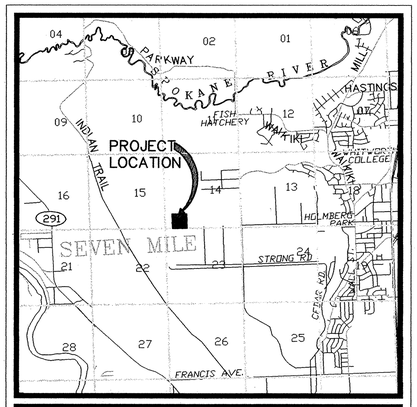
# SHAWNEE CANYON ESTATES

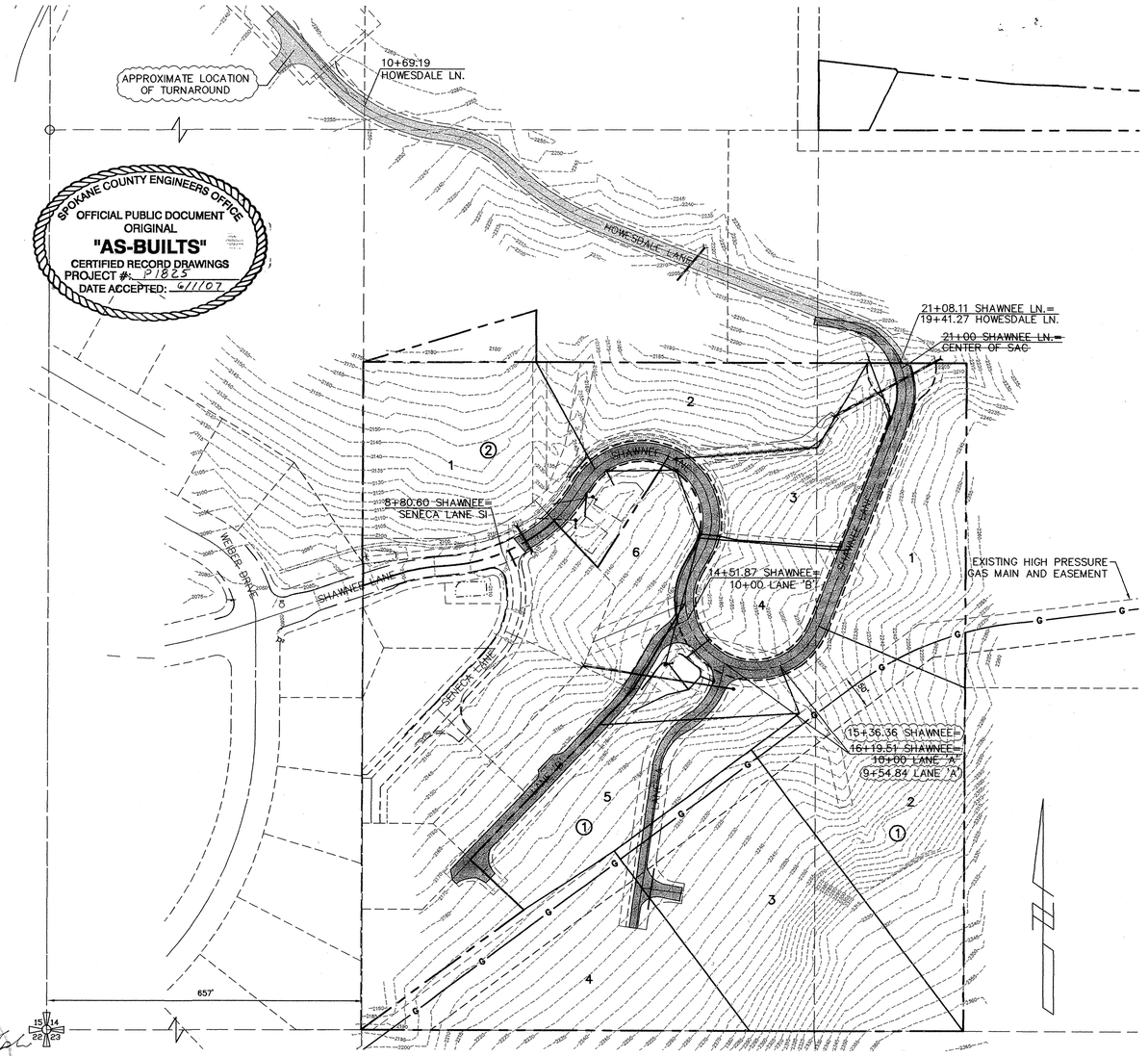
## STREET AND DRAINAGE PLANS

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON

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




VICINITY MAP




SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1825
DATE ACCEPTED: 6/1/07

## LEGEND

| EXISTING | GENERAL | PROPOSED |
|---|---|---|
| | ROADWAY CENTER LINE | |
| | PRIVATE ROAD EASEMENT | |
| | PROPERTY LINE | |
| | EASEMENT LINE | |
| | CURB | |
| | PAVEMENT | |
| | PLAT BOUNDARY | |
| | **STORM DRAINAGE** | |
| | DRAINAGE LINE | |
| DW | DRYWELL | DW |
| CB | CATCH BASIN | CB |
| | DITCH | |
| | **SANITARY SEWER** | |
| | SANITARY SEWER | |
| | MANHOLE | |
| | CLEANOUT | |
| | SEWER SERVICE | |
| | **WATER** | |
| | WATER LINE | |
| | VALVE | V |
| FH | FIRE HYDRANT | FH |
| WS | SERVICE | WS |
| BLOWOFF | BLOWOFF | BLOWOFF |

## ABBREVIATIONS

| | |
|---|---|
| SAN | SANITARY SEWER |
| WM | WATER MAIN |
| MH | MANHOLE |
| EXIST | EXISTING |
| CO | SEWER CLEANOUT |
| HYD | HYDRANT |
| RT | RIGHT |
| LT | LEFT |
| PC | POINT OF CURVE |
| PT | POINT OF TANGENCY |
| PRC | POINT OF REVERSE CURVE |
| PCC | POINT OF COMPOUND CURVE |
| CT | COURT |
| RD | ROAD |
| LN | LANE |
| STA | STATION |
| STA L | STATION LENGTH |
| ACT L | ACTUAL LENGTH |
| G | GRADE |
| I.E. | INVERT ELEVATION |
| RIM EL | RIM ELEVATION |
| DIA | DIAMETER |
| SI | STREET INTERSECTION |
| BDRY | BOUNDARY |
| EP | EDGE OF PAVEMENT |
| TC | TOP OF CURB |
| TA | TOP OF ASPHALT |
| CL | CENTERLINE |

**DATUM**
BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842

STATE OF WASHINGTON
KURT S. STORHAUG
33684
REGISTERED PROFESSIONAL ENGINEER
5/4/07
EXPIRE: 12/18/07

GRAPHIC SCALE
100 0 50 100 200
( IN FEET )
1 inch = 100 ft.

"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."

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:
FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

DOCUMENT LIMITATIONS: This document only represents an illustration of improvements recorded in place and is not an exact representation of location or placement. Only data shown in balloon ( ) represents information obtained from post construction survey This does not certify acceptability or approvability of construction work performed. Actual location of improvements should be verified by user and appropriate agencies.

## GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE COMPLETION OF THE INTENDED IMPROVEMENTS SHOWN ON THESE DRAWINGS OR DESIGNATED TO BE PROVIDED, INSTALLED OR CONSTRUCTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL WORK AND MATERIALS SHALL BE IN CONFORMANCE WITH THE "SPOKANE COUNTY STANDARDS FOR ROAD AND SEWER CONSTRUCTION 1995", AND AS AMENDED.
3. THE CONTRACTOR IS REQUIRED TO HAVE A VALID CONSTRUCTION PERMIT ON SITE AT ALL TIMES. THE ABSENCE OF THE PERMIT WILL RESULT IN AN IMMEDIATE SHUT DOWN OF WORK AND THE POSSIBLE REMOVAL OF THOSE ITEMS CONSTRUCTED WITHOUT THE PERMIT.
4. 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.
5. 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.
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. IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN THE PLANS AND EXISTING CONDITIONS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER, NELSON OGREN, @ 458–6840, THE SITE/ PROJECT INSPECTING ENGINEER OR HIS REPRESENTATIVE, BRUCE HOWARD AT S.T.I. NORTHWEST @ 534–9711 AND THE SPOKANE COUNTY ENGINEER AT 477–3600.
8. FOR CONSTRUCTION OF DRYWELLS, INSTALL FILTER FABRIC, "AMOCO" 4545 OR APPROVED EQUIVALENT, BETWEEN THE DRYWELL BARREL AND THE WASHED DRAINROCK, AND BETWEEN THE WASHED DRAINROCK AND THE NATIVE SOILS, PER SPOKANE COUNTY STANDARD DETAIL B–1a.
9. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT ALL CATCH BASINS AND DRYWELLS FROM BEING CONTAMINATED WITH SILT, BY INSTALLING FILTER FABRIC BETWEEN THE METAL FRAME AND GRATE DURING SITE CONSTRUCTION, AND KEEPING IT IN PLACE UNTIL THE ESTABLISHMENT OF GRASS AND THE STREETS HAVE BEEN PAVED AND CLEANED.

   IN THE EVENT SILT OR OTHER DELETERIOUS MATERIAL IS ALLOWED TO ENTER A DRYWELL OR CATCH BASIN, THE CONTRACTOR SHALL CLEAN THE STRUCTURE TO THE SATISFACTION OF THE CERTIFYING ENGINEER.
10. ALL DRYWELL CONNECTION PIPES SHALL BE PLACED BELOW THE DRYWELL CONCRETE CAP AND SHALL FLOW AS DIRECTED IN THE PLANS.
11. ALL CURB DROP INLETS ARE TO HAVE A 2" DEPRESSION PER FIGURE 48, PAGE 6–84 OF THE SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT. ALL GUTTER INLETS SHALL BE CONSTRUCTED WITH A 1" DEPRESSION PER STANDARD DETAIL B–18.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS WHICH MAY ACCUMULATE ON PAVED STREETS ADJACENT TO THE SITE AS A RESULT OF THE CONSTRUCTION ACTIVITY. CLEANING SHALL BE ON AN "AS NEEDED" BASIS USING WATER UNDER PRESSURE. SWEEPING AND WATER SHALL BE USED WHEN WATER PRESSURE ALONE WILL NOT WASH THE CONSTRUCTION DEBRIS FROM THE STREET.
13. THE FLOOR OF A GRASSED PERCOLATION AREA (GPA) SWALE INCLUDES THE LEVEL PORTION OF THE FLOOR OF THE SWALE AND THE SIDESTEPS 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 AND PRIOR TO FINAL ACCEPTANCE. THE SWALE FLOOR MATERIAL SHALL BE INSTALLED TO A NATIVE SOIL STRATUM WHICH ALSO MEETS OR EXCEED THIS MINIMUM PERCOLATION RATE OF 0.5 INCHES PER HOUR.
14. THE SPOKANE COUNTY ENGINEER REQUIRES SOIL TESTS WHERE AVERAGE POND DEPTHS ARE GREATER THAN 6 INCHES. ONE (1) TEST EACH FOR CATION EXCHANGE CAPACITY AND COIL ORGANIC CONTENT PER AREA 1,500 S.F. OR LESS. TESTS SHALL BE PERFORMED ON A WELL–MIXED COMPOSITE SAMPLE CONSISTING OF THE TOP SIX (6) INCHES OF SOIL FROM AT LEAST FOUR (4) CORES UNIFORMLY DISTRIBUTED OVER THE PERCOLATION AREA. IF THE AVERAGE CATION EXCHANGE CAPACITY IS 15 MILLIEQUIVALENTS PER 100 GRAMS OR MORE, OR THE SOIL IS 2% ORGANIC CARBON OR MORE, THE SOIL WILL BE CONSIDERED SUITABLE FOR STORMWATER TREATMENT.
15. NO QUANTITIES HAVE BEEN CALCULATED TO DETERMINE VOLUMES OF EXCAVATION AND EMBANKMENT ON THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE OR DISPOSE OF ALL EMBANKMENT AND/OR EXCAVATED MATERIALS.
16. EACH DRAINAGE POND SHALL BE SHAPED IN ACCORDANCE WITH THE APPROVED STREET AND DRAINAGE PLANS, SODDED AND IRRIGATED, CERTIFIED BY THE INSPECTION AGENCY, AND ACCEPTED BY THE SPOKANE COUNTY ENGINEERING DEPARTMENT PRIOR TO ACCEPTING ANY STORMWATER RUNOFF.

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DEVELOPER'S APPROVAL DATE

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

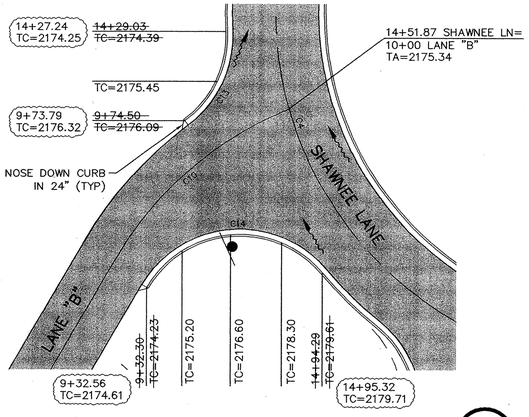
STREET CONSTRUCTION PLANS
**SHAWNEE CANYON ESTATES**
**STREET AND STORM DRAINAGE**
**COVER**
SPOKANE COUNTY, WASHINGTON

Sheet Title
STREET COVER



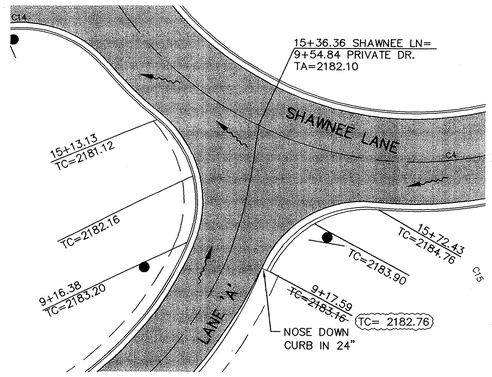
P 1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON




## INTERSECTION DETAIL (1)

SCALE: 1" = 20'




## INTERSECTION DETAIL (2)

SCALE: 1" = 20'

**NOTE:**
ROADWAY SECTION TRANSITIONS, SHAWNEE LANE:
STA 9+75 TO STA 10+50 &
STA 13+25 TO STA 14+00 &
STA 17+00 TO STA 17+50

KULWANT S. SAHI — STATE OF WASHINGTON — 33684 — REGISTERED PROFESSIONAL ENGINEER — 3/4/07 — EXPIRE: 12/18/07

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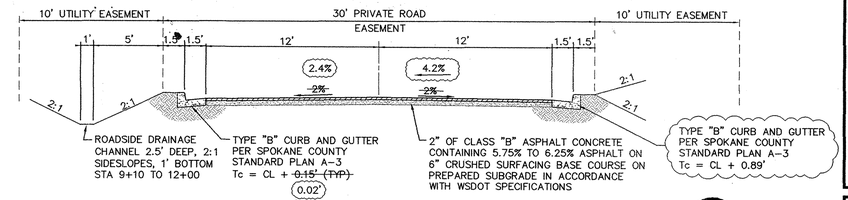



## TYPICAL ROADWAY SECTION, SHAWNEE LANE (A)

NOT TO SCALE

~~STA 9+07.96 TO STA 9+75~~

STA 9+10±

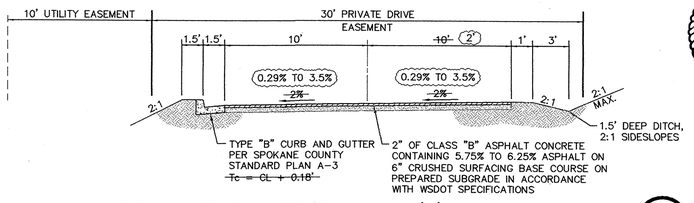
### CURVE TABLE

| CURVE | RADIUS | LENGTH | TANGENT | CHORD | DELTA |
|---|---|---|---|---|---|
| C4 | 100.00 | 329.80 | 1276.36 | 199.39 | 188°57'35" |
| C10 | 100.00 | 65.10 | 33.75 | 63.95 | 37°17'54" |
| C12 | 100.00 | 85.91 | 45.81 | 83.29 | 49°13'27" |
| C13 | 30.00 | 29.09 | 15.80 | 27.96 | 55°33'09" |
| C14 | 30.00 | 57.47 | 42.65 | 49.08 | 109°45'14" |
| C15 | 30.00 | 38.53 | 22.44 | 35.94 | 73°35'27" |
| C16 | 30.00 | 37.41 | 21.58 | 35.03 | 71°26'59" |

### RIP-RAP CHANNEL STABILIZATION

| STREET | STATION | | STATION | THICKNESS MIN. (in) | STONE SIZE MIN. (in) | STONE SIZE MAX (in) |
|---|---|---|---|---|---|---|
| SHAWNEE | 12+00 | TO | 13+25 | 12 | 1 | 6 |
| SHAWNEE | 16+50 | TO | 20+50 | | | |
| LANE 'B' | 5+50 | TO | 8+00 | | | |
| HOWESDALE | 10+70 | TO | 19+00 | | | |
| SHAWNEE | 8+00 | TO | 12+00 | 18 | 3 | 18 |

Underlayment: 6" CSBC per WSDOT Standard Specifications over Amoco 4545 Geotextile Fabric




## TYPICAL ROADWAY SECTION, LANE 'A' (E)

NOT TO SCALE

STA 5+34 TO STA 8+91

SPOKANE COUNTY ENGINEERS OFFICE
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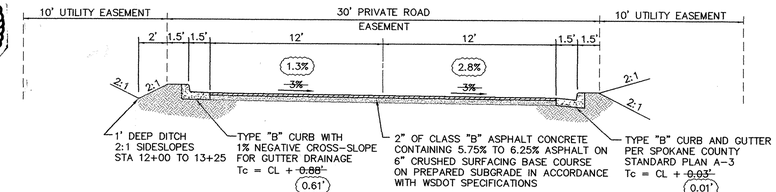
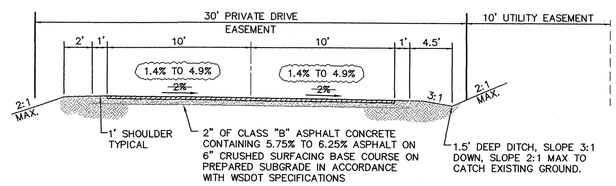



## TYPICAL ROADWAY SECTION, SHAWNEE LANE (B)

NOT TO SCALE

~~STA 10+50 TO STA 13+25~~

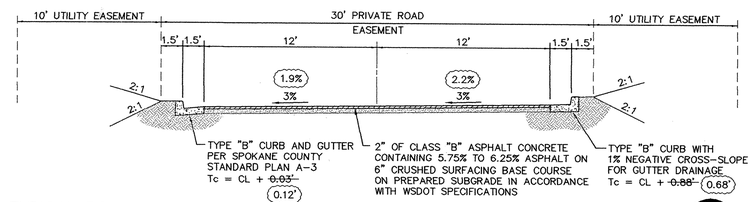
STA 11+90±




## TYPICAL ROADWAY SECTION, LANE 'B' (F)

NOT TO SCALE

STA 5+97 TO STA 8+47

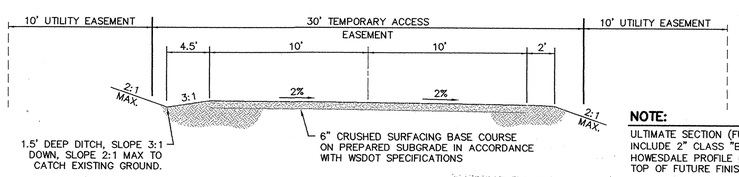



## TYPICAL ROADWAY SECTION, SHAWNEE LANE (C)

NOT TO SCALE

~~STA 14+00 TO STA 17+00~~

STA 16+15±

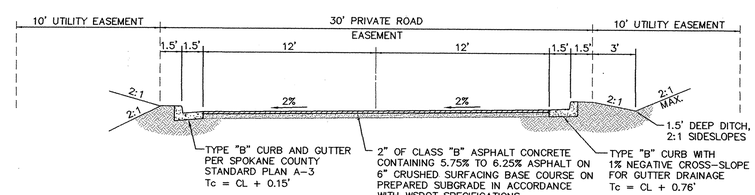



**NOTE:**
ULTIMATE SECTION (FUTURE) TO INCLUDE 2" CLASS "B" ASPHALT. HOWESDALE PROFILE (SHEET 5) SHOWS TOP OF FUTURE FINISHED GRADE.

## TYPICAL ROADWAY SECTION, HOWESDALE LANE (G)

NOT TO SCALE

STA 10+69.19 TO STA 19+41.27




## TYPICAL ROADWAY SECTION, SHAWNEE LANE (D)

NOT TO SCALE

STA 17+50 TO STA 20+50

### RECORD DRAWING:
FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
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**DATUM**
BASED ON CITY DATUM, C.B.M. NO. 32, N.E. CORNER – ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC
CITY ELEV. 1996.972 – 13.13' = NAVD88 ELEV = 1983.842.

DEVELOPER'S APPROVAL DATE

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |
| 04/28/04 | LANE A ALIGNMENT REVISIONS |

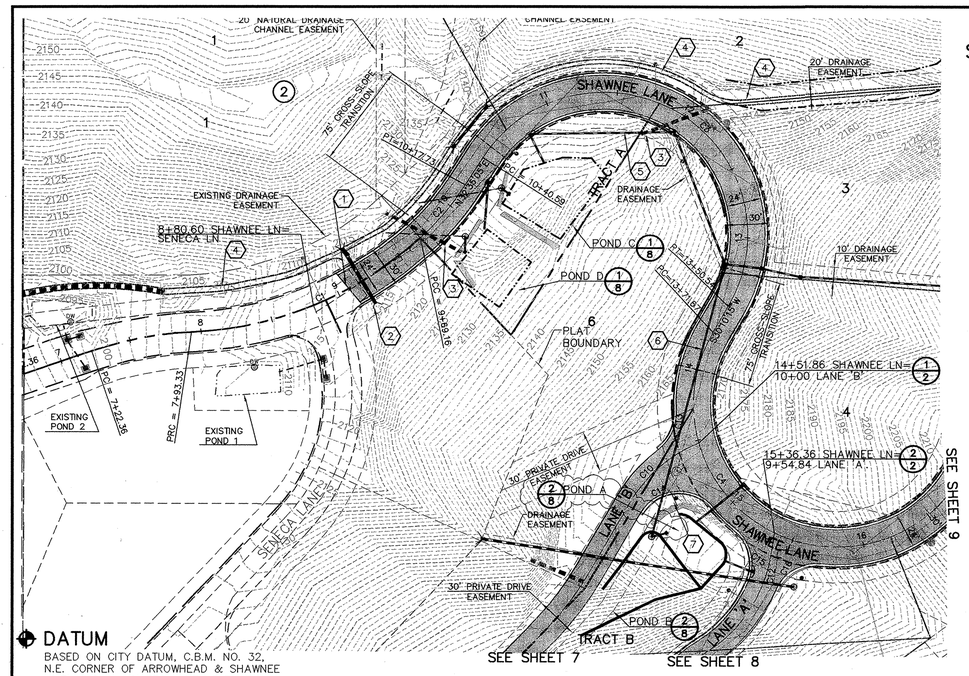
STREET CONSTRUCTION PLANS
**SHAWNEE CANYON ESTATES**
**STREET AND STORM DRAINAGE DETAILS**
SPOKANE COUNTY, WASHINGTON

Sheet Title: STREET DETAILS



P 1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON

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## CONSTRUCTION NOTES:

**– SEE POND DETAILS AND ONSITE STORM SYSTEM PLANS AND PROFILES FOR DRAINAGE CONSTRUCTION NOTES.**

1. STA 9+07.96. SAWCUT EXISTING ASPHALT. TACK COAT EDGE PRIOR TO PAVING.
2. STA 9+18.40, RT. CONCRETE HEADWALL FOR EXISTING 24" CMP CULVERT. SEE DETAIL 3, SHEET 8.
3. REMOVE EXISTING CULVERT PIPES.
4. DRAINAGE CHANNEL. SEE SHEET 9 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
5. ONSITE STORM SYSTEM. SEE SHEET 10 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
6. TRACT A OVERFLOW. SEE SHEET 11 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
6. "STREET NAME" SIGN PER SPOKANE COUNTY STANDARD PLAN A-6.

## CURVE TABLE

| CURVE | RADIUS | LENGTH | TANGENT | CHORD | DELTA |
|---|---|---|---|---|---|
| C1 | 250.00 | 175.83 | 91.73 | 172.23 | 40°17'49" |
| C2 | 190.53 | 48.57 | 24.41 | 48.43 | 14°36'16" |
| C3 | 100.00 | 309.95 | 4746.41 | 199.96 | 177°35'10" |
| C4 | 100.00 | 329.80 | 1276.36 | 199.39 | 188°57'35" |
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REGISTERED PROFESSIONAL ENGINEER
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CALL TWO BUSINESS DAYS BEFORE YOU DIG

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50 0 25 50 100
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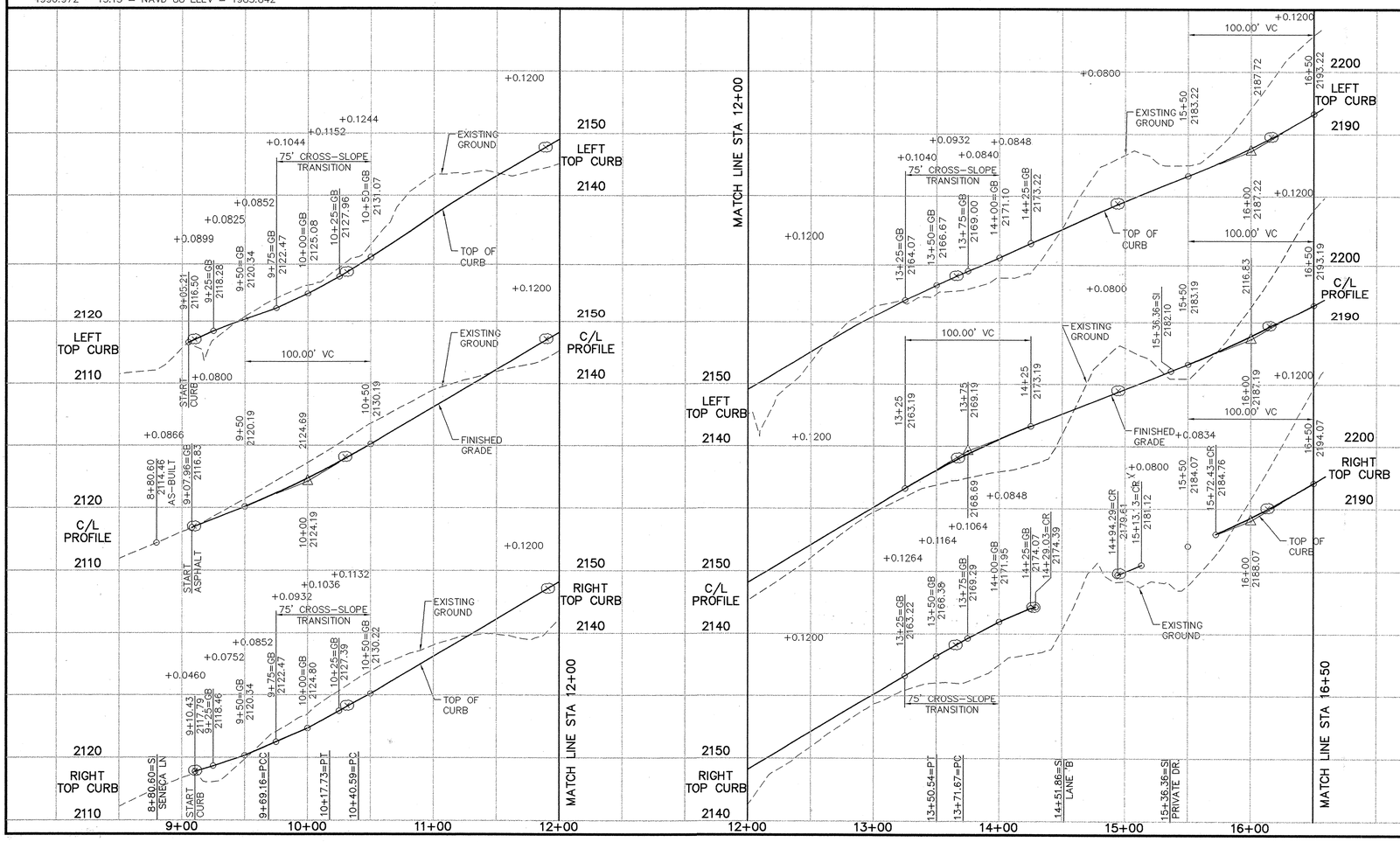
DEVELOPER'S APPROVAL DATE

VERTICAL SCALE: 1"=10'

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| 04/29/04 | LANE A ALIGNMENT CHANGES |

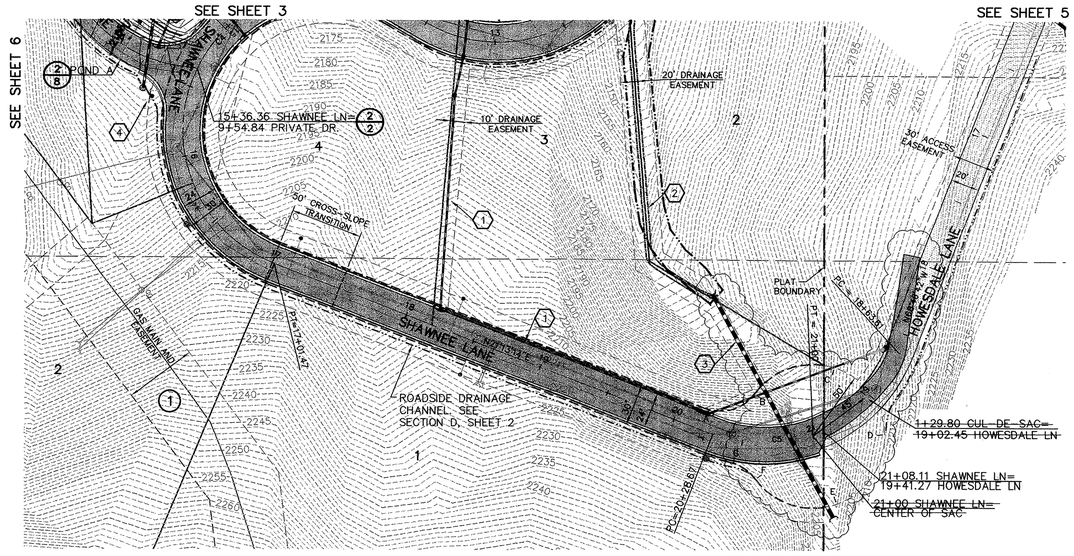
STREET CONSTRUCTION PLANS
# SHAWNEE CANYON ESTATES
## STREET AND STORM DRAINAGE
## SHAWNEE LANE STA 8+80.60 TO STA 16+50
SPOKANE COUNTY, WASHINGTON

Sheet Title
STREET PLAN AND PROFILE



P1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON




## DATUM

BASED ON CITY DATUM, C.B.M. NO. 32,
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19.7' NNC & 1.2' EEC. CITY ELEVATION
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## CONSTRUCTION NOTES:

—SEE POND DETAILS AND ONSITE STORM SYSTEM PLANS AND PROFILES FOR DRAINAGE CONSTRUCTION NOTES.

1. ONSITE STORM SYSTEM. SEE SHEET 10 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
2. DRAINAGE CHANNEL. SEE SHEET 9 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
3. 180 L.F. OF 30" HDPE CULVERT WITH CONCRETE HEADWALL PER DETAIL 3, SHEET 8.
   IE(NE)=2202.0, STA 20+96.60, ~~64.7' RT.~~ 58.1' RT.
   2171.2 IE(SW)=~~2171.0~~, STA 19+93.50, ~~86.7' LT.~~ 90.8' LT.
   S=~~0.1722~~ 0.1711
4. "STREET NAME" SIGN PER SPOKANE COUNTY STANDARD PLAN A-16.

## CURVE TABLE

| CURVE | RADIUS | LENGTH | TANGENT | CHORD | DELTA |
|---|---|---|---|---|---|
| C4 | 100.00 | 329.80 | 1276.36 | 199.39 | 188°57'35" |
| C5 | 100.00 | 157.10 | 100.02 | 141.43 | 90°00'37" |
| C12 | 90.00 | 103.02 | 57.98 | 97.49 | 65°35'03" |
| C15 | 30.00 | 64.91 | 56.39 | 52.97 | 128°58'33" |
| C16 | 30.00 | 27.74 | 14.95 | 26.77 | 52°59'19" |

KUIWANT S. SAHI
STATE OF WASHINGTON
33894
REGISTERED PROFESSIONAL ENGINEER
5/14/07
EXPIRES 12/18/07

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

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

"I have reviewed the construction and to my knowledge find it to be in substantial compliance with the approved certified plans and Standard Specifications except as noted."

## RECORD DRAWING:

FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

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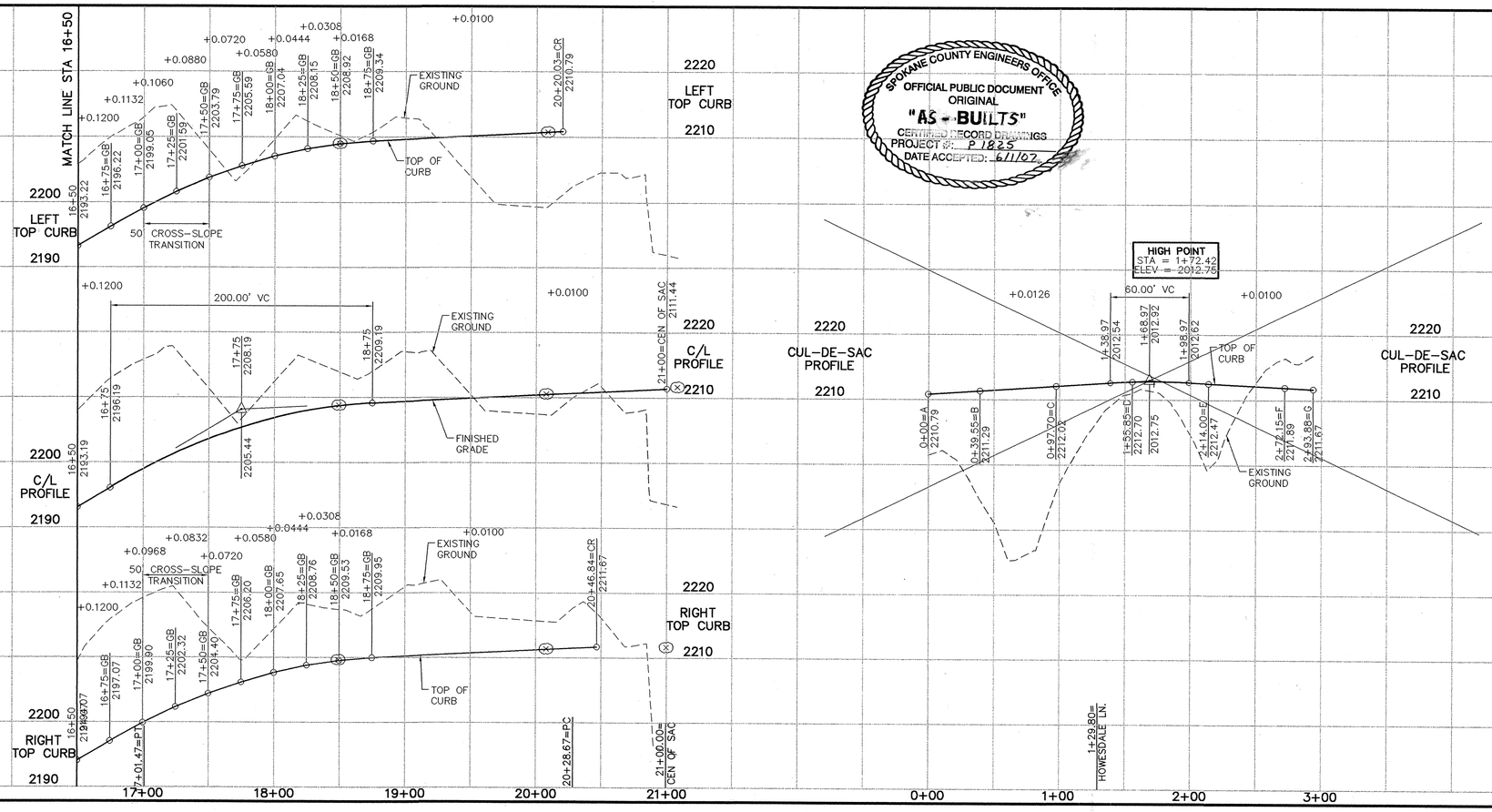
DEVELOPER'S APPROVAL DATE

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

VERTICAL SCALE: 1"=10'



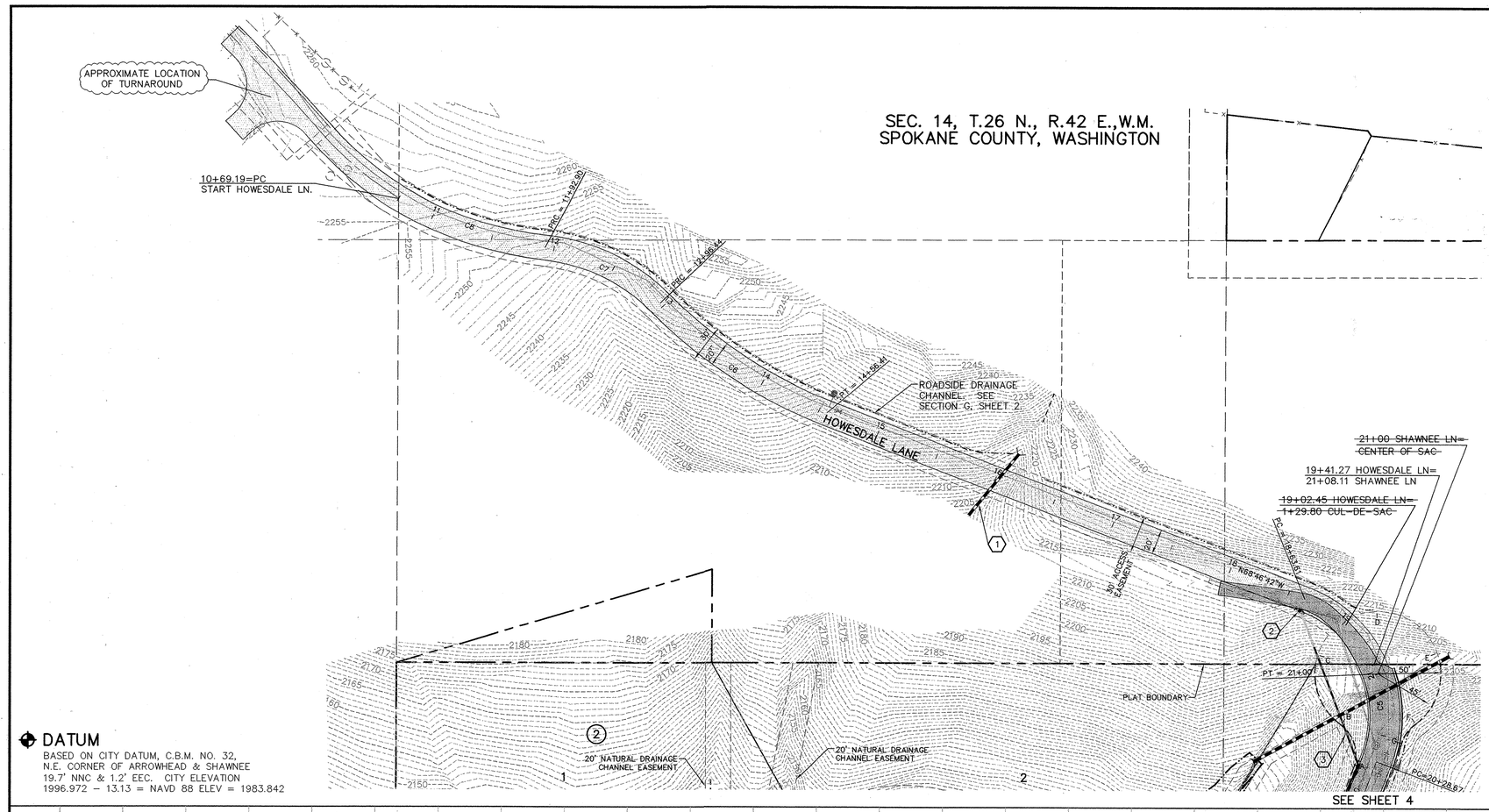

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P 1825
DATE ACCEPTED: 6/1/07

STREET CONSTRUCTION PLANS
**SHAWNEE CANYON ESTATES**
**STREET AND STORM DRAINAGE**
**SHAWNEE LANE STA 16+50 TO STA 21+08.11**
SPOKANE COUNTY, WASHINGTON

Sheet Title
STREET PLAN AND PROFILE



P1825 Engr As-Builts




## DATUM

BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842

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

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

"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."

## CONSTRUCTION NOTES:

—SEE POND DETAILS AND ONSITE STORM SYSTEM PLANS AND PROFILES FOR DRAINAGE CONSTRUCTION NOTES.

1. 63 L.F. OF 18" HDPE CULVERT WITH CONCRETE HEADWALL PER DETAIL 3, SHEET 8.
IE(NE)=2214.0, IE(SW)=2202.0. S=0.1905
2. STA 18+63.07, RT. TYPE 1 CATCH BASIN (FUTURE).
3. ONSITE STORM SYSTEM. SEE SHEET 10 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.

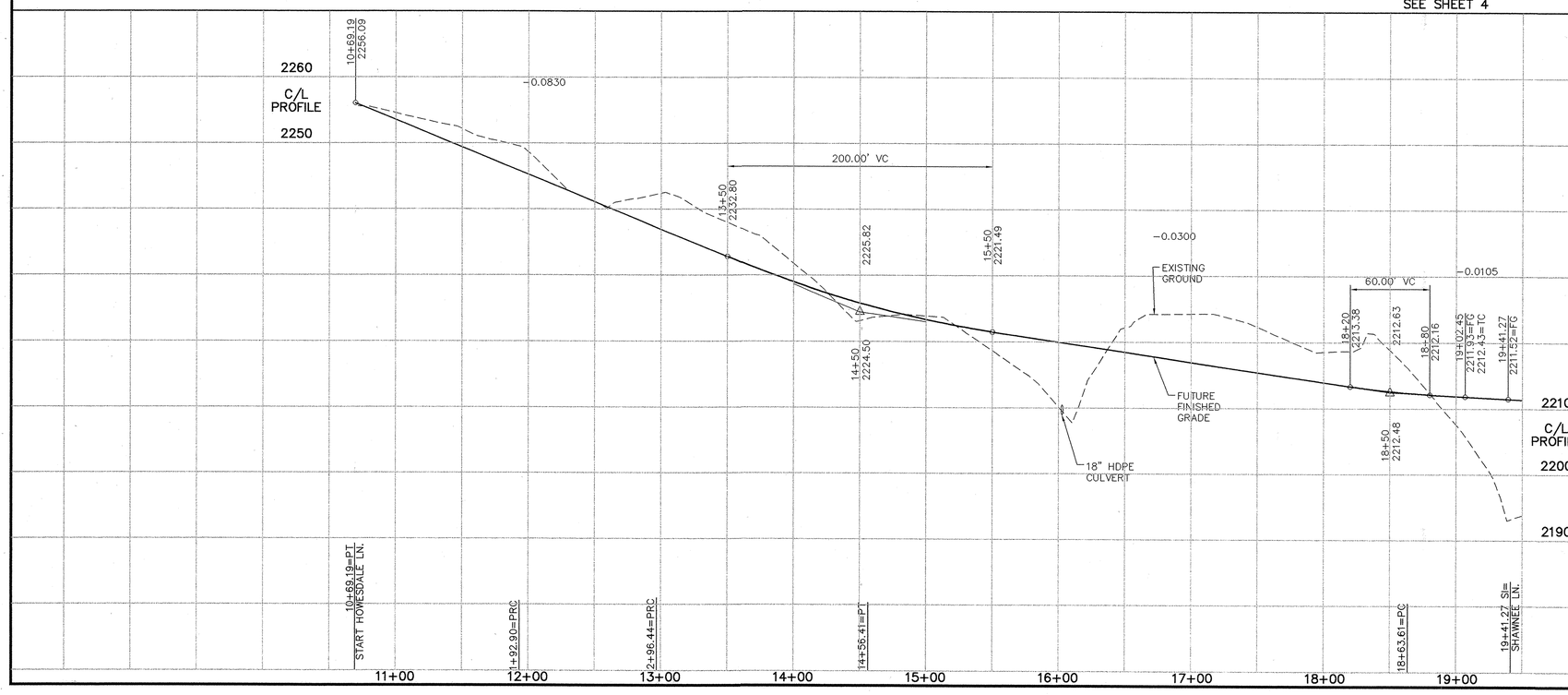
## CURVE TABLE

| CURVE | RADIUS | LENGTH | TANGENT | CHORD | DELTA |
|---|---|---|---|---|---|
| C5 | 100.00 | 157.10 | 100.02 | 141.43 | 90°00'37" |
| C6 | 357.00 | 159.97 | 81.35 | 158.64 | 25°40'29" |
| C7 | 150.00 | 103.54 | 53.93 | 101.50 | 39°33'03" |
| C8 | 275.00 | 123.71 | 62.92 | 122.67 | 25°46'27" |

DEVELOPER'S APPROVAL

DATE

VERTICAL SCALE: 1"=10'




## RECORD DRAWING:

FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

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SPOKANE COUNTY ENGINEERS OFFICE
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CERTIFIED RECORD DRAWINGS
PROJECT #: P1825
DATE ACCEPTED: 6/1/07

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

STREET CONSTRUCTION PLANS

# SHAWNEE CANYON ESTATES

## STREET AND STORM DRAINAGE

## HOWESDALE LN STA 10+69.19 TO STA 19+41.27

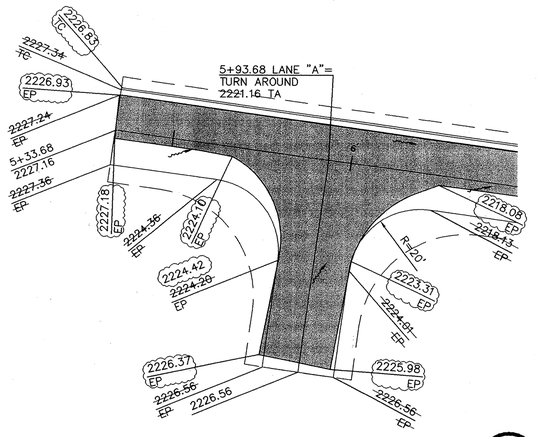
SPOKANE COUNTY, WASHINGTON

Sheet Title
STREET PLAN AND PROFILE



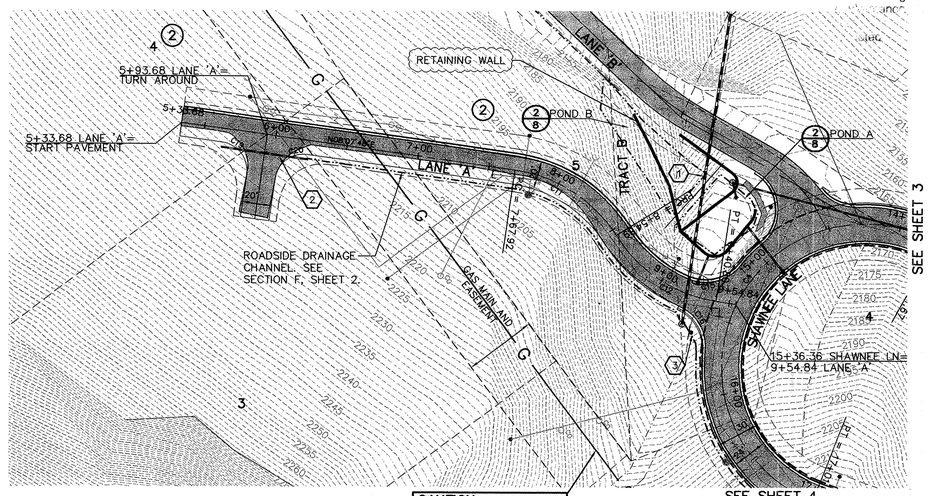
P1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON




TURN AROUND DETAIL (1)

SCALE: 1" = 20'




**CAUTION**
EXISTING HIGH
PRESSURE GAS MAIN

"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."

KUWAIT S. SAIF
STATE OF WASHINGTON
EXPIRE: 12/18/07
3/29/07

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

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

## CONSTRUCTION NOTES:

**– SEE POND DETAILS AND ONSITE STORM SYSTEM PLANS AND PROFILES FOR DRAINAGE CONSTRUCTION NOTES.**

(1) BY–PASS CULVERT. SEE SHEET 12 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.

(2) (61) ~~60~~ L.F. OF 12" HDPE CULVERT.
IE(N)=~~2217.13~~ (2217.10) IE(S)=~~2221.03~~ (2221.19) ~~S=0.0650~~ (S=0.067)

(3) "STREET NAME" SIGN PER SPOKANE COUNTY STANDARD PLAN A–6

## CURVE TABLE

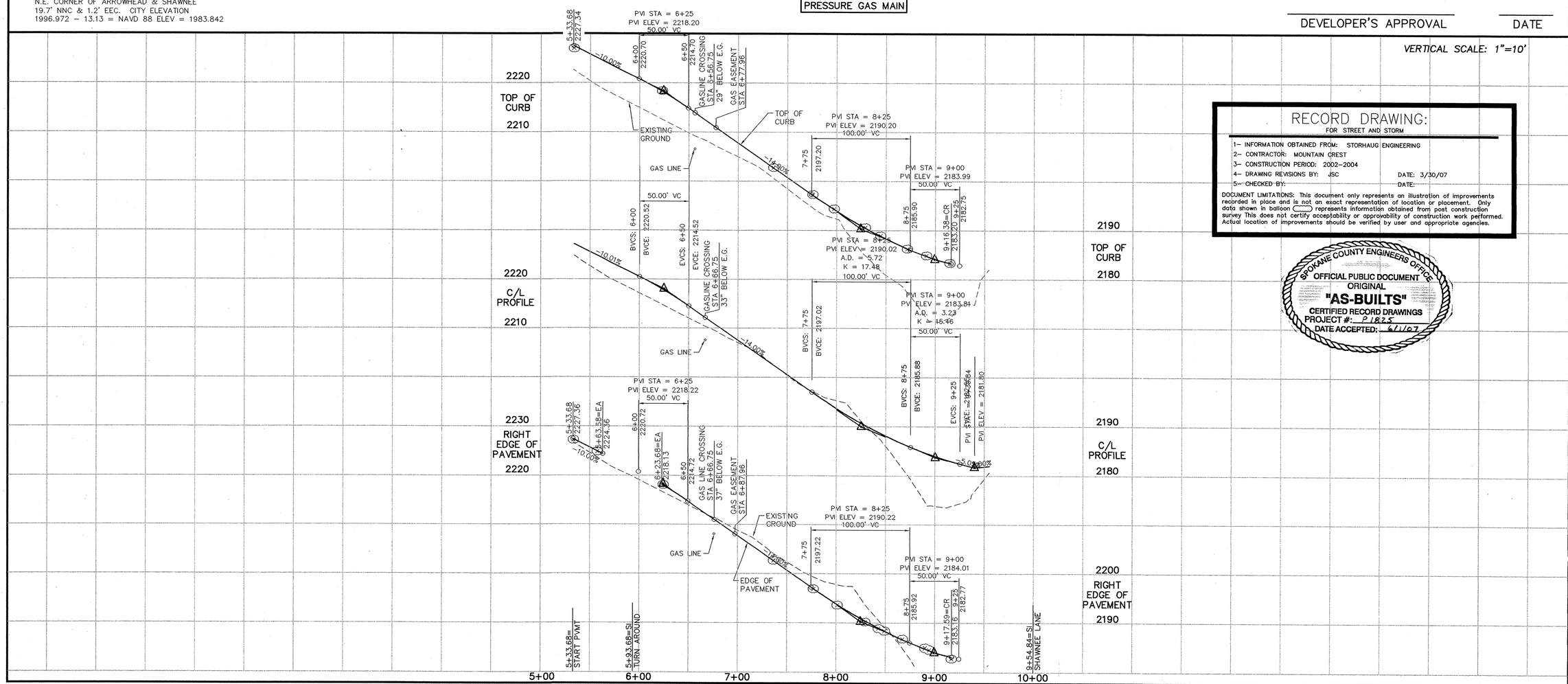
| CURVE | RADIUS | LENGTH | TANGENT | CHORD | DELTA |
|---|---|---|---|---|---|
| C4 | 100.00 | 329.80 | 1276.36 | 199.39 | 188°57'35" |
| C11 | 100.00 | 86.97 | 46.45 | 84.25 | 49°49'45" |
| C12 | 100.00 | 85.91 | 45.81 | 83.29 | 49°13'27" |
| C15 | 30.00 | 38.53 | 22.44 | 35.94 | 73°35'27" |
| C16 | 30.00 | 37.41 | 21.58 | 35.03 | 71°26'59" |
| ~~C19~~ | ~~20.00~~ | ~~31.42~~ | ~~20.00~~ | ~~28.28~~ | ~~90°00'00"~~ |
| C20 | 20.00 | 31.42 | 20.00 | 28.28 | 90°00'00" |

## DATUM

BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842

DEVELOPER'S APPROVAL DATE

*VERTICAL SCALE: 1"=10'*




## RECORD DRAWING:
FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

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SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1825
DATE ACCEPTED: 6/1/07

| Date | Description |
|---|---|
| 05/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |
| 04/16/04 | LANE A ALIGNMENT REVISIONS |

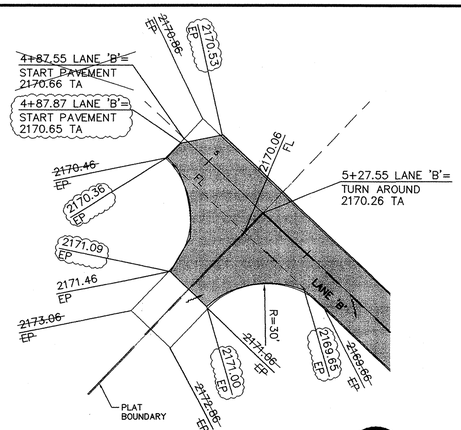
STREET CONSTRUCTION PLANS
**SHAWNEE CANYON ESTATES**
**STREET AND STORM DRAINAGE**
**LANE 'A' STA 5+33.68 TO STA 10+00**
SPOKANE COUNTY, WASHINGTON

Sheet Title
STREET PLAN AND PROFILE

6 OF 12
Sheet Number

P1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON




## INTERSECTION DETAIL

SCALE: 1" = 20'

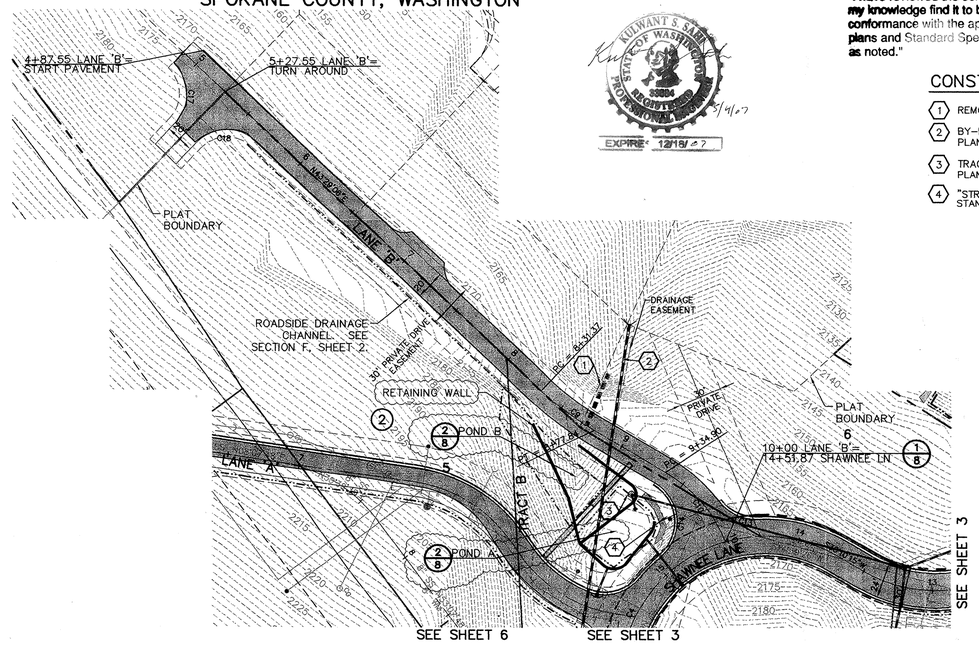
1 / —

## CURVE TABLE

| CURVE | RADIUS | LENGTH | TANGENT | CHORD | DELTA |
|---|---|---|---|---|---|
| C4 | 100.00 | 329.80 | 1276.36 | 199.39 | 188°57'35" |
| C9 | 200.00 | 46.48 | 23.34 | 46.37 | 13°18'51" |
| C10 | 100.00 | 65.10 | 33.75 | 63.95 | 37°17'54" |
| C13 | 30.00 | 29.09 | 15.80 | 27.96 | 55°33'09" |
| C14 | 30.00 | 57.47 | 42.65 | 49.08 | 109°45'14" |
| C17 | 30.00 | 47.12 | 30.00 | 42.43 | 90°00'00" |
| C18 | 30.00 | 47.12 | 30.00 | 42.43 | 90°00'00" |

## DATUM

BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842




"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."

KULWANT S. SAHI
STATE OF WASHINGTON
30884
REGISTERED PROFESSIONAL ENGINEER
3/9/07
EXPIRE: 12/18/07

## CONSTRUCTION NOTES:

1. REMOVE EXISTING STORM CULVERT.
2. BY-PASS CULVERT. SEE SHEET 12 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
3. TRACT B OVERFLOW. SEE SHEET 11 FOR PLAN, PROFILE, AND CONSTRUCTION NOTES.
4. "STREET NAME" SIGN PER SPOKANE COUNTY STANDARD PLAN A-6.

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

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

## RECORD DRAWING:

FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
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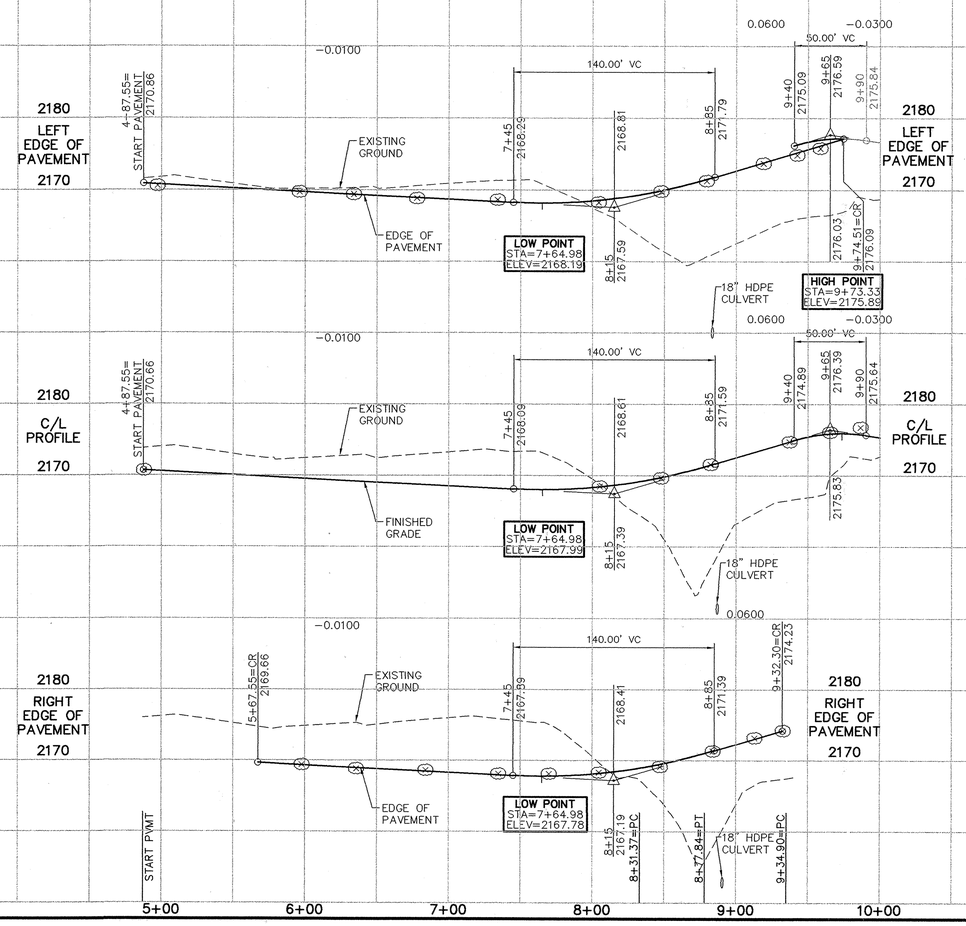
DEVELOPER'S APPROVAL DATE

VERTICAL SCALE: 1"=10'




SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1825
DATE ACCEPTED: 6/11/07

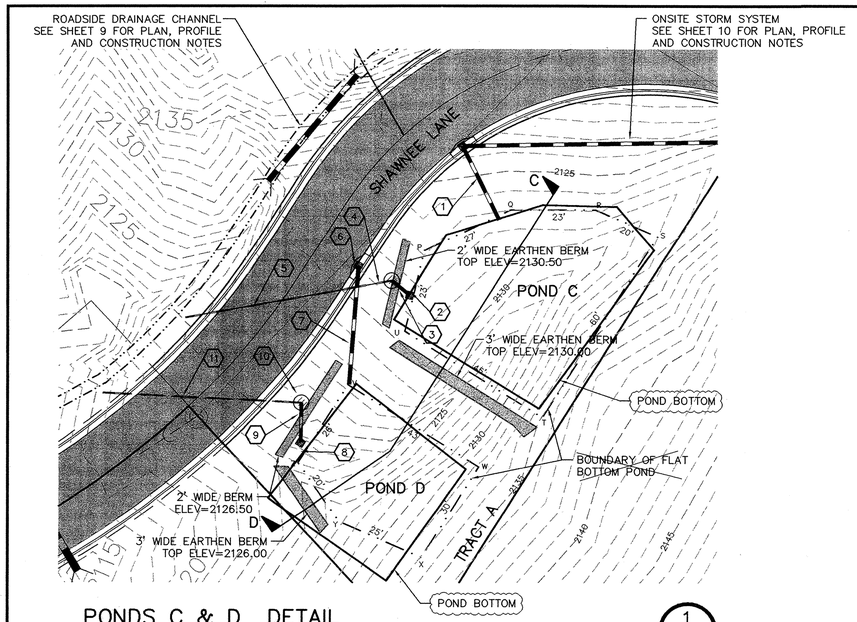
| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

STREET CONSTRUCTION PLANS
# SHAWNEE CANYON ESTATES
## STREET AND STORM DRAINAGE
## LANE 'B' STA 4+87.55 TO STA 10+00
SPOKANE COUNTY, WASHINGTON

Sheet Title
STREET PLAN AND PROFILE



P1825 Engr As-Builts




## PONDS C & D DETAIL

SCALE: 1" = 20'

1

POND D

POND BOTTOM ELEV = 2125.00
POND BOTTOM AREA = ~~1350 S.F.~~ 1545 S.F.
REQUIRED "208" VOLUME = 82 C.F.
PROVIDED "208" VOLUME = 718 C.F.
OUTLET ELEVATION = 2125.50
MINIMUM BERM ELEV = 2126.00

POND C

POND BOTTOM ELEV = 2129.00
POND BOTTOM AREA = ~~2493 S.F.~~ 2434 S.F.
REQUIRED "208" VOLUME = 1790 C.F.
PROVIDED "208" VOLUME = 1792 C.F.
OUTLET ELEVATION = 2129.67
MINIMUM BERM ELEV = 2130.00

POND BOTTOM LOCATION TABLE (SHAWNEE LANE STATION & OFFSET)

| POINT | STATION | OFFSET |
|---|---|---|
| V | 10+01.1 | 28.8' RT. |
| W | 10+04.1 | 71.6' RT. |
| X | 9+82.6 | 75.6' RT. |
| Y | 9+76.2 | 52.2' RT. |
| Z | 9+79.1 | 32.6' RT. |

POND BOTTOM DIMENSION TABLE

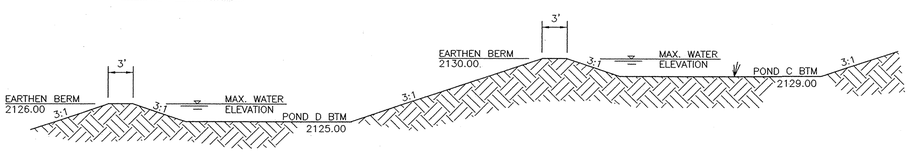
| POINTS | LENGTH |
|---|---|
| V–W | 43' |
| W–X | 30' |
| X–Y | 25' |
| Y–Z | 20' |
| Z–V | 26' |

POND BOTTOM LOCATION TABLE (SHAWNEE LANE STATION & OFFSET)

| POINT | STATION | OFFSET |
|---|---|---|
| P | 10+42.1 | 25.6' RT. |
| Q | 10+77.9 | 35.1' RT. |
| R | 11+13.9 | 45.6' RT. |
| S | 11+46.8 | 54.9' RT. |
| T | 10+20.0 | 78.5' RT. |
| U | 10+19.7 | 33.3' RT. |

POND BOTTOM DIMENSION TABLE

| POINTS | LENGTH |
|---|---|
| P–Q | 27' |
| Q–R | 23' |
| R–S | 20' |
| S–T | 60' |
| T–U | 45' |
| U–P | 23' |




## PONDS C & D SECTION

NOT TO SCALE

5

"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."

5/4/07

EXPIRES 12/18/07

## RECORD DRAWING:

FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

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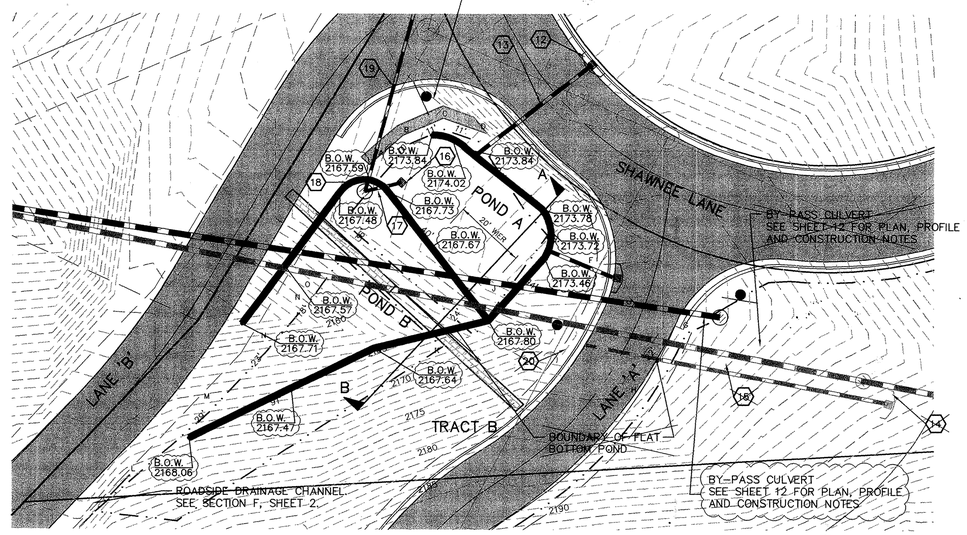
## COUNTY DATUM

BASED ON CITY DATUM, C.B.M. NO. 32,
NE CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON




## PONDS A & B DETAIL

SCALE: 1" = 20'

2

POND B

POND BOTTOM ELEV = 2166.00
POND BOTTOM AREA = 2273 S.F.
REQUIRED "208" VOLUME = 558 C.F.
PROVIDED "208" VOLUME = 1193 C.F.
OUTLET ELEVATION = 2166.50
MINIMUM BERM ELEV = 2167.20

POND BOTTOM LOCATION TABLE (LANE B STATION & OFFSET)

| POINT | STATION | OFFSET |
|---|---|---|
| I | 9+24.7 | 31.6' RT. |
| J | 9+16.0 | 70.9' RT. |
| K | 8+92.7 | 65.0' RT. |
| L | 8+24.0 | 16.0' RT. |
| M | 8+50.8 | 20.9' RT. |
| N | 8+71.3 | 24.9' RT. |
| O | 8+88.5 | 27.3' RT. |

POND BOTTOM DIMENSION TABLE

| POINTS | LENGTH |
|---|---|
| I–J | 40' |
| J–K | 24' |
| K–L | 91' |
| L–M | 29' |
| M–N | 23' |
| N–O | 18' |
| O–I | 36' |

POND A

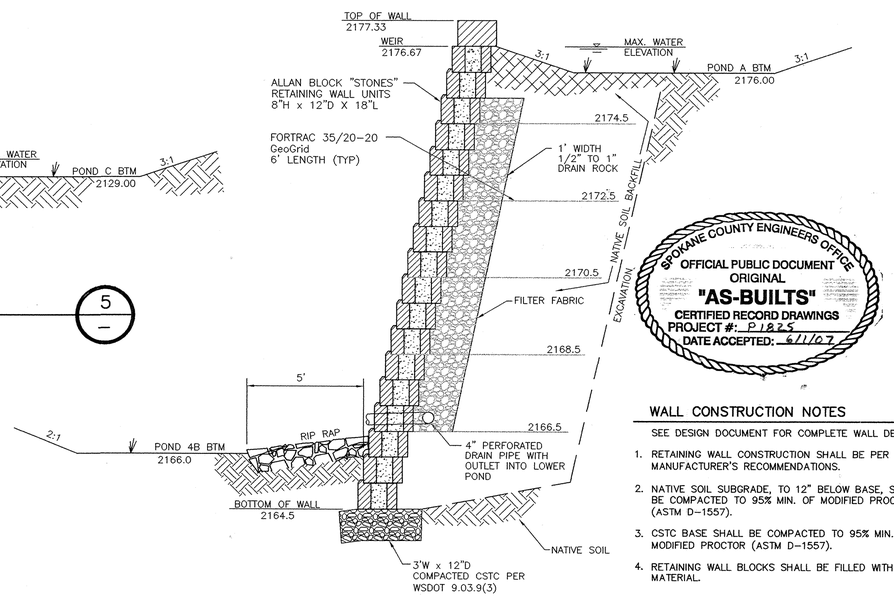
POND BOTTOM ELEV = 2176.00
POND BOTTOM AREA = 1773 S.F.
REQUIRED "208" VOLUME = 951 C.F.
PROVIDED "208" VOLUME = 972 C.F.
OUTLET ELEVATION = 2176.50
TOP OF WALL ELEV = 2177.33
MINIMUM BERM ELEV = 2177.00

POND BOTTOM LOCATION TABLE (SHAWNEE LANE STATION & OFFSET)

| POINT | STATION | OFFSET |
|---|---|---|
| A | 14+84.8 | 51.1' RT. |
| B | 14+83.9 | 41.2' RT. |
| C | 14+85.5 | 30.8' RT. |
| D | 14+92.4 | 24.9' RT. |
| E | 15+10.8 | 29.5' RT. |
| F | 15+29.2 | 34.2' RT. |
| G | 15+51.5 | 39.9' RT. |
| H | 15+46.0 | 59.8' RT. |

POND BOTTOM DIMENSION TABLE

| POINTS | LENGTH |
|---|---|
| A–B | 10' |
| B–C | 11' |
| C–D | 11' |
| D–E | 24' |
| E–F | 25' |
| F–G | 31' |
| G–H | 22' |
| H–A | 94' |




## PONDS A & B AND RETAINING WALL SECTION

NOT TO SCALE

4

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1825
DATE ACCEPTED: 6/1/07

### WALL CONSTRUCTION NOTES

SEE DESIGN DOCUMENT FOR COMPLETE WALL DESIGN.

1. RETAINING WALL CONSTRUCTION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
2. NATIVE SOIL SUBGRADE, TO 12" BELOW BASE, SHALL BE COMPACTED TO 95% MIN. OF MODIFIED PROCTOR (ASTM D–1557).
3. CSTC BASE SHALL BE COMPACTED TO 95% MIN. OF MODIFIED PROCTOR (ASTM D–1557).
4. RETAINING WALL BLOCKS SHALL BE FILLED WITH CSTC MATERIAL.

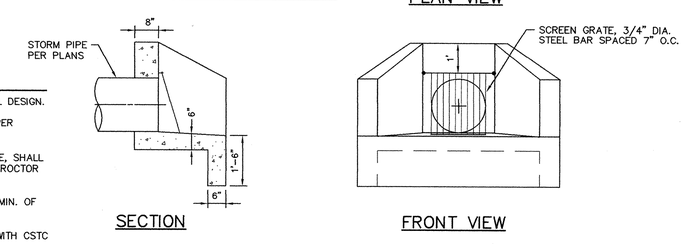
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
456·8000
CALL TWO BUSINESS DAYS BEFORE YOU DIG

## CONSTRUCTION NOTES:

1. 21 L.F. OF 12" H.D.P.E. STORM PIPE. S=0.0210. IE(N)=2129.94, IE(S)=~~2129.50.~~ 2130.35 SEE ONSITE STORM SYSTEM (SHEET 10) FOR PLAN AND PROFILE.
2. STA 10+29.5, 27.6' RT. TYPE 1 CATCH BASIN WITH TYPE 2 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–11, B–13, B–17 AND B–18. RIM ELEV=~~2129.67.~~ 2130.19
3. 6 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0500. IE(E)=2124.80, IE(W)=~~2124.50.~~ 2124.87
4. STA 10+27, 20.5' RT. TYPE B DRYWELL WITH TYPE 4 METAL FRAME AND SOLID COVER PER SPOKANE COUNTY STANDARD PLANS B–1a AND B–15. RIM ELEV=~~2129.50.~~ 2130.57
5. 54 L.F. OF 2" PVC DRAIN PIPE. S=0.0650. IE(E)=2125.5, IE(W)=2122.0.
6. STA 10+28.00, 12.5' RT. TYPE 1 CONCRETE INLET WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–5, B–10, B–12, B–17 AND B–18. TC ELEV=2127.73, RIM ELEV=~~2127.15.~~ 2127.46
7. 33 L.F. OF 10" H.D.P.E. STORM PIPE. SEE SHEET 11 FOR PROFILE. S=0.0052. IE(N)=2125.30, IE(S)~~2125.13.~~ 2125.18 9+83.2, 29' RT.
8. STA ~~9+81.4,~~ 30' RT. TYPE 1 CATCH BASIN WITH TYPE 2 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–11, B–13, B–17 AND B–18. RIM ELEV=~~2125.50.~~ 2125.49
9. 11 ~~12~~ L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0500. IE(N)=~~2120.50.~~ IE(S)=2121.10. 2118.76
10. STA 9+90.8, 21.2' RT. TYPE B DRYWELL WITH TYPE 4 METAL FRAME AND SOLID COVER PER SPOKANE COUNTY STANDARD PLANS B–1a AND B–15. RIM ELEV=~~2125.50.~~ 2126.26
11. 54 L.F. OF 2" PVC DRAIN PIPE. S=0.0650. IE(E)=2121.5, IE(W)=2118.0.
12. STA 14+96.00, 12.5' LT. TYPE 1 CONCRETE INLET WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–5, B–10, B–12, B–17 AND B–18. TC ELEV=2178.90, RIM ELEV=~~2178.32.~~ 2178.64
13. 41 ~~38~~ L.F. OF 10" H.D.P.E. STORM PIPE. SEE SHEET 11 FOR PROFILE. S=0.0084. IE(NE)=2176.32, IE(SW)=~~2176.00.~~ 2175.42
14. ~~STA 9+32.69, 11.9' LT (LANE A). TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–7, B–10, B–12, B–17 AND B–18. TC ELEV=2192.45, RIM ELEV=2191.87.~~
15. ~~65 L.F. OF 12" H.D.P.E. STORM PIPE. SEE SHEET 11 FOR PROFILE. S=0.1595. IE(E)=2186.87, IE(W)=2176.50.~~
16. STA 9+29.2, 32' RT (LANE B). TYPE 1 CATCH BASIN WITH TYPE 2 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–11, B–13 AND B–17. RIM ELEV=~~2176.50.~~ 2174.37
17. 19 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0000. IE(E)=2171.50, IE(W)=2163.50.
18. STA 9+22, 25.2' RT (LANE B). TYPE B DRYWELL WITH TYPE 4 METAL FRAME AND SOLID COVER PER SPOKANE COUNTY STANDARD PLANS B–1a AND B–15. RIM ELEV=~~2166.50.~~ 2168.22
19. 196 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0184. IE(N)=2157.90, IE(S)=2161.50. SEE TRACT A OVERFLOW (SHEET 11) FOR PLAN AND PROFILE.
20. BLOCK RETAINING WALL. SEE SECTION DETAIL 4, THIS SHEET.

NOTE:
MINIMUM CONCRETE MIX FOR HEADWALL AND APRON SHALL BE 5 1/2 SACK, 3000 PSI. HEADWALL SLAB AND WALL TO BE REINFORCED WITH #4 BARS 6" O.C. EACH DIRECTION THROUGHOUT. 1" CHAMFER ON ALL EXPOSED CORNERS OF WALLS.

| D | L | E | F | W |
|---|---|---|---|---|
| 18" | 2'–3 1/8" | 1'–3" | 1'–10 1/2" | 2'–0" |
| 24" | 3'–1 7/8" | 1'–9" | 2'–7 1/2" | 2'–6" |
| 30" | 4'–0 5/8" | 2'–3" | 3'–4 1/2" | 3'–0" |
| 36" | 4'–11 1/2" | 2'–9" | 4'–1 1/2" | 3'–6" |




WILBERT PRECAST – PRODUCT #4016

## CONCRETE HEADWALL

NOT TO SCALE

3

DEVELOPER'S APPROVAL DATE

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 06/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

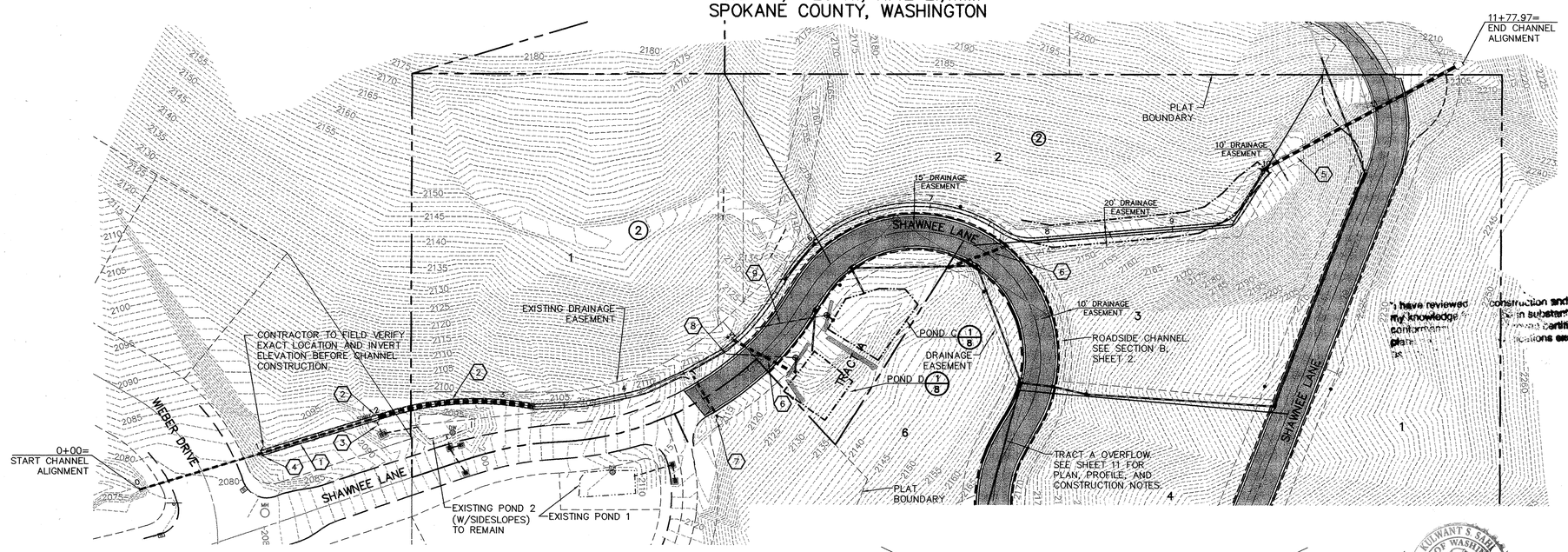
STREET CONSTRUCTION PLANS
**SHAWNEE CANYON ESTATES**
**STREET AND STORM DRAINAGE**
**POND DETAILS**
SPOKANE COUNTY, WASHINGTON

Sheet Title: STREET DETAILS



P1825 Eng As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON




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

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

## CONSTRUCTION NOTES:

1. REMOVE 95 L.F. OF EXISTING 24" CONCRETE STORM PIPE. REPLACE WITH DRAINAGE CHANNEL PER DETAIL 1, THIS SHEET.
2. REMOVE EXISTING STORM DRAINAGE MANHOLE AND 36" CONCRETE STORM PIPE.
3. EXISTING 12" CMP PIPE. DAYLIGHT INTO NEW DRAINAGE CHANNEL. IE(N)=2092.73 (AS-BUILT).
4. CONCRETE HEADWALL PER DETAIL 3, SHEET 8.
5. 180 L.F. OF 30" HDPE CULVERT WITH CONCRETE HEADWALL PER DETAIL 3, SHEET 8. IE(NE)=2202.0, IE(SW)=~~2171.0~~ (2171.2)
6. EXISTING CULVERT TO BE REMOVED.
7. STA 9+18.40, RT. CONCRETE HEADWALL FOR EXISTING 24" CMP CULVERT. SEE DETAIL 3, SHEET 8.
8. 54 L.F. OF 2" PVC DRAIN PIPE FROM POND D. IE(E)=2121.50, IE(W)=2118.00. S=0.0650.
9. 54 L.F. OF 2" PVC DRAIN PIPE FROM POND C. IE(E)=2125.50, IE(W)=2122.00. S=0.0650.

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

## RECORD DRAWING:
FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

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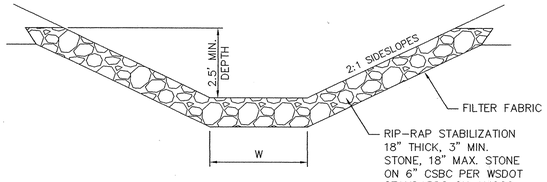
## DATUM
BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842



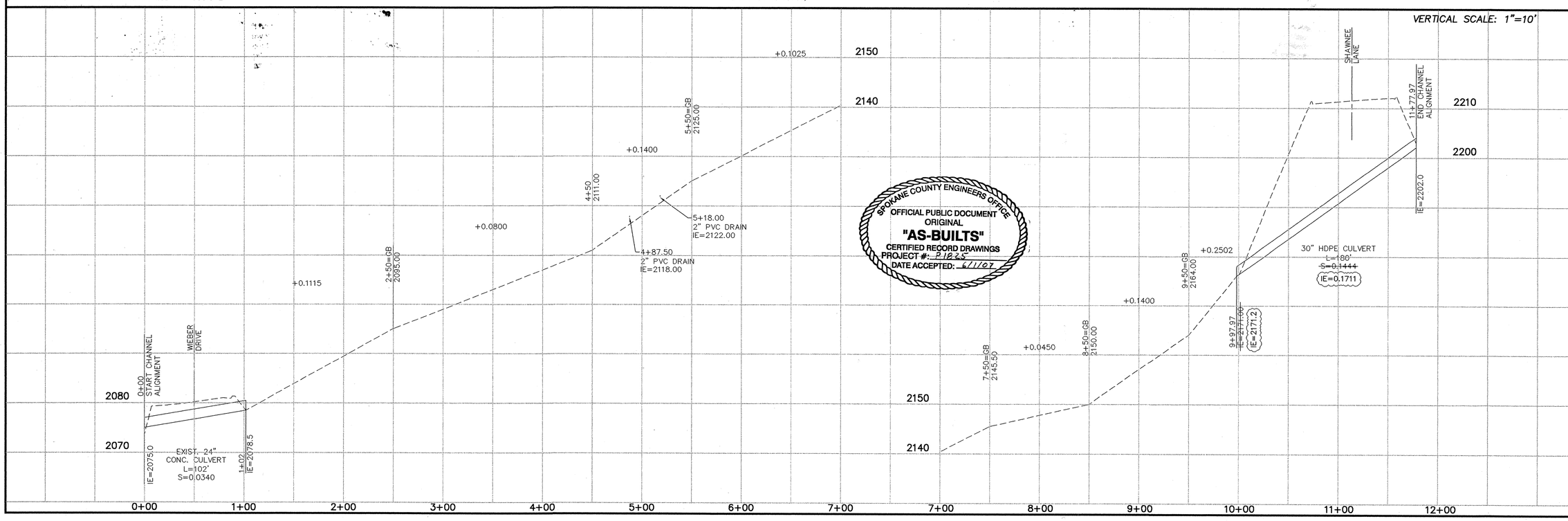

## DRAINAGE CHANNEL SECTION
STA 1+02 TO 7+50, W=3'
STA 7+50 TO 10+00, W=4'

KUWANT S. SAHOTA
STATE OF WASHINGTON
32884
REGISTERED PROFESSIONAL ENGINEER
5/4/07
EXPIRES 12/18/07

"I have reviewed the construction and to the best of my knowledge find it to be in substantial conformance with the approved certified plans and Standard Specifications except as noted."

DEVELOPER'S APPROVAL DATE

VERTICAL SCALE: 1"=10'




SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P1825
DATE ACCEPTED: 6/1/07

STREET CONSTRUCTION PLANS
# SHAWNEE CANYON ESTATES
## STREET AND STORM DRAINAGE
## DRAINAGE CHANNEL AND CULVERT
SPOKANE COUNTY, WASHINGTON

Sheet Title
STORM DRAIN
PLAN AND
PROFILE

9 OF 12
Sheet Number

P1825 Engr As-Builts

# SEC. 14, T.26 N., R.42 E.,W.M.
# SPOKANE COUNTY, WASHINGTON

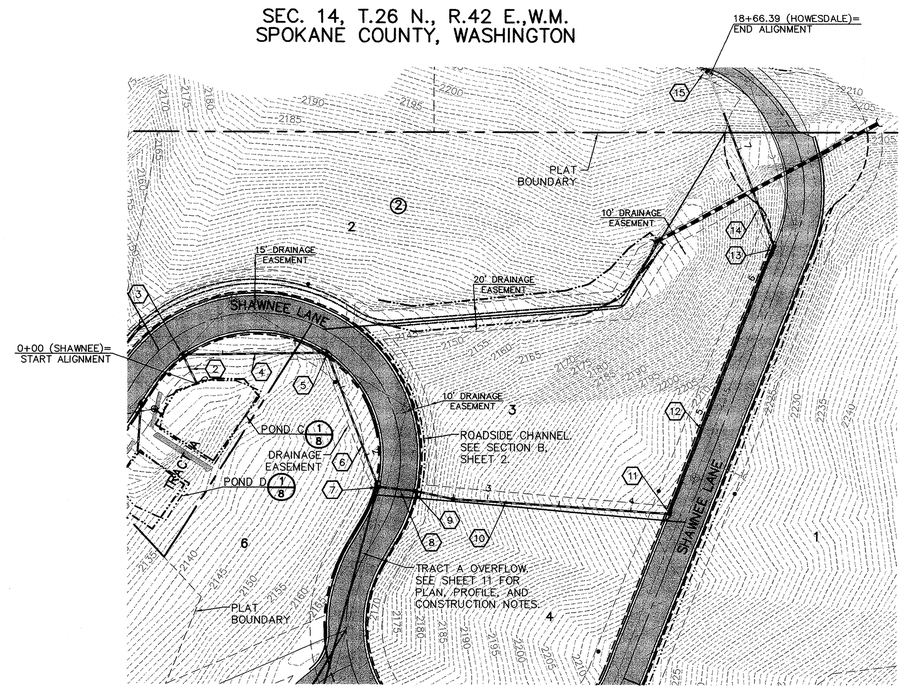
## CONSTRUCTION NOTES:

NOTE: ALL STATIONS REFER TO THE ONSITE DRAINAGE ALIGNMENT. COORESPONDING STREET STATIONS SHOWN ON THE PROFILE.

1. NOT USED.
2. 21 L.F. OF 12" H.D.P.E. STORM PIPE. S=0.0210. IE(N)=2129.94, IE(S)=~~2129.50.~~ (2130.35)
3. STA 0+22.08. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12, B-17 AND B-18. TC ELEV=2133.52, RIM ELEV=~~2132.94.~~ (2133.19)
4. 100 L.F. OF 12" H.D.P.E. STORM PIPE. S=0.1286. IE(E)=2142.80, IE(W)=2129.94.
5. STA 1+23.63. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12, B-17 AND B-18. TC ELEV=2148.38, RIM ELEV=~~2147.80.~~ (2147.75)
6. 100 L.F. OF 12" H.D.P.E. STORM PIPE. S=0.1460. IE(N)=2142.80, IE(S)=2157.40.
7. STA 2+24.23. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12, B-17 AND B-18. TC ELEV=2162.98, RIM ELEV=~~2162.40.~~ (2162.71)
8. 24 L.F. OF 12" H.D.P.E. STORM PIPE. S=0.0654. IE(E)=2158.97, IE(W)=2157.40.
9. STA 2+48.49. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12 AND B-17. TC ELEV=2162.55, RIM ELEV=~~2161.97.~~ (2163.08)
10. (150) ~~178~~ L.F. OF 12" H.D.P.E. STORM PIPE WITH CONCRETE PIPE ANCHORS PER FIGURE 40 OF THE SPOKANE COUNTY GUIDELINES FOR STORMWATER MANAGEMENT. S=0.2440. IE(E)=2202.40, IE(W)=2158.97.
11. STA 4+26.65. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12, B-17 AND B-18. TC ELEV=2207.98, RIM ELEV=~~2207.40.~~ (2207.60)
12. (195) ~~200~~ L.F. OF 12" H.D.P.E. STORM PIPE. S=0.0141. IE(N)=2205.21, IE(S)=2202.40.
13. STA 6+25.79. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12, B-17 AND B-18. TC ELEV=2210.79, RIM ELEV=~~2210.21.~~ (2210.38)
14. 100 L.F. OF 12" H.D.P.E. STORM PIPE WITH 12" END CAP. S=0.0128. IE(N)=2206.49, IE(S)=2205.21.
15. FUTURE STA 7+55.79. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B-4, B-7, B-10, B-12, B-17 AND B-18. TC ELEV=2212.46, RIM ELEV=2211.88.

## DATUM

BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842




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

KULWANT S. SAINI
STATE OF WASHINGTON
12461
PROFESSIONAL ENGINEER
3/04/07
EXPIRES 12/16/07

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

"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."

## RECORD DRAWING:
FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
2– CONTRACTOR: MOUNTAIN CREST
3– CONSTRUCTION PERIOD: 2002–2004
4– DRAWING REVISIONS BY: JSC DATE: 3/30/07
5– CHECKED BY: DATE:

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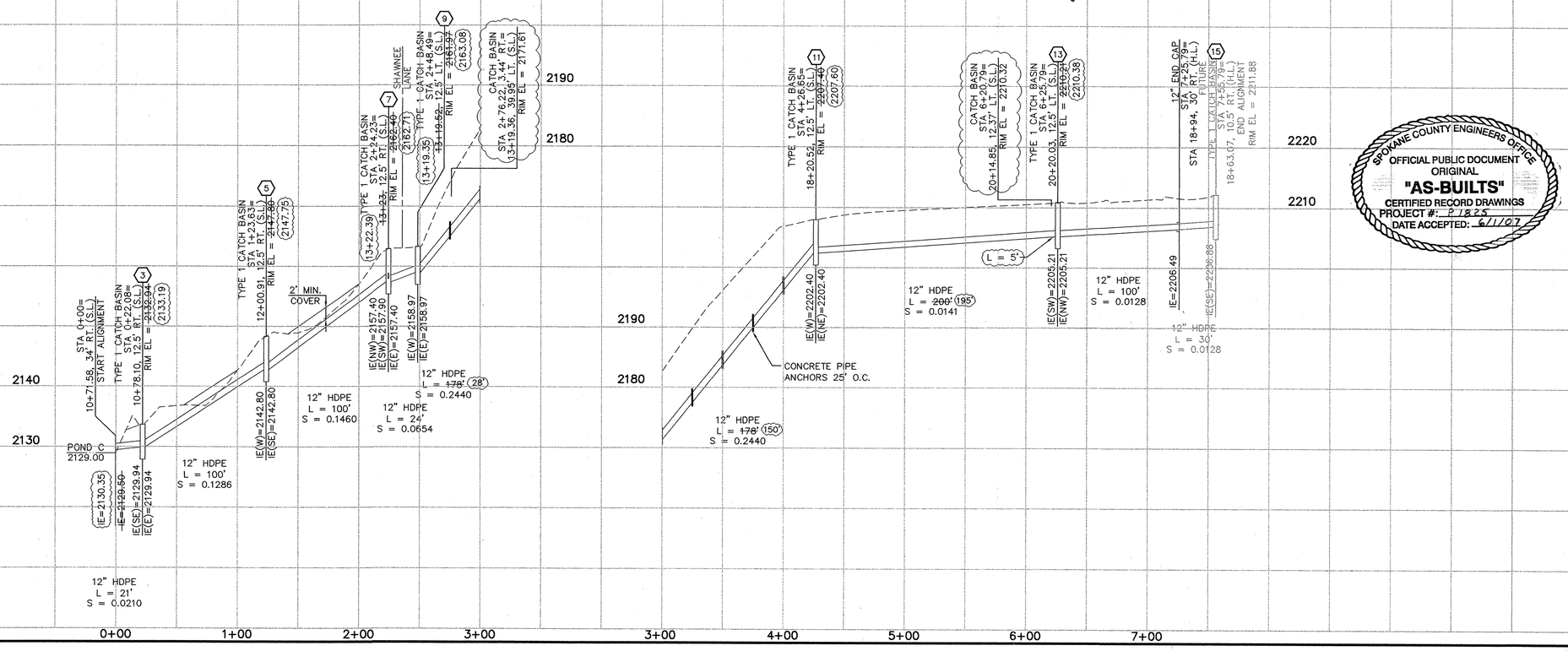
DEVELOPER'S APPROVAL DATE

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

VERTICAL SCALE: 1"=10'




SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P 1825
DATE ACCEPTED: 6/1/07

STREET CONSTRUCTION PLANS
**SHAWNEE CANYON ESTATES**
**STREET AND STORM DRAINAGE**
**ON-SITE DRAINAGE**
SPOKANE COUNTY, WASHINGTON

Sheet Title
STORM DRAIN PLAN AND PROFILE

10 OF 12
Sheet Number

P1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON

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

## RECORD DRAWING:
FOR STREET AND STORM

1– INFORMATION OBTAINED FROM: STORHAUG ENGINEERING
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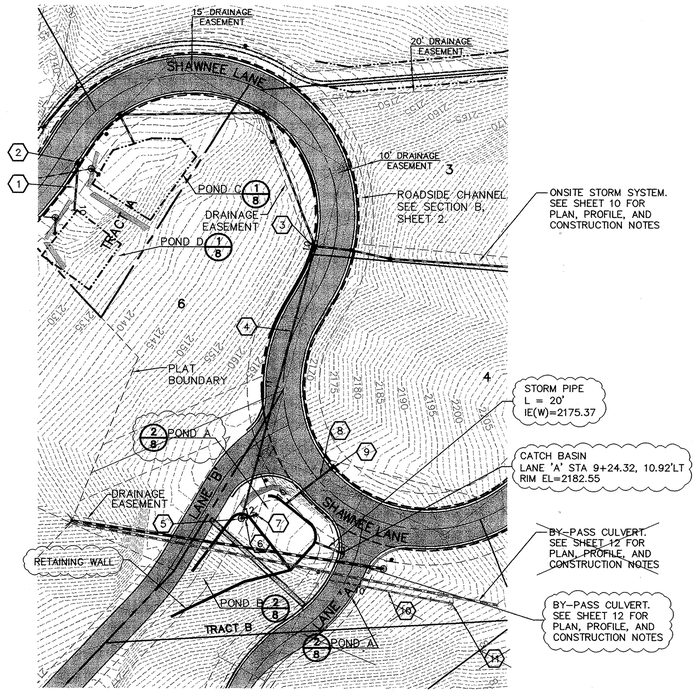



## CONSTRUCTION NOTES:

NOTE: ALL STATIONS REFER TO THE DRAINAGE ALIGNMENTS. CORRESPONDING STREET STATIONS SHOWN ON THE PROFILES.

1. 33 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0052. IE(N)=2125.30, IE(S)=~~2125.13.~~ 2125.18
2. STA 10+32.40. TYPE 1 CONCRETE INLET WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–5, B–10, B–12, B–17 AND B–18. TC ELEV=2127.73, RIM ELEV=~~2127.15.~~ 2127.46
3. STA 10+00. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–7, B–10, B–12, B–17 AND B–18. TC ELEV=2162.98, RIM ELEV=~~2162.40.~~ 2162.71
4. 196 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0184. IE(N)=2157.90, IE(S)=2161.50.
5. STA 11+96. TYPE B DRYWELL WITH TYPE 4 METAL FRAME AND SOLID COVER PER SPOKANE COUNTY STANDARD PLANS B–1a AND B–15. RIM ELEV=~~2166.50.~~ 2168.22
6. 10 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.8000. IE(E)=2171.50, IE(W)=2163.50.
7. STA 12+05.05. TYPE 1 CATCH BASIN WITH TYPE 2 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–11, B–13 AND B–17. RIM ELEV=~~2176.50.~~ 2174.37
8. ~~38~~ 41 L.F. OF 10" H.D.P.E. STORM PIPE. S=0.0084. IE(NE)=2176.32, IE(SW)=~~2176.00.~~ 2175.42
9. STA 10+36.85. TYPE 1 CONCRETE INLET WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–5, B–10, B–12, B–17 AND B–18. TC ELEV=2178.90, RIM ELEV=~~2178.32.~~ 2178.64
10. ~~65 L.F. OF 12" H.D.P.E. STORM PIPE. S=0.1595. IE(E)=2186.87, IE(W)=2176.50.~~
11. ~~STA 10+63.32. TYPE 1 CATCH BASIN WITH TYPE 1 METAL FRAME AND GRATE, AND GRATE GUARD PER SPOKANE COUNTY STANDARD PLANS B–4, B–7, B–10, B–12, B–17 AND B–18. TC ELEV=2192.45, RIM ELEV=2191.87.~~

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

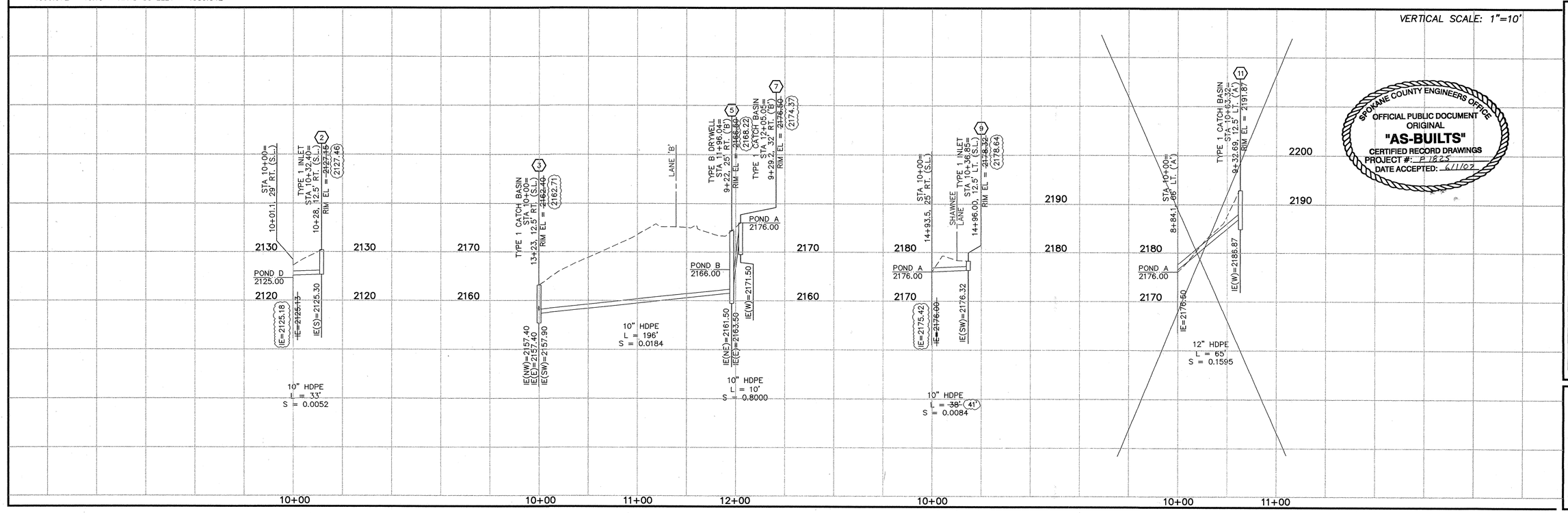
"I have reviewed the construction and to my knowledge find it to be in substantial conformance with the approved certified plans and Standard Specifications except as noted."

DEVELOPER'S APPROVAL DATE

| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

## DATUM
BASED ON CITY DATUM, C.B.M. NO. 32,
N.E. CORNER OF ARROWHEAD & SHAWNEE
19.7' NNC & 1.2' EEC. CITY ELEVATION
1996.972 – 13.13 = NAVD 88 ELEV = 1983.842

VERTICAL SCALE: 1"=10'




SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
ORIGINAL
"AS-BUILTS"
CERTIFIED RECORD DRAWINGS
PROJECT #: P 1825
DATE ACCEPTED: 6/11/07

STREET CONSTRUCTION PLANS
# SHAWNEE CANYON ESTATES
## STREET AND STORM DRAINAGE
## ON-SITE DRAINAGE
SPOKANE COUNTY, WASHINGTON

Sheet Title
STORM DRAIN PLAN AND PROFILE

11 OF 12
Sheet Number

P1825 Engr As-Builts

SEC. 14, T.26 N., R.42 E.,W.M.
SPOKANE COUNTY, WASHINGTON

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

## RECORD DRAWING:
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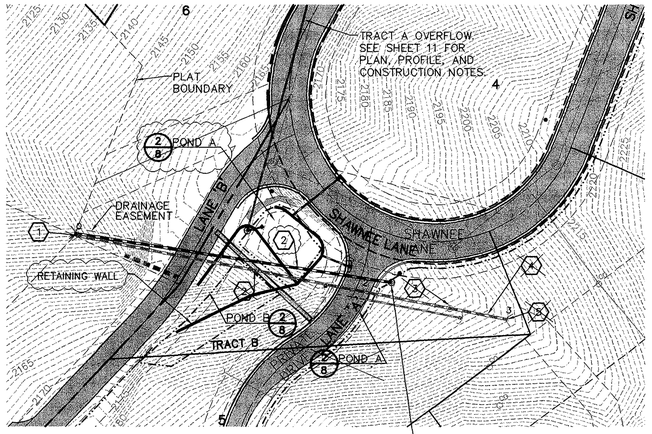


SDMH
LANE 'A' STA 9+23.26, 20.98' RT
RIM EL=2181.44

GRAPHIC SCALE
50 0 25 50 100
( IN FEET )
1 inch = 50 ft.

## CONSTRUCTION NOTES:

NOTE: ALL STATIONS REFER TO THE BY-PASS CULVERT ALIGNMENTS. CORRESPONDING STREET STATIONS SHOWN ON THE PROFILE.

1. CONCRETE HEADWALL AT CULVERT OUTLET, PER DETAIL 3, SHEET 8.
2. ~~260~~ 220 L.F. OF 18" H.D.P.E. STORM PIPE. S=0.1362. IE(E)=2175.40, ~~IE(S)=2140.00.~~ IE(W)=2140.18
3. ~~STA 2+60. WSDOT 48" TYPE 2 CATCH BASIN WITH MANHOLE RING AND COVER PER STANDARD PLAN B-1e. RIM ELEV=2190.00.~~
4. ~~40 L.F. OF 18" H.D.P.E. STORM PIPE. S=0.1375. IE(E)=2185.00, IE(W)=2190.50.~~
5. ~~CONCRETE HEADWALL AT CULVERT INLET, PER DETAIL 3, SHEET 8.~~

KULWANT S. SAHLI
STATE OF WASHINGTON
33884
REGISTERED PROFESSIONAL ENGINEER
3/04/07
EXPIRE: 12/18/07

"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."

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT
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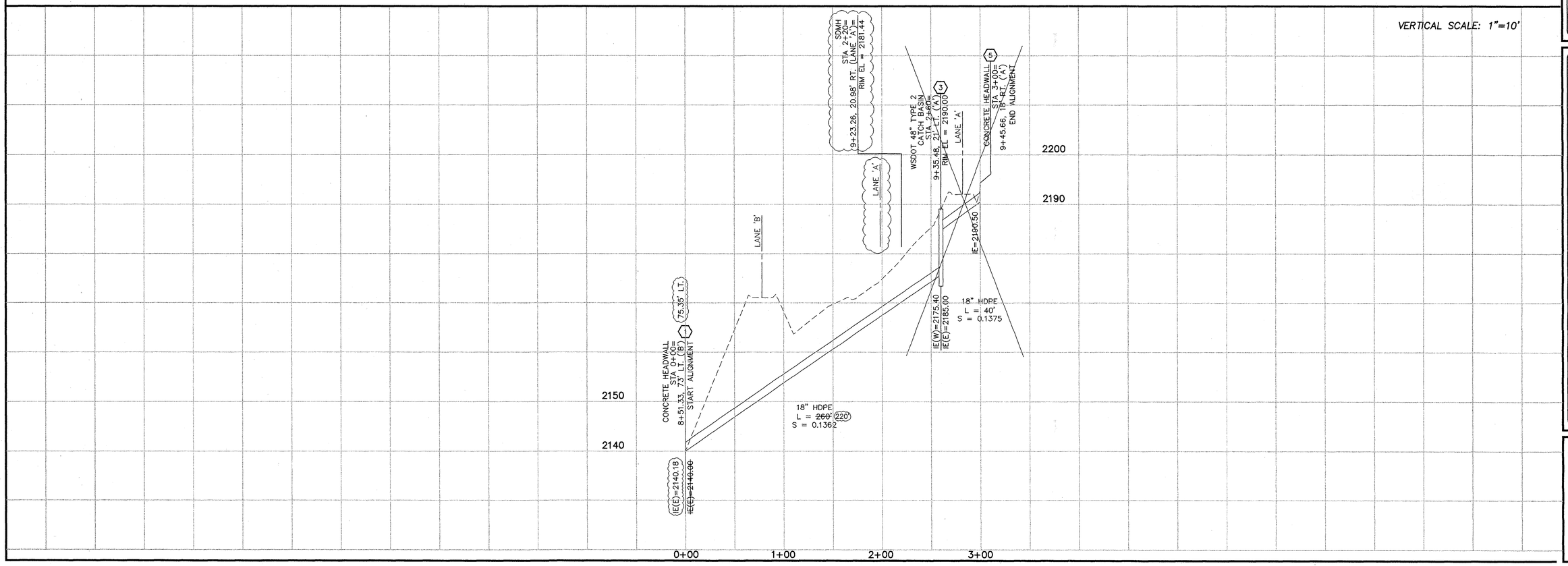
DEVELOPER'S APPROVAL DATE

VERTICAL SCALE: 1"=10'




| Date | Description |
|---|---|
| 06/28/01 | ORIGINAL PREPARATION |
| 08/14/01 | SPOKANE COUNTY REVIEW COMMENTS |

STREET CONSTRUCTION PLANS
SHAWNEE CANYON ESTATES
STREET AND STORM DRAINAGE
BY-PASS CULVERT
SPOKANE COUNTY, WASHINGTON

Sheet Title
STORM DRAIN PLAN AND PROFILE

12 OF 12
Sheet Number

P1825 ENG AS-BUILTS