CITY OF ASTORIA
27TH STREET SLIDE - WATER AND SEWER REPAIR

UTILITY PROVIDERS

ELECTRICITY
PACIFIC POWER
ATTN: MARILYN BROCKEY
2340 SE DOLPHIN AVENUE
WARRENTON, OR 97146
(503) 861-6005
(503) 861-6020 (FAX)

TELECOMMUNICATIONS
LUMEN
TOBY RESMUSSEN
481 INDUSTRY STREET
ASTORIA, OR 97103
(509) 222-8018

CABLE TELEVISION/INTERNET
CHARTER SPECTRUM COMMUNICATIONS
ATTN: VINNY BILLECI
419 GATEWAY AVENUE
ASTORIA, OR 97103
(503) 338-7710
(503) 298-0129 (CELL)

CITY OF ASTORIA
WATER, SEWER & STORM
ATTN:OLE GIFFORD, FILED OP MANAGER
1095 DUANE STREET
ASTORIA, OR 97103
(503) 325-3524
(503) 325-3550 (FAX)

GAS
NW NATURAL GAS
ATTN: RYAN WINFREE
220 NW 2ND AVE
PORTLAND, OR 97209
(503) 610-7765
(773) 612-9237 (CELL)

ONE CALL CENTER
1-800-332-2344 OR 811

ELEVATION DATUM

ALL ELEVATION SHOWN HEREON ARE BASED ON NAVD 88

BASEMAP

1. THE TOPOGRAPHIC BASEMAP WAS PREPARED USING ASTORIA AERIAL TOPOGRAPHIC DATA, LiDAR DATA, AERIAL IMAGERY, EXISTING UTILITY MAPS, MARKED UTILITY LOCATES, AND DRONE IMAGERY AND SURFACE DATED MAY 31, 2024

2. CONTRACTOR IS REQUIRED TO CALL 1-800-332-2344 (OREGON UTILITY NOTIFICATION CENTER) PRIOR TO ANY EXCAVATION.

3. CONTRACTOR SHALL POTHOLE ALL UTILITY CROSSINGS BEFORE CONSTRUCTION TO REDUCE GRADE AND ALIGNMENT CONFLICTS DURING CONSTRUCTION.

GENERAL NOTES

1. ATTENTION CONTRACTORS: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503) 232-1897 OR 1-800-332-2344. AT LEAST TWO (2) BUSINESS DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OREGON UTILITY NOTIFICATION CENTER OF THE DATE AND LOCATION OF THE PROPOSED CONSTRUCTION, AND THE TYPE OF WORK TO BE PERFORMED.

2. ALL EXISTING FACILITIES TO BE MAINTAINED IN-PLACE BY THE CONTRACTOR UNLESS OTHERWISE SHOWN OR DIRECTED. CONTRACTOR TO LEAVE EXISTING FACILITIES IN AN EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF THE CITY.

3. IN ACCORDANCE WITH O.R.S.290.140, IF THE CONTRACTOR FINDS IT NECESSARY TO INTERFERE WITH OR PAVE OVER ANY ESTABLISHED PUBLIC LAND SURVEY CORNER OR ITS ACCESSORIES, WITHIN THE PROJECT LIMITS, THE CONTRACTOR SHALL NOTIFY THE COUNTY SURVEYOR PRIOR TO DOING SO.

4. IN ACCORDANCE WITH O.R.S.290.150, CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL SURVEY MONUMENTS DISTURBED OR DESTROYED DURING CONSTRUCTION. REPLACING THE SURVEY MONUMENTS SHALL BE DONE BY A REGISTERED OREGON LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.

5. CITY OF ASTORIA RIGHT-OF-WAY, TEMPORARY STREET USE/SOUND AMPLIFICATION, AND GRADING/EROSION CONTROL PERMITS WILL BE REQUIRED PRIOR TO CONSTRUCTION. THERE WILL BE NO FEE FOR THESE PERMITS.

6. EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. CONTACT UTILITY COMPANIES FOR PREMARKING. POTHOLE ALL UTILITY CROSSINGS BEFORE CONSTRUCTION TO PREVENT GRADE AND ALIGNMENT CONFLICTS.

7. TECHNICAL SPECIFICATIONS FOR CONSTRUCTION ARE TO FOLLOW THE PROJECT SPECIFICATIONS IN 2018 EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION (ODOT/APWA) AND CITY OF ASTORIA SPECIAL PROVISIONS.

8. UPON COMPLETION OF CONSTRUCTION OF THE PROJECT, CONTRACTOR TO SUBMIT RECORD DRAWINGS TO THE CITY OF ASTORIA PRIOR TO FINAL PAYMENT.

ROADWORK/SITEWORK

9. CONTRACTOR SHALL RESTORE ALL SURFACES TO MATCH EXISTING AND ADJACENT GRADES.

SIGNAGE

10. CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, TRAFFIC CONES PER ODOT REQUIREMENTS. ACCESS TO EXISTING DRIVEWAYS AND BUSINESSES TO BE MAINTAINED AT ALL TIMES.

LANDSLIDE/CONSTRUCTION NOTES

1. THE PROJECT IS LOCATED NEAR THE TOE OF RECENTLY ACTIVE LANDSLIDE (SEE LANDSLIDE MAP, THIS SHEET).

2. THE ALIGNMENT OF SOME OF THE TRENCHES ARE PERPENDICULAR TO THE INFERRED DIRECTION OF LANDSLIDE MOVEMENT. EXCAVATING THE TRENCH WILL TEND TO INCREASE THE LIKELIHOOD OF SLIDE MOVEMENT, BUT RELATIVELY SIMPLE STAGING CAN BE IMPLEMENTED TO MINIMIZE THE CHANCE OF TRIGGERING LANDSLIDE MOVEMENTS.

3. TO REDUCE THE POTENTIAL FOR LANDSLIDE MOVEMENT, WORK SHALL OCCUR DURING THE DRY SEASON WITH ALL WORK STARTING AFTER AUGUST 15TH AND COMPLETED PRIOR TO NOVEMBER 15TH.

4. THE CITY WILL PROVIDE VISUAL OBSERVATION OF THE LANDSLIDE DURING CONSTRUCTION TO IDENTIFY POSSIBLE CHANGES IN SLOPE CONDITIONS. ITEMS SUCH AS FRESH CRACKS IN ASPHALT, STRUCTURES, OR LANDSCAPE AREAS COULD BE INDICATIONS OF NEW SLIDE MOVEMENT. CONTRACTOR SHALL IMMEDIATELY CONTACT THE CITY AND ENGINEER IF ANY FRESH CRACKS ARE OBSERVED BY CONTRACTOR'S PERSONNEL.

5. STABILITY: THE SITE HAS DEMONSTRATED RECENT LANDSLIDE MOVEMENT AND IS LIKELY MARGINALLY STABLE, MEANING THAT MOVEMENT MAY OCCUR DURING WINTER MONTHS WHEN GROUNDWATER IS ELEVATED OR WHEN LOADING CONDITIONS CHANGE (CUTS/FILLS/EARTHWORK). HEAVY PRECIPITATION HAS THE POTENTIAL TO REACTIVATE THE LANDSLIDE. THE CONTRACTOR MAY BE REQUIRED TO PAUSE CONSTRUCTION ACTIVITIES AND TAKE PROTECTIVE MEASURES AT THE CONSTRUCTION SITE WHEN HEAVY PRECIPITATION IS EXPECTED OR WHEN HEAVY PRECIPITATION OCCURS.

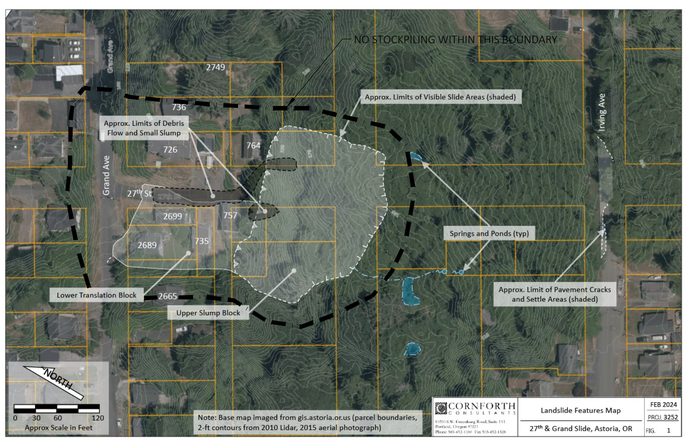
6. BALANCED GRADING: MASS BALANCE SHALL BE MAINTAINED AS CLOSE AS PRACTICABLE TO EXISTING CONDITIONS DURING THE WORK. ANY UNBALANCED GRADING SHOULD BE LIMITED IN EXTENT TO THAT WHICH CAN BE BALANCED WITHIN ONE 8-HOUR WORK SHIFT.

7. TRENCH OPENING: LIMIT THE LENGTH OF OPEN UTILITY TRENCH TO 50 FEET. ONCE A TRENCH SEGMENT IS BACKFILLED, A NEW 50-FOOT SEGMENT OF TRENCH MAY BE EXCAVATED.

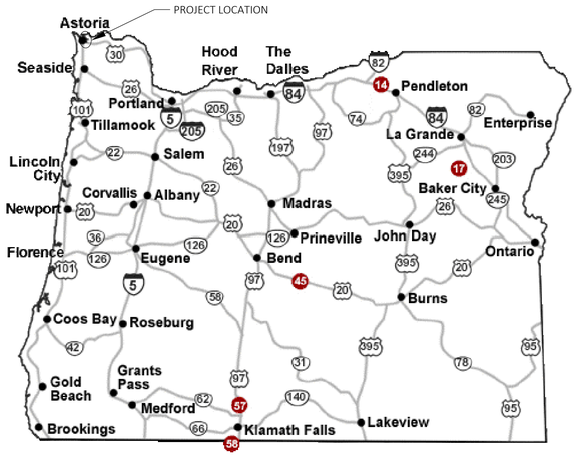
   PIPE TRENCHES SHALL BE EXCAVATED AND BACKFILLED WITHIN ONE WORK SHIFT TO MINIMIZE THE DESTABILIZING IMPACT OF THE NEW TRENCH. TRENCHES SHALL NOT BE LEFT OPEN OVERNIGHT, THROUGH THE WEEKEND, OR DURING ANY WORK STOPPAGE. THEREFORE, THE LENGTH OF EXCAVATED TRENCH PER SHIFT SHALL BE LIMITED TO WHAT CAN BE BACKFILLED WITHIN THAT SHIFT. THE LEADING EDGE OF THE TRENCH EXCAVATION MAY BE UNFILLED FOR A MAXIMUM DISTANCE OF 5 FEET FOR UP TO 20 HOURS.

8. STOCKPILING: STOCKPILING OF ANY MATERIALS WITHIN THE LIMITS OF THE LANDSLIDE OR WITHIN CLOSE PROXIMITY (50 FEET FROM LANDSLIDE BOUNDARIES) IS PROHIBITED.

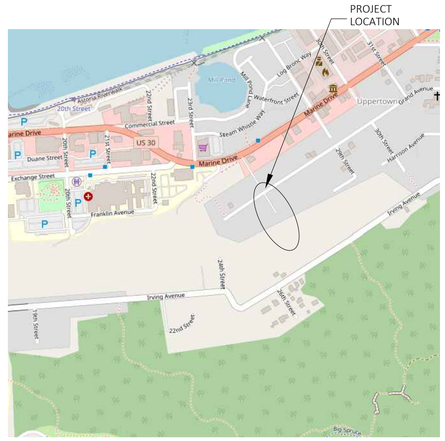
9. CLAY DAMS: CLAY DAMS SHALL BE INSTALLED AT 50' O.C. AND SHALL CONSIST OF FINE-GRAINED MATERIAL. APPROVED NATIVE MATERIAL MAY ALSO BE USED.



MAPPED LANDSLIDE/PROJECT LOCATION
NOT TO SCALE



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

LEGEND

EXISTING

- EXISTING TAX LOT LINES
- EXISTING EDGE OF ROADWAY
- EXISTING GAS LINE
- OVERHEAD LINE
- EXISTING SANITARY SEWER LINE
- EXISTING COMBINED SEWER LINE
- EXISTING STORM DRAIN LINE
- EXISTING SEWER LATERAL (W/SIZE)
- EXISTING WATER LINE (W/SIZE)
- EXISTING WATER SERVICE LINE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING CATCH BASIN
- EXISTING UTILITY POLE
- EXISTING WATER METER
- FLOW ARROW
- EXISTING CONTOUR MAJOR
- EXISTING CONTOUR MINOR
- EXISTING BUILDING OUTLINE
- EDGE OF GRAVEL

NEW

- SAWCUT
- NEW WATERLINE
- NEW COMBINED SEWER LINE
- NEW SANITARY SEWER LATERAL
- NEW SEWER MANHOLE
- NEW SEWER LATERAL CLEANOUT
- PROPOSED EASEMENT
- NEW CATCH BASIN
- NEW ROCK LINED DITCH
- NEW FRENCH DRAIN

DEMO / ABANDON

- ABANDON WATERLINE
- ABANDON SEWER LINE
- DEMO COMBINED SEWER LINE
- EXISTING COMBINED SEWER LINE TO STAY IN SERVICE AS STORM LINE

SHEET INDEX

ODOT STANDARD DRAWINGS
RD1010, RD250

CITY STANDARD DRAWINGS
UT-1, S-1, S-3, S-4, S-8, S-9, W-1, W-2, W-3, W-4, W-7, ST-3, ST-4, SD-2

ATTENTION: OREGON LAW REQUIRES THE CONTRACTOR TO FOLLOW THE RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR MAY OBTAIN COPIES OF THE RULES BY CALLING THE UTILITY NOTIFICATION CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-246-6699.)

Engineer's Stamp

27th STREET SLIDE
WATER & SEWER REPAIR
COVER SHEET

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

No.	Revision/Issue Date

Project Name and Address
27TH STREET / GRAND AVENUE WATER AND SEWER REPAIR

Drawing Name: 27TH SLIDE 90%	Sheet: G-1
Date: 08/14/24	
Scale: As Noted	

GENERAL NOTES:

1. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND ARRANGE FOR THE RELOCATION OF ANY IN CONFLICT WITH THE PROPOSED CONSTRUCTION. THE LOCATIONS, DEPTH, AND DESCRIPTION OF EXISTING UTILITIES SHOWN WERE COMPILED FROM AVAILABLE RECORDS AND-OR FIELD SURVEYS. THE CITY OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OF THE COMPLETENESS OF SUCH RECORDS. ADDITIONAL UTILITIES MAY EXIST WITHIN THE WORK AREA.

2. THE CONTRACTOR SHALL MAKE PROVISIONS TO KEEP ALL EXISTING UTILITIES (INCLUDING NON-LOCATABLE) IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE NOTIFICATION OF DAMAGE TO UTILITIES AND THE REPAIR OR REPLACEMENT OF DAMAGED UTILITIES USING MATERIALS AND METHODS APPROVED BY THE UTILITY OWNER. NO SERVICE INTERRUPTIONS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN AGREEMENT WITH THE UTILITY OWNER/PROVIDER.

3. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS AND OTHERWISE VERIFY ALL DIMENSIONS AND EXISTING CONSTRUCTION CONDITIONS INDICATED AND OR SHOWN ON THE PLANS. SHOULD ANY ERROR OR INCONSISTENCY EXIST, THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK AFFECTED UNTIL REPORTED TO THE DESIGN ENGINEER FOR CLARIFICATION OR CORRECTION.

4. ALL PROJECT ELEMENTS SHALL BE CONSTRUCTED PER APPROVED PROJECT DRAWINGS; SPECIFICATIONS; FEDERAL, STATE AND LOCAL PERMITS.

5. THE CONTRACTOR SHALL KEEP AN APPROVED SET OF PLANS ON THE PROJECT SITE AT ALL TIMES.

6. CONTRACTOR SHALL ERECT AND MAINTAIN TEMPORARY TRAFFIC CONTROL PER THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), PART 6, AND THE 2011 OREGON TEMPORARY TRAFFIC CONTROL HANDBOOK.

7. WORK IS IN AN EXISTING PUBLIC RIGHT OF WAY THAT IS OPEN TO TRAFFIC, THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN WITH ROW PERMIT TO APPROPRIATE CITY, COUNTY, AND STATE PERSONNEL FOR APPROVAL. A TEMPORARY STREET USE AND SOUND AMPLIFICATION PERMIT IS REQUIRED FOR ANY STREET CLOSURES.

8. APPROVALS SHALL BE OBTAINED PRIOR TO START OF WORK.

9. ANY INSPECTION BY THE CITY, COUNTY, STATE, FEDERAL AGENCY OR DESIGN ENGINEER SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN COMPLIANCE WITH THE APPLICABLE CODES, REGULATIONS, CITY STANDARDS AND PROJECT CONTRACT DOCUMENTS.

WATER SYSTEM NOTES

1. NOTIFY THE CITY OF ASTORIA 72-HRS. PRIOR TO PERFORMING ANY WORK.

2. THE CITY'S OPERATIONS DIVISION AT (503) 325-3524 MUST BE CONTACTED TO OPEN OR CLOSE ANY WATER VALVES, INCLUDING HYDRANTS, AND MUST BE CALLED AT LEAST THREE WORKING DAYS IN ADVANCE.

3. ALL PUBLIC WATER LINE PIPE SHALL BE HDPE PIPE CONFORMING TO AWWA C906, WITH A STANDARD DIMENSION RATIO NO GREATER THAN 11, UNLESS OTHERWISE NOTED ON THE PLANS.

4. GATE VALVES SHALL MEET THE REQUIREMENTS OF AWWA C509 OR C515. VALVES SHALL BE 2" SQUARE NUT NON-RISING STEM (NRS) OPERATING, UNLESS SPECIFIED OTHERWISE. ALL VALVES SHALL BE TESTED TO ENSURE PROPER MOVEMENT PRIOR TO INSTALLATION.

5. ALL DUCTILE IRON MECHANICAL JOINT FITTINGS SHALL BE PRESSURE RATED AT 350 PSI AND MEET THE REQUIREMENTS OF AWWA C153. ALL FLANGED FITTINGS AND CAST IRON MECHANICAL JOINT FITTINGS SHALL BE MANUFACTURED DOMESTICALLY AND MEET THE REQUIREMENTS OF AWWA C110 AND C111. ALL FITTINGS SHALL BE FACTORY CEMENT MORTAR LINED AND COATED.

6. HORIZONTAL SEPARATION OF PARALLEL WATER AND SANITARY SEWER LINES SHALL MEET THE REQUIREMENTS OF FIGURE 6-1 IN THE CITY OF ASTORIA ENGINEERING DESIGN STANDARDS. IN AREAS WHERE SEPARATION REQUIREMENTS ARE UNABLE TO BE MET, SEPARATION SHALL BE APPROVED BY THE CITY.

7. WATER AND SANITARY SEWER LINE CROSSINGS SHALL BE IN ACCORDANCE WITH THE OAR 333-061-0050(9). SANITARY SEWER/WATER LINE CROSSINGS SHALL BE AS NEAR TO 90 DEGREES AS PRACTICAL. THE BOTTOM OF THE WATER LINE SHALL BE 1.5 FEET OR MORE ABOVE THE TOP OF THE SANITARY SEWER LINE AND ONE FULL STICK OF WATER LINE SHALL BE CENTERED AT THE CROSSING.

8. MINIMUM HORIZONTAL SEPARATION OF PARALLEL WATER AND ALL OTHER UTILITIES EXCEPT SANITARY SEWER SHALL BE 5 FT. MINIMUM VERTICAL CLEARANCE AT CROSSINGS SHALL BE 1 FT, EXCEPT FOR GAS CROSSINGS, WHICH REQUIRE 2 FT MINIMUM VERTICAL CLEARANCE.

9. TRACER WIRE SHALL BE 14-GAUGE, SOLID CORE, BLUE-COATED COPPER WIRE WITH THERMOPLASTIC INSULATION RECOMMENDED FOR DIRECT BURIAL, AND SHALL BE INSTALLED WITH ALL PVC AND HDPE WATER PIPE.

10. TRENCH BACKFILL MUST BE COMPACTED PER CITY OF ASTORIA STANDARD DETAIL UT-1.

11. ALL WATER LINE PIPE, INCLUDING SERVICE LINES, SHALL HAVE A MINIMUM OF 30" OF COVER TO FINISH GRADE.

12. WATER METERS AND METER BOXES SHALL BE PROVIDED AND INSTALLED BY THE CITY OF ASTORIA.

13. ALL PRIVATE DOMESTIC WATER PIPING SHALL BE INSTALLED BY A LICENSED PLUMBING CONTRACTOR AND A LICENSED JOURNEYMAN PLUMBER.

14. ALL NEW WATER SYSTEMS (INCLUDING LINES, VALVES, HYDRANTS AND SERVICES) SHALL BE INDIVIDUALLY PRESSURE TESTED, CHLORINATED, AND TESTED FOR BACTERIA. ALL TESTING SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C600 AND C651, AND OHA/DEQ REQUIREMENTS.

CHANGED TEXT TO BE MORE INLINE WITH STANDARD WATER NOTES

EROSION CONTROL NOTES:

CONSTRUCTION:

1. GENERAL: ALL EROSION CONTROL PRODUCTS AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON THE PLANS. ALL EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL ALL RESEEDING EFFORTS ARE COMPLETED AND VEGETATION HAS TAKEN ROOT, OR AS DIRECTED BY THE ENGINEER.

GENERAL

2. THE ESC FACILITIES SHOWN ON THESE PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE SEDIMENT AND SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.

3. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.

4. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED EVERY WEEK OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT. A STORM EVENT IS CLASSIFIED AS A RAINFALL EVENT WITH GREATER THAN 0.5 INCHES OF RAIN. A STORM EVENT MUST NOT HAVE A PERIOD GREATER THAN 4 HOURS BETWEEN RAINFALL EVENTS.

5. CLEARING AND GRADING SHALL BE DONE IN A PHASED MANNER TO PREVENT EXPOSED OR INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. CLEARING, GRADING, AND EROSION CONTROL SHALL TAKE PLACE IN SUCH A MANNER THAT OF BARE SOIL ARE PROTECTED AT THE END OF EACH WORKDAY.

6. ALL STOCKPILED ORGANIC MATERIALS/SOILS NOT SUBJECT TO IMMEDIATE USE, SHALL BE COVERED WITH PLASTIC SHEETING AND THIS COVERING SECURED WITH ROPES AND SANDBAGS.

7. THE CITY WILL RETAIN THE AUTHORITY TO INSPECT AND MODIFY ANY CONSTRUCTION ACTIVITY CAUSING EROSION OR SEDIMENTATION.

STORM WATER MANAGEMENT PLAN

PRIOR TO ANY SIGNIFICANT EXCAVATION

1. INSTALL BEST MANAGEMENT PRACTICE (BMP) FOR EROSION PREVENTION

2. MAINTAIN AS MUCH EXISTING VEGETATION AS POSSIBLE

DURING CONSTRUCTION

3. REMOVE ANY SOIL THAT LEAVES THE SITES AND ENTERS DOWNSTREAM DRAINAGE SYSTEM

4. THE CONTRACTOR SHALL MAINTAIN ALL EROSION, SEDIMENT AND POLLUTANT CONTROL MEASURES, TEMPORARY AND PERMANENT, IN PROPER FUNCTIONING ORDER. WITHIN 24 HOURS FOLLOWING A STORM OR HIGH WIND EVENT, THE CONTRACTOR MUST ADJUST, REPAIR AND REPLACE EROSION, SEDIMENT AND POLLUTANT CONTROL MEASURES TO ENSURE THAT THE MEASURES ARE FUNCTIONING PROPERLY.

5. ALL STOCKPILED MATERIALS SHALL BE PROTECTED WITH TEMPORARY SOIL STABILIZATION MEASURES SUCH AS PLASTIC SHEETING SECURED WITH TIE DOWNS AND SAND BAGS. STOCKPILING OF ANY MATERIALS WITHIN THE LIMITS OF THE LANDSLIDE OR WITHIN CLOSE PROXIMITY (50 FEET FROM LANDSLIDE BOUNDARIES) IS PROHIBITED.

UPON COMPLETION OF EXCAVATION

RE-SEED ALL DISTURBED SOILS. SEED SHALL BE FROM BLUE TAG STOCK AND FROM THE LATEST CROP AVAILABLE. SEED SHALL BE OF A TYPE THAT WILL THRIVE IN SHADED AREAS.

SEWER SYSTEM NOTES

GENERAL

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RE-ROUTING OF ACTIVE STORM /SEWER MAINS ON AN AS-NEEDED BASIS.

2. CONTRACTOR SHALL SUBMIT PIPING/PUMPING PLAN PRIOR TO WORK ON ACTIVE STORM/SEWER MAINS.

3. AT THE END OF EACH WORK DAY ALL OPEN TRENCHES SHALL BE BACKFILLED.

4. NO UNDERGROUND WORK SHALL BE "BURIED" UNTIL INSPECTED AND APPROVED BY THE CITY.

SEWER MANHOLES

1. CONTRACTOR SHALL VERIFY ALL INVERTS, PIPE SIZES AND CONNECTIONS AT EACH MANHOLE.

2. CONTRACTOR SHALL SUBMIT MANHOLE SCHEDULE (SIZE, INVERTS, STACK UP, ETC) FOR CITY APPROVAL.

SEWER MAIN AND MANHOLE TESTING

1. NEW SEWER PIPES MUST BE THOROUGHLY FLUSHED, INSPECTED BY VIDEO AND MANDREL TESTED, AFTER TRENCH BACKFILLING IS COMPLETE AND PRIOR TO CITY ACCEPTANCE. THIS INCLUDES VIDEO CONFIRMATION THAT THE LINE IS FREE FROM SAGS, IRREGULAR JOINTS AND CONNECTIONS, OBSTRUCTIONS, RESTRICTIONS OR OTHER ANOMALIES THAT MAY CAUSE SOLIDS TO ACCUMULATE.

2. SEWER MAIN TESTING TO BE PERFORMED IN ACCORDANCE WITH 2018 EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION (ODOT/APWA) AND CITY OF ASTORIA SPECIAL PROVISION:
   - A. 00455.70 GENERAL
   - B. 00445.71 REQUIREMENTS PRIOR TO TESTS
   - C. 00445.72 PIPE TESTING
   - D. 00445.73 DEFLECTION TESTING FOR FLEXIBLE PIPE
   - E. 00445.74 VIDEO INSPECTION OF SANITARY AND STORM SEWERS
   - F. 00445.75 REPAIRS

2. SEWER MANHOLE TESTING TO BE PERFORMED IN ACCORDANCE WITH ODOT:
   - A. 00470.70 CLEANING
   - B. 00470.71 SANITARY MANHOLE ACCEPTANCE TESTING

27th STREET SLIDE
WATER & SEWER REPAIR
PROJECT NOTES

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

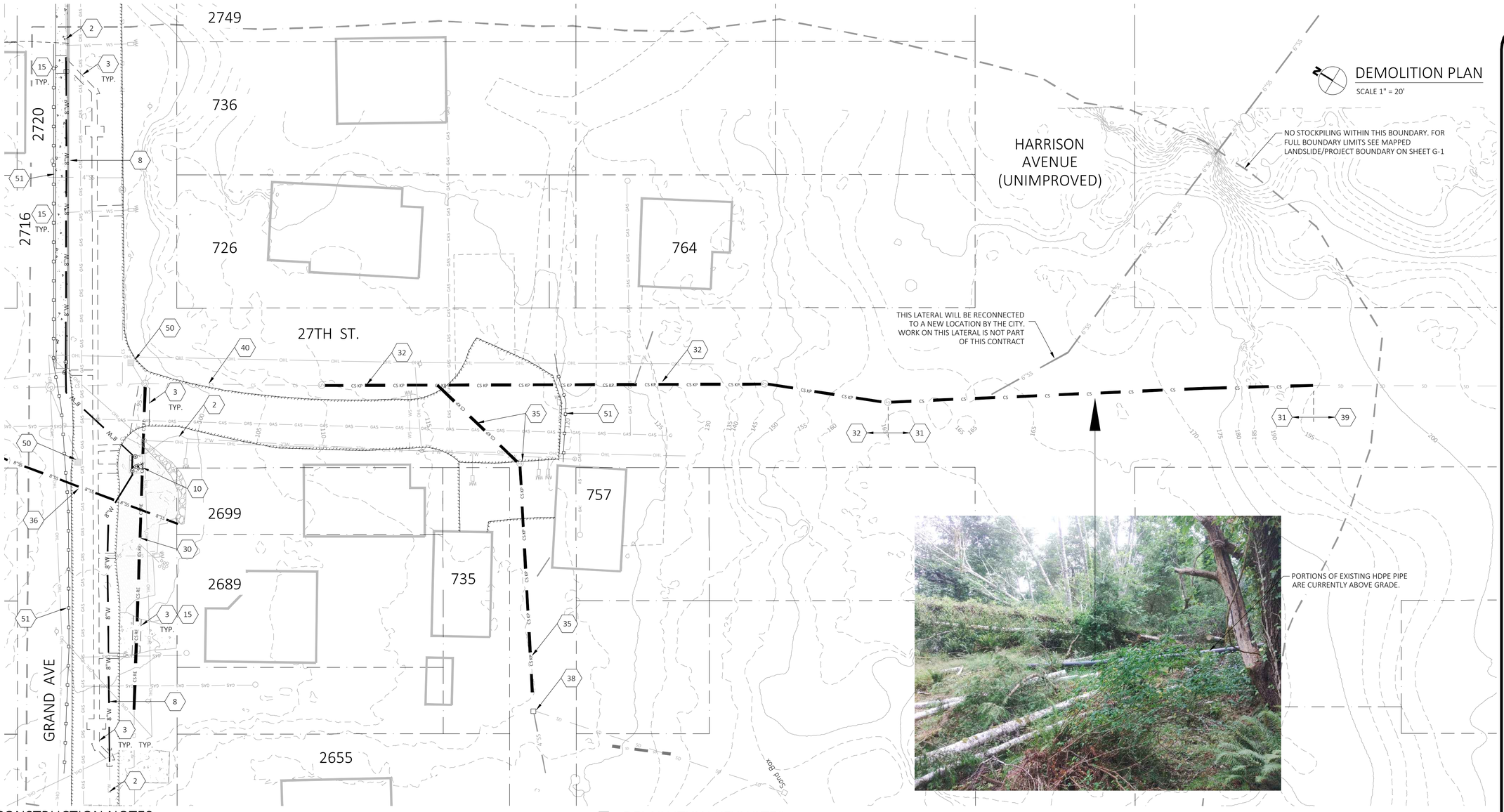
No.	Revision/Issue Date

Project Name and Address

27TH STREET / GRAND AVENUE
WATER AND SEWER REPAIR

Engineer's Stamp

Drawing Name: 27TH SLIDE 90%	Sheet: G-2
Date: 08/14/24	
Scale: As Noted	



PORTIONS OF EXISTING HDPE PIPE ARE CURRENTLY ABOVE GRADE.

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL POTHOLE ALL UTILITY CONNECTION AND CROSSING LOCATIONS. NOTIFY CITY ENGINEER IMMEDIATELY IF EXISTING UTILITIES ARE ENCOUNTERED IN CONFLICT WITH PROPOSED ALIGNMENT, PROFILE, OR WITH LESS THAN 12" VERTICAL CLEARANCE AT CROSSING WITH NEW WATER OR SEWER MAIN.
2. CONTRACTOR TO COORDINATE SCHEDULES WITH CITY FOR ADJUSTMENTS TO THE WATER/SEWER MAIN AND SERVICES.
3. COORDINATE INSPECTION WITH CITY A MINIMUM 48 HOURS IN ADVANCE OF POTHOLING AND CONSTRUCTING.
4. PROJECT SITE SHALL BE SWEPT CLEAN AT THE END OF EACH WORKDAY OR AS NECESSARY TO PREVENT SEDIMENT MIGRATION AND TRACKING.
5. PROJECT STREETS MAY BE CLOSED, INCLUDING GRAND AVENUE WEST OF 27TH STREET, FROM 8:00 AM TO 6:00 PM MONDAY-FRIDAY DURING ACTIVE CONSTRUCTION. CONTRACTOR SHALL MAINTAIN LOCAL AND EMERGENCY ACCESS AND COORDINATE WEEKLY ACCESS FOR SANITATION SERVICES.
6. NO EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. SECURITY OF MATERIALS AND SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE ELEVATIONS PRESENTED ON THE PLANS WERE DETERMINED USING ASTORIA AERIAL TOPOGRAPHIC DATA, 2010 LIDAR DATA, AND DRONE IMAGERY WITH SURFACE DATA DATED MAY 31, 2024. THE DESIGN ELEVATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD MEASUREMENTS TAKEN DURING CONSTRUCTION.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TEMPORARY OR PERMANENT STORM, SEWER, AND WATER SERVICES TO BUILDINGS AND USERS AFFECTED BY DEMOLITION OF EXISTING SYSTEMS.
9. ITEMS NOTED FOR REMOVAL OR DEMOLITION TO BE DISPOSED OF IN A MANNER THAT MEETS APPLICABLE STATE AND FEDERAL REGULATIONS.
10. ALL BACKFILL AND COMPACTION WORK ASSOCIATED WITH UTILITY REMOVAL MUST BE OBSERVED BY THE CITY AND MEET CONTRACT REQUIREMENTS FOR COMPACTION.
11. CONTRACTOR SHALL PLAN AND EXECUTE DEMOLITION IN ACCORDANCE WITH OSHA 29 CFR PART 1926 INCLUDING SUBPART "T" DEMOLITION.
12. PROTECT IN PLACE ALL SITE FEATURES NOT MARKED FOR REMOVAL.
13. PRIOR TO ANY LAND DISTURBANCE OR DEMOLITION ACTIVITIES, ALL SITE CONSTRUCTION EROSION CONTROL MEASURES SHALL BE IN PLACE PER THE APPROVED EROSION CONTROL PLAN SET.
14. CONTRACTOR TO PLAN ANY SITE WORK WHERE POTHOLING IS REQUIRED TO VERIFY EXISTING UTILITIES BEFORE DEMOLITION AND CONSTRUCTION ACTIVITIES. THE POTHOLING SCHEDULE MUST BE APPROVED BY THE CITY AND UTILITY COMPANY. ALL UTILITY CROSSINGS WHERE POTHOLING IS RECOMMENDED OR APPROPRIATE MAY NOT BE SHOWN ON THIS PLAN SHEET. CONTRACTOR TO UTILIZE THEIR DISCRETION TO LIMIT PROJECT SCOPE AND SCHEDULE RISK DUE TO KNOWN UNKNOWNS.
15. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN MAPPED FROM OBSERVED ABOVE GROUND EVIDENCE AND GROUND MARKINGS BY OTHERS, AND EXISTING DRAWINGS. THE CITY MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE CITY FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY DO CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE CITY HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

(X) DEMOLITION KEYNOTES:

2. EXISTING WATERLINE TO REMAIN.
3. SAWCUT EXISTING PAVEMENT.
8. CAP EXISTING WATERLINE ENDS WITH MJ CAP ENCASED IN CDF. WATERLINE TO REMAIN IN SERVICE UNTIL NEW HDPE WATER MAIN IS ACTIVATED.
10. SALVAGE EXISTING HYDRANT AND VALVES AND DELIVER TO CITY.
15. REMOVE EXISTING CURB, SIDEWALK, AND PAVEMENT IN AREAS OF UTILITY TRENCHING. AFTER UTILITY INSTALLATION IS COMPLETE, CONTRACTOR TO RESTORE SURFACING TO EXISTING CONDITIONS OR BETTER. SEE DETAIL UT-1 ON SHEET D-1 AND DETAIL ST-3 & 4 ON SHEET D2.
30. EXISTING COMBINED SEWER LINE TO REMOVE DURING CONSTRUCTION OF NEW SEWER MAIN. TV EXISTING LINE AND POTHOLE SERVICE CONNECTIONS AND NEW MANHOLE LOCATION PRIOR TO REMOVAL TO CONFIRM CONNECTION LOCATIONS, ALIGNMENT AND ELEVATIONS.
31. REMOVE EXISTING HDPE LINE.
32. PROTECT EXISTING COMBINED SEWER LINE. THIS LINE MAY STILL PROVIDE A DEWATERING FUNCTION. TO THE EXTENT POSSIBLE, PROVIDE TV INSPECTION OF THE EXISTING LINE TO DETERMINE EXISTING CONNECTIONS AND TO DETERMINE QUALITY OF EXISTING PIPE. POTHOLE EXISTING CONNECTIONS TO CONFIRM CONNECTION LOCATIONS, ALIGNMENT AND ELEVATIONS.
35. CLEAN PIPELINES AND EXISTING MANHOLE. ONCE PIPES ARE CLEAN AND FREE OF STANDING WATER AND DEBRIS, PERFORM A TV INSPECTION OF THE SYSTEM TO IDENTIFY THE LOCATIONS OF LATERAL CONNECTIONS AND ASSESS THE CONDITION OF THE PIPE. NOTE THAT THIS MANHOLE CURRENTLY RETAINS WATER DUE TO A REVERSE SLOPE IN THE PIPE(S) CAUSED BY THE SLIDE. THE PIPE SYSTEM MAY REMAIN IN PLACE IF APPROVED BY THE CITY. HOWEVER, ALL LATERALS WILL BE RELOCATED TO THE WEST, REGARDLESS OF THE PIPE'S CONDITION.
36. EXISTING SEWER LINE TO GROUTED AND ABANDONED IN PLACE. TV EXISTING LINE PRIOR TO ABANDONMENT TO CONFIRM NO LIVE CONNECTION EXIST.
38. DEMO AND REMOVE EXISTING CONCRETE SEWER/STORM STRUCTURE.
39. PROTECT EXISTING STORMWATER PIPELINE. POINT OF PROTECTION STARTS AT STA 5+67 OF THE 27TH STREET ALIGNMENT LOCATED ON SHEET S-1.
40. PROTECT IN PLACE EXISTING COMBINED SEWER LINE.
50. INSTALL PREFABRICATED FILTER INSERT AND MAINTAIN UNTIL ALL SURFACES HAVE BEEN STABILIZED. SEE ODOT STANDARD DRAWING RD1010 ON SHEET D-3.
51. INSTALL STRAW WATTLE IN 3" DEEP TRENCH . STAKE WATTLE EVERY 3'-4'. ABUT ADJACENT WATTLES TIGHTLY, END TO END, WITHOUT OVERLAPPING THE ENDS. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND WATTLE.

Engineer's Stamp

27th STREET SLIDE WATER & SEWER REPAIR

DEMOLITION PLAN

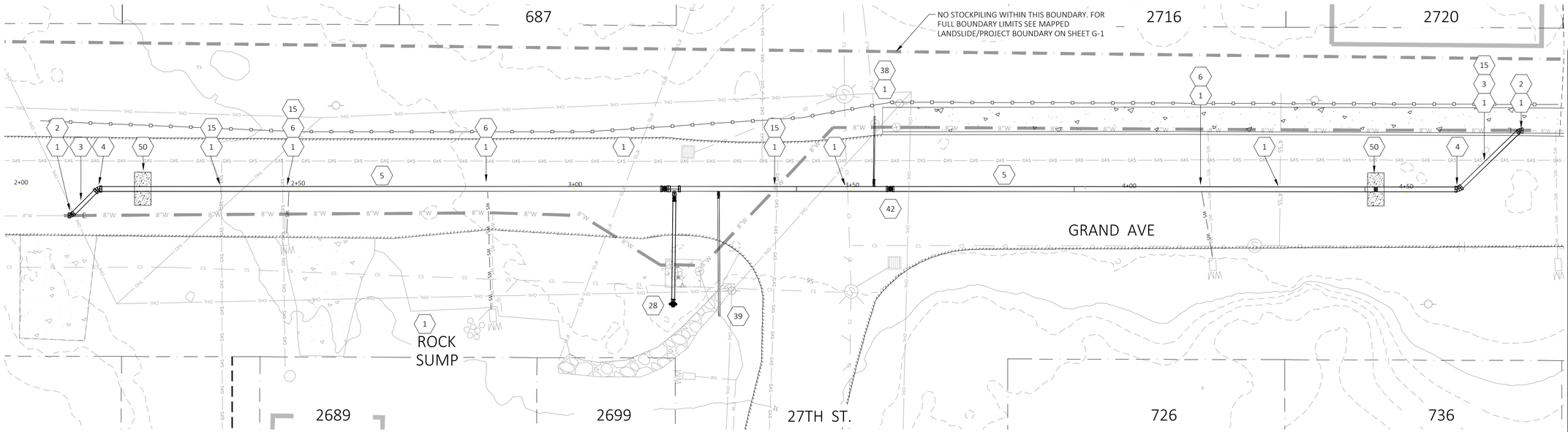
City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

No.	Revision/Issue Date

Project Name and Address

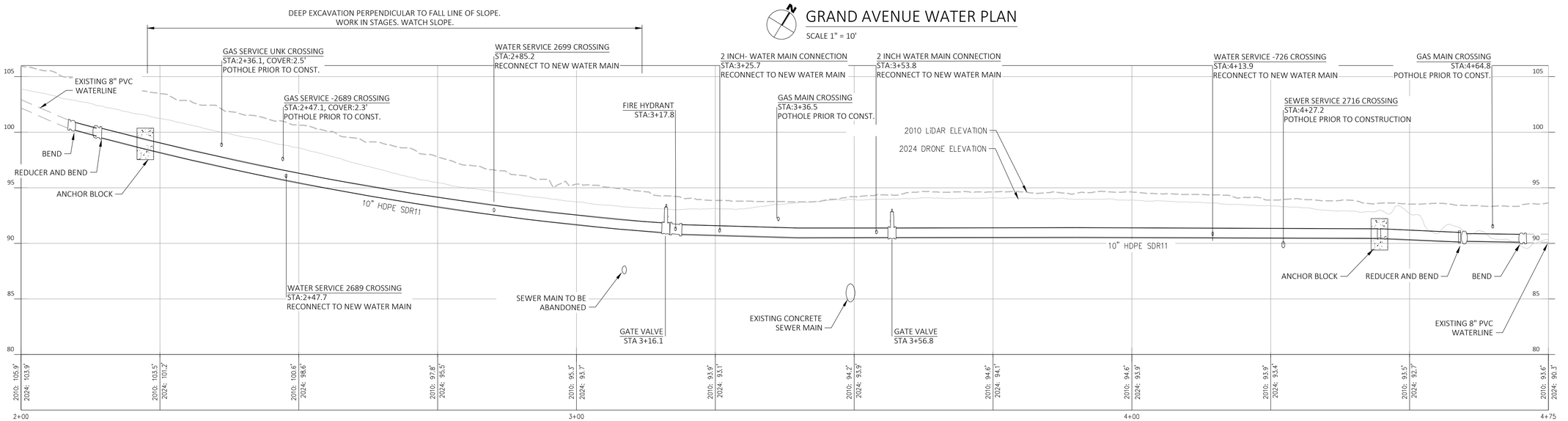
27TH STREET / GRAND AVENUE WATER AND SEWER REPAIR

Drawing Name: 27TH SLIDE 90%	Sheet: DE-1
Date: 08/14/24	
Scale: As Noted	



GRAND AVENUE WATER PLAN

SCALE 1" = 10'



GRAND AVENUE WATER PROFILE

SCALES: HORIZONTAL: 1" = 10' VERTICAL: 1" = 5'

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL POTHOLE ALL UTILITY CONNECTION AND CROSSING LOCATIONS. NOTIFY THE CITY ENGINEER IMMEDIATELY IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT WITH THE PROPOSED ALIGNMENT, PROFILE, OR HAVE LESS THAN 12 INCHES OF VERTICAL CLEARANCE AT THE CROSSING WITH THE NEW WATER MAIN.
2. THE CONTRACTOR MUST COORDINATE SCHEDULES WITH THE CITY FOR ADJUSTMENTS TO THE WATER MAIN AND WATER SERVICES.
3. COORDINATE INSPECTION WITH THE CITY A MINIMUM OF 48 HOURS IN ADVANCE OF POTHOLES AND CONSTRUCTION.
4. THE PROJECT SITE SHALL BE SWEPT CLEAN AT THE END OF EACH WORKDAY OR AS NECESSARY TO PREVENT SEDIMENT MIGRATION AND TRACKING.
5. GRAND AVENUE MAY BE CLOSED WEST OF 27TH STREET FROM 8:00 AM TO 6:00 PM, MONDAY THROUGH FRIDAY, DURING ACTIVE CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN LOCAL AND EMERGENCY ACCESS AND COORDINATE WEEKLY ACCESS FOR SANITATION SERVICES.
6. NO EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. SECURITY OF MATERIALS AND THE SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR.
7. THE ELEVATIONS PRESENTED ON THE PLANS WERE DETERMINED USING ASTORIA AERIAL TOPOGRAPHIC DATA, 2010 LIDAR DATA, AND DRONE IMAGERY WITH SURFACE DATA DATED MAY 31, 2024. THE DESIGN ELEVATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD MEASUREMENTS TAKEN DURING CONSTRUCTION.

(X) WATERLINE KEYNOTES:

1. POTHOLE EXISTING UTILITY TO DETERMINE SIZE, MATERIAL, LOCATION, AND DEPTH. REPORT INFORMATION TO CITY AND ENGINEER IMMEDIATELY. NOT ALL LOCATIONS SHOWN FOR CLARITY, POTHOLE ALL UTILITIES THAT MAY IMPACT UTILITY DESIGN.
2. CONNECT TO EXISTING 8" PVC MAIN WITH ALPHA COUPLING (OR APPROVED EQUAL), 8" MJXMJ 45° DI BEND, 8" CLASS 52 DI PUP. USE ROMAC GRIP RINGS AT CONNECTIONS WITH A THRUST BLOCK.
3. INSTALL NEW 8" C900 PVC MAIN. SEE ASTORIA STANDARD DETAIL UT-1, SHEET D-1.
4. INSTALL 8" 45° (MJXFL) BEND WITH WITH ROMAC GRIP RING AND THRUST BLOCK. CONNECT FLANGED END OF BEND TO 8"X10" (FLXFL) REDUCER, CONNECT TO FLANGED END REDUCER TO NEW 10" HDPE WATERLINE.
5. CONSTRUCT NEW 10" HDPE WATERLINE (SDR-11). SEE ASTORIA STANDARD DETAIL UT-1, SHEET D-1. INSTALL TRENCH DAMS AT 50' O.C. SEE DETAIL 1 ON SHEET D-4
6. INSTALL 1" CTS SDR 9 PE WATER SERVICE TO EXISTING METER AND INSTALL NEW 1" METER BOX. SEE DETAIL W-3, SHEET D-2
15. NW NATURAL REQUIRES 6" VERTICAL CLEARANCE FROM UTILITY. IF NECESSARY, COORDINATE ADJUSTMENT OF EXISTING GAS SERVICE/MAIN WITH NW NATURAL.
28. INSTALL FIRE HYDRANT ASSEMBLY WITH 10"X6" FLXFL TEE . SEE ASTORIA STANDARD DETAIL W-2, SHEET D-2 FOR STANDARD FIRE HYDRANT ASSEMBLY. CONNECT DOWNSTREAM END OF FLANGED TEE TO A FLANGED END OF THE NEW 10" HDPE END, CONNECT OTHER END OF FLANGED TEE TO A NEW 10" FLXFL GATE VALVE. CONNECT UPSTREAM END OF 10" GATE VALVE TO AN UPSTREAM FLANGED END OF THE 10" HDPE PIPE.
38. CONNECT EXISTING 2" WATERLINE TO NEW HDPE MAIN AND DEMO EXISTING WATER VALVE ON EXISTING 2" WATERLINE. SEE ASTORIA STANDARD DETAIL W-4 (NOTES 1-7), SHEET D-3 FOR CONNECTION DETAIL (NOTE THAT STANDARD REQUIRES A NEW 2" GATE VALVE AT THE CONNECTION TO THE NEW 10" WATER MAIN). CONNECT TO EXISTING 2" WATERLINE USING ROMAC MACRO HP COUPLER (OR APPROVED EQUAL). POTHOLE CONNECTION PRIOR TO ORDERING PARTS TO DETERMINE PIPE SIZE AND MATERIAL.
39. CONNECT EXISTING 2" HDPE WATERLINE TO NEW 10" HDPE MAIN AND DEMO EXISTING WATER VALVE ON EXISTING 2" WATERLINE. SEE ASTORIA STANDARD DETAIL W-4 (NOTES 1-7), SHEET D-3 FOR CONNECTION DETAIL (NOTE THAT STANDARD REQUIRES A NEW 2" GATE VALVE AT THE CONNECTION TO THE NEW 10" WATER MAIN). CONNECT TO EXISTING 2" WATERLINE USING COMPRESSION COUPLER. POTHOLE CONNECTION PRIOR TO ORDERING PARTS TO DETERMINE PIPE SIZE AND MATERIAL.
42. INSTALL 10" GATE VALVE (FLXFL) TO FLANGED ENDS OF NEW 10" HDPE WATERLINE.
50. CONCRETE ANCHOR BLOCK, SEE DETAIL 1, SHEET D-2

MAXIMUM OPEN TRENCH LENGTH SHALL NOT EXCEED 50 FEET.

Engineer's Stamp

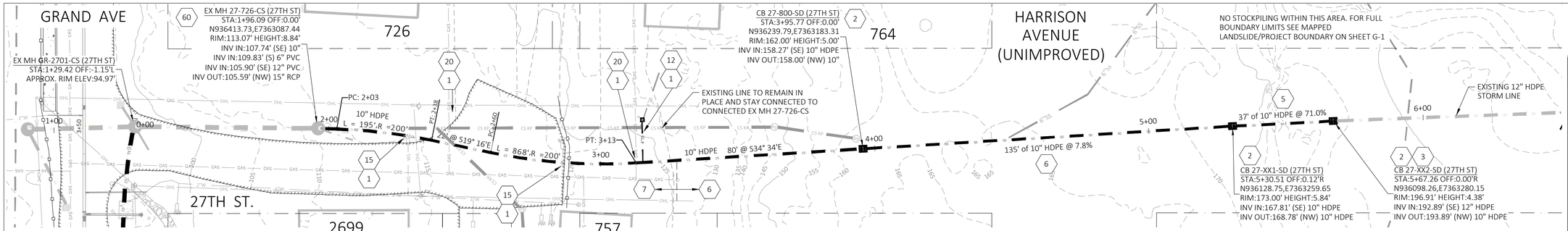
27th STREET SLIDE
WATER & SEWER REPAIR
WATER ALIGNMENT AND PROFILE

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

No.	Revision/Issue Date

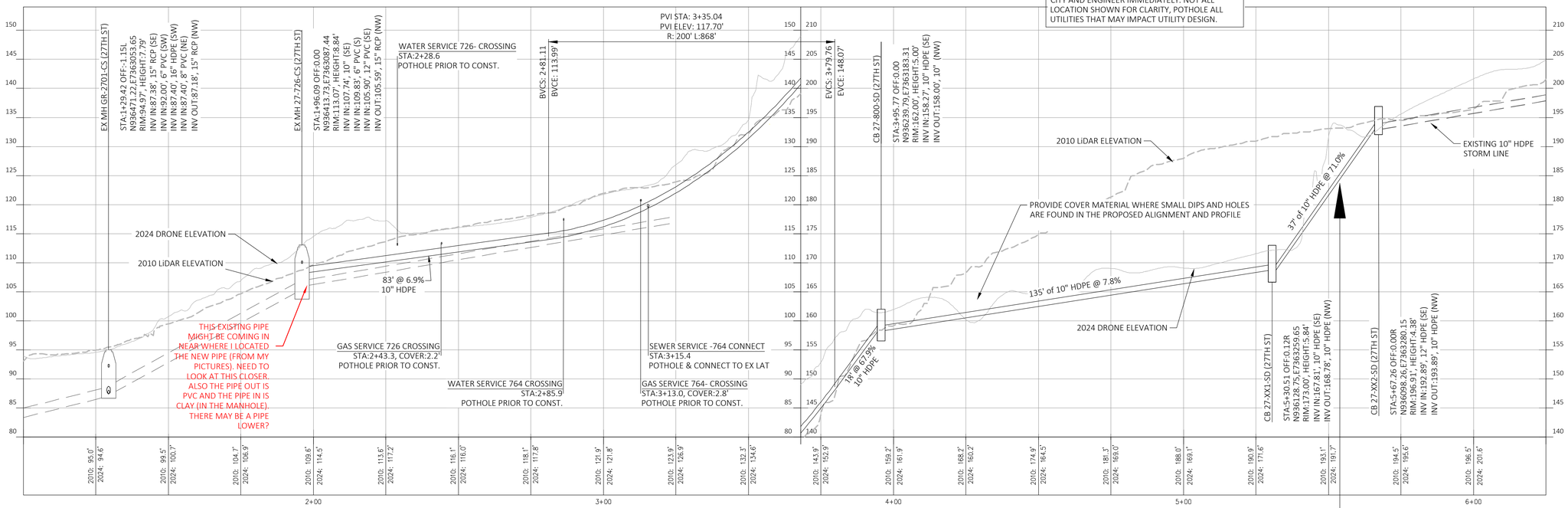
Project Name and Address
27TH STREET / GRAND AVENUE WATER AND SEWER REPAIR

Drawing Name	Sheet
27TH SLIDE 90%	W-1
Date: 08/14/24	
Scale: As Noted	



27TH STREET SEWER PLAN

SCALE 1" = 20'



27TH STREET SEWER PROFILE

SCALES: HORIZONTAL: 1" = 20' VERTICAL: 1" = 10'

POTHOLE NOTE

PRIOR TO ORDERING MATERIALS, POTHOLE EXISTING UTILITY TO DETERMINE SIZE, MATERIAL, LOCATION, AND DEPTH. REPORT INFORMATION TO CITY AND ENGINEER IMMEDIATELY. NOT ALL LOCATION SHOWN FOR CLARITY, POTHOLE ALL UTILITIES THAT MAY IMPACT UTILITY DESIGN.

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL POTHOLE ALL UTILITY CONNECTION AND CROSSING LOCATIONS. NOTIFY CITY ENGINEER IMMEDIATELY IF EXISTING UTILITIES ARE ENCOUNTERED IN CONFLICT WITH PROPOSED ALIGNMENT, PROFILE, OR WITH LESS THAN 12" VERTICAL CLEARANCE AT CROSSING WITH NEW SEWER MAIN.
2. PROJECT SITE SHALL BE CLEANED AT THE END OF EACH WORKDAY OR AS NECESSARY TO PREVENT SEDIMENT MIGRATION AND TRACKING.
3. 27TH STREET AVENUE CAN BE CLOSED , FROM 8:00 AM TO 6:00 PM MONDAY-FRIDAY DURING ACTIVE CONSTRUCTION. CONTRACTOR SHALL MAINTAIN LOCAL AND EMERGENCY ACCESS AND COORDINATE WEEKLY ACCESS FOR SANITATION SERVICES.
4. NO EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. SECURITY OF MATERIALS AND SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE ELEVATIONS PRESENTED ON THE PLANS WERE DETERMINED USING ASTORIA AERIAL TOPOGRAPHIC DATA, 2010 LIDAR DATA, AND DRONE IMAGERY WITH SURFACE DATA DATED MAY 31, 2024. THE DESIGN ELEVATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD MEASUREMENTS TAKEN DURING CONSTRUCTION.

KEYNOTES:

1. POTHOLE EXISTING UTILITY TO DETERMINE SIZE, MATERIAL, LOCATION, AND DEPTH, REPORT INFORMATION TO CITY AND ENGINEER IMMEDIATELY.
2. CONSTRUCT CATCH BASIN, SEE ASTORIA STANDARD DETAIL SD-1, SD-3, & SD-4 ON SHEET D-5. ACTUAL LOCATIONS, DEPTHS AND INVERTS WILL BE DETERMINED DURING CONSTRUCTION. THESE PLANS PROVIDE A GENERAL INTENT.
3. CONNECT TO EXISTING 10" HDPE LINE. EXISTING LINE IS SHALLOW AND EXPOSED TO THE SURFACE.
5. CONSTRUCT 10"Ø HDPE SDR 21 STORM WATER MAIN. SEE ASTORIA STANDARD DETAIL UT-1 ON SHEET D-1. PROVIDE A MINIMUM OF 18" OF COVER USING NATIVE MATERIAL FOR BEDDING AND BACKFILL. COVER ALL EXPOSED SOILS WITH STRAW AND SEED IMMEDIATELY AFTER BACKFILLING TRENCH.
6. CONSTRUCT 10"Ø HDPE SDR 21 COMBINED SEWER MAIN. SEE ASTORIA STANDARD DETAIL UT-1 ON SHEET D-1. PROVIDE A MINIMUM OF 12" OF COVER USING NATIVE MATERIAL FOR BEDDING AND BACKFILL. COVER ALL EXPOSED SOILS WITH STRAW AND SEED IMMEDIATELY AFTER BACKFILLING TRENCH.
7. CONSTRUCT 10"Ø HDPE SDR 21 STORMWATER MAIN. SEE ASTORIA STANDARD DETAIL UT-1 ON SHEET D-1. PROVIDE A MINIMUM OF 24" OF COVER USING CRUSHED ROCK BEDDING AND BACKFILL. THIS LINE HAS BOTH VERTICAL AND HORIZONTAL BENDS WITH A RADIUS OF 200' OR GREATER (PER DEQ GUIDELINES). THE ALIGNMENT AND ELEVATIONS WILL BE DETERMINED DURING CONSTRUCTION TO ALLOW NECESSARY CHANGES TO ALIGN WITH SITE CONDITIONS.
12. INSTALL C900 PVC SEWER LATERAL AT 2% MINIMUM SLOPE WITH CLEANOUT. SEE ASTORIA STANDARD DETAIL S-8 AND S-9 ON SHEET D-1. CONNECT TO NEW HDPE SEWER MAIN USING ELECTRO-FUSION SADDLE, CUT OPENING INTO HDPE PIPE TO MATCH SADDLE OPENING, SMOOTH ROUGH EDGES OF PIPE AS NECESSARY. CONNECT SEWER LATERAL TO SADDLE USING FERNCO XL COUPLING (OR APPROVED EQUAL).
15. LIFT WATER SERVICE TO PROVIDE A MINIMUM 12" OF SEPARATION BETWEEN NEW SEWER MAIN. IF LESS THAN 12" OF SEPARATION, BED WATER SERVICE FROM SPRINGLINE OF NEW SEWER MAIN TO SPRINGLINE OF WATER SERVICE USING CDF THE WIDTH OF THE SEWER TRENCH.
20. NW NATURAL REQUIRES 6" VERTICAL CLEARANCE FROM UTILITY. IF NECESSARY, COORDINATE ADJUSTMENT OF EXISTING GAS SERVICE/MAIN WITH NW NATURAL.
60. THE TOP SECTIONS OF THE EXISTING MANHOLE HAVE SLIGHTLY SHIFTED OFF THE BASE. CLEAN BASE AND ADJUST MANHOLE SECTIONS. GROUT ALL JOINTS AND PIPE PROTRUSIONS. CORE DRILL NEW CONNECTION.

IMAGE OF EXISTING PIPE AND LANDSLIDE

27th STREET SLIDE
WATER & SEWER REPAIR
27TH ST. SEWER PLAN/PROFILE

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

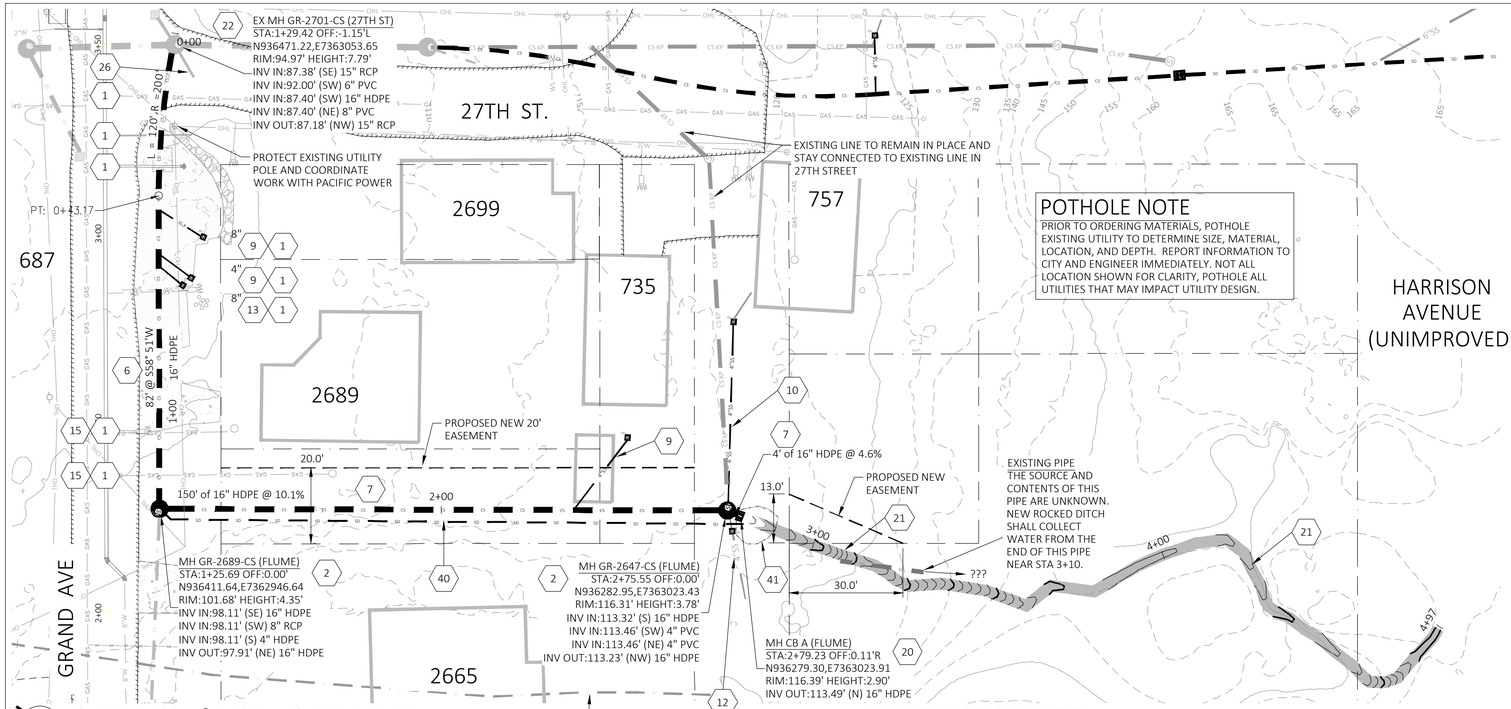
No.	Revision/Issue Date

Project Name and Address

27TH STREET / GRAND AVENUE WATER AND SEWER REPAIR

Engineer's Stamp

Drawing Name	Sheet
27TH SLIDE 90%	S-1
Date: 08/14/24	
Scale: As Noted	



GRAND AVE. & FLUME SEWER MAIN

SCALE 1" = 20'

CONSTRUCTION NOTES:

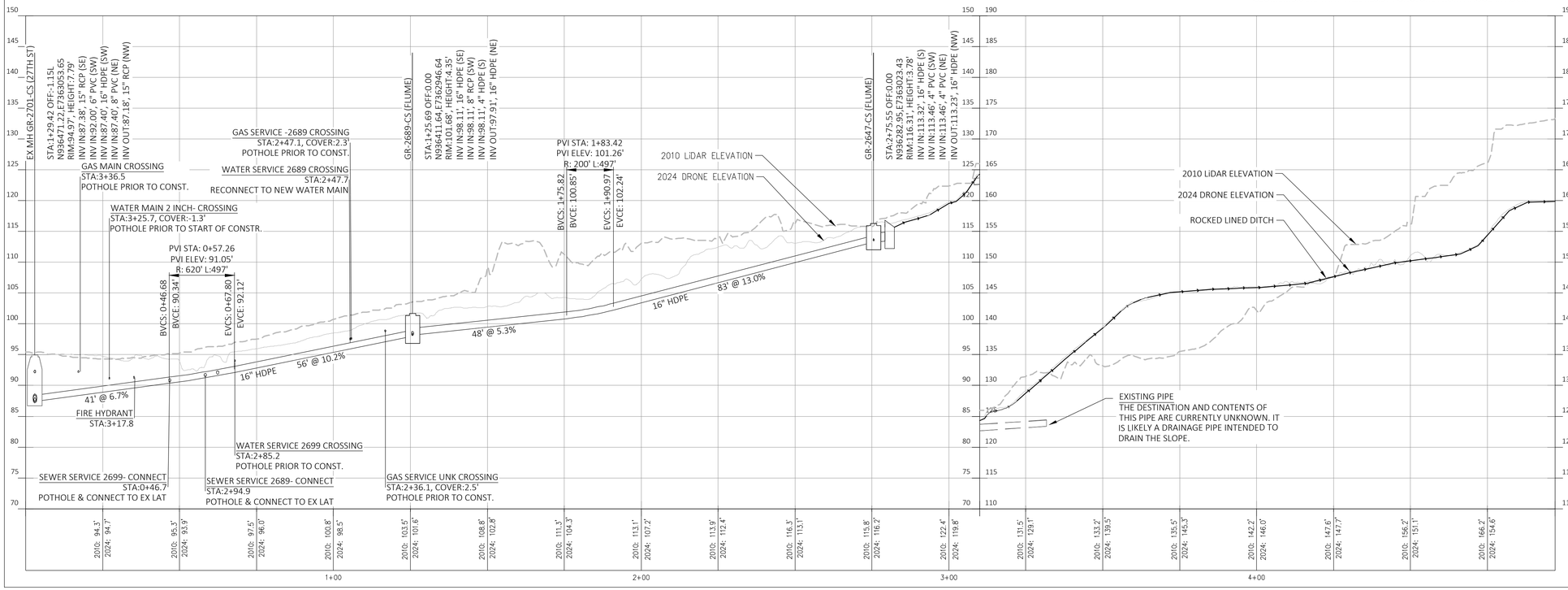
1. CONTRACTOR SHALL POTHOLE ALL UTILITY CONNECTION AND CROSSING LOCATIONS. NOTIFY CITY ENGINEER IMMEDIATELY IF EXISTING UTILITIES ARE ENCOUNTERED IN CONFLICT WITH PROPOSED ALIGNMENT, PROFILE, OR WITH LESS THAN 12" VERTICAL CLEARANCE AT CROSSING WITH NEW SEWER MAIN.
2. PROJECT SITE SHALL BE CLEANED AT THE END OF EACH WORKDAY OR AS NECESSARY TO PREVENT SEDIMENT MIGRATION AND TRACKING.
3. GRAND AVENUE CAN BE CLOSED , FROM 8:00 AM TO 6:00 PM MONDAY-FRIDAY DURING ACTIVE CONSTRUCTION. CONTRACTOR SHALL MAINTAIN LOCAL AND EMERGENCY ACCESS AND COORDINATE WEEKLY ACCESS FOR SANITATION SERVICES.

CONSTRUCTION NOTES CONTINUED:

5. NO EXCAVATION SHALL BE LEFT OPEN OVERNIGHT. SECURITY OF MATERIALS AND SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE ELEVATIONS PRESENTED ON THE PLANS WERE DETERMINED USING ASTORIA AERIAL TOPOGRAPHIC DATA, 2010 LIDAR DATA, AND DRONE IMAGERY WITH SURFACE DATA DATED MAY 31, 2024. THE DESIGN ELEVATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD MEASUREMENTS TAKEN DURING CONSTRUCTION.

(X) KEYNOTES:

1. POTHOLE EXISTING UTILITY TO DETERMINE SIZE, MATERIAL, LOCATION, AND DEPTH. REPORT INFORMATION TO CITY AND ENGINEER IMMEDIATELY. NOT ALL LOCATION SHOWN FOR CLARITY, POTHOLE ALL UTILITIES THAT MAY IMPACT UTILITY DESIGN.
2. CONSTRUCT 48" FLAT TOP MANHOLE WITHOUT LOCKING LIDS. SEE ASTORIA STANDARD DETAIL S-1 & S-4 ON SHEET D-1. CORE DRILL ALL NEW CONNECTIONS. ACTUAL LOCATIONS, DEPTHS AND INVERTS WILL BE DETERMINED DURING CONSTRUCTION. THESE PLANS PROVIDE A GENERAL INTENT.
6. CONSTRUCT 16"Ø HDPE SDR 21 COMBINED SEWER MAIN. SEE ASTORIA STANDARD DETAIL UT-1 ON SHEET D-1. PROVIDE A MINIMUM OF 36" OF COVER USING CRUSHED ROCK BEDDING AND BACKFILL. THIS LINE HAS BOTH VERTICAL AND HORIZONTAL BENDS WITH A RADIUS OF 200' OR GREATER (PER DEQ GUIDELINES). THE ALIGNMENT AND ELEVATIONS WILL BE DETERMINED DURING CONSTRUCTION TO ALLOW NECESSARY CHANGES DUE TO SITE CONDITIONS. THE INTENT IS TO CONSTRUCT THE NEW PIPE AT THE SAME LINE AND GRADE AS THE EXISTING PIPE AND DEMO THE PIPE AS CONSTRUCTION PROGRESSES.
7. CONSTRUCT 16"Ø HDPE SDR 21 COMBINED SEWER MAIN OR STORM LINE. SEE ASTORIA STANDARD DETAIL UT-1 ON SHEET D-1. PROVIDE A MINIMUM OF 24" OF COVER USING CRUSHED ROCK BEDDING AND BACKFILL. THE ALIGNMENT AND ELEVATIONS WILL BE DETERMINED DURING CONSTRUCTION TO ALLOW NECESSARY CHANGES DUE TO SITE CONDITIONS. COVER ALL EXPOSED SOILS WITH STRAW AND SEED IMMEDIATELY AFTER BACKFILLING TRENCH.
9. INSTALL C900 PVC SEWER LATERAL AT 2% MINIMUM SLOPE WITH CLEANOUT. SEE ASTORIA STANDARD DETAIL S-8 AND S-9 ON SHEET D-1. CONNECT TO NEW HDPE SEWER MAIN USING ELECTRO-FUSION SADDLE, CUT OPENING INTO HDPE PIPE TO MATCH SADDLE OPENING, SMOOTH ROUGH EDGES OF PIPE AS NECESSARY. CONNECT SEWER LATERAL TO SADDLE USING FERNCO XL COUPLING (OR APPROVED EQUAL).
10. INSTALL C900 PVC SEWER LATERAL AT 2% MINIMUM SLOPE WITH CLEANOUT AND CONNECT TO EXISTING SEWER LATERAL FROM 757 27TH STREET. SEE ASTORIA STANDARD DETAIL S-8 AND S-9 ON SHEET D-1. CONNECT TO NEW MH GR-2647-CS.
12. CONNECT EXISTING SEWER LATERAL FROM 2647 GRAND AVENUE TO NEW MH GR-2647-CS.
13. CONNECT TO EXISTING ROCK SUMP AND FUTURE BUTTRESS DRAIN. INSTALL C900 PVC SEWER LATERAL AT 2% MINIMUM SLOPE WITH CLEANOUT. SEE ASTORIA STANDARD DETAIL S-8 AND S-9 ON SHEET D-1. CONNECT TO NEW HDPE SEWER MAIN USING ELECTRO-FUSION SADDLE, CUT OPENING INTO HDPE PIPE TO MATCH SADDLE OPENING, SMOOTH ROUGH EDGES OF PIPE AS NECESSARY. CONNECT SEWER LATERAL TO SADDLE USING FERNCO XL COUPLING (OR APPROVED EQUAL).
15. NW NATURAL REQUIRES 6" VERTICAL CLEARANCE FROM UTILITY. IF NECESSARY, COORDINATE ADJUSTMENT OF EXISTING GAS SERVICE/MAIN WITH NW NATURAL.
20. CONSTRUCT FIELD INLET BASIN. SEE ASTORIA STANDARD DETAIL SD-2 ON SHEET D-3
21. CONSTRUCT ROCK LINED DITCH. SEE DETAIL 2, SHEET D-4. THIS IS A FIELD FIT ITEM WITH THE INTENT TO COLLECT WATER FROM THE HILLSIDE AND DRAIN IT INTO THE CITY SEWER SYSTEM. COVER ALL CUT SLOPES CREATED DURING CONSTRUCTION AND COVER ALL OTHER EXPOSED SOILS WITH STRAW AND SEED .
22. CONNECT TO EXISTING MANHOLE AT EXISTING CONNECTION INTO MH.
26. POSSIBLE LATERAL CONNECTION FROM 2699 27TH STREET, TV AND POTHOLE CONNECTION TO DETERMINE ALIGNMENT AND SOURCE
40. CONSTRUCT FRENCH DRAIN WITH 4" PERFORATED PIPE PER DETAIL 1, SHEET D-3. ALIGN PIPE APPROXIMATELY 3' SOUTH OF THE NEW COMBINED SEWER LINE AND CONNECT TO NEW MANHOLE GR-2689-CS. END PIPE AT NEW CATCH BASIN A WITH AN END CAP TO PREVENT SOIL AND DEBRIS FROM ENTERING PIPE (DO NOT CONNECT TO THIS CATCH BASIN).
41. PROVIDE 6" THICKNESS OF 3" CRUSHED ROCK PER DETAIL 2, SHEET D-4. REPLACE FABRIC IN DETAIL WITH A REINFORCED HDPE GEOMEMBRANE THAT WILL RESIST PUNCTURE FROM ANGULAR ROCK.



GRAND AVE. & FLUME SEWER MAIN PROFILE

SCALES: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 10'

Engineer's Stamp

27th STREET SLIDE WATER & SEWER REPAIR

GRAND AVE. & FLUME SEWER PLAN /PROFILE

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

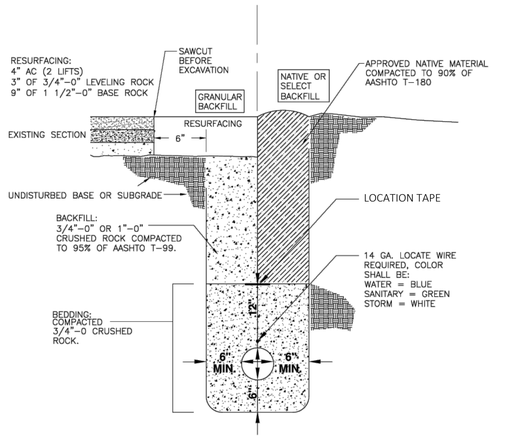
No.	Revision/Issue Date

Project Name and Address

27TH STREET / GRAND AVENUE WATER AND SEWER REPAIR

80% DESIGN

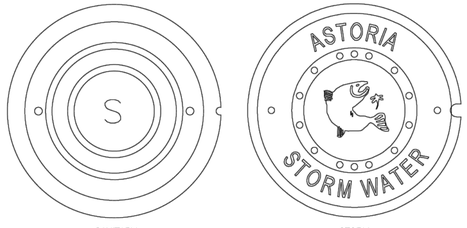
Drawing Name	Sheet
27TH SLIDE 90%	S-2
Date: 08/14/24	
Scale: As Noted	

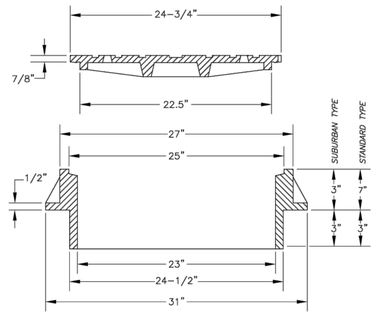


NOTE:
1. CONTRACTOR SHALL TACK EDGES OF TRENCH AND PLACE AND COMPACT ASPHALT IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS.
2. REPLACE CONCRETE ROADWAY AS ENCOUNTERED, EQUIVALENT SECTION. CONCRETE TO BE CLASS 3300, 1 1/2" MAX AGGREGATE.
3. IN ROADWAY SHOULDERS AND GRAVEL DRIVEWAYS IN RIGHT-OF-WAY USE GRANULAR BACKFILL AND SURFACE WITH 6" OF 3/4"-0" CRUSHED ROCK.

City of Astoria
Public Works Department
1095 Duane Street

Utility Trench Detail		
Date Adopt. 11/01/12	**Date Rev.** 11/20/15	DWG. NO. UT-1
Dwg. Name: UT-1 Utility Trench.dwg		

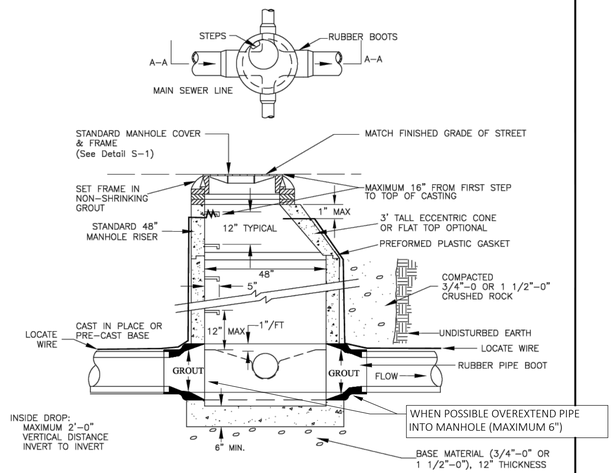




NOTES:
1. USE SUBURBAN TYPE ONLY IN NON-TRAFFIC AREAS.
2. COVER & FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 35B.
3. COVER & FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
4. NOTCH LID FOR LIFTING HOOK.

City of Astoria
Public Works Department
1095 Duane Street

Manhole Frame & Cover Detail		
Date Adopt. 11/01/12	**Date Rev.** 09/11/17	DWG. NO. S-1
Dwg. Name: S-1 Manhole Frame & Cover.dwg		

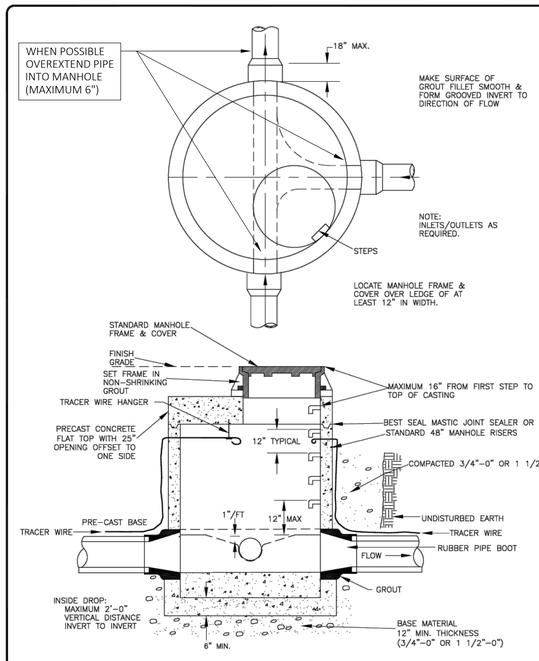


SECTION A-A

NOTES:
1. THIS TYPE OF MANHOLE SHALL BE USED ONLY FOR PIPE SIZE OF 24" OR LESS.
2. GROUT INSIDE AND OUTSIDE AT PENETRATION IF NO BOOT, GROUT INSIDE IF THERE IS A BOOT, GROUT INSIDE WHERE SECTIONS COME TOGETHER AND PICK HOLES.
3. LOCATE WIRE SHALL BE 14 GAGE GREEN, DRILL NO MORE THAN 1" BELOW FRAME, LEAVE ENOUGH WIRE TO GET TO TOP, GROUT HOLES.
4. CONSTRUCT CHANNEL AND SHELF IN FIELD.
5. FLAT TOP MANHOLE SLABS SHALL HAVE A 25" OPENING, OFFSET TO ONE SIDE.

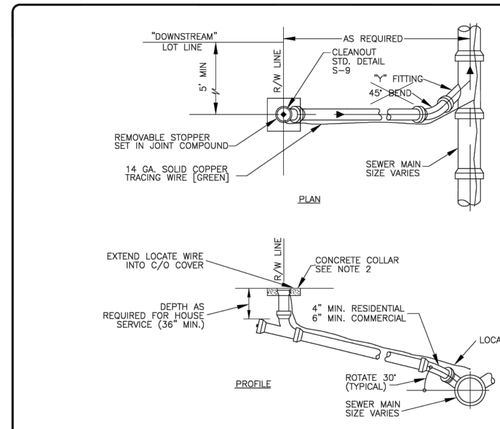
City of Astoria
Public Works Department
1095 Duane Street

Standard Manhole Detail		
Date Adopt. 11/01/12	**Date Rev.** 11/20/15	DWG. NO. S-3
Dwg. Name: S-3 Standard Manhole.dwg		



City of Astoria
Public Works Department
1095 Duane Street

Flat Top Manhole Detail		
Date Adopt. 11/01/12	**Date Rev.** 11/16/15	DWG. NO. S-4
Dwg. Name: S-4 Flat Top Manhole.dwg		



NOTES

1. SERVICE CONNECTION DETAILS ARE BASED ON GASKETED PVC PIPE AND FITTINGS. SEWER LATERAL PIPE SHALL BE PVC C900 (GREEN)

2. SEWER CLEAN-OUTS NOT IN PAVEMENT SHALL HAVE CONCRETE COLLAR 18"x18"x4" AROUND THE COVER AND MUST BE INSTALLED AND ADJUSTED TO FINISHED GRADE AT THE RIGHT-OF-WAY/PROPERTY LINE.

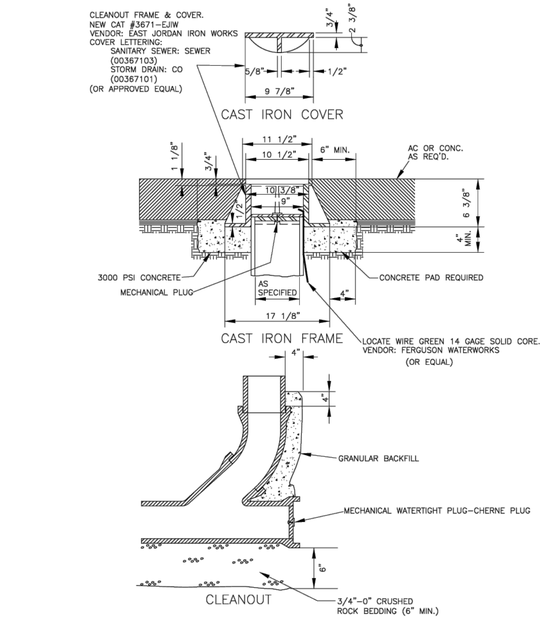
3. CONNECTION TO EXISTING SANITARY SEWER PIPE SHALL BE MADE AS FOLLOWS:
   "6" SS MAIN - PVC WYE AND FERNCO COUPLERS WITH SHEAR RINGS OR APPROVED EQUIVALENT
   "8" AND LARGER SS MAIN - INSERT-A-TEE OR APPROVED EQUIVALENT

4. ALL PVC TO CLAY SERVICE CONNECTIONS UNDER LOAD BEARING SURFACES SHALL USE FERNCO TYPE CONNECTORS WITH STAINLESS STEEL SHEAR RINGS OR APPROVED EQUAL.

5. 90° FITTINGS ARE PROHIBITED. MINIMUM 6" PIPE LENGTH BETWEEN 45° FITTINGS.

City of Astoria
Public Works Department
1095 Duane Street

Typical Sewer Connection Detail		
Date Adopt. 11/01/12	**Date Rev.** 01/09/17	DWG. NO. S-8
Dwg. Name: S-8 Typical Sewer Connection.dwg		



NOTES:
ALL CLEANOUT MATERIAL TO BE SAME AS CARRIER PIPE

City of Astoria
Public Works Department
1095 Duane Street

Clean Out Detail		
Date Adopt. 11/01/12	**Date Rev.** 09/11/17	DWG. NO. S-9
Dwg. Name: S-9 Clean Out.dwg		

27th STREET SLIDE
WATER & SEWER REPAIR
FLUME REALIGNMENT

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

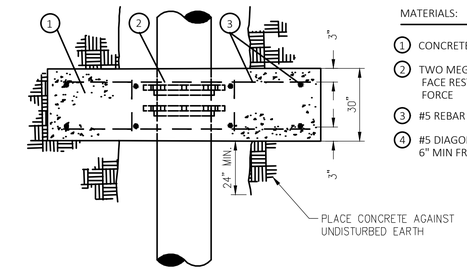
No.	Revision/Issue Date

Project Name and Address

27TH STREET / GRAND AVENUE
WATER AND SEWER REPAIR

Engineer's Stamp

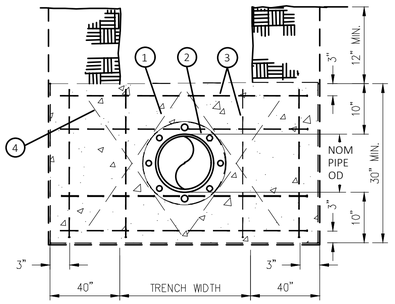
Drawing Name	Sheet
27TH SLIDE 90%	D-1
Date: 08/14/24	
Scale: As Noted	



TOP VIEW

MATERIALS:

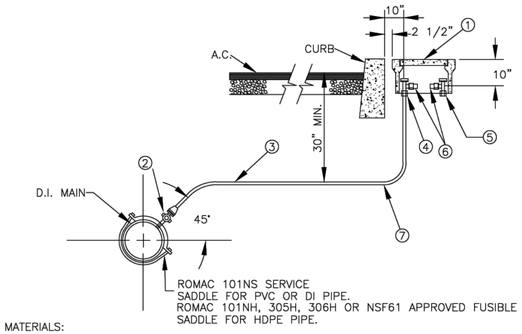
1. CONCRETE STRADDLE BLOCK.
2. TWO MEGALUG. BE CERTAIN FACE RESTRAINT IN DIRECTION OF FORCE
3. #5 REBAR EACH WAY, 12" O/C.
4. #5 DIAGONAL BARS FRONT AND BACK 6" MIN FROM OUTSIDE OF PIPE



FRONT VIEW

NOTES:
1. BEARING AREA OF BLOCK SHALL BE AGAINST UNDISTURBED SOIL.
2. STRADDLE BLOCK SHALL HAVE A MINIMUM OF 12" COVER.
3. CONCRETE SHALL BE COMMERCIAL MIX, MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.

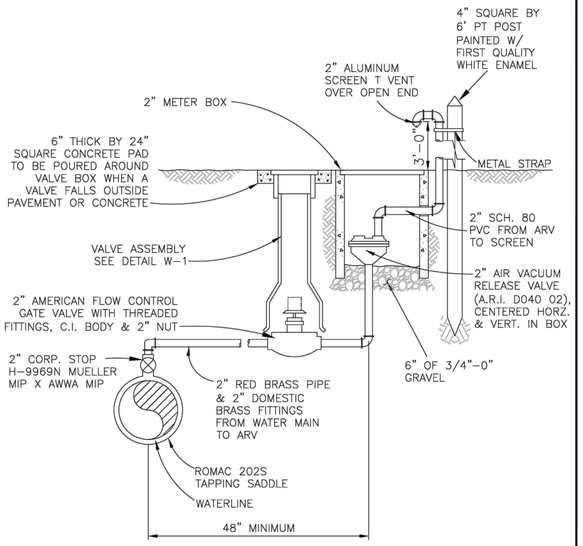
1 / D-2 ANCHOR BLOCK DETAIL
SCALE: NTS



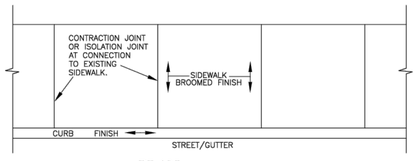
MATERIALS:
1. ARMOR CAST POLYMER CONCRETE METER BOX AND LID.
   A. 3/4" OR 1" SERVICE – 13"X24"X12" BODY NO. A6001946PCX12 20K AND CAST IRON READ COVER NO. A6001969RC1 20K.
2. 1" MUELLER CORP. STOP PN B25028N
3. 1" CTS SDR 9 (200 PSI) PE BLUE. USE SS STIFFENER FOR FITTINGS PN504385 TUBING OR SOFT TEMPER, TYPE 'K' COPPER TUBING COMPLYING WITH ASTM B–88 UPON ENGINEERS APPROVAL.
4. 1" MUELLER ANGLE METER STOP PN B24258N CMP CTS X MTR
5. 1" MUELLER ANGLE METER STOP PN B24265N FIP X MTR (CUSTOMER SIDE)
6. 3/4" TO 1" BRASS METER ADAPTER FORD PN A–34NL OR APPROVED EQUAL (FOR 3/4" METER INSTALLATIONS)
7. 14GA. BLUE DIRECT BURIAL TRACER LOCATE WIRE, SOLID CORE MIN. .045 INSULATED COVER.

NOTES:
1. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
2. ALL PIPE AND STRUCTURE ZONES SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX. DENS. AS DETERMINED BY AASHTO T–180.
3. METER BOX SHALL BE CENTER OVER THE COMPLETED METER ASSEMBLY.
4. WATER METERS THAT ALSO PROVIDE FIRE SUPPRESSION MUST BE TAGGED WITH "SUPPLIES FIRE SUPPRESSION." TAG SHALL BE MIN. 2.5" X 5", WEATHERPROOF, HEAVY DUTY RED PLASTIC. PRE–DRILL AND SECURED TO THE METER WITH PLASTIC CABLE TIES.
5. SERVICE SADDLES MANUFACTURED FOR USE WITH HDPE PIPE SHALL BE USED WHEN CONNECTING TO HDPE MAINS.
6. NEW SERVICES TO 3/4" METERS SHALL BE 1" PE BLUE TUBING.

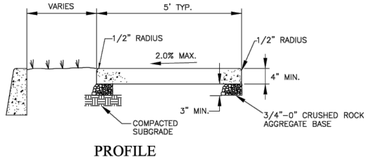
City of Astoria Public Works Department 1095 Duane Street	3/4" & 1" Water Service Detail		
	Date Adopt. 11/01/2012	Date Rev. 08/07/2023	DWG. NO. W-3
	Dwg. Name: W-3 1 Inch Water Service.dwg		



City of Astoria Public Works Department 1095 Duane Street	Air/Vacuum Release Valve Detail		
	Date Adopt. 09/23/15	Date Rev. -----	DWG. NO. W-7
	Dwg. Name: W-7 Air Release.dwg		



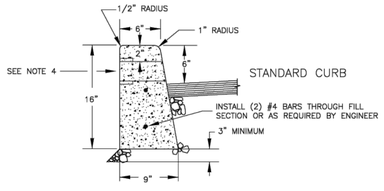
PLAN

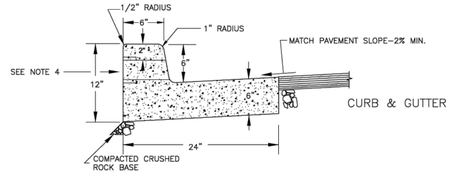


PROFILE

NOTES:
1. PORTLAND CEMENT CONCRETE SHALL ATTAIN A 28–DAY COMPRESSIVE STRENGTH OF 3300 P.S.I.
2. CONTRACTION JOINTS SHALL BE PLACED SO AS TO MAKE SQUARE BLOCKS FOR WALKS UP TO 8' WIDE AND ALSO AT ALL CHANGES IN DIRECTION AND POINTS OF CURVATURE. JOINT SHALL BE 1/8" TO 1/4" WIDE WITH A MINIMUM DEPTH OF 1/3 OF THE CONCRETE THICKNESS.
3. ISOLATION JOINTS SHALL BE PLACED AT CONNECTIONS TO EXISTING SIDEWALK, EDGES OF DRIVEWAYS AND ALL STRUCTURES WITHIN SIDEWALK. JOINTS SHALL CONSIST OF A PREFORMED FILLER MATERIAL WITH MINIMUM 1/2" THICKNESS.

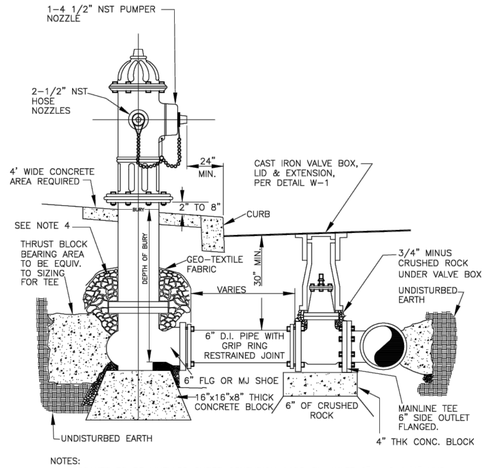
City of Astoria Public Works Department 1095 Duane Street	Sidewalk Detail		
	Date Adopt. 11/01/12	Date Rev. 11/10/15	DWG. NO. ST-3
	Dwg. Name: ST–3 Sidewalk.dwg		





NOTES:
1. PORTLAND CEMENT CONCRETE SHALL ATTAIN A 28–DAY COMPRESSIVE STRENGTH OF 3300 P.S.I..
2. CONTRACTION JOINTS SHALL BE PLACED AT 15 FOOT MINIMUM INTERVALS WITH 1 1/2" DEPTH. MATCH SIDEWALK JOINTS.
3. PLACE CONTRACTION JOINT IN CURB OVER CENTER OF PIPE EXTEND PIPE TO BACK OF SIDEWALK IF SIDEWALK IS ADJACENT TO CURB.
4. DRAINAGE BLOCKOUT 3" I.D. PLASTIC PIPE W/BELL. LOCATED AS DIRECTED IN THE FIELD. GENERALLY NOT LESS THAT 2 PER LOT.

City of Astoria Public Works Department 1095 Duane Street	Curb Detail		
	Date Adopt. 11/01/12	Date Rev. -----	DWG. NO. ST-4
	Dwg. Name: ST–4 Curb.dwg		



NOTES:
1. HYDRANTS TO BE MUELLER SUPER CENTURION A423–PN, INLET 6" – 5 1/4" MVO, 1–1/2" PENTAGON OPERATING NUT OPEN LEFT.
2. HYDRANTS ARE YELLOW AND PRIVATE HYDRANTS ARE RED.
3. RESTRAIN JOINTS BY USING FLANGED HYDRANT SHOE, SPOOL, AND GATE VALVE –OR– WITH GRIP RING GASKET JOINT RESTRAINTS.
4. ALL FITTINGS IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN PLASTIC. HYDRANT DRAIN HOLES TO REMAIN OPEN TO DRAIN ROCK AND OPERATIONAL.
5. 1 1/2" – 3/4" CLEAN DRAIN ROCK SHALL BE PLACED A MINIMUM OF 6" ABOVE DRAIN OUTLET 1 YD MINIMUM AREA.
6. WHERE PLANTER STRIP EXISTS HYDRANT SHALL BE PLACED SO FRONT PORT IS A MINIMUM OF 24" BEHIND FACE OF CURB.
7. BURY OF HYDRANT SHALL BE MEASURED FROM FINISHED GRADE TO BOTTOM OF CONNECTION PIPE.
8. THRUST BLOCK AT FIRE HYDRANT TEE SHALL HAVE A 3.7 SQ. FT BEARING AREA.
9. HYDRANT VALVE SHALL BE AMERICAN FLOW CONTROL RESILIENT SEAT GATE VALVE ONLY.
10. PIPING BETWEEN HYDRANT AND VALVE TO BE SAME PRESSURE CLASS AND MATERIAL AS WATER MAIN OR GREATER.
11. HYDRANT MAY NOT BE LOCATED WITHIN 3' OF ANY OBSTRUCTION.

City of Astoria Public Works Department 1095 Duane Street	Fire Hydrant Detail		
	Date Adopt. 10/31/12	Date Rev. 11/13/15	DWG. NO. W-2
	Dwg. Name: W–2 Fire Hydrant.dwg		

27th STREET SLIDE
WATER & SEWER REPAIR
FLUME REALIGNMENT

City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

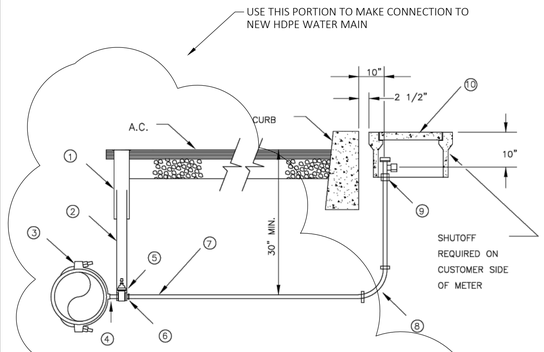
No.	Revision/Issue Date

Project Name and Address

27TH STREET / GRAND AVENUE
WATER AND SEWER REPAIR

Engineer's Stamp

Drawing Name	Sheet
27TH SLIDE 90%	D-2
Date: 08/14/24	
Scale: As Noted	

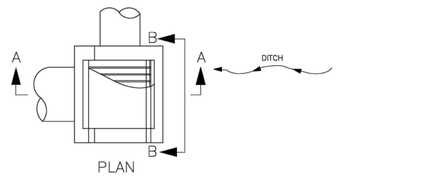


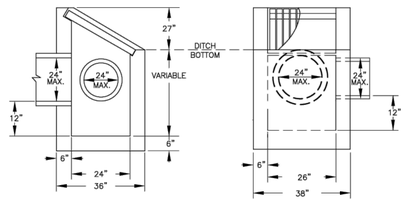
NOTES:
1. EJIW - 18" VALVE BOX TOP WITH COVER
2. 6" PVC D3034 SEWER PIPE
3. PIPE SIZE-ROMAC 202S STYLE SERVICE SADDLE DOUBLE STRAP STAINLESS STEEL-TAP 2" I.P. THREAD.
4. 2" BRASS CLOSE NIPPLE
5. 2" C.I. GATE VALVE WITH 2" OPERATING NUT, BOTH ENDS FEMALE I.P. THREADS-AMERICAN FLOW CONTROL
6. 2" MUELLER COMPRESSION #110 COUPLING, MALE I.P. THREADS #15428N.
7. 2" HDPE TUBING CTS SIZE SDR 9 (200 PSI).
8. IF NEEDED 2" QUARTER BEND UNION, COMPRESSION CONNECTOR CTS O.D. TUBING BOTH ENDS-IFH15526N
9. 2" GROUND KEY ANGLE METER STOP MUELLER 110 COMPRESSION, FOR CTS O.D. TUBING, METER FLANGE 180 TURN CHECK-LOCK WING-IFH14277N.
10. ARMORCAST 17" X 30" X 12" POLYMER CONCRETE METER BOX (A6001640PCX12) AND COVER W/ CAST IRON READ LID (A6001947TRC1)
11. WATER METERS THAT ALSO PROVIDE FIRE SUPPRESSION MUST BE TAGGED WITH "SUPPLIES FIRE SUPPRESSION." TAG SHALL BE MIN. 2.5" X 5", WEATHERPROOF, HEAVY DUTY RED PLASTIC. PRE-DRILL AND SECURED TO THE METER WITH PLASTIC CABLE TIES.

City of Astoria
Public Works Department
1095 Duane Street

2 Inch Water Service Detail

Date Adopt. 11/01/12	Date Rev. 11/16/15	DWG. NO. W-4
Dwg. Name: W-4 2 Inch Water Service.dwg		



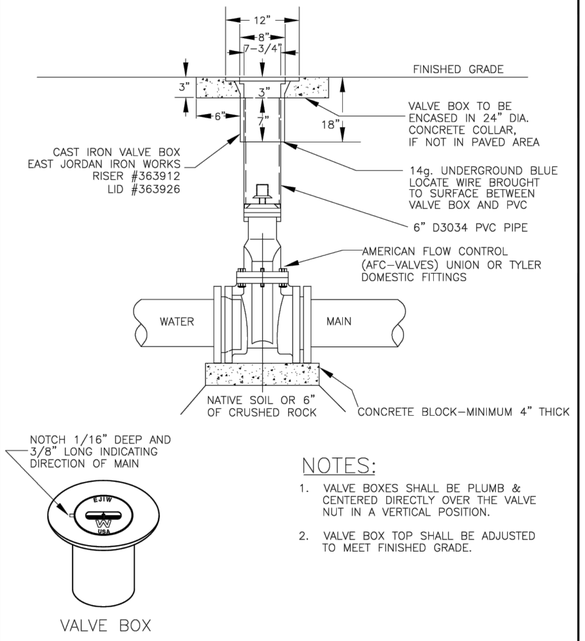


NOTES:
1. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3300 P.S.I. IN 28 DAYS.

City of Astoria
Public Works Department
1095 Duane Street

Field Inlet Detail

Date Adopt. 11/01/12	Date Rev. -----	DWG. NO. SD-2
Dwg. Name: SD-2 Field Inlet.dwg		

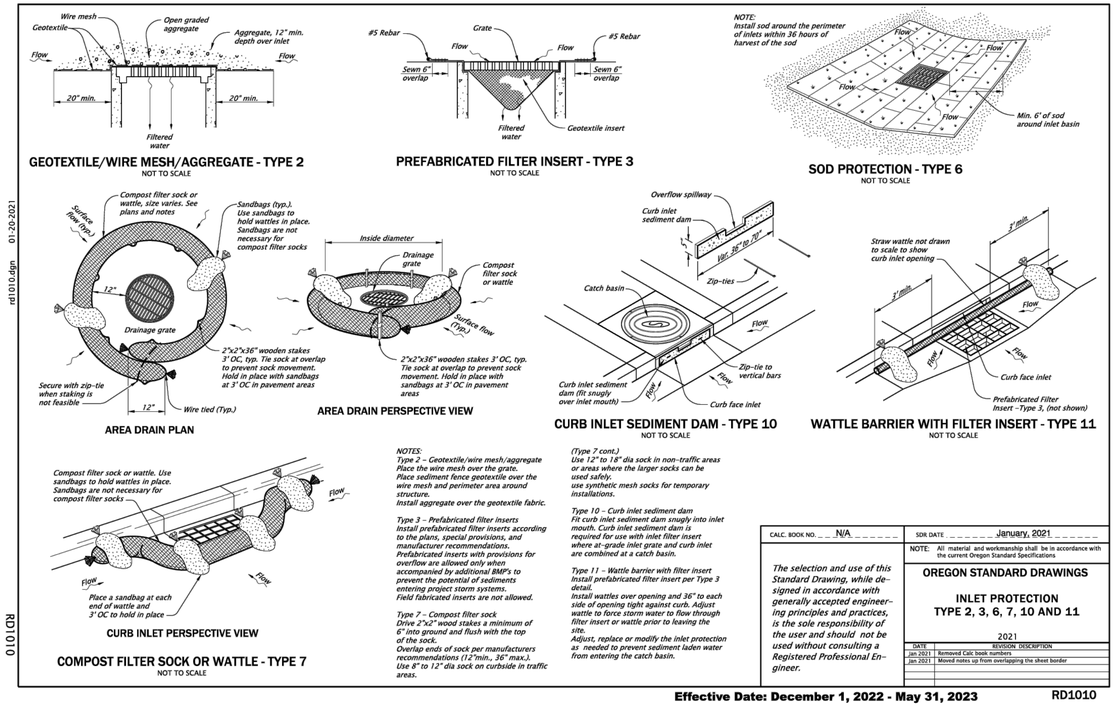


NOTES:
1. VALVE BOXES SHALL BE PLUMB & CENTERED DIRECTLY OVER THE VALVE NUT IN A VERTICAL POSITION.
2. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.

City of Astoria
Public Works Department
1095 Duane Street

Water Valve Detail

Date Adopt. 10/31/12	Date Rev. 11/13/15	DWG. NO. W-1
Dwg. Name: W-1 Water Valve.dwg		



NOTES:
Type 2 – Geotextile/wire mesh/aggregate
Place the wire mesh over the grate.
Place sediment fence geotextile over the wire mesh and perimeter area around structure.
Install aggregate over the geotextile fabric.

Type 3 – Prefabricated filter inserts
Install prefabricated filter inserts according to the plans, special provisions, and manufacturer recommendations.
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMP's to prevent the potential of sediments entering project storm systems.
Field fabricated inserts are not allowed.

Type 7 – Compost filter sock
Drive 2"x2" wood stakes a minimum of 6" into ground and flush with the top of the sock.
Overlap ends of sock per manufacturers recommendations (12"min., 36" max.).
Use 8" to 12" dia sock on curbside in traffic areas.

(Type 7 cont.)
Use 12" to 18" dia sock in non-traffic areas or areas where the larger socks can be used safely.
use synthetic mesh socks for temporary installations.

Type 10 – Curb inlet sediment dam
Fit curb inlet sediment dam snugly into inlet mouth. Curb inlet sediment dam is required for use with inlet filter insert where at-grade inlet grate and curb inlet are combined at a catch basin.

Type 11 – Wattle barrier with filter insert
Install prefabricated filter insert per Type 3 detail.
Install wattles over opening and 36" to each side of opening tight against curb. Adjust wattle to force storm water to flow through filter insert or wattle prior to leaving the site.
Adjust, replace or modify the inlet protection as needed to prevent sediment laden water from entering the catch basin.

CALC. BOOK NO. N/A	SDR DATE January, 2021
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications

OREGON STANDARD DRAWINGS

INLET PROTECTION
TYPE 2, 3, 6, 7, 10 AND 11

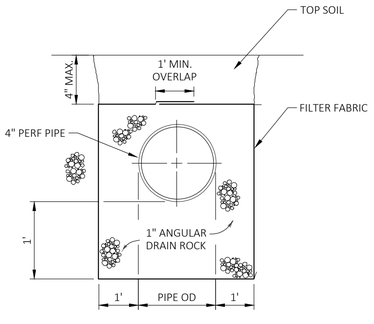
2021

DATE	REVISION DESCRIPTION
Jan 2021	Removed Calc book numbers
Jan 2021	Moved notes up from overlapping the sheet border

Effective Date: December 1, 2022 - May 31, 2023 RD1010

rd1010.dgn 01-20-2021

RD1010



STANDARD CROSS SECTION

1 / D-3 FRENCH DRAIN TRENCH DETAIL
SCALE: NTS

NOTES

GENERAL:
1. THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PREVENT CONTAMINATION OF THE TRENCH WITH SAND, SILT AND FOREIGN MATERIALS.

PERFORATED PIPE:
1. 4-INCH HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, COMPLYING WITH AASHTO M252 STANDARDS.
2. CLASS II PERFORATION, WITH SLOTS OR HOLES AROUND THE CIRCUMFERENCE.
3. MUST MEET OR EXCEED PERFORMANCE CRITERIA IN AASHTO M252 AND AASHTO M294 FOR CORRUGATED POLYETHYLENE PIPE.
4. INSTALL ACCORDING TO MANUFACTURER RECOMMENDATIONS

FILTER FABRIC:
1. NON-WOVEN GEOTEXTILE FABRIC MADE FROM HIGH-QUALITY POLYPROPYLENE.
2. MINIMUM WEIGHT OF 4 OUNCES PER SQUARE YARD (OZ/YD²).
3. THE FABRIC SHOULD HAVE A PERMEABILITY RATE OF AT LEAST 0.1 CM/SEC TO ALLOW ADEQUATE WATER FLOW WHILE PREVENTING SOIL FINES FROM ENTERING THE DRAINAGE SYSTEM.
4. MINIMUM PUNCTURE RESISTANCE OF 80 LBS.
5. THE FABRIC SHOULD BE UV STABILIZED TO RESIST DEGRADATION FROM SUNLIGHT EXPOSURE DURING INSTALLATION.
6. ENSURE A MINIMUM OVERLAP OF 12 INCHES AT SEAMS OR JOINTS IN THE FABRIC.

Engineer's Stamp

27th STREET SLIDE
WATER & SEWER REPAIR
FLUME REALIGNMENT

City of Astoria
Public Works Dept
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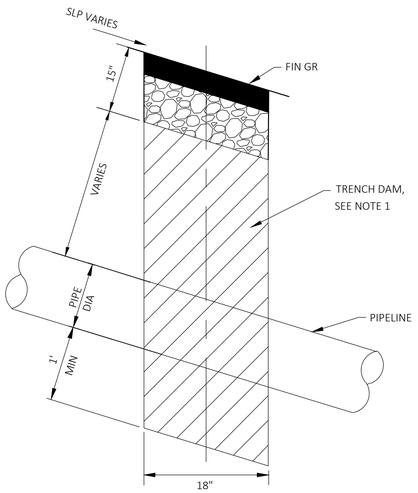
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

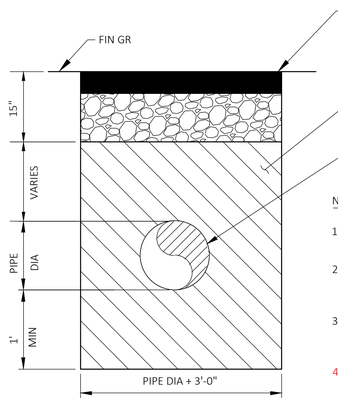
No.	Revision/Issue Date

Project Name and Address

27TH STREET / GRAND AVENUE
WATER AND SEWER REPAIR

Drawing Name 27TH SLIDE 90%	Sheet D-3
Date 08/14/24	
Scale As Noted	





NOTES:

1. CONSTRUCT TRENCH DAMS WITH APPROVED NATIVE MATERIAL.
2. TRENCH DAMS SHALL BE INSTALLED IN PIPELINE TRENCH AT 50' O.C. COORDINATE EXACT LOCATION W/ FIELD ENGINEER.
3. TRENCH DAMS SHALL BE KEYED INTO THE SIDES AND BOTTOM OF THE PIPE TRENCH A MINIMUM OF 1-FOOT ON ALL SIDES.
4. MAXIMUM LIFT THICKNESS SHALL 8 INCHES, COMPACTED TO MINIMUM OF 90% AS DETERMINED BY ASTM D1557. MAINTAIN MOISTURE CONTENT WITHIN ±2% OF OPTIMUM MOISTURE CONTENT. IT MAY NOT BE REASONABLE TO EXPECT THE SOIL TO BE TESTED?

1 / D-4 TYPICAL TRENCH DAM
SCALE: NTS

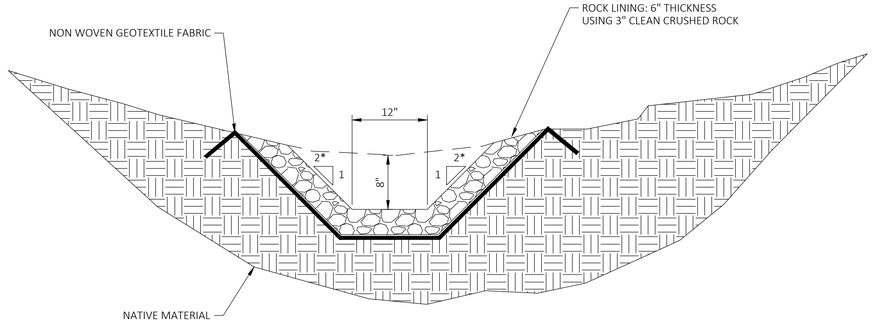
GENERAL NOTES:

1. THE ROCK LINING MUST BE INSTALLED TO FORM A STABLE STRUCTURE WITH A MINIMUM OF VOIDS, ENSURING EACH ROCK IS PLACED IN CONTACT WITH ADJACENT ROCKS.
2. ROCK LINING SHALL BE SOUND, DENSE, AND DURABLE ANGULAR ROCK .
3. PLACE THE FILTER FABRIC DIRECTLY ON THE PREPARED SOIL SURFACE BEFORE ADDING THE CRUSHED ROCK.S.

FILTER FABRIC:

1. NON-WOVEN GEOTEXTILE FABRIC MADE FROM HIGH-QUALITY POLYPROPYLENE.
2. MINIMUM WEIGHT OF 4 OUNCES PER SQUARE YARD (OZ/YD²).
3. THE FABRIC SHOULD HAVE A PERMEABILITY RATE OF AT LEAST 0.1 CM/SEC TO ALLOW ADEQUATE WATER FLOW WHILE PREVENTING SOIL FINES FROM ENTERING THE DRAINAGE SYSTEM.
4. MINIMUM PUNCTURE RESISTANCE OF 80 LBS.
5. THE FABRIC SHOULD BE UV STABILIZED TO RESIST DEGRADATION.
6. ENSURE A MINIMUM OVERLAP OF 12 INCHES AT SEAMS OR JOINTS IN THE FABRIC WITH THE UPPER PORTION LAID OVER THE LOWER PORTIONS.

* SIDE SLOPE SHALL BE 2:1, SOME LOCATION MAY REQUIRE STEEPER SIDE SLOPES TO PREVENT EXCESSIVE GROUND DISTURBANCE. WHERE STEEPER SIDE SLOPES ARE NECESSARY, PROVIDE A THICKER ROCK SECTION OR LARGER ROCK TO PROVIDE A STABLE SLOPE.



2 / D-4 ROCK LINED DITCH
SCALE: NTS

THRUST BLOCKING

TABLE A
CONCRETE THRUST BLOCKING (HORIZONTAL)

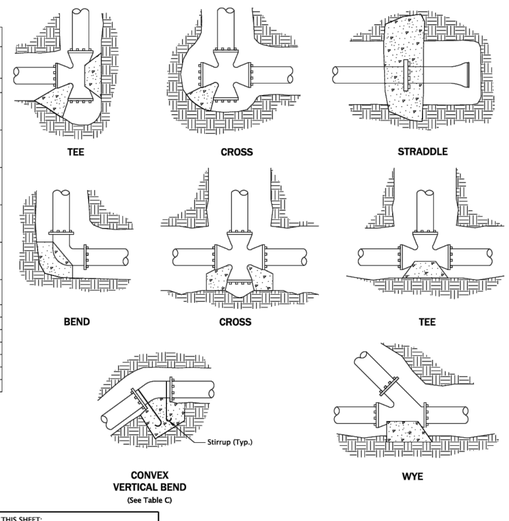
PIPE DIA.	Table Pressure PSI	Thrust (T) at fittings in Pounds A: Tee & Dead Ends	B: 90 deg Bend	C: 45 deg Bend	D: 22.5 deg Bend	E: 11.25 deg Bend
4"	250	3035	4320	2315	1215	610
6"	250	6860	9735	5215	2720	1375
8"	250	12185	17310	9265	4835	2430
10"	250	19045	27045	14480	7560	3800
12"	250	27405	38940	20840	10880	5465
14"	250	37320	53010	28370	14815	7445
16"	250	48740	69245	37050	19360	9735

TABLE B

Soil Type	Soil Bearing Capacity (B) in PSF
Muck, peat, etc.	0
Soft Clay	1000
Sand	2000
Sand and gravel	3000
Sand and gravel cemented with clay	4000
Hard shale	10,000

TABLE C
CONCRETE BLOCKING FOR CONVEX VERTICAL BENDS
DIMENSION TABLE

PIPE DIA. in.	Table Pressure PSI	Bend Angle (deg)	Concrete Volume (cy)	Cube Size (ft)	Stirrup Dia. (in)	Stirrup Embmt. (in)	Stirrup Bar #
4"	250	11.25	0.21	1.8	⅜	17	5
		22.5	0.43	2.3			
		45	0.77	2.8			
6"	250	11.25	0.48	2.4	⅜	17	5
		22.5	0.95	3.0			
		45	1.79	3.6			
8"	250	11.25	0.86	2.9	⅜	17	5
		22.5	1.65	3.5			
		45	3.22	4.4			
10"	250	11.25	1.39	3.3	⅜	17	5
		22.5	2.62	4.1			
		45	4.97	4.1			
12"	250	11.25	1.94	3.7	⅜	17	5
		22.5	3.91	4.7			
		45	6.89	5.7	⅝	24	7
14"	250	11.25	2.62	4.1	⅜	17	5
		22.5	5.26	5.2	¾	20	6
		45	9.70	6.4	1	27	8
16"	250	11.25	3.44	4.5	⅝	17	5
		22.5	6.89	5.7	⅞	24	7
		45	12.63	7.0	1⅛	30	9



THRUST BLOCK BEARING AREA EQUATION

NOTE: WHEN THRUST BLOCK BEARING AREA IS NOT SPECIFIED ON THE PLANS OR DETERMINED BY THE ENGINEER, USE THE FOLLOWING PROCEDURE TO DETERMINE REQUIRED BEARING AREA.

1. Determine thrust (T) for type of fitting or joint and size of pipe from Table A.
2. Determine Design (Test) Pressure from Standard Specifications or Special Provisions.
3. Determine Table Pressure from Table A.
4. Determine Soil Bearing Capacity (B) of soil from Table B.
5. Determine required bearing area (A) in sq. ft. as follows:

$$\text{Thrust Block Bearing Area} = A = \left(\frac{T}{B}\right)\left(\frac{\text{Design (Test) Pressure}}{\text{Table Pressure}}\right)$$

Example: Design (Test) Pressure = 150 PSI; Pipe = 14"; Fitting = Tee; Soil = Sand
From Table A, T = 37320
From Table B, B = 2000

$$A = \left(\frac{37320}{2000}\right)\left(\frac{150}{250}\right) = 11.2 \text{ sq.ft.}$$

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Contractor to provide blocking adequate to withstand full test pressure.
2. Pour concrete blocking against undisturbed earth.
3. All concrete shall be commercial grade concrete.
4. Wrap pipe and/or fittings with 2 layers of polyethylene film where in contact with concrete
5. Keep concrete clear of all joints and accessories.
6. Stirrups shall be deformed galvanized cold rolled steel AASHTO M31 (ASTM A615), Grade 60. Coat with coal tar epoxy after installation.
7. See project plans for details not shown.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

THRUST BLOCKING

2024

DATE	REVISION DESCRIPTION

CALC. BOOK NO. ... N/A ... SDR DATE 25-JUL-2017 | RD250

20-JUL-2020
RD250.dgn

Effective Date: December 1, 2023 - May 31, 2024

27th STREET SLIDE
WATER & SEWER REPAIR
FLUME REALIGNMENT

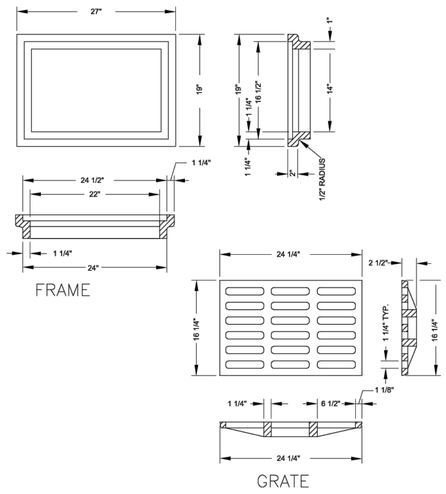
City of Astoria
Public Works Dept
Engineering Div.
1095 Duane St.
Astoria, Oregon 97103
PH: (503)338-5173 Fax: (503)338-6538

No.	Revision/Issue Date

Project Name and Address
27TH STREET / GRAND AVENUE
WATER AND SEWER REPAIR

Engineer's Stamp

Drawing Name: 27TH SLIDE 90%
Date: 08/14/24
Scale: As Noted
Sheet: D-4

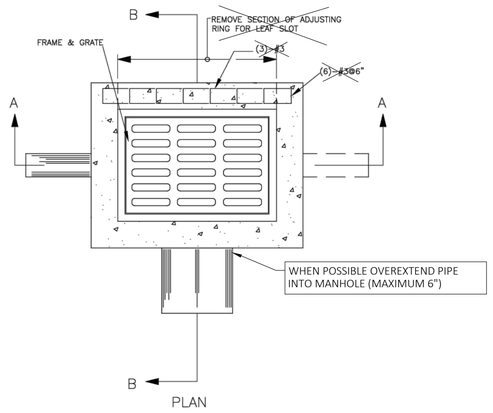


NOTES:
1. ALL CASTINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A48, CLASS 30B.
2. ROUNDS, FILLETS, TAPERS AND OTHER MINOR MODIFICATIONS TO THE DEMINSIONS SHOWN MAY BE MADE TO CONFORM TO COMMON SHOP PRACTICES.
3. GRIND SMOOTH FINISH BEARING SURFACES.
4. AVAILABLE THROUGH OLYMPIC FOUNDRY INC., PART NO. SM41.

City of Astoria
Public Works Department
1095 Duane Street

Catch Basin Frame & Grate Detail

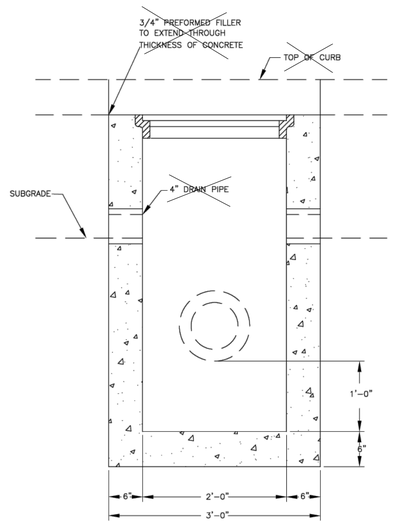
Date Adopt. 11/01/12	Date Rev. 11/16/15	DWG. NO. SD-1
Dwg. Name: SD-1 CB Frame & Grate.dwg		



City of Astoria
Public Works Department
1095 Duane Street

Catch Basin Detail

Date Adopt. 11/01/12	Date Rev. ----	DWG. NO. SD-3
Dwg. Name: SD-3 Catch Basin.dwg		



SECTION A

NOTES:

1. SUMP REQUIRED IN CATCH BASINS WITH OUTLET PIPE ONLY. FOR CATCH BASINS WITH INLET AND OUTLET PIPES FORM CHANNELS TO DIRECT FLOW.

2. CATCH BASIN BASE SHALL BE CITY OF SALEM TYPE 1, SHORT 36".

City of Astoria
Public Works Department
1095 Duane Street

Catch Basin Detail

Date Adopt. 11/01/12	Date Rev. 11/16/12	DWG. NO. SD-4
Dwg. Name: SD-4 Catch Basin.dwg		

27th STREET SLIDE
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27TH SLIDE 90%	D-5
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Scale: As Noted	