# PATTERSON DRIVE WATERLINE REPLACEMENT PROJECT

Bids were received by the Authority on June 14, 2021 for the Patterson Drive Waterline Replacement project. At their monthly meeting on June 16, 2021, the Board of Directors accepted the proposal from the lowest responsible Bidder, Stefanik's Next Generation Contracting Company, Inc. in the amount of \$319,032.50.

The project consists of the installation of 1,250 linear feet of 6-inch diameter ductile iron replacement waterline, 350 linear feet of 2-inch diameter waterline, fire hydrant assembly, connections to the existing water system, valves, and all necessary appurtenances, Township roadway and other restoration for said construction. The new waterline will replace an existing line that has deteriorated to the point where line breaks are frequent.

Construction is expected to begin in August. It is anticipated that all construction activities will be completed by the end of November. During construction, those traveling in the area should expect traffic restrictions weekdays from 7am until 5pm.

# Patterson Drive Waterline Replacement Contract No. 21-07

Situate In **Hopewell Township** Beaver County, Pennsylvania

Prepared For

### **EXISTING CONDITION NOTES:**

- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED BY FIELD SURVEY OF MARKINGS MADE IN THE FIELD BY THE RESPECTIVE UTILITY COMPANY OF A TAKEN FROM DRAWINGS OF THE EXISTING UTILITIES PROVIDED BY THE UTILITY COMPANIES, ALL EXISTING SUBSURPACE UTILITY INTERPROVIDED BY THE UTILITY COMPANIES, ALL EXISTING SUBSURPACE UTILITY PROVIDED BY THE UTILITY OF A UTILITY PROVIDED BY THE UTILITY COMPANIES, ALL EXISTING SUBSURPACE OF THE CONTRACT DRAWINGS IS CHARACTERIZED AS UTILITY QUALITY LEVEL C OR DEPRECISED BY SHOULD SHOW THE OFFICE OF THE COLLECTION AND DEPICTION OF EXISTING SUBSURPACE UTILITY DATA" UNLESS SPECIFICALLY OFTED OTHERWISE.
- HE ENGINEER OR SURVEYOR MAKES NO QUARANTEE THAT THI NDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN HE AREA, EITHER IN SERVICE OR ABANDONED.
- THE ENGINEER OR SURVEYOR HAS NOT PHYSICALLY LOCATED ANY OF THE UNDERGROUND UTILITIES...
- PROPERTY LINES SHOWN HEREIN ARE PREPARED FROM DEED PLOTS AND/OR FROM TAX MAP INFORMATION, NO FIELD PROPERTY SURVEYS WERE PERFORMED, PROPERTY LINES NOT FIELD VERIFIED

# Municipal Water Authority of Aliquippa

140 Bet Tech Drive Aliquippa, Pennsylvania 15001

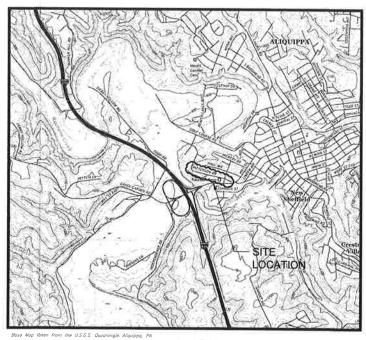
### ONE CALL RESPONDENTS

Information as to the location and type of underground utilities and structures shown are approximate. Contractor(s) shall verify all such information in the field. Prior to any excavation, the Contractor(s) shall notify the Pennsylvania One Call System by calling 811, Locations of the utilities shown on the drawings or within the construction aren are based on information provided through the Pennsylvania One Call System, Inc, Serial No. 20211450985. The respondents to the One Call

PA One Call Contacts						
Utility	Company	Address	Email			
OWNER/WATER/ SEWER	ALIQUIPPA MUNICIPAL WATER AUTHORITY CONTACT: COREY CURENTON	140 BET-TECH DR ALIQUIPPA, PA. 15001	maintenance@aliquippawater.com			
GAS	PEOPLES GAS COMPANY LLC CONTACT: MICHAEL DENNY	375 NORTH SHORE DRIVE PITTSBURGH, PA. 15212	michael.denny@peoples-gas.com			
WATER	AMBRIDGE WATER AUTHORITY CONTACT: JEFF ALLEN	19TH & MERCHANT ST EXT PO BOX C PO BOX 257 AMBRIDGE, PA 15003	jallen@ambwater.org			
TELEPHONE	VERIZON PENNSYLVANIA LLC CONTACT: DEBORAH BARUM	1026 HAY ST PITTSBURGH, PA, 15221	deborah,d,delia@verizon.com			
ELECTRIC	DUQUESNE LIGHT COMPANY CONTACT: KYLIE PARISON	2645 NEW BEAVER AVE PA-TD PITTSBURGH, PA 15233	kparison@duqlight.com			
MUNICIPAL	HOPEWELL TOWNSHIP CONTACT: CHRIS THOMPSON	1700 CLARK BLVD ALIQUIPPA, PA. 15001	wpcs@hopewelltwp.com			

ISTING SUBSURFACE UTILITY INFORMATION PRESENTED ON THE CONTRACT DRAWINGS IS CHARACTERIZED AS UTILITY QUALITY LEVEL C OR "CI/ASCE 38-02 - STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" UNLESS "CALLY NOTED OTHERWISE."

January 2021 June 1, 2021 (Issued for Bidding)



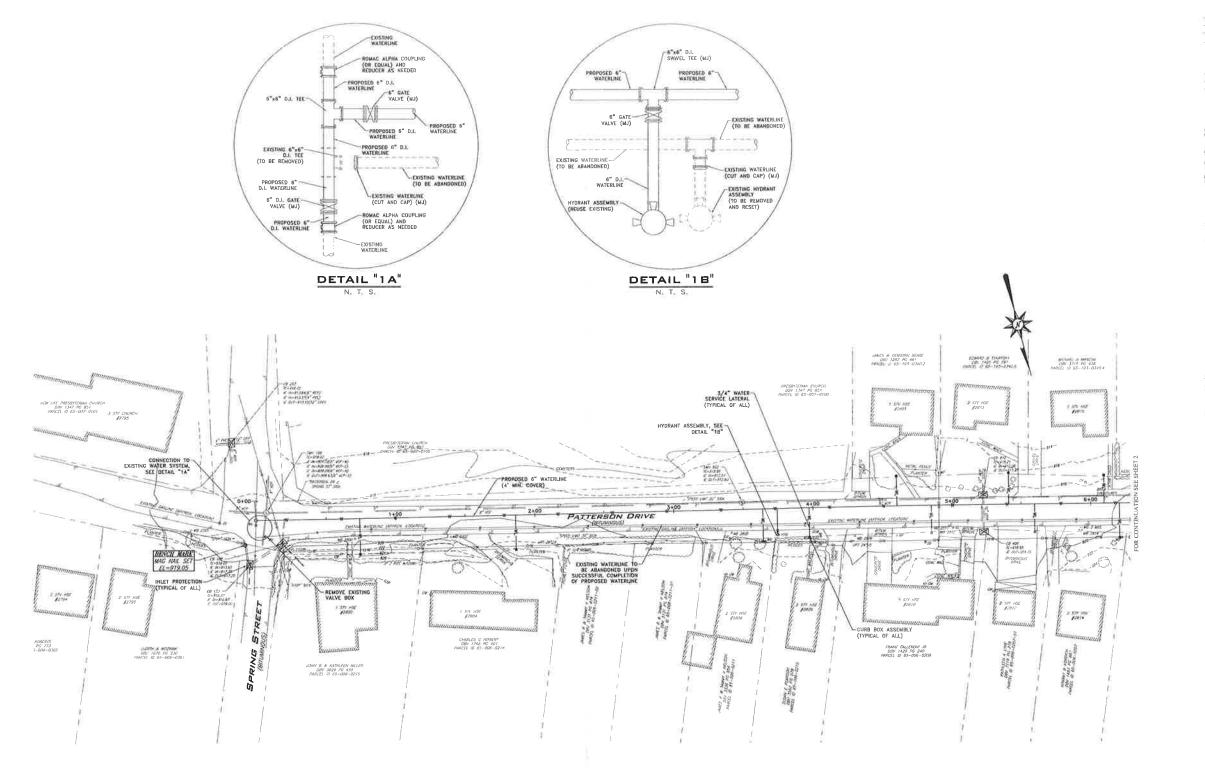
Location Map

	Sheet Index	
Sheet No.	Sheet Description	Drawing No.
	Title Sheet	
1 of 5	Waterline Plan	474-057-1
2 of 5	Waterline Plan	474-057-2
3 of 5	Waterline Plan	474-057-3
4 of 5	Standard Details	474-057-4
5 of 5	Standard Details	474-057-5









0' 30' 6

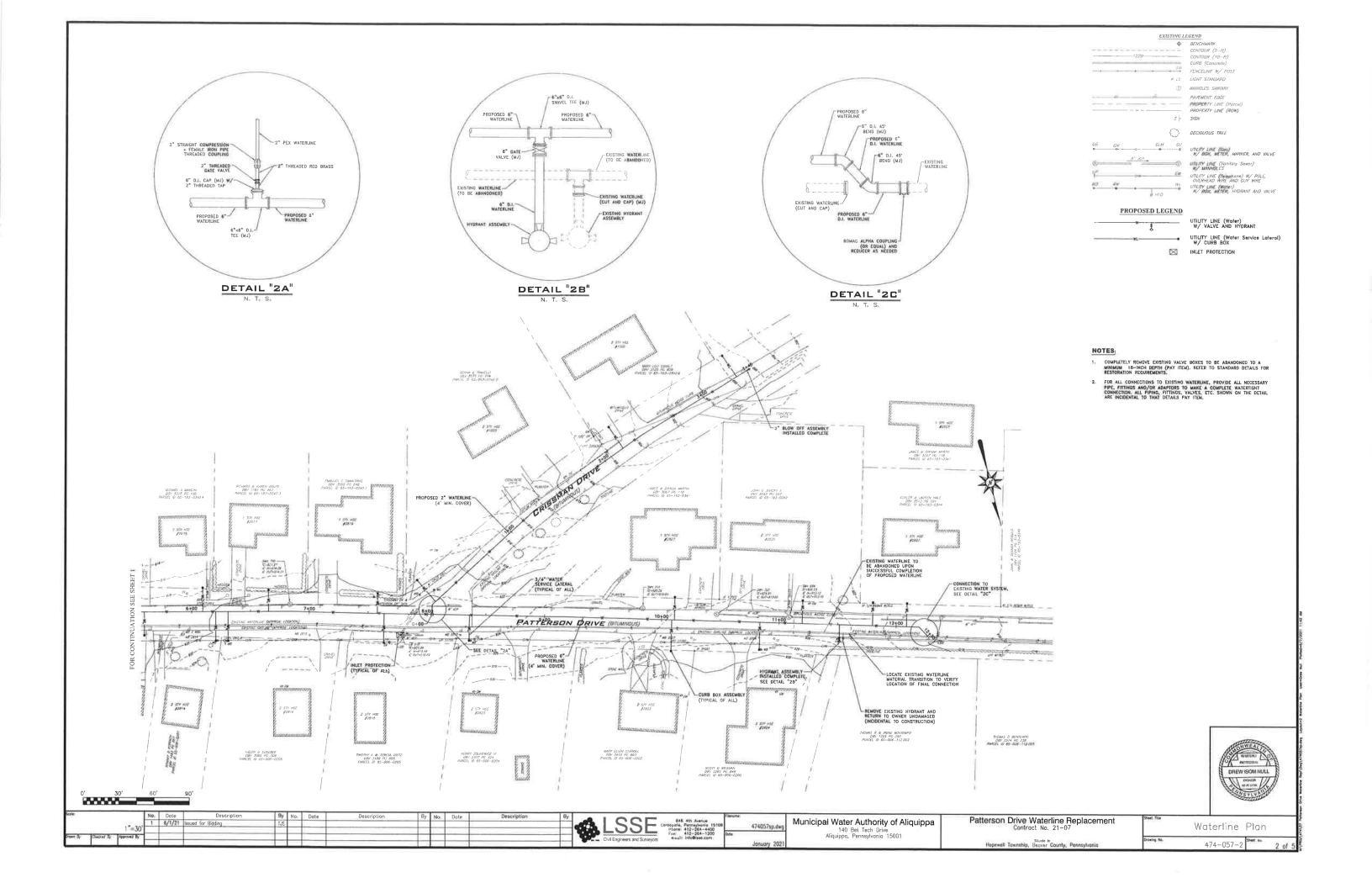


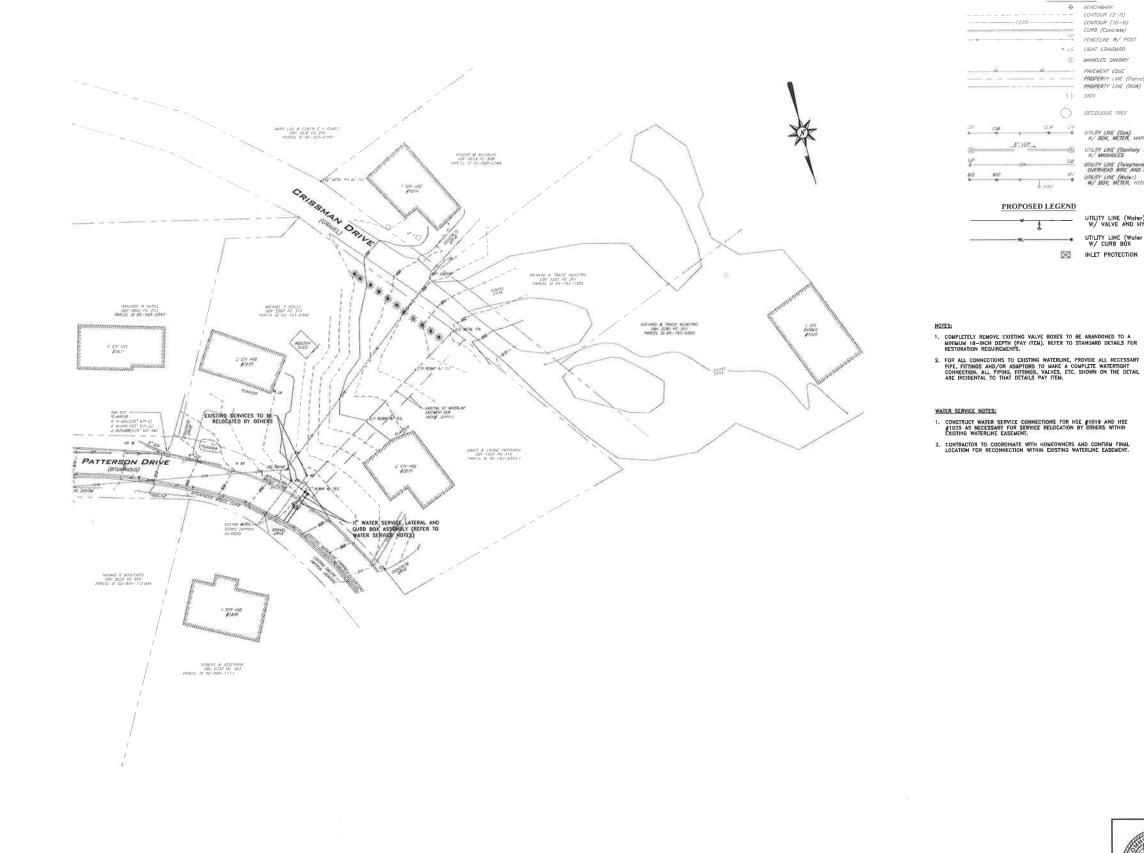
### NOTES:

- COMPLETELY REMOVE EXISTING VALVE BOXES TO BE ABANDONED TO A MINIMUM 18—INCH DEPTH (PAY ITEM). REFER TO STANDARD DETAILS F RESTORATION REQUIREMENTS.
- FOR ALL CONNECTIONS TO EXISTING WATERLINE, PROVIDE ALL NECESSARY
  PIPE, FITTINGS AND/OR ADAPTORS TO MAKE A COMPLETE WATERTIGHT
  CONNECTION. ALL PIPING, FITTINGS, VALVES, ETC. SHOWN ON THE DETAIL
  ARE INCIDENTAL TO THAT DETAILS PAY ITEM.

DREVI SOM NULL

Sedec		No. [	Date	Description med for Bidding	By No.	Date	Description	By No. Date	Description	LSSE	866 4th Avenue rompsis, Pennsylvania 15108 Phane: 412-264-4400	474057sp.dwg	Municipal Water Authority of Aliquippa 140 Bet Tech Drive	Patterson Drive Waterline Replacement Contract No. 21-07	Sheet little	Waterline Plan
Street By Charles By	y Approved By									 Civil Engineers and Surveyors	Phone: 412-264-4400 Fox: 412-264-1200 email: Info@fesse.com	January 2021	Aliquippa, Pennsylvania 15001	Stude in Hopewell Township, Beaver Caunly, Pennsylvania	Graving No.	474-057-1 Sheet No. 1 of 5







EXISTING LEGEND

\* L5 LIGHT STANDARD (S) MANHOLES: SANITARY

5 SIGN DECIDUOUS TREE OF CLV CLV UTLEY FAIL (GOL) WARKER, AND VALVE

UTILITY LINE (Southery Sawer)

W/ MUNICIPS

AD BED WY OKRHESO WAS AND DOT WHE WILLIAM THE MAD OUT WHE WAS AND THE HOUSE WAS AND THE HOUSE AND VALVE

PROPOSED LEGEND

ONERHEAD WITH AND GUY WITH

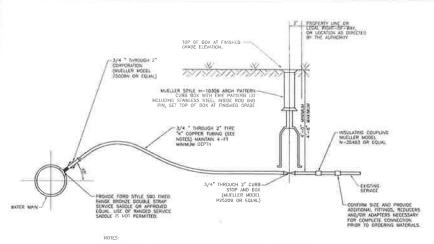
UTILITY LINE (Water)
W/ VALVE AND HYDRANT UTILITY LINE (Water Service Lateral)
W/ CURB BOX

INLET PROTECTION

PAVEMENT EDGE
PROPERTY LINE (Parcel)
PROPERTY LINE (ROW)

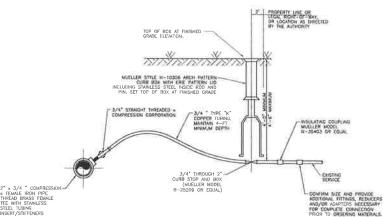
No. Date Descri Patterson Drive Waterline Replacement LSSE Core Coregoods, Permylands 15/10 Feet, 117-254-15/00 Feet, 11 Municipal Water Authority of Aliquippa Waterline Plan 474057sp.dwg 140 Bet Tech Drive Aliquippo, Pennsylvania 15001 1"=30" 474-057-3 Sheet No. State in Hopewell Township, Beaver County, Pennsylvani

0′ 30′



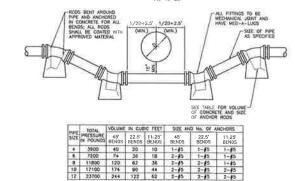
- 1. DETAIL TYPICAL FOR 3/4" THROUGH 2" CONNECTIONS, THEREFORE SIZE OF CORPORATION STOP, TYPE "K" COPPER TUBING AND CURB STOP SHALL BE SIZED ACCORDINGLY.
- 3. COMPLETELY REMOVE AND DISPOSE OF EXISTING CURB BOXES (INCIDENTAL TO

# PVC AND DUCTILE IRON PIPING SERVICE CONNECTION



- 1. DETAIL TYPICAL FOR 3/4" THROUGH 2" CONNECTIONS, THEREFORE SIZE OF CORPORATION STOP, TYPE "K" COPPER TUBING AND CURB STOP SHALL BE SIZED ACCORDINGLY...
- 20 DIG TEST PIT(S) AS NECESSARY TO COMPIRM EXISTING SERVICE SIZE PRIOR TO ORDERING MATERIALS AND PROVIDE COUPUING SIZED TO MATCH EXISTING SERVICE AND ALL NECESS FITTINGS AND/OR ADPARTERS/REDUCERS TO MAKE A COMPLETE CONNECTION TO EXISTING SERVICE (INCIDENTIAL TO CONSTRUCTION).
- COMPLETELY REMOVE AND DISPOSE OF EXISTING CURB BOXES (INCIDENTAL TO CONSTRUCTION).
- 4. FOR PEX PIPING VERIFY LOCATION OF EXISTING SERVICE TO BE RECONNECTED PRIOR TO PLACEMENT OF SERVICE TEE/CORPORATION.
- 5. PROVIDE ALL FITTINGS RATED FOR USE ON CROSS-UNKED POLYETHYLENE PRESSURE PIPING CONTRACTOR TO CONFIRM PRIOR TO ORDERING MATERIALS

# PEX PIPING SERVICE CONNECTION

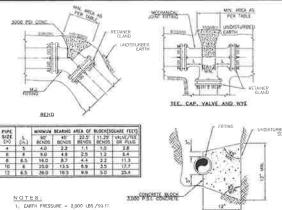


AS NOTED

1 5/1/21 Issued for Bidding

- I THE TABLE IS BASED ON 300 APPLIED PRESSURE
- 2. REINFORCE ALL BLOCKS WITH #5 AT 8" E.F. MINIMUM 3" FROM ALL SIDES.

# WATER LINE VERTICAL BLOCKING



- 2. APPLIED PRESSURE + 300 P.S.L.
- 3. IF EARTH IN FIELD WILL NOT SUPPORT THE ABOVE EARTH PRESSURE, AREA OF BLOCK MUST BE INCREASED PROPORTIONATELY.
- 4. CONCRETE TO BE 3,000 P.S.I., PADOT CLASS A, 3" SLUMP
- 5, ALL MECHANICAL JOINT FASTENERS (I.E. BOLTS, NUTS, ETC.) SHALL BE FREE OF CONGRETE ALL FITTINGS SHALL BE MECHANICAL JOINT AND HAVE MECHA-LUG RETAINER GLANDS( OR EQUAL) INSTALLED TO MANUFACTURERS SPECIFICATIONS.
- E. CONCHETE WITH BEARING AMERS GREATER THAN 3 S.F. TO HAVE WE A WE WELDED WISE FABRIC. 7. ALL TEES, WYES, CROSSES & PLUGS, & BENDS OF 10" OR MORE SHALL BE BLOCKED AGAINST FIRM EARTH WITH CONCRETE

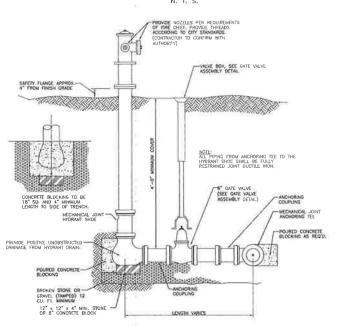
## HORIZONTAL THRUST BLOCKING

CONTRACTOR OF STREET 2" STRAIGHT COMPRESS! X FEMALE IRON PIPE COUPLING BRASIS NIPPLE

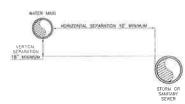
1. ALL PIPE AND FITTINGS TO BE LOW LEAD COMPLIANT RED BRASS.

2 PLACE 2 CU. FT. OF STONE UNDER DRAIN HOLE

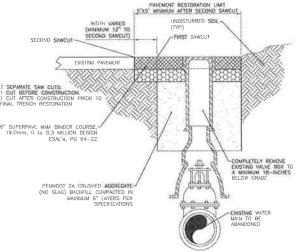
### PEX PIPING 2" BLOW-OFF ASSEMBLY



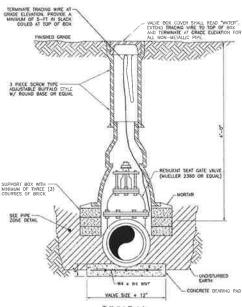
FIRE HYDRANT ASSEMBLY



### UTILITY SEPARATION N. T. S.



RESTORATION FOR TOWNSHIP ROADWAY



# GATE VALVE ASSEMBLY

Municipal Water Authority of Aliquippa 474057dt.dwg 140 Bet Tech Drive Aliquippa, Pennsylvania 15001

Patterson Drive Waterline Replacement

L. LTHLITY CONTLICES: Verify All Livining Utilities In The Heidt Pries for Start Of Execution Work. Complex Work One Call Requirements: Censis, All Utility Congruess: that May these Excluses Within the Work Axes, For Interception Congress and Lixing Submitted Cities Uniform Descented Office Congress and Lixing Submitted Cities Congress and Lixing Submitted Cities Congress and Con

GENERAL NOTES WATERLINES

2. PREPARATORY SURVEYS: The Construction Plans are flued on Aerial Photogrammetr flortzenia and Vertical Accuracy are librard on Notional May Accuracy Standards so Publisheds by USSS' fract (Nosworther 1999). Vertical Accuracy is pricelly the Intell Irt21 the Common Internet, Informational Accuracy Scale. Note and Report to the Engineer Amy Material Disreguestee Dissavered in Performing Lysard Finderingth Check and Verify Rendrand Extension For All Work, Hofero Stant Of Construction

3. MAINLINE ALIGNMENT FITTING LOCATION and depth: The

4. SERVICE LINE LOCATIONS: Set The Accould Accommodate Fach Studening Elevation And The Termination of all Waterlines Service Lines At The Time Of Construction To Hest Accommodate Fach Studente To The Service Line Installations And Existing Reconnections, Perform All Required Preparatory West Including Digging Any Construction Paint

5. UNCLASSIBILD EXCAVATION: All Excavation is Unclassified. No Extra Payment Will Be Made For Rock Or Any Other Material Encountered in Construction At The Location Shown On The Drawing Or Any Horizontal Or Vertical

6. COMPETENT PERSON: Designate And Maintain On-Site A Trained

10. F. & S. CONTROL: Implement And Maintain An Erosion And Sedimentation Control Plan 11. MEASUREMENT: All Waterline Stationing And Payment Is Determined On The Basis Of Horizontal

13. ANCHORING AND BLOCKING: Install Ali Required Anchoring And Concrete Flocking At Ali Bends Ant Similar Pittings. Provide Cashin-Pase Concrete Blocking: Follow Detail Drawings. Do Not Bury Fittings in Concrete, When Coward Conditions Are Not Nation Fo. Concrete Anchory. From the Self-Revisited Androb Type Free And Fittings.

14. RECORDS: Maintain Dally As-Dath, Record Information Including Valve Stationing And Triangulate All Curb Boxes, Volve Boxes, and Universifes, And Show Dimensions On Record Drawings. Record Information To Insolute Size And Material Of Existing Water Service Connections (Immediately, Motify Yowner Of Presence Of Any). Lead Service Lines: Fumilish Owner Representative Copies Of All Dallows, Slips Far All Materials Delivered To The Project.

15. PROJECT COORDINATION: Coordinate And Schodule All Work As Required With Other Co

17. OPEN EXCAVATIONS: Protect Public At All Times From All Open Excavation. Cover All Suitable Steel Plaies At The End Of Each Workday.

18. BACKFILL: TRENCH BACKFILL REQUIREMENTS

Contractor Is Solely. Responsible to Repair Any and All Trench Settlement. Regardless Of Consultion. For 18
Months After Final Payment.

FINAL ZONE:

20. HYDRANT REMOVAL CUT /PLUG WATERLINES: Cut And Plug All Evisting Waterlines To Be Taker
Out Of Service Al Locations As Shown On The Drawings Or As Directed By The Owner. Plug With Mechanical Joint Plug

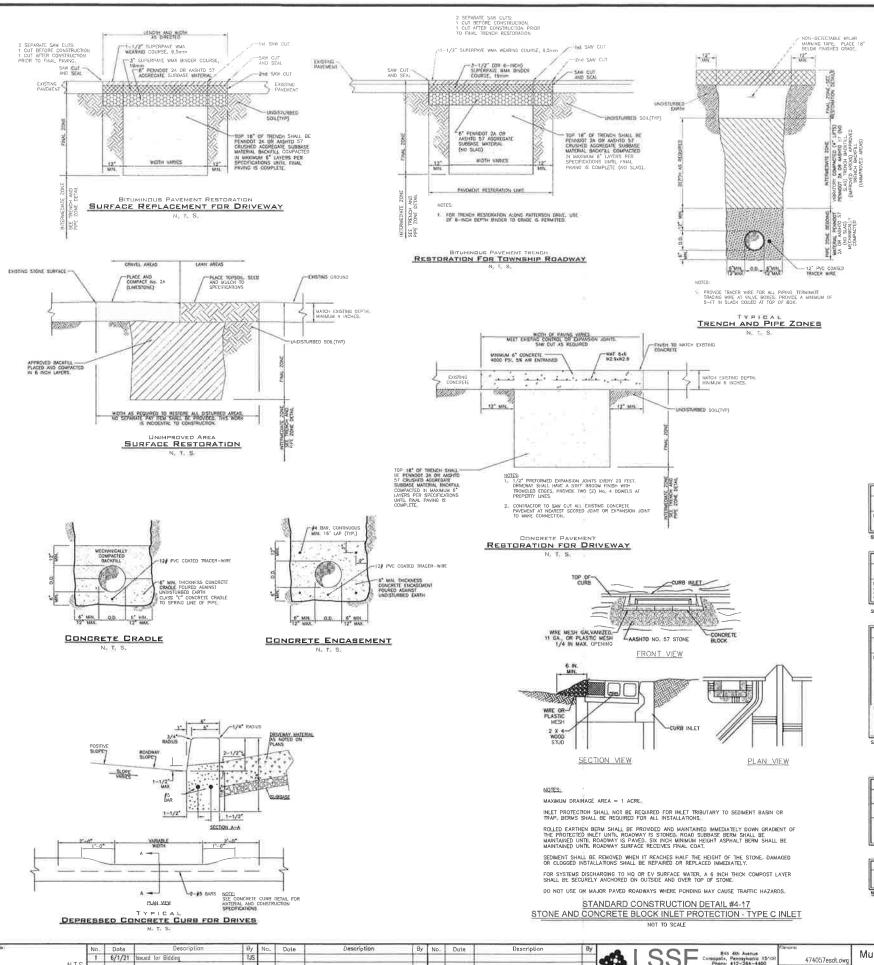
21. disputal of Distriction solution: Dispose of Water Used To District Regulatory Agency Requirements Confirm Requirements Prior Tu Discharge

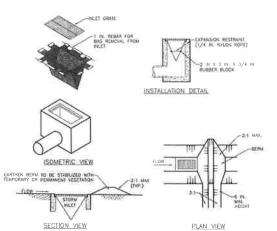


Standard Details

Hopewell Township, Beaver County, Pennsylvani

474-057-4 Pet No.





- NOTES:

  1. MAXIMUM DRAMAGE APEA X, ACRE.
  2. NEET PROJECTION SMALL NOT DE REQUIRED FOR INLET TRIBUTIARY.

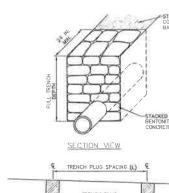
  2. NEET PROJECTION SMALL NOT DE REQUIRED FOR INLET TRIBUTIARY.

  NET PROJECTION SMALL NOT DE REQUIRED FOR ALL MISTALLAND SMALL DE MANTANED DYNT LE REQUIRED FOR ALL MISTALLAND SMALL DE MANTANED UNTIL REQUIREMENT SMALL DE MANTANED UNTIL REMANDART SMALL DE GAMMEL.

  SMALL DE MANTANED UNTIL PERMANENT SMALLZATION IS COMPLETED OR BEAMAN PERMANENT SMALLZATION.

  AT A MINIMUM TRAPEZOTON, TEAM STRENGTH OF 50 LBS. FILTER BAGS SMALL DE TRAPEIGLE NOT DE SMALL MISTALLAND SMALL DE CAPABLE OF TRAPEIGLE AND TRAPEIGLE NOT DE SMALL PROPERTIES NOT DE SMALL PROPERTIES DE SMALL PROMETE SMALL PROPERTIES DE SMALL DE MASSIME AND A MINIMUM TRAPEZOTON. TEAM STRENGTH OF 50 LBS. FILTER BAGS SMALL DE CEMPTED AND RINGE OR REPLACED WHEN MALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCTED SOA STO LOURS FLOROMOR OR PRYMASING OF THE SUPPLY SHALL BE MANTANED ON SITE FOR REPLACEDIENT OF SUPPLY SHALL BE MANTANED ON SITE FOR REPLACEDIENT OF BAGS. MAL NEEDED REPRAIS SHALL BE MINIMED MALED SHALL BE SMALL BE ALL DISPOSS ACCUMULATED SCIENCES AS MALL AS ALL DE DO NOT USE ON MALOR PAPED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC MAZAROS.

## FILTER BAG INLET PROTECTION



PIPELITIE PROFILE VIEW

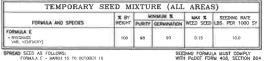
PA DEP EROSION CONTROL MANUAL TABLE 13.1

INIAMINION SI A	SPACING	MATERIALS FOR TRENCH PLUGS
TRENCH SLOPE (%)	(FT)	PLUG MATERIAL
< 5	1000	. CLAY, BENTONITE, OR CONCRETE FILLED SACKS
5 - 15	500	. CLAY, BENTONITE, OR CONCRETE FILLED SACKS
15 - 25	300	. CLAY, BENTONITE, OR CONCRETE FILLED SACKS
25 - 35	200	. CLAY, BENTONITE, OR CONCRETE FILLED SACKS
35 - 100	100	. CLAY, BENTONITE, OR CONCRETE FILLED SACKS
> 100	50	CEMENT BAGS (WETTED) OR MORTARED STONE

IMPERVIOUS TRENCH PLUGS ARE REQUIRED FOR ALL STREAM, RIVER, WETLAND, OR OTHER WATER BODY CROSSINGS.

# STANDARD CONSTRUCTION DETAIL #13-4 TRENCH PLUG INSTALLATION

NOT TO SCALE



PERMANENT SEED	MIXTU	RE (	LAWN/Y	ARD A	REAS)
FORMULA AND SPECIES	# BY WEIGHT	100	CERMINATION	WAX X WEED SEED	SEEDING RATE LBS, PER 1000 SY
FORMULA # * PERENNUL RYEGRASS MIXTURE • CREPPING RED FESCUE OR CHEWING FESCUE * KENTUCKY BILUEGRASS MIXTURE	20 30 50	98 98 98	90 85 80	0.15 0.15 0.20	21.0 TOTAL 4.0 6.0 11.0

SEEDING FORMULA MUST COMPLY WITH PODOT FORM 408, SECTION 804

WEIGHT	PURITY 90	CERMINATION		BS PER 1000 SY
10	98			9.0 TOTAL
	99	00		
40			0.15	1,45
40	98	85	0.15	5.80
40	98	80*	0.10	5.80
10	92	80	0.15	1.45
				21.0 TOTAL
70	98	85	0.15	15 0
30	98	85	0.15	8.0
	10	10 92 70 98	10 92 80 70 98 85	10 92 80 0.15 70 98 85 0.15

SPREAD SEED AS FOLLOWS:

FORMULA W - APRIL 1 TO JUNE 15

ACCUST 16 TO SEPTEMBER 15

SEEDING FORMULA MUST COMPLY WITH Padot FORM 408, SECTION 804

	MULCHES
HAY:	TINOTHY HAY, MIXED CLOVER AND TIMOTHY HAY, OR OTHER ACCEPTABLE NATIVE OR FÖRAGE CRASSES. WELL-CURED TO LESS THAN 20% MOISTURE CONTENT, BY WEIGHT,
STRAW:	EINER WHILD OR OUT TIME. MEANDWAY FREE OF WARLE SEED, WELL-CURED TO LESS THAN 20% MOSTURE CONTON, BY WEN-H.
A MULCH	LICH INSTITUTE V.ATTR SEEDING OR WITHEN 48 HOURS NITTR SEEDING IS CONVETED. PLACE MY OR STRAW  ***********************************

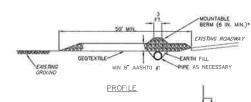
MULCH MUST COMPLY WITH PODOT FORM 408, SECTION 805

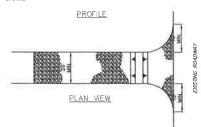
FERTILIZER AND LIME

FERTILIZER AND LIME

FERTILIZER AND LIME

FIGURE WHY PRIMATE OF ANALYSIS 16-16-16 OF A RAY OF 1000-1600 FOR KICK TON TRANSPORTED ANALYSIS 16-20-20 AT A RAY OF 1000-1600 FOUNDS THE ACRE FOR PROMATED ANALYSIS 16-20-20 AT A RAY OF 1 TON PER ACRE FOR TRANSPORT





\* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR HISP RUPPOSE. ALL SEDIMENT DEPOSITION ON PAYED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE ANDINTS OF SEDIMENT ARE BEING PROSTED ON ROOMWY, EXTEND LEAGTH OF ROCK CONSTRUCTION ENTRANCE BY SOFT OF THE CONSTRUCTION ENTRANCE BY SOFT ON THE CONSTRUCTION ENTRANCE BY SOFT ON THE CONSTRUCTION ENTRANCE BY SOFT ON THE REPOSITION OF A CONSTRUCTION ENTRANCE BY SOFT ON THE READWAY OF SWEEPING THE OPPOSITS INTO ROADWAY DITCHES. SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE

STANDARD CONSTRUCTION DETAIL #3-1 ROCK CONSTRUCTION ENTRANCE



SEEDING CHART

Municipal Water Authority of Aliquippa 140 Bet Tech Drive Aliquippa, Pennsylvania 15001

Patterson Drive Waterline Replacement

Standard Details

Situate in Hopewell Township, Beaver County, Pennsylvania

474-057-5