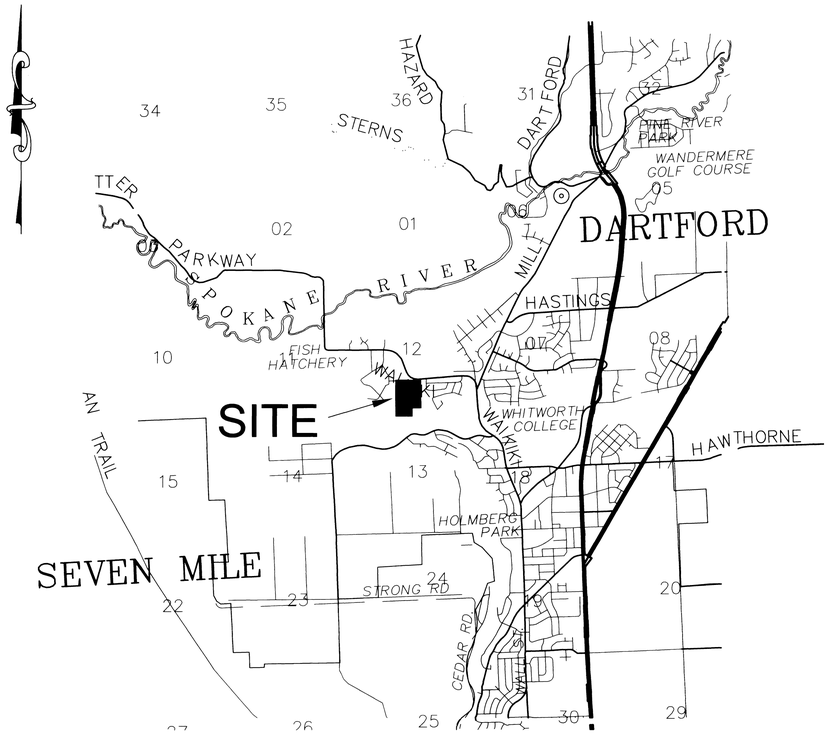

VICINITY MAP

STREET AND DRAINAGE AS-BUILT PLANS FOR

THE LLOYD CHARLES ESTATES

A PORTION OF THE SE 1/4 OF SECTION 12, TOWNSHIP 26N, RANGE 42E W.M.

SPOKANE COUNTY, WASHINGTON

FEBRUARY 16, 2006

STREET AND DRAINAGE

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ABBREVIATIONS

ACP	ASPHALTIC CONCRETE PAVEMENT
C.S.T.C.	CRUSHED SURFACE BASE COURSE
CL	CENTERLINE
DR	DRIVE
ELEV. OR EL.	ELEVATION
EXIST.	EXISTING
FL	FLOW LINE (ELEVATION)
FT.	FEET
GALV.	GALVANIZED
I.E.	INVERT ELEVATION
IN.	INCHES
L.F.	LINEAR FEET
LT.	LEFT
M.H.	MANHOLE
MAX.	MAXIMUM
MIN.	MINIMUM
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
P.T.	PRESSURE TREATED
PT.	POINT
R/W	RIGHT-OF-WAY
RD.	ROAD
RT.	RIGHT
SDMH	STORM DRAIN MANHOLE
TYP.	TYPICAL

LEGEND

- EXISTING ASPHALT PAVING
- PROPOSED GRAVEL DRIVE
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- PROPOSED DRAINAGE RETENTION OR DETENTION POND
- STANDARD SPOKANE COUNTY WHEELCHAIR RAMP
- PROPOSED DRAIN PIPE
- STORM SEWER MANHOLE
- RIP-RAP DRAINAGE OUTLET

STANDARD NOTES FOR CONSTRUCTION PLANS

THE FOLLOWING STANDARD NOTES ARE TO BE INCLUDED IN A ROAD AND DRAINAGE PLAN SET, FOR PRIVATELY SPONSORED DEVELOPMENTS. THESE NOTES ARE APPLICABLE TO BOTH PUBLIC AND PRIVATE ROADS.

1) ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION" 2001, AND AS AMENDED.

2) LOCATIONS OF EXISTING UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES. ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.

3) THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE APPROVED ROAD AND DRAINAGE PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

4) IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND THE SPOKANE COUNTY ENGINEER'S OFFICE.

5) FOR CONSTRUCTION OF DRYWELL, INSTALL FILTER FABRIC (AMOCO 4545 OR APPROVED EQUIVALENT) BETWEEN THE WASHED DRAINROCK AND THE NATIVE SOILS.

6) PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 456-8000 BEFORE YOU DIG.

7) FOR ANY CURB GRADES LESS THAN 0.8% (0.008 FT/FT), A WASHINGTON STATE PROFESSIONAL LAND SURVEYOR SHALL VERIFY THAT THE CURB FORMS ARE AT THE GRADES NOTED ON THE APPROVED PLANS, PRIOR TO PLACEMENT OF CURB MATERIALS. THE CONTRACTOR IS RESPONSIBLE FOR ARRANGING AND COORDINATING WORK WITH THE PROFESSIONAL LAND SURVEYOR.

8) THE CONTRACTOR SHALL EMPLOY A LICENSED SURVEYOR TO VERIFY THAT THE CROSS-GUTTER FORMS ARE AT THE CORRECT PLANE GRADE PRIOR TO CONCRETE PLACEMENT. THE CROSS-GUTTERS SHALL BE CONSTRUCTED PRIOR TO PAVING, AND THE PAVEMENT SHALL THEN MATCH THE EDGE OF CONCRETE GUTTER.

9) THE FLOOR OF A GRASSED PERCOLATION AREA (GPA) SWALE INCLUDES THE LEVEL PORTION OF THE FLOOR OF THE SWALE, AND THE SIDESLOPES OF THE SWALE UP TO THE GPA OVERFLOW ELEVATION OR TOP OF DRYWELL. THE SOIL LOCATED IN THE FLOOR OF THE GPA SWALE SHALL BE A MEDIUM TO WELL-DRAINING MATERIAL, WITH A MINIMUM INFILTRATION RATE OF 0.5 INCHES PER HOUR. THE ENGINEER SHALL PROVIDE A WRITTEN STATEMENT WHICH VERIFIES THAT ALL GPA SWALES CONFORM TO THIS REQUIREMENT. THIS WRITTEN STATEMENT SHALL BE SUBMITTED TO THE SPOKANE COUNTY ENGINEER'S OFFICE PRIOR TO INSTALLING FINISHED LANDSCAPING/SOD AND PRIOR TO FINAL ACCEPTANCE. THE SWALE FLOOR MATERIAL SHALL BE INSTALLED TO A NATIVE SOIL STRATUM WHICH ALSO MEETS OR EXCEEDS THIS MINIMUM PERCOLATION RATE OF 0.5 INCHES PER HOUR.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

NOTE:

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH 2002 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS PROMULGATED JOINTLY BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND AS AMENDED BY SPOKANE COUNTY UTILITIES.

DEVELOPER'S APPROVAL:

GARY DILLWOODIE — DATE: Feb. 20, 2006

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO APPLICABLE EDITIONS OF THE SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION AND THE SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT. ALL DESIGN DEVIATIONS HAVE BEEN APPROVED BY THE SPOKANE COUNTY ENGINEER. I APPROVE THESE PLANS FOR CONSTRUCTION.

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL — STATE OF WASHINGTON — 28984 — REGISTERED PROFESSIONAL ENGINEER — 2/16/06

EXPIRES 7-04-06

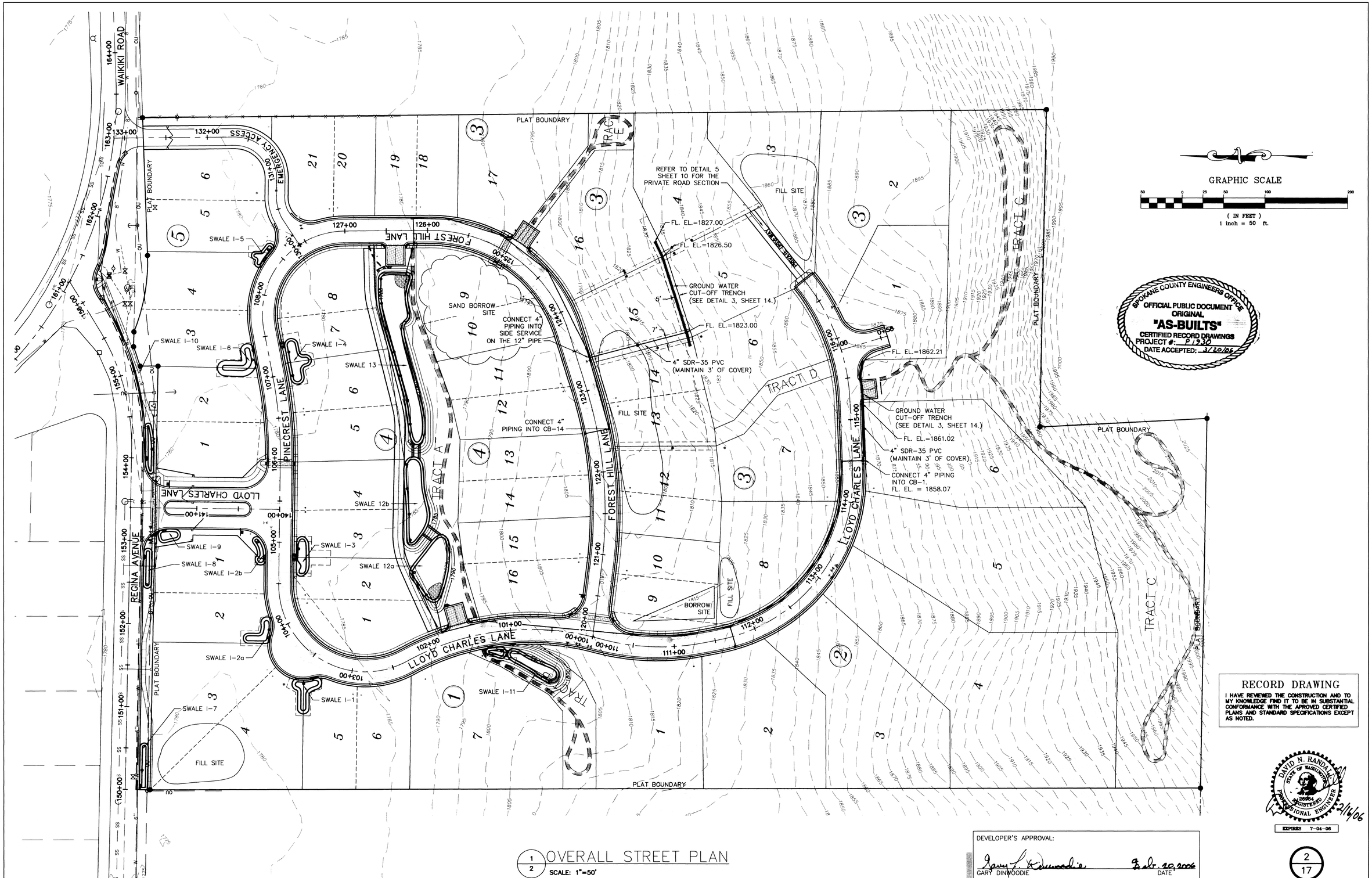
CALL BEFORE YOU DIG: 456-8000

NW	NE
SW	SE

12-26-42

AC
ac@adamsandclark.com
Adams & Clark, Inc.
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913
Project No. 2003-01-027

P1930 Eng/As Built



1/2 OVERALL STREET PLAN

SCALE: 1"=50'

2/17

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 50'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL N/A	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

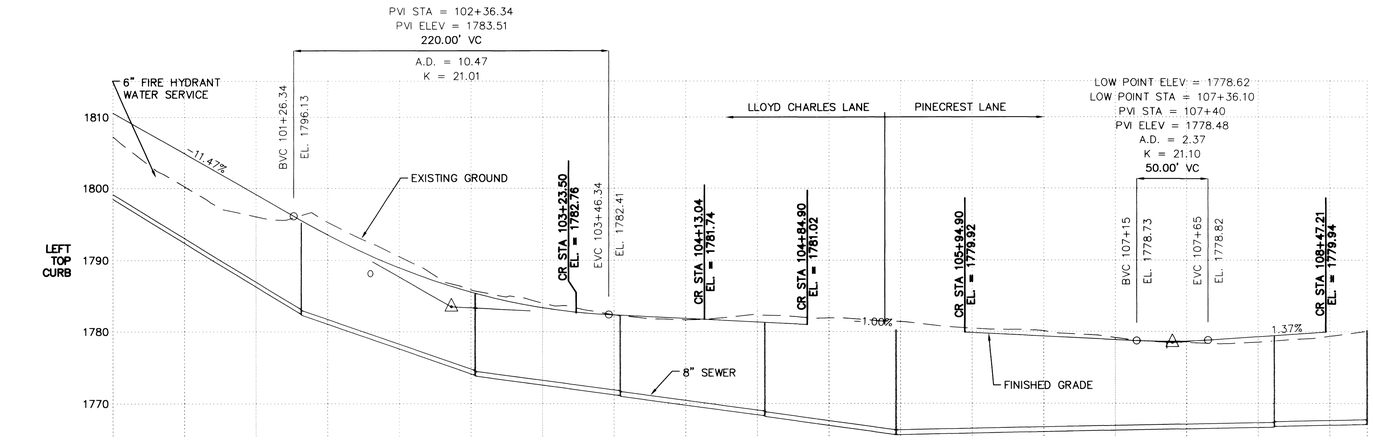
LLOYD CHARLES ESTATES

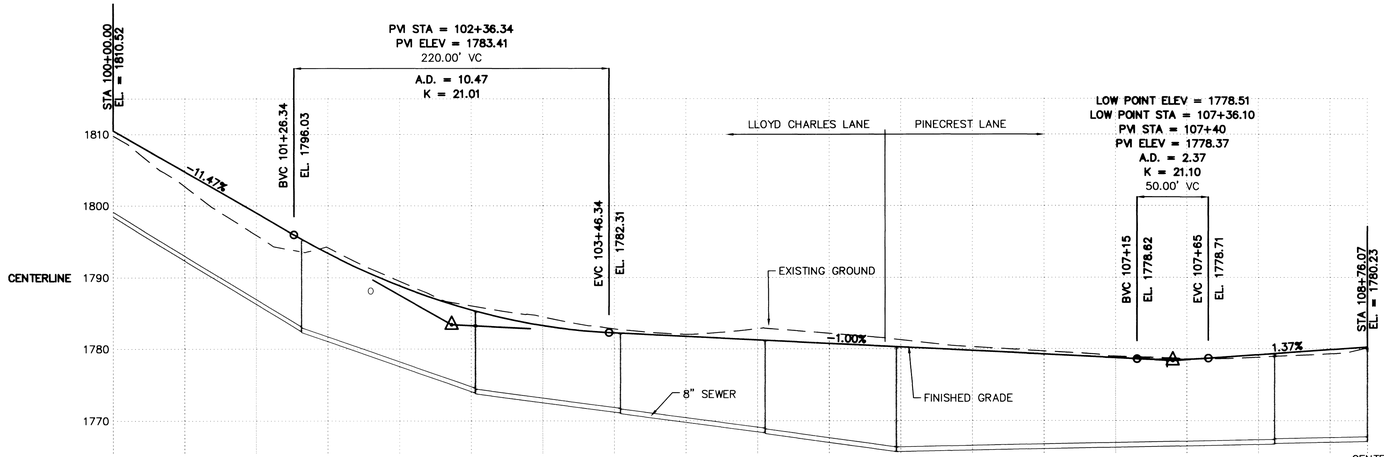
OVERALL STREET AND DRAINAGE PLAN

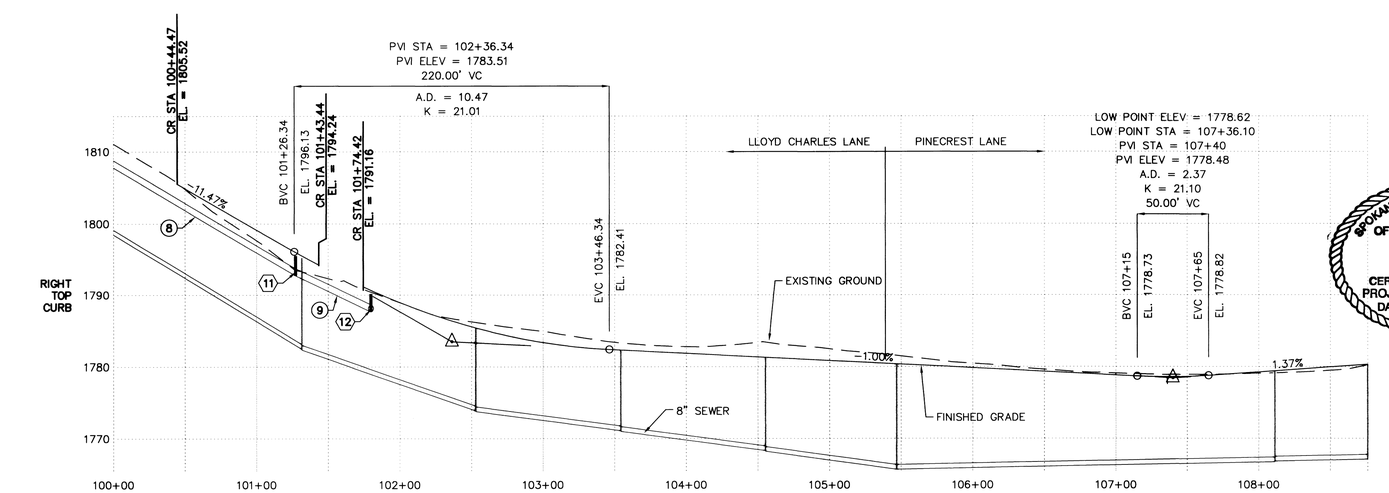
TYPE OF IMPROVEMENT: STREET

PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built







1/3 STREET PROFILE – STA. 100+00 TO 108+76.07

SCALE: 1"=50'

DRAINAGE STRUCTURE TABLE

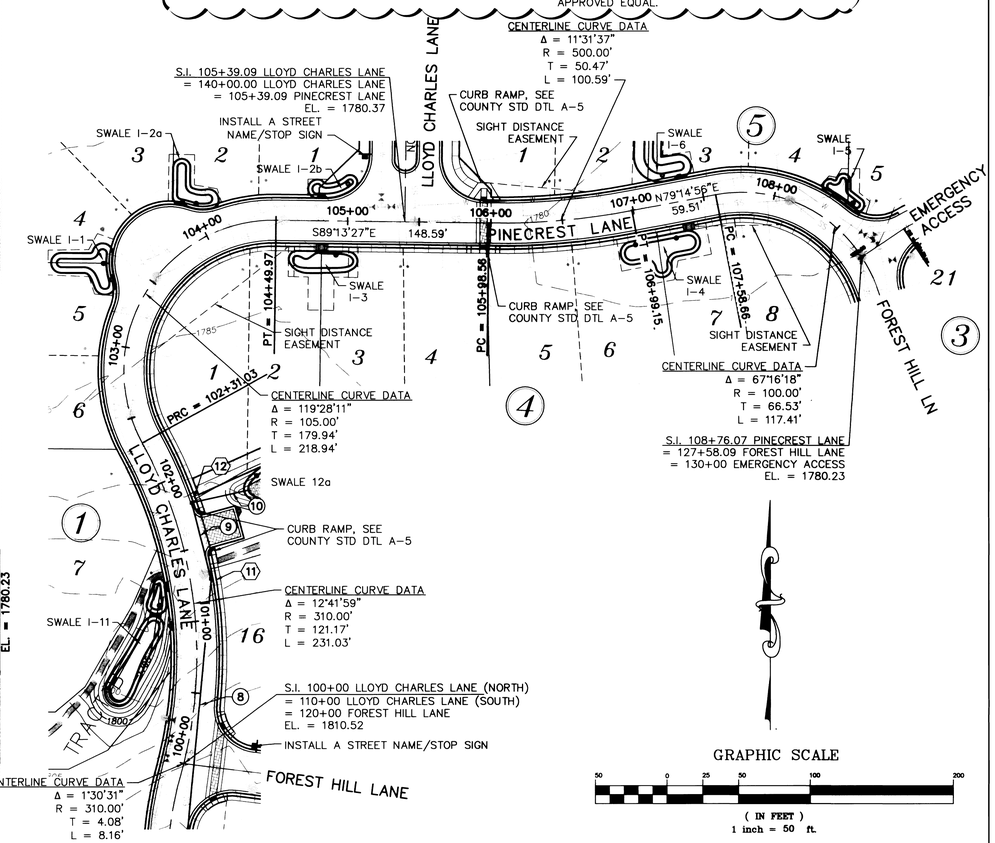
ID	STATION/OFFSET	RIM EL.	STRUCTURE/ TYPE	FRAME TYPE	GRATE TYPE
11	~~101+27.28/15.5' RT.~~ 101+27.75/14.46' RT.	~~1795.52~~ 1795.48	COUNTY/1	1	1
12	~~101+79.87/15.5' RT.~~ 101+79.64/14.54' RT.	~~1790.17~~ 1790.27	COUNTY/1	1	1

NOTE:
REFER TO WSDOT STANDARD PLAN B-4c AND B-4d FOR WSDOT CB DETAILS AND REFER TO SPOKANE COUNTY STANDARD PLANS B-4, B-10 AND B-12 FOR COUNTY CB DETAILS.

STORM DRAIN PIPE TABLE

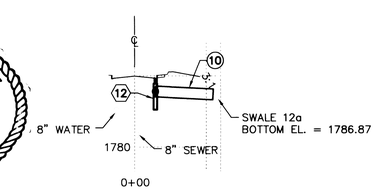
ID	LENGTH	SIZE	FL IN	FL OUT	SLOPE
8	~~176.74~~ 177.30	12"	~~1813.03~~ 1812.67	~~1792.73~~ 1792.27	~~11.49%~~ 11.51%
9	~~55.00~~ 54.25	12"	~~1792.73~~ 1792.37	~~1787.67~~ 1787.51	~~9.20%~~ 8.96%
10	~~40.00~~ 39.88	18"	~~1787.27~~ 1787.18	~~1786.87~~ 1787.02	~~1.00%~~ 0.40%

NOTE:
STORM DRAIN PIPING WILL BE N-12 ADS OR APPROVED EQUAL.



2/3 STREET PLAN – STA. 100+00 TO 108+76.07

SCALE: 1"=50'



3/3 PIPE 10 PROFILE

SCALE: 1"=50'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P 1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL — STATE OF WASHINGTON — 26981 — REGISTERED PROFESSIONAL ENGINEER — 2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:
GARY DINWOODIE — DATE Feb 10, 2006

3/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

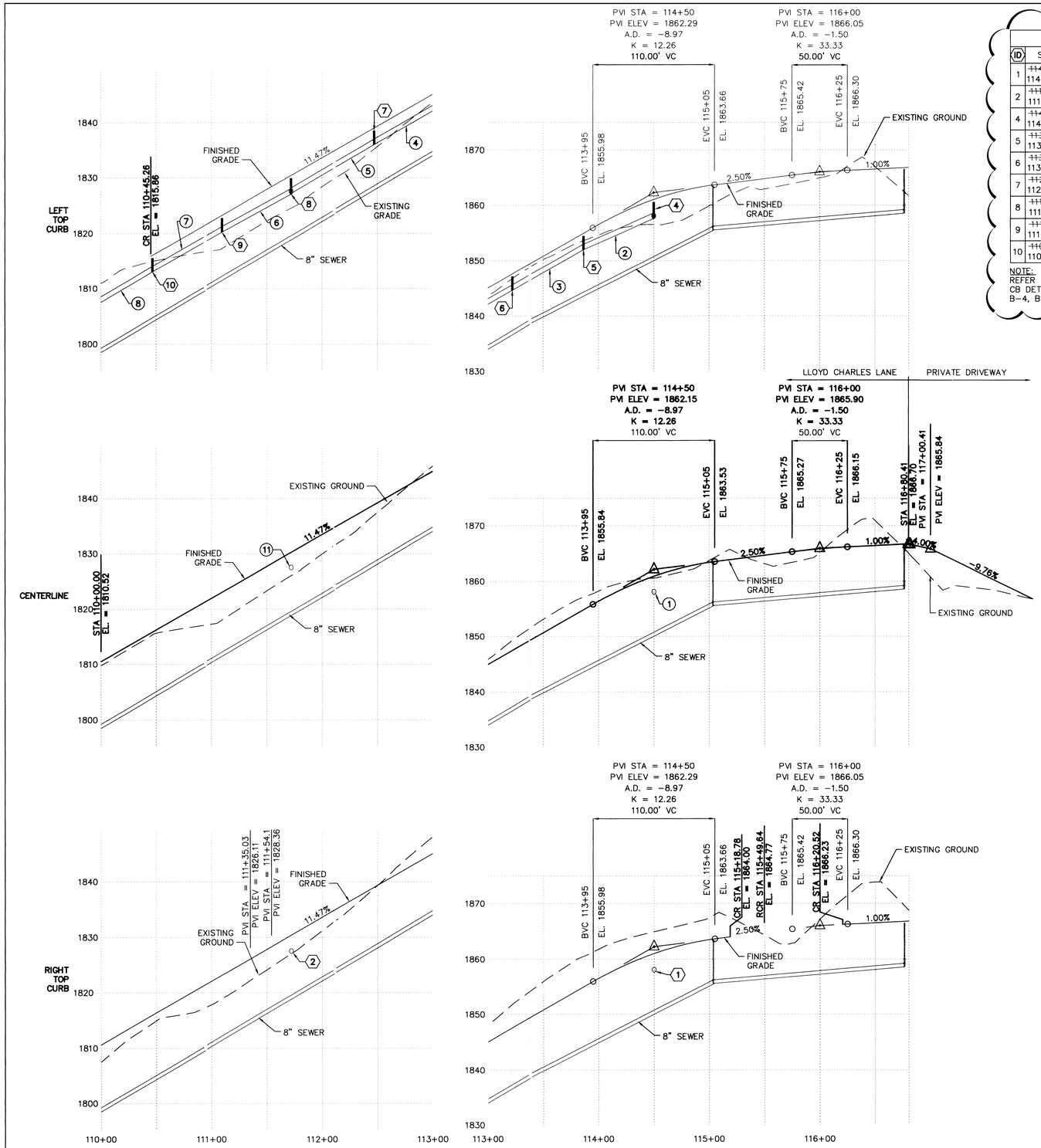
BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 50'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL 10'	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES
STREET PLAN & PROFILE
LLOYD CHARLES LANE – NORTH
PINECREST LANE

TYPE OF IMPROVEMENT: STREET	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built



1/4 STREET PROFILE – STA. 110+00 TO 116+80.41

SCALE: 1"=50'

DRAINAGE STRUCTURE TABLE

ID	STATION/OFFSET	RIM EL.	STRUCTURE/ TYPE	FRAME TYPE	GRATE TYPE
1	~~114+50.00/13.5' RT.~~ 114+49.78/12.44' RT.	~~1860.57~~ 1860.53	WSDOT	–	VANED
2	~~111+72.05/15.5' RT.~~ 111+71.57/12.13' RT.	~~1829.91~~ 1829.83	WSDOT	–	VANED
4	~~114+50.00/13.5' LT.~~ 114+49.60/12.47' LT.	~~1860.57~~ 1860.53	COUNTY/1	1	1
5	~~113+86.59/13.5' LT.~~ 113+86.72/12.81' LT.	~~1854.52~~ 1854.73	COUNTY/1	1	1
6	~~113+22.30/13.5' LT.~~ 113+22.09/12.63' LT.	1847.15	COUNTY/1	1	1
7	~~112+47.17/13.5' LT.~~ 112+46.39/12.69' LT.	~~1838.53~~ 1838.46	COUNTY/1	1	1
8	~~111+72.05/13.5' LT.~~ 111+71.41/12.62' LT.	~~1829.91~~ 1829.81	COUNTY/1	1	1
9	~~111+09.71/13.5' LT.~~ 111+09.27/12.52' LT.	~~1822.76~~ 1822.75	COUNTY/1	1	1
10	~~110+46.71/13.5' LT.~~ 110+46.81/12.57' LT.	~~1815.53~~ 1815.58	COUNTY/1	1	1

NOTE:
REFER TO WSDOT STANDARD PLAN B-4c AND B-4d FOR WSDOT CB DETAILS AND REFER TO SPOKANE COUNTY STANDARD PLANS B-4, B-10 AND B-12 FOR COUNTY CB DETAILS.

STORM DRAIN PIPE TABLE

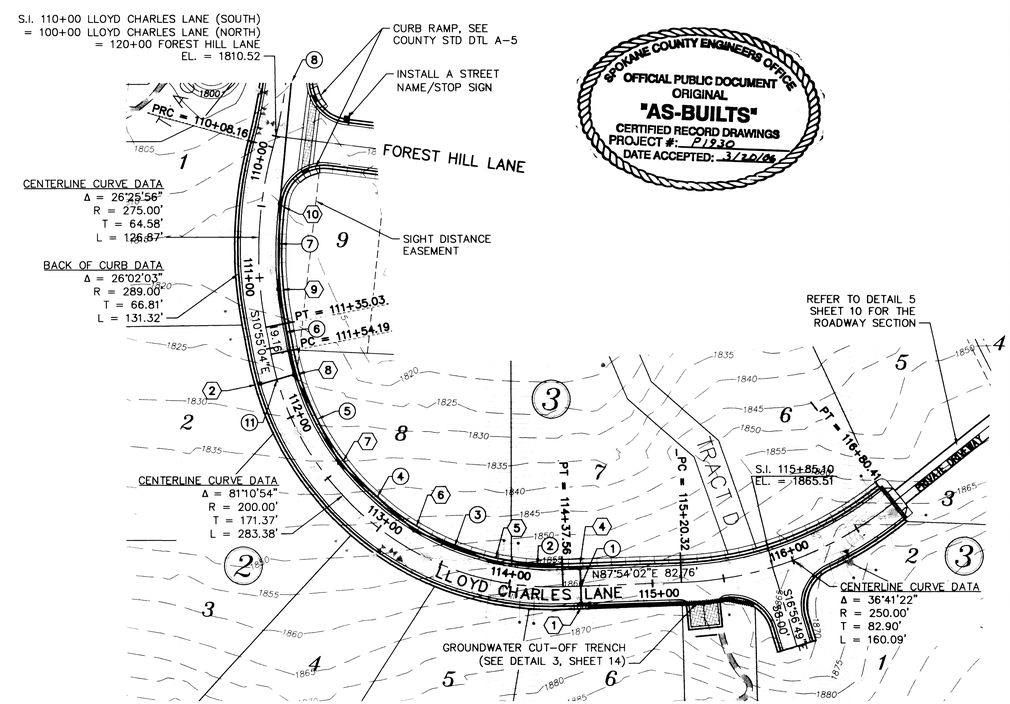
ID	LENGTH	SIZE	FL IN	FL OUT	SLOPE
1	~~25.08~~ 24.92	10"	~~1858.07~~ 1857.83	~~1857.81~~ 1857.50	~~1.04%~~ 1.32%
2	~~60.00~~ 59.45	12"	~~1857.68~~ 1857.56	~~1852.02~~ 1851.98	~~9.43%~~ 9.39%
3	~~60.00~~ 60.26	12"	~~1852.02~~ 1851.87	~~1844.65~~ 1844.60	~~12.28%~~ 12.06%
4	~~70.00~~ 70.49	12"	~~1844.65~~ 1844.32	~~1836.03~~ 1835.77	~~12.31%~~ 12.13%
5	~~70.00~~ 69.83	12"	~~1836.03~~ 1835.72	~~1827.16~~ 1826.87	12.67%
6	~~60.00~~ 59.82	12"	~~1827.03~~ 1826.76	~~1820.26~~ 1820.04	~~11.28%~~ 11.23%
7	~~60.00~~ 59.48	12"	~~1820.26~~ 1819.82	~~1813.03~~ 1812.64	~~12.05%~~ 12.07%
8	~~176.74~~ 177.30	12"	~~1813.03~~ 1812.67	~~1792.73~~ 1792.27	~~11.49%~~ 11.51%
11	~~25.08~~ 24.75	10"	~~1827.41~~ 1827.10	~~1827.16~~ 1826.86	~~1.00%~~ 0.97%

NOTE:
STORM DRAIN PIPING WILL BE N-12 ADS OR APPROVED EQUAL.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.



2/4 STREET PLAN – STA. 110+00 TO 116+80.41

SCALE: 1"=50'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL
STATE OF WASHINGTON
29904
REGISTERED
PROFESSIONAL ENGINEER
3/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:

Gary G. Dinwoodie — Feb 20, 2006
GARY DINWOODIE — DATE

4/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 50'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL 10'	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

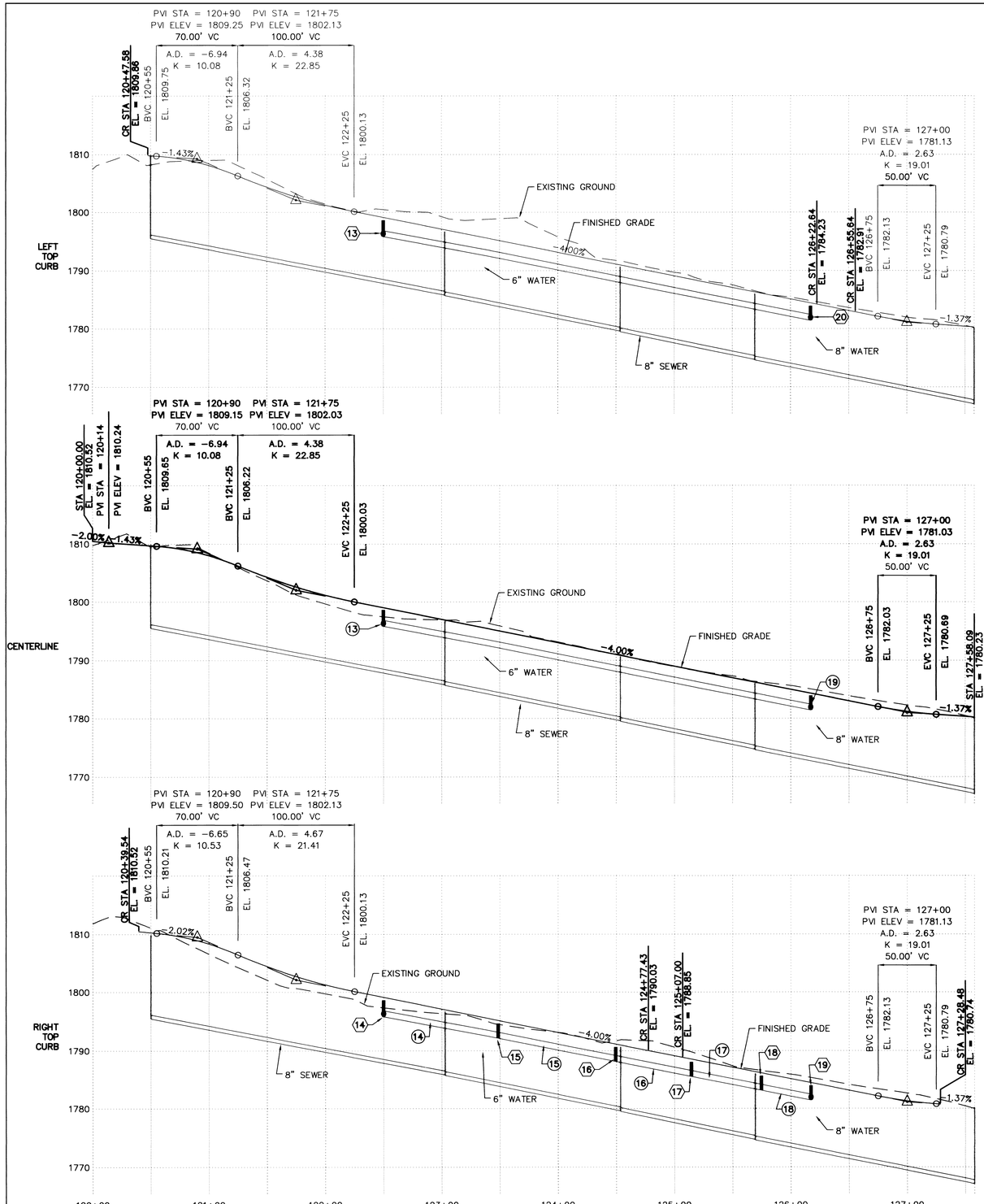
ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

STREET PLAN & PROFILE
LLOYD CHARLES LANE – SOUTH
STA. 110+00 TO STA. 116+80.41

TYPE OF IMPROVEMENT:	STREET
PROJECT NUMBER	PLAN NUMBER
20031027	

P-1930



1/5 STREET PROFILE – STA. 120+00 TO 127+58.09

SCALE: 1"=50'

DRAINAGE STRUCTURE TABLE					
ID	STATION/OFFSET	RIM EL.	STRUCTURE/ TYPE	FRAME TYPE	GRATE TYPE
13	~~122+50.00/15.5' LT.~~ 122+49.71/14.64' LT.	~~1798.63~~ 1798.62	COUNTY/1	1	1
14	~~122+50.00/13.5' RT.~~ 122+49.95/14.52' RT.	~~1798.63~~ 1798.70	COUNTY/1	1	1
15	~~123+48.50/15.5' RT.~~ 123+49.31/14.53' RT.	~~1794.69~~ 1794.67	COUNTY/1	1	1
16	~~124+49.37/15.5' RT.~~ 124+49.63/14.47' RT.	~~1790.66~~ 1790.67	COUNTY/1	1	1
17	~~125+14.37/15.5' RT.~~ 125+14.12/14.51' RT.	~~1788.06~~ 1788.09	COUNTY/1	1	1
18	~~125+74.68/15.5' RT.~~ 125+75.88/14.32' RT.	~~1785.64~~ 1785.61	COUNTY/1	1	1
19	~~126+17.23/15.5' RT.~~ 126+18.61/14.49' RT.	~~1783.94~~ 1783.88	COUNTY/1	1	1
20	~~126+16.61/15.5' LT.~~ 126+16.40/14.52' LT.	~~1783.97~~ 1784.04	COUNTY/1	1	1

NOTE:
REFER TO WSDOT STANDARD PLAN B-4c AND B-4d FOR WSDOT CB DETAILS AND REFER TO SPOKANE COUNTY STANDARD PLANS B-4, B-10 AND B-12 FOR COUNTY CB DETAILS.

STORM DRAIN PIPE TABLE					
ID	LENGTH	SIZE	FL IN	FL OUT	SLOPE
13	~~29.08~~ 29.16	10"	~~1796.82~~ 1795.89	~~1796.24~~ 1795.65	~~1.99%~~ 0.82%
14	~~100.00~~ 100.86	12"	~~1795.84~~ 1795.66	~~1792.19~~ 1791.98	3.65%
15	~~106.01~~ 105.47	12"	~~1792.19~~ 1792.05	~~1788.16~~ 1788.06	~~3.80%~~ 3.78%
16	~~70.00~~ 69.43	12"	~~1788.16~~ 1788.03	~~1785.56~~ 1785.57	~~3.71%~~ 3.54%
17	~~65.00~~ 66.51	12"	~~1785.56~~ 1785.55	~~1783.14~~ 1783.20	~~3.72%~~ 3.53%
18	~~45.00~~ 44.50	12"	~~1783.14~~ 1783.17	~~1781.44~~ 1781.57	~~3.78%~~ 3.60%
19	~~29.09~~ 29.10	12"	~~1781.24~~ 1781.58	~~1780.86~~ 1781.31	~~1.31%~~ 0.93%
20	~~40.00~~ 40.42	18"	~~1780.46~~ 1781.27	~~1779.66~~ 1779.74	~~2.00%~~ 3.79%

NOTE:
STORM DRAIN PIPING WILL BE N-12 ADS OR APPROVED EQUAL.

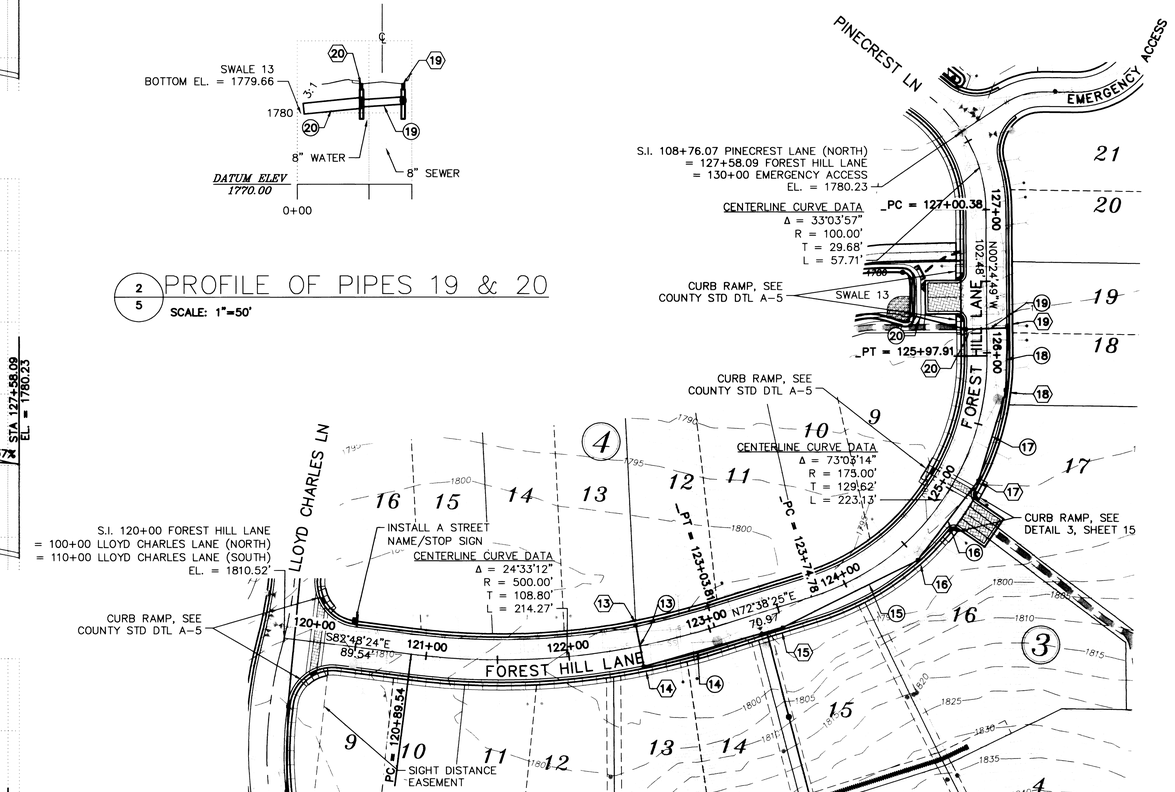
GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

2/5 PROFILE OF PIPES 19 & 20

SCALE: 1"=50'



3/5 STREET PLAN – STA. 120+00 TO 127+58.09

SCALE: 1"=50'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
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PROJECT #: P1930
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2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:

GARY DINWOODIE — DATE: Feb. 20, 2006

5/17

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BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

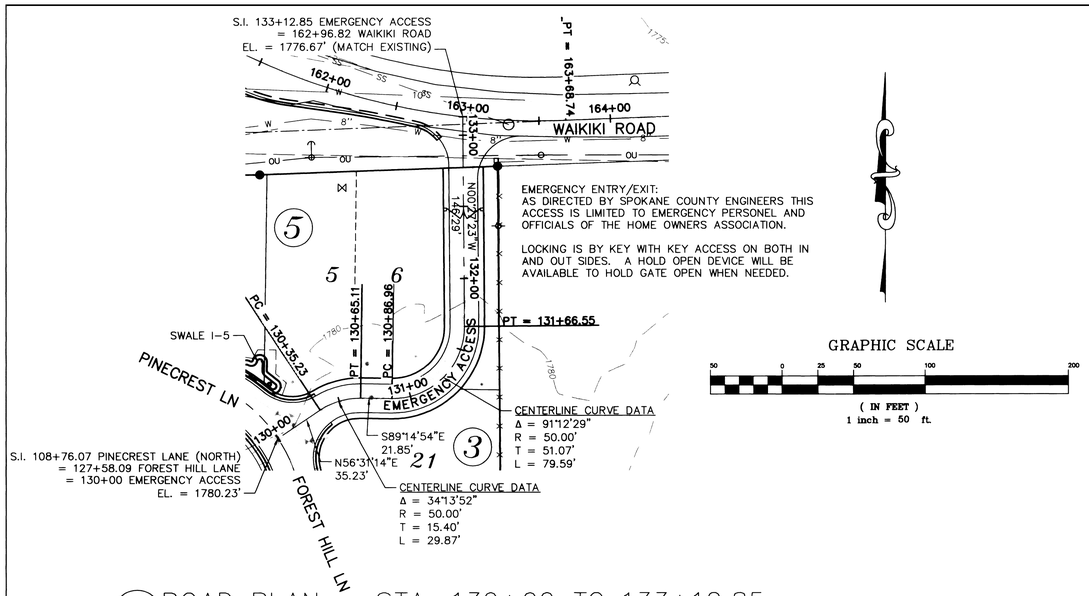
BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 50'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL 10'	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES
STREET PLAN & PROFILE
FOREST HILL LANE
STA. 120+00 TO STA. 127+58.09

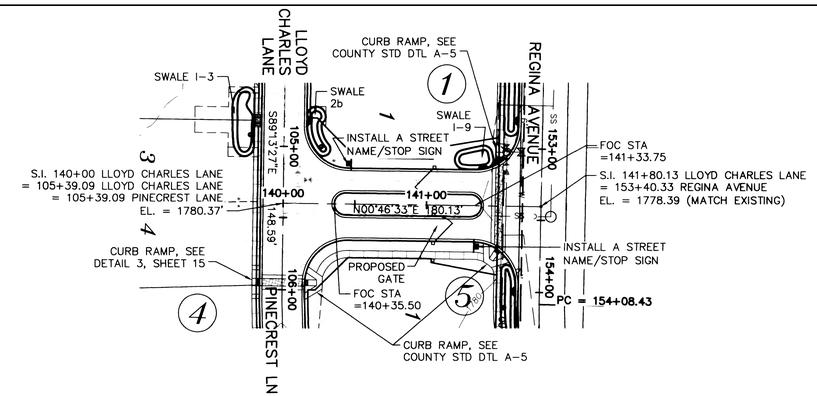
TYPE OF IMPROVEMENT: STREET	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 – Eng As Built



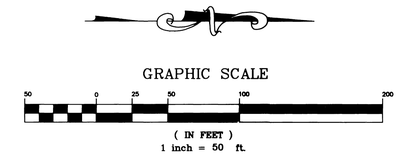
1/6 ROAD PLAN – STA. 130+00 TO 133+12.85

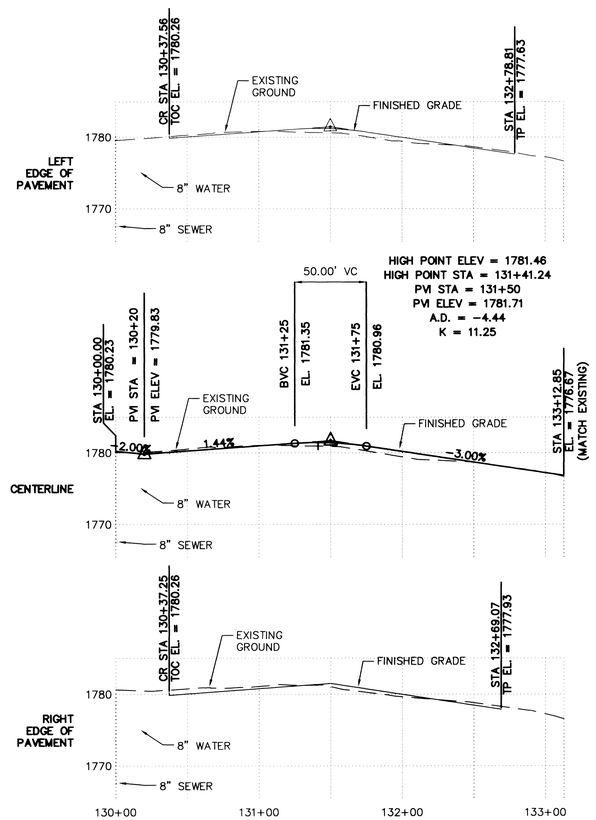
SCALE: 1"=50'



2/6 ROAD PLAN – STA. 140+00 TO 141+80.13

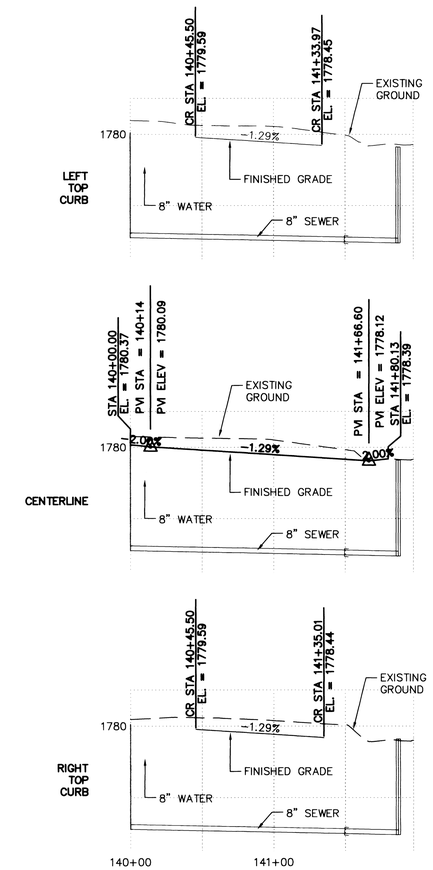
SCALE: 1"=50'





4/6 ROAD PROFILE– STA. 130+00 TO 133+12.85

SCALE: 1"=50'



5/6 ROAD PROFILE – STA. 140+00 TO 141+80.13

SCALE: 1"=50'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL
STATE OF WASHINGTON
28984
REGISTERED
PROFESSIONAL ENGINEER
2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:

GARY DINWOODIE — DATE: Feb. 20, 2006

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

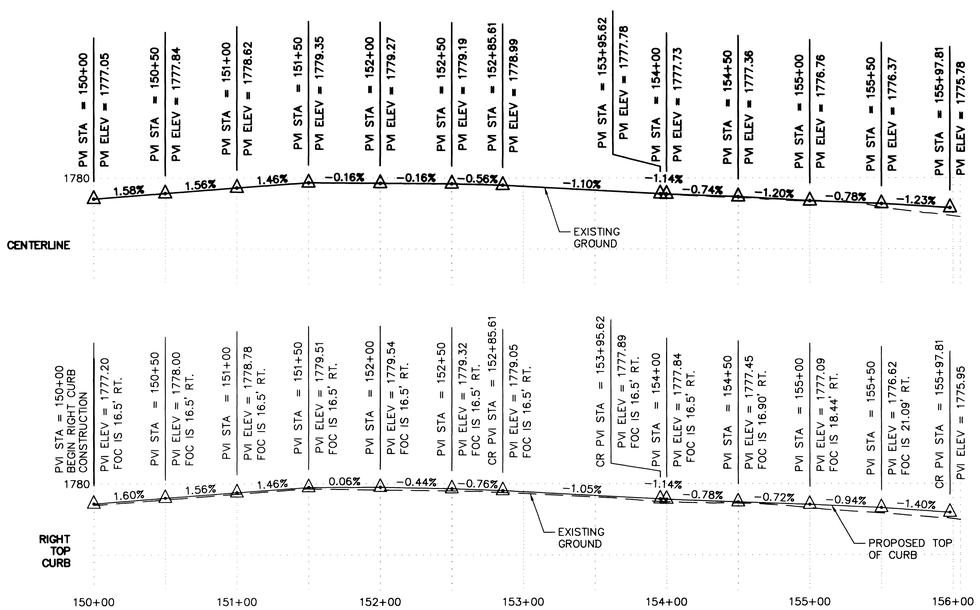
BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 50'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL 10'	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES
STREET PLAN & PROFILE
EMERGENCY ACCESS
LLOYD CHARLES LANE

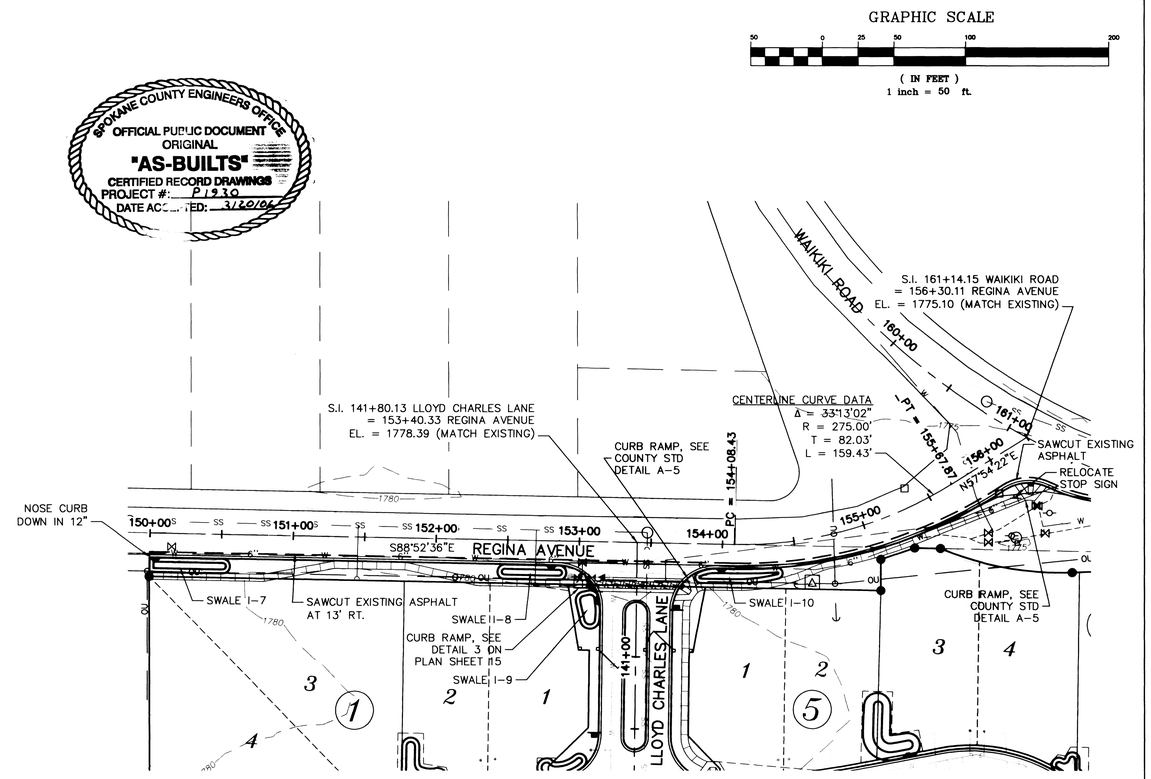
TYPE OF IMPROVEMENT: STREET	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng/As Built



1/7 ROAD PROFILE – STA. 150+00 TO 156+30.11

SCALE: 1"=50'



2/7 ROAD PLAN – STA. 150+00 TO 156+30.11

SCALE: 1"=50'

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL — STATE OF WASHINGTON — 25984 — REGISTERED PROFESSIONAL ENGINEER — 3/15/06

EXPIRES 7-04-06

DEVELOPER'S APPROVAL:

GARY DINWOODIE — DATE March 16, 2006

7/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
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ELEVATION 1777.09' (NAVD 88)	VERTICAL 10'	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

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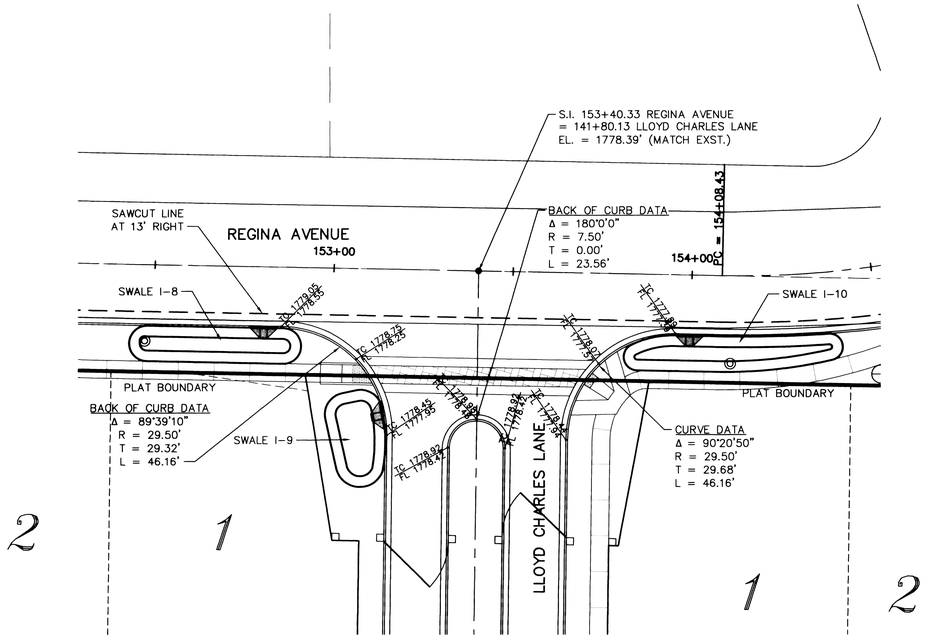
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES
STREET PLAN & PROFILE
REGINA AVENUE
STA. 150+00 TO 156+30.11

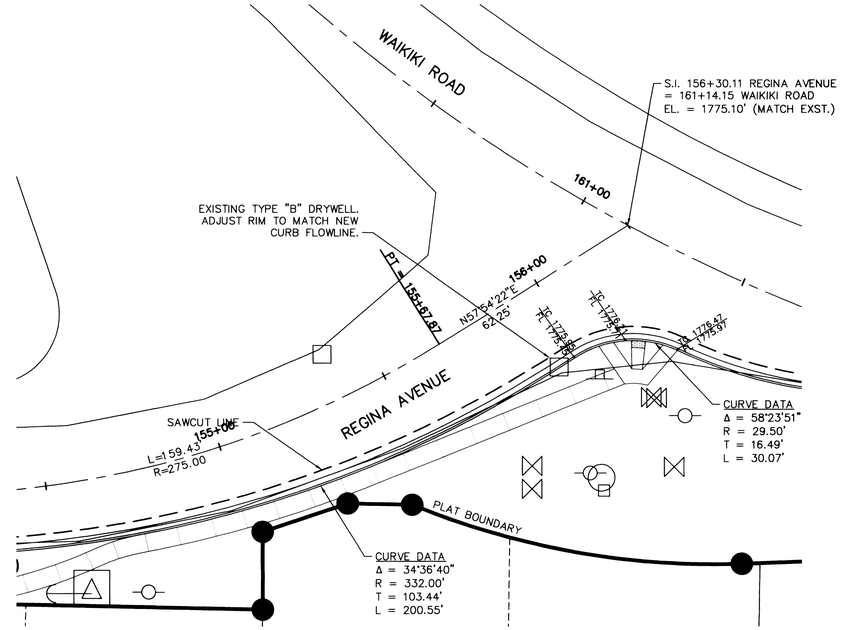
TYPE OF IMPROVEMENT:	STREET
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built



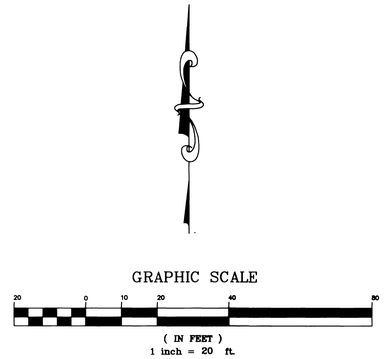
1/8 LLOYD CHARLES LANE AND REGINA AVENUE

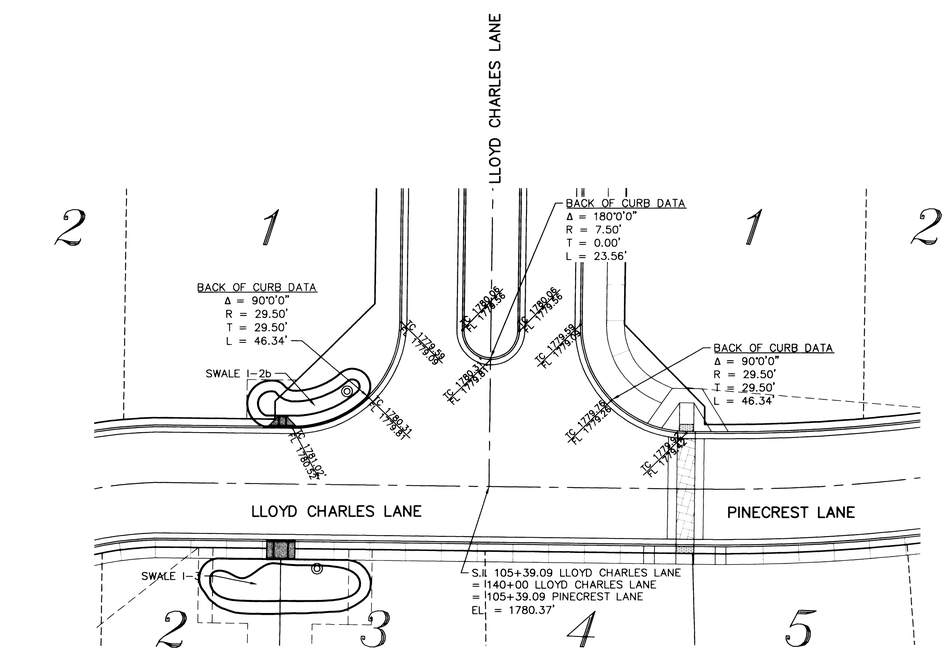
SCALE: 1"=20'



2/8 REGINA AVENUE AND WAIKIKI ROAD

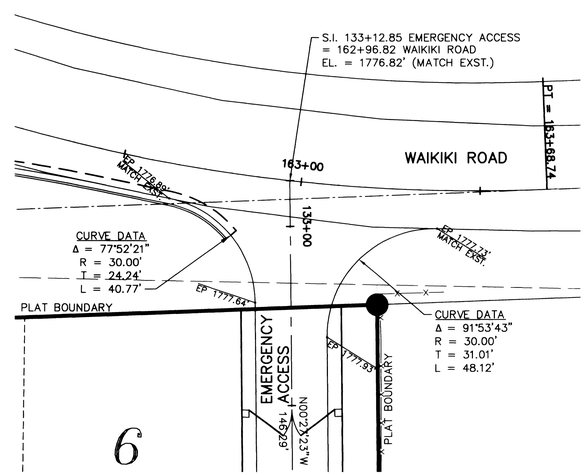
SCALE: 1"=20'





3/8 LLOYD CHARLES LANE AND PINECREST LANE

SCALE: 1"=20'



4/8 EMERGENCY ACCESS AND WAIKIKI ROAD

SCALE: 1"=20'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL
STATE OF WASHINGTON
26964
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 7-04-06
2/16/06

DEVELOPER'S APPROVAL:

GARY DINWOODIE — DATE Feb. 28, 2006

8/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 20'	09/04	DRAWN ARP
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LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

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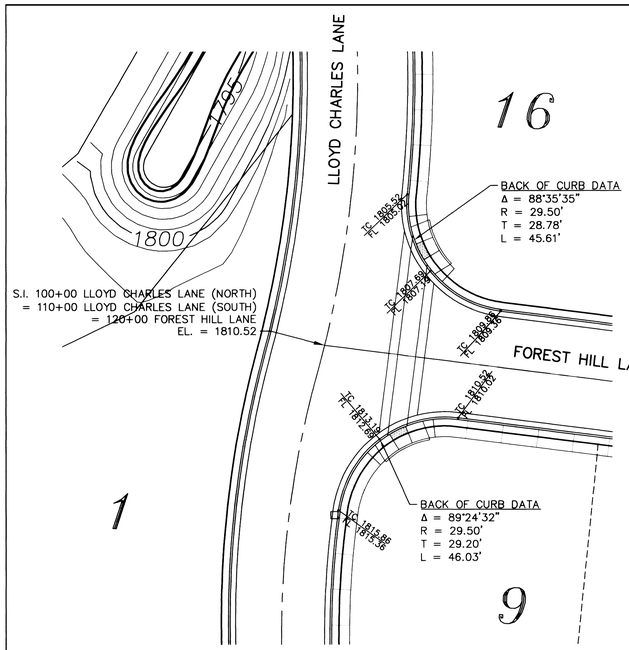
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

STREET INTERSECTION DETAILS

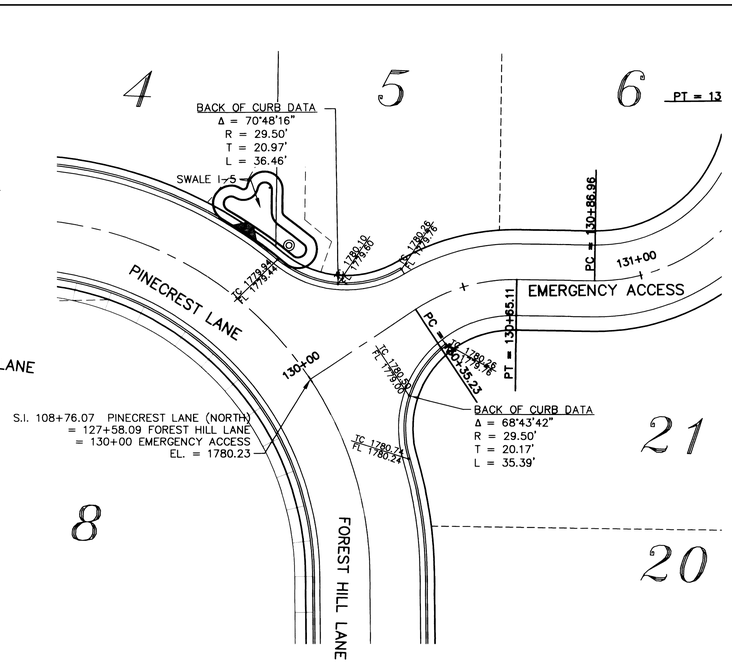
TYPE OF IMPROVEMENT: STREET	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Builts



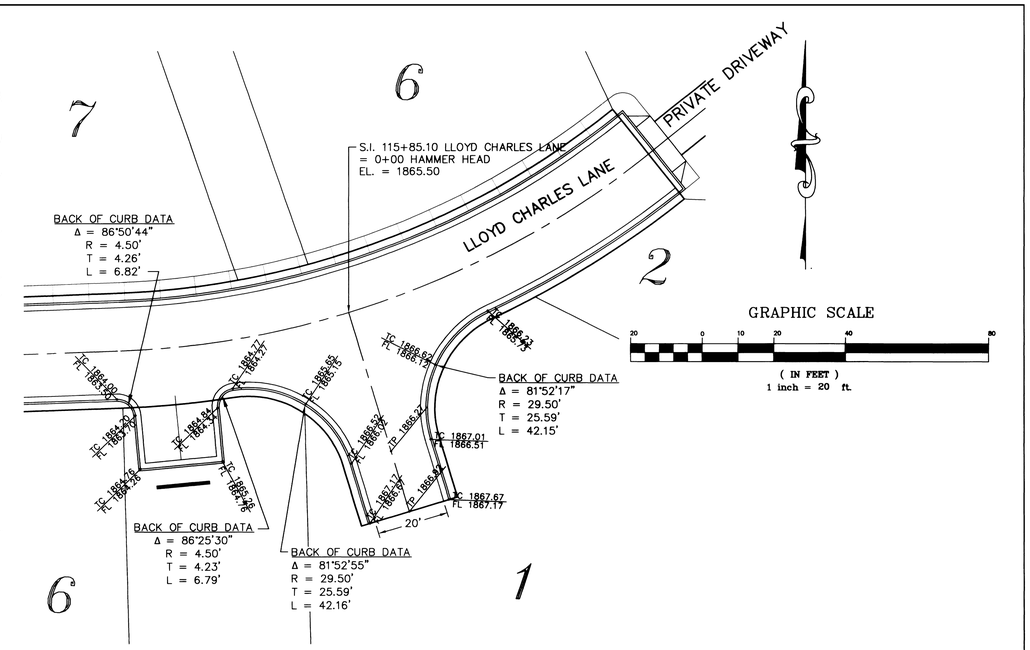
1/9 LLOYD CHARLES LANE AND FOREST HILL LANE

SCALE: 1"=20'



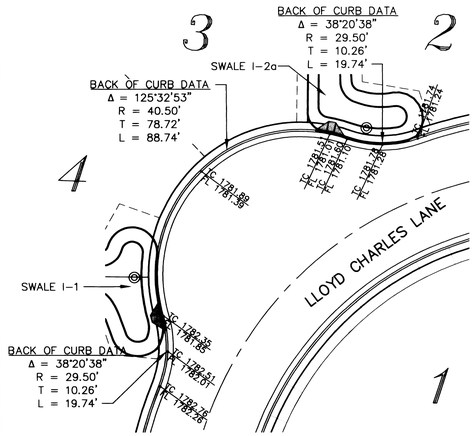
2/9 PINECREST LANE AND FOREST HILL LANE

SCALE: 1"=20'



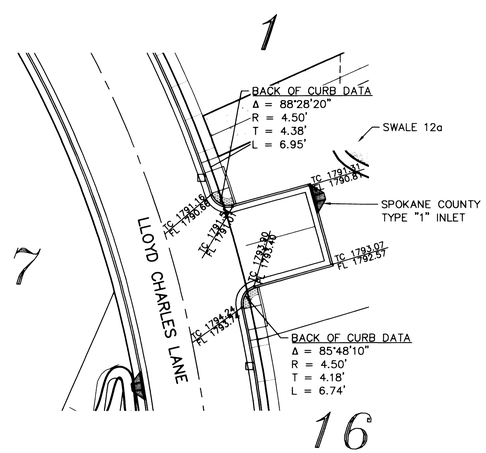
3/9 LLOYD CHARLES LANE AND TURN-AROUND

SCALE: 1"=20'



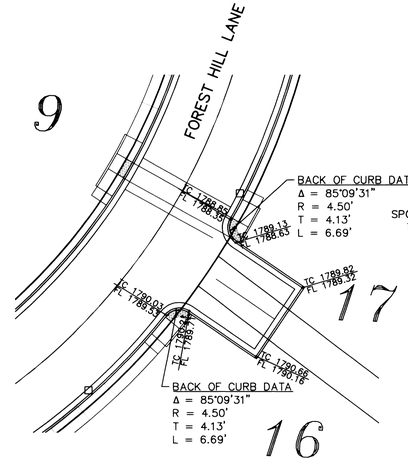
4/9 TURN-OUT KNOB

SCALE: 1"=20'



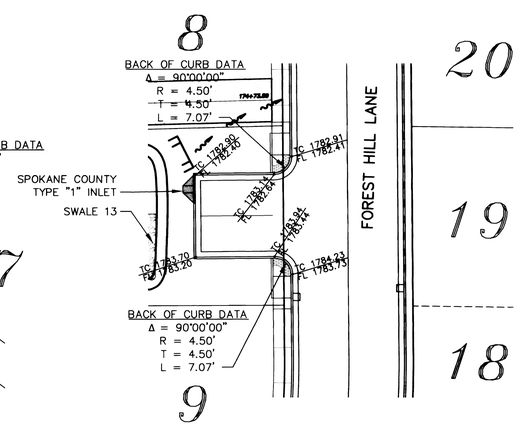
5/9 PARKING SECTION

SCALE: 1"=20'



6/9 PARKING SECTION

SCALE: 1"=20'



7/9 PARKING SECTION

SCALE: 1"=20'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
RECORD DRAWINGS
P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING

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DAVID N. RANDALL
STATE OF WASHINGTON
29984
REGISTERED
PROFESSIONAL ENGINEER
3/14/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:

GARY DINWOODIE — DATE: Feb. 20, 2006

9/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 20'	09/04	DRAWN ARP
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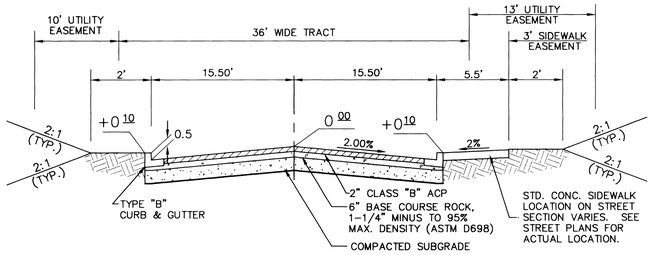
ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

STREET INTERSECTION DETAILS

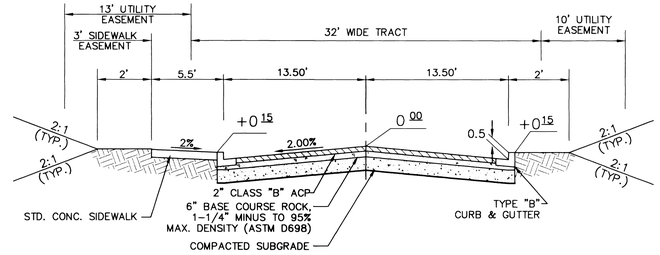
TYPE OF IMPROVEMENT: STREET	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built



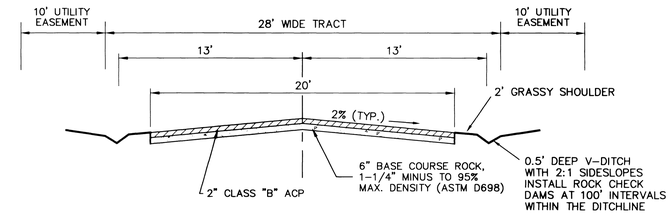
TYPICAL STREET SECTION FOR
LLOYD CHARLES LANE (NORTH PORTION)
(STA 100+00 TO 105+39.09)
PINECREST LANE
(STA 105+39.09 TO 108+76.07)
& FOREST HILL LANE

1/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



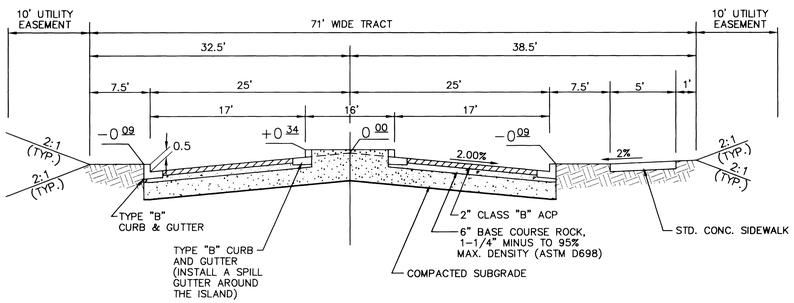
TYPICAL STREET SECTION FOR
LLOYD CHARLES LANE (SOUTH PORTION)
(STA 110+00 TO 116+80.41)

2/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



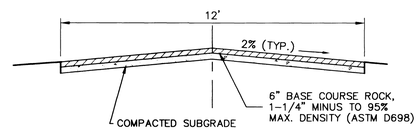
TYPICAL STREET SECTION FOR
EMERGENCY ACCESS

3/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



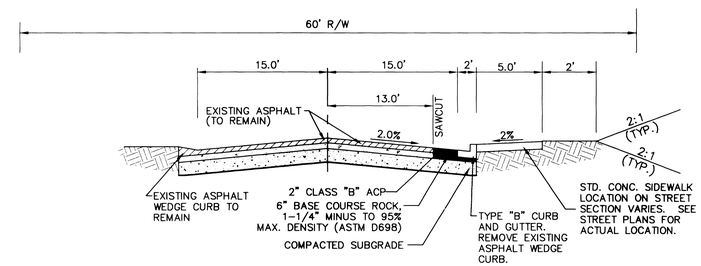
TYPICAL STREET SECTION FOR
LLOYD CHARLES LANE (ENTRANCE)

4/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



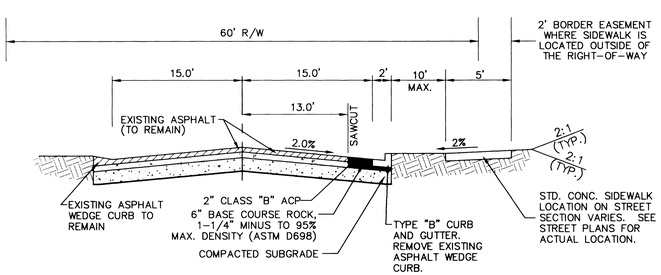
TYPICAL STREET SECTION FOR
PRIVATE DRIVE

5/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



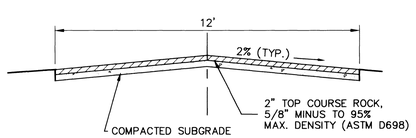
TYPICAL STREET SECTION FOR
REGINA AVENUE – ADJACENT SIDEWALK

6/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



TYPICAL STREET SECTION FOR
REGINA AVENUE – DISPLACED SIDEWALK

7/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE



TYPICAL STREET SECTION FOR
SWALE MAINTENANCE ROAD

8/10 TYPICAL STREET SECTION
SCALE: NOT TO SCALE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
BU
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING
I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL, STATE OF WASHINGTON, 26964, REGISTERED PROFESSIONAL ENGINEER 2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:
GARY DINWOODIE — DATE Feb 20, 2006

10/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL N/A	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL N/A	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

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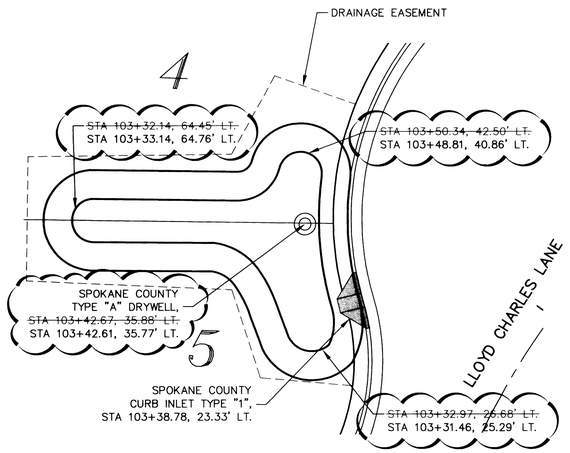
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, Wa. 99204
(509) 747-4600 F(509) 747-8913

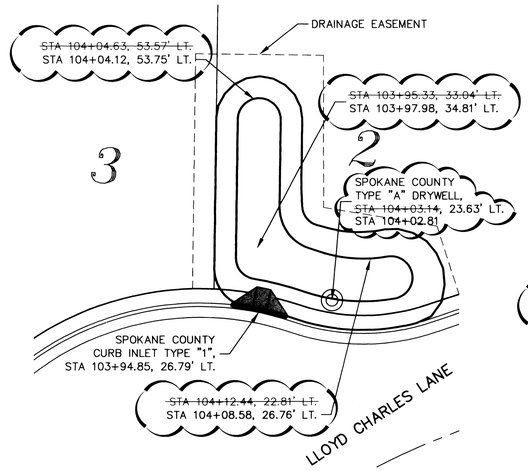
LLOYD CHARLES ESTATES
ROAD SECTIONS

TYPE OF IMPROVEMENT:	STREET
PROJECT NUMBER	PLAN NUMBER
20031027	

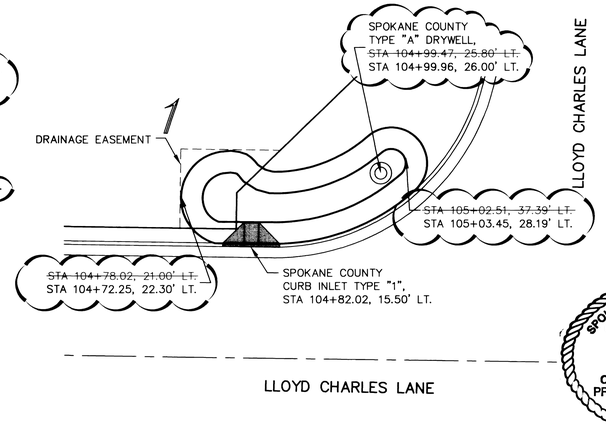
P1930 Eng As Built



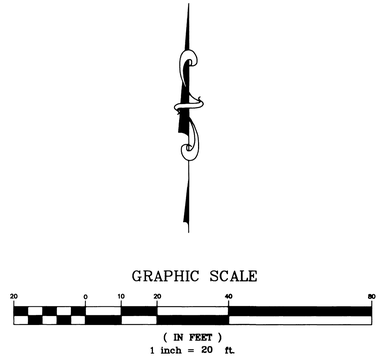
1/11 SWALE I-1
SCALE: 1"=10'



2/11 SWALE I-2a
SCALE: 1"=10'



3/11 SWALE I-2b
SCALE: 1"=10'



SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
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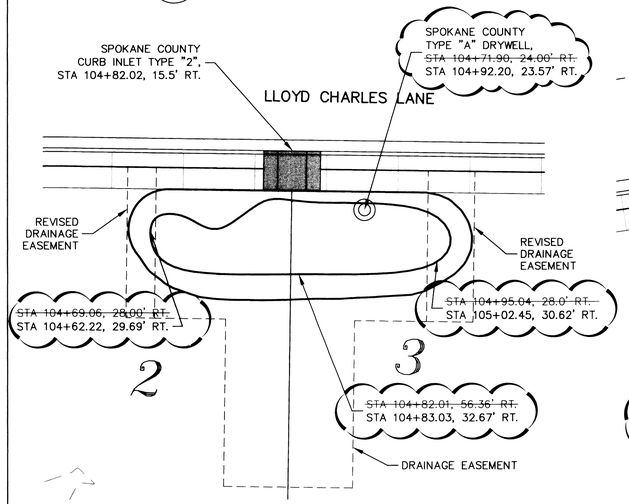
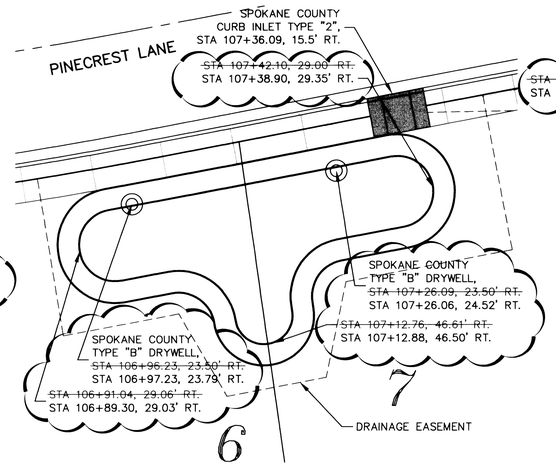
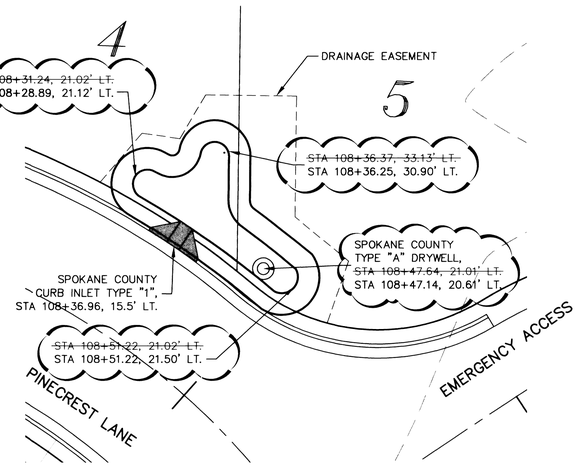
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06



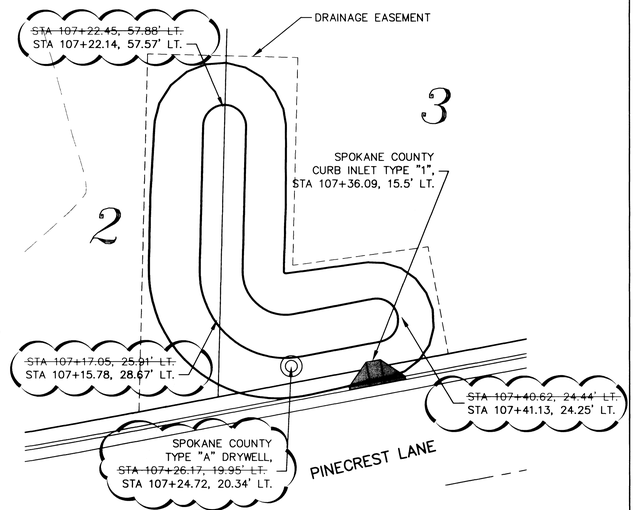
4/11 SWALE I-3
SCALE: 1"=10'



5/11 SWALE I-4
SCALE: 1"=10'



6/11 SWALE I-5
SCALE: 1"=10'



7/11 SWALE I-6
SCALE: 1"=10'

SWALE DATA

SWALE ID	BOTTOM AREA REQ (S.F.)	BOTTOM ELEV.	MIN. TOP OF BERM ELEV.	DRYWELL RIM ELEV.	INLET ELEV.	INLET LENGTH
I-1	~~340~~ 364.4	~~1781.10~~ 1780.79	1782.10	~~1781.60~~ 1781.54	1781.85	4'
I-2a	~~260~~ 260	~~1780.30~~ 1780.14	1781.30	~~1780.80~~ 1780.79	1781.05	4'
I-2b	~~100~~ 130.9	~~1779.80~~ 1779.17	1780.80	~~1780.30~~ 1779.81	1780.55	4'
I-3	~~350~~ 356	~~1779.80~~ 1779.49	1780.80	~~1780.30~~ 1780.23	1780.55	4'
I-4	~~615~~ 600.6	~~1777.36~~ 1777.43	1778.36	~~1777.86~~ 1777.94	1778.11	4'
I-5	~~155~~ 157.2	~~1778.55~~ 1778.29	1779.55	~~1779.05~~ 1779.02	1779.30	4'
I-6	~~310~~ 312.3	~~1777.36~~ 1777.24	1778.36	~~1777.86~~ 1777.92	1778.11	4'

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL — STATE OF WASHINGTON — 24984 — REGISTERED PROFESSIONAL ENGINEER — 2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:
Gary L. Dinwoodie — Feb 20, 2006
GARY DINWOODIE — DATE

11/17

CALL BEFORE YOU DIG: 1-800-456-8000

ARP	DRAINAGE AS-BUILTS	01/06				
BY	REVISIONS	DATE	PROJ.	FROM AS BUILT	TO	ACCEPT

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 10'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL N/A	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

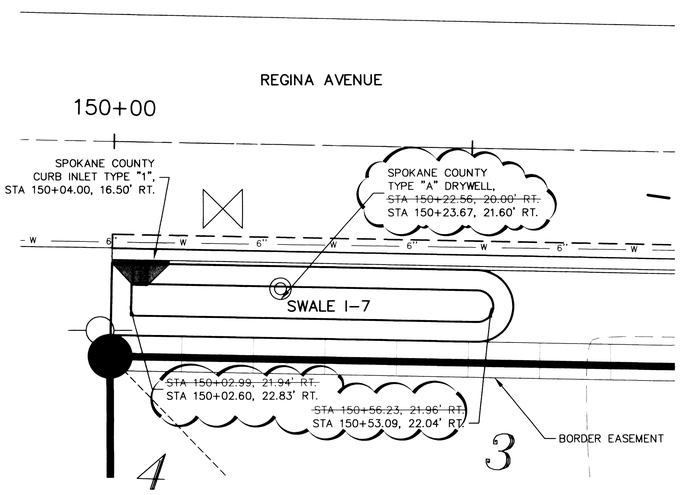
LLOYD CHARLES ESTATES

SWALE GRADING PLAN

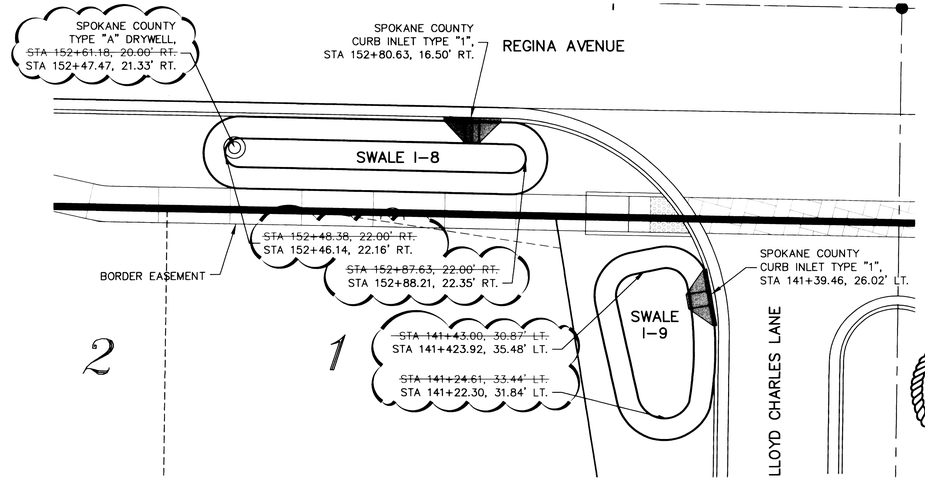
TYPE OF IMPROVEMENT: DRAINAGE

PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng/AsBuilt



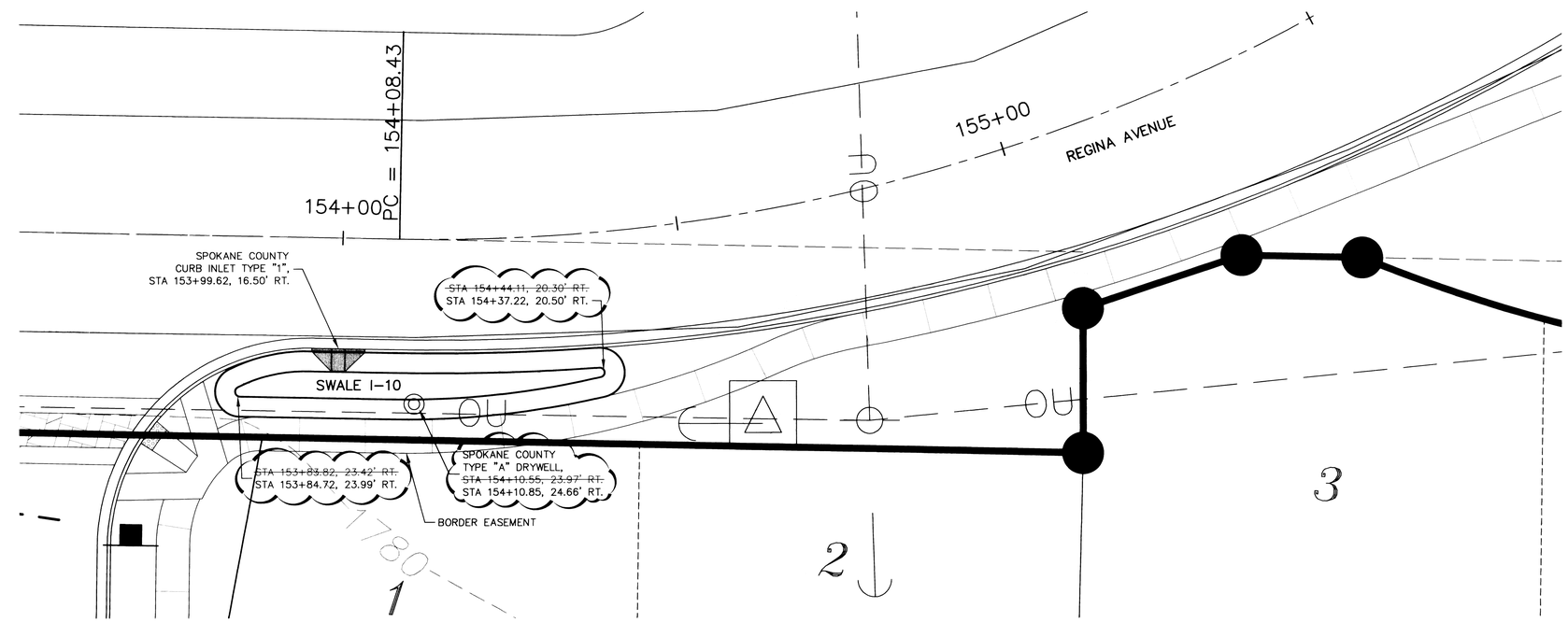
1/12 SWALE I-7
SCALE: 1"=10'



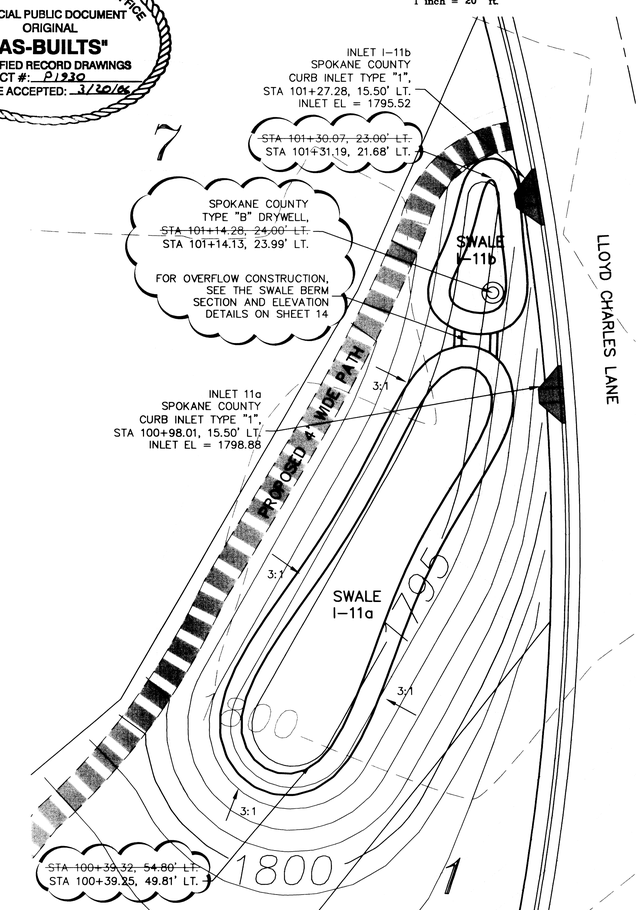
2/12 SWALES I-8 AND I-9
SCALE: 1"=10'

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.



3/12 SWALE I-10
SCALE: 1"=10'



4/12 SWALE I-11
SCALE: 1"=10'

SWALE DATA						
SWALE ID	BOTTOM AREA REQ (S.F.)	BOTTOM ELEV.	MIN. TOP OF BERM ELEV.	DRYWELL RIM ELEV.	INLET ELEV.	INLET LENGTH
I-7	~~217~~ 220.8	~~1776.01~~ 1776.09	1777.01	~~1776.51~~ 1776.45	1776.76	4'
I-8	~~154~~ 164.9	~~1777.84~~ 1777.89	1778.84	~~1778.34~~ 1778.30	1778.59	4'
I-9	~~159~~ 177.2	~~1777.26~~ 1777.11	1778.26	–	1778.01	4'
I-10	~~188~~ 182	~~1776.59~~ 1776.23	1777.59	~~1777.09~~ 1776.95	1777.34	4'
I-11a	~~562~~ 742.4	~~1794.77~~ 1796.50	1795.77	–	1798.88	6'
I-11b		~~1794.77~~ 1794.30	1795.77	~~1794.27~~ 1794.89	1795.52	6'

RECORD DRAWING
I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL
STATE OF WASHINGTON
26964
REGISTERED
PROFESSIONAL ENGINEER
2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:
Gary L. Drawoodie Feb. 20, 2006
GARY DRAWOODIE DATE

12/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 10'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL N/A	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

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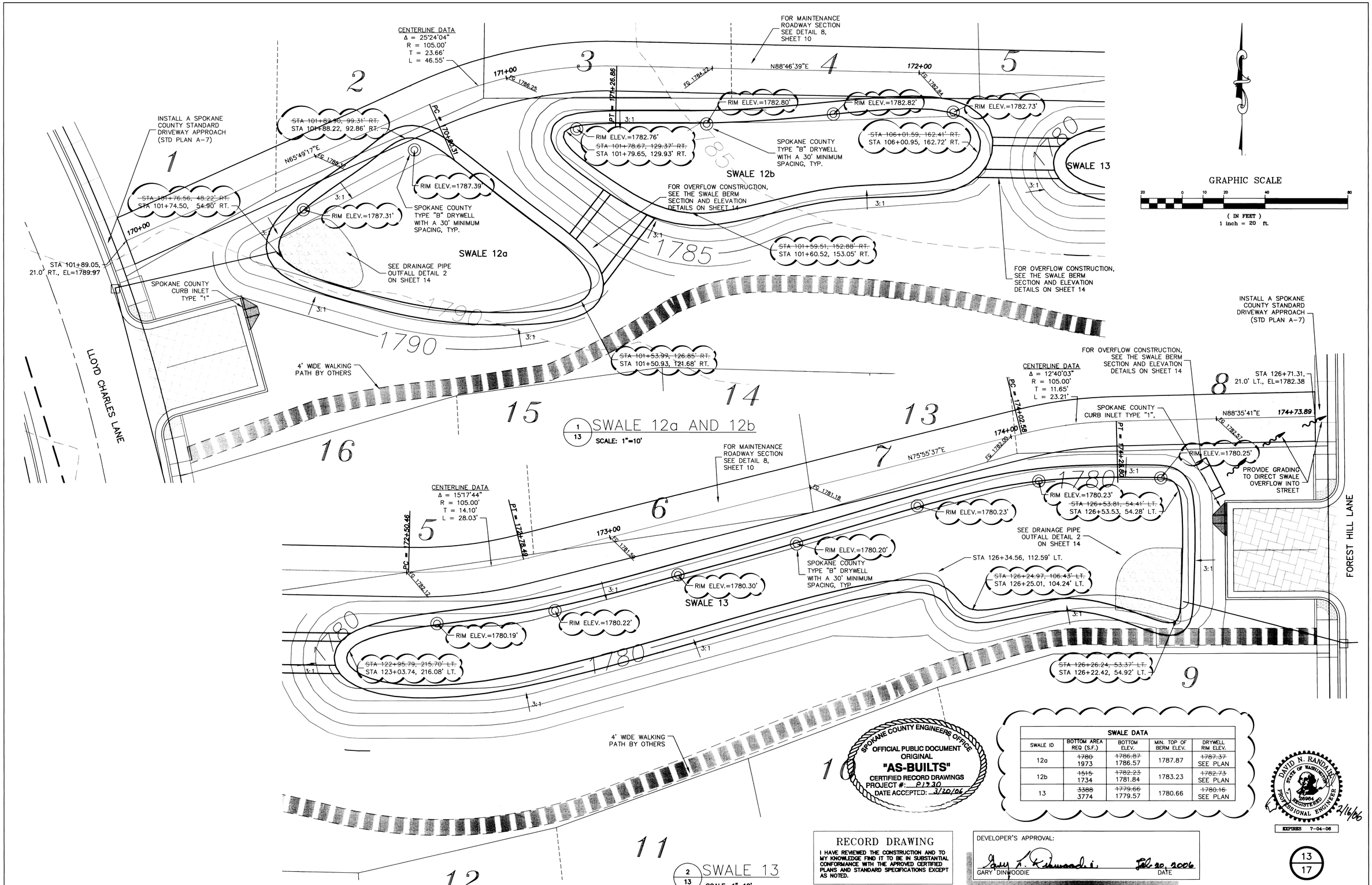
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES
SWALE GRADING PLAN

TYPE OF IMPROVEMENT: DRAINAGE	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As-Built



SWALE DATA

SWALE ID	BOTTOM AREA REQ (S.F.)	BOTTOM ELEV.	MIN. TOP OF BERM ELEV.	DRYWELL RIM ELEV.
12a	~~1780~~ 1973	~~1786.87~~ 1786.57	1787.87	~~1787.37~~ SEE PLAN
12b	~~1515~~ 1734	~~1782.23~~ 1781.84	1783.23	~~1782.73~~ SEE PLAN
13	~~3388~~ 3774	~~1779.66~~ 1779.57	1780.66	~~1780.16~~ SEE PLAN

RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DEVELOPER'S APPROVAL:

Gary L. Kahmoodie — Feb 20, 2006

GARY DINWOODIE — DATE

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

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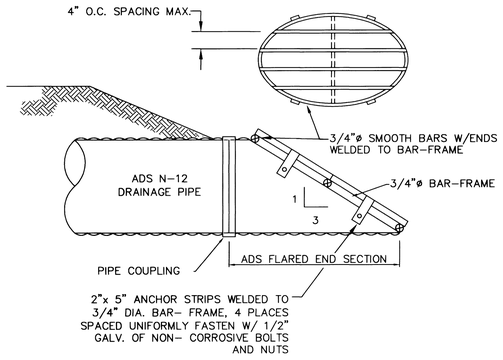
LLOYD CHARLES ESTATES

SWALE GRADING PLAN

TYPE OF IMPROVEMENT: DRAINAGE	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built

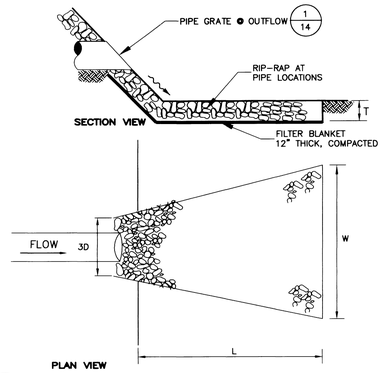


NOTE: INSTALL GRATE ON ALL DRAINAGE PIPE 12" OR LARGER.

1/14 PIPE GRATE DETAIL

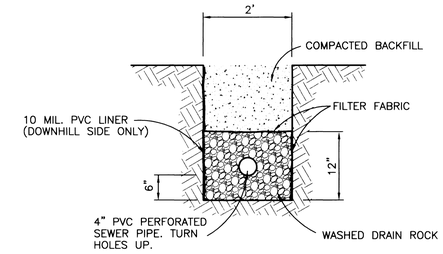
SCALE: N.T.S.

LOCATION	L(ft)	W(ft)	T(in.)	MIN. STONE DIAMETER (in.)	3D(ft)
SWALE 12a	27.9	15.7	12	3	4.5
SWALE 13	25.3	14.6	12	4	4.5



2/14 DRAINAGE PIPE OUTFALL DETAIL

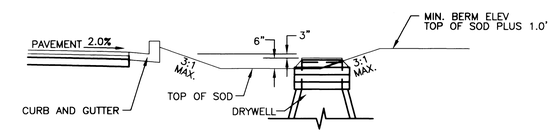
SCALE: N.T.S.



NOTE: THE TOPOGRAPHY ALONG THE ALIGNMENT OF THE PROPOSED TRENCH DRAIN WAS OBTAINED FROM AERIAL PHOTOGRAPHY AND MAY DIFFER FROM THAT SHOWN ON THE DRAWINGS. THE ACTUAL TRENCH DEPTH SHOULD BE APPROXIMATELY 5' DEEP.

3/14 TRENCH DRAIN DETAIL

SCALE: N.T.S.

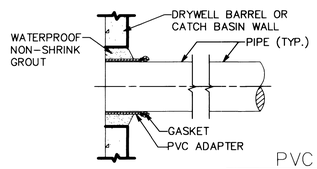


4/14 GRASSED PERCOLATION AREA DETAIL

SCALE: N.T.S.

GENERAL NOTES

1. GRAVEL BACKFILL QUANTITY FOR DRYWELLS :
   TYPE "A" - 30 CUBIC YARDS MINIMUM / 42 TONS.
   TYPE "B" - 40 CUBIC YARDS MINIMUM / 56 TONS.
   OR AS SPECIFIED ON ROAD PLANS.
2. SPECIAL BACKFILL MATERIAL FOR DRYWELLS SHALL CONSIST OF WASHED GRAVEL GRADED FROM 1" TO 3" WITH A MAXIMUM OF 5% PASSING THE U.S. No. 200 SCREEN, AS MEASURED BY WEIGHT. A MAXIMUM OF 10% OF THE AGGREGATE, AS MEASURED BY WEIGHT, MAY BE CRUSHED OR FRACTURED ROCK. THE REMAINING 90% SHALL BE NATURALLY OCCURRING UNFRACTURED MATERIAL.
3. FABRIC SHALL BE MODERATE SURVIVABILITY AS OUTLINED IN STANDARD SPECIFICATIONS 9-33
4. SEE STANDARD PLANS SHEETS B-2 AND B-3 FOR PRECAST CONCRETE DETAILS.
5. ADJUSTMENT BLOCKS SHALL BE CEMENT CONCRETE.
6. PRECAST RISER MAY BE USED IN COMBINATION WITH OR IN LIEU OF ADJUSTING BLOCKS.
7. WHEN PVC PIPE IS USED A PVC ADAPTER SHALL BE INSTALLED.
8. PIPES SHALL BE GROUTED INTO DRYWELLS.

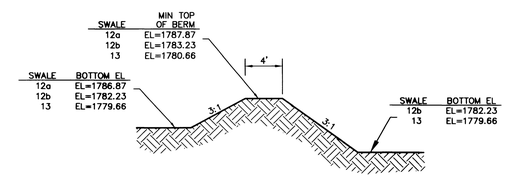


NOTE:

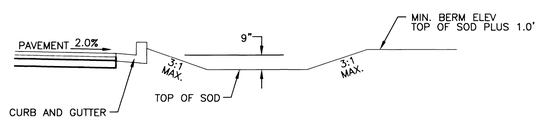
PVC PIPE ADAPTERS AND GASKET MAY VARY IN SHAPE AND SIZE AS ILLUSTRATED IN DETAIL BY ACCEPTABLE ALTERNATE IN ACCORDANCE WITH A.S.T.M.-C-428.

PVC ADAPTER
(SAND COLLAR)

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06



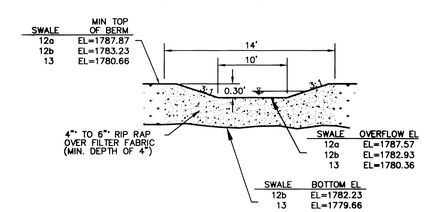
SWALE BERM SECTION



NOTE: THIS DETAIL IS REQUIRED AT SWALE 1-9

6/14 GRASS PERCOLATION AREA - NO D/W

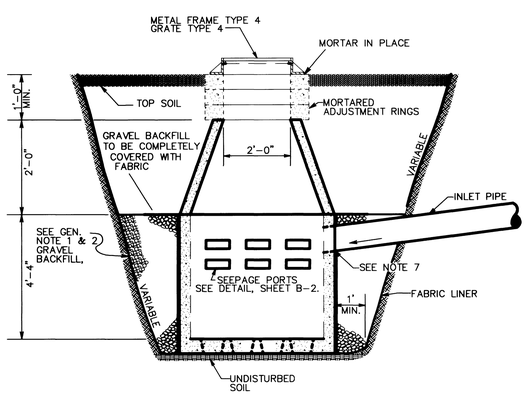
SCALE: N.T.S.



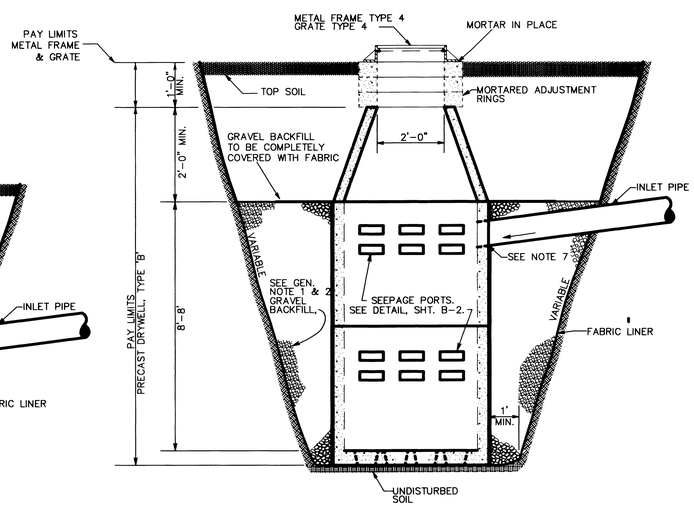
SWALE BERM ELEVATION

7/14 SWALE BERM AND WEIR DETAIL

SCALE: N.T.S.



DRYWELL - TYPE 'A' SWALE



DRYWELL - TYPE 'B' SWALE

5/14 PRECAST DRYWELLS IN SWALES

SCALE: N.T.S.

RECORD DRAWING
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DAVID N. RANDALL — STATE OF WASHINGTON — 26954 — REGISTERED PROFESSIONAL ENGINEER — 2/14/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:
GARY DINWOODIE — DATE Feb 29 2006

14/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
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Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

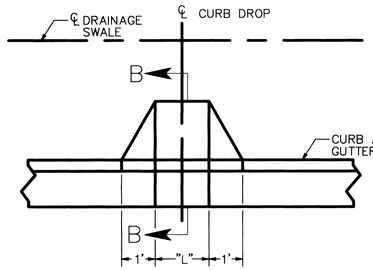
DETAILS

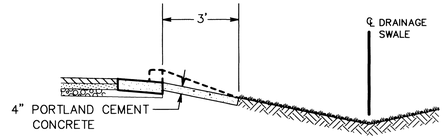
TYPE OF IMPROVEMENT:	STREET
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built

GENERAL NOTES

1. CURB INLET SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE PROJECT SPECIAL PROVISIONS.
2. TOP SURFACE TO BE BROOM FINISHED.
3. ALL EXTERNAL EDGES NOT LABELED SHALL BE TROWELLED WITH 1/4" RADIUS EDGER.

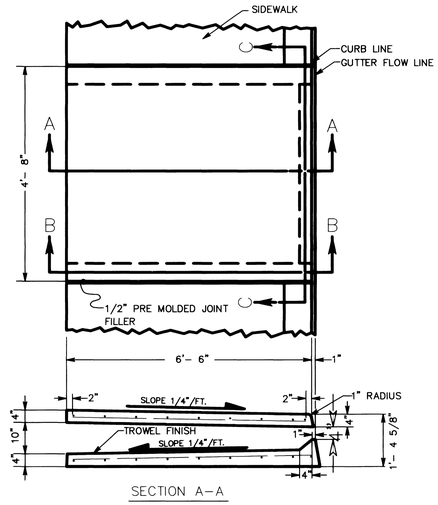




SECTION B–B

1/15 CURB INLET TYPE 1

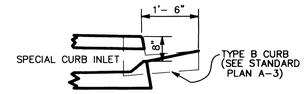
SCALE: N.T.S.



SECTION A–A

SECTION B–B
REBAR PLACEMENT

SPECIAL CURB INLET



GENERAL NOTES

1. CURB INLET SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) & ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE PROJECT SPECIAL PROVISIONS.
2. TOP SURFACE TO BE BROOM FINISHED.
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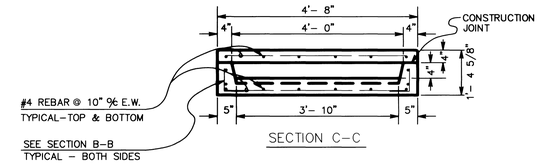
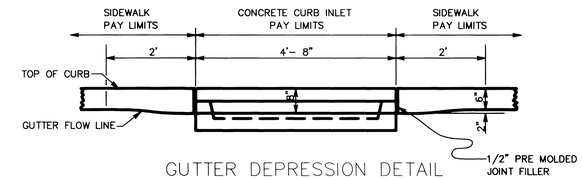
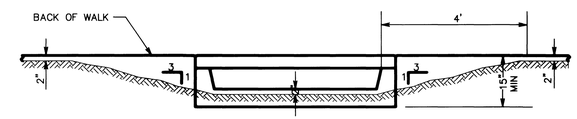


SECTION C–C



GUTTER DEPRESSION DETAIL



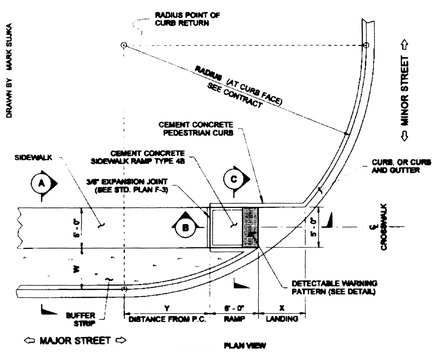
OUTLET SWALE GRADING DETAIL

2/15 CURB INLET TYPE 2

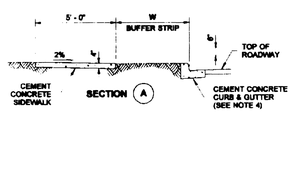
SCALE: N.T.S.

RADIUS (AT CURB FACE)	W = 3' - 6"		W = 4' - 6"		W = 5' - 6"		W = 6' - 6"		W = 7' - 6"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5' - 5 1/2"	4' - 6 1/2"	4' - 8 1/2"	6' - 0"	4' - 1"	7' - 2 3/4"	3' - 7"	8' - 3 1/2"	3' - 1 1/2"	9' - 2 1/2"
30 FEET	7' - 3 3/4"	7' - 1"	6' - 5 1/2"	9' - 11 1/2"	5' - 9 1/4"	10' - 7"	5' - 2 1/2"	12' - 0"	4' - 8 3/4"	13' - 3 1/4"
40 FEET	8' - 9 1/2"	9' - 2 1/2"	7' - 10"	11' - 5 1/4"	7' - 1"	13' - 4 1/2"	6' - 5 3/4"	15' - 3/4"	5' - 11 1/2"	16' - 7 1/4"
50 FEET	10' - 3/4"	11' - 3/4"	9' - 1/4"	13' - 7 1/4"	8' - 2 1/2"	16' - 9 1/2"	7' - 8 1/2"	17' - 9"	6' - 11 3/4"	19' - 6 1/4"
60 FEET	11' - 2 1/2"	12' - 8 3/4"	10' - 3/4"	15' - 6 1/2"	9' - 2 1/4"	17' - 11 3/4"	8' - 5 3/4"	20' - 1 3/4"	7' - 10 1/2"	22' - 1 1/2"
70 FEET	12' - 2 3/4"	14' - 3 1/4"	11' - 1/4"	17' - 4"	10' - 1"	19' - 11 3/4"	9' - 3 3/4"	22' - 4 1/4"	8' - 8 1/4"	24' - 6 1/4"
80 FEET	13' - 2"	15' - 8 1/2"	11' - 10 1/2"	18' - 11 3/4"	10' - 10 3/4"	21' - 10"	10' - 1"	24' - 4 3/4"	9' - 5"	26' - 8 3/4"
90 FEET	14' - 1/2"	17' - 1/2"	12' - 8 1/4"	20' - 6 1/2"	11' - 7 3/4"	23' - 7"	10' - 9 3/4"	26' - 3 3/4"	10' - 1 1/4"	28' - 9 1/2"
100 FEET	14' - 10 1/2"	18' - 3 3/4"	13' - 5 1/2"	22' - 0"	12' - 4 1/4"	25' - 2 3/4"	11' - 5 3/4"	28' - 1 1/2"	10' - 9"	30' - 9"

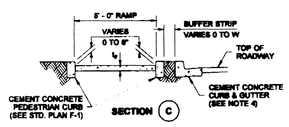
INTERMEDIATE RADII CAN BE INTERPOLATED



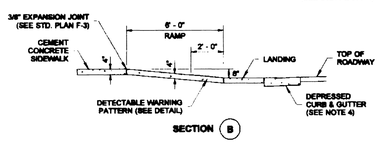
PLAN VIEW
SIDEWALK RAMP TYPE 4B
PLAN



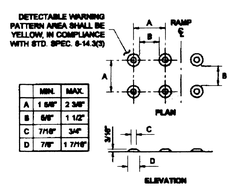
SECTION A



SECTION C



SECTION B

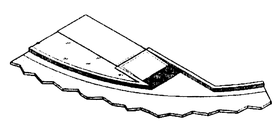


	MIN.	MAX.
A	1 5/8"	2 3/8"
B	5/8"	1 1/2"
C	7/16"	3/4"
D	7/8"	1 7/16"

TRUNCATED DOMES (SEE NOTE 6)
DETECTABLE WARNING PATTERN DETAIL

NOTES

1. This layout is used to provide access to a single crosswalk parallel to the major street. The bid item "Cement Conc. Sidewalk Ramp Type 4B" does not include the adjacent Curb (or Curb & Gutter), the Sidewalk, or the Cement Conc. Pedestrian Curb.
2. Ramp slopes shall not be steeper than 12H:1V.
3. Avoid placing drainage structures, junction boxes or other obstructions in front of ramp access areas.
4. Curb & Gutter is shown, see the Contract Plans for the curb design specified. See Standard Plan F-1 for curb details.
5. See Std. Plan F-3 for sidewalk joint placement and details.
6. Detectable warning patterns may be created by any method that will achieve the truncated dome dimensions and spacing shown.



ISOMETRIC VIEW

HAROLD J. PETERSEN — STATE OF WASHINGTON — 21861 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES MAY 16, 2005

SIDEWALK RAMP TYPE 4B WITH LAYOUT
STANDARD PLAN F-3e
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Harold J. Petersen 02-08-05
STATE BRIDGE ENGINEER — DATE
Washington State Department of Transportation

NOTE: THIS PLAN WAS MADE USING INFORMATION EXTRACTED FROM AN ELECTRONIC DUPLICATE THAT ORIGINAL, ISSUED BY THE ENGINEER AND APPROVED FOR PUBLICATION, IS NOT ON FILE AT THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION. A WET INK OF APPROVAL OF THE ORIGINAL.

3/15 WSDOT SIDEWALK RAMP TYPE 4B

SCALE: N.T.S.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING
I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDAL — STATE OF WASHINGTON — 26964 — REGISTERED PROFESSIONAL ENGINEER — 3/15/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:
GARY DINWOODIE — DATE March 16, 2006

15/17

CALL BEFORE YOU DIG:1–800–456–8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL N/A	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL N/A	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

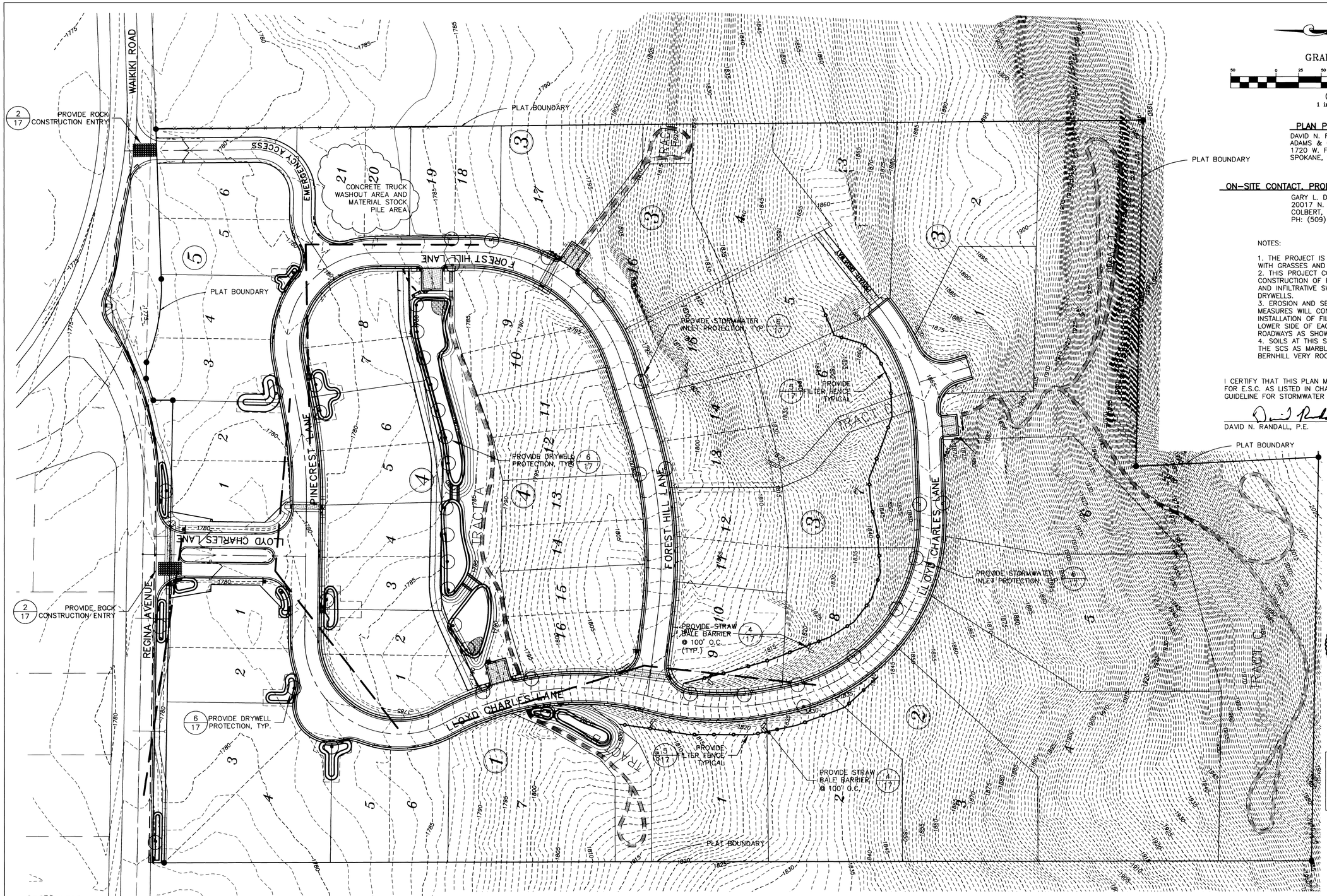
ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

DETAILS

TYPE OF IMPROVEMENT: STREET	
PROJECT NUMBER	PLAN NUMBER
20031027	

P1930 Eng As Built



GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

PLAN PREPARATION:

DAVID N. RANDALL, P.E.
ADAMS & CLARK, INC.
1720 W. FOURTH AVE.
SPOKANE, WA 99204

ON-SITE CONTACT, PROPERTY OWNER & APPLICANT:

GARY L. DINWOODIE
20017 N. LITTLE SPOKANE DRIVE
COLBERT, WA 99005
PH: (509) 466-6309

NOTES:

1. THE PROJECT IS CURRENTLY VEGETATED WITH GRASSES AND PINES.
2. THIS PROJECT CONSISTS OF THE CONSTRUCTION OF RESIDENTIAL STREETS AND INFILTRATIVE SWALES WITH ASSOCIATED DRYWELLS.
3. EROSION AND SEDIMENT CONTROL MEASURES WILL CONSIST OF THE INSTALLATION OF FILTER FENCE ALONG THE LOWER SIDE OF EACH OF THE PROPOSED ROADWAYS AS SHOWN ON THIS DRAWING.
4. SOILS AT THIS SITE ARE CLASSIFIED BY THE SCS AS MARBLE LOAMY SAND AND BERNHILL VERY ROCKY COMPLEX.

I CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS FOR E.S.C. AS LISTED IN CHAPTER 4.5 OF THE GUIDELINE FOR STORMWATER MANAGEMENT.

DAVID N. RANDALL, P.E. DATE 2/16/06

PROPERTY DESCRIPTION:
A PORTION OF THE SE1/4 OF SECTION 12, TOWNSHIP 26 NORTH, RANGE 42 EAST, W.M.
SPOKANE COUNTY, WASHINGTON

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1930
DATE ACCEPTED: 3/20/06

RECORD DRAWING
I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

DAVID N. RANDALL
STATE OF WASHINGTON
26964
REGISTERED
PROFESSIONAL ENGINEER
2/16/06
EXPIRES 7-04-06

1/16 EROSION CONTROL PLAN
SCALE: 1"=50'

DEVELOPER'S APPROVAL:
GARY DINWOODIE DATE Feb 20, 2006

16/17

CALL BEFORE YOU DIG: 1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
TBM	HORIZONTAL 50'	09/04	DRAWN ARP
ELEVATION 1777.09' (NAVD 88)	VERTICAL N/A	09/04	CHECKED DNR
LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

ADAMS & CLARK, Inc.
ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

EROSION CONTROL DETAILS

TYPE OF IMPROVEMENT: EROSION	
PROJECT NUMBER	PLAN NUMBER
20031027	

P-1930 Eng As-Builts

GENERAL SPECIFICATIONS

1. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH SPOKANE COUNTY STANDARDS.
2. LOCATIONS OF EXISTING UTILITIES SHOWN IN PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES, ANY CONFLICTING UTILITIES SHALL BE RELOCATED PRIOR TO CONSTRUCTION OF ROAD AND DRAINAGE FACILITIES.
3. THE CONTRACTOR IS REQUIRED TO HAVE A COMPLETE SET OF THE APPROVED ROAD AND DRAINAGE PLANS ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
4. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER AND SPOKANE COUNTY ENGINEERS.
5. PRIOR TO SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES. CALL THE UNDERGROUND UTILITY LOCATION SERVICE AT 456-8000 BEFORE YOU DIG.
6. THE EROSION/SEDIMENTATION CONTROL MEASURES SHOWN ARE THE MINIMUM REQUIREMENTS FOR THE ANTICIPATED SITE CONDITIONS. THE CONTRACTOR SHALL INSPECT AND MAINTAIN THESE ESC MEASURES DAILY, AND SHALL MAINTAIN AND UPGRADE THESE MEASURES AS NECESSARY TO PREVENT SEDIMENT-LADEN WATER FROM EITHER FLOWING OFF THE SITE, OR INTO NEW/EXISTING STORM DRAINAGE FACILITIES.
7. THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE.
8. TEMPORARY EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED PRIOR TO ANY OTHER SITE WORK, AND TO REMAIN IN PLACE UNTIL ROAD AND RESERVOIR CONSTRUCTION IS COMPLETE, AND ALL PERMANENT EROSION CONTROL AND DRAINAGE FACILITIES ARE IN PLACE.
9. GEOTEXTILE FABRIC IS TO BE PLACED ON THE RIMS OF DRYWELLS, CATCH BASINS AND INLETS UNTIL SUCH TIME THE VEGETATION ON THE SITE IS ESTABLISHED AND THE THREAT OF SEDIMENT DEPOSITION INTO THE DRAINAGE SYSTEM IS MITIGATED.

DEFINITION:

MINIMIZING EXPOSED SOILS AND CONSEQUENT EROSION BY CLEARING ONLY WHERE CONSTRUCTION WILL OCCUR.

PURPOSE:

TO REDUCE EROSION BY PRESERVING NATURAL VEGETATION WHEREVER PRACTICABLE.

CONDITIONS WHERE PRACTICE APPLIES:

NATURAL VEGETATION SHOULD BE PRESERVED ON ALL AREAS OUTSIDE THE CLEARING AND GRUBBING LIMITS.

PRESERVE NATURAL VEGETATION

1/17

DEFINITION:

A TEMPORARY STONE-STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.

PURPOSE:

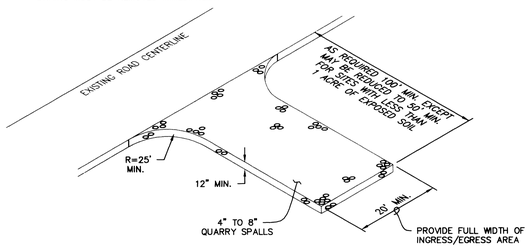
TO REDUCE THE AMOUNT OF MUD, DIRT, ROCKS, ETC. TRANSPORTED ONTO PUBLIC ROADS BY MOTOR VEHICLES OR RUNOFF BY CONSTRUCTING A STABILIZED PAD OF ROCK SPALLS AT ENTRANCES TO CONSTRUCTION SITES AND WASHING OF TIRES DURING EGRESS.

CONDITIONS WHERE PRACTICE APPLIES:

- WHENEVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD OR OTHER PAVED AREAS.

MAINTENANCE:

- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.



ROCK CONSTRUCTION ENTRY

2/17

EROSION CONTROL NOTES

1. AN EROSION/SEDIMENTATION CONTROL (ESC) PLAN IS REQUIRED FOR THIS PROJECT. IMPLEMENTATION OF THE ESC PLAN, AND CONSTRUCTION, MAINTENANCE, AND UPGRADING OF THE ESC FACILITIES ARE THE RESPONSIBILITY OF THE DEVELOPER UNTIL ALL CONSTRUCTION IS COMPLETED AND ACCEPTED BY SPOKANE COUNTY, OR UNTIL VEGETATION IS ESTABLISHED THROUGHOUT THE SITE, AND ACEPTED BY SPOKANE COUNTY, WHICHEVER IS LATER.
2. APPROVAL OF THE ESC PLAN DOES CONSTITUTE APPROVAL OF ANY OF THE PROPOSED ROAD, STORM DRAINAGE, GRADING OR UTILITY DESIGN ELEMENTS SHOWN ON THE ESC PLAN.

ON-SITE CONTACT, PROPERTY OWNER & APPLICANT:

GARY L. DINWOODIE
20017 N. LITTLE SPOKANE DRIVE
COLBERT, WA 99005
PH: (509) 466-6309

PLAN PREPARATION:

DAVID N. RANDALL, P.E.
ADAMS & CLARK, INC.
1720 W. FOURTH AVE.
SPOKANE, WA 99204

I CERTIFY THAT THIS PLAN MEETS THE REQUIREMENTS FOR E.S.C. AS LISTED IN CHAPTER 4.5 OF THE GUIDELINE FOR STORMWATER MANAGEMENT.

DAVID N. RANDALL, P.E. DATE 2/16/06

PROPERTY DESCRIPTION:
A PORTION OF THE SE1/4 OF SECTION 12, TOWNSHIP 26 NORTH, RANGE 42 EAST, W.M.
SPOKANE COUNTY, WASHINGTON

DEFINITION:

THE ESTABLISHMENT OF PERENNIAL VEGETATIVE COVER ON DISTURBED AREAS.

PURPOSE:

TO ESTABLISH PERMANENT VEGETATION (SUCH AS GRASSES, LEGUMES AND TREES AND SHRUBS) AS RAPIDLY AS POSSIBLE TO PREVENT SOIL EROSION BY WIND OR WATER, AND TO IMPROVE WILDLIFE HABITAT AND SITE AESTHETICS.

CONDITIONS WHERE PRACTICE APPLIES:

- GRADED, FINAL GRADED OR CLEARED AREAS WHERE PERMANENT VEGETATIVE COVER IS NEEDED TO ESTABLISH THE SOIL.
- AREAS WHICH WILL NOT BE BROUGHT TO FINAL GRADE FOR A YEAR OR MORE.
- VEGETATION-LINED CHANNELS.

PROVIDE FRESH, CLEAN NEW CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSTS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND AND NATIVE SPECIES AT PERCENTAGES AS FOLLOWS:

GRASS SEED: FRESH, CLEAN, DRY, NEW CROP SEED COMPLYING WITH THE ASSOCIATION OF OFFICIAL ANALYSTS' "RULES FOR TESTING SEEDS" FOR PURITY AND GERMINATION TOLERANCE. PROVIDE THE FOLLOWING EROSION SEED MIX FOR THE HYDROSEEDING: SHEEP FESCUE, 33 % HARD FESCUE, 33%; CANADA BLUEGRASS, 20%; ANNUAL RYE GRASS, 10%; ACHILLEA MILLEFOLIUM, 1%; LUPINUS PERENNIS, 1%; AMELANCHIER ALNIFOLIA, 1%; ROSA WOODSII, 1%; ANNUAL RYE GRASS, 10%; AND CONTAIN LESS THAN 1% WEED CONTENT. SEED SHALL BE APPLIED AT A MINIMUM RATE OF 80 POUNDS PER ACRE.

PROVIDE HYDROSEEDING AS FOLLOWS:

HYDROSEEDING: MIX SPECIFIED SEED AT THE RATE OF 80 LBS./ACRE, FERTILIZER AT THE RATE OF 400 LBS./ACRE OF 16-16-16 AND FIBER MULCH IN WATER, USING EQUIPMENT SPECIFICALLY DESIGNED FOR HYDROSEED APPLICATION. CONTINUE MIXING UNTIL UNIFORMLY BLENDED INTO HOMOGENOUS SLURRY SUITABLE FOR HYDRAULIC APPLICATION.

1. MIX SLURRY WITH NONASPHALTIC TACKIFIER, PER MANUFACTURER'S RECOMMENDATION.
2. APPLY SLURRY UNIFORMLY TO ALL AREAS TO BE SEEDED IN A 1-STEP PROCESS. APPLY MULCH AT THE MINIMUM RATE OF 2000 LBS./ACRE (16.5 KG PER 100 SQ.M) DRY WEIGHT BUT NOT LESS THAN THE RATE REQUIRED TO OBTAIN SPECIFIED SEED-SOWING RATE.

ALL SEEDING OF SLOPES SHALL BE DONE IN ACCORDANCE WITH W.S.D.O.T. STANDARD SPECIFICATIONS.

PERMANENT SEEDING SHALL OCCUR BETWEEN THE DATES OF AUGUST 15 TO OCTOBER 15. ANY AREAS THAT ARE NOT SEEDED AND ARE EXPOSED FOR MORE THAN 30 DAYS SHALL HAVE A TEMPORARY CONTROL BLANKET, OR A STRAW MULCH (1.2 TONS PER ACRE APPLIED). MULCH SHALL BE ANCHORED INTO THE SOIL BY DISKING OR OTHER METHODS AS APPROVED SPOKANE COUNTY.
MULCHING OPERATIONS SHALL BE PER W.S.D.O.T. SPECIFICATIONS SECTION 8-01.3(5).

PERMANENT SEEDING

3/17

DEFINITION:

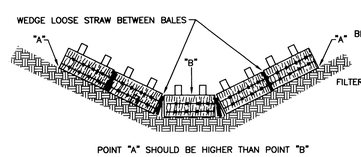
A TEMPORARY SEDIMENT BARRIER CONSISTING OF A ROW OF ENTRENCHED AND ANCHORED STRAW BALES.

PURPOSE:

1. TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS OF LIMITED EXTENT TO PREVENT SEDIMENT FROM LEAVING THE SITE.
2. TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW TO MODERATE LEVEL CHANNEL FLOWS.

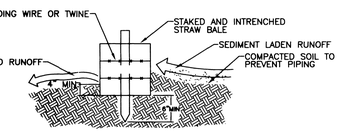
MAINTENANCE:

- CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS, AND UNDERCUTTING BENEATH BALES.
- SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RUNOFF-PRODUCING RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.



POINT "A" SHOULD BE HIGHER THAN POINT "B"

PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY



CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

STRAW BALE DETAILS

4/17

DEFINITION:
A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. THE FILTER FENCE IS CONSTRUCTED OF STAKES AND SYNTHETIC FILTER FABRIC WITH A RIGID WIRE FENCE BACKING WHERE NECESSARY FOR SUPPORT.

PURPOSE:
1. TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT UNDER SHEET FLOW CONDITIONS FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
2. TO DECREASE THE VELOCITY OF SHEET FLOWS.

THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS AR NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.

POSTS SHALL BE SPACED A MAXIMUM OF 6 FEET APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 30 INCHES (WHERE PHYSICALLY POSSIBLE).

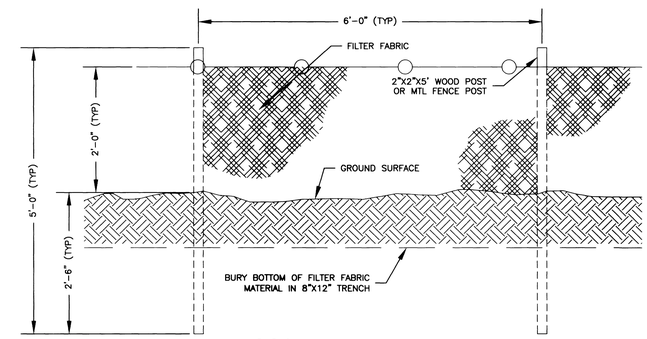
A TRENCH SHALL BE EXCAVATED APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP ALONG THE LINE OF POST AND UP SLOPE FROM THE BARRIER. THE TRENCH SHALL BE CONSTRUCTED TO FOLLOW THE CONTOUR.

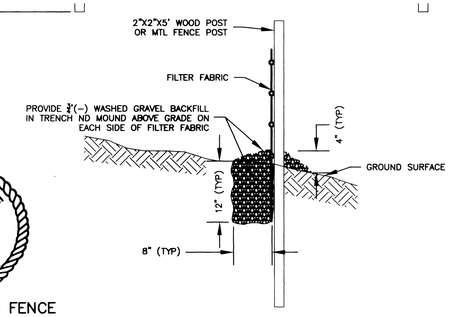
WHEN SLIT FILM FILTER FABRIC IS USED, WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UP SLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RIGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

SLIT FILM FILTER FABRIC SHALL BE WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES. OTHER TYPES OF FABRIC MAY BE STAPLED TO THE FENCE.

WHEN EXTRA-STRENGTH OR MONOFILAMENT FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POST. EXTRA CARE SHOULD BE USED WHEN JOINING OR OVERLAPPING THESE STIFFER FABRICS. APPARENT OPENING SIZE OF FILTER FABRIC SHALL BE 70.

MAINTENANCE:
- INSPECT IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIR AS NECESSARY.
- SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.





SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P-1930
DATE ACCEPTED: 3/20/06

FILTER FENCE

5/17

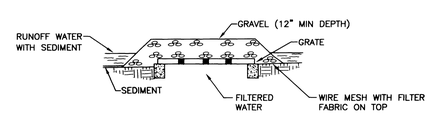
RECORD DRAWING

I HAVE REVIEWED THE CONSTRUCTION AND TO MY KNOWLEDGE FIND IT TO BE IN SUBSTANTIAL CONFORMANCE WITH THE APROVED CERTIFIED PLANS AND STANDARD SPECIFICATIONS EXCEPT AS NOTED.

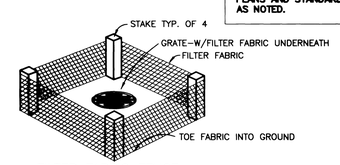
DEFINITION:
A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN, DROP INLET, OR CURB INLET.

PURPOSE:
TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA.

- INSTALLATION PROCEDURE FOR FILTER FABRIC FENCE:
  - A. PLACE 2 INCH BY 2 INCH WOODEN POSTS AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND DRIVE THEM AT LEAST 8 INCHES INTO THE GROUND. THE STAKES MUST BE AT LEAST 3 FEET LONG.
  - B. EXCAVATE A TRENCH APPROXIMATELY 8 INCHES WIDE AND 12 INCHES DEEP AROUND THE OUTSIDE PERIMETER OF THE STAKES.
  - C. STAPLE THE FILTER FABRIC TO WOODEN STAKES SO THAT 32 INCHES OF THE FABRIC EXTENDS OUT AND CAN BE FORMED INTO THE TRENCH. USE HEAVY-DUTY WIRE STAPLES AT LEAST 1/2 INCH IN LENGTH.
  - D. BACKFILL THE TRENCH WITH 3/4 INCH OR LESS WASHED GRAVEL ALL THE WAY AROUND.
  - E. SILT FENCE INLET BARRIER SHALL BE CONSTRUCTED ON ALL INLETS AT THE TIME OF THEIR CONSTRUCTION. APPARENT OPENING SIZE OF FILTER FABRIC SHALL BE 70.
- INSTALLATION PROCEDURE FOR GRAVEL AND WIRE MESH FILTER:
  - A. PLACE WIRE MESH OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. USE HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, OVERLAP THE STRIPS. PLACE FILTER FABRIC OVER WIRE MESH.
  - B. EXTEND THE FILTER FENCE/WIRE MESH BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES. PLACE 3/4 INCH TO 3-INCH GRAVEL OVER THE FILTER FABRIC/WIRE MESH. THE DEPTH OF THE GRAVEL SHOULD BE AT LEAST 12 INCHES.



GRAVEL AND WIRE MESH FILTER



FILTER FABRIC FENCE

STORM DRAIN INLET PROTECTION

6/17

DAVID N. RANDALL, STATE OF WASHINGTON, 26964, REGISTERED PROFESSIONAL ENGINEER 2/16/06
EXPIRES 7-04-06

DEVELOPER'S APPROVAL:

GARY DINWOODIE DATE Feb. 20 2006

17/17

CALL BEFORE YOU DIG:1-800-456-8000

BY	REVISIONS	DATE	PROJ.	FROM	AS BUILT	TO	ACCEPT
ARP	DRAINAGE AS-BUILTS	01/06					

BENCH MARK DATUM	SCALE	DATE	STAFF
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LOCATION SURVEY SPIKE WITH BRASS WASHER MARKED "LS 25564" PER SR33			APPROVED

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ac@adamsandclark.com
1720 W. Fourth Ave.
Spokane, WA 99204
(509) 747-4600 F(509) 747-8913

LLOYD CHARLES ESTATES

EROSION CONTROL DETAILS

TYPE OF IMPROVEMENT:	EROSION
PROJECT NUMBER	PLAN NUMBER
20031027	

P-1930 Eng As Built