





SHEET NOTES

- A. SITE MUST HAVE CERTIFIED EROSION AND SEDIMENT CONTROL LEAD TO COMPLY WITH BMP C160.
- B. ALL MATERIAL HANDLING ON SITE MUST COMPLY WITH BMP C150, BMP C151, AND BMP C154.
- C. PLACE PLASTIC COVERING OVER ALL SOIL PILES COMPLYING WITH BMP C123 OR STRAW COMPLYING WITH BMP C121.
- D. SEQUENCE CONSTRUCTION SCHEDULE TO COMPLY WITH BMP C162.
- E. SEE SWPPP FOR ADDITIONAL EROSION CONTROL MEASURES.
- F. PERMANENTLY STABILIZE SITE, RE-ESTABLISH VEGETATION OR LANDSCAPING PRIOR TO REMOVAL OF EROSION CONTROL MEASURES
- G. SEE GENERAL GRADING AND EROSION NOTES SHEET CXXX
- H. SHEET FLOW & DIVERSION TRENCHES SHALL BE UTILIZED TO DIRECT RUNOFF TO TEMPORARY SEDIMENT PONDS.

NOTE: SIGNIFICANT VARIATION AND DEGREE OF EROSION CONTROL EFFORT WILL BE DICTATED BY WEATHER CONDITIONS. THE DEVELOPER AND CONTRACTOR SHOULD BE PREPARED TO PROVIDE EXTRA EROSION CONTROL PROVISIONS AND EFFORT DURING WINTER AND WET WEATHER CONDITIONS BEYOND THAT NORMALLY REQUIRED DURING SUMMER AND DRY WEATHER CONDITIONS. FINE GRAINED AND UNCONSOLIDATED SOILS ON SLOPING SITES MAY BECOME UNSTABLE WHEN SUBJECT TO EXCESSIVE MOISTURE.

APPROXIMATE EARTHWORK VOLUMES

CUT: 8,400 yd<sup>3</sup>  
FILL: 4,800 yd<sup>3</sup>  
CUT/FILL AREA: 3.035 ACRE

DISCLAIMER: THESE FIGURES REPRESENT APPROXIMATE EARTHWORK QUANTITIES CALCULATED FROM THE EXISTING SURFACE TO A FINAL SURFACE AT 1:1 VOLUME. THIS ESTIMATE DOES NOT INCLUDE THE ROAD OR SIDEWALK PRISMS, TRENCH SPOILS, TRENCHING FOR UTILITIES, OVER EXCAVATION, SHRINKAGE OR SWELL ETC. CONTRACTORS ARE SOLELY RESPONSIBLE FOR QUANTITY ESTIMATES FOR BIDDING PURPOSES. THE FINAL SURFACE IS TOP OF PARKING LOTS, FINISHED FLOOR ELEVATIONS, FINAL GRADING, FINAL ROAD SURFACE, ETC.

COMPACTION TABLE

FILL TYPE	LOCATION	COMPACTION REQ.	AASHTO TEST METHODOLOGY
SUBGRADE	DRIVEWAY	95%	ASTM D1557
BASE ROCK	DRIVEWAY	95%	ASTM D1557
ASPHALT	DRIVEWAY	91%	ASTM D2041
BUILDING PAD			
SUBGRADE	BUILDING PAD	95%	ASTM D1557
TRENCH BACKFILL	STRUCTURAL AREAS	95%	ASTM D1557

DISCLAIMER: GRADING QUANTITIES FOR PRELIMINARY PLAN ONLY. EXISTING GROUND SURFACE BASED ON GIS INFORMATION AND IS APPROXIMATE ONLY.

SENSITIVE AREAS

NO SENSITIVE AREAS ON SITE AS IDENTIFIED BY CLARK COUNTY GIS OTHER THAN AS SHOWN ON PLAN. NO WETLANDS OR WETLAND BUFFERS, NO HABITAT OR HABITAT BUFFERS, NO WATERWAYS OR SHORELINE AREAS ON SITE.

STEEP SLOPES, EROSION HAZARD, AND LANDSLIDE HAZARDS ARE MAPPED ON SITE BY GIS.

WELLS AND DRAINFIELDS

NO RECORDS FOUND INDICATE EXISTING SEPTIC DRAINFIELD. NO RECORDS FOUND INDICATING A WELL IS PRESENT. ANY SEPTIC SYSTEM OR WELL ENCOUNTERED TO BE DECOMMISSIONED FOLLOWING DISTRICT STANDARDS.

IMPERVIOUS SURFACE

NO IMPERVIOUS SURFACES PROPOSED OTHER THAN STREET AND SIDEWALK

SITE INFORMATION

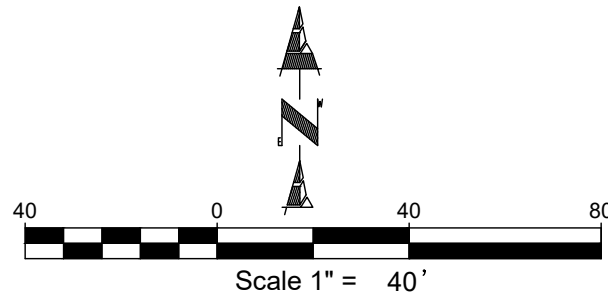
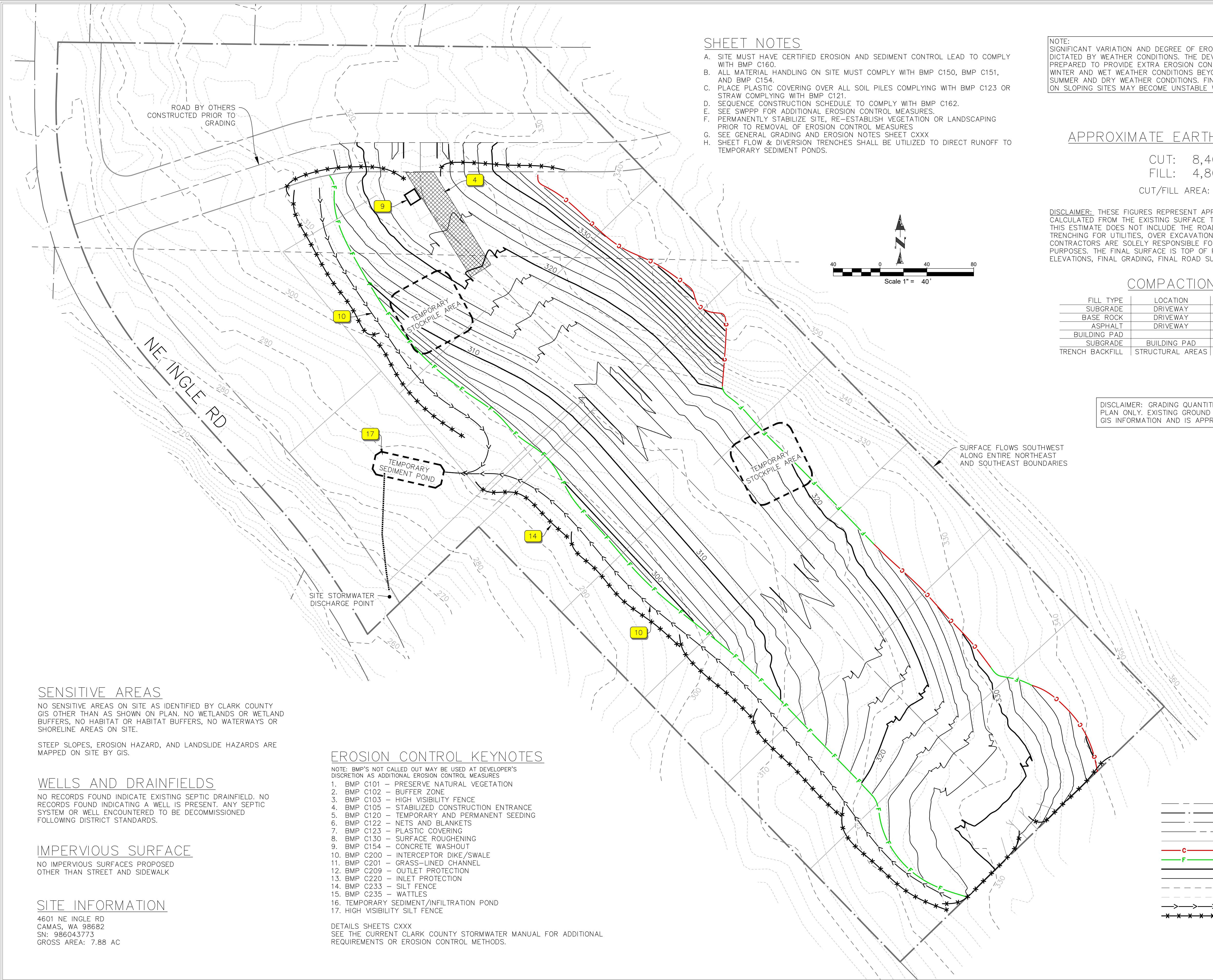
4601 NE INGLE RD  
CAMAS, WA 98682  
SN: 986043773  
GROSS AREA: 7.88 AC

EROSION CONTROL KEYNOTES

NOTE: BMP'S NOT CALLED OUT MAY BE USED AT DEVELOPER'S DISCRETION AS ADDITIONAL EROSION CONTROL MEASURES

- 1. BMP C101 - PRESERVE NATURAL VEGETATION
- 2. BMP C102 - BUFFER ZONE
- 3. BMP C103 - HIGH VISIBILITY FENCE
- 4. BMP C105 - STABILIZED CONSTRUCTION ENTRANCE
- 5. BMP C120 - TEMPORARY AND PERMANENT SEEDING
- 6. BMP C122 - NETS AND BLANKETS
- 7. BMP C123 - PLASTIC COVERING
- 8. BMP C130 - SURFACE ROUGHENING
- 9. BMP C154 - CONCRETE WASHOUT
- 10. BMP C200 - INTERCEPTOR DIKE/SWALE
- 11. BMP C201 - GRASS-LINED CHANNEL
- 12. BMP C209 - OUTLET PROTECTION
- 13. BMP C220 - INLET PROTECTION
- 14. BMP C233 - SILT FENCE
- 15. BMP C235 - WATTLES
- 16. TEMPORARY SEDIMENT/INFILTRATION POND
- 17. HIGH VISIBILITY SILT FENCE

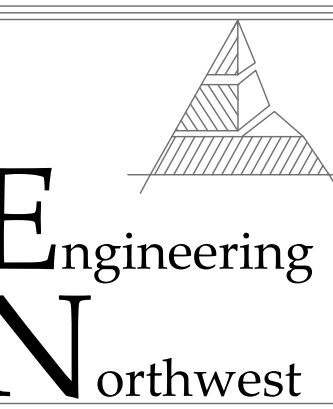
DETAILS SHEETS CXXX  
SEE THE CURRENT CLARK COUNTY STORMWATER MANUAL FOR ADDITIONAL REQUIREMENTS OR EROSION CONTROL METHODS.



LEGEND

- CENTERLINE
- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED LOT LINE
- LIMITS OF CUT
- LIMITS OF FILL
- FINAL GRADE - MAJOR (5')
- FINAL GRADE - MINOR (1')
- EXISTING GRADE - MAJOR (5')
- EXISTING GRADE - MINOR (1')
- DIKE/SWALE
- SILT FENCE





PRELIMINARY STORM  
**HIDDEN RIDGE ESTATES**  
Consulting Engineers & Planners | 7504 NW 10th Avenue, Vancouver, WA 98665 | PH (360) 931-3122

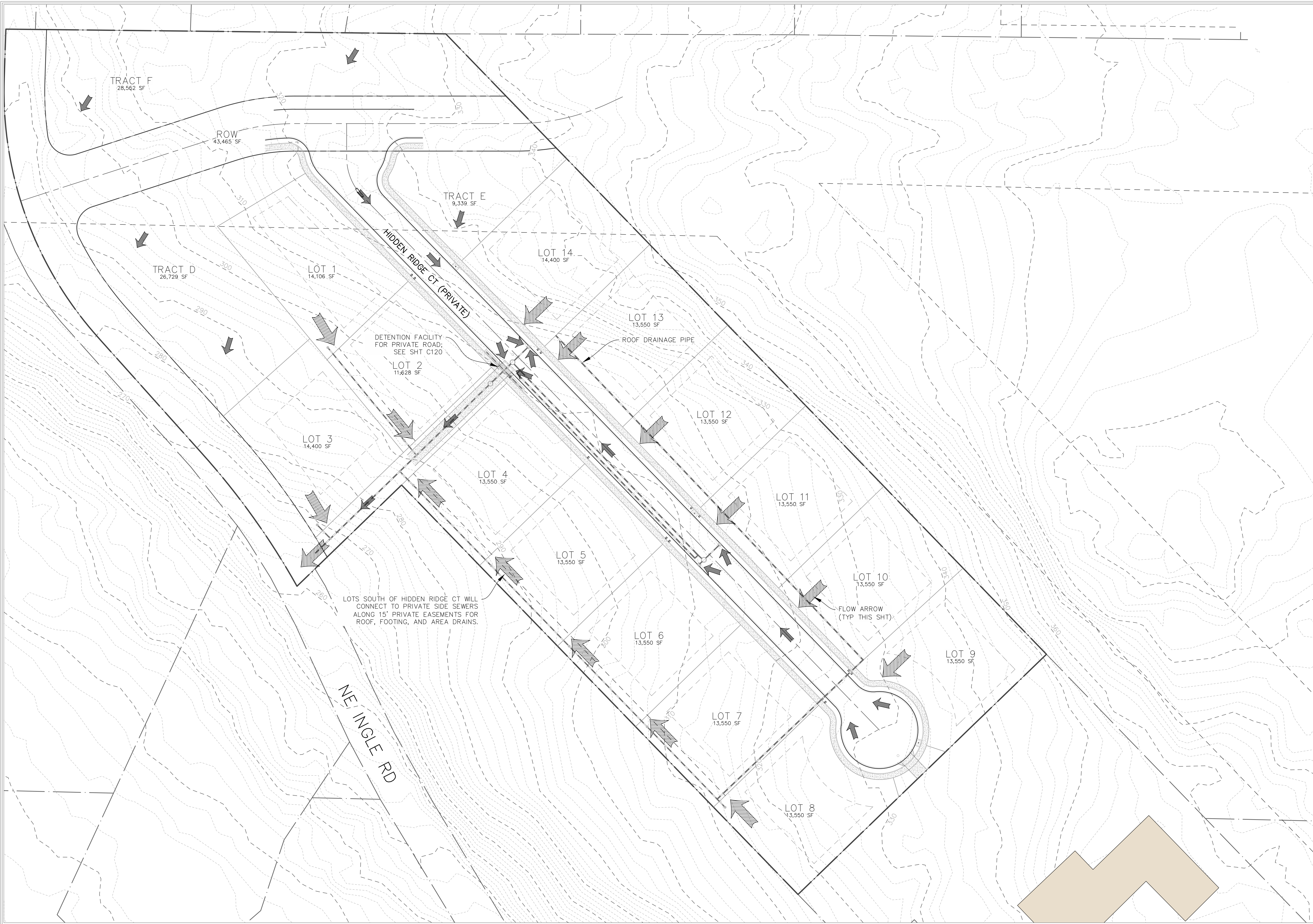
CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555  
"It's the Low"  
NORTHWEST UTILITIES NOTIFICATION CENTER

REVISIONS:

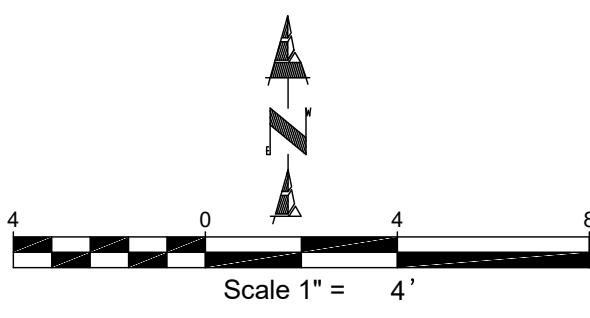
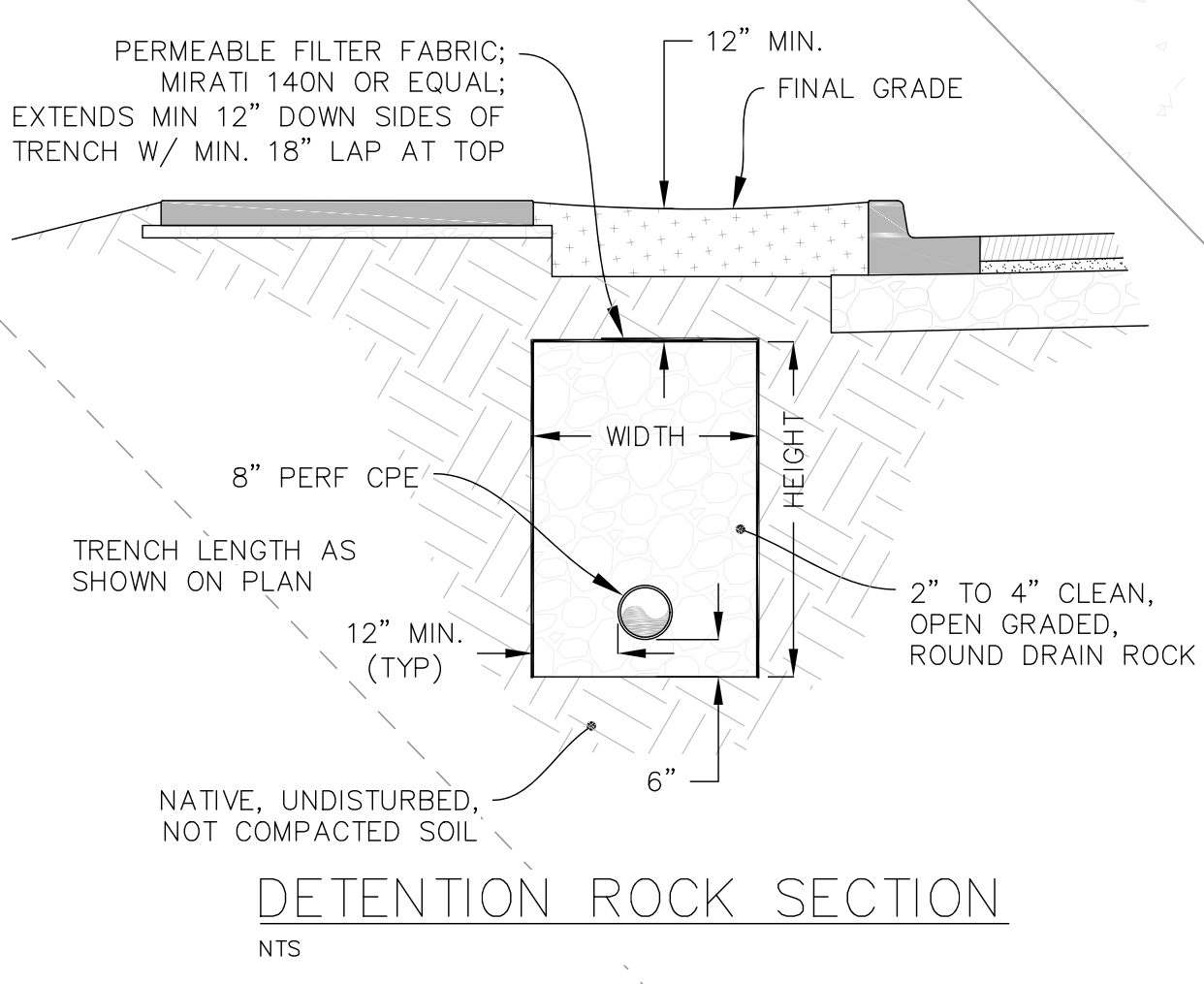
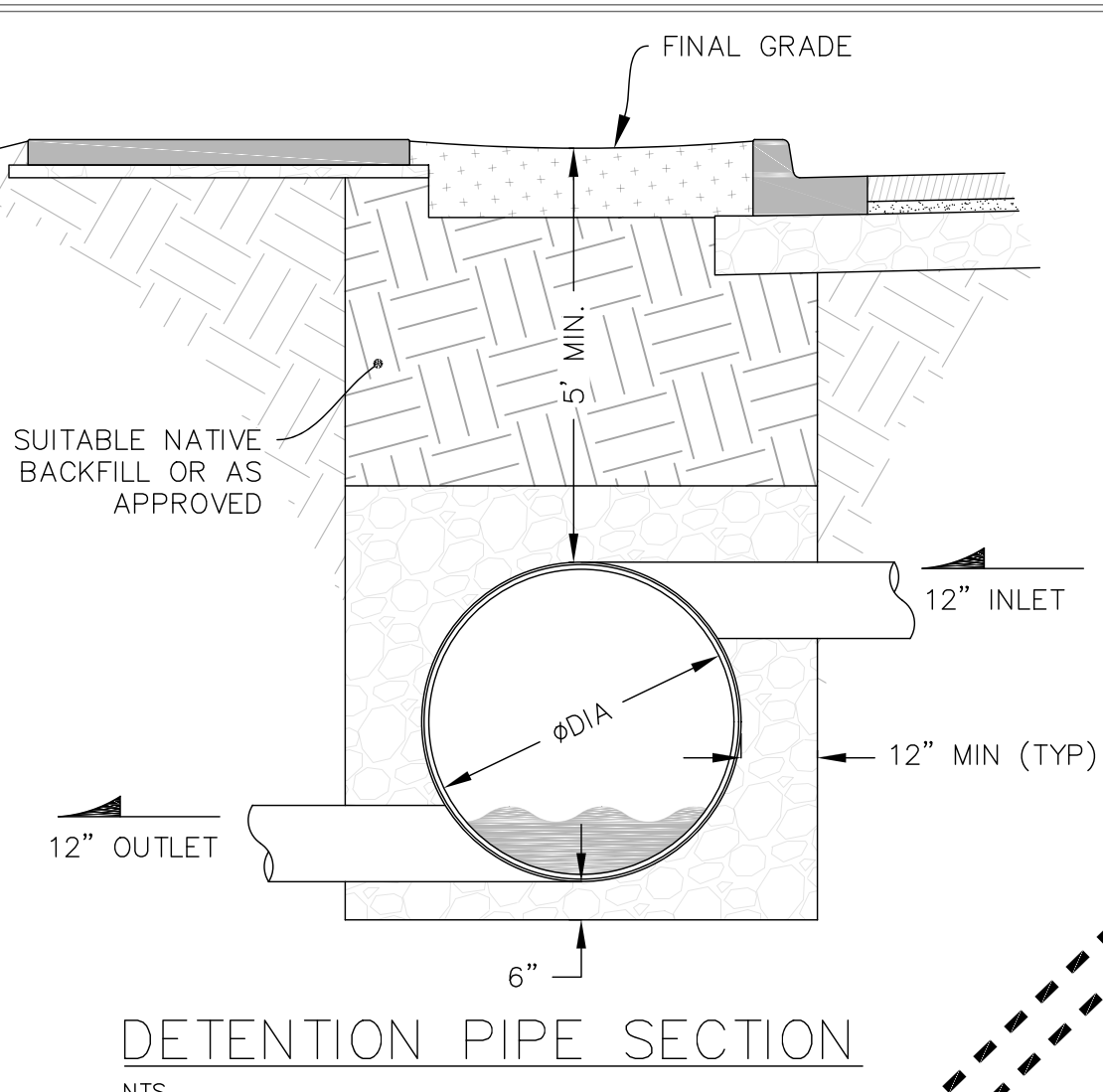
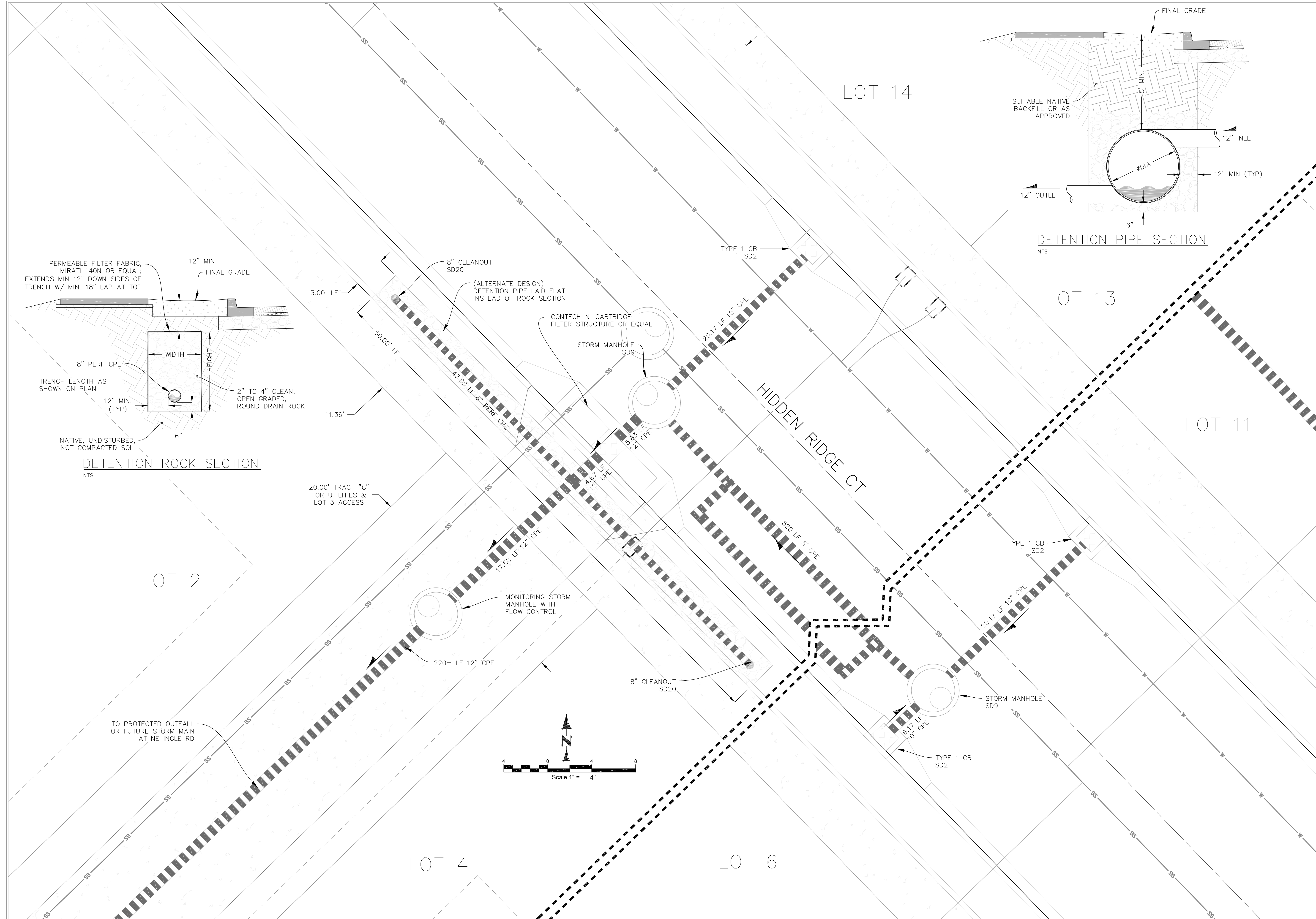
SEAL:

PROJECT NO: 20180055D  
DESIGNED BY: PCW  
DRAWN BY: NVS  
DATE: 9/30/2019

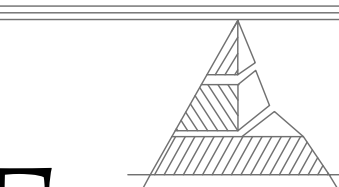
**SHEET NO.**  
**C110**











Engineering  
Northwest

Consulting Engineers & Planners | 7504 NW 10th Avenue, Vancouver, WA 98665 | PH (360) 931-3122

PRELIMINARY SEWER & WATER PLAN  
HIDDEN RIDGE ESTATES

CALL 48 HOURS  
BEFORE YOU DIG

1-800-424-5555  
"It's the Low"

NORTHWEST  
UTILITIES  
NOTIFICATION CENTER

REVISIONS:

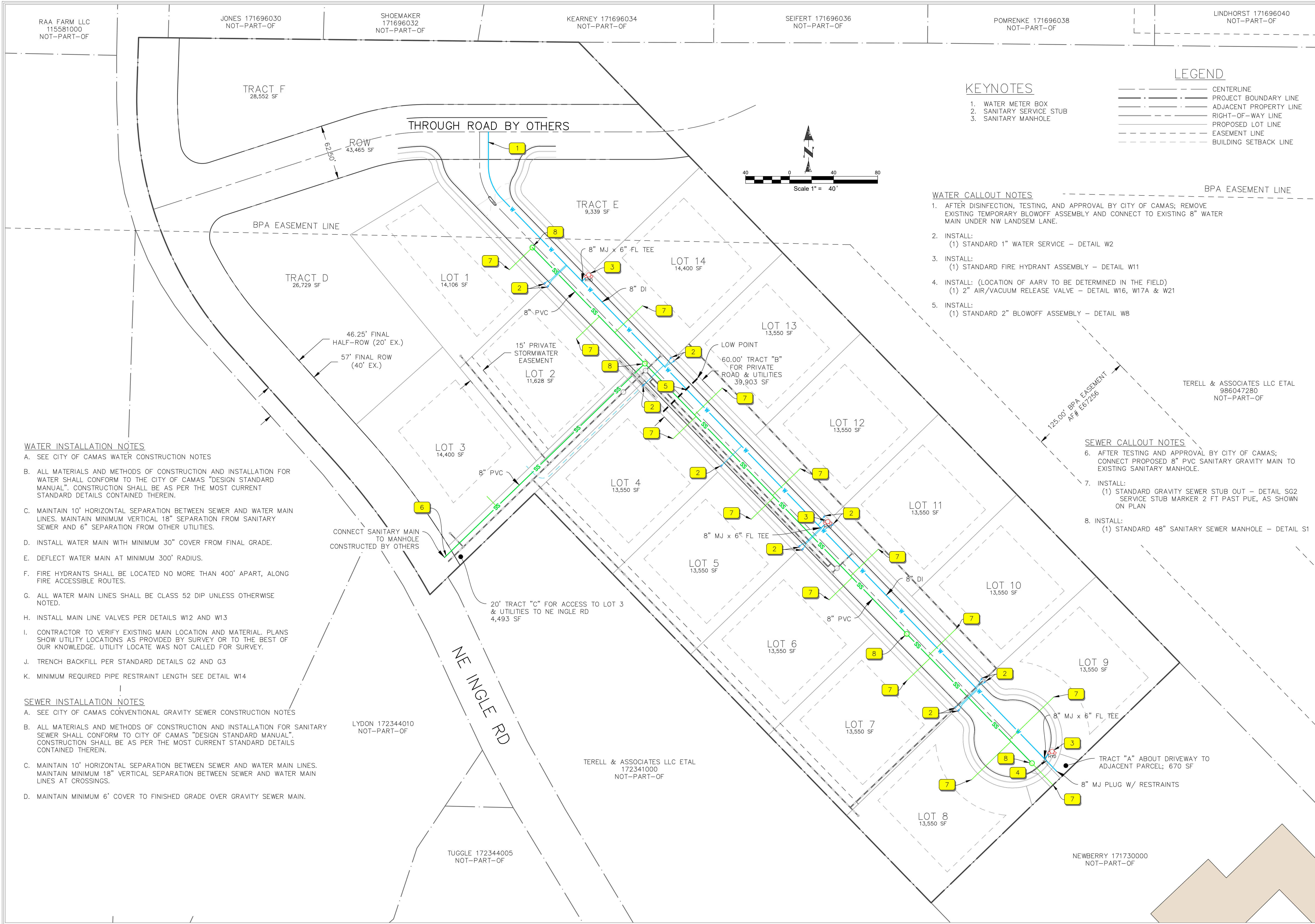
SEAL:

PRELIMINARY  
NOT FOR CONSTRUCTION

43138  
REGISTERED  
PROFESSIONAL ENGINEER

PROJECT NO: 2018005SD  
DESIGNED BY: PCW  
DRAWN BY: NVS  
DATE: 9/30/2019

SHEET NO.  
C130



WATER INSTALLATION NOTES

- SEE CITY OF CAMAS WATER CONSTRUCTION NOTES
- ALL MATERIALS AND METHODS OF CONSTRUCTION AND INSTALLATION FOR WATER SHALL CONFORM TO THE CITY OF CAMAS "DESIGN STANDARD MANUAL". CONSTRUCTION SHALL BE AS PER THE MOST CURRENT STANDARD DETAILS CONTAINED THEREIN.
- MAINTAIN 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAIN LINES. MAINTAIN MINIMUM VERTICAL 18" SEPARATION FROM SANITARY SEWER AND 6" SEPARATION FROM OTHER UTILITIES.
- INSTALL WATER MAIN WITH MINIMUM 30" COVER FROM FINAL GRADE.
- DEFLECT WATER MAIN AT MINIMUM 300' RADIUS.
- FIRE HYDRANTS SHALL BE LOCATED NO MORE THAN 400' APART, ALONG FIRE ACCESSIBLE ROUTES.
- ALL WATER MAIN LINES SHALL BE CLASS 52 DIP UNLESS OTHERWISE NOTED.
- INSTALL MAIN LINE VALVES PER DETAILS W12 AND W13
- CONTRACTOR TO VERIFY EXISTING MAIN LOCATION AND MATERIAL. PLANS SHOW UTILITY LOCATIONS AS PROVIDED BY SURVEY OR TO THE BEST OF OUR KNOWLEDGE. UTILITY LOCATE WAS NOT CALLED FOR SURVEY.
- TRENCH BACKFILL PER STANDARD DETAILS G2 AND G3
- MINIMUM REQUIRED PIPE RESTRAINT LENGTH SEE DETAIL W14

SEWER INSTALLATION NOTES

- SEE CITY OF CAMAS CONVENTIONAL GRAVITY SEWER CONSTRUCTION NOTES
- ALL MATERIALS AND METHODS OF CONSTRUCTION AND INSTALLATION FOR SANITARY SEWER SHALL CONFORM TO CITY OF CAMAS "DESIGN STANDARD MANUAL". CONSTRUCTION SHALL BE AS PER THE MOST CURRENT STANDARD DETAILS CONTAINED THEREIN.
- MAINTAIN 10' HORIZONTAL SEPARATION BETWEEN SEWER AND WATER MAIN LINES. MAINTAIN MINIMUM 18" VERTICAL SEPARATION BETWEEN SEWER AND WATER MAIN LINES AT CROSSINGS.
- MAINTAIN MINIMUM 6' COVER TO FINISHED GRADE OVER GRAVITY SEWER MAIN.

KEYNOTES

- WATER METER BOX
- SANITARY SERVICE STUB
- SANITARY MANHOLE

LEGEND

- CENTERLINE
- PROJECT BOUNDARY LINE
- ADJACENT PROPERTY LINE
- RIGHT-OF-WAY LINE
- PROPOSED LOT LINE
- EASEMENT LINE
- BUILDING SETBACK LINE

WATER CALLOUT NOTES

- AFTER DISINFECTION, TESTING, AND APPROVAL BY CITY OF CAMAS; REMOVE EXISTING TEMPORARY BLOWOFF ASSEMBLY AND CONNECT TO EXISTING 8" WATER MAIN UNDER NW LANSEM LANE.
- INSTALL:  
(1) STANDARD 1" WATER SERVICE - DETAIL W2
- INSTALL:  
(1) STANDARD FIRE HYDRANT ASSEMBLY - DETAIL W11
- INSTALL: (LOCATION OF AARV TO BE DETERMINED IN THE FIELD)  
(1) 2" AIR/VACUUM RELEASE VALVE - DETAIL W16, W17A & W21
- INSTALL:  
(1) STANDARD 2" BLOWOFF ASSEMBLY - DETAIL W8



SEWER CALLOUT NOTES

- AFTER TESTING AND APPROVAL BY CITY OF CAMAS; CONNECT PROPOSED 8" PVC SANITARY GRAVITY MAIN TO EXISTING SANITARY MANHOLE.
- INSTALL:  
(1) STANDARD GRAVITY SEWER STUB OUT - DETAIL SG2  
SERVICE STUB MARKER 2 FT PAST PUE, AS SHOWN ON PLAN
- INSTALL:  
(1) STANDARD 48" SANITARY SEWER MANHOLE - DETAIL S1





PLANT SCHEDULE

STREET TREES	BOTANICAL / COMMON NAME	CONTAINER	SIZE	SPACING	QTY
	<i>Nyssa sylvatica</i> 'Afterburner' / Afterburner Tupelo or Approved Equal. Street Trees may be moved or eliminated to avoid conflicts with future driveways, street lights, or utilities.	B & B	2" cal	30' o.c.	47
SEED	BOTANICAL / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Turf Seed PT 755 Fleur de Lawn / Pro-time Fleur de Lawn Seed Mix (THROUGHOUT PLANTER STRIPS)	hydroseed			12,767 sf

HIDDEN RIDGE ESTATES



