

MULTNOMAH COUNTY DEPARTMENT OF COMMUNITY SERVICES  
TRANSPORTATION PLANNING AND DEVELOPMENT PROGRAM

Construction Permit

\_\_\_01 August \_\_\_, 2024\_\_\_

Under the provisions of Multnomah County Code (“MCC”) Sections 27.055, 27.056, 29.506, and 29.572, and Multnomah County Road Rules (“MCRR”) 18.200, this Construction Permit (the “Permit”) is hereby issued by Multnomah County Transportation Planning and Development Program (“County”) to:

PORTLAND WATER BUREAU

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1120 SW 5<sup>TH</sup> AVE, RM 405, PORTLAND, OR 97204

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CONTACT: ROBERT FRALEY

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CONTACT PHONE: 503-823-3573

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CONTACT EMAIL: Robert.fraley@portlandoregon.gov

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(“Developer”). This Permit is issued for the construction of the improvements within the County controlled rights-of-way or easements, as described in EXHIBIT A, attached hereto and made a part of this document.

A. General Permit Requirements:

1. The County shall approve all plans, drawings, and other design documents prior to the construction of any improvements as described in the Exhibit A.
2. NO PARTIAL IMPROVEMENTS SHALL BE CONSTRUCTED WITHIN THE COUNTY RIGHT-OF-WAY.
3. ANY EXCAVATION, ROCKING, OR PAVING SHALL ONLY BE ALLOWED AS A PART OF A CONTINUOUS, TIMELY OPERATION TOWARD COMPLETION OF THE WORK AS DESCRIBED IN THE EXHIBIT “A.” NO PAVING SHALL BE ALLOWED UNTIL ALL CURB, EXCAVATION, ROCK, DRAINAGE, AND UTILITY WORK, HAS BEEN COMPLETED WITHIN THE AREA TO BE PAVED, AND THEN ONLY AS A PART OF THE CONTINUOUS, TIMELY COMPLETION OF THE ENTIRE PAVING PROJECT, AS SHOWN ON THE APPROVED PLANS.
4. The County reserves the right to prohibit any further connections, withhold occupancy permits, or remove or block any existing connections between the facilities covered by this Permit and adjacent properties, if the Developer does not provide or complete all items of this Permit to the County's satisfaction.

B. The County agrees to do the following:

1. Establish the amounts of the Administration Fee, Performance Guarantee, and Maintenance Guarantee.
2. Review plans, drawings, and other design documents for conformance with design and drafting criteria. Upon approval of the plans, provide the Developer with copy sets of plans and specifications, and schedule a pre-construction meeting.
3. Establish a reasonable length of time for construction activities within the right-of-way. Issue "First Notification" to authorize the beginning of construction activities, and start the calendar day count
4. Issue "Second Notification" to stop the calendar day count if the County deemed the project to be substantially complete in accordance to the contract documents so that the work can be used for its intended purpose.
5. Perform all required final construction supervision, inspection, and testing if needed.
6. Inspect completed facility for acceptance of construction work, and if facilities are accepted issue the "Third Notification" to release the Performance Guarantee.
7. Conduct final inspection prior to expiration of Maintenance Guarantee, and if facilities are accepted issue the "Fourth Notification" to release the Maintenance Guarantee.
8. Administration required for processing and accepting facility as a County or Service District maintained facility, where applicable.

C. The Developer agrees to do the following:

1. Deposit with the County an Administration Fee, of **\$ See Exhibit A** prior to scheduling the pre-design meeting. Following acceptance by the County of the completed improvements, this fee may be adjusted up or down to reflect the actual costs incurred by the County. Over-payment will be refunded to the Developer. Under-payment will result in billing the Developer for the difference between the actual costs incurred and the initial fee.
2. Before issuance of the "First Notification" provide to the County a properly executed Performance Guarantee in the amount of **\$ See Exhibit A**. This guarantee shall be submitted to the County Engineer. The Performance Guarantee shall guarantee the completion of the improvements described in Exhibit A and shall remain in full force and effect until the Developer receives the "Third Notification" or termination of this Construction Permit whichever comes first.
3. Before issuance of the "Third Notification" provide to the County a properly executed Maintenance Guarantee, in the amount of **\$ See Exhibit A**. The guarantee shall be submitted to the County Engineer. The guarantee shall not expire for two (2) years from date Developer receives the "Third Notification" or receives the "Fourth Notification", whichever comes later. The Maintenance Guarantee shall guarantee the repair or

replacement of any improvements constructed under this permit which become unsatisfactory to the County because of workmanship or materials used during their construction or that are damaged by project workmen or equipment completing the related adjacent construction.

4. Complete all construction activities, to include all "As-Built" information, within eighteen (18) months of the issuance date of the "Third Notification".
  5. Obtain the services of a consulting Engineer, registered in the state of Oregon, WHO WILL BE FURNISHED A COPY OF THIS PERMIT BY THE DEVELOPER. The Developer or Consultant shall furnish to the County a fully executed "Consulting Engineer's Statement" (see attachment), AND SCHEDULE A PRE-DESIGN MEETING WITH THE COUNTY PRIOR TO COMMENCING ANY DESIGN WORK. If Developer should change consulting engineers prior to acceptance of plans a new fully executed "Consulting Engineer's Statement" must be furnished to the County before the project can continue. Any compensation paid to the Engineer for services rendered in performance of Developer's obligations under this Permit may not be included as part of the Administration Fee.
  6. Convey all right-of-way dedications and easement dedications as required by this Construction Permit to the appropriate governing body, free of all encumbrances, before issuance of the "First Notification."
  7. Developer shall defend, save, hold harmless, and indemnify County and its officers, employees, and agents from and against all claims, suits, actions, losses, damages, liabilities, costs, and expenses of any nature whatsoever, including attorney fees, resulting from, arising out of, or relating to the activities of Developer or its officers, employees, agents, contractors, subcontractors under this Permit. Developer shall have control of the defense and settlement of any claim that is subject to this paragraph. However, neither the Developer nor any attorney engaged by the Developer shall defend the claim in the name of the County or any department of the County, nor purport to act as legal representative of the County or any of its departments without receiving from the Multnomah County Attorney's Office, authority to act as legal counsel for the County, nor shall Developer settle any claim on behalf of the County without the approval of the Multnomah County Attorney's Office. County may, at its election and expense, assume its own defense and settlement.
- D. Developer shall ensure that any Consulting Engineer ("Engineer") retained by the Developer to provide services under this Permit complies with the following requirements:
1. The Engineer must work directly with the County Engineer, and provide engineering services in the same manner as if the Engineer had been retained by the County.
  2. Design the project, including complete plans and specifications, in conformance with MCC 29.500, the Multnomah County Design and Construction Manual, and design standards adopted thereunder. All plans submitted for review shall be submitted on 24 inch by 36 inch sheets. Plans shall be produced using English units and quantities.
  3. Perform or obtain all survey work according to County standards, as required for design and construction of the project. Perform any additional construction staking or material testing

as directed by the County. The Engineer shall document any changes to the approved design that occur during construction, and submit any additional work required for preparation of "as-built" plans.

4. After production of "as-built" plans, the Engineer shall provide to the County an electronic copy of the drawings, to include the base topographic survey data, with the "as-built" mylars.
5. Detail on the plans items of esthetic or historic significance, including trees, inside the right-of-way or within ten (10) feet of the right-of-way line that may be disturbed or destroyed by the project.
6. Detail on the plans all underground utilities to be constructed as part of this Permit as a composite utility plan. All information is to be furnished by the respective utilities, and approved by them.
7. Obtain DEQ and appropriate city approval of sanitary sewers, if applicable, and furnish copy of approval to the County prior to the County's approval of plans.
8. The Engineer shall make all changes to the plans as may be required for County approval of the plans. After all changes have been made, the Engineer shall submit a stamped and signed plans either electronically or on double mat mylar or photocopied mylars on double mat mylars and one set of 11 inch by 17 inch paper. If mylars are hand produced or pen plotted, mylars are to be produced in black ink.

E. Developer shall ensure that any Construction Contractor ("Contractor") retained by the Developer to provide services under this Permit complies with the following requirements:

1. Before the pre-construction meeting, Contractor shall notify all affected utilities and coordinate their work within the project.
2. At the time of the pre-construction meeting, the Contractor shall provide to the County the following documents:

Traffic control plans

Insurance Certificate with Multnomah County as additional insured

Construction work schedule

List of contractors' contact numbers for emergencies

List of subcontractors

List of material suppliers

Gradation, Abrasion, Sand Equivalent, Fracture, and Degradation Tests for Aggregate

Mix Design for Concrete and Asphalt

Material Certifications

All documents shall conform to the requirements of the current ODOT Oregon Standard Specifications for Construction.

3. All activities, including work to be performed and materials to be used in the performance of work as described in the Exhibit/s, shall conform to the current ODOT Oregon Standard



Specifications for Construction except as modified by Multnomah County Special Provisions.

4. Maintain all erosion control measures at all times.
5. Complete all construction activities within the right-of-way within the period specified in the "First Notification" and complete any corrective work as detailed in the "Second Notification" within twenty (20) calendar days from the date of the "Second Notification". Failure to meet these deadlines shall be grounds for the County to proceed under Section F (2) of this Permit.

F. Time Extension/Forfeiture

1. The County may, in its sole discretion, grant time extensions to the time limits described in this Permit. Any request for a time extension shall be in writing, and state the reasons for the extension. An approved extension may require an additional Administration Fee and may also require a new Performance Guarantee in an increased amount necessary to cover current estimated construction costs. Before the County grants any time extension, the Developer shall furnish proof that all Fees and Guarantees have met the requirements of Sections C (1) and C (2) for the new date being requested.
2. The County may, in its sole discretion, require forfeiture of the Performance Guarantee and complete the project for any of the following:
  - a) Failure to complete construction by the date established in Section C (4)
  - b) Failure to complete construction activities within the time limit established in the "First Notification."
  - c) Failure to complete the corrective work within 20 calendar days of the date of the "Second Notification."
  - d) Failure to abide by the other terms of this Permit.
3. If the Performance Guarantee is insufficient to reimburse the County for its costs to complete the project under paragraph 2 of this section, the County shall bill the Developer for any excess costs.

I (We) have read and hereby accept the terms of this Construction Permit.

By David Peters  
Developer

1 August 2024  
(Date)

David Peters  
Developer (Print Name)

\_\_\_\_\_  
Tax ID No.

Accepted for Multnomah County, Oregon

By Brad Choi  
Brad Choi, PE  
Transportation Development Manager

8/8/24  
(Date)

By \_\_\_\_\_  
Jon Henrichsen, PE  
Transportation Division Director

8/8/24  
(Date)

Digitally signed by Brad Choi  
DN: G=US, E=brad.choi@multco.us, O=Multnomah County,  
OU=Transportation Planning and Development, CN=Brad  
Choi  
Date: 2024.08.08 11:40:45-0700'

Construction Permit No: ROW-CONST-2023-0003.2

Effective Date: 08AUG2024

EXHIBIT "A"

To make frontage/road improvements as part of the Notice of Decision document T3-2022-16220 Hearings Officer's Decision and fulfills the following Conditions of Approval D.5.b, E.1.f, E.1.h, E.1.i, E.1.j, E.1.k, E.1.l, E.1.m, E.1.n, E.1.o, E.1.p, E.1.q, and E.1.r.

The improvements are to consist of the following:

1. Road improvements as shown in the attached Construction Plan.

Furnish Administration Fee in amount of \$ 125,427.00 (please see Section C (1) of Construction Permit). Administration Fee must accompany signed Project Permit. If writing a check, please make check payable to: MULTNOMAH COUNTY.

Furnish Performance Guarantee in amount of \$ 1,379,697.00 (please see Section C (2) of Construction Permit).

Furnish Maintenance Guarantee in amount of \$ 275,939.00 (please see Section C (3) of Construction Permit).

Both the Performance Guarantee and the Maintenance Guarantee can be provided in the form of an indemnity agreement between the City and County in a form approved by the County Attorney.



**GENERAL SYMBOLOGY**

- NEW CONSTRUCTION
- EXISTING (SCREENED)
- FUTURE (PHANTOM)
- EXISTING TO BE REMOVED OR DEMOLISHED

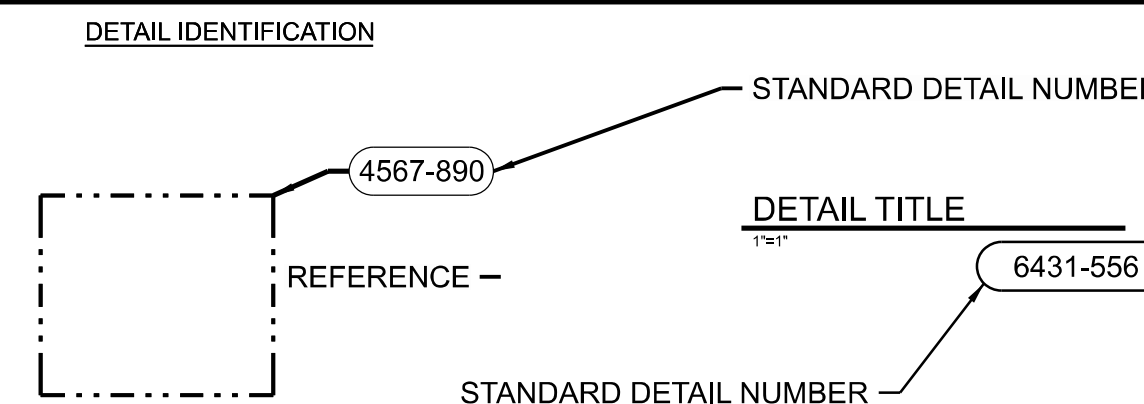
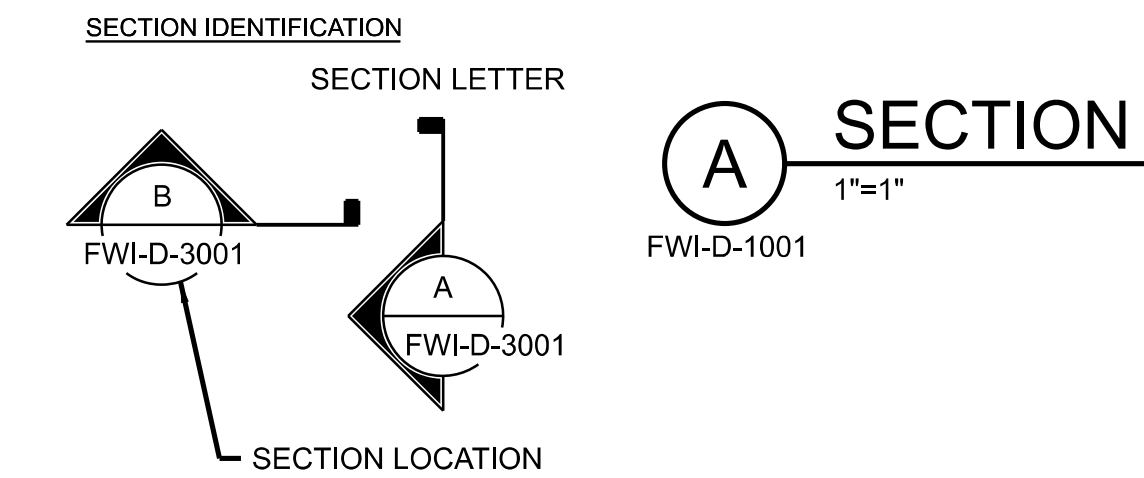
**MULTNOMAH COUNTY TRANSPORTATION DIVISION**

ACCEPTED  
 ACCEPTED WITH COMMENTS  
 APPROVED  
 APPROVED AS NOTED  
 RETURNED FOR CORRECTION

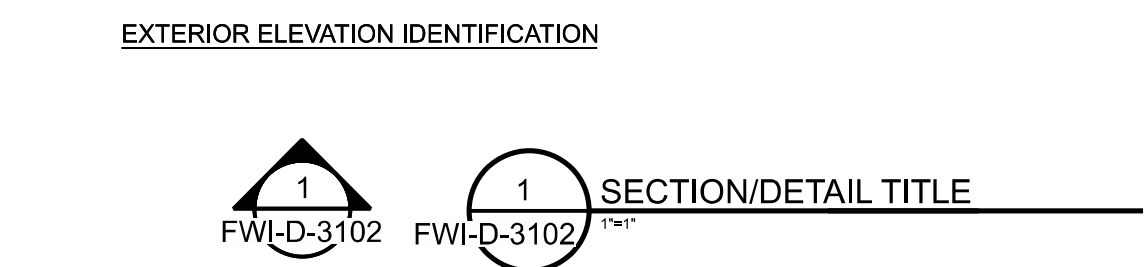
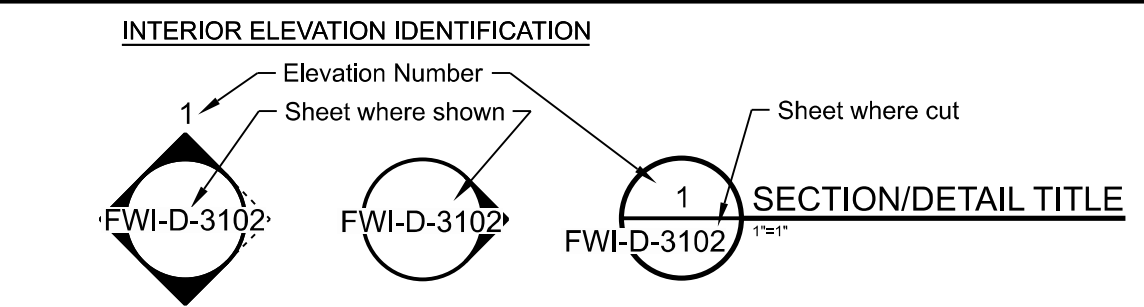
DOCUMENTS BEARING THIS STAMP ARE SUBJECT TO THE PROVISIONS SET FORTH IN SECTION 10.01 OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION THAT ARE ACTIVE FOR THIS PROJECT. REVIEW IS ONLY FOR GENERAL CONFORMANCE AND COMPLIANCE OF THE PROJECT AND DOES NOT EXTEND TO MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH CONTRACT DOCUMENTS DIMENSIONS AND FABRICATION TO BE CONFIRMED AND COMPLETED AT THE JOB SITE FOR PROGRESS AND COORDINATION OF THE WORK OF ALL TRADES AND SATISFACTORY WORK PERFORMANCE.

BY **buert** DATE **8/5/2024**

**REFERENCE SYMBOLS**

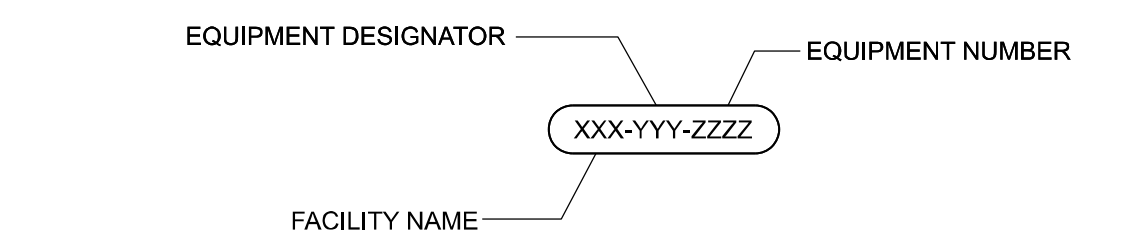


- NOTES:**
- ALL DESIGN DETAILS ARE TYPICAL AND MUST BE USED IF DESIGN DETAIL DESIGNATION IS SHOWN.
  - THE TERM STANDARD DETAIL, OR A FORM OF IT, IS SYNONYMOUS WITH DESIGN DETAIL, AND REFERS TO THE DESIGN DETAILS FOUND IN THIS SET OF CONTRACT DOCUMENTS.
  - THE DESIGN DETAILS REPRESENT THE CHARACTER AND NATURE OF THE WORK REQUIRED THROUGHOUT THE PROJECT. ALL ASSOCIATED WORK SHALL BE IN ACCORDANCE WITH THE DESIGN DETAILS SHOWN WHETHER THE DETAILS ARE SPECIFICALLY REFERENCED OR NOT.



**EQUIPMENT IDENTIFICATION**

SEE EQUIPMENT SCHEDULE/SPECIFICATIONS



**PLEASE NOTE:**

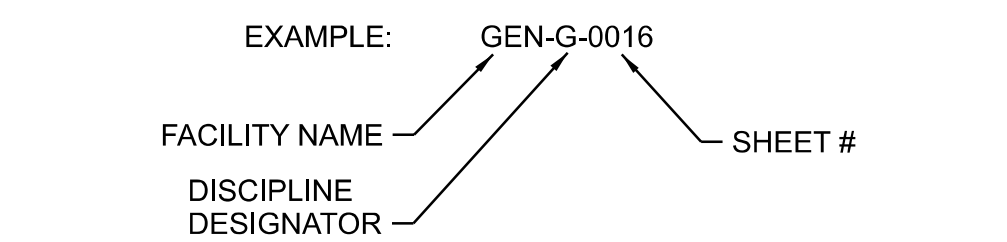
DISCIPLINE SPECIFIC SYMBOLS ARE SHOWN ON THE DISCIPLINE GENERAL DRAWINGS.

FOR WELDING SYMBOLS USE AMERICAN WELDING SOCIETY STANDARD SYMBOLS.

**MISCELLANEOUS SYMBOLS**

- SHEET KEY SYMBOL
- REVISION TRIANGLE SYMBOL
- BREAK SYMBOL
- ANGLE SYMBOL
- CENTERLINE SYMBOL
- MATCHLINE SYMBOL
- MATCHLINE STA
- MATCHLINE SHEET
- ARCHITECTURAL UNIT SCALE BAR
- CIVIL UNIT SCALE BAR
- CIVIL SCALE BAR WHERE THERE ARE HORIZONTAL AND VERTICAL SCALES
- NORTH ARROW

**SHEET DISCIPLINE DESIGNATION**



**FACILITY NAMES**

- GEN GENERAL
- TFC TRAFFIC CONTROL
- RWP RAW WATER PIPELINE
- MUL MULTNOMAH CONNECTION
- TPS TUNNEL PORTAL SHAFT
- FWP FINISHED WATER PIPELINE
- FWI FINISHED WATER INTERTIE
- COA CONDUIT ABANDONMENT
- STD STANDARD DETAILS

**DISCIPLINE DESIGNATORS**

- A ARCHITECTURAL
- C CIVIL
- CA CIVIL APPURTENANCE PLAN AND SECTION
- CE CIVIL EROSION AND SEDIMENT CONTROL
- CG CIVIL STREET DESIGN
- CP CATHODIC PROTECTION
- CS CIVIL STORM DRAINAGE
- D PROCESS MECHANICAL
- E ELECTRICAL
- EL ELECTRICAL LIGHTNING AND RECEPTACLES
- EP ELECTRICAL EQUIPMENT PLAN
- G GENERAL
- L LANDSCAPE
- M MECHANICAL
- MP BUILDING MECHANICAL
- P PWB STANDARD DETAILS
- R RENDERING
- S STRUCTURAL
- TC TRAFFIC CONTROL
- TP TREE PLAN
- V SURVEY
- W UTILITY
- Z STANDARD DETAILS
- X INSTRUMENTATION AND CONTROL

**MULTNOMAH COUNTY GENERAL NOTES:**

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE PLANS, CONTRACT DOCUMENTS, DETAILS, AND THE CURRENT EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTIONS.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS ELEVATIONS, SLOPES, AND LENGTHS PRIOR TO CONSTRUCTION. EXISTING UNDERGROUND UTILITY LOCATIONS ARE COMPILED FROM THE BEST AVAILABLE RECORDS. THE ENGINEER OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. ADDITIONAL UTILITIES MAY EXIST WITHIN THE WORK AREA. DEPTHS ARE APPROXIMATE ONLY AND MAY VARY IN DEPTH AND DISTANCE FROM THAT INDICATED ON THE PLANS. NOTIFY ENGINEER OF ANY DISCREPANCIES. NO DELAYS WILL BE ALLOWED DUE TO NEGLIGENCE TO COORDINATE WITH UTILITY COMPANIES. CONTRACTOR MUST POTHOLE UTILITIES PRIOR TO CONSTRUCTION AND COORDINATE WITH UTILITY COMPANIES TO RELOCATE FACILITIES AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY CHANGES IN PUBLIC FACILITIES WITHIN THE JURISDICTION OF THE COUNTY MUST BE REVIEWED AND APPROVED BY COUNTY.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROCURE ALL APPLICABLE PERMITS, LICENSES, AND CERTIFICATES RELATIVE TO THE TRADES TO COMPLETE THE PROJECT AND FOR THE USE OF SUCH WORK WHEN COMPLETED. COMPLIANCE SHALL BE AT ALL LEVELS, FEDERAL, STATE, COUNTY, AND LOCAL RELATING TO THE PERFORMANCE OF THIS WORK.
- OREGON LAW REQUIRES THE CONTRACTOR 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. COPIES OF THE RULES MAY BE OBTAINED BY CALLING THE CENTER (ONE CALL UTILITY LOCATE NUMBER 503-246-6699). ALL EXCAVATORS MUST COMPLY WITH ALL PROVISIONS OR ORS 757.541 TO 757.751 INCLUDING NOTIFICATION OF ALL OWNERS OF UNDERGROUND FACILITIES AT LEAST 48 BUSINESS HOURS, BUT NOT MORE THAN 10 BUSINESS DAYS BEFORE COMMENCING ANY EXCAVATION.
- THE CONTRACTOR SHALL MAKE PROVISIONS TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED UTILITIES USING MATERIALS AND METHODS APPROVED BY THE UTILITY OWNER. NO SERVICE INTERRUPTIONS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN AGREEMENT WITH THE UTILITY PROVIDER.
- CONTRACTOR SHALL NOTIFY THE ENGINEER, MULTNOMAH COUNTY, AND THE CITY PUBLIC WORKS/CITY ENGINEER 48 HOURS IN ADVANCE OF STARTING CONSTRUCTION AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS, OR HOLIDAYS.
- CONTRACTOR SHALL REMOVE AND DISPOSE OF WASTE MATERIALS IN SUCH A MANNER AS TO MEET ALL APPLICABLE REGULATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AN APPROPRIATE SITE.
- FOR UNANTICIPATED CONTAMINATION ENCOUNTERED DURING CONSTRUCTION IN THE COUNTY RIGHT-OF-WAY, THE PERMITTEE/APPLICANT OR ITS AGENT SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE MANAGEMENT AND DISPOSAL OF CONTAMINATED MEDIA ENCOUNTERED. THE PERMITTEE IS ALSO RESPONSIBLE FOR ALL RESULTANT DELAYS.
- CONTRACTOR SHALL NOT USE THE PUBLIC RIGHT-OF-WAY FOR STORAGE OF EQUIPMENT, MATERIALS, CONSTRUCTION TRAILERS, AND CONSTRUCTION VEHICLES UNLESS OTHERWISE APPROVED.
- CONTRACTOR SHALL PROVIDE A STAGING PLAN. CONSTRUCTION VEHICLES SHALL ONLY PARK ON A LOCATION INDICATED ON THE CONSTRUCTION STAGING PLAN.
- HOURS OF CONSTRUCTION SHALL BE 7:00 AM TO 6:00 PM, MONDAY THROUGH FRIDAY. CONSTRUCTION IS PROHIBITED ON SATURDAY AND SUNDAY AND HOURS OUTSIDE THE NORMAL HOURS OF OPERATION UNLESS OTHERWISE APPROVED IN WRITING. CONSTRUCTION ACTIVITIES INCLUDE ALL FIELD MAINTENANCE OF EQUIPMENT, REFUELING, AND PICK UP AND DELIVERY OF EQUIPMENT AS WELL AS THE ACTUAL CONSTRUCTION ACTIVITY.
- THE CONTRACTOR SHALL HAVE A MINIMUM OF ONE (1) SET OF APPROVED CONSTRUCTION PLANS ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET THE INTENT OF THE PROJECT CONTRACT DOCUMENTS, PLANS AND APPLICABLE AGENCY REQUIREMENTS AND OTHER WORK NECESSARY TO PROVIDE A COMPLETE PROJECT IN AN ACCEPTABLE MANNER.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS BEFORE THE START OF WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY FIELD MEASUREMENTS AND OTHERWISE VERIFY 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 PROJECT ENGINEER FOR CLARIFICATION OR CORRECTION.
- ANY INSPECTION BY THE CITY, COUNTY, STATE, FEDERAL AGENCY OR PROJECT ENGINEER SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN COMPLIANCE WITH THE APPLICABLE CODES, REGULATIONS, PROJECT CONTRACT DOCUMENTS AND CITY, COUNTY AND STATE STANDARDS.
- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PRESENT A LIST AT THE PRE-CONSTRUCTION MEETING OF SUB-CONTRACTORS, A PROJECT SCHEDULE, ALL MATERIALS SUBMITTALS, ALL SHOP DRAWINGS, A TRAFFIC CONTROL PLAN AND A LIST OF AT LEAST THREE (3) PEOPLE RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL DURING NON-WORK PERIODS. ALL SUBMITTALS MUST BE READY AT TIME OF PRE-CONSTRUCTION MEETING.
- THE CONTRACTOR SHALL COORDINATE WITH PGE OR UTILITY POLE OWNER FOR TEMPORARY SUPPORT OR RELOCATION FOR UTILITY POLES IN CLOSE PROXIMITY TO THE WORK.
- AREAS OF CONSTRUCTION SHALL BE STRIPPED BY REMOVING TOPSOIL, AND OTHER MATERIALS NOT SUITABLE FOR COMPACTION. STRIPPED MATERIALS SHALL NOT BE USED FOR ROADWAY EMBANKMENT OR STRUCTURAL FILL. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL. FILL AREAS TO BE INSPECTED BY THE COUNTY OR PROJECT ENGINEER PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS.
- ADJUST ALL WATER VALVE BOXES, MANHOLE AND CLEAN OUT RIMS, AND METER BOXES TO MATCH FINISHED GRADE.
- CONTRACTOR SHALL PROTECT EXISTING MONUMENTS, BENCHMARKS, PROPERTY CORNERS AND GOVERNMENT CORNERS WHERE FEASIBLE. IF MONUMENTS ARE DISTURBED OR DESTROYED, NOTIFY THE PROJECT ENGINEER.
- THE CONTRACTOR SHALL CONTROL TRAFFIC THROUGH THE PROJECT SITE IN CONFORMANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)" AND "OREGON SUPPLEMENTS" TO MUTCD.
- IF TEMPORARY ROAD CLOSURES ARE REQUIRED, CONTRACTOR SHALL NOTIFY PROPERTY OWNERS AND OCCUPANTS AFFECTED BY THE CLOSURE BY MAIL OR DOOR HANGER AT LEAST 48 HOURS PRIOR TO ROAD CLOSURE. ROADS SHALL BE REOPENED AT THE END OF EACH DAY TO ALL ACCESS TO ALL PROPERTIES.
- THE CONTRACTOR SHALL TAKE NO ADVANTAGE OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES IN THE PLANS. WHEN ERRORS, OMISSIONS, OR DISCREPANCIES ARE FOUND, THE ENGINEER AND THE COUNTY SHALL BE NOTIFIED. WORK PERFORMED BY THE CONTRACTOR AS A RESULT OF AN ERROR, OMISSION, OR DISCREPANCY IN THE PLANS SHALL BE AT CONTRACTOR'S RISK AND EXPENSE WHEN SUCH ERROR, OMISSION, OR DISCREPANCY HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE COUNTY.
- ENGINEER SHALL BE CONTACTED PRIOR TO ANY VARIATION FROM THE APPROVED PLANS.
- SUBSEQUENT SETTLEMENT OR CRACKING OF FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A FAILURE OF THE SUBGRADE AND REPAIRED AT NO COST TO THE COUNTY AND IN A MANNER ACCEPTABLE TO THE COUNTY.
- PRIOR TO FINAL ACCEPTANCE AND PAYMENT, THE CONTRACTOR SHALL CLEAN THE WORK SITE AND ADJACENT AREAS OF ANY DEBRIS, DISCARDED ASPHALTIC CONCRETE MATERIAL OR OTHER ITEMS DEPOSITED BY THE CONTRACTOR'S PERSONNEL DURING THE PERFORMANCE OF THE CONTRACT.
- CONTRACTOR SHALL PROVIDE AS-BUILT INFORMATION TO THE COUNTY AFTER CONSTRUCTION IS COMPLETED AND ONCE APPROVED BY PORTLAND WATER BUREAU.

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

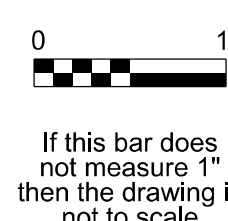
07/23/2024 9:23:56 AM W02563\_GEN-G-0016.dgn

No	Date	Description	Appd
1	7/2024	DCN-03 - CCD-0003	BJP
Revision			
Survey			



Designed By	TWL	Program Mgr	DH
Drawn By	AP	Const Mgr	BN
Checked By	SDA	CMII Eng Mgr	JB
Project Mgr	BJP	Date	9/29/23

**WARNING**



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



Bull Run Filtration Pipelines

GENERAL

GENERAL LEGEND

SAP Project No  
**W02563**

1/4 Section

Sheet No  
**GEN-G-0016**



# LAND USE CONDITIONS OF APPROVAL

1. TRAFFIC CONTROL PLAN (TCP) SHALL BE SUBMITTED DURING THE CONSTRUCTION PERMITTING PROCESS THAT SHOWS DETOURS AND ROAD CLOSURES (MCR 13.200.A). ANY DEVIATION TO THE APPROVED TCP DURING CONSTRUCTION SHALL REQUIRE A RESUBMITTAL OF THE TCP FOR APPROVAL.
2. EXCEPT FOR THOSE ROADS WHERE SPECIFIC WORK WILL BE REQUIRED BY THE PROJECT AGREEMENT DESCRIBED IN CONDITION 6, RURAL ROADS WITH A PAVEMENT CONDITION INDEX (PCI) RATING BELOW 50 MUST NOT BE USED AS DETOUR ROUTES IN THE TRAFFIC CONTROL PLAN UNLESS THE WATER BUREAU SUBMITS CONSTRUCTION PLANS TO MITIGATE IMPACTS AND IMPROVE THE PCI. THE CONSTRUCTION PERMIT PROCESS WILL BE USED TO REVIEW TCP AND CONFIRM APPROPRIATE DETOUR ROUTES.
3. THE TCP MUST INCLUDE AN EMERGENCY COORDINATION SECTION THAT AT MINIMUM INCLUDES THE FOLLOWING:
  - A. SATISFY THE MINIMUM REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
  - B. PROVIDE CONSTRUCTION UPDATE REPORTS TO EMERGENCY RESPONDERS THAT INCLUDE, AT A MINIMUM, THE FOLLOWING INFORMATION:
    1. DATES AND TIMES OF CLOSURE/PARTIAL CLOSURE
    2. NAME OF CONTRACTOR AND EMERGENCY CONTACTS (REQUIRED ON-SITE CONTRACT)
    3. PURPOSE OF CLOSURE
    4. LOCATION OF CLOSURE AND NUMBER OF LANES
    5. WORK HOURS AND TIMES OF ROAD CLOSURES
    6. TRAFFIC CONTROL LAYOUT PLAN
    7. LEGEND
      - I. NORTH ARROW
      - II. STREET NAMES WITHIN A CERTAIN DISTANCE OF THE SITE
      - III. PHYSICAL FEATURES SUCH AS MEDIANS, SHOULDERS, ETC.
      - IV. IDENTIFIED METHOD FOR PASSAGE OF EMERGENCY RESPONSE VEHICLES (INCLUDING TEMPORARY CONDITIONS/DETOUR PLAN)
      - V. LOCATION OF SIGNIFICANT CONSTRUCTION ITEMS SUCH AS DUMPSTERS AND HEAVY EQUIPMENT
4. THE CONSTRUCTION UPDATE REPORTS MUST BE PROVIDED AT LEAST WEEKLY UNLESS AN ALTERNATIVE FREQUENCY IS REQUESTED BY AN EMERGENCY RESPONDER.
5. THE TCP MUST PROVIDE FOR ACCESS THROUGH CONSTRUCTION ONES AS FOLLOWS:
  - A. WHERE NO DETOUR IS AVAILABLE, SUCH AS TO ACCESS LUSTED FLATS VIA DODGE PARK BOULEVARD OR TO ACCESS THE ONLY ACCESS TO A FARM FIELD, THE APPLICANT SHALL (1) ENSURE THAT WORK ZONES ALLOWING A SINGLE LANE OF TRAFFIC TO PASS ARE WIDE ENOUGH TO ACCOMMODATE FARM TRAFFIC UP TO 16 FEET WIDE; AND (2) FLAG FARM TRAFFIC, SERVICE PROVIDERS, AND LOCAL RESIDENTS (WITHIN THE CLOSURE) THROUGH OTHERWISE CLOSED WORK ZONES.
  - B. THE WATER BUREAU SHALL (1) ENSURE THAT WORK ZONES ALLOWING A SINGLE LANE OF TRAFFIC TO PASS ARE WIDE ENOUGH TO ACCOMMODATE EMERGENCY VEHICLES; AND (2) FLAG EMERGENCY VEHICLES THROUGH OTHERWISE CLOSED WORK ZONES. ACCESS FOR EMERGENCY VEHICLES SHALL BE PROVIDED AT ALL TIMES.
  - C. THE WATER BUREAU SHALL REQUIRE THE CONTRACTOR TO TAKE MEASURES TO ENSURE THEY CAN ACCOMMODATE THIS TRAFFIC THROUGH A WORK ZONE REGARDLESS OF THE STAGE OF CONSTRUCTION. FOR EXAMPLE, IF PIPELINE CONSTRUCTION OBSTRUCTS A ROAD THAT CANNOT BE DETOURED AROUND, THE CONTRACTOR WILL HAVE ON-HAND THE MATERIALS NEEDED TO PLATE THE EXCAVATION OR OTHERWISE ALLOW THIS TRAFFIC TO PROCEED THROUGH THE WORK ZONE.
6. WHEN CONSTRUCTION IMPACTS THE PUBLIC RIGHT-OF-WAY IN FRONT OF A BUSINESS, POST "BUSINESS OPEN" SIGNS TYPICAL OF ROADWAY CONSTRUCTION PROJECTS IN ANY AREA WHERE ROAD CONSTRUCTION AND/OR PIPELINE INSTALLATION IS OCCURRING AND WHERE BUSINESS WOULD ANTICIPATE VISITORS.
7. PROVIDE "LOCAL ACCESS ONLY" SIGNAGE RESTRICTING ACCESS TO CARPENTER LANE WEST OF COTTRELL ROAD, AS WELL AS INCLUDING THE PROHIBITION ON USE IN THE SAFE DRIVER TRAINING.
8. INSTRUCT FILTRATION PROJECT CONSTRUCTION DRIVERS TO AVOID SPECIFIC ROAD SEGMENTS THAT HAVE DIRECT ACCESS TO IDENTIFIED SCHOOLS. THE SPECIFIC SCHOOL, STREETS, TYPES OF CONSTRUCTION TRAFFIC, AND HOURS TO BE AVOIDED ARE LISTED IN THE TABLE BELOW. THESE CONSTRAINTS APPLY ONLY ON DAYS WHEN SCHOOL IS IN SESSION.
9. THE WATER BUREAU MAY NOT INCLUDE CARPENTER LANE WEST OF COTTRELL AS A DETOUR OPTION IN TRAFFIC CONTROL PLANS FOR SIGNAGE DURING CONSTRUCTION.
10. WATER BUREAU SHALL COMPLY WITH THE FOLLOWING CONSTRAINTS FOR PIPELINE CONSTRUCTION:
  - A. NO WORK SHALL BE PERFORMED SIMULTANEOUSLY ON TWO COUNTY ROADS AT THE SAME TIME WITH THE EXCEPTION THAT:
    1. S.E. DODGE PARK BOULEVARD AND ALTMAN ROAD WORK IS ALLOWED TO BE PERFORMED CONCURRENTLY; AND
    2. S.E. LUSTED ROAD (BETWEEN FINISHED WATER INTERTIE AND S.E. ALTMAN ROAD) AND S.E. COTTRELL ROAD WORK IS ALLOWED TO BE PERFORMED CONCURRENTLY.
  - B. THE SEGMENT OF DODGE PARK BLVD EAST OF THE INTERSECTION OF S.E. COTTRELL ROAD AND S.E. DODGE PARK BOULEVARD CAN ONLY BE CONSTRUCTED DURING THE TIME FRAME OF AUGUST THROUGH OCTOBER.
  - C. THE INTERSECTION OF S.E. COTTRELL ROAD/S.E. DODGE PARK BOULEVARD CAN ONLY BE CLOSED IN THE MONTH OF OCTOBER.
  - D. THE CLOSING OF S.E. DODGE PARK BOULEVARD TO CROSS THE ROAD ONTO THE PRIVATE PROPERTY AT THE WEST END OF THE FINISHED WATER PIPES CAN ONLY BE CLOSED IN THE MONTH OF OCTOBER.
  - E. S.E. COTTRELL ROAD CANNOT BE CLOSED OR LIMITED TO TRAFFIC WHILE WORK IS BEING ACCOMPLISHED ON S.E. DODGE PARK BOULEVARD LIMITING TRAFFIC.
  - F. PIPELINE INSTALLATION ACROSS THE PRIVATE PROPERTY IS RECOMMENDED TO ONLY BE CONDUCTED DURING THE SUMMERTIME (NON-WET PERIODS).
  - G. A MINIMUM SINGLE LANE OF TRAFFIC FLOW IS REQUIRED AT ALL TIMES ALONG S.E. DODGE PARK BOULEVARD WHILE WORK IS BEING ACCOMPLISHED, AND THE TRAFFIC LIMITATIONS SHALL ONLY BE RESTRICTED BY THE ROLLING LANE CLOSURE (WITH THE EXCEPTION OF THE CLOSURES NOTED IN C. AND D., BUT ONLY IN COMPLIANCE WITH THOSE TWO CONSTRAINTS).
  - H. CLOSURE OF S.E. LUSTED ROAD BETWEEN THE FINISHED WATER INTERTIE TO S.E. ALTMAN ROAD IS ALLOWED WITH THE FOLLOWING LIMITATIONS:
    1. A FARM DIRECT AND U-PICK PEACH ORCHARD LOCATED APPROXIMATELY 900 FEET EAST OF S.E. ALTMAN ROAD SHALL BE PROVIDED WITH UNIMPEDED ACCESS FOR THEIR CUSTOMERS DURING THE MONTH OF AUGUST.
  - I. THE COMPLETION OF THE C4FWP PIPELINE FROM THE STOP SIGN ON S.E. ALTMAN ROAD AT S.E. OXBOW DRIVE TO S.E. OXBOW DRIVE FOR CONNECTION TO THE EXISTING CONDUIT 4 CAN ONLY OCCUR DURING THE MONTHS OF JUNE/JULY OR OCTOBER/MID-NOVEMBER TO NOT IMPEDE FARMERS' SHIPPING TRAFFIC AT OTHER PERIODS OF THE YEAR.
  - J. THE FINISHED WATER S.E. LUSTED ROAD CLOSURE CANNOT BE DONE SIMULTANEOUSLY WITH THE CLOSURE OF S.E. ALTMAN ROAD.
  - K. THE C4FWP PIPELINE IN OXBOW DRIVE AND CONNECTION IN OXBOW DRIVE CANNOT BE CONSTRUCTED SIMULTANEOUS WITH THE WORK ON FINISHED WATER PIPES IN S.E. LUSTED ROAD.
11. PIPELINE CONSTRUCTION MUST ADDITIONALLY COMPLY WITH THE FOLLOWING:
  - A. S.E. ALTMAN RD BETWEEN S.E. LUSTED RD AND S.E. PIPELINE RD WILL BE ALLOWED FULL CLOSURE FOR PIPELINE INSTALLATION BUT ACCESS MUST BE MAINTAINED FOR (1) FARM TRAFFIC, SERVICE PROVIDERS, AND LOCAL RESIDENTS (WITHIN THE CLOSURE) WHO HAVE NO DETOUR ALTERNATIVE AND FOR (2) EMERGENCY VEHICLES.
  - B. S.E. ALTMAN RD FROM S.E. PIPELINE RD TO THE STOP SIGN AT THE INTERSECTION OF S.E. ALTMAN RD/SE OXBOW DRIVE CAN BE FULLY CLOSED FOR THE DURATION OF THE PIPELINE INSTALLATION, BUT ACCESS MUST BE MAINTAINED FOR (1) FARM TRAFFIC, SERVICE PROVIDERS, AND LOCAL RESIDENTS (WITHIN THE CLOSURE) WHO HAVE NO DETOUR ALTERNATIVE AND FOR (2) EMERGENCY VEHICLES.
  - C. FOR THE PIPELINE CONNECTION WORK ON S.E. LUSTED RD AT THE MULTNOMAH CONNECTION TO EACH OF THE EXISTING CONDUITS, DAYTIME ROAD CLOSURE IS ALLOWED BUT ACCESS FOR (1) FARM TRAFFIC, SERVICE PROVIDERS, AND LOCAL RESIDENTS (WITHIN THE CLOSURE) WHO HAVE NO DETOUR ALTERNATIVE AND FOR (2) EMERGENCY VEHICLES, MUST BE MAINTAINED THROUGH THE CONSTRUCTION ZONE. OUTSIDE OF CONSTRUCTION WORK HOURS, SINGLE LANE ACCESS THROUGH THE CONSTRUCTION ZONE SHALL BE PROVIDED BY EITHER FLAGGING OR SIGNALIZATION.

DISTRICT	SCHOOL	STREET	EXTENT	CONSTRUCTION TRAFFIC TYPE	AVOIDANCE HOURS*
OREGON TRAIL	OREGON TRAIL ACADEMY	SE PROCTOR RD	SE BLUFF RD TO SE DODGE PARK BLVD	ALL	ALL
		SE BLUFF RD	JUST EAST OF SE 352ND AVE TO SE BEAR CREEK LN	TRUCKS AND CRAFT LABOR COMMUTERS	7:15 TO 8:15 AM 2:15 TO 3:15 PM
GRESHAM-BARLOW	KELSO ELEMENTARY	SE KELSO RD	SE ORIENT DR TO SE EKLUND AVE	ALL	ALL
		SAM BARLOW HIGH	SE LUSTED RD	SE 282ND AVE TO SE 302ND AVE	TRUCKS CRAFT LABOR COMMUTERS
		SE 302ND AVE	SE LUSTED RD TO SE CHASE RD	TRUCKS CRAFT LABOR COMMUTERS	ALL 7:05 TO 9:05 AM 2:00 TO 3:00 PM
	EAST ORIENT ELEMENTARY	SE 302ND AVE	SE DODGE PARK BLVD TO SE BLUFF RD	ALL	ALL
	WEST ORIENT MIDDLE	SE SHORT RD	SE DODGE PARK BLVD TO SE ORIENT DR	ALL	ALL
		SE ORIENT DR/ SE BLUFF RD	SE SHORT RD TO SE 302ND AVE	TRUCKS CRAFT LABOR COMMUTERS	ALL 8:35 TO 10:35 AM 3:05 TO 4:05 PM
KELLY CREEK ELEMENTARY	SE BAKER WAY/ SE 24TH ST	SE WILLIAMS DR TO SE CHASE RD	ALL	ALL	

\*AVOIDANCE HOURS ARE BASED ON 30 MINUTES BEFORE AND AFTER SCHOOL START AND END TIMES SHOWN ON DISTRICT WEBSITES AT THE TIME OF THIS DECISION. TWO-HOUR MORNING AVOIDANCE PERIODS ARE INCLUDED FOR THOSE SCHOOLS THAT HAVE REGULARLY SCHEDULED LATE STARTS ON CERTAIN DAYS. THE APPLICANT WILL UPDATE AVOIDANCE HOURS ANNUALLY PRIOR TO THE START OF EACH SCHOOL YEAR, OR MORE FREQUENTLY IF NOTIFIED BY THE DISTRICTS, TO REFLECT ANY CHANGES MADE BY THE DISTRICTS TO START AND/OR END TIMES. ANY RESULTING UPDATES WILL BE CONSISTENT WITH THE 30-MINUTE PERIODS DESCRIBED ABOVE.

06/11/2024 1:32:29 PM W02563\_TFC-C-0001.dgn

No	Date	Description	Appd
Revision			
Survey			



Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	1/22/24



Date	



Bull Run Filtration Pipelines  
**TRAFFIC CONTROL**  
 GENERAL NOTES

SAP Project No	W02563
1/4 Section	
Sheet No	TFC-C-0001

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.



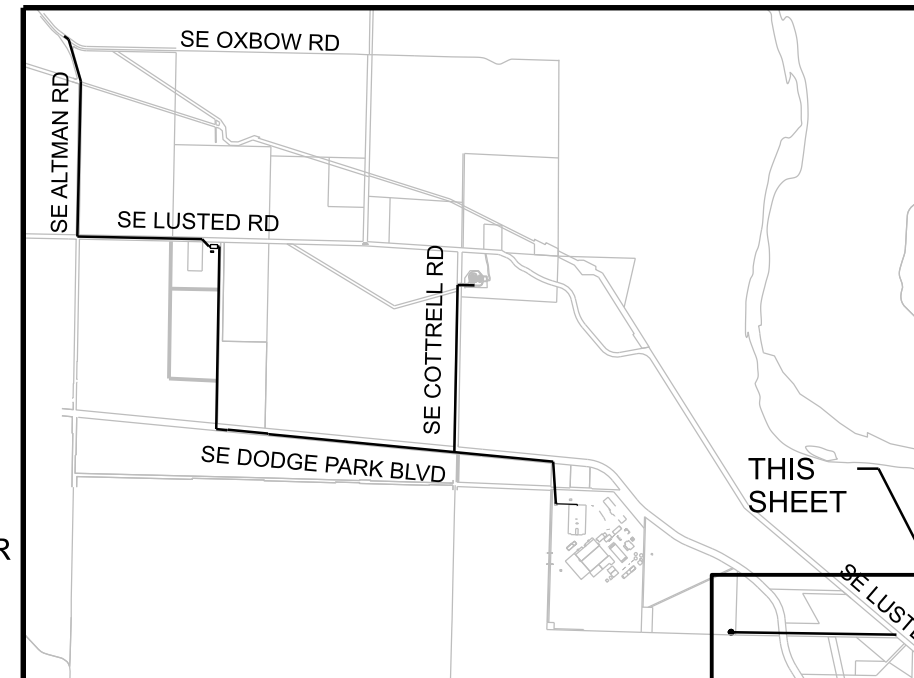
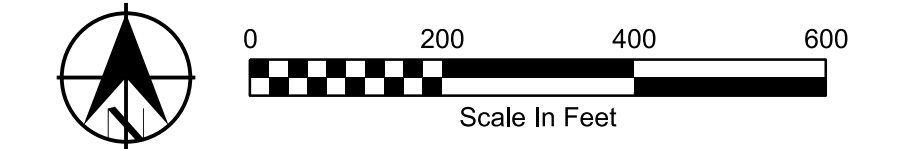
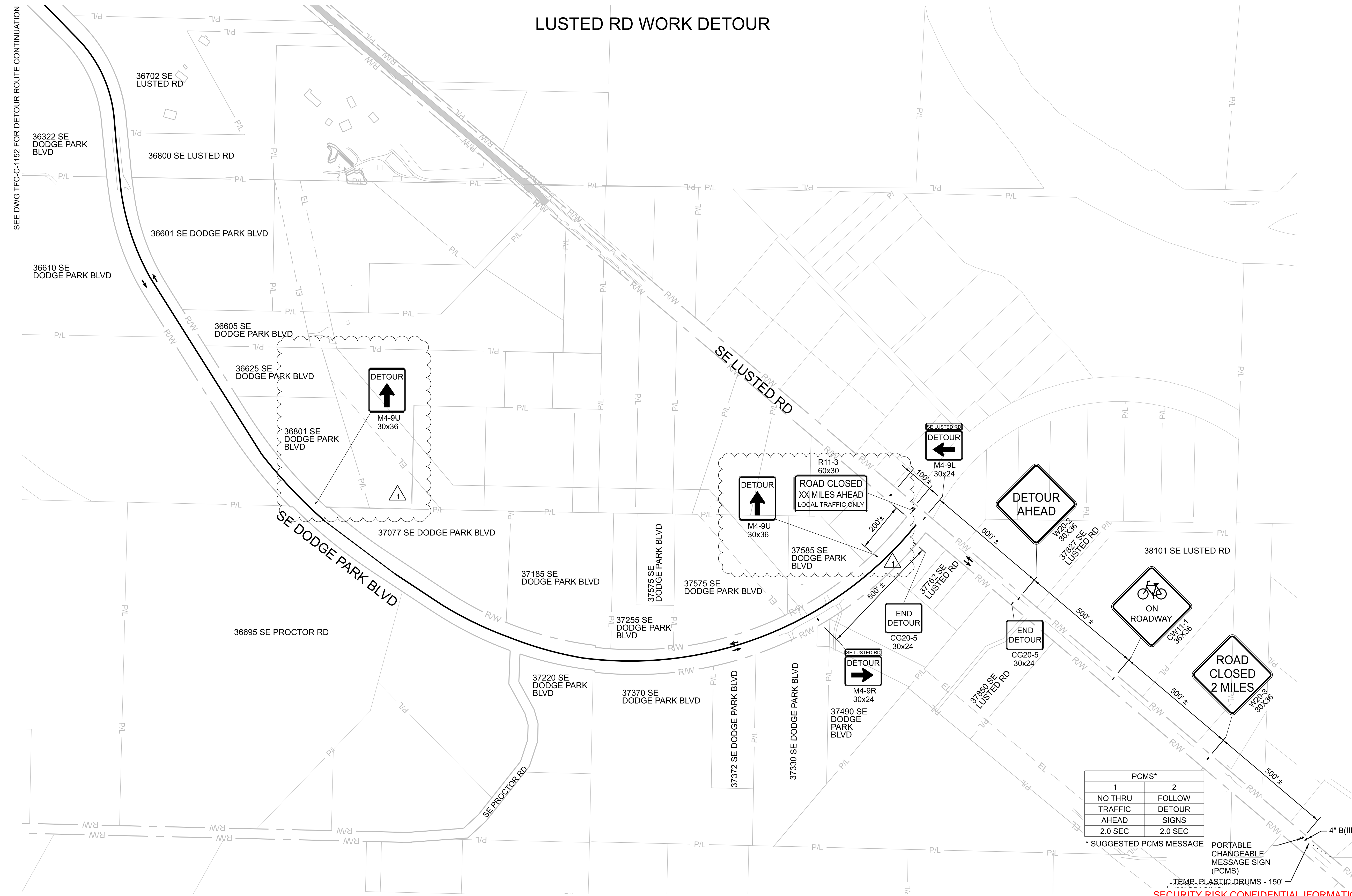
# LUSTED RD WORK DETOUR

## GENERAL SHEET NOTES

1. THIS LOCATION IS SHARED BETWEEN CLACKAMAS AND MULTNOMAH COUNTIES.
2. CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.

## LEGEND

- DIRECTION OF TRAFFIC
- DETOUR ROUTE
- DETOUR SIGNS (3471-901)
- TYPE III BARRICADE (3471-865)
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- EL — EXISTING EASEMENT
- TEMPORARY TUBULAR MARKERS
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)



PCMS*	
1	2
NO THRU TRAFFIC AHEAD	FOLLOW DETOUR SIGNS
2.0 SEC	2.0 SEC

\* SUGGESTED PCMS MESSAGE

PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

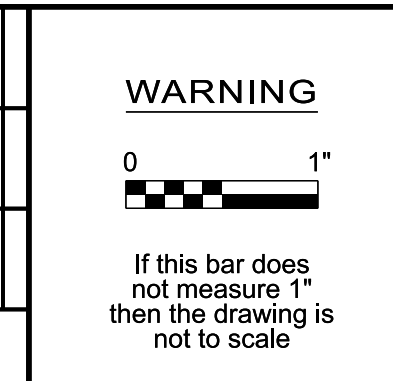
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24-JUL-2024 16:22

No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	JB
Date	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
 LUSTED WORK DETOUR - 1

SAP Project No  
**W02563**  
 1/4 Section  
 Sheet No  
 TFC-C-1151



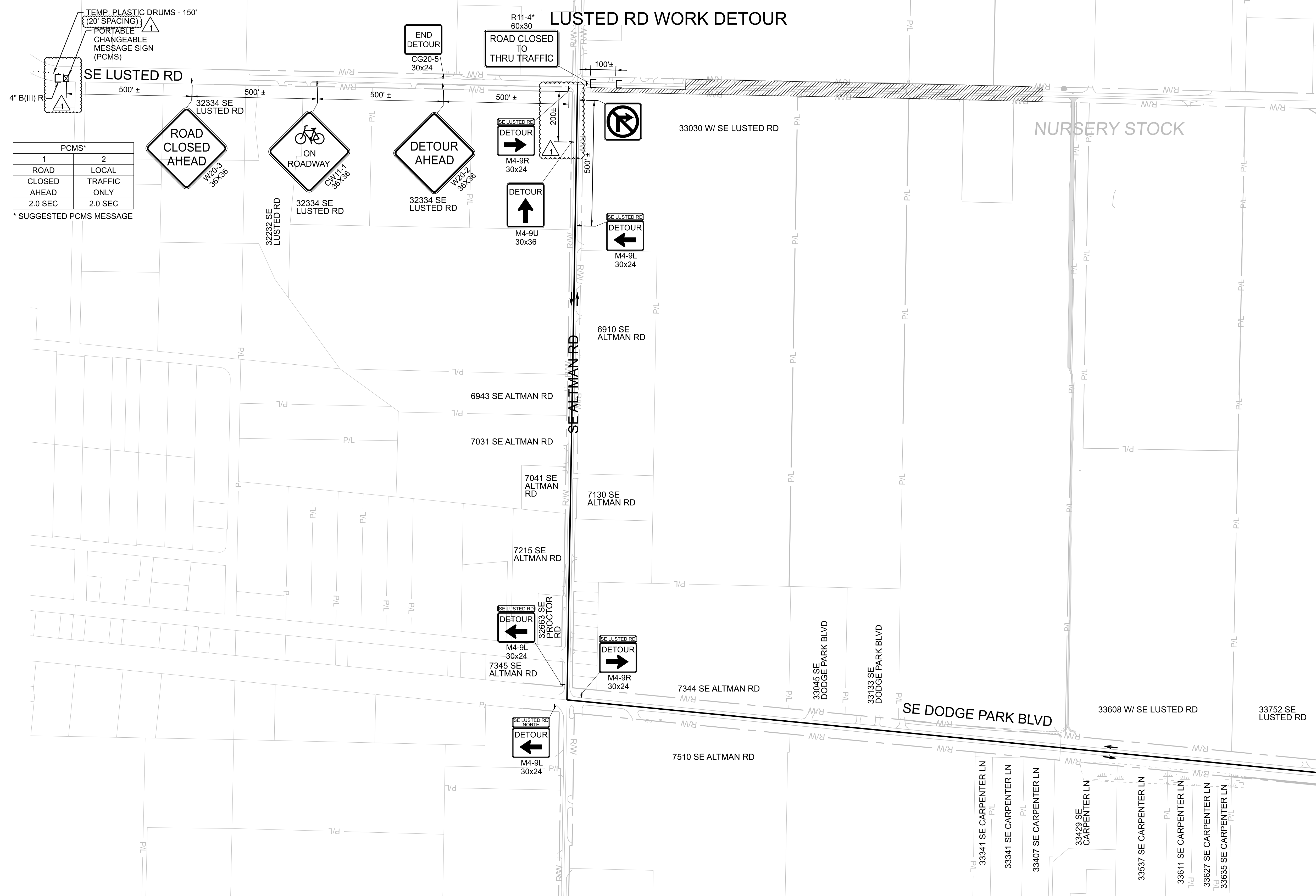
### GENERAL SHEET NOTES

1. THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
2. CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES, PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.

### LEGEND

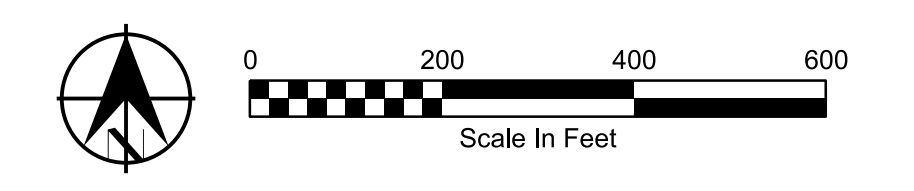
- DIRECTION OF TRAFFIC
- UNDER CONSTRUCTION
- DETOUR ROUTE
- DETOUR SIGNS (3471-901)
- TYPE III BARRICADE (3471-865)
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- TEMPORARY TUBULAR MARKERS

## LUSTED RD WORK DETOUR



PCMS*	
1	2
ROAD CLOSED AHEAD	LOCAL TRAFFIC ONLY
2.0 SEC	2.0 SEC

\* SUGGESTED PCMS MESSAGE



KEYPLAN

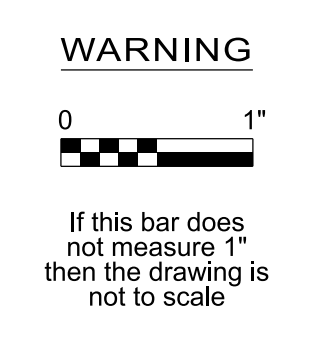
SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

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No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424

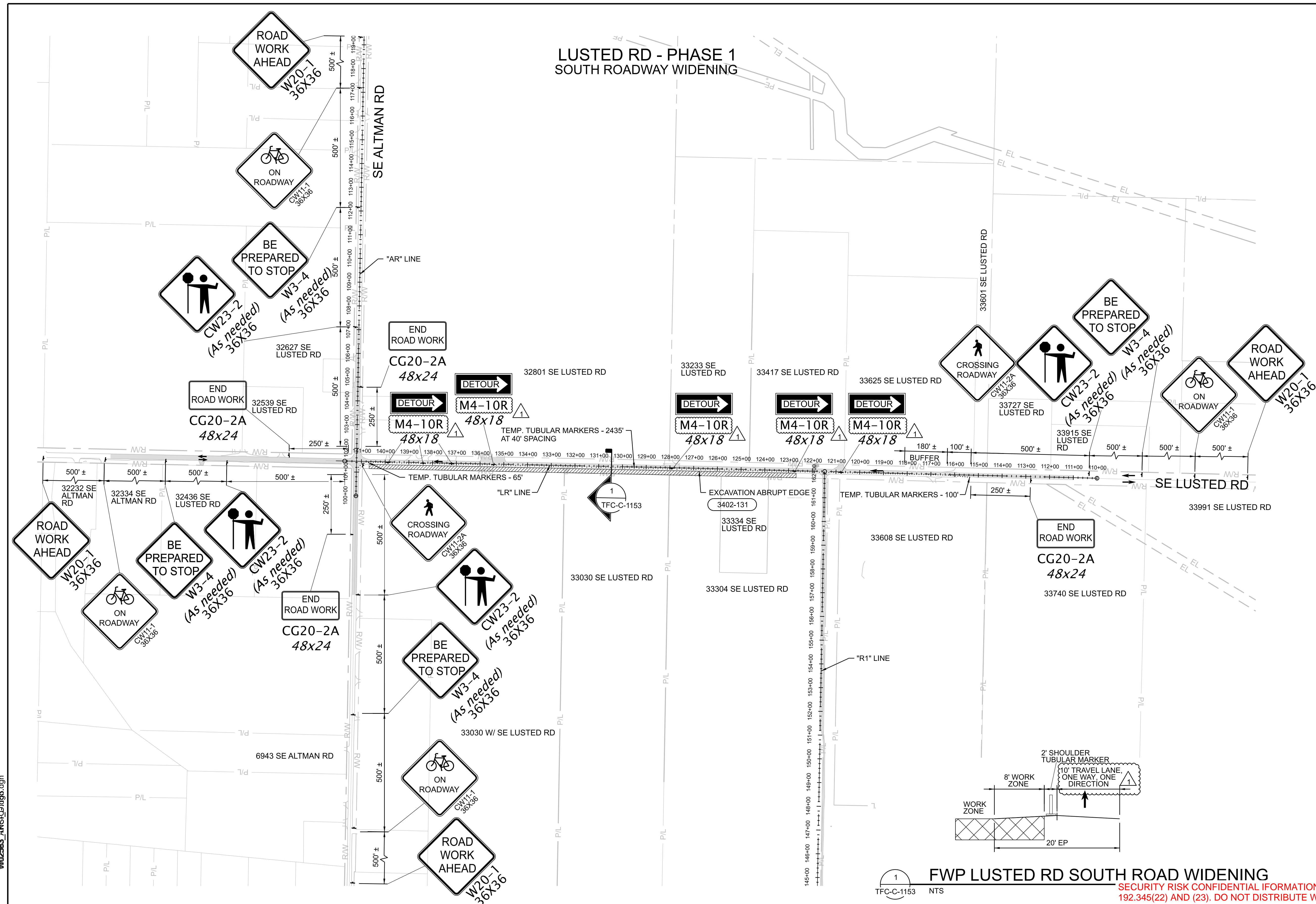


Bull Run Filtration Pipelines  
**FINISHED WATER PIPELINE TRAFFIC CONTROL**  
 LUSTED WORK DETOUR - 2

SAP Project No  
**W02563**  
 1/4 Section  
 Sheet No  
 TFC-C-1152



# LUSTED RD - PHASE 1 SOUTH ROADWAY WIDENING

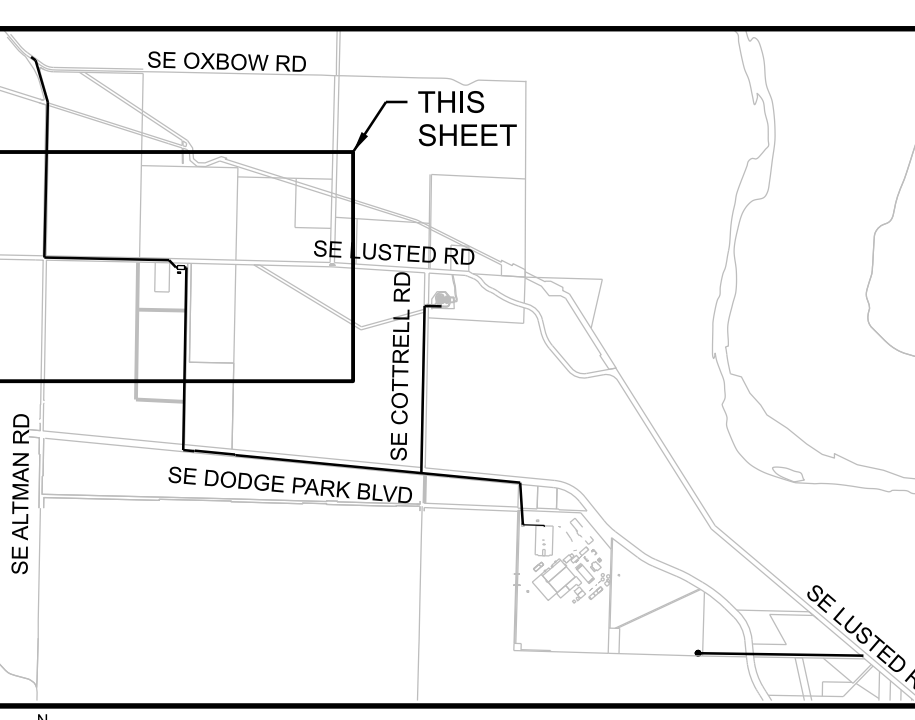
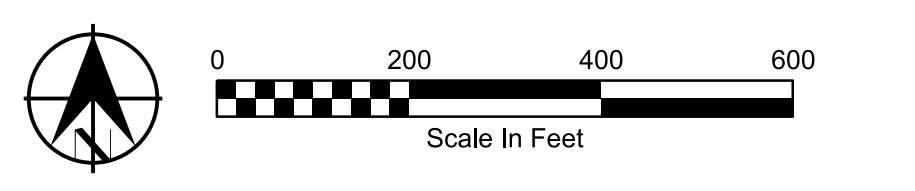


## GENERAL SHEET NOTES

- REFER TO FWP-CG-2118 TO FWP-CG-2122 FOR TEMPORARY STREET DESIGN.
- REFER TO FWP-C-2501 TO FWP-C-2504 FOR PIPE CONSTRUCTION.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- TEMPORARY TUBULAR MARKER SPACING AT TAPERS SHALL BE 20' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT RADII SHALL BE 10' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT DRIVEWAYS SHALL BE NO MORE THAN 20' AND ALLOW ACCESS FOR PASSENGER VEHICLES.

## LEGEND

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN (3471-901)
- TEMPORARY TUBULAR MARKERS
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT



**FWP LUSTED RD SOUTH ROAD WIDENING**  
 SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

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No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
 Date

**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
 LUSTED RD PHASE 1

SAP Project No  
**W02563**  
 1/4 Section  
 Sheet No  
**TFC-C-1153**



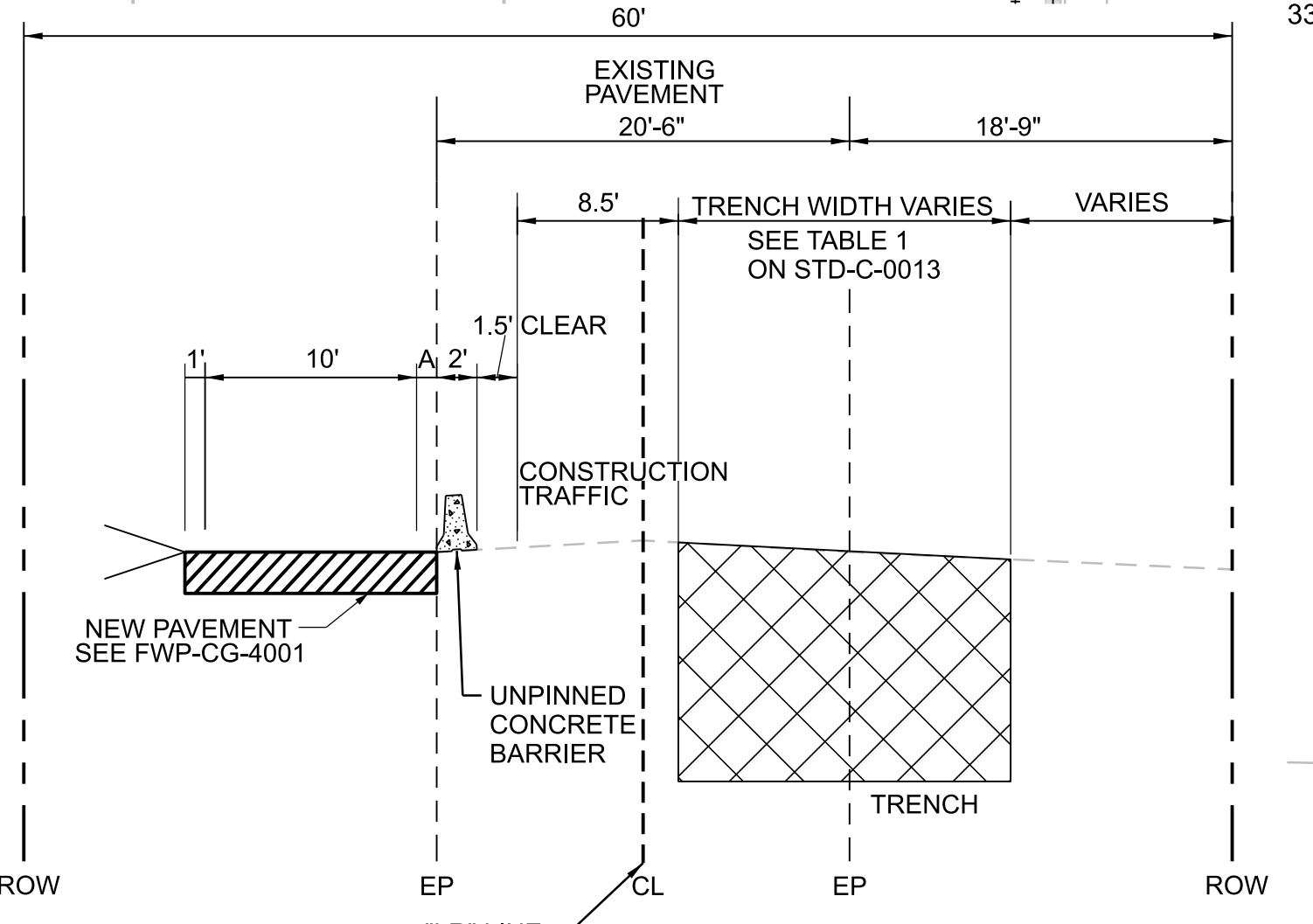
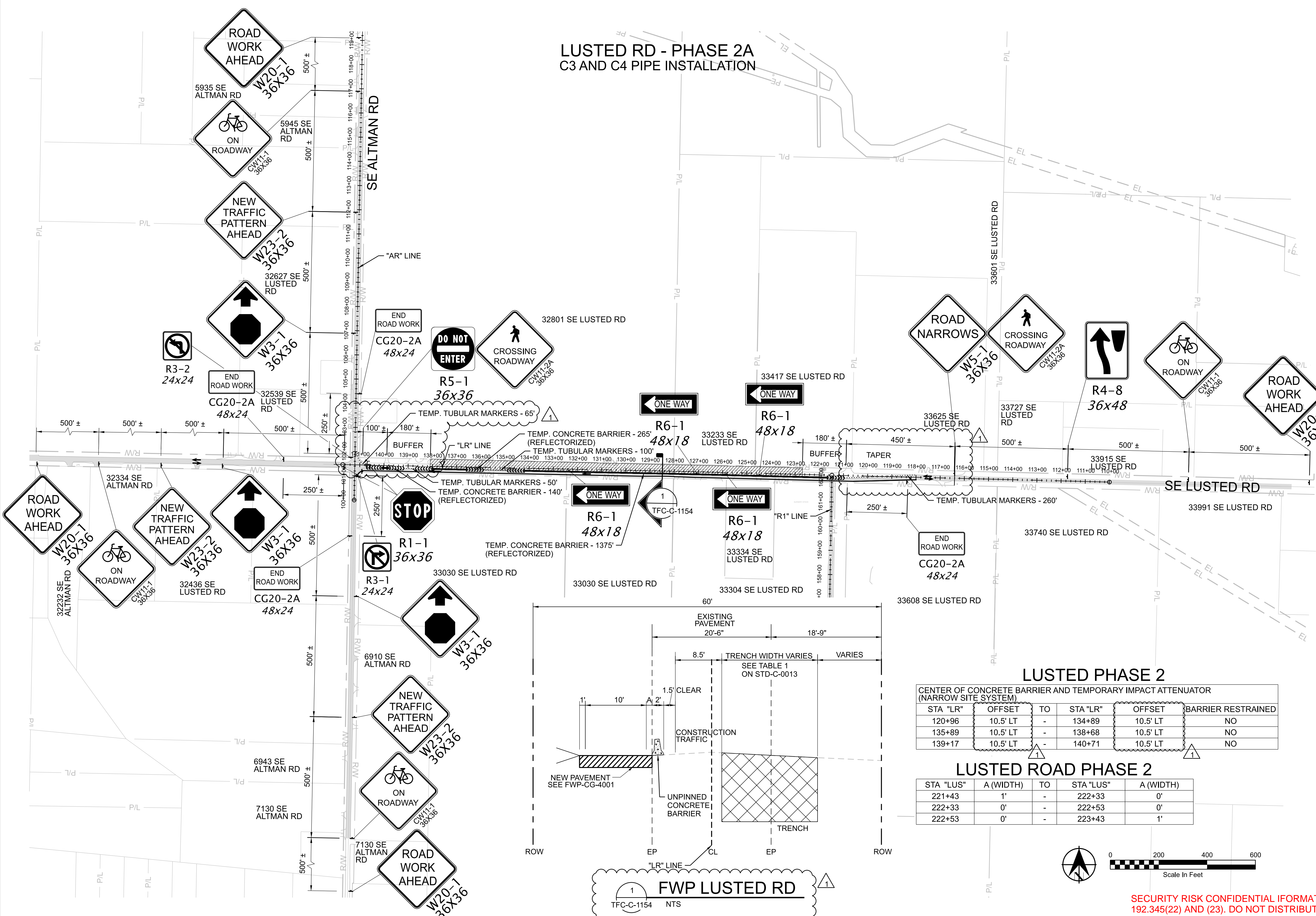
# LUSTED RD - PHASE 2A C3 AND C4 PIPE INSTALLATION

## GENERAL SHEET NOTES

- REFER TO FWP-CG-2123 TO FWP-CG-2126 FOR TEMPORARY STREET DESIGN.
- REFER TO FWP-C-2301 TO FWP-C-2304 FOR PIPE CONSTRUCTION.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
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- TEMPORARY TUBULAR MARKER SPACING AT DRIVEWAYS SHALL BE NO MORE THAN 20' AND ALLOW ACCESS FOR PASSENGER VEHICLES.

## LEGEND

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN (3471-901)
- TEMPORARY CONCRETE BARRIER (3471-935)
- TYPE III BARRICADE (3471-865)
- TEMPORARY IMPACT ATTENUATOR (3471-936)
- TEMPORARY TUBULAR MARKERS
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT



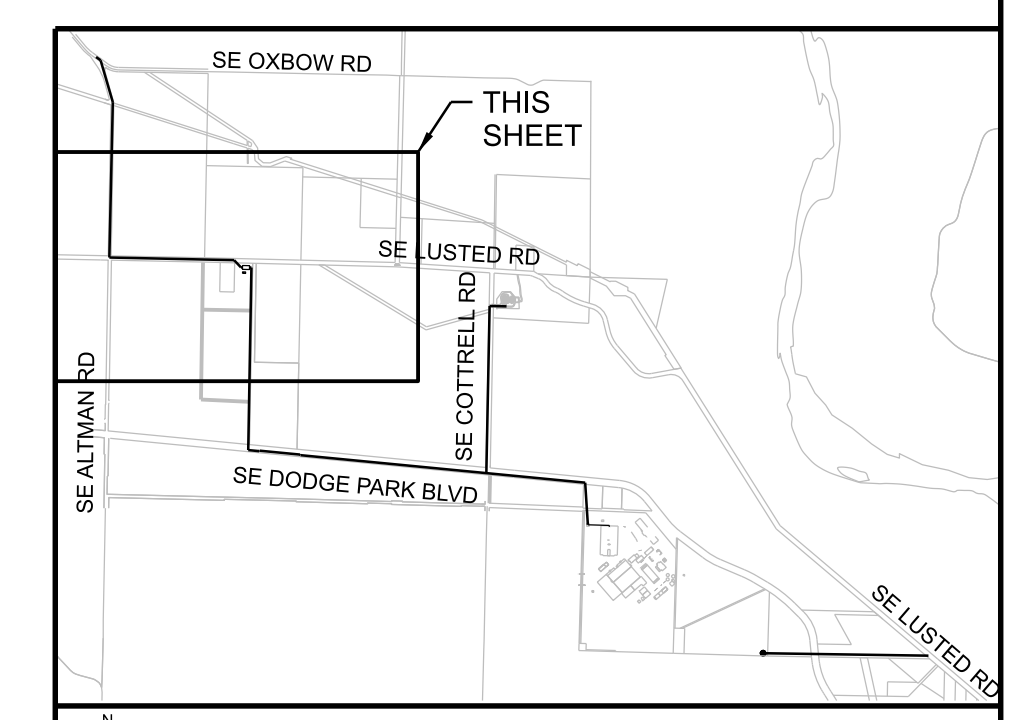
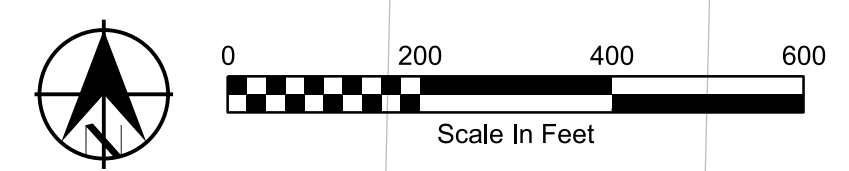
**LUSTED PHASE 2**  
CENTER OF CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATOR (NARROW SITE SYSTEM)

STA "LR"	OFFSET	TO	STA "LR"	OFFSET	BARRIER RESTRAINED
120+96	10.5' LT	-	134+89	10.5' LT	NO
135+89	10.5' LT	-	138+68	10.5' LT	NO
139+17	10.5' LT	-	140+71	10.5' LT	NO

**LUSTED ROAD PHASE 2**

STA "LUS"	A (WIDTH)	TO	STA "LUS"	A (WIDTH)
221+43	1'	-	222+33	0'
222+33	0'	-	222+53	0'
222+53	0'	-	223+43	1'

**FWP LUSTED RD**  
TFC-C-1154 NTS



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No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP
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Survey			

**EMERIO**  
ENGINEERING • SURVEYING • DESIGN

**REGISTERED PROFESSIONAL ENGINEER**  
55528PE  
*Rafael Gaeta*  
OR  
JULY 15, 2001  
RAFAEL GAETA

EXPIRES 6-30-25

Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	9/29/23

**WARNING**

0 1'

If this bar does not measure 1" then the drawing is not to scale

**PORTLAND WATER BUREAU**  
FROM FOREST TO FAUCET

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424

**CITY OF PORTLAND OREGON**  
1851

**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE TRAFFIC CONTROL**  
LUSTED RD PHASE 2A

SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
TFC-C-1154



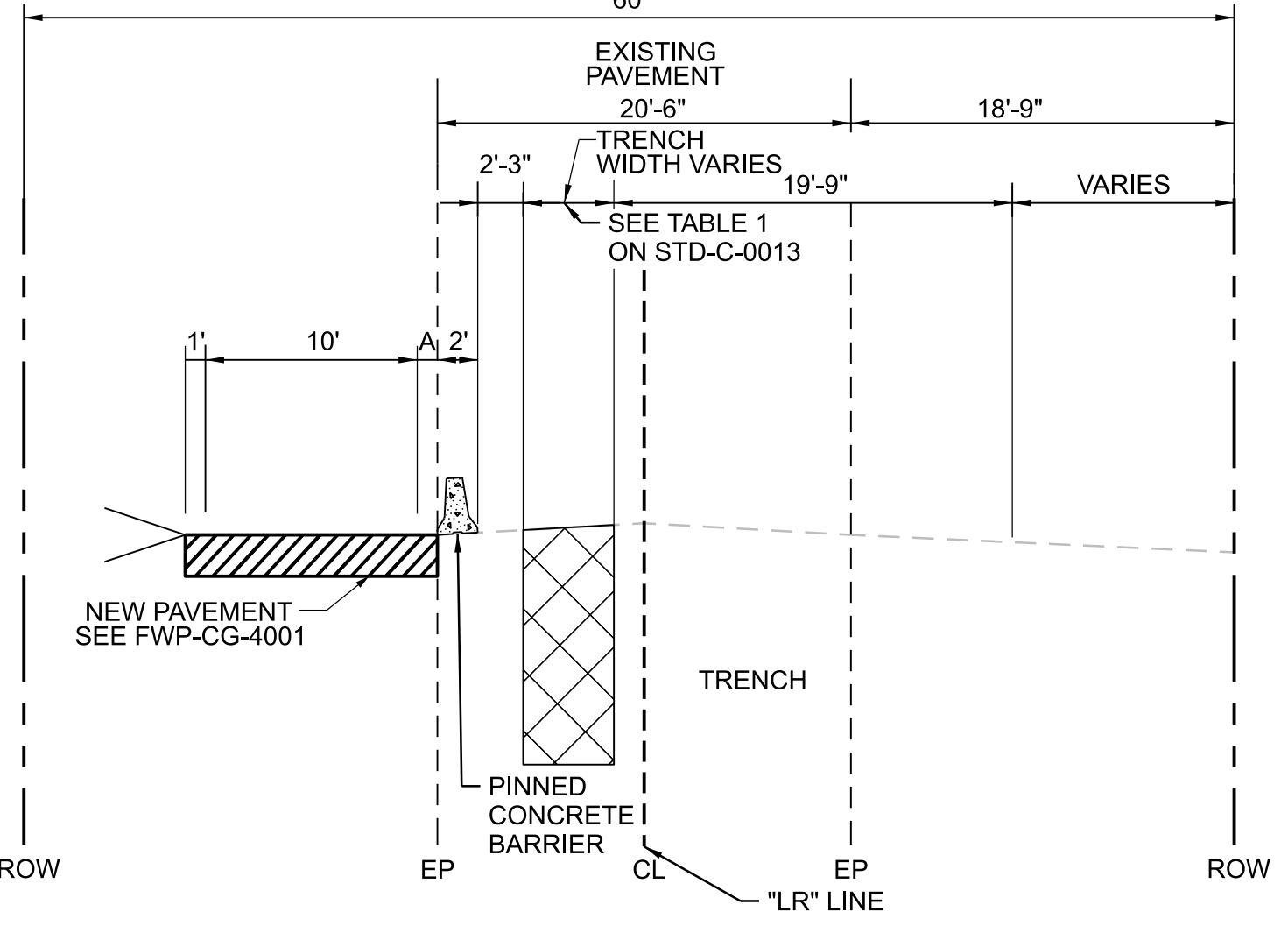
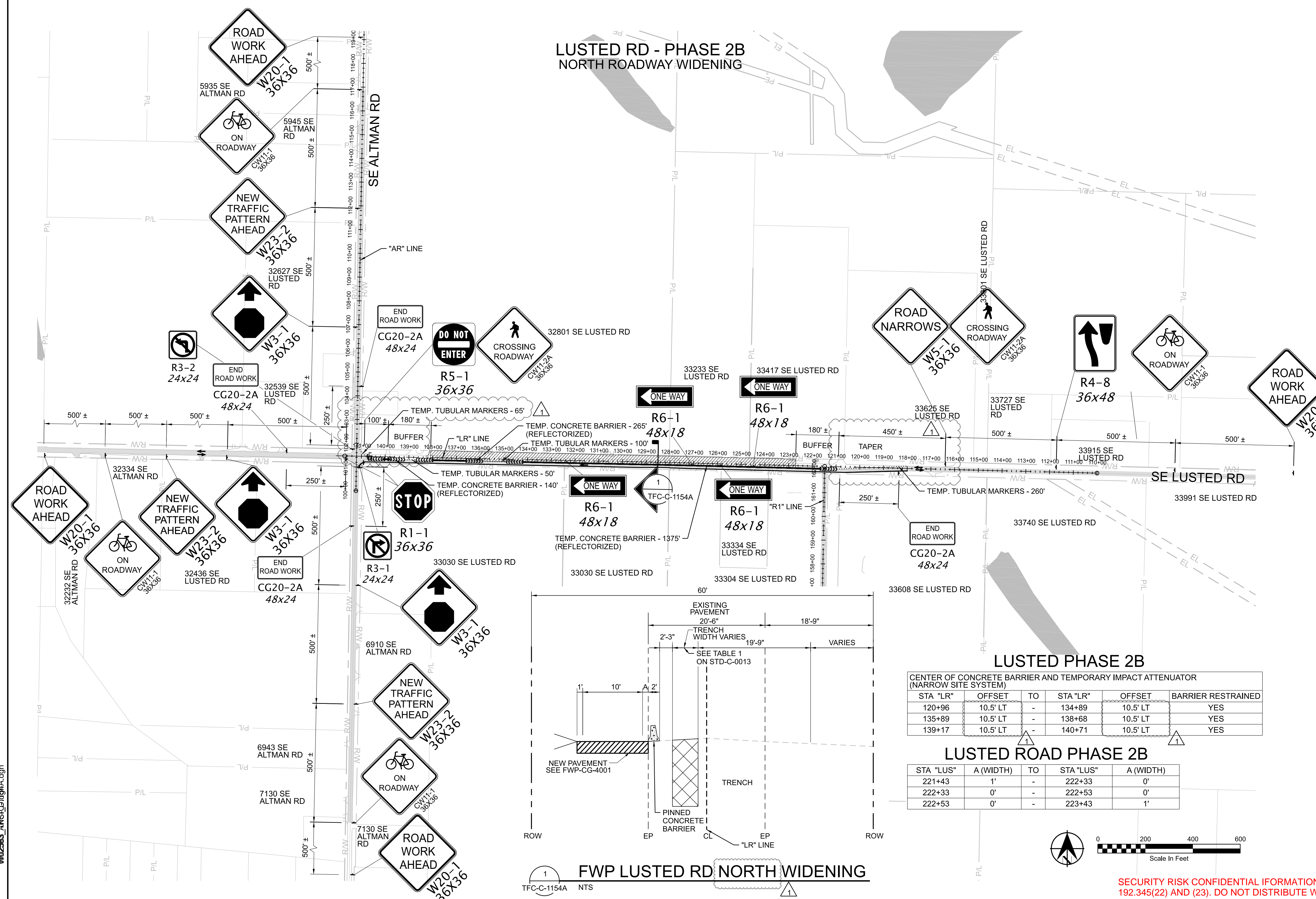
**GENERAL SHEET NOTES**

- REFER TO FWP-CG-2123 TO FWP-CG-2126 FOR TEMPORARY STREET DESIGN.
- REFER TO FWP-C-2301 TO FWP-C-2304 FOR PIPE CONSTRUCTION.
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- TEMPORARY TUBULAR MARKER SPACING AT DRIVEWAYS SHALL BE NO MORE THAN 20' AND ALLOW ACCESS FOR PASSENGER VEHICLES.

**LEGEND**

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN (3471-901)
- TEMPORARY CONCRETE BARRIER (3471-935)
- TYPE III BARRICADE (3471-865)
- TEMPORARY IMPACT ATTENUATOR (3471-936)
- TEMPORARY TUBULAR MARKERS
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT

**LUSTED RD - PHASE 2B  
NORTH ROADWAY WIDENING**

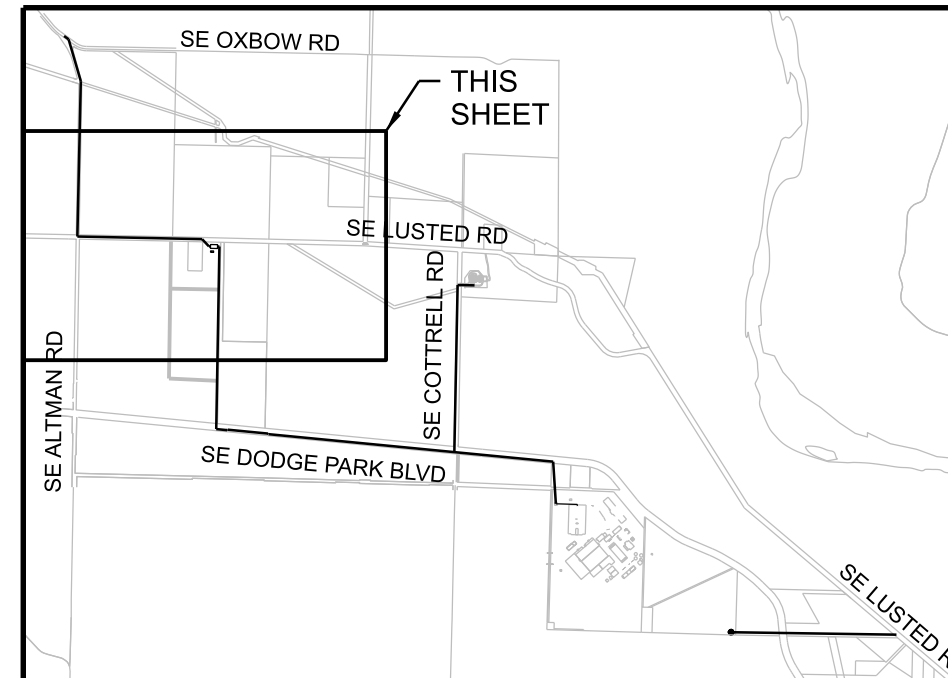
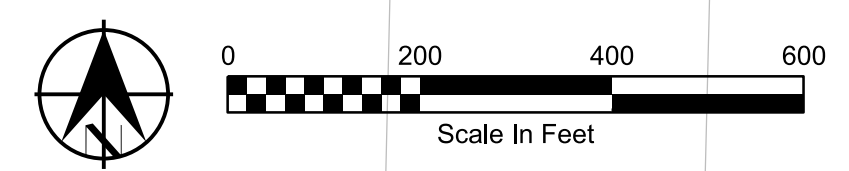


**LUSTED PHASE 2B**  
CENTER OF CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATOR (NARROW SITE SYSTEM)

STA "LR"	OFFSET	TO	STA "LR"	OFFSET	BARRIER RESTRAINED
120+96	10.5' LT	-	134+89	10.5' LT	YES
135+89	10.5' LT	-	138+68	10.5' LT	YES
139+17	10.5' LT	-	140+71	10.5' LT	YES

**LUSTED ROAD PHASE 2B**

STA "LUS"	A (WIDTH)	TO	STA "LUS"	A (WIDTH)
221+43	1'	-	222+33	0'
222+33	0'	-	222+53	0'
222+53	0'	-	223+43	1'



**FWP LUSTED RD NORTH WIDENING**  
TFC-C-1154A NTS

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

24-JUL-2024 16:18 W02563\_ARIS(0)1684A.dgn

1	6/2024	DCN-03 - CCD-0003	BJP
No	Date	Description	Appd
Revision			
Survey			



Designed By	Program Mgr	DH
Drawn By	Const Mgr	BN
Checked By	CMII Eng Mgr	JB
Project Mgr	Date	9/29/23



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
LUSTED RD PHASE 2B

SAP Project No	W02563
1/4 Section	
Sheet No	TFC-C-1154A

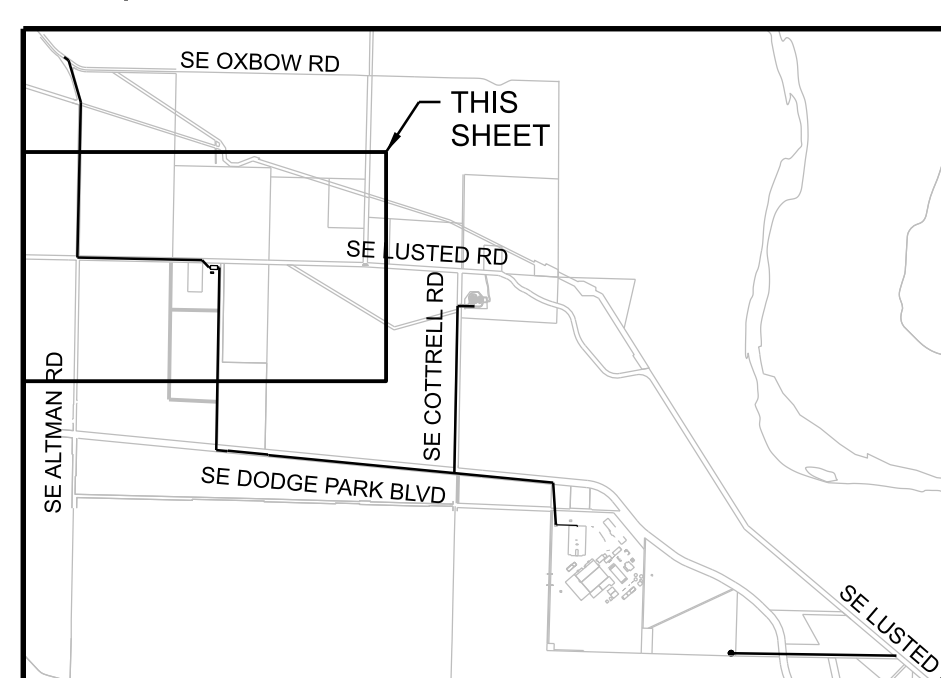
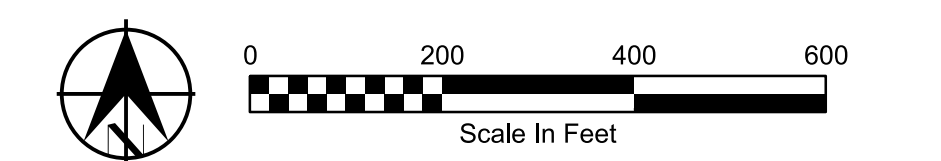


### GENERAL SHEET NOTES

- REFER TO FWP-C-2201 TO FWP-C-2204 FOR PIPE CONSTRUCTION.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES, PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- TEMPORARY TUBULAR MARKER SPACING AT TAPERS SHALL BE 20' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT RADII SHALL BE 10' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT DRIVEWAYS SHALL BE NO MORE THAN 20' AND ALLOW ACCESS FOR PASSENGER VEHICLES.

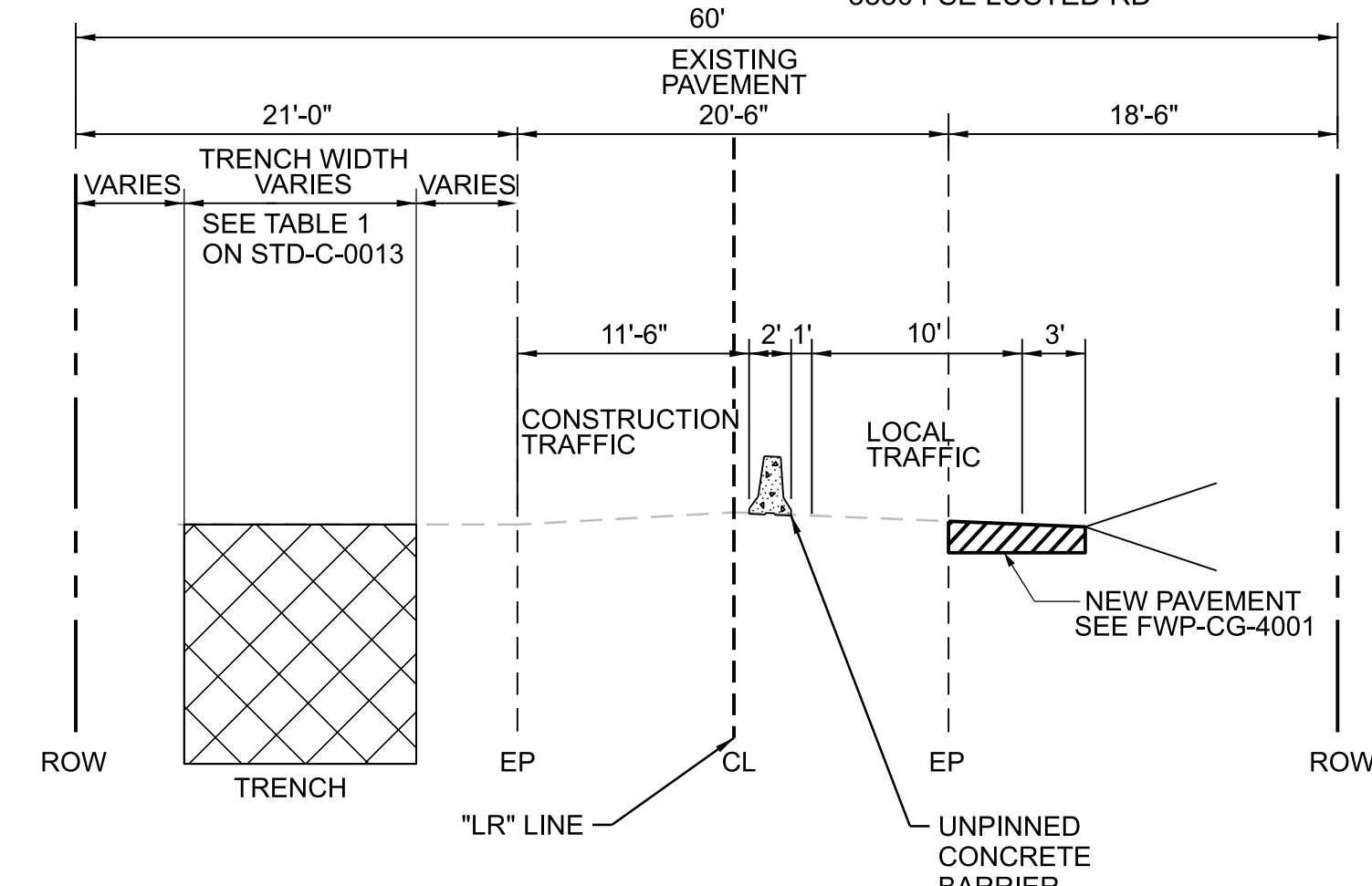
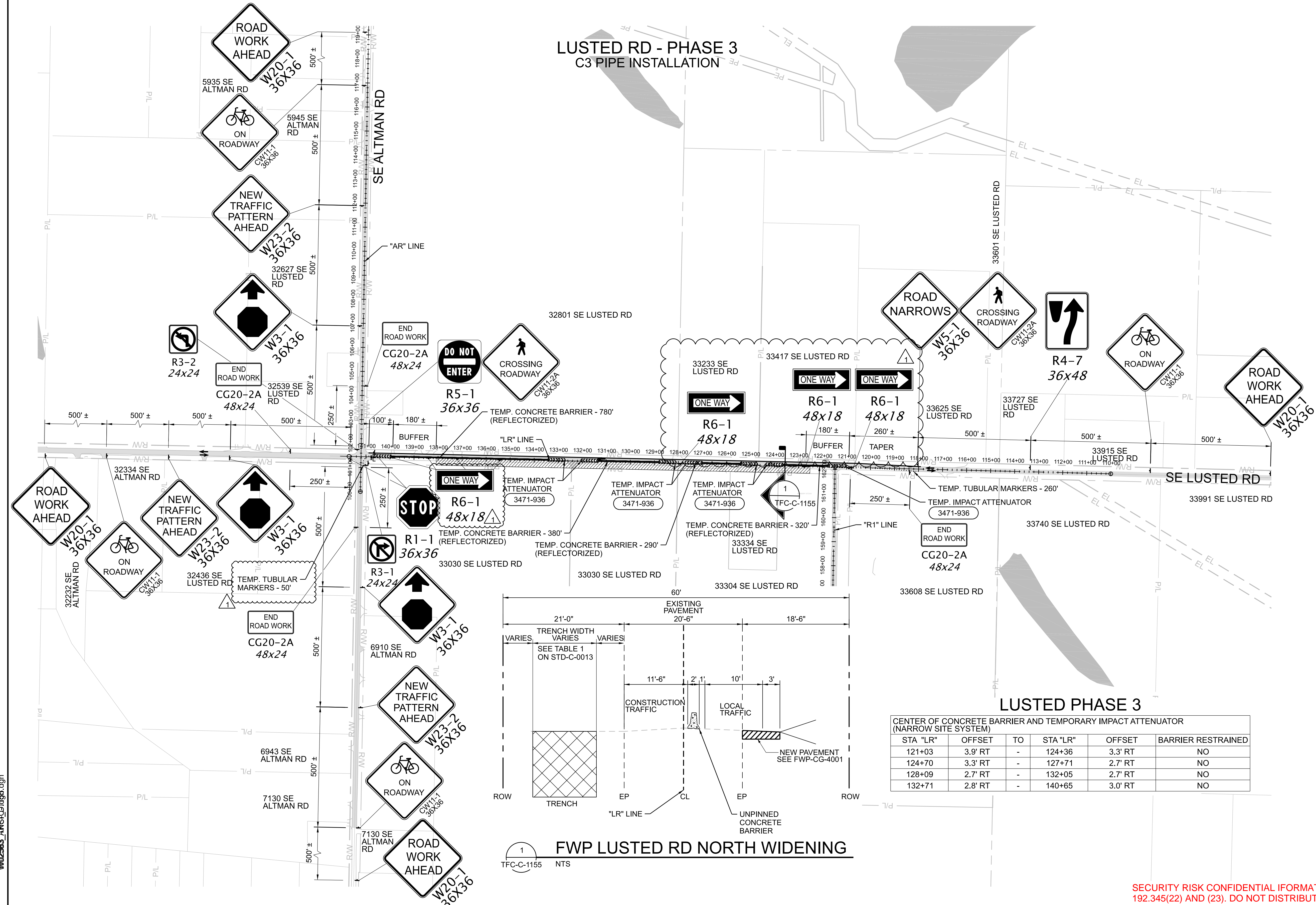
### LEGEND

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN  
3471-901
- TEMPORARY CONCRETE BARRIER  
3471-935
- TYPE III BARRICADE  
3471-865
- TEMPORARY IMPACT ATTENUATOR  
3471-936
- TEMPORARY TUBULAR MARKERS
- EXISTING PROPERTY LINE (P/L)
- EXISTING RIGHT OF WAY (R/W)
- EXISTING EASEMENT (EL)



### KEYPLAN

## LUSTED RD - PHASE 3 C3 PIPE INSTALLATION



1 FWP LUSTED RD NORTH WIDENING  
TFC-C-1155 NTS

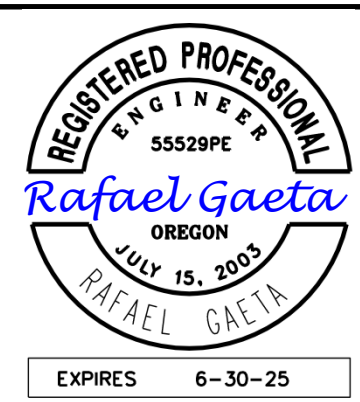
**LUSTED PHASE 3**  
CENTER OF CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATOR (NARROW SITE SYSTEM)

STA "LR"	OFFSET	TO	STA "LR"	OFFSET	BARRIER RESTRAINED
121+03	3.9' RT	-	124+36	3.3' RT	NO
124+70	3.3' RT	-	127+71	2.7' RT	NO
128+09	2.7' RT	-	132+05	2.7' RT	NO
132+71	2.8' RT	-	140+65	3.0' RT	NO

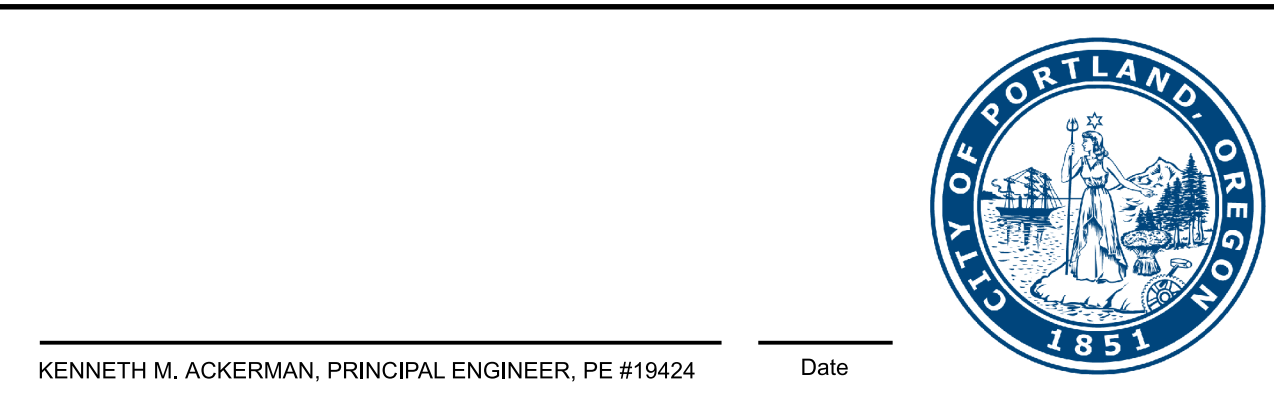
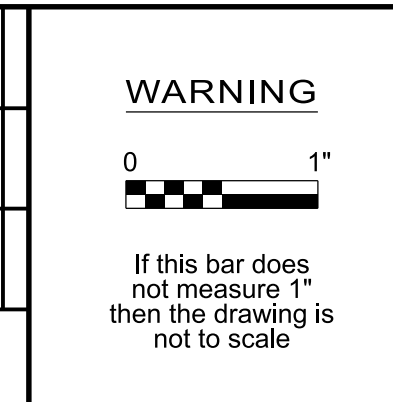
SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

24-JUL-2024 16:14 W02563\_ARIS(0)165.dgn

1	6/2024	DCN-03 - CCD-0003	BJP
No	Date	Description	Appd
Revision			
Survey			



Designed By	DH
Drawn By	Const Mgr BN
Checked By	CMII Eng Mgr JB
Project Mgr	Date 9/29/23



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
LUSTED RD PHASE 3

SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
**TFC-C-1155**

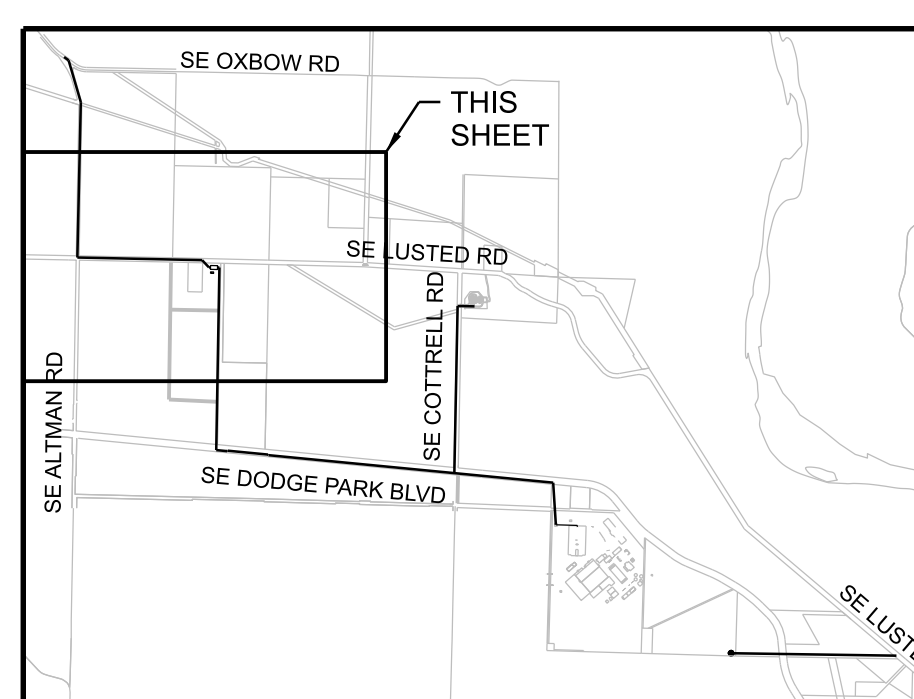
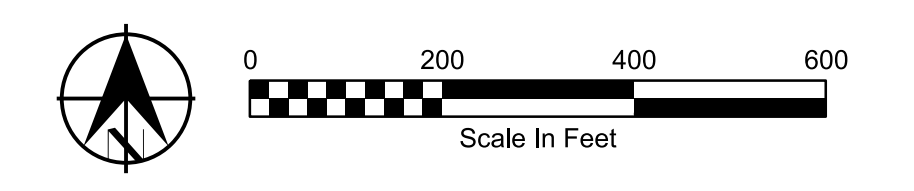


**GENERAL SHEET NOTES**

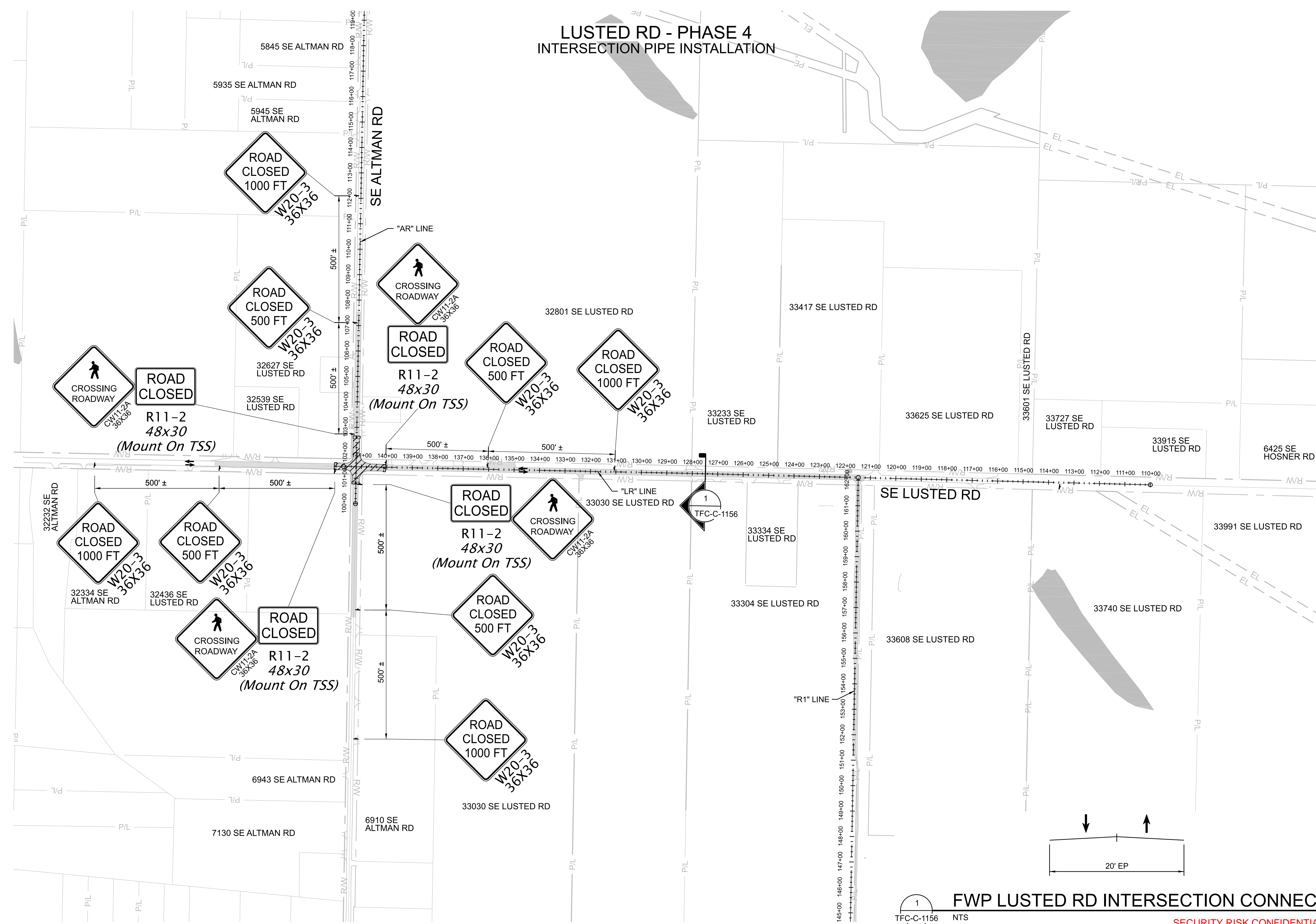
- REFER TO FWP-C-2301 TO FWP-C-2304 FOR PIPE CONSTRUCTION.
- REFER TO FWP-C-2201 TO FWP-C-2204 FOR PIPE CONSTRUCTION.
- REFER TO FWP-CG-2200 TO FWP-CG-2203 FOR PERMANENT STREET DESIGN.
- REFER TO TFC-1160 TO TFC-C-1161 FOR SE ALTMAN RD AND SE LUSTED RD INTERSECTION CLOSURE DETOUR.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES, PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- CONTRACTORS SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AND FARM VEHICLES THROUGH THE FULL ROAD CLOSURE.

**LEGEND**

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN 3471-901
- TYPE III BARRICADE 3471-865
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- EL EXISTING EASEMENT



**LUSTED RD - PHASE 4  
INTERSECTION PIPE INSTALLATION**



**1 FWP LUSTED RD INTERSECTION CONNECTION**  
TFC-C-1156 NTS

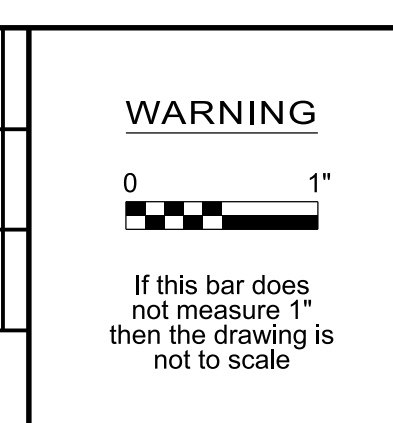
SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

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No	Date	Description	Appd
2	6/2024	DCN-03 - CCD-0003	BJP
1	10/2023	DCN-01 - CCD-0001	BJP



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	JB
Date	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
Date



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
LUSTED RD PHASE 4

SAP Project No	W02563
1/4 Section	
Sheet No	TFC-C-1156



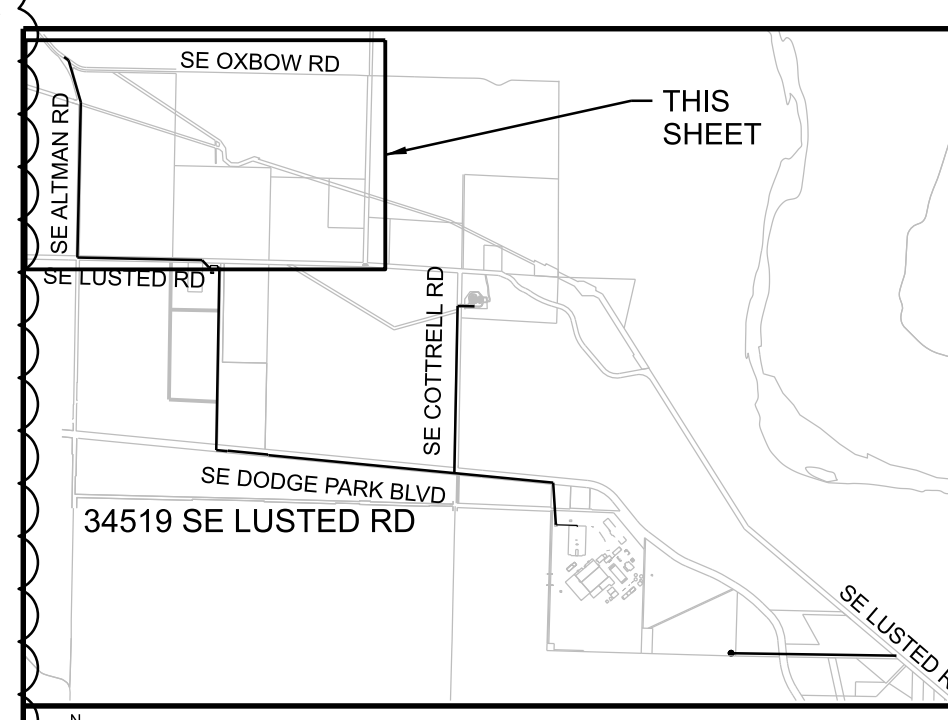
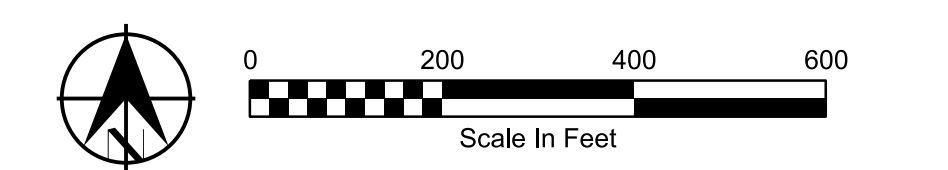
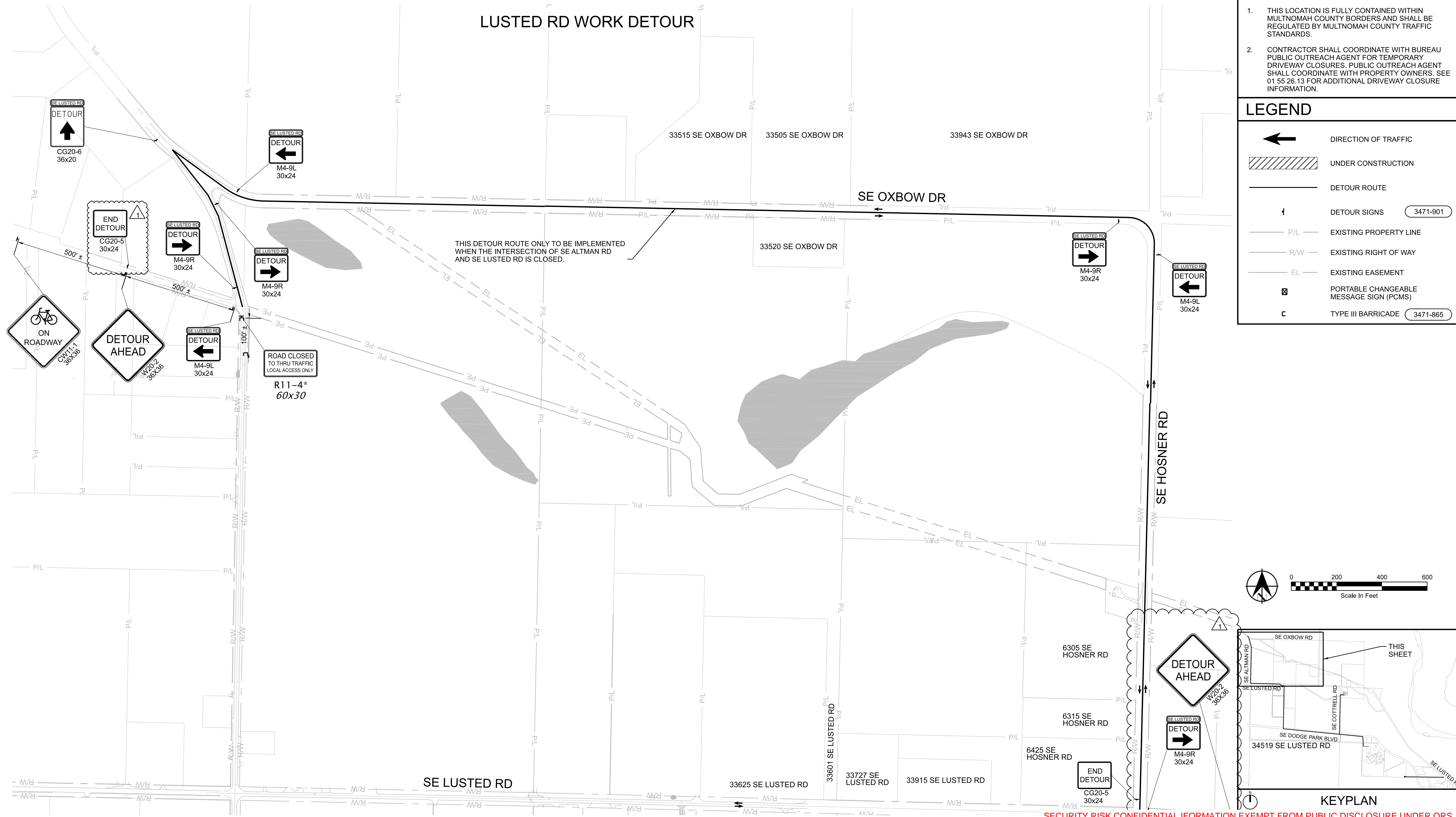
**GENERAL SHEET NOTES**

1. THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
2. CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES, PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.

**LEGEND**

- DIRECTION OF TRAFFIC
- UNDER CONSTRUCTION
- DETOUR ROUTE
- DETOUR SIGNS 3471-901
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- EL EXISTING EASEMENT
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- TYPE III BARRICADE 3471-865

**LUSTED RD WORK DETOUR**



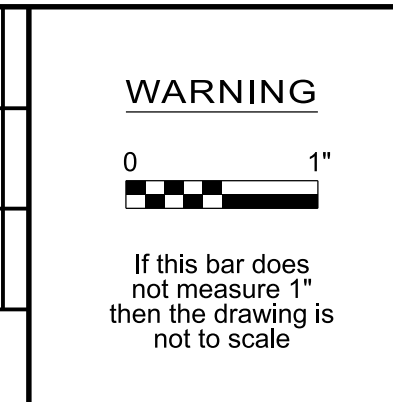
SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

W02563\_ARIS(0)161.dgn 16:19 24-JUL-2024

No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP
Revision			
Survey			



Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
 ALTERNATE LUSTED DETOUR - 2

SAP Project No	W02563
Sheet No	TFC-C-1161

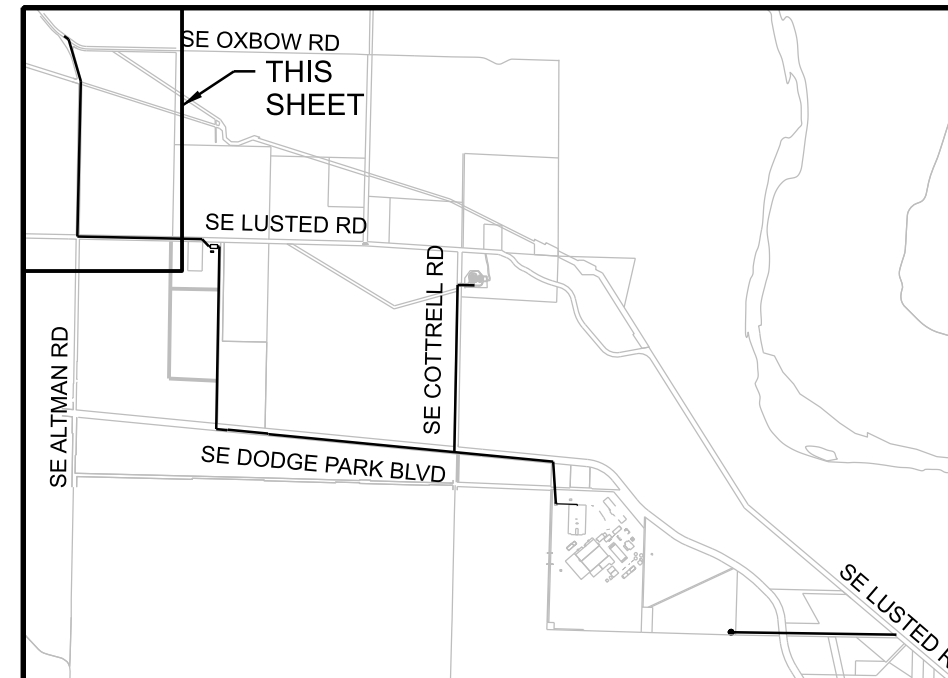
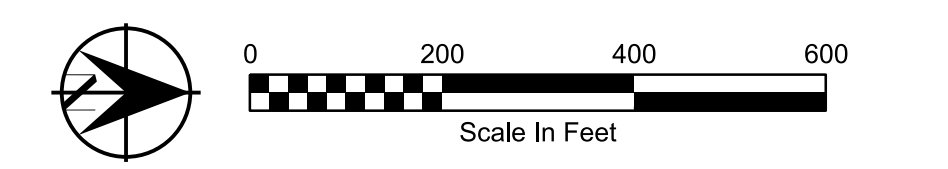


### GENERAL SHEET NOTES

- REFER TO FWP-C-2504 TO FWP-C-2509 FOR PIPE CONSTRUCTION.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- TEMPORARY TUBULAR MARKER SPACING AT TAPERS SHALL BE 20' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT RADII SHALL BE 10' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT DRIVEWAYS SHALL BE NO MORE THAN 20' AND ALLOW ACCESS FOR PASSENGER VEHICLES.

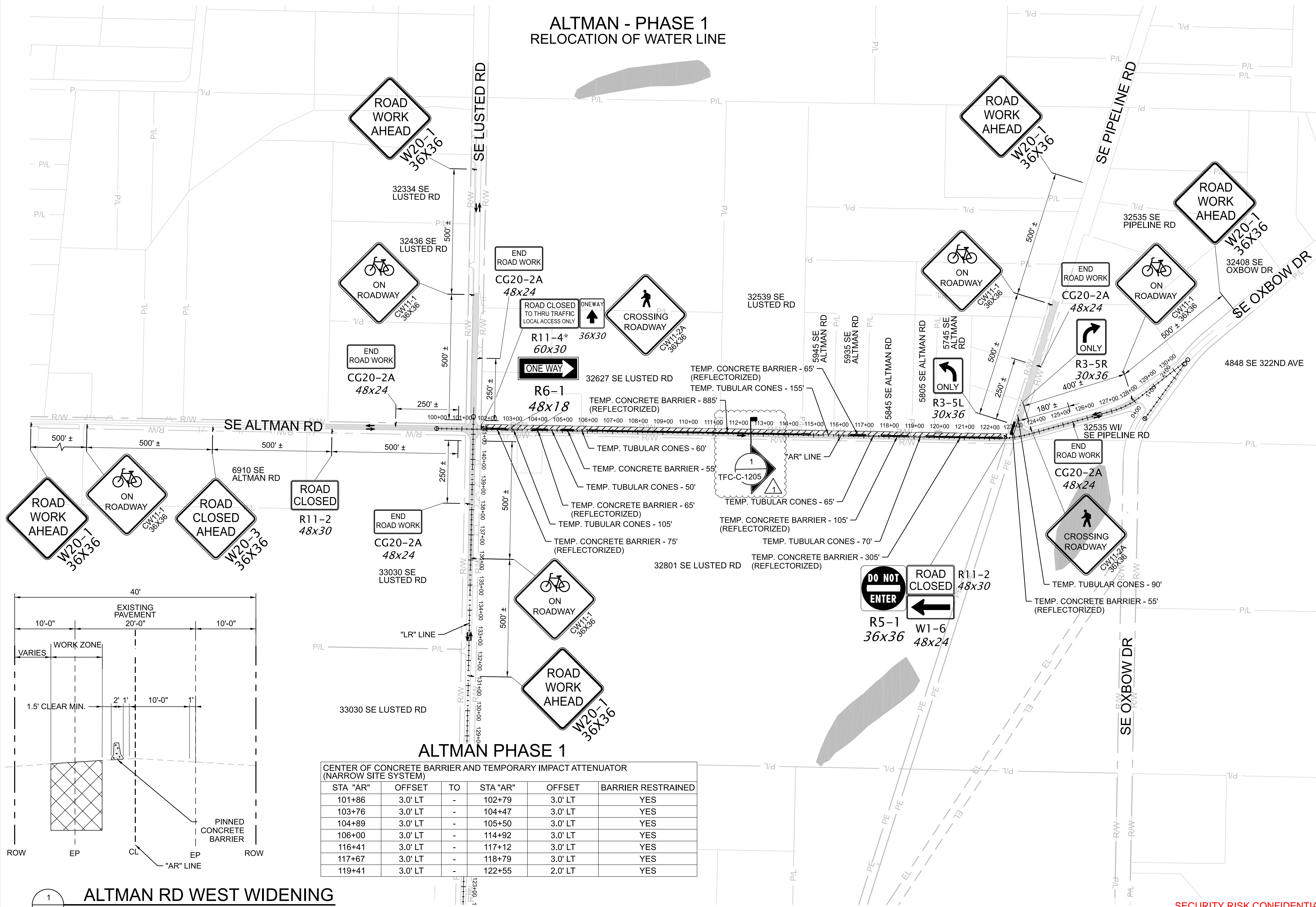
### LEGEND

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN  
3471-901
- TYPE III BARRICADE  
3471-865
- TEMPORARY TUBULAR MARKERS
- TEMPORARY CONCRETE BARRIER  
3471-935
- TEMPORARY IMPACT ATTENUATOR  
3471-936
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- EL EXISTING EASEMENT
- PEDESTRIAN CROSSING ROUTE



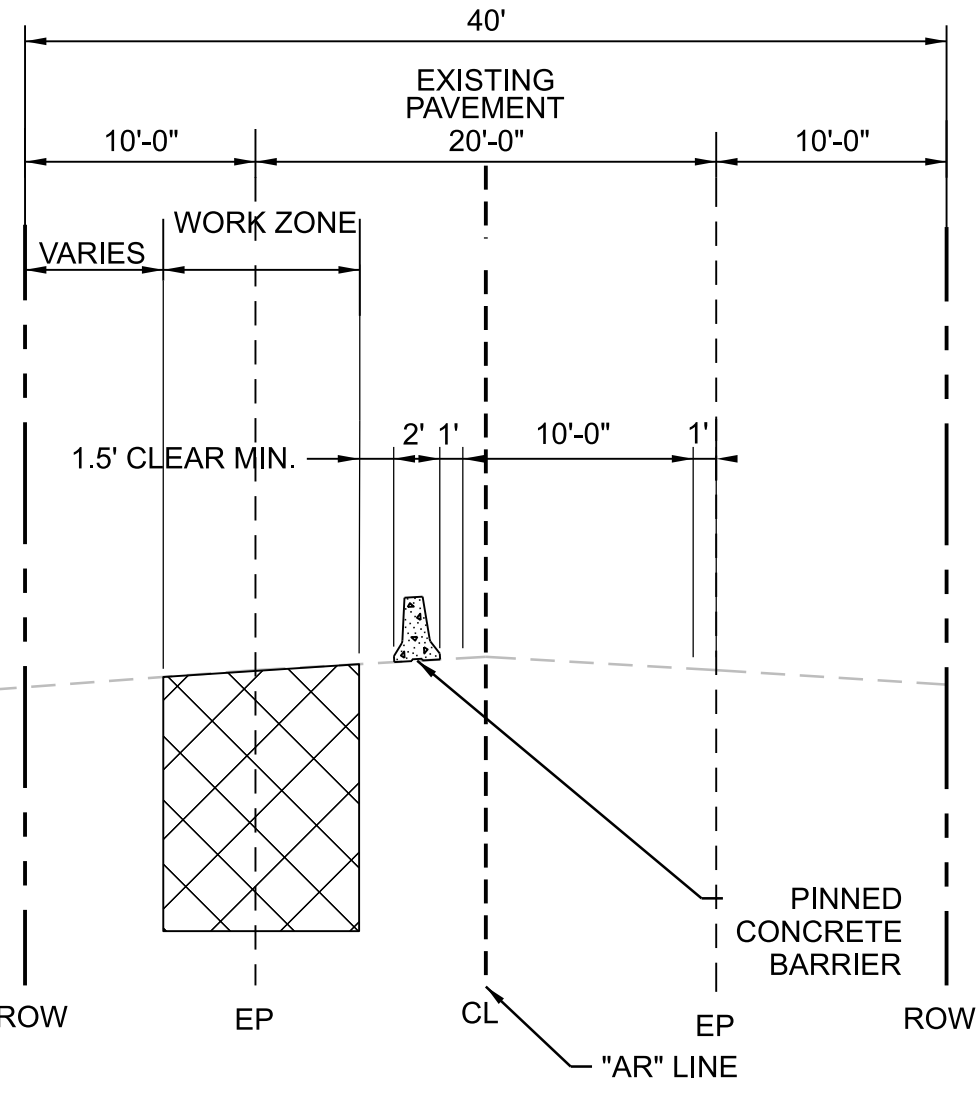
### KEYPLAN

## ALTMAN - PHASE 1 RELOCATION OF WATER LINE



**ALTMAN PHASE 1**  
CENTER OF CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATOR (NARROW SITE SYSTEM)

STA "AR"	OFFSET	TO	STA "AR"	OFFSET	BARRIER RESTRAINED
101+86	3.0' LT	-	102+79	3.0' LT	YES
103+76	3.0' LT	-	104+47	3.0' LT	YES
104+89	3.0' LT	-	105+50	3.0' LT	YES
106+00	3.0' LT	-	114+92	3.0' LT	YES
116+41	3.0' LT	-	117+12	3.0' LT	YES
117+67	3.0' LT	-	118+79	3.0' LT	YES
119+41	3.0' LT	-	122+55	2.0' LT	YES



### 1 ALTMAN RD WEST WIDENING

TFC-C-1205 NTS

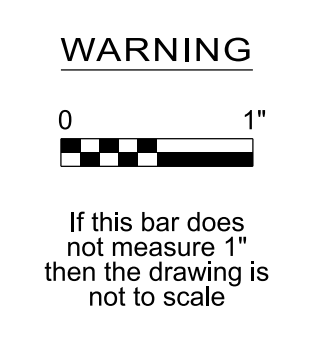
SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

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No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	Date 9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



Bull Run Filtration Pipelines  
**FINISHED WATER PIPELINE TRAFFIC CONTROL**  
ALTMAN PHASE 1

SAP Project No	W02563
1/4 Section	
Sheet No	TFC-C-1205

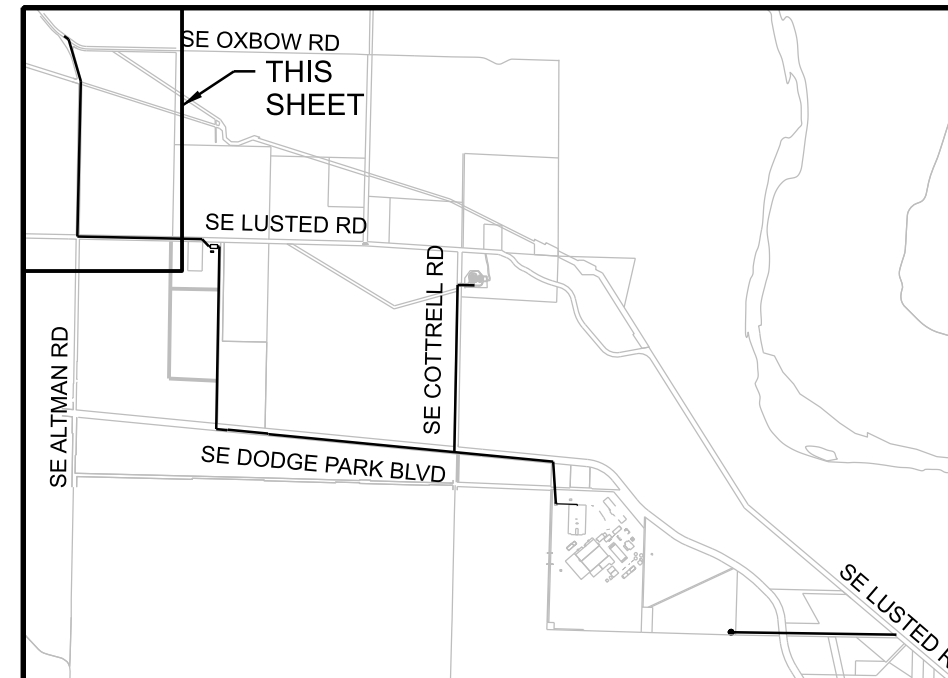
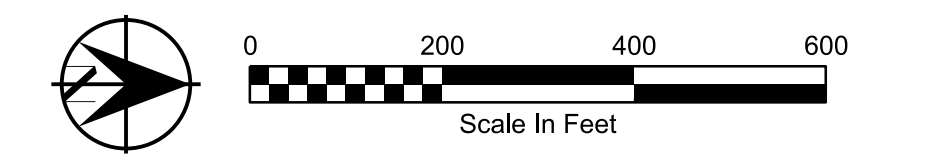


### GENERAL SHEET NOTES

- REFER TO FWP-C-2204, FWP-C-2304 TO FWP-C-2310 FOR PIPE CONSTRUCTION.
- PROVIDE ADDITIONAL TEMPORARY TUBULAR MARKERS NEAR UTILITY POLES ADJACENT TO TEMPORARY ROADWAY.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- CONTRACTOR SHALL PERFORM WORK IN 150' SEGMENTS INTENDED BY THE CONTINUOUS OR INTERMITTENTLY MOVING CONSTRUCTION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.

### LEGEND

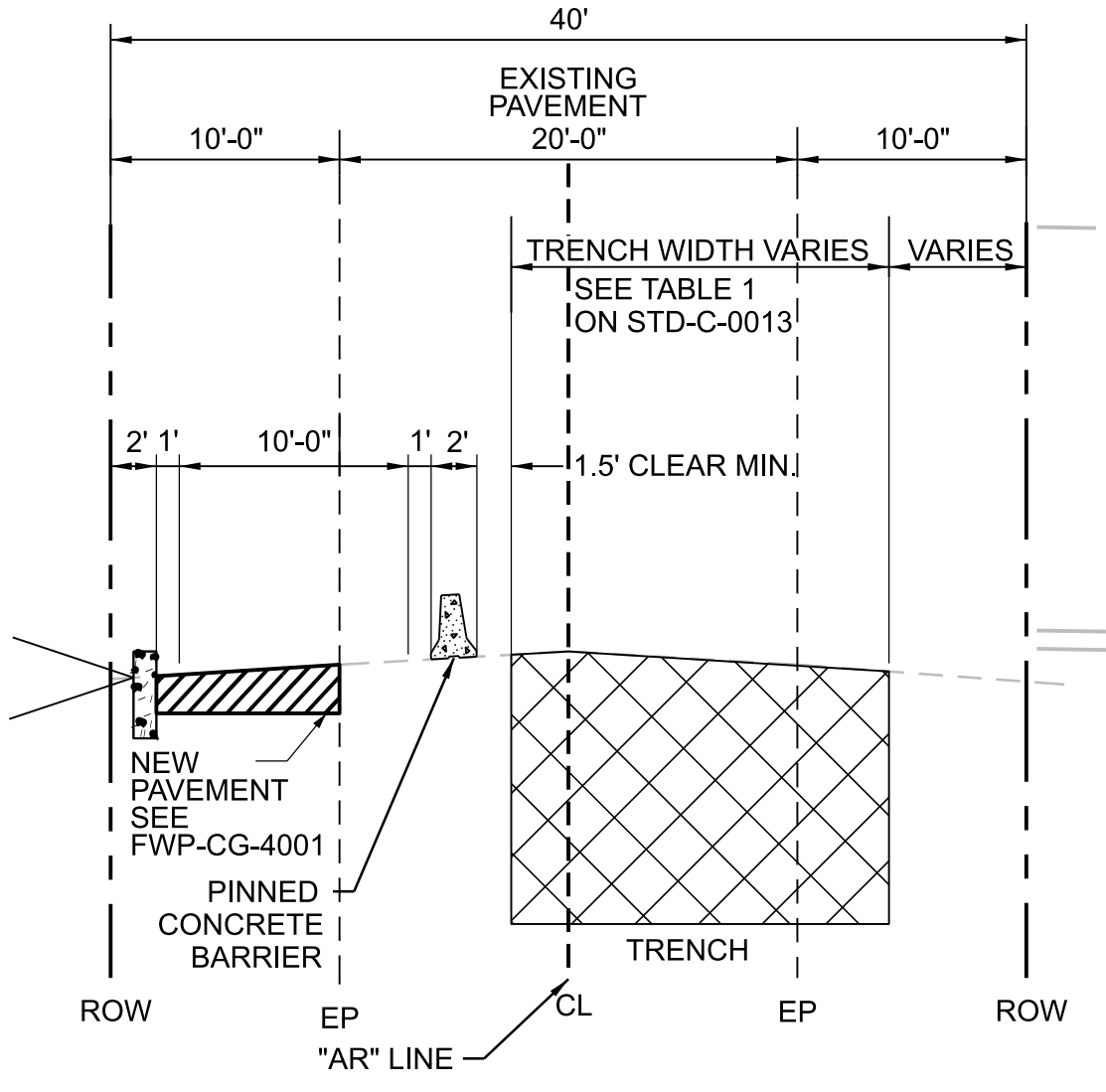
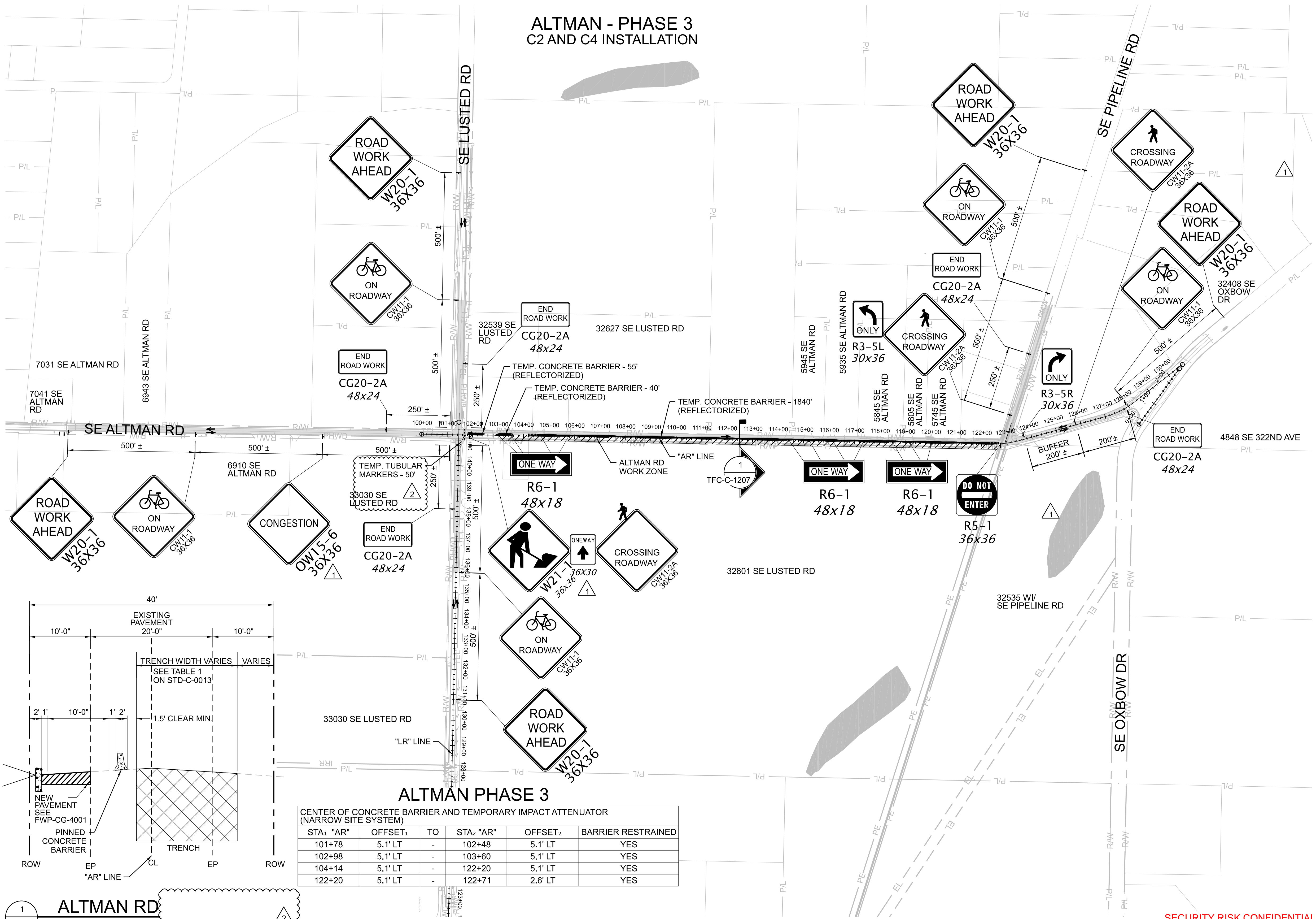
- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN  
3471-901  
3471-935  
3471-936
- TEMPORARY CONCRETE BARRIER
- TEMPORARY IMPACT ATTENUATOR
- EXISTING PROPERTY LINE
- EXISTING RIGHT OF WAY
- EXISTING EASEMENT
- PEDESTRIAN CROSSING ROUTE



### KEYPLAN

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

## ALTMAN - PHASE 3 C2 AND C4 INSTALLATION



**ALTMAN PHASE 3**  
CENTER OF CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATOR (NARROW SITE SYSTEM)

STA1 "AR"	OFFSET1	TO	STA2 "AR"	OFFSET2	BARRIER RESTRAINED
101+78	5.1' LT	-	102+48	5.1' LT	YES
102+98	5.1' LT	-	103+60	5.1' LT	YES
104+14	5.1' LT	-	122+20	5.1' LT	YES
122+20	5.1' LT	-	122+71	2.6' LT	YES



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24-JUL-2024 16:24

No	Date	Description	Appd
2	6/2024	DCN-03 - CCD-0003	BJP
1	5/2024	DCN-02 - CCD-0002	BJP



Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
ALTMAN PHASE 3

SAP Project No	W02563
Sheet No	TFC-C-1207

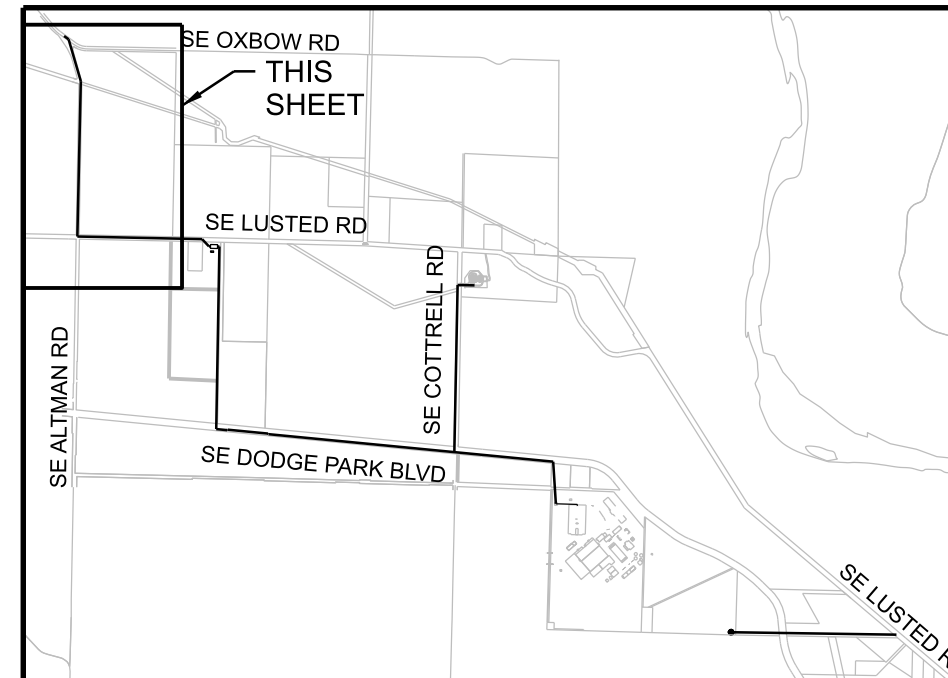
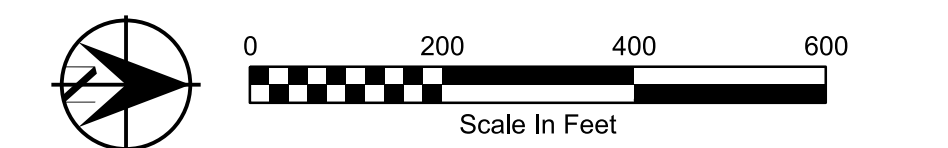


### GENERAL SHEET NOTES

- REFER TO FWP-C-2204, FWP-C-2304 TO FWP-C-2310 FOR PIPE CONSTRUCTION.
- PROVIDE ADDITIONAL TEMPORARY TUBULAR MARKERS NEAR UTILITY POLES ADJACENT TO TEMPORARY ROADWAY.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- CONTRACTOR SHALL PERFORM WORK IN 150' SEGMENTS INTENDED BY THE CONTINUOUS OR INTERMITTENTLY MOVING CONSTRUCTION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- AFTER WORKING HOURS, CONTRACTORS TO ENCLOSE EXCAVATION AREA WITH 6' CHAIN LINK FENCE, AND PROVIDE A MINIMUM 4' WIDE PEDESTRIAN PATH ON EXISTING PAVEMENT FROM SE PIPELINE RD TO SE OXBOW DR.
- CONTRACTORS SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AND FARM VEHICLES THROUGH THE FULL ROAD CLOSURE.

### LEGEND

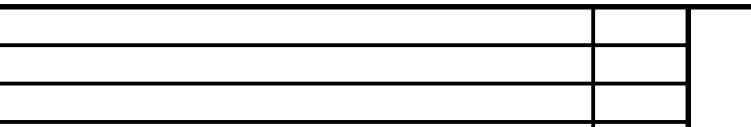
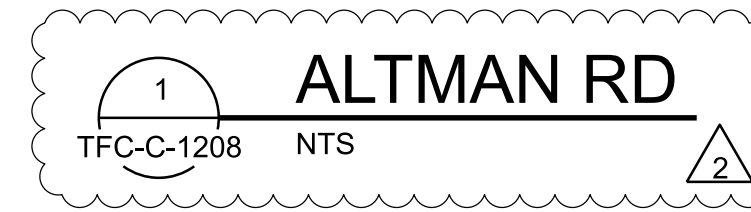
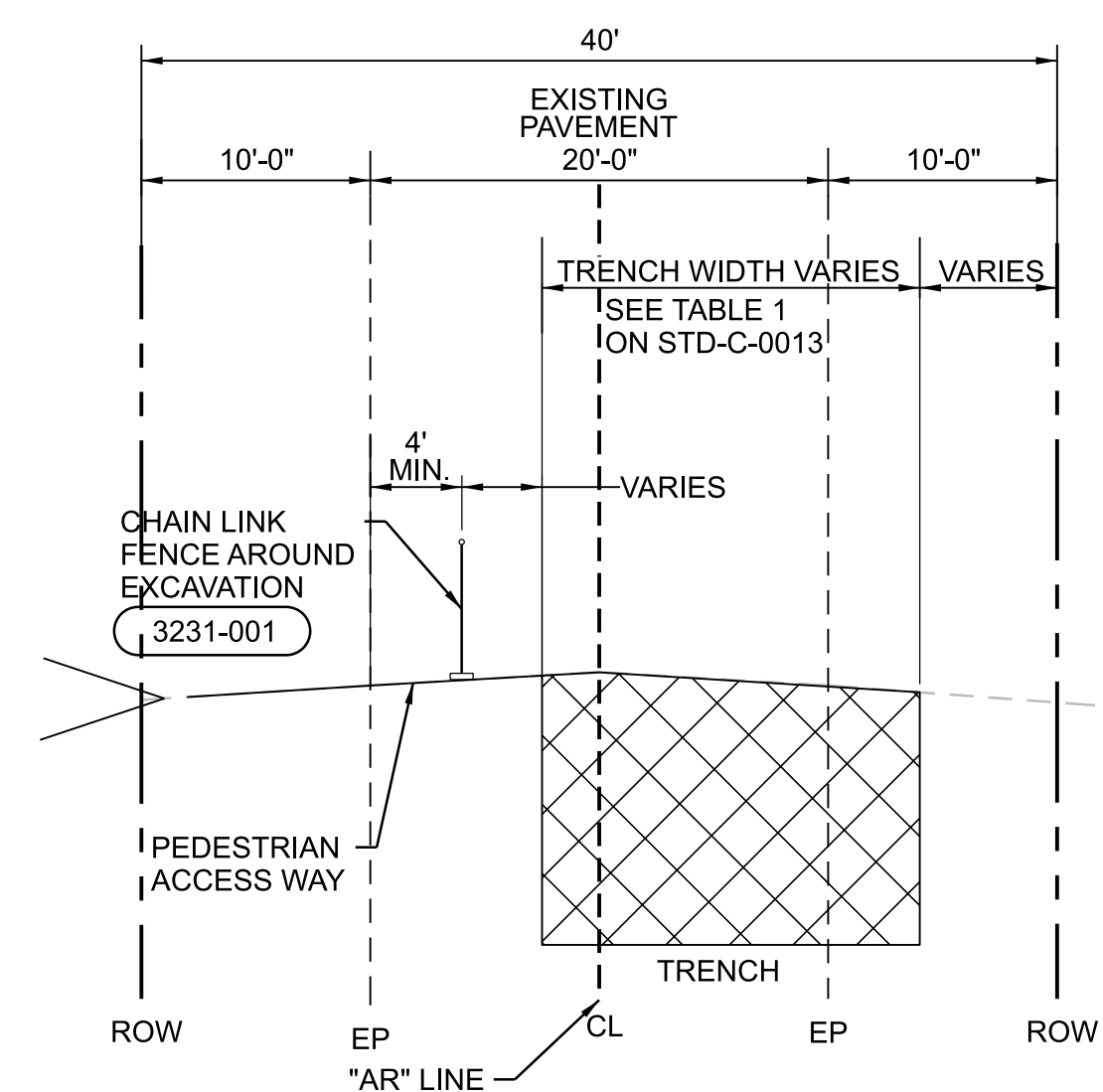
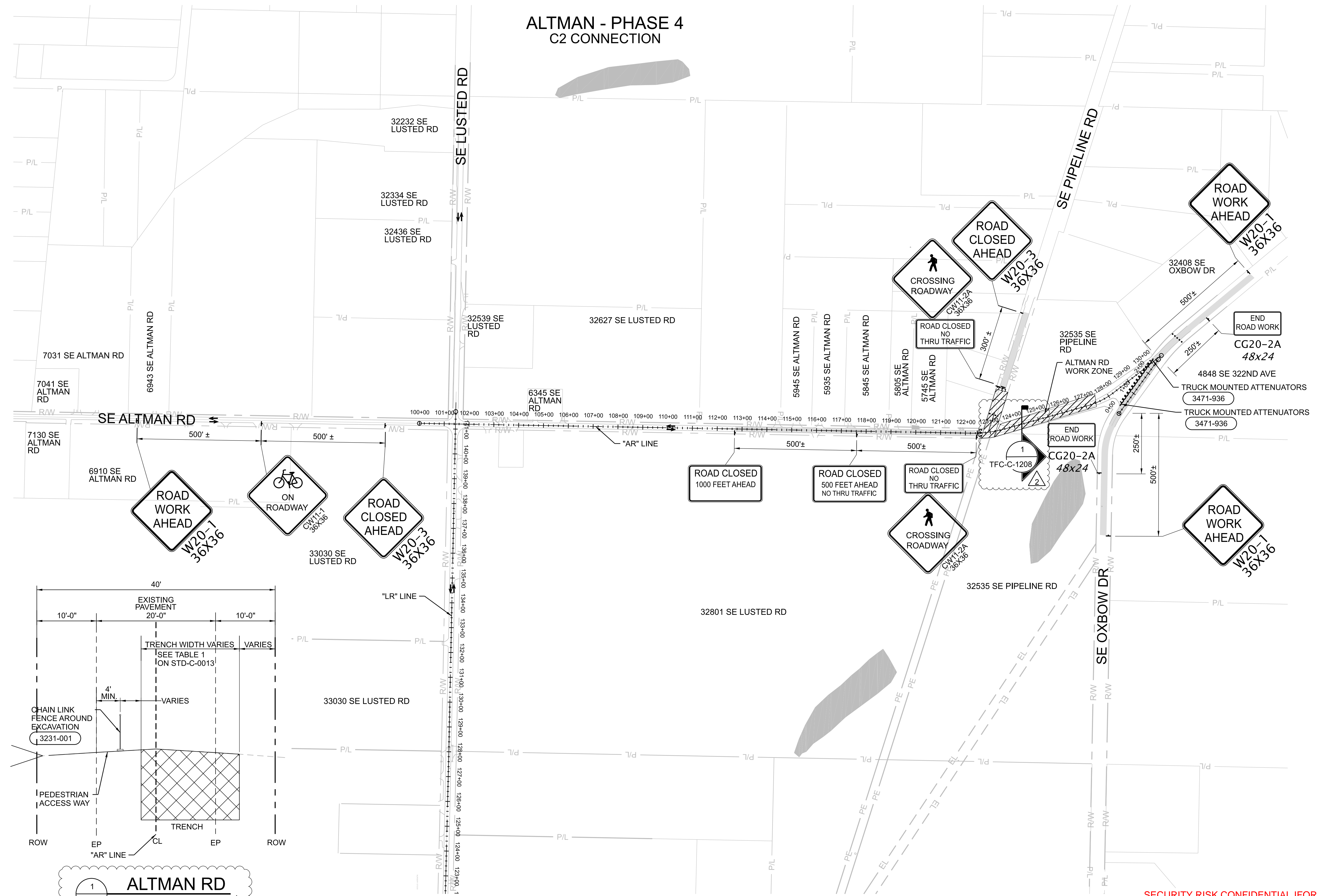
- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN  
3471-901
- TYPE III BARRICADE  
3471-865
- TEMPORARY CONCRETE BARRIER  
3471-935
- TRUCK MOUNTED ATTENUATORS  
3471-936
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- EL EXISTING EASEMENT



### KEYPLAN

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

## ALTMAN - PHASE 4 C2 CONNECTION



24-JUL-2024 16:20 W02563\_ARIS(01)099.dgn

No	Date	Description	Appd
2	6/2024	DCN-03 - CCD-0003	BJP
1	10/2023	DCN-01 - CCD-0001	BJP
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	JB
Date	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TRAFFIC CONTROL**  
ALTMAN PHASE 4

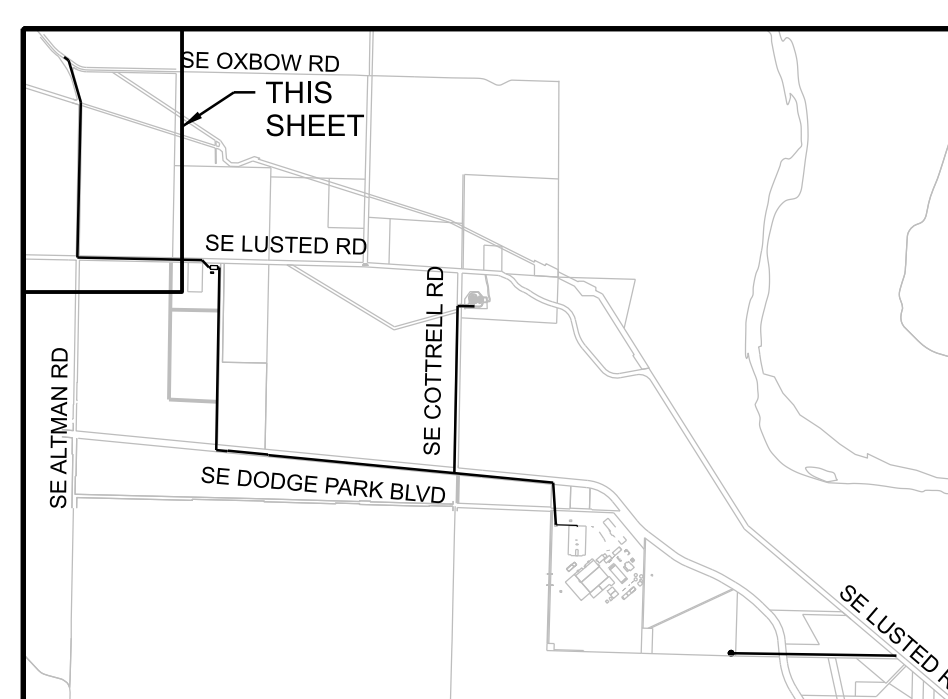
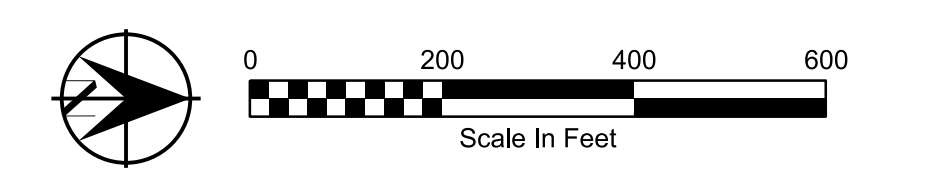
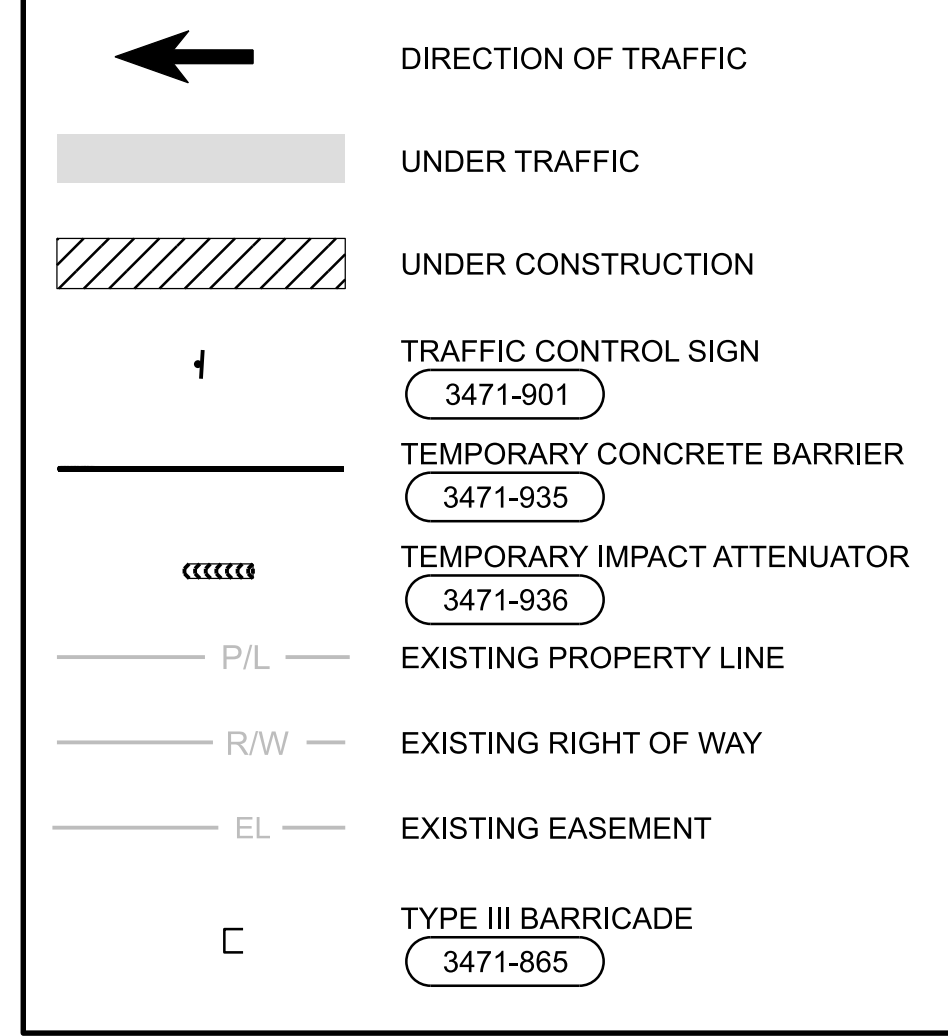
SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
TFC-C-1208



### GENERAL SHEET NOTES

- REFER TO FWP-C-2204, FWP-C-2304 TO FWP-C-2310 FOR PIPE CONSTRUCTION.
- PROVIDE ADDITIONAL TEMPORARY TUBULAR MARKERS NEAR UTILITY POLES ADJACENT TO TEMPORARY ROADWAY.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- AFTER WORKING HOURS, CONTRACTORS TO ENCLOSE EXCAVATION AREA WITH 6' CHAIN LINK FENCE, AND PROVIDE A MINIMUM 4' WIDE PEDESTRIAN PATH ON EXISTING PAVEMENT FROM SE PIPELINE RD TO SE OXBOW DR.
- CONTRACTORS SHALL MAINTAIN ACCESS FOR EMERGENCY VEHICLES AND FARM VEHICLES THROUGH THE FULL ROAD CLOSURE.

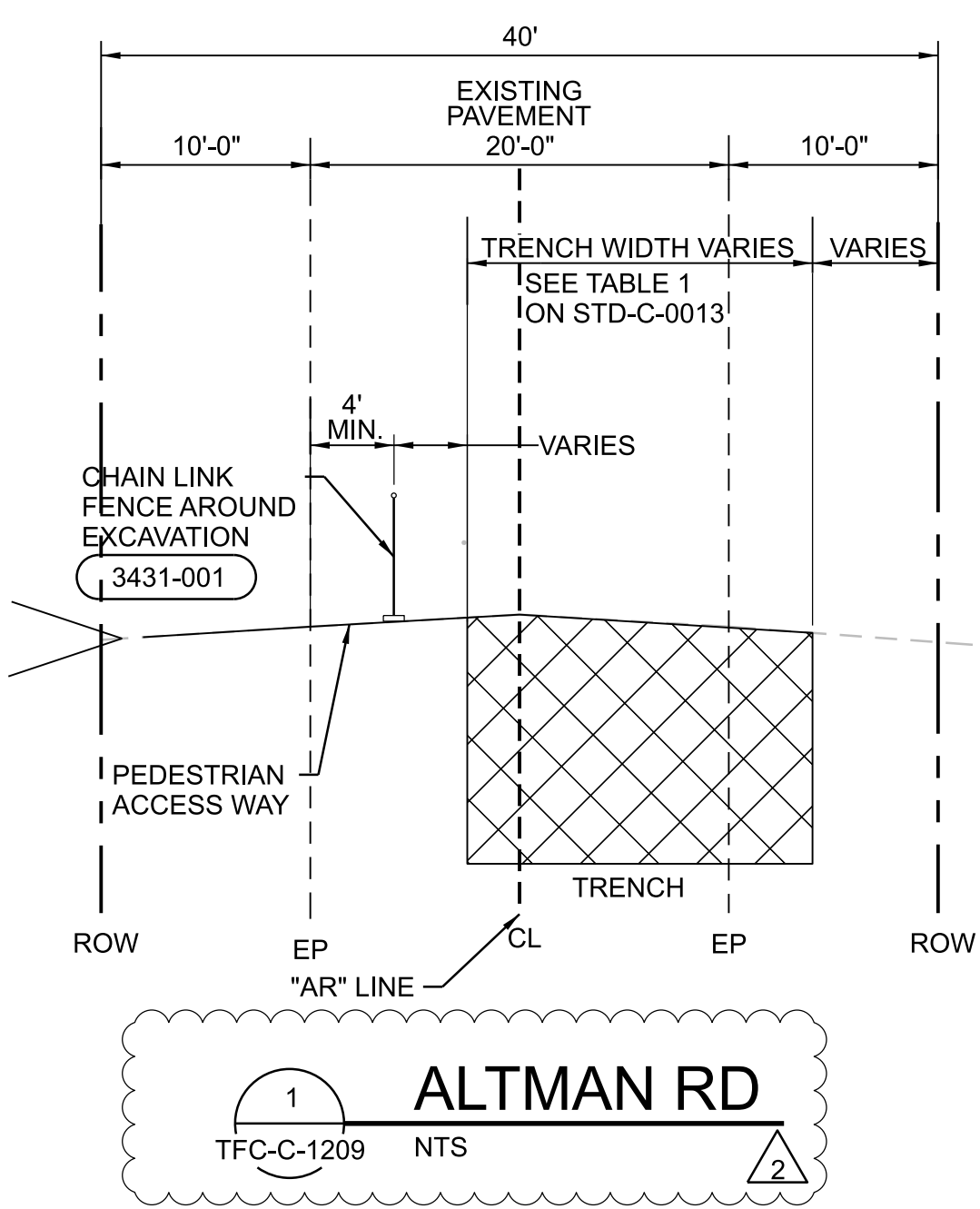
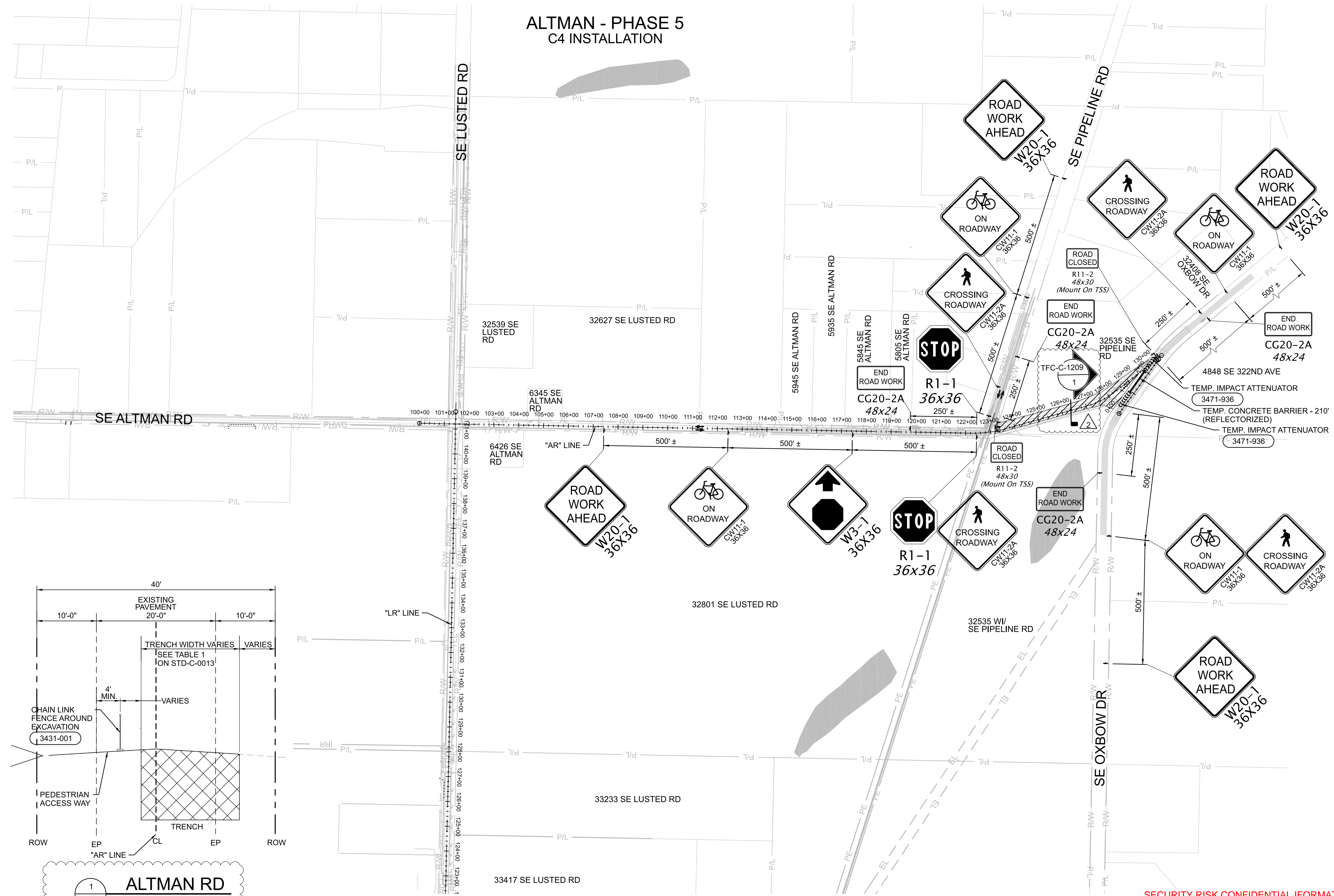
### LEGEND



### KEYPLAN

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

### ALTMAN - PHASE 5 C4 INSTALLATION

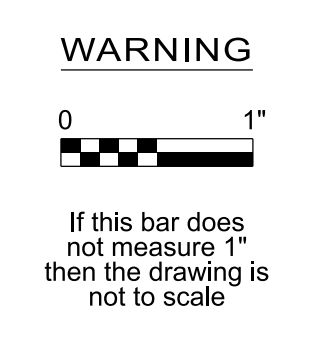


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No	Date	Description	Appd
2	6/2024	DCN-03 - CCD-0003	BJP
1	10/2023	DCN-01 - CCD-0001	BJP
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	JB
Date	9/29/23



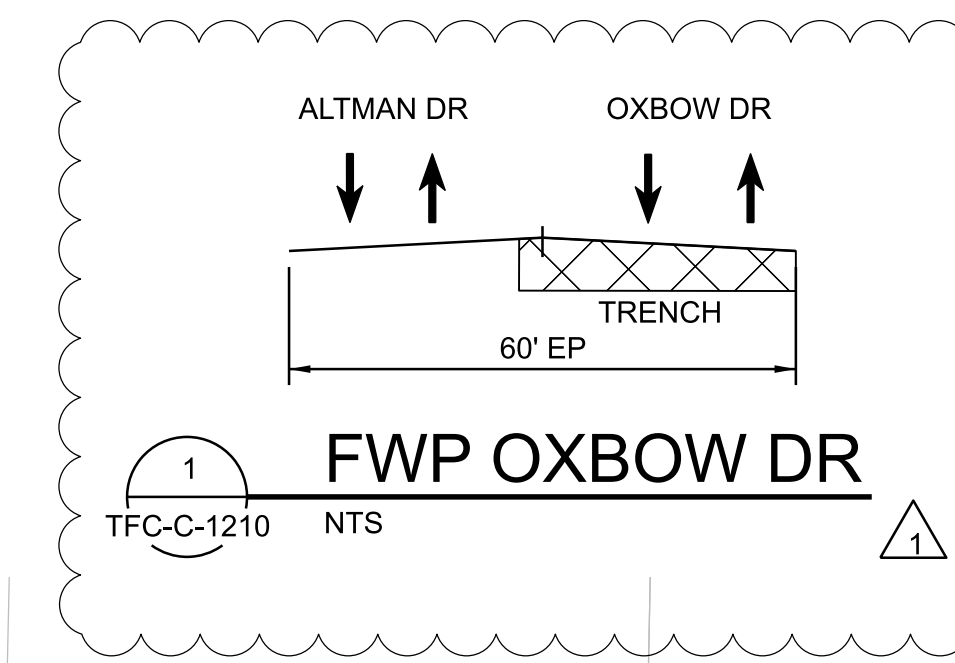
Bull Run Filtration Pipelines  
**FINISHED WATER PIPELINE TRAFFIC CONTROL**  
ALTMAN PHASE 5

SAP Project No  
**W02563**  
1/4 Section  
Sheet No  
TFC-C-1209

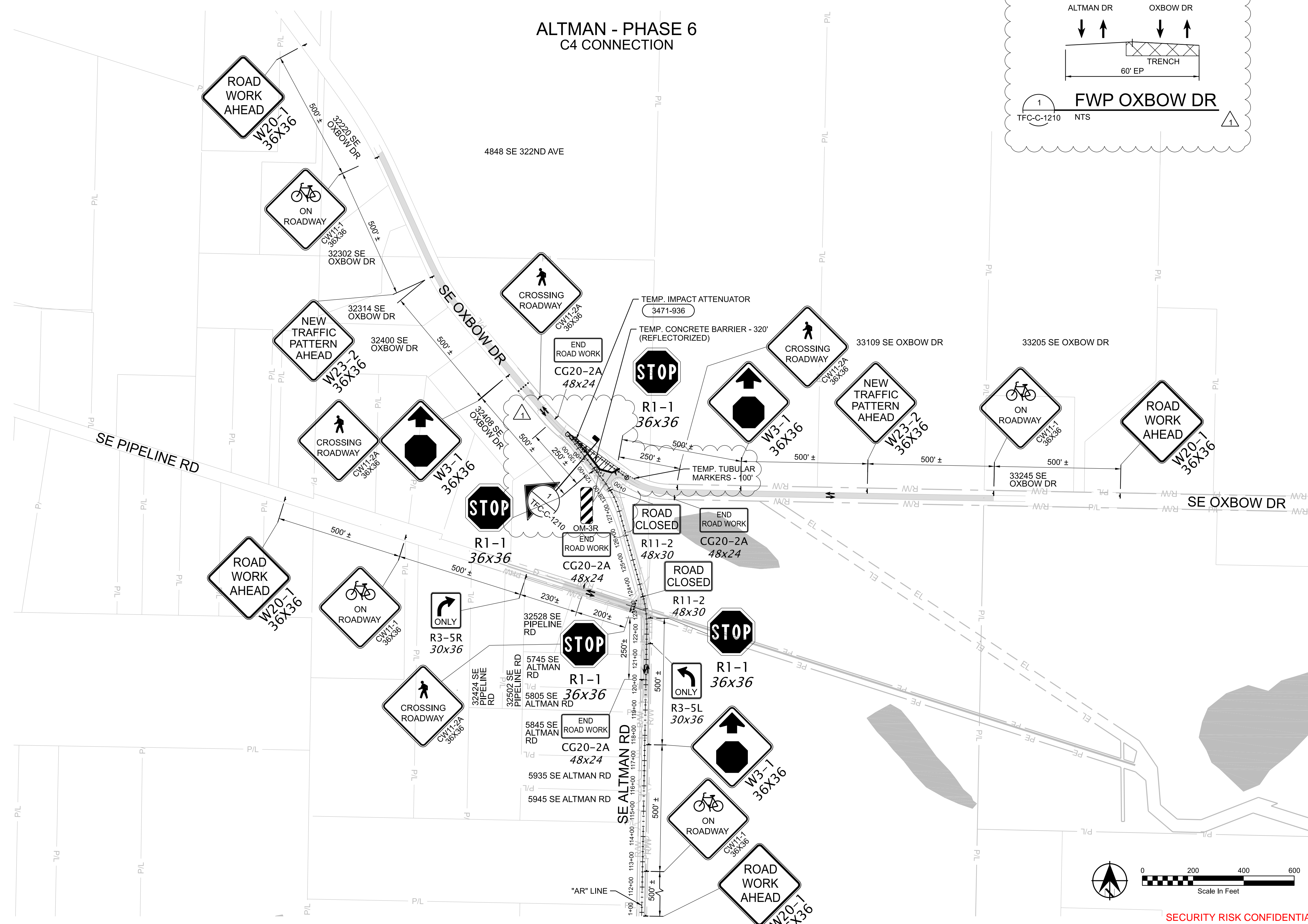


### GENERAL SHEET NOTES

- REFER TO FWP-C-2204, FWP-C-2304 TO FWP-C-2310 FOR PIPE CONSTRUCTION.
- PROVIDE ADDITIONAL TEMPORARY TUBULAR MARKERS NEAR UTILITY POLES ADJACENT TO TEMPORARY ROADWAY.
- THIS LOCATION IS FULLY CONTAINED WITHIN MULTNOMAH COUNTY BORDERS AND SHALL BE REGULATED BY MULTNOMAH COUNTY TRAFFIC STANDARDS.
- CONTRACTOR SHALL COORDINATE WITH BUREAU PUBLIC OUTREACH AGENT FOR TEMPORARY DRIVEWAY CLOSURES. PUBLIC OUTREACH AGENT SHALL COORDINATE WITH PROPERTY OWNERS. SEE 01 55 26.13 FOR ADDITIONAL DRIVEWAY CLOSURE INFORMATION.
- THIS DRAWING PROVIDES A GENERAL LAYOUT FOR MAINTAINING TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF FINAL PLANS FOR APPROVAL PRIOR TO IMPLEMENTATION IN THE FIELD.
- TEMPORARY TUBULAR MARKER SPACING AT TAPERS SHALL BE 20' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT RADII SHALL BE 10' LONG.
- TEMPORARY TUBULAR MARKER SPACING AT DRIVEWAYS SHALL BE NO MORE THAN 20' AND ALLOW ACCESS FOR PASSENGER VEHICLES.

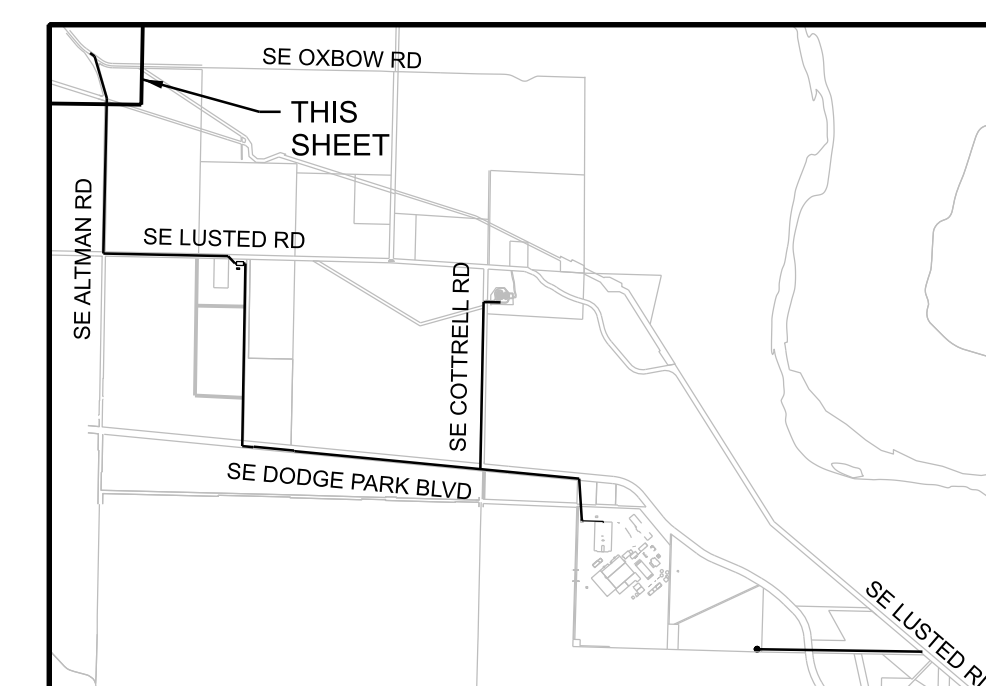


### ALTMAN - PHASE 6 C4 CONNECTION

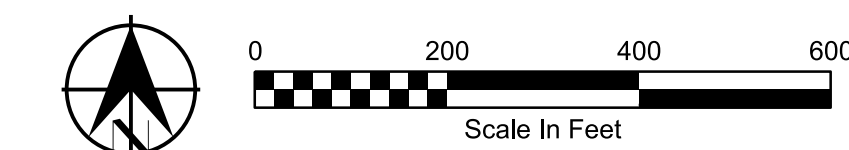


### LEGEND

- DIRECTION OF TRAFFIC
- UNDER TRAFFIC
- UNDER CONSTRUCTION
- TRAFFIC CONTROL SIGN  
3471-901
- TYPE III BARRICADE  
3471-865
- TEMPORARY TUBULAR MARKERS
- TEMPORARY CONCRETE BARRIER  
3471-935
- TEMPORARY IMPACT ATTENUATOR  
3471-936
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- EL EXISTING EASEMENT
- PEDESTRIAN ROUTE



### KEYPLAN



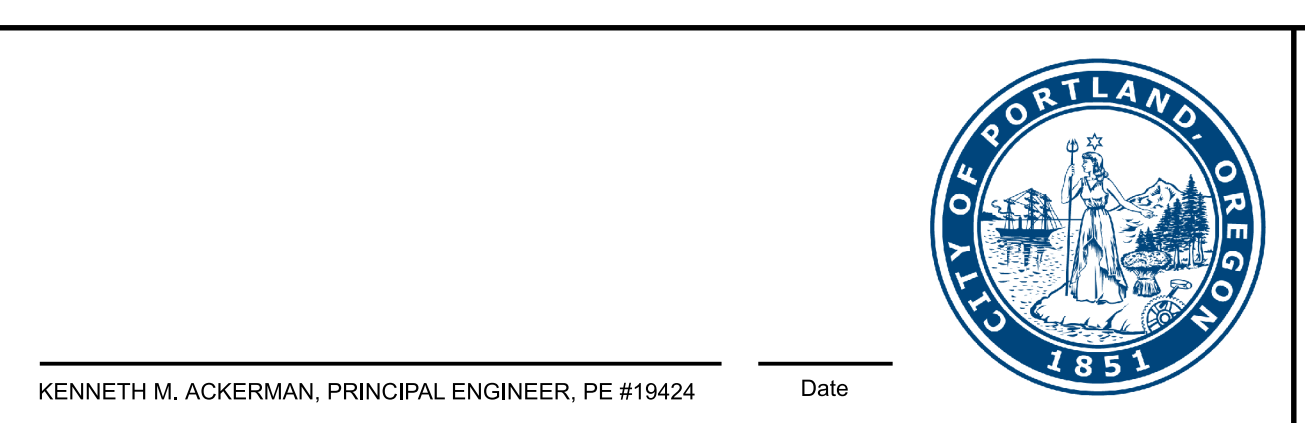
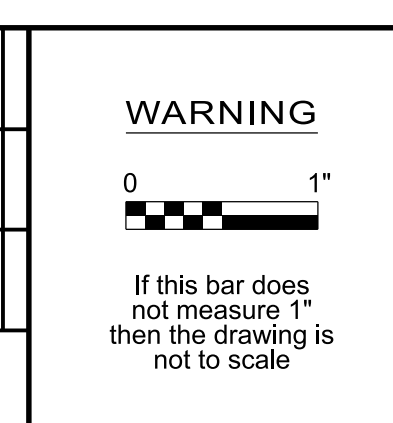
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No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP
Revision			
Survey			



Designed By	DH
Drawn By	Const Mgr BN
Checked By	CMII Eng Mgr JB
Project Mgr	Date 9/29/23



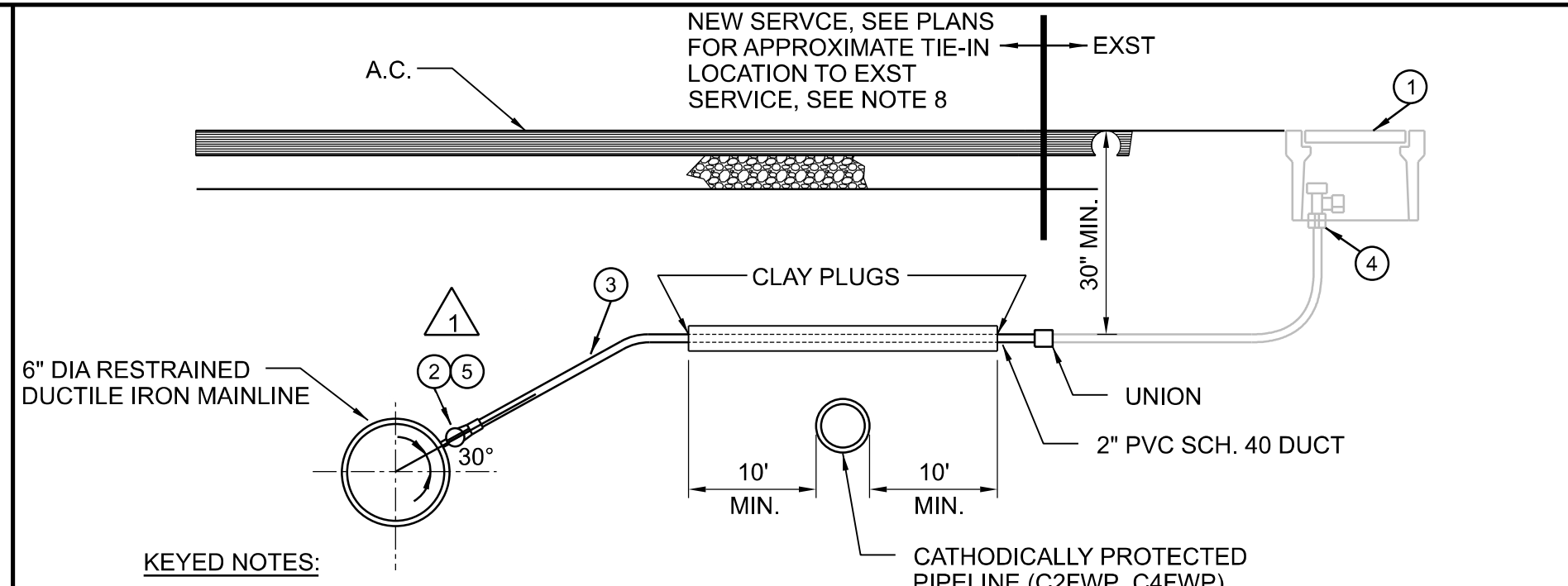
**FINISHED WATER PIPELINE  
TRAFFIC CONTROL**  
ALTMAN PHASE 6

SAP Project No	W02563
1/4 Section	
Sheet No	TFC-C-1210



**GENERAL NOTES FOR PHWD FACILITIES:**

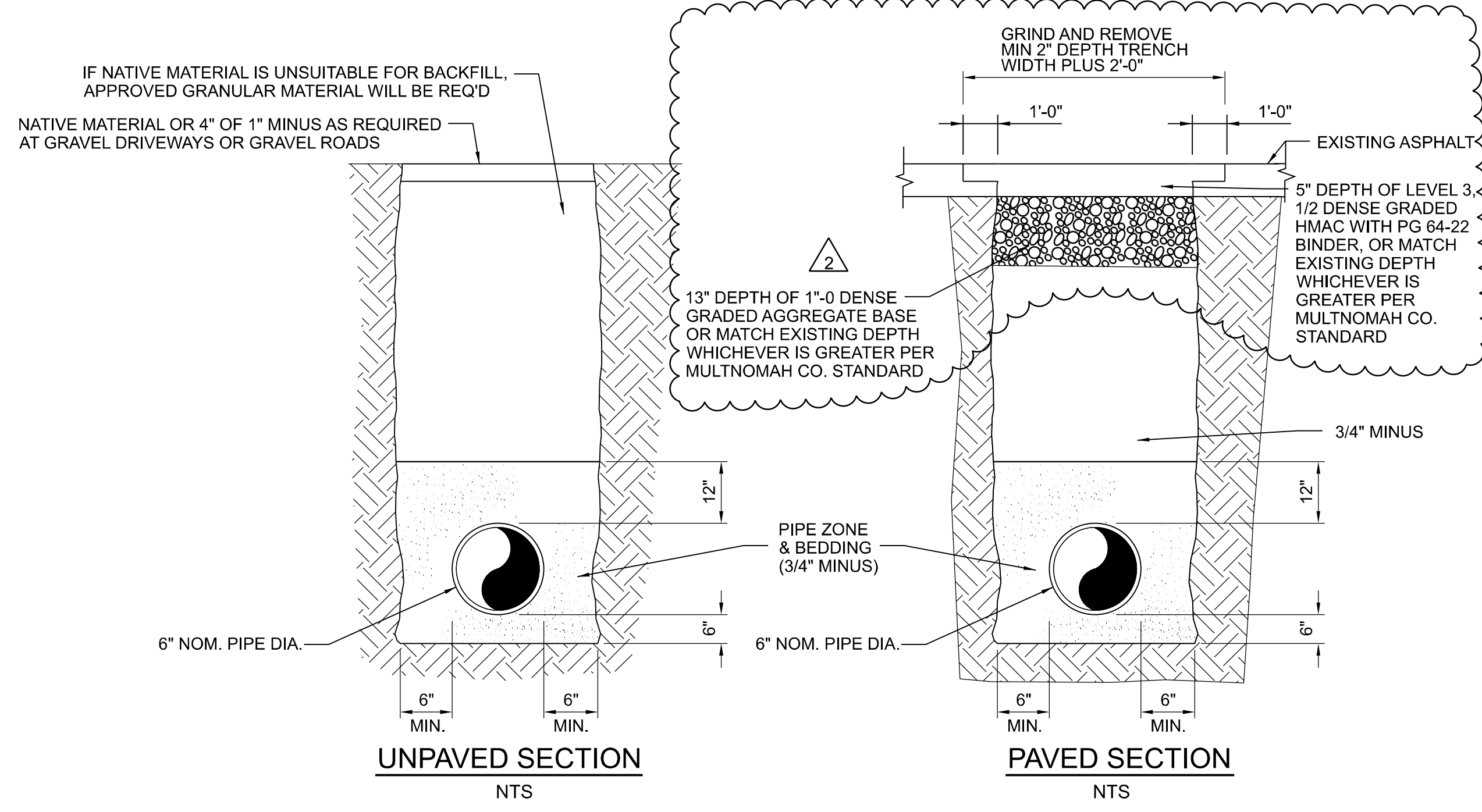
- WATER MAINS SHALL BE POLYETHYLENE WRAPPED RESTRAINED CLASS 52 DUCTILE IRON PIPE CONFORMING TO AWWA C151. PIPE SHALL HAVE DOUBLE CEMENT MORTAR LINING AND BITUMINOUS SEAL COAT CONFORMING TO AWWA C104. JOINTS SHALL BE FULLY RESTRAINED MECHANICAL. PIPE FITTINGS SHALL BE RESTRAINED DUCTILE IRON MECHANICAL JOINTS, CONFORMING TO AWWA C110 OR C153, AND OF DOMESTIC ORIGIN. PIPE SHALL BE LAID SUCH THAT IT IS SUPPORTED ALONG ITS FULL LENGTH, INCLUDING DIGGING OF "BELL HOLES". BOND ALL NEW DUCTILE IRON PIPE TO FORM AN ELECTRICALLY CONTINUOUS PIPE AS SHOWN IN DETAIL 2642-852.
- WATER MAINS SHALL HAVE A MINIMUM COVER OF 42".
- GATE VALVES (4" THROUGH 12") SHALL BE RESILIENT-SEATED TYPE CONFORMING TO AWWA C509. VALVE BOXES SHALL BE VANCOUVER 910/18-INCHES LONG WITH 6" P.V.C. 3034 AS BOTTOM SECTION. SAW CUT A LINE IN VALVE BOX FLANGE SO THAT THEY ARE PARALLEL WITH THE PIPELINE. VALVE BOXES THAT ARE LOCATED OUTSIDE AREAS TO BE PAVED SHALL HAVE A 2" X 2" X 6" THICK COLLAR OF HOT ASPHALT PLACED AROUND THEM. WHERE THE TOP OF THE VALVE OPERATING NUT IS 48" OR MORE BELOW FINISHED GRADE, OPERATING EXTENSIONS SHALL BE PROVIDED TO BRING THE OPERATING NUT TO A POINT 18" BELOW FINISHED GRADE. THE EXTENSION STEM SHALL BE CONSTRUCTED OF STEEL.
- TAPPING SLEEVES SHALL BE EITHER EPOXY-COATED STEEL WITH STAINLESS STEEL BOLTS OR STAINLESS STEEL FULL CIRCLE TAPPING SLEEVE.
- GRANULAR MATERIAL USED FOR PIPE BASE, PIPE ZONE AND TRENCH BACKFILL SHALL BE 3/4" - 0" CRUSHED ROCK. PIPE BASE SHALL BE A MINIMUM OF 4-INCHES DEEP AT THE PIPE BARREL AND NOT LESS THAN 3-INCHES DEEP AT THE BELL. GRANULAR BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY PER ASTM D1557 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 85% OF IN-PLACE DENSITY OF SURROUNDING SOIL.
- INSPECTION OF THE WATER IMPROVEMENTS WILL BE MADE BY PLEASANT HOME WATER DISTRICT PERSONNEL OR OTHERS DESIGNATED BY THE DISTRICT. THE PRESSURE TEST IS TO BE MADE AFTER ALL SERVICES ARE INSTALLED. CURBS ARE IN AND ROAD BASE ROCK IS PLACED. TEST PRESSURE SHALL BE 1.5 TIMES STATIC PRESSURE (MINIMUM 150 PSI) AT THE LOWEST POINT IN THE SYSTEM BEING TESTED; 30 MINUTE DURATION; NO PRESSURE LOSS.
- ALL MATERIALS, INSTALLATIONS, TESTS AND CHLORINATION SHALL BE IN STRICT ACCORDANCE WITH THE STANDARDS AND CODES OF THE PLEASANT HOME WATER DISTRICT AND THE OREGON STATE HEALTH DIVISION ADMINISTRATIVE RULES, CHAPTER 333.
- TEST AND DISINFECT WATER MAINS IN ACCORDANCE WITH SECTION 01 74 30. PROVIDE CONCURRENT NOTIFICATIONS AND SUBMITTALS TO PHWD WITH PORTLAND WATER BUREAU OWNER'S REPRESENTATIVE FOR TESTING AND DISINFECTION PLANS FOR NEW WATER MAINS.
- NOTIFY PHWD 30 DAYS PRIOR TO INTENDED DATE OF PLACING NEW WATER MAINS INTO SERVICE.
- PROVIDE AS-BUILT SURVEY AND RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTIONS 01 71 23 AND 01 78 39. DRAWINGS FWP-C-2501 THROUGH FWP-C-2510 WILL BE PROVIDED TO PHWD SEPERATELY FROM THE BALANCE OF THE PROJECT DRAWINGS.
- CONSTRUCT THE WORKS IN ACCORDANCE WITH SECTION 33 12 13 WATER SERVICE CONNECTIONS AND PORTLAND WATER BUREAU STANDARD DETAILS WHERE PHWD STANDARD DETAILS ARE NOT EXPLICIT.
- MAINTAIN WATER SUPPLY TO EXISTING WATERLINES AND SERVICES WHILE NEW PHWD FACILITIES ARE INSTALLED. SEQUENCE NEW PHWD PIPELINE AND SERVICE TIE-INS TO EXISTING SUCH THAT NO SERVICE IS SHUTDOWN FOR MORE THAN 4 HOURS MAXIMUM. NOTIFY PHWD 72 HOURS PRIOR TO ANY WATER SYSTEM SHUTDOWN.



- KEYED NOTES:**
- PROTECT EXISTING TRAFFIC RATED JENSEN PRECAST; MODEL 37MB BODY, 37-S COVER, AND 37-S LID (1-S).
  - MUELLER INSULATING CORP. STOP SIMILAR TO #B-25008, FORD FB 10003Q, OR AN APPROVED EQUAL. THE INSULATING CORP STOP SHALL BE BRASS WITH NYLON INSULATING MATERIAL THAT EFFECTIVELY STOPS THE FLOW OF ELECTRICAL CURRENT WITHOUT COMPROMISING STRENGTH OF SERVICE LINE. THE SEAL SHALL BE ACCOMPLISHED WITH AN O-RING. CORP STOPS SHALL BE DIRECT TAP IF SMALLER THAN 2" DIA.
  - 1" SOFT TEMPER, TYPE "K" COPPER TUBING COMPLYING WITH ASTM B-88.
  - EXISTING MUELLER, ANGLE METER STOP NO. B-24258, FORD BA-43-332WQ, OR AN APPROVED EQUAL.
  - LOCATION OF CORP STOP SHOWN IN PLANS IS APPROXIMATE. FIELD LOCATE CORP STOP TO FACILITATE NEW SERVICE INSTALLATION WHILE MAINTAINING EXISTING SERVICE IN OPERATION UNTIL CONNECTION TO EXISTING SERVICE IS COMPLETE.

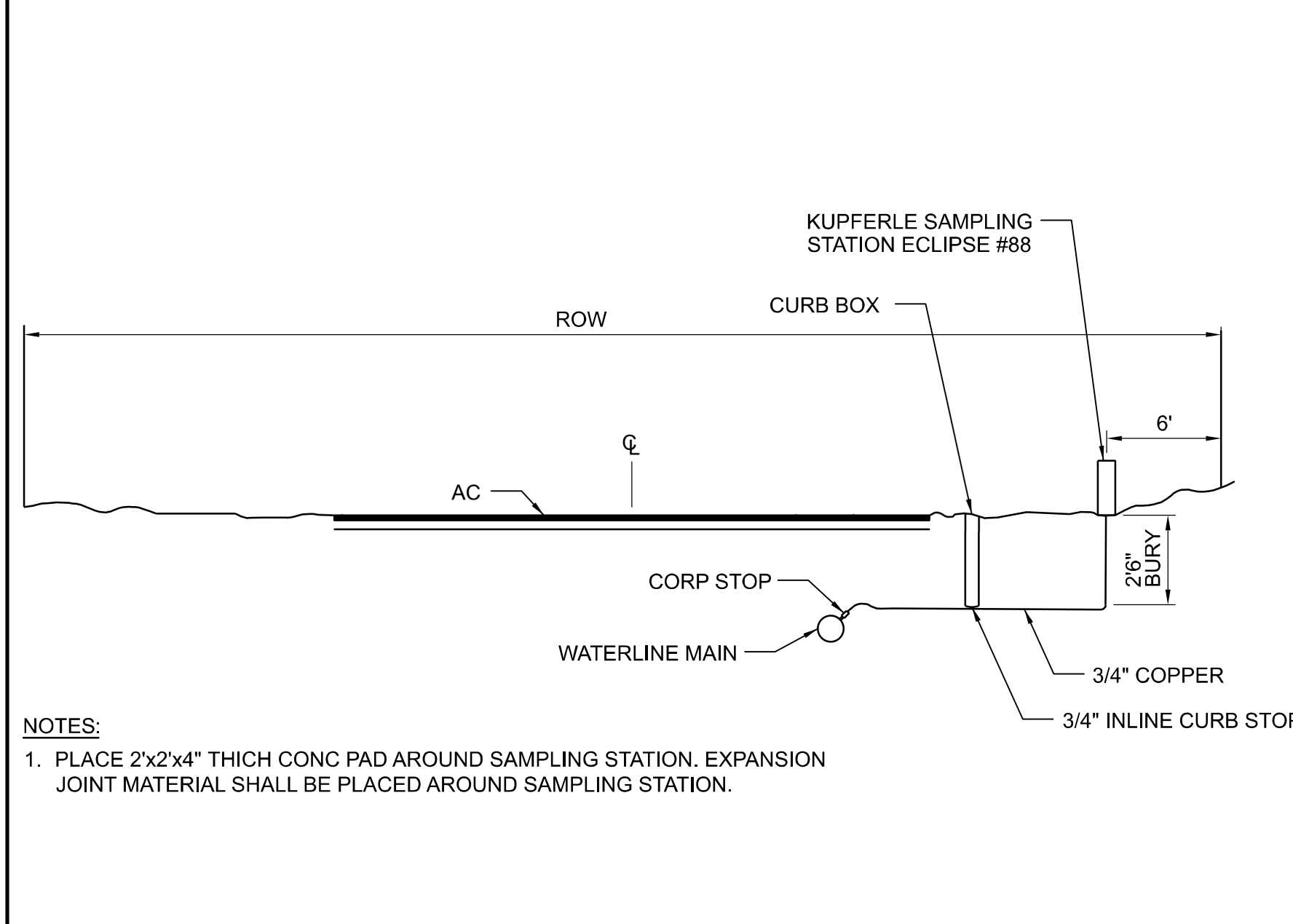
- NOTES:**
- SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE.
  - ALL PIPE AND STRUCTURE ZONES SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY AASHTO T-180.
  - WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED WITH IMPERVIOUS PLUG AS SHOWN ABOVE.
  - SET CORP. STOP WITH OPERATION NUT AT 3 OR 9 O'CLOCK.
  - ONLY APPROVED BIT WITH CC THREADS AND TAPPING MACHINE ALLOWED FOR INSTALLATION OF CORP STOP.
  - COPPER SERVICE SHALL BE INSTALLED IN A DIRECT LINE BETWEEN TAP AND METER.
  - COPPER TO BE ONE CONTINUOUS PIECE UNTIL CONNECTION TO EXST SERVICE WITH NEW UNION.
  - PROTECT EXISTING PHWD PIPELINES AND EXISTING PHWD SERVICES UNTIL TIE-IN TO EXISTING PHWD FACILITIES. EXISTING PHWD SYSTEM SHALL REMAIN OPERATIONAL UNTIL TIE-IN.
  - FOR LOCATIONS WHERE SERVICE IS USED FOR MANUAL AIR RELEASE, INSTALL HAND TIGHT THREADED PLUG IN CORP STOP OF SAME MATERIAL AS CORP STOP, LOCATE CORP STOP 12" BELOW FINISH GRADE, INSTALL 6" DEPTH OF RIGID INSULATION WITHIN CURB BOX AFFIXED WITH NYLON ROPE (OR SIMILAR) FOR EASE OF INSULATION REMOVAL.

**PHWD SERVICE DETAIL**  
NTS  
2500-003



- NOTES:**
- ALL WATER MAINS SHALL HAVE A MIN. COVER OF 42" IN RIGHT-OF-WAY AND 48" IN EASEMENTS.
  - ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY PER ASTM D1557.
  - ALL TRENCH BACKFILL AND PATCHING SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF CONTRACT DOCUMENTS EXCEPT WHERE NOTED TO MEET MULTNOMAH CO. STANDARD.
  - INSTALL TRACER WIRE IN ACCORDANCE WITH SPECIFICATIONS.
  - REPLACE STRIPING PER OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION SECTION 00850 & 00860.

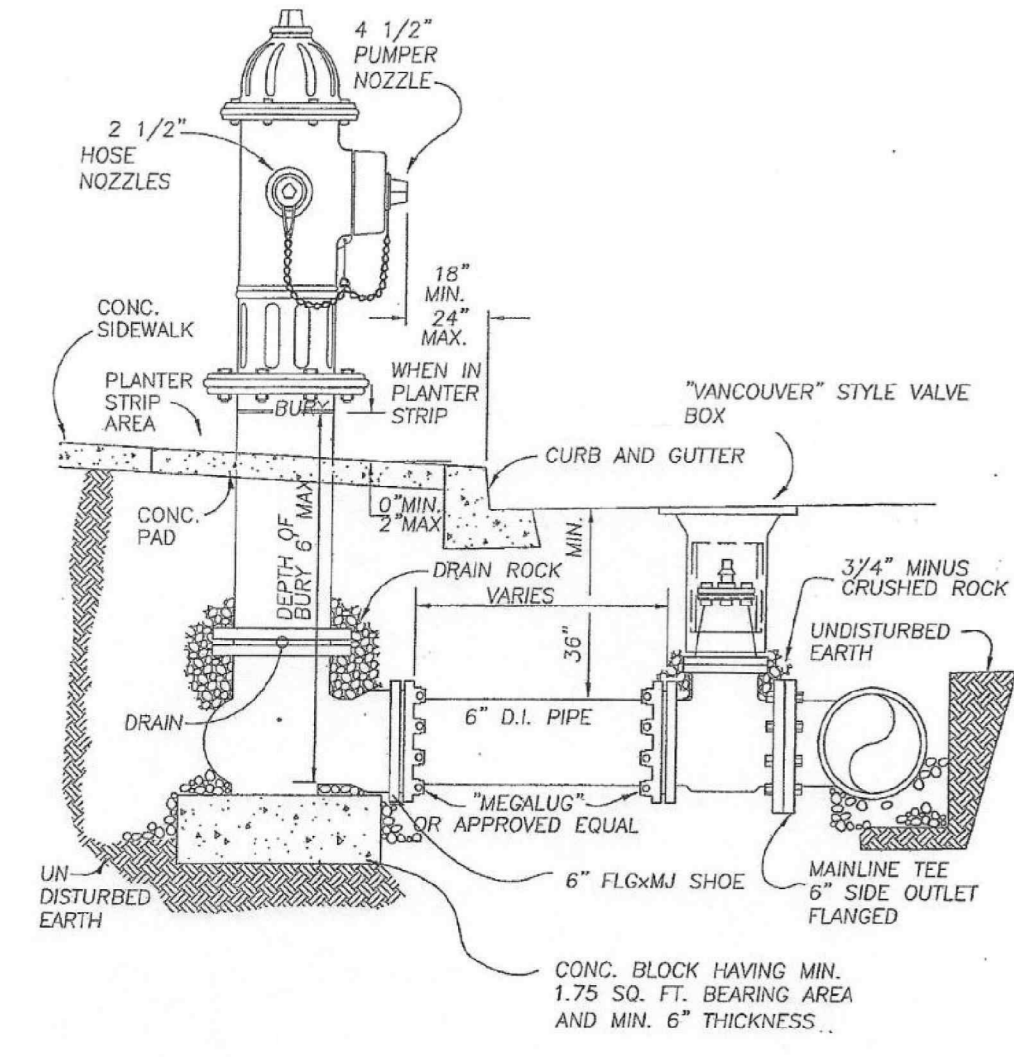
**PHWD TRENCH SECTION**  
NTS  
2500-005



- NOTES:**
- PLACE 2'x2'x4" THICK CONC PAD AROUND SAMPLING STATION. EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND SAMPLING STATION.

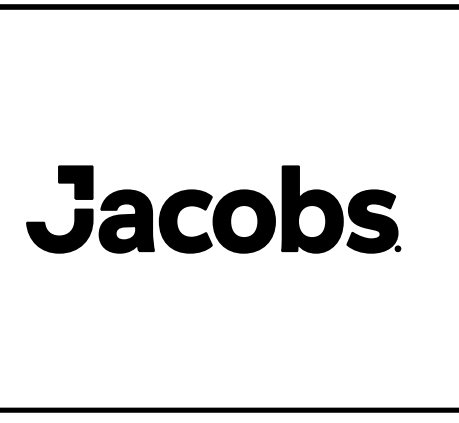
**PHWD SAMPLING STATION DETAIL**  
NTS  
2500-010

- NOTES:**
- CURB, GUTTER, PLANTER STRIP, AND SIDEWALK ONLY WHERE APPLICABLE. SEE PLANS.
  - FIRE HYDRANTS SHALL BE MUELLER CENTURION, M & H 949 RELIANT OR CLOW F-2500 OR KENNEDY GUARDIAN WITH 6" MJ INLET AND 5 1/4" VALVE OPENING. FIRE HYDRANTS ARE TO HAVE A 4 1/2" AND TWO 2 1/2" OUTLETS. PUMPER OUTLET TO FACE THE DIRECTION OF ACCESS.
  - HYDRANT COLOR SHALL BE YELLOW SHERWIN WILLIAMS GCC-5006, OR APPROVED EQUAL.
  - ALL MJ'S ON TEE, VALVE AND FIRE HYDRANT SHALL BE RESTRAINED WITH "MEGALUG" FOLLOWER GLANDS OR APPROVED EQUAL. RESTRAIN MIN. 10 LF OF PIPE EACH SIDE OF TEE ON MAIN LINE AND ALL PIPE AND FITTINGS RESTRAIN ON THE BRANCH SIDE OF TEE. NO JOINTS BETWEEN VALVE AND SHOE UNLESS PIPE RUN LENGTH IS OVER 18 LF.
  - MIN. 4' CU. FT. OF 1-1/2"-3/4" CLEAN DRAIN ROCK SHALL BE PLACED AROUND SHOE UP TO A MIN. OF 6" ABOVE DRAIN OUTLETS
  - BURY OF HYDRANT SHALL BE MEASURED FROM BURY LINE TO BOTTOM OF CONNECTING PIPE. HYDRANT SHALL HAVE A MAX. OF A 6" BURY, UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE.
  - HYDRANT VALVE SHALL BE MUELLER RESILIENT WEDGE GATE VALVE #A-2360-16 OR APPROVED EQUAL.
  - WHERE NO SIDEWALK EXISTS AROUND A HYDRANT, INCLUDING A PLANTER STRIP, PLACE A 5'x5'x4" THICK CONC. PAD AROUND HYDRANT. EXPANSION JOINT MATERIAL SHALL BE PLACED AROUND HYDRANT BARREL WHEN PLACED IN CONCRETE.

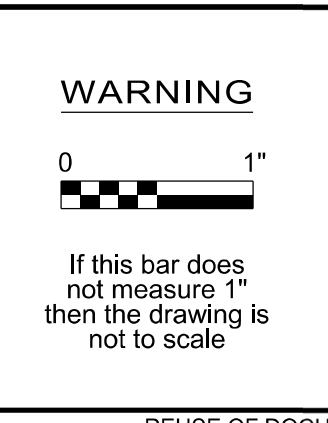


**PHWD FIRE HYDRANT DETAIL**  
NTS  
2500-015

No	Date	Description	Appd
2	7/2024	DCN-03 - CCD-0003	BJP
1	10/2023	DCN-01 - CCD-0001	BJP
Revision			
Survey			



Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	9/29/23



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
Date



**Bull Run Filtration Pipelines**  
**PLEASANT HOME WATER DIST**  
DETAILS

SAP Project No	W02563
1/4 Section	
Sheet No	FWP-C-2510

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EROSION AND SEDIMENT CONTROL NOTES (ALL SECTIONS REFERENCING DEQ 1200-CA PERMIT)

- 1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES...
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-CA PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-CA PERMIT REQUIREMENTS. (SECTION 6.5q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISIONS TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION OUTSIDE OF PROJECT LIMITS AS DELINEATED BY TREE PROTECTION FENCING AND SEDIMENT FENCING AND RE-VEGETATE ALL UNPAVED AREAS WITHIN THE PROJECT LIMITS. TEMPORARY RE-VEGETATION IS REQUIRED DURING CONSTRUCTION AS INDICATED BELOW AND PERMANENT RE-VEGETATION IS REQUIRED FOLLOWING COMPLETION OF CONSTRUCTION. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FOET OF WATERS OF THE STATE. 100 FOOT BUFFERS FROM STREAMS AND WATER BODIES SHOWN ON RWP-CE-1001 AND FWP-CE-1010. DISTURBANCE WITHIN THE 100 FOOT BUFFER OF BEAVER CREEK AND WATER BODIES IS MITIGATED WITH BMPs TO ENSURE MINIMUM WATER QUALITY STANDARDS ARE MET. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE, (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAM BANKS. (SECTIONS 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT VEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. MATERIAL AND WASTE STORAGE AREAS OUTSIDE OF RIGHTS-OF-WAY WILL BE ESTABLISHED BY THE CONTRACTOR AND EROSION CONTROL MEASURES TO PROTECT MATERIAL AND WASTE STORAGE AREAS WILL COMPLY WITH THE EROSION CONTROL CONSTRUCTION DETAILS. MATERIAL WILL NOT BE STOCKPILED WITHIN THE RIGHT-OF-WAY. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMP'S SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPs MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. PUBLIC ROADS WILL BE SWEEPED DAILY. PRIVATE FARM ROADS UTILIZED DURING CONSTRUCTION WILL BE IMPROVED WITH GRAVEL PRIOR TO LAND DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.f)
22. CONTROL PROHIBITED DISCHARGED FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING WILL BE DELINEATED BY A SEDIMENT FENCE TO PREVENT DISTURBANCE. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPs TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)

- 26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17a)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPONDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPs WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW PROJECT SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATION OF THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPs MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5b)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5c)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5a)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN-UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIMEFRAME. (SECTION 2.2.19)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STROM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT ANY PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR LONGER CALENDAR DAYS. (SECTION 6.5.f)

- 41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR LONGER WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED MOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)
43. STORM DRAIN INLETS, CATCHBASINS, AND AREA DRAINS SHALL BE PROTECTED USING THE APPROVED BEST MANAGEMENT PRACTICE (BMP) AT ALL TIMES DURING CONSTRUCTION.
44. EFFECTIVE EROSION CONTROL, DUST CONTROL, AND DRAINAGE CONTROL IS REQUIRED AT ALL TIMES. THE COUNTY MAY ORDER STOPPAGE OF WORK TO EFFECT CORRECTIVE ACTION AT ANY TIME.
45. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND FROM OCTOBER 1 THROUGH MAY 31.
46. WATERTIGHT TRUCKS MUST BE USED TO TRANSPORT SATURATED SOILS FROM THE CONSTRUCTION SITE. AN APPROVED EQUIVALENT IS TO DRAIN THE SOIL ON-SITE AT A DESIGNATED LOCATION USING APPROPRIATE BMP'S; SOIL MUST BE DRAINED SUFFICIENTLY FOR MINIMAL SPILLAGE.
47. DEVELOP AND MAINTAIN ONSITE A WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURE.
48. ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.
49. DEQ MUST APPROVE OF ANY TREATMENT SYSTEM AND OPERATIONAL PLAN THAT MAY BE NECESSARY TO TREAT CONTAMINATED CONSTRUCTION DEWATERING OR SEDIMENT AND TURBIDITY IN STORMWATER RUNOFF.
50. SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR THIRTY (30) DAYS OR MORE, THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD.
51. SHOULD CONSTRUCTION ACTIVITIES CEASE FOR FIFTEEN (15) DAYS OR MORE ON ANY SIGNIFICANT PORTION OF A CONSTRUCTION SITE, TEMPORARY STABILIZATION IS REQUIRED FOR THAT PORTION OF THE SITE WITH STRAW, COMPOST, OR OTHER COVERING THAT WILL PREVENT SOIL OR WIND EROSION UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.

SEC SEEDING TABLE with columns: BOTANICAL NAME, COMMON NAME. Rows include BROMUS CARINATUS (CALIFORNIA BROME), CAREX DEWEYANA (DEWEY'S SEDGE), DESCHAMPSIA ELONGATA (SLENDER HAIRGRASS), ELYMUS GLAUCUS (BLUE WLLDRYE), GEUM MACROPHYLLUM (LARGE-LEAVED AVENS), GLYCERIA ELATA (TALL MANNAGRASS), LUPINUS LATIFOLIUM (LARGELEAF LUPINE), PRUNELLA LANCEOLATA (SELFHEAL), TELLIMA GRANDIFLORA (FRINGE CUPS).

INSPECTION FREQUENCY

Table with columns: SITE CONDITION, MINIMUM FREQUENCY. Rows include ACTIVE PERIOD, INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS, PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER, PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS, PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DURING FROZEN CONDITIONS.

LAWN SEEDING

LAWN SEEDING TABLE with columns: BOTANICAL NAME, COMMON NAME. Rows include FESTUCA ARUNDINACEA (TURFWAY - TURFWAY TALL FESCUE), FESTUCA ARUNDINACEA (HOUNDGOG 8' - HOUNDGOG 8 TALL FESCUE), FESTUCA ARUNDINACEA (FOXHOUND TALL FESCUE).

FILTER STRIP SEEDING

FILTER STRIP SEEDING TABLE with columns: BOTANICAL NAME, COMMON NAME. Rows include HORDEUM VULGARE VAR POCO (POCO BARLEY), HARDEUM BRACHYANTHERUM (MEADOW BARLEY), BROMUS CARINATUS (CALIFORNIA BROME), FESTUCA IDAHOENSIS ROMERID (ROEMER'S FESCUE), TRIFOLIUM FRAGIFERUM (STRAWBERRY CLOVER), CLARKIA AMONEA (FAREWELL TO SPRING), OENOTHERA ELATA HOOKERI (HOOKER'S EVENING PRIMROSE), DESHAMPSIA CESPITOSA (TUFTED HAIRGRASS), AGROSTIS EXERATA (SPIKE BENTGRASS).

ROADSIDE SEEDING

ROADSIDE SEEDING TABLE with columns: BOTANICAL NAME, COMMON NAME. Rows include FESTUCA RUBRA VAR. SEALINK (SEALINK CREEPING RED FESCUE), FESTUCA OVINA VAR. AZAY BLUE (AZAY BLUE SHEEP FESCUE), TRIFOLIUM FRAGIFERUM (STRAWBERRY CLOVER), NEMOPHILA MENZIESII (BABY BLUE EYES), LIMNANTHES DOUGLASII (DOUGLAS MEADOWFOAM), ARMERIA MARITIMA (THRIFT SEAPINK), TRIFOLIUM REPENS VAR MICROCLOVER (MICROCLOVER), LOBULARIA MARITIMA (SWEET ALYSSUM CARPET OF SNOW), ACHILLEA MILLEFOLIUM (COMMON YARROW), BELLIS PERENNIS (LAWNDAISY).

PASTURE SEEDING

PASTURE SEEDING TABLE with columns: BOTANICAL NAME, COMMON NAME. Rows include FESTUCA ARUNDINACEA VAR ATLAS (ATLAS FORAGE TALL FESCUE), FESTULOLIUM SPP (SWEET TART FESTULOIUM), LOLIUM PERENNE VAR AMAZON (TETRAPLOID AMAZON TETRAPLOID PERENNIAL RYE), LOLIUM MULTIFLORIUM VAR BIG SHOT TETRAPLOID (BIG SHOT TETRAPLOID ANNUAL RYE), DACTYLIS GLOMERITA (POTOMAC ORCHARDGRASS).

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

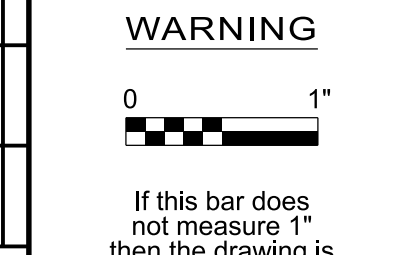
BMP MATRIX FOR CONSTRUCTION PHASE. Table with columns: YEAR (2024-2027), PHASE/BMP, CLEARING, MASS GRADING, UTILITY CONSTRUCTION, VERTICAL CONSTRUCTION, FINAL STABILIZATION. Rows include EROSION PREVENTION (GROUND COVER, PLASTIC SHEETING, DUST CONTROL, TEMPORARY STABILIZATION, PERMANENT STABILIZATION, BUFFER ZONE), SEDIMENT CONTROL (SEDIMENT FENCE, STRAW WATTLES, INLET PROTECTION, DEWATERING), RUN OFF CONTROL (CONSTRUCTION ENTRANCE, EXISTING OUTLET PROTECTION, NEW OUTLET PROTECTION, EXISTING CURB INLET CHECK DAMS), POLLUTION PREVENTION (HAZARD WASTE MANAGEMENT, SPILL KIT ONSITE, CONCRETE WASHOUT AREA).

W02563\_FWP-CE-1000A.dgn

Revision table with columns: No, Date, Description, Appd. Rows include revisions 1, 2, 3.



Project metadata table with fields: Designed By (DH), Drawn By (BN), Checked By (JB), Project Mgr, Date (1/22/24).



Bull Run Filtration Pipelines logo and FINISHED WATER PIPELINE EROSION AND SED. CONTROL GENERAL NOTES text.

24-JUL-2024 20:20



### GENERAL SHEET NOTES

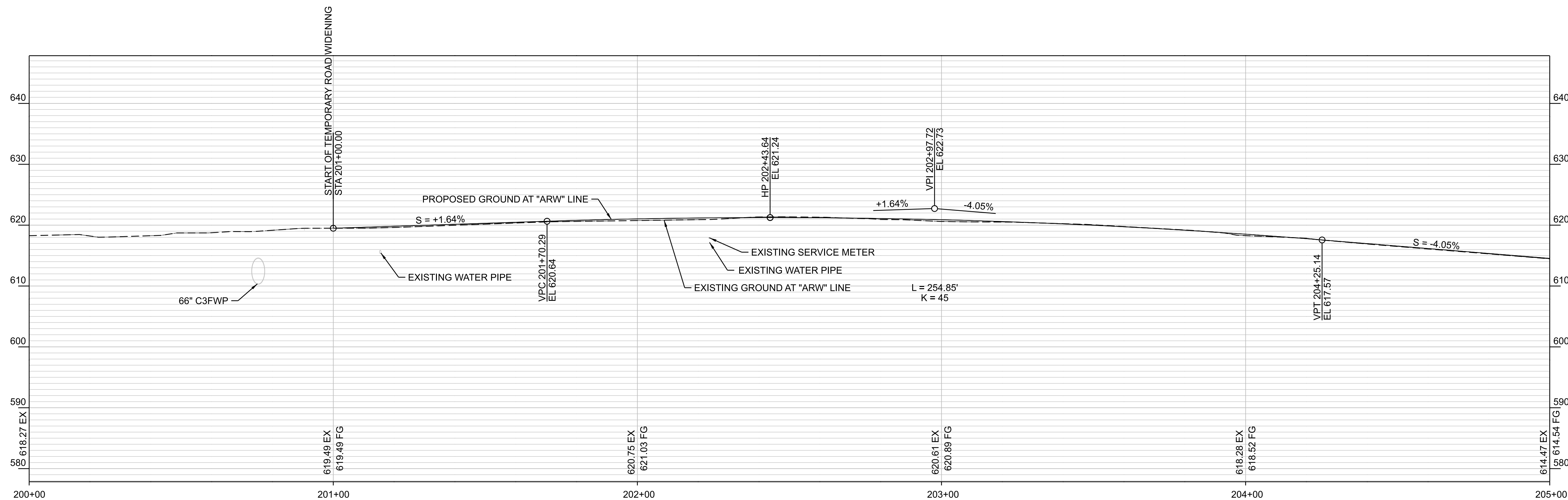
- ALTMAN WEST WIDENING  
EXCAVATION: 1,544 CY  
EMBANKMENT: 4 CY  
THESE EARTHWORK QUANTITIES ARE ESTIMATED THROUGH COMPARISON OF THE GENERATED TEMPORARY SURFACE AND THE EXISTING GROUND. QUANTITIES DO NOT INCLUDE ROADWAY STRUCTURAL FILL OR BASE MATERIAL, STRIPPING, OR TRENCH SPOIL.
- FOR EXISTING WATER STRUCTURE RELOCATIONS, SEE SHEETS FWP-C-2501 TO FWP-C-2509.

### SHEET KEYNOTES

- CONSTRUCT ROAD PER DETAIL 3/FWP-CG-4000
- RELOCATE EXISTING MAILBOX TO LOCATION SHOWN ON PLANS. (1055-101)
- PROTECT EXISTING SIGN
- PROTECT EXISTING ELECTRICAL BOX
- PROTECT EXISTING UTILITY POLE
- PROTECT EXISTING WATER METER

### LEGEND

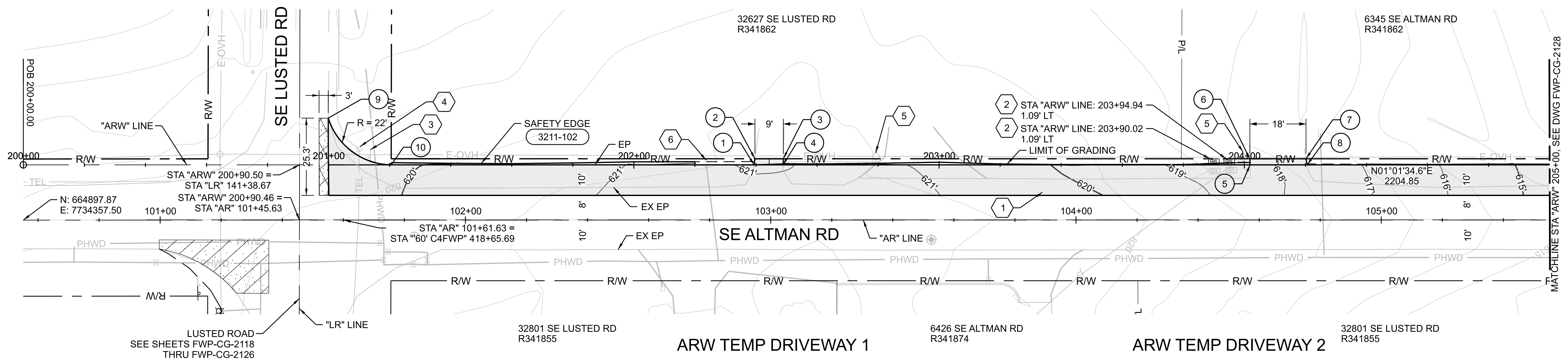
- TEMPORARY ASPHALT (3211-103)
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- LIMIT OF GRADING
- PROPOSED MAILBOX
- GRIND AND INLAY (3211-101)
- TREE PROTECTION FENCE



**PROFILE**  
SCALE: HORIZ - 1"=20'  
VERT - 1"=10'

#### ARW TEMP TURN RADIUS

#	STA	OFFSET	ELEVATION
9	200+99.89	15.32' LT	618.84'
10	201+20.62	0.00	619.83'

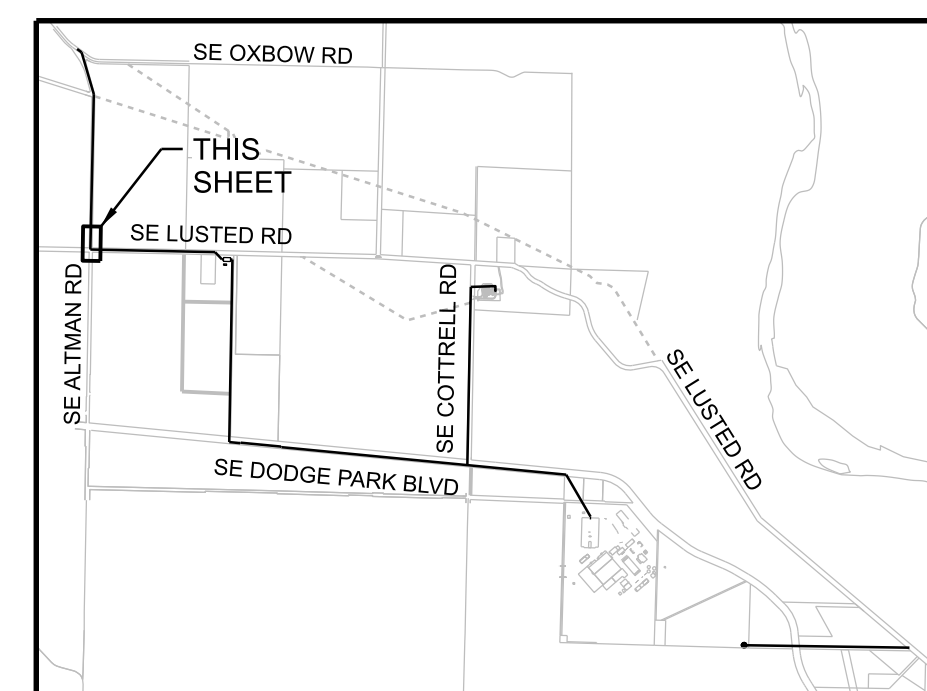


#### ARW TEMP DRIVEWAY 1

#	STA	OFFSET	ELEVATION
1	202+39.39	0.00	621.24'
2	202+39.66	2.00' LT	621.35'
3	202+48.95	2.00' LT	621.35'
4	202+48.90	0.00	621.24'

#### ARW TEMP DRIVEWAY 2

#	STA	OFFSET	ELEVATION
5	204+01.84	0.00	618.22'
6	204+01.78	2.00' LT	618.15'
7	204+20.17	2.00' LT	617.78'
8	204+20.54	0.00	617.82'



#### KEYPLAN

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

W02563\_FWP-CG-INBpAR.dgn

28-SEP-2023 12:02

No	Date	Description	Appd
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	Date: 9/29/23

#### WARNING



If this bar does not measure 1" then the drawing is not to scale



KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TEMPORARY STREET DESIGN**  
ALTMAN ROAD

SAP Project No  
**W02563**  
1/4 Section  
3664 / 3764  
Sheet No  
FWP-CG-2127  
337 of 623



### GENERAL SHEET NOTES

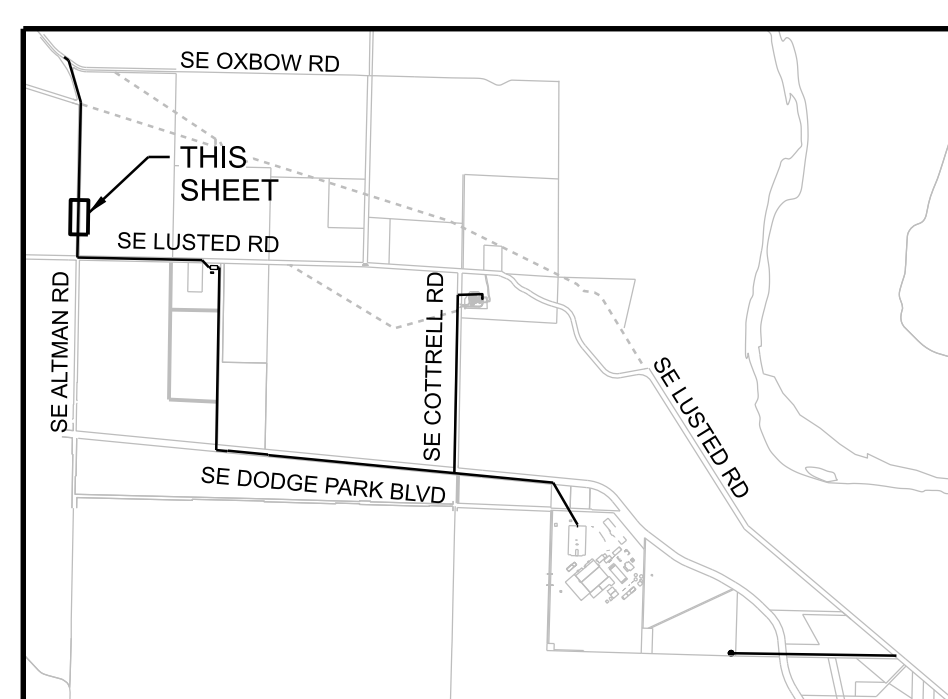
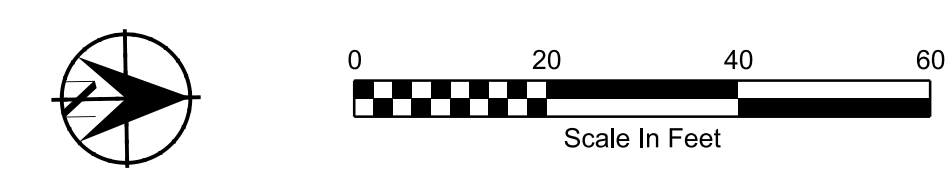
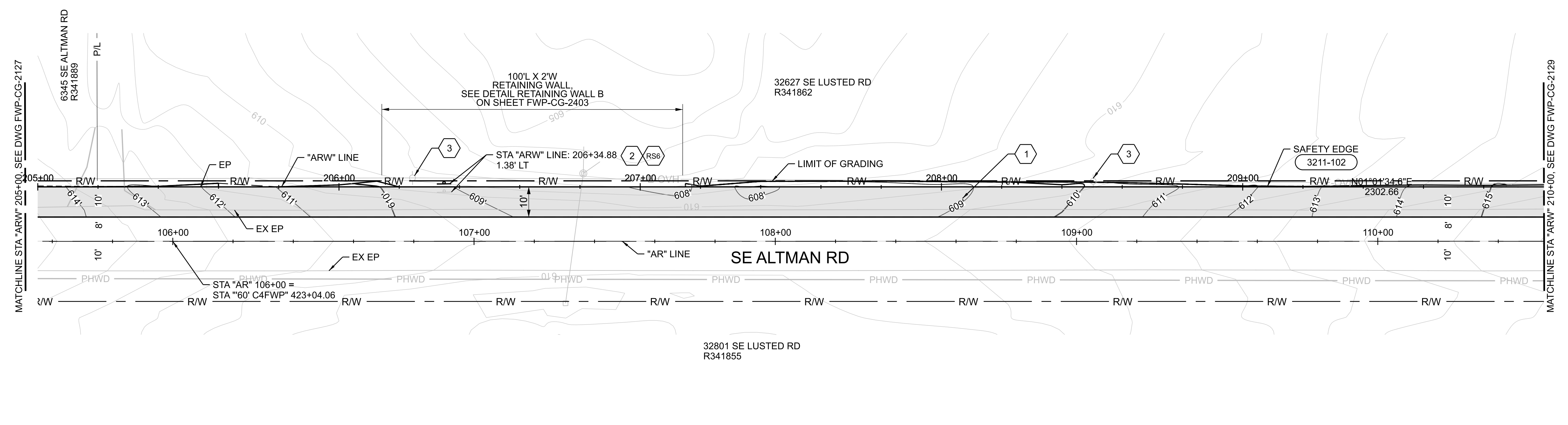
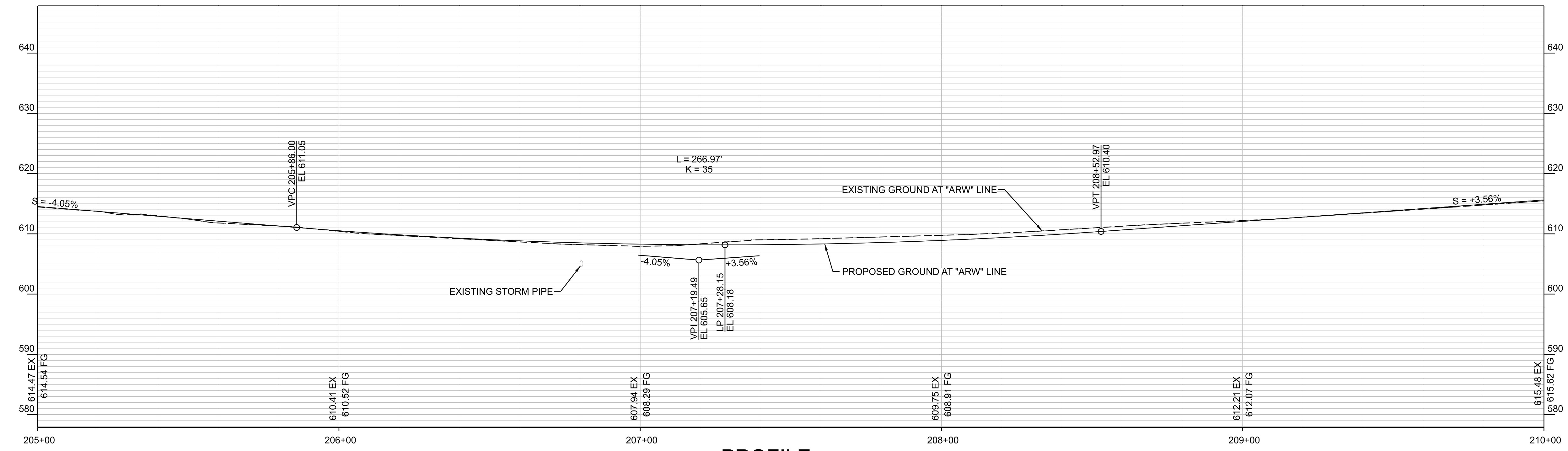
1. ALTMAN WEST WIDENING  
EXCAVATION: 1,544 CY  
EMBANKMENT: 4 CY  
THESE EARTHWORK QUANTITIES ARE ESTIMATED THROUGH COMPARISON OF THE GENERATED TEMPORARY SURFACE AND THE EXISTING GROUND. QUANTITIES DO NOT INCLUDE ROADWAY STRUCTURAL FILL OR BASE MATERIAL, STRIPPING, OR TRENCH SPOIL.

### SHEET KEYNOTES

1. CONSTRUCT ROAD PER DETAIL 3/FWP-CG-4000.
2. REMOVE AND SAVE EXISTING SIGN (N) TO LOCATION SHOWN ON PLANS. SEE SHEET FWP-CG-4005 FOR SIGN DETAILS.
3. PROTECT EXISTING UTILITY POLE.

### LEGEND

TEMPORARY ASPHALT (3211-103)  
 P/L — EXISTING PROPERTY LINE  
 R/W — EXISTING RIGHT OF WAY  
 LIMIT OF GRADING

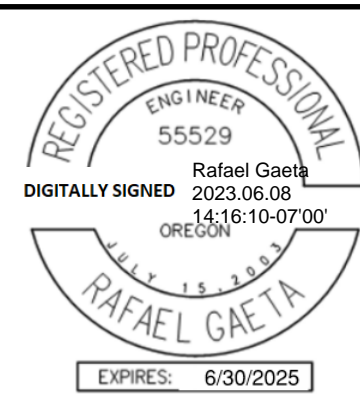


### KEYPLAN

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

16-MAY-2023 03:53 W02563\_FWP-CG-INPpAR.dgn

No	Date	Description	Appd
Revision			
Survey			



Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	
Date	6/7/23

**WARNING**

0 1"

If this bar does not measure 1" then the drawing is not to scale



*Kenneth M. Ackerman*  
KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
Date: 6/7/2023



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TEMPORARY STREET DESIGN**  
ALTMAN ROAD

SAP Project No	W02563
1/4 Section	3763
Sheet No	FWP-CG-2128
	338 of 623



### GENERAL SHEET NOTES

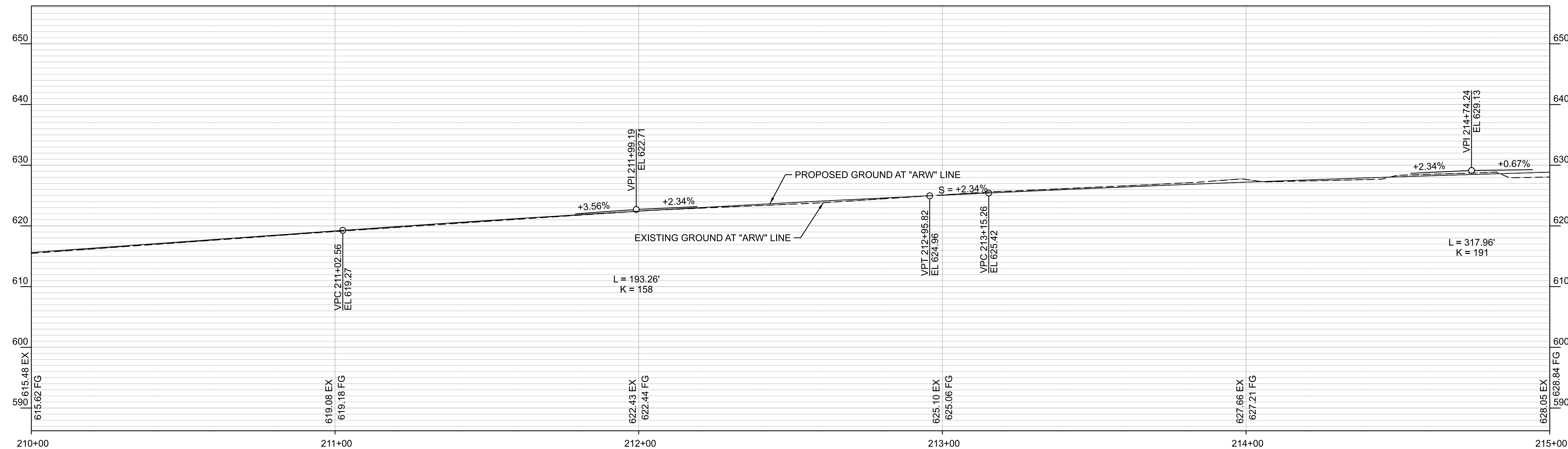
- ALTMAN WEST WIDENING  
EXCAVATION: 1,544 CY  
EMBANKMENT: 4 CY  
THESE EARTHWORK QUANTITIES ARE ESTIMATED THROUGH COMPARISON OF THE GENERATED TEMPORARY SURFACE AND THE EXISTING GROUND. QUANTITIES DO NOT INCLUDE ROADWAY STRUCTURAL FILL OR BASE MATERIAL, STRIPPING, OR TRENCH SPOIL.

### SHEET KEYNOTES

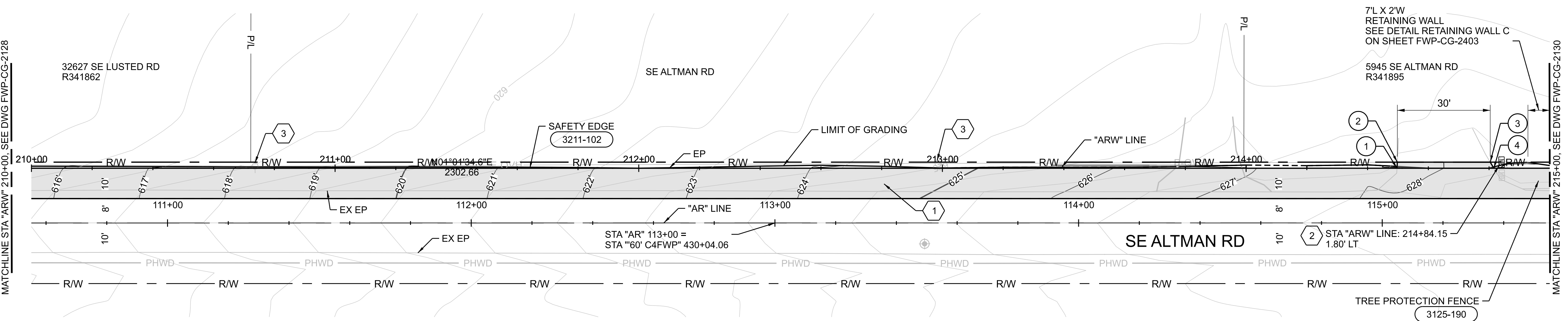
- CONSTRUCT ROAD PER DETAIL 3/FWP-CG-4000
- RELOCATE EXISTING MAILBOX TO LOCATION SHOWN ON PLANS. (1055-101)
- PROTECT EXISTING UTILITY POLE.

### LEGEND

- TEMPORARY ASPHALT (3211-103)
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- — — — — LIMIT OF GRADING
- PROPOSED MAILBOX
- O — TREE PROTECTION FENCE

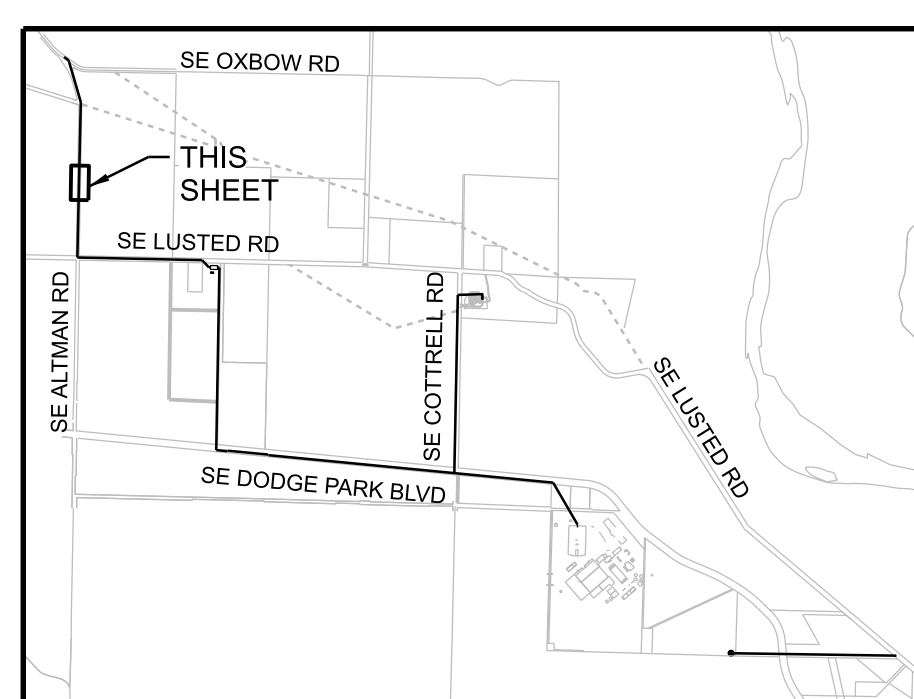


**PROFILE**  
SCALE: HORIZ - 1"=20'  
VERT - 1"=10'



**ARW TEMP DRIVEWAY 3**

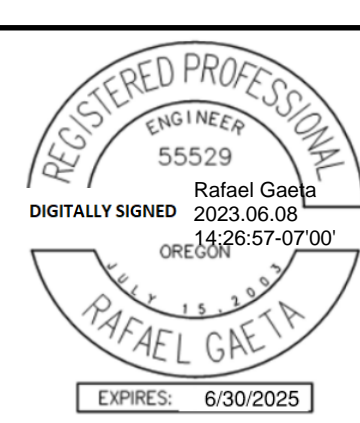
#	STA	OFFSET	ELEVATION
1	214+49.68	0.00	628.09'
2	214+49.79	2.00' LT	628.20'
3	214+80.38	2.00' LT	628.65'
4	214+81.57	0.00	628.58'



**KEYPLAN**

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

No	Date	Description	Appd



Designed By	RG	Program Mgr	DH
Drawn By	BN	Const Mgr	BN
Checked By	JB	CMII Eng Mgr	JB
Project Mgr		Date	6/7/23



*Kenneth M. Ackerman*  
KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
Date: 6/7/2023



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TEMPORARY STREET DESIGN**  
ALTMAN ROAD

SAP Project No  
**W02563**  
1/4 Section  
3664 / 3764  
Sheet No  
FWP-CG-2129  
339 of 623



### GENERAL SHEET NOTES

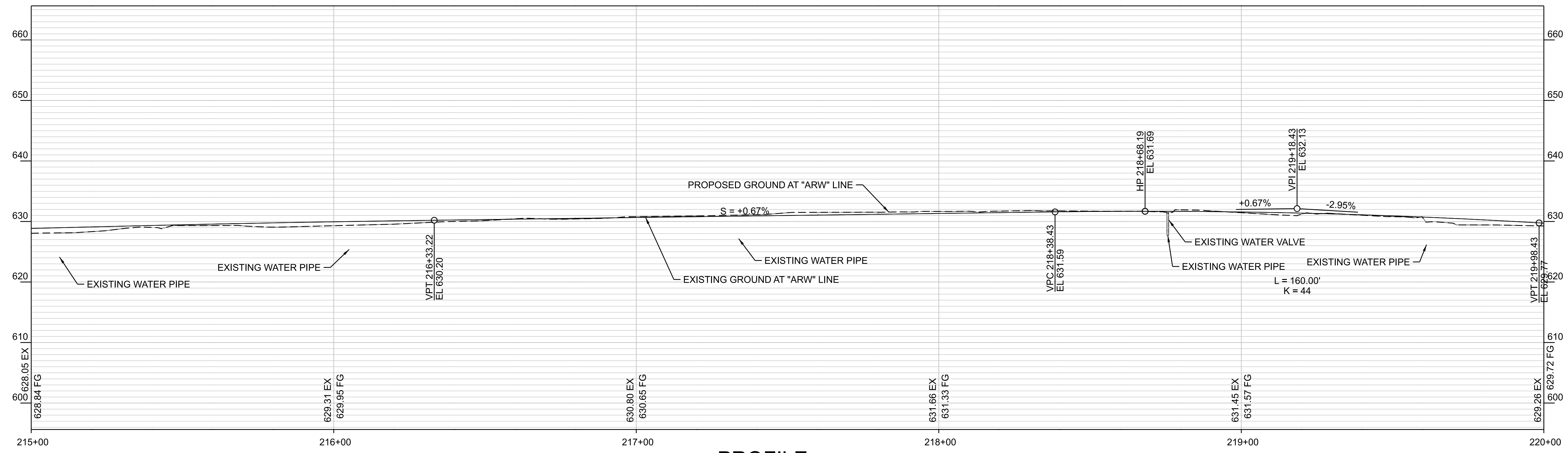
1. ALTMAN WEST WIDENING  
EXCAVATION: 1,544 CY  
EMBANKMENT: 4 CY  
THESE EARTHWORK QUANTITIES ARE ESTIMATED THROUGH COMPARISON OF THE GENERATED TEMPORARY SURFACE AND THE EXISTING GROUND. QUANTITIES DO NOT INCLUDE ROADWAY STRUCTURAL FILL OR BASE MATERIAL, STRIPPING, OR TRENCH SPOIL.

### SHEET KEYNOTES

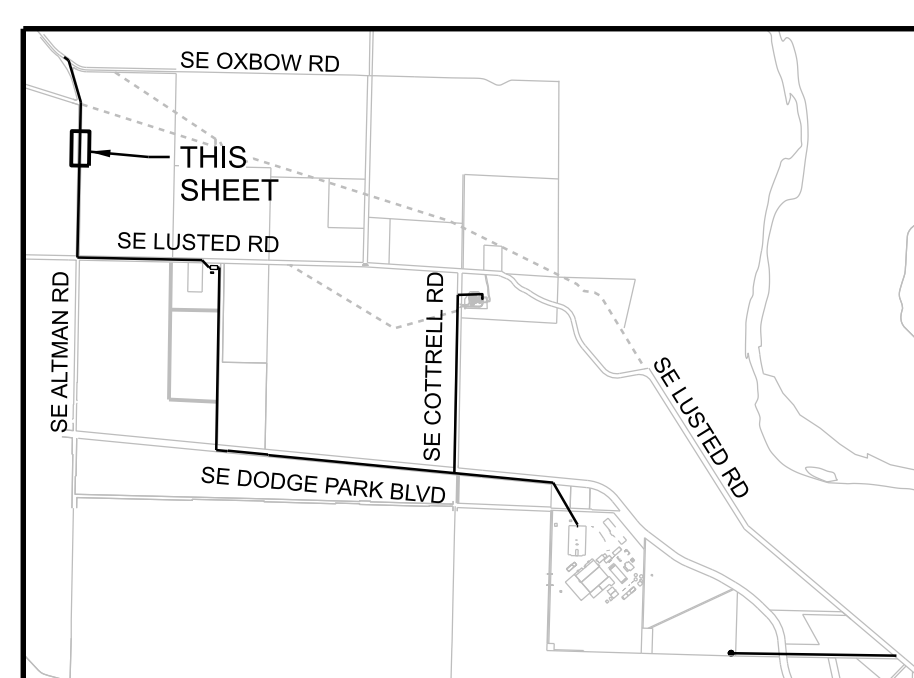
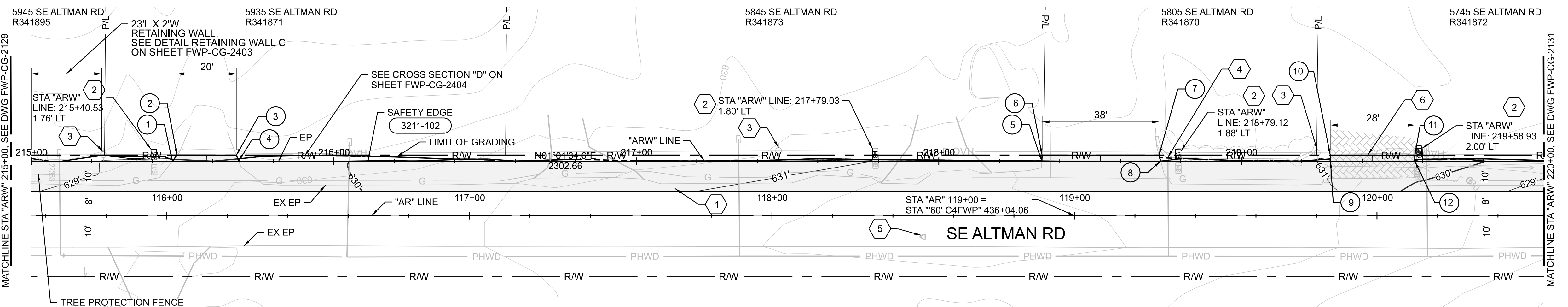
1. CONSTRUCT ROAD PER DETAIL 3/FWP-CG-4000.
2. RELOCATE EXISTING MAILBOX TO LOCATION SHOWN ON PLANS. (1055-101)
3. PROTECT EXISTING UTILITY POLE.
4. PROTECT EXISTING WATER METER.
5. COORDINATE WITH OWNER FOR MONITOR WELLS DECOMMISSION.
6. REMOVE AND SALVAGE PAVER DRIVEWAY TO R/W LIMITS.

### LEGEND

- TEMPORARY ASPHALT (3211-103)
- P/L — EXISTING PROPERTY LINE
- R/W — EXISTING RIGHT OF WAY
- DISTURBANCE LIMIT
- (M) PROPOSED MAILBOX
- O — TREE PROTECTION FENCE



**PROFILE**  
SCALE: HORIZ - 1"=20'  
VERT - 1"=10'



### KEYPLAN

**ARW TEMP DRIVEWAY 4**

#	STA	OFFSET	ELEVATION
1	215+46.63	0.00	629.31'
2	215+48.21	2.00' LT	629.14'
3	215+67.79	2.00' LT	629.18'
4	215+68.57	0.00	629.35'

**ARW TEMP DRIVEWAY 5**

#	STA	OFFSET	ELEVATION
5	218+34.03	0.00	631.75'
6	218+34.13	2.00' LT	631.68'
7	218+72.76	2.00' LT	631.61'
8	218+73.72	0.00	631.61'

**ARW TEMP DRIVEWAY 6**

#	STA	OFFSET	ELEVATION
9	219+29.42	0.00	631.34'
10	219+29.40	2.00' LT	631.38'
11	219+57.35	2.00' LT	630.86'
12	219+57.33	0.00	631.61'

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16-MAY-2023 03:55 W02563\_FWP-CG-INBpAR.dgn

No	Date	Description	Appd



Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	6/7/23



*Kenneth M. Ackerman*  
KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
Date: 6/7/2023



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TEMPORARY STREET DESIGN**  
ALTMAN ROAD

SAP Project No  
**W02563**  
1/4 Section  
3664 / 3764  
Sheet No  
FWP-CG-2130  
340 of 623



**GENERAL SHEET NOTES**

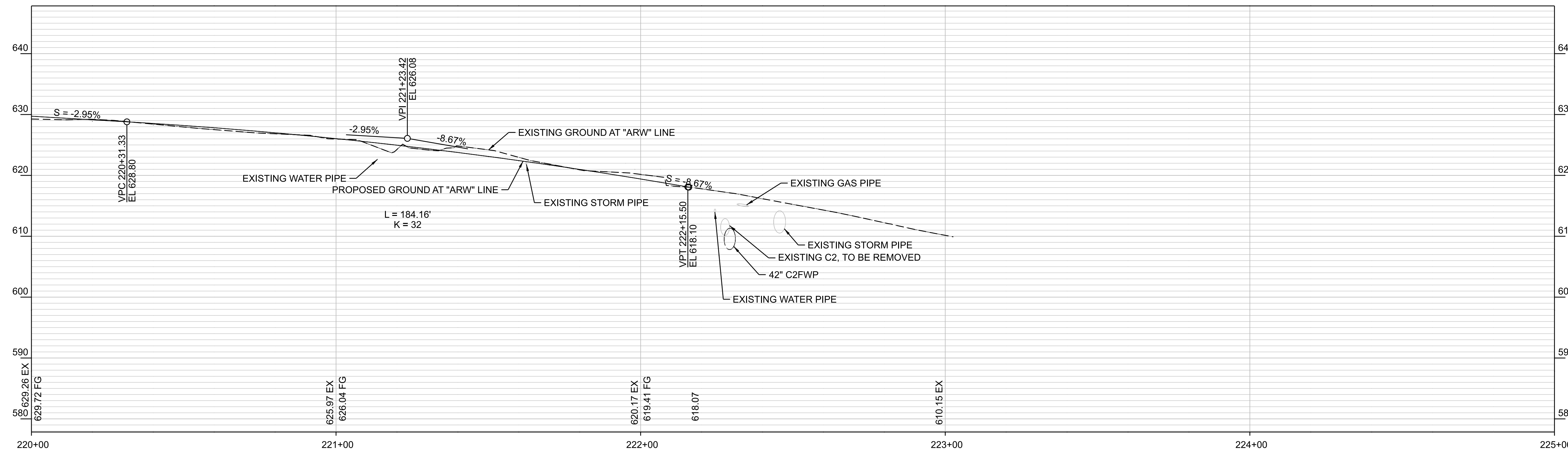
1. ALTMAN WEST WIDENING  
EXCAVATION: 1,544 CY  
EMBANKMENT: 4 CY  
THESE EARTHWORK QUANTITIES ARE ESTIMATED THROUGH COMPARISON OF THE GENERATED TEMPORARY SURFACE AND THE EXISTING GROUND. QUANTITIES DO NOT INCLUDE ROADWAY STRUCTURAL FILL OR BASE MATERIAL, STRIPPING, OR TRENCH SPOIL.

**SHEET KEYNOTES**

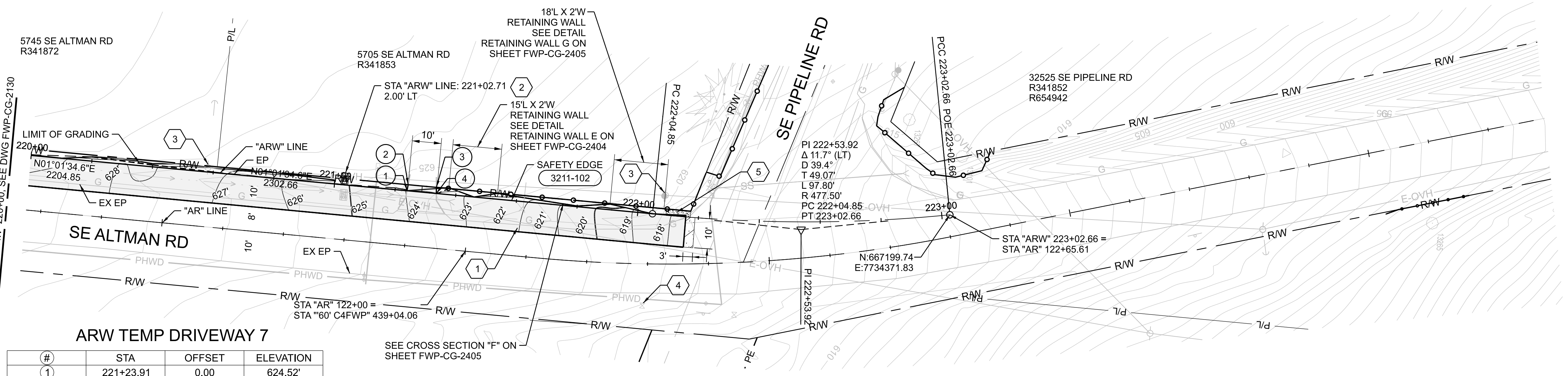
1. CONSTRUCT ROAD PER DETAIL 3/FWP-CG-4000
2. RELOCATE EXISTING MAILBOX TO LOCATION SHOWN ON PLANS. (1055-101)
3. PROTECT EXISTING UTILITY POLE.
4. RELOCATE EXISTING WATER VALVE TO NEW PHWD LINE. EXACT LOCATION TO BE DETERMINED.
5. INSTALL 8'X2' CLASS 50 RIPRAP SLOPE EMBANKMENT. (3300-803)

**LEGEND**

- TEMPORARY ASPHALT (3211-103)
- GRIND AND INLAY (3211-101)
- P/L EXISTING PROPERTY LINE
- R/W EXISTING RIGHT OF WAY
- LIMIT OF GRADING
- PROPOSED MAILBOX
- TREE PROTECTION FENCE

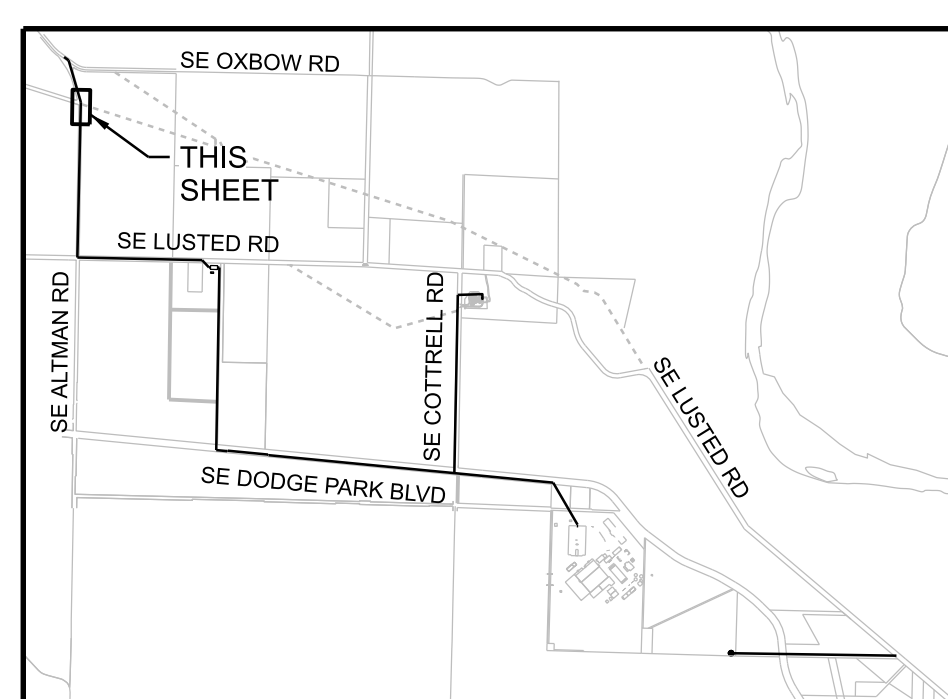


**PROFILE**  
SCALE: HORIZ - 1"=20'  
VERT - 1"=10'



**ARW TEMP DRIVEWAY 7**

#	STA	OFFSET	ELEVATION
1	221+23.91	0.00	624.52'
2	221+24.10	2.00' LT	624.60'
3	221+33.41	2.00' LT	624.19'
4	221+33.59	0.00	624.04'



**KEYPLAN**

SECURITY RISK CONFIDENTIAL INFORMATION EXEMPT FROM PUBLIC DISCLOSURE UNDER ORS 192.345(22) AND (23). DO NOT DISTRIBUTE WITHOUT PERMISSION FROM COUNTY ATTORNEYS.

16-MAY-2023 03:56 W02563\_FWP-CG-INBpAR.dgn

No	Date	Description	Appd
Revision			



Designed By	Program Mgr
Drawn By	Const Mgr
Checked By	CMII Eng Mgr
Project Mgr	Date
	6/7/23



*Kenneth M. Ackerman*  
KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424  
Date: 6/7/2023



**Bull Run Filtration Pipelines**  
**FINISHED WATER PIPELINE**  
**TEMPORARY STREET DESIGN**  
ALTMAN ROAD

SAP Project No  
**W02563**  
1/4 Section  
3664 / 3764  
Sheet No  
FWP-CG-2131  
341 of 623



**GENERAL SHEET NOTES**

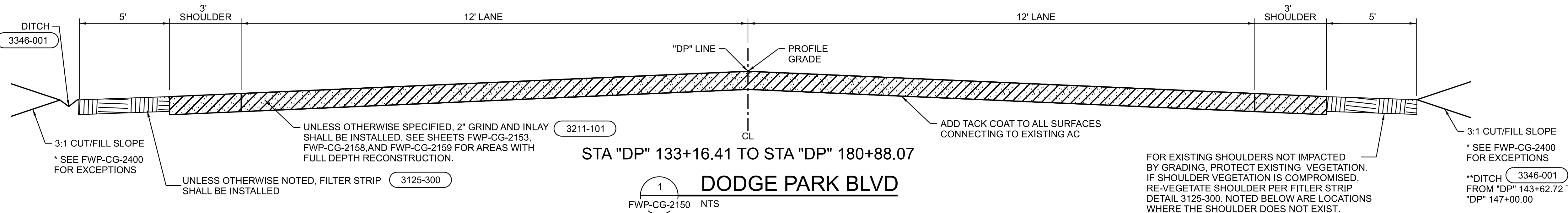
1. PREPARE SUBGRADE PER SPECIFICATION 32 11 13 SECTION 3.03.
2. COMPACT BASE AGGREGATE MATERIAL TO 95% COMPACTION PER SPECIFICATION 32 11 23

**STORM SEWER NOTES**

1. STORM SEWER PIPE SHALL BE THE SIZE NOTED ON THE PLANS. PVC PIPE WILL REQUIRE A 95% MANDREL TEST.
2. CATCH BASINS SHALL BE AS SPECIFIED AND OF THE TYPE SHOWN ON THE DETAIL SHEET.
3. ALL FIELD TILES, GUTTERS, DRAINS, AND FOUNDATION DRAINS ENCOUNTERED SHALL BE CONNECTED TO THE STORM SEWER SYSTEM AS DIRECTED BY THE ENGINEER. NOTIFY THE COUNTY INSPECTOR OF ANY TILES ENCOUNTERED PRIOR TO THE CONNECTION TO STORM SYSTEM OR OTHER MITIGATION.
4. CONTRACTOR TO PROVIDE PLAN FOR CONTINUOUS FUNCTION OF THE EXISTING STORM SEWER SYSTEM DURING CONSTRUCTION.

**PAVING NOTES**

1. THE CONTRACTOR SHALL ADJUST ALL VALVES, BOXES, MANHOLES, AND WATER METERS TO FINISHED GRADE.
2. THE CONTRACTOR SHALL SAWCUT STRAIGHT MATCHLINES TO CREATE A CLEAN BUTT JOINT BETWEEN THE EXISTING AND NEW PAVEMENT. SEAL ALL NEW PAVEMENT JOINTS WITH RUBBERIZED SEALANT.
3. AGGREGATE BASE SHALL BE COMPACTED PER THE CURRENT OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION. CONTRACTOR TO HAVE AGGREGATE BASE COMPACTION TESTING CONDUCTED BY A QUALIFIED TESTING FACILITY PRIOR TO PLACEMENT OF ASPHALT CONCRETE WITHIN THE PUBLIC RIGHT-OF-WAY. TEST REPORTS TO BE PROVIDED TO MULTNOMAH COUNTY.
4. ASPHALT CONCRETE SHALL BE COMPACTED PER THE CURRENT OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION. CONTRACTOR TO HAVE ASPHALT CONCRETE COMPACTION TESTING CONDUCTED BY A QUALIFIED TESTING FACILITY FOR ALL ASPHALT PAVEMENT PLACED WITHIN THE PUBLIC RIGHT-OF-WAY. TEST REPORTS TO BE PROVIDED TO MULTNOMAH COUNTY.
5. ALL EXCAVATIONS WITHIN A PAVED STREET OPEN TO TRAFFIC SHALL BE TEMPORARILY RESURFACED AT THE END OF EACH WORK DAY AND PRIOR TO ALLOWING VEHICULAR TRAFFIC ONTO EXCAVATED AREAS. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING, MAINTAINING, AND REMOVING TEMPORARY SURFACING MATERIALS. NO MEASUREMENT WILL BE MADE FOR TEMPORARY SURFACING MATERIALS AND IS CONSIDERED INCIDENTAL TO THE OVERALL CONSTRUCTION.
6. LONGITUDINAL JOINTS SHALL FALL ON EITHER LANE LINES OR FOG LINES.



STA "DP" 133+16.41 TO STA "DP" 180+88.07

**DODGE PARK BLVD**

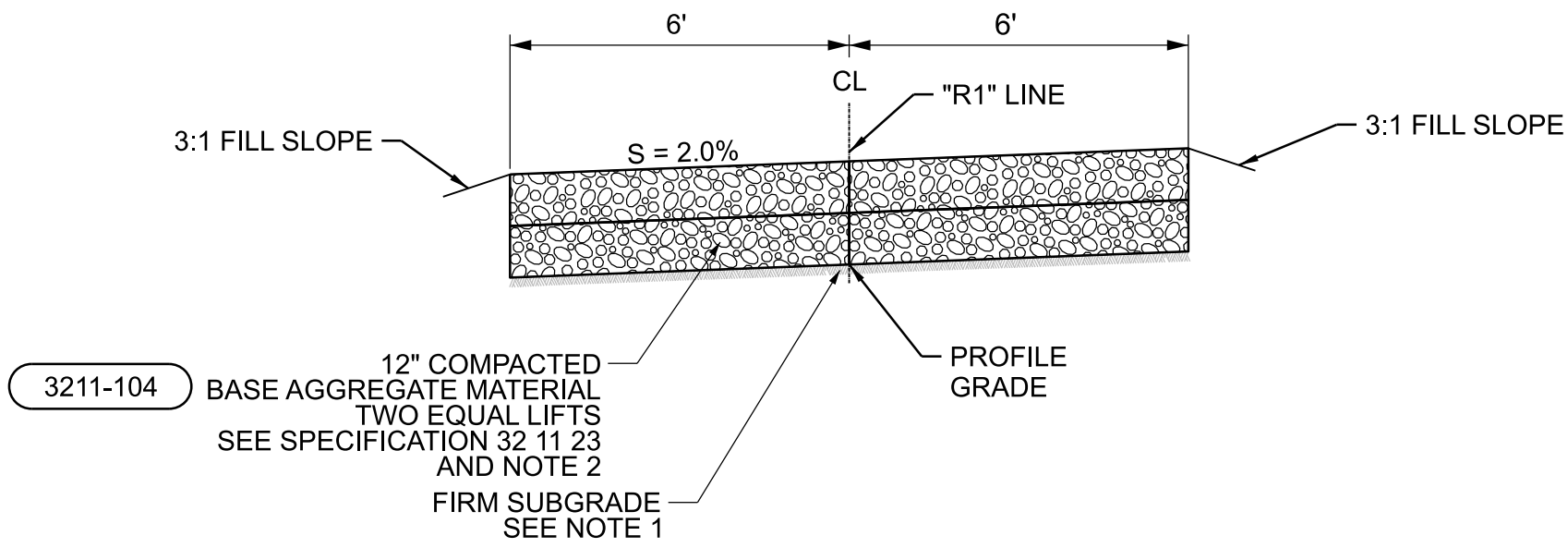
FWP-CG-2150 NTS

STA1	STA2	
146+78.05	147+61.55	*INTERSECTION

\* SEE FWP-CG-2153 FOR INTERSECTION TABLE

STA1	STA2	
139+43.71	139+73.55	*DRIVEWAY
140+40.39	140+83.13	*DRIVEWAY
142+09.53	142+58.11	*DRIVEWAY
146+76.18	147+68.70	*INTERSECTION
156+57.84	157+20.77	*DRIVEWAY
159+87.68	160+87.90	*DRIVEWAY
166+65.25	167+26.33	*DRIVEWAY
170+58.25	171+17.51	*DRIVEWAY

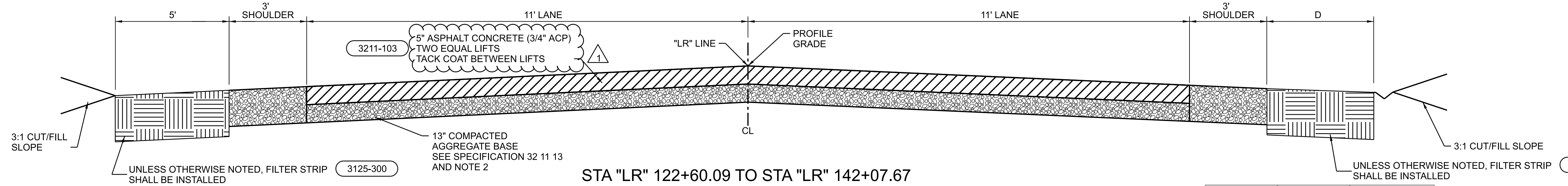
\* SEE FWP-CG-2160 THROUGH FWP-CG-2163 FOR DRIVEWAY ENLARGEMENT SHEETS  
 \* SEE FWP-CG-2152 AND FWP-CG-2153 FOR INTERSECTION TABLE



STA "R1" 121+47.58 TO STA "R1" 130+00

**ROAD 1 TYPICAL SECTION**

FWP-CG-2180 NTS



STA "LR" 122+60.09 TO STA "LR" 142+07.67

**LUSTED ROAD TYPICAL SECTION**

FWP-CG-2200 NTS

STA1	STA2	
124+26.23	124+76.78	*DRIVEWAY
125+36.96	126+17.01	*DRIVEWAY
126+68.02	127+35.56	*DRIVEWAY
127+57.37	128+12.91	*DRIVEWAY
132+17.98	132+61.06	*DRIVEWAY
140+80.55	142+07.67	*INTERSECTION

\* SEE FWP-CG-2205 THROUGH FWP-CG-2211 FOR DRIVEWAY ENLARGEMENT SHEETS  
 \* SEE FWP-CG-2204 FOR INTERSECTION TABLE

STA1	STA2	D
122+60.09	122+92.65	*DRIVEWAY
122+95.65	127+46.44	*DITCH
127+46.44	128+33.09	*DRIVEWAY
128+33.09	131+95.72	*DITCH
134+85.79	136+06.17	*DRIVEWAY
136+92.63	137+46.24	*DRIVEWAY
138+09.63	139+12.00	*DRIVEWAY
139+72.11	140+05.30	*DRIVEWAY
140+80.36	142+07.66	*INTERSECTION

\* SEE FWP-CG-2205 THROUGH FWP-CG-2211 FOR DRIVEWAY ENLARGEMENT SHEETS  
 \* SEE FWP-CG-2204 FOR INTERSECTION TABLE

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W02563\_ANSI\_D.dgn 20:19 24-JUL-2024

No	Date	Description	Appd
1	6/2024	DCN-03 - CCD-0003	BJP

Designed By	DH
Drawn By	BN
Checked By	JB
Project Mgr	JB
Date	9/29/23

**WARNING**

If this bar does not measure 1" then the drawing is not to scale

KENNETH M. ACKERMAN, PRINCIPAL ENGINEER, PE #19424	Date
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**Bull Run Filtration Pipelines**

**FINISHED WATER PIPELINE STREET DESIGN**

TYPICAL ROAD SECTIONS

SAP Project No	W02563
Sheet No	FWP-CG-4003