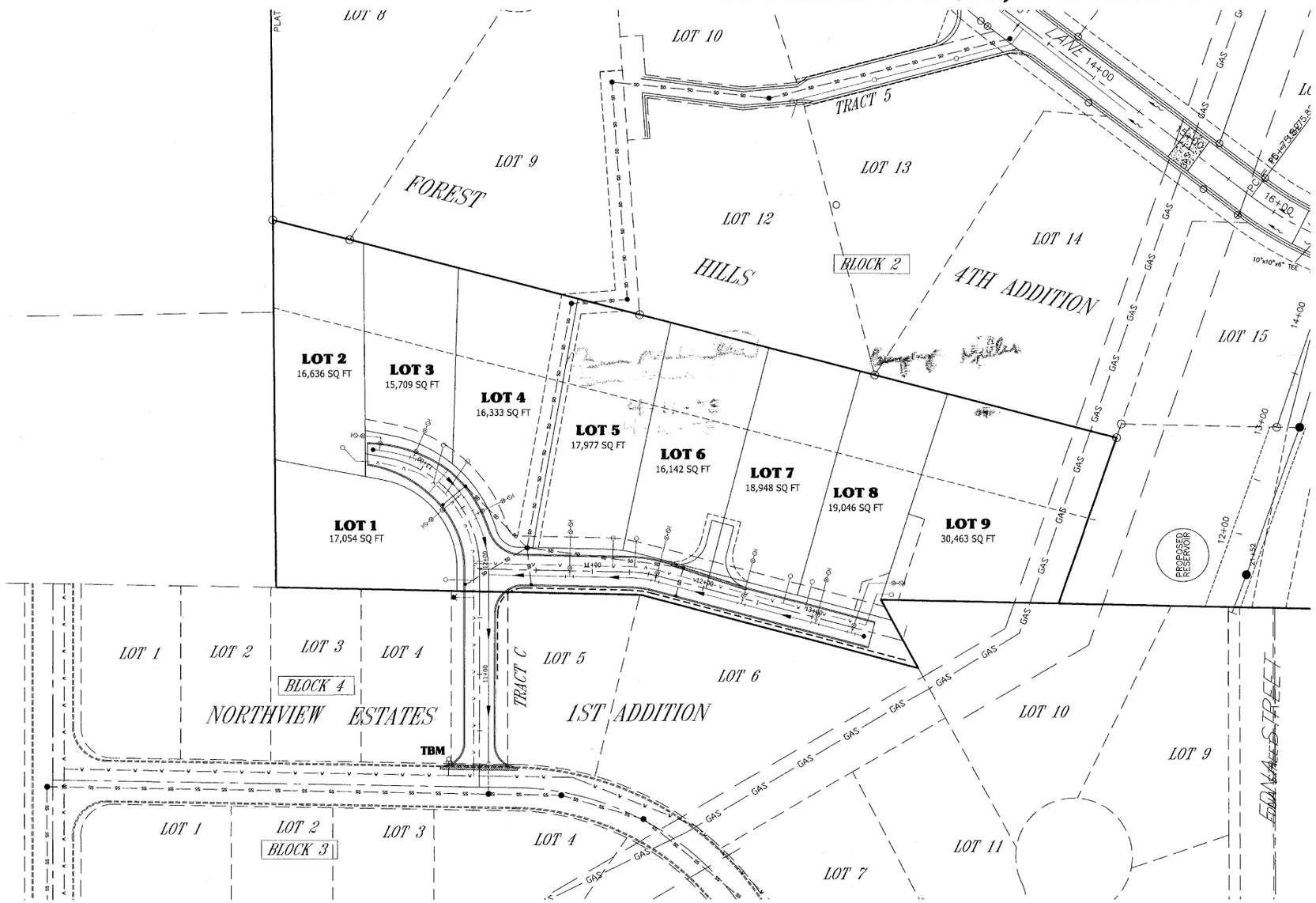
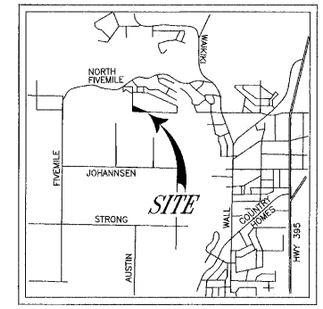
CALL 48 HOURS BEFORE YOU DIG 456-8000 ONE CALL NUMBER

ROAD PLANS
FOR
FOREST HILLS FIFTH ADDITION
PORTION OF THE NE1/4 OF SECTION 13, T26N, R42E, W.M.
SPOKANE COUNTY, WASHINGTON





VICINITY MAP

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P-15076
DATE ACCEPTED: 4/21/08
ACCEPTANCE EXPIRES: 4/21/10
PROJECT LANE MILES PUBLIC: -0-
PROJECT LANE MILES PRIVATE: 0.13
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

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" 2004, 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) 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 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.

7) 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.

8) Type 1 catch basins to be Spokane County Standard per drawing B-4. Type 2 WSDOT catch basin are per Standard Plan b-10.20. Type 2 frame and grate will be installed on all catch basins within the roadway, unless otherwise noted. Solid lids for Spokane County inlets are per plan B-15.

9) Silt fence is to be placed around the downslope perimeter of the site before removal of erosion control measures. Leave fence in place until final ground cover roots and construction related erosion hazard subsides.

10) Pipes installed at over 20% grade are to be secured with standard pipe anchors.

11) Storm sewer to be constructed using ADS pipe with watertight joints. Joint coupler to be kept clean during pipe installation, and the installation procedure shall follow manufacturer's recommendations.

12) Onsite grading shall be in accordance with the approved grading plan and ESC plan. Any import or export of material shall be from a preapproved surce/destination and coordinated with the Spokane County Department of Building and Planning at 477-3675. Grading on this site or any other site must comply with all development regulations including, but not limited to, grading permits, SEPA review, timber harvest permits, critical areas, floodplains, designated drainageways, etc.

DEVELOPER

DATE: 4-11-08

GREGORY S. MILLER
STATE OF WASHINGTON
37450
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 11/03/09

THIS STAMP IS NOT VALID UNLESS SIGNED WITH AN ORIGINAL SIGNATURE AND DATE

TABLE OF CONTENTS

SHEET 1: TITLE SHEET
SHEET 2: KYLE LANE: STA 10+00.00 TO STA 13+47.08
ASHLEIGH LANE: STA 10+00.00 to STA 13+56.41
SHEET 3: STORMSEWER PLAN
SHEET 4: MISCELLANEOUS DETAILS

NOTE:

UNDERGROUND UTILITIES WERE OBTAINED BY EXISTING FIELD LOCATED FIXTURES AND MAPS SUPPLIED BY SPOKANE COUNTY THEY SHOULD BE FIELD VERIFIED.

TEMPORARY BENCH MARK (TBM)

TOP OF FIRE HYDRANT
NORTH SIDE OF BRIARCLIFF LANE
SOUTHEAST CORNER OF LOT 5
NORTHVIEW ESTATES 1ST ADDITION
ELEV = 2399.74

LEGEND

- CATCH BASINS
- SS — SEWER MAIN
- W — WATER LINE
- SD — STORMSEWER LINE
- EXISTING CONTOURS

ENGINEER'S CERTIFICATE

THE DESIGN IMPROVEMENTS SHOWN IN THIS SET OF PLANS AND CALCULATIONS CONFORM TO THE APPLICABLE EDITIONS OF THE 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.

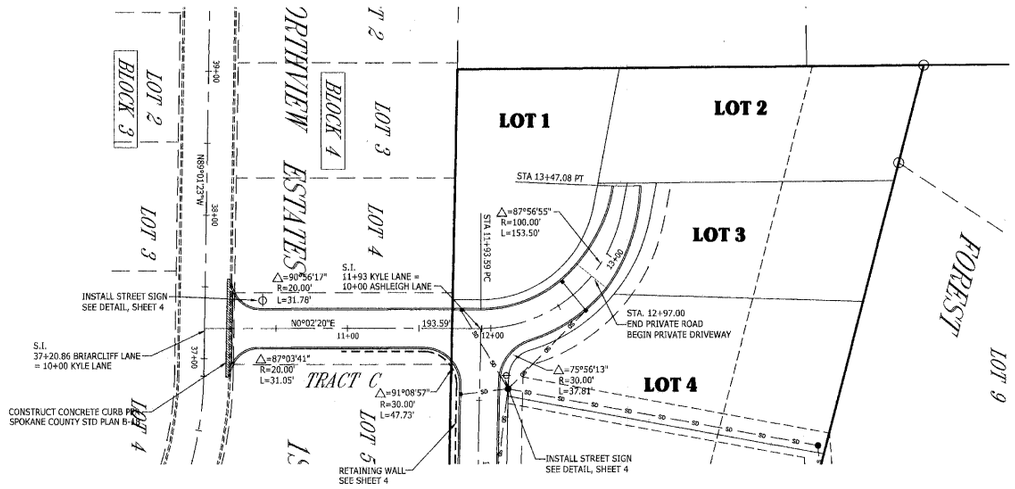
0 25 50 100

MILLER ENGINEERING
CONSULTING CIVIL ENGINEERING SERVICES
5516 N. BELT, SPOKANE, WASHINGTON 99205 (509) 953-5166

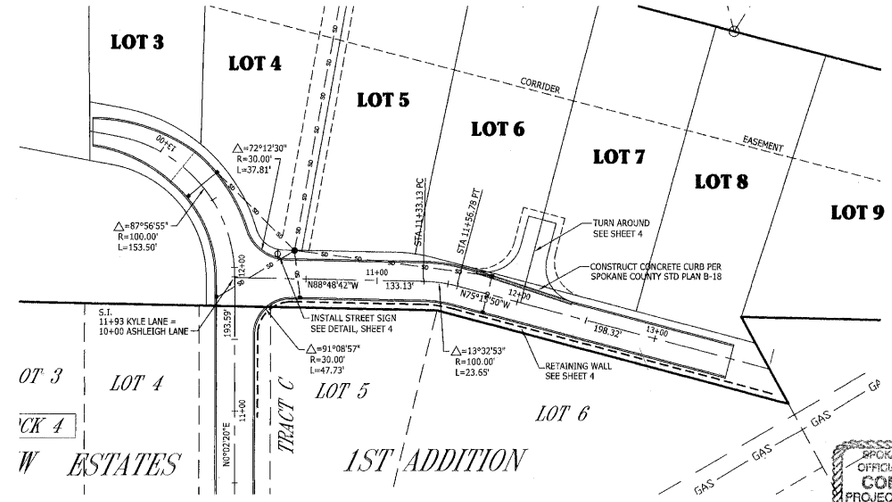
HOWES QUALITY CONSTRUCTION
14 W. GRAVES ROAD
SPOKANE, WA 99218

PROJECT NO. 0609
SHT 1 OF 4
DATE: 05/13/06
SCALE: 1"=50'
DRAWN BY: GSM
CHECKED BY: GSM
FIELD BOOK: 0609

P-15076 Eng Road Drawings



KYLE LANE



ASHLEIGH LANE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P-15079
DATE ACCEPTED: 4/21/08
ACCEPTANCE EXPIRES: 4/21/10
PROJECT LANE MILES PUBLIC:
PROJECT LANE MILES PRIVATE: 0.13
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

UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
1-800-424-5555
CALL TWO BUSINESS DAYS BEFORE YOU DIG

LEGEND
- CATCH BASINS
- SS — SEWER MAIN
- W — WATER LINE
- SD — STORMSEWER LINE
- EXISTING CONTOURS

TEMPORARY BENCH MARK (TBM)

TOP OF FIRE HYDRANT
NORTH SIDE OF BRIARCLIFF LANE
SOUTHEAST CORNER OF LOT 5
NORTHVIEW ESTATES 1ST ADDITION
ELEV = 2399.74

DEVELOPER

DATE: 4-11-08

GREGORY S. MILLER
STATE OF WASHINGTON
37450
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/03/08

THIS STAMP IS NOT VALID UNLESS SIGNED WITH AN ORIGINAL SIGNATURE AND DATE.

0 25' 50' 100'

REVISIONS			

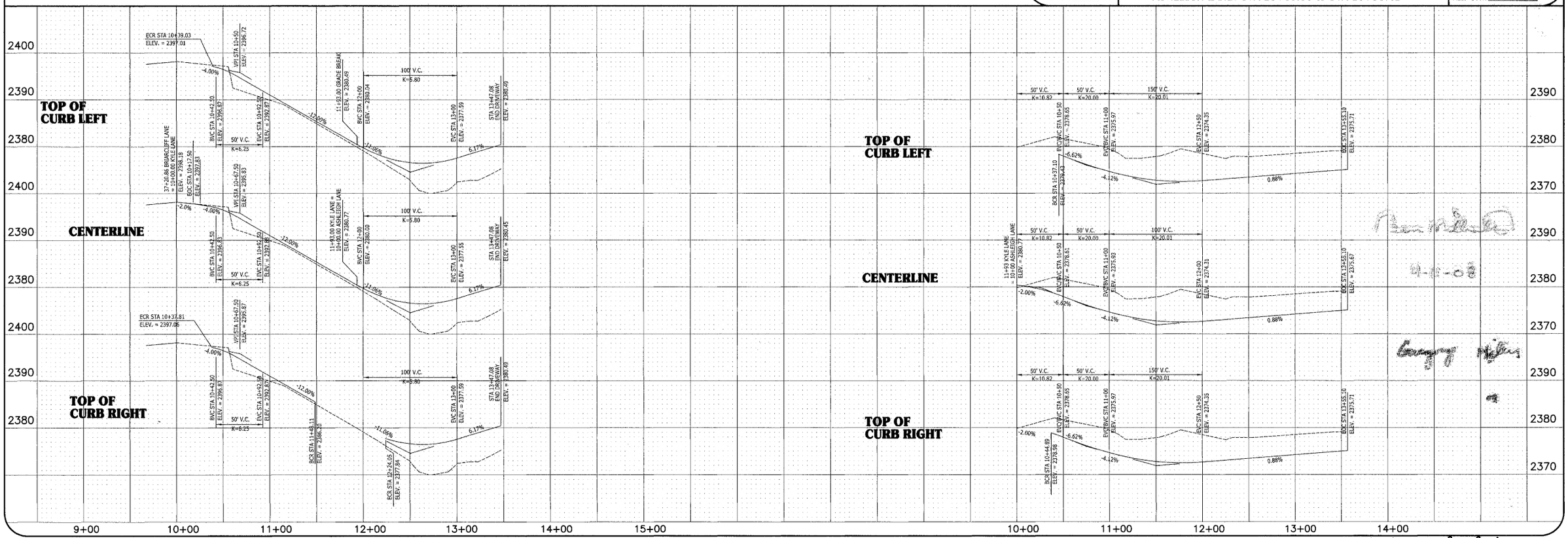
MILLER ENGINEERING
CONSULTING CIVIL ENGINEERING SERVICES
5516 N. BELT, SPOKANE, WASHINGTON 99205 (509) 953-5166

PROJECT NO. 0609
SHT 2 OF 4

SCALE
HORIZONTAL: 1"=50'
VERTICAL: 1"=10'

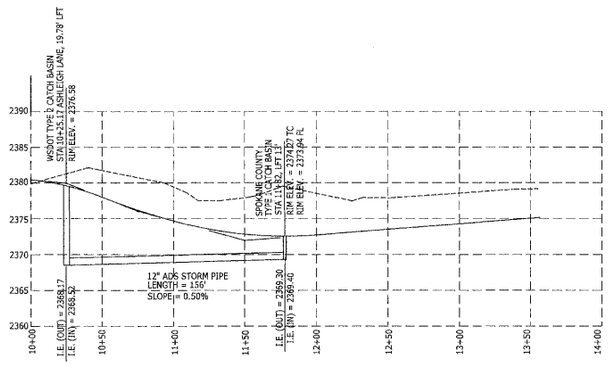
FOREST HILLS 5TH ADDITION
KYLE LANE: STA 10+00.00 TO STA 13+47.08
ASHLEIGH LANE: STA 10+00.00 to STA 13+56.41

DATE: 06/02/06
DRAWN BY: GSM
CHECKED BY: GSM
FIELD BOOK: 0609

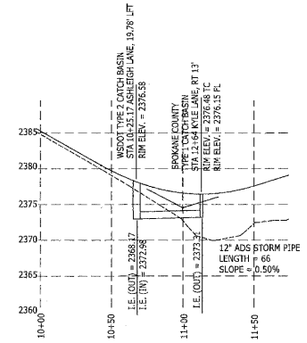


P-15079 Eng Road Drainage

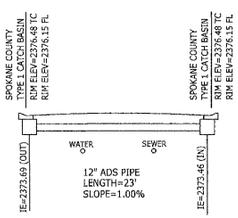
STORMSEWER
FOREST HILLS FIFTH ADDITION



STORMSEWER LINE "B"

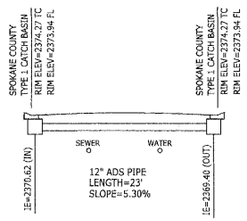


STORMSEWER LINE "C"



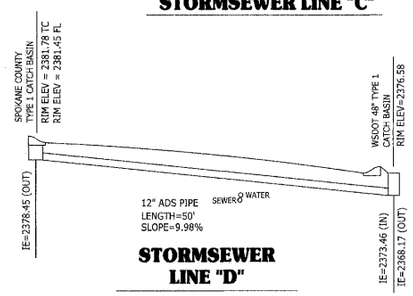
STORMSEWER LINE "F"

SCALE: 1" = 10'



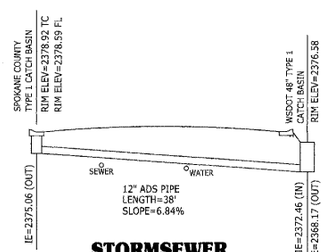
STORMSEWER LINE "G"

SCALE: 1" = 10'



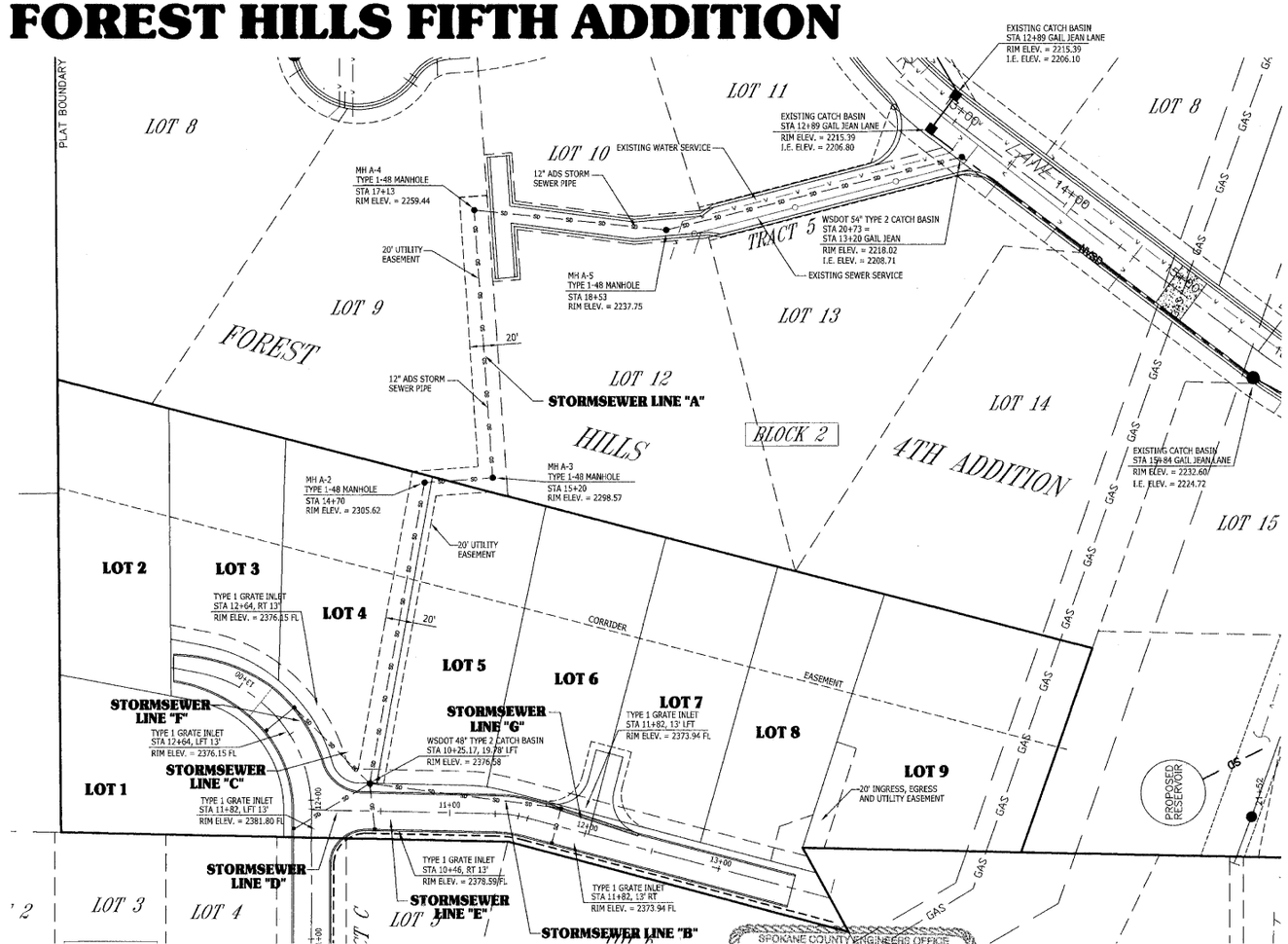
STORMSEWER LINE "D"

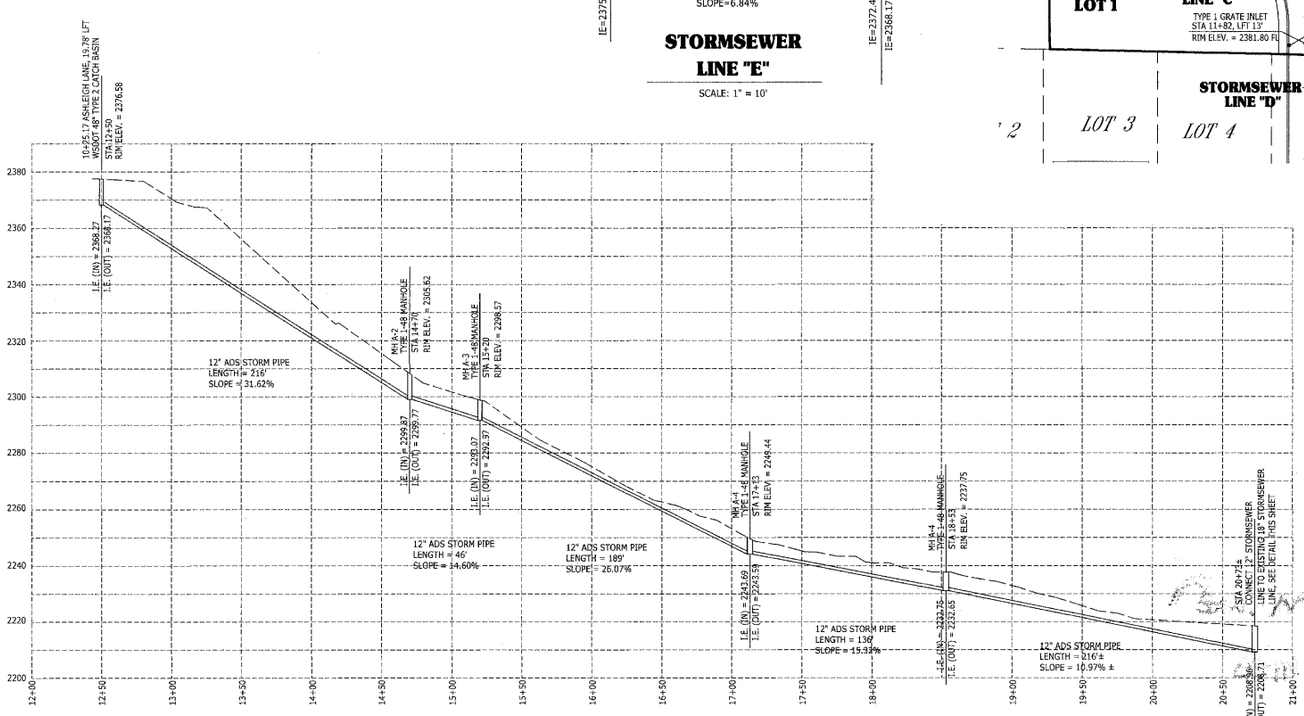
SCALE: 1" = 10'



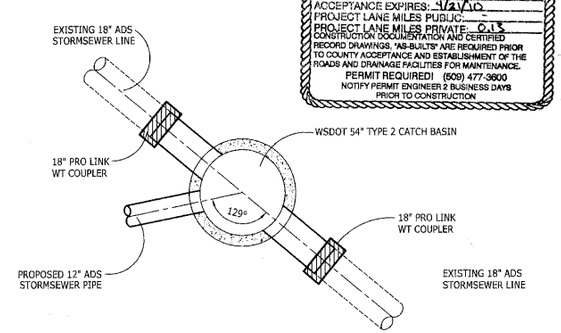
STORMSEWER LINE "E"

SCALE: 1" = 10'





STORMSEWER LINE "A"



STORMSEWER CONNECTION

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P-15076
DATE ACCEPTED: 4/21/08
ACCEPTANCE EXPIRES: 4/21/10
PROJECT LANE MILES PUBLIC: –
PROJECT LANE MILES PRIVATE: 0.13
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

DEVELOPER

DATE: 4-11-08

GREGORY S. MILLER
STATE OF WASHINGTON
37450
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/03/08

THIS STAMP IS NOT VALID UNLESS SIGNED WITH AN ORIGINAL SIGNATURE AND DATE

MILLER ENGINEERING
CONSULTING CIVIL ENGINEERING SERVICES
5516 N. BELT, SPOKANE, WASHINGTON 99205 (509) 953-5166

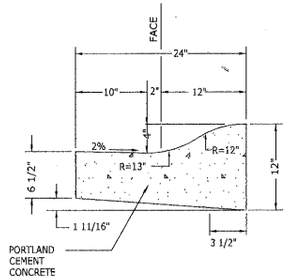
PROJECT NO. 0609
SHT 3 OF 4

STORMSEWER PLAN
FOREST HILLS 5TH ADDITION

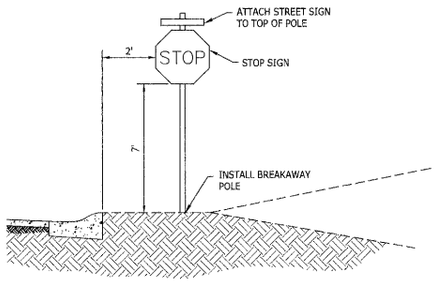
DATE: 01/07/07
SCALE: N.A.
DRAWN BY: GSM
CHECKED BY: GSM
FIELD BOOK: 0609

P-15076 Eng Prod Drawings

CONSTRUCTION DETAILS
FOREST HILLS FIFTH ADDITION



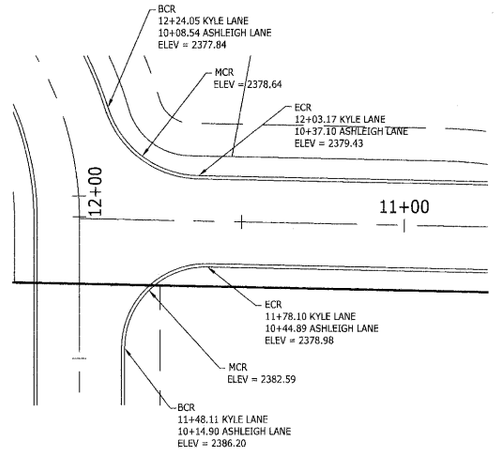
TYPE "R" CURB
N.T.S.



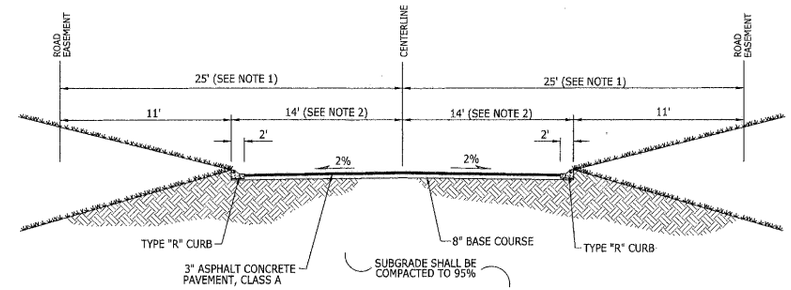
STOP AND STREET SIGN
N.T.S.

NOTE:

1.) FABRICATE ALL SIGN PANELS OF 16ga ALUMINUM
2.) USE NON-CORROSIVE 3/8" MACHINE BOLTS AND WASHERS 2 PER SIGN FOR POST MOUNTING
3.) SEE SPOKANE COUNTY STANDARD PLAN A-16 FOR STREET SIGN DETAILS.



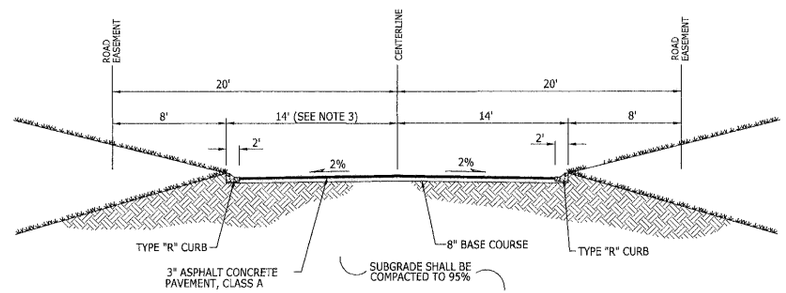
INTERSECTION DETAIL
N.T.S.



ROADWAY SECTION - KYLE LANE
N.T.S.

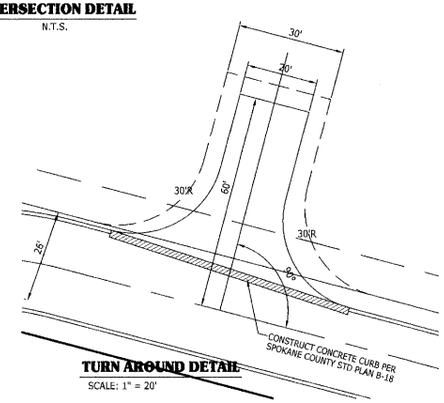
NOTE 1:
ROADWAY EASEMENT FROM STA 10+00 TO STA 11+73 IS 50' WIDE. FROM 11+73 TO 13+48, THE ROADWAY EASEMENT IS 40' WIDE.

NOTE 2:
ROADWAY WIDTH FROM STA 10+00 TO STA 12+80 IS 24' WIDE. ROADWAY TAPERS DOWN TO 16' AND BECOMES DRIVEWAY FROM STATION 12+80.00 TO STA 13+47.08.

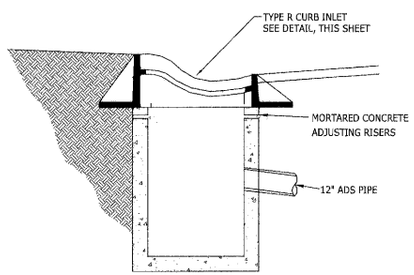


ROADWAY SECTION - ASHLEIGH LANE
N.T.S.

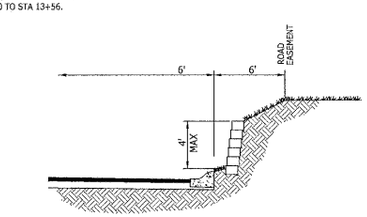
NOTE 3:
ROADWAY WIDTH FROM STA 10+00 TO STA 11+80 IS 24' WIDE. ROADWAY TAPERS DOWN TO 20' AND CENETERLINE IS OFFSET FROM STATION 11+80 TO STA 13+56.



TURN AROUND DETAIL
SCALE: 1" = 20'

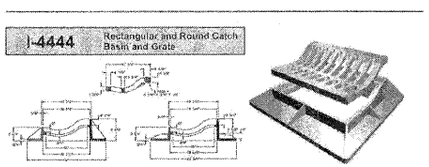


SPOKANE COUNTY TYPE 1 CATCH BASIN
NTS

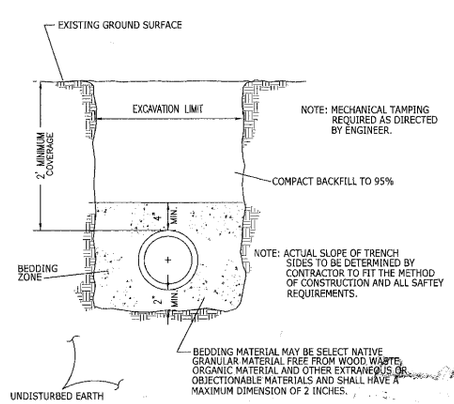


ROADWAY SECTION - ASHLEIGH LANE - OPTION 2
N.T.S.

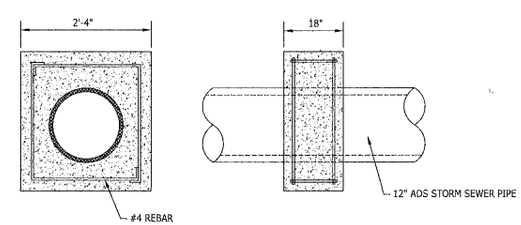
CONSTRUCT RETAINING WALL ALONG SOUTH SIDE OF ASHLEIGH LANE WHERE REQUIRED TO KEEP SLOPE ON SITE



ROLLED CURB GRATE INLET
MANUFACTURED BY:
D and L FOUNDRY
MOSES LAKE, WASHINGTON
DISTRIBUTED BY:
WILBERT PRECAST
SPOKANE, WASHINGTON



TYPICAL TRENCH SECTION



PIPE ANCHOR
NOT TO SCALE

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P-15072
DATE ACCEPTED: 4/21/08
ACCEPTANCE EXPIRES: 4/21/10
PROJECT LANE MILES PUBLIC: -
PROJECT LANE MILES PRIVATE: 0.13
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

CALL 48 HOURS BEFORE YOU DIG
456-8000
ONE CALL NUMBER

Ben Miller
DEVELOPER

DATE: 4-11-08

GREGORY S. MILLER
STATE OF WASHINGTON
37450
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/03/09

THIS STAMP IS NOT VALID UNLESS SIGNED WITH AN ORIGINAL SIGNATURE AND DATE

MILLER ENGINEERING
CONSULTING CIVIL ENGINEERING SERVICES
5516 N. BELT, SPOKANE, WASHINGTON 99205 (509) 953-5166

PROJECT NO. 0609
SHT 4 OF 4

CONSTRUCTION DETAILS
FOREST HILLS 5TH ADDITION

DATE: 01/08/07
SCALE: N.A.
DRAWN BY: GSM
CHECKED BY: GSM
FIELD BOOK: 0609

P-15072 Eng Road · Drainage

TEMPORARY EROSION CONTROL PLAN
FOR
FOREST HILLS FIFTH ADDITION
PORTION OF THE NE1/4 OF SECTION 13, T26N, R42E, W.M.
SPOKANE COUNTY, WASHINGTON

EROSION CONTROL NOTES

Onsite grading shall be in accordance with the approved grading plan and ESC plan. Any import or export of material shall be from a preapproved surce/destination and coordinated with the Spokane County Department of Building and Planning at 477-3675. Grading on this site or any other site must comply with all development regulations including, but not limited to, grading permits, SEPA review, timber harvest permits, critical areas, floodplains, designated drainageways, etc.

1. CONSTRUCTION TRAFFIC SHALL BE RESPONSIBLE FOR THE REMOVAL OF MUD AND DEBRIS PRIOR TO ACCESSING PUBLIC STREETS.

ER1) 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 accepted by Spokane County, whichever is later.

ER2) 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.

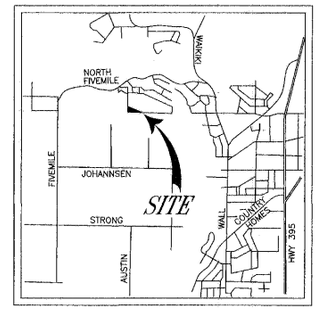
ER3) The erosion/sedimentation control measures shown are the minimum requirements for the anticipated site conditions. The Contractor shall inspect and maintain these ESC measures daily, and shall maintain and upgrade these measures as necessary to prevent sediment-laden water from either flowing off the site, or into new/existing storm drainage facilities, such as drywells, culverts, or gravel galleries.

ER4) The Contractor/Developer is responsible for installing Rock Construction Entries at any and all locations used to enter or exit project site.

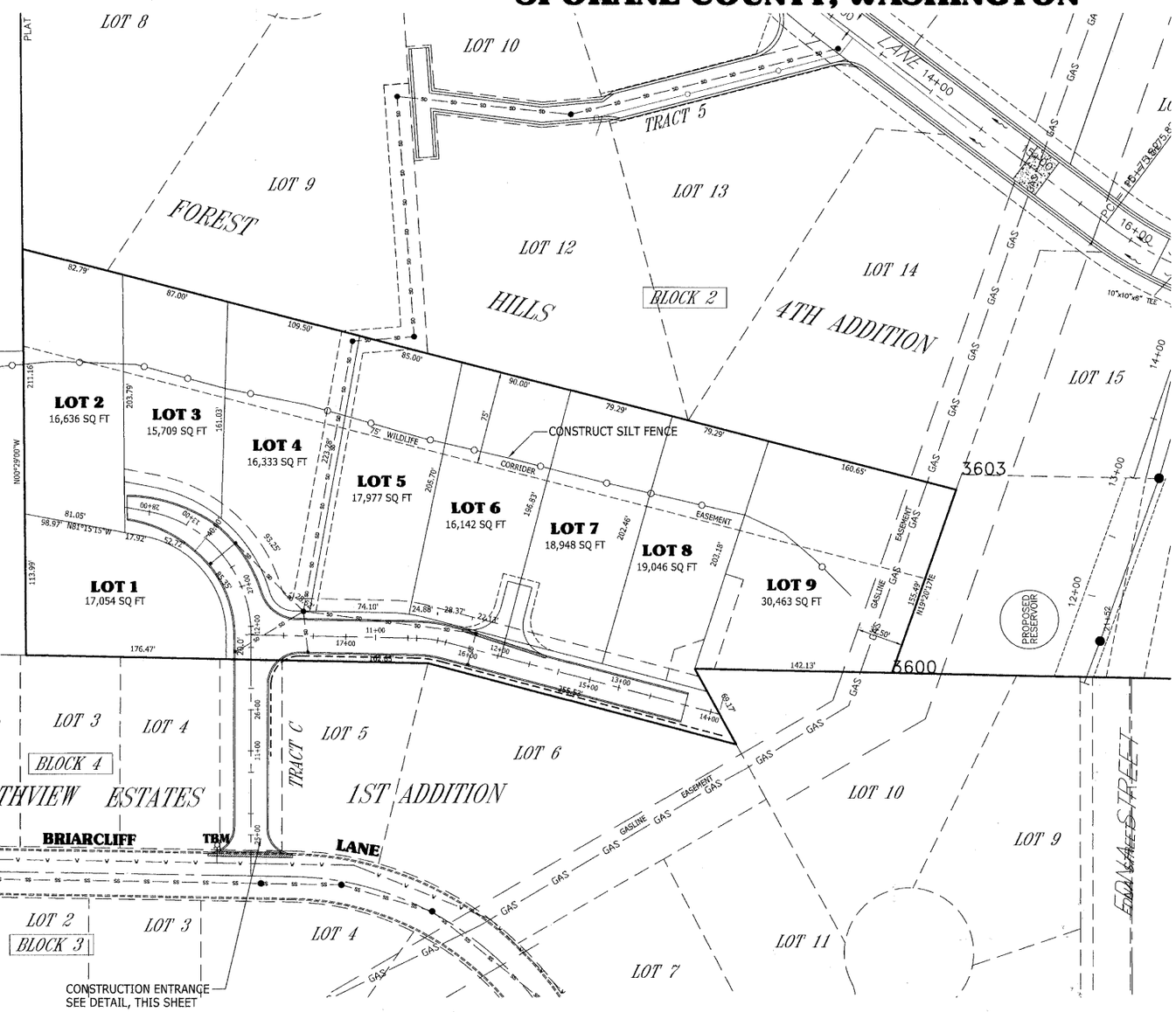
ER5) Geotextile fabric is to be placed on the rims of drywells, catch basins and inlets until such time the vegetation on the site is established and the threat of sediment deposition into the drainage system is mitigated.

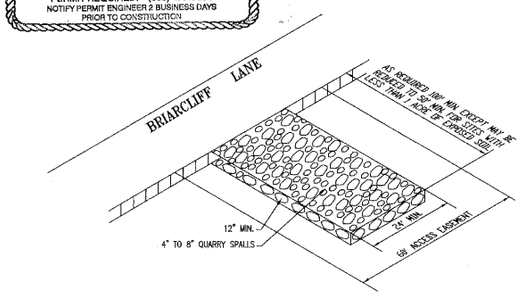
UNDERGROUND SERVICE ALERT
ONE-CALL NUMBER
1-800-424-5555
CALL TWO BUSINESS DAYS BEFORE YOU DIG

SPOKANE COUNTY ENGINEERS OFFICE
OFFICIAL PUBLIC DOCUMENT ORIGINAL
CONSTRUCTION PLANS
PROJECT #: P-1507C
DATE ACCEPTED: 4/21/08
ACCEPTANCE EXPIRES: 4/21/10
PROJECT LANE MILES PUBLIC: -
PROJECT LANE MILES PRIVATE: 0.18
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



VICINITY MAP



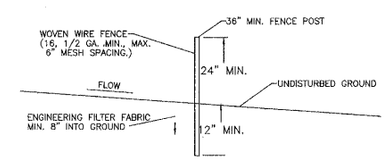


CONSTRUCTION ENTRANCE
(NTS)

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.



SECTION
NTS

CONSTRUCTION NOTES FOR FILTER FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STABLES.
2. FILTER FABRIC TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION.
3. WHERE TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
4. MAINTENANCE SHALL BE PREFORMED AS NEEDED AND MATERIAL REMOVED WHEN BULGES DEVELOP IN THE SILT FENCE.
5. POSTS TO BE EITHER STEEL "T" OR "U", OR 2" HARDWOOD POLES.
6. WIRE FENCE TO BE WOVEN WIRE, 14 GAUGE 6" MAX. OPENING SIZE.
7. FILTER FABRIC TO BE ENGINEERING FABRIC, AMOCO 2020 OR EQUAL.

PROJECT SUMMARY

This project consists of construction of a 24 foot wide private road to serve 9 proposed single family residential lots. The roadway will be curbed and catch basins and veined grates will be installed at all low points and strategic points. Stormwater will be collected, routed and discharged into an existing storm sewer serving Forest Hills and Northview Estates. Stormwater generated from on-site improvements will be collected and routed into a stormwater swale located at the corner of Five Mile Road and Waikiki Road. The stormwater sewer network and drainage pond at the corner of Five Mile and Waikiki will be used to dispose of stormwater. This system has adequate capacity to handle the runoff generated from this proposed development.

ENGINEER'S CERTIFICATE

THE EROSION CONTROL MEASURES SHOWN IN THIS SET OF PLANS AND CALCULATIONS MEET THE ESC PLAN REQUIREMENTS AS LISTED IN CHAPTER 4.5 OF THE GUIDELINES FOR STORMWATER MANAGEMENT. I APPROVE THIS PLAN FOR CONSTRUCTION.

LEGEND

SILT FENCE

PROPERTY OWNER:	HOWES QUALITY DEVELOPMENT
APPLICANT:	RON HOWES
CONTACT PERSON:	GREG MILLER
CONTACT PHONE:	509-953-5166
ECS PREPARER:	MILLER ENGINEERING
EXIST. VEGETATION:	WOODLANDS WITH MODERATE COVER
SOILS ON SITE:	BERNHILL VERY ROCKY COMPLEX (BKd) BERNHILL SILT LOAM, MODERATELY SHALLOW (Bb6)

DEVELOPER

DATE: 4-11-08

GREGORY S. MILLER
STATE OF WASHINGTON
37450
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 11/03/08

THIS STAMP IS NOT VALID UNLESS SIGNED WITH AN ORIGINAL SIGNATURE AND DATE

0 25 50 100

MILLER ENGINEERING
CONSULTING CIVIL ENGINEERING SERVICES
5516 N. BELT, SPOKANE, WASHINGTON 99205 (509) 953-5166

HOWES QUALITY CONSTRUCTION
14 W. GRAVES ROAD
SPOKANE, WA 99218

PROJECT NO. 0609
SHT 1 OF 1
DATE: 04/07/07
SCALE: 1"=50'
DRAWN BY: GSM
CHECKED BY: GSM
FIELD BOOK: 0609

P-1507C Eng Prel Drainage