MASON COUNTY PUD NO.1

SECTION 17, TOWNSHIP 19W, RANGE 5N

TAX PARCEL: SEE INDEX SHEET

PROJECT DATA

MASON COUNTY PUD NO.1 (OWNER):

KRISTIN MASTELLER **GENERAL MANAGER** N 21971 HWY 101 SHELTON, WA 98584

BKI ENGINEERING SERVICES (DESIGNER):

TOM PANKAU 1315 SE GRACE AVE., SUITE 201 BATTLEGROUND, WA 98604 (630) 947-9359 TOMP@BKI.CC





WHITEWOLF ENGINEERING SERVICES (EOR):

RAVYN WHITEWOLF, PE, PMP, VMA

(360) 592-3445 WHITEWOLFENGINEERINGSERVICES@GMAIL.COM

GENERAL NOTES

- 1. LAKE ARROWHEAD WATERLINE REPLACEMENT PROJECT INVOLVES THE INSTALLATION OF A WATER LINES AND APPURTENANCES LOCATED IN THE LAKE ARROWHEAD COMMUNITY. CONTRACTOR WILL PROVIDE ALL REQUIRED TOOLS, MATERIALS, EQUIPMENT, PERSONNEL AND TESTING REQUIRED FOR PROJECT COMPLETION.
- ALL WORK SHALL BE IN ACCORDANCE WITH MASON COUNTY PUBLIC UTILITIES DISTRICT NO. 1 "MINIMUM DESIGN STANDARDS & STANDARD CONSTRUCTION MATERIALS", MASON COUNTY PUBLIC WORKS STANDARDS, WSDOT STANDARD SPECIFICATIONS M41-10 2021, AND PROJECT PLANS. APPURTENANCES SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- GROUND CONDITIONS WERE DETERMINED USING UNITED STATES DEPARTMENT OF AGRICULTURE'S WEB SOIL SURVEY AND IS UP TO THE CONTRACTOR'S INTERPRETATION OF ACTUAL GROUND CONDITIONS.
- TEMPORARY EROSION/WATER POLLUTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTHWORK OR CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH MASON COUNTY STANDARDS, WA DOE 2014 SWMMWW, AND PROJECT PLANS. SIGNIFICANT VARIATION AND DEGREE OF EROSION CONTROL EFFORT WILL BE DICTATED BY WEATHER CONDITIONS. THE CONTRACTOR SHOULD BE PREPARED TO PROVIDE EXTRA EROSION CONTROL PROVISIONS AND EFFORT DURING WET WEATHER CONDITIONS BEYOND THAT NORMALLY REQUIRED DURING DRY CONDITIONS. FINE GRAINED AND UNCONSOLIDATED SOILS ON SLOPING SITES MAY BECOME UNSTABLE WHEN SUBJECT TO EXCESSIVE MOISTURE.
- DISTURBED AND EXPOSED AREAS FROM INSTALLATION OF INFRASTRUCTURE AND UTILITIES SHALL BE RESTORED AND STABILIZED. CONTRACTOR TO INSTALL ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PROTECT DISTURBED AND EXPOSED SOILS. REFER TO TESC FOR MORE DETAILS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL OTHER PERMITS, RIGHT-OF-WAYS, EASEMENTS, AND OTHER REQUIREMENTS BY THE COUNTY OR OTHER GOVERNING AUTHORITY OR AGENCY AS MAY BE APPLICABLE.
- CALL UNDERGROUND LOCATE LINE A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATIONS. UTILITIES SHOWN ON CONSTRUCTION PLANS ARE NOT EXACT IN LOCATION. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND FOR ANY DAMAGE DONE TO THEM DURING CONSTRUCTION ACTIVITIES.
- ALL SOIL DISTURBING ACTIVITY MUST ADHERE TO THE REQUIREMENTS OF WASHINGTON DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND WASHINGTON DEPARTMENT OF ECOLOGY STANDARDS AND REQUIREMENTS.
- 9. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH MASON COUNTY PUD NO. 1 PRIOR TO THE START OF CONSTRUCTION.
- 10. CONTRACTOR MUST CARRY OUT HYDROSTATIC AND LEAKAGE TESTING ON THE WATER MAIN SEGMENTS PER PROJECT PLANS, WSDOT STANDARD SPECIFICATIONS M41-10, AND PUD NO. 1 OF MASON COUNTY'S "MINIMUM DESIGN STANDARDS & CONSTRUCTION MATERIALS" DOCUMENT.
- 11. UPON COMPLETION OF PRESSURE TESTING, THE CONTRACTOR MUST DISINFECT ALL PIPES AND FITTINGS IN THE SYSTEM ACCORDING TO WSDOT STANDARD SPECIFICATIONS M41-10 AND PUD NO. 1 OF MASON COUNTY'S "MINIMUM DESIGN STANDARDS & CONSTRUCTION MATERIALS" DOCUMENT.
- 12. PROJECT IS LOCATED IN A HEAVILY VEGETATED AREA WITH WET CONDITIONS. CONTRACTOR SHALL UNDERSTAND THE SITE CONDITIONS IN ITS ENTIRETY PRIOR TO PLACING BID.

SHEET INDEX

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1	CS1	COVER SHEET	
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5	SP1	SITE PLAN	
6	DT1	WATER DETAILS - TRAILS	
7	DT2	EROSION CONTROL DETAILS	

GENERAL NOTES (CONTINUED)

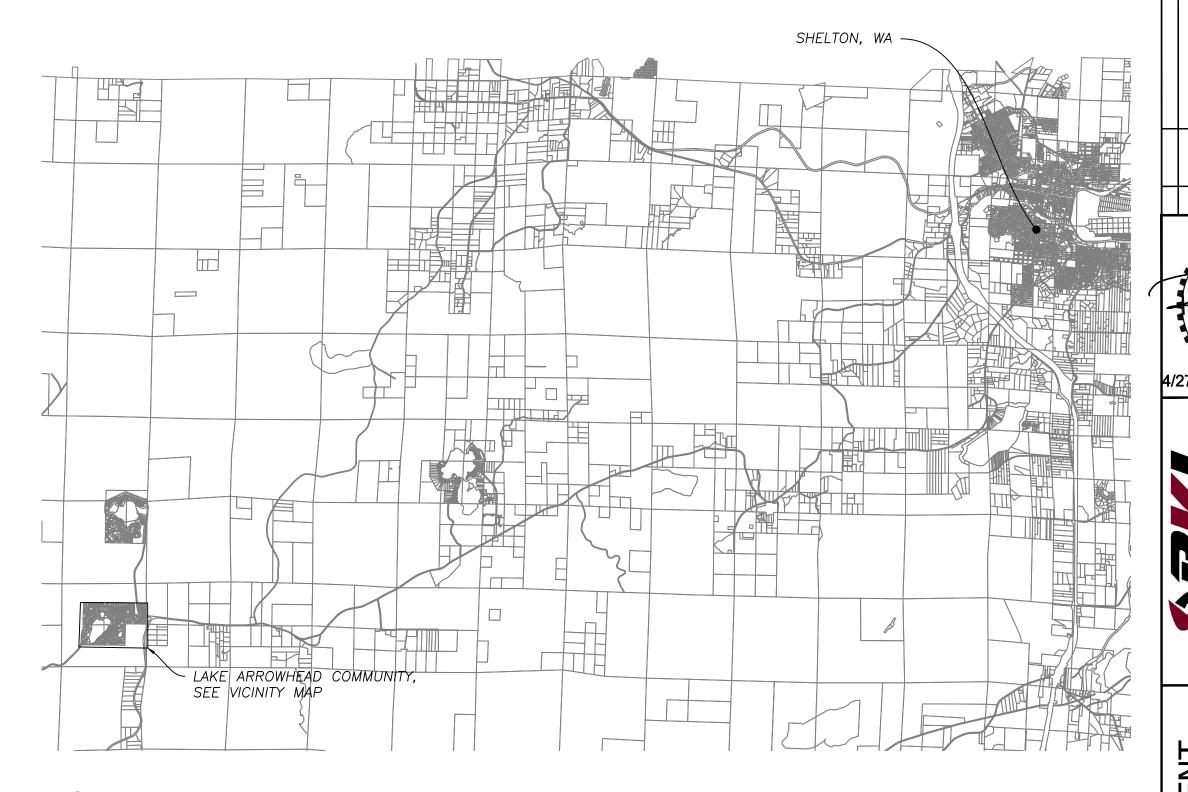
- 1. 2014 DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON (2014 SWMMWW) INDICATE THAT ONLY MINIMUM REQUIREMENT #2 APPLIES BECAUSE LAND DISTURBING ACTIVITIES FROM TRENCHING IS ESTIMATED TO BE LESS THAN 7,000 SQUARE FEET. ALL 13 ELEMENTS OF CONSTRUCTION STORMWATER POLLUTION PREVENTION WERE CONSIDERED AND CONTROLS WERE DEVELOPED FOR THE PROJECT SITE.
- 2. PROJECT IS EXEMPT FROM STATE SEPA REVIEW ACCORDING TO WAC 197-11-800(23)(B) FOR WATER LINES AND APPURTENANCES.
- 3. ALL LINEWORK AND EXISTING CONDITIONS SHOWN ON PLANS ARE NOT EXACT IN LOCATION AND SHOULD BE USED FOR GENERAL INTERPRETATION ONLY. THE CONTRACTOR SHALL NOTIFY THE OWNER IF DISCREPANCIES ARE FOUND IN THE FIELD THAT CONFLICT WITH CONSTRUCTION
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PERMITTING AND IMPLEMENTATION OF ANY TRAFFIC CONTROLS REQUIRED BY MASON COUNTY.
- 5. CONTRACTOR WILL COORDINATE WITH MASON COUNTY PUD NO. 1 ON TIE-IN CONNECTIONS AND FOR ANY OUTAGES REQUIRED. MASON COUNTY PUD NO. 1 WILL BE RESPONSIBLE FOR COMPLETING SERVICE CONNECTIONS REQUIRED. CONTRACTOR SHALL MAINTAIN DAILY COMMUNICATIONS WITH THE PUD IN ORDER TO COORDINATE WORK ITEMS AND TO MINIMIZE
- 6. CONTRACTOR SHALL MAINTAIN A SAFE AND CLEAN WORKSITE THROUGHOUT CONSTRUCTION AND ALLOW ACCESS TO INSPECTORS OR OWNER REPRESENTATIVES.
- 7. CONSTRUCTION OF WATER MAINS SHALL CONFORM TO REQUIREMENTS LISTED IN WSDOT STANDARD SPECIFICATION SECTION 7-09 AND PAYMENT WILL BE MADE ACCORDING TO SECTION 7-09.5 FOR CONSTRUCTION OF WATER MAIN.
- 8. PRIOR TO TESTING, THE CONTRACTOR SHALL SUBMIT A FLUSHING PLAN TO THE PUD PER WSDOT 8-03.3(7) THAT DETAILS HOW THE SUPERCHLORINATED WATER WILL BE RELEASED FROM THE CONSTRUCTED WATER MAIN WHILE PROTECTING EROSION AND WATER QUALITY. TESTING ACTIVITIES SHALL NOT COMMENCE UNTIL THE PLAN IS REVIEWED AND APPROVED BY

UTILITY NOTE

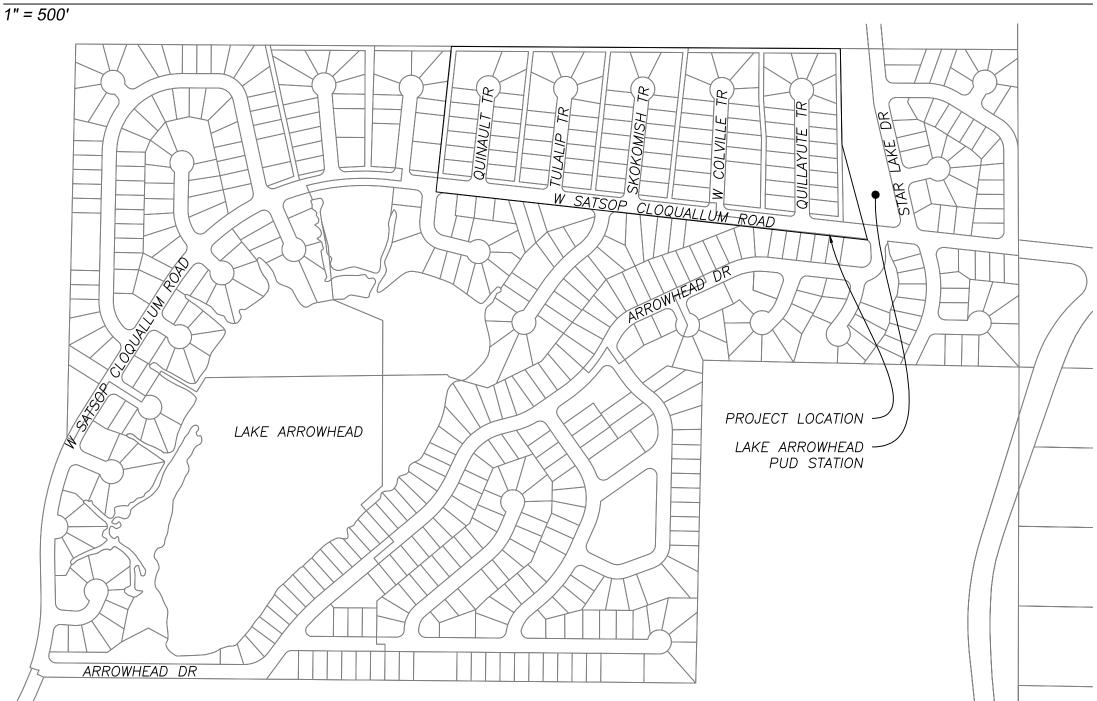
UNDERGROUND AND OVERHEAD UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE NOT IN EXACT LOCATIONS AND THE PROTECTION OF EXISTING UTILITIES ARE THE CONTRACTOR'S RESPONSIBILITY DURING CONSTRUCTION. BROWN & KYSAR INC. MAKES NO CERTIFICATION AS TO THE LOCATION OF ANY UTILITIES SHOWN ON THE PLANS.



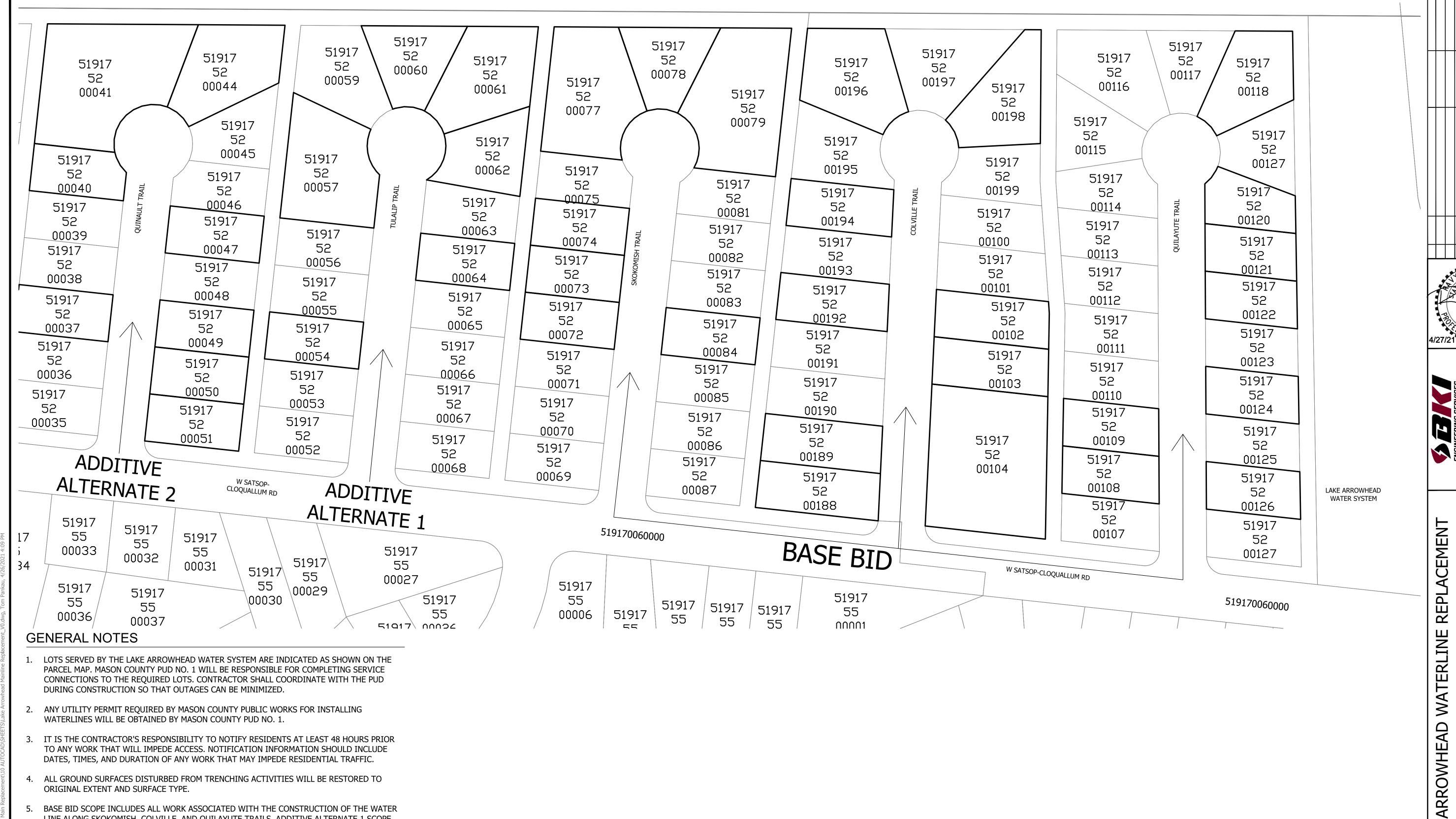
PROJECT OVERVIEW



VICINITY MAP



SHEET PUD 7. 101 COVER



- LOTS SERVED BY THE LAKE ARROWHEAD WATER SYSTEM ARE INDICATED AS SHOWN ON THE PARCEL MAP. MASON COUNTY PUD NO. 1 WILL BE RESPONSIBLE FOR COMPLETING SERVICE CONNECTIONS TO THE REQUIRED LOTS. CONTRACTOR SHALL COORDINATE WITH THE PUD DURING CONSTRUCTION SO THAT OUTAGES CAN BE MINIMIZED.
- ANY UTILITY PERMIT REQUIRED BY MASON COUNTY PUBLIC WORKS FOR INSTALLING WATERLINES WILL BE OBTAINED BY MASON COUNTY PUD NO. 1.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY RESIDENTS AT LEAST 48 HOURS PRIOR TO ANY WORK THAT WILL IMPEDE ACCESS. NOTIFICATION INFORMATION SHOULD INCLUDE DATES, TIMES, AND DURATION OF ANY WORK THAT MAY IMPEDE RESIDENTIAL TRAFFIC.
- ALL GROUND SURFACES DISTURBED FROM TRENCHING ACTIVITIES WILL BE RESTORED TO ORIGINAL EXTENT AND SURFACE TYPE.
- BASE BID SCOPE INCLUDES ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE WATER LINE ALONG SKOKOMISH, COLVILLE, AND QUILAYUTE TRAILS. ADDITIVE ALTERNATE 1 SCOPE INCLUDES ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE WATER LINE ALONG TUALALIP TRAIL. ADDITIVE ALTERNATE 2 SCOPE INCLUDES ALL WORK ASSOCIATED WITH THE CONSTRUCTION OF THE WATER LINE ALONG QUINAULT TRAIL.

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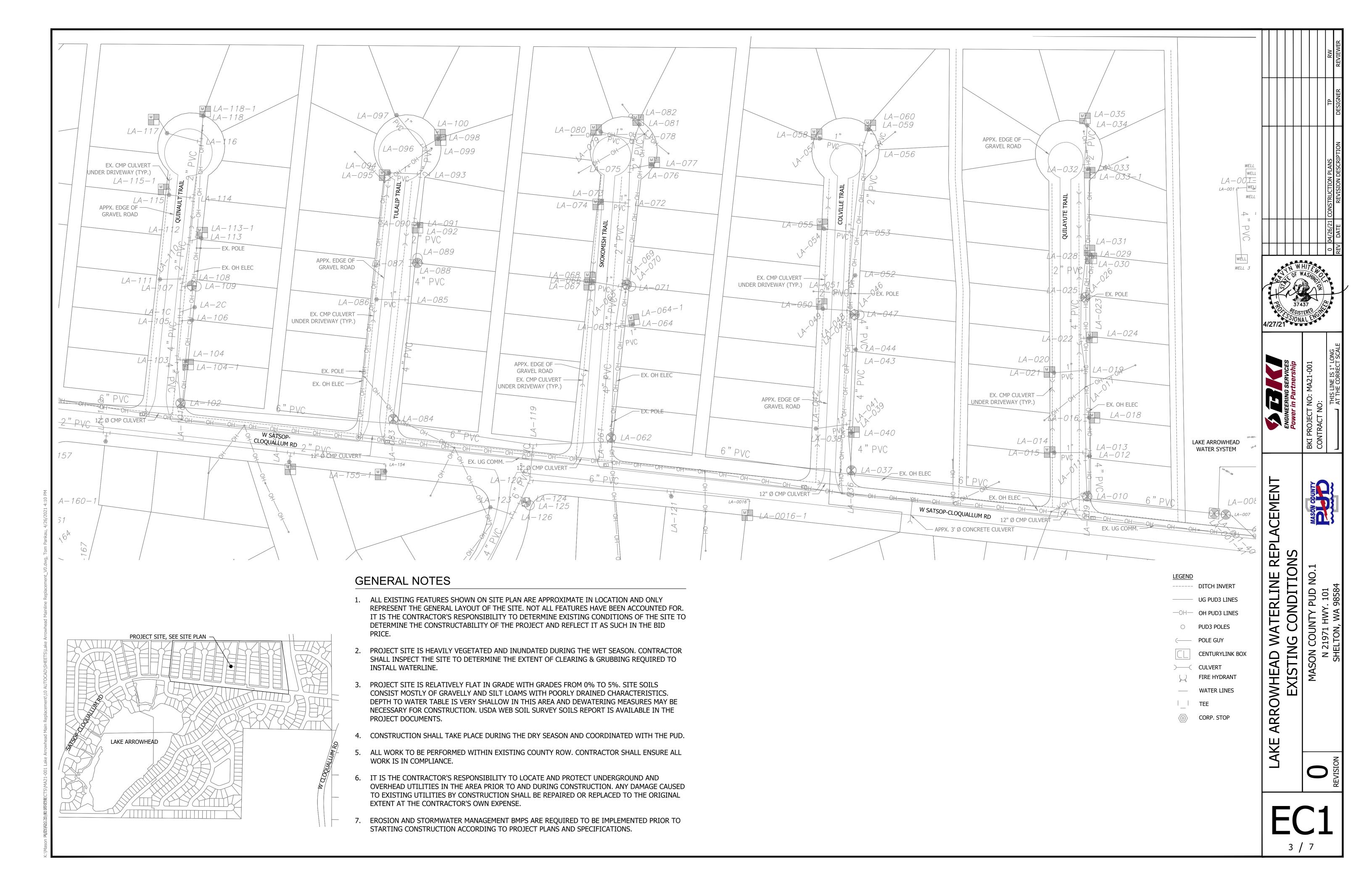
INDEX MAP

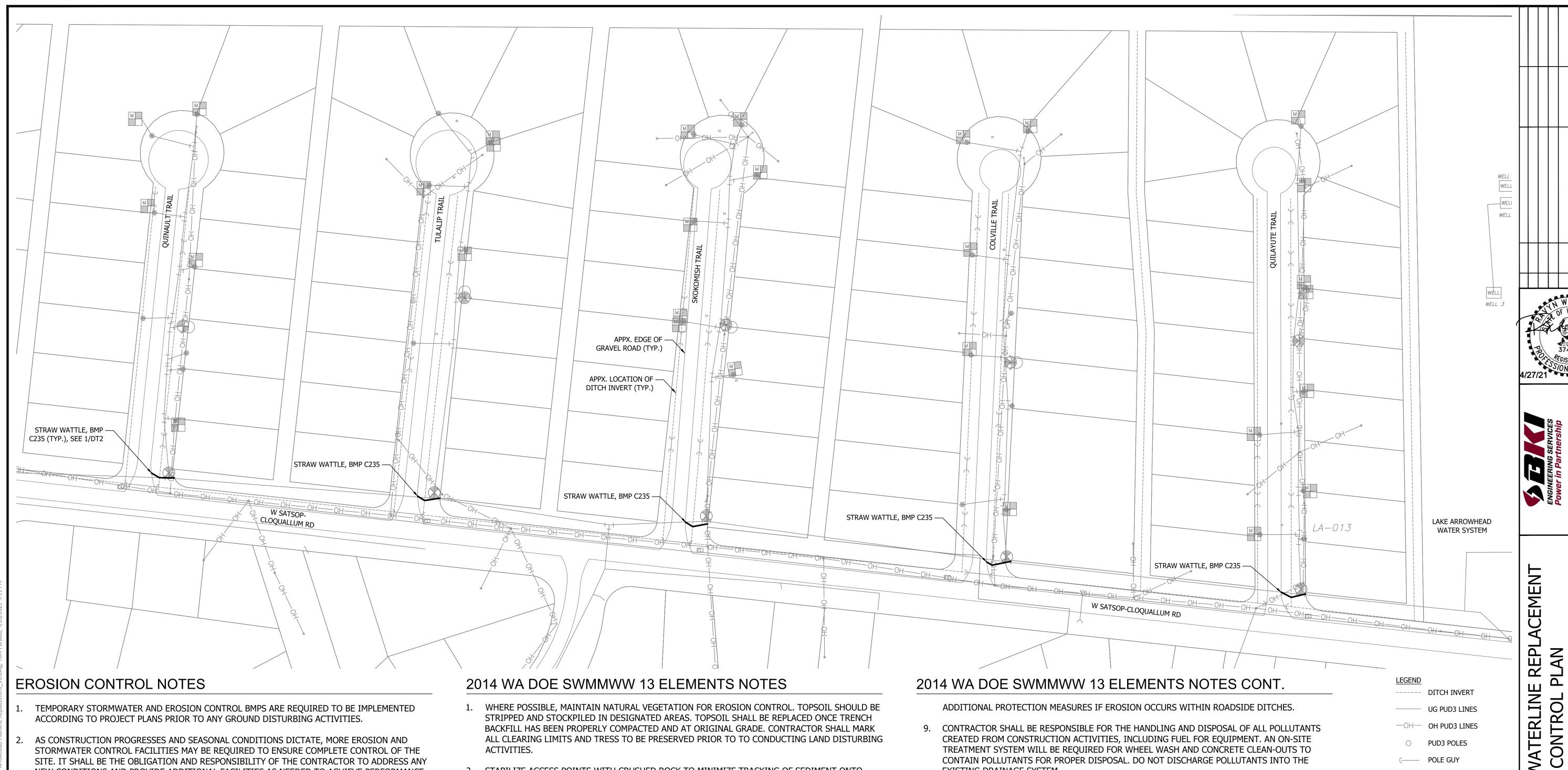
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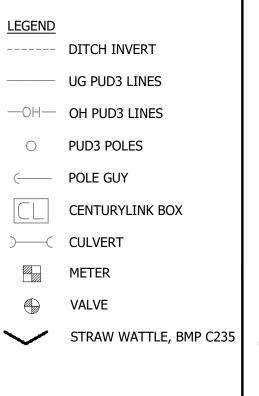




- SITE. IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS AND PROVIDE ADDITIONAL FACILITIES AS NEEDED TO ACHIEVE PERFORMANCE STANDARDS.
- NOTIFY PROJECT ENGINEER AND OWNER IF CONTAMINANTS ARE ENCOUNTERED DURING CONSTRUCTION.
- WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR EROSION CONTROL. TOPSOIL SHOULD BE STRIPPED AND STOCKPILED IN DESIGNATED AREAS. TOPSOIL SHALL BE REPLACED ONCE TRENCH BACKFILL HAS BEEN PROPERLY COMPACTED AND AT ORIGINAL GRADE.
- DUE TO WET CONDITIONS IN THE AREA, WORK SHALL NOT BE CONDUCTED DURING THE WET SEASON.
- PLACE STRAW WATTLE AT SOUTHERN END OF CONSTRUCTION TO INTERCEPT ANY SEDIMENT POLLUTANTS GENERATED FROM EARTHWORK ACTIVITIES. INSTALL WATTLES ACCORDING TO 2014 SWMMWW BMP C235. LAY STRAW WATTLE FROM EDGE OF GRAVEL ROAD THROUGH DITCH INVERT AND EQUAL DISTANCE UP THE DITCH SLOPE.

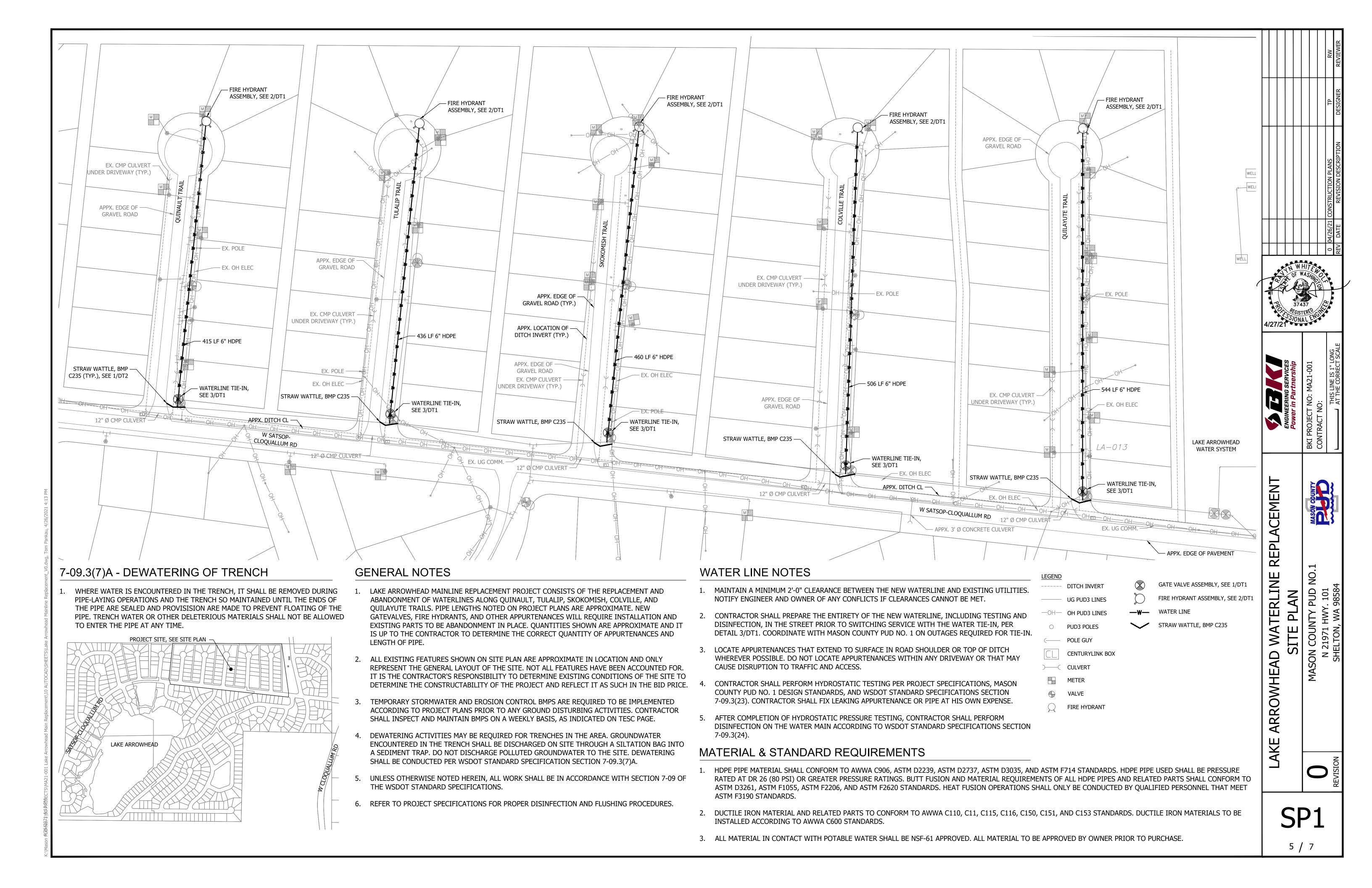
- 2. STABILIZE ACCESS POINTS WITH CRUSHED ROCK TO MINIMIZE TRACKING OF SEDIMENT ONTO PUBLIC ROADS. CLEAN ALL ROADWAYS AND DISPOSE OF SEDIMENT AT THE END OF THE DAY.
- 3. PROTECT PROPERTIES FROM EROSION AND PREVENT INCREASES IN VELOCITY AND PEAK VOLUMETRIC FLOW RATES OF RUN-OFF CAUSED BY CONSTRUCTION. CONTRACTOR TO CONSTRUCT ADDITIONAL EROSION AND STORMWATER CONTROL BMPS TO MINIMIZE EROSION IF HIGH FLOWS CANNOT BE PREVENTED.
- 4. CONSTRUCT SEDIMENT CONTROL BMPS PER PLANS PRIOR TO ANY GROUND-DISTURBING ACTIVITIES AND TAKE ALL MEASURES NECESSARY TO MINIMIZE SEDIMENT DISCHARGES FROM THE SITE.
- 5. ALL DISTURBED LAND AREAS UNWORKED FOR SEVEN (7) DAYS OR MORE SHALL BE PROTECTED FROM EROSION BY HYDROSEEDING WITH A MIX OR METHOD APPROVED BY MASON COUNTY. ALL STOCKPILES SHALL BE PROTECTED FROM EROSION AND LOCATED AWAY FROM DRAINAGE CHANNELS.
- 6. PLACE EXCAVATED MATERIAL ON THE UPHILL SIDE OF TRENCHES. IMPLEMENT BMPS AS SHOWN ON PLAN TO REDUCE EROSION ON DITCH SLOPES. DO NOT DAMAGE DITCH SLOPES WITH HEAVY MACHINERY.
- 7. PROTECT EXISTING CULVERTS FROM EXCESSIVE SEDIMENTATION. CLEAN AND MAINTAIN CULVERTS AS NECESSARY TO NOT LIMIT ITS FLOW CAPACITY.
- 8. EXISTING ON-SITE CONVEYANCE CHANNELS AND DITCHES MUST BE PROTECTED FROM EROSION FROM RUN-OFF THROUGH USE OF BMPS SHOWN ON PLANS. CONTRACTOR MUST IMPLEMENT

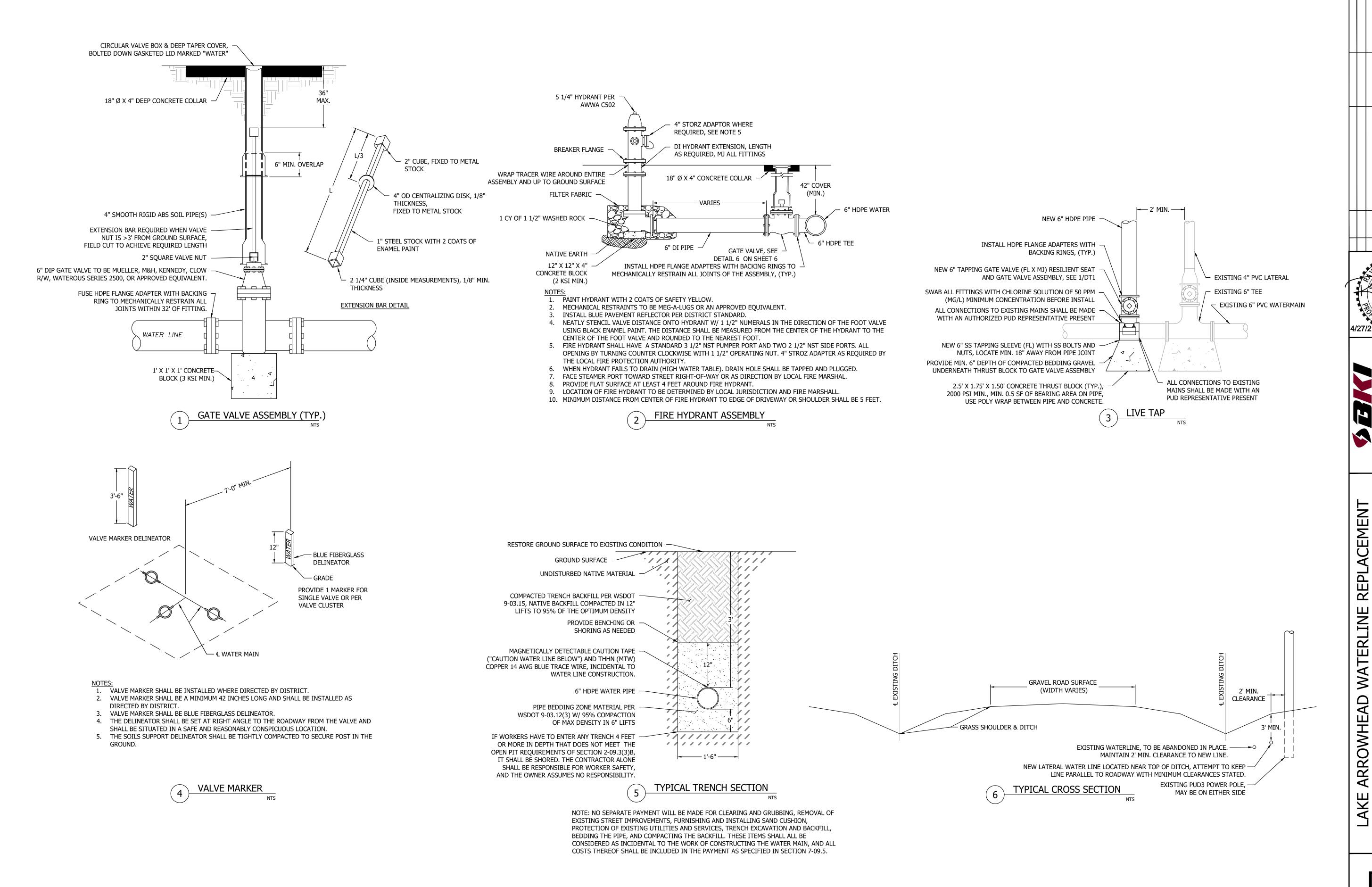
- CONTAIN POLLUTANTS FOR PROPER DISPOSAL. DO NOT DISCHARGE POLLUTANTS INTO THE EXISTING DRAINAGE SYSTEM.
- 10. DISCHARGE ONLY CLEAN, NON-TURBID DEWATERING WATER TO EXISTING DRAINAGE SYSTEM THROUGH A SEDIMENT BAG IN A MANNER THAT DOES NOT CAUSE EXCESSIVE EROSION OR FLOODING OF THE CHANNEL. HANDLE HIGHLY TURBID OR CONTAMINATED DEWATERING WATER SEPARATELY FROM STORMWATER.
- 11. MAINTAIN EROSION AND SEDIMENT CONTROL BMPS ON A DAILY BASIS TO ASSURED CONTINUED PERFORMANCE IN ACCORDANCE WITH 2014 SWMMWW MANUAL. REMOVE ALL TEMPORARY BMPS WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED.
- 12. CONTRACTOR IS RESPONSIBLE FOR THE PROPER PERFORMANCE OF ALL BMPS IMPLEMENTED AND WILL REPAIR, MAINTAIN, OR ADD BMPS AS REQUESTED BY THE OWNER IN ORDER TO MEET EROSION CONTROL STANDARDS. CONTRACTOR SHALL PROVIDE PROJECT SCHEDULE IN ORDER TO REDUCE THE AMOUNT AND DURATION OF SOIL EXPOSED TO EROSION.
- 13. THERE ARE NO LOW IMPACT DEVELOPMENT BMPS IMPLEMENTED FOR THIS PROJECT OR FOUND ON-SITE TO PROTECT.



WATERLINE EROSION **OWHEAD** \triangleleft

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WATER DETAILS - TRAILS

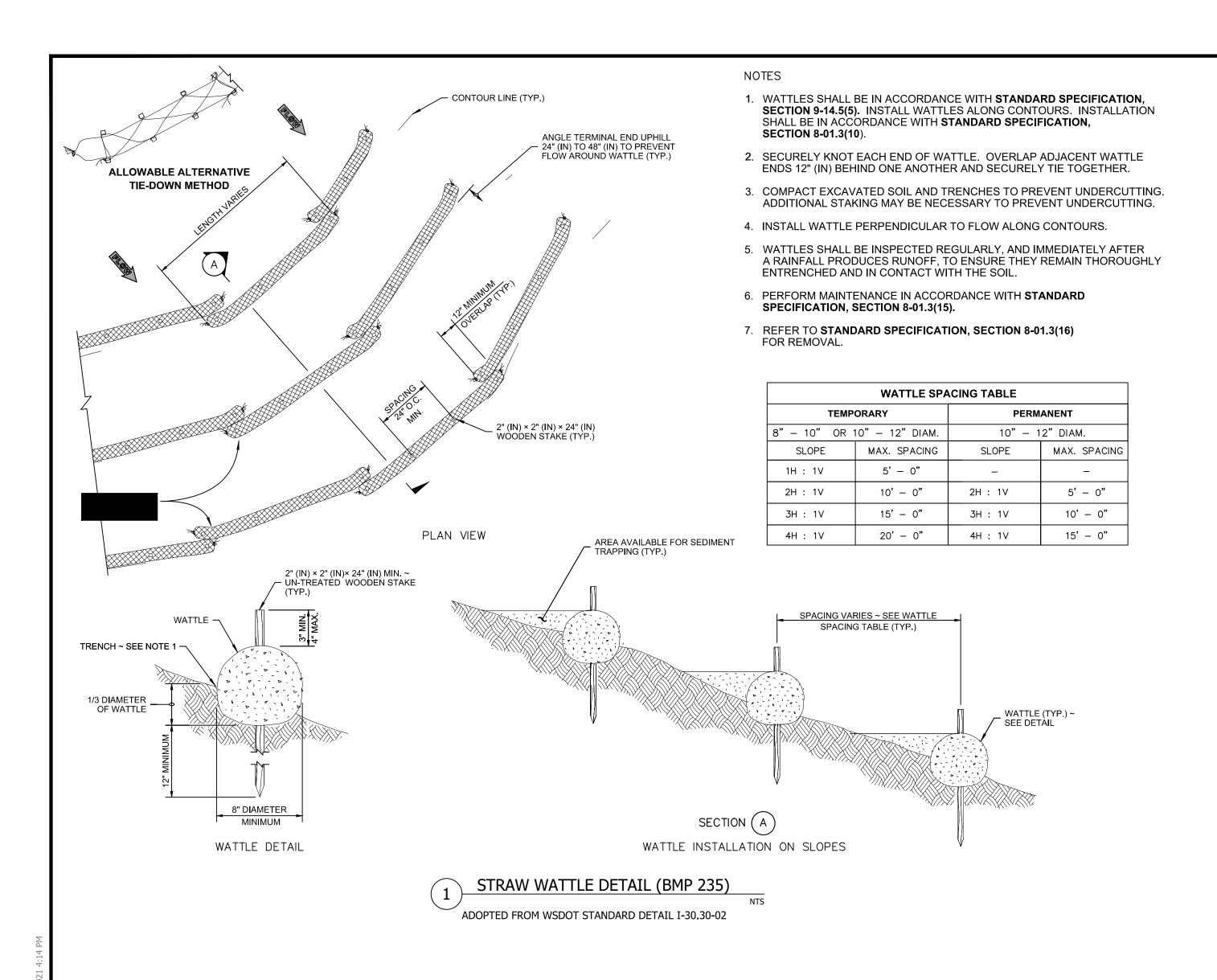
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