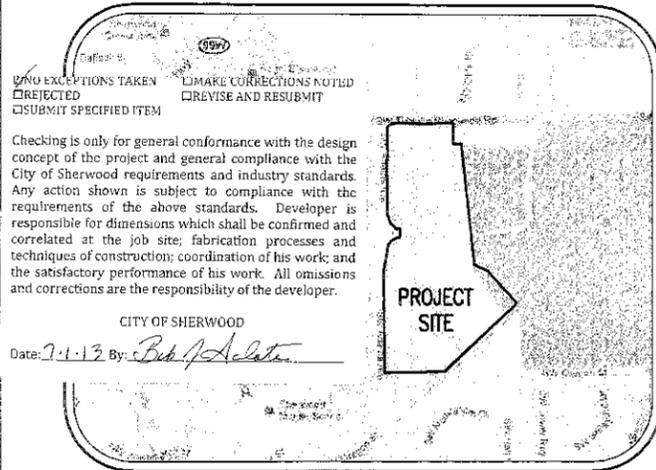
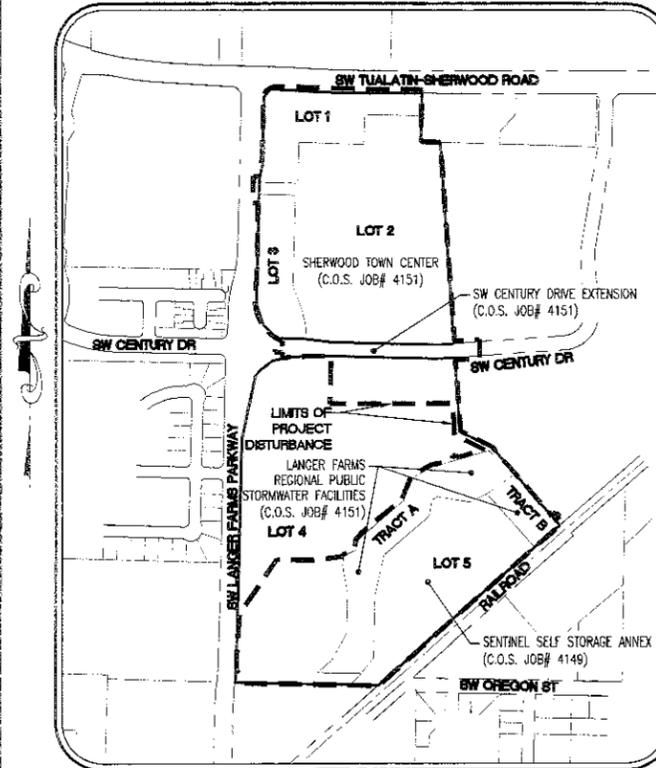


# LANGER FARMS/SENTINEL SELF STORAGE ANNEX



VICINITY MAP  
NO SCALE



SITE MAP  
1" = 400'

**PROPERTY DESCRIPTION:**

WASHINGTON COUNTY ASSESSOR'S MAP 2S 1 29DB, TAX LOTS 100, 200, 300 AND MAP 2S 1 29DC, TAX LOT 100, 200, 300, 400

**PROJECT LOCATION:**

14958 SW LANGER FARMS PARKWAY, SHERWOOD, OR 97140. EAST OF SW LANGER FARMS PARKWAY, SOUTH OF TUALATIN-SHERWOOD ROAD, NORTH OF SW OREGON STREET  
LATITUDE: 45.3611, LONGITUDE: -122.8343

**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, BEFORE COMMENCING AN EXCAVATION. CALL 503-246-6699.

## EROSION AND SEDIMENT CONTROL PLANS

**DEVELOPER**

LANGER GRAMOR, LLC.  
CONTACT: DEAN SORENSEN  
19767 SW 72ND AVENUE, SUITE 100  
TUALATIN, OR 97062

**PLANNING/ENGINEERING/SURVEYING FIRM**

AKS ENGINEERING & FORESTRY, LLC.  
CONTACT: ALEX HURLEY  
13910 SW GALBREATH DRIVE, SUITE 100  
SHERWOOD, OR 97140  
PH: 503-925-8799  
FAX: 503-925-8969

**NARRATIVE DESCRIPTIONS**

**EXISTING SITE CONDITIONS**

\* AGRICULTURAL USE

**DEVELOPED CONDITIONS**

\* STORAGE FACILITY, ACCESS, COMMERCIAL DEVELOPMENT AND REGIONAL STORMWATER FACILITY

**NATURE OF CONSTRUCTION ACTIVITY AND TIME TABLE FOR MAJOR ACTIVITIES**

- \* CLEARING AND TREE REMOVAL (MAY 1, 2013 - JULY 15, 2013)
- \* GRADING (EXCAVATION AND FILL) (MAY 15, 2013 - SEPTEMBER 15, 2013)
- \* INSTALLATION OF UTILITY (MAY 1, 2013 - APRIL 15, 2014)
- \* FINAL STABILIZATION (SEPTEMBER 15, 2013 - APRIL 15, 2014)

TOTAL SITE AREA = 2,399,720 SF = 55.09 ACRES

TOTAL DISTURBED AREA = 1,827,534 SF = 41.95 ACRES

**SITE SOIL CLASSIFICATION:**

- 1 - ALOHA SILT LOAM
- 21A - HILLSBORO LOAM, 0 TO 3 PERCENT SLOPES
- 37A - QUATAMA LOAM, 0 TO 3 PERCENT SLOPES
- 37B - QUATAMA LOAM, 3 TO 7 PERCENT SLOPES
- 42 - VERBOORT SILTY CLAY LOAM

ON-SITE SOILS HAVE A SLIGHT EROSION POTENTIAL. ALL FILL MATERIAL SHALL BE GENERATED ON-SITE FROM GRADING EXCAVATION AND UTILITY TRENCH SPOILS OR HAULED IN FROM OFFSITE SOURCES.

**RECEIVING WATER BODIES:**

ROCK CREEK

**PERMITEE'S SITE INSPECTOR:** JARED HARGENS

COMPANY/AGENCY: NORTHWEST EARTHMOVERS INC.  
PHONE: 971-253-9206  
FAX: -----  
E-MAIL: JAREDHARGENS@NWEARTHMOVERS.COM  
DESCRIPTION OF EXPERIENCE: EMPLOYEE OF NORTHWEST EARTHMOVERS INC. FOR 6 YEARS AND A PROJECT MANAGER FOR 3 YEARS. JARED HARGENS HAS BEEN INVOLVED WITH ALL FACETS OF SITEWORK CONSTRUCTION INCLUDING THE MANAGEMENT AND SUPERVISION OF EROSION CONTROL.

**RATIONALE STATEMENT**

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE ABOVE LISTED BMP'S WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS, TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

**STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:**

- ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A.8.A)
- THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS. (SCHEDULE A.8.C.I.(1)(C))
- SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT. (SCHEDULE A.12.C.II)
- PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A.8.C.I.(1)(D))
- IDENTIFY, MARK, AND PROTECT (BY FENCING OFF 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. (SCHEDULE A.8.C.I.(1) & (2))
- PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.B.II(1) AND A.7.B.II(3))
- EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS. (SCHEDULE A.7.D.I AND A.8.C)
- ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
- APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS. (SCHEDULE A.8.C.I.(2))
- ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
- PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ON-SITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A.7.D.II(1) AND A.8.C.I.(4))
- WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II(3))
- 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, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2))
- 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. (SCH A.7.E.II)
- USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL (SCHEDULE A.7.B.II)
- THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SCHEDULE A.9.B.II)
- IF A STORMWATER 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 INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SCHEDULE A.9.D)
- TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A.7.B)
- 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. (SCHEDULE A.7.E.II.(2))
- CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER. (SCHEDULE A.7.A.I)
- SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
- OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT, AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.II)
- 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. (SCHEDULE A.9.C.III & IV)
- 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 REOCCURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
- THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
- THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
- PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE 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. (SCHEDULE A.7.F.II)
- PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS. (SCHEDULE A.7.B.II(2) AND A.8.C.II)

**LOCAL AGENCY-SPECIFIC EROSION CONTROL NOTES:**

- IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1; THE TYPE AND PERCENTAGES OF SEED IN THE MIX MUST BE IDENTIFIED ON THE PLANS.
- ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (E. FILTER BAG).
- ALL EXPOSED SOILS MUST BE COVERED DURING THE WET WEATHER PERIOD, OCTOBER 01 - MAY 31.

THE PERMITEE IS REQUIRED TO MEET ALL THE CONDITIONS OF THE 1200C PERMIT. THIS ESCP AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS. IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERCEDE REQUIREMENTS OF THIS PLAN.

**BMP MATRIX FOR CONSTRUCTION PHASES**

REFER TO DEQ GUIDANCE MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S.

|                               | CLEARING | GRADING | UTILITY INSTALLATION | STREET CONSTRUCTION | FINAL STABILIZATION | WET WEATHER (OCT. 1 - MAY 31ST) |
|-------------------------------|----------|---------|----------------------|---------------------|---------------------|---------------------------------|
| <b>EROSION PREVENTION</b>     |          |         |                      |                     |                     |                                 |
| PRESERVE NATURAL VEGETATION   | ** X     | X       | X                    | X                   | X                   | X                               |
| GROUND COVER                  |          |         |                      |                     | X                   | X                               |
| <b>HYDRAULIC APPLICATIONS</b> |          |         |                      |                     |                     |                                 |
| PLASTIC MULCHING              |          | X       |                      |                     |                     | X                               |
| DUST CONTROL                  | X        | X       | X                    | X                   | X                   | X                               |
| TEMPORARY PERMANENT SEEDING   |          |         |                      |                     | X                   | X                               |
| BUFFER ZONE                   | ** X     | X       | X                    | X                   | X                   | X                               |
| <b>OTHER</b>                  |          |         |                      |                     |                     |                                 |
| SEDIMENT CONTROL              |          |         |                      |                     |                     |                                 |
| SEDIMENT FENCE (PERIMETER)    | ** X     | X       | X                    | X                   |                     | X                               |
| SEDIMENT FENCE (OUTER)        |          |         |                      |                     |                     | X                               |
| STRAW MATS                    | ** X     | X       | X                    | X                   |                     | X                               |
| FILTER BERM                   |          |         |                      |                     | X                   | X                               |
| VALET PROTECTION              | ** X     | X       | X                    | X                   | X                   | X                               |
| DEWATERING                    |          |         |                      |                     |                     | X                               |
| SEDIMENT TRAP                 |          |         |                      |                     |                     | X                               |
| <b>OTHER</b>                  |          |         |                      |                     |                     |                                 |
| RAIN OFF CONTROL              |          |         |                      |                     |                     |                                 |
| CONSTRUCTION ENTRANCE         | ** X     | X       | X                    | X                   |                     | X                               |
| PIPE SLOPE DRAIN              |          |         |                      |                     |                     | X                               |
| OUTLET PROTECTION             |          |         | X                    | X                   |                     | X                               |
| SURFACE ROADSEEDING           |          |         | X                    | X                   |                     | X                               |
| CHECK DAM                     |          | X       | X                    | X                   |                     | X                               |
| <b>OTHER</b>                  |          |         |                      |                     |                     |                                 |
| POLLUTION PREVENTION          |          |         |                      |                     |                     |                                 |
| PROPER SIGNAGE                | X        | X       | X                    | X                   | X                   | X                               |
| HAZ WASTE MGMT                | X        | X       | X                    | X                   | X                   | X                               |
| SPILL KIT ON-SITE             | X        | X       | X                    | X                   | X                   | X                               |
| CONCRETE WASHOUT AREA         | X        | X       | X                    | X                   | X                   | X                               |

\*\* SIGNIFIES BMP THAT WILL BE INSTALLED PRIOR TO ANY GROUND DISTURBING ACTIVITY.

**INSPECTION FREQUENCY**

| SITE CONDITION   | MINIMUM FREQUENCY  |
|--|--|
| 1. ACTIVE PERIOD   | DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING.  |
| 2. PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY. | AT LEAST ONCE EVERY TWO (2) WEEKS REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.  |
| 3. INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS.              | ONCE TO ENSURE THAT EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER. ANY NECESSARY MAINTENANCE AND REPAIR MUST BE MADE PRIOR TO LEAVING THE SITE. |
| 4. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER.         | IF PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT AND ACCESSIBLE DISCHARGE POINT OR DOWNSTREAM LOCATION.  |

- \* HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS. (SCHEDULE A.8.C.I.(3))
- \* ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS.
- \* INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
- \* RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS OF GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION. (SCHEDULE B.2.A)

**SHEET INDEX**

**EROSION AND SEDIMENT CONTROL PLANS**

|      |  |
|------|--|
| C050 | EROSION AND SEDIMENT CONTROL COVER SHEET           |
| C051 | CLEARING, EROSION, AND SEDIMENT CONTROL PLAN SOUTH |
| C052 | CLEARING, EROSION, AND SEDIMENT CONTROL PLAN NORTH |
| C053 | GRADING EROSION AND SEDIMENT CONTROL PLAN SOUTH    |
| C054 | GRADING EROSION AND SEDIMENT CONTROL PLAN NORTH    |
| C055 | EROSION AND SEDIMENT CONTROL DETAILS               |
| C056 | EROSION AND SEDIMENT CONTROL DETAILS               |

EROSION AND SEDIMENT CONTROL COVER SHEET

PERMIT SET  
LANGER FARMS  
SHERWOOD  
WASHINGTON COUNTY TAX MAP 2S 1 29D

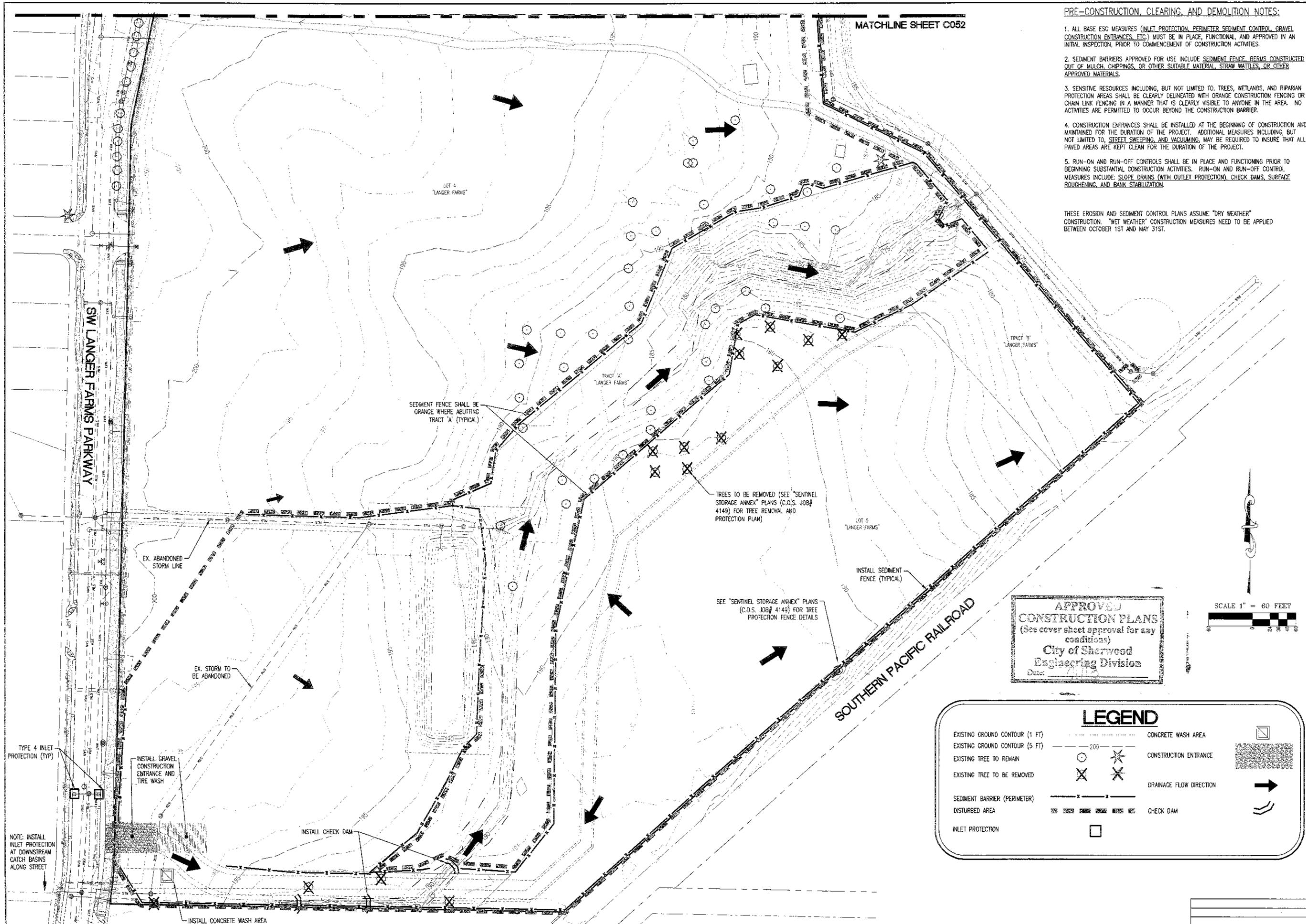


DESIGNED BY: AMH  
DRAWN BY: QMP  
CHECKED BY: AMH  
DRAWING NO: E1-C050  
SCALE: AS NOTED

PREPARED FOR:  
LANGER GRAMOR, LLC.  
19767 SW 72ND AVENUE  
SUITE 100  
TUALATIN, OR 97062  
DATE: 07/01/13



JOB NUMBER  
2929  
SHEET  
C050



MATCHLINE SHEET C052

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

1. 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.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. 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.
4. 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.
5. 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.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

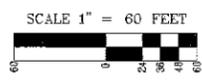
SEDIMENT FENCE SHALL BE ORANGE WHERE ABUTTING TRACT 'A' (TYPICAL)

TREES TO BE REMOVED (SEE "SENTINEL STORAGE ANNEX" PLANS (C.O.S. JOB# 4149) FOR TREE REMOVAL AND PROTECTION PLAN)

SEE "SENTINEL STORAGE ANNEX" PLANS (C.O.S. JOB# 4149) FOR TREE PROTECTION FENCE DETAILS

INSTALL SEDIMENT FENCE (TYPICAL)

**APPROVED CONSTRUCTION PLANS**  
 (See cover sheet approval for any conditions)  
**City of Sherwood Engineering Division**  
 Date: 7/13/13



**LEGEND**

|                                |           |                         |  |
|--------------------------------|-----------|-------------------------|--|
| EXISTING GROUND CONTOUR (1 FT) | ---       | CONCRETE WASH AREA      |  |
| EXISTING GROUND CONTOUR (5 FT) | - - - -   | CONSTRUCTION ENTRANCE   |  |
| EXISTING TREE TO REMAIN        | ○         | DRAINAGE FLOW DIRECTION |  |
| EXISTING TREE TO BE REMOVED    | ✕         | CHECK DAM               |  |
| SEDIMENT BARRIER (PERIMETER)   | - x - x - |                         |  |
| DISTURBED AREA                 |           |                         |  |
| INLET PROTECTION               | □         |                         |  |

TYPE 4 INLET PROTECTION (TYP)

INSTALL GRAVEL CONSTRUCTION ENTRANCE AND TIRE WASH

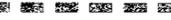
INSTALL CHECK DAM

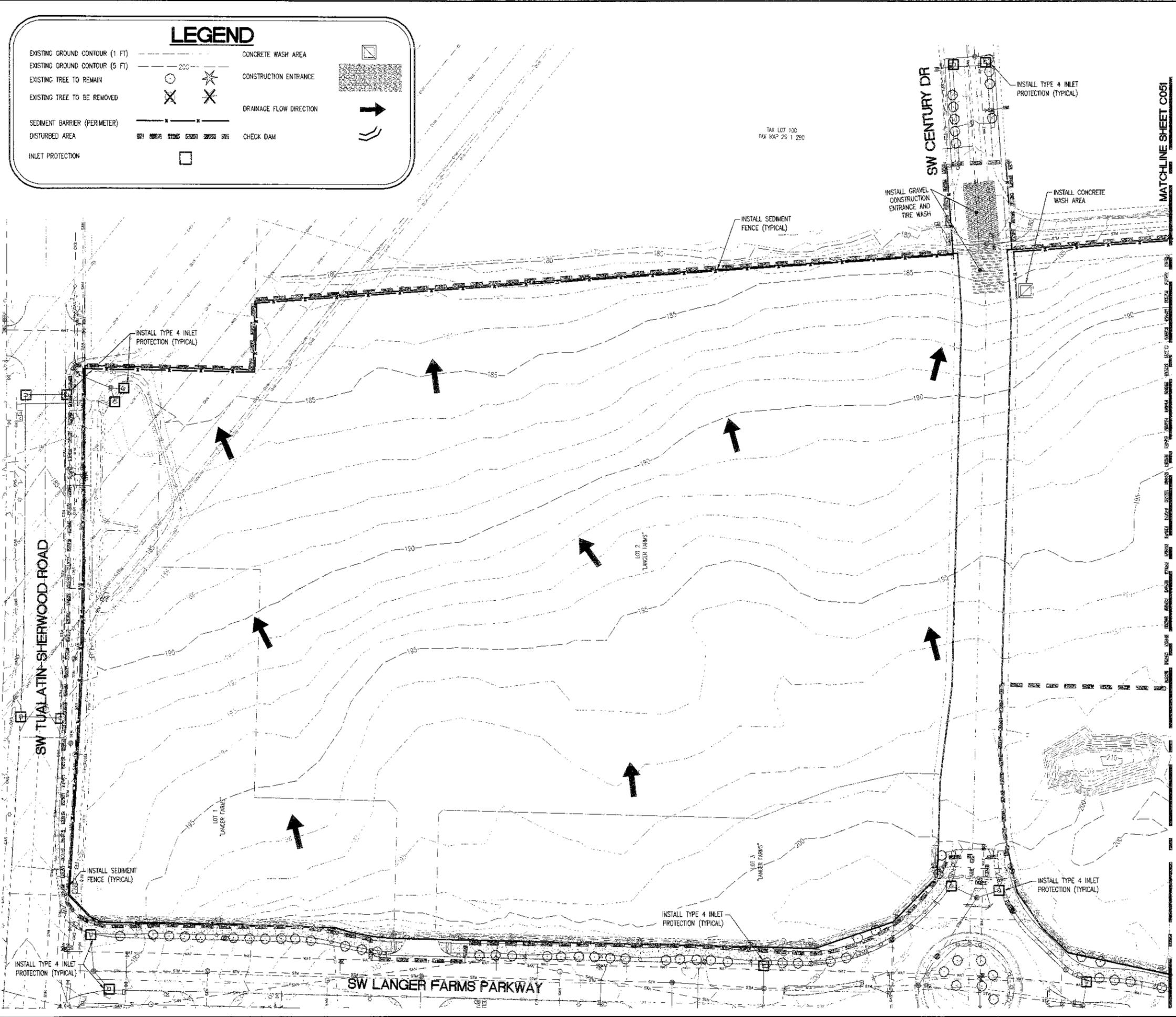
INSTALL CONCRETE WASH AREA

NOTE: INSTALL INLET PROTECTION AT DOWNSTREAM CATCH BASINS ALONG STREET

**CLEARING, EROSION, AND SEDIMENT CONTROL PLAN SOUTH**  
**PERMIT SET**  
**LANGER FARMS**  
**SHERWOOD OREGON**  
 WASHINGTON COUNTY TAX MAP 25-1-290  
**AKS**  
 ENGINEERING & FORESTRY  
 ENGINEERING · PLANNING  
 SURVEYING · FORESTRY  
 13810 SW GAUREATH DR.,  
 SUITE 100  
 SHERWOOD, OR 97140  
 PHONE: (503) 925-8799  
 FAX: (503) 925-8869  
 DESIGNED BY: AHH  
 DRAWN BY: QMP  
 CHECKED BY: AHH  
 DRAWING NO.: E1-C051  
 SCALE: AS NOTED  
**PREPARED FOR:**  
 LANGER GRAMOR, LLC  
 19767 SW 72ND AVENUE  
 SUITE 100  
 TUALATIN, OR 97062  
 DATE: 07/01/13  
  
 RENEWAL DATE: 6/30/15  
 JOB NUMBER  
**2929**  
 SHEET  
**C051**

### LEGEND

|                                |   |                         |   |
|--------------------------------|---|-------------------------|---|
| EXISTING GROUND CONTOUR (1 FT) | - - - - -   | CONCRETE WASH AREA      |  |
| EXISTING GROUND CONTOUR (5 FT) | - - - - -   | CONSTRUCTION ENTRANCE   |  |
| EXISTING TREE TO REMAIN        |  | DRAINAGE FLOW DIRECTION |  |
| EXISTING TREE TO BE REMOVED    |  | CHECK DAM               |  |
| SEDIMENT BARRIER (PERIMETER)   |  | INLET PROTECTION        |  |
| DISTURBED AREA                 |  |                         |   |



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

1. 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.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPINGS, OR OTHER SUITABLE MATERIAL, STRAW MATS, OR OTHER APPROVED MATERIALS.
3. 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.
4. 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.
5. 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.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

MATCHLINE SHEET C051

**CLEARING, EROSION, AND SEDIMENT CONTROL PLAN NORTH**

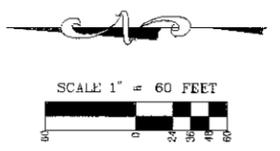
**PERMIT SET  
LANGER FARMS  
SHERWOOD OREGON**  
WASHINGTON COUNTY TAX MAP 25 1 250  
TAX LOT 300

**AKS**  
ENGINEERING & FORESTRY  
ENGINEERING · PLANNING  
SURVEYING · FORESTRY  
13910 SW GALEBREATH DR.,  
SUITE 100  
SHERWOOD, OR 97140  
PHONE: (503) 325-8799  
FAX: (503) 325-8865

|               |  |
|---------------|--|
| DESIGNED BY:  | AHH  |
| DRAWN BY:     | OMP  |
| CHECKED BY:   | AHH  |
| DRAWING NO.:  | E1-C051  |
| SCALE:        | AS NOTED   |
| PREPARED FOR: | LANGER GRAMOR, LLC,<br>19767 SW 72ND AVENUE<br>SUITE 100<br>TUALATIN, OR 97062 |
| DATE:         | 07/01/13   |

**REGISTERED PROFESSIONAL**  
ALEXANDER H. HUBLEY  
OREGON  
RENEWAL DATE: 6/30/13

**APPROVED  
CONSTRUCTION PLANS**  
(See cover sheet approval for any conditions)  
**City of Sherwood  
Engineering Division**  
Date:



|            |      |
|------------|------|
| JOB NUMBER | 2929 |
| SHEET      | C052 |

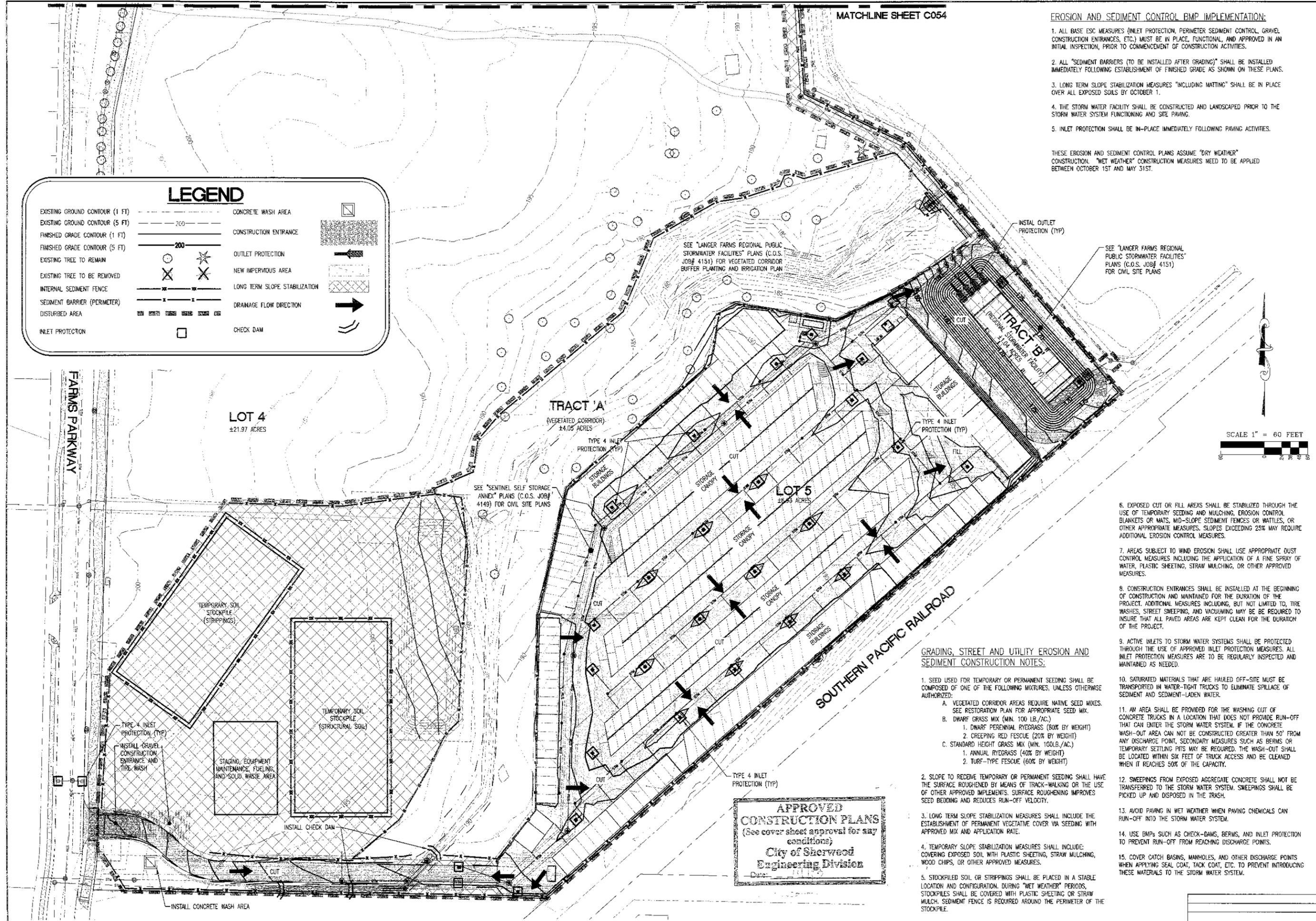
**EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:**

1. 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.
2. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
3. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.
4. THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.
5. INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

**LEGEND**

|                                |              |                               |          |
|--------------------------------|--------------|-------------------------------|----------|
| EXISTING GROUND CONTOUR (1 FT) | --- 1 FT --- | CONCRETE WASH AREA            | [Symbol] |
| EXISTING GROUND CONTOUR (5 FT) | --- 5 FT --- | CONSTRUCTION ENTRANCE         | [Symbol] |
| FINISHED GRADE CONTOUR (1 FT)  | --- 1 FT --- | OUTLET PROTECTION             | [Symbol] |
| FINISHED GRADE CONTOUR (5 FT)  | --- 5 FT --- | NEW IMPERVIOUS AREA           | [Symbol] |
| EXISTING TREE TO REMAIN        | [Symbol]     | LONG TERM SLOPE STABILIZATION | [Symbol] |
| EXISTING TREE TO BE REMOVED    | [Symbol]     | DRAINAGE FLOW DIRECTION       | [Symbol] |
| INTERNAL SEDIMENT FENCE        | [Symbol]     | CHECK DAM                     | [Symbol] |
| SEDIMENT BARRIER (PERIMETER)   | [Symbol]     |                               |          |
| DISTURBED AREA                 | [Symbol]     |                               |          |
| INLET PROTECTION               | [Symbol]     |                               |          |



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

1. SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
  - A. VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
  - B. DWARF GRASS MIX (MIN. 100 LB./AC.)
    - 1. DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
    - 2. CREEPING RED FESCUE (20% BY WEIGHT)
  - C. STANDARD HEIGHT GRASS MIX (MIN. 100LB./AC.)
    - 1. ANNUAL RYEGRASS (40% BY WEIGHT)
    - 2. TURF-TYPE FESCUE (60% BY WEIGHT)
2. 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.
3. LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
4. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
11. 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.
12. SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
13. AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
14. USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
15. 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.

**APPROVED CONSTRUCTION PLANS**  
 (See cover sheet approval for any conditions)  
 City of Sherwood  
 Engineering Division  
 Date: \_\_\_\_\_

**GRADING EROSION AND SEDIMENT CONTROL PLAN SOUTH**

**PERMIT SET**  
**LANGER FARMS**  
**SHERWOOD OREGON**  
 WASHINGTON COUNTY TAX MAP 25 1 290

**AKS**  
 ENGINEERING & SURVEYING  
 ENGINEERING - PLANNING  
 SURVEYING - FORESTRY  
 13910 SW CALBREATH DR.,  
 SUITE 100  
 SHERWOOD, OR 97140  
 PHONE: (503) 925-8799  
 FAX: (503) 925-8969

|              |          |
|--------------|----------|
| DESIGNED BY: | AHH      |
| DRAWN BY:    | QMP      |
| CHECKED BY:  | AHH      |
| DRAWING NO.: | E1-C055  |
| SCALE:       | AS NOTED |

**PREPARED FOR:**  
 LANGER GRAMOR, LLC.  
 19767 SW 72ND AVENUE  
 SUITE 100  
 TUALATIN, OR 97062

DATE: 07/01/13

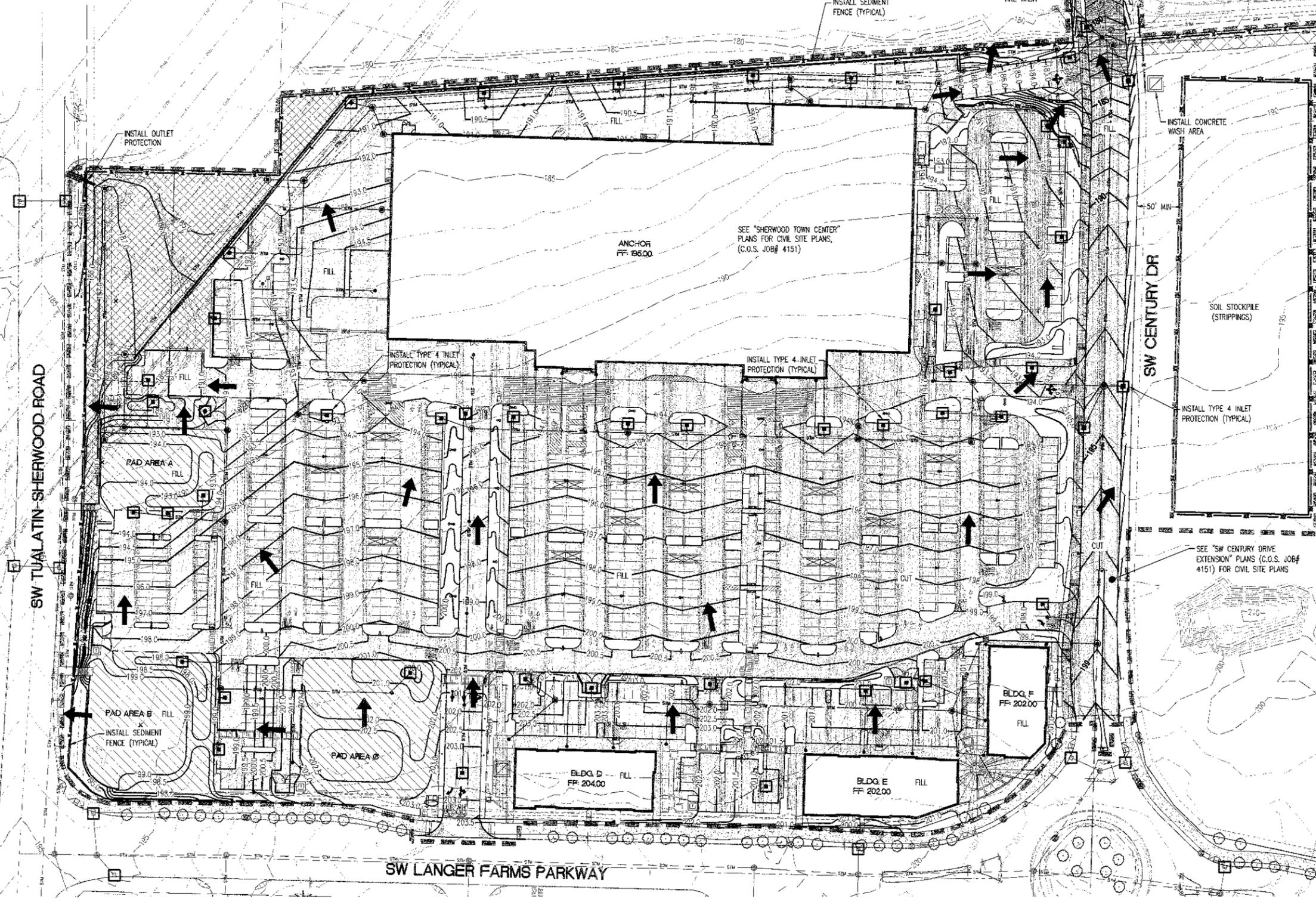
**REGISTERED PROFESSIONAL**  
 SURVEYOR  
 5652992  
 OREGON  
 ALEXANDER H. HURLEY  
 RENEWAL DATE: 6/30/15

JOB NUMBER  
**2929**  
 SHEET  
**C053**

### LEGEND

|                                |     |                               |  |
|--------------------------------|-----|-------------------------------|--|
| EXISTING GROUND CONTOUR (1 FT) | --- | CONCRETE WASH AREA            |  |
| EXISTING GROUND CONTOUR (5 FT) | --- | CONSTRUCTION ENTRANCE         |  |
| FINISHED GRADE CONTOUR (1 FT)  | --- | OUTLET PROTECTION             |  |
| FINISHED GRADE CONTOUR (5 FT)  | --- | NEW IMPERVIOUS AREA           |  |
| EXISTING TREE TO REMAIN        |     | LONG TERM SLOPE STABILIZATION |  |
| EXISTING TREE TO BE REMOVED    |     | DRAINAGE FLOW DIRECTION       |  |
| INTERNAL SEDIMENT FENCE        |     | CRUSHED ROCK BUILDING PAD     |  |
| SEDIMENT BARRIER (PERIMETER)   |     |                               |  |
| DISTURBED AREA                 |     |                               |  |
| INLET PROTECTION               |     |                               |  |

**APPROVED  
CONSTRUCTION PLANS**  
(See cover sheet approval for any conditions)  
**City of Sherwood  
Engineering Division**  
Date: 7/12/13



MATCHLINE SHEET C053

- EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION:**
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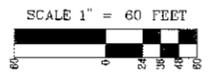
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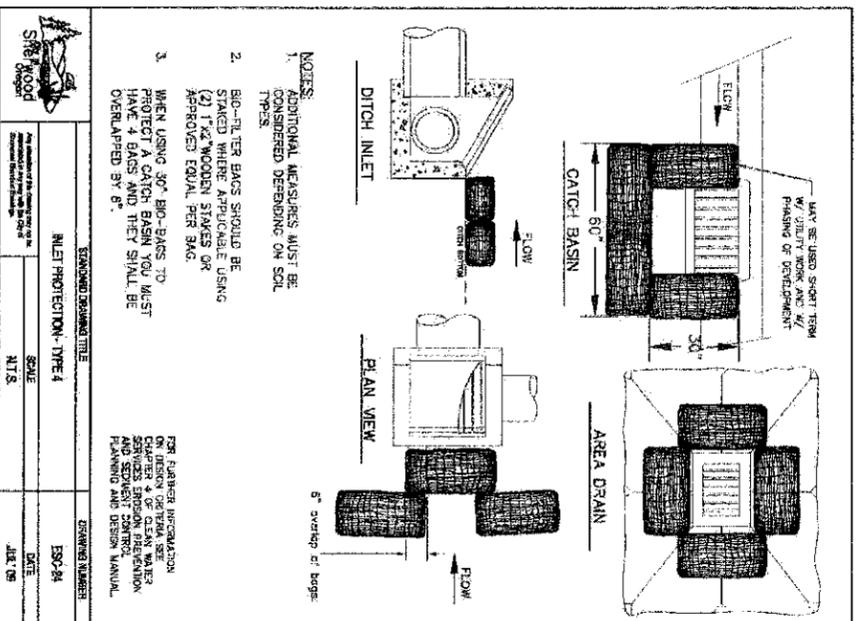
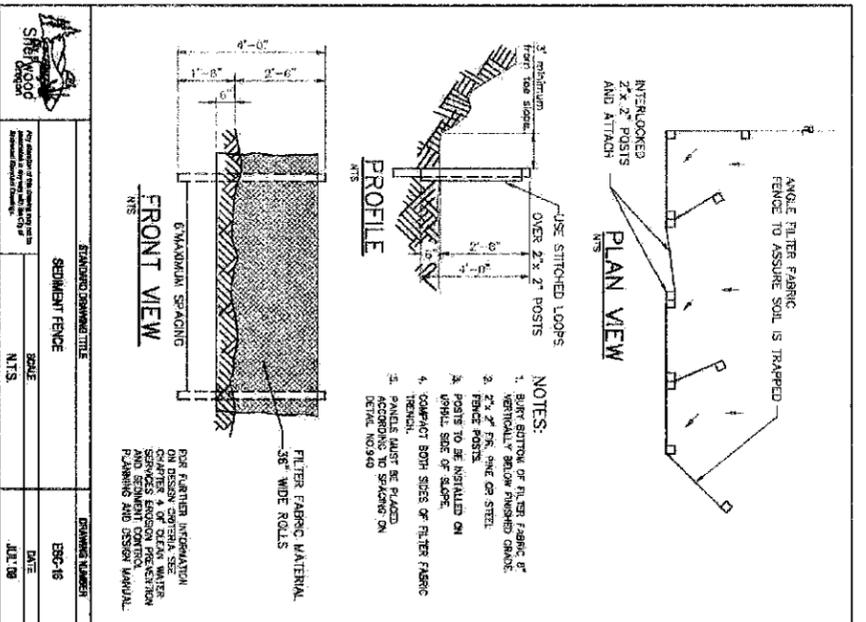
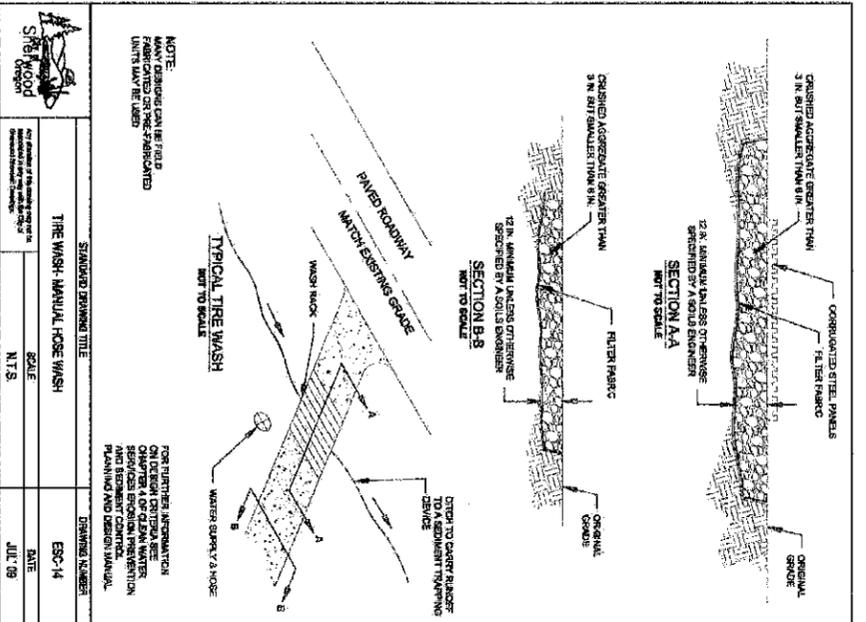
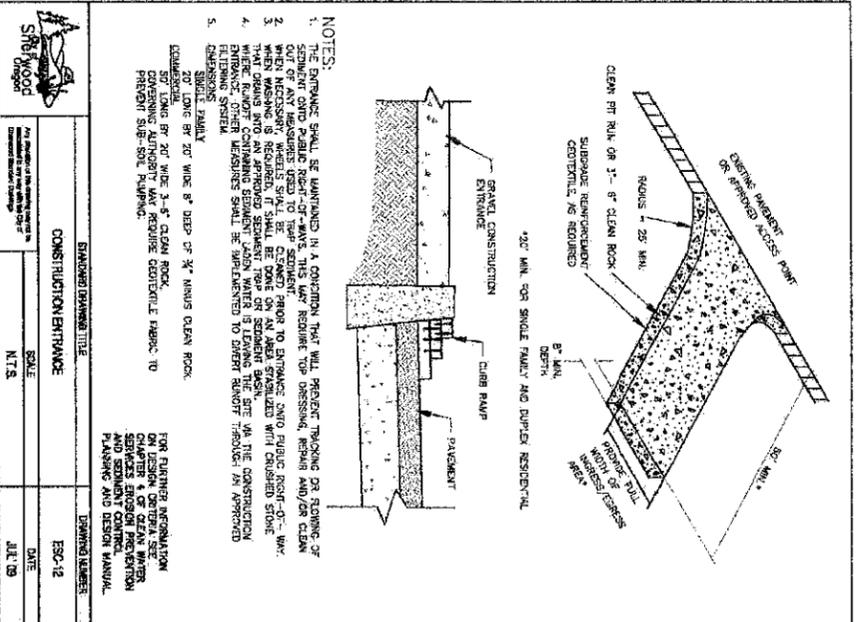
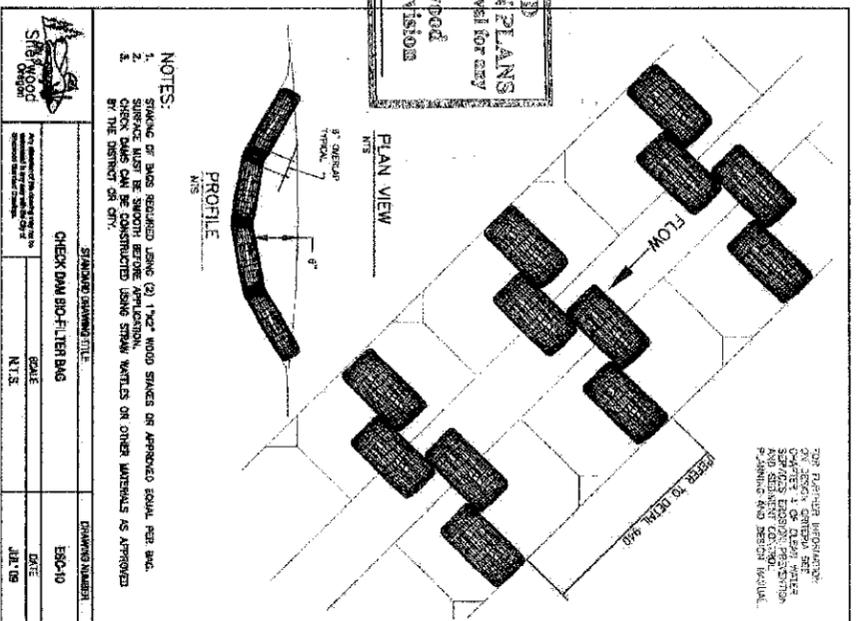
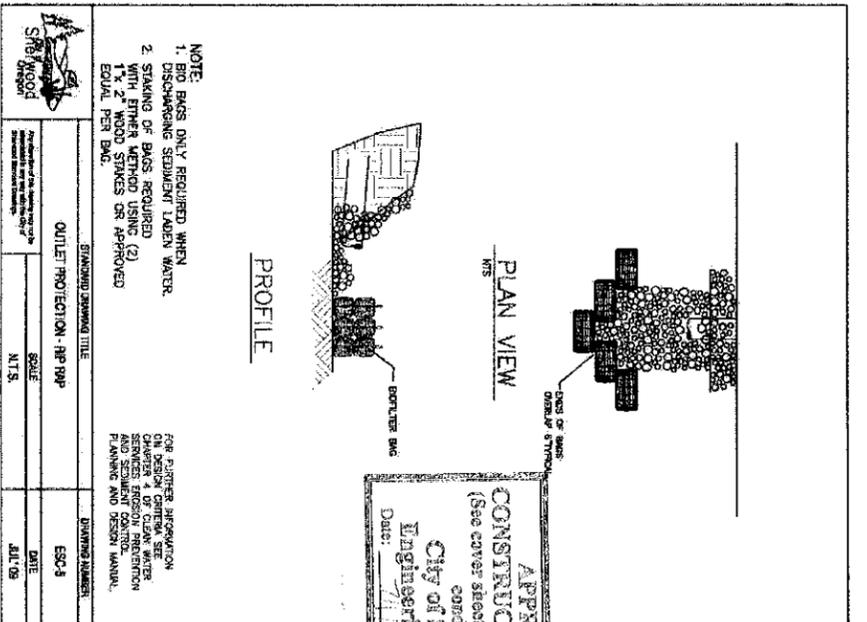
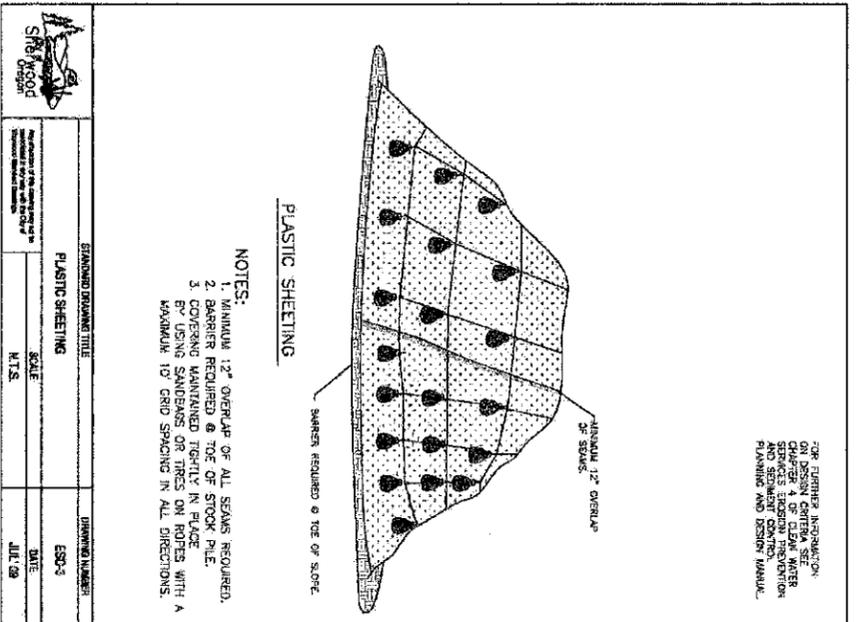
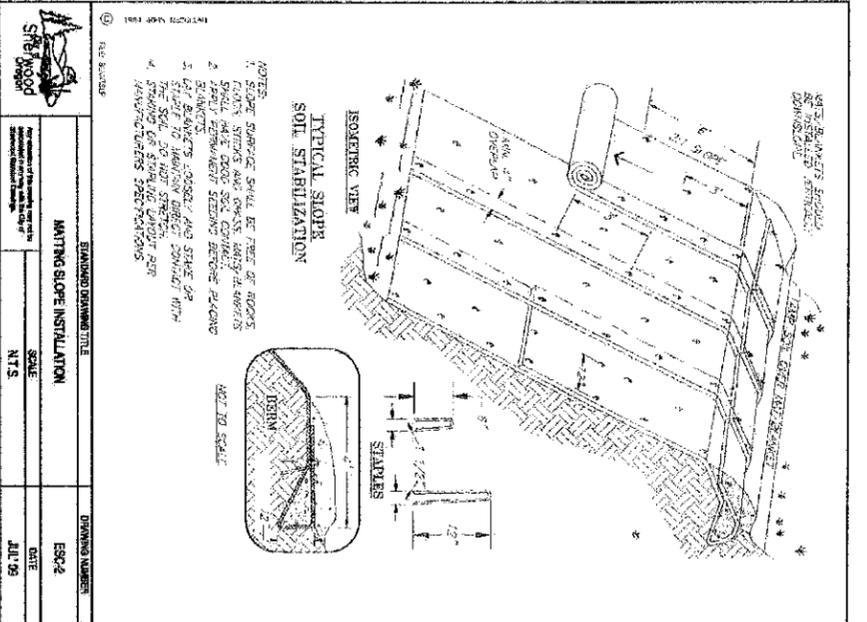
**GRADING EROSION AND SEDIMENT CONTROL PLAN NORTH**

**PERMIT SET  
LANGER FARMS  
SHERWOOD**

**AKS**  
ENGINEERING & FORESTRY  
13310 SW GALBREATH DR.,  
SUITE 100  
SHERWOOD, OR 97140  
PHONE: (503) 925-8799  
FAX: (503) 925-8888

DESIGNED BY: AHJ  
DRAWN BY: OMP  
CHECKED BY: AHJ  
DRAWING NO.: E1-C053  
SCALE: AS NOTED  
PREPARED FOR:  
LANGER GRAMCO, LLC.  
19767 SW 72ND AVENUE  
SUITE 100  
TUALATIN, OR 97062  
DATE: 07/01/13  
  
JOB NUMBER  
**2929**  
SHEET  
**C054**





FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

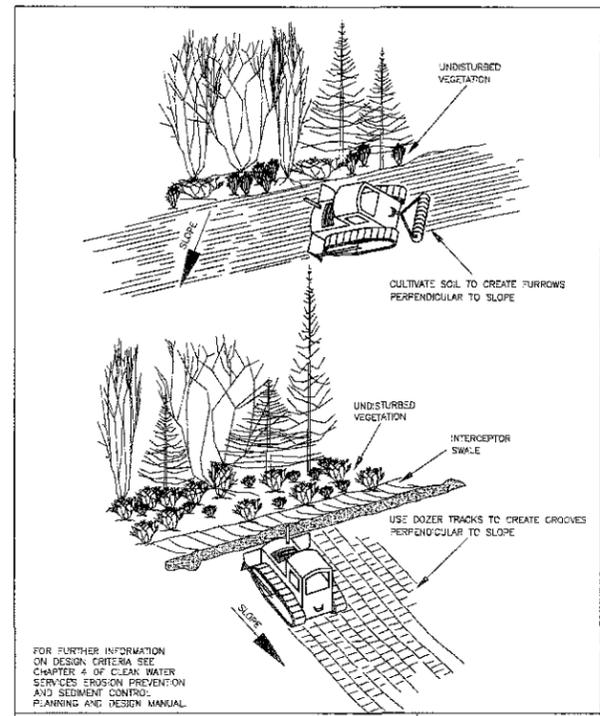
| SPACING FOR CHECK DAMS |             |            |            |
|------------------------|-------------|------------|------------|
| DITCH GRADE            | 6 INCH      | 12 INCH    | 18 INCH    |
| 5%                     | NOT ALLOWED | 16 FT O.C. | 26 FT O.C. |
| 5%                     | NOT ALLOWED | 20 FT      | 30 FT      |
| 4%                     | NOT ALLOWED | 26 FT      | 40 FT      |
| 3%                     | 15 FT       | 33 FT      | 50 FT      |
| 2%                     | 25 FT       | 50 FT      | 80 FT      |

**BARRIER SPACING FOR GENERAL APPLICATION**

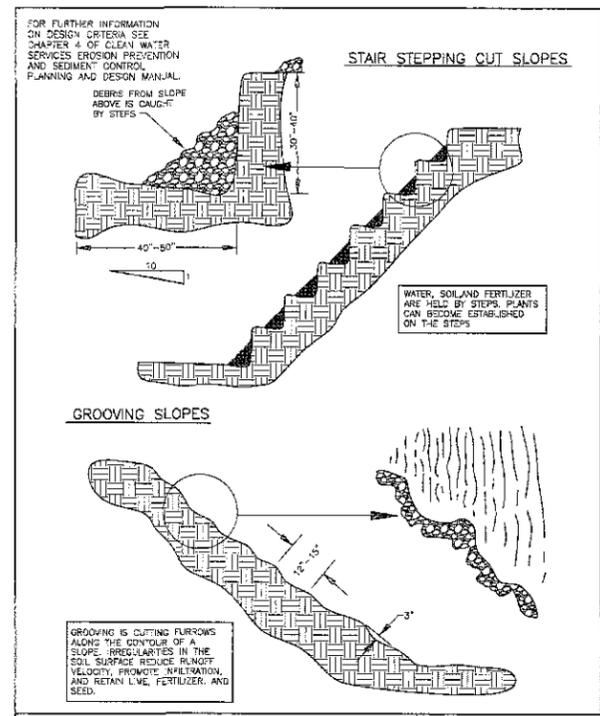
| INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS |                 |                          |
|--|-----------------|--------------------------|
| % SLOPE                                    | SLOPE           | MAXIMUM SPACING ON SLOPE |
| 10% OR FLATTER                             | 10:1 OR FLATTER | 300 FT                   |
| >10% OR <15%                               | >10:1 OR <7.5:1 | 150 FT                   |
| >15% OR <20%                               | >7.5:1 OR <5:1  | 100 FT                   |
| >20% OR <30%                               | >5:1 OR <3.5:1  | 50 FT                    |
| >30% OR <50%                               | >3.5:1 OR <2:1  | 25 FT                    |

FOR MORE INFORMATION REGARDING THESE TABLES SEE CHAPTER 4 TABLES 4-2 AND 4-7 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL DESIGN MANUAL.

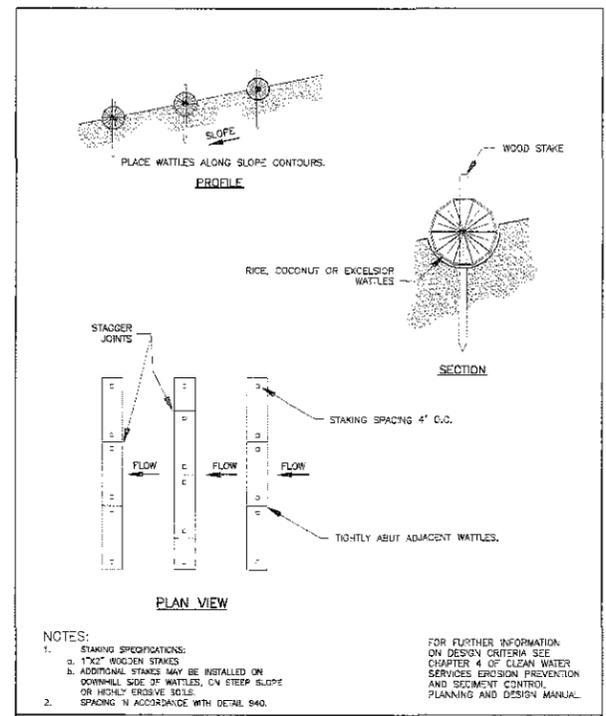
| STANDARD DRAWING TITLE | DRAWING NUMBER |
|------------------------|----------------|
| SPACING TABLES         | ESC-29         |
| SCALE                  | DATE           |
| N.T.S.                 | JUL '09        |



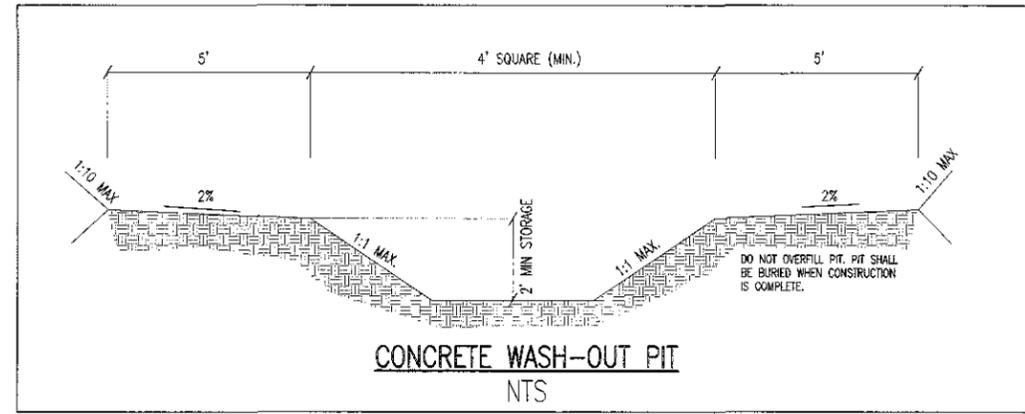
**SURFACE ROUGHENING CAT TRACKING**  
DRAWING NO. 530 REVISED 12-06  
CleanWater Services  
Our commitment is clear.



**SURFACE ROUGHENING STAIR STEPPING/GROOVING SLOPES**  
DRAWING NO. 535 REVISED 12-06  
CleanWater Services  
Our commitment is clear.



**WATTLES**  
DRAWING NO. 850 REVISED 12-06  
CleanWater Services  
Our commitment is clear.



**CONCRETE WASH-OUT PIT**  
NTS

**APPROVED CONSTRUCTION PLANS**  
(See cover sheet approval for any conditions)  
City of Sherwood  
Engineering Division  
Date: 07/07/13

EROSION AND SEDIMENT CONTROL DETAILS

PERMIT SET  
LANGER FARMS  
SHERWOOD OREGON  
WASHINGTON COUNTY TAX MAP 25.1.290  
SHERWOOD TAX LOT 300

AKS ENGINEERING & FORESTRY  
ENGINEERING • PLANNING  
SURVEYING • FORESTRY  
13810 SW GALBREATH DR.,  
SUITE 100  
SHERWOOD, OR 97140  
PHONE: (503) 925-8799  
FAX: (503) 925-8969

DESIGNED BY: AHH  
DRAWN BY: QMP  
CHECKED BY: AHH  
DRAWING NO.: E1-0055  
SCALE: AS NOTED  
PREPARED FOR:  
LANGER GRAMOR, LLC  
19767 SW 72ND AVENUE  
SUITE 100  
TUALATIN, OR 97062  
DATE: 07/07/13  
REGISTERED PROFESSIONAL  
ENGINEER  
ALEXANDER H. HURLEY  
OR0001  
RENEWAL DATE: 6/30/13

JOB NUMBER  
2929  
SHEET  
C056