COVER SHEET
BUCKEYE ESTATES
PORT. OF SECTS. 9, 10, 16, T27N, R43E, W.M.
SPOKANE COUNTY, WASHINGTON

GENERAL NOTES:

(1) All work and materials shall be in conformance with the "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION" 1999, 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's and the Spokane County Engineer's Office.

(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.

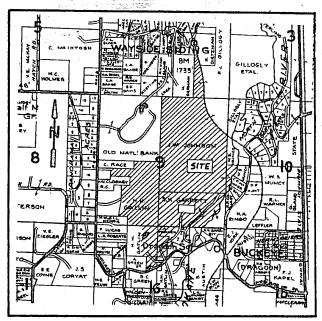
(6) For construction of dry wells, install filter fabric (Amoco 4545 or approved equivalent) between the dry well barrel and the washed drain rock, and between the washed drain rock and the native soils.

(7) For any curb grades less than 0.8% (0.008 ft/ft), a Washington State-licensed Professional Land Surveyor shall verify that the curb forms are at the grades noted on the approved plans, prior to placement of curb material. The Contractor is responsible for arranging and coordinating work with the Professional Land Surveyor.

(8) The floor of a Grassed Percolation Area (GPA) swale includes the level portion of the floor of the swale, and the sideslops 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 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.

(9) All asphalt and crushed surfacing depths are compacted in place depths.

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 11/5/2002
ACCEPTANCE EXPIRES: 11/5/2005
PROJECT LANE MILES PUBLIC: 2
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTS AS-BUILTED AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND FINAL ENGINEERING OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 5 BUSINESS DAYS PRIOR TO CONSTRUCTION



VICINITY MAP

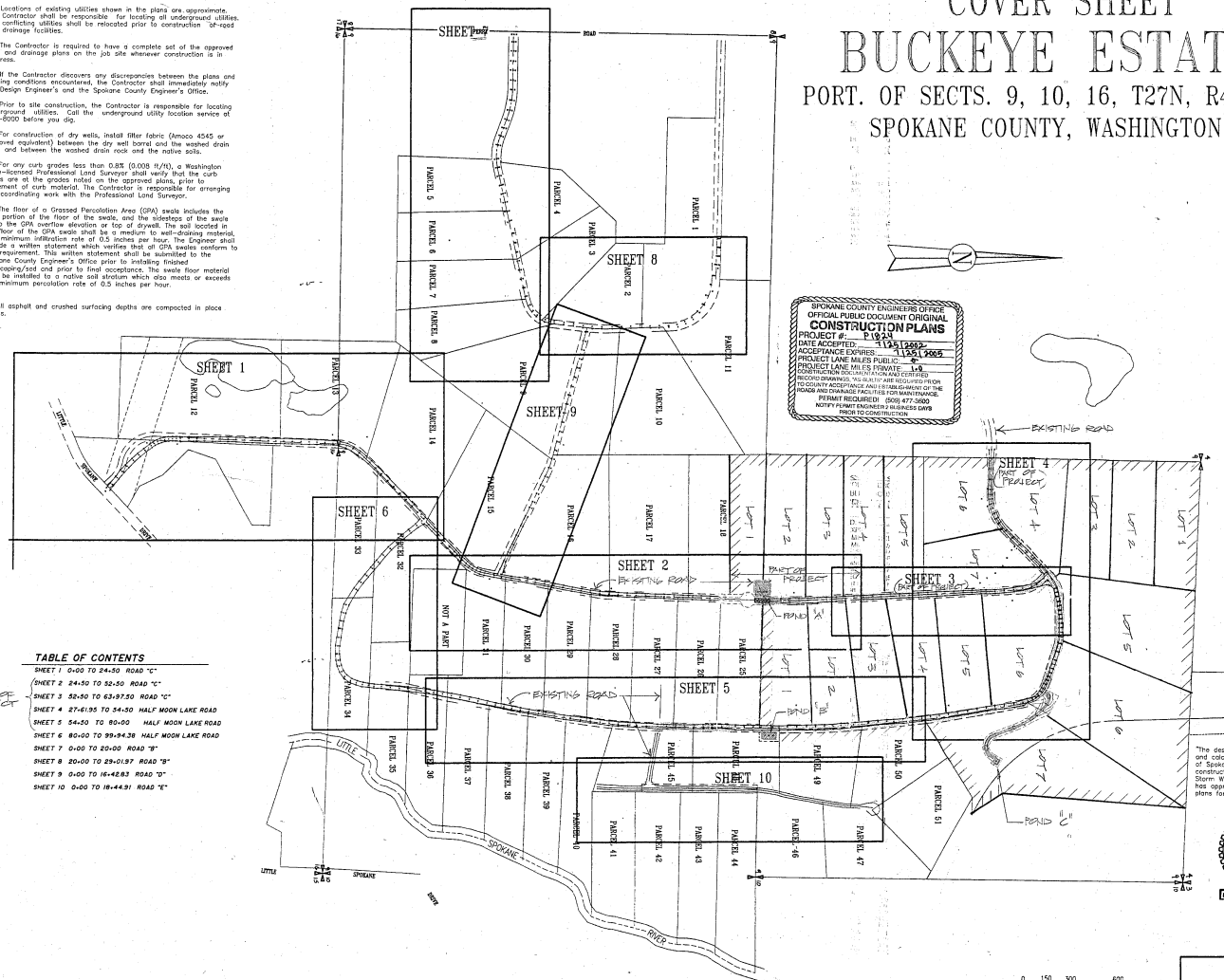


TABLE OF CONTENTS

PART OF PROJECT

SHEET 1 0+00 TO 24+50 ROAD "C"
SHEET 2 24+50 TO 52+50 ROAD "C"
SHEET 3 52+50 TO 63+97.50 ROAD "C"
SHEET 4 27+61.95 TO 54+50 HALF MOON LAKE ROAD
SHEET 5 54+50 TO 80+00 HALF MOON LAKE ROAD
SHEET 6 80+00 TO 99+94.38 HALF MOON LAKE ROAD
SHEET 7 0+00 TO 20+00 ROAD "B"
SHEET 8 20+00 TO 29+01.97 ROAD "B"
SHEET 9 0+00 TO 16+42.83 ROAD "D"
SHEET 10 0+00 TO 18+44.91 ROAD "E"

Willis C. Dashiell — DEVELOPER — 11/30/01 DATE

Lon A. Yeagin, Deputy Chief — FIRE DISTRICT # 4 — 12-2-01 DATE

"The design improvements shown in this set of plans and calculations conform to the applicable editions of Spokane County standards for road and sewer construction and the Spokane County guidelines for Storm Water management. The Spokane County Engineer has approved all design deviations. I approve these plans for construction."

REGISTERED PROFESSIONAL ENGINEER — EXPIRES 12/15/02

STEVEN M. HAUGEN — REGISTERED PROFESSIONAL ENGINEER — EXPIRES NOV 18, 1996

0 150 300 600
SCALE: 1" = 300'

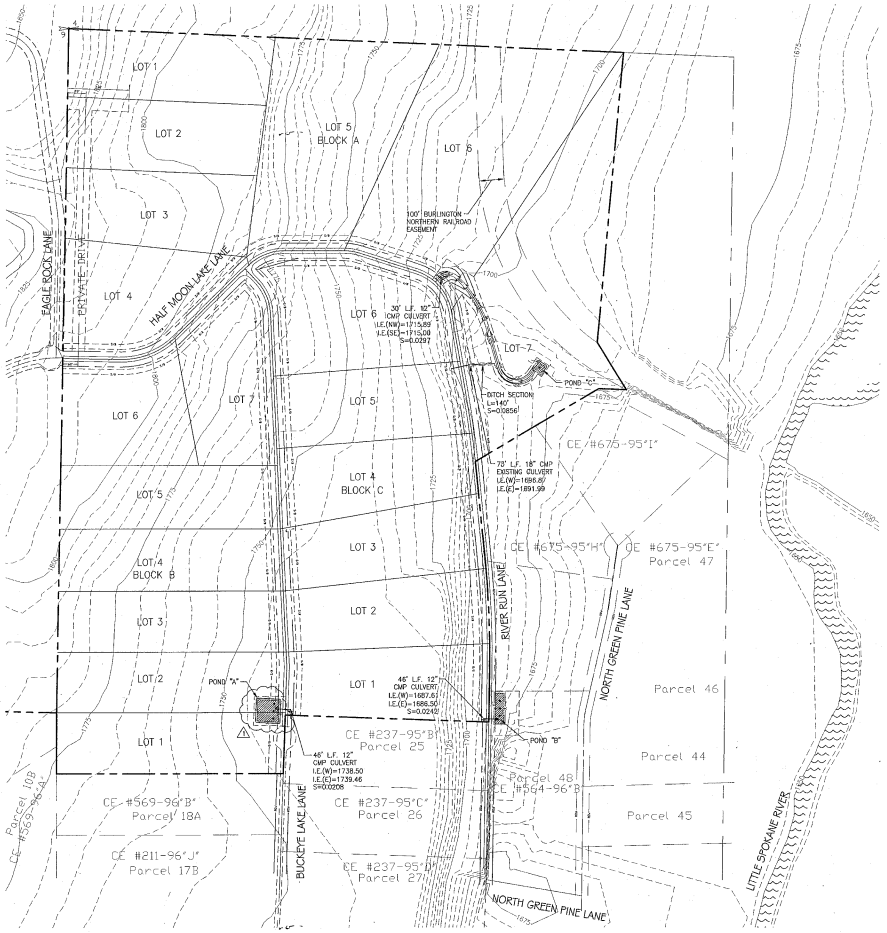
J. PAUL RAMER & ASSOCIATES, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
N 10115 NEWPORT HWY., SPOKANE, WASHINGTON 99218 (509) 467-5261

Date DECEMBER 29, 1995
Scale 1" = 300'
Drawn by GSM
Checked DHM
Field Book

GREG BLESSING
107 S. HOWARD, SUITE 500
SPOKANE, WASH 99204

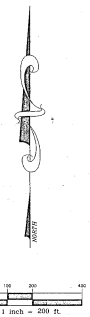
PROJECT NO. 95091
SHT 1A OF 10

P1824 Eng'd Set of Drawings



LEGEND

- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED POND



SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 1.0
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PERMIT REQUIRED: (509) 477-3600
NOTIFY PERMIT ENGINEERS BUSINESS DAYS PRIOR TO CONSTRUCTION

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456-8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

NO.	DATE	BY	APP.	REVISION
1	6/13/02	SWF	RHG	REVISED POND "A" LOCATION PER COUNTY PLANNING

RANDELL G. HAHN
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
6/13/02
EXPIRES 12-15-02

HAHN ENGINEERING, INC.
605 E. HOLLAND AVE., SUITE 112
SPOKANE, WA. 99218
(509) 467-1550 FAX (509) 467-8189
www.hahnengr.com

SCALE
HORIZ. 1" = 200
VERT. N/A

	DATE
DRAWN: SWF	6/13/02
DESIGNED: KSN	6/13/02
APPROVED: RGH	

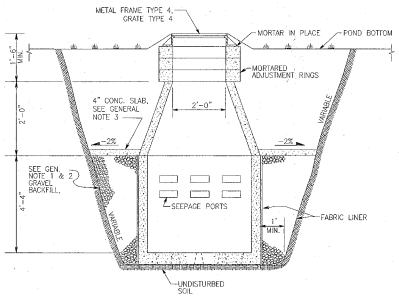
BUD DASHIELL
NORTH BUCKEYE VALLEY ESTATES

DRAINAGE PLAN

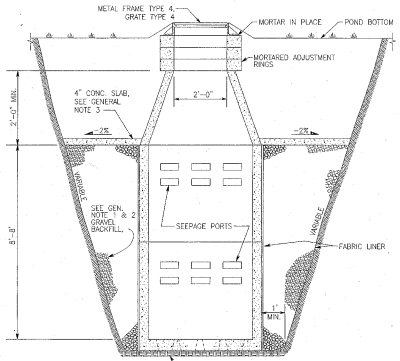
EROSION
SHEET NO. C/1

CAD FILE: 01-259-1EROSION

P-1824 Eng Road - Drainage



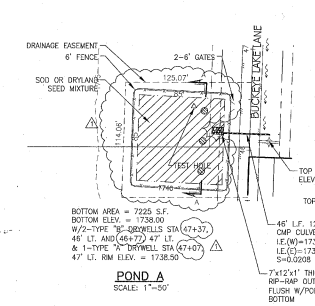
DRYWELL – TYPE 'A'
(NTS)



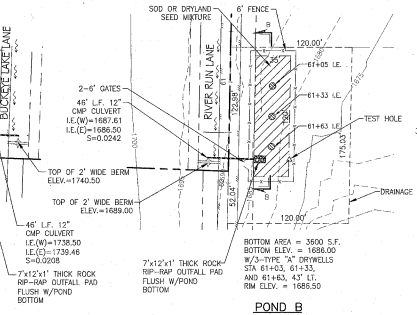
DRYWELL – TYPE 'B'
(NTS)

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. CONCRETE SLAB SHALL BE CLASS 3000 CONCRETE.
4. ADJUSTMENT BLOCKS SHALL BE CEMENT CONCRETE.
5. PRECAST RISER MAY BE USED IN COMBINATION WITH OR IN LIEU OF ADJUSTING BLOCKS.



POND A
SCALE: 1"=30'



POND B
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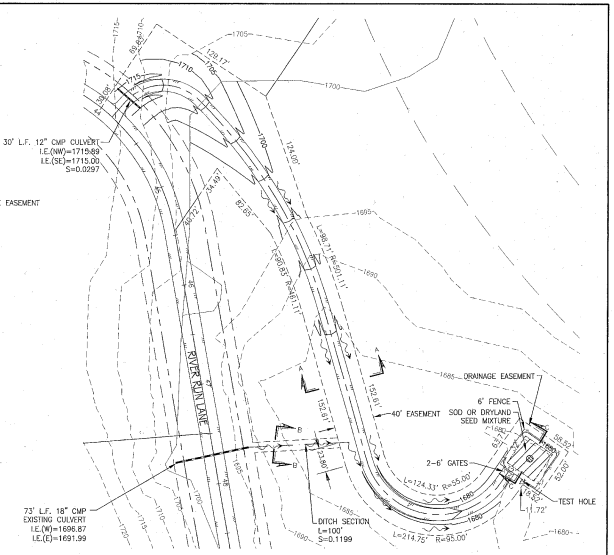
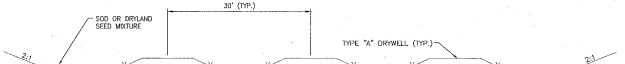


POND C
SCALE: 1"=50'

POND "A"–TYPICAL SECTION
(NTS)



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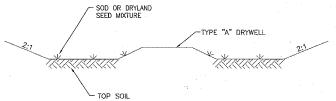

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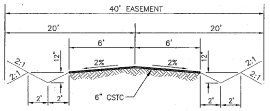

ACCESS DRIVE SECTION
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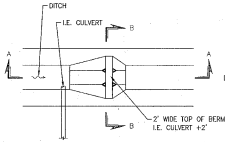
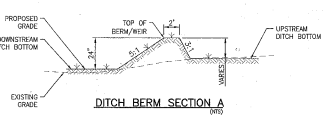
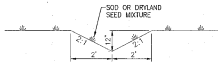


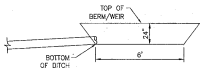
DITCH BERM PLAN VIEW
(NTS)



DITCH BERM SECTION A
(NTS)



DITCH DETAIL
(NTS)



DITCH BERM SECTION B
(NTS)

FENCE SPECIFICATIONS

6' HIGH CHAIN LINK FENCE OR DECORATIVE VINYL FENCING WITH MATCHING GATES PROVIDED WITH A LOCKABLE DEVICE.

SPOKANE COUNTY ENGINEERS OFFICE
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PROJECT LANE MILES PRIVATE: 1.0
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PERMIT REQUIRED: (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

NO.	DATE	BY	APP.	REVISION
1	6/13/02	SWF	RHG	REVISED POND "A" LOCATION PER COUNTY PLANNING

HAHN ENGINEERING, INC.
605 E. HOLLAND AVE., SUITE 112
SPOKANE, WA. 99218
(509) 467-1550 FAX (509) 467-8189
www.hahnengr.com

SCALE		DRAWN:	DATE
HORIZ	1" = 50'	SWF	6/13/02
VERT.	N/A	DESIGNED: KSN	6/13/02
		APPROVED: RGH	

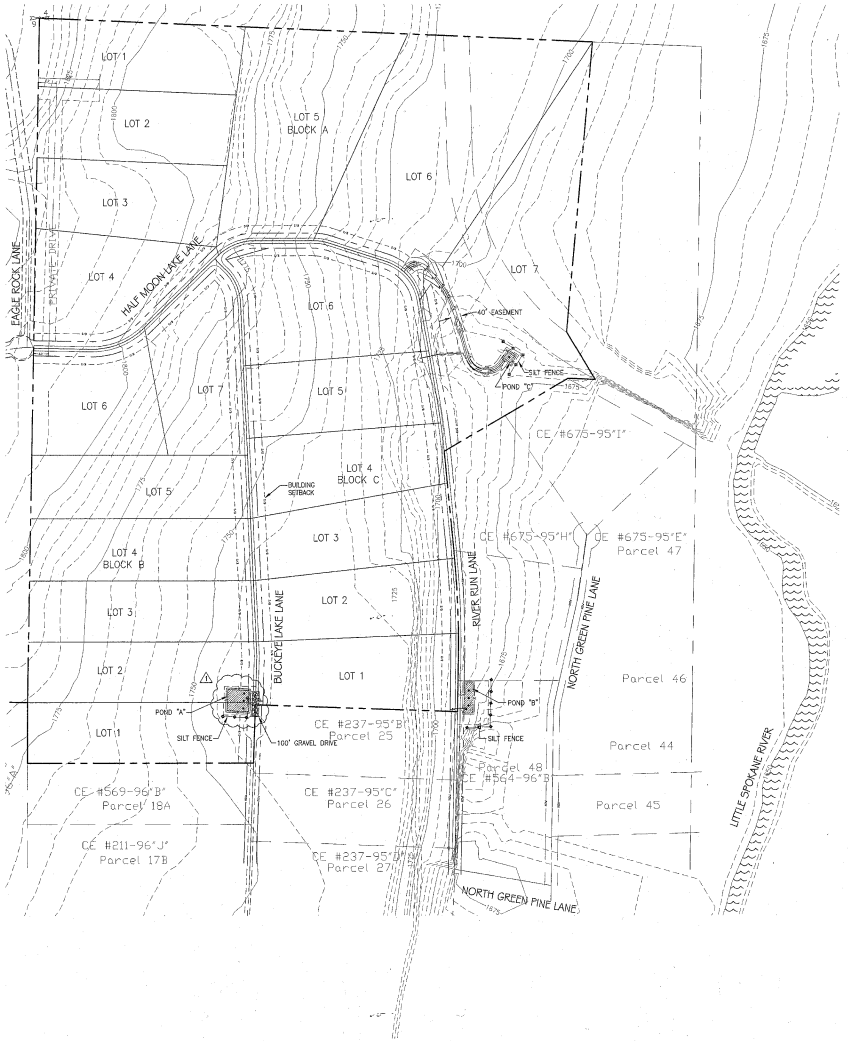
BUD DASHIELL
NORTH BUCKEYE VALLEY ESTATES

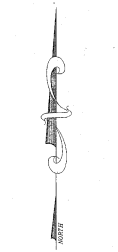
DETAIL SHEET

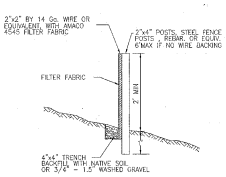
STORM
SHEET NO. C 2

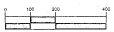
CAD FILE: (01-259-1/DWG/POND DETAILS.DWG)

P1824 Emailed-Mylars









TYPICAL LOT EROSION CONTROL

IMPLEMENTATION OF INDIVIDUAL LOT EROSION CONTROL IS TO TAKE PLACE BY THE BUILDER AT TIME OF HOME CONSTRUCTION

EROSION NOTES

1) AN EROSION/SEDIMENTATION CONTROL 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 ACCEPTED BY SPOKANE COUNTY, WHICHEVER IS LATER.

2) APPROVAL OF THE ESC PLAN DOES NOT CONSTITUTE APPROVAL OF ANY OF THE PROPOSED ROAD, STORM DRAINAGE, GRADING OR UTILITY DESIGN ELEMENTS SHOWN ON THE ESC PLAN.

3) 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, SUCH AS DRYWELLS, CULVERTS, OR GRAVEL GALLERIES.

4) THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR INSTALLING ROCK CONSTRUCTION ENTRIES AT ANY AND ALL LOCATIONS USED TO ENTER OR EXIT THE PROJECT SITE.

5) GEOTEXTILE FABRIC IS TO BE PLACE 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.

SEEDING NOTES

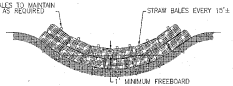
GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE OF PURITY AND GERMINATION ESTABLISHED BY THE OFFICIAL SEED ANALYSIS OF NORTH AMERICA. PROVIDE SEED MIXTURE COMPOSED OF GRASS SPECIES AND PERCENTAGES AS FOLLOWS:

10 PERCENT	ELKA PERRENIAL RYE
20 PERCENT	DURAR HARD FESCUE
45 PERCENT	COVAR SHEEP FESCUE
15 PERCENT	MEURERS CANADIAN BLUEGRASS

PROVIDE MIXTURE COMPOSED OF GRASS SEED AND FERTILIZER IN PERCENTAGES AS FOLLOWS:

GRASS SEED: 90 LBS. PER ACRE
FERTILIZER: 16-16-16 TIMED RELEASE COMPOSITION, 300 LBS. PER ACRE

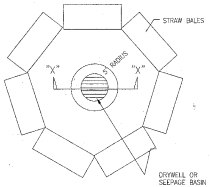
ALL SEEDING SLOPES SHALL BE DONE IN ACCORDANCE WITH THE WSDOT STANDARD SPECIFICATIONS, SEC. 8-01.



EROSION CONTROL DETAIL – A
(NTS)

TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN NOTES:

1. Where possible, maintain natural vegetation for silt control.
2. Temporary siltation and detention ponds to be constructed by placing straw bales across swales.
3. All temporary siltation and detention ponds shall be maintained in a satisfactory condition until such time that clearing and/or construction is completed and the permanent drainage facilitates are operational.
4. Return siltation control areas to original ground conditions.
5. Rip-rap base (both sides) at bales for erosion control, as required.
6. Approval of this plan does not constitute an approval of design, size nor location of pipes, restrictors, channels, or retention facilities; but is an approval of temporary sedimentation control plan only.



DRYWELL AND SEEPAGE BASIN DETAIL
(NTS)

SECTION "X–X"
(NTS)

SPOKANE COUNTY ENGINEERS OFFICE
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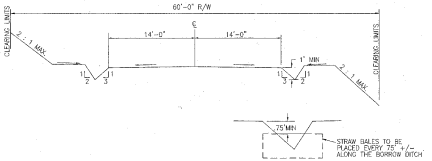
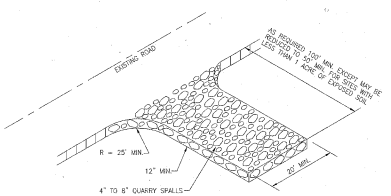


TYPICAL RIGHT OF WAY SECTION
(NTS)



CONSTRUCTION ENTRANCE
(NTS)

CONSTRUCTION ENTRANCE NOTES

1) THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR 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 STRUCTURE. FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

2) ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

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CALL TWO BUSINESS DAYS BEFORE YOU DIG

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RANDELL G. HAHN — STATE OF WASHINGTON — 12966 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 12-16-02

SCALE	DRAWN:	DATE
HORIZ. 1" = 200	SWF	6/13/02
	DESIGNED:	
VERT. N/A	KSN	6/13/02
	APPROVED:	
	RGH	

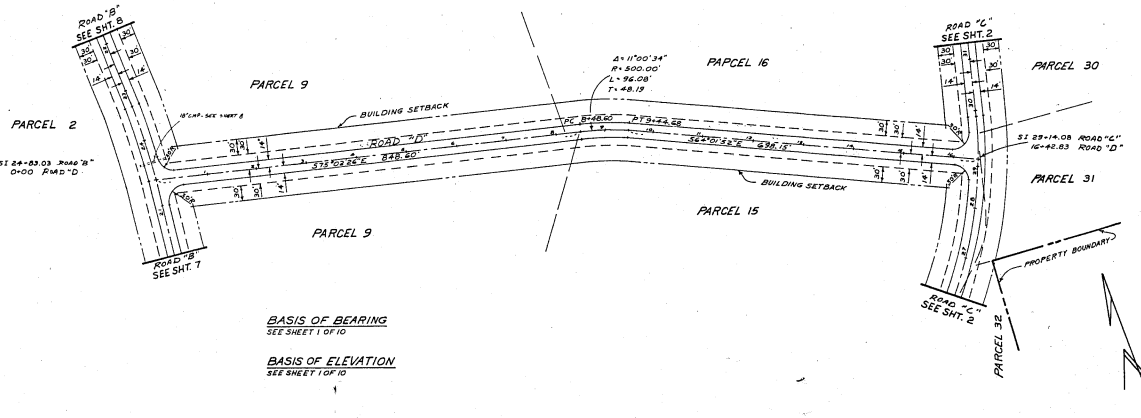
BUD DASHIELL
NORTH BUCKEYE VALLEY ESTATES

EROSION CONTROL PLAN

EROSION
SHEET NO.
C / 3

CAD FILE: 01-259-1ERO3DN

P1824 Eng Prel Drawing



BASIS OF BEARING
SEE SHEET 1 OF 10

BASIS OF ELEVATION
SEE SHEET 1 OF 10

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PERMIT REQUIRED! (509) 477-3620
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

William A. Dashiell — DEVELOPER — 11/14/01 DATE

Jack Kay, Deputy Chief — FIRE DISTRICT # 4 — 12-3-01 DATE

STEVEN M. HAUGEN — STATE OF WASHINGTON — 13484 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES NOV 16 1996

REVISIONS	

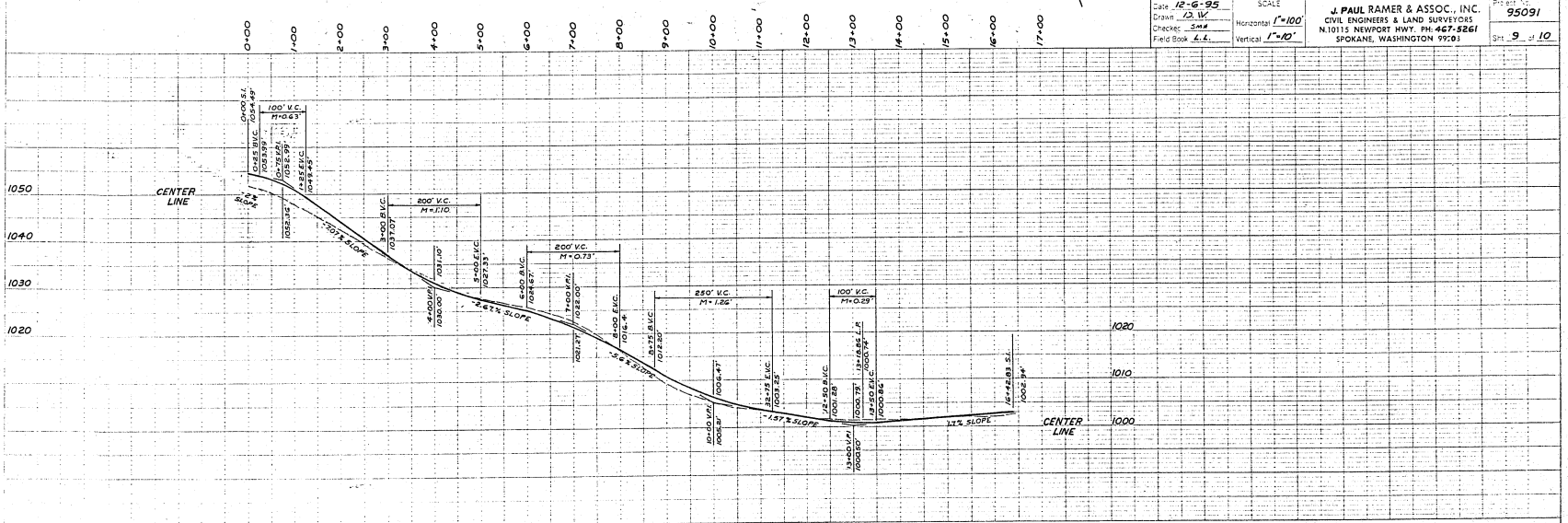
ROAD "D"
BLESSING

Date 12-6-95
Drawn D.W.
Checker SMH
Field Book F.F.

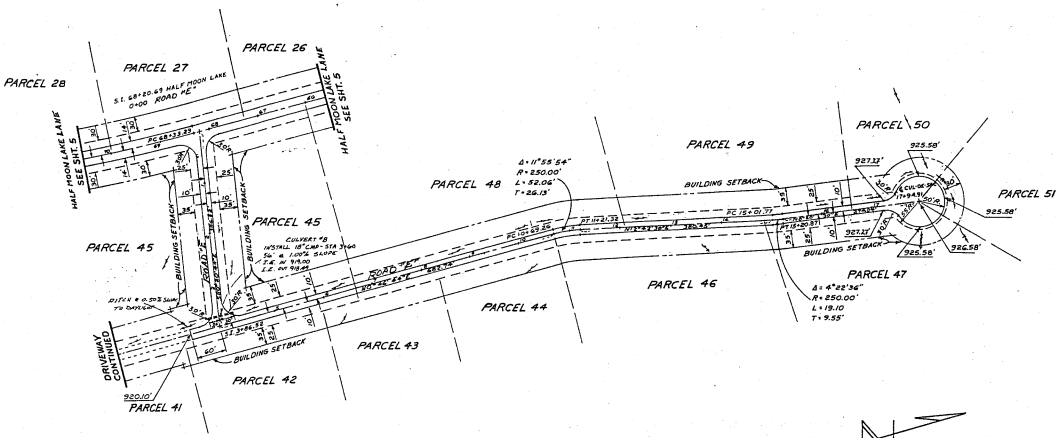
SCALE
Horizontal 1"=100'
Vertical 1"=10'

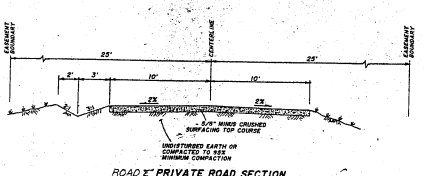
J. PAUL RAMER & ASSOC., INC.
CIVIL ENGINEERS & LAND SURVEYORS
N.10115 NEWPORT HWY. PH: 467-5261
SPOKANE, WASHINGTON 99203

Project No. 95091
Sht. 9 of 10



P1824 Eng Road - Drawings 9-27-43





ROAD "E" PRIVATE ROAD SECTION
SCALE: 1" = 5'-0"

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, AS BUILTS ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED: (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

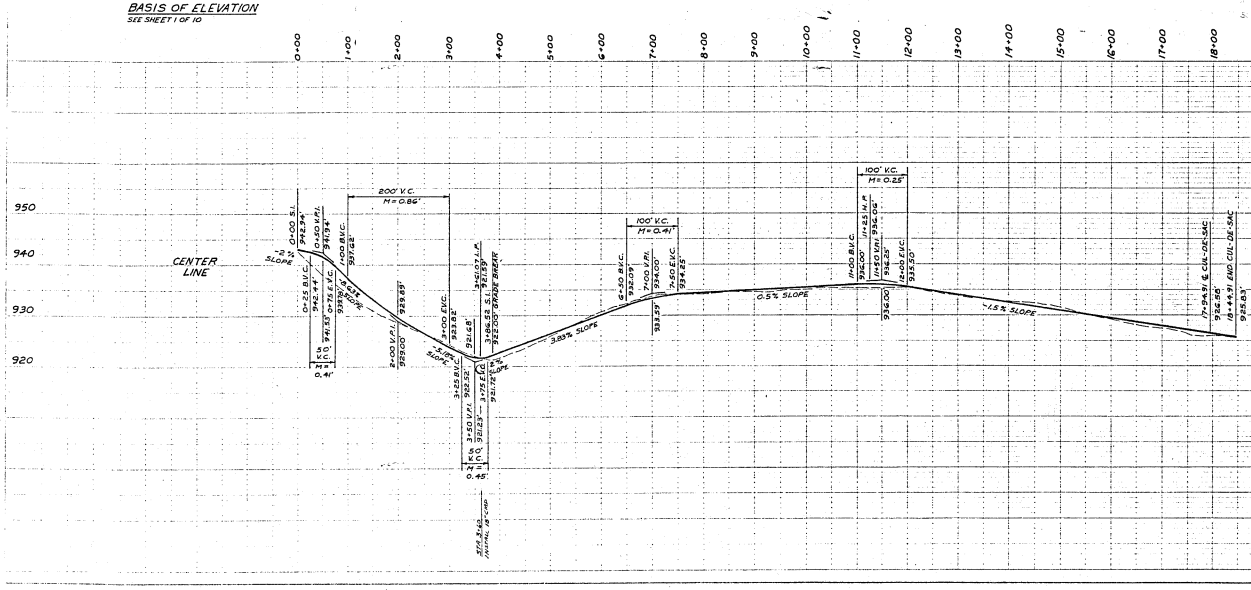
William C. Dashiell — 11/13/01
DEVELOPER — DATE

Jack Kirby Deputy Chief — 12-3-01
FIRE DISTRICT #4 — DATE

STEVEN M. HANSEN
STATE OF WASHINGTON
40047
REGISTERED PROFESSIONAL ENGINEER
EXPIRES NOV 19, 1996

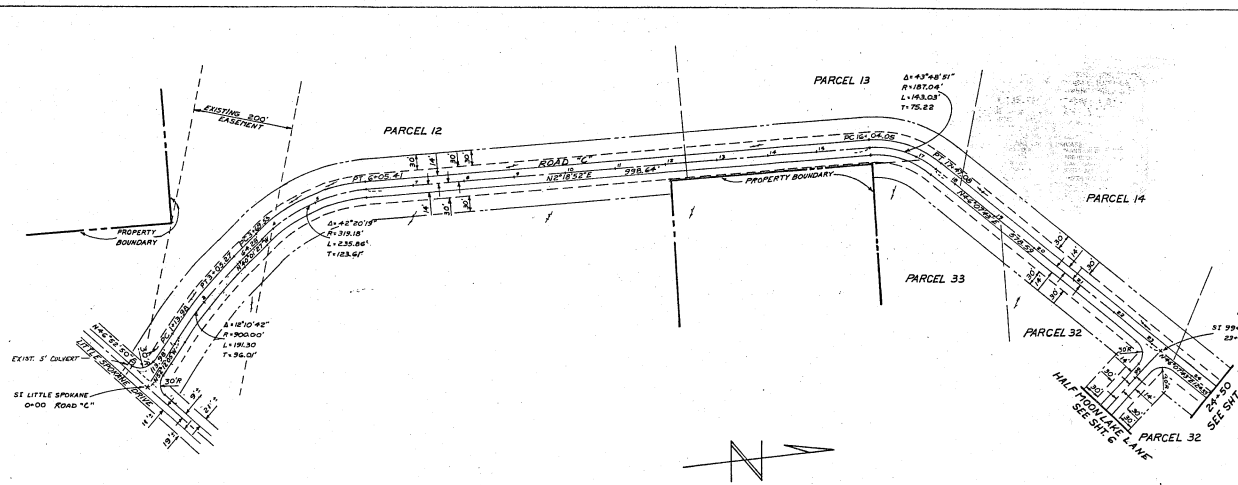
BASIS OF BEARING
SEE SHEET 1 OF 10

BASIS OF ELEVATION
SEE SHEET 1 OF 10



REVISIONS		ROAD "E" BLESSING	
Date 12-6-95	SCALE	J. PUAL RAMER & ASSOC., INC.	Project No. 95091
Drawn D.W.	Horizontal 1"=100'	CIVIL ENGINEERS & LAND SURVEYORS	
Checked SMH	Vertical 1"=10'	N.10115 NEWPORT HWY. PH: 467-5261	Sht 10 of 10
Field Book L.L.		SPOKANE, WASHINGTON 99203	

P-1824 Eng Road-Drawing 9-27-43



SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 4
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

BASIS OF BEARING

N/S CTR LINE SEC 9 IS N1°00'31"E PER SHORT PLAT "SP 973-94

BASIS OF ELEVATION

1928 U.S.G.S. @ S.T. PERRY RAMP + HALF MOON LAKE ROAD PER S.P. 973-94 = 1118.91. THIS PROJECT

William C. Dashiell 11/18/02
DEVELOPER DATE

Fred Kay Deputy Chief 12-3-01
FIRE DISTRICT #4 DATE

STEVEN M. HANNEY — STATE OF WASHINGTON — 16946 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES NOV. 18, 1996

PROFESSIONAL ENGINEER — STATE OF WASHINGTON — JAMES L. WHITE
EXPIRES 12/15/02

REVISIONS
1
2
3

ROAD "C"
BLESSING

Date 12-4-95
Drawn J.W.
Checked
Field Book L.L.

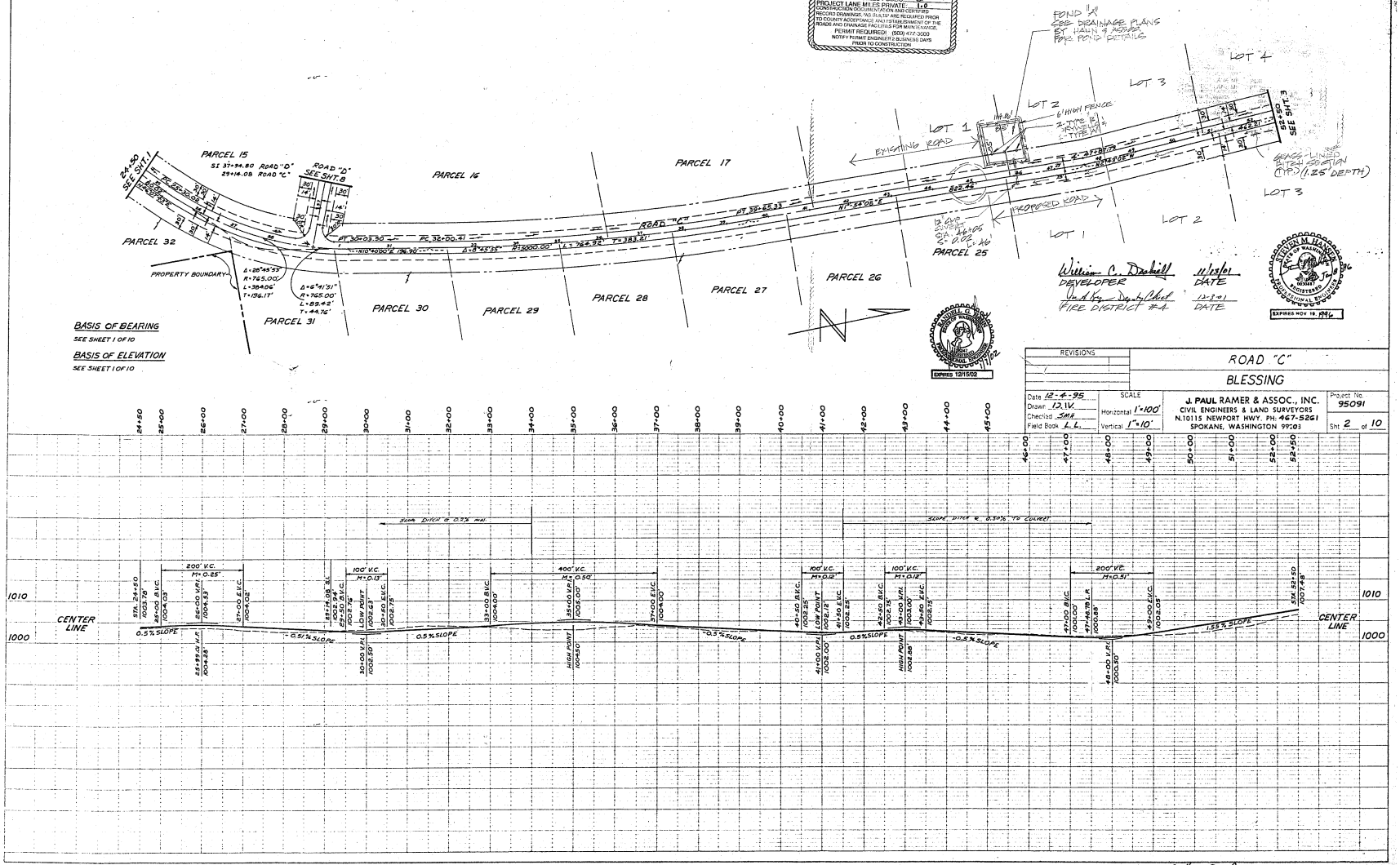
SCALE
Horizontal 1"=100'
Vertical 1"=10'

J. PAUL RAMER & ASSOC., INC.
CIVIL ENGINEERS & LAND SURVEYORS
N.10115 NEWPORT HWY. PH: 467-5261
SPOKANE, WASHINGTON 99218

Project No. 95091
Sht 1 of 10

P-1824 Employed Drawings

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS AS BUILT ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND STATEMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED: (509) 477-3000
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

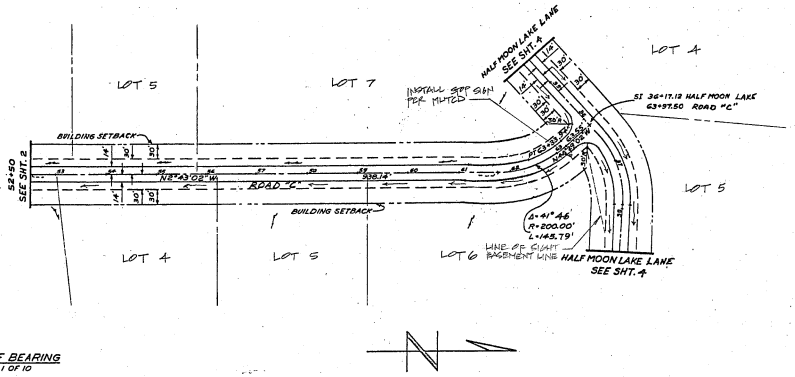


William C. Dashiell 11/13/01
DEVELOPER DATE
Fire District #4 12-3-01
DATE

REVISIONS	ROAD "C"
	BLESSING

Date 12-4-95	SCALE	J. PAUL RAMER & ASSOC., INC.	Project No. 95091
Drawn D.W.	Horizontal 1"=100'	CIVIL ENGINEERS & LAND SURVEYORS	
Checked SMH	Vertical 1"=10'	N.10115 NEWPORT HWY. PH: 467-5261	
Field Book L.L.		SPOKANE, WASHINGTON 99203	Sht 2 of 10

P-1824 Eng Road-Drainage 9-27-02



BASIS OF BEARING
SEE SHEET 1 OF 10

BASIS OF ELEVATION
SEE SHEET 1 OF 10

TABLE 4.3.6A ROCK PROTECTION AT OUTFALLS

Discharge Velocity At Design Flow (fps)		REQUIRED PROTECTION				
Greater than	Less than or equal to	Minimum Dimensions				
		Type	Thickness	Width	Length	Height
0	5	Rip Rap**	1 ft.	Diameter + 8 ft.	8 ft. or 4X Dia. whichever is greater	Crown + 1 ft.
5	10	Rip Rap**	1 ft.	Diameter + 8 ft. or 2X dia., whichever is greater	12 ft. or 4X dia. whichever is greater	Crown + 1 ft.
10	20	Gabion Outfall	1-ft.	(As required)	(As required)	Crown + 1 ft.
20	N/A	Engineered Energy Dissipator Required				

* Rip rap shall be in accordance with section 9-13.1 of the WSDOT/APWA Standard Specifications. Rip rap to be reasonably well graded with rock gradation as follows:

Passing 8 inch square sieve 100%) or (Maximum stone size 8"
Passing 6 inch square sieve 40-60%) or (Medium stone size 6"
Passing 2 inch square sieve 0-10%) or (Minimum stone size 2"

** Rip rap to be reasonably well graded with rock gradation as follows:

Maximum stone size 24" (nominal diameter)
Median stone size 16"
Minimum stone size 4"

Note: Rip rap sizing governed by side slopes on outlet channel, assumed to be ~3:1.

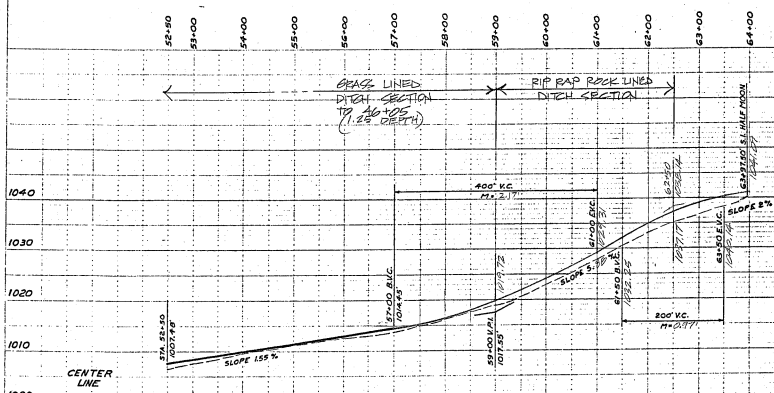
SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P-1824
DATE ACCEPTED: 7/25/2003
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 4
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS BUILT" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

William C. Dashiell — 11/13/01
DEVELOPER — DATE

Jim Kay Dwight Elliot — 12-3-01
FIRE DISTRICT #4 — DATE

STEVEN M. HARRIS — 10/8/1996 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES NOV 19, 1996

EXPIRES 12/15/02



REVISIONS	

ROAD "C"
BLESSING

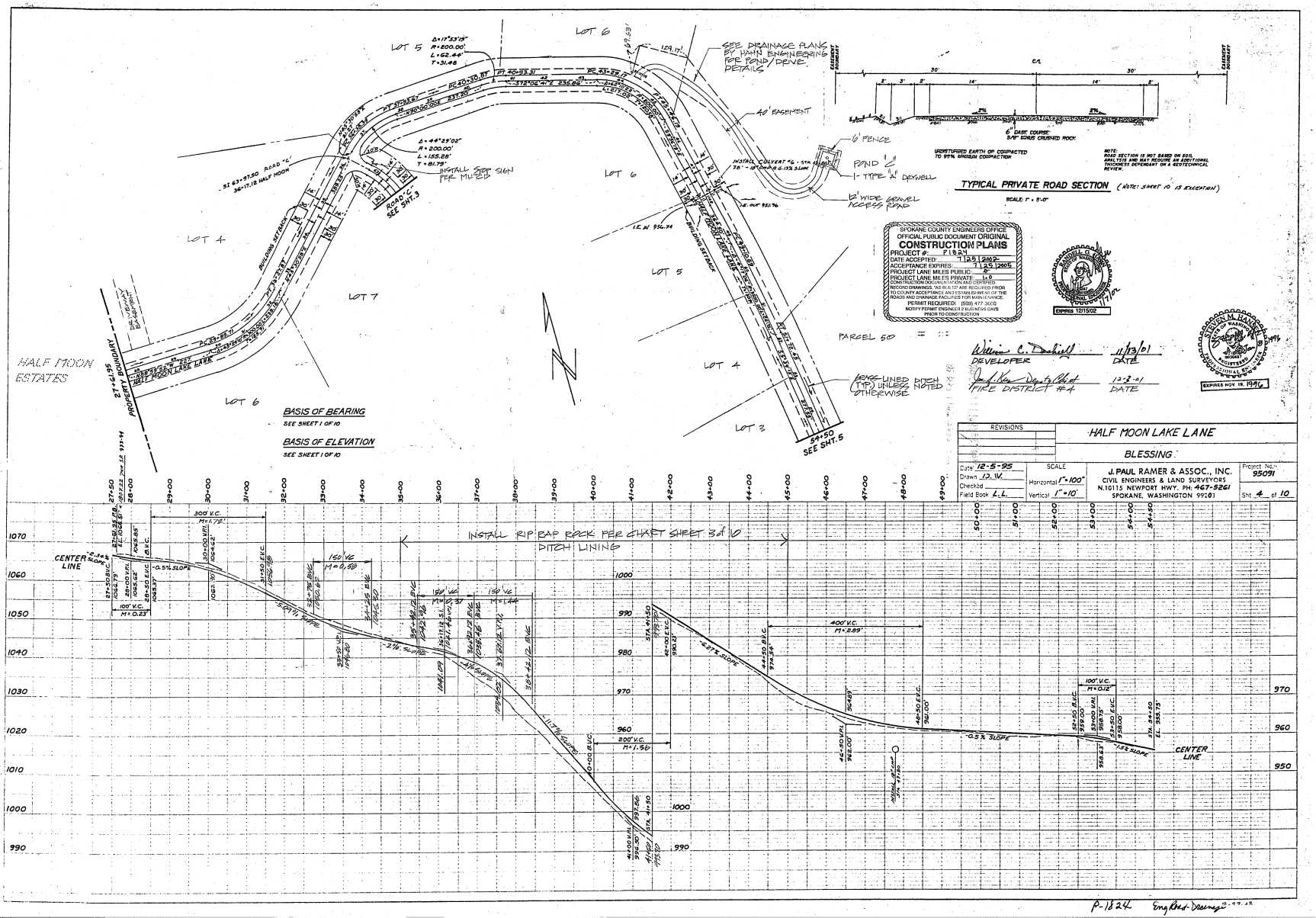
Date 12-4-95
Drawn J.D.W.
Checked S.M.H.
Field Book L.A.

SCALE
Horizontal 1"=100'
Vertical 1"=10'

J. PAUL RAMER & ASSOC., INC.
CIVIL ENGINEERS & LAND SURVEYORS
N.10115 NEWPORT HWY. PH. 467-5261
SPOKANE, WASHINGTON 99201

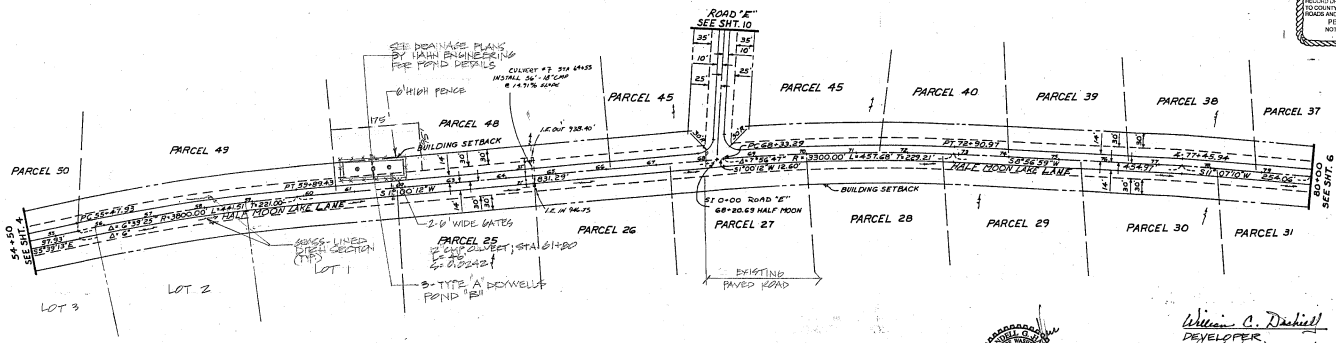
Project No. 95091
Sht 3 of 10

P-1824 Eng/Bond - Drawing #-2743



P-1824 Eng Road-Drainage

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 1
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, WILL BE ON-SITE AND REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED: (509) 477-3600
NOTIFY PERMIT ENGINEER 7 BUSINESS DAYS PRIOR TO CONSTRUCTION



BASIS OF BEARING
SEE SHEET 1 OF 10

BASIS OF ELEVATION
SEE SHEET 1 OF 10

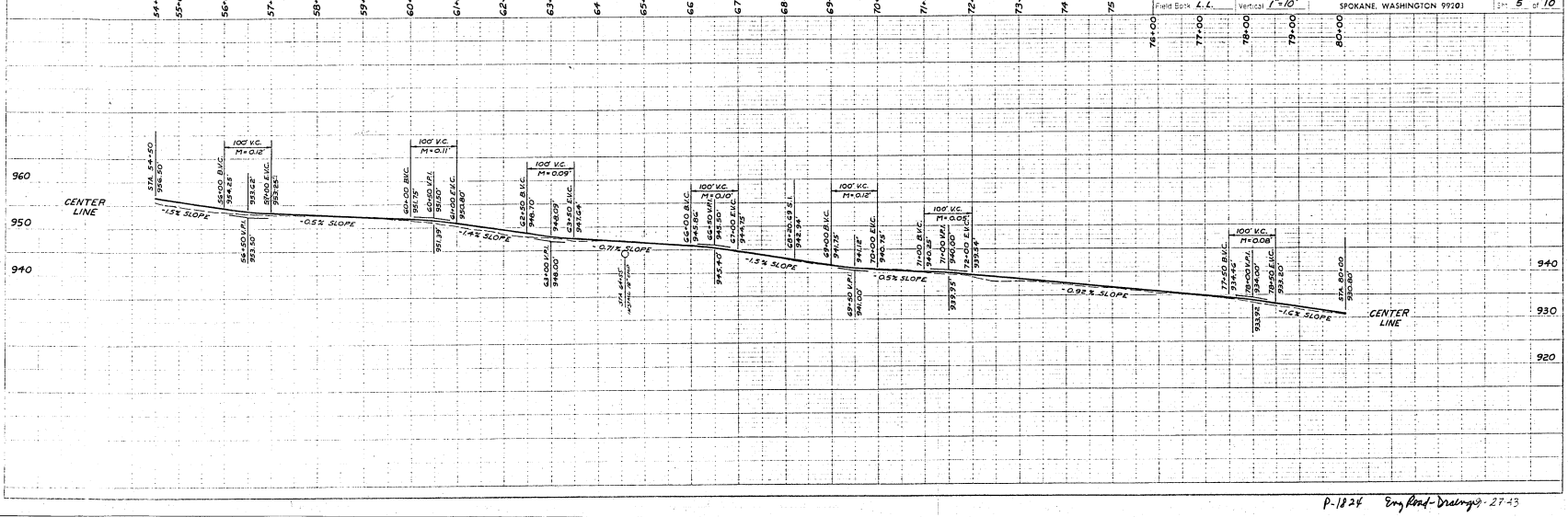
William C. Dashiell 11/18/01
DEVELOPER DATE
[signature] 12-3-01
FIRE DISTRICT #4 DATE

EXPIRES 12/15/02

EXPIRES NOV 19, 1996

REVISIONS	HALF MOON LAKE LANE
	BLESSING

Date 12-5-95	SCALE	J. PAUL RAMER & ASSOC., INC.	Project No. 95091
Drawn D.W.	Horizontal 1"=100'	CIVIL ENGINEERS & LAND SURVEYORS	
Checked	Vertical 1"=10'	N.10115 NEWPORT HWY. PH. 467-5261	Sht. 5 of 10
Field Book L.L.		SPOKANE, WASHINGTON 99203	



P-1824 Eng Road-Drainage-27-43

CULVERT SECTION

SCALE: 1" = 5'-0"

CULVERT INFORMATION

Culvert No.	Size	Location	Road Name	Invert Elev. In	Invert Elev. Out	Slope	Length A	Length B	Total Length
1	18"	28+12	ROAD "B"	1068.91	1062.67	7.26%	50'	34'	86'
2	18"	21+82	ROAD "B"	1049.78	1049.31	3.50%	25'	17'	42'
3									
4	18"	47+50	ROAD "C"	998.00	997.52	1.00%	25'	23'	48'
5	18"	32+55	HALF MOON LAKE LANE	1049.73	1047.94	3.73%	27'	21'	48'
6	18"	47+80	HALF MOON LAKE LANE	956.74	951.96	6.13%	46'	32'	78'
7	18"	64+55	HALF MOON LAKE LANE	946.75	938.40	14.91%	35'	21'	56'
8	18"	3+60	ROAD "E"	919.00	918.44	1.00%	30'	26'	56'
9	18"	85+10	HALF MOON LAKE LANE	923.60	922.70	1.67%	36'	18'	54'

William C. Drabold
DEVELOPER 11/13/01
DATE

[signature] Deputy Chief
FIRE DISTRICT #4 12-3-01
DATE

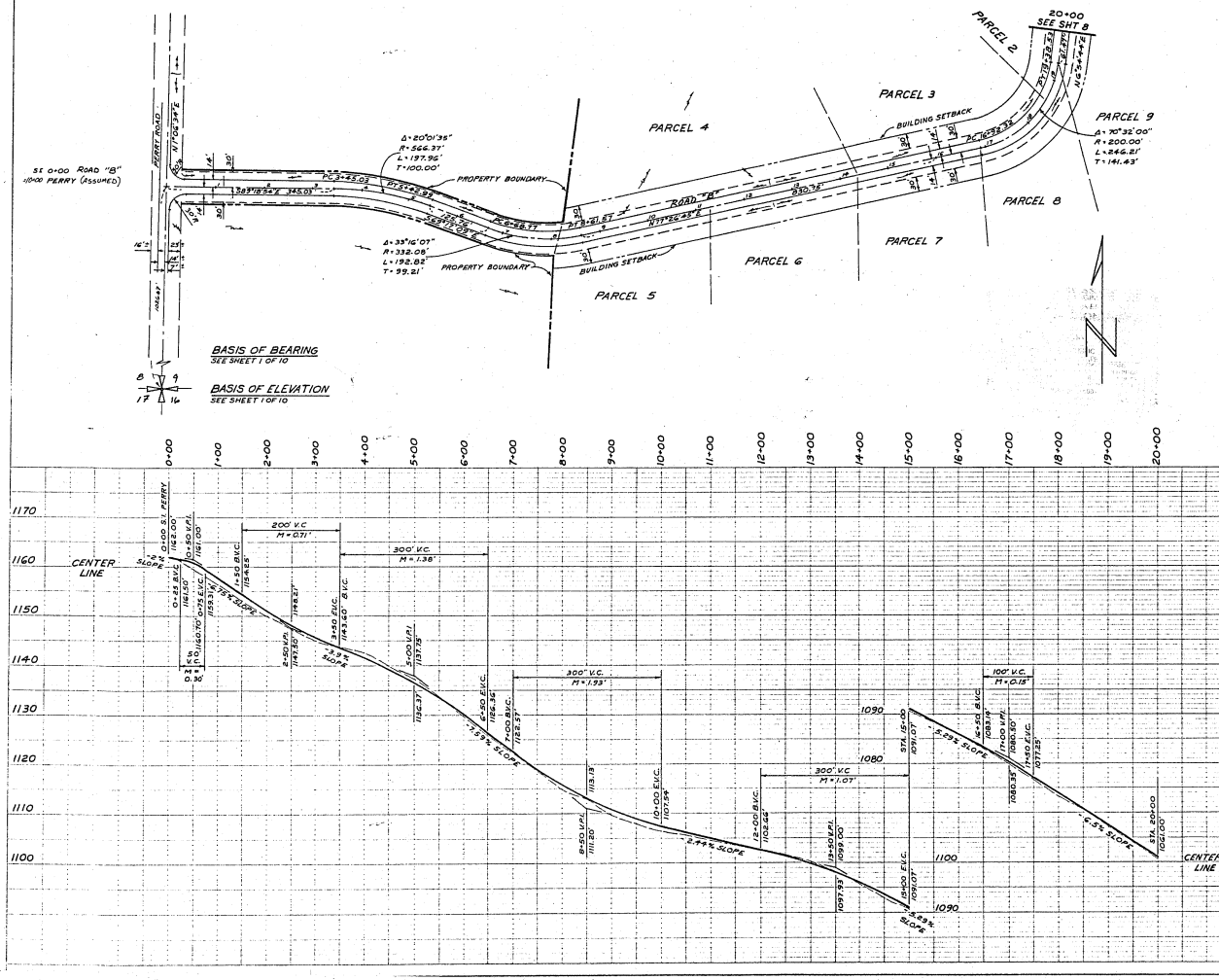
STEVEN M. HANSEN — STATE OF WASHINGTON — 0030887 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES NOV 10, 1996

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

REVISIONS	HALF MOON LAKE LANE
	BLESSING

Date 12-5-95 / Drawn D.W. / Checked SMH / Field Book L.L.	SCALE Horizontal 1"=100' / Vertical 1"=10'	J. PAUL RAMER & ASSOC., INC. CIVIL ENGINEERS & LAND SURVEYORS N.10115 NEWPORT HWY. PH: 467-5261 SPOKANE, WASHINGTON 99203	Project No. 95091 / Sht 6 of 10

P.1824 Eng Road Drainage 1-27-43



SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P1824
DATE ACCEPTED: 7/25/2002
ACCEPTANCE EXPIRES: 7/25/2005
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 1.0
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PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

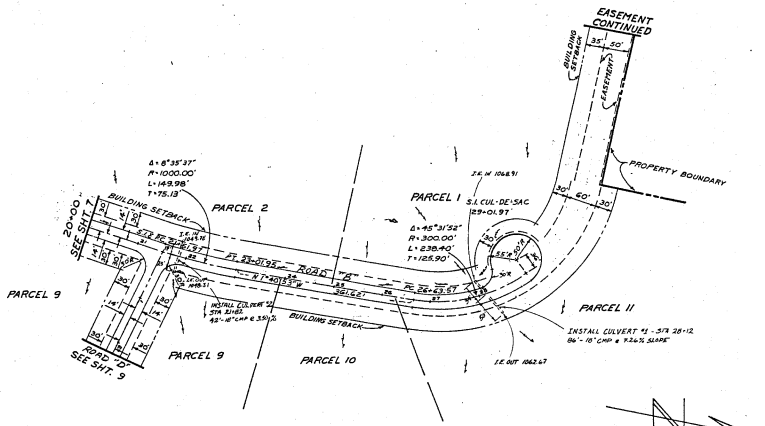
William C. Dashiell — 11/13/01
DEVELOPER — DATE

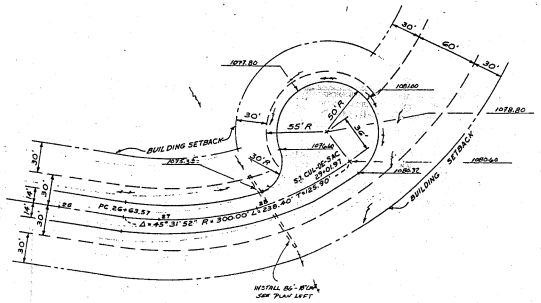
[signature] — 12-3-01
FIRE DISTRICT #4 — DATE

STEVEN M. HANSEN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 19496
EXPIRES NOV 19, 1996

REVISIONS		ROAD "B"	
		BLESSING	
Date 12-6-95	SCALE	J. PUAL RAMER & ASSOC., INC.	Project No. 95091
Drawn D. W.	Horizontal 1"=100'	CIVIL ENGINEERS & LAND SURVEYORS	
Checked –		N.10115 NEWPORT HWY. PH: 467-5261	
Field Book L.L.	Vertical 1"=10'	SPOKANE, WASHINGTON 99208	Sht 7 of 10

P-1824 Eng Road Drainage 9-27-43





CUL-DE-SAC
SCALE-1"=50'

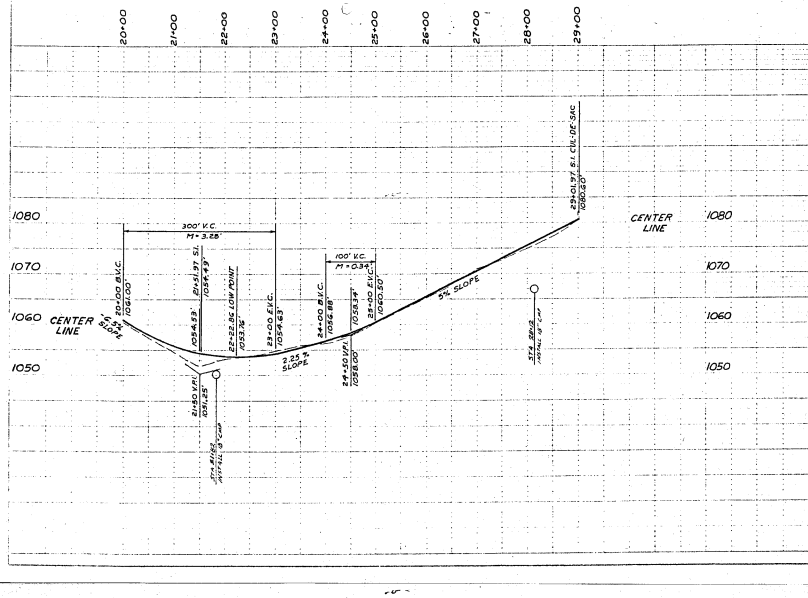
BASIS OF BEARING
SEE SHEET 1 OF 10

BASIS OF ELEVATION
SEE SHEET 1 OF 10

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P 1824
DATE ACCEPTED: 1/25/2002
ACCEPTANCE EXPIRES: 1/25/2004
PROJECT LANE MILES PUBLIC: 0
PROJECT LANE MILES PRIVATE: 1.0
CONSTRUCTION DOCUMENTATION AND CERTIFIED RECORD DRAWINGS, "AS-BUILTS" ARE REQUIRED PRIOR TO COUNTY ACCEPTANCE AND ESTABLISHMENT OF THE ROADS AND DRAINAGE FACILITIES FOR MAINTENANCE.
PERMIT REQUIRED! (509) 477-3600
NOTIFY PERMIT ENGINEER 2 BUSINESS DAYS PRIOR TO CONSTRUCTION

William C. Bradwell
DEVELOPER
11/28/01
DATE

Joe A. Kay Deputy Chief
FIRE DISTRICT #4
12-3-01
DATE

STEVEN M. HANSEN
STATE OF WASHINGTON
12/31/96
REGISTERED PROFESSIONAL ENGINEER
EXPIRES NOV 19, 1996

REVISIONS		ROAD "B"
		BLESSING
Date 12-11-95	SCALE	J. PAUL RAMER & ASSOC., INC.
Drawn J.W.	Horizontal 1"=100'	CIVIL ENGINEERS & LAND SURVEYORS
Checked SMH	Vertical 1"=10'	N.10115 NEWPORT HWY. PH: 467-5261
Field Book L.L.		SPOKANE, WASHINGTON 99218
		Project No. 95091
		Sht 8 of 10