

August 19, 2021

Mark L. Johnson, Executive Director & Secretary Washington Utilities and Transportation Commission PO Box 47250 Olympia, WA 98504-7250 UTIL. AND TRANSF

08/19/21 14:

Dear Mr. Johnson;

Enclosed is a copy of the contract between Mark Berthold and Washington Water Service Company (WWSC) to provide domestic and commercial fire-flow service. The scope of work is to include the tap and extension of the water main on 208th Street East at two locations indicated on the plan-set provided by Apex Engineering, titled Rainier View Water Company Probuild Water Main Extension Plan dated 10/28/2029. This site is in Pierce County, which is serviced by Southwood Water System, DOH ID# 82844H. This agreement has been signed by Michael Cook and countersigned by Matthew D. Brown, the General Manager of WWSC.

Estimated costs identified on attachment "A" are \$72,472.00. To this, a half payment of \$36,236.00 has been received for the total projected engineering costs, as attached.

A vicinity map showing the location of the lot is included with this filing. Please do not hesitate to call me at 253-851-4060 Ext. 1103, if you have any questions.

Sincerely,

Thu Hoang

Accounting Analyst

Customer Service: Toll Free (877) 408-4060

Gig Harbor: 14519 PEACOCK HILL AVE NW • PO BOX 336 • GIG HARBOR, WA 98335

Olympia: 6800 MERIDIAN RD SE • OLYMPIA, WA 98513



WASHINGTON WATER SERVICE

14519 Peacock Hill Avenue • P.O. Box 336 Gig Harbor, WA 98335 *Tel*: (877) 408-4060

June 9, 2021

Mr. Michael Cook Cook Investments NW SPNWY, LLC 1331 208th Street E Spanaway, WA 98387

Re:

Southwood Water System, DOH ID# 82844H, Pierce County

Water Main Extension Agreement for Builders First Source Spanaway Project

Address: 1331 208th St E Parcel No. 0318033051

Dear Mr. Cook:

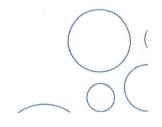
This Water Main Extension Agreement (the "Agreement") is between Washington Water Service Company (the "Washington Water") and Mark Berthold (the "Owner") to extend the existing water main line and installation of any other facilities needed to provide water utility service to the parcel(s) referenced above.

This Agreement sets forth the terms and conditions and projected costs, enclosed as "Attachment A", to to provide domestic and commercial fire-flow service to your property. The scope of work is to include the the tap and extension of the water main on 208th Street East at two locations indicated on the plan-set provided by Apex Engineering, titled Rainier View Water Company Probuild Water Main Extension Plan dated 10/28/2019. The hydrants installed for this project will meet the minimum commercial fire flow of 1,500 gallons per minute for 2-hours.

The projected cost of \$72,472 is exclusive to the time and materials necessary to tie-in the new construction to the distribution system, bacteriologic sampling, and engineer inspections. The final amount billed for completing this project is based on actual costs for engineering, materials, labor and other variables needed to complete the project, this amount may also vary from the projected costs provided due to unforeseen issues during the installation/tie-in of the extended water main and service line that are beyond the control of Washington Water.

Washington Water will review the provided engineered construction plan and will allow the parcel owner to hire his/her own underground contractor to install the watermain, appurtenances and service for the intended propose of installing water service to the parcel listed above. This contractor must be approved by Washington Water, prior to beginning any underground work (a list of approved contractors can be provided upon request).

The improvements stated herein qualify as Contributed In Aid of Construction (CIAC). Pursuant to Section 118(b) of the Tax Cuts and Job Act of 2017, federal tax laws require CIAC funds to be federally taxed ensuring that the



expansion of water service to new customers does not unfairly burden a utility's existing customers. Applicants should consult their tax advisors concerning the application of tax laws to their particular situations.

Terms & Conditions

The projected costs are for engineering, construction materials and labor only, unless otherwise specified in Attachment A. Upon execution of this Agreement and prior to commencement of engineering and construction, Washington Water requires a deposit payment of 50% of the project costs as outlined in this Agreement. All past due accounts will be charged 1.5% per month (18% per annum). The projected costs submitted in this Agreement is provided as preliminary information only and the figures and information contained herein are subject to the execution of this Agreement within 30-business days of the date the Agreement was issued.

Terms and conditions of this Agreement are subject to the review and approval of the Washington State Utilities and Transportation Commission (the "Commission"). Upon execution of this Agreement, Washington Water will submit the Agreement to the Commission for their approval. Upon the Commission's approval, plans will be prepared, and if required, submitted to the Washington State Department of Health for their approval. Once all necessary approvals have been obtained and the required payment received, Washington Water will schedule and cause construction to commence.

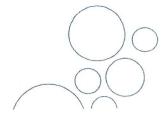
Upon completion of the project an Easement is necessary for Washington Water to maintain our water system facilities on an on-going basis. The Owner's surveyor or engineering firm will need to prepare an easement description and drawing exhibit for the on-site water system mains and appurtenances using the Washington Water easement form after construction is complete. Once all signatures have been notarized the easement document, must be recorded with the Pierce County Auditor's office.

Upon completion of the main extension and any other requested facilities have been installed, pressure tested, bacteriological samples taken and tested with satisfactory results and a Certificate of Completion signed by a licensed engineer and all approvals received; the Owner is to provide Washington Water with a Bill of Sale transferring the ownership of these contributed facilities to Washington Water.

Washington Water requires all remaining amounts be paid in full with an active billing account established prior to commencement of water service and issuance of a Certificate of Water Availability. If meter installation does not occur after the installation of facilities, the Owner will be charge a monthly Ready-to-Serve fee as listed in Washington Water's approved tariff, until a meter installation has occurred. Washington Water will provide the Owner with a Certificate of Water Availability.

Neither this Agreement nor any of the rights, interests or obligations under this Agreement may be assigned or delegated, in whole or in part, by operation of law, or otherwise, by Owner without the prior written consent of Washington Water, and any such assignment without such prior written consent shall be invalid. Nothing expressed or referred to in this Agreement will be construed to give any person other than the parties to this Agreement any legal or equitable right, remedy, or claim under or with respect to this Agreement or any provision of this Agreement. This Agreement and all of its provisions and conditions are for the sole and exclusive benefit of the parties to this Agreement and their successors and assigns.

Upon execution of this Agreement, the Owner has 180-business days to coordinate with Washington Water for the engineering and construction to complete this project. This Agreement shall automatically become invalid unless the work authorized in this Agreement has commenced within 180-business days after execution. Once



this Agreement has become invalid, the project will be closed and all project work will cease; a refund check will be issued to the Owner for pre-paid amounts received by Washington Water minus any billable work completed and non-refundable fees.

I elect to hire my own qualified contractor to complete the installation under the conditions listed below:

(Initial)

- Remit the deposit payment of \$36,236 (50%) of the projected costs (\$72,751) for engineering, construction labor, materials, and county permits provided by Washington Water, as outlined in Attachment A.
- Prior to any underground work being started, the hired contractor must be pre-approved by Washington Water. A list of approved contractors can be provided upon request.
- Provide installing contractor's name and contact information, along with copies of their Contractor's License, and Certificate of Insurance (contractor must have a minimum insurance coverage of \$1,000,000 per occurrence, \$2,000,000 annual aggregate naming Washington Water Service Company as Additional Insured and Certificate Holder).
- Time required to complete this project may vary due to the size of the project, projects already scheduled and emergencies that may require our construction crew to leave project site.

BEFORE CONSTRUCTION BEGINS:

- The signed Agreement and the required payment must be received by Washington Water before any work will be scheduled, including the purchasing of materials.
- If required, Washington Water will be responsible for obtaining all necessary regulatory agency approvals, county/state permits and schedule with outside contractors.
- Provide names of any contractor(s) that may be working on-site.
- Schedule a pre-con meeting to review detailed plans and specifications with Washington Water's Engineer, and the Construction Superintendent or Construction Foreman.
- Underground contractor will be responsible for traffic control, excavation of the main to be tapped along with any road repairs necessary during and after installation. Any contractor purchased materials must be on-site and inspected by Washington Water prior to installation.
- Washington Water will tap the existing watermain on 208th Street E as each of the two locations indicated on the plan-set and will install a 12" AWWA gate valves and valve blocking will be provided by Washington Water for your contractor to connect to.

DURING CONSTRUCTION:

- The installation of all on-site piping, services, water service lines, valves, fittings and other appurtenances will be the responsibility of the Owner.
- Washington Water will operate the valves for filling and flushing of the new water main and will do periodic inspections of the installation.
- Review status of project with Washington Water's Construction Superintendent.
- Coordinate inspections with Washington Water (either our Construction or Engineering Department)

BEFORE TIE-IN/ACTIVATION OF NEW FACILITIES:

- Once construction is completed, Washington Water will be witness a pressure test of all new water mains and appurtenances.
- A final inspection must be scheduled with the Construction Superintendent or Construction Foreman to review installed facilities and that the installed facilities have been installed in accordance with the specifications provided in the engineering plans.

- If a fire hydrant is installed, Washington Water will be responsible for fire flow testing and county submittal.
- Washington Water will take bacteriological samples. The results from the samples taken are required to meet all Washington State Department of Health Drinking Water Regulations and Standards. Unsatisfactory results will delay the tie-in of the new facilities.
- A backflow assembly (Double Check Valve-DCVA/Reduced Pressure Backflow-RPBA/Pressure Vacuum Breaker-PVB) is required whenever there is a possibility of a cross connection between the public water system and a non-portable water source. Examples include, but are not limited to, irrigation systems, fire sprinkler systems or other water-using equipment. The backflow assembly device must be installed on the customer side of the meter; a licensed plumber can install this device. Annual testing and repair of the device is the responsibility of the parcel owner.
- Final payment for the work completed as outlined in this Agreement has been received, and any remaining amounts due be paid in full

If the terms of this letter are acceptable, please initial your election to hire your own contractor to complete the extension project under the terms listed in the Agreement and then sign the letter below. Return both this letter and the agreed payment to our Gig Harbor Office at 14519 Peacock Hill Avenue NW, Gig Harbor, WA 98335 (Mailing Address: PO Box 336, Gig Harbor, WA 98332). If you have any questions, please give me a call directly in Gig Harbor at (253) 851-4060 or toll free at (877) 408-4060.

Sincerely,

By:

Matthew D. Brown, P.E.

General Manager

Accepted

Ву:

MICHAEL

Printed Name

602-708-374

Phone

6-16-20

Date Accepted

Enclosure(s)

cc: Kanosi Chakweva, Accounting Manager
Eric Williams, Construction Superintendent
Sarah Castro, Customer Service Manager
John Puccinelli, Engineering Manager
Shawn O'Dell, Operations Manager (Gig Harbor/Olympia)
Bob Blackman, Local Manager (East Pierce)

File1: Water System File2: EngFile# 3910

W:\Systems\Southwood ID82844H Pierce\Projects_Work Orders\SWS.21 MainExt_1331 208th StE (BuildersFirst)\SWS.MainExt.Tap_1331 208th StE (ParO318033051) BuildersFirst_CnstAgree.docx



Washington Water Service Co.

Engineering Department 6800 Meridian Road SE Olympia, WA 98513

Engineer's Opinion of Probable Project Costs Summary Attachment "A"

Southwood 1331 208th St Distribution Extension

May 28, 2021 (Projected Cost Good for 30-Days)

Engineering File # 3910

*** Construction Materials ***

Unit of Property	Description	Quantity	Unit of Measure	Unit Cost	Total
103240	Construction Materials, Pipe, Valves, Fittings, Etc		LS	\$ 7,264.71	\$ 7,264.71
103450	Construction Materials for Services		LS	\$	\$
103480	Construction Materials for Hydrants		I LS		\$
					\$ -
					\$ -
		Sub-Total			\$ 7,264.71
		Contingency		10%	\$ 726.47
		Sales Tax		9.00%	\$ 719.21
		SUB Total - N	Materials .		\$ 8,710.39
		Rounded Up	Value	4	 \$8,800.00

*** Construction Labor ***

		o uno u o				
Unit of			Unit of			
Property	Description	Quantity	Measure	ι	Jnit Cost	Total
103240	Construction Labor - Watermain	1	LS	\$	7,860.00	\$ 7,860.00
103450	Construction Labor - Services	1	LS	\$	393.00	\$ 393.00
103480	Construction Labor - Hydrants	1	LS	\$	786.00	\$ 786.00
						\$ -
	WWSC Engineering	1	LS	\$	2,358.00	\$ 2,358.00
						\$ -
						\$
						\$ 11,397.00
		Contingency			10%	\$ 1,139.70
		Sub-Total - Co	onstruction l	abor		\$ 12,536.70
		Rounded Up	Value			\$12,600.00

*** Outside Contractor ***

Unit of			Unit of		
Property	Description	Quantity	Measure	Unit Cost	 Total
	County Permits (Encroachment)	1	LS	\$ 393.00	\$ 393.00
	Tapping Services	1	LS	\$5,879.28	\$ 5,879.28
	Hydrogeologist	1	LS		\$
	Geotechnical Engineer	1	LS		\$
	Engineering Consultant	1	LS		\$ -
	Land Surveyor	1	LS		\$ -
	Land Cost	1	LS		\$ -
	Additional Insurance	1	LS		\$
	Bonding	1	LS		\$ -
	Sanitary Facility Rental (Portable Toilet)	1	LS	\$ -	\$ -
	Paving Contractor - Pavement Restoration	1	LS		\$ -
	Traffic Control Contractor - Flaggers	1	LS	\$ -	\$
					\$ -
					\$ -
					\$ -
					\$
		SUB TOTAL			\$ 6,272.28
		Contingency		10%	\$ 627.23
		Sub-Total - O	utside Conti	actor	\$ 6,899.51
		Rounded Up	Value		\$6,900.0
		Project Subto	tal =		\$ 28,300.00
		East Pierce Facilities Charge			\$ 8,256.00
		Federal Tax p	er the TCJA	\=	\$ 9,717.42
		State B&O Ta			\$ 704.67

Projected Funds Required = \$72,472

1) This document is intended to forecast approximate construction costs based upon current information and similar projects, and is not intended to accurately represent actual design or construction components or prices

95,904.97 Anticipated TCJA Tax =

2) Totals are rounded to nearest \$100

Anticiapted Developer (onsite) Costs



25,493.73

RECEIVED AUG. 19, 2021 WA. UT. & TRANS COMM. ORIGINAL UW-210656

FOR SECURITY PURPOSES, THE FACE OF THIS DOCUMENT CONTAINS A TWO TONED COLORED BACKGROUND AND MICROPRINTING IN THE BORDER

BUILDERS FIRSTSOURCE - DALLAS, LLC

BANK OF AMERICA, NA CUSTOMER CONNECTION, TX 32-1/1110 00682825

2001 BRYAN STREET SUITE 1600 CUSTOMER CONNECT
DALLAS, TX 75201

CHECK DATE: 06-11-2021

AMOUNT

PAY THIRTY-SIX THOUSAND TWO HUNDRED THIRTY-SIX AND 00/100 VOID AFTER 120 DAYS

\$36,236.00

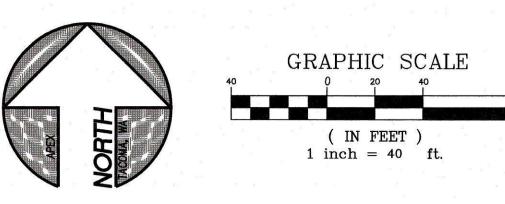
TO THE WASHINGTON WATER SERVICE CO ORDER PO BOX 336

OF

GIG HARBOR, WA 98335 USA

AS CHIEF FINANCIAL OFFICER

THE REVERSE SIDE OF THE DOCUMENT INCLUDES A HEAT SENSITIVE INK FEATURE





RAINIER VIEW WATER COMPANY

PROBUILD - WATER MAIN EXTENSION - PLAN A PORTION OF SEC. 3, TWP. 18 N., RGE 3 E., W.M.

DESIGN APPROVAL, DATE 6/30/2021

VICINITY MAP

GENERAL NOTES:

- 1. CONSTRUCTION METHODS FOR PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH DIVISIONS 7 AND 9 OF THE LATEST EDITION OF THE STANDARD PLANS AND STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION (WSDOT/APWA) EXCEPT ALL REFERENCES TO ENGINEER SHALL BE CHANGED TO OWNER.
- 2. PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON PIPE.
- 3. BLOW-OFF ASSEMBLIES SHALL BE INSTALLED WHERE SHOWN ON THE
- 4. AIR RELEASE VACUUM VALVES SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND ALL SYSTEM HIGH POINTS.
- 5. SAMPLING STATIONS SHALL BE INSTALLED APPROXIMATELY WHERE SHOWN ON THE PLANS OR ADDED PER RAINIER VIEW DIRECTION. FINAL

LOCATION(S) TO BE DETERMINED IN THE FIELD BY RAINIER VIEW.

- 6. PIPE SHALL HAVE A MINIMUM OF 36 INCHES OF COVER. EXACT DEPTH OF PIPE SHALL BE DETERMINED IN THE FIELD TO GENERALLY CONFORM TO TOPOGRAPHY. PIPE SHALL MAINTAIN POSITIVE SLOPE BETWEEN BLOW-OFFS AND AIR RELEASE VALVES.
- PRESSURE TESTING AND DISINFECTION SHALL BE IN ACCORDANCE WITH DIVISION 7 OF THE ABOVE REFERENCED SPECIFICATION.
- 8. SOME UTILITIES SHOWN ARE BASED UPON AS-BUILT PLANS, THE LOCATIONS ARE APPROXIMATE ONLY. NOT ALL EXISTING UTILITIES AND SERVICES HAVE BEEN LOCATED OR SHOWN. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE ONE-CALL NUMBER IS 1-800-424-5555.
- 9. EASEMENTS, FRANCHISES AND PERMITS SHALL BE OBTAINED FOR ALL WATER LINE CONSTRUCTION. MINIMUM EASEMENT WIDTHS SHOULD BE 15
- 10. THE OWNER, HIS REPRESENTATIVE, OR THE CONTRACTOR SHALL BE REQUIRED TO SCHEDULE A PRE-CONSTRUCTION CONFERENCE FOR ALL WATER CONSTRUCTION SHOWN ON THESE PLANS. THE CONFERENCE SHOULD BE SCHEDULED BY CALLING (253) 537-6634 TWO WEEKS PRIOR TO COMMENCEMENT OF WORK.

RAINIER VIEW WATER COMPANY NOTES:

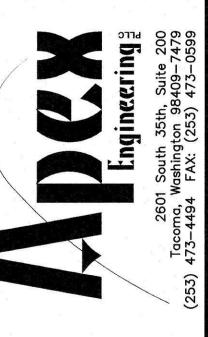
- 1. ANY REQUIRED SPECIFICATIONS NOT INDICATED WILL FOLLOW MOST CURRENT "STANDARD SPECIFICATIONS FOR RAINIER VIEW WATER COMPANY" AND AWWA STANDARDS.
- 2. ALL PIPING TO BE BEDDED 4" MINIMUM UNDER PIPE AND 6" MINIMUM OVER PIPE. BEDDING UNDER PIPE TO BE PLACED IN TRENCH PRIOR TO INSTALLING WATER MAIN.
- 3. USE 14 GAUGE LOCATE (TRACER) WIRE, ATTACHED TO WATER MAIN AND ALL FACILITIES. LOOP TO TOP OF ALL VALVE BOXES AND BLOW OFF
- 4. DETECTION TAPE TO BE 18" TO 24" BELOW FINISH GRADE. RUN DETECTION TAPE OVER MAINS AND SERVICE LINES.
- 5. ALL VALVE RISERS TO BE CAST IRON.
- 6. ALL FIRE HYDRANTS TO BE "IOWA", "M & H", OR "MUELLER CENTURION" TYPE ONLY. ALL HYDRANTS TO BE EQUIPPED WITH 5" STORZ ADAPTORS.
- 7. ALL HYDRANTS TO BE SECURED WITH SHACKLE (TIE) RODS OR MEGA-LUG CONSTRUCTION.
- 8. ALL BLOW-OFFS, AIR RELEASE/VACUUM VALVES, AND SAMPLING STATIONS TO MEET RAINIER VIEW WATER COMPANY APPROVAL PRIOR TO
- 9. ALL BLOW-OFFS TO BE INSTALLED WITHIN CONCRETE BLOW-OFF/METER BOX, SET TO FINISH GRADE AND MEETING HS-20 LOADING STANDARDS.
- 10. ALL BENDS, CAPS, TEES, WYES AND FITTINGS TO BE THRUST BLOCKED.

NOTE:

THE LOCATIONS OF THE WATER METERS SHOWN ARE APPROXIMATE ONLY. METERS SHALL TYPICALLY BE LOCATED WITHIN R.O.W. OR UTILITY EASEMENT AT PROPERTY LINES. METER LOCATIONS IN QUESTION SHALL BE DETERMINED BY THE RVWC FIELD SUPERVISOR. MAINTAIN MINIMUM REQUIRED SEPARATION BETWEEN WATER MAINS/SERVICE LINES, AND SANITARY SEWER MAIN LINES AND

SOME EXISTING UTILITIES SHOWN ARE BASED UPON AS-BUILT PLANS, THE LOCATIONS ARE APPROXIMATE ONLY. NOT ALL EXISTING UTILITIES AND SERVICES HAVE BEEN LOCATED OR SHOWN. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL UNDERGROUND 8 SCALE 1 - 40' UTILITIES PRIOR TO CONSTRUCTION.

THE BOUNDARY AND SITE LAYOUT INFORMATION SHOWN HEREON WAS TAKEN FROM THE CIVIL PLANS PROVIDED BY BEYLER CONSULTING LLC, RECEIVED 09/26/19.



DATE SEALED 06/22/2021

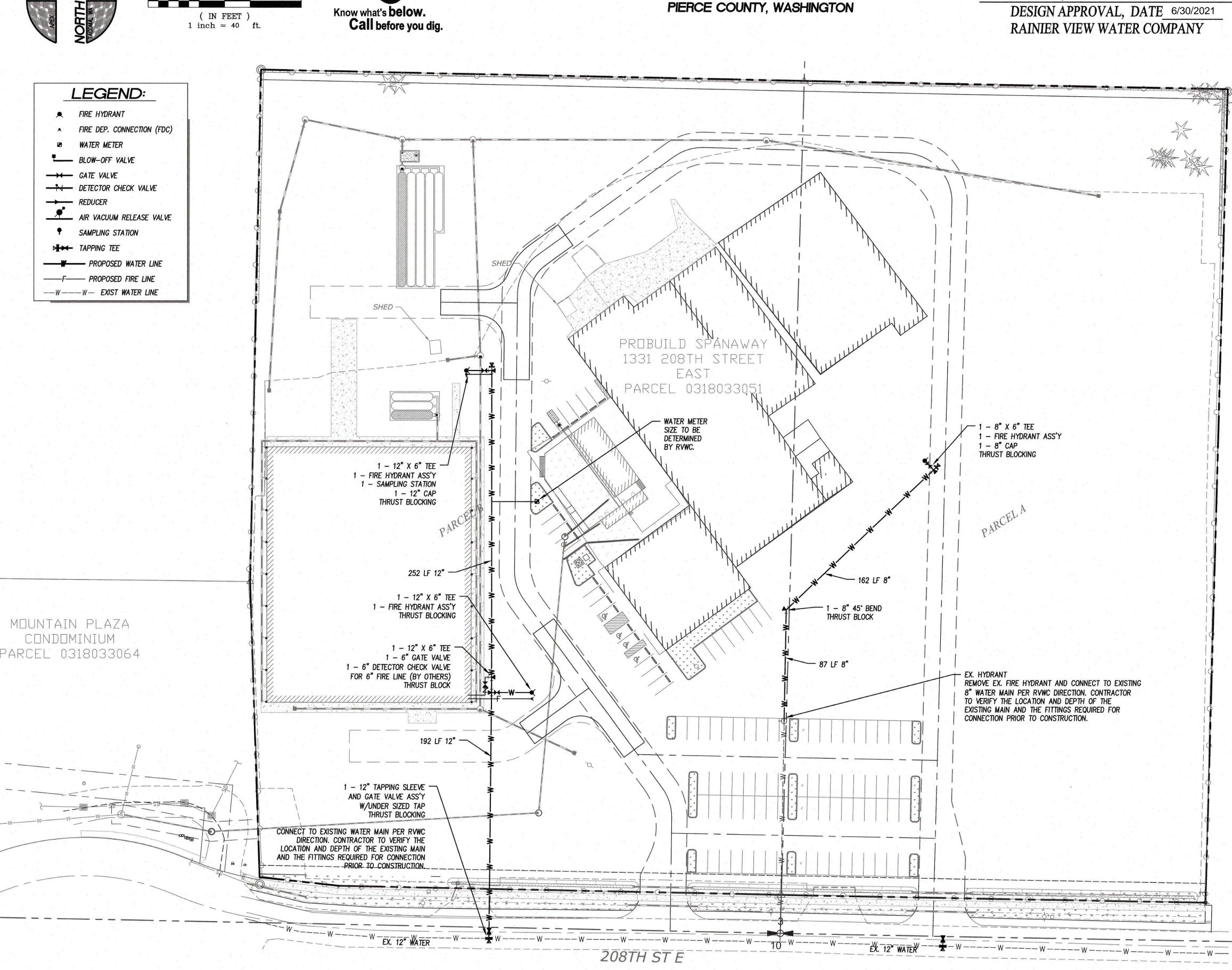


PROJECT MANAGER KIM A SAVAGE, P.E.

DESIGN DRAWN CHECKED KS

SEC 3 T 18 N R 3 E FILE NO 34948-WAWRK.DWG DATE 10-31-19

SHEET 1 OF 2 @ APEX ENGINEERING PLLC 2019



DESIGN APPROVAL, DATE

R.O.W. PRIVATE PROPERT FINISH GRADE -36" MIN. COVER ∠CUSTOMER'S

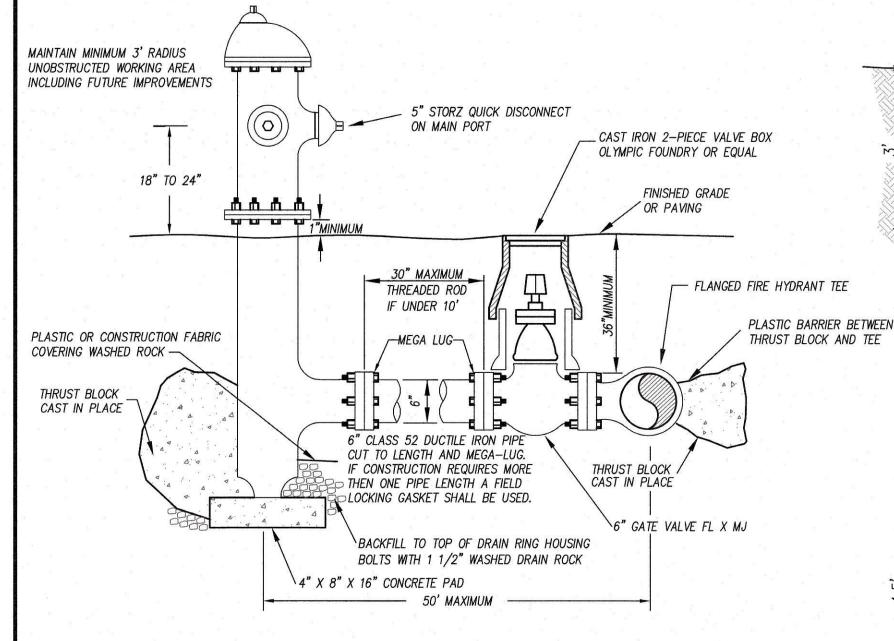
HORIZONTAL METER SETTER INSTALLATION

- (A) DUCTILE IRON SERVICE SADDLE WITH IP THREAD AND DOUBLE STAINLESS STRAPS
- (B) CORPORATION STOP, IP X IP
- (C) 200 PSI HIGH DENSITY POLYETHELENE I.P.S. WITH BRASS COMPRESSION COUPLINGS WITH STIFFENERS
- (D) 1-1/2" OR 2" LOCKABLE METER SETTER WITH LOCKABLE HIGH BY-PASS OPTION & CHECK VALVE (* TO BE DETERMINED, COORDINATE WITH RVWC.)
- (E) 12" X 1-1/2" OR 2" BRASS NIPPLE
- (F) FOGTITE #2 CONCRETE METER BOX, STEEL TRAFFIC LID WITH 1 1/2" LID HOLE FOR TOUCH-READ PAD

- 1. SERVICE LINES SHALL BE PERPENDICULAR TO THE WATER MAIN, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- 2. AN APPROVED BACKFLOW ASSEMBLY MUST BE INSTALLED PER RVWC REQUIREMENTS. IRRIGATION SYSTEM SHALL NOT BE PUT INTO SERVICE UNTIL THE BACKFLOW ASSEMBLY INSTALLATION IS APPROVED BY A CITY OF RVWC INSPECTOR.
- 3. METER WILL BE SUPPLIED AND INSTALLED BY THE RVWC
- 4. LOCATE WIRE SHALL BE 14 GAUGE VINYL COATED COPPER WIRE PLACED WITH POLYETHYLENE SERVICE LINE. BARE LOCATE WIRE (STRIPPED) SHALL BE WRAPPED AROUND THE CORPORATION STOP A MINIMUM OF TWO TIME. THE END IN THE METER BOX SHALL BE LOOPED WITHIN THE METER BOX

1 1/2" OR 2" METER SERVICE

(REVISED 2017)



TYPICAL FIRE HYDRANT DETAIL

(REVISED 2013)

- ALL HYDRANTS WILL BE DRY BARREL A MINIMUM OF 4.5 FEET IN LENGTH.
- 2. MECHANICAL JOINT INLET, 5 1/4" MAIN VALVE WITH 6" INLET.

ACCEPTABLE HYDRANTS:

- 1. MUELLER "SUPER CENTURION 250"
- 2. CLOW "MEDALLION" 3. M&H 929 "RELIANT" 4. WATEROUS "PACER MODEL"

HYDRANT BOLLARD DETAIL

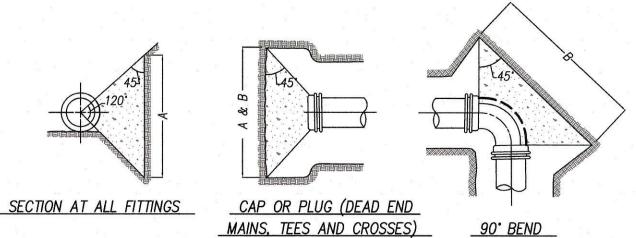
PLAN VIEW

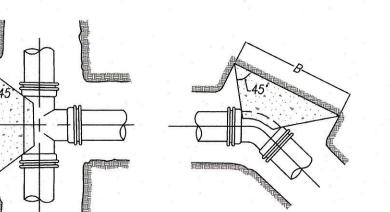
(REVISED 2013)

RAINIER VIEW WATER COMPANY

PROBUILD - WATER MAIN EXTENSION - DETAILS

A PORTION OF SEC. 3, TWP. 18 N., RGE 3 E., W.M. PIERCE COUNTY, WASHINGTON





45; 22-1/2; AND 11-1/4° BENDS

$A \times B$	= BEARING	AREA REC	Q'D IN SQ.	FT. (SEE	NOTE 2)
PIPE SIZE	CAP,PLUG OR TEE	90°BEND	45°BEND	22-1/2° BEND	11–1/4° BEND
<6"	4.5	6.0	3.5	2.0	1.0
8"	7.5	10.5	6.0	3.0	1.5
10"	11	15.5	8.5	4.5	2.5
12"	15.5	22.0	12.0	6.0	3.5
14"	21.0	29.5	16.0	8.5	4.5
16"	27.0	38.0	20.5	10.5	5.5

THRUST BLOCK DETAIL

TEES AND WYES

1. THRUST BLOCKS ARE REQUIRED ON ALL FITTINGS FOR PRESSURE PIPE WITH PUSH-ON OR MECHANICAL TYPE

2. ALL CONCRETE BLOCKING SHALL BE POURED AGAINST

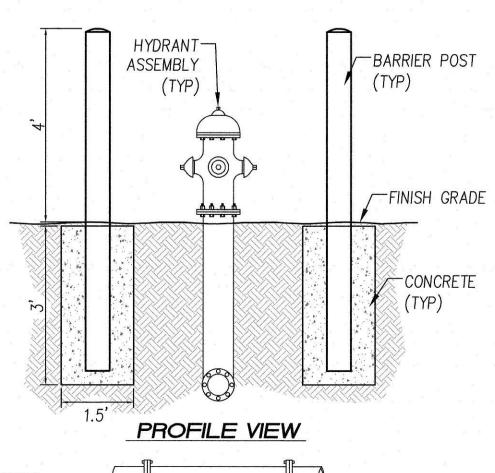
PRESSURE OF 225 PSI.

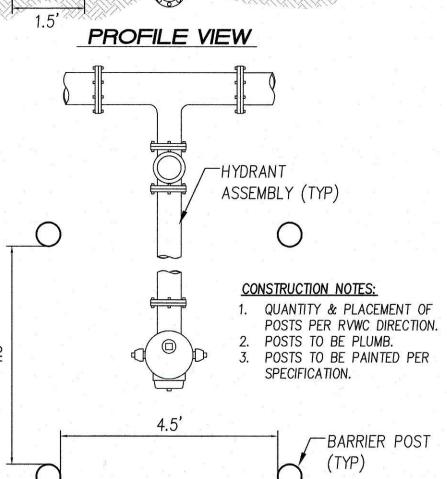
DRY, UNDISTURBED SUBGRADE. THE TABLE IS BASED UPON 2000 LBS. S.F. ALLOWABLE SOIL BEARING.

WEAKER SOIL WILL REQUIRE INCREASED BEARING AREA.

SQUARE FOOTAGE IN TABLE IS DETERMINED FOR TEST

(REVISED 2013)





FIRE LINE DETECTOR CHECK VALVE DETAIL

CAST IRON 2-PIECE VALVE BOX

OLYMPIC FOUNDRY OR EQUAL. -

6" GATE VALVE ---

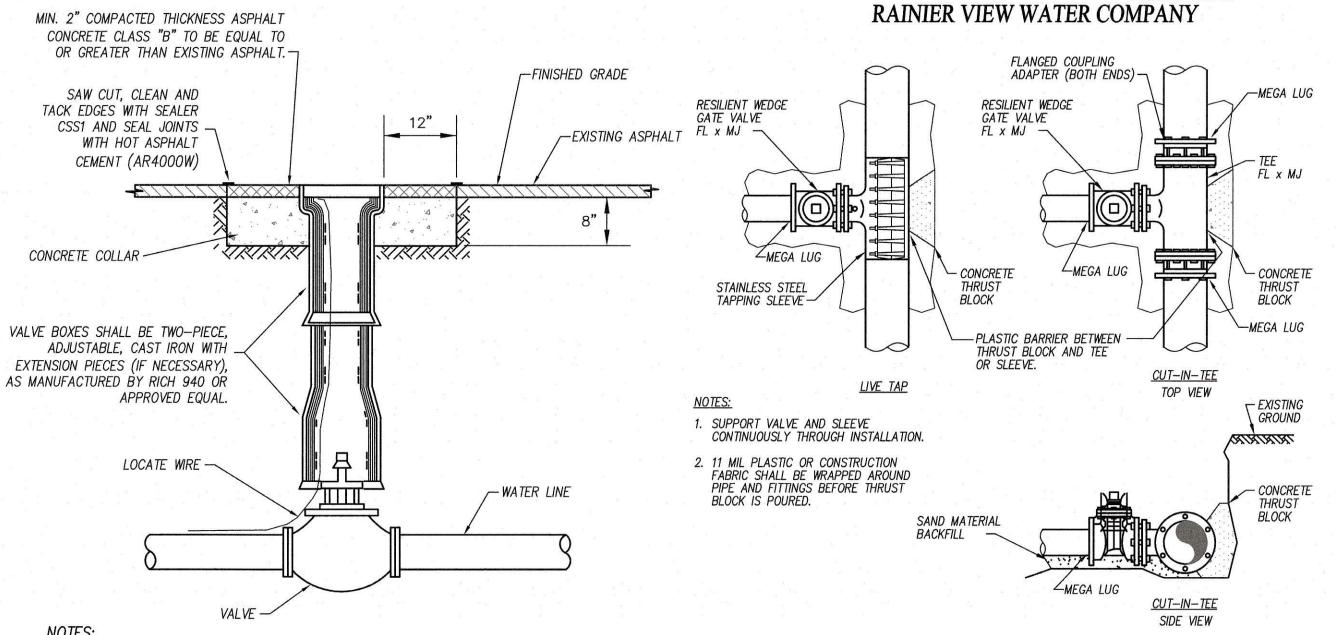
TRACE WIRE ---

FINISHED GRADE -

— PLASTIC BARRIER BETWEEN │ 🤽

THRUST BLOCK AND TEE

N.T.S. (REVISED 2013)



CONNECTION TO EXISTING MAIN DETAIL 1. VALVE BOXES TO HAVE TABS TURNED IN THE DIRECTION OF THE WATER MAIN INSTALLED ON, AND

STANDARD TYPE 1 2' RISER WITH

FRAME AND LOCKING SOLID COVER.-

- PVC SCH 40 PIPE

HEIGHT TO BE ADJUSTED

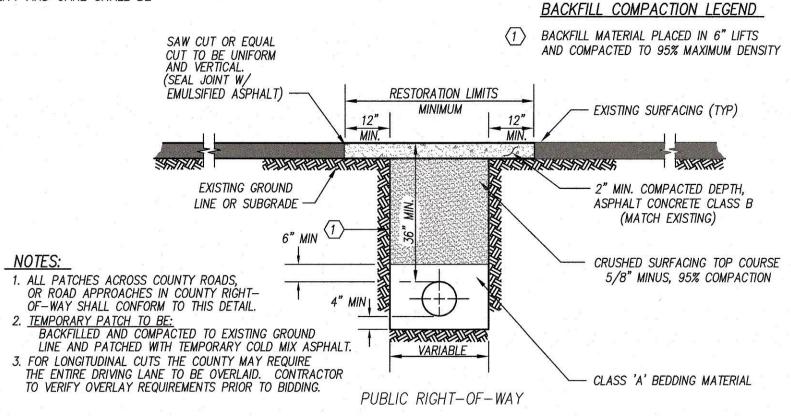
PER WATER INSPECTOR

2. ALL EXISTING CAST IRON VALVE BOXES SHALL BE ADJUSTED TO GRADE WITH CAST IRON

3. ALIGNMENTS OF THE VALVE BOX SHALL BE THE DEVELOPERS RESPONSIBILITY AND CARE SHALL BE TAKEN TO ENSURE THAT THE VALVE MAY BE OPERATED.

4. LOCATE WIRE TO EXTEND MINIMUM OF 12" BEYOND TOP OF VALVE BOX.

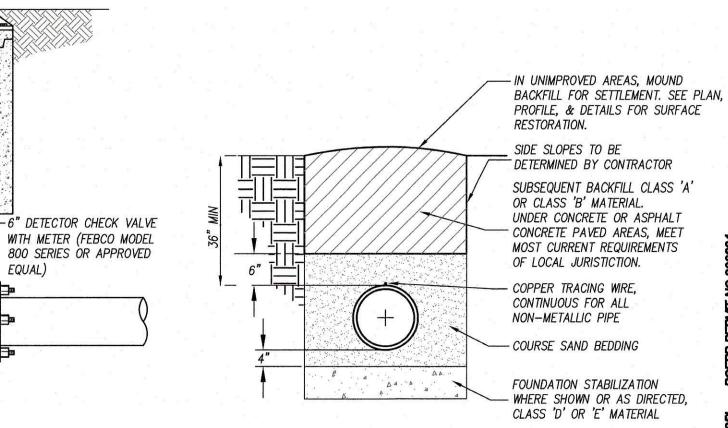
VALVE BOX N.T.S. (REVISED 2013)



N.T.S. (REVISED 2013)

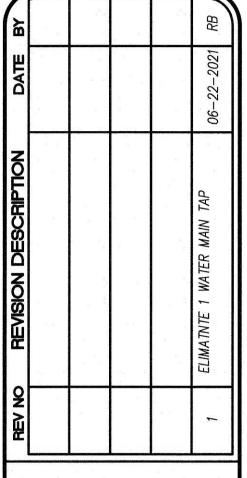
UTILITY PATCH DETAIL

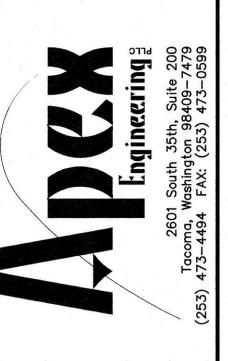
N.T.S. (REVISED 2013)



TYPICAL TRENCH DETAIL

N.T.S. (REVISED 2013)





DATE SEALED 06/22/2021

	MANAGER MASAVAGE, P.E.
	RB
DRAWN	RB
CHECKE	KS
SEC 3	_ T 18 N R 3 E
FILE NO _	34948-WAWRK.DWG
DATE _1	0-31-19

SCALE AS NOTED SHEET 2 OF 2 FILE NO

APEX ENGINEERING PLLC 201