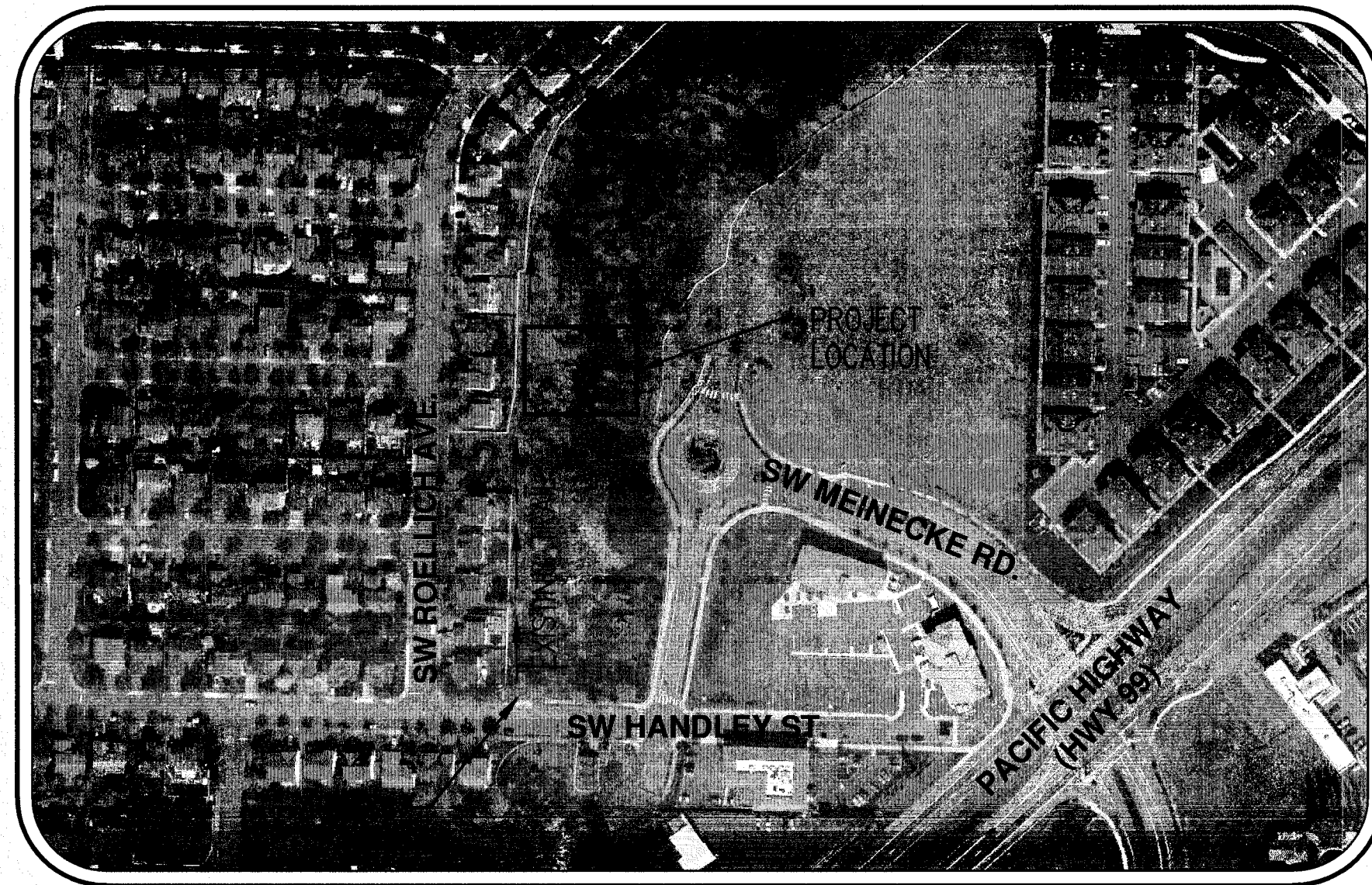


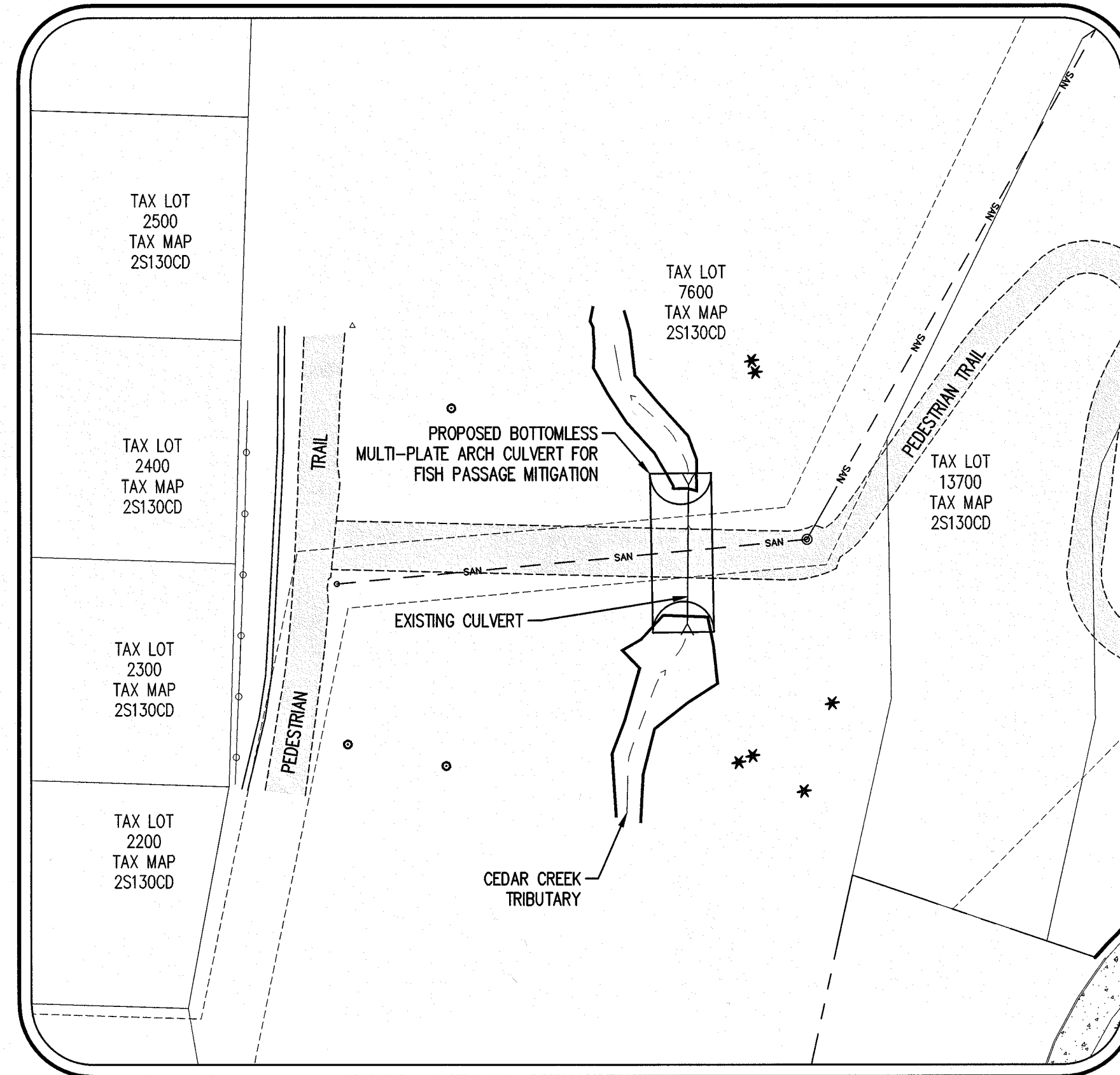
# COLUMBIA STREET REGIONAL STORMWATER FACILITY

## FISH PASSAGE MITIGATION

### ENGINEERING CONSTRUCTION PLANS



**VICINITY MAP**  
NOT TO SCALE



**SITE MAP**  
1"=100'

NOTE: THIS DESIGN COMPLIES WITH ORS 92.044(7) IN THAT NO UTILITY INFRASTRUCTURE IS DESIGNED TO BE WITHIN 1-FOOT OF A SURVEY MONUMENT LOCATION SHOWN ON A SUBDIVISION OR PARTITION PLAT. NO DESIGN MODIFICATION OR FINAL FIELD LOCATION CHANGE SHALL BE PERMITTED IF IT WOULD CAUSE ANY UTILITY INFRASTRUCTURE TO BE PLACED WITHIN A PROHIBITED AREA.



**ATTENTION EXCAVATORS:**  
OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THESE RULES FROM THE CENTER BY CALLING 503-232-1987. IF YOU HAVE ANY QUESTIONS ABOUT THE RULES, YOU MAY CONTACT THE CENTER. YOU MUST NOTIFY THE CENTER AT LEAST TWO BUSINESS DAYS BUT NOT MORE THAN TEN BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

**APPLICANT / OWNER**

CITY OF SHERWOOD  
CONTACT: CRAIG CHRISTENSEN, PE  
22560 SW PINE STREET  
SHERWOOD, OR 97140  
PH: 503-925-2301  
FAX: 503-625-0629

**UTILITY CONTACTS**

PORTLAND GENERAL ELECTRIC  
BRIAN BUSWELL  
9480 SW BOECKMAN ROAD  
WILSONVILLE, OR 97070  
PH: 503-570-4450

**GAS**

NW NATURAL  
220 NW 2ND AVENUE  
PORTLAND, OR 97209  
PH: 503-226-4211

**COMMUNICATIONS**

QWEST  
8021 SW CAPITOL HILL ROAD  
PORTLAND, OR 97219  
PH: 503-242-3952

**STREETS**

CITY OF SHERWOOD, PUBLIC WORKS  
22560 SW PINE ST  
SHERWOOD, OR 97140  
PH: 503-625-5722

**PROJECT LOCATION:**

NORTHWEST OF THE INTERSECTION OF SW BROOK WAY AND SW MEINECKE ROAD, SHERWOOD, OREGON

**PROPERTY DESCRIPTION:**

TAX LOT ID: 2S130CD07600  
TAX LOT 7600 (WASHINGTON COUNTY TAX MAP 2S 1 30CD) AND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 30, TOWNSHIP 2 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

**EXISTING LAND USE:**

TAX LOT 7600 CONSISTS OF TRACT 'A' WHICH HAS BEEN RESERVED OPEN SPACE, WITH PEDESTRIAN PATHS AND VEGETATION.

**PROJECT PURPOSE:**

REPLACE AN EXISTING CULVERT WITH A NEW STORM CULVERT WHICH MEETS FISH PASSAGE REQUIREMENTS.

**PLANNING / ENGINEERING / SURVEYING / ARBORIST / LANDSCAPING / NATURAL RESOURCES FIRM**

AKS ENGINEERING & FORESTRY, LLC.  
CONTACT: PAUL SELLKE, PE, GE  
12965 SW HERMAN ROAD, SUITE 100  
TUALATIN, OR 97062  
PH: 503-563-6151  
FAX: 503-563-6152

**STORM/SEWER/WATER**

CITY OF SHERWOOD, PUBLIC WORKS  
22560 SW PINE ST  
SHERWOOD, OR 97140  
PH: 503-625-5722

**COMMUNICATIONS**

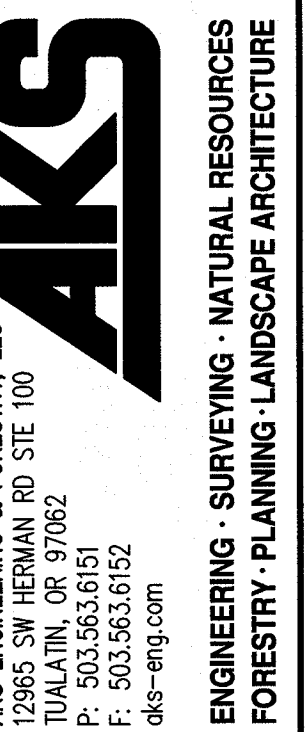
COMCAST CABLE  
10831 SW CASCADE AVENUE  
TIGARD, OR 97223  
PH: 503-596-3754

**COMMUNICATIONS**

VERIZON (FRONTIER)  
4155 SW CEDAR HILLS BLVD  
BEAVERTON, OR 97005  
PH: 503-526-3544

**BUILDING DEPARTMENT**

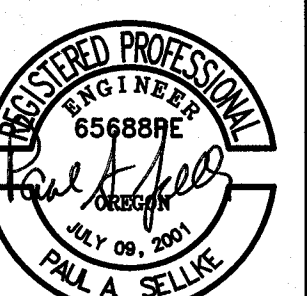
CITY OF SHERWOOD BUILDING DEPT.  
22560 SW PINE ST  
SHERWOOD, OR 97140  
PH: 503-625-4226



**FISH PASSAGE MITIGATION**  
SHERWOOD OREGON  
WASHINGTON COUNTY TAX MAP 2S 1 30CD  
TAX LOT 7600

**COVER SHEET WITH SITE AND VICINITY MAPS**

DESIGNED BY: PAS/DS  
DRAWN BY: DS  
CHECKED BY: PAS  
SCALE: AS NOTED  
DATE: 12-31-2015

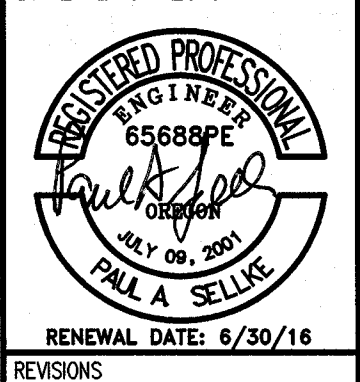


RENEWAL DATE: 8/30/16  
REVISIONS:

JOB NUMBER  
3068

SHEET

**C000**



**GENERAL NOTES**

- ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THESE PLANS, CURRENT ENGINEERING DESIGN AND STANDARD DETAILS MANUAL OF THE CITY OF SHERWOOD, AND ALL OTHER APPLICABLE STANDARDS. IMPROVEMENTS DEPICTED ON THESE PLANS SHALL BE IN CONFORMANCE WITH 2015 ODOT / APWA STANDARD SPECIFICATIONS WHERE NOT SPECIFICALLY STATED.
- CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF ORS 757.541 TO 757.571 (REQUIRES CONTRACTOR TO NOTIFY UTILITY COMPANIES AT LEAST 48 HOURS, BUT NO MORE THAN 10 DAYS, PRIOR TO ANY EXCAVATION). CONTRACTOR SHALL ALSO BE RESPONSIBLE TO VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION.

**UNDERGROUND UTILITY LOCATE: 503-246-6699**

- PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PRESENT AT THE PRE-CONSTRUCTION MEETING A LIST OF SUBCONTRACTORS, A PROJECT SCHEDULE, A TRAFFIC CONTROL PLAN, AND AN EMERGENCY CONTACT NAME AND PHONE NUMBER, AND A COPY OF THEIR COS OR METRO BUSINESS LICENSE FOR CONTRACTORS AND ALL SUBS.
- DURING THE COURSE OF WORK, CONTRACTOR SHALL COORDINATE AND ACCOMMODATE OTHER CONTRACTORS, OPERATIONS OF THE CITY OR OPERATIONS OF VARIOUS UTILITY DISTRICTS OR OTHER AGENCIES.
- CONTRACTOR SHALL PROVIDE TRAFFIC REGULATION, BARRICADES, AND OTHER NECESSARY SAFETY MEASURES IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, OSHA REGULATIONS, AND ALL OTHER APPLICABLE REGULATIONS. (INCIDENTAL TO THE BID ITEM "TEMPORARY WORK ZONE TRAFFIC CONTROL")
- PUBLIC ROADWAYS SHALL NOT BE CLOSED TO TRAFFIC, AT ANY TIME, WITHOUT HAVING FIRST OBTAINED WRITTEN APPROVAL FROM THE CITY. THE CONTRACTOR IS RESPONSIBLE FOR PROVISION OF TIMELY NOTIFICATION OF TRAFFIC FLOW DISRUPTIONS TO AREA WIDE EMERGENCY SERVICES.
- TRAFFIC CONTROL DEVICES, FLAG PERSONS, ETC., SHALL BE IN PLACE PRIOR TO INITIATION OF CONSTRUCTION WORK AND SHALL BE EFFECTIVELY MAINTAINED.
- A COPY OF THE REQUIRED PERMITS (WITH ALL ATTACHMENTS), A COPY OF THE APPROVED CONSTRUCTION PLANS, AND ALL AMENDMENTS SHALL BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. ALL WORK SHALL CONFORM TO THE PERMIT TERMS, CONDITIONS/PROVISIONS, THE CITY APPROVED CONSTRUCTION PLANS, APPROVED PLAN AMENDMENTS, AND TO THESE GENERAL CONDITIONS. CHANGES TO ANY OF THE AFORESAID MUST BE APPROVED BY THE PROJECT ENGINEER AND THE CITY, IN ADVANCE OF WORK PERFORMANCE.

- CITY OF SHERWOOD SHALL OBTAIN ALL REQUIRED PERMITS FROM CLEAN WATER SERVICES (CWS), OREGON DEPARTMENT OF FISH AND WILDLIFE (ODFW), OREGON DIVISION OF STATE LANDS (ODSL), US ARMY CORPS OF ENGINEERS (USACE) AND OTHER APPLICABLE AGENCIES REQUIRED FOR CONSTRUCTION OF THESE PLANS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED DURING THE COURSE OF CONSTRUCTION, RIGHT-OF-WAY PERMITS, BUILDING PERMITS, AND PERMITS TO HAUL ON PUBLIC ROADS, ETC.
- CONTRACTOR IS TO NOTIFY THE CITY OF SHERWOOD 48 HOURS PRIOR TO START OF CONSTRUCTION AND PRIOR TO ANY ELEMENTS OF CONSTRUCTION REQUIRING INSPECTION.
- CITY SHALL COORDINATE AND PAY FOR ALL EARTHWORK, BACKFILL AND CULVERT TESTING WITH THE PROJECT'S GEOTECHNICAL ENGINEER. COMPACTION TESTING FOR PATHWAY BASE ROCK AND ASPHALT TO BE ARRANGED AND PAID FOR BY THE CONTRACTOR. CONTRACTOR TO COORDINATE WITH THE CITY ONE WEEK IN ADVANCE OF TESTING FOR SCHEDULING WITH TESTING AGENCY.
- PROOFROLL SUBGRADE WITH A LOADED 10 YARD DUMP TRUCK TO CHECK COMPACTION PRIOR TO PLACEMENT OF SUBBASE ROCK AND AGAIN AT THE COMPLETION OF THE PLACEMENT OF THE BASE ROCK PRIOR TO PAVING THE FIRST LIFT OF ASPHALT. PROOF-ROLLING RESULTS SHALL MEET THE REQUIREMENTS OF THE CITY OF SHERWOOD PUBLIC WORKS DEPARTMENT. IN ADDITION, THE SUBGRADE AND AGGREGATE BASE ROCK SHALL HAVE A DENSITY TEST RESULTS OF AT LEAST 95% OF AASHTO T-99 (STANDARD PROCTOR) FOR SUBGRADE AND 95% OF AASHTO T-180 FOR BASE ROCK.
- CONTRACTOR SHALL GUARANTEE ALL WORK TO BE FREE FROM DEFECTS AND FAILURES FOR A PERIOD OF 2 YEARS AFTER FINAL ACCEPTANCE BY CITY. SUBSEQUENT SETTLEMENT OF FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A FAILURE OF THE SUBGRADE AND SHALL BE REPAIRED AT NO COST TO THE CITY AND IN A MANNER ACCEPTABLE TO THE CITY.
- CONTRACTOR SHALL CAREFULLY MAINTAIN BENCHMARKS, PROPERTY CORNERS, MONUMENTS, AND OTHER REFERENCE POINTS. IF SUCH POINTS ARE DISTURBED OR DESTROYED BY THE CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND PAY FOR THEIR REPLACEMENT BY EMPLOYING A PROFESSIONAL LAND SURVEYOR TO RESET PROPERTY CORNERS AND OTHER SUCH MONUMENTS.

- FINAL CLEANUP - 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 DISPOSED OF BY THE CONTRACTOR'S PERSONNEL DURING THE PERFORMANCE OF THIS CONTRACT.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF SHERWOOD 24 HOURS BEFORE STARTING ANY CONSTRUCTION OR RESUMING WORK AFTER SHUTDOWNS, EXCEPT TO NORMAL RESUMPTION OF WORK AFTER HOLIDAYS AND WEEKENDS.
- HOURS OF WORK SHALL BE LIMITED TO 7 AM TO 6 PM (MONDAY THROUGH FRIDAY). CITY APPROVAL REQUIRED FOR WEEKEND WORK.
- THE LOCATIONS, DEPTH AND DESCRIPTION OF EXISTING UTILITIES SHOWN ARE COMPILED FROM AVAILABLE RECORDS AND/OR FIELD SURVEYS SUPPLIED BY AKS ENGINEERING, LLC THE ENGINEER OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY OR THE COMPLETENESS OF SUCH RECORDS. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. ADDITIONAL UTILITIES MAY EXIST WITHIN THE WORK AREA.
- CONTRACTOR MUST VERIFY ALL EXISTING UTILITIES FOR BOTH VERTICAL ELEVATION AND HORIZONTAL LOCATION PRIOR TO START OF WORK (POTHOLE BEFORE DIGGING IF NECESSARY). SHOULD CONFLICTS ARISE AND REDESIGN OR RELOCATION OF FACILITIES BE NECESSARY, CONTRACTOR SHALL CONTACT COS AND PROJECT ENGINEER. CHANGES MUST BE APPROVED BY THE PROJECT ENGINEER AND CITY IN ADVANCE OF WORK. CONTRACTOR SHALL COORDINATE THE WORK WITH UTILITY AGENCIES. (INCIDENTAL)
- MAINTENANCE OF THE WORK AREA AND CONSTRUCTION ENTRANCE AREAS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE WORK AREA AND CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CLEAN AND SANITARY CONDITION, FREE FROM OBSTRUCTIONS, HAZARDS, DEBRIS, AND TRASH AT ALL TIMES.
- THE SPREADING OR TRACKING OF MUD AND/OR DEBRIS OR STORAGE OF MATERIAL AND EQUIPMENT OF ANY KIND UPON ANY PUBLIC ROADWAY OR PEDESTRIAN TRAIL IS STRICTLY PROHIBITED AND VIOLATION SHALL BE CAUSE FOR IMMEDIATE SUSPENSION OF THE PERMIT. THE PROJECT ENGINEER AND/OR CITY MAY AT ANY TIME ORDER IMMEDIATE CLEAN UP AND STOPPAGE OF WORK TO ACCOMPLISH CLEAN UP. (INCIDENTAL)
- EFFECTIVE EROSION CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED.
- PROPERTY DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE SEEDED AND RESTORED TO PRE-EXISTING CONDITIONS: SHRUBS, FLOWERS, BARK DUST, EXISTING SIGNS, PAVEMENT MARKINGS, MAILBOXES, ETC. DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE RE-ESTABLISHED, REINSTALLED OR REPLACED, WITH LIKE

- KIND AND MATERIAL. (INCIDENTAL)
- EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE SITE AND SHALL BE ROUTED SO THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE PROJECT ENGINEER AND/OR CITY MAY AT ANY TIME ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL. PAID FOR UNDER THE BID ITEM "WORK ISOLATION & TEMPORARY CREEK DIVERSION".
  - NO TRENCH OR EXCAVATION, ON SITE OR OFF-SITE, SHALL BE LEFT AT ANY TIME IN AN UNSAFE CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR AND IS LIABLE FOR HAZARDS OR DAMAGE RESULTING FROM THE PROSECUTION OF THE WORK.
  - WORK PROVIDED FOR UNDER THE PERMIT SHALL INCLUDE REPAIR OF EXISTING FACILITIES (ROADS, DITCHES, ETC.) AS MAY BE NECESSARY, IN THE PROJECT ENGINEER'S OPINION, TO OVERCOME DETERIORATION OR DAMAGE WHICH OCCURRED IN CONJUNCTION WITH THE WORK AUTHORIZED BY THE PERMIT. CORRECTIVE WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.
  - THE PROJECT ENGINEER MAY, AT THEIR DISCRETION, REQUIRE PROVISION OF TESTS AND OR REPORTS FROM THE CONTRACTOR TO VALIDATE CLAIMS OF MATERIAL OR CONSTRUCTION ADEQUACY/COMPLIANCE. SUCH TESTS/REPORTS SHALL BE PROVIDED AT THE CONTRACTOR'S EXPENSE.
  - THE PERMIT HOLDER SHALL PROVIDE A COPY OF A PROPERLY EXECUTED RELEASE AND WAIVER DOCUMENT TO THE CITY FOR EACH OWNERSHIP DISTURBED BY CONSTRUCTION ACTIVITY, AS EVIDENCE OF DISTURBANCE RESOLUTION AND OWNER SATISFACTION.
  - THE FOLLOWING STANDARD SPECIFICATIONS ARE INCORPORATED BY REFERENCE. ALL MATERIALS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF THE UNIFORM PLUMBING CODE (UPC), INTERNATIONAL BUILDING CODE (IBC), ODOT/AWPA STANDARD SPECIFICATIONS (2015 EDITION), AND THE CITY OF SHERWOOD AND CWS.
  - PROJECT ENGINEER RESERVES THE RIGHT TO ADJUST GRADES OR ALIGNMENT TO ACCOMMODATE OTHER UTILITIES AS REQUIRED; SUCH ADJUSTMENTS OR REVISIONS SHALL BE REVIEWED BY THE CITY ENGINEERING STAFF AND APPROVED PRIOR TO COMMENCEMENT OF WORK.
  - PROPERTY AND RIGHT-OF-WAY LINES SHOWN ARE APPROXIMATE. THESE PLANS ARE NOT MEANT TO SERVE BOUNDARY SURVEY PURPOSES.
  - THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND CITY SEVEN (7) DAYS IN ADVANCE OF THE BEGINNING OF CONSTRUCTION.
  - ANY INSPECTION/OBSERVATION BY THE CITY, PROJECT ENGINEER OR PROJECT INSPECTORS SHALL NOT, IN ANY WAY RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN COMPLIANCE WITH THE APPLICABLE CODES, REGULATIONS, CITY STANDARDS, ENGINEERING PLANS, AND PROJECT CONTRACT DOCUMENTS.
  - THESE PLANS ASSUME THAT CONSTRUCTION STAKING WILL BE NECESSARY TO CONSTRUCT THE IMPROVEMENTS SHOWN. AKS ENGINEERING & FORESTRY LLC DOES NOT ACCEPT ANY RESPONSIBILITY FOR ITEMS CONSTRUCTED INCORRECTLY BASED ON MISINTERPRETATIONS OF ITEMS SHOWN ON THESE PLANS.
  - CONSTRUCTION SURVEYING SERVICES ARE BEING PROVIDED BY AKS ENGINEERING & FORESTRY AND PAID FOR BY THE CITY. CONTACT JOE JEWETT (503-563-6151) AT LEAST 72 HOURS IN ADVANCE FOR STAKING.
  - CONSTRUCTION FOR THIS PROJECT IS ANTICIPATED TO BEGIN ON JULY 5, 2016 WITH A COMPLETION DATE OF OCTOBER 14, 2016. IN-WATER WORK MAY NOT BEGIN UNTIL JULY 15.
  - CONTRACTOR TO POTHOLE ALL LOCATED UTILITY CROSSINGS (SANITARY, ETC.) PRIOR TO ORDERING CULVERT MATERIALS AND PRIOR TO CONSTRUCTION. THE CITY AND ENGINEER SHALL BE NOTIFIED OF POTENTIAL CONFLICTS AND TIME ALLOWED FOR REDESIGN IF NEEDED. CONTRACTOR SHALL COORDINATE WITH THE CITY REGARDING ANY REQUIRED SERVICE INTERRUPTIONS. (INCIDENTAL)**

**LEGEND**

	<b>EXISTING</b>	<b>PROPOSED</b>		<b>EXISTING</b>	<b>PROPOSED</b>
DECIDUOUS TREE			STORM SEWER CLEAN OUT		
CONIFEROUS TREE			STORM SEWER CATCH BASIN		
FIRE HYDRANT			STORM SEWER AREA DRAIN		
WATER BLOWOFF			STORM SEWER MANHOLE		
WATER METER			GAS METER		
WATER VALVE			GAS VALVE		
DOUBLE CHECK VALVE			GUY WIRE ANCHOR		
AIR RELEASE VALVE			POWER POLE		
SANITARY SEWER CLEAN OUT			POWER VAULT		
SANITARY SEWER MANHOLE			POWER JUNCTION BOX		
SIGN			POWER PEDESTAL		
STREET LIGHT			COMMUNICATIONS VAULT		
MAILBOX			COMMUNICATIONS JUNCTION BOX		
			COMMUNICATIONS RISER		

	<b>EXISTING</b>	<b>PROPOSED</b>
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE		
OVERHEAD WIRE		
COMMUNICATIONS LINE		
FIBER OPTIC LINE		
GAS LINE		
STORM SEWER LINE		
SANITARY SEWER LINE		
WATER LINE		

**FISH PASSAGE  
 MITIGATION**

WASHINGTON COUNTY TAX MAP 2S 1 300D

**SHERWOOD OREGON**  
 TAX LOT 7600

**EXISTING CONDITIONS  
 PLAN**

DESIGNED BY: MB  
 DRAWN BY: MB  
 CHECKED BY: AHH  
 SCALE: AS NOTED  
 DATE: 12-31-2015

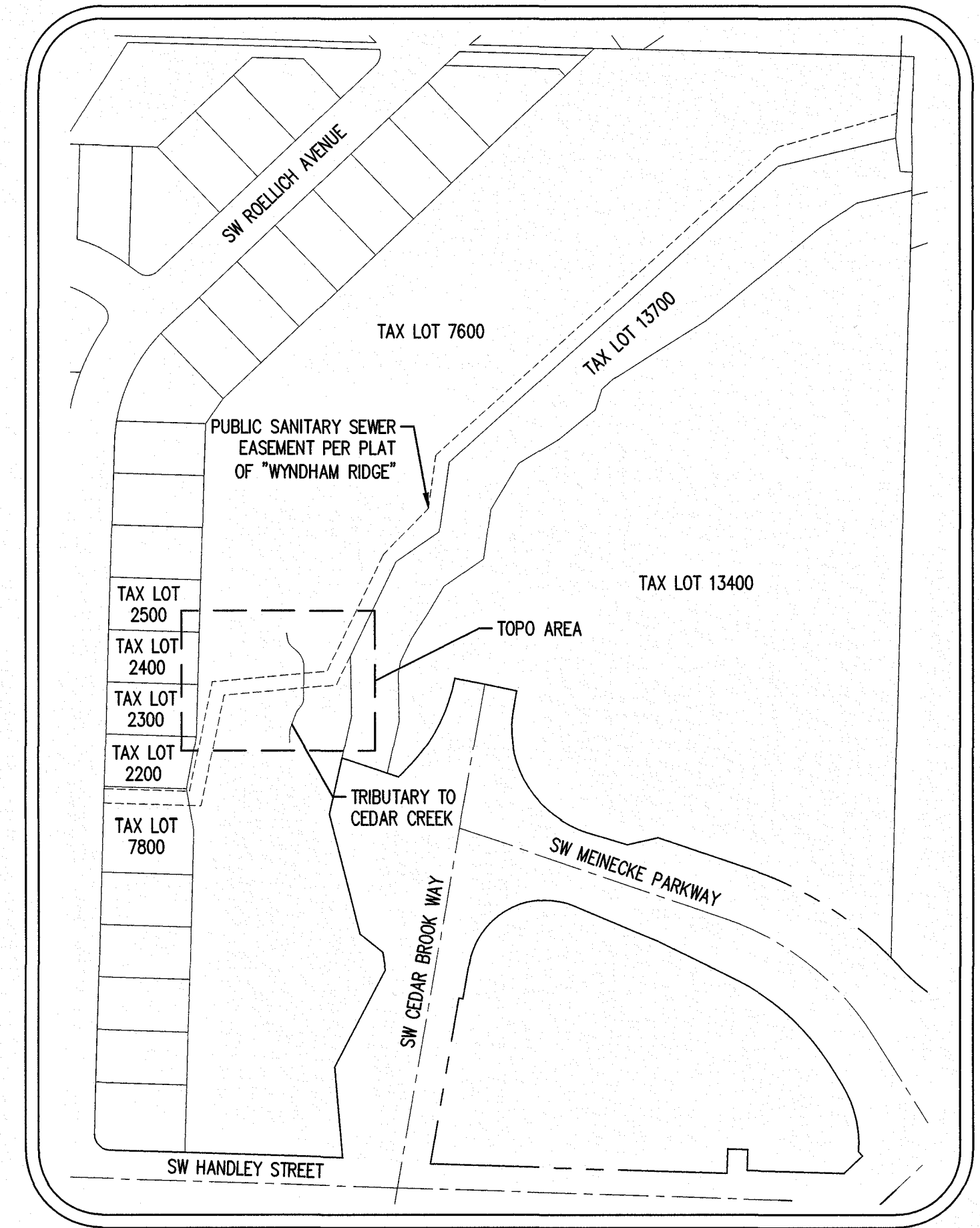
REGISTERED  
 PROFESSIONAL  
 LAND SURVEYOR

OREGON  
 JULY 15, 2003  
 ALEXANDER H. HURLEY  
 58539LS  
 RENEWS: 6/30/17

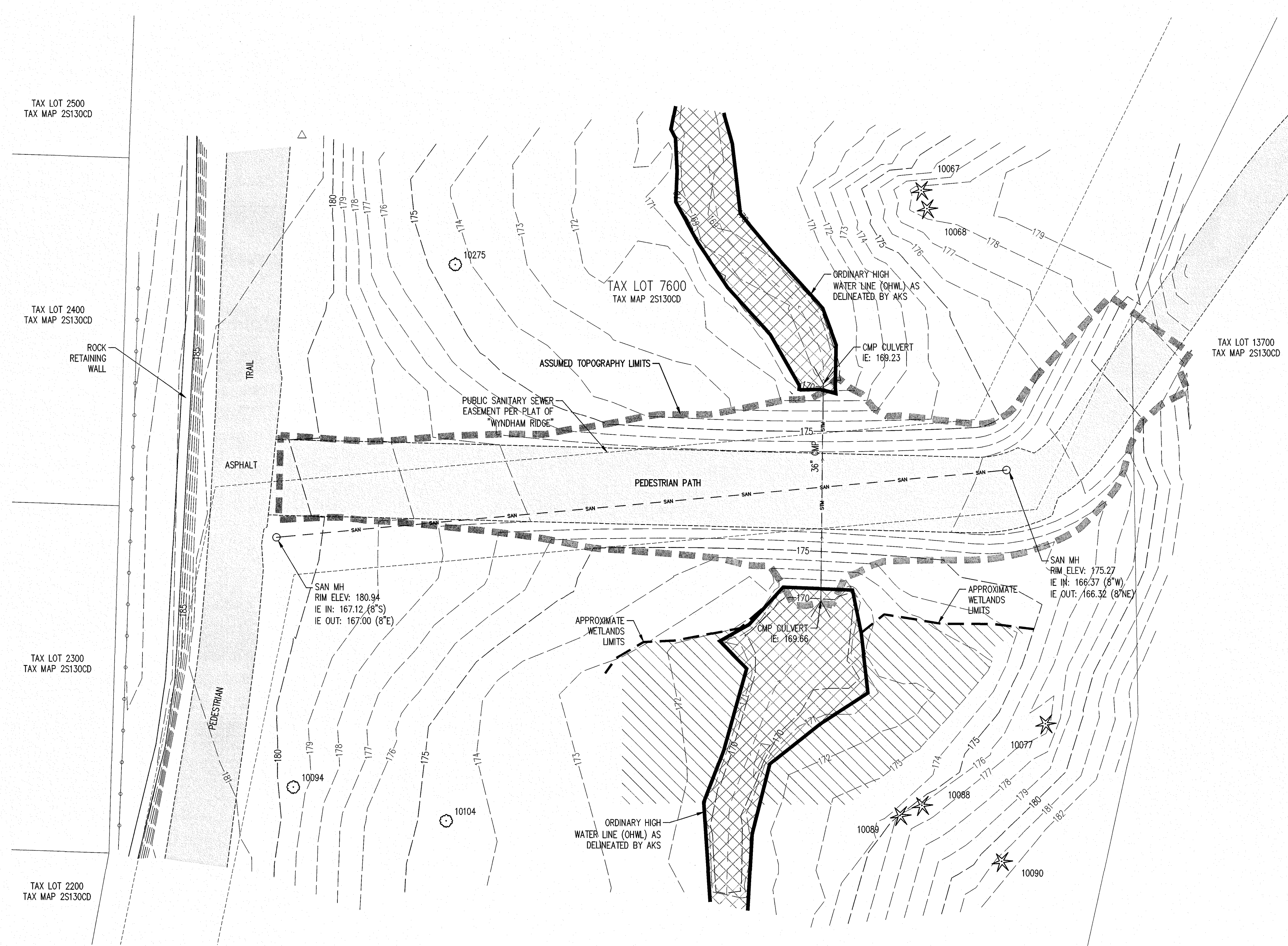
REVISIONS

JOB NUMBER  
**3068**

SHEET  
**C002**



**LOCATION MAP**  
 NOT TO SCALE



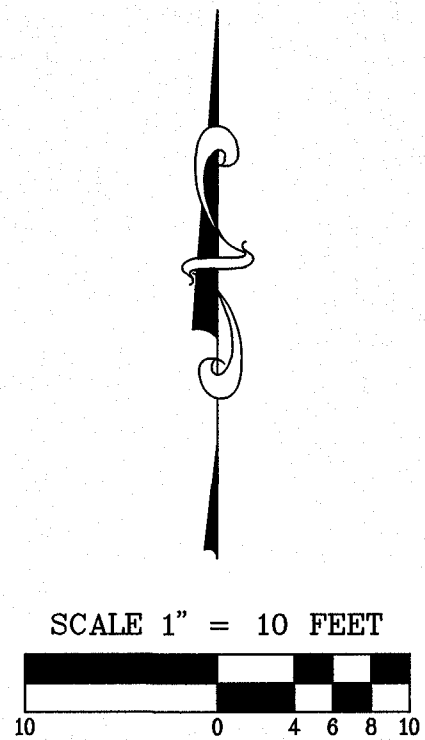
TREE NO.	SPECIES	DBH (IN)
10067	CONIFER	23
10068	CONIFER	23
10077	CONIFER	23, 38
10088	CONIFER	19
10089	CONIFER	24
10090	CONIFER	44
10094	DECIDUOUS	9
10104	DECIDUOUS	13
10275	DECIDUOUS	8, 10

**NOTES:**

1. FIELD WORK WAS CONDUCTED MARCH 30, 2015.
2. VERTICAL DATUM: ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 39, A 2" BRASS DISK LOCATED NEAR THE INTERSECTION OF HIGHWAY 99W AND N. SHERWOOD BOULEVARD IN THE CHEVRON GAS STATION PARKING LOT. ELEVATION = 213.90 (NAVD 88).
3. THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
4. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
5. CONTOUR INTERVAL IS 1 FOOT.
6. ONLY TREES HAVING A DIAMETER OF 6" AND GREATER, MEASURED AT BRESTH HEIGHT, WERE SURVEYED AT THIS TIME.
7. SHOWN TOPOGRAPHY AND PEDESTRIAN TRAIL WITHIN ASSUMED TOPOGRAPHY LIMITS AREA ARE BASED ON DESIGN PLANS FOR PROPOSED TRAIL TO BE CONSTRUCTED IN MID TO LATE 2015 AS PART OF THE CEDAR BROOK SUBDIVISION PROJECT. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING THE PROJECT.

**LEGEND**

- EXISTING AC SURFACE
- EXISTING WETLAND
- PERENNIAL TRIBUTARY TO CEDAR CREEK



**GRADING, STREET AND UTILITY EROSION AND SEDIMENT CONSTRUCTION NOTES:**

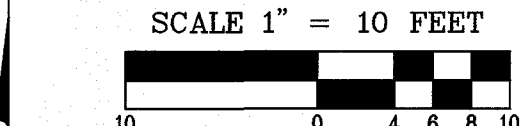
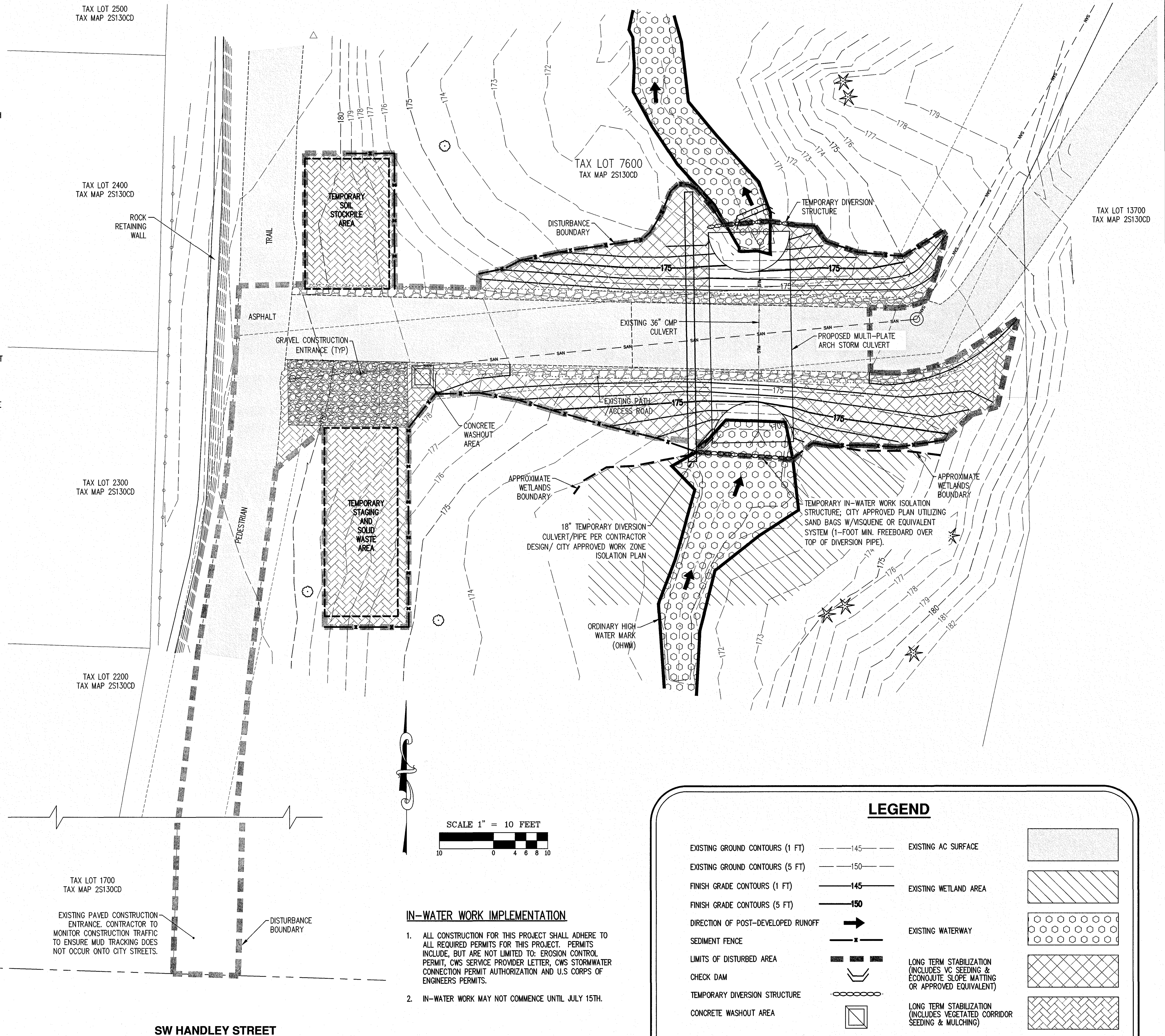
- SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
  - VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
- SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
- LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
- TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
- STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
- EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
- AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
- SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
- AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
- SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
- AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
- USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
- COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

**EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION**

- ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
- LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.

**PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES:**

- ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
- SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING, AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

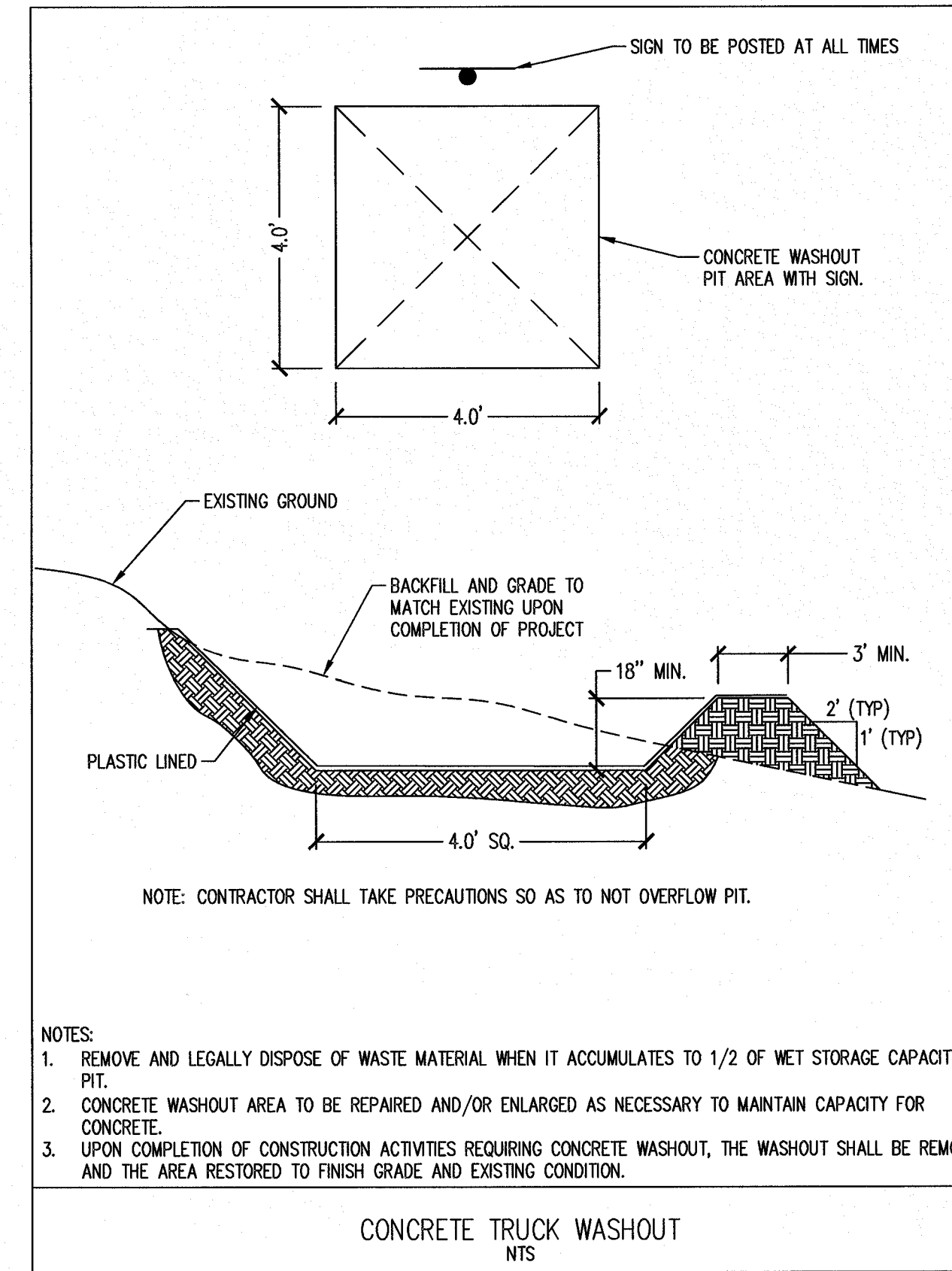
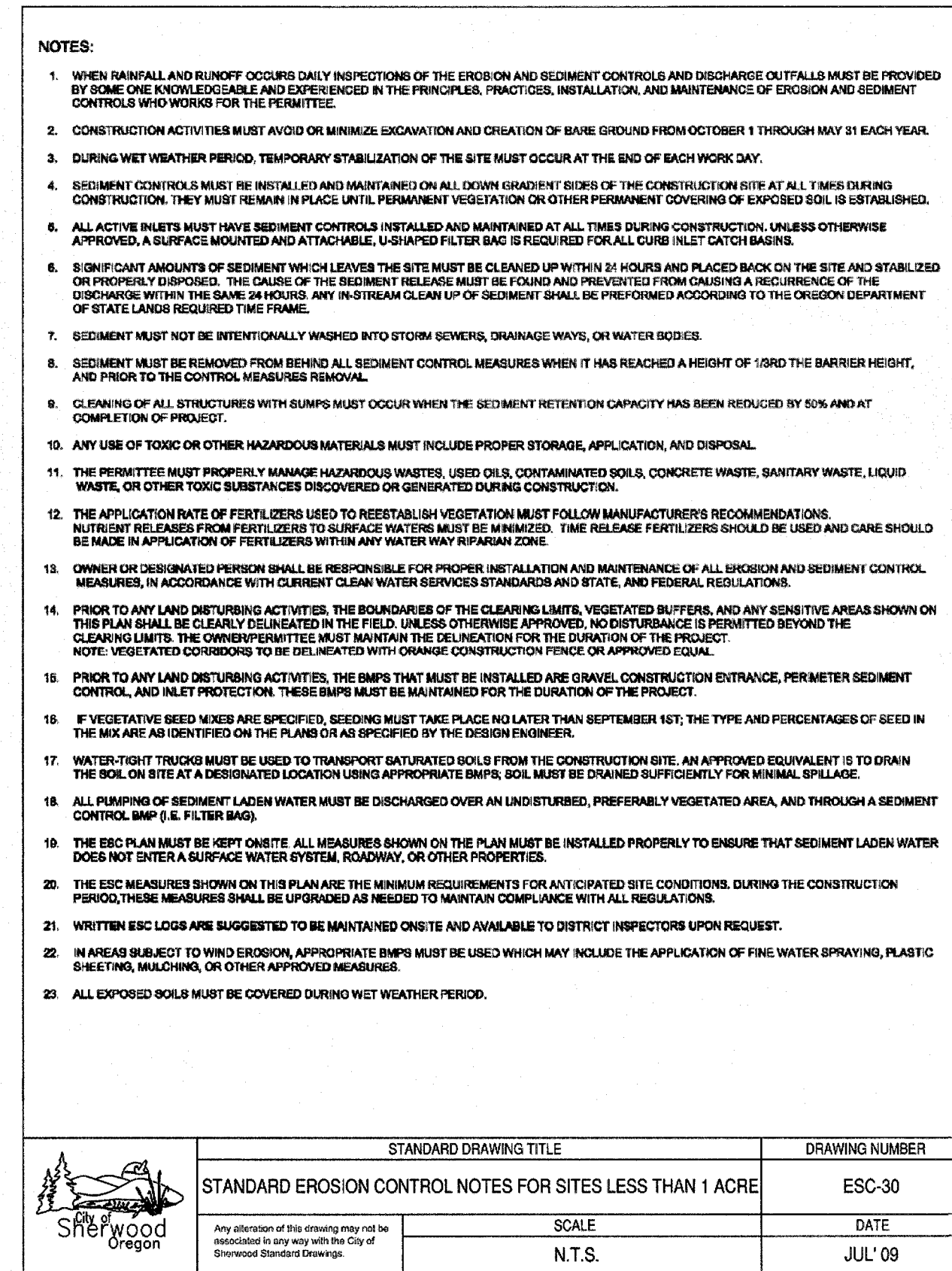
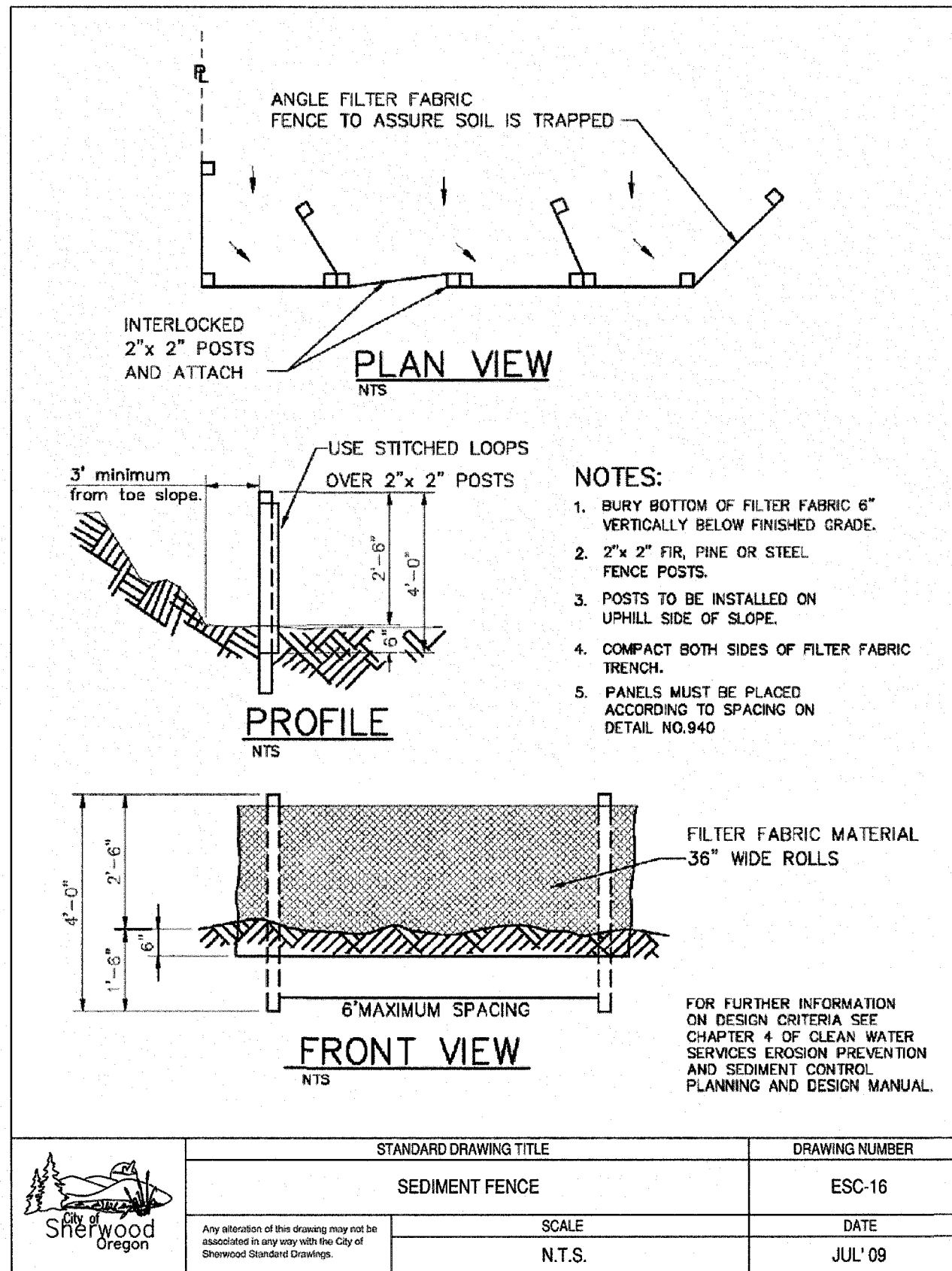
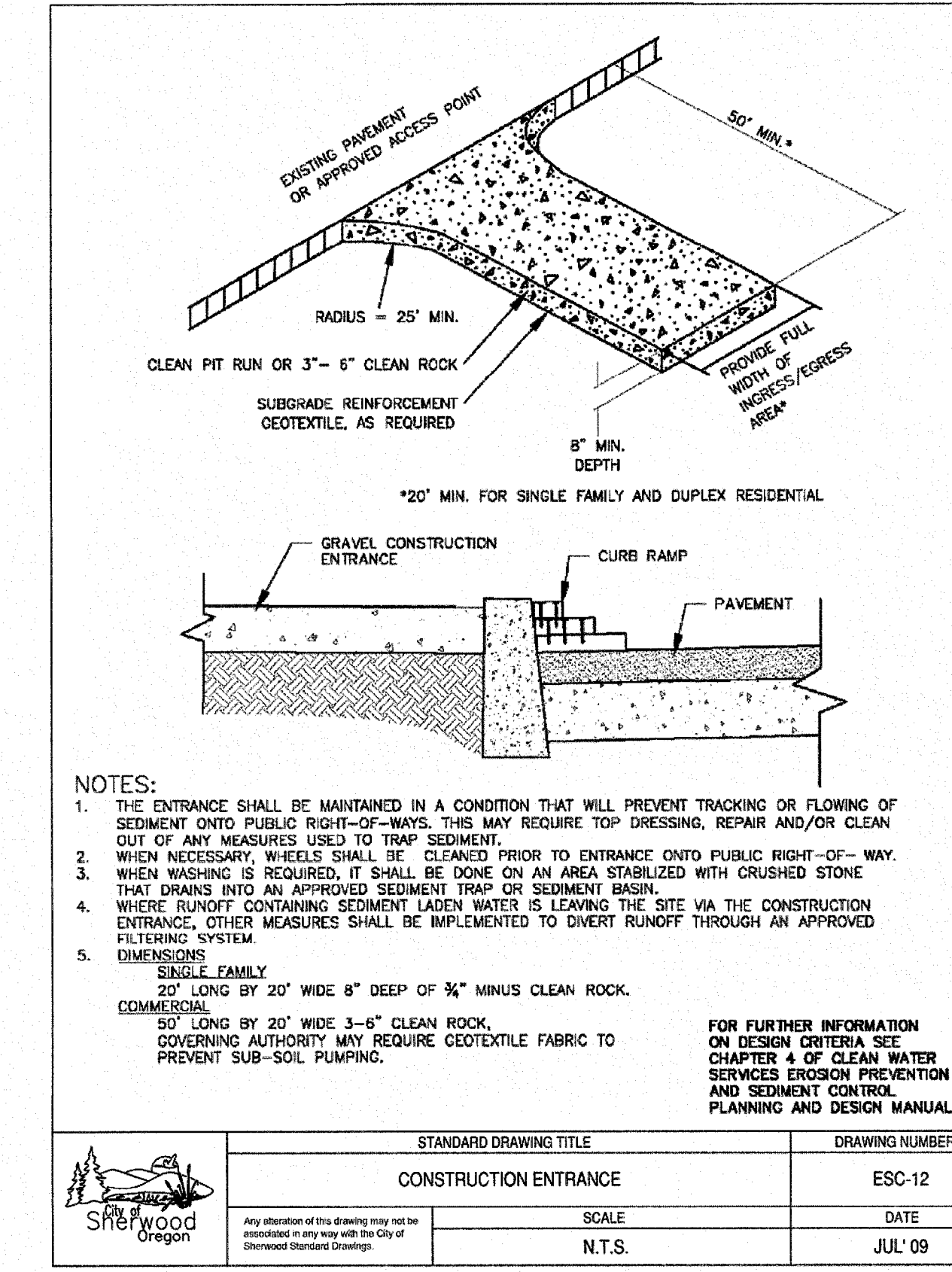
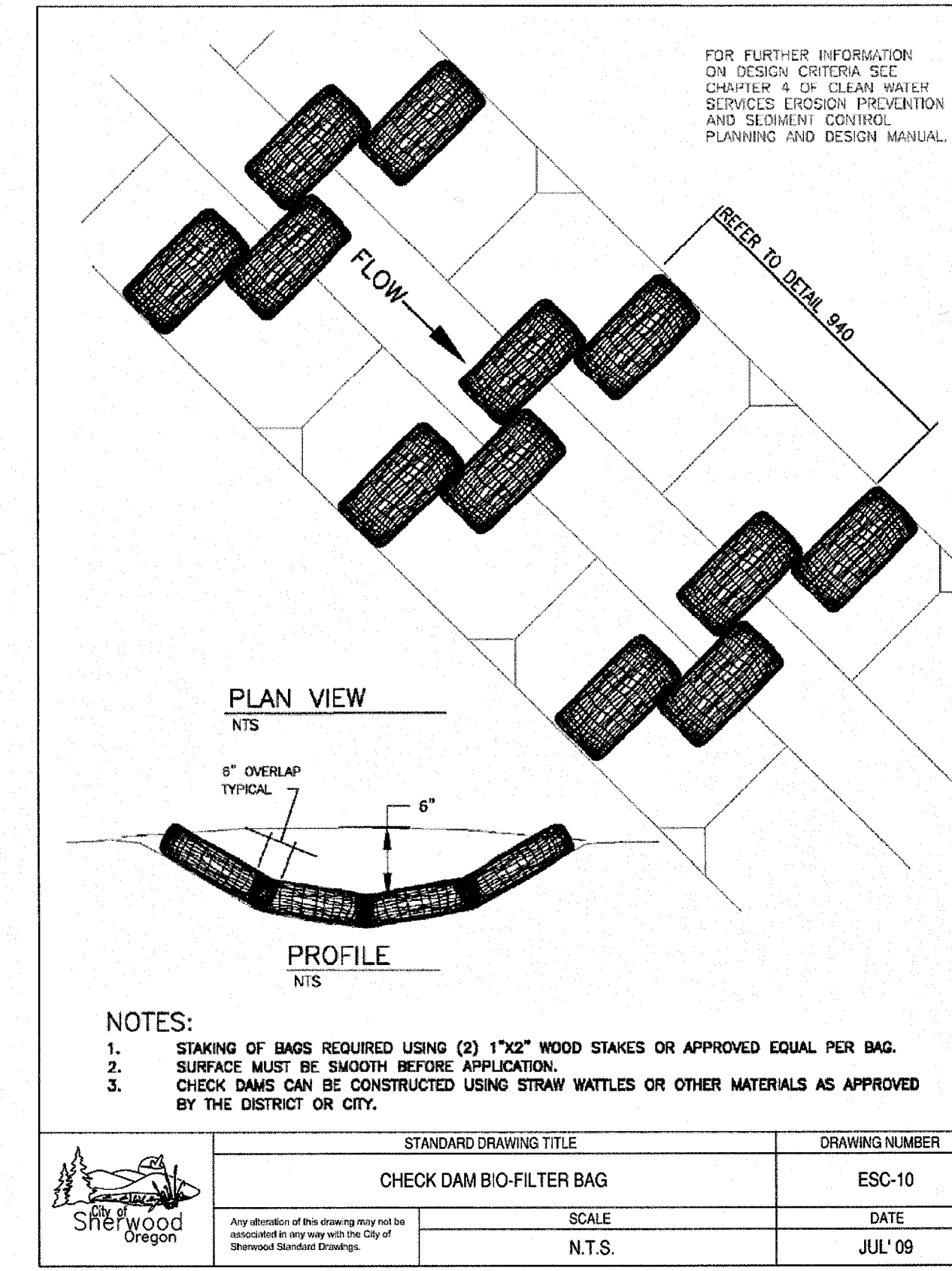
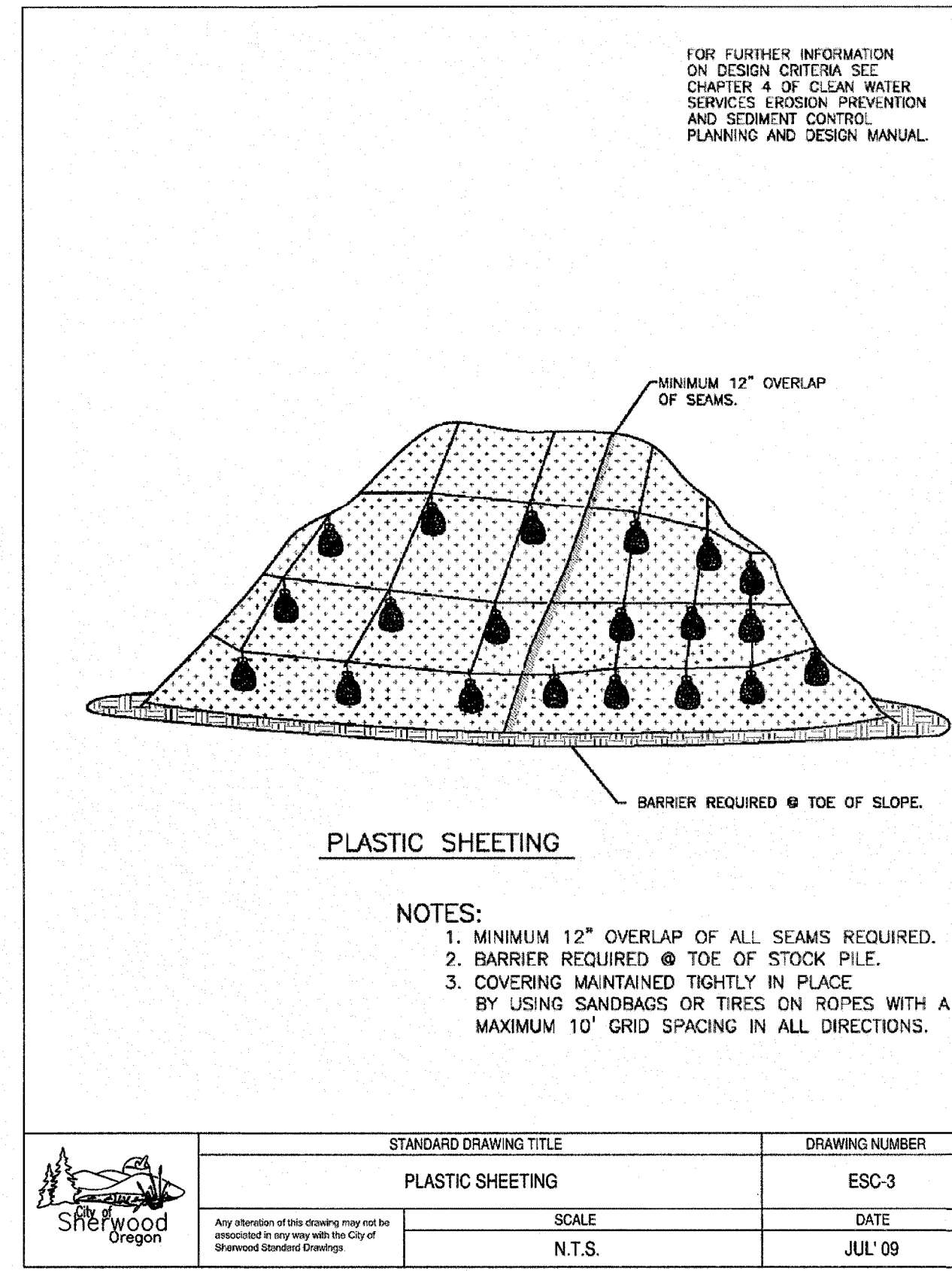
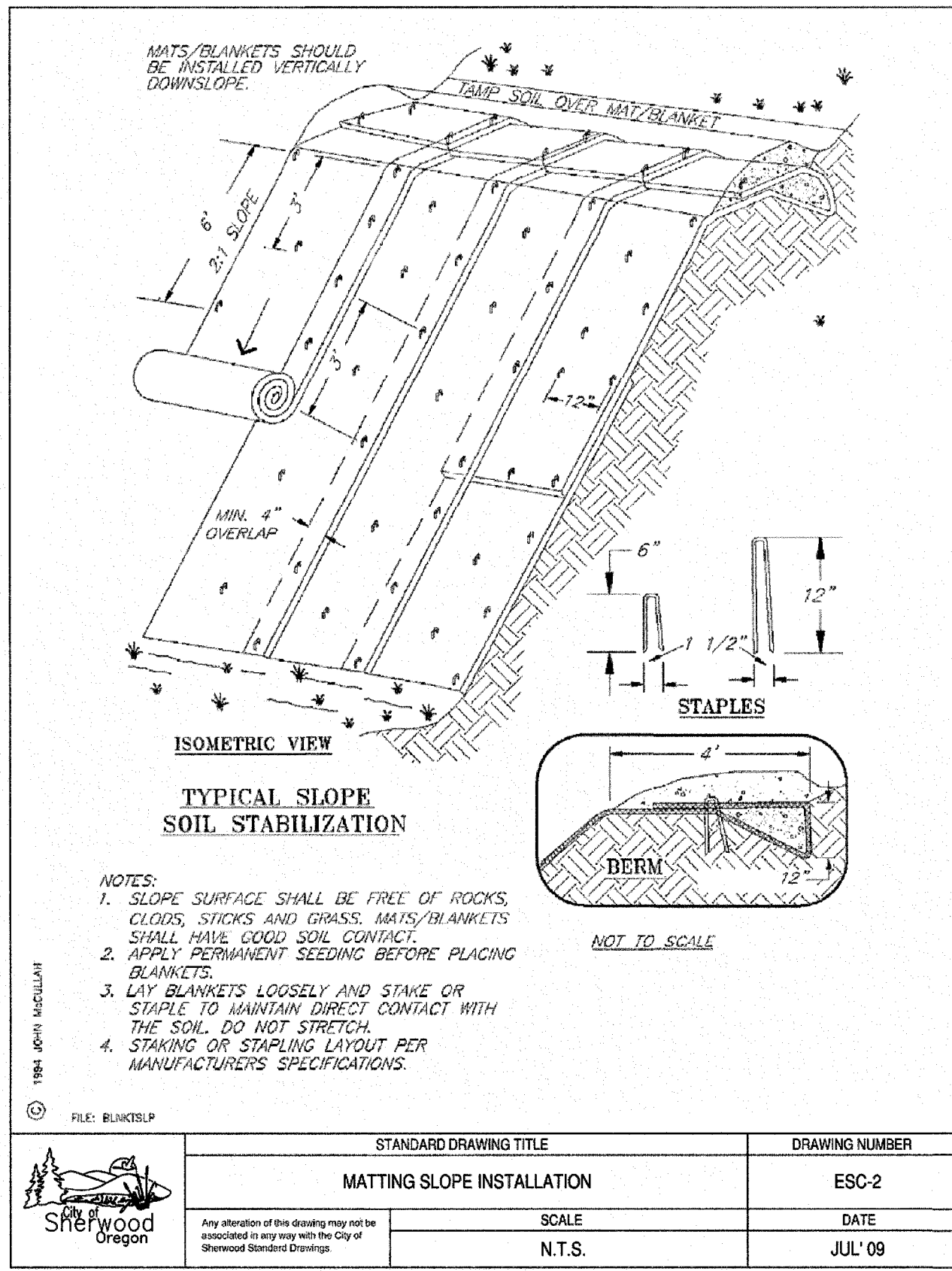


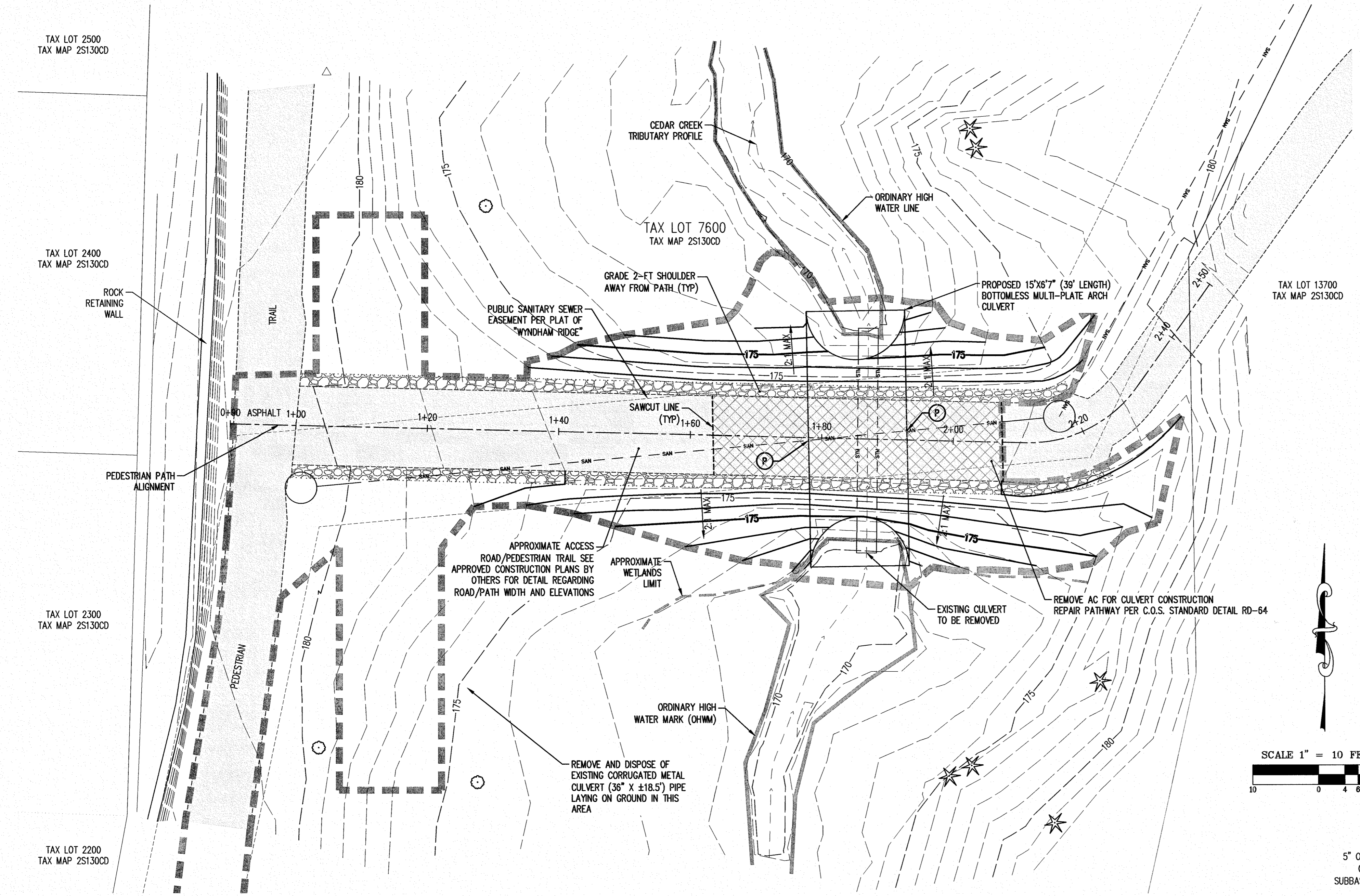
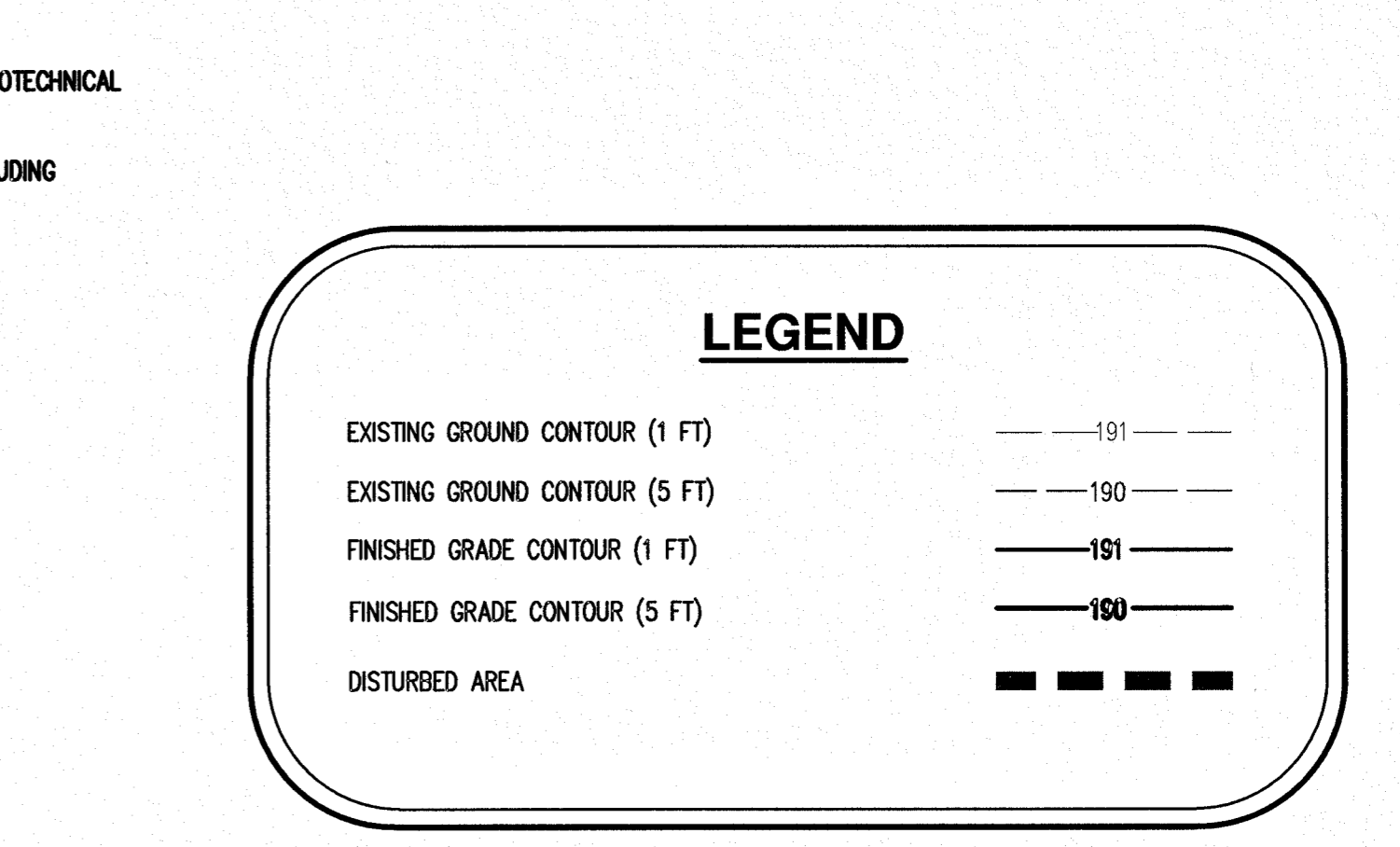
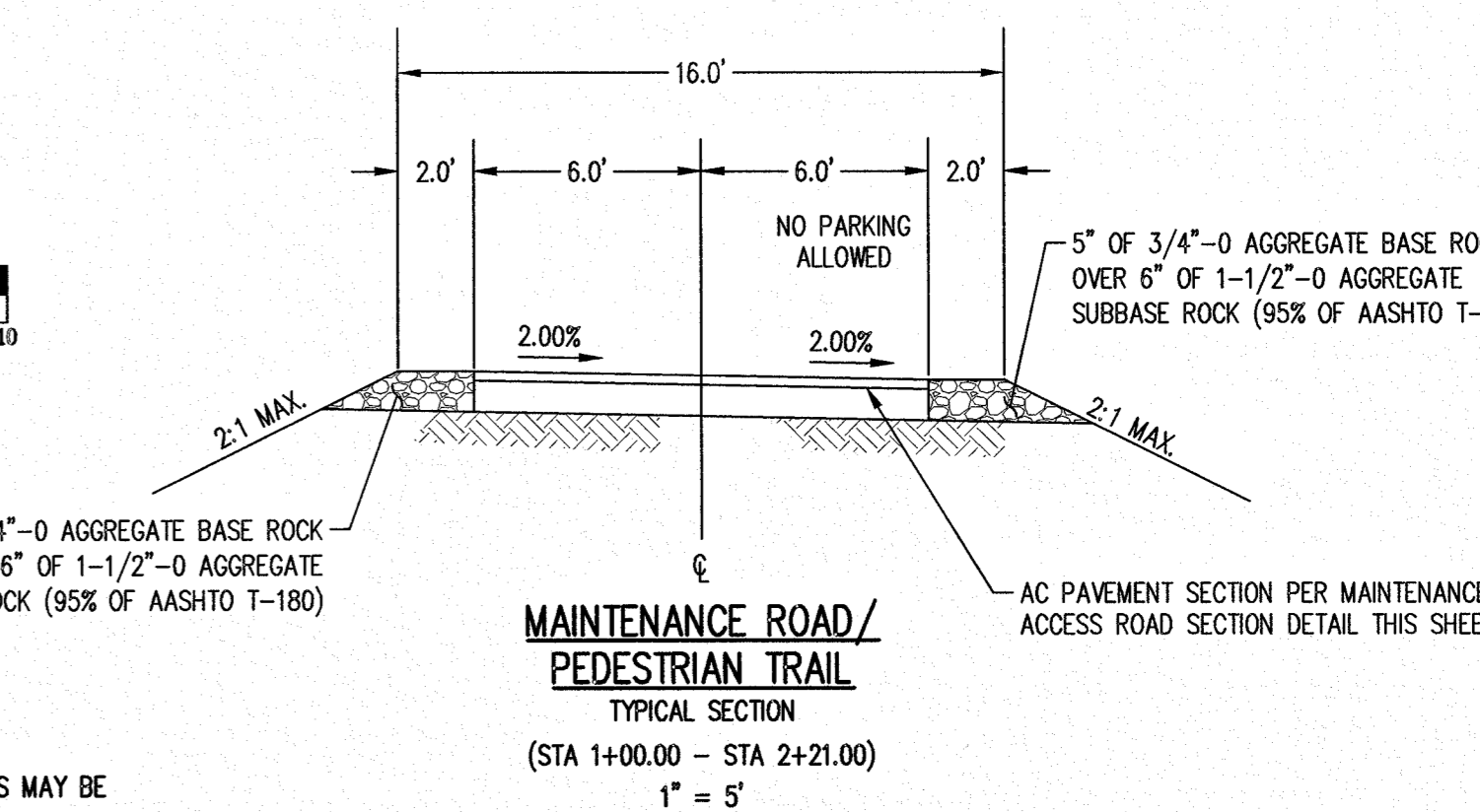
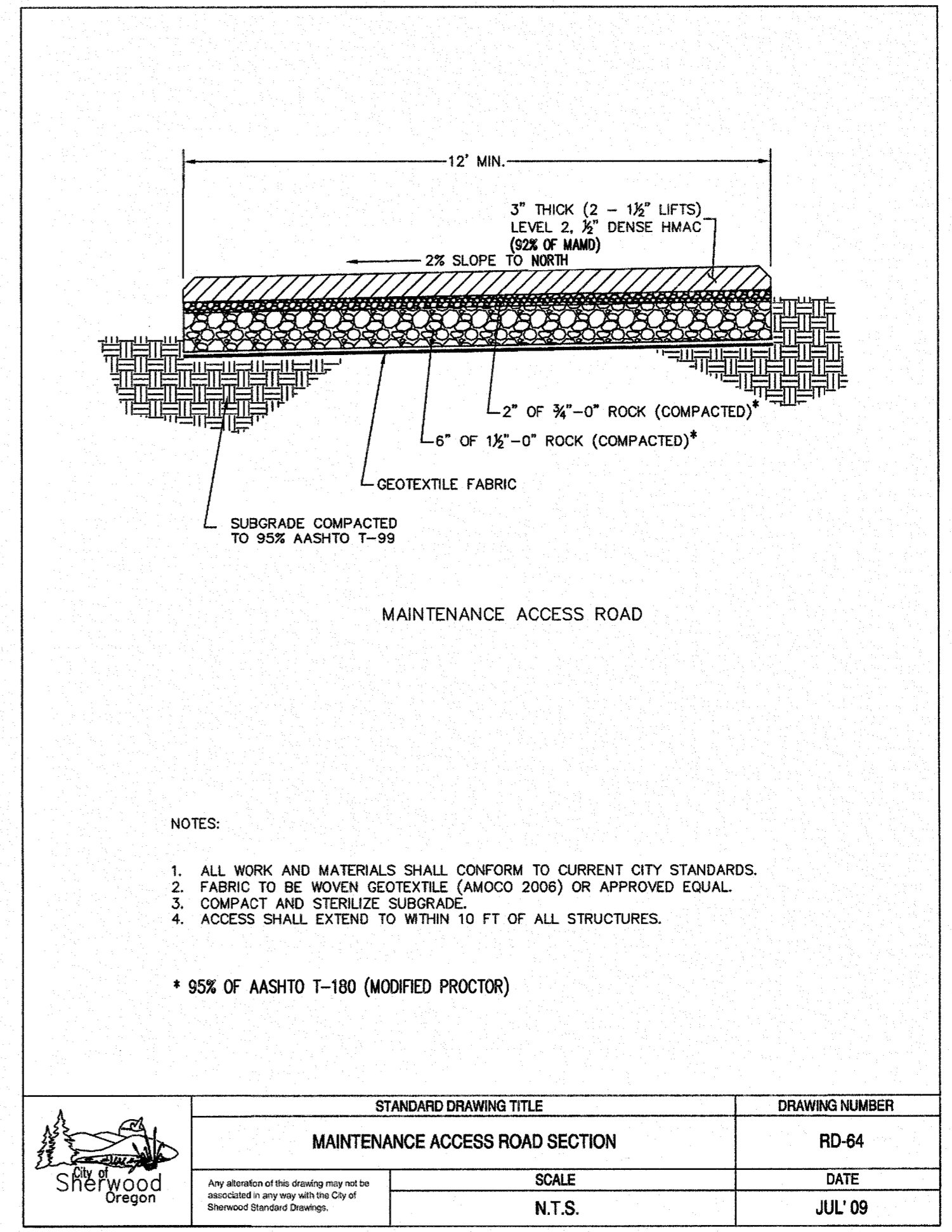
**IN-WATER WORK IMPLEMENTATION**

- ALL CONSTRUCTION FOR THIS PROJECT SHALL ADHERE TO ALL REQUIRED PERMITS FOR THIS PROJECT. PERMITS INCLUDE, BUT ARE NOT LIMITED TO: EROSION CONTROL PERMIT, CWS SERVICE PROVIDER LETTER, CWS STORMWATER CONNECTION PERMIT AUTHORIZATION AND U.S. CORPS OF ENGINEERS PERMITS.
- IN-WATER WORK MAY NOT COMMENCE UNTIL JULY 15TH.

**LEGEND**

EXISTING GROUND CONTOURS (1 FT)	---145---	EXISTING AC SURFACE	[Pattern]
EXISTING GROUND CONTOURS (5 FT)	---150---	EXISTING WETLAND AREA	[Pattern]
FINISH GRADE CONTOURS (1 FT)	---145---	EXISTING WATERWAY	[Pattern]
FINISH GRADE CONTOURS (5 FT)	---150---	LONG TERM STABILIZATION (INCLUDES VC SEEDING & ECONDUITE SLOPE MATTING OR APPROVED EQUIVALENT)	[Pattern]
DIRECTION OF POST-DEVELOPED RUNOFF	➔	LONG TERM STABILIZATION (INCLUDES VEGETATED CORRIDOR SEEDING & MULCHING)	[Pattern]
SEDIMENT FENCE	[Symbol]	GRAVEL CONSTRUCTION ENTRANCE	[Pattern]
LIMITS OF DISTURBED AREA	[Symbol]		
CHECK DAM	[Symbol]		
TEMPORARY DIVERSION STRUCTURE	[Symbol]		
CONCRETE WASHOUT AREA	[Symbol]		





**GRADING NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE NECESSARY ARRANGEMENTS FOR COMPACTION TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER AND FOR SUPPLYING THE RESULTS TO THE PROJECT ENGINEER.
2. SITE PREPARATION MUST INCLUDE THE REMOVAL OF VEGETATION, NON-COMPLYING FILL, TOPSOIL, OR OTHER UNSUITABLE MATERIAL PRIOR TO PLACEMENT OF THE FILL.
3. NO CUT OR FILL SHALL EXCEED A GRADE OF 2 HORIZONTAL TO 1 VERTICAL UNLESS APPROVED BEFOREHAND BY THE GEOTECHNICAL ENGINEER, PROJECT ENGINEER, AND JURISDICTION.
4. APPROPRIATE BENCHING OF FILLS IS REQUIRED FOR FILLS OVER 5 FEET IN HEIGHT ON SLOPES IN EXCESS OF 5 HORIZONTAL TO 1 VERTICAL. BENCHING MUST BE DONE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
5. CUT AND FILL SLOPES SHALL BE PROTECTED FROM EROSION. SUCH PROTECTION MAY CONSIST OF APPROPRIATE REVEGETATION OR OTHER ACCEPTABLE MEANS AND METHODS. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTHWORK OR SITE STRIPPING.
6. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER AND THE PROJECT GEOTECHNICAL ENGINEER FOR REQUIRED INSPECTIONS AT THE FOLLOWING STAGES OF CONSTRUCTION OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER:
  - A. INSPECTION OF SITE STRIPPING, BUT PRIOR TO FILL PLACEMENT. EROSION CONTROL MEASURES SHALL BE IN PLACE AT THIS TIME.
  - B. IN PREPARATION OF BENCH CONSTRUCTION PRIOR TO FILL PLACEMENT.
  - C. AFTER THE MAJORITY OF FILL HAS BEEN PLACED AND IS IN "ROUGH" GRADE BUT PRIOR TO FINAL GRADING.
  - D. WHEN FINAL GRADING IS COMPLETED.
  - E. DURING FINAL GRADING, BUT PRIOR TO BASE ROCK AND PAVEMENT CONSTRUCTION.
7. PROJECT GRADING LIMITS SHALL BE WITHIN THE PROJECT'S PROPERTY BOUNDARY, UNLESS OTHERWISE SHOWN ON PLANS.
8. THE IDENTIFICATION OR REMOVAL OF UNSUITABLE MATERIAL SHALL BE DONE WITH CONSULTATION WITH THE PROJECT GEOTECHNICAL ENGINEER.
9. REMOVE AND DISPOSE OFFSITE OF ALL ORGANIC AND/OR UNSUITABLE MATERIALS, INCLUDING TREES, STUMPS, ROOTS, BRUSH, AND GRASS IN SUCH A MANNER TO MEET ALL APPLICABLE REGULATIONS. ON-SITE DISPOSAL IS NOT ALLOWED.
10. STRAIGHT GRADES SHALL BE RUN BETWEEN FINISH GRADE AND/OR FINISH CONTOUR LINES SHOWN, UNLESS OTHERWISE NOTED. FINISH GRADES ARE TO DRAIN AS INDICATED ON THE PLANS. ROUGH GRADING SHALL BE FINISHED BY BLADING AND RAKING TO REASONABLE SMOOTH CONTOURS WITH GENTLE TRANSITIONS.
11. MATERIAL IN SOFT SPOTS PAVED OR SIDEWALK AREAS SHALL BE REMOVED TO THE DEPTH REQUIRED (AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER) TO PROVIDE A FIRM SUBGRADE AND SHALL BE REPLACED WITH SUITABLE BACKFILL. FILLS TO BE CONSTRUCTED IN HORIZONTAL LIFTS NOT TO EXCEED 8 INCHES LOOSE MEASURE.
12. COMPACTION TESTS AND REPORTS SHALL BE CONDUCTED BY AN APPROVED TESTING LABORATORY, TEST FREQUENCY SHALL BE PER THE PROJECT GEOTECHNICAL ENGINEER. TESTING TO COMMENCE WITH FILL ACTIVITIES AND AS A MINIMUM, ONE TEST SHALL BE TAKEN FOR EVERY 500 CUBIC YARDS PLACED OR 2 VERTICAL FEET, WHICHEVER IS LESS. TESTING SHALL BE PROVIDED IN ACCORDANCE WITH NOTE 11 ON SHEET C001.
13. FINISHED GRADE CONTOURS SHOWN ARE APPROXIMATE FINAL GRADE ELEVATIONS.
14. IF SPRINGS OR GROUNDWATER ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROJECT GEOTECHNICAL ENGINEER AND PROJECT ENGINEER OF THE CONDITIONS FOUND AND COORDINATE HIS ACTIVITIES IN A MANNER THAT WILL ALLOW TIME TO REVIEW THE SITUATION AND PREPARE A PLAN TO PROPERLY MITIGATE THE WATER ENCOUNTERED.
15. ALL CUT AND FILL AREAS SHALL BE STRIPPED OF SOO AND OTHER NON-STRUCTURAL MATERIAL (DEPTH TO BE DETERMINED BY PROJECT GEOTECHNICAL ENGINEER).
16. ALL GRADING SHALL BE IN CONFORMANCE WITH APPENDIX J OF THE CURRENT INTERNATIONAL BUILDING CODE (IBC).
17. ALL STRUCTURAL FILL SHALL MEET THE REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER, AND THE

**JURISDICTION.**

18. THESE PLANS AND SPECIFICATIONS ASSUME "DRY WEATHER" CONSTRUCTION. ADDITIONAL MEASURES MAY BE REQUIRED BY PROJECT GEOTECHNICAL ENGINEER FOR "WET WEATHER" CONSTRUCTION.
19. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER AND THE GEOTECHNICAL REPORT DATED JULY 22, 2015 BY HARDMAN GEOTECHNICAL SERVICES, INC.
20. CONTRACTOR IS RESPONSIBLE FOR HAUL-OFF AND DISPOSAL OF ALL EXCESS FILL MATERIAL, INCLUDING OBTAINING ANY ASSOCIATED PERMITS.

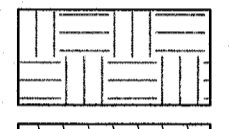



(P) CONTRACTOR TO POT HOLE AND VERIFY ALL UTILITY INVERT ELEVATIONS PRIOR TO DESIGN AND ORDERING OF ARCH CULVERT MATERIALS (INCIDENTAL)





**NOTES:**

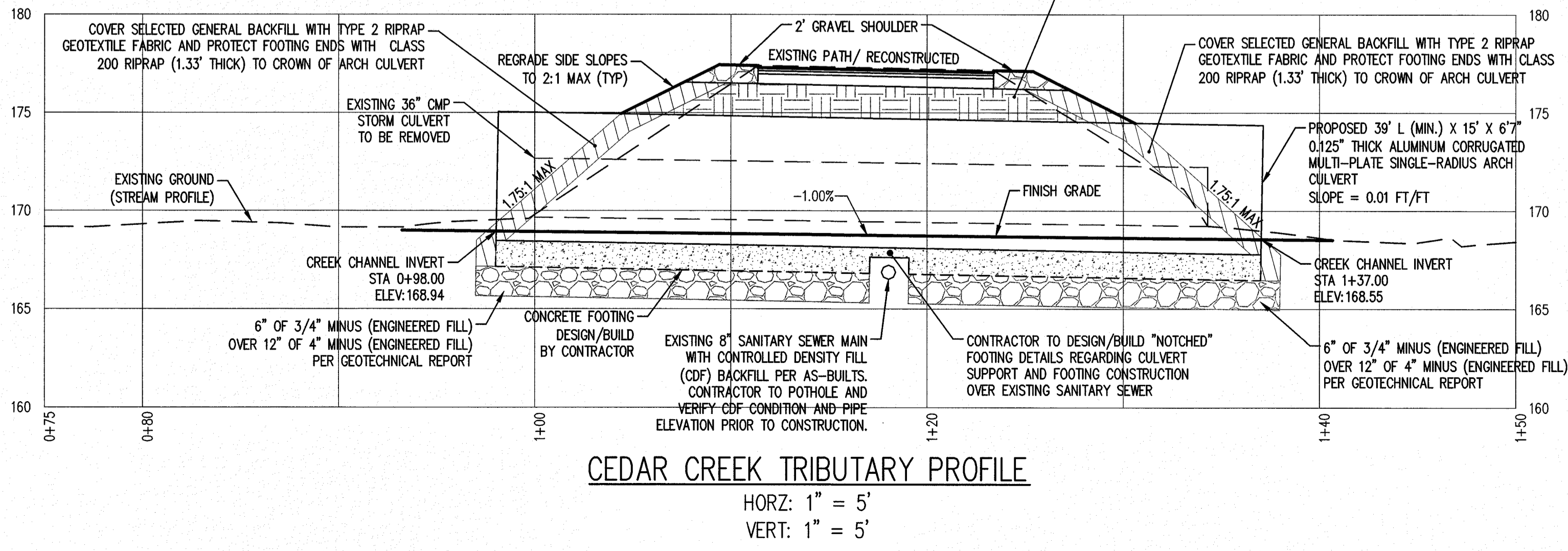
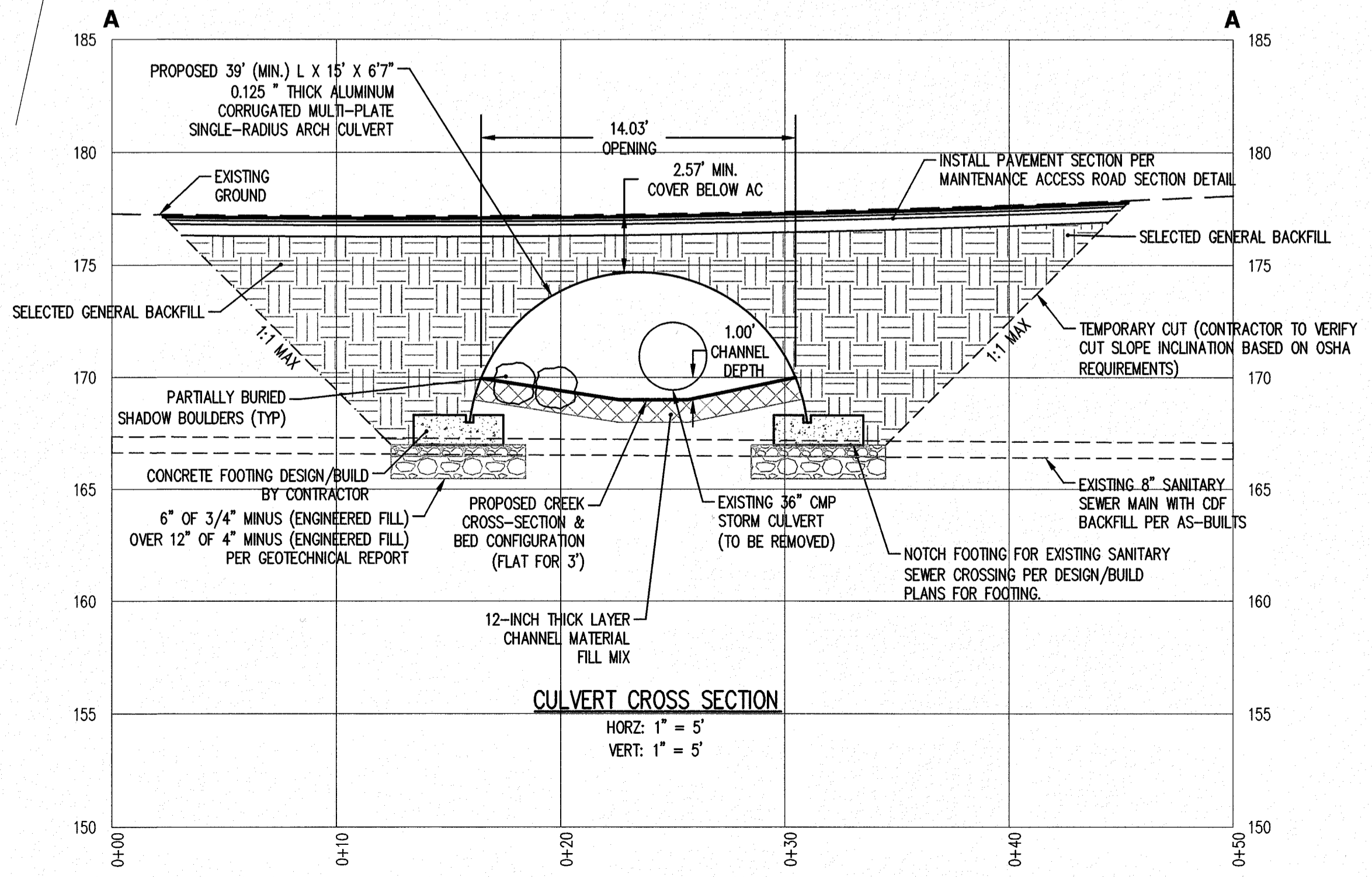
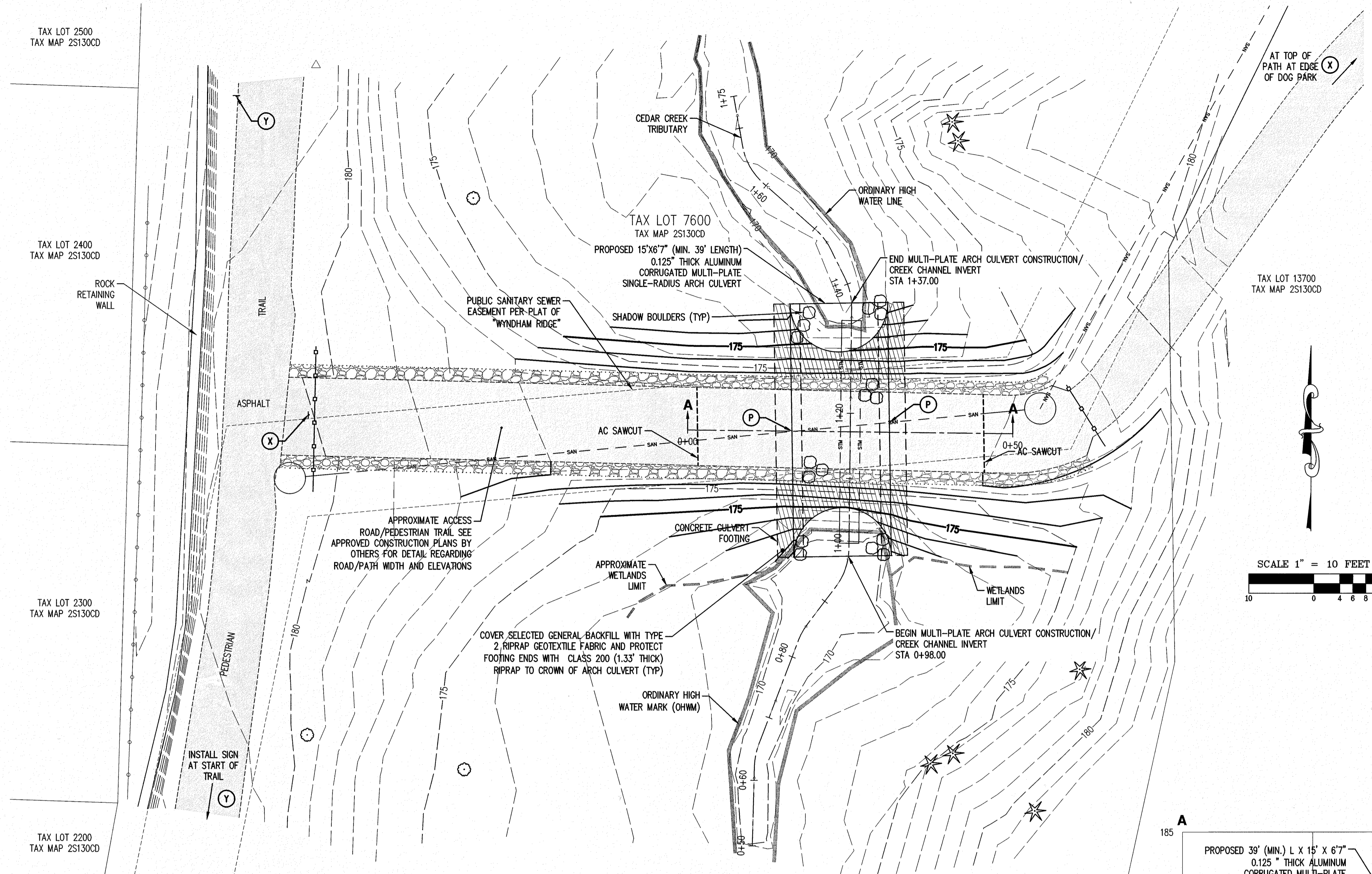
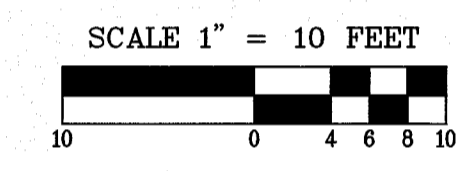
- 1) CONCRETE CULVERT FOOTING TO BE DESIGN/BUILD BY CONTRACTOR. CONTRACTOR RESPONSIBLE FOR OBTAINING A BUILDING PERMIT FROM CITY OF SHERWOOD FOR FOOTINGS (INCLUDING ALL APPLICABLE CALCULATIONS, DOCUMENTS, AND OTHER SUBMITTALS REQUIRED TO OBTAIN THE PERMIT). DESIGN LIVE LOAD IS AASHTO HS-20. SEE GEOTECHNICAL REPORT FOR SOIL PROPERTIES. CONTRACTOR TO PROVIDE PROJECT ENGINEER WITH SHOP DRAWINGS OF FOOTINGS FOR REVIEW AND APPROVAL PRIOR TO PERMIT SUBMITTAL.
- 2) CONTRACTOR TO INSTALL ARCH CULVERT PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE PROJECT ENGINEER AND CITY WITH SHOP DRAWINGS OF ARCH CULVERT AND FOOTING DESIGN FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
- 3) CONTRACTOR TO COORDINATE INSPECTIONS OF CULVERT FOOTING SUBGRADE EXCAVATION, SUBGRADE PREPARATION, ENGINEERED FILL PLACEMENT AND COMPACTION WITH THE CITY AND PROJECT'S GEOTECHNICAL ENGINEER.
- 4) WHERE STREAM CHANNEL IS DISTURBED, THE TOP 1-FT UNDER CULVERT SHALL BE FINISHED WITH THE FOLLOWING CHANNEL MATERIAL FILL MIX:  
 50% FINES (DIRT, SILT, SAND)  
 45% SMALL ROCK (1/2"-6" DIAMETER)  
 5% SHADOW BOULDERS (12"-24")\*\*
- 5) DURING CONSTRUCTION, THE FINES AND SMALL ROCK SHOULD BE MIXED PRIOR TO PLACEMENT.
- 6) SHADOW BOULDERS SHOULD PROTRUDE 30-50% ABOVE THE FINAL STREAMBED ELEVATION. PAID FOR UNDER THE BID ITEM "CLASS 200 RIPRAP"

CULVERT FOUNDATION OVER-EXCAVATION AND SUBGRADE PREPARATION SHALL ADHERE TO RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL EVALUATION REPORT (DATED JULY 22, 2015) BY HARDMAN GEOTECHNICAL SERVICES, INC.

**LEGEND**

-  SELECTED GENERAL BACKFILL (STRUCTURE BACKFILL)
-  CLASS 200 RIPRAP (1.33' THICK)
-  ENGINEERED FILL
-  CHANNEL MATERIAL FILL MIX


-  CONTRACTOR TO POTHOLE AND VERIFY ALL UTILITY INVERT ELEVATIONS PRIOR TO DESIGN AND ORDERING OF ARCH CULVERT MATERIALS
-  "PEDESTRIAN PATHWAY CLOSED" SIGN AND BARRICADE TO BE INSTALLED AT A MINIMUM. ADDITIONAL MEASURES MAY BE NECESSARY. MEASURES CONSIDERED INCIDENTAL TO THE BID ITEM: "TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE".
-  "UTILITY WORK AREA" SIGN. CONTRACTOR TO PROVIDE TEMPORARY WORK ZONE TRAFFIC CONTROL SIGNAGE WHEN OPERATING VEHICLES/EQUIPMENT ON PEDESTRIAN TRAIL. CONTRACTOR TO MINIMIZE USE OF TRAIL AS MUCH AS POSSIBLE. MEASURES CONSIDERED INCIDENTAL TO THE BID ITEM: "TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE".
-  TEMPORARY SECURITY FENCE INSTALLATION FOR PEDESTRIAN SAFETY. CONTRACTOR INSTALLATION AND MAINTENANCE CONSIDERED INCIDENTAL TO THE BID ITEM: "TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE".



AKS DRAWING FILE: C100 STM CULVERT.DWG | LAYOUT: C100

**PLANTING LIST FOR THE FISH PASSAGE MITIGATION AREAS**

APPROXIMATE AREA OF DISTURBANCE: 2,969 SF ±

SYMBOL	QTTES.	BOTANICAL NAME	COMMON NAME	SIZE / MIN. HT.*	CONDITION	SPACING	SPACING FORMAT**
<b>TREES (29)</b>							
	15	ACER MACROPHYLLUM	BIG LEAF MAPLE	2 GAL./3' HT.	CONTAINER	10' O.C.	SINGLE
	14	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	2 GAL./3' HT.	CONTAINER	10' O.C.	SINGLE
<b>SHRUBS (145)</b>							
	29	ACER CIRCINATUM	VINE MAPLE	2 GAL./2' HT.	CONTAINER	4-5' O.C.	SINGLE
	29	HOLIDISCUS DISCOLOR	OCEANSPRAY	1 GAL./18" HT.	CONTAINER	4-5' O.C.	SINGLE
	29	POLYSTICHUM MUNITUM	SWORD FERN	2 GAL./12" HT.	CONTAINER	4-5' O.C.	CLUSTER
	29	RUBUS PARVIFOLUM	THIMBLEBERRY	1 GAL./18" HT.	CONTAINER	4-5' O.C.	CLUSTER
	29	SYMPHORICAPROS ALBUS	SNOWBERRY	1 GAL./18" HT.	CONTAINER	4-5' O.C.	CLUSTER
<b>SEED MIX</b>							
		BROMUS CARINATUS	NATIVE CALIFORNIA BROME	SEED		10 LBS PLS/ACRE	
		ELYMUS GLAUCUS	BLUE WILDRIE	SEED		10 LBS PLS/ACRE	
		FESTUCA RUBRA VAR. RUBRA	NATIVE RED FESCUE	SEED		5 LBS PLS/ACRE	
		LUPINUS POLYPHYLLUS	LARGE-LEAFED LUPINE	SEED		8 LBS PLS/ACRE	

\* BARE ROOT MAY BE SUBSTITUTED FOR CONTAINER PLANTS BASED ON AVAILABILITY. IF BARE ROOT PLANTS ARE USED, THEY MUST BE PLANTED DURING THE LATE WINTER/EARLY SPRING DORMANCY PERIOD. MINIMUM CWS PLANT HEIGHTS SHALL STILL APPLY.

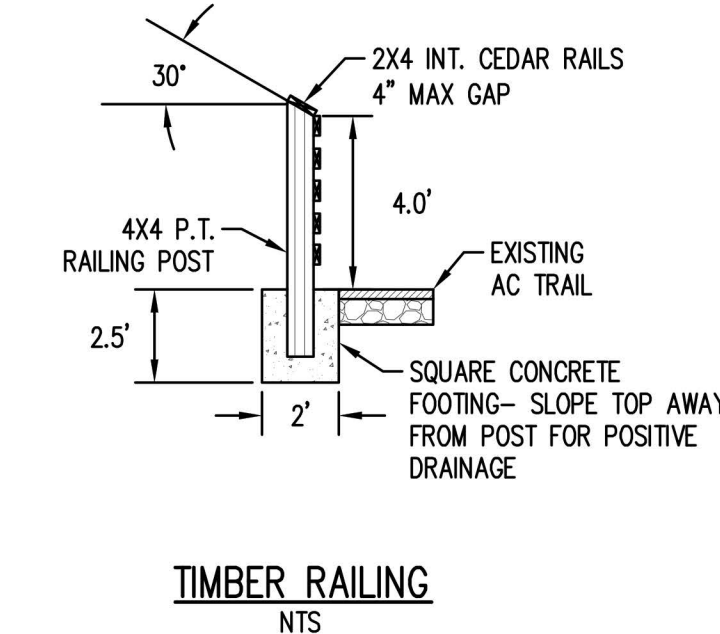
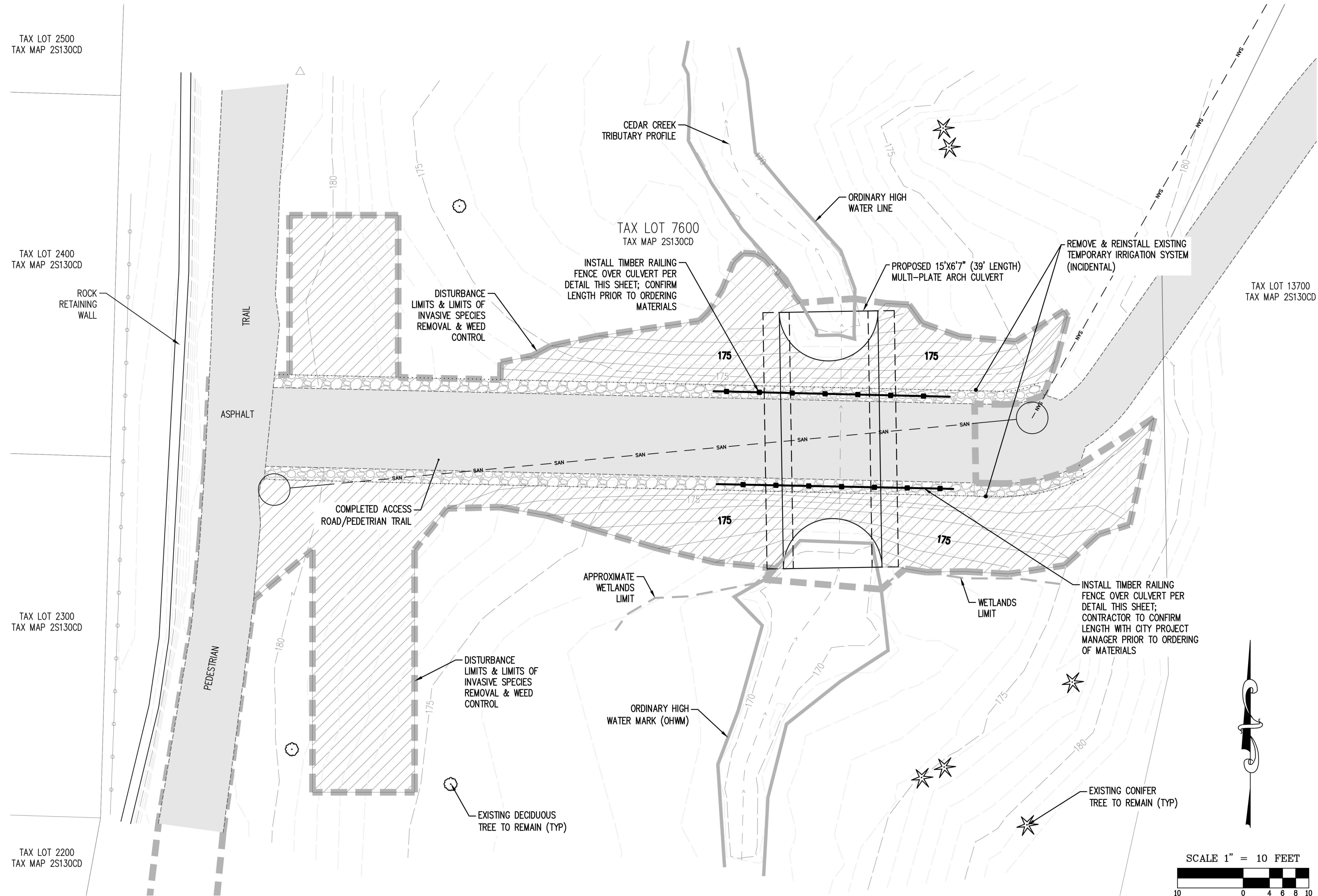
\*\* PLANT PLACEMENT SHALL BE CONSISTENT WITH NATURALLY OCCURRING PLANT COMMUNITIES. TREES AND SHRUBS SHALL BE PLACED IN SINGLES OR CLUSTERS OF THE SAME SPECIES TO PROVIDE A NATURAL PLANTING SCHEME.

**MAINTENANCE CONTACT:**

CITY OF SHERWOOD OR SELECTED AGENT  
22560 SW PINE STREET  
SHERWOOD, OR 97140  
PH: 503-925-2301

**VEGETATED CORRIDOR NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT QUANTITIES. IF DISCREPANCIES OCCUR DESIGN INTENT PREVAILS OVER QUANTITIES LISTED.
- EVERY EFFORT SHALL BE MADE TO PROTECT AND PRESERVE EXISTING NATIVE VEGETATION SPECIES ON SITE.
- ALL PLANTS AND PLANTINGS SHALL CONFORM TO CLEAN WATER SERVICES (CWS) DESIGN STANDARDS. REFER TO CWS DESIGN AND CONSTRUCTION MANUAL AND STANDARD DETAILS, CURRENT EDITION.
- PLANTS SHALL BE RANDOMLY PLACED FOR A NATURAL APPEARANCE. ADJUST PLANTINGS ON SITE AS NECESSARY AROUND EXISTING VEGETATION AND SITE FEATURES.
- PLANT SPECIES, LOCATIONS, QUANTITIES, ETC. MAY BE SUBSTITUTED OR REVISED BY THE LANDSCAPE ARCHITECT PRIOR TO FINAL INSTALLATION DUE TO SITE CONDITIONS, AVAILABILITY, ETC. WHERE ALLOWED BY CLEAN WATER SERVICES.
- INVASIVE SPECIES ON SITE INCLUDE HIMALAYAN BLACKBERRY AND ENGLISH IVY. NON-NATIVE, INVASIVE PLANT MATERIAL, ROOTS, AND SEEDS SHALL BE REMOVED FROM THE ENHANCEMENT AREA PER CWS STANDARDS PRIOR TO INSTALLING NEW ENHANCEMENT PLANTINGS. REFER TO CLEAN WATER SERVICES INTEGRATED PEST MANAGEMENT PLAN (IVAM) MANUAL FOR INVASIVE SPECIES CONTROL.
- PLANT INSTALLATION: CONTAINERIZED STOCK SHOULD PREFERABLY BE INSTALLED BETWEEN FEBRUARY 1 THROUGH MAY 1 OR OCTOBER 1 THROUGH NOVEMBER 15. BARE ROOT STOCK MAY BE SUBSTITUTED, WITH APPROVAL, FOR CONTAINER PLANTS BASED ON AVAILABILITY. BARE ROOT MAY ONLY BE INSTALLED FROM DECEMBER 15 THROUGH APRIL 15 DURING THE LATE WINTER/EARLY SPRING DORMANCY PERIOD. PLANTINGS OUTSIDE THESE TIMES MAY REQUIRE ADDITIONAL MEASURES TO ENSURE SURVIVAL (DEEP WATERING, EXTRA MULCH, ETC.)
- PLANTINGS SHALL BE MULCHED A MINIMUM OF 3" DEEP AND 18" IN DIAMETER TO RETAIN MOISTURE AND DISCOURAGE WEED GROWTH. MULCH SHALL BE CONSISTENT WITH CWS STANDARDS AND BE MADE FROM COMPOSTED BARK OR LEAVES THAT HAVE NOT BEEN CHEMICALLY TREATED. AVOID PLACING MULCH IN FREQUENTLY INUNDATED AREAS TO AVOID ANY POTENTIAL WATER QUALITY IMPACTS.
- ALL LANDSCAPING SHALL BE AUTOMATICALLY IRRIGATED BY REINSTALLATION OF THE EXISTING TEMPORARY IRRIGATION SYSTEM. IRRIGATION SYSTEM SHALL BE USED DURING THE TWO-YEAR ESTABLISHMENT PERIOD TO ENSURE PLANT SURVIVAL. WATERING SHALL BE AT A MINIMUM RATE OF AT LEAST 1" PER WEEK FROM JUNE 15 THROUGH OCTOBER 15 AND AS REQUIRED DURING INCLEMENT WEATHER DURING PLANT ESTABLISHMENT (A MINIMUM OF TWO YEARS). COORDINATE LOCATION FOR POINT OF CONNECTION WITH CITY. TEMPORARY IRRIGATION WATER COST WILL BE PAID FOR BY THE CITY.
- PLANTS SHALL BE TAGGED FOR DORMANT SEASON IDENTIFICATION IF REQUIRED BY CWS.
- TREE PLANTINGS SHALL BE PROTECTED FROM WILDLIFE DAMAGE (BEAVER, NUTRIA) BY INSTALLING TREE-PROTECTOR TUBES OR WIRE MESH CYLINDERS AROUND NEWLY INSTALLED PLANTINGS.
- MAINTENANCE: CWS REQUIRES A TWO-YEAR MAINTENANCE PERIOD FOR VEGETATED CORRIDOR ENHANCEMENT/MITIGATION. THE PERMITTEE OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR THE MAINTENANCE OF THE VEGETATED CORRIDOR PLANTINGS FOR A MINIMUM OF TWO-YEARS FOLLOWING CONSTRUCTION AND ACCEPTANCE OF THE IMPROVEMENTS. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, INVASIVE/NON-NATIVE PLANT MATERIAL REMOVAL; INSPECTION, REPLACEMENT, AND WINTERIZATION OF THE IRRIGATION SYSTEM COMPONENTS; PLANT PRUNING AND REPLACEMENT, ETC. MAINTENANCE SHALL OCCUR A MINIMUM OF THREE TIMES PER GROWING SEASON (MAY, JULY, SEPTEMBER) AND ONCE PRIOR TO ONSET OF THE GROWING SEASON (MARCH/APRIL). INVASIVE SPECIES CONTROL IS TO BE CONDUCTED AS NEEDED BASED UPON THE SITE INSPECTIONS. INVASIVE SPECIES INCLUDE: HIMALAYAN BLACKBERRY (RUBUS ARMENIACUS), REED CANARY GRASS (PHALARIS ARUNDINACEA), TEASEL (DIPSACUS FULLONUM), CANADA AND BULL THISTLE (CIRSIIUM ARVENSE AND C. VULGARE), SCOTCH BROOM (CYTISUS SCOPARIUS), PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), JAPANESE KNOTWEED (POLYGONIUM CUSPIDATUM), MORNING GLORY (CONVOLVULUS SPECIES), GIANT HOGWEED (HERACLEUM MANTEGAZIANUM), ENGLISH IVY (HEDERA HELIX), NIGHTSHADE (SOLANUM SPECIES), AND CLEMATIS (CLEMATIS LIGUSTICIFOLIA AND C. VITALBA).
- MONITORING: THE PERMITTEE OR THEIR REPRESENTATIVE IS RESPONSIBLE FOR VISITING AND EVALUATING THE SITE A MINIMUM OF TWICE ANNUALLY DURING THE GROWING SEASON (BY JUNE 1 AND SEPTEMBER 30) FOR THE TWO YEAR MAINTENANCE PERIOD. MAINTENANCE SHALL BE CONDUCTED AS NEEDED BASED UPON THE SITE INSPECTIONS. CWS' SUCCESS CRITERION FOR VEGETATED CORRIDOR LANDSCAPING IS 80% SURVIVAL OF TREE AND SHRUB PLANTINGS DURING THE TWO-YEARS FOLLOWING PLANTING. IF ANY MORTALITY IS NOTED ON THE SITE, THE FACTOR LIKELY TO HAVE CAUSED THE MORTALITY OF PLANTINGS IS TO BE DETERMINED AND CORRECTED IF POSSIBLE. IF SURVIVAL FALLS BELOW 80% AT ANY TIME DURING THE TWO-YEAR MAINTENANCE PERIOD, THE PLANTINGS SHALL BE REPLACED, AND OTHER CORRECTIVE MEASURES, SUCH AS ADDITIONAL MULCHING OR IRRIGATION, MAY NEED TO BE IMPLEMENTED. IF REPLANTING IS NECESSARY, THE MAINTENANCE PERIOD WILL BE EXTENDED FOR TWO-YEARS FROM THE DATE OF REPLANTING.



NOTES:  
1. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS. ALL CONCRETE SHALL CONTAIN ±5% OF 1% AIR ENTRAINMENT. SLUMP SHALL BE 1" TO 3" FOR FOUNDATIONS AND 1" TO 4" FOR ALL OTHER USES.

