WATER DISTRICT 19

RIDGE ROAD WATER MAIN REPLACEMENT

PHASE 2, SPRING 2012

VOLUME II OF II

SIGNED: 11/15/10

SIGNED: 11/15/10

WATER DISTRICT 19

COMMISSIONERS

Steve Haworth, President
Bob Powell, Secretary
Richard Bard

GENERAL MANAGER

Jeff Lakin

OPERATIONS LEAD

Armin Wahanik

PROJECT PHASING NOTE:
THE RIDGE ROAD WATER MAIN REPLACEMENT PROJECT WILL BE CONSTRUCTED IN PHASES OVER MULTIPLE YEARS. WHILE BID DOCUMENTS HAVE BEEN PREPARED AND PROVIDED FOR THE FULL PROJECT, THE CONTRACTOR'S SCOPE OF WORK SHALL BE LIMITED BY THE PHASING LIMITS IDENTIFIED ON THE PLANS AND IN THE SPECIFICATIONS. SEE SECTION 20 OF THE SPECIAL PROVISION FOR ADDITIONAL INFORMATION.

LEGEND

EXISTING

UTILITY SYMBOLS

- WATER METER
- 3-NOZZLE FIRE HYDRANT
- BO — BLOW-OFF VALVE
- WATER VALVE (GATE/OTHER)
- WATER VAULT
- GAS VALVE
- P — POWER VAULT
- UTP — UTILITY POLE
- PPU — UTILITY POLE W/UNDERGROUND CONDUIT
- PPT — UTILITY POLE W/TRANSFORMER
- PPL — UTILITY POLE W/LIGHT
- UTILITY POLE ANCHOR
- TELEPHONE RISER
- T — TELEPHONE VAULT
- STORM DRAIN CATCH BASIN
- STORM DRAIN CULVERT

LINETYPES

- WS — WATER SERVICE
- W — WATER MAIN
- G — GAS
- P — POWER (BURIED)
- OHP — POWER (OVERHEAD)
- TEL — TELEPHONE (BURIED)
- TV — CABLE TELEVISION (BURIED)
- ST — STORM DRAIN
- DITCH
- CHAINLINK FENCE
- GUARDRAIL
- RETAINING WALL
- EDGE OF PAVEMENT — EDGE OF PAVEMENT
- EDGE OF GRAVEL — EDGE OF GRAVEL
- ROAD CENTERLINE (CROWN)
- 560 — CONTOUR (MAJOR)
- CONTOUR (MINOR)
- RIGHT-OF-WAY LINE
- PARCEL LINE

TREE SYMBOLS

- TREE (Conifer)
- F — FIR
- H — HEMLOCK
- P — PINE
- CFR — CONIFER
- TREE (Deciduous)
- M — MAPLE
- MA — MADRONA
- DEC — DECIDUOUS
- CY — CHERRY
- TREE LINE
- HEDGE

SURFACE SYMBOLS

- MB — MAIL BOX
- ROCK FACING
- SIGN
- YARD LIGHT / LAMP POST
- GUARD POST

SURVEY SYMBOLS

- SECTION CORNER
- QUARTER CORNER
- MON IN CASE (AS DESCRIBED)
- REBAR W/ RED CONTROL CAP
- LARGE MAG NAIL W/ WASHER

HATCHING

- PAVEMENT
- CONCRETE
- GRAVEL

PROPOSED

UTILITY SYMBOLS

- BENDS
- TEE
- FIRE HYDRANT
- GATE VALVE
- BLOW-OFF VALVE
- AIR/VACUUM VALVE
- SPOOL

LINETYPES

- 8" PVC W — WATER MAIN
- WS — WATER SERVICE PIPE
- 0+50 — CONSTRUCTION STATION LINE

HATCHING

- HMA GRIND AND OVERLAY
- HMA TRENCH PATCH

SURVEY DATUM:

HORIZONTAL DATUM – NAD 83/91 WASHINGTON NORTH ZONE ESTABLISHED BY HOLDING PUBLISHED COORDINATES AT KING COUNTY SURVEY CONTROL POINTS 3211, 5211 AND 5216.

VERTICAL DATUM – NAVD 88
CONTOUR INTERVAL 1'

SURVEY BENCHMARK:

ORTHO ELEVATION OF KING COUNTY SURVEY CONTROL POINT 5211 ELEVATION = 400.07 (NOTE THAT THIS ELEVATION IS GPS DERIVED AND NOT PART OF A DIFFERENTIAL LEVEL LOOP)

SURVEY NOTES:

1. PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING LEICA SYSTEM 500 AND 1200 EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING LEICA ELECTRONIC TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. SURVEY PERFORMED BY TRIAD ASSOCIATES, MARCH/APRIL, 2010.
2. UTILITY LOCATIONS SHOWN ON THIS SURVEY DRAWING ARE BASED UPON FIELD LOCATION OF EXISTING UTILITY STRUCTURES, FIELD LOCATION OF CONDUCTIBLE UNDERGROUND UTILITIES BASED ON PAINT MARKS OR OTHER MARKINGS ESTABLISHED BY A UTILITY LOCATE SERVICE AND UTILITY LOCATIONS BASED ON UTILITY MAPS PROVIDED BY UTILITY PURVEYORS. NO SUB-SURFACE EXPLORATION WAS DONE TO VERIFY UTILITY ROUTINGS.
3. WATER LINES LOCATED BY WATER DISTRICT 19. UNDERGROUND ELECTRIC, TELEPHONE AND GAS LINES LOCATED BY C-N-I LOCATES, BONNY LAKE, WA.
4. RIGHT-OF-WAY (MARCH 2007) AND PARCEL (JUNE 2008) BOUNDARIES ARE DERIVED FROM KING COUNTY GIS MAPPING.

CONTACT PERSONNEL

NAME, POSITION	AGENCY	TELEPHONE
JEFF LAKIN, DISTRICT MANAGER	WATER DISTRICT 19	(206) 463-9007 (OFFICE)
ARMIN WAHANIK, LEAD OPERATOR	WATER DISTRICT 19	(206) 437-3320 (CELL)
KYLE PETTIBONE, P.E., PROJECT MANAGER	RH2 ENGINEERING, INC	(425) 951-5360 (OFFICE)
SEAN KANDA, PROJECT ENGINEER	RH2 ENGINEERING, INC	(425) 951-5460 (OFFICE)

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PHASE II

VICINITY MAP

TAKEN FROM GOOGLE MAPS ON APRIL 30TH, 2010

Station Baseline Definition

CONTROL POINT	DESCRIPTION	NORTHING	EASTING	ELEVATION
WCSS 3211	FND "X" ON 3" BRASS DISK IN CONC MON IN CASE AT INTERSECTION VASHON HWY SW & SW BANK RD	167,454.84'	1,237,823.24'	384.39'
WCSS 5211	FND PUNCH ON 3" DISK IN CONC MON IN CASE DOWN 0.3' AT INTERSECTION VASHON HWY SW & SW 192ND ST	162,149.67'	1,237,715.61'	SEE NOTES THIS SHEET
WCSS 5216	FND 1/2" IP IN CONC INSIDE CASE DOWN 1' BELOW RIM	159,388.56'	1,242,943.89'	237.90'
N/A	CONSTRUCTION STATION LINE START POINT (STA 0+00)	164,740.34'	1,240,421.09'	N/A

CALL 48 HOURS BEFORE YOU DIG
ONE CALL 1-800-424-5555

REPORT ALL SPILLS
DEPT. OF ECOLOGY 1-800-258-5990

NOTE:
LOCATION CALLOUTS OF PROPOSED BLOW-OFF AND AIR/VACUUM RELEASE ASSEMBLIES REFERENCE ASSEMBLY LOCATIONS. LOCATION CALLOUTS OF PROPOSED FIRE HYDRANT ASSEMBLIES REFERENCE PROPOSED WATER MAIN CONNECTION TEE LOCATIONS. LOCATION OF CALLOUTS OF EXISTING WATER SERVICE CONNECTIONS REFERENCE CONNECTION AT EXISTING WATER METER LOCATION.

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

COVER AND GENERAL INFORMATION

RH2 ENGINEERS PLANNERS SCIENTISTS

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http://www.rh2.com
mailbox@rh2.com 1.800.720.8052

BELLINGHAM 360.676.0836
454 West Horton Road

BOTHELL 425.951.5400
22722 29th Drive SE, Suite 210

EAST WENATCHEE 509.886.2900
300 Simon Street, Suite 5

RICHLAND 509.946.5181
114 Columbia Point Drive, Suite C

SILVERDALE 360.876.7960
2021 NW Mhyre Rd, Suite 107

TACOMA 253.272.3059
621 Pacific Avenue Suite 104

SCALE: SHOWN
0 1" 2"
DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

NO.	REVISION	BY	REVIEW	DATE
3	REVISED TO CONFORM TO CONSTRUCTION RECORDS	KSK	KMP	05/13/11
A	ISSUED FOR BIDDING	ZRM	KMP	11/05/10

PLOT: 20
ENGINEER: SMK
REVIEWED: KMP
DATE: NOV 16, 2010
CLIENT: W19
JOB NO.: 110-027
FILENAME: RRWM-D-COV

DWG NO. G01

General Notes

1. THE CONTRACTOR SHALL COORDINATE AND ATTEND A PRE-CONSTRUCTION MEETING. A PRE-CONSTRUCTION MEETING SHALL BE COMPLETED WITH THE CONTRACTOR PERSONNEL AND OWNER PERSONNEL PRIOR TO BEGINNING ANY CONSTRUCTION. PROVIDE 5 CALENDAR DAY NOTICE TO THE OWNER, MINIMUM.
2. THE CONTRACTOR SHALL GIVE THE DISTRICT A MINIMUM OF 72 HOURS NOTICE IN ADVANCE OF START OF WORK AND CONNECTION TO EXISTING SYSTEM AND PRIOR TO SHUTTING DOWN ANY EXISTING WATER SERVICE.
3. A PRE-CONSTRUCTION MEETING PRIOR TO ANY WORK IN THE KING COUNTY RIGHT OF WAY SHALL BE COMPLETED WITH KING COUNTY ROW INSPECTOR PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING IN A JOB START NOTICE TO KING COUNTY 24 HOURS PRIOR TO ANY WORK IN THE RIGHT OF WAY. THIS MEETING CAN BE ACCOMPLISHED SEPARATELY OR COMBINED WITH THE OWNER PRE-CONSTRUCTION MEETING.
4. CONTRACTOR SHALL CALL 1-800-424-5555 FOR UTILITY LOCATES BEFORE CONSTRUCTION. THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED BY THE APPROPRIATE UTILITY LOCATING PROFESSIONALS, PRIOR TO AND DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE UTILITY COMPANY WHEN A CONFLICT OCCURS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES REQUIRED TO PERFORM THE WORK.
6. CONTRACTOR MUST KEEP (1) COPY OF DISTRICT STANDARDS AND (3) COPIES OF APPROVED PLANS ON-SITE WHENEVER CONSTRUCTION IS IN PROGRESS. TWO (2) COPIES OF APPROVED PLANS ON-SITE SHALL BE USED TO RECORD "AS BUILTS" INFORMATION. ONE (1) SET SHALL BE SUBMITTED TO DISTRICT AT COMPLETION OF CONSTRUCTION.
7. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY REQUIRED PERMITS IN ADDITION TO PERMITS PROVIDED BY OWNER.
8. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH WATER DISTRICT 19 DEVELOPER STANDARDS FOR THE CONSTRUCTION OF WATER SYSTEMS (DISTRICT STANDARDS).
9. CONTRACTOR INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE OWNER FOR APPROVAL PRIOR TO IMPLEMENTATION OR CONSTRUCTION.
10. WHERE LOCATION OF EXISTING MAILBOXES OR NEWSPAPER BOXES CONFLICT WITH CONSTRUCTION ACTIVITIES WITHIN THE PROJECT LIMITS, CONTRACTOR SHALL TEMPORARILY RELOCATE THEM SUCH THAT THEIR INTENDED USE IS NOT IMPAIRED. AFTER CONSTRUCTION, RESTORE MAILBOXES AND NEWSPAPER BOXES TO ORIGINAL CONDITION AND LOCATION. IF THE ORIGINAL LOCATION OF THE MAILBOXES OR NEWSPAPER BOXES CONFLICTS WITH THE PROPOSED WATER MAIN, RELOCATE BOXES TO AN OWNER APPROVED LOCATION THAT IS NEARBY THE ORIGINAL. MAILBOXES AND NEWSPAPER BOXES SHALL BE INSTALLED BETWEEN 36" TO 42" ABOVE GRADE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING AND MAINTAINING ALL ALIGNMENT STAKES, SLOPE STAKES, AND GRADES NECESSARY FOR THE CONSTRUCTION OF THE WATER MAINS, SANITARY SEWER LINES, SIDE SEWERS, TRENCHING, UTILITIES, STORM DRAINAGE, ROADBED, SURFACING, PAVING, SIGNING, ILLUMINATION, SIGNALS, AND STRIPING IF SUCH CONSTRUCTION IS INCLUDED IN HIS PROJECT. EXCEPT FOR THE SURVEY CONTROL DATA FURNISHED BY THE OWNER, CALCULATIONS, SURVEYING, AND MEASURING REQUIRED FOR SETTING AND MAINTAINING THE NECESSARY LINES AND GRADES SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
12. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING COMPLETE AS-CONSTRUCTED RECORDS.
13. THE CONTRACTOR SHALL CLEAN UP ALL AREAS AFFECTED BY CONSTRUCTION ACTIVITY TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT THE END OF EACH WORKING DAY OR MORE FREQUENTLY IF REQUIRED. THIS INCLUDES REMOVAL OF ALL DUST, MUD, ROCKS, ASPHALT DEBRIS, AND REFUSE FROM STREETS, SIDEWALKS, DRIVEWAYS, AND ANY OTHER AREAS AFFECTED BY THE CONSTRUCTION ACTIVITIES. THE OWNER'S REPRESENTATIVE CAN SHUTDOWN THE PROJECT IF CLEAN UP IS NOT PERFORMED TO THEIR SATISFACTION. DAILY CLEANUP IS AN INTEGRAL PART OF EROSION AND POLLUTION CONTROL.
14. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO THEIR EXISTING CONDITION OR BETTER AND PER WATER DISTRICT 19 DEVELOPER STANDARDS AND THESE PLANS. CONTRACTOR SHALL HYDROSEED ALL EXISTING GRASS AREAS THAT ARE DISTURBED BY THEIR ACTIVITIES UNLESS OTHERWISE NOTED ON THE PLANS.
15. CONTRACTOR SHALL REPLACE ALL EXISTING MONUMENTS AND SURVEY MARKERS THAT ARE DISTURBED ON THIS PROJECT WITH MONUMENTS PER KING COUNTY STANDARDS. ALL EXISTING SURVEY MARKERS SHALL BE LOCATED AND RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF WASHINGTON. ALL SURVEY NOTES REFERENCING THE EXISTING SURVEY MARKERS SHALL BE SUBMITTED TO THE OWNER PRIOR TO CONSTRUCTION.
16. CONTRACTOR SHALL RESTORE MARKERS FOR FRONT PROPERTY CORNERS THAT ARE DISTURBED BY CONSTRUCTION. MARKERS SHALL BE RE-ESTABLISHED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF WASHINGTON.
17. THE DISTRICT AND ITS REPRESENTATIVES SHALL, AT ALL TIMES HAVE ACCESS TO THE SITE FOR THE PURPOSE OF INSPECTING AND TESTING THE WORK IN PROGRESS.
18. ALL PIPE LENGTHS ARE APPROXIMATE. CONTRACTOR TO PROVIDE ADDITIONAL LENGTHS IF NECESSARY FOR A COMPLETE SYSTEM.
19. ROAD WAY CROSSINGS FOR UTILITIES 6" AND SMALLER SHALL BE BORED UNLESS OTHERWISE NOTED ON THE PLANS.

Existing Utilities

1. ALL UTILITIES: ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS HAVE BEEN LOCATED BY SURVEY PER THE SURVEY NOTES PROVIDED IN DWG NO. G01 WITH THE EXCEPTION OF THE WATER MAIN SHOWN IN 91ST AVE SW (BEALL RD SW), WHICH WAS ADDED BY THE ENGINEER BASED ON WATER DISTRICT 19 GIS RECORDS. IT IS UNDERSTOOD THAT OTHER ABOVE GROUND AND UNDERGROUND FACILITIES NOT SHOWN ON THE DRAWINGS MAY BE ENCOUNTERED DURING THE COURSE OF THE WORK. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND THE SIZE OF ALL UTILITIES SHOWN TO AVOID DAMAGE AND/OR DISTURBANCE TO SUCH UTILITIES, AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. CONTRACTOR SHALL PRESERVE, PROTECT AND SUPPORT ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION.
2. POWER, TELEPHONE, GAS AND CABLE: WHERE THESE UTILITIES CROSS THE PROPOSED WATER MAIN, THE DEPTH OF EACH IS SHOWN ON THE PROFILES AND IS BASED ON TYPICAL LAYING DEPTHS FOR EACH OF THESE UTILITIES. ACTUAL DEPTHS ARE UNKNOWN AND MAY VARY SIGNIFICANTLY. CONTRACTOR SHALL NOTIFY THE DISTRICT IMMEDIATELY IF UTILITY CROSSING DEPTH CONFLICTS ARISE.
3. WATER: THE VERTICAL AND HORIZONTAL LOCATIONS OF THE EXISTING WATER MAIN SHOWN ON THE PLANS ARE APPROXIMATE AND ARE BASED ON NOTED SURVEY AND GIS RECORDS AS PREVIOUSLY NOTED. DEVIATIONS FROM THESE PLANS MAY EXIST.
4. IN LOCATIONS WHERE THE EXISTING WATER MAIN IS EXPOSED IN ORDER TO CONSTRUCT THE NEW WATER MAIN, THE AMOUNT OF OPEN TRENCH SHALL BE MINIMIZED TO AVOID EXPOSING MORE THAN ONE EXISTING WATER MAIN PIPE JOINT WHERE THE EXISTING PIPE IS TO REMAIN. THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT PREVENTS DAMAGE TO THE EXISTING WATER MAIN DURING THE CONSTRUCTION OF THE NEW WATER MAIN.
5. WHERE EXISTING ASBESTOS CEMENT (AC) WATER MAIN IS TO BE REPLACED WITH A NEW WATER MAIN IT SHALL BE LEFT UNEXPOSED WHENEVER POSSIBLE. IT IS ACKNOWLEDGED THAT EXPOSURE OF SOME AC WATER MAIN WILL BE REQUIRED WHEN MAKING CONNECTION(S) TO THE EXISTING WATER MAIN. WHEN AC WATER MAIN IS EXPOSED IT SHALL BE REMOVED, STORED, PREPARED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL STANDARDS.
6. PROVIDE STYROFOAM CUSHION BETWEEN PIPING AT PIPE CROSSINGS WHERE PIPES CROSS WITH LESS THAN 12 INCHES OF VERTICAL SEPARATION. A SAND CUSHION MAY BE USED IN AREAS WHERE ADEQUATE COMPACTION CAN BE ACHIEVED AND AS APPROVED BY THE ENGINEER.
7. THE CONTRACTOR SHALL MAINTAIN WATER SERVICE TO ALL EXISTING CUSTOMERS AT ALL TIMES, EXCEPT WHEN CONNECTION TO THE EXISTING SYSTEM IS MADE.
8. THE CONTRACTOR SHALL NOTIFY EACH AFFECTED CUSTOMER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY SERVICE DISRUPTION. NO SHUTDOWNS SHALL BE ALLOWED ON MONDAYS, FRIDAYS OR THE DAYS BEFORE AND AFTER A HOLIDAY.
9. NOT ALL OVERHEAD UTILITIES ARE SHOWN ON THE PLANS AND THE CONTRACTOR SHALL EXPECT TO ENCOUNTER MORE OVERHEAD UTILITIES THAN SHOWN. THE CONTRACTOR SHALL ACCOUNT FOR ACCOMMODATING ALL OVERHEAD UTILITIES IN HIS BID AND NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR FACILITATING OVERHEAD UTILITIES.

Existing Utilities (Continued)

10. CONFLICTS WHICH MAY OCCUR DURING CONSTRUCTION OF THE PROPOSED WATER MAIN OR SERVICE LINES SHALL BE RESOLVED IN THE FOLLOWING MANNER:
    – IF THE PROPOSED WATER MAIN CONFLICTS WITH A MAJOR UTILITY SUCH AS A 2" OR GREATER DIAMETER GAS MAIN OR STORM WATER MAIN, THE WATER LINE SHALL BE DEFLECTED WITHIN MANUFACTURER'S STANDARDS OR REALIGNED USING VERTICAL OR HORIZONTAL BENDS AS APPROVED BY THE ENGINEER. PAYMENT FOR THESE ALIGNMENT CHANGES SHALL BE BASED ON THE UNIT PRICES FOR BENDS AND FITTINGS AND EXTRA EXCAVATION AND BACKFILL AS ESTABLISHED PRIOR TO THE CHANGES BEING CONSTRUCTED AND AS APPROVED BY THE ENGINEER.
    – IF THE PROPOSED WATER MAIN CONFLICTS WITH A MINOR UTILITY SUCH AS POWER, CABLE, GAS SERVICE AND TELEPHONE LINES, THE UTILITY COMPANY SHALL BE CONTACTED AND THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY TO REALIGN THE CONFLICTING UTILITY, UNLESS OTHERWISE APPROVED BY THE ENGINEER. PAYMENT FOR THESE ALIGNMENT CHANGES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

Water Main Abandonment Notes

1. DISTRICT SHALL BE SOLE DETERMINER OF APPROPRIATE ABANDONMENT PROCEDURES AND METHODS. RESTORE ALL DISTURBED SURFACES TO ORIGINAL CONDITION AND TO THE SATISFACTION OF THE DISTRICT. RETURN ALL REMOVED FACILITIES (HYDRANTS, FITTINGS, VALVES, ETC.) TO THE DISTRICT AT THE DISCRETION OF THE DISTRICT. UNUSABLE EQUIPMENT SHALL BE DISPOSED OF BY THE CONTRACTOR. THE FOLLOWING METHODS ARE APPROVED ABANDONMENT PROCEDURES FOR TERMINATED FACILITIES.
2. ABANDONED HYDRANTS, SERVICES, BRANCH MAINS, ETC. SHALL BE TERMINATED ALL THE WAY BACK TO THE MAINLINE AND SHALL NOT BE LEFT STUBBED OUT.
3. VALVES
   1. REMOVE VALVES AND VALVE BOXES. PLUG OR BLIND FLANGE THE WATER MAIN.
   2. AN ALTERNATIVE METHOD OF ABANDONMENT IS ACCEPTABLE IF, AT THE DISCRETION OF THE DISTRICT, THE VALVE CANNOT BE REMOVED. PLUG AND CLOSE THE VALVE, THEN REMOVE THE VALVE BOX.
4. WATER MAINS
   1. CUT AND DRAIN THE ABANDONED WATER MAIN WHERE EXPOSED DURING CONSTRUCTION.
   2. REMOVE ANY MAINS IN THE WAY OF NEW CONSTRUCTION. SAW CUT AND REMOVE SHORT SECTIONS OF PIPE. MAINS SHALL NOT BE FORCIBLY REMOVED WITH HEAVY EQUIPMENT DUE TO POTENTIAL DAMAGE TO SURROUNDING UTILITIES.
   3. REMOVE ALL VALVES AND VALVE BOXES.
   4. MAINS NOT ENCOUNTERED DURING NEW TRENCHING MAY BE LEFT IN PLACE, BUT VALVES MUST BE ABANDONED AS DESCRIBED UNDER "VALVES".
   5. PLUG ENDS OF ABANDONED MAINS EXPOSED DURING CONSTRUCTION WITH GROUT PLUG, BLIND FLANGE, OR CAP AS DIRECTED BY THE DISTRICT DEPENDING ON THE TYPE OF PIPE AND SOIL CONDITIONS.
5. WATER SERVICES
   1. REMOVE ALL VAULTS, SETTERS AND MISCELLANEOUS FITTINGS. BACKFILL WITH CRUSHED ROCK AND COMPACT. NATIVE SOILS MAY BE USED FOR BACKFILL ONLY IF APPROVED BY THE DISTRICT.
   2. REMOVE ENTIRE SERVICE LINE BACK TO WATER MAIN. CLOSE AND PLUG CORP STOP.
   3. AT THE DISCRETION OF THE DISTRICT, THE SERVICE LINE MAY REMAIN IN PLACE, BUT MUST BE TERMINATED AT THE MAINLINE AS DESCRIBED ABOVE.
6. HYDRANTS
   1. REMOVE ENTIRE HYDRANT AND ABANDON MAINLINE VALVE AS DETAILED ABOVE. REMOVE ANY BOLLARDS.

Water Main Construction Notes

1. WATER MAIN TRENCH SECTION AND ALL EXCAVATED AREAS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE DISTRICT STANDARD DETAILS AND WITH SECTIONS 7-9.3(10) AND 7-9.3(11) OF THE STANDARD SPECIFICATIONS. COMPACTION TESTING SHALL BE REQUIRED DURING BACKFILLING OPERATIONS ON ALL 36" AND LARGER PIPE AND AT THE DISCRETION OF THE DISTRICT. IF TRENCH BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS, CONTRACTOR SHALL EXCAVATE, RE-COMPACT AND RETEST MATERIAL AT CONTRACTOR'S EXPENSE.
2. COMPACTION TESTING IS REQUIRED FOR ALL OPEN CUTS AND/OR CROSSINGS WITHIN PAVED OR TRAVELED AREAS OF PUBLIC AND PRIVATE RIGHT-OF-WAYS.
3. CONTRACTOR SHALL POTHOLE A SUFFICIENT DISTANCE AHEAD OF PIPE LAYING TO VERIFY DEPTH OF ALL EXISTING WATER MAINS AND CROSSING UTILITIES PRIOR TO CONSTRUCTION AND CONNECTIONS AND TO ANTICIPATE ANY NECESSARY CHANGES IN FITTINGS OR ALIGNMENT.
4. MAINLINE ISOLATION VALVES SHALL BE AWWA C905 GATE VALVE (FLXFL) FOR 12" AND SMALLER; AWWA C504 BUTTERFLY VALVES (FLXFL) FOR VALVES LARGER THAN 12". THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PIPE SIZE, MATERIAL, AND END TYPE TRANSITIONS (WHETHER SHOWN ON THE PLANS OR NOT). DO NOT REDUCE MAINLINE SIZE AT VALVE.
5. DISTRICT APPROVED THRUST RESTRAINTS ARE REQUIRED FOR ALL UNRESTRAINED FITTINGS. THRUST BLOCKING IS THE PREFERRED METHOD. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PIPE JOINT RESTRAINT SO THAT THE PIPE DOES NOT SEPARATE DUE TO THERMAL EXPANSION, UNRESOLVED THRUST FORCES, OR DESTABILIZATION OF STEEP SLOPES.
6. WHERE MECHANICAL THRUST RESTRAINT (I.E. MEGALUGS) IS ALLOWED, ALL PIPE SHALL BE DUCTILE IRON, CLASS 53.
7. AT POINTS WHERE EXISTING THRUST BLOCKING EXISTS, MINIMUM CLEARANCE OF UNDISTURBED SOIL BETWEEN THE CONCRETE BLOCKING AND PROPOSED BURIED UTILITIES OR STRUCTURES SHALL BE 5 FEET.
8. THE CONTRACTOR SHALL PERFORM PRESSURE TESTING IN ACCORDANCE WITH THE SPECIFICATIONS, UNLESS OTHERWISE APPROVED. MAINLINE SHALL BE TESTED IN SECTIONS OF NO MORE THAN 1,500 FEET. THE DISTRICT INSPECTOR HAS DISCRETION TO MODIFY THE TESTING REQUIREMENTS AS HE DEEMS APPROPRIATE.
9. CONSTRUCTION OF THE PROPOSED WATER IMPROVEMENTS SHALL BE PHASED AND STAGED SUCH THAT THE EXISTING WATER SYSTEM IS NOT ABANDONED, DAMAGED, OR REMOVED PRIOR TO SCHEDULED PROJECT COMPLETION DATE. FAILURE TO FOLLOW THESE REQUIREMENTS, MAY IRREVERSIBLY AND ADVERSELY IMPACT THE DISTRICT'S ABILITY TO SERVE CUSTOMERS.

Traffic Control Notes

1. RIGHT-OF-WAY PERMIT IS PROVIDED BY THE OWNER AND INCLUDES PROPOSED TRAFFIC CONTROL PLANS. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING AND OBTAINING ANY ADDITIONAL REQUIRED PERMITS, SUCH AS STREET USE AND/OR TRANSPORTATION, PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH KING COUNTY PRIOR TO AND DURING CONSTRUCTION TO ENSURE TRAFFIC CONTROL AND DETOURS EMPLOYED MEET KING COUNTY REQUIREMENTS AND APPROVAL.
2. ALL TRAFFIC CONTROL DEVICES SHALL MEET MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES STANDARDS.
3. ALL BARRICADES SHALL HAVE AMBER FLASHING LIGHTS THAT WILL BE TURNED ON AT NIGHT.
4. THE CONTRACTOR SHALL PROVIDE FOR EMERGENCY VEHICLE ACCESS TO ALL PROPERTIES ADJACENT TO THE PROJECT. THE OWNER SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY ACTIONS BY THE CONTRACTOR THAT MAY AFFECT THE FUNCTIONS OR DRIVEWAY ACCESS OF THE OWNER.

TESC General Notes

1. CONTRACTOR SHALL PROVIDED EROSION AND SEDIMENTATION CONTROL MEASURES AND FACILITIES PER APPENDIX D OF THE KING COUNTY SURFACE WATER DESIGN MANUAL (2009), WATER DISTRICT 19 DEVELOPER STANDARDS FOR THE CONSTRUCTION OF WATER SYSTEMS AND THESE PLANS.
2. ANY DISCHARGE OF SEDIMENT-LADEN RUN-OFF OR OTHER POLLUTANTS TO WATERS OF THE STATE IS IN VIOLATION OF CHAPTER 90.48, WATER POLLUTION CONTROL, AND WAC 173-201A, WATER QUALITY STANDARDS FOR SURFACE WATERS OF THE STATE OF WASHINGTON, AND IS SUBJECT TO ENFORCEMENT ACTION.
3. DURING CONSTRUCTION, ALL RELEASES OF OILS, HYDRAULIC FLUIDS, FUELS, OTHER PETROLEUM PRODUCTS, PAINTS, SOLVENTS, AND OTHER DELETERIOUS MATERIALS MUST BE CONTAINED AND REMOVED IN A MANNER THAT WILL PREVENT THEIR DISCHARGE TO WATERS AND SOILS. THE CLEANUP OF SPILLS SHALL TAKE PRECEDENCE OVER OTHER WORK ON THE PROJECT. BARRELS, PETROPHILIC PADS, TARPS, AND OTHER EQUIPMENT NECESSARY FOR TAKING, CAPTURING, CONTROLLING, AND DISPOSING OF HAZARDOUS FLUIDS SHALL BE AVAILABLE ON-SITE AT ALL TIMES.
4. PROPER EROSION AND SEDIMENT CONTROL PRACTICES MUST BE USED ON THE CONSTRUCTION SITE AND ADJACENT AREAS TO PREVENT UPLAND SEDIMENTS FROM ENTERING THE NATURAL DRAINAGE SYSTEM. ALL SURFACE AREAS DISTURBED AND ANY EMBANKMENTS OR EXCAVATIONS CREATED BY CONSTRUCTION ACTIVITIES MUST BE REVEGETATED OR PROVIDED AN EQUIVALENT TYPE OF PROTECTION AGAINST EROSION.

TESC General Notes (Continued)

5. LINEAR CONSTRUCTION ACTIVITIES SUCH AS RIGHT-OF-WAY AND EASEMENT CLEARING, ROADWAY DEVELOPMENT, PIPELINES, AND TRENCHING FOR UTILITIES, SHALL BE CONDUCTED TO MEET THE SOIL STABILIZATION REQUIREMENT.
6. IF STRAW MULCH FOR TEMPORARY EROSION CONTROL IS USED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF FOUR INCHES.
7. OWNER REPRESENTATIVES MAY DIRECT MAINTENANCE AND REPAIR OF TESC MEASURES AND/OR FACILITIES AS THE HIGHEST PRIORITY WORK AT ANY TIME THE TESC MEASURES AND/OR FACILITIES DO NOT MEET THE CURRENT KING COUNTY, DISTRICT AND PLAN REQUIREMENTS. ALL TESC MEASURES AND/OR FACILITIES MAY NOT BE SHOWN ON THE PLANS, BUT SHALL BE PROVIDED BASED ON WEATHER CONDITIONS AND CONSTRUCTION PRACTICES AT THE DISCRETION OF THE OWNER.
8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL LOADS ARE SECURED PER RCW 46.61.655.
9. DUST CONTROL MUST BE PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL USE A VACUUM STREET SWEEPER TO REMOVE DUST AND DEBRIS FROM PAVEMENT AREAS AS DIRECTED BY THE ENGINEER OR OWNER'S REPRESENTATIVE. FLUSHING OF STREETS SHALL NOT BE PERMITTED WITHOUT PRIOR DISTRICT AND COUNTY APPROVAL. POWER BROOMS SHALL NOT BE USED, NOR PERMITTED ON SITE.

Erosion and Sediment Control Measures (King County 2009 SWDM D.8.2 Standard ESC Plan Notes)

NOTE: NOTES 3, 4, 11 AND 12 DO NOT APPLY TO THIS PROJECT AND HAVE BEEN ELIMINATED IN THE LIST BELOW.

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.) AS DIRECTED BY KING COUNTY.
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO CONSECUTIVE DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES THAT DO NOT REQUIRE IMMEDIATE ATTENTION SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH DURING THE DRY SEASON, BI-MONTHLY DURING THE WET SEASON, OR WITHIN TWENTY FOUR (24) HOURS FOLLOWING A STORM EVENT.
13. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
14. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DDES INSPECTOR.
15. CONTRACTOR SHALL LOAD EXCAVATED MATERIALS DIRECTLY FROM TRENCH TO BACK OF DUMP TRUCK FOR DISPOSAL. NO NATIVE MATERIALS SHALL BE STOCKPILED OR PLACED ON ROADWAYS.

Project Construction Sequence - ESC Measures and Implementation

1. HOLD THE PRE-CONSTRUCTION MEETING.
2. POST SIGN WITH NAME AND PHONE NUMBER OF ESC SUPERVISOR (MAY BE CONSOLIDATED WITH THE REQUIRED NOTICE OF CONSTRUCTION SIGN).
3. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
4. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAWINGS, ETC.).
5. MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH KING COUNTY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
6. RELOCATE EROSION CONTROL MEASURES, OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE KING COUNTY EROSION AND SEDIMENT CONTROL STANDARDS.
7. COVER ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN (7) DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, OR EQUIVALENT. BACKFILL ALL TRENCH AREAS AT THE CLOSE OF EACH WORKING DAY FOR SAFETY AND EROSION CONCERNS. CAP PIPE AS NEEDED AND UTILIZE STEEL PLATES FOR SMALL TRENCH AREAS THAT MUST REMAIN OPEN.
8. TEMPORARILY STABILIZE ALL AREAS WITHIN SEVEN (7) DAYS OF FINAL TRENCH BACKFILL AND COMPACTION.
9. UPON COMPLETION OF THE PROJECT, PERMANENTLY STABILIZE ALL DISTURBED AREAS AND REMOVE BMPS IF APPROPRIATE.

Dewatering Notes

1. THE CONTRACTOR SHALL DETERMINE THE SCOPE, TYPE, SIZE, QUANTITY, METHOD OF INSTALLATION, OPERATION, AND REMOVAL OF THE DEWATERING SYSTEM NECESSARY TO KEEP THE EXCAVATION SITE DEWATERED TO STABILIZE THE SOILS FOR CONSTRUCTION. THE METHOD MUST MEET THE GUIDELINES LISTED IN THE SPECIFICATIONS.
2. THE CONTRACTOR SHALL DISCHARGE WATER FROM A DEWATERING SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF STATE AND LOCAL REGULATIONS AND THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS. AT NO TIME SHALL SILT LADEN WATER BE DISCHARGED FROM THE SITE INTO STREAMS, RIVERS, OR LAKES.
3. THE CONTRACTOR SHALL PROVIDE TESC AND DEWATERING PLAN. WATER DISCHARGED TO SURFACE WATERS OF THE STATE MUST MEET THE STATE WATER QUALITY WAC 173-201A-200 FOR TURBIDITY IN NEPHELOMETRIC TURBIDITY UNITS (NTU). NO DISCHARGE SHALL RESULT IN A TURBIDITY INCREASE OF 5 NTU OVER BACKGROUND WHEN THE BACKGROUND IS 50 NTU OR LESS; OR AN INCREASE OF 10 PERCENT WHEN THE BACKGROUND TURBIDITY IS MORE THAN 50 NTU.

Road and Driveway Restoration Notes

1. CONTRACTOR SHALL PROVIDE ASPHALT OVERLAY OR TRENCH PATCH IN LOCATIONS SHOWN IN THESE PLANS AND ACCORDING TO KING COUNTY ROAD STANDARDS AND THE DETAILS ON DWG NO. DT2.
2. WHERE EXISTING GRAVEL DRIVEWAYS ARE DISTURBED BY THE PROPOSED WATER MAIN CONSTRUCTION, CONTRACTOR SHALL RESTORE ACCORDING TO THE DETAILS ON DWG NO. DT2.

RICHARD H. HARBERT
STATE OF WASHINGTON
16727
REGISTERED PROFESSIONAL ENGINEER
SIGNED: 11/15/10

KYLE M. PETTIBONE
STATE OF WASHINGTON
41857
REGISTERED PROFESSIONAL ENGINEER
SIGNED: 11/15/10

WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

CONSTRUCTION NOTES

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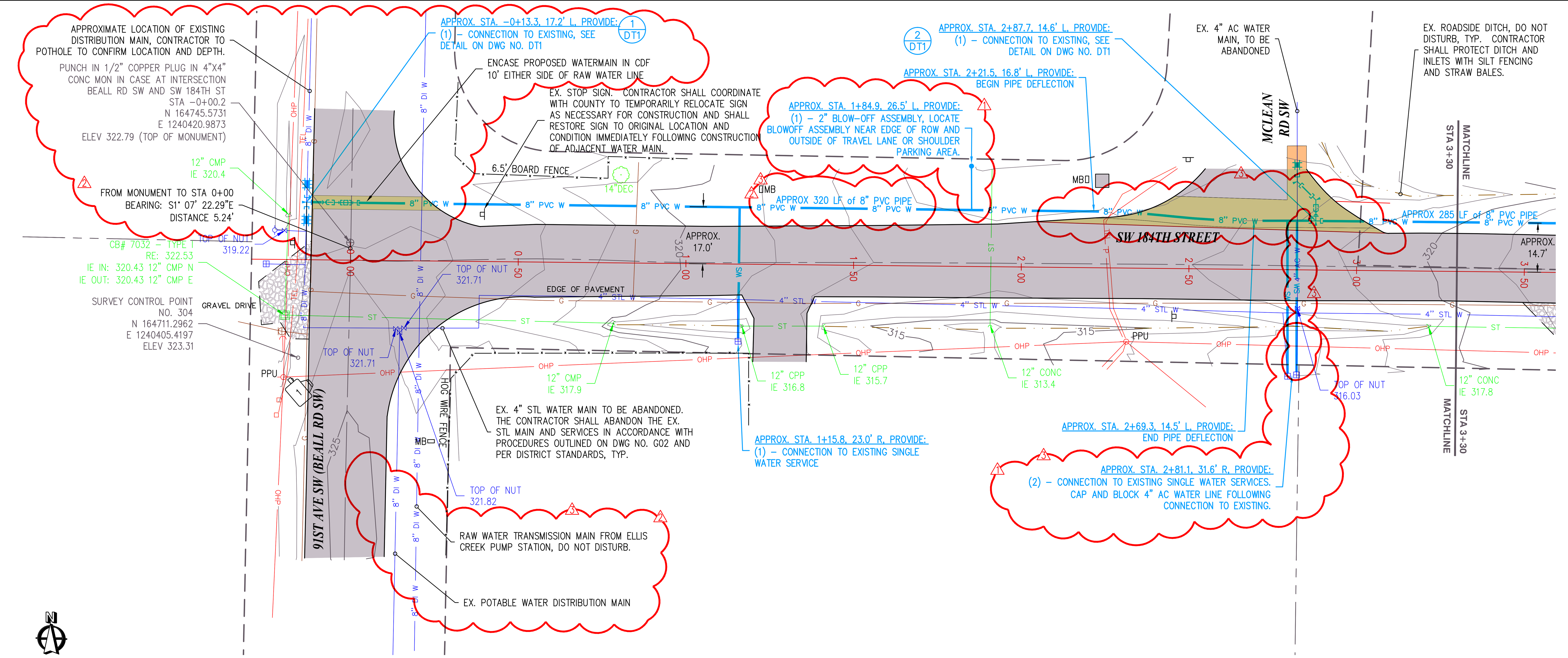
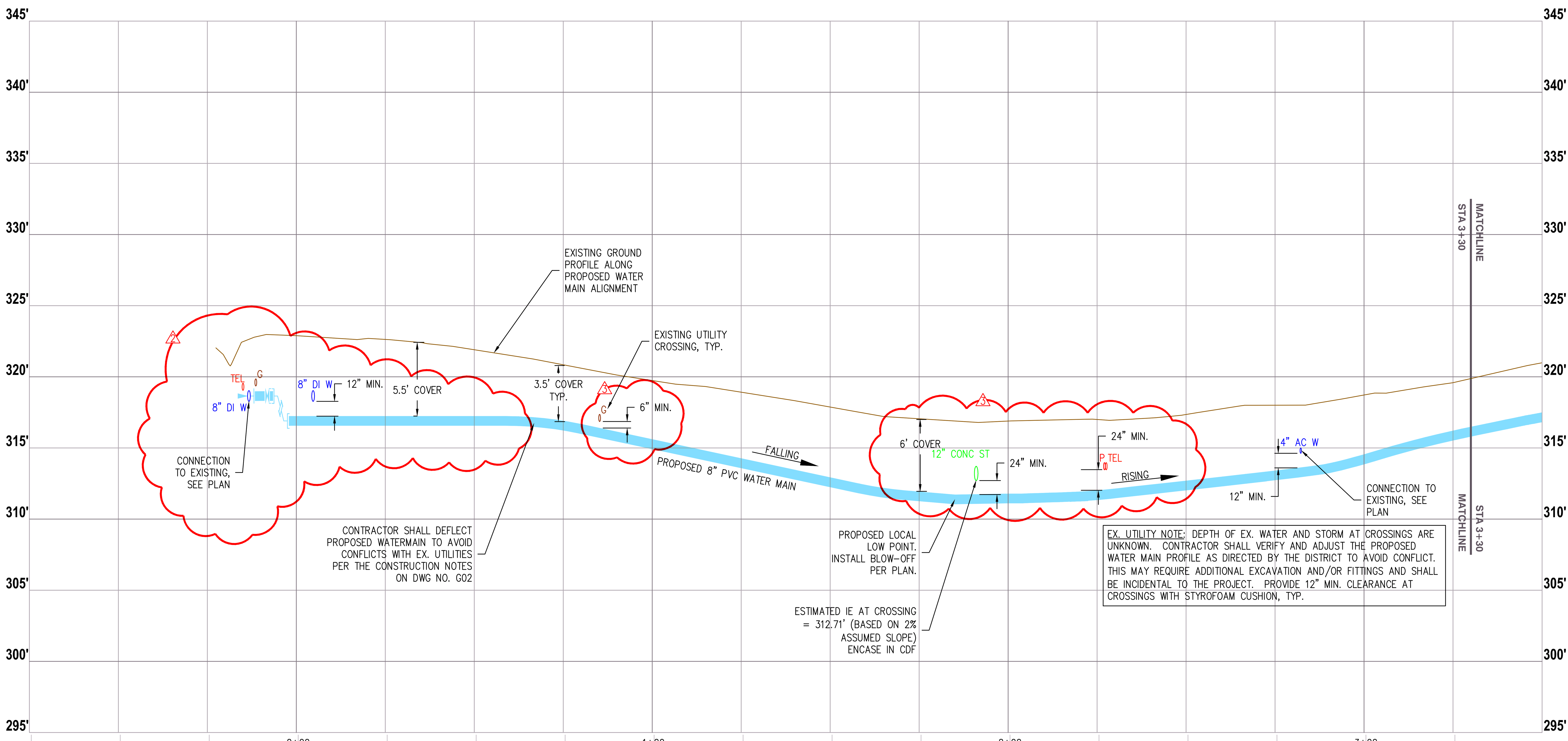
SILVERDALE 360.876.7960
2021 NW Myhre Rd, Suite 107
TACOMA 253.272.3059
621 Pacific Avenue Suite 104

SCALE: SHOWN
0 1" 2"
DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

	ISSUED FOR BIDDING	ZRM	KMP	11/05/10	
NO.	REVISION	BY	REVIEW	DATE	

PLOT:	20	DWG NO. G02
ENGINEER:	SMK	
REVIEWED:	KMP	
DATE:	NOV 16, 2010	SHEET NO. 2
CLIENT:	W19	
JOB NO.:	110-027	17
FILENAME:	RRWM-D-GEN	





EX. UTILITY NOTE: DEPTH OF EX. WATER AND STORM AT CROSSINGS ARE UNKNOWN. CONTRACTOR SHALL VERIFY AND ADJUST THE PROPOSED WATER MAIN PROFILE AS DIRECTED BY THE DISTRICT TO AVOID CONFLICT. THIS MAY REQUIRE ADDITIONAL EXCAVATION AND/OR FITTINGS AND SHALL BE INCIDENTAL TO THE PROJECT. PROVIDE 12" MIN. CLEARANCE AT CROSSINGS WITH STYROFOAM CUSHION, TYP.

WATER MAIN PLAN AND PROFILE

HORIZ: 1" = 20', VERT: 1" = 5'

NOTE: HIGH AND LOW POINTS ARE SHOWN ON THE PLANS. CONTRACTOR SHALL PROVIDE CONTINUOUS RISING OR FALLING SLOPE FOR WATER MAIN AS SHOWN ON THE PLANS AND SHALL CREATE NO LOCALIZED HIGH OR LOW POINTS.

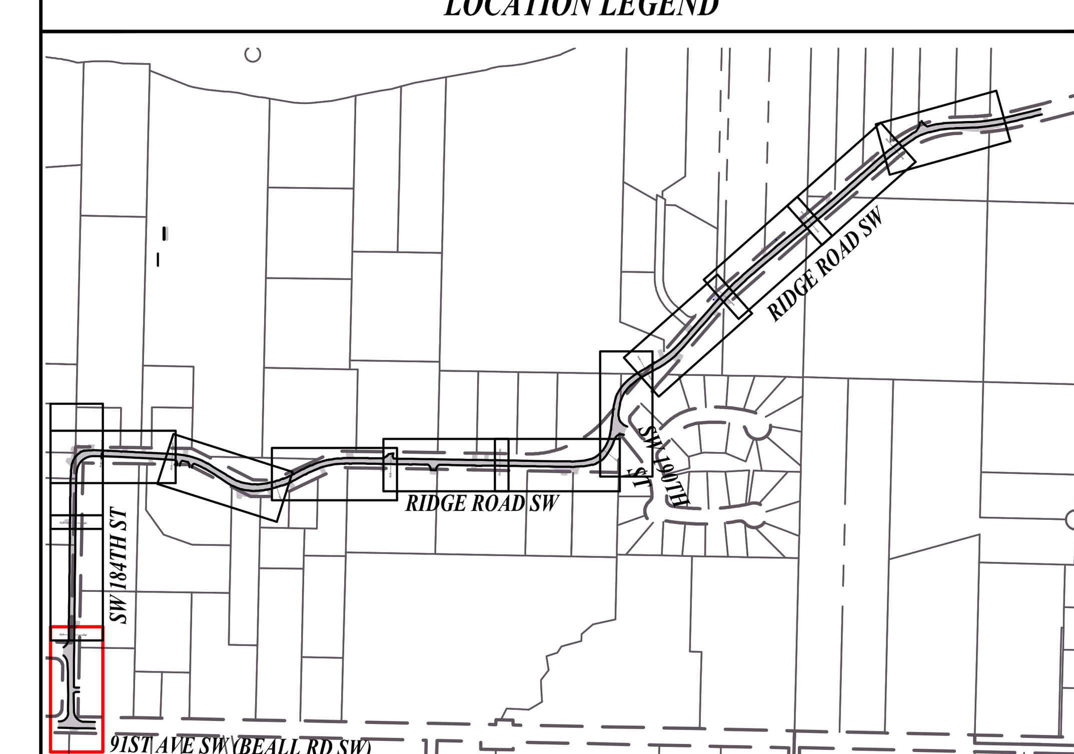
PHOTOS/NOTES

1

APPROX. LOCATION OF PROPOSED WATER MAIN, TYP.

SEE NEXT SHEET 2

LOCATION LEGEND



LOCATION LEGEND

1" = 600'

NO.	REVISION	BY	REVIEW	DATE
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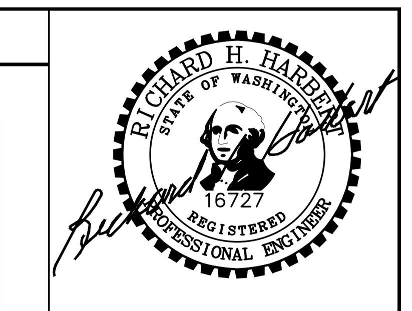
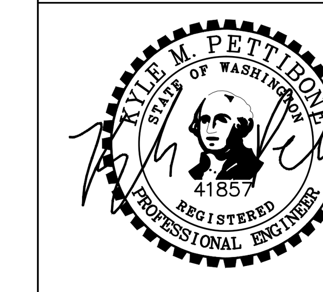
3	RFI NO. 3	DID	KMP	2/24/11
2	RFI NO. 1	DID	KMP	2/24/11
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10



SIGNED: 11/15/10



SIGNED: 11/15/10

WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

WATER MAIN PLAN AND PROFILE

RH2 ENGINEERS PLANNERS SCIENTISTS

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RICHLAND 509.946.5181
114 Columbia Point Drive, Suite C

SILVERDALE 360.876.7960
2021 NW Myhre Rd, Suite 107

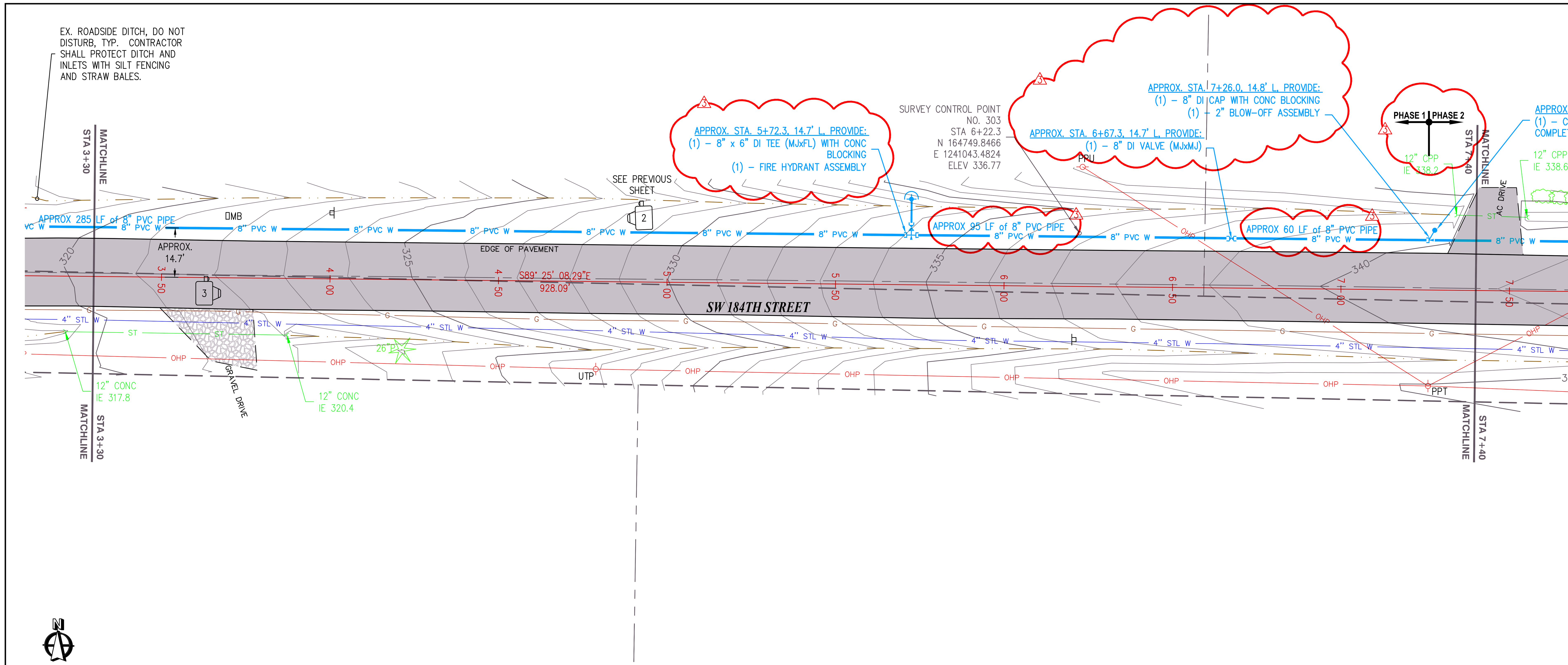
TACOMA 253.272.3059
621 Pacific Avenue Suite 104

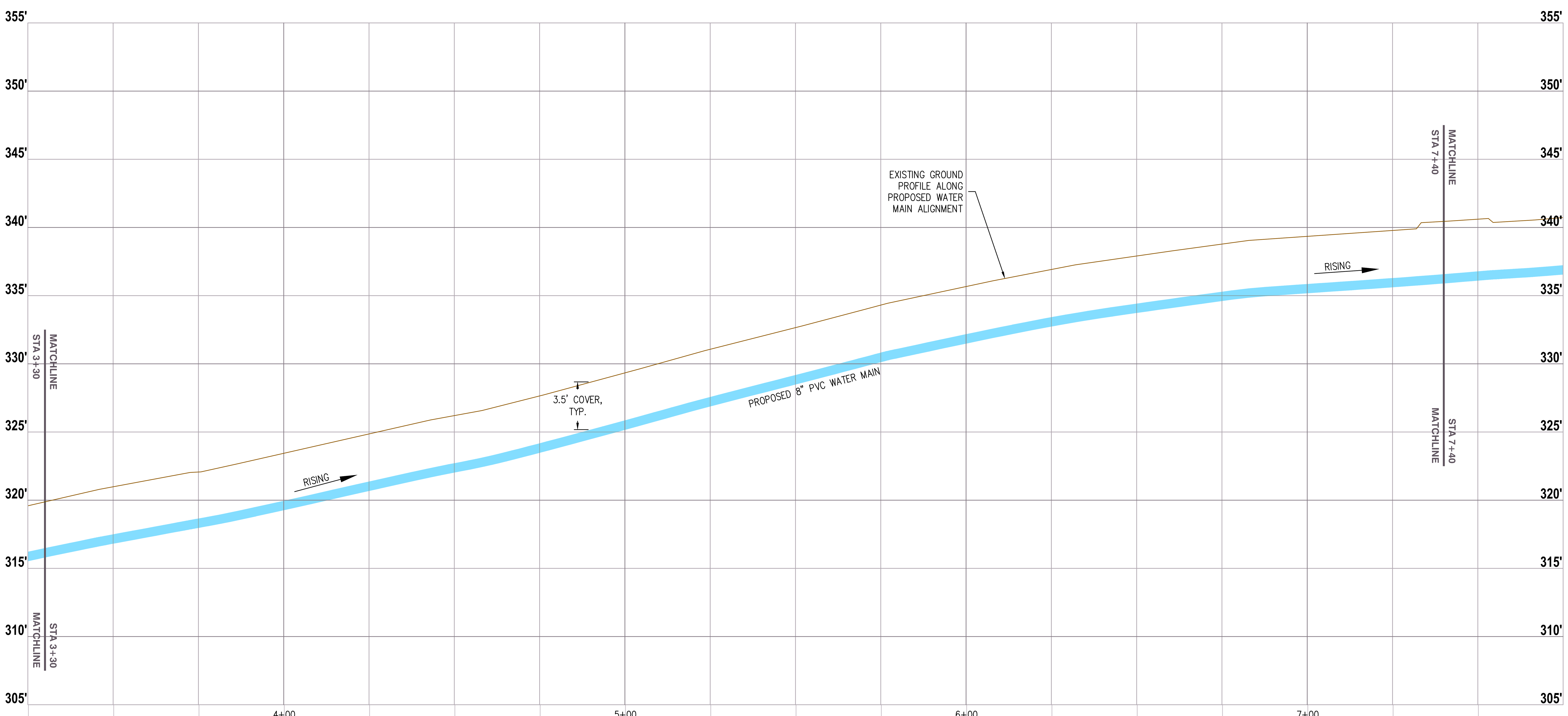
SCALE: SHOWN
0 1" 2"
DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

PLOT: 20
ENGINEER: DEB
REVIEWED: KMP
DATE: NOV 16, 2010
CLIENT: W19
JOB NO.: 110-027
FILENAME: RRWM-D-PLAN

DWG NO. D01

SHEET NO. 3 / 17





WATER MAIN PLAN AND PROFILE

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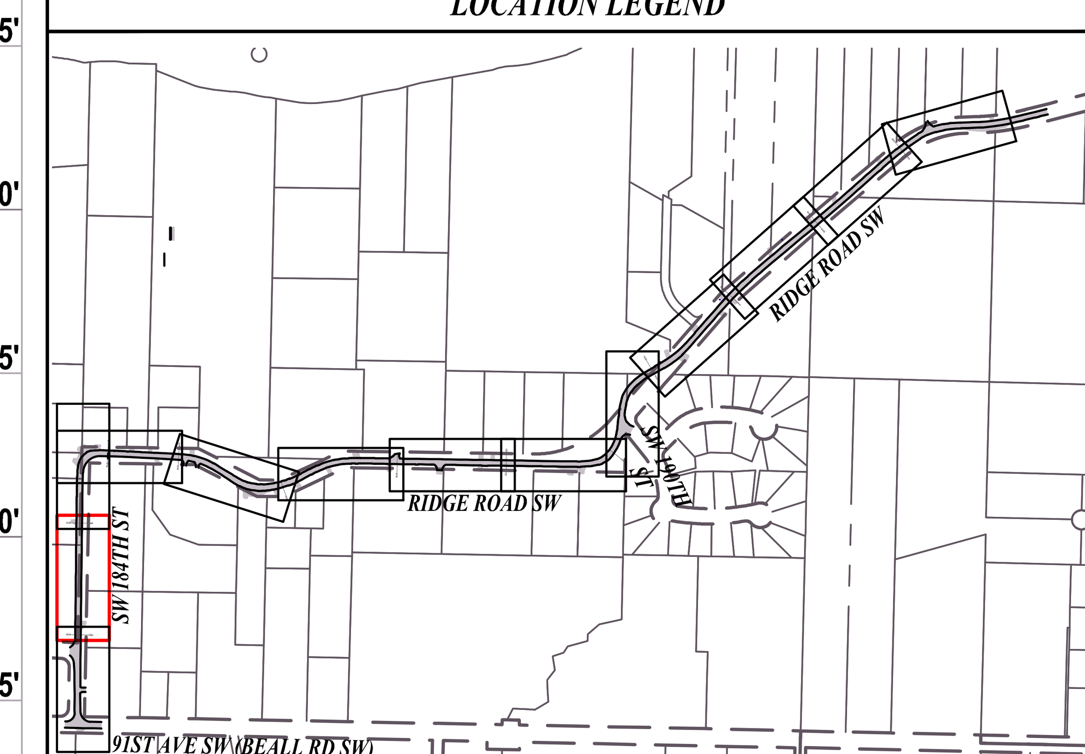
PHOTOS/NOTES

3

SEE NEXT SHEET 4

LOCATION LEGEND



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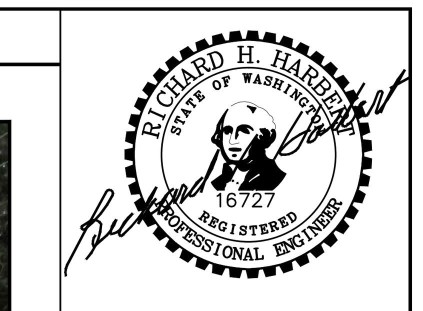
1" = 600'



SIGNED: 11/15/10

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WATER DISTRICT 19

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RIDGE ROAD WATER MAIN REPLACEMENT

WATER MAIN PLAN AND PROFILE

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SCALE: SHOWN

0 1" 2"

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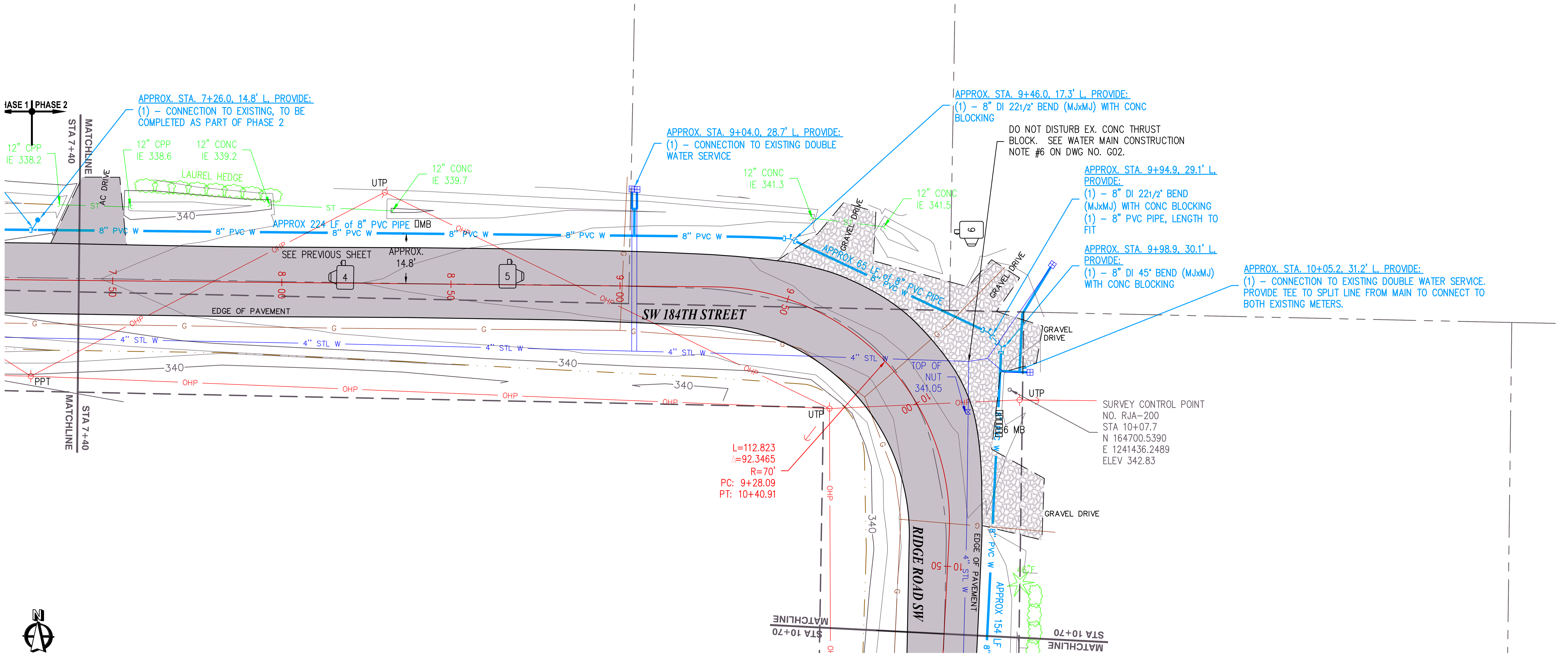
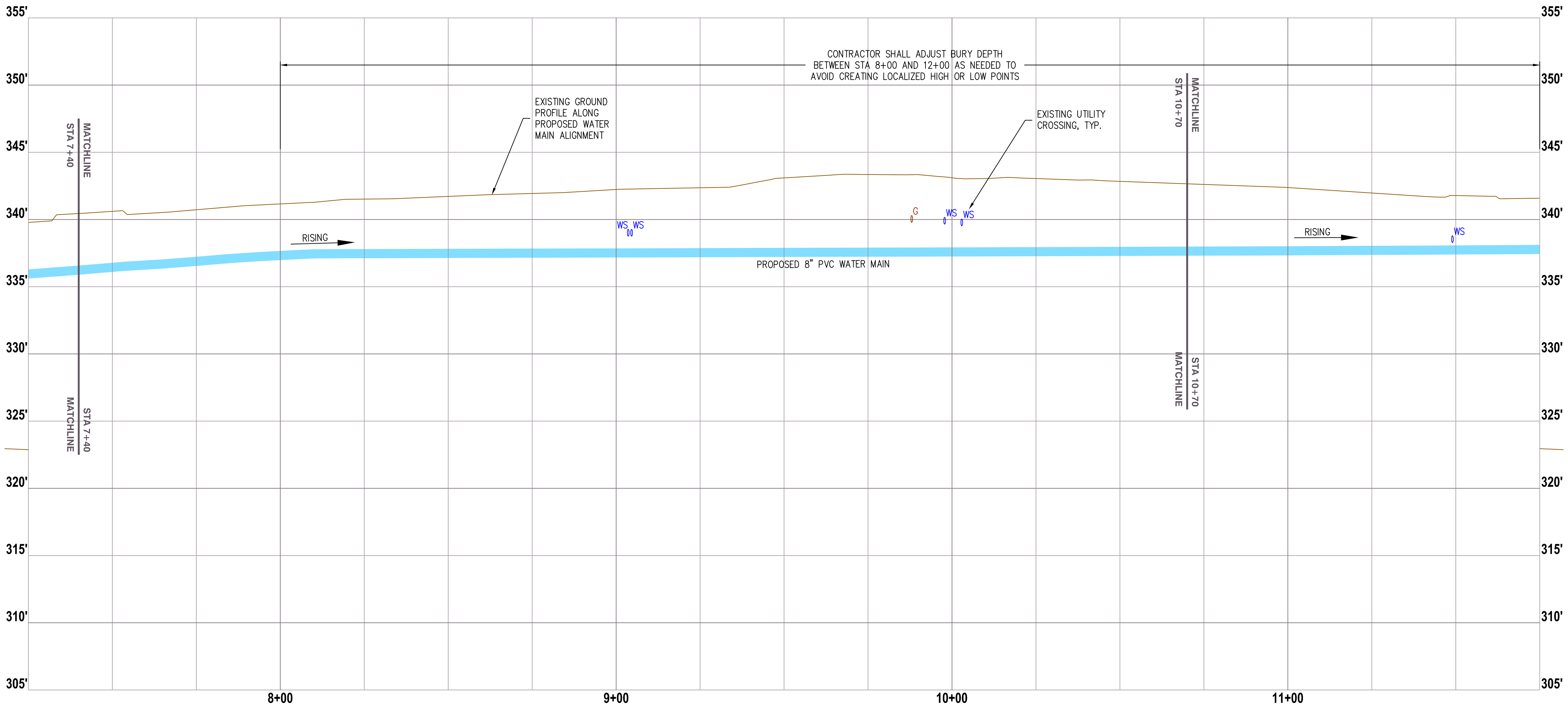
NO.	REVISION	BY	REVIEW	DATE
3	REVISED TO CONFORM TO CONSTRUCTION RECORDS	KSK	KMP	05/13/11
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10

PLOT:	20
ENGINEER:	DEB
REVIEWED:	KMP
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO.:	110-027
FILENAME:	RRWM-D-PLAN

DWG NO. D02





WATER MAIN PLAN AND PROFILE

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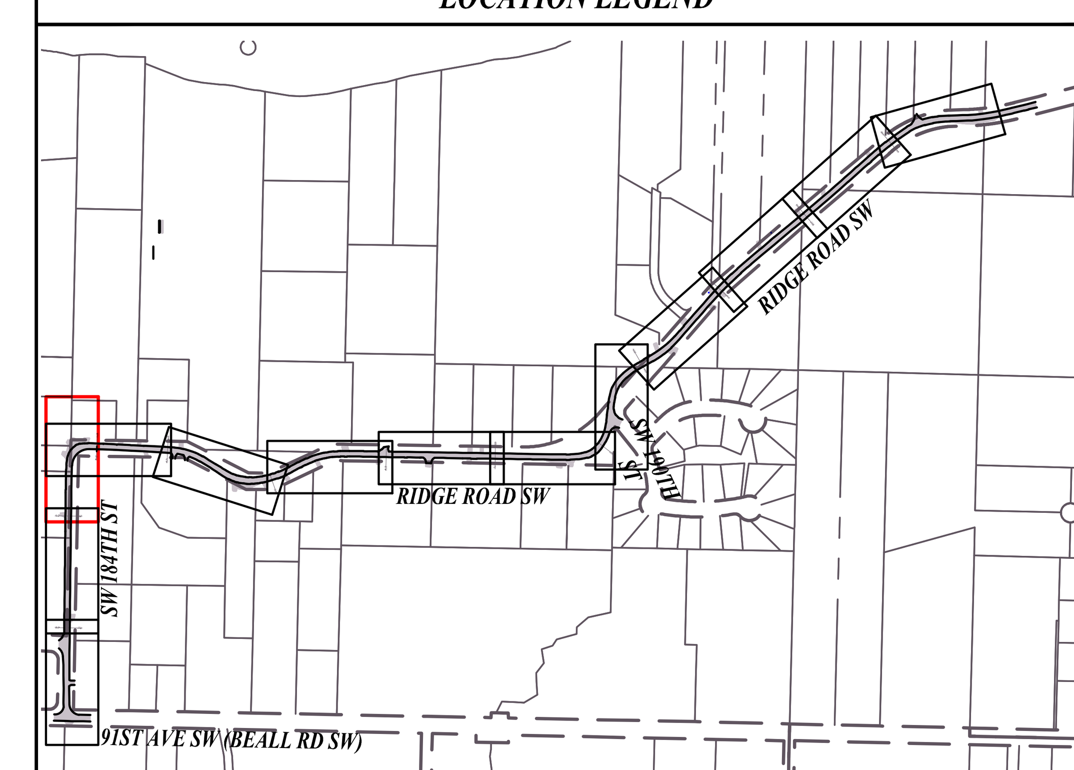
PHOTOS/NOTES

5

6

LOCATION LEGEND



LOCATION LEGEND

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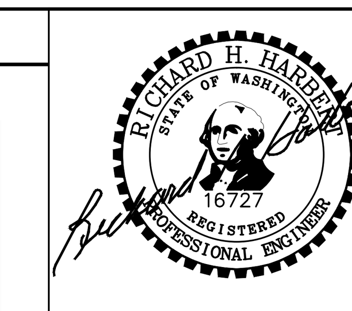

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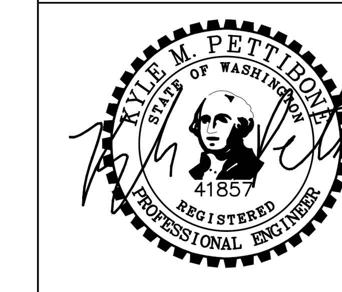

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WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

WATER MAIN PLAN AND PROFILE

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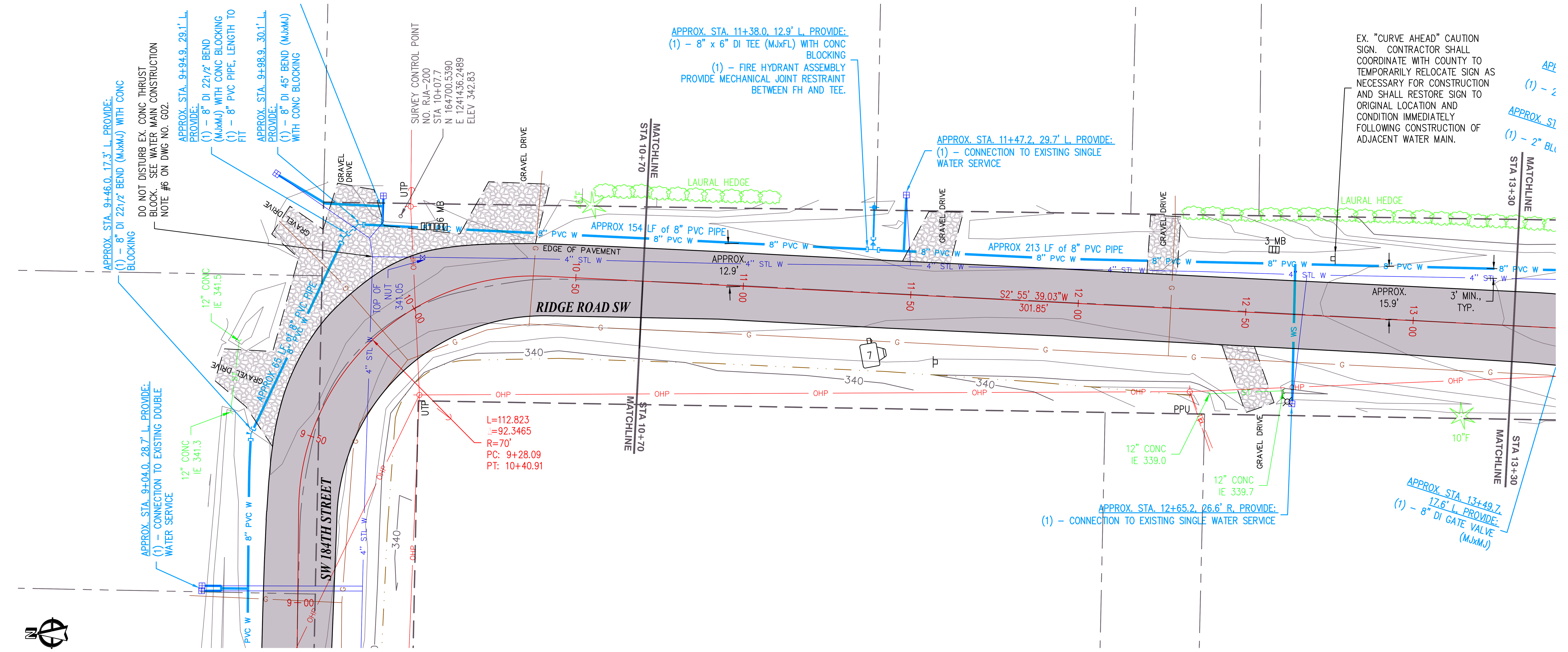
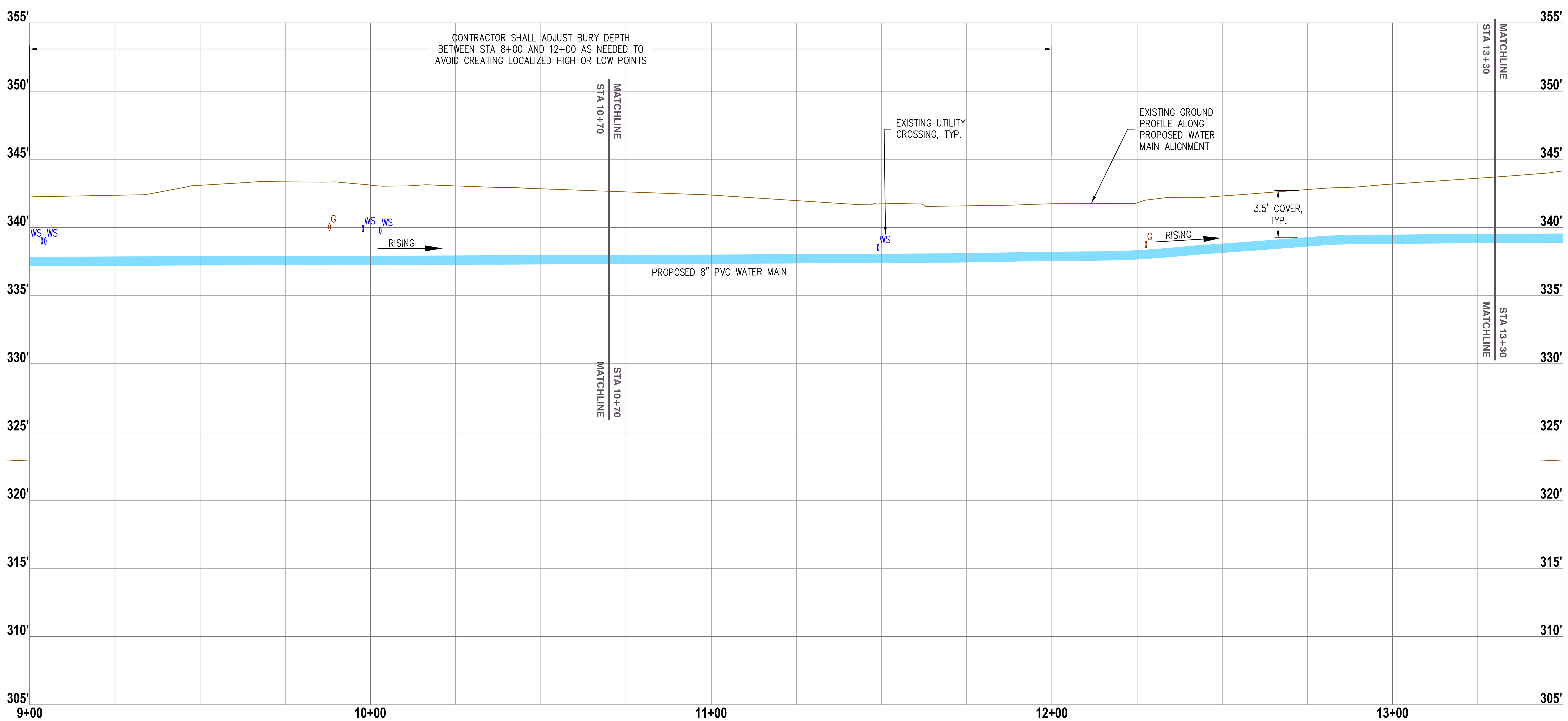
SCALE: SHOWN
0 1" 2"
DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

PLOT: 20	DWG NO. D03	
ENGINEER: DEB		
REVIEWED: KMP		
DATE: NOV 16, 2010	SHEET NO. 5 / 17	
CLIENT: W19		
JOB NO.: 110-027		
FILENAME: RRWM-D-PLAN		

NO.	REVISION	BY	REVIEW	DATE
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10





WATER MAIN PLAN AND PROFILE

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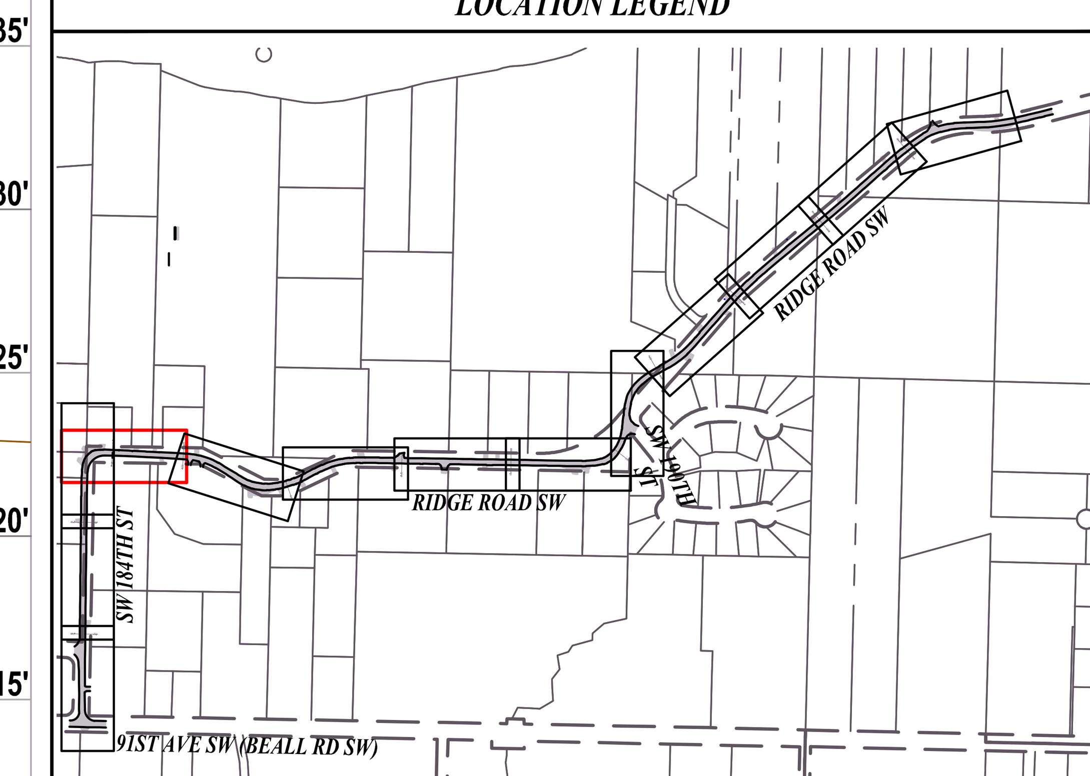
PHOTOS/NOTES

7

SEE NEXT SHEET 8

LOCATION LEGEND



LOCATION LEGEND

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SIGNED: 11/15/10

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WATER DISTRICT 19

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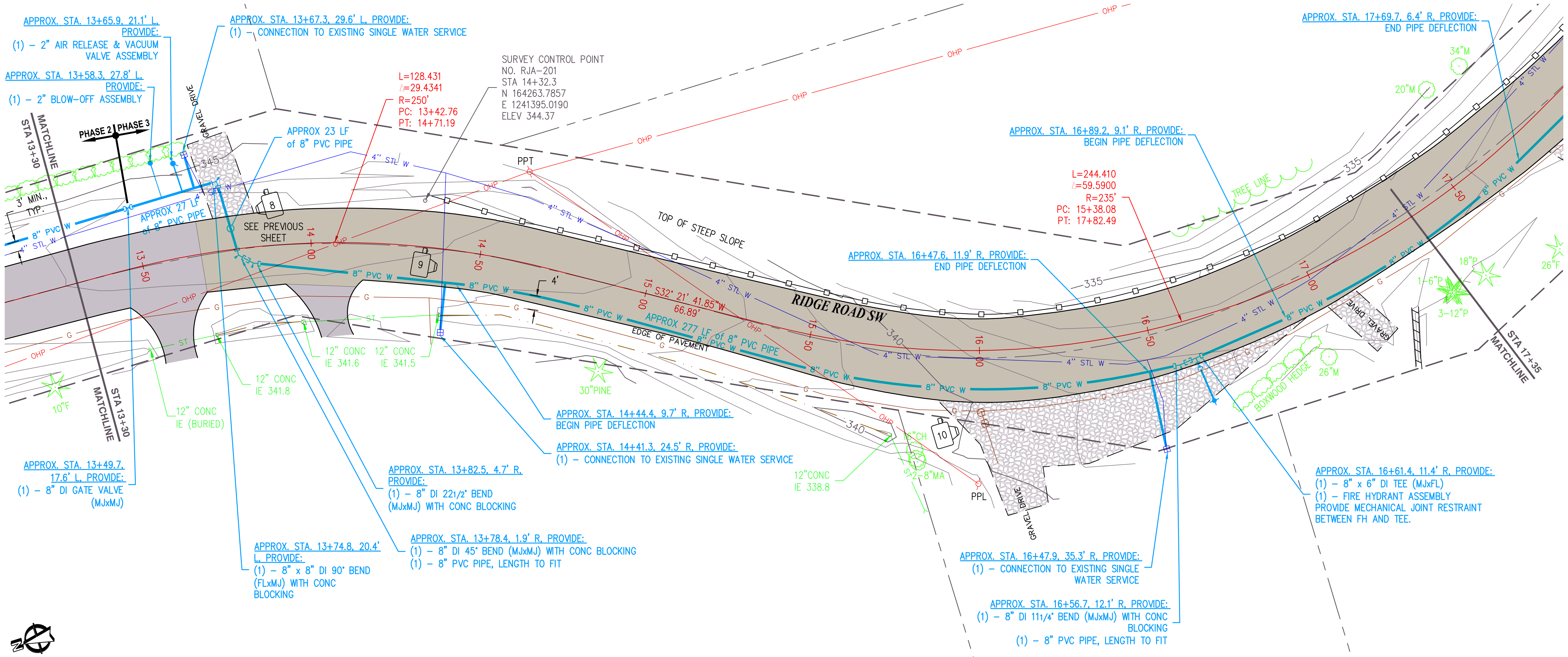
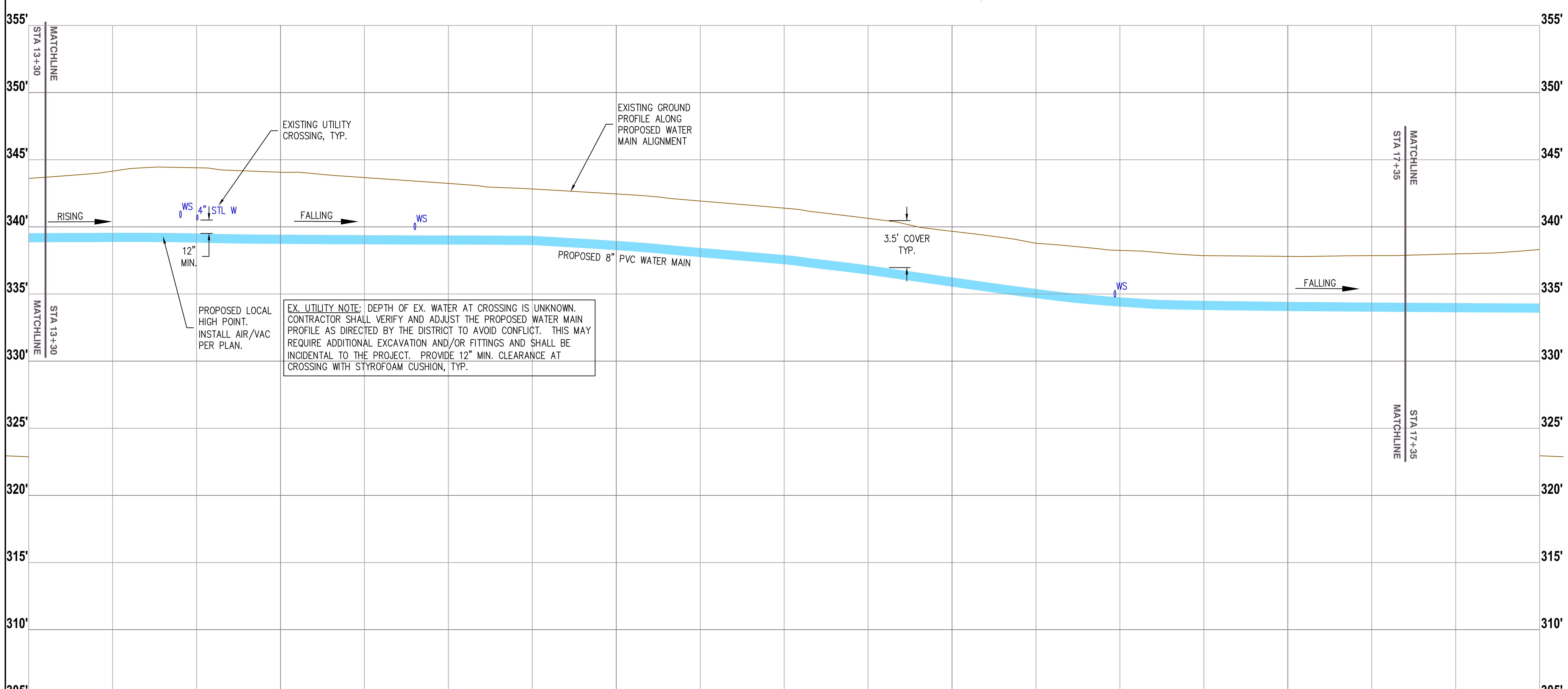
NO.	REVISION	BY	REVIEW	DATE
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10

PLOT: 20
ENGINEER: DEB
REVIEWED: KMP
DATE: NOV 16, 2010
CLIENT: W19
JOB NO.: 110-027
FILENAME: RRWM-D-PLAN
DWG NO. D04
SHEET NO. 6
17





WATER MAIN PLAN AND PROFILE

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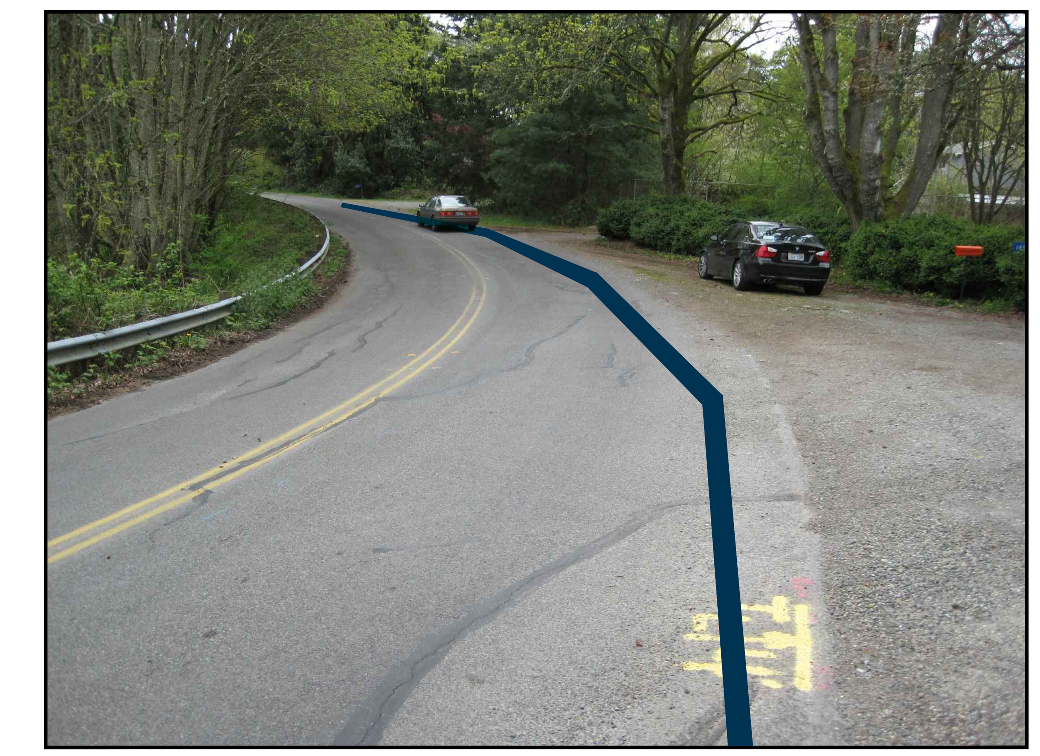
PHOTOS/NOTES



SIGNED: 11/15/10

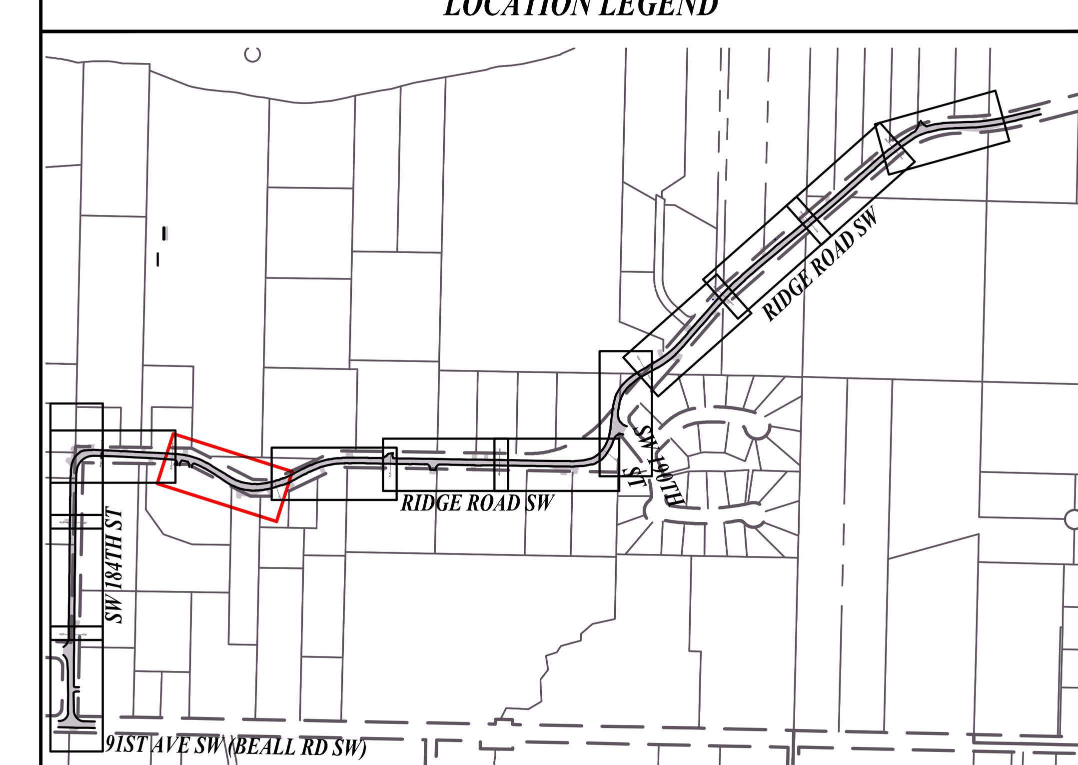
SIGNED: 11/15/10

WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

WATER MAIN PLAN AND PROFILE

LOCATION LEGEND



LOCATION LEGEND
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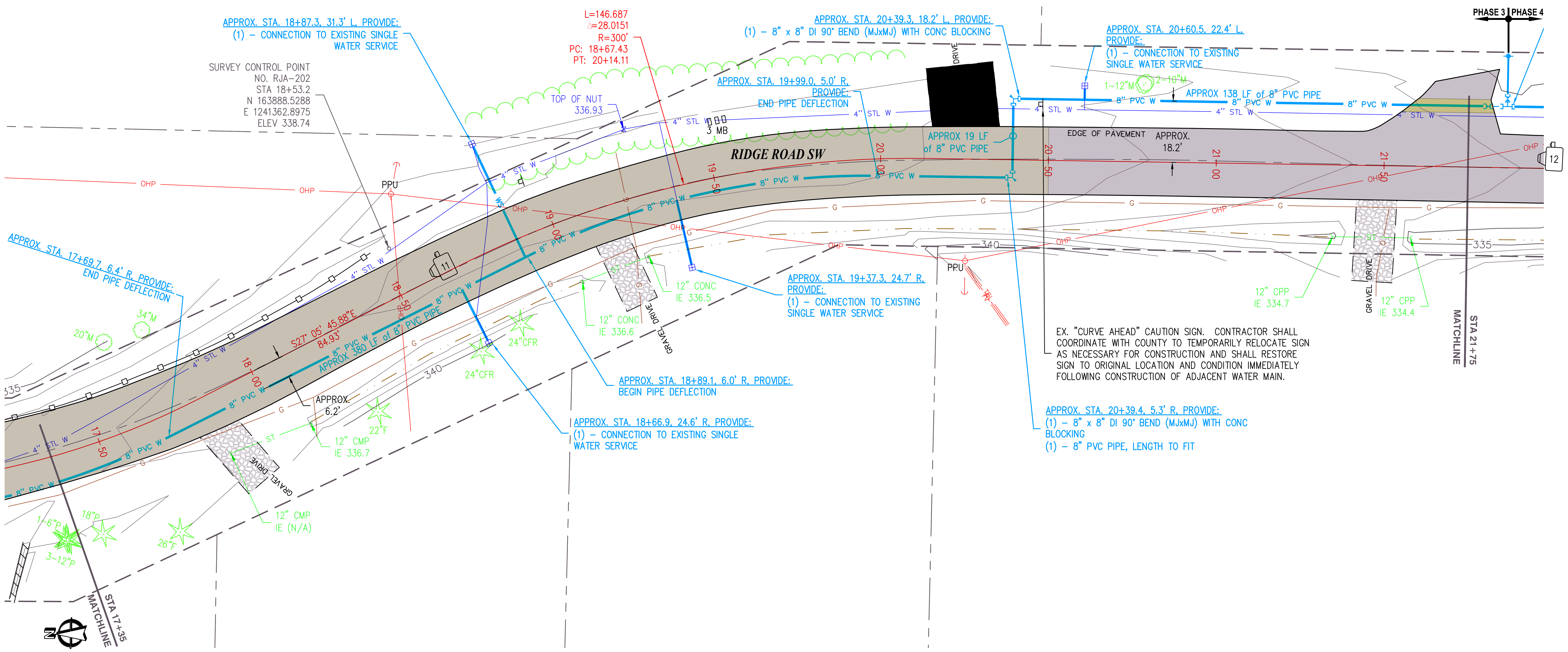
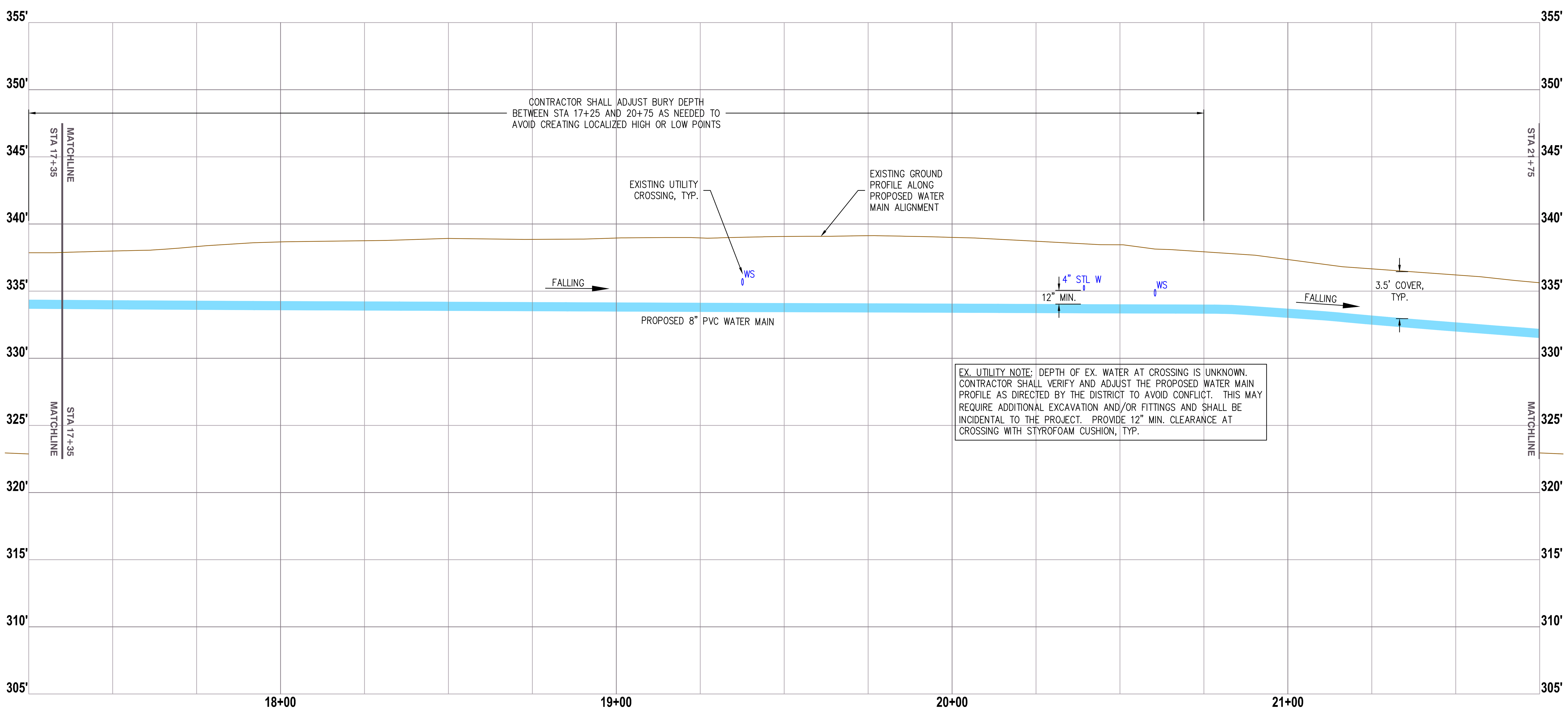
NO.	REVISION	BY	REVIEW	DATE
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10

PLOT:	20
ENGINEER:	DEB
REVIEWED:	KMP
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO.:	110-027
FILENAME:	RRWM-D-PLAN
DWG NO.	D05
SHEET NO.	7 / 17

PHOTOS/NOTES





EX. UTILITY NOTE: DEPTH OF EX. WATER AT CROSSING IS UNKNOWN. CONTRACTOR SHALL VERIFY AND ADJUST THE PROPOSED WATER MAIN PROFILE AS DIRECTED BY THE DISTRICT TO AVOID CONFLICT. THIS MAY REQUIRE ADDITIONAL EXCAVATION AND/OR FITTINGS AND SHALL BE INCIDENTAL TO THE PROJECT. PROVIDE 12" MIN. CLEARANCE AT CROSSING WITH STYROFOAM CUSHION, TYP.

WATER MAIN PLAN AND PROFILE

HORIZ: 1" = 20', VERT: 1" = 5'

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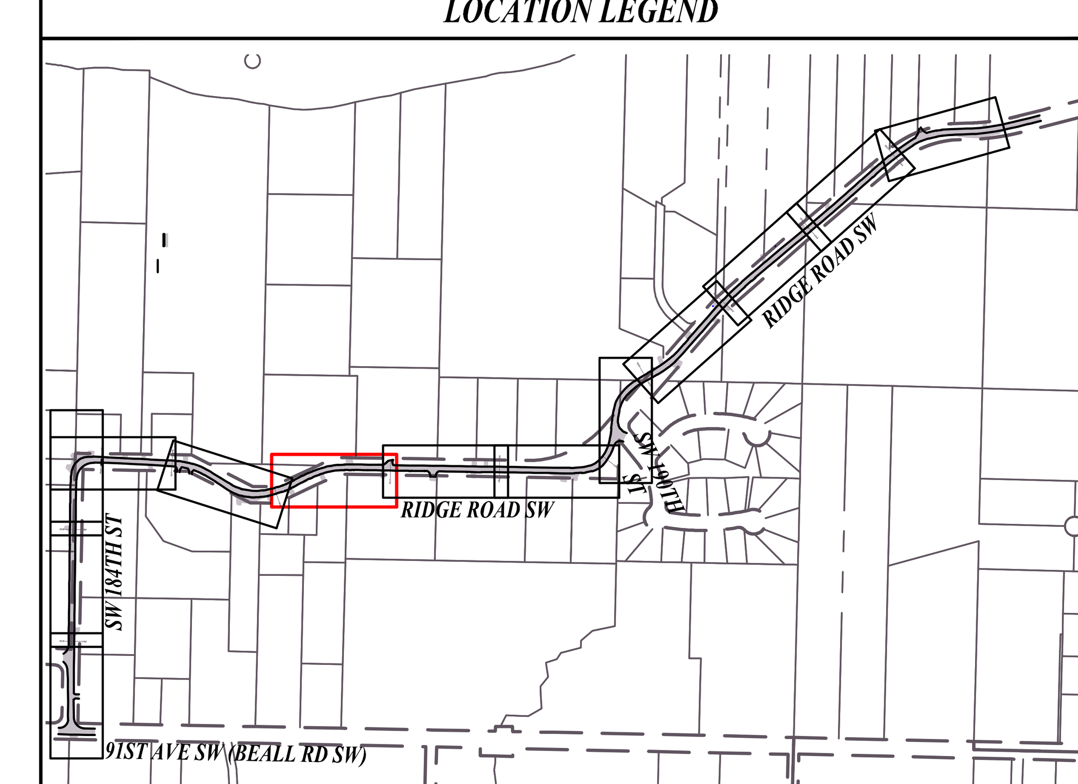
LOCATION LEGEND



LOCATION LEGEND
1" = 600'

SIGNED: 11/15/10

SIGNED: 11/15/10

WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT
WATER MAIN PLAN AND PROFILE

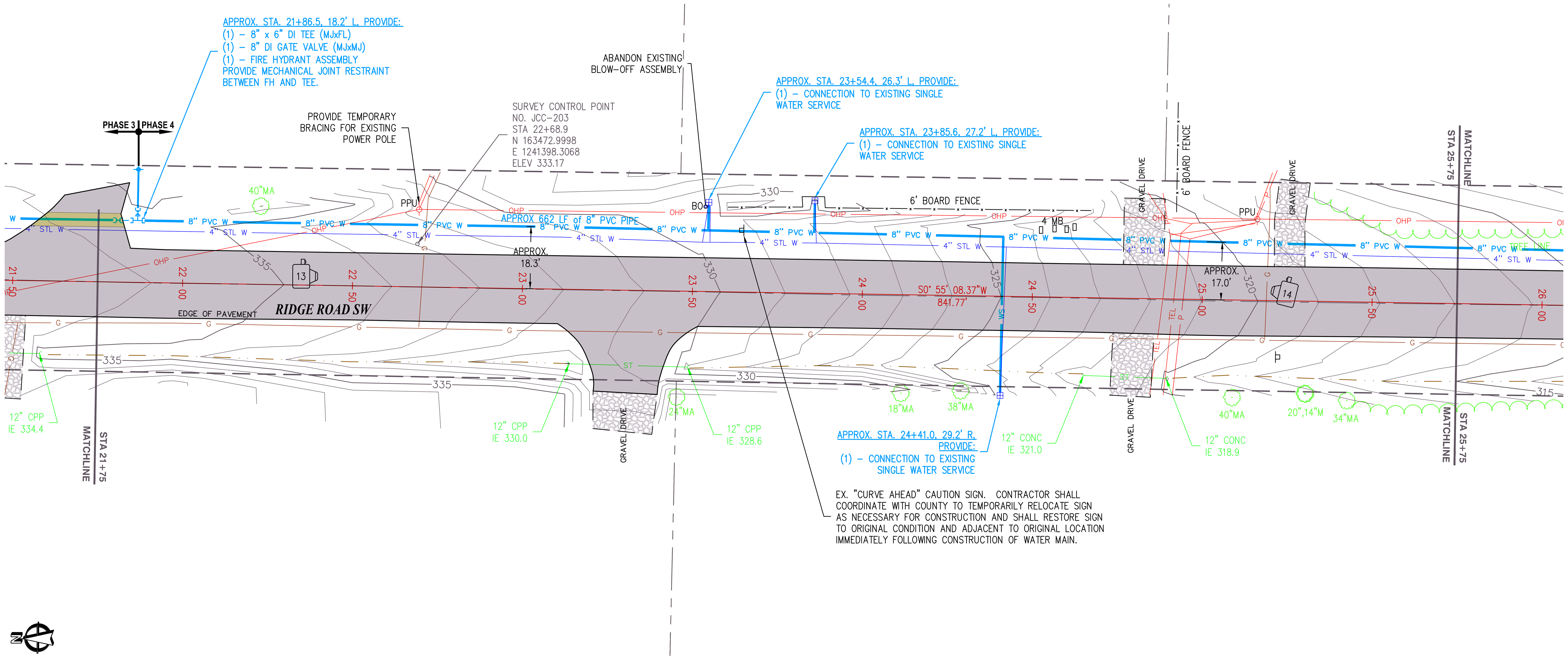
RH2 ENGINEERS PLANNERS SCIENTISTS

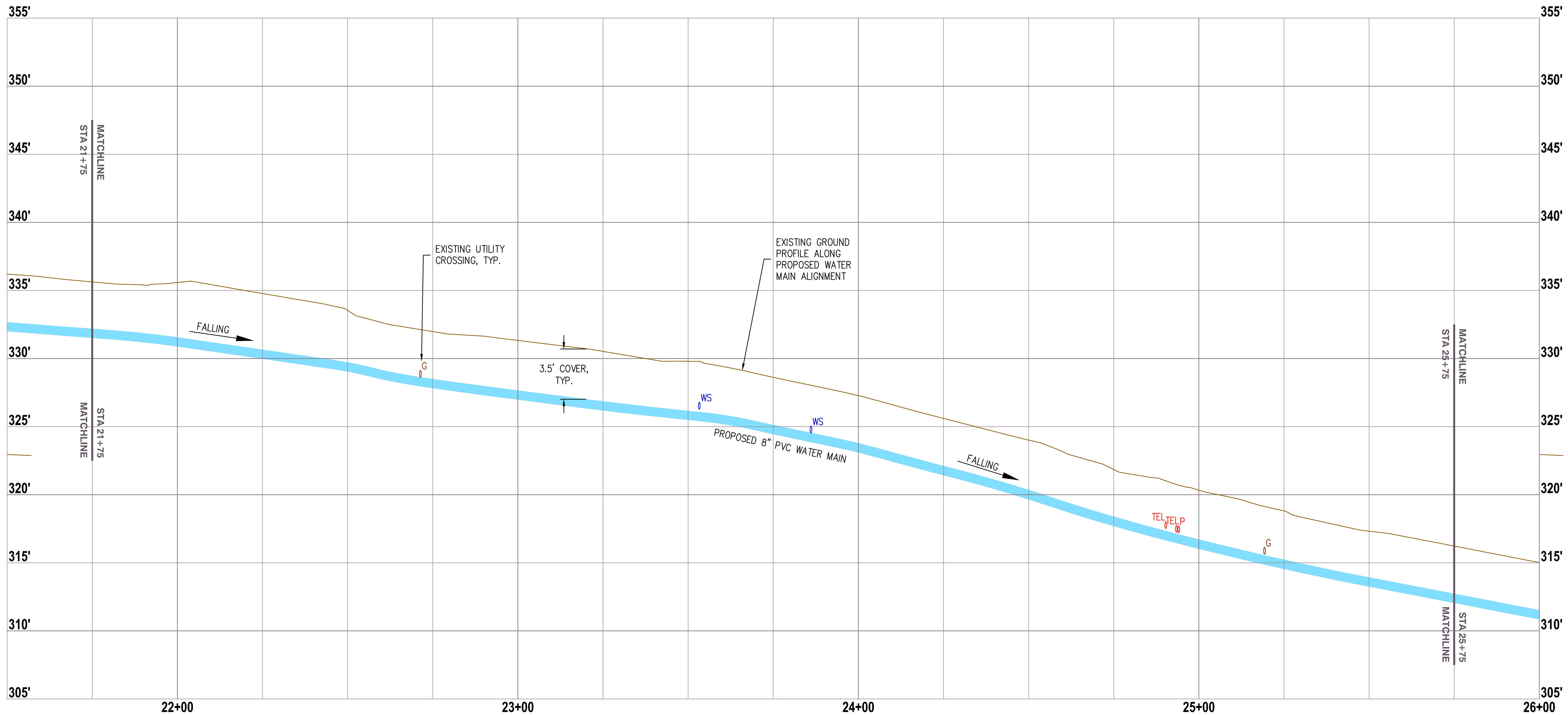
RH2 ENGINEERING, INC.
http://www.rh2.com
mailbox@rh2.com 1.800.720.8052
BELLINGHAM 360.676.0836 454 West Horton Road
BOTHELL 425.951.5400 22722 29th Drive SE, Suite 210
EAST WENATCHEE 509.886.2900 300 Simon Street, Suite 5
RICHLAND 509.946.5181 114 Columbia Point Drive, Suite C
SILVERDALE 360.876.7960 2021 NW Myhre Rd, Suite 107
TACOMA 253.272.3059 621 Pacific Avenue Suite 104

SCALE: SHOWN
0 1" 2"
DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

NO.	REVISION	BY	REVIEW	DATE
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10

PLOT:	20
ENGINEER:	DEB
REVIEWED:	KMP
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO.:	110-027
FILENAME:	RRWM-D-PLAN
DWG NO.	D06
SHEET NO.	8 / 17





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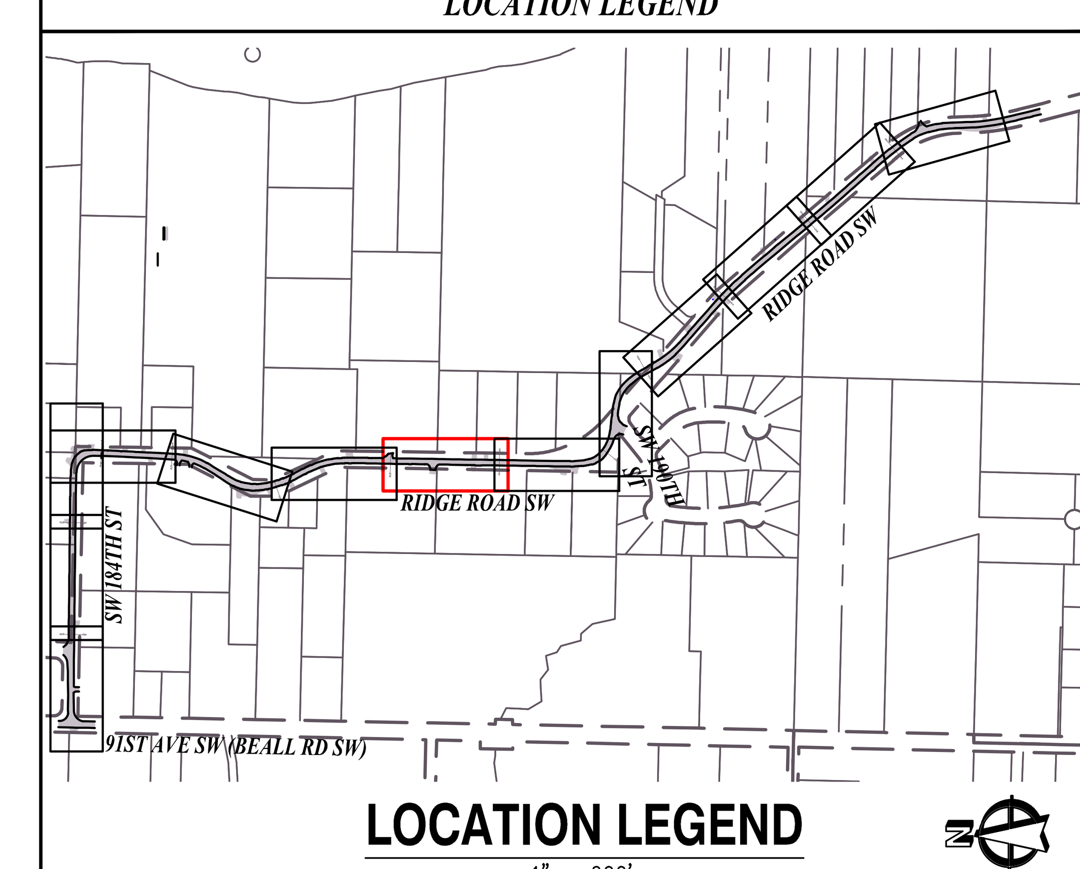
PHOTOS/NOTES

13

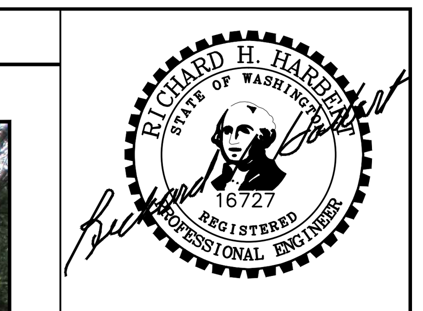
14

LOCATION LEGEND



LOCATION LEGEND

1" = 600'



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WATER DISTRICT 19

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PLOT:	20
ENGINEER:	DEB
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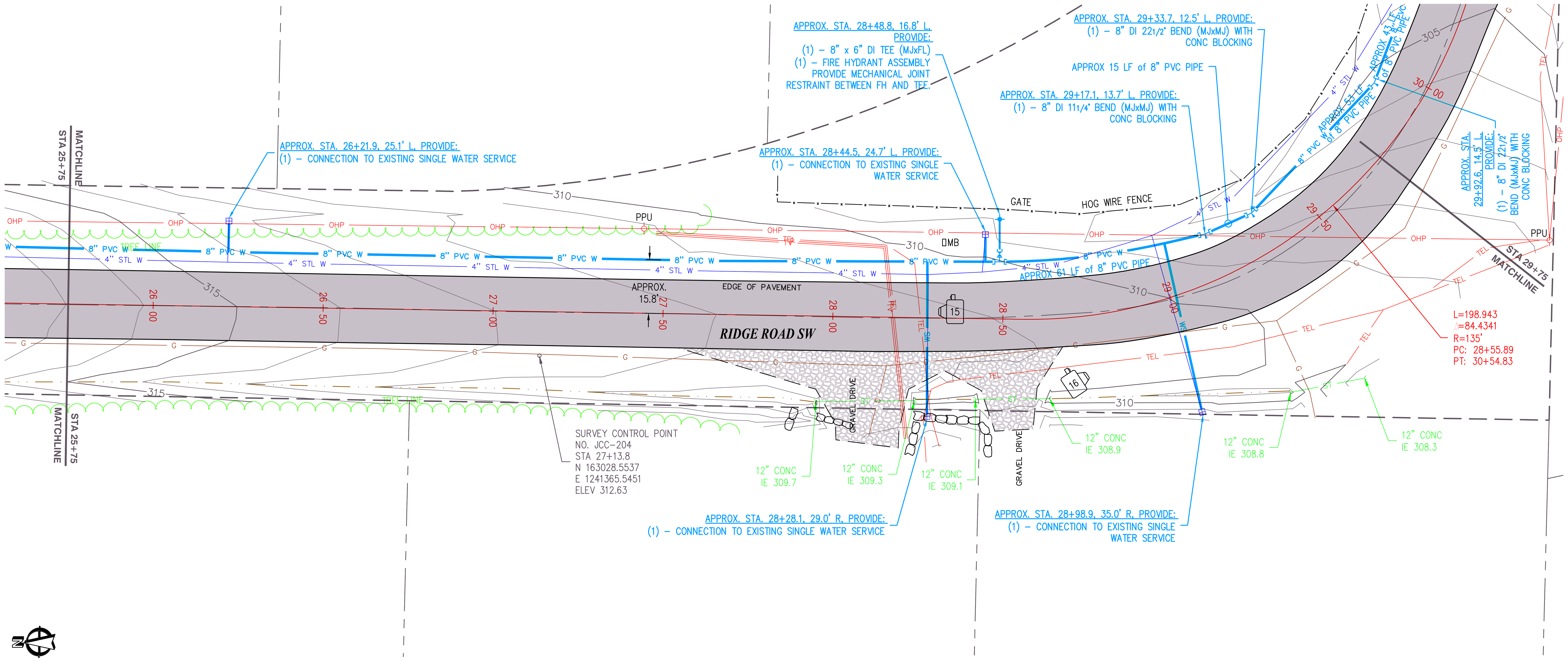
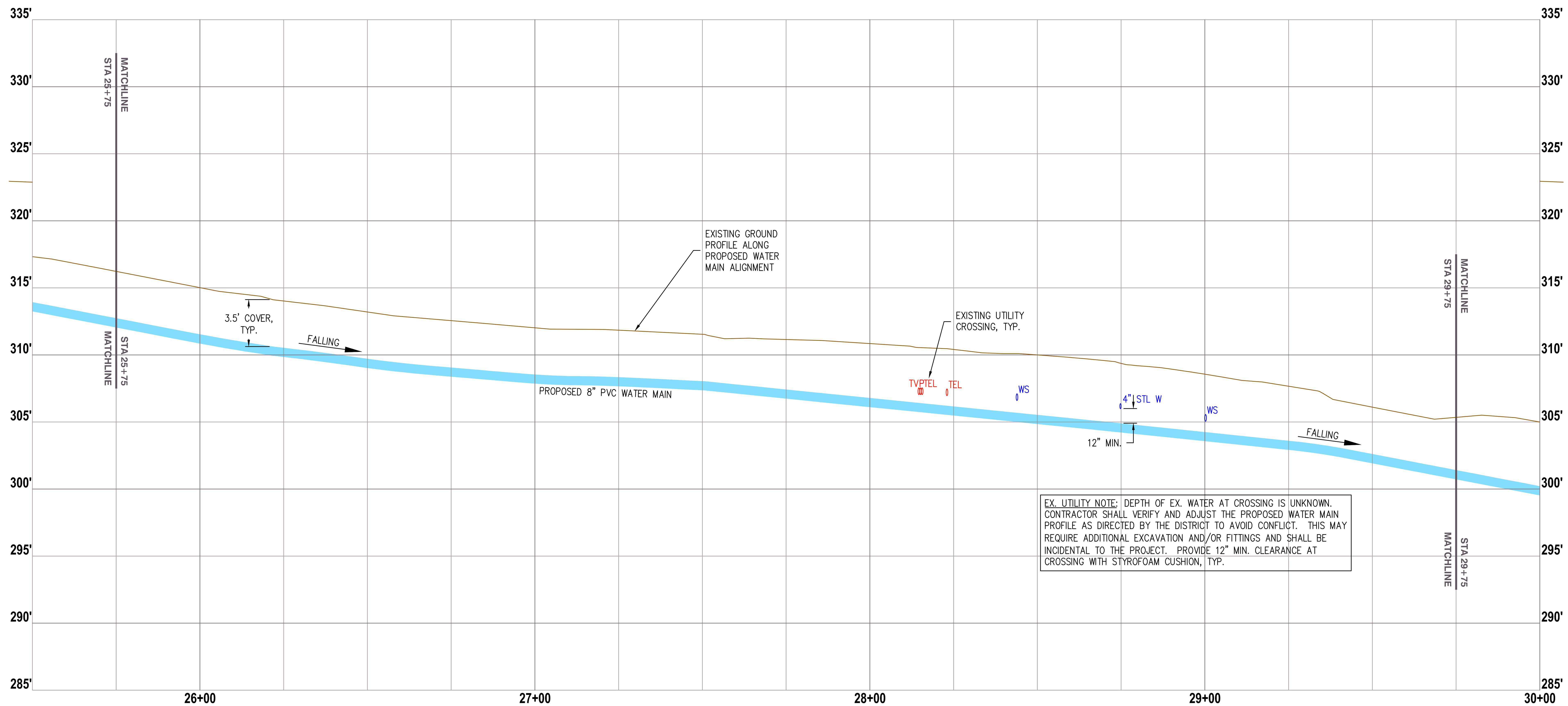
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO.:	110-027
FILENAME:	RRWM-D-PLAN
DWG NO.	D07
SHEET NO.	9 / 17





WATER MAIN PLAN AND PROFILE

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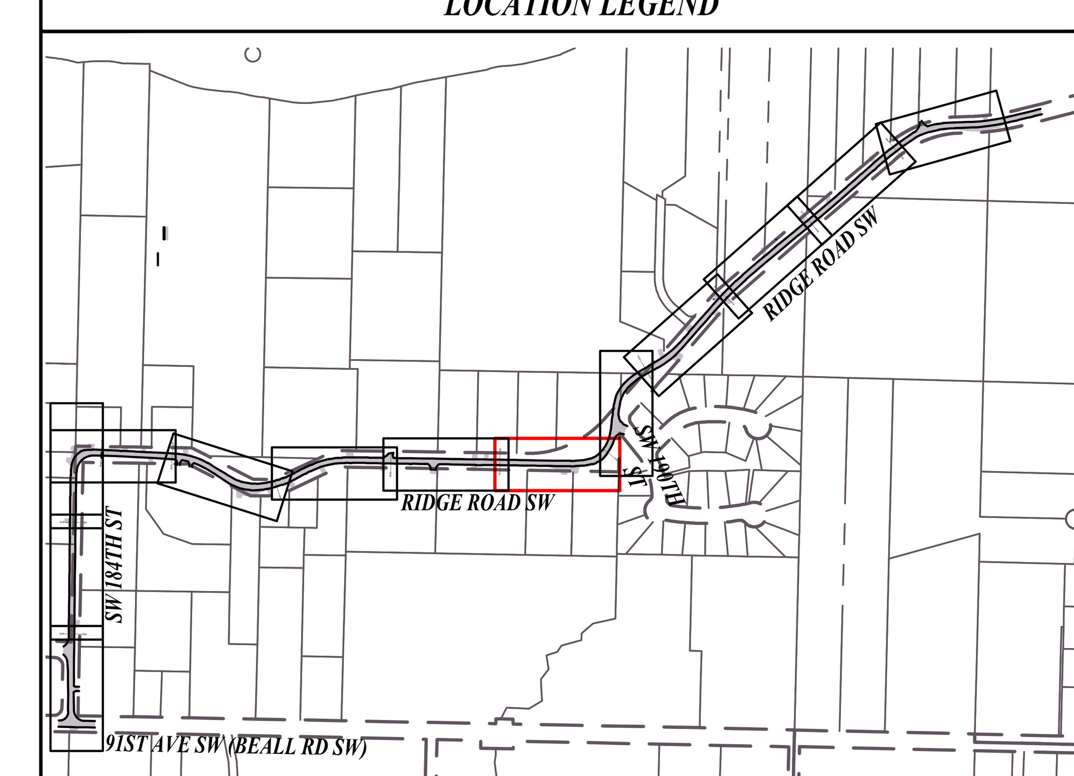
PHOTOS/NOTES

15

16

LOCATION LEGEND



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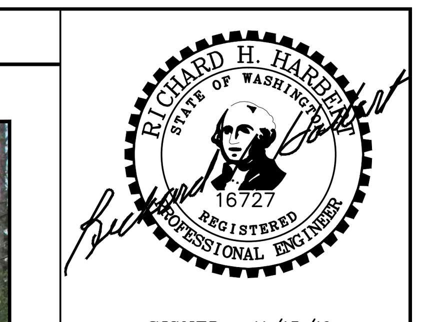
1" = 600'



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SCALE: SHOWN
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NO.	REVISION	BY	REVIEW	DATE
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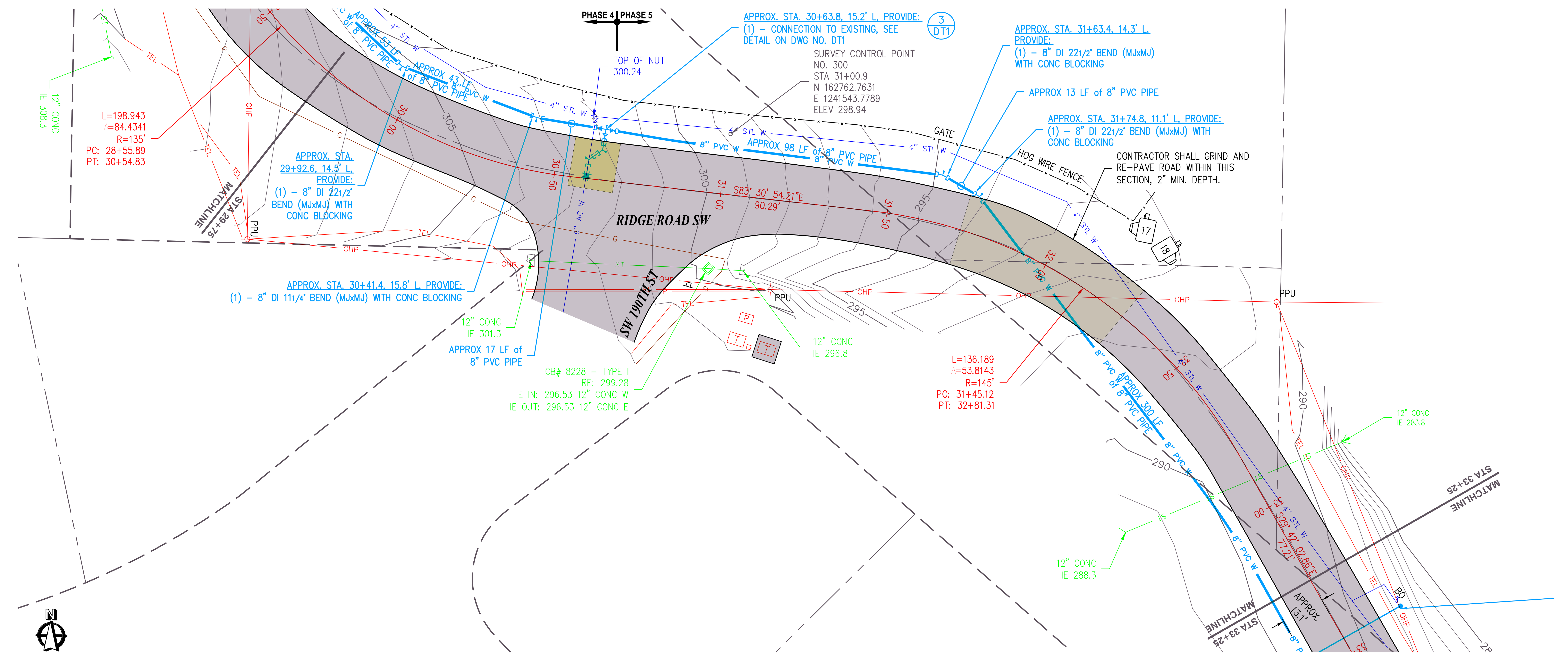
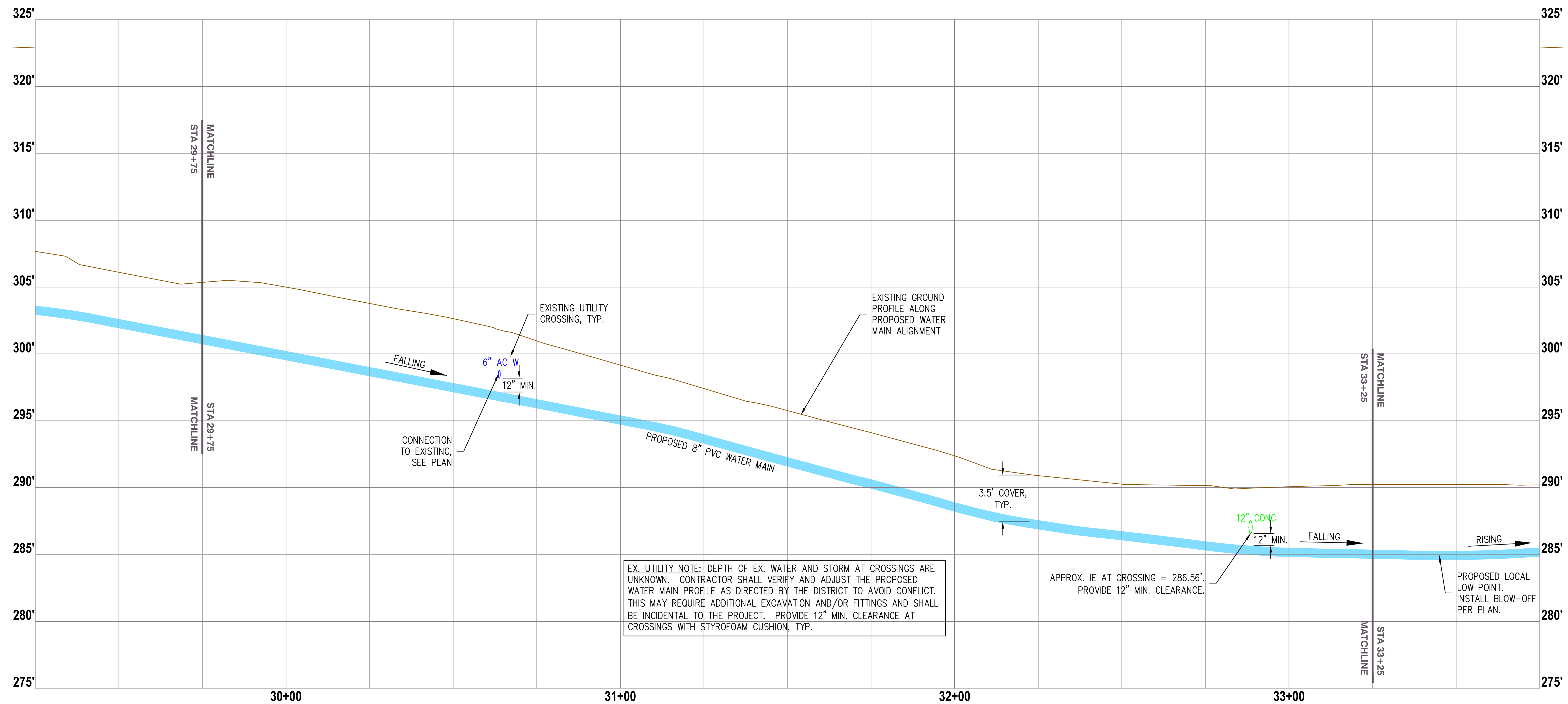
PLOT:	20
ENGINEER:	DEB
REVIEWED:	KMP
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO:	110-027
FILENAME:	RRWM-D-PLAN
DWG NO.	D08
SHEET NO.	10 / 17





EX. UTILITY NOTE: DEPTH OF EX. WATER AND STORM AT CROSSINGS ARE UNKNOWN. CONTRACTOR SHALL VERIFY AND ADJUST THE PROPOSED WATER MAIN PROFILE AS DIRECTED BY THE DISTRICT TO AVOID CONFLICT. THIS MAY REQUIRE ADDITIONAL EXCAVATION AND/OR FITTINGS AND SHALL BE INCIDENTAL TO THE PROJECT. PROVIDE 12" MIN. CLEARANCE AT CROSSINGS WITH STYROFOAM CUSHION, TYP.

WATER MAIN PLAN AND PROFILE

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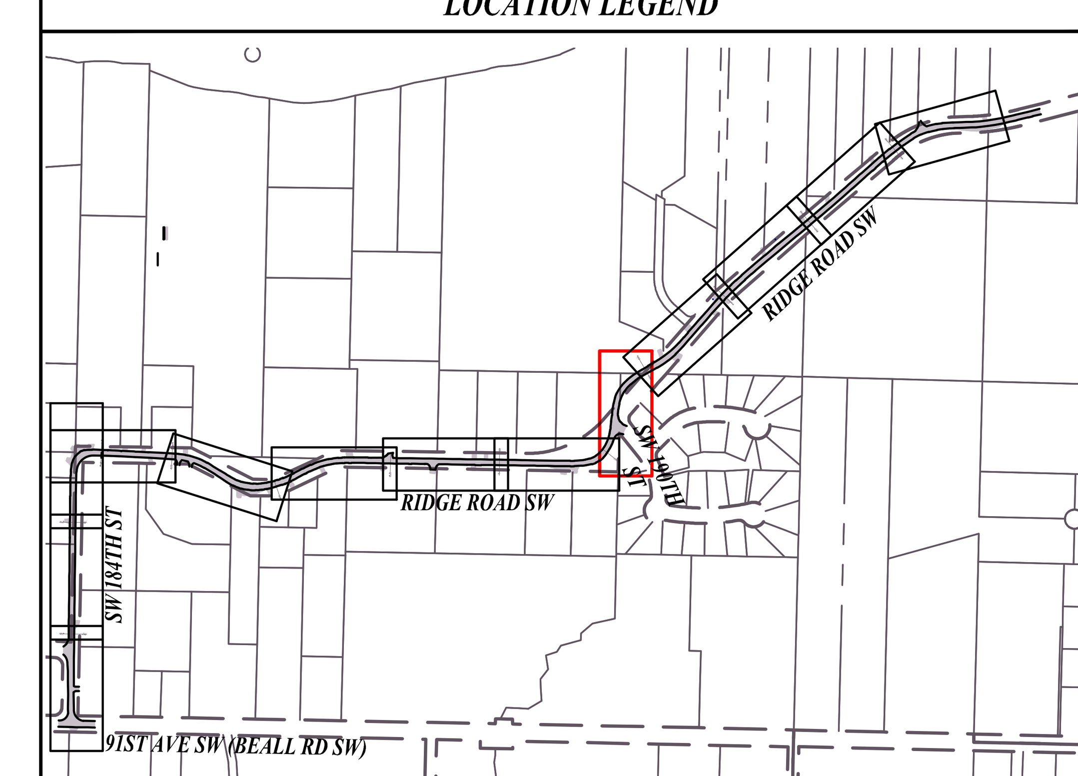
PHOTOS/NOTES

17

18

LOCATION LEGEND



LOCATION LEGEND

1" = 600'

SIGNED: 11/15/10

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WATER DISTRICT 19

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TACOMA 253.272.3059
621 Pacific Avenue Suite 104

SCALE: SHOWN
0 1" 2"
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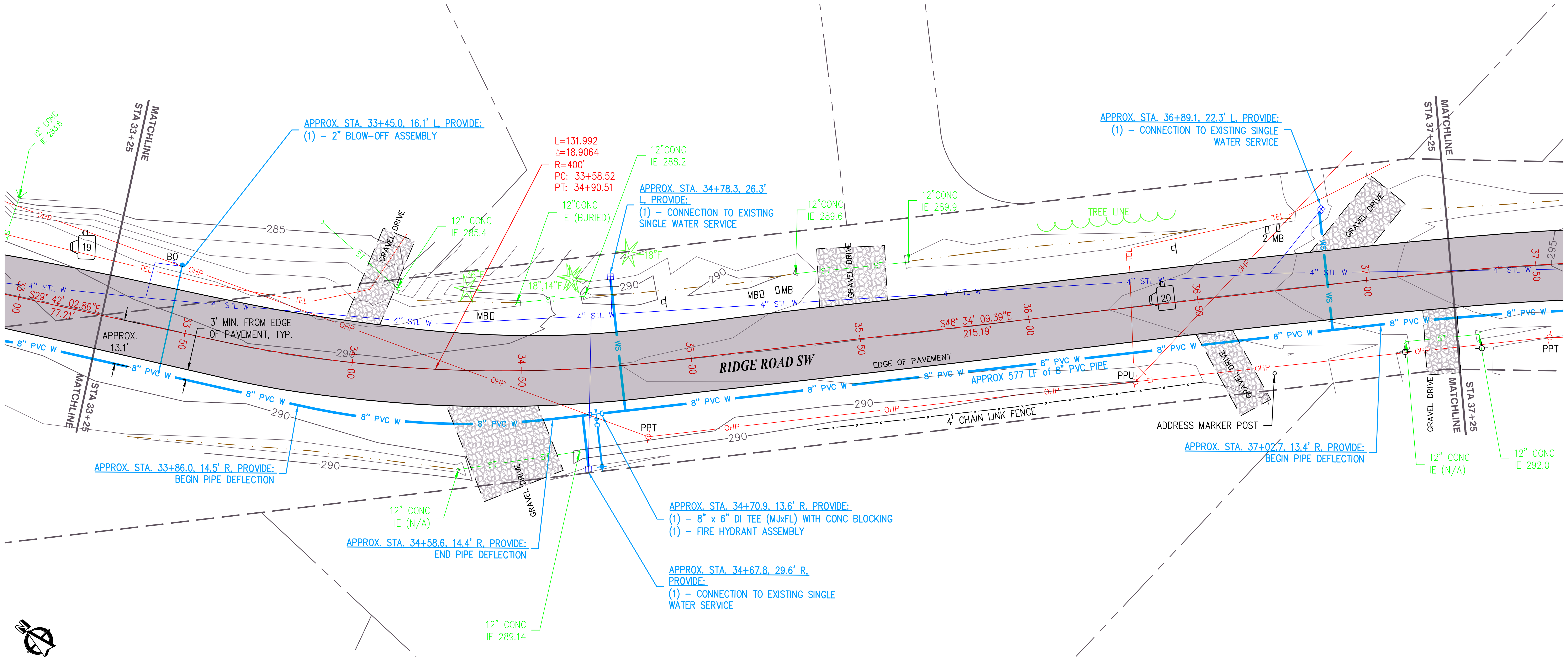
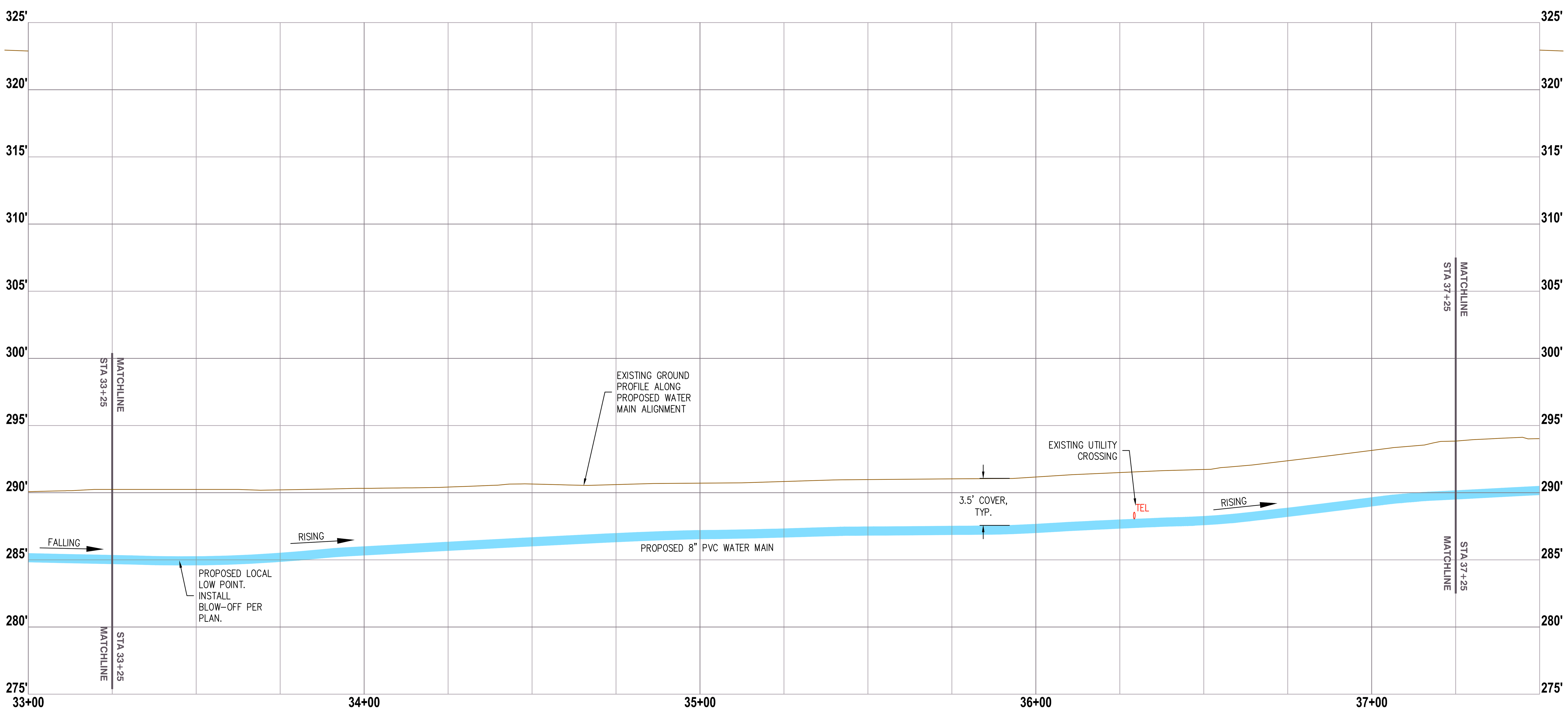
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10
NO.	REVISION	BY	REVIEW	DATE

PLOT:	20
ENGINEER:	DEB
REVIEWED:	KMP
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO.:	110-027
FILENAME:	RRWM-D-PLAN

DWG NO. D09

SHEET NO. 11 / 17





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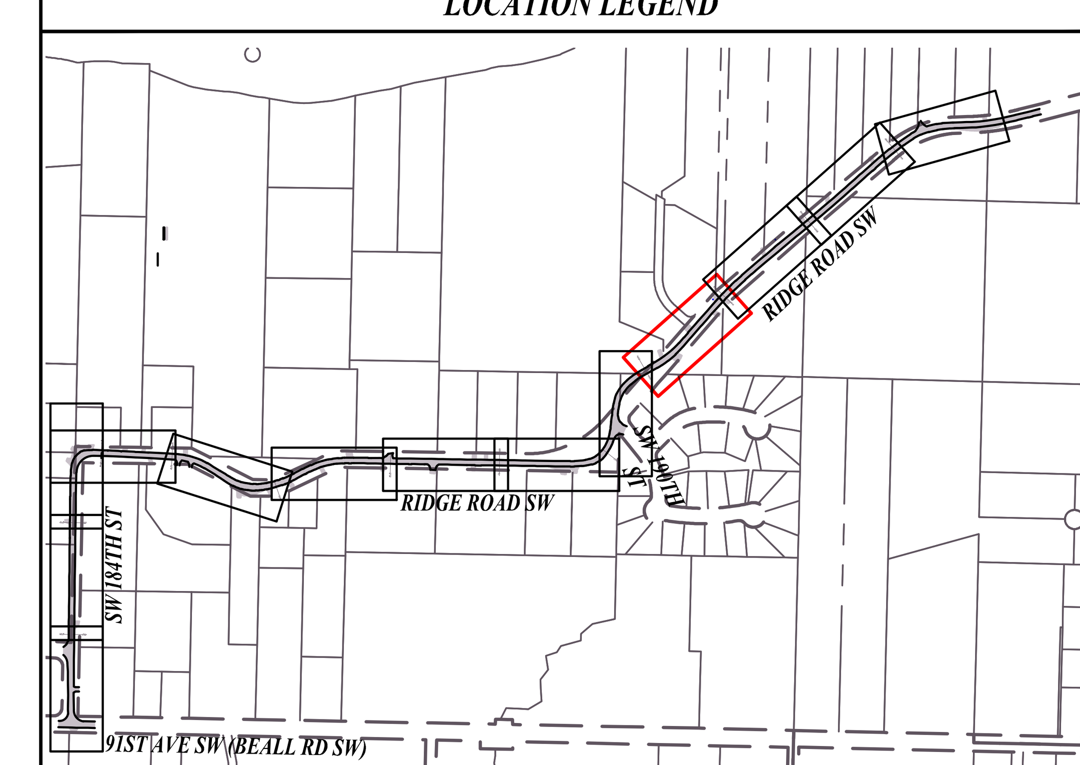
PHOTOS/NOTES

19

20

LOCATION LEGEND



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REVIEWED:	KMP
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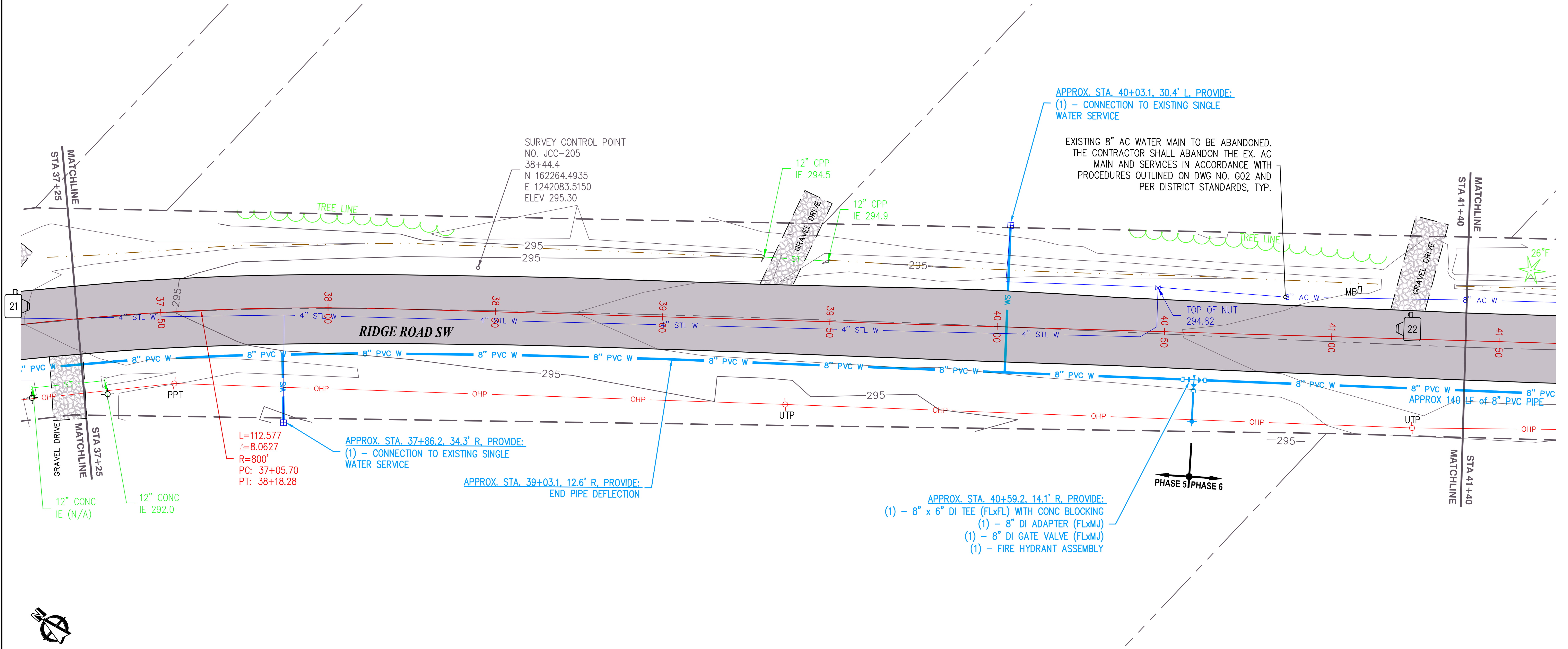
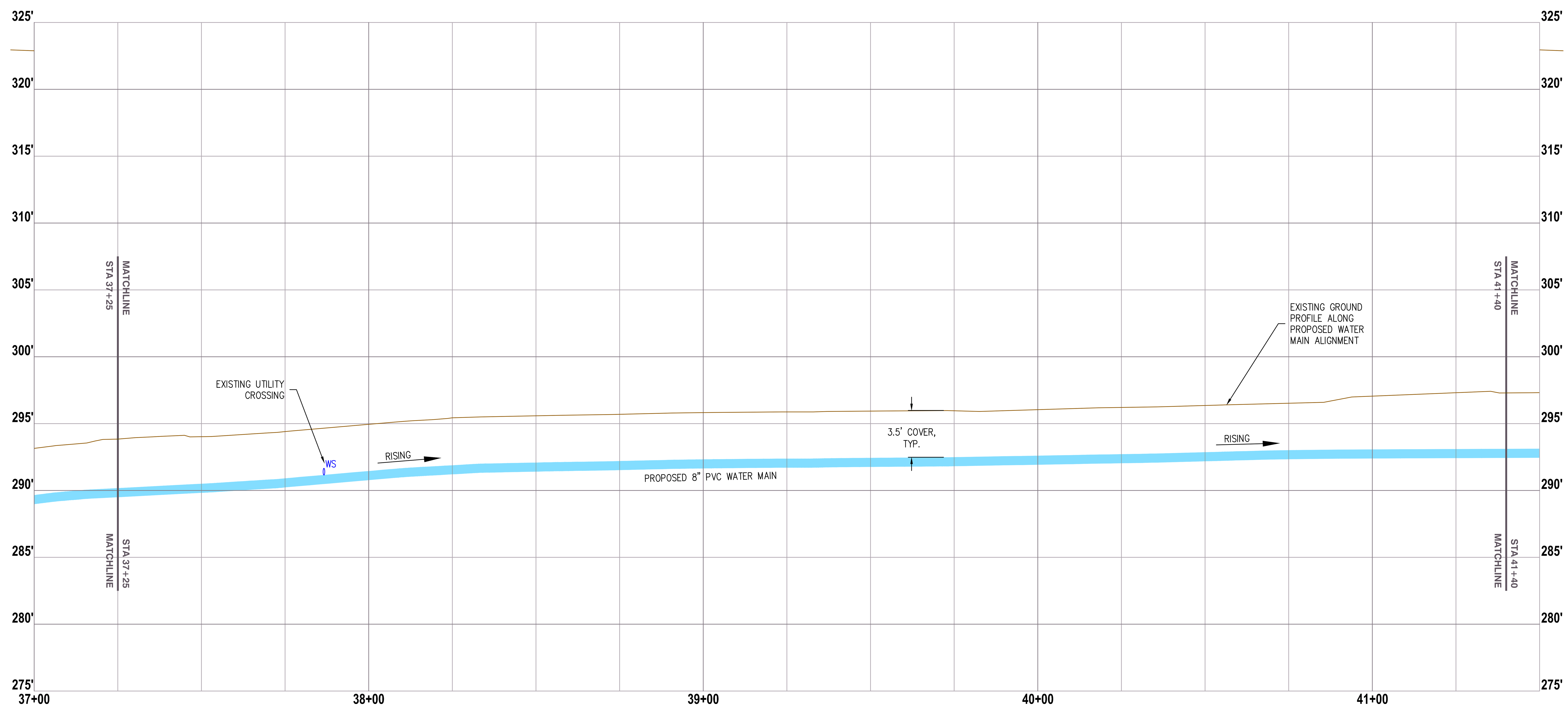
CLIENT:	W19
JOB NO.:	110-027
FILENAME:	RRWM-D-PLAN
DWG NO.	D10
SHEET NO.	12 / 17





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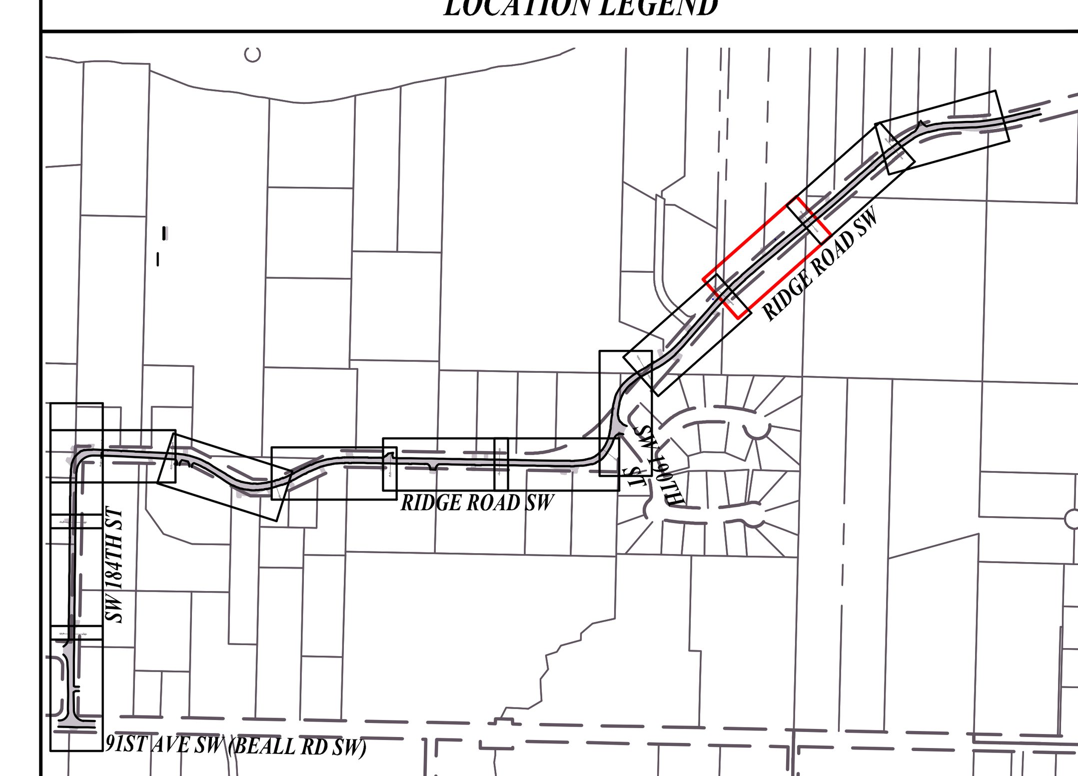
PHOTOS/NOTES

21

22

LOCATION LEGEND



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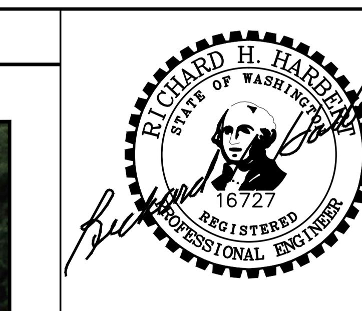

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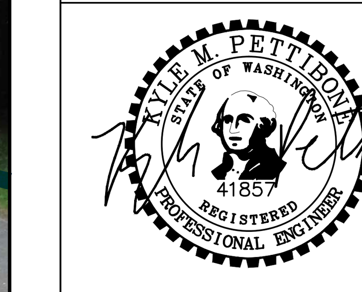

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WATER DISTRICT 19

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RIDGE ROAD WATER MAIN REPLACEMENT

WATER MAIN PLAN AND PROFILE

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SCALE: SHOWN

0 1" 2"

DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

PLOT: 20	DWG NO. D11				
ENGINEER: DEB					
REVIEWED: KMP					
DATE: NOV 16, 2010	SHEET NO. 13 / 17				
CLIENT: W19					
JOB NO.: 110-027					
FILENAME: RRWM-D-PLAN					

NO.	REVISION	BY	REVIEW	DATE
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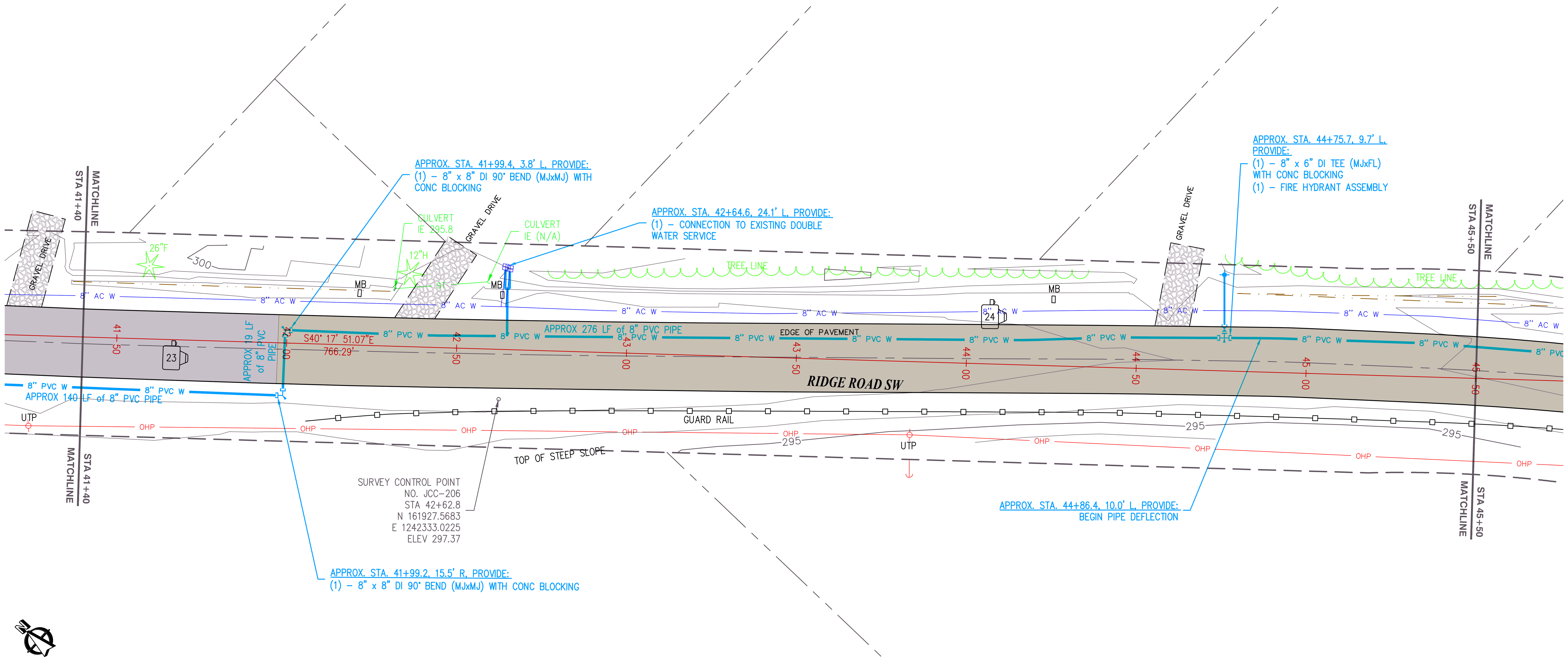

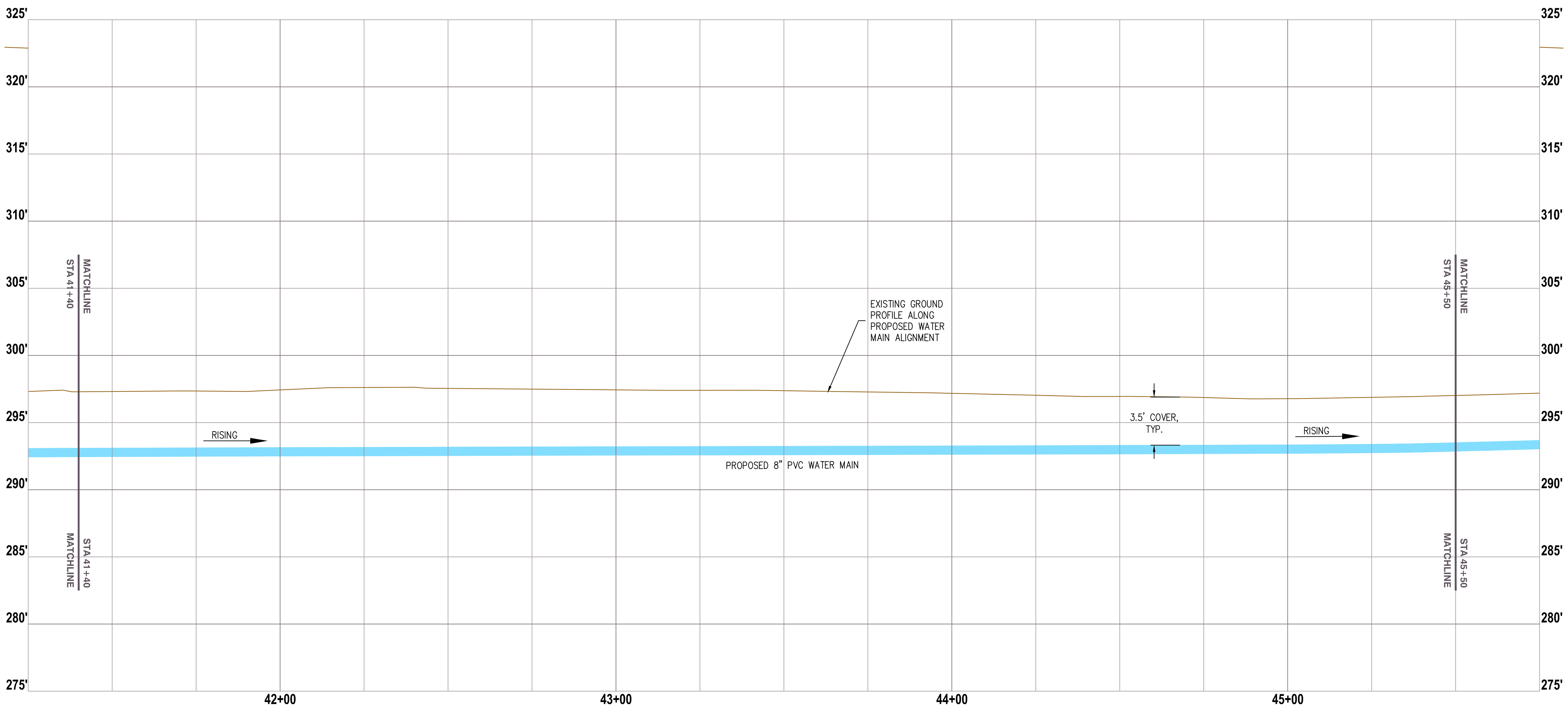

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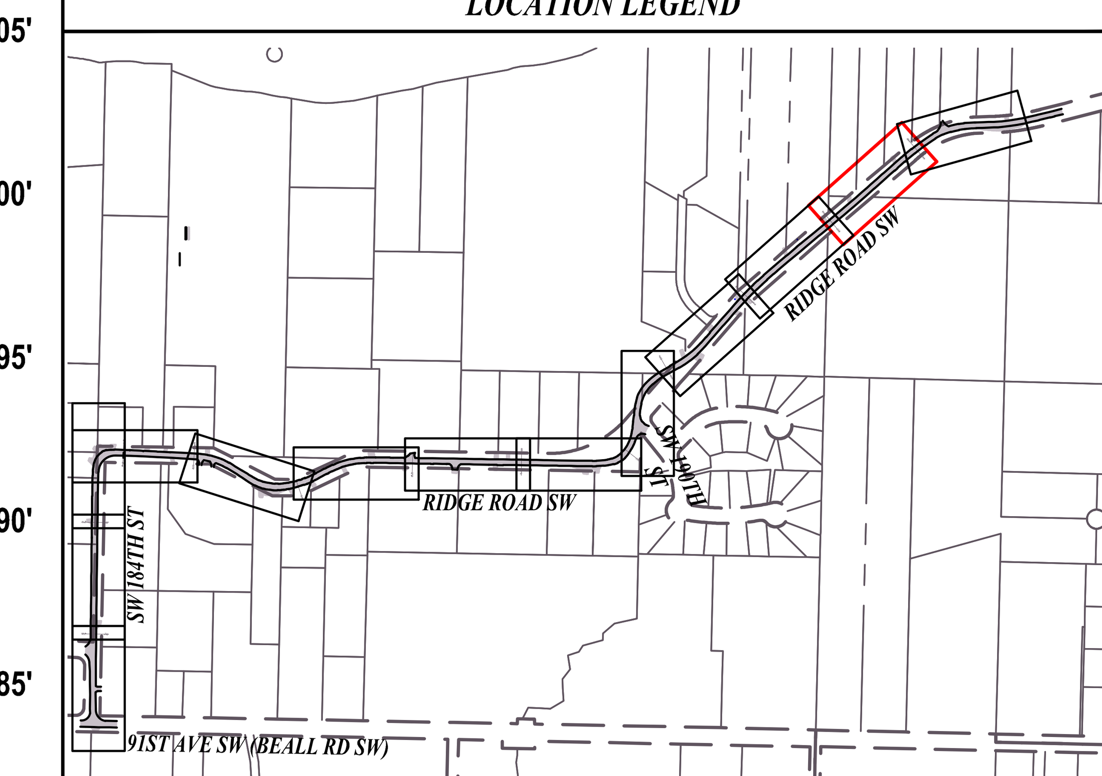
PHOTOS/NOTES

23

24

LOCATION LEGEND



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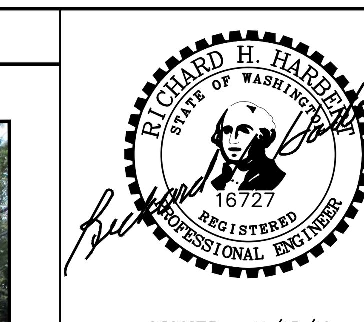
1" = 600'



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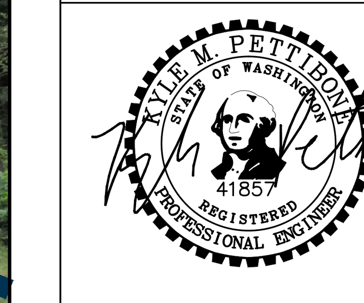

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0 1" 2"

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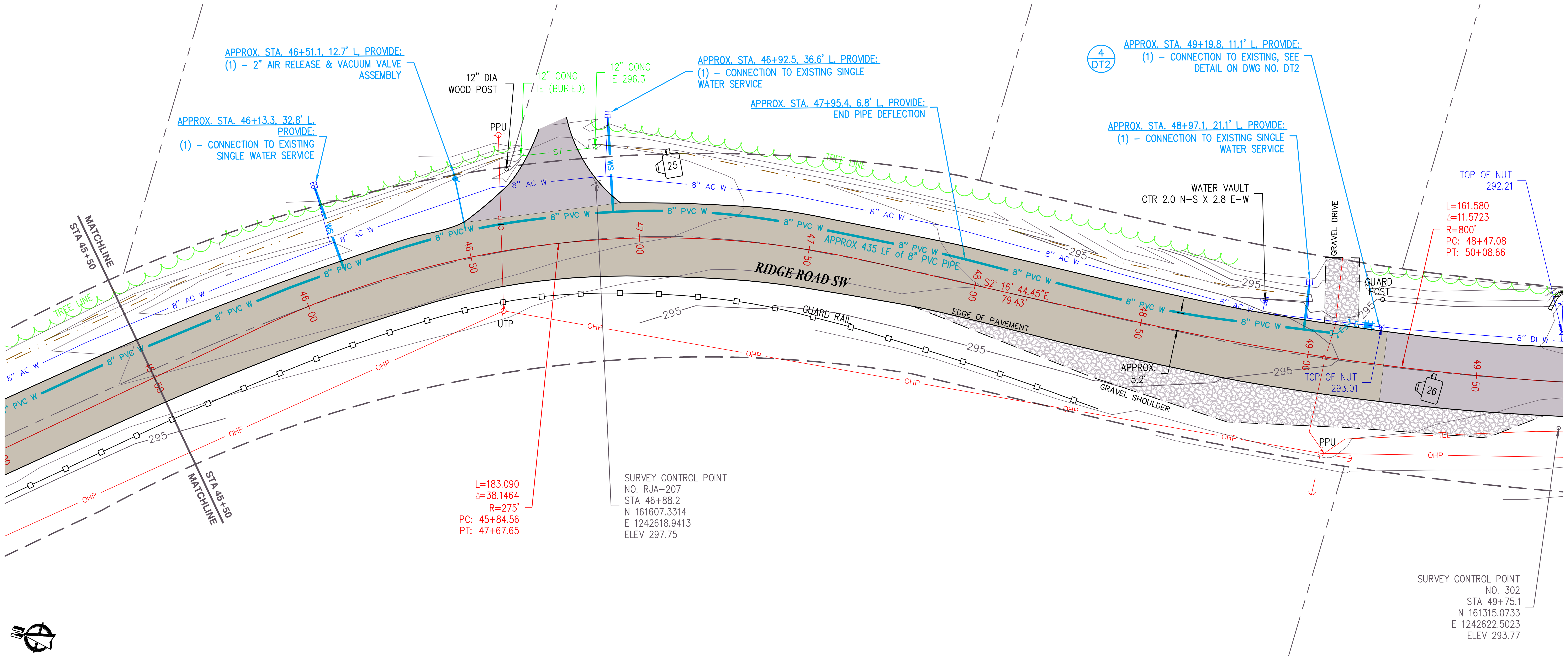
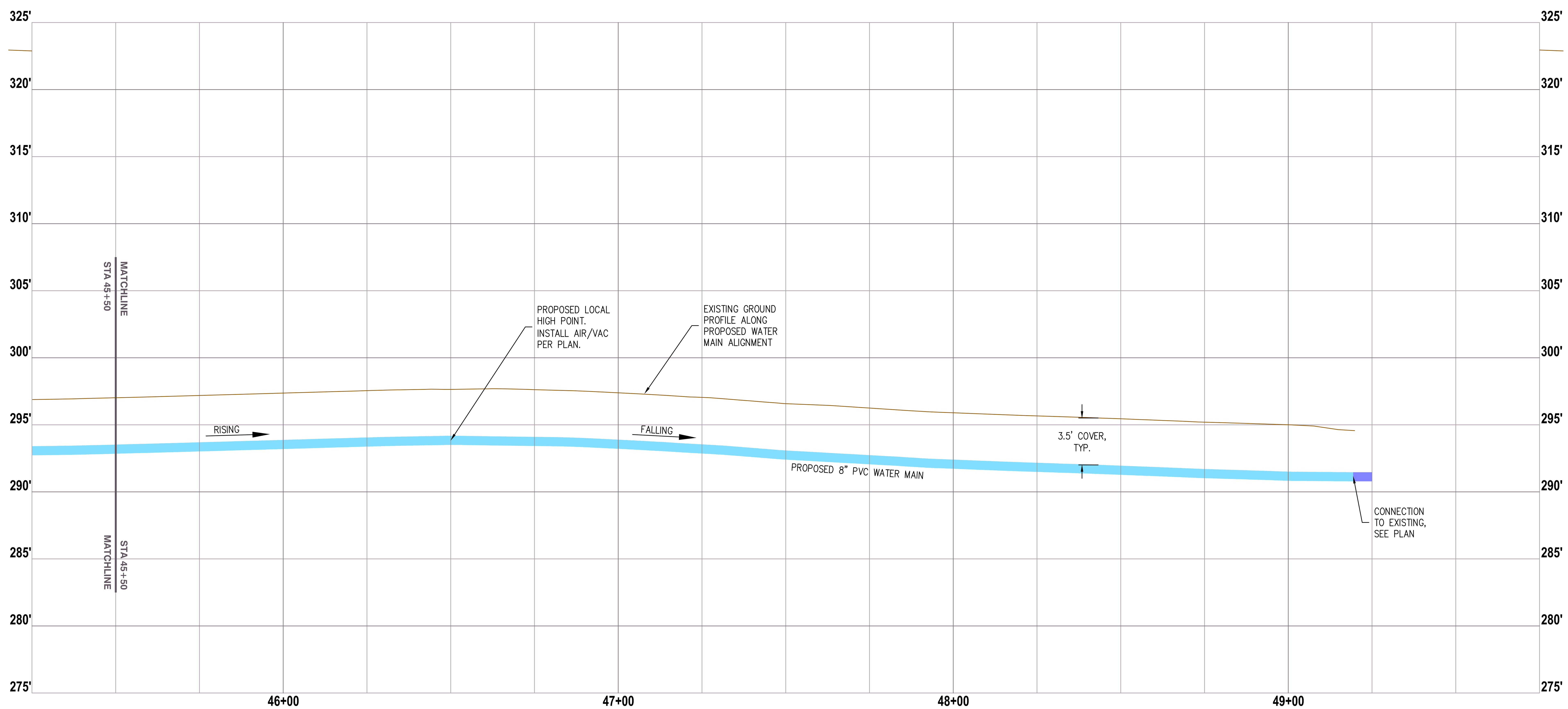
DWG NO.	D12
SHEET NO.	14 / 17





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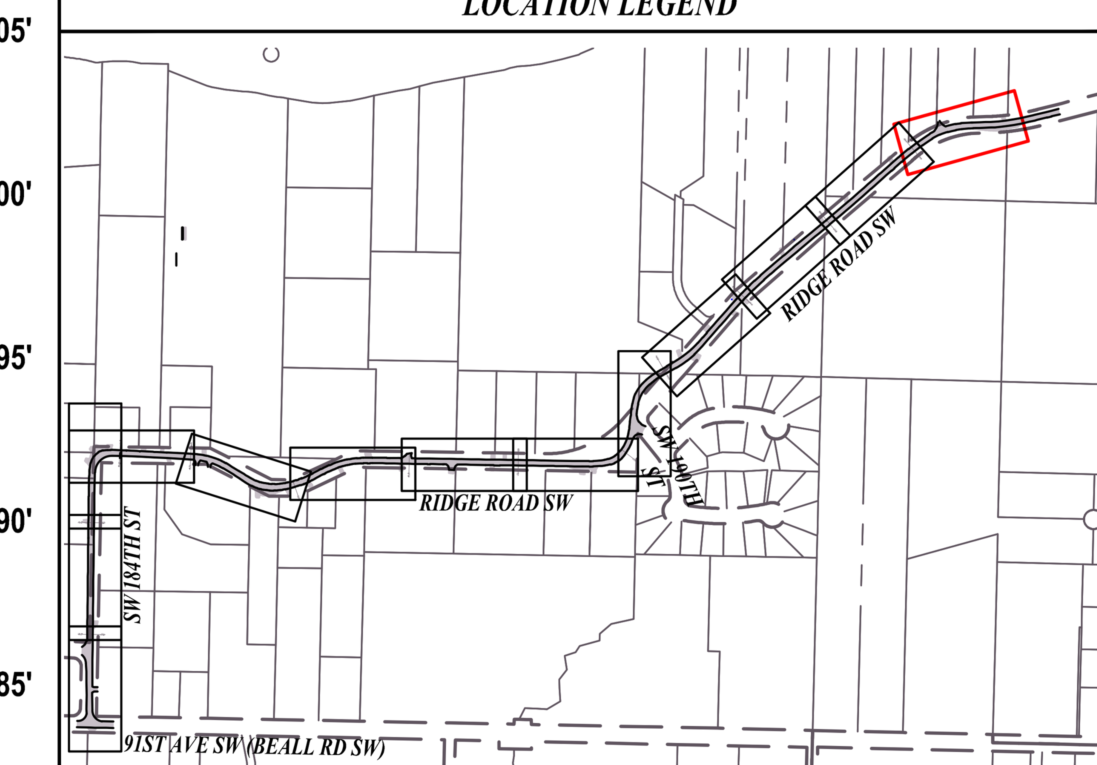
PHOTOS/NOTES

25

26

LOCATION LEGEND



LOCATION LEGEND

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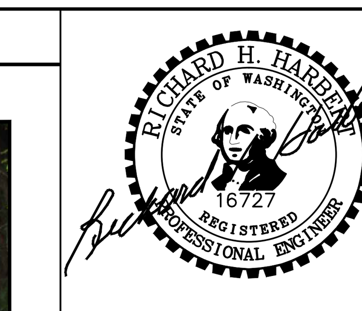

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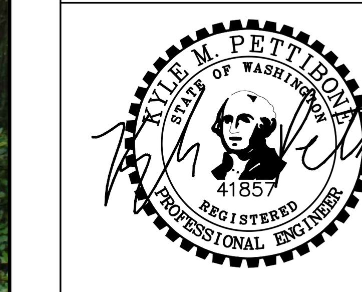

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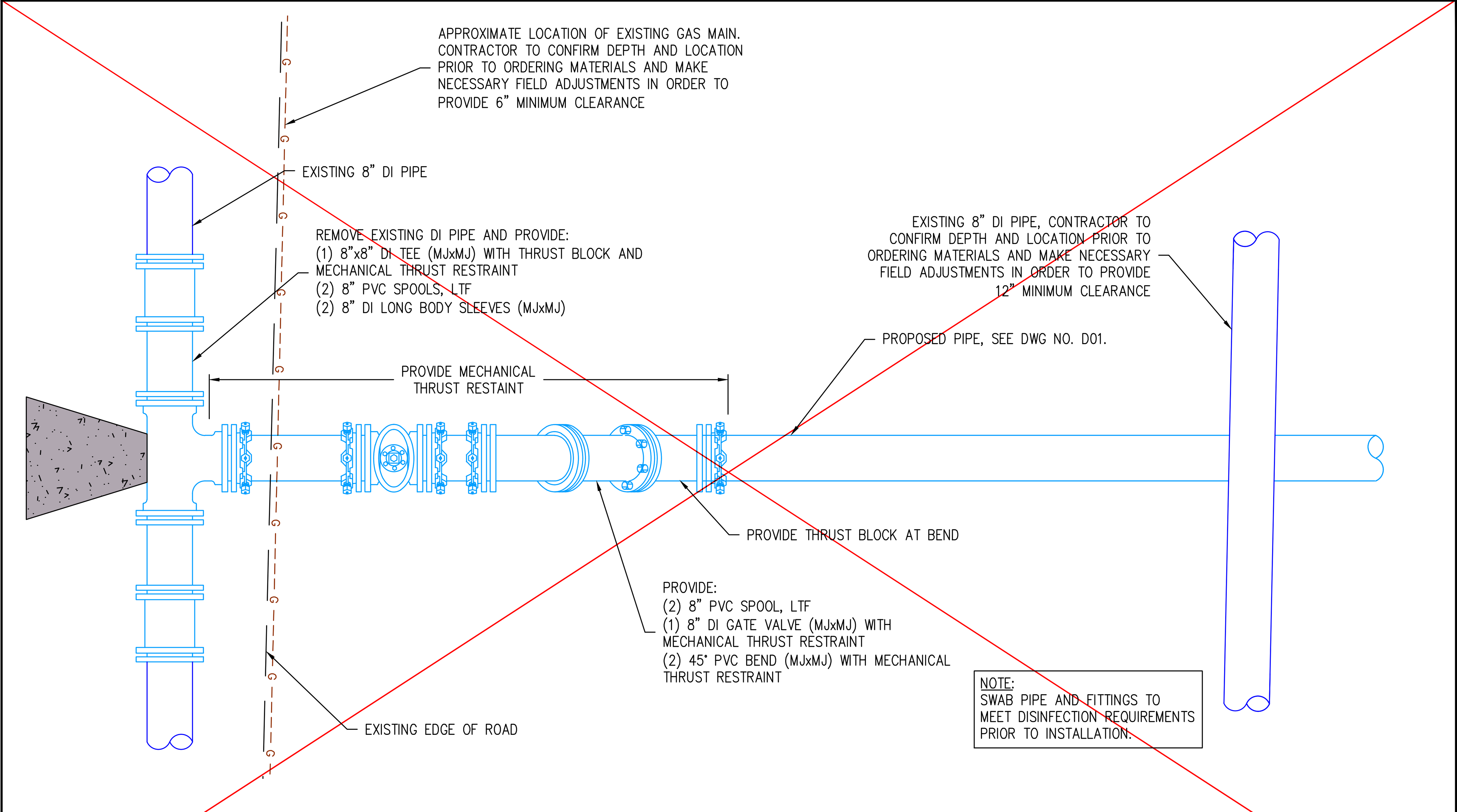
REVIEWED:	KMP
DATE:	NOV 16, 2010
CLIENT:	W19
JOB NO:	110–027
FILENAME:	RRWM–D–PLAN
DWG NO.	D13
SHEET NO.	15 / 17

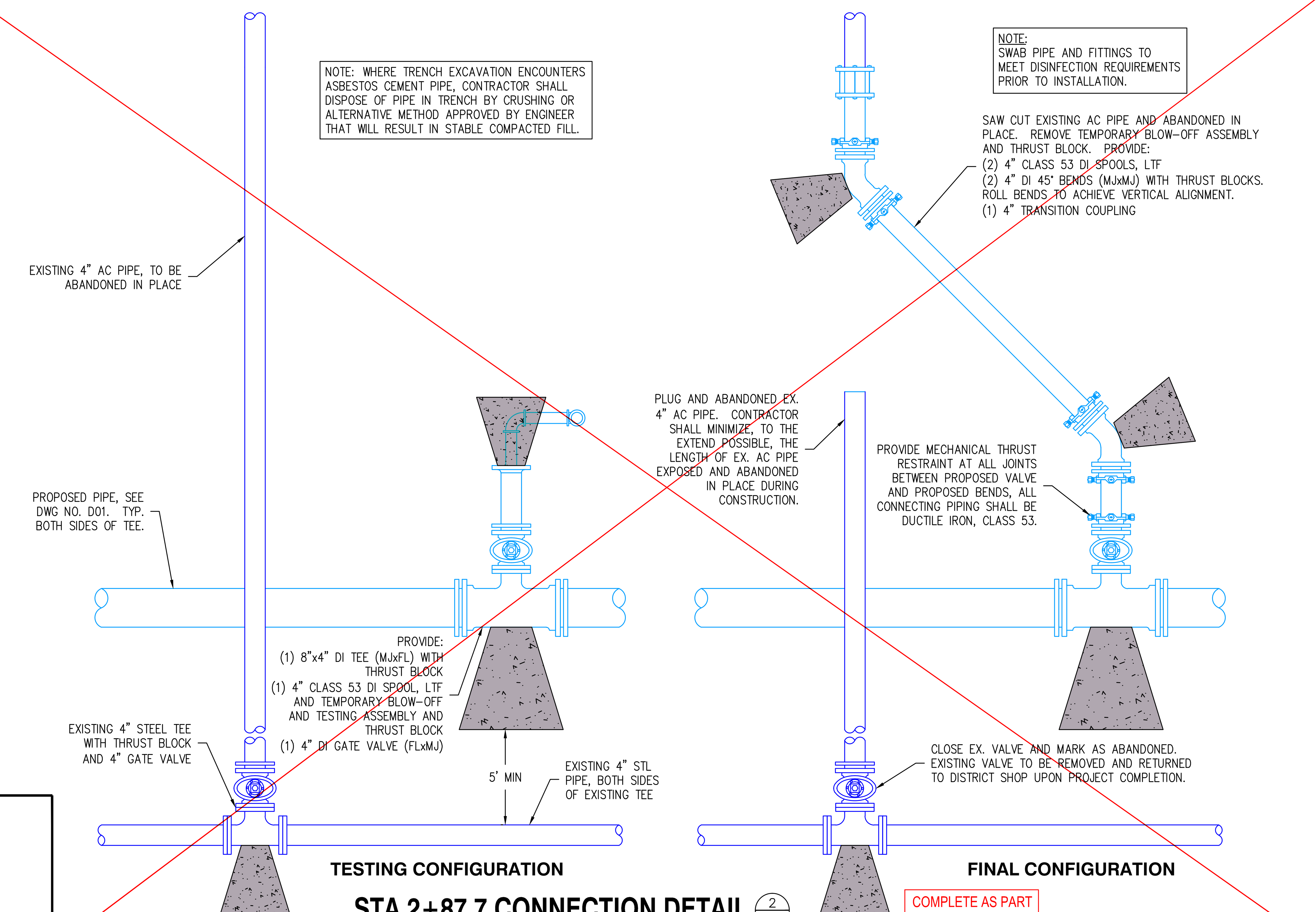
NO.	REVISION	BY	REVIEW	DATE
1	ISSUED FOR BIDDING	ZRM	KMP	11/05/10



STA -0+13.3 CONNECTION DETAIL (1/D01)

NOT TO SCALE

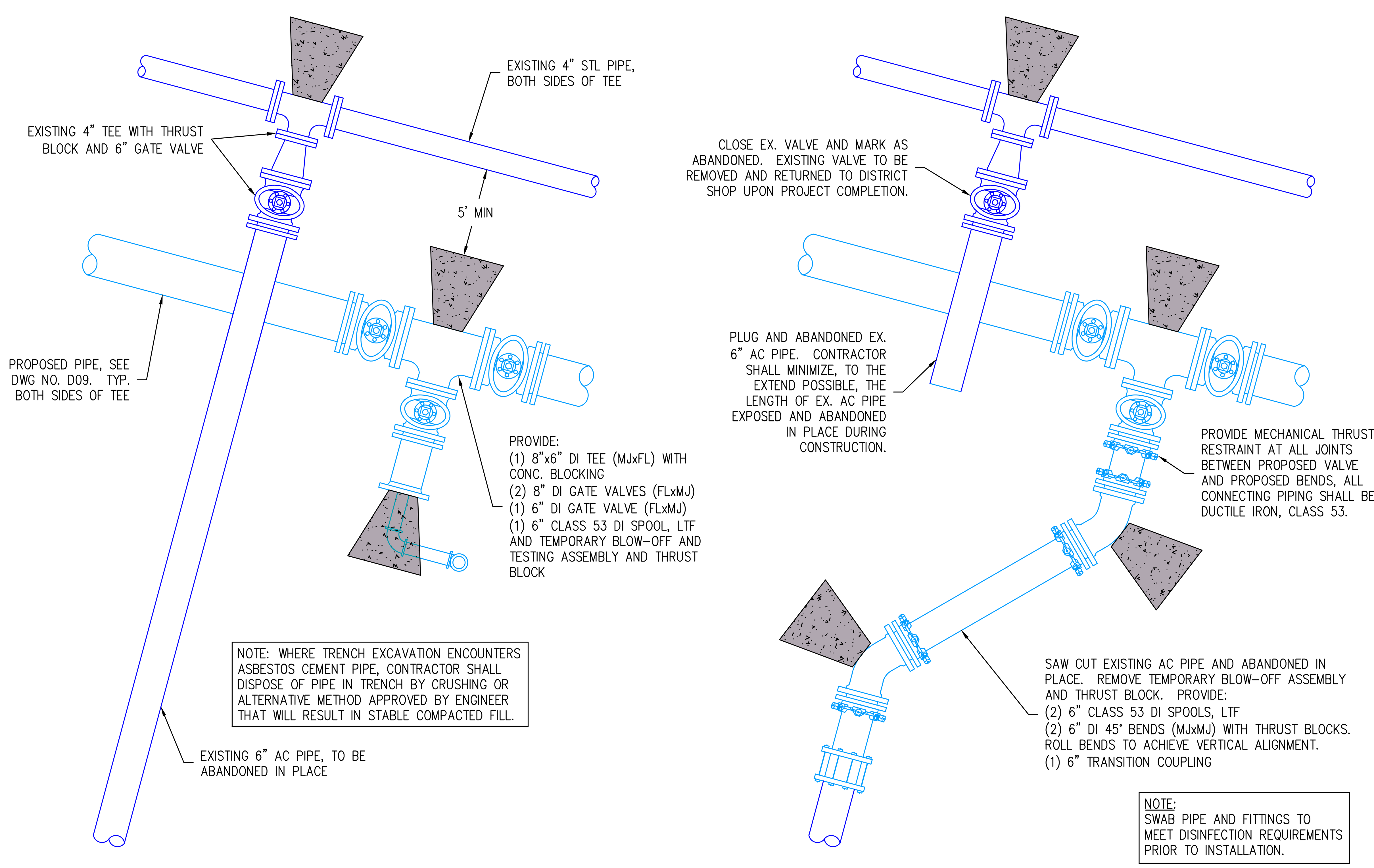
COMPLETE AS PART OF PHASE 1



STA 2+87.7 CONNECTION DETAIL (2/D01)

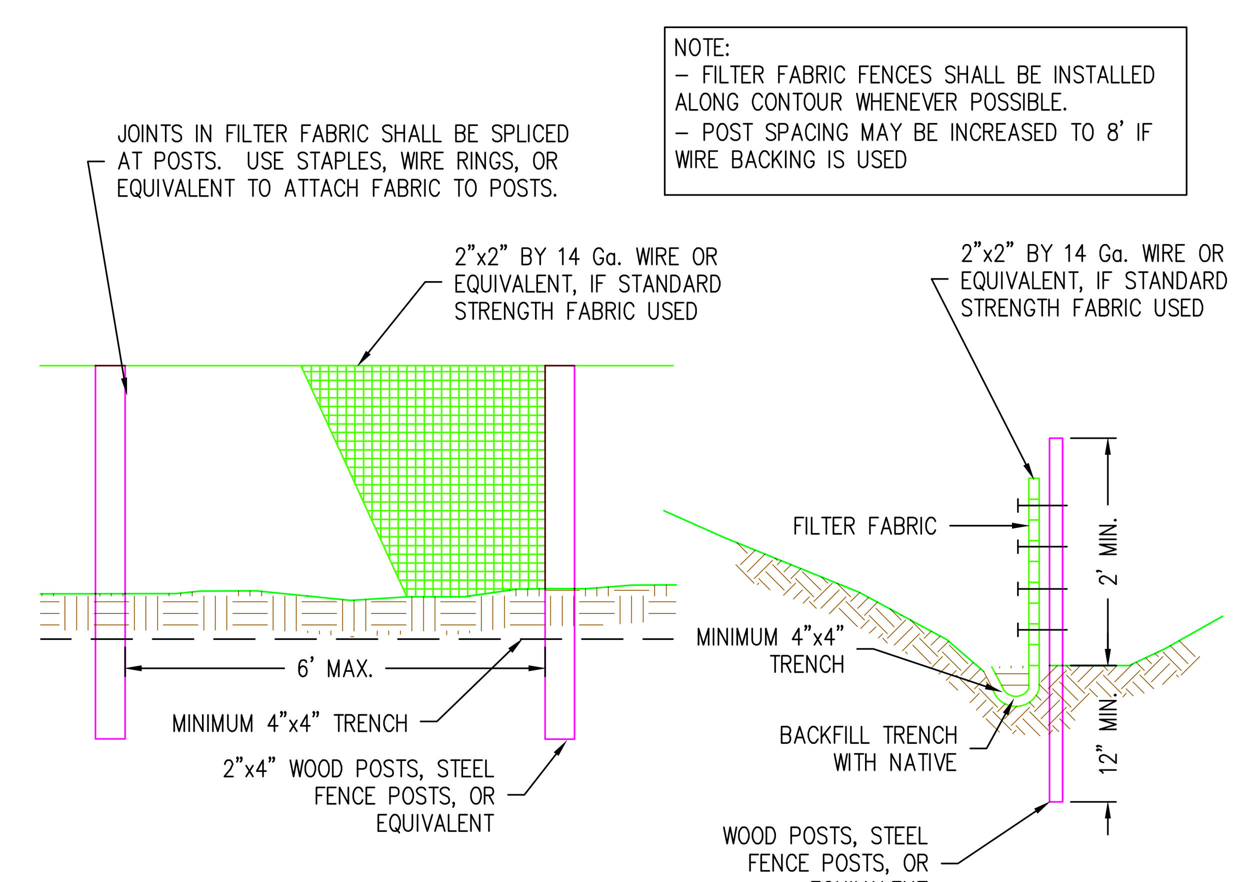
NOT TO SCALE

COMPLETE AS PART OF PHASE 1



STA 30+63.8 CONNECTION DETAIL (3/D09)

NOT TO SCALE



EROSION CONTROL SILT FENCE DETAIL

NOT TO SCALE

FILTER FABRIC FENCE NOTES

1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST.
2. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY-DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
3. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 20 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
4. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF THE STANDARD NOTE ABOVE APPLYING.
5. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.
6. FILTER FABRIC FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

NO.	REVISION	BY	REVIEW	DATE
3	RFI NO. 3	DID	KMP	2/24/11
2	ISSUED FOR BIDDING	ZRM	KMP	11/05/10

RICHARD H. HARBERT, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 16727
SIGNED: 11/15/10

KYLE M. PETTIBONE, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 41857
SIGNED: 11/15/10

WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

DETAILS I

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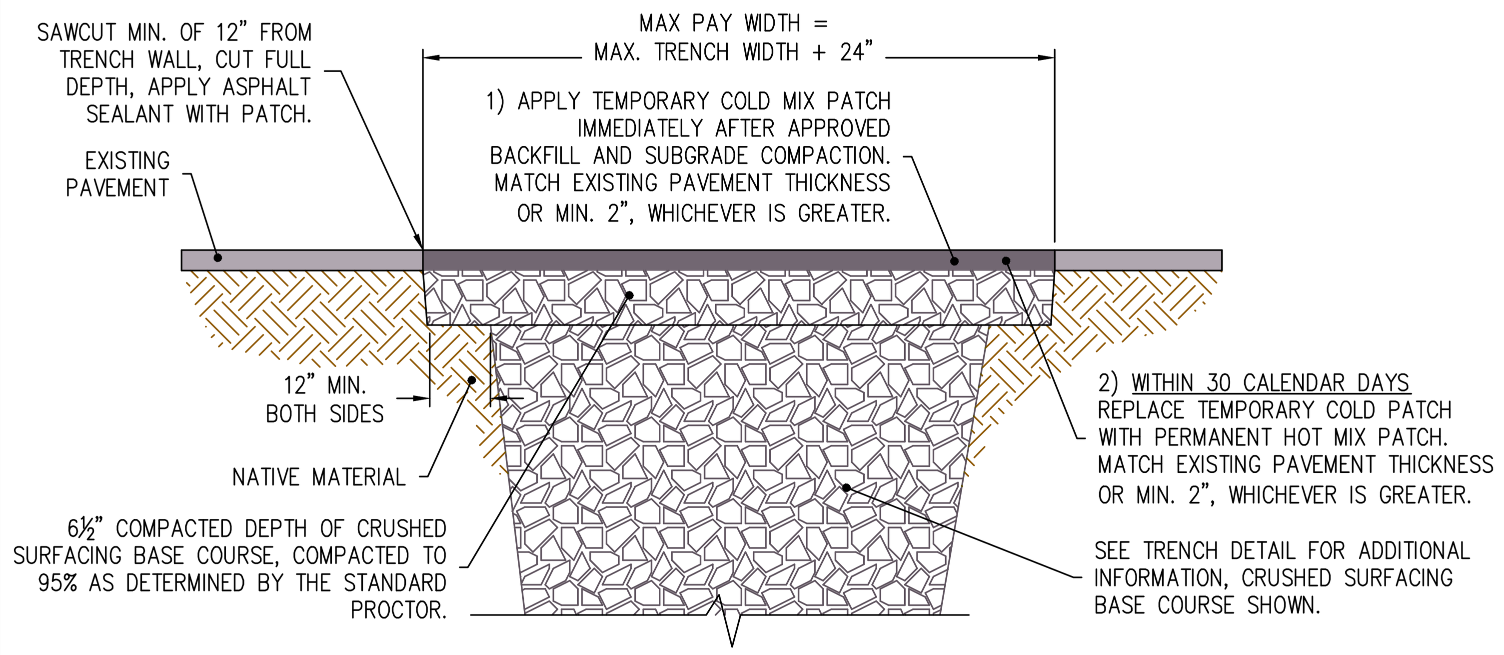
EAST WENATCHEE 509.886.2900 300 Simon Street, Suite 5
RICHLAND 509.946.5181 114 Columbia Point Drive, Suite C
SILVERDALE 360.876.7960 2021 NW Myhre Rd, Suite 107
TACOMA 253.272.3059 621 Pacific Avenue Suite 104

SCALE: SHOWN
0 1" 2"
DRAWING IS NOT TO SCALE IF BAR IS NOT 2" LONG

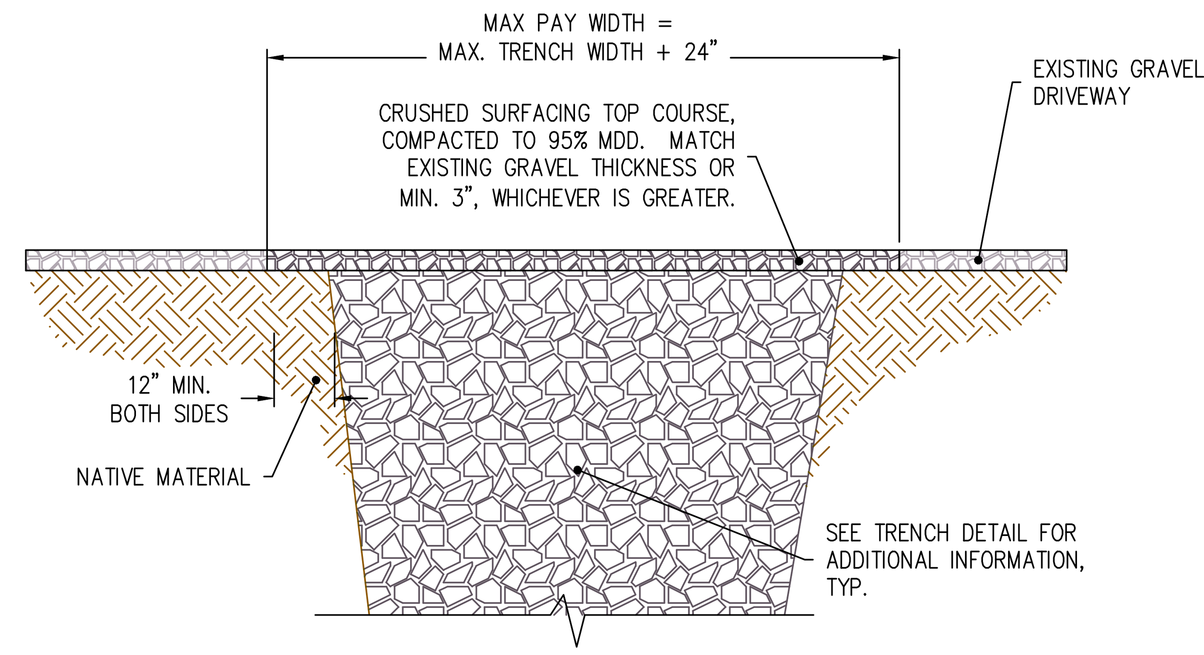
PLOT: 20
ENGINEER: SMK
REVIEWED: KMP
DATE: NOV 16, 2010
CLIENT: W19
JOB NO: 110-027
FILENAME: RRWM-D-DETAIL
DWG NO. DT1
SHEET NO. 16 / 17



ROADWAY TRENCH PATCH DETAIL

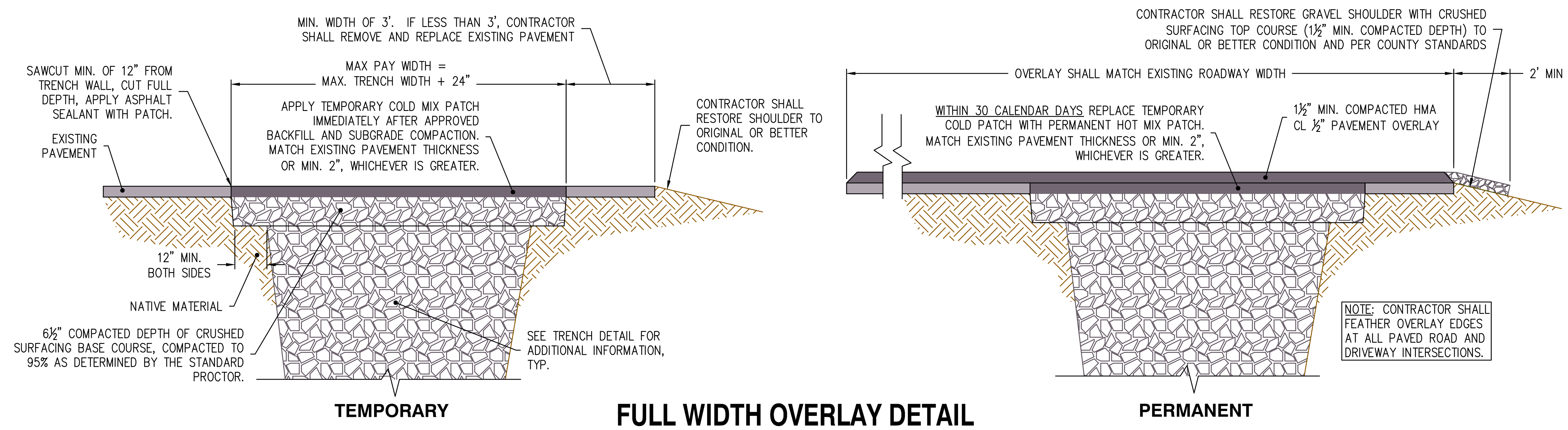
NOT TO SCALE

NOTE: SEE TRENCH AND RESTORATION NOTES FOR COMPACTION TESTING REQUIREMENTS.



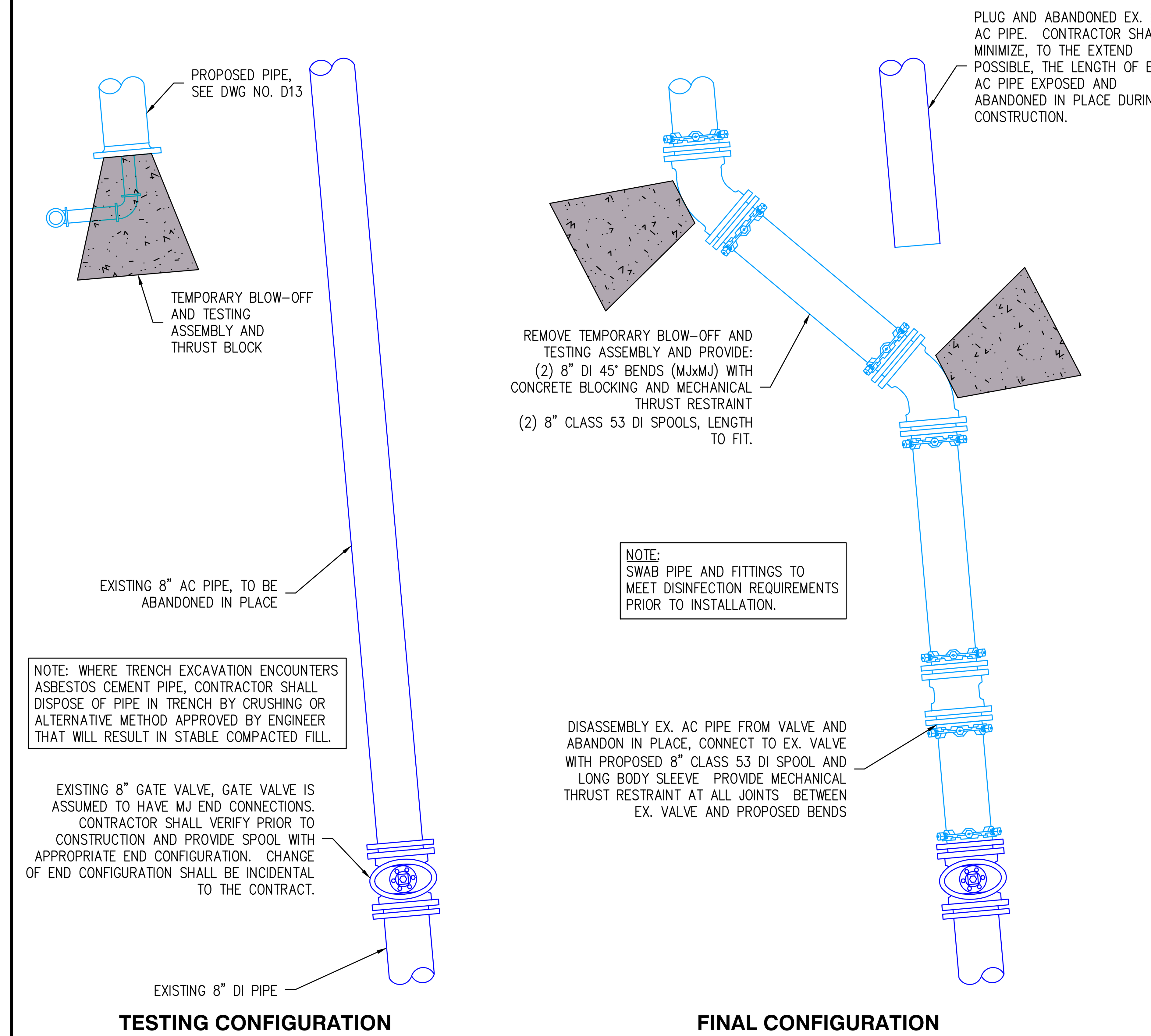
GRAVEL DRIVEWAY RESTORATION DETAIL

NOT TO SCALE



FULL WIDTH OVERLAY DETAIL

NOT TO SCALE



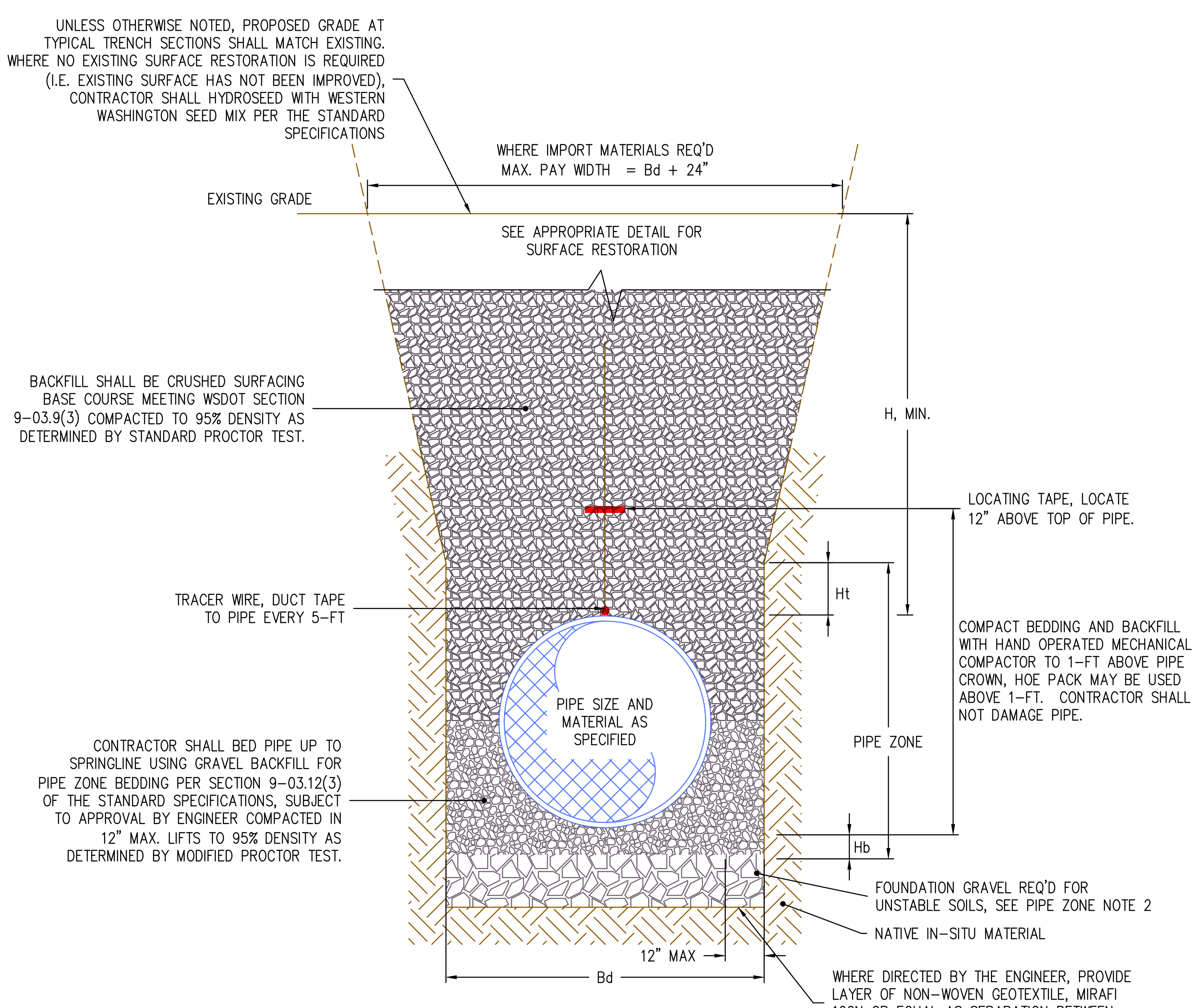
STA 49+19.8 CONNECTION DETAIL

4
D13

NOT TO SCALE

TRENCH AND RESTORATION NOTES

1. ALL TRENCH AND SURFACE RESTORATION SHALL BE ACCORDING TO KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (2007) AND DISTRICT STANDARDS. KING COUNTY STANDARDS SHALL BE FOLLOWED IF MORE STRINGENT.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL EXCAVATED PAVEMENT AND OTHER UNSUITABLE MATERIALS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF PAVEMENT DAMAGED OUTSIDE OF PAY LIMITS. THE CONTRACTOR SHALL ALSO FURNISH ALL WORK AND MATERIALS NECESSARY TO RESTORE THE ROADWAY DAMAGED OUTSIDE OF THE PAY LIMITS AT NO ADDITIONAL EXPENSE TO THE OWNER.
4. THE CONTRACTOR SHALL REPLACE AND REPAINT STREET MARKINGS DAMAGED DURING CONSTRUCTION.
5. MATCH EXISTING SLOPES FOR PAVEMENT AND GRAVEL DRIVEWAY RESTORATION. PAVEMENT SLOPES SHALL BE A MINIMUM OF 2% FROM CENTERLINE TO EDGE.
6. ALL TRENCHING AND SHORING TO BE DONE IN ACCORDANCE WITH OSHA AND WISHA STANDARDS.
7. TACK ALL EDGES PRIOR TO PAVING.
8. IF EXISTING GRAVEL SHOULDER IS DISTURBED, CONTRACTOR SHALL RESTORE WITH 6" DEPTH OF ⅝"-MINUS CRUSHED ROCK.
9. IN LANDSCAPED OR CULTIVATED, NON-PAVED, NON-GRAVELED AREAS RESTORE SURFACE WITHIN DISTURBED AREA TO EQUAL OR BETTER THAN EXISTING CONDITION, INCLUDING SAND, TOP SOIL, GRASS, SHRUBS, ETC. HYDROSEED ALL DISTURBED AREAS WITH WESTERN WASHINGTON SEED MIX PER THE STANDARD SPECIFICATIONS.
10. WITHIN ROADWAY, ENTIRE TRENCH SHALL BE COMPACTED MECHANICALLY TO 95% MAX. DENSITY AS DETERMINED BY WSDOT/APWA STANDARD SPECIFICATION 2-03.3(14)D. MAX. 6" LIFTS ALLOWED UNLESS IT IS DEMONSTRATED THAT COMPACTION REQUIREMENTS CAN BE MET WITH 12" LIFTS.
11. CONTRACTOR TO PROVIDE STEEL PLATES IN AREAS REQUIRED TO BE OPEN TO TRAFFIC AND PRIOR TO FINAL TRENCH RESTORATION AS DIRECTED BY THE OWNER OR COUNTY ROW INSPECTOR. PLATES SHALL BE TREATED FOR VEHICLE SKID RESISTANCE.



TRENCH DETAIL - TYPICAL

NOT TO SCALE

TRENCH NOTES

PIPE COVER (H, Hw)

MIN. COVER REQUIRED OVER ALL PIPE (H)
- PIPE DIA. = ALL 3.5-FT, U.N.O.

NOTES:

1. DEEPER EXCAVATION MAY BE REQUIRED DUE TO LOCALIZED BREAKS IN GRADE OR TO INSTALL THE PROPOSED PIPE UNDER EXISTING UTILITIES AND WILL BE INCIDENTAL TO THE CONTRACT.
2. WHERE THE PROFILE OF THE PIPELINE AND GROUND SURFACE IS SHOWN ON THE PLANS, THE PIPELINE SHALL BE CONSTRUCTED TO THE ELEVATIONS SHOWN REGARDLESS OF DEPTH.
3. THE LOCATION OF THE BLOW-OFF (LOW POINTS) AND AIR VALVE (HIGH POINTS) ASSEMBLIES ARE SHOWN ON THE PLANS. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A CONTINUOUSLY FALLING PIPE SLOPE. THE CONTRACTOR SHALL NOT CREATE LOCAL HIGH OR LOW POINTS EXCEPT WHERE SPECIFICALLY DETAILED IN THESE PLANS OR DIRECTED BY THE OWNER'S FIELD REPRESENTATIVE. CREATION OF A LOCAL HIGH OR LOW POINT WOULD MATERIALLY AFFECT THE OPERATION OF THE PROPOSED SYSTEM AND WILL THEREFORE REQUIRE THAT THE PIPELINE BE REMOVED AND REINSTALLED WITHOUT A LOCAL HIGH OR LOW POINT AT THE CONTRACTOR'S EXPENSE.

PIPE ZONE DIMENSIONS (Hb, Ht, Bd)

MIN. DEPTH OF BEDDING UNDER ANY PORTION OF PIPE (Hb)
- STABLE SOILS CONSISTING OF NATIVE SANDS AND GRAVELS UP TO 3" DIA. 3-IN
- ROCK EXCAVATION (ANY ROCK OR GRANULAR MATERIAL OVER 3" DIA.) 6-IN
- CLAY, PEAT, SILT, OR OTHER UNSUITABLE MATERIAL (SEE NOTES) 1-FT

MIN. HEIGHT OF PIPE ZONE BACKFILL OVER PIPE (Ht)
- PIPE DIA. <= 24" 6-IN

MAX. TRENCH WIDTH AT PIPE ZONE (Bd)
- PIPE DIA. = 4" - 36" PIPE O.D. + 18"

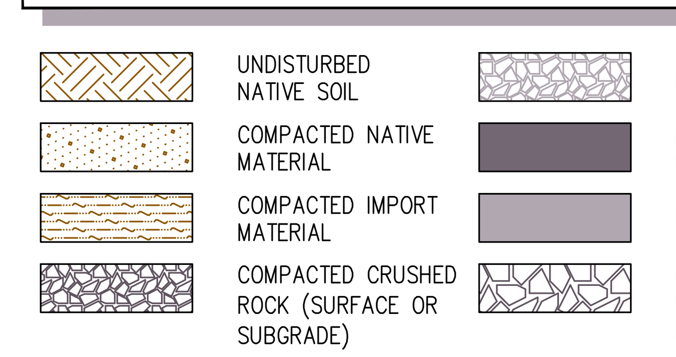
NOTES:

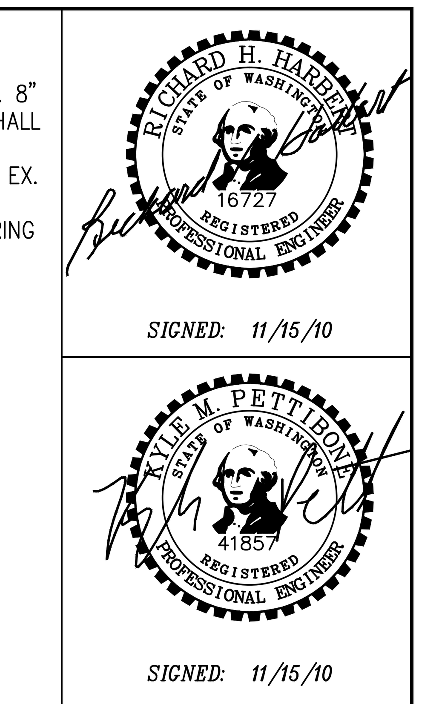
1. ALL CLAY, ORGANICS, ROCKS OVER 6" IN DIAMETER, PEAT, WET SILTS, DEBRIS AND OTHER SUCH MATERIALS IDENTIFIED BY THE OWNER'S REPRESENTATIVE ARE UNSUITABLE FOR BACKFILL AND SHALL BE REMOVED AND DISPOSED BY THE CONTRACTOR.
2. WHERE UNSTABLE SOILS ARE ENCOUNTERED, THE CONTRACTOR SHALL OVEREXCAVATE TO THE DEPTH SPECIFIED BY THE ENGINEER (MIN. 12") AND PROVIDE CLASS B FOUNDATION MATERIAL PER SECTION 9-03.17 OF THE STANDARD SPECIFICATIONS OR SIMILAR ENGINEER APPROVED FOUNDATION MATERIAL.

TRENCH BACKFILL MATERIALS AND CONDITIONS

1. ALL BACKFILL MATERIAL WITHIN ROADWAY RIGHT-OF-WAYS (ROWs) SHALL BE CRUSHED ROCK.
2. BEDDING AND BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY WITHIN TRAVELED ROADWAYS AND SHOULDERS. CONTRACTOR SHALL ADD WATER AS NECESSARY TO OBTAIN OPTIMUM MOISTURE CONTENT AS DETERMINED BY COMPACTION TESTING PROCTOR.
3. ALL TRENCHING AND SHORING TO BE DONE IN ACCORDANCE WITH OSHA AND WISHA STANDARDS. CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH SAFETY AND EXCAVATION AS SOIL CONDITIONS CHANGE IN THE FIELD.

TRENCH AND SURFACE RESTORATION LEGEND





SIGNED: 11/15/10

SIGNED: 11/15/10

WATER DISTRICT 19

WATER DISTRICT 19
RIDGE ROAD WATER MAIN REPLACEMENT

DETAILS II

RH2 ENGINEERS PLANNERS SCIENTISTS
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PLOT: 20	DWG NO. DT2				
ENGINEER: SMK					
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DATE: NOV 16, 2010	SHEET NO. 17				
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NO.	REVISION	BY	REVIEW	DATE
⚠	ISSUED FOR BIDDING	ZRM	KMP	11/05/10