT Community Development Block Grant – Imminent Threat Grant Program	Repair unanticipated water, sewer and other public drainage facility damages that pose an immediate, urgent threat to public health and safety. A formal disaster must be declared	• Non-entitlement cities or towns with fewer than 50,000 people • Non-entitlement counties with fewer than 200,000 people	Grant; pending availability of funds • Only eligible costs incurred after an emergency is formally declared can be reimbursed	Applications accepted year-round. **Contact:** Kaaren Roe 360-725-3018 kaaren.roe@commerce.wa.gov
RD – ECWAG Emergency Community Water Assistance Grants	Domestic water projects needing emergency repairs due to an incident such as: a drought; earthquake; flood; chemical spill; fire; etc. A significant decline in quantity or quality of potable water supply that was caused by an emergency	Public bodies, tribes and private non-profit corporations serving rural areas with populations under 10,000	Grant; pending availability of funds • $150,000 limit for incident related emergency repairs to an existing water system • $500,000 limit to alleviate a significant decline in potable water supply caused by an emergency	Applications accepted year-round on a fund-available basis **Contact:** Gene Dobry 360-704-7733 eugene.dobry@wa.usda.gov http://www.rurdev.usda.gov/wa
RCAC **RURAL COMMUNITY ASSISTANCE CORPORATION** Intermediate Term Loan	Water, wastewater, solid waste and stormwater facilities that primarily serve low-income rural communities.	Non-profit organizations, public agencies, tribes, and low-income rural communities with a 50,000 population or less.	• For smaller capital needs, normally not to exceed $100,000 • Maximum 20 year term • 5% interest rate • 1% loan fee	Applications accepted anytime **Contact:** Josh Griff 720-951-2163 jgriff@rcac.org Applications available on-line at www.rcac.org