DRAWING SCALE
NOTE: ALL DRAWING SCALES ARE BASED ON A FULL SIZE PLAN SHEET OF 22"X34" UNLESS NOTED OTHERWISE.
VERIFY SCALE
0 1"
BAR IS ONE INCH ON ORIGINAL DRAWING, IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

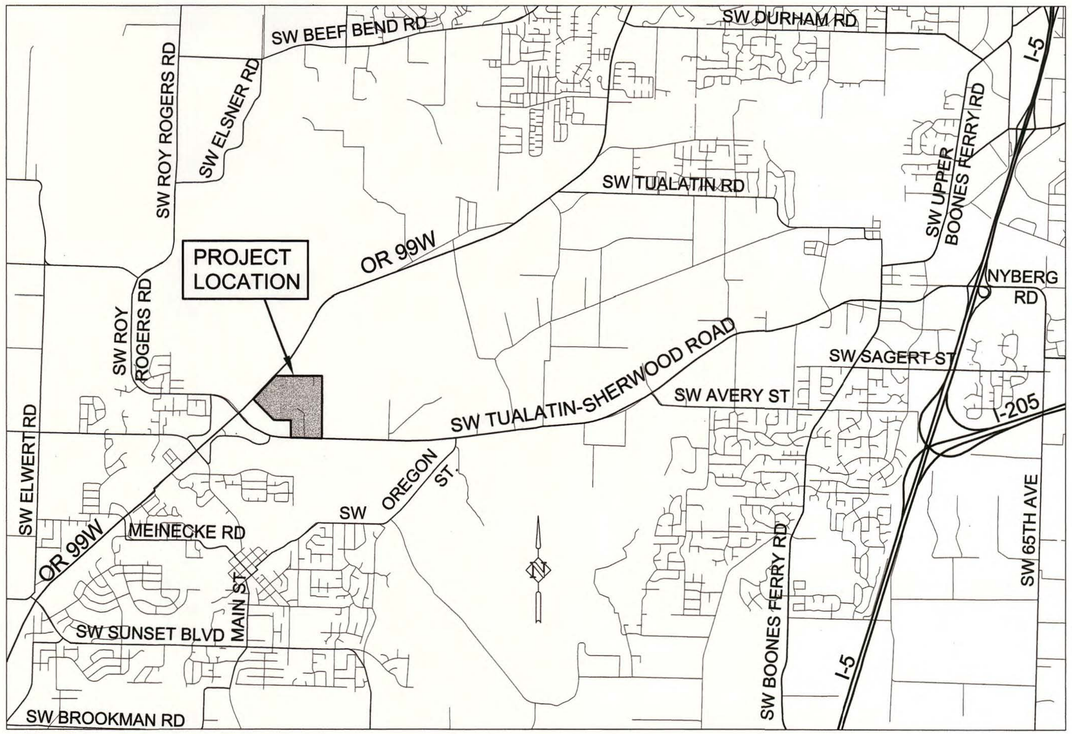
ADAMS AVENUE NORTH

HIGHWAY 99W TO TUALATIN-SHERWOOD ROAD
GRADING, STRUCTURES, AND PAVING
SHERWOOD, OREGON

☐NO EXCEPTIONS TAKEN ☐MAKE CORRECTIONS NOTED
☐REJECTED ☐REVISE AND RESUBMIT
☐SUBMIT SPECIFIED ITEM

Checking is only for general conformance with the design concept of the project and general compliance with the City of Sherwood requirements and industry standards. Any action shown is subject to compliance with the requirements of the above standards. Developer is responsible for dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work; and the satisfactory performance of his work. All omissions and corrections are the responsibility of the developer.

CITY OF SHERWOOD
Date: 7-2-13 By: [signature]



VICINITY MAP
N.T.S.

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FINAL DESIGN

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.

PROPERTY DESCRIPTION:
PUBLIC RIGHT–OF–WAY

NORTHEAST AND NORTHWEST 1/4 OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

NOTE:
THE ENGINEER OF RECORD AND CITY ENGINEER SHALL APPROVE IN WRITING ALL PROPOSED PLAN CHANGES, MATERIAL SUBSTITUTIONS OR VALUE ENGINEERING PRIOR TO INSTALLATION AND THAT ANY UNAUTHORIZED CHANGES SHALL BE REMOVED AND REPLACED AT THE GENERAL CONTRACTOR'S EXPENSE.

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

ROADWAY PLANS & DETAILS

DESIGNED BY:	BRA/HHPR TEAM
DRAFTED BY:	HHPR TEAM
DATE:	MAY 2012

ADAMS AVENUE NORTH
TITLE SHEET
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	1

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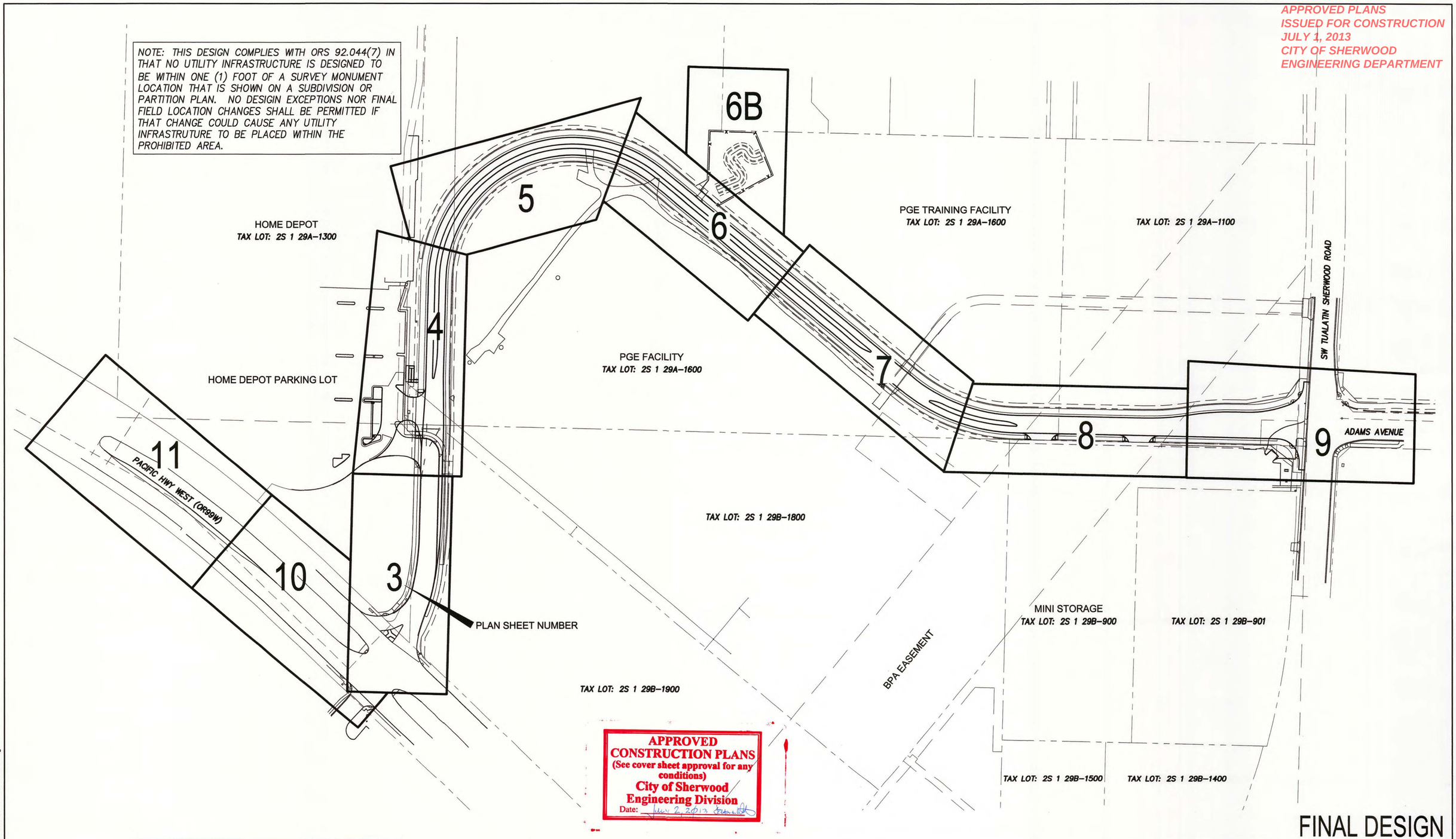
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

NOTE: THIS DESIGN COMPLIES WITH ORS 92.044(7) IN THAT NO UTILITY INFRASTRUCTURE IS DESIGNED TO BE WITHIN ONE (1) FOOT OF A SURVEY MONUMENT LOCATION THAT IS SHOWN ON A SUBDIVISION OR PARTITION PLAN. NO DESIGIN EXCEPTIONS NOR FINAL FIELD LOCATION CHANGES SHALL BE PERMITTED IF THAT CHANGE COULD CAUSE ANY UTILITY INFRASTRUTURE TO BE PLACED WITHIN THE PROHIBITED AREA.



APPROVED
CONSTRUCTION PLANS
(See cover sheet approval for any conditions)
City of Sherwood
Engineering Division
Date: July 2, 2013

FINAL DESIGN

BENCHMARK

THE BENCHMARK FOR THIS PROJECT IS WASHINGTON COUNTY BENCHMARK NUMBER 39. THE BENCHMARK IS A BRASS DISK SET IN CONCRETE POST WITH SPIKES ALONG THE SOUTH SIDE OF EASTBOUND 99W AND WEST SIDE OF S.W. LANGER DRIVE, 44 FEET SOUTH OF SOUTH EDGE OF EASTBOUND LANES OF 99W. ELEVATION – 210.23'

0 50 100 200
SCALE: 1" = 100'

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/12

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
PROJECT INDEX MAP
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	1A

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APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

CITY OF SHERWOOD GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE CITY OF SHERWOOD, WASHINGTON COUNTY, ODOT, SHERWOOD WATER, UNIFORM PLUMBING CODE, INTERNATIONAL BUILDING CODE, CLEAN WATER SERVICES AND TUALATIN VALLEY FIRE AND RESCUE STANDARDS & SPECIFICATIONS.
2. THE LOCATION AND DESCRIPTIONS OF EXISTING UTILITIES SHOWN ARE COMPILED FROM AVAILABLE RECORDS AND FIELD SURVEY COMPLETED BY HARPER HOUF PETERSON RIGHELLIS INC. DATED NOVEMBER 3, 2008. THE CITY OR UTILITY COMPANIES DO NOT GUARANTEE THE ACCURACY NOR THE COMPLETENESS OF SUCH RECORDS.
3. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF ORS 757.541 TO 757.571. THE CONTRACTOR SHALL NOTIFY EACH UNDERGROUND UTILITY AS LEAST 48 BUSINESS-DAY HOURS PRIOR TO EXCAVATING, BORING, OR POTHOLING. ALL UTILITY CROSSINGS SHALL BE POTHOLED AS NECESSARY PRIOR TO EXCAVATING OR BORING TO ALLOW THE CONTRACTOR TO PREVENT GRADE OR ALIGNMENT CONFLICTS.
4. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
5. UTILITIES, OR INTERFERING PORTIONS OF UTILITIES, THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL PLUG THE REMAINING EXPOSED ENDS OF ABANDONED UTILITIES PER LOCAL REQUIREMENTS.
6. LOCATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ARE APPROXIMATE ONLY AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST.
7. TOPOGRAPHY SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS PRIOR TO CONSTRUCTION.
8. ADJUST ALL RIMS, COVERS AND FRAMES TO FINISH GRADE
9. CONSTRUCTION NOISE AND PROJECT WORK TIMES SHALL COMPLY WITH THE CURRENT ORDINANCES AND "GENERAL CONSTRUCTION PRACTICES" POLICY OF THE CITY OF SHERWOOD.
10. PRIOR TO CONSTRUCTING ANY OF THE UTILITY SYSTEMS, THE CONTRACTOR SHALL POT HOLE ALL CONNECTION POINTS AND UTILITY CROSSINGS TO VERIFY INVERTS, SIZES, LOCATIONS AND POTENTIAL CONFLICTS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION OR RE-DESIGN.
11. THE CONTRACTOR SHALL KEEP AN APPROVED SET OF PLANS WITH ALL APPROVED REVISIONS ON THE PROJECT SITE AT ALL TIMES. ANY CHANGES SHALL BE DESIGNED BY THE ENGINEER AND SUBMITTED TO THE AFFECTED AGENCY FOR APPROVAL. THIS SET OF PLANS WITH ALL CHANGES MARKED SHALL BE SUBMITTED TO THE OWNER FOR AS-BUILTS.
12. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THIS SITE. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THESE PLANS, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING SHALL BE REPLACED IN KIND.
13. ANY ALTERATION OR VARIANCE FROM THESE PLANS, EXCEPT MINOR FIELD ADJUSTMENTS NEEDED TO MEET EXISTING FIELD CONDITIONS, SHALL BE DESIGNED/APPROVED BY THE ENGINEER, AND BE APPROVED BY THE APPLICABLE AGENCY REPRESENTATIVE.
14. A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE CITY INSPECTOR AND AGENCIES PRIOR TO STARTING ANY WORK.
15. CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING PROPERTY MONUMENTS SHOWN IN WASHINGTON COUNTY ROS 31601 PRIOR TO CONSTRUCTION. ANY MONUMENTS DISTURBED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE. A SURVEY SHALL BE RECORDED WITH WASHINGTON COUNTY FOR ANY RESET PLANS.
16. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS INCLUDING SUCH INCIDENTALS AS MAY BE NECESSARY TO MEET APPLICABLE AGENCY REQUIREMENTS AND PROVIDE A COMPLETED PROJECT.
17. CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES, WARNING SIGNS, AND TRAFFIC CONES PER CITY, COUNTY AND ODOT REQUIREMENTS IN ACCORDANCE WITH THE MUTCD (INCLUDING OREGON AMENDMENTS). ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES. ALL TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY THE CITY OF SHERWOOD AND IN PLACE PRIOR TO ANY CONSTRUCTION ACTIVITY.
18. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL REQUIRED OR NECESSARY INSPECTIONS ARE COMPLETED BY AUTHORIZED INSPECTORS PRIOR TO PROCEEDING WITH SUBSEQUENT WORK WHICH COVERS OR THAT IS DEPENDENT ON THE WORK TO BE INSPECTED. FAILURE TO OBTAIN NECESSARY INSPECTION(S) AND APPROVAL(S) SHALL RESULT IN THE CONTRACTOR BEING FULLY RESPONSIBLE FOR ALL PROBLEMS ARISING FROM UN-INSPECTED WORK.
19. AN EROSION/SEDIMENTATION CONTROL (ESC) PLAN IS REQUIRED ON THIS PROJECT. THE IMPLEMENTATION OF ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND ALL THE VEGETATION/LANDSCAPING IS ESTABLISHED. THE CITY WILL INSPECT THE PROJECT FOR COMPLIANCE WITH THE ESC PLAN.
20. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN TO THE CITY PRIOR TO CONSTRUCTION FOR REVIEW AND APPROVAL.
21. STATIONING IS BASED ON CENTERLINE OF RIGHT-OF-WAY UNLESS OTHERWISE SPECIFIED.
22. NO WORK WILL BE PERMITTED DURING THE HOURS OF DARKNESS, NOR BETWEEN 7:00 P.M. TO 7:00 A.M. MONDAY THROUGH FRIDAY NOR WEEKENDS UNLESS APPROVED IN WRITING BY THE CITY MANAGER.
23. CONTRACTOR TO PROVIDE ENGINEER WITH COPY OF FIELD PLANS SHOWING ANY AND ALL DEVIATIONS FROM DESIGN FOR ASBUILT SUBMITTAL TO CITY.
24. AT THE END OF EACH WORK DAY THE CONTRACTOR SHALL CLEAN UP THE PROJECT AREA AND LEAVE IT IN A NEAT AND SECURED MANNER. UPON COMPLETION, THE CONTRACTOR SHALL LEAVE THE PROJECT AREA FREE OF DEBRIS AND UNUSED MATERIAL.
25. THE CONTRACTOR SHALL PRUNE ALL VEGETATION, AS NECESSARY, AWAY AND UP FROM THE STREET AS WELL AS ANY ROOT PRUNING AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPING THAT IS TO REMAIN.
26. THE CONTRACTOR SHALL PROTECT ANY REMAINING EXISTING CONCRETE CURBS AND SIDEWALKS. IF DAMAGED, THEY WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
27. NO STREET SHALL BE CLOSED WITHOUT THE EXPRESS APPROVAL OF THE CITY ENGINEER. CONTRACTOR SHALL NOTIFY THE CITY OF SHERWOOD (503) 925-2309, SHERWOOD POLICE DEPARTMENT, SHERWOOD SCHOOL DISTRICT, 911 EMERGENCY SERVICES AND TUALATIN VALLEY FIRE AND RESCUE AT LEAST 24 HOURS IN ADVANCE OF ANY STREET CLOSURE.
28. NO LANE RESTRICTIONS WILL BE ALLOWED BETWEEN 9:00 A.M. AND 3:00 P.M. SEE WASHINGTON COUNTY FACILITIES PERMIT AND ROAD DESIGN AND CONSTRUCTION STANDARDS FOR LANE RESTRICTIONS ON TUALATIN-SHERWOOD ROAD. SEE ODOT FACILITIES PERMIT FOR LANE RESTRICTIONS ON OR 99W.
29. WORK SHALL CONFORM TO THE CONDITIONS OUTLINED IN THE HOME DEPOT PROPERTY AGREEMENT DOCUMENTS INCLUDED IN THE PROJECT SPECIFICATIONS.
30. WORK SHALL CONFORM TO ALL PERMIT CONDITIONS INCLUDED IN THE PROJECT SPECIFICATIONS.

CITY OF SHERWOOD STANDARD NOTES

1. CONTRACTOR SHALL NOTIFY CITY OF SHERWOOD ENGINEERING DEPARTMENT AT 503-925-2309 TWO (2) BUSINESS DAYS PRIOR TO COMMENCEMENT OF WORK ON GRADING, PUBLIC IMPROVEMENTS, OR STORM WATER TREATMENT FACILITIES.
2. ALL CONSTRUCTION SHALL CONFORM TO CITY OF SHERWOOD STANDARD CONSTRUCTION SPECIFICATIONS. CONTRACTOR AND SUBCONTRACTOR(S) SHALL HAVE A MINIMUM OF ONE SET OF APPROVED PLANS AND CITY OF SHERWOOD STANDARD CONSTRUCTION SPECIFICATIONS ON THE JOB SITE AT ALL TIMES DURING CONSTRUCTION.
3. VERTICAL CONTROL BASED ON WASHINGTON COUNTY BENCHMARK # 39, HAVING AN ELEVATION OF 210.23 FEET, BEING A FOUND BRASS DISK SET IN CONCRETE POST WITH SPIKES ALONG THE SOUTH SIDE OF EASTBOUND HWY 99W AND WEST SIDE OF SW LANGER DRIVE, 44 FEET SOUTH OF SOUTH EDGE OF EASTBOUND LANES OF HWY 99W. VERTICAL DATUM IS NAVD 29.
4. APPLICANT(S) IS RESPONSIBLE FOR ALL COSTS OF CONSTRUCTION.
5. CITY OF SHERWOOD MAINTAINS THE ENDS OF HOUSE LATERALS AT THE CURB LINE IN RIGHT-OF-WAY AND AT THE END OF THE TEE IN EASEMENTS.
6. CITY OF SHERWOOD BUILDING DEPARTMENT APPROVALS AND PERMITS ARE REQUIRED FOR PRIVATELY MAINTAINED SEWER, INLETS, INLET LEADS, AND SERVICE LATERALS CONSTRUCTED OUTSIDE OF PUBLIC RIGHT-OF-WAY OR SEWER EASEMENT. ALL WORK APPROVED UNDER PLUMBING PERMITS SHALL BE PRIVATELY OWNED AND MAINTAINED.
7. ATTENTION EXCAVATORS: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY 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 CALL CENTER. YOU MUST NOTIFY THE CENTER AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING EXCAVATION. CALL 503-246-6699.
8. MARK ENDS OF ALL STUB OUTS AND LATERALS WITH CONTINUOUS PRESSURE TREATED 2"X4". TOP 12" TO BE PAINTED WHITE FOR STORM AND STENCILED WITH BLACK "ST", PAINTED GREEN FOR SANITARY AND STENCILED WITH BLACK "SS". ALSO INCLUDE PIPE SIZE, MATERIAL TYPE, AND PIPE DEPTH. BURY 2"X4" TO I.E. OF STUB OR LATERAL.
9. ALL SEWER TRENCH LINES AND EXCAVATIONS SHALL BE PROPERLY SHORED AND BRACED TO PREVENT CAVING. EXCAVATIONS MAY REQUIRE EXTRA SHORING AND BRACING. ALL SHEETING, SHORING, AND BRACING OF TRENCHES SHALL CONFORM TO OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION (OSHA) REGULATIONS AND CITY OF SHERWOOD STANDARD CONSTRUCTION SPECIFICATIONS.
10. THE CONTRACTOR SHALL LOCATE, EXPOSE, MARK AND NOTE THE ELEVATION, SIZE AND MATERIAL OF ALL EXISTING SIDE SEWERS (SANITARY AND STORM) AT THE EDGE OF PUBLIC RIGHT-OF-WAY OR BACK OF PUBLIC EASEMENT (WHICHEVER IS FURTHEST FROM THE MAIN), AND CONFIRM THE ABILITY TO MAINTAIN POSITIVE FLOW PRIOR TO LOCATING AND INSTALLING IN-LINE TEES AND RECONNECTING TO THE MAINS. SIDE SEWERS SHALL BE INSTALLED PERPENDICULAR TO THE MAINS UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE CITY ENGINEER. PLAN DISCREPANCIES, THE INABILITY TO PROVIDE POSITIVE FLOW AND/OR INSTALL SIDE SEWERS PERPENDICULAR TO THE MAINS SHALL BE BROUGHT TO THE ATTENTION OF AND WRITTEN DIRECTIVE OBTAINED FROM THE ENGINEER-OF-RECORD PRIOR TO THE PLACEMENT OF TEES.

GENERAL CONSTRUCTION NOTES

* SEE EROSION CONTROL AND UTILITY PLANS FOR ADDITIONAL NOTES

1. AT NO TIME SHALL MORE THAN 300 FEET OF PIPE TRENCH BE OPEN AT ONE TIME. TRENCHES SHALL BE BACKFILLED OR SECURED WITH STEEL PLATES AT THE END OF EACH WORK DAY.
2. IF IN THE OPTION OF THE ENGINEER, THE TRENCH FOUNDATION BE DETERMINED TO BE INADEQUATE TO SUPPORT THE BEDDING AND PIPE THE TRENCH SHALL BE OVER EXCAVATED 12" AND BACKFILLED WITH AN APPROVED CRUSHED AGGREGATE.

GRADING AND PAVING:

1. ASPHALTIC CONCRETE (A.C.) PAVEMENT SHALL BE LEVEL 3 AS DEFINED IN THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (ODOT), LATEST EDITION.
2. CRUSHED ROCK SHALL BE SIZED AS SHOWN ON PLAN AND AS DEFINED IN THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (ODOT), LATEST EDITION.
3. STRUCTURAL FILLS COMPOSED OF ON-SITE MATERIALS SHALL HAVE A MAXIMUM UNCOMPACTED THICKNESS OF SIX TO EIGHT INCHES AND BE COMPACTED TO A MINIMUM OF 92% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AND SHALL CONFORM TO THE RECOMMENDATION OF THE GEOTECHNICAL REPORT.
4. A TEMPORARY HARD-SURFACE PATCH (COLD MIX A.C. OR HOT MIX BASE PAVING) SHALL BE PLACED ON ALL TRENCHES AT THE END OF EACH DAYS WORK. NO TRENCH, 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 EXECUTION OF THE WORK.
5. SAWCUT STRAIGHT MATCHLINES TO CREATE A BUTT JOINT BETWEEN THE EXISTING PAVEMENT AND NEW PAVEMENT. COORDINATE WITH THE FIELD INSPECTOR.

STORM DRAINAGE

1. STORM DRAIN PIPE, BENDS, AND FITTINGS SHALL BE PVC, ASTM D-3034, SDR 35 (ASTM F-679, SDR 35 FOR 18"-48") UNLESS SPECIFIED OTHERWISE. ALL PIPE SHALL BE IN ACCORDANCE WITH CITY OF SHERWOOD AND CLEAN WATER SERVICES STANDARDS.
2. VIDEO INSPECTION (T.V.) TESTING OF ALL STORM MAINLINES IS REQUIRED BY THE CONTRACTOR. FIELD INSPECTOR TO BE PRESENT AT TIME OF ALL TESTING.
3. MANDREL TESTS OF STORM SEWER ARE REQUIRED. MAKE APPOINTMENTS 48 HOURS IN ADVANCE FOR INSPECTOR TO MONITOR ALL TESTING.
4. ALL STORM SEWER INFRASTRUCTURE INSTALLED DURING THE PROJECT SHALL BE FLUSHED AND CLEANED OF DEBRIS PRIOR TO VIDEO INSPECTION AND FINAL ACCEPTANCE BY CITY.

SANITARY SEWER

1. SANITARY SEWER PIPE, BENDS, AND FITTINGS SHALL BE PVC, ASTM D-3034 UNLESS OTHERWISE SPECIFIED.
2. VIDEO INSPECTION (T.V.) TESTING OF ALL SANITARY MAINLINES IS REQUIRED BY THE CONTRACTOR. FIELD INSPECTOR TO BE PRESENT AT TIME OF ALL TESTING.
3. MANDREL AND AIR TESTS OF SANITARY SEWER ARE REQUIRED. MAKE APPOINTMENTS 48 HOURS IN ADVANCE FOR INSPECTOR TO MONITOR ALL TESTING.
4. VACUUM TEST SANITARY MANHOLES PER CWS STANDARDS.
5. ALL SANITARY SEWER INFRASTRUCTURE INSTALLED DURING THE PROJECT SHALL BE FLUSHED AND CLEANED OF DEBRIS PRIOR TO VIDEO INSPECTION AND FINAL ACCEPTANCE BY CITY.

WATER

1. ALL PIPE AND FITTINGS FOR NEW WATER LINE SHALL BE CEMENT LINED, TYTON JOINT, AMERICAN FASTITE, CLASS 51 OR CLASS 52 DUCTILE IRON OR AWWA C151 AS SPECIFIED ON THE PLANS.
2. ALL WATER PIPE SHALL HAVE 36" MINIMUM COVER MEASURED FROM FINISH GRADE.
3. THRUST BLOCKING MAY BE REPLACED WITH RESTRAIN JOINT SYSTEM RETAINER GLANDS AS APPROVED, REQUIRED, AND DIRECTED BY THE CITY OF SHERWOOD.
4. UPON COMPLETION INSTALLATION OF THE WATER SYSTEM, ALL LINES SHALL BE FLUSHED AND DISINFECTED IN CONFORMANCE WITH HEALTH DIVISION GUIDELINES AND CITY OF SHERWOOD STANDARDS CURRENT REVISIONS. THE CONTRACTOR SHALL TEST ALL LINES PER THE CITY OF SHERWOOD, SEE COS STANDARDS, CHAPTER V-WATER SYSTEM.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM THAT THE EXISTING WATER SYSTEM IS RESTRAINED PRIOR TO EXCAVATION OVER, UNDER OR ADJACENT TO WATER INFRASTRUCTURE AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY ENGINEER OF UNRESTRAINED SYSTEMS AND RECEIVE CONFIRMATION OF THAT NOTICE PRIOR TO EXCAVATION. FAILURE TO CONFIRM WATER SYSTEM RESTRAINTS AND TO NOTIFY THE CITY ENGINEER OF UNRESTRAINED INFRASTRUCTUREPRIOR TO EXCAVATION SHALL HOLD THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ASSOCIATED SYSTEM REPAIRS, PROJECT DELAYS AND ADDED COSTS RESULTING FROM EXCAVATION OVER, UNDER OR ADJACENT TO AN UNRESTRAINED SYSTEM.
6. SHERWOOD WATER DISTRICT SHALL BE THE ONLY ENTITY THAT OPERATES WATER VALVES.
7. ALL NEW AND REPLACEMENT WATER METERS IDENTIFIED IN THE PLANS/SPECS ARE TO BE PROVIDED AND INSTALLED BY THE SHERWOOD WATER DISTRICT AND THAT A PRIVATE PLUMBING CONTRACTOR MUST OBTAIN A BUILDING PERMIT TO MAKE CONNECTION TO THE PRIVATE SIDE OF THE METER. CONTRACTOR TO CONTACT THE SHERWOOD WATER DISTRICT.
8. ANY SHUT OFF OR DOWNTIME OF EXISTING WATER SERVICES SHALL BE COORDINATED THROUGH AND AUTHORIZED BY THE SHERWOOD WATER DISTRICT. NO UNAUTHORIZED SHUTDOWNS ARE ALLOWED.
9. COPPER TUBING SHALL BE TYPE "K" SOFT FOR 1" AND SMALLER SERVICE LINES ON THE PUBLIC SIDE OF THE METER AND RIGID FOR 1 1/2" AND 2" SERVICES.
10. WATER SERVICES SHALL BE INSTALLED BY THE CONTRACTOR. COORDINATE METER INSTALLATION BY THE CITY OF SHERWOOD PUBLIC WORKS. ALL WORK ON THE PRIVATE SIDE OF THE METER MUST BE COMPLETED BY A LICENSED PLUMBER.
11. NO BACKFILL OF WATER SYSTEM SHALL TAKE PLACE PRIOR TO PUBLIC WORKS APPROVAL.

UTILITIES

THE FOLLOWING JURISIDICTIONS AND UTILITY SERVERS MAY HAVE FACILITIES WITHIN THE LIMITS OF THE PROJECT:

N.W. NATURAL	BOB KELLER	503-226-4211 EXT. 3046
FRONTIER-TELEPHONE	TAM NGUYEN	503-691-4463
COMCAST-CABLE	KEN PARRIS	503-969-8662
P.G.E.-POWER	RAY LAMBERT	503-570-4413
P.G.E.-TRANSMISSION	MIKE LIVINGSTON	503-464-8127
P.G.E.-STREET LIGHTING	JEFF STEIGLEDER	503-570-4404
CITY FIBER OPTIC	BRAD CRAWFORD	503-625-4203
CITY SANITARY SEWER, STORM SEWER & WATER	RICH SATTLER	503-925-2319
BONNEVILLE POWER	SHELLEY FENTON	503-230-4797
ADMINISTRATION	MONICA STAFFLUND	503-507-4658

1. CONTRACTOR SHALL PROTECT EXISTING GAS, WATER SERVICE LINES, AND UTILITIES. ALL DISTURBED WATER SERVICE LINES SHALL BE REPAIRED AS DIRECTED BY PUBLIC WORKS.
2. PROVISIONS SHALL BE MADE BY THE CONTRACTOR TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT EXISTING SANITARY SERVICE LATERALS. ALL DISTURBED SANITARY SERVICE LATERALS SHALL BE REPAIRED AS DIRECTED AND INSPECTED BY THE CITY OF SHERWOOD
4. CONTRACTOR SHALL POTHOLE WATERLINE, GAS MAIN, TELEPHONE AND OTHER CROSSINGS BEFORE INSTALLING UTILITIES. CONTRACTOR TO REPORT ANY CONFLICTS PRIOR TO TO INSTALLING UTILITIES.
5. ALL STORM, SANITARY SEWER, AND WATER TRENCH LINES AND EXCAVATIONS SHALL BE PROPERLY SHORED AND BRACED TO PREVENT CAVING. ALL SHEETING, SHORING, AND BRACING IN TRENCHES SHALL CONFORM TO OREGON OCCUPATIONAL SAFETY AND HEALTH DIVISION (OSHA) REGULATIONS.
6. ADJUST ALL MANHOLE AND CLEAN OUT RIMS WITHIN PROJECT AREA TO FINISH GRADE.

PROJECT CONTACT LIST

CIVIL ENGINEER:
HARPER HOUF PETERSON RIGHELLIS INC.
205 SE SPOKANE STREET, SUITE 200
PORTLAND, OREGON 97202
CONTACT: BEN AUSTIN, P.E.
PH. 503-221-1131

CITY ENGINEER:
CITY OF SHERWOOD
22560 SW PINE ST
SHERWOOD, OREGON 97140
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PH. 503-925-2304

TRAFFIC ENGINEER:
DKS ASSOCIATES
117 COMMERCIAL ST. NE, SUITE 310
SALEM, OR 97301
CONTACT: SCOTT MANSUR, P.E.
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LANDSCAPE ARCHITECT:
HARPER HOUF PETERSON RIGHELLIS INC.
205 SE SPOKANE STREET, SUITE 200
PORTLAND, OREGON 97202
CONTACT: SCOTT BANKER
PH. 203-221-1131

TOPOGRAPHY LEGEND

- SAN — SANITARY SEWER LINE
- W — UNDERGROUND WATER LINE
- E — UNDERGROUND ELECTRICAL LINE
- G — UNDERGROUND GAS LINE
- T — UNDERGROUND TELEPHONE LINE
- FO — UNDERGROUND TELEPHONE DUCT
- OE — OVERHEAD ELECTRICAL LINE
- O — CHAINLINK FENCE
- O — WOOD FENCE
- EXISTING CONCRETE SURFACE
- EXISTING ASPHALT SURFACE
- EXISTING GRAVEL SURFACE
- WATER METER
- FIRE HYDRANT
- WV — WATER VALVE
- WATER VAULT
- SV — SPRINKLER VALVE
- BOLLARD
- CATCH BASIN
- POWER METER
- SIGN
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- TELEPHONE MANHOLE
- GUY WIRE
- POWER POLE
- POWER POLE WITH UNDERGROUND
- POWER POLE W/LIGHT
- LIGHT POLE
- GV — GASE VALVE
- GAS METER
- PHONE BOOTH
- BUSH
- DECIDUOUS TREE
- CONFEROUS TREE
- FIRE DEPARTMENT CONNECTION
- TRAFFIC SIGNAL
- SIGNAL BOX
- CURB INLET CATCH BASIN
- TELEPHONE VAULT

PROPOSED LEGEND

- RIGHT-OF-WAY
- SIDEWALK
- CURB
- CENTERLINE OF ROAD
- MEDIAN
- SAWCUT
- JT — JT — JOINT TRENCH
- SAN — SANITARY SEWER
- STORM SEWER
- WATER

LIST OF ABBREVIATIONS

A.C.	ASPHALT CONCRETE	N.T.S.	NOT TO SCALE
B.O.W.	BACK OF WALK	OFF.	OFFSET
BVC	BEGIN VERTICAL CURVE	PC	POINT OF CURVATURE
CB	CATCH BASIN	PCC	POINT OF COMPOUND CURVE
C/L	CENTERLINE	P.C.C.	PORTLAND CEMENT CONCRETE
C.R.	CURB RETURN	P/L	PROPERTY LINE
DWG.	DRAWING	PNT.	POINT
ELEV.	ELEVATION	PRC	POINT OF REVERSE CURVE
EVC	END VERTICAL CURVE	PROP.	PROPOSED
EX.	EXISTING	PT	POINT OF TANGENCY
GUT	GUTTER	PVI	POINT OF VERTICAL INTERSECTION
HOR.	HORIZONTAL	R.O.W.	RIGHT-OF-WAY
I.E.	INVERT	RT.	RIGHT
INV.	INVERT	STA	STATION
LT.	LEFT	STD.	STANDARD
MAX.	MAXIMUM	TOC	TOP OF CURB
MH	MANHOLE	TYP.	TYPICAL
MIN.	MINIMUM	V.C.	VERTICAL CURVE
N/A	NOT APPLICABLE	VER.	VERTICAL
NO.	NUMBER	X-SLOPE	CROSS-SLOPE

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JULY 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

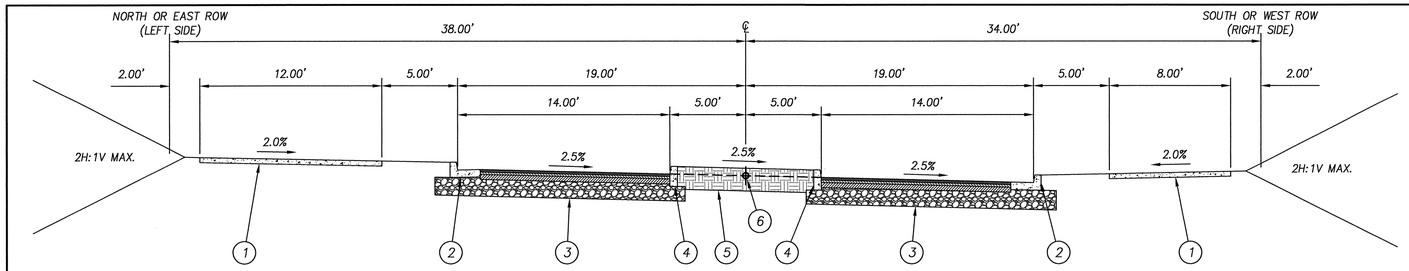
Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
GENERAL NOTES AND LEGENDS
SHERWOOD, OREGON

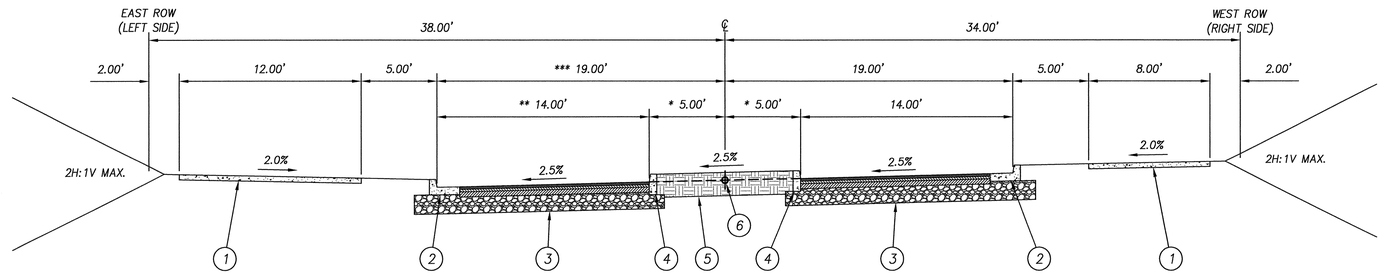
FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	1A-1

P:\SHR-08\SHR08-DWG\SSHEETS\ SHR08-01A-1-GEN NOTES.dwg



ADAMS AVENUE – SHED RIGHT SECTION

STA: 10+79.92 TO STA: 16+49.56



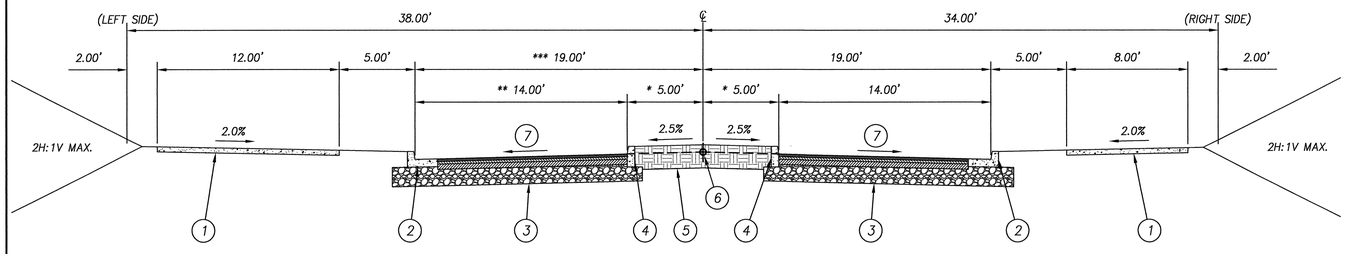
ADAMS AVENUE – SHED LEFT SECTION

STA: 27+00.00 TO STA: 31+90.41

* SEE SHEETS 2F'S FOR MEDIAN DIMENSIONS AND GEOMETRY (MEDIAN VARIES 0 TO 22.29')

** VARIES 14' TO 37' FROM STA: 29+20.65 TO STA: 31+90.41

*** VARIES 19' TO 37' FROM STA: 29+20.65 TO STA: 31+90.41



ADAMS AVENUE – STANDARD SECTION

STA: 6+00.00 TO STA: 6+50.00****

STA: 6+50.00 TO STA: 10+79.92

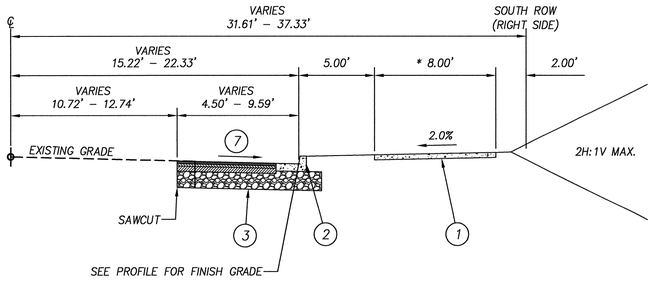
STA: 16+49.56 TO STA: 27+00.00

* SEE SHEETS 2F'S FOR MEDIAN DIMENSIONS AND GEOMETRY (MEDIAN VARIES 0 TO 5')

** VARIES 14' TO 25' FROM STA: 6+00.00 TO STA: 7+95.96

*** VARIES 19' TO 25' FROM STA: 6+00.00 TO STA: 7+95.96

**** SEE SHEET 4 FOR CROWN TRANSITION



ADAMS AVENUE – WIDENING

STA: 3+76.25 TO STA: 6+00.00

* SW BEGINS AT STA: 4+06.77

CONSTRUCTION NOTES

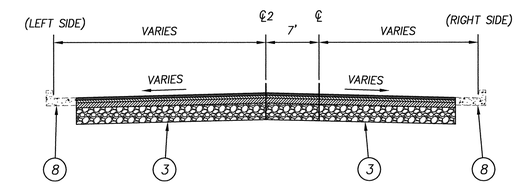
1. TYPICAL SIDEWALK. SEE DETAIL RD-26 ON SHEET 2B-1.
2. CURB AND GUTTER. SEE DETAIL RD-22 AND RD-23 ON SHEET 2B-1.
3. STRUCTURAL SECTION:
   8" OF LEVEL 3, ½ INCH DENSE HMAC (3 LIFTS) OVER
   13" OF 1" AGGREGATE BASE OVER
   SUBGRADE GEOTEXTILE FABRIC
4. CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B-1.
5. PLANTED MEDIAN. WIDTH SHOWN IS STANDARD BUT MEDIAN DISAPPEARS AT TURN LANE LOCATIONS. PLANT PER LANDSCAPE PLANS.
6. FINISH GRADE AT CONSTRUCTION CENTERLINE. SEE PROFILE.
7. 2.5% STANDARD CROSS SLOPE UNLESS NOTED OTHERWISE. SEE SUPERELEVATION DATA TABLE ON THIS SHEET FOR VARIATIONS.
8. EXISTING CURB AND GUTTER.

NOTE: PER THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT DATED JULY 10, 2009, AN ALTERNATE CEMENT TREATED BASE PAVEMENT SECTION IS IDENTIFIED AND IS AVAILABLE SHOULD THE CONTRACTOR CHOOSE TO UTILIZE IT. IF THIS SECTION IS SELECTED THE CONTRACTOR MUST NOTIFY THE CITY OF SHERWOOD IN WRITING OF THIS CHANGE.

STRUCTURAL SECTION NOTES

1. COMPACT UPPER 12" OF SUBGRADE TO 92% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-99.
2. INSTALL SUBGRADE GEOTEXTILE FABRIC IN AREAS OF FULL DEPTH CONSTRUCTION AS INDICATED IN THE SECTIONS.
3. AGGREGATE BASE COURSE SHALL BE COMPACTED IN 6" LIFTS, MAX.
4. ALL ASPHALT CONCRETE SHALL BE LEVEL 3, 1/2-INCH DENSE MHMAC. NO LIFT SHALL EXCEED 3" IN DEPTH.
5. OVER EXCAVATE SUBGRADE SOFT SPOTS PER SECTION 00331 OF THE STANDARD SPECIFICATIONS AS AMENDED BY THE SPECIAL PROVISIONS.
6. SUBGRADE REQUIRED TO BE PROOF ROLLED WITH A FULLY LOADED DUMP TRUCK. COORDINATE WITH THE INSPECTOR.
7. AGGREGATE BASE REQUIRED TO BE PROOF ROLLED WITH A FULLY LOADED DUMP TRUCK. COORDINATE WITH THE INSPECTOR.
9. CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE SUBGRADE FROM DAMAGED DUE TO CONSTRUCTION TRAFFIC.
10. EXCAVATE ROAD SECTION TO LINES AND GRADES SPECIFIED IN THE PLANS. TILLED SOIL AND UNDOCUMENTED FILL IS ANTICIPATED UP TO 2.0' BELOW GROUND SURFACE.
11. SITE GRADING AND ROAD SECTION SHALL CONFORM TO THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT DATED JULY 10, 2009.
12. ALL JOINTS BETWEEN A.C. AND CONCRETE STRUCTURES MUST BE TACKED AND SAND SEALED.

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



ADAMS AVENUE – RECONSTRUCTION SECTION

STA: 2+09.67 TO STA: 2+70.65*

STA: 2+70.65 TO STA: 6+00.00

* SEE SHEET 3A FOR INTERSECTION GRADES

SUPERELEVATION DATA

REGION	DESCRIPTION	STATION	LEFT GUTTER ELEV.	LEFT CROSS SLOPE	CENTERLINE ELEV.	RIGHT CROSS SLOPE	RIGHT GUTTER ELEV.	SPECIAL CONSTRUCTION
1	ENC = END NORMAL CROWN	9+29.92	172.51	-2.50%	173.03	-2.50%	172.51	
		9+50	172.80	-1.83%	173.20	-2.50%	172.68	
		9+75	173.14	-0.98%	173.40	-2.50%	172.88	
		10+00	173.50	-0.16%	173.61	-2.50%	173.09	GUTTER TRANSITION
		10+25	174.02	0.67%	173.82	-2.50%	173.30	SHED LEFT GUTTER
		10+50	174.37	1.50%	174.02	-2.50%	173.50	SHED LEFT GUTTER
		10+75	174.72	2.34%	174.23	-2.50%	173.71	SHED LEFT GUTTER
	BFS = BEGIN FULL SUPER	10+79.92	174.79	2.50%	174.27	-2.50%	173.75	SHED LEFT GUTTER
	EFS = END FULL SUPER	16+49.56	179.09	2.50%	178.57	-2.50%	178.05	SHED LEFT GUTTER
		16+50	179.08	2.49%	178.56	-2.50%	178.04	SHED LEFT GUTTER
		16+75	178.58	1.65%	178.21	-2.50%	177.69	SHED LEFT GUTTER
		17+00	177.89	0.82%	177.66	-2.50%	177.14	SHED LEFT GUTTER
		17+25	177.00	-0.01%	177.08	-2.50%	176.56	GUTTER TRANSITION
		17+50	176.28	-0.85%	176.51	-2.50%	175.99	
		17+75	175.66	-1.68%	176.04	-2.50%	175.52	
1	BNC = BEGIN NORMAL CROWN	17+99.56	175.22	-2.50%	175.74	-2.50%	175.22	
2	ENC = END NORMAL CROWN	25+50	185.66	-2.50%	186.18	-2.50%	185.66	
		25+75	186.11	-2.50%	186.63	-1.67%	186.25	
		26+00	186.56	-2.50%	187.08	-0.83%	186.85	
		26+25	187.01	-2.50%	187.53	0.00%	187.61	GUTTER TRANSITION
		26+50	187.46	-2.50%	187.98	0.83%	188.21	SHED RIGHT GUTTER
		26+75	187.91	-2.50%	188.43	1.67%	188.81	SHED RIGHT GUTTER
2	BFS = BEGIN FULL SUPER	27+00	188.36	-2.50%	188.88	2.50%	189.40	SHED RIGHT GUTTER

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

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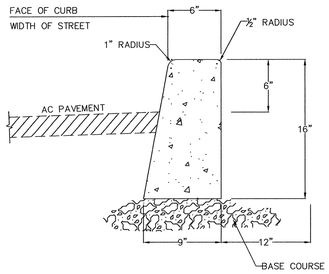
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
TYPICAL SECTIONS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02-TYPICAL SECTIONS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



NOTES:

1. VERTICAL CURB TO BE USED AT MEDIANS AND MEDIAN PLANTING STRIPS, OR IN REPLACEMENT OF DAMAGED EXISTING VERTICAL CURBS.
2. FOR DESIGN SPEEDS GREATER THAN 40 MPH, USE STANDARD CURB AND GUTTER (SEE STD DET RD–22).
3. CONCRETE SHALL BE COMMERCIAL MIX. MIN. COMPRESSIVE STRENGTH OF 3300 PSI AT 28 DAYS.
4. EXPANSION JOINTS:

   A. TO BE PROVIDED:

   1) AT EACH POINT OF TANGENCY OF THE CURB.
   2) AT EACH COLD JOINT.
   3) AT EACH SIDE OF INLET STRUCTURES.
   4) AT EACH END OF DRIVEWAYS.
   5) AT LOCATIONS NECESSARY TO LIMIT SPACING TO 45 FEET.

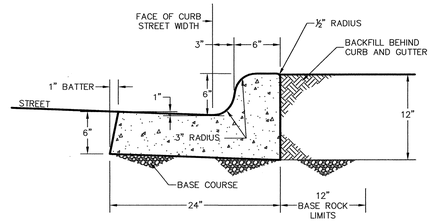
   B. MATERIAL TO BE PRE–MOLDED, ASPHALT IMPREGNATED, NON–EXTRUDING, WITH A THICKNESS OF ½ INCH.

4. CONTRACTION JOINTS:

   A. SPACING TO BE NOT MORE THAN 15 FEET.
   B. THE DEPTH OF THE JOINT SHALL BE AT LEAST 1½'.

5. BASE ROCK: ⅜"–0", COMPACTED TO 95% MAX DENSITY. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURE OR 4" IN DEPTH, WHICHEVER IS GREATER.

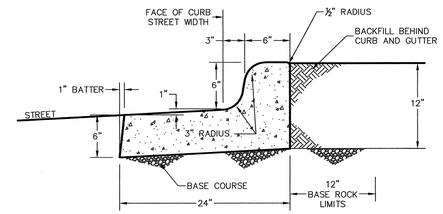
City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD VERTICAL CURB	RD-21
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



NOTES:

1. MONOLITHIC CURB AND GUTTER SHALL BE USED ON ALL NEW ROADWAY SECTIONS, EXCEPT AT ROADWAY MEDIANS AND AT MOUNTABLE CURB SECTIONS (SEE STD DET RD–21 & RD–24 FOR THESE CONDITIONS).
2. CONCRETE SHALL BE COMMERCIAL MIX, WITH A 28–DAY COMPRESSIVE STRENGTH OF 3300 PSI, WITH A SLUMP RANGE OF 1½" TO 3" MAX.
3. EXPANSION JOINTS TO BE PROVIDED AT EACH:
   A. POINT OF TANGENCY.
   B. COLD JOINT.
   C. SIDE OF INLET STRUCTURES.
   D. SIDE OF DRIVEWAYS.
4. EXPANSION JOINT MATERIAL SHALL BE PRE–MOLDED, ASPHALT IMPREGNATED, NON–EXTRUDING, WITH A THICKNESS OF ½".
5. CONTRACTION JOINTS SHALL HAVE:
   A. SPACING OF NOT MORE THAN 15 FEET.
   B. DEPTH OF JOINT OF AT LEAST 1½".
6. BASE ROCK SHALL BE ¾"–0", COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T–180. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURES OR 4", WHICHEVER IS GREATER, AND SHALL EXTEND 12" BEHIND CURB.
7. FOR CURB AND GUTTER REQUIREMENTS ON SHED AND SUPERELVATED ROAD SECTIONS, SEE STD DET RD–23.

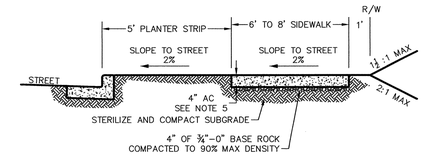
City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD MONOLITHIC CURB AND GUTTER	RD-22
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



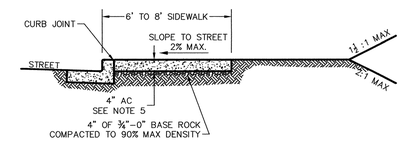
NOTES:

1. REVERSE MONOLITHIC CURB AND GUTTER SHALL BE USED ON ALL NEW SHED AND SUPERELEVATED ROADWAY SECTIONS WHERE ROAD CROSS–SLOPE IS AWAY FROM THE GUTTER. AT ROADWAY MEDIANS AND AT MOUNTABLE CURB SECTIONS (SEE STD DET RD–21 & RD–24 FOR THESE CONDITIONS).
2. CONCRETE SHALL BE COMMERCIAL MIX, WITH A 28–DAY COMPRESSIVE STRENGTH OF 3300 PSI, WITH A SLUMP RANGE OF 1½" TO 3" MAX.
3. EXPANSION JOINTS TO BE PROVIDED AT EACH:
   A. POINT OF TANGENCY.
   B. COLD JOINT.
   C. SIDE OF INLET STRUCTURES.
   D. SIDE OF DRIVEWAYS.
4. EXPANSION JOINT MATERIAL SHALL BE PRE–MOLDED, ASPHALT IMPREGNATED, NON–EXTRUDING, WITH A THICKNESS OF ½".
5. CONTRACTION JOINTS SHALL HAVE:
   A. SPACING OF NOT MORE THAN 15 FEET.
   B. DEPTH OF JOINT OF AT LEAST 1½".
6. BASE ROCK SHALL BE ¾"–0", COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T–180. BASE ROCK SHALL BE TO SUBGRADE OF STREET STRUCTURES OR 4", WHICHEVER IS GREATER, AND SHALL EXTEND 12" BEHIND CURB.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD REVERSE MONOLITHIC CURB AND GUTTER	RD-23
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



SIDEWALK WITH PLANTER STRIP
(FOR ALL NEW CONSTRUCTION)

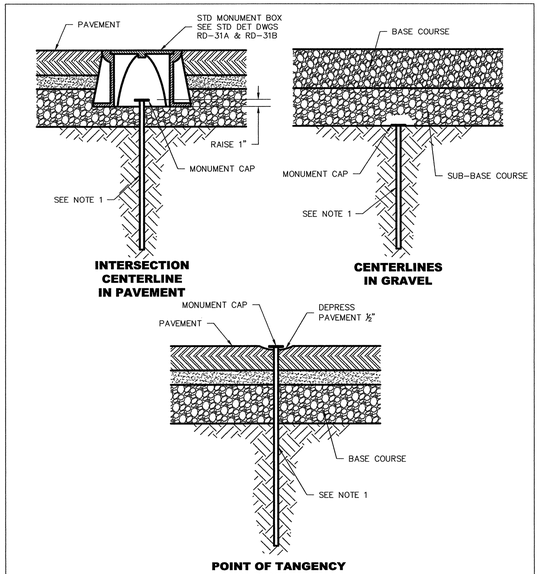


CURB-TIGHT SIDEWALK
(TO BE USED WITH VARIANCE ONLY)

NOTES:

1. CONCRETE SHALL BE COMMERCIAL MIX, MIN. COMPRESSIVE STRENGTH OF 3300 PSI @ 28 DAYS, WITH A SLUMP RANGE OF 1½" MIN. TO 3" MAX.
2. SIDEWALK PANELS TO BE SQUARE (5' LONG x 5' WIDE TYP.).
3. EXPANSION JOINTS TO BE PLACED AT SIDES OF DRIVEWAY APPROACHES, UTILITY VAULTS, CURB RAMPS, AND/OR POINTS OF TANGENCY IN CURB AS SHOWN ON THE STANDARD DRAWINGS FOR SIDEWALK RAMPS, AND AT SPACING NOT TO EXCEED 45'.
4. FOR SIDEWALKS ADJACENT TO THE CURB AND POURED AT THE SAME TIME AS THE CURB, THE JOINT BETWEEN THEM SHALL BE A TROWELED JOINT WITH A MINIMUM ½" RADIUS.
5. SIDEWALKS SHALL HAVE A MINIMUM THICKNESS OF 4". IF MOUNTABLE CURB IS USED, OR IF SIDEWALK IS INTENDED AS PORTION OF A RESIDENTIAL DRIVEWAY IT SHALL HAVE A 6" MINIMUM THICKNESS, COMMERCIAL 8".
6. CONCRETE SHALL HAVE A BROOM FINISH, ALL JOINTS SHALL BE EDGED WITH 3" SHINE.
7. WIDTH OF PLANTER STRIP AND SIDEWALK IS MEASURED FROM FACE OF CURB.
8. IF DRAIN BLOCKOUTS IN CURBS ARE APPROVED, THEY SHALL BE EXTENDED PERPENDICULAR TO CURB TO 1' PAST BACK OF SIDEWALK WITH A 3" DIAMETER ADS PIPE. CONTRACTION JOINT SHALL BE PLACE OVER PIPE.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD SIDEWALK DETAIL	RD-26
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



INTERSECTION CENTERLINE IN PAVEMENT

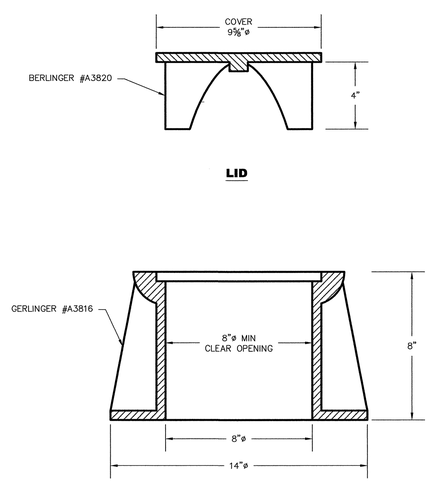
CENTERLINES IN GRAVEL

POINT OF TANGENCY IN PAVEMENT

NOTES:

1. ALL MONUMENTS SHALL USE EITHER ⅝" DIA x 30" LONG IRON ROD OR ¾" DIA x 30" LONG IRON PIPE.
2. ALL MONUMENTS SHALL BE IN ACCORDANCE WITH THE OREGON REVISED STATUTES CHAPTERS 92 AND 209.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD CENTERLINE MONUMENTS	RD-30
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



LID

FRAME

NOTES:

1. STANDARD MONUMENT BOX SHALL BE CAST IRON WITH 8" MINIMUM INSIDE DIAMETER.
2. IF A 12" MONUMENT BOX IS REQUIRED, USE GERLINGER #A4629.
3. NEW MANHOLES SHALL BE LOCATED A MINIMUM OF 4 FEET FROM CENTER OF ITS BASE TO MONUMENT BOX.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD MONUMENT BOX	RD-31A
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JULY 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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ENGINEERS • PLANNERS
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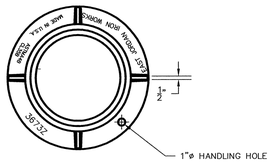
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

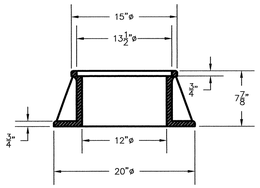
ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-1

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02B-DETAILS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

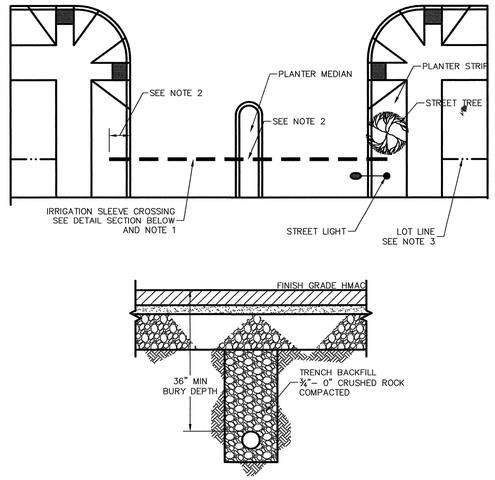




NOTES:

1. STANDARD MONUMENT BOX SHALL BE CAST IRON WITH 8" MINIMUM INSIDE DIAMETER.
2. IF A 12" MONUMENT BOX IS REQUIRED, USE GERLINGER #A4629.
3. NEW MANHOLES SHALL BE LOCATED A MINIMUM OF 4 FEET FROM CENTER OF ITS BASE TO MONUMENT BOX.

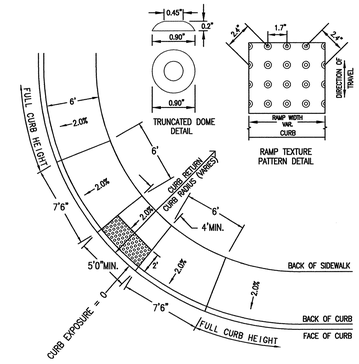
City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD MONUMENT BOX FRAME	RD-31B
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



NOTES:

1. IRRIGATION SLEEVE CROSSING MATERIAL SHALL BE 4"ø DUCTILE IRON PIPE (DIP). LOCATION OF ALL IRRIGATION SLEEVE CROSSINGS SHALL BE SHOWN ON ALL UTILITY PLAN SHEETS.
2. IRRIGATION SLEEVE CROSSING PIPE SHALL EXTEND TO MIDDLE OF PLANTER STRIPS.
3. IRRIGATION SLEEVE CROSSINGS SHALL BE LOCATED AS NEAR TO LOT LINES AS POSSIBLE, AWAY FROM STREET INTERSECTIONS, SIDEWALK CROSSING RAMPS.
4. IRRIGATION STREET CROSSINGS SHALL BE LOCATED TO AVOID CONFLICT WITH STREET LIGHTS AND STREET TREES.
5. ENDS OF SLEEVE CROSSING SHALL BE EITHER PLUGGED WITH GROUT OR A RUBBER BOOT ATTACHED TO PREVENT INFILTRATION OF SOIL INTO THE ANGULAR SPACE BETWEEN THE SLEEVE AND IRRIGATION LINE. THE SLEEVE CROSSING SHALL NOT BE FILLED WITH SAND OR SLURRY MIX.
6. IRRIGATION SLEEVE CROSSING LOCATIONS SHALL BE NOTED ON CONSTRUCTION PLANS USING STREET CENTERLINE STATIONING. THE SLEEVE CROSSINGS SHALL BE INSTALLED PERPENDICULAR TO STREET CENTERLINE ALIGNMENT.

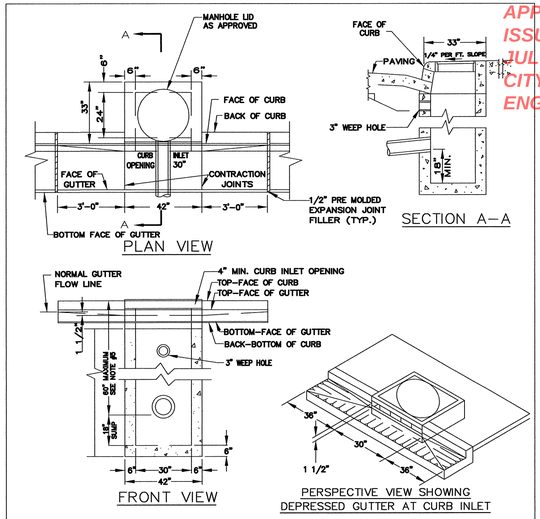
City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	IRRIGATION SLEEVE STREET CROSSING DETAIL	RD-40
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



NOTES:

1. PROJECT ENGINEER SHALL USE THIS DRAWING AS A GUIDE FOR DESIGNING RAMPS AND SHALL PREPARE A SITE SPECIFIC DRAWING FOR EACH RAMP.
2. PROJECT ENGINEER SHALL VERIFY APPLICABILITY OF THIS DRAWING TO SPECIFIC LOCATIONS WITHIN THE PROJECT BEFORE USING IT AS A DESIGN GUIDE AND SHALL LOCATE EACH RAMP RELATIVE TO CROSSWALK OR STOP LINE.
3. SIDEWALK RAMP GRADES SHALL MEET CURRENT ADA STANDARDS.
4. PLANTER STRIP DETAIL – REFER TO ODOT STANDARD DRAWING RD 755 (SIDEWALK RAMP DETAIL).
5. DETECTABLE WARNING SHALL BE TRUNCATED DOME TYPE, 24" LONG IN DIRECTION OF TRAVEL AND FULL WIDTH OF RAMP, WITH DOMES ALIGNED ON A SQUARE GRID WITH ITS GRIDLINES PARALLEL AND PERPENDICULAR TO THE CENTERLINE OF THE RAMP. COLOR OF DETECTABLE WARNING SHALL BE SAFETY YELLOW.
6. CURB INLET OR CATCH BASIN SHALL NOT BE ALLOWED IN FRONT OF RAMP.
7. CONCRETE SHALL BE A COMMERCIAL MIX, WITH A 28 DAY COMPRESSIVE STRENGTH OF 3300 PSI, WITH A SLUMP RANGE BETWEEN 1½" AND 3".
8. ¾"–0" BASE ROCK SHALL BE COMPACTED TO 90% OF MAXIMUM DENSITY.
9. BEVEL THE CURB CUT FROM GUTTER TO BACK OF CURB AT 8.33% (1:12) MAX.
10. SCORE CONCRETE AT GRADE CHANGES, SURFACE TEXTURE CHANGES AND AT ALL OTHER POINTS SHOWN.
11. CONCRETE SURFACE SHALL HAVE BROOM FINISH, AND EDGE ALL JOINTS.
12. PROJECT ENGINEER SHALL ACCEPT FULL RESPONSIBILITY FOR CORRECTING ALL UNACCEPTABLE RAMP CONSTRUCTION RESULTING FROM APPLYING THIS DRAWING "AS IS" AND NOT PROVIDING A SITE–SPECIFIC DRAWING FOR EACH RAMP.

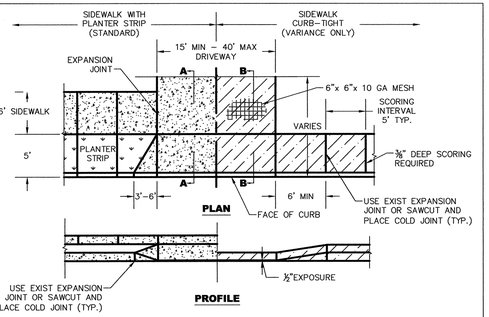
City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD CURB RETURN & RAMP DETAIL	RD-43
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09

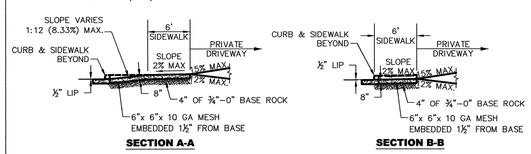


NOTES:

1. ALL FABRICATED METAL PARTS SHALL BE NEW STRUCTURAL, ASTM A–36 STEEL, AND BE HOT–DIPPED GALVANIZED AFTER FABRICATION.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. AND A SLUMP OF 2" TO 4".
3. INSTALL STEPS WHEN DISTANCE FROM TOP OF LID TO FLOW LINE OF PIPE IS GREATER THAN 48", SEE STD. DRAWING SS–10. SET FIRST STEP 12" FROM TOP OF GRATE AND ALIGN WITH LID OPENING.
4. INSTALL STRUCTURE ON MINIMUM OF 8" OF ¾" TO 0" COMPACTED BASE MATERIAL.
5. 72" MAXIMUM ALLOWED WITH DISTRICT OR CITY APPROVAL, TO AVOID CONFLICTS WITH EXISTING UTILITIES.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	INLET CATCH BASIN (CG-30)	SS-43
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL '09

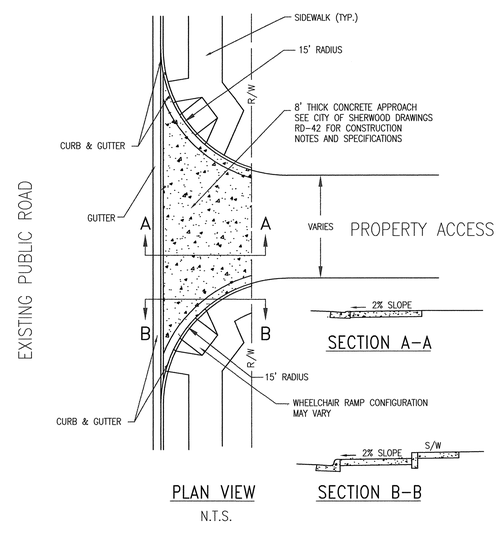




NOTES:

1. CONCRETE SHALL HAVE 8" MINIMUM DEPTH AND A COMPRESSIVE STRENGTH OF 4000 PSI @ 28 DAYS.
2. CURB JOINT SHALL BE A TROWELED JOINT WITH A MINIMUM ½" RADIUS ALONG BACK OF CURB.
3. EXPANSION JOINTS SHALL BE ½" PRE–MOLDED ASPHALT IMPREGNATED MATERIAL, CEDAR OR EQUIVALENT EXTENDING FROM TOP OF BASE TO FINISHED GRADE.
4. CONCRETE SHALL HAVE A BROOM FINISH AND EDGE ALL JOINTS.
5. WEEPHOLES ARE NOT TO BE PLACED IN WINGS.
6. IF CURBING IS BEING REMOVED TO INSTALL DRIVEWAY AND GUTTER SHOULD BECOME SEPARATED FROM THE DRIVING SURFACE IN EXCESS OF ⅜", THEN THE GUTTER SHALL ALSO BE REMOVED AND REPLACED.
7. WINGS OF THE COMMERCIAL DRIVEWAY WHICH ARE A PORTION OF THE SIDEWALK SHALL NOT EXCEED A SLOPE OF 8.33% (1:12).
8. ODOT STANDARD DRAWINGS FOR COMMERCIAL DRIVEWAYS MAY BE USED WHEN PRE–APPROVED BY CITY ENGINEER.
9. SLOPE OF THE DRIVEWAY MAY BE AWAY FROM THE CURB WHEN PRE–APPROVED BY THE CITY ENGINEER.

City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD COMMERCIAL DRIVEWAY DETAIL	RD-42
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	STANDARD HIGH VOLUME COMMERCIAL DRIVEWAY & CURB RETURNS	RD-42HV
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-2

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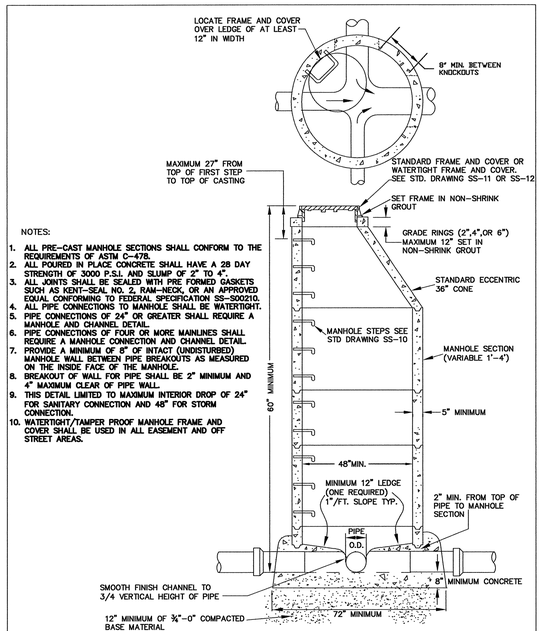
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. AND SLUMP OF 2" TO 4".
3. ALL JOINTS SHALL BE SEALED WITH PRE FORMED GASKETS SUCH AS KENT-SEAL NO. 2, RAM-NECK, OR AN APPROVED EQUAL CONFORMING TO FEDERAL SPECIFICATION SS-S00210.
4. ALL PIPE CONNECTIONS TO MANHOLE SHALL BE WATERTIGHT.
5. PIPE CONNECTIONS OF 24" OR GREATER SHALL REQUIRE A MANHOLE AND CHANNEL DETAIL.
6. PIPE CONNECTIONS OF FOUR OR MORE MAINLINES SHALL REQUIRE A MANHOLE CONNECTION AND CHANNEL DETAIL.
7. PROVIDE A MINIMUM OF 8" OF INTACT (UNDISTURBED) MANHOLE WALL BETWEEN PIPE BREAKOUTS AS MEASURED ON THE INSIDE FACE OF THE MANHOLE.
8. BREAKOUT OF WALL FOR PIPE SHALL BE 2" MINIMUM AND 4" MAXIMUM CLEAR OF PIPE WALL.
9. THIS DETAIL LIMITED TO MAXIMUM INTERIOR DROP OF 24" FOR SANITARY CONNECTION AND 48" FOR STORM CONNECTION.
10. WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS.

STANDARD DRAWING TITLE	DRAWING NUMBER
STANDARD MANHOLE	SS-1
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

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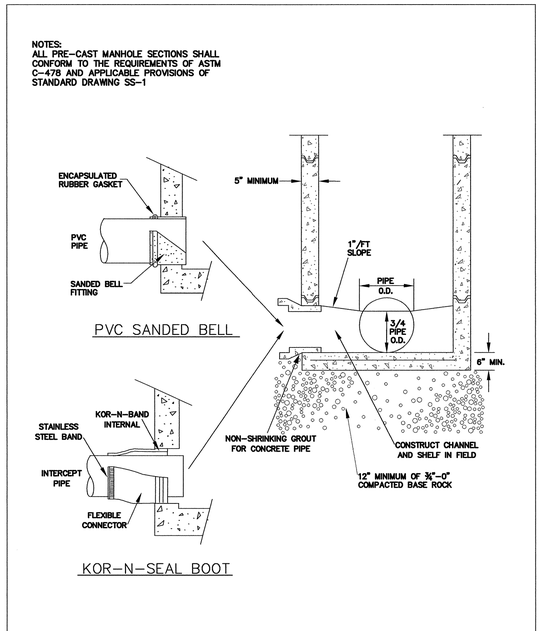
NOTES:
ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD DRAWING SS-1



STANDARD DRAWING TITLE	DRAWING NUMBER
PRECAST CONCRETE MANHOLE BASE	SS-2
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

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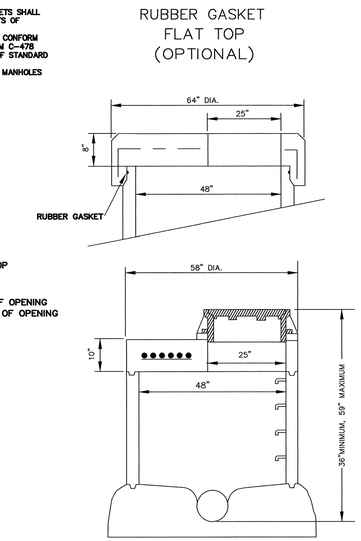
NOTES:
1. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-433.
2. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, DRAWING SS-1.
3. STEPS REQUIRED ON FLAT TOP MANHOLES DEEPER THAN 48".

RUBBER GASKET FLAT TOP REINFORCEMENT
OR
STANDARD MANHOLE FLAT TOP REINFORCEMENT

#6 BAR AROUND OUTSIDE OF OPENING
#6 DIAGONALS BOTH SIDES OF OPENING
#6 6" O.C. BOTH WAYS

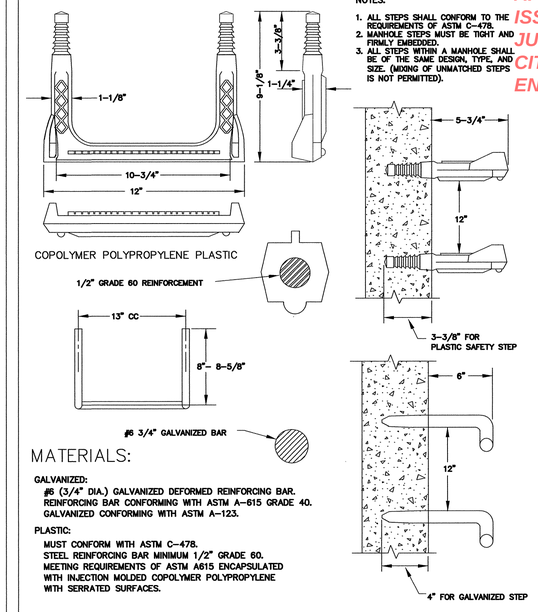


STANDARD DRAWING TITLE	DRAWING NUMBER
FLAT TOP MANHOLE	SS-5
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.

NOTES:
1. ALL STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. MANHOLE STEPS MUST BE TIGHT AND FIRMLY EMBEDDED.
3. ALL STEPS WITHIN A MANHOLE SHALL BE OF THE SAME DESIGN, TYPE, AND SIZE. (MIXING OF UNMATCHED STEPS IS NOT PERMITTED).



MATERIALS:

GALVANIZED:
#6 (3/4" DIA.) GALVANIZED DEFORMED REINFORCING BAR. REINFORCING BAR CONFORMING WITH ASTM A-615 GRADE 40. GALVANIZED CONFORMING WITH ASTM A-123.

PLASTIC:
MUST CONFORM WITH ASTM C-478.
STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60.
MEETING REQUIREMENTS OF ASTM A615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.

STANDARD DRAWING TITLE	DRAWING NUMBER
MANHOLE STEP	SS-10
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

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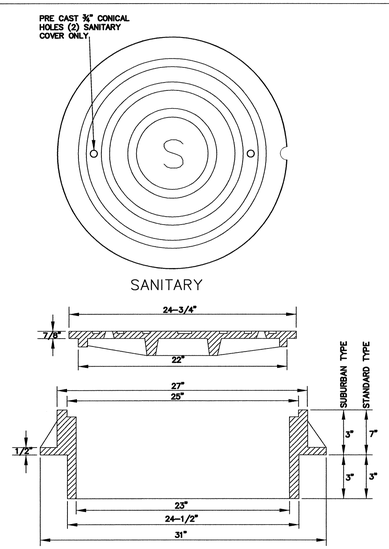

NOTES:
1. SUBURBAN TYPE NOT FOR USE IN TRAFFIC AREAS OF COLLECTOR AND ARTERIAL STREETS
2. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
3. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
4. NOTCH LID FOR LIFTING HOOK.

STANDARD DRAWING TITLE	DRAWING NUMBER
SUBURBAN AND STANDARD MANHOLE FRAME AND COVER SANITARY	SS-11
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

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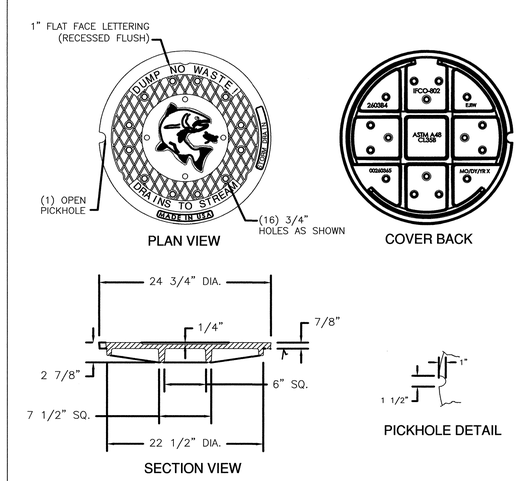

SEE DETAIL SS-11 FOR MANHOLE FRAME SPECIFICATIONS.

STANDARD DRAWING TITLE	DRAWING NUMBER
STORM WATER MANHOLE LID	SS-12
SCALE: N.T.S.	DATE: JUL '09

City of Sherwood Oregon

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FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
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ROADWAY PLANS & DETAILS

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205 SE Spokane Street, Suite 200, Portland, OR 97202
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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-3

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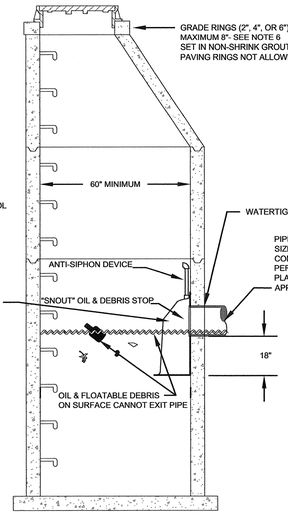
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

SEE NOTE AT TOP OF STANDARD DETAIL SS-12. FOR LARGE DIAMETER MANHOLES SEE STANDARD DETAIL SS-16



NOTES:
1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STD. MANHOLE DRAWING SS-1
2. INLET AND OUTLET PIPE NOT TO EXCEED 18"DIA.
3. PROVIDE SPECIAL DETAIL FOR OUTLET FLOW CONTROL EXCEEDING 18" DIA.
4. ALL OUTLETS SHALL HAVE FLOW CONTROL DEVICE.

ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
BEST MANAGEMENT PRODUCTS, INC.
53 MT. ARCHER RD.
LYME, CT 06371
(860) 434-0277, (860) 434-3195
FAX TOLL FREE: (800) 504-8008
OR (888) 354-7585
WEB SITE: WWW.BESTMP.COM
OR PRE-APPROVED EQUAL

SUMP VOLUME AVAILABLE

MINIMUM		MAXIMUM	
60" M.H.=	58.9 CF		98.1 CF
72" M.H.=	84.8 CF		141.3 CF
84" M.H.=	115.4 CF		192.3 CF

PROVIDE SPECIAL DETAIL FOR VOLUME REQUIREMENTS EXCEEDING 192.3 CF

SUMP VOLUME REQUIREMENTS
20 CF/1.0 CFS OF INFLOW
58.9 CF MINIMUM REQUIRED

STANDARD DRAWING TITLE	DRAWING NUMBER
WATER QUALITY MANHOLE (SNOUT) A	SS-25

City of Sherwood Oregon

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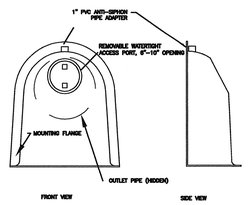
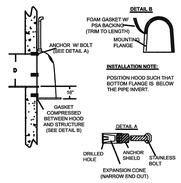
SCALE	DATE
N.T.S.	JUL' 09

CONFIGURATION DETAIL



INSTALLATION DETAIL



INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS BELOW THE PIPE INVERT.

SNOUT OIL-WATER-DEBRIS SEPARATOR

NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND WATER QUALITY STRUCTURES SHALL BE AS MANUFACTURED BY:
BEST MANAGEMENT PRODUCTS, INC.
53 MT. ARCHER RD.
LYME, CT 06371
(860) 434-0277, (860) 434-3195 FAX
TOLL FREE: (800) 504-8008 OR (888) 354-7585
WEB SITE: www.bestmp.com
OR PRE-APPROVED EQUAL.
2. ALL HOODS SHALL BE CONSTRUCTED OF A GLASS REINFORCED RESIN COMPOSITE WITH ISO GEL COAT EXTERIOR FINISH WITH A MINIMUM 0.125" LAMINATE THICKNESS.
3. ALL HOODS SHALL BE EQUIPPED WITH A WATERTIGHT ACCESS PORT, A MOUNTING FLANGE, AND AN ANTI-SIPHON VENT AS DRAWN. (SEE CONFIGURATION DETAIL)
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATION.
5. THE BOTTOM OF THE HOOD SHALL EXTEND DOWNWARD A DISTANCE OF 18" FROM I.E. OUT.
6. THE ANTI-SIPHON VENT SHALL EXTEND ABOVE HOOD BY MINIMUM OF 3" AND A MAXIMUM OF 24" ACCORDING TO STRUCTURE CONFIGURATION.
7. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
8. THE HOOD SHALL BE SECURELY ATTACHED TO STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS SUPPLIED BY MANUFACTURER. (SEE INSTALLATION DETAIL)
9. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
INSTALLATION KIT SHALL INCLUDE:
A. INSTALLATION INSTRUCTIONS
B. PVC ANTI-SIPHON VENT PIPE AND ADAPTER
C. OIL-RESISTANT CRUSHED CELL FOAM GASKET WITH PSA BACKING
D. 3/8" STAINLESS STEEL BOLTS
E. ANCHOR SHIELDS

STANDARD DRAWING TITLE	DRAWING NUMBER
WATER QUALITY MANHOLE (SNOUT) B	SS-26

City of Sherwood Oregon

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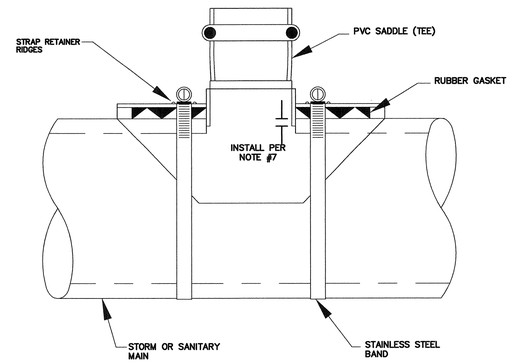
SCALE	DATE
N.T.S.	JUL' 09



NOTES:
1. INDEXED PVC GASKETED SADDLE SHALL CONFORM TO ASTM 3034 SDR35.
2. PVC COMPOUNDS SHALL CONFORM TO ASTM D1784 WITH CELL CLASS OF 12454-B/C OR 12364-C.
3. ALL ELASTOMERIC SEALS (RUBBER GASKETS) SHALL CONFORM TO ASTM F477.
4. INDEXED PVC GASKETED SADDLE SHALL BE INSTALLED WITH RUBBER GASKETS APPROVED FOR THE SEWER MAIN WALL CONFIGURATION (PROFILE OR SMOOTH WALL).
5. STAINLESS STEEL BANDS SHALL BE 300 SERIES, 3/4" BAND WIDTH, CADMIUM PLATED, CARBON STEEL, AND ATTACHED WITH HEX HEAD, SLOTTED SCREWS.
6. INSERTION HOLE SHALL BE CORE DRILLED.
7. INDEXED SADDLE SHALL BE INSERTED A MINIMUM OF 1/4" FROM OUTSIDE WALL OF HOST PIPE AND SHALL NOT PROTRUDE BEYOND THE INSIDE WALL OF THE HOST PIPE.

STANDARD DRAWING TITLE	DRAWING NUMBER
INDEXED PVC GASKETED SADDLE	SS-64

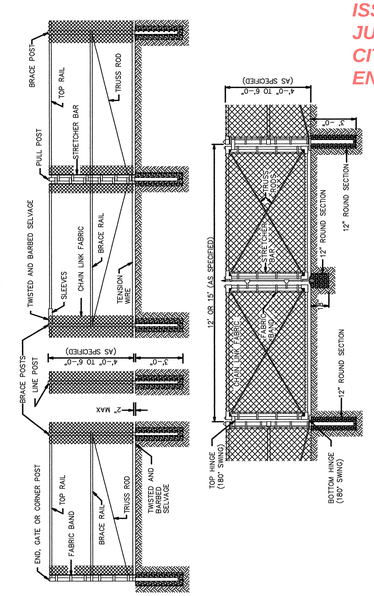
City of Sherwood Oregon

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.

SCALE	DATE
N.T.S.	JUL' 09

NOTES:
1. ALL FITTINGS, FASTENERS, & AND FABRIC TIES SHALL BE HOT DIP GALV.
2. CONC SHALL BE MIN 2500 PSI @ 28 DAYS.
3. PROVIDE BRACE RAIL BETWEEN END POSTS AND LINE POSTS. LENGTHS AS REQ'D.
4. PROVIDE GATE STOPS AND DROP RECEIVERS SET IN CONCRETE EACH GATE.
5. PROVIDE EXTENSION ARMS ON LINE, END AND CORNER POSTS & GATE POSTS AS REQ'D.
6. PROVIDE SIGHT OBSCURING SLATS WITH ALL WASTEWATER PUMP STATIONS.
7. CENTER BRACE RAIL NOT REQUIRED WITH FENCE HEIGHT OF 5' OR LESS.
8. ALL POSTS AND RAILS TO MATCH FENCE COLOR.

MEMBER	NOMINAL DIA	MATERIAL
BRACE RAIL	1.660	GALV TUBULAR STL
GATE FRAME	2.00	GALV TUBULAR STL
LINE POSTS	2.375	GALV TUBULAR STL
END, CORNER POST	2.875	GALV TUBULAR STL
CHAIN LINK FABRIC		9 GA. W/GREEN OR BLACK PVC COATING
	GATE OPENING (ft)	NOMINAL DIA	MATERIAL
GATE POST	12' OR 15'	4	GALV TUBULAR STL



STANDARD DRAWING TITLE	DRAWING NUMBER
CHAIN LINK FENCE AND GATE	SS-84

City of Sherwood Oregon

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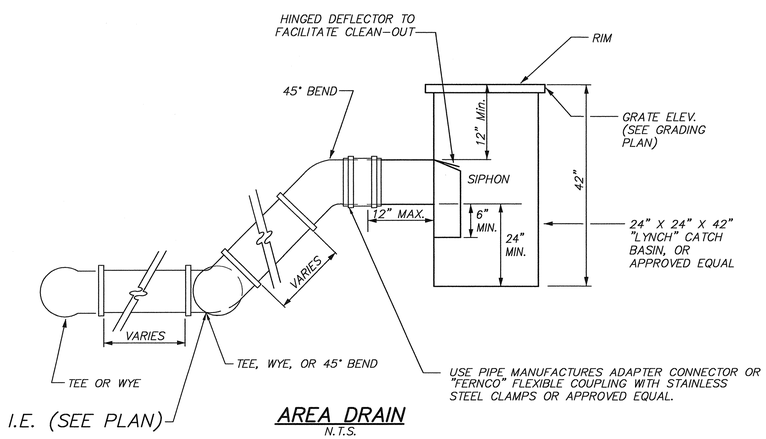
SCALE	DATE
N.T.S.	JUL' 09



AREA DRAIN
N.T.S.

MINIMUM PIPE COVER FOR STORM MAINLINE		
TYPE OF PIPE	PAVED AREAS (INCHES)	UNPAVED AREAS (INCHES)
OTHER APPROVED PIPE	48	36
RCP CLASS III	30	18
RCP CLASS IV	24	12
RCP CLASS V	18	6
AWWA C900	24	12
AWWA C905	24	12
DUCTILE IRON	18	6

NOTE: PLANS IDENTIFY PIPE MATERIAL BASED ON MINIMUM PIPE COVER. A DIFFERENT PIPE MATERIAL MAY BE USED IF IT CONFORMS WITH THE COVER REQUIREMENTS SHOWN ON THE TABLE.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
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205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

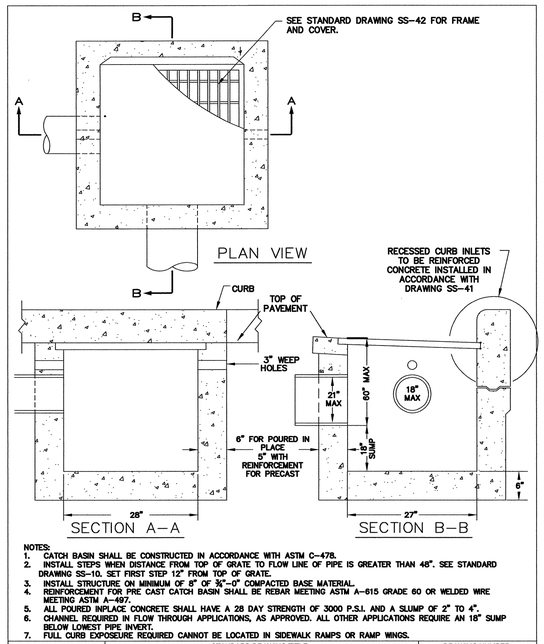
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-4

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02B-DETAILS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



NOTES:
1. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C-478.
2. INSTALL STEPS WHEN DISTANCE FROM TOP OF GRATE TO FLOW LINE OF PIPE IS GREATER THAN 48". SEE STANDARD DRAWING SS-10. SET FIRST STEP 12" FROM TOP OF GRATE.
3. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4"-0" COMPACTED BASE MATERIAL.
4. REINFORCEMENT FOR PRE CAST CATCH BASIN SHALL BE REBAR MEETING ASTM A-615 GRADE 60 OR WELDED WIRE MEETING ASTM A-497.
5. ALL POURED INPLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. AND A SLUMP OF 2" TO 4".
6. CHANNEL REQUIRED IN FLOW THROUGH APPLICATIONS, AS APPROVED. ALL OTHER APPLICATIONS REQUIRE AN 18" SUMP BELOW LOWEST PIPE INVERT.
7. FULL CURB EXPOSURE REQUIRED CANNOT BE LOCATED IN SIDEWALK RAMPS OR RAMP WINGS.

STANDARD DRAWING TITLE	DRAWING NUMBER
GUTTER & CURB INLET CATCH BASIN (CG-2)	SS-40
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

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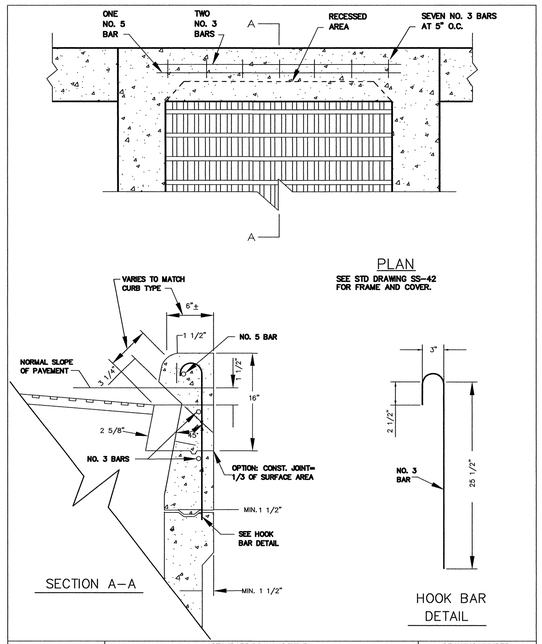

STANDARD DRAWING TITLE	DRAWING NUMBER
GUTTER & CURB INLET CATCH BASIN (CG-2) REINFORCEMENT	SS-41
SCALE: N.T.S.	DATE: JUL '09

City of Sherwood Oregon

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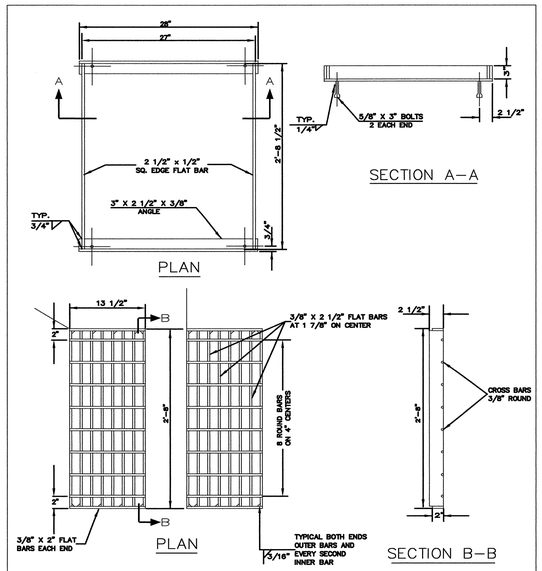

NOTE:
FRAME AND GRATE TO BE NEW STRUCTURAL ASTM A-36 FLAT BAR STEEL OR APPROVED EQUAL.
ADDITIONAL THICKNESS AND REINFORCEMENT SHALL BE REQUIRED FOR STATE HIGHWAY APPLICATIONS.

STANDARD DRAWING TITLE	DRAWING NUMBER
CATCH BASIN FRAME AND GRATE (CG-2)	SS-42
SCALE: N.T.S.	DATE: JUL '09

City of Sherwood Oregon

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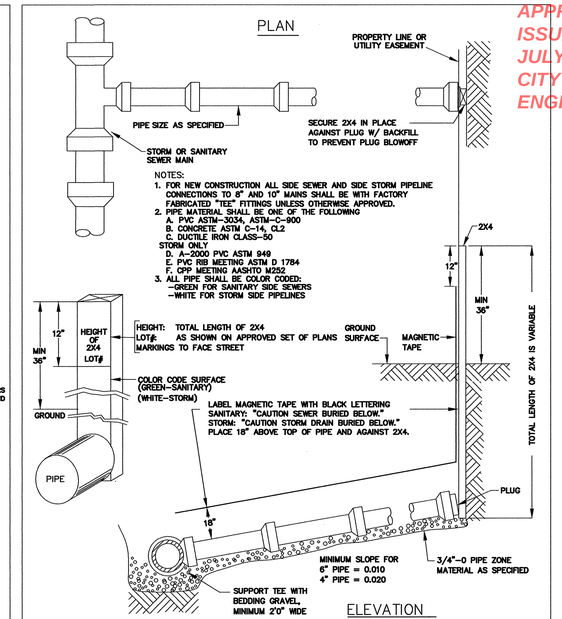

NOTES:
1. FOR NEW CONSTRUCTION ALL SIDE SEWER AND SIDE STORM PIPELINE CONNECTIONS TO 8" AND 10" MAINS SHALL BE WITH FACTORY FABRICATED "TEE" FITTINGS UNLESS OTHERWISE APPROVED.
2. PIPE MATERIAL SHALL BE ONE OF THE FOLLOWING
   A. PVC ASTM-3034, ASTM-C-900
   B. CONCRETE ASTM C-14, CL2
   C. DUCTILE IRON CLASS-50
   STORM ONLY
   D. A-2000 PVC ASTM 949
   E. PVC RIB MEETING ASTM D 1784
   F. CPP MEETING AASHTO M252
3. ALL PIPE SHALL BE COLOR CODED:
   -GREEN FOR SANITARY SIDE SEWERS
   -WHITE FOR STORM SIDE PIPELINES

STANDARD DRAWING TITLE	DRAWING NUMBER
SIDE SEWER/SIDE STORM PIPELINE	SS-62
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon

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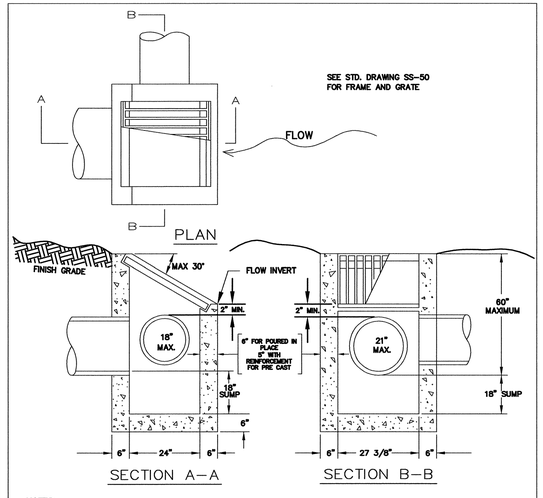

NOTES:
1. ALL PRE CAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.
2. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4" – 0" COMPACTED BASE MATERIAL.
3. PRE CAST REINFORCEMENT SHALL BE REBAR MEETING ASTM A615 GRADE 60 OR WELDED WIRE MEETING ASTM A497
4. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND SLUMP OF 2" TO 4".
5. PRE-CAST STRUCTURE'S CONFORMING TO O.D.O.T. TYPE G-2 CATCH BASIN DESIGN/WITH DITCH INLET TOP ARE AN ACCEPTABLE ALTERNATE. ALL GRATE MATERIALS SHALL MEET C.W.S. STANDARDS AS SHOWN ON DETAIL SS-50

STANDARD DRAWING TITLE	DRAWING NUMBER
DITCH INLET	SS-49
SCALE: N.T.S.	DATE: JUL '09

City of Sherwood Oregon

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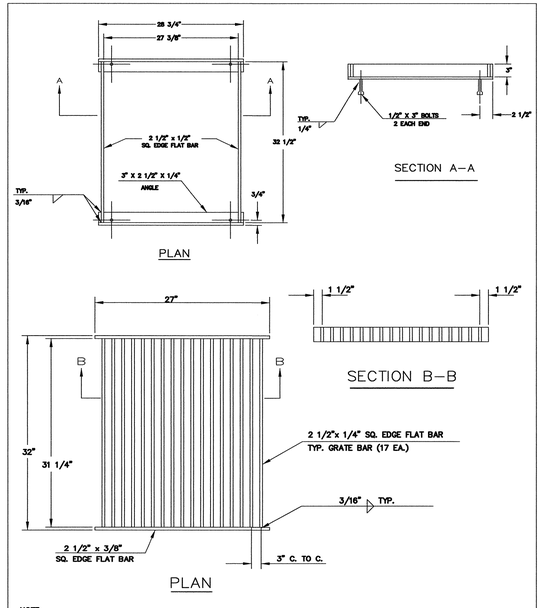

NOTE:
FRAME AND GRATE SHALL BE NEW STRUCTURAL ASTM A-36 FLAT BAR STEEL OR APPROVED EQUAL.

STANDARD DRAWING TITLE	DRAWING NUMBER
DITCH INLET FRAME AND GRATE	SS-50
SCALE: N.T.S.	DATE: JUL '09

City of Sherwood Oregon

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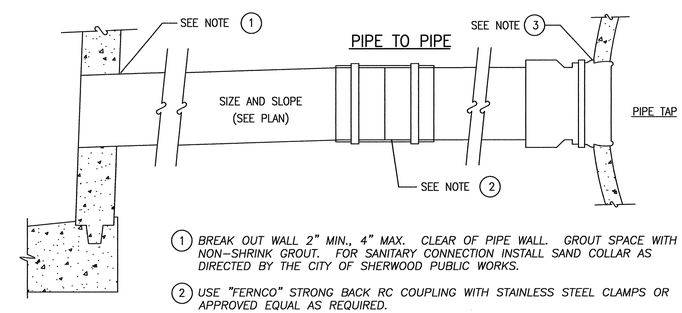

1. BREAK OUT WALL 2" MIN., 4" MAX. CLEAR OF PIPE WALL. GROUT SPACE WITH NON-SHRINK GROUT. FOR SANITARY CONNECTION INSTALL SAND COLLAR AS DIRECTED BY THE CITY OF SHERWOOD PUBLIC WORKS.
2. USE "FERNCO" STRONG BACK RC COUPLING WITH STAINLESS STEEL CLAMPS OR APPROVED EQUAL AS REQUIRED.
3. CUT HOLE INTO PIPE AND INSTALL "FOWLER" SEWER BOOT TAP OR APPROVED EQUAL.

PIPE CONNECTION

FOR STORM PIPE AND/OR SANITARY PIPE
N.T.S.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-5

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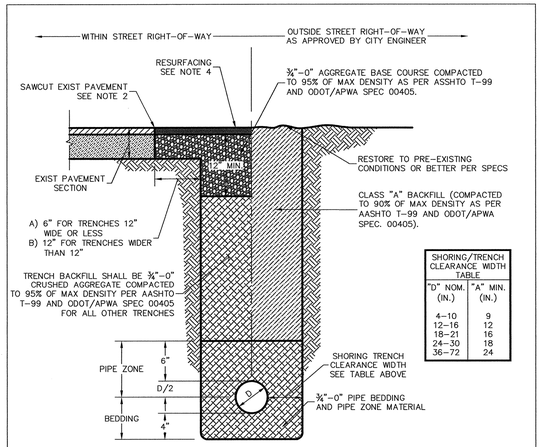
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



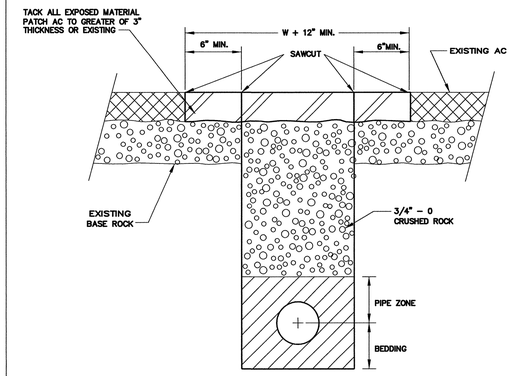
SHORING/TRENCH CLEARANCE WIDTH TABLE	
"D" NOM. (IN.)	"A" MIN. (IN.)
4–10	9
12–16	12
18–21	16
24–30	18
36–72	24

NOTES:

1. THESE TRENCH BACKFILL REQUIREMENTS APPLY TO ALL PUBLIC UTILITY PIPES. FOR ADDITIONAL REQUIREMENTS, SEE CITY STANDARD DESIGN MANUAL SECTION 210.19.
2. SAWCUT EXISTING AC PAVEMENT FULL DEPTH. SAWCUT EXISTING PCC PAVEMENT ACCORDING TO CITY STANDARD DETAILS.
3. FOR PCC PAVEMENT REQUIRED WIDTH OF CUT, SEE CITY STANDARD DETAILS.
4. MATCH EXISTING PAVEMENT MATERIAL(S). THICKNESS SHALL BE AS FOLLOWS:
   4.1. FOR EXISTING PCC: EXISTING PAVEMENT THICKNESS PLUS 2", BUT NOT LESS THAN 8". ON ARTERIAL AND COLLECTOR STREETS, CONCRETE PATCHING MATERIAL SHALL BE HIGH EARLY STRENGTH CLASS 5000 PSI PCC APPROVED BY CITY ENGINEER.
   4.2. FOR EXISTING AC PAVEMENT; RESURFACE TO A MINIMUM OF 3½" OF LEVEL 2, ½" DENSE HMAC OR EXISTING AC THICKNESS PLUS 2", WHICHEVER IS GREATER, BUT DO NOT EXCEED 6". COMPACT AC IN 2" MAX LIFTS TO 91% OF MAXIMUM DENSITY (RICE).
5. ALL CUT EDGES OF AC SHALL BE SAND SEALED WITH CRS-1 OR CRS-2 EMULSIFIED ASPHALT OR EQUIVALENT.
6. FOR CONDUIT TRENCH REQUIREMENTS SEE CITY STANDARD DETAIL RD-46.

STANDARD DRAWING TITLE	DRAWING NUMBER
STANDARD PIPE TRENCH BACKFILL AND SURFACE RESTORATION	RD-47
SCALE: N.T.S.	DATE: JUL' 09

City of Sherwood Oregon — Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



NOTE:
1. TEE CUT TO BE DONE AFTER EXCAVATION AND BACKFILL OF TRENCH.
2. SEE STD. DRAWING SS-69 FOR BEDDING, PIPE ZONE, AND TRENCH BACKFILL.

STANDARD DRAWING TITLE	DRAWING NUMBER
T-CUT ASPHALT DETAILS	SS-70
SCALE: N.T.S.	DATE: JUL' 09

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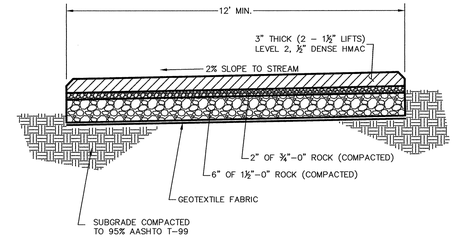

MAINTENANCE ACCESS ROAD

NOTES:

1. ALL WORK AND MATERIALS SHALL CONFORM TO CURRENT CITY STANDARDS.
2. FABRIC TO BE WOVEN GEOTEXTILE (AMOCO 2006) OR APPROVED EQUAL.
3. COMPACT AND STERILIZE SUBGRADE.
4. ACCESS SHALL EXTEND TO WITHIN 10 FT OF ALL STRUCTURES.

STANDARD DRAWING TITLE	DRAWING NUMBER
MAINTENANCE ACCESS ROAD SECTION	RD-64
SCALE: N.T.S.	DATE: JUL' 09

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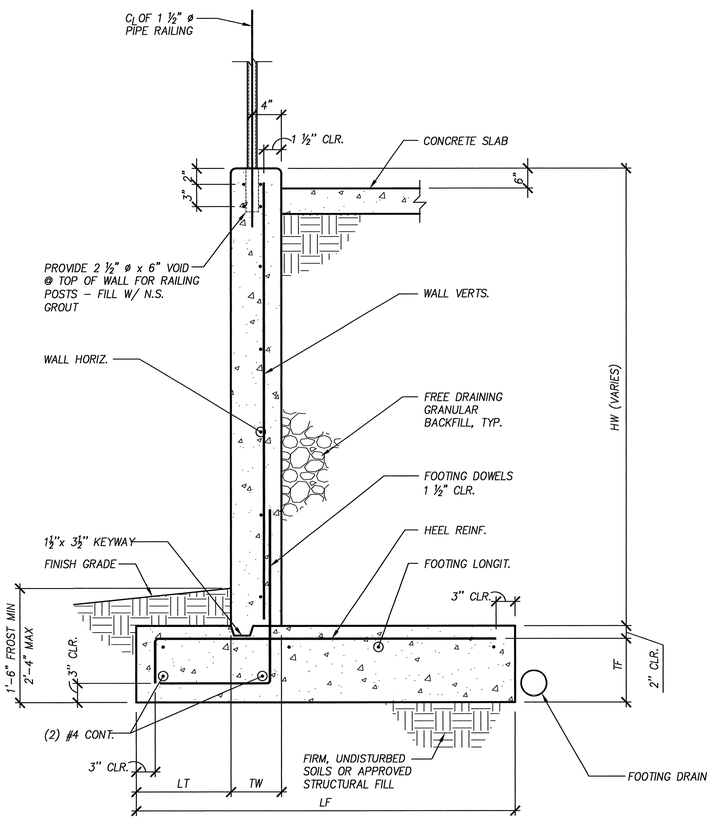


EFP: 35 pcf
CONC: f'c = 3000
REBAR: fy = 60ksi
SBP = 1500PSF ALLOWABLE

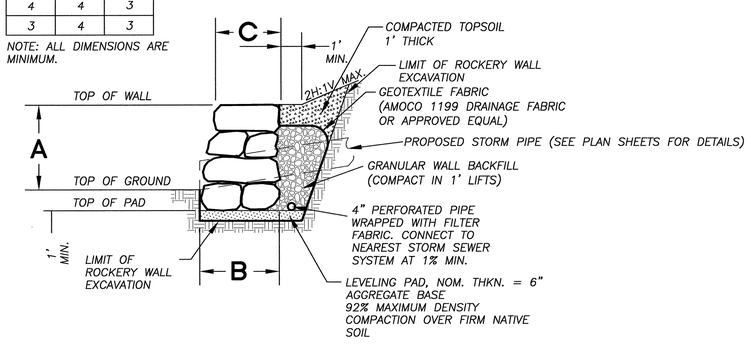
SCHEDULE

DIMENSIONS					FOOTING REINFORCING			WALL REINF.	
HW	TF	TW	LF	LT	FTG. LONGIT.	HEEL REINF.	FTG. DOWELS	WALL VERT.	WALL HORIZ.
UP TO 2'-0"	10"	8"	2'-0"	6"	(2) #4	#4 @ 36"	#4 x ⌋ @ 18"	DOWELS	#4 @ 12"
UP TO 4'-0"	10"	8"	3'-0"	6"	(3) #4	#4 @ 24"	#4 x ⌋ 36" @ 18"	#4 @ 18"	#4 @ 12"
UP TO 6'-6"	10"	8"	4'-0"	1"	(3) #4	#4 @ 18"	#4 x ⌋ 36" @ 12"	#4 @ 12"	#4 @ 12"

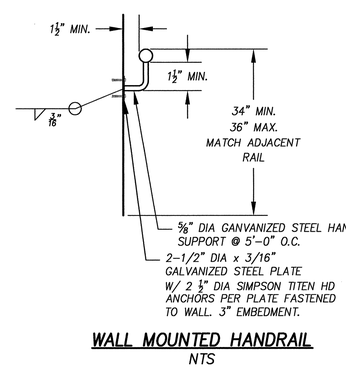
DIMENSIONS TABLE

A (ft)	B (ft)	C (ft)
6	5	4
4	4	3
3	4	3

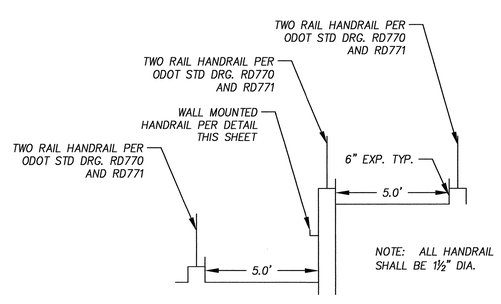
NOTE: ALL DIMENSIONS ARE MINIMUM.



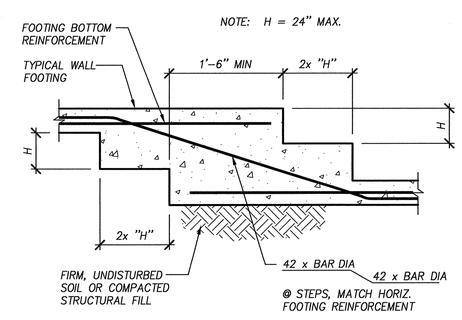
ROCKERY WALL
NTS



WALL MOUNTED HANDRAIL
NTS



RETAINING CURB SECTION A-A
NTS



RETAINING CURB WITH HANDRAIL
NTS

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-6

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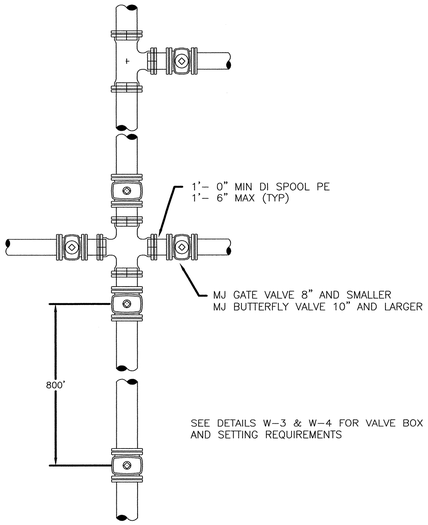
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



STANDARD DRAWING TITLE	DRAWING NUMBER
TYPICAL WATER VALVE LOCATION DETAIL	W-1
SCALE: N.T.S.	DATE: JUL' 09

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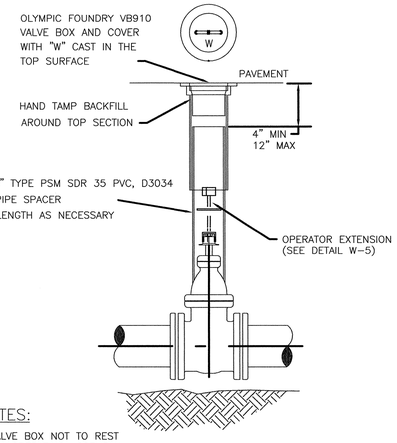

NOTES:

1. VALVE BOX NOT TO REST ON OPERATING ASSEMBLY
2. OPERATOR EXTENSION REQUIRED WHEN VALVE NUT IS DEEPER THAN 3 FEET FROM FINISHED GRADE
3. CENTER VALVE BOX ON AXIS OF OPER NUT
4. PROVIDE 24" SQUARE BY 4" THICK CONCRETE PAD AROUND VALVE BOX OUTSIDE OF PAVED AREAS
5. VALVE BOX COVER SHALL BE A MINIMUM OF 2½ " IN LENGTH

STANDARD DRAWING TITLE	DRAWING NUMBER
TYPICAL GATE VALVE SETTING DETAIL	W-3
SCALE: N.T.S.	DATE: JUL' 09

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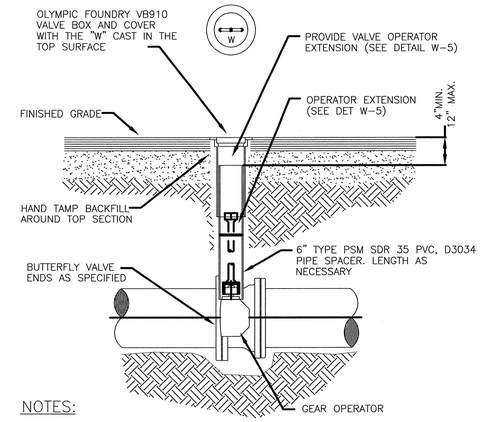

NOTES:

1. VALVE BOX NOT TO REST ON OPERATING ASSEMBLY.
2. OPERATOR EXTENSION REQUIRED WHEN VALVE NUT IS DEEPER THAN 3 FEET FROM FINISHED GRADE.
3. CENTER VALVE BOX ON AXIS OF OPER. NUT.
4. PROVIDE 24" SQUARE BY 4" THICK CONCRETE PAD OUTSIDE OF PAVED AREAS
5. VALVE BOX COVER SHALL BE A MINIMUM OF 2½" IN LENGTH

STANDARD DRAWING TITLE	DRAWING NUMBER
BUTTERFLY VALVE SETTING DETAIL	W-4
SCALE: N.T.S.	DATE: JUL' 09

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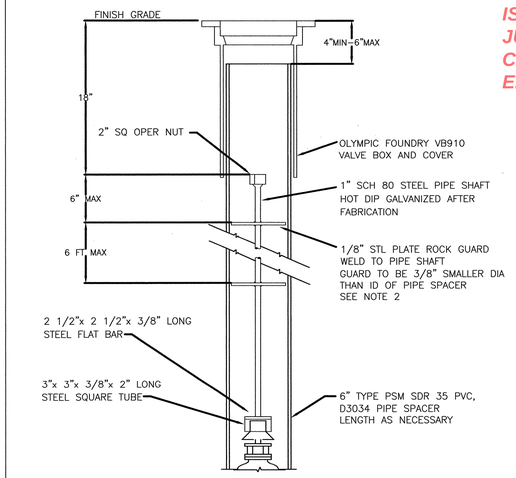
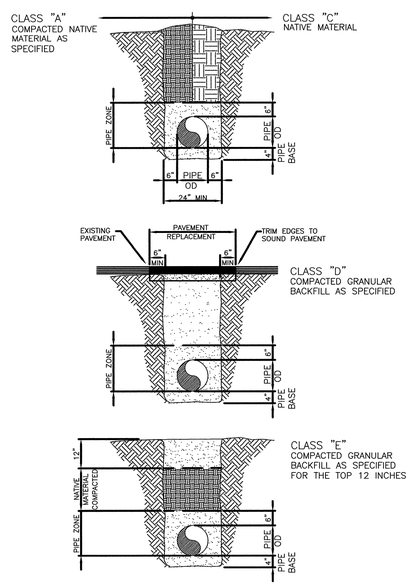


NOTES:

1. EXTEND 2" NUT TO WITHIN 18" OF FINISH GRADE WHEN VALVE NUT IS DEEPER THAN 3 FEET FROM FINISHED GRADE
2. WHERE DEPTH IS OVER 6 FEET. A SECOND PLATE WILL BE INSTALLED EQUALLY BETWEEN ROCK GUARD AND 2" VALVE NUT.

STANDARD DRAWING TITLE	DRAWING NUMBER
VALVE OPERATOR EXTENSION	W-5
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



STANDARD DRAWING TITLE	DRAWING NUMBER
TRENCH BACKFILL ABOVE THE PIPE ZONE	W-10
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.

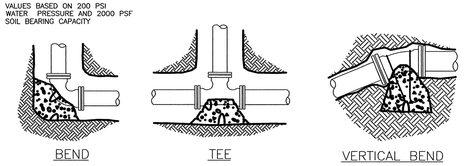
(HORIZONTAL)
BEARING AREA OF THRUST BLOCKS IN SQ FT

FITTING SIZE	TEE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4	1.3	1.8	1.0	1.0	1.0
6	2.8	4.0	2.2	1.1	1.0
8	5.0	7.1	3.8	2.0	1.0
12	11.3	16.0	8.7	4.4	2.2
16	20.1	28.4	15.4	7.8	3.9
20	31.1	44.4	24.0	12.3	6.2
24	45.2	64.0	34.6	17.7	8.9

VALUES BASED ON 200 PSI WATER PRESSURE AND 2000 PSF SOIL BEARING CAPACITY

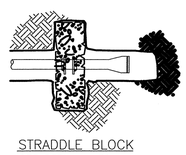
VOLUME OF THRUST BLOCK IN CU YDS (VERTICAL)

FITTING SIZE	BEND ANGLE 45°	22.5°	11.25°
4	1.1	0.4	0.2
6	2.7	1.0	0.4
8	4.0	1.5	0.6
12	8.5	3.2	1.3
16	14.8	5.6	2.3



BEND TEE VERTICAL BEND

FITTING SIZE	ROD SIZE	EMBEDMENT
4"–12"	#6	30"
14"–16"	#8	36"



STRADDLE BLOCK
SEE DETAIL W–30

NOTES:

1) THRUST BLOCKING AT ALL TEES, BENDS AND ENDS OF PIPING
2) CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH
3) ALL CONCRETE TO BE CLASS 3000
4) INSTALL 12 MIL TOTAL THICKNESS POLYTHENE SHEET AROUND FITTING. SECURE SHEET ENDS TO PREVENT INFILTRATION OF DIRT BETWEEN SHEET AND PIPE FITTING PRIOR TO POURING THRUST BLOCKING
5) PROTECT MECHANICAL JOINT FOLLOWERS AND BOLTS FROM CONCRETE WITH TEMPORARY FORMS AND POLYTHENE SHEETING SEE NOTE 3

STANDARD DRAWING TITLE	DRAWING NUMBER
THRUST BLOCKING DETAILS	W-12
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

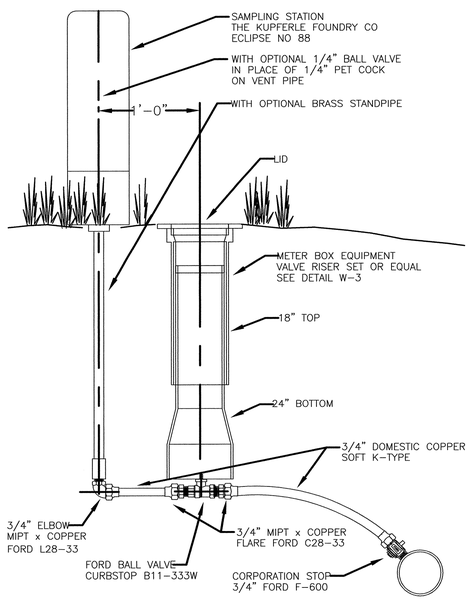
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-7

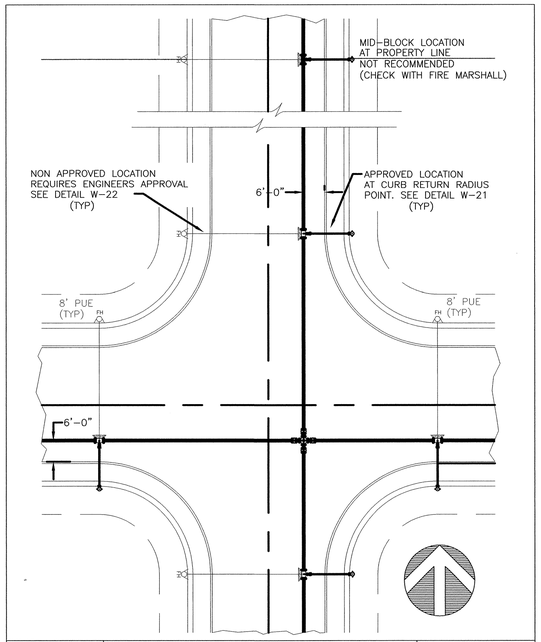
P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02B-DETAILS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



STANDARD DRAWING TITLE	DRAWING NUMBER
SAMPLE STATION INSTALLATION	W-15
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



STANDARD DRAWING TITLE	DRAWING NUMBER
TYPICAL FIRE HYDRANT	W-20
SCALE: N.T.S.	DATE: JUL' 09

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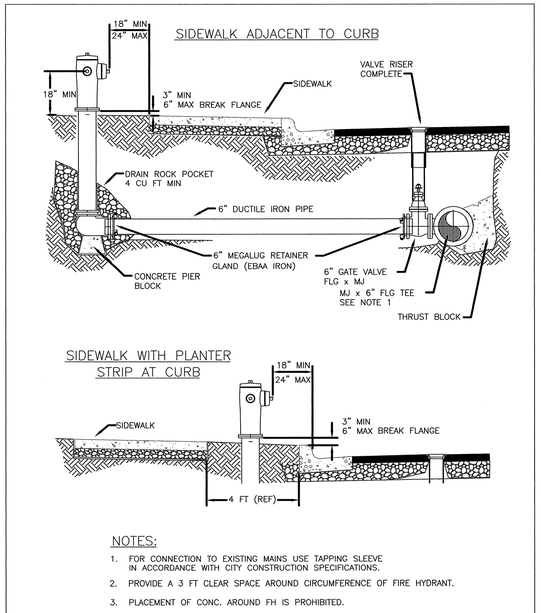

NOTES:

1. FOR CONNECTION TO EXISTING MAINS USE TAPPING SLEEVE IN ACCORDANCE WITH CITY CONSTRUCTION SPECIFICATIONS.
2. PROVIDE A 3 FT CLEAR SPACE AROUND CIRCUMFERENCE OF FIRE HYDRANT.
3. PLACEMENT OF CONC. AROUND FH IS PROHIBITED.

STANDARD DRAWING TITLE	DRAWING NUMBER
FIRE HYDRANT STANDARD INSTALLATION	W-21
SCALE: N.T.S.	DATE: JUL' 09

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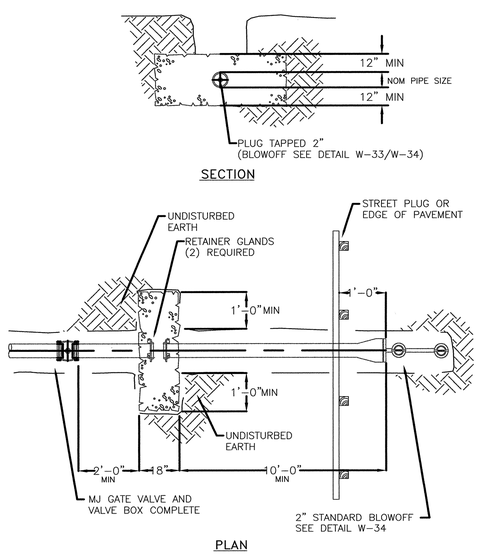

STANDARD DRAWING TITLE	DRAWING NUMBER
COLLAR THRUST BLOCK	W-30
SCALE: N.T.S.	DATE: JUL' 09

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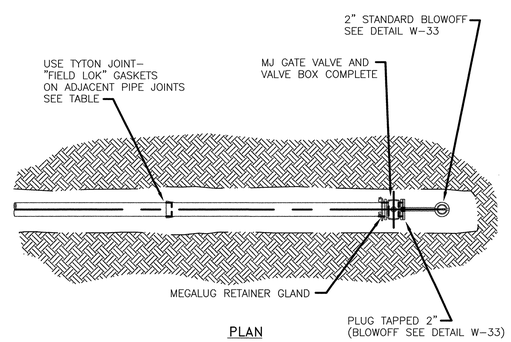

USE TYTON JOINT-
"FIELD LOK" GASKETS
ON ADJACENT PIPE JOINTS
SEE TABLE

PIPE SIZE	NO. OF PIPE RESTRAINED
4"	3 (54')
6"	3 (54')
8"	3 (54')
12"	4 (72')
16"	5 (90')

STANDARD DRAWING TITLE	DRAWING NUMBER
PHASE BREAK END	W-32
SCALE: N.T.S.	DATE: JUL' 09

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FINAL DESIGN

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Home of the Tualatin River National Wildlife Refuge

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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
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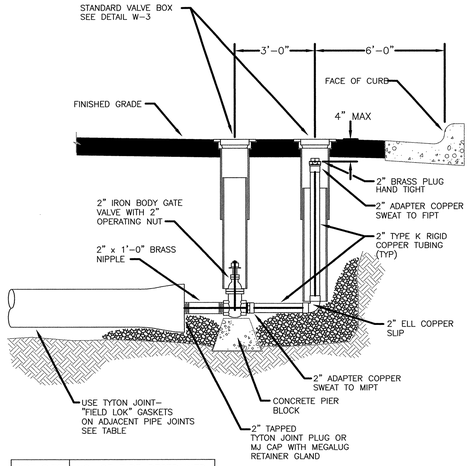
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-8

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02B-DETAILS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



PIPE SIZE	NO. OF PIPE RESTRAINED
4"	3 (54')
6"	3 (54')
8"	3 (54')
12"	4 (72')
16"	5 (90')

NOTES:

1. BACKFILL WILL BE COMPACTED 90% 3/4" GRAVEL, WITH MIN. 36" COVER
2. THREADED BRASS PIPING MAY BE USED IN PLACE OF COPPER TUBING
3. PROVIDE 24" SQUARE BY 4" THICK CONC. AROUND VALVE BOX OUTSIDE PAVED AREAS

STANDARD DRAWING TITLE	DRAWING NUMBER
2" STANDARD BLOWOFF (FIELD-LOK)	W-33
SCALE: N.T.S.	DATE: JUL' 09

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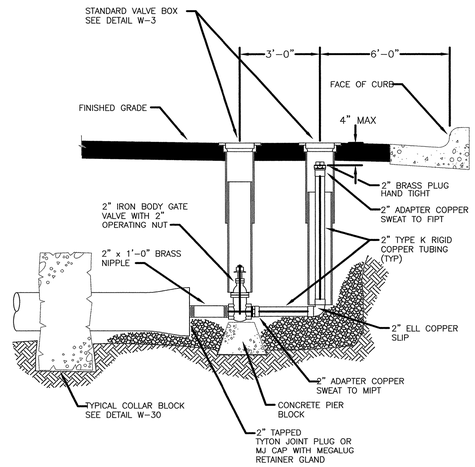
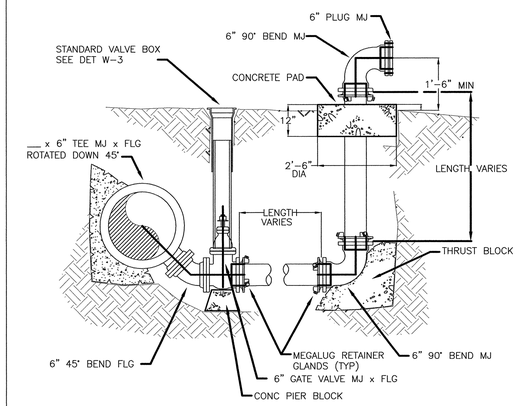


NOTES:

1. THREADED BRASS PIPING MAY BE USED IN PLACE OF COPPER TUBING
2. PROVIDE 24" SQUARE BY 4" THICK CONC. AROUND VALVE BOX OUTSIDE PAVED AREAS

STANDARD DRAWING TITLE	DRAWING NUMBER
2" STANDARD BLOWOFF (THRUST BLOCK)	W-34
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



NOTES:

1. PROVIDE 24" SQUARE BY 4" THICK CONC. AROUND VALVE BOX OUTSIDE PAVED AREAS

STANDARD DRAWING TITLE	DRAWING NUMBER
6" BLOWOFF DETAIL	W-37
SCALE: N.T.S.	DATE: JUL' 09

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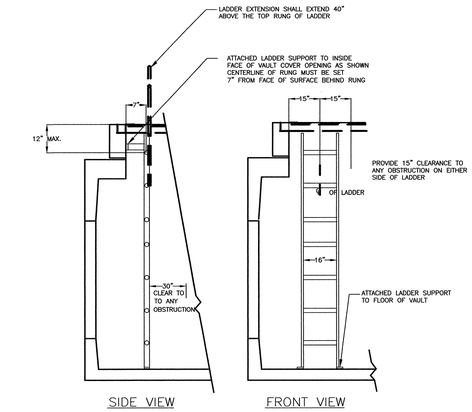

LADDER SHALL MEET THE REQUIREMENTS OF OSHA AND SHALL BE PROVIDED WITH A LADDER EXTENSION IN ACCORDANCE WITH CITY CONSTRUCTION SPECIFICATIONS.

STANDARD DRAWING TITLE	DRAWING NUMBER
VAULT LADDER INSTALLATION DETAIL	W-40
SCALE: N.T.S.	DATE: JUL' 09

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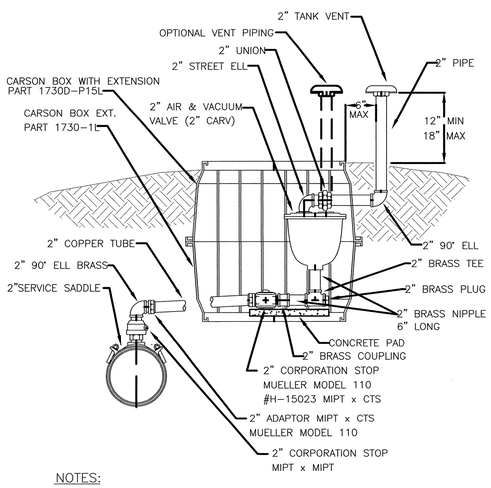
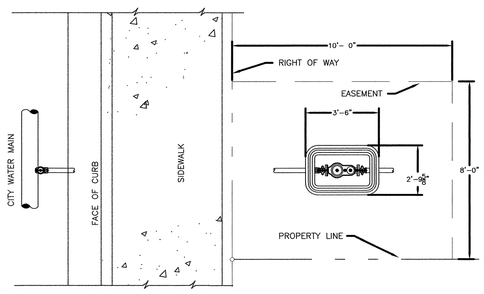


NOTES:

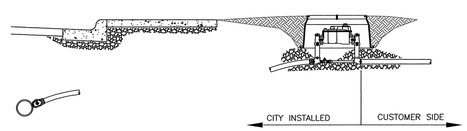
1. VENT PIPING TO BE GALVANIZED
2. SLOPE COPPER TUBE FROM MAIN UP TO AIR VALVE 1% MIN
3. LOCATION SIMILAR TO METER BOX SEE DETAIL W-7
4. SEE WATER SYSTEM STDS FOR CORPORATION STOPS, FLARE OR COMPRESSION, AS SPECIFIED

STANDARD DRAWING TITLE	DRAWING NUMBER
2" COMBINATION AIR & VACUUM VALVE	W-51
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



PLAN



PROFILE

STANDARD DRAWING TITLE	DRAWING NUMBER
1-1/2" & 2" METER INSTALLATION	W-60
SCALE: N.T.S.	DATE: JUL' 09

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FINAL DESIGN

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Home of the Tualatin River National Wildlife Refuge

Engineering Department
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Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-9

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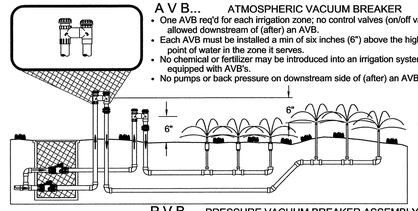
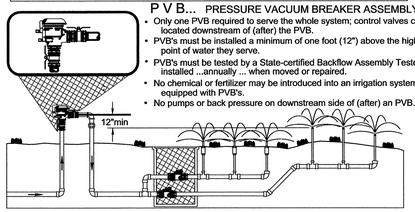
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



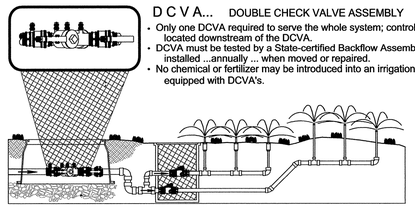
A V B... ATMOSPHERIC VACUUM BREAKER

- One AVB req'd for each irrigation zone; no control valves (on/off valves) allowed downstream of (after) an AVB.
- Each AVB must be installed a min of six inches (6") above the highest point of water in the zone it serves.
- No chemical or fertilizer may be introduced into an irrigation system equipped with AVB's.
- No pumps or back pressure on downstream side of (after) an AVB.



P V B... PRESSURE VACUUM BREAKER ASSEMBLY

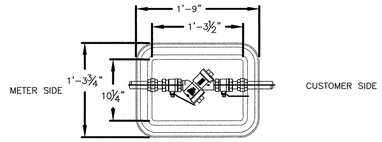
- Only one PVB required to serve the whole system; control valves can be located downstream of (after) the PVB.
- PVB's must be installed a minimum of one foot (12") above the highest point of water they serve.
- PVB's must be tested by a State-certified Backflow Assembly Tester...when installed ...annually ... when moved or repaired.
- No chemical or fertilizer may be introduced into an irrigation system equipped with PVB's.
- No pumps or back pressure on downstream side of (after) an PVB.



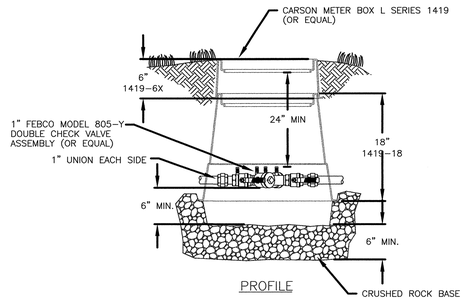
D C V A... DOUBLE CHECK VALVE ASSEMBLY

- Only one DCVA required to serve the whole system; control valves can be located downstream of the DCVA.
- DCVA must be tested by a State-certified Backflow Assembly Tester...when installed ...annually ... when moved or repaired.
- No chemical or fertilizer may be introduced into an irrigation system equipped with DCVA's.

STANDARD DRAWING TITLE		DRAWING NUMBER
TYPICAL BACKFLOW PREVENTERS FOR LAWN SPRINKLER SYSTEMS		W-70
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE	DATE
	N.T.S.	JUL' 09



PLAN

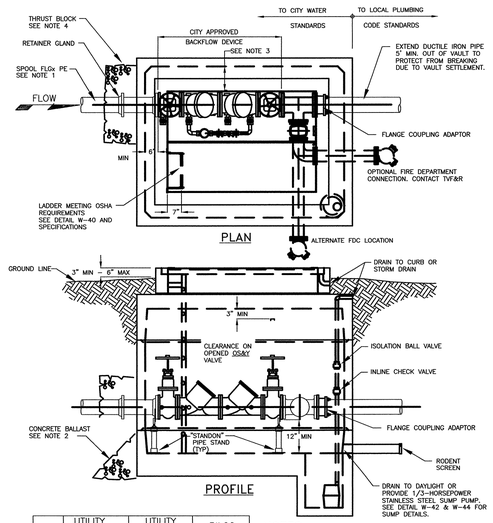


PROFILE

NOTE:

INSTALLATION SHOWN IS ONLY A SUGGESTION. THE DISTANCE FROM BOTTOM OF DEVICE TO FINISH GRADE, FREEZE PROTECTION, AND CLEARANCE FOR TESTING & REPAIR ARE THE MAJOR CONSIDERATIONS FOR INSTALLATION. PLUGS TO BE INSTALLED IN TEST COCKS OF BELOW GROUND INSTALLATIONS (NO DISSIMILAR METALS).
IF ADEQUATE FREEZE PROTECTION IS PROVIDED, THE 24" MIN CLEARANCE MAY BE REDUCED.

STANDARD DRAWING TITLE		DRAWING NUMBER
1" DOUBLE CHECK ASSEMBLY		W-72
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE	DATE
	N.T.S.	JUL' 09



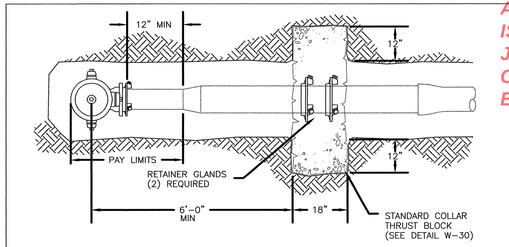
SIZE	UTILITY VAULT WITH FDC *	UTILITY VAULT W/O FDC *	BILCO DOOR *
3	577-WA	577-WA	J-5AL
4	577-WA	577-WA	J-5AL
6	676-WA	676-WA	J-5AL
8	687-WA	687-WA	JD-3AL
10	5106-LA	5106-LA	JD-3AL

* "OR EQUAL" APPROVED BY CITY ENGINEER

NOTES:

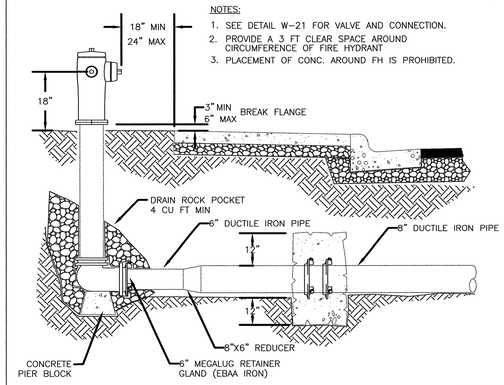
1. CONTRACTOR TO SEAL ALL OPENINGS IN VAULT WITH NON SHRINK GROUT
2. CONTRACTOR TO INSTALL CONCRETE BALLAST 3 CU YDS MIN AROUND BASE OF VAULT WHERE FLOODING OR HIGH GROUND WATER EXIST
3. CLEARANCE BETWEEN WALL AND DEVICE 8" MIN., 12" MAX., EXCEPT 8" MIN, 9" MAX. FOR 660-WA VAULT
4. THRUST BLOCK 1'-0" MIN THICKNESS
5. DETECTOR METER TO READ IN CUBIC FEET

STANDARD DRAWING TITLE		DRAWING NUMBER
DOUBLE CHECK DETECTOR ASSEMBLY		W-78
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE	DATE
	N.T.S.	JUL' 09



NOTES:

1. SEE DETAIL W-21 FOR VALVE AND CONNECTION.
2. PROVIDE A 3 FT CLEAR SPACE AROUND CIRCUMFERENCE OF FIRE HYDRANT
3. PLACEMENT OF CONC. AROUND FH IS PROHIBITED.



FIRE HYDRANT ON FUTURE MAIN EXTENSION
N.T.S.

FINAL DESIGN

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-10

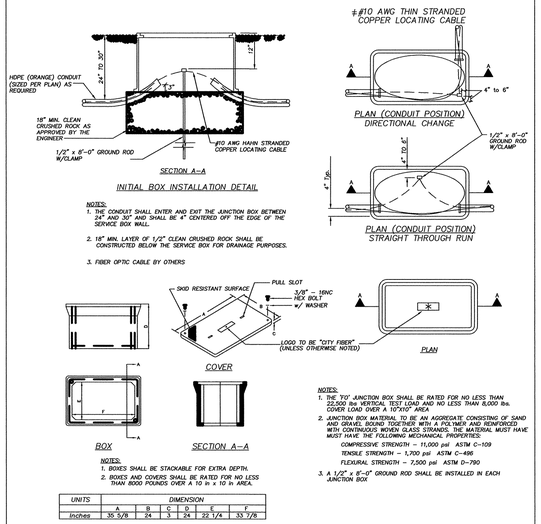
P:\SHR-08\SHR08-DWGS\SHEETS\SHR08-02B-DETAILS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

1. FIBER OPTIC CONDUIT TO BE HDPE (ORANGE)
2. CONDUIT DIAMETER TO BE 2" UNLESS OTHERWISE SPECIFIED
3. TRACER WIRE TO BE #10 AWG THIN STRANDED COPPER CABLE
4. FIBER OPTIC JUNCTION BOX TO BE:
   MANUFACTURER: ARMORCAST
   NUMBER: A6001974APCX24
   UNLESS OTHERWISE SPECIFIED
5. FIBER OPTIC SPLICE VAULT TO BE:
   MANUFACTURER: UTILITY VAULT
   NUMBER: 233-LA
   UNLESS OTHERWISE SPECIFIED
6. MARKER TAPE (IF REQUIRED) TO BE 6" VINYL UNLESS OTHERWISE SPECIFIED
7. FIBER OPTIC CABLE TO BE INSTALLED BY OTHERS
8. 2" CITY FIBER CONDUIT SHALL BE INSTALLED ALONG STREET FRONTAGE IN THE PUBLIC UTILITY EASEMENT (IF AVAILABLE) OR WITHIN STREET RIGHT-OF-WAY FOR ALL RESIDENTIAL AND COMMERCIAL CONSTRUCTION PROJECTS.

STANDARD DRAWING TITLE	DRAWING NUMBER
CITY FIBER OPTIC GENERAL NOTES	FO-1
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.

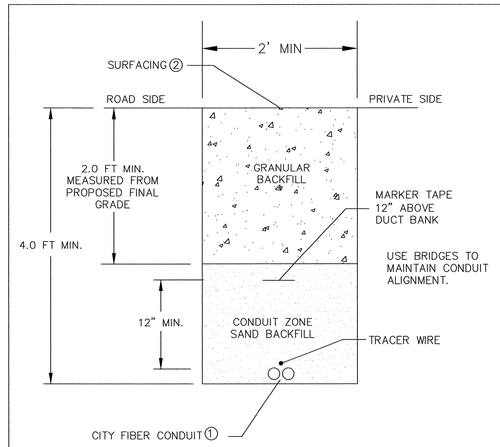


UNITS	DIMENSION					
	A	B	C	D	E	F
Inches	35 5/8	24	3	24	22 1/4	33 7/8

FIBERGLASS REINFORCED POLYMER CONCRETE FIBER OPTIC JUNCTION BOX DETAILS
NOT TO SCALE

STANDARD DRAWING TITLE	DRAWING NUMBER
CITY FIBER OPTIC JUNCTION BOX DETAIL	FO-2
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



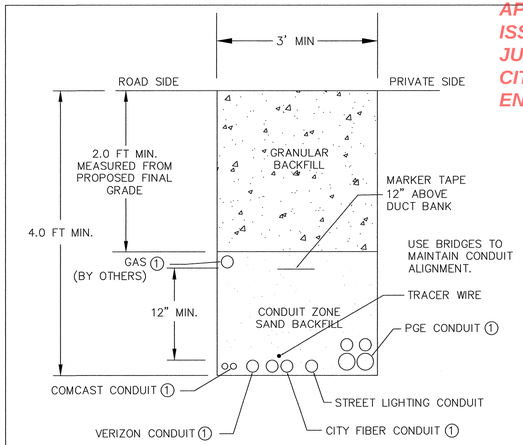
CITY FIBER OPTIC TRENCH

TYPICAL SECTION (N.T.S.)
THIS SECTION IS SCHEMATIC AND FOR INFORMATIONAL PURPOSES.

NOTE: ① MINIMUM CONDUIT SIZE 2" DIAMETER. SEE PLANS FOR LOCATIONS. CONDUIT TO BE HDPE (ORANGE).
② SURFACING OF PAVED AREAS SHALL COMPLY WITH STANDARD DRAWING RD-45.

STANDARD DRAWING TITLE	DRAWING NUMBER
CITY FIBER OPTIC TRENCH DETAIL	FO-3
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



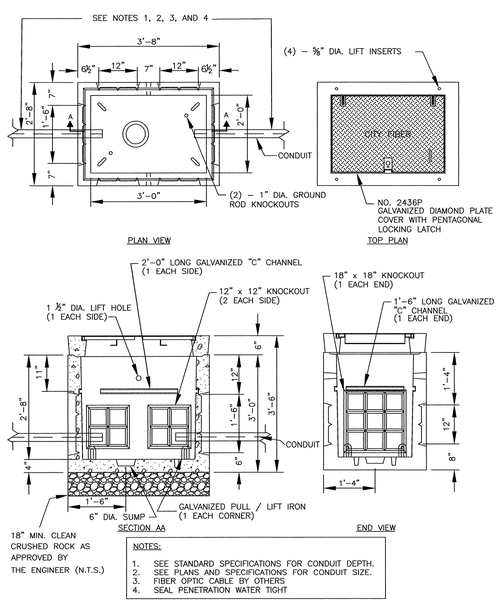
JOINT UTILITY TRENCH

TYPICAL SECTION (N.T.S.)
THIS SECTION IS SCHEMATIC AND FOR INFORMATIONAL PURPOSES.

NOTE: ① UTILITIES IN JOINT TRENCH VARY BY PROJECT AREA. SEE PLANS FOR LOCATIONS AND SIZES OF CONDUIT FOR EACH UTILITY.
② SURFACING OF PAVED AREAS SHALL COMPLY WITH STANDARD DRAWING RD-45.
③ MINIMUM CONDUIT SIZE 2", CONDUIT TO BE HDPE (ORANGE)

STANDARD DRAWING TITLE	DRAWING NUMBER
UTILITIES JOINT TRENCH	FO-4
SCALE: N.T.S.	DATE: JUL' 09

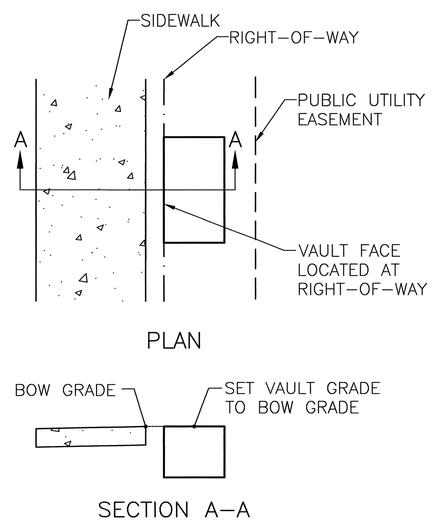
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



NOTES:
1. SEE STANDARD SPECIFICATIONS FOR CONDUIT DEPTH.
2. SEE PLANS AND SPECIFICATIONS FOR CONDUIT SIZE.
3. FIBER OPTIC CABLE BY OTHERS
4. SEAL PENETRATION WATER TIGHT

STANDARD DRAWING TITLE	DRAWING NUMBER
CITY FIBER OPTIC SPLICE VAULT	FO-5
SCALE: N.T.S.	DATE: JUL' 09

Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.



TYPICAL VAULT PLACEMENT

NTS

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/12

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

ROADWAY PLANS & DETAILS

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2B-11

P:\SHR-08\SHR08-DWGS\SHEETS\SHR08-02B-DETAILS.dwg

EROSION & SEDIMENT CONTROL PLANS

ADAMS AVENUE NORTH

SHERWOOD, OREGON

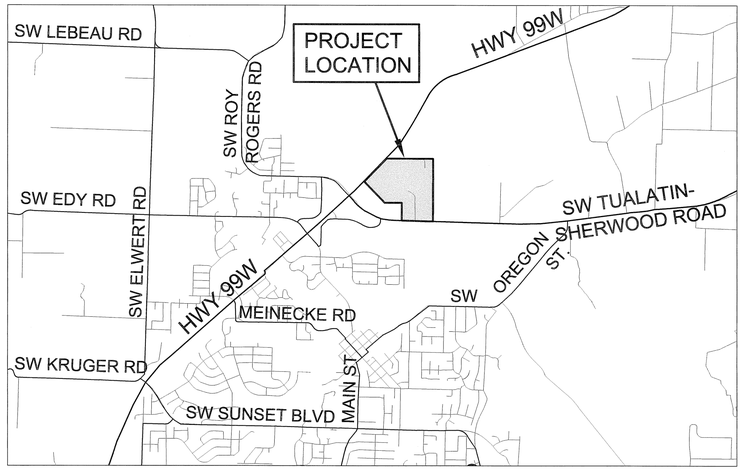
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JUL 1 2015
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

SHEET INDEX

2C–1 ESC COVER SHEET
2C–2 CLEARING & DEMOLITION ESC PLAN
2C–3 CLEARING & DEMOLITION ESC PLAN
2C–4 CLEARING & DEMOLITION ESC PLAN
2C–5 CLEARING & DEMOLITION ESC PLAN
2C–6 GRADING, STREET & UTILITY CONSTRUCTION ESC PLAN
2C–7 GRADING, STREET & UTILITY CONSTRUCTION ESC PLAN
2C–8 GRADING, STREET & UTILITY CONSTRUCTION ESC PLAN
2C–9 GRADING, STREET & UTILITY CONSTRUCTION ESC PLAN
2C–10 ESC DETAILS
2C–11 ESC DETAILS

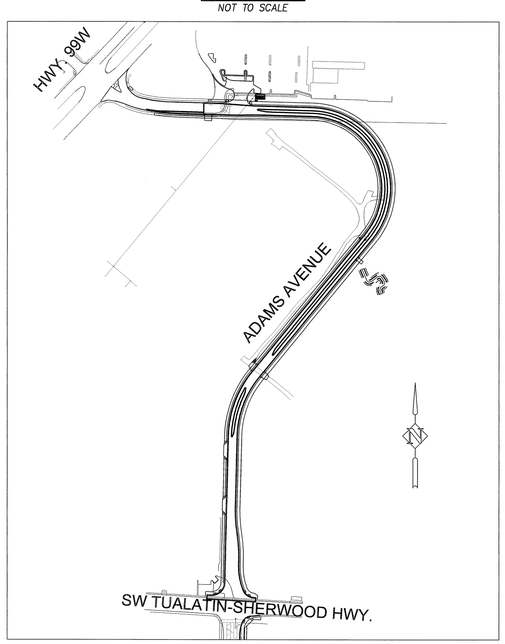
ATTENTION EXCAVATORS:

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.



VICINITY MAP

NOT TO SCALE



OVERALL SITE MAP

SCALE: 1" = 300'

ENGINEERS/PLANNERS/SURVEYORS:

HARPER HOUF PETERSON RIGHELLIS INC.
CONTACT: BEN AUSTIN, P.E.
205 SE SPOKANE STREET
PORTLAND, OR 97202
(503) 221–1131
BENA@HHPR.COM

OWNER/DEVELOPER:

CITY OF SHERWOOD
CONTACT: JASON WATERS, P.E.
22560 SW PINE STREET
SHERWOOD, OR 97140
(503) 925–2309
WATERSJ@SHERWOODOREGON.GOV

LOCATION:

ADAMS AVENUE NORTH TUALATIN–SHERWOOD ROAD TO HIGHWAY 99W
SHERWOOD, OREGON 97140
WASHINGTON COUNTY

LATITUDE: 45°22'13"N
LONGITUDE: 122°50'08"W

PROPERTY DESCRIPTION

PUBLIC RIGHT–OF–WAY

NORTHEAST AND NORTHWEST 1/4 OF SECTION 29, TOWNSHIP 2 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

BENCHMARK

THE BENCHMARK FOR THIS PROJECT IS WASHINGTON COUNTY BENCHMARK NUMBER 39. THE BENCHMARK IS A BRASS DISK SET IN CONCRETE POST WITH SPIKES ALONG THE SOUTH SIDE OF EASTBOUND 99W AND WEST SIDE OF S.W. LANGER DRIVE, 44 FEET SOUTH OF SOUTH EDGE OF EASTBOUND LANES OF 99W.

ELEVATION – 210.23'

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 LISTED BMPs 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.

BRA
INITIAL

EXISTING CONDITIONS:

OPEN FIELDS, 2 PGE SUBSTATIONS, PGE TRANSMISSION TOWERS, ACCESS POINT TO THE NORTH USING EXISTING HOME DEPOT ACCESS, UTILITIES

DEVELOPED CONDITIONS:

2 ACCESS POINTS; ONE NEW FROM THE SOUTH AT ADAMS AVENUE AND TUALATIN–SHERWOOD HWY. ONE EXISTING FROM THE NORTH EXTENDING THE EXISTING HOME DEPOT ACCESS FROM SW PACIFIC HWY.; NEW SIDEWALKS, DRIVEWAYS, CURB AND GUTTER, MEDIAN, AND NEW STORM, SANITARY AND WATER UTILITIES

CONSTRUCTION ACTIVITIES TIME TABLE:

- CLEARING (TBD)
- MASS GRADING (TBD)
- UTILITY INSTALLATION (TBD)
- STREET CONSTRUCTION (TBD)
- STABILIZATION (TBD)

TOTAL SITE AREA: 342,445 SF = 7.86 ACRES

TOTAL DISTURBED AREA: 245,267 SF = 5.63 ACRES

SITE SOIL CLASSIFICATION:

SOURCE OF MAP: NATURAL RESOURCES CONSERVATION SERVICE
WEB SOIL SURVEY URL: http://websoilsurvey.nrcs.usda.gov
COORDINATE SYSTEM: UTM ZONE 10N NAD83
SURVEY AREA DATA: VERSION 7, AUG. 31, 2009
AERIAL IMAGES DATED: 8/4/2009

THE SUBSURFACE SOIL CLASSIFICATIONS ARE GENERALLY LOAM AND SILT.

THE USDA SOILS MAP FOR WASHINGTON COUNTY LABEL THE ONSITE SOILS AS #1 ALOHA SILT LOAM, #21A, B & D HILLSBORO LOAM AND #37A & B QUATAMA LOAM.

THESE SOILS ERODE EASILY BY WIND AND WATER AND EROSION CONTROL MEASURES WILL BE INSTALLED BEFORE CONSTRUCTION BEGINS.

RECEIVING BODIES OF WATER:

STORM WATER WILL BE COLLECTED AND TREATED ON SITE, THEN RELEASED INTO AN EXISTING OPEN CONVEYANCE CHANNEL PRIOR TO ENTERING ROCK CREEK.

PERMITTEE'S SITE INSPECTOR:

NAME: ROBERT FISHER
COMPANY: HARPER HOUF PETERSON RIGHELLIS INC.
PHONE: 503–221–1131
FAX: 503–221–1171
E–MAIL: BOB@HHPR.COM
EXPERIENCE: OVER 10 YEARS EXPERIENCE IN CONSTRUCTION INSPECTION TOTALING MORE THAN 200 HOURS IN THE INSPECTION OF EROSION CONTROL MEASURES.

INSPECTION FREQUENCY:

	SITE CONDITION	MINIMUM FREQUENCY
1.	ACTIVE PERIOD	DAILY WHEN STORMWATER RUNOFF, INCLUDING RUNOFF FROM SNOWMELT, IS OCCURRING. AT LEAST ONCE EVERY TWO (2) WEEKS REGARDLESS OF WETHER STORMWATER RUNOFF IS OCCURRING.
2.	PRIOR TO THE SITE BECOMING INACTIVE OR IN ANTICIPATION OF SITE INACCESSIBILITY.	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.
3.	INACTIVE PERIODS GREATER THAN FOURTEEN (14) CONSECUTIVE CALENDAR DAYS.	ONCE EVERY TWO (2) WEEKS.
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–CON MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE EC INSPECTOR.
- ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ 1200C PERMIT REQUIREMENTS.
- INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ 1200C 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)

BMP MATRIX FOR CONSTRUCTION PHASES

	CLEARING	MASS GRADING	UTILITY INSTALLATION	STREET CONSTRUCTION	FINAL STABILIZATION	WET WEATHER (OCT 1 – MAY 31ST)
EROSION PREVENTION						
PRESERVE NATURAL VEGETATION	X**	X	X	X	X	X
GROUND COVER					X	X
HYDRAULIC APPLICATIONS						
PLASTIC SHEETING						X
MATTING						X
DUST CONTROL	X	X	X	X	X	
TEMPORARY/ PERMANENT SEEDING					X	X
BUFFER ZONE						
OTHER:						
SEDIMENT CONTROL						
SEDIMENT FENCE (PERIMETER)	X**	X	X	X	X	X
SEDIMENT FENCE (INTERIOR)						
STRAW WATTLES						
FILTER BERM						
INLET PROTECTION	X	X	X	X	X	X
DEWATERING						
SEDIMENT TRAP						
OTHER:						
RUN OFF CONTROL						
CONSTRUCTION ENTRANCE	X**	X	X			X
PIPE SLOPE DRAIN						
OUTLET PROTECTION			X	X	X	X
SURFACE ROUGHENING					X	X
CHECK DAMS	X	X	X	X	X	X
OTHER:						
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
OTHER:						

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

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

STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES:

1. 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)
2. 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.ii.(1)(c))
3. 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.iii)
4. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A 8.c.ii.(1)(d))
5. 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))
6. 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.iii(1) AND A.7.b.iii(3))
7. 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)
8. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.c.ii.(6))
9. 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.ii.(2))
10. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON–STORMWATER CONTROLS. (SCHEDULE A.8.c.i.(7))
11. 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 ONSITE, 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))
12. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER–TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.d.ii.(3))
13. 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))
14. 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.iii.)
15. USE WATER, SOIL–BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND–BLOWN SOIL. (SCHEDULE A 7.b.ii)
16. 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.iii)
17. 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 SYSTEM, 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)
18. 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)
19. 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))
20. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER. (SCHEDULE A.7.a.i)
21. 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)
22. 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)
23. 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)
24. 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 DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.b.i)
25. 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)
26. 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)
27. 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)
28. 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.iii(2) AND A.8.c.iii)

LOCAL AGENCY–SPECIFIC EROSION CONTROL NOTES:

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

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: OCT 2012

ADAMS AVENUE NORTH
ESC COVER SHEET
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-1

P:\SHR-08\SHR08-DWGS\1200C Permit\ SHR08-2C1-COVER.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

LEGEND – CLEARING & DEMOLITION

- 210 — EXISTING CONTOUR
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING
- SEDIMENT PROTECTION FENCING. SEE DETAIL ON SHEET 2C-10
- DAYLIGHT LINE
- IRRIGATION LINE TO BE ABANDONED
- REMOVE STORM LINE AND ASSOCIATED CATCH BASINS AND CLEANOUTS
- REMOVE FENCE, RAIL ROAD TIE OR CURB
- REMOVE PAVEMENT, SIDEWALK AND ASSOCIATED CURB
- DRAINAGE FLOW DIRECTION
- (1) INSTALL SILT SACK SEDIMENT CONTROL. UPON PROJECT COMPLETION CONTRACTOR SHALL REMOVE SILT SACK AND CLEAN SUMP. SEE DETAIL ON SHEET 2C-10.
- (2) INSTALL SEDIMENT FENCE. SEE DETAIL ON SHEET 2C-10.
- (3) INSTALL TREE PROTECTION FENCING. SEE DETAIL ON SHEET 2C-11.
- (4) CONSTRUCT CONSTRUCTION ENTRANCE. SEE DETAIL ON SHEET 2C-10.
- (5) INSTALL OUTLET PROTECTION. SEE DETAIL ON SHEET 2C-10.

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.

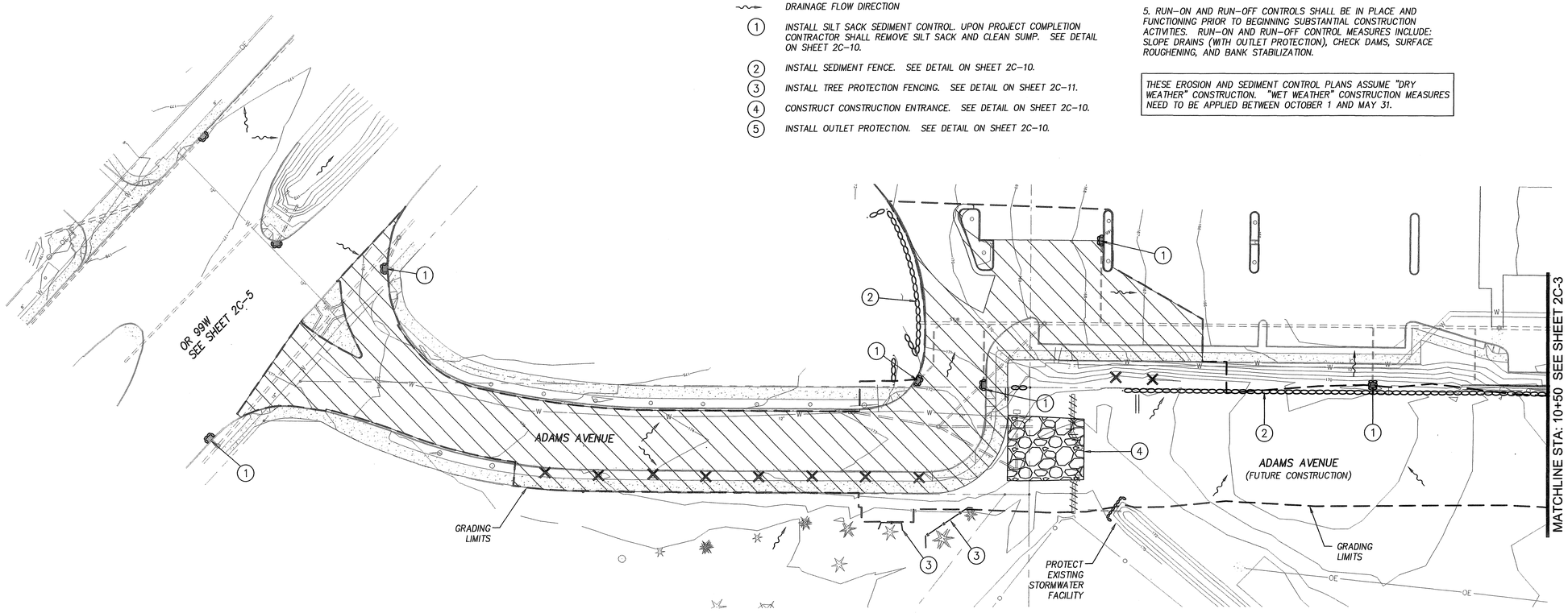
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.

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 1 AND MAY 31.



0 20 40 80
SCALE: 1" = 40'

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

ROADWAY PLANS & DETAILS

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: APRIL 2012

ADAMS AVENUE NORTH
CLEARING & DEMOLITION ESC PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-2

FINAL DESIGN

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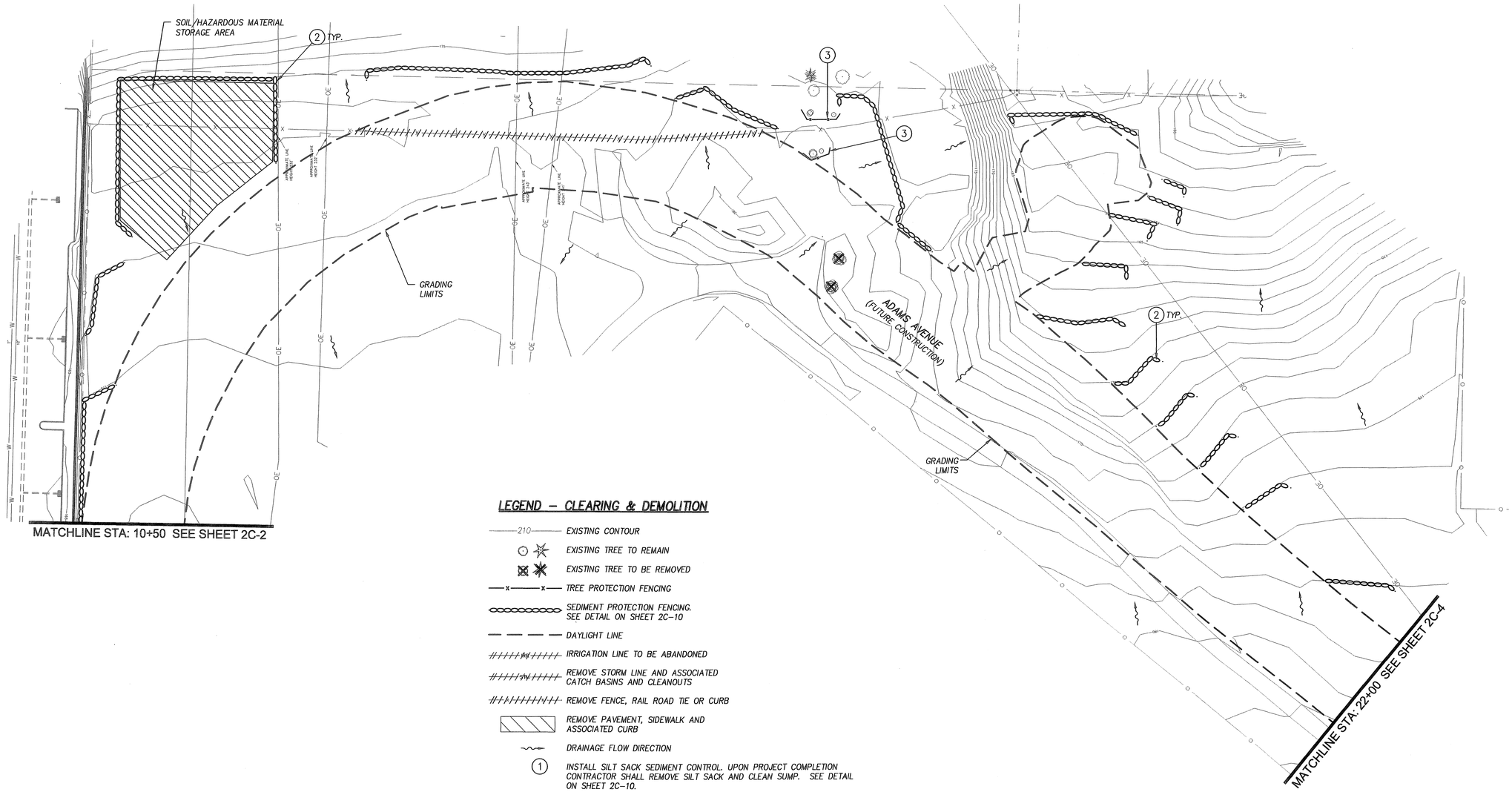
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



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REGION 10	OREGON DIVISION	SHR-08	2C-3

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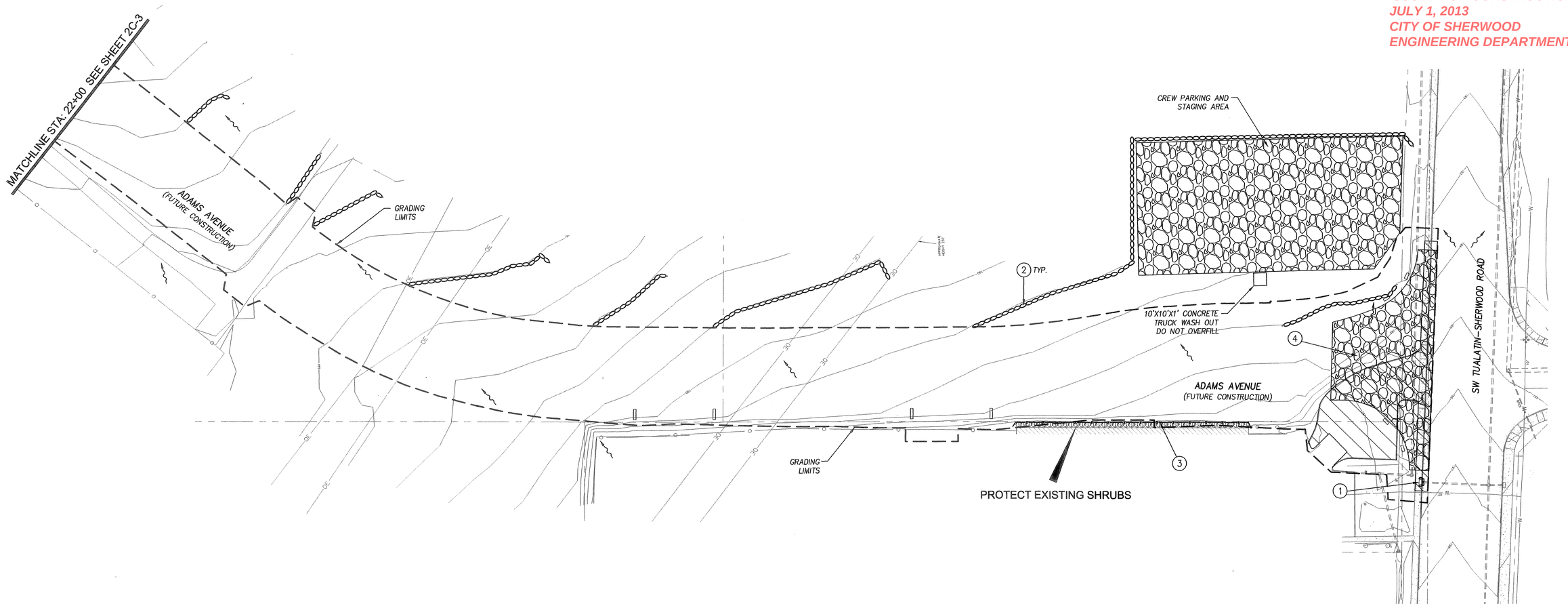

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REGION 10	OREGON DIVISION	SHR-08	2C-4

FINAL DESIGN

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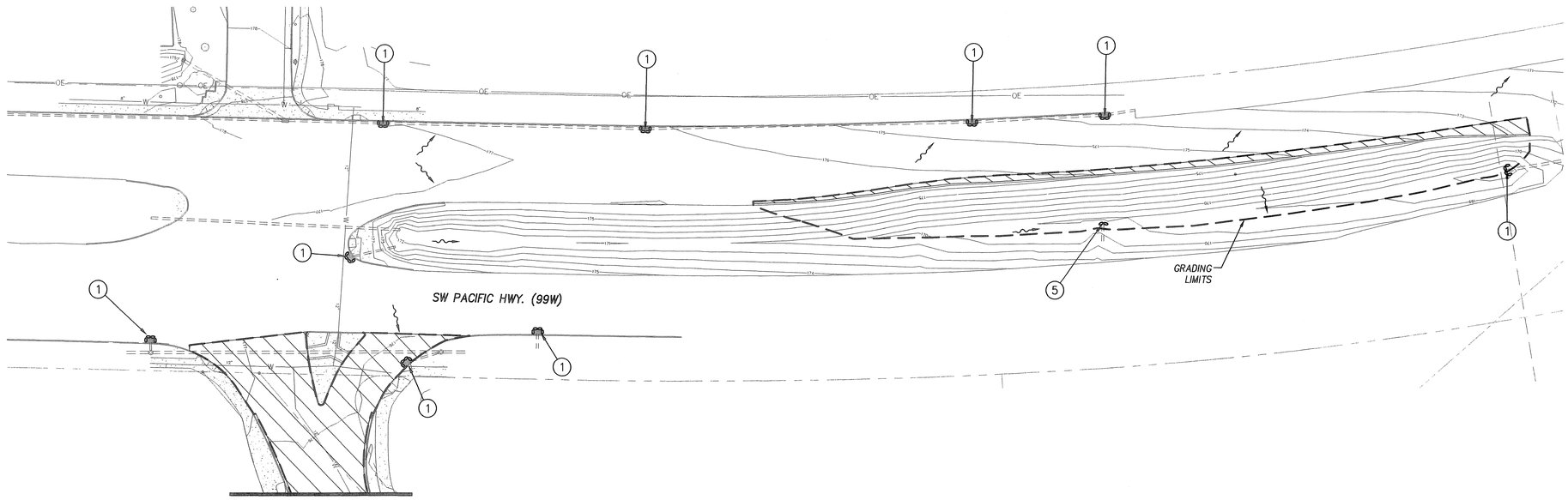

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ADAMS AVENUE NORTH
CLEARING & DEMOLITION ESC PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-5

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APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

LEGEND – GRADING, STREET & UTILITY

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3	INSTALL CHECK DAM BIO–FILTER BAGS. SEE DETAIL ON SHEET 2C–11.
4	INSTALL OUTLET PROTECTION. SEE DETAIL ON SHEET 2C–10.
	DRAINAGE FLOW DIRECTION

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

GRADING, STREET, AND UTILITY 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 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.

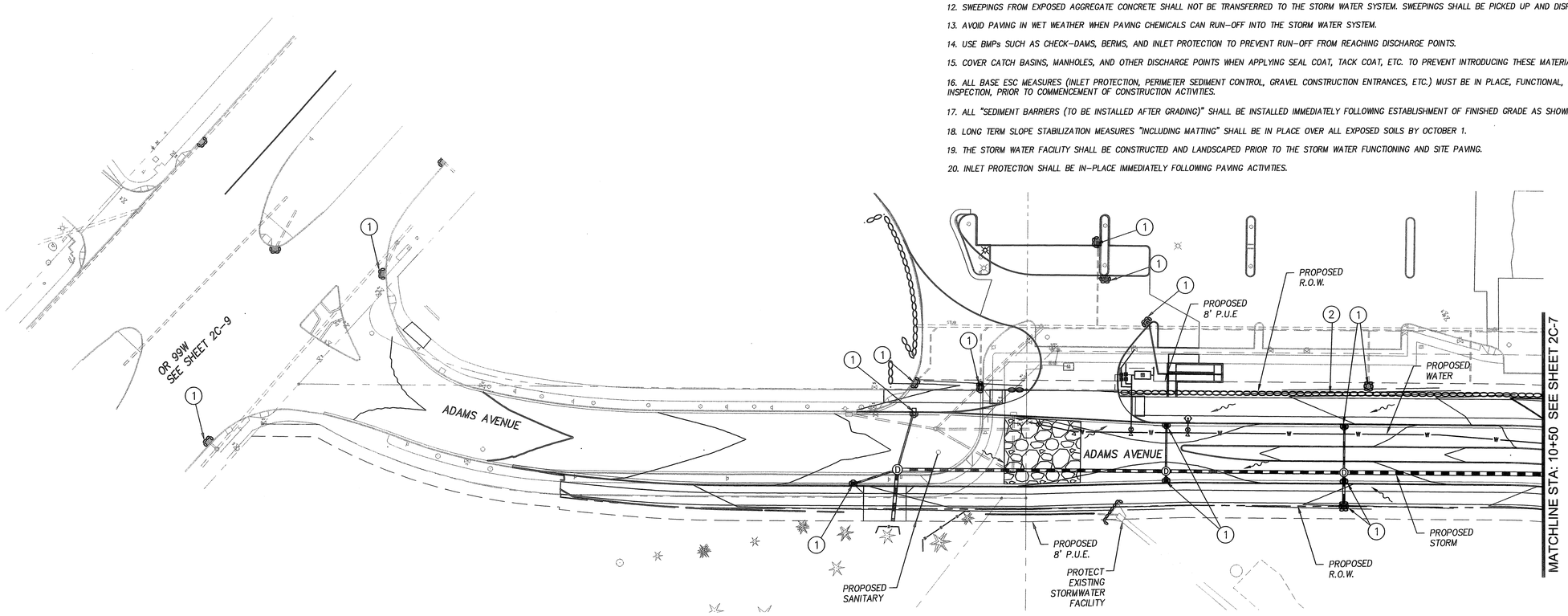
16. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

17. ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.

18. LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.

19. THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER FUNCTIONING AND SITE PAVING.

20. INLET PROTECTION SHALL BE IN–PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.



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FINAL DESIGN

ADAMS AVENUE NORTH
GRADING, STREET & UTILITY ESC PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-6

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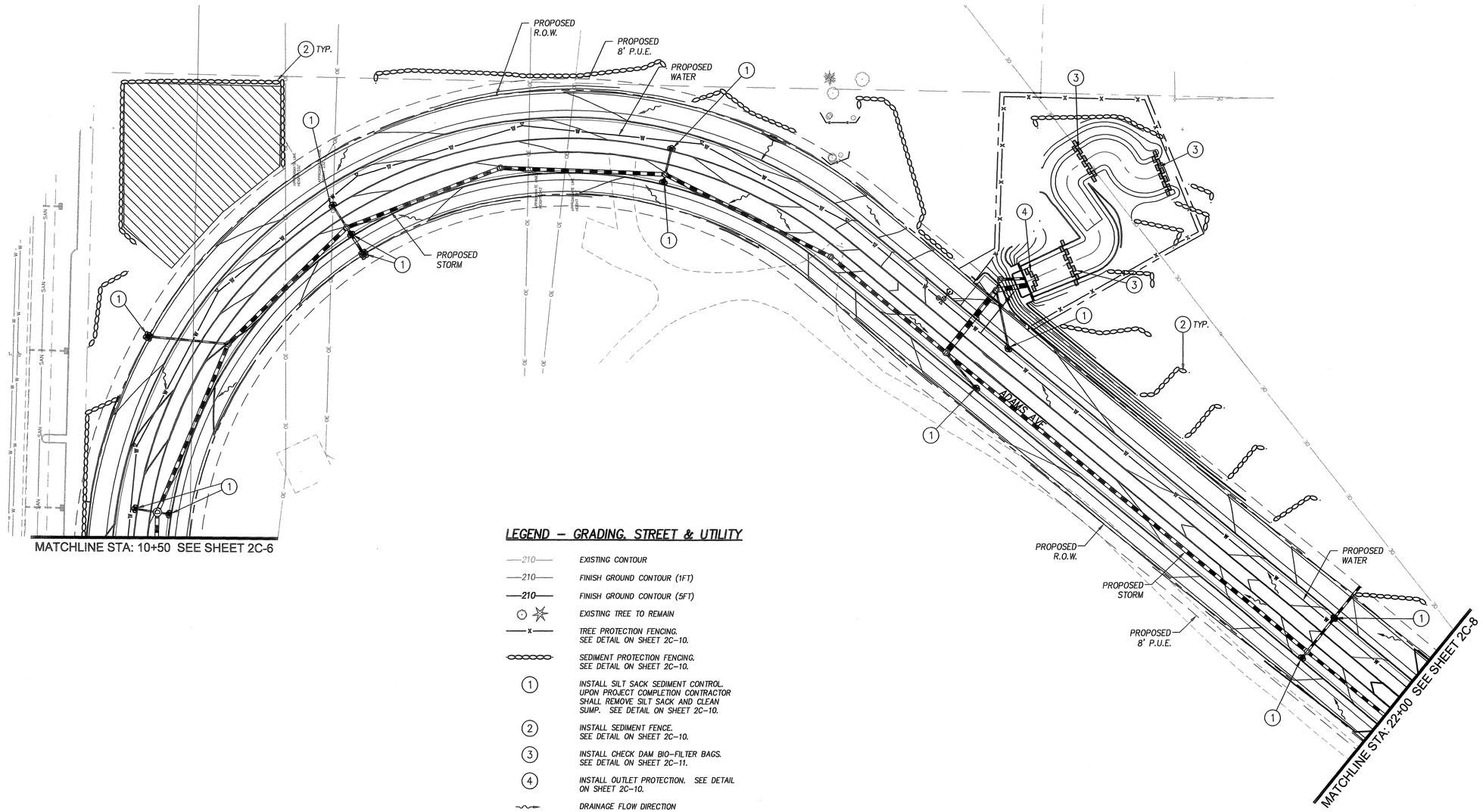

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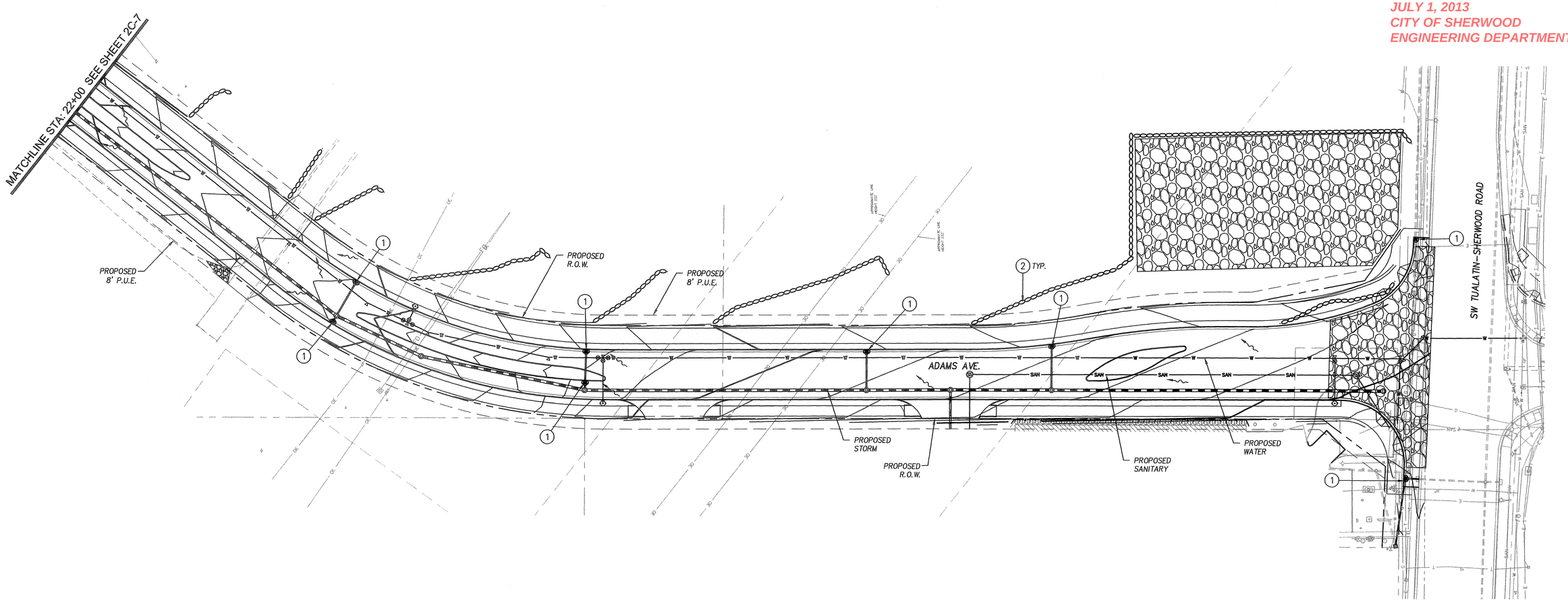

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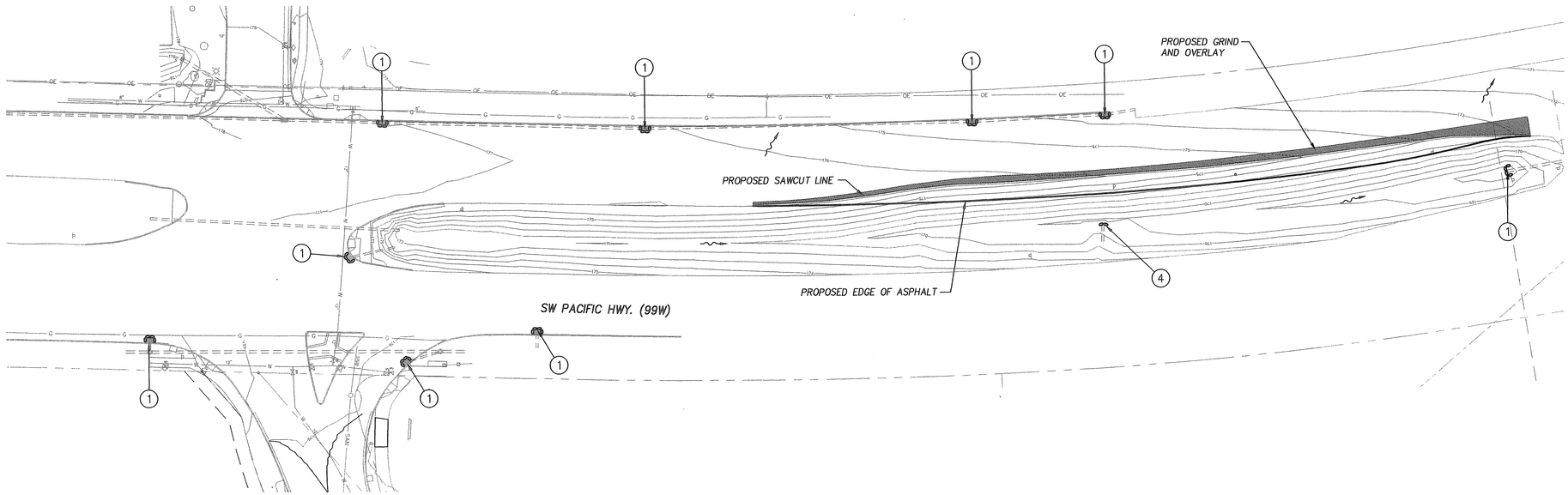

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—x—	TREE PROTECTION FENCING. SEE DETAIL ON SHEET 2C-10.
	SEDIMENT PROTECTION FENCING. SEE DETAIL ON SHEET 2C-10.
1	INSTALL SILT SACK SEDIMENT CONTROL. UPON PROJECT COMPLETION CONTRACTOR SHALL REMOVE SILT SACK AND CLEAN SUMP. SEE DETAIL ON SHEET 2C-10.
2	INSTALL SEDIMENT FENCE. SEE DETAIL ON SHEET 2C-10.
3	INSTALL CHECK DAM BIO-FILTER BAGS. SEE DETAIL ON SHEET 2C-11.
4	INSTALL OUTLET PROTECTION. SEE DETAIL ON SHEET 2C-10.
	DRAINAGE FLOW DIRECTION

0 20 40 80
SCALE: 1" = 40'

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: APRIL 2012

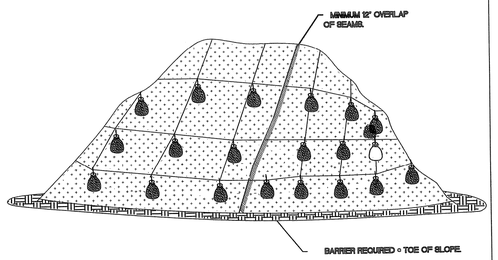
ADAMS AVENUE NORTH
GRADING, STREET & UTILITY ESC PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-9

P:\SHR-08\SHR08-DWGS\1200C Permit\ SHR08-2C6-CONS.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

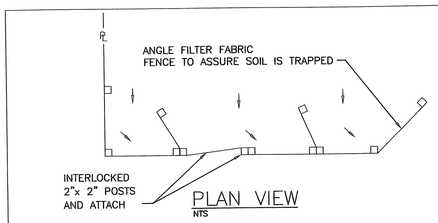
FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



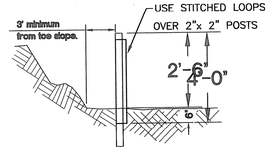
PLASTIC SHEETING

NOTES:
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. BARRIER REQUIRED @ TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.

PLASTIC SHEETING
DRAWING NO. 810 REVISED 12-06
Clean Water Services — Our commitment is clear.

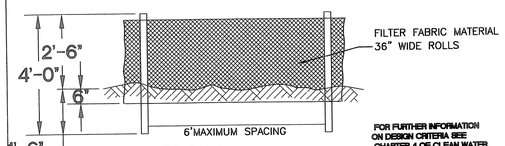


PLAN VIEW
NTS



PROFILE
NTS

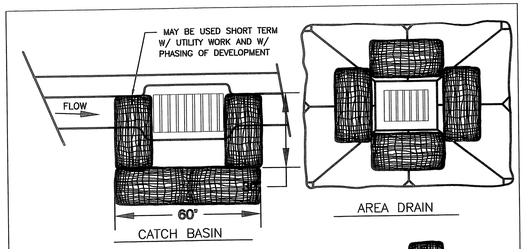
NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
5. PANELS MUST BE PLACED ACCORDING TO SPACING ON DETAIL NO.940

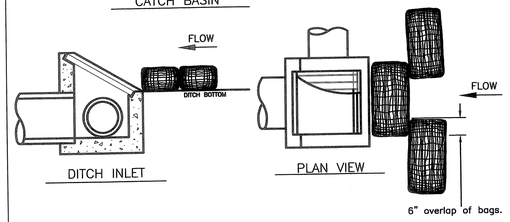


FRONT VIEW
NTS

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

SEDIMENT FENCE
DRAWING NO. 875 REVISED 12-06
Clean Water Services — Our commitment is clear.

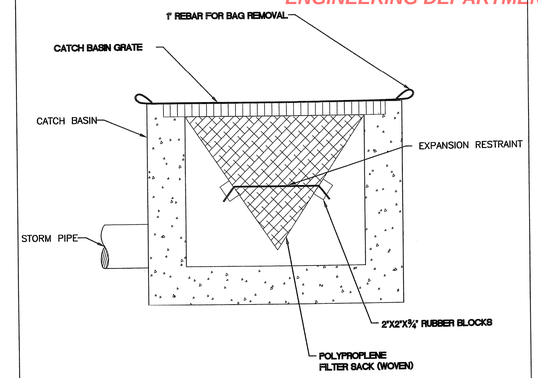




NOTES:
1. ADDITIONAL MEASURES MUST BE CONSIDERED DEPENDING ON SOIL TYPES.
2. BIO-FILTER BAGS SHOULD BE STAKED WHERE APPLICABLE USING (2) 1"x2"WOODEN STAKES OR APPROVED EQUAL PER BAG.
3. WHEN USING 30" BIO-BAGS TO PROTECT A CATCH BASIN YOU MUST HAVE 4 BAGS AND THEY SHALL BE OVERLAPPED BY 6".

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

INLET PROTECTION TYPE 4
DRAWING NO. 915 REVISED 12-06
Clean Water Services — Our commitment is clear.

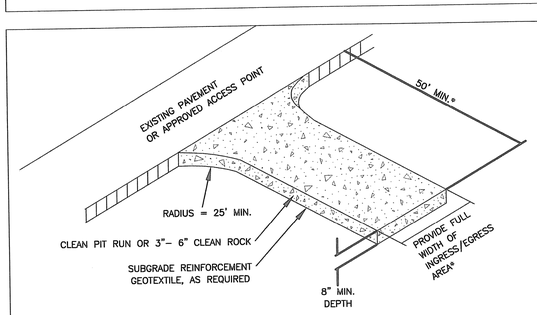


WOVEN POLYPROPLENE SACK

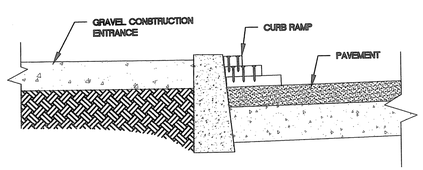
NOTE:
1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

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

INLET PROTECTION TYPE 5
DRAWING NO. 920 REVISED 12-06
Clean Water Services — Our commitment is clear.



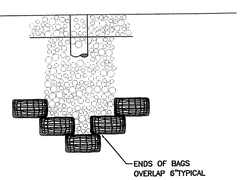
*20' MIN. FOR SINGLE FAMILY AND DUPLEX RESIDENTIAL



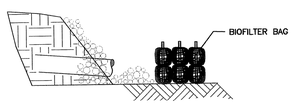
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF- WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

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

CONSTRUCTION ENTRANCE
Detail Drawing 855 REVISED 12-06
Clean Water Services — Our commitment is clear.



PLAN VIEW
NTS



PROFILE

NOTE:
1. BIO BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
2. STAKING OF BAGS REQUIRED WITH EITHER METHOD USING (2) 1"x 2" WOOD STAKES OR APPROVED EQUAL PER BAG.

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

OUTLET PROTECTION RIP RAP
Detail Drawing 820 REVISED 12-06
Clean Water Services — Our commitment is clear.

FINAL DESIGN

City of Sherwood Oregon
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Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
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EXPIRES: 12/31/13

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: APRIL 2012

ADAMS AVENUE NORTH DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-10

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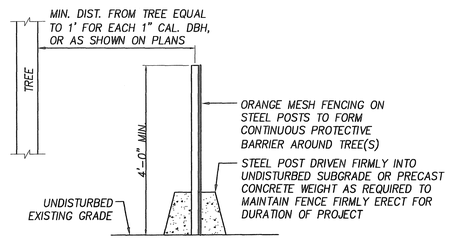
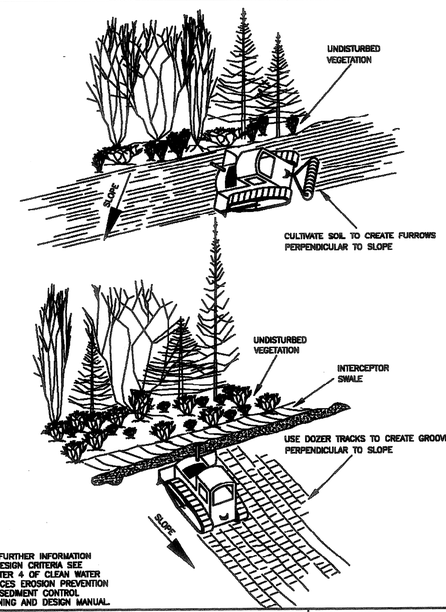
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



TREE PROTECTION FENCING DETAIL
N.T.S.

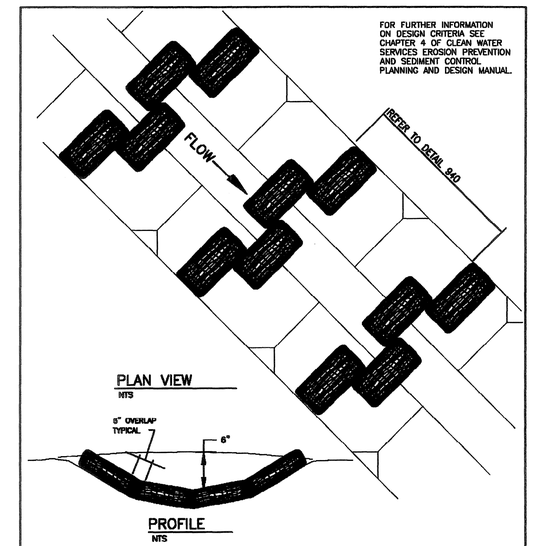


FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SURFACE ROUGHENING
CAT TRACKING

DRAWING NO. 830 REVISED 12-06

Clean Water Services
Our commitment is clear.



NOTES:
1. STAKING OF BAGS REQUIRED USING (2) 1"x2" WOOD STAKES OR APPROVED EQUAL PER BAG.
2. SURFACE MUST BE SMOOTH BEFORE APPLICATION.
3. CHECK DAMS CAN BE CONSTRUCTED USING STRAW WATTLES OR OTHER MATERIALS AS APPROVED BY THE DISTRICT OR CITY.

CHECK DAM
BIO-FILTER BAG

DRAWING NO. 845 REVISED 12-06

Clean Water Services
Our commitment is clear.

FINAL DESIGN

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: APRIL 2012

ADAMS AVENUE NORTH
DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2C-11

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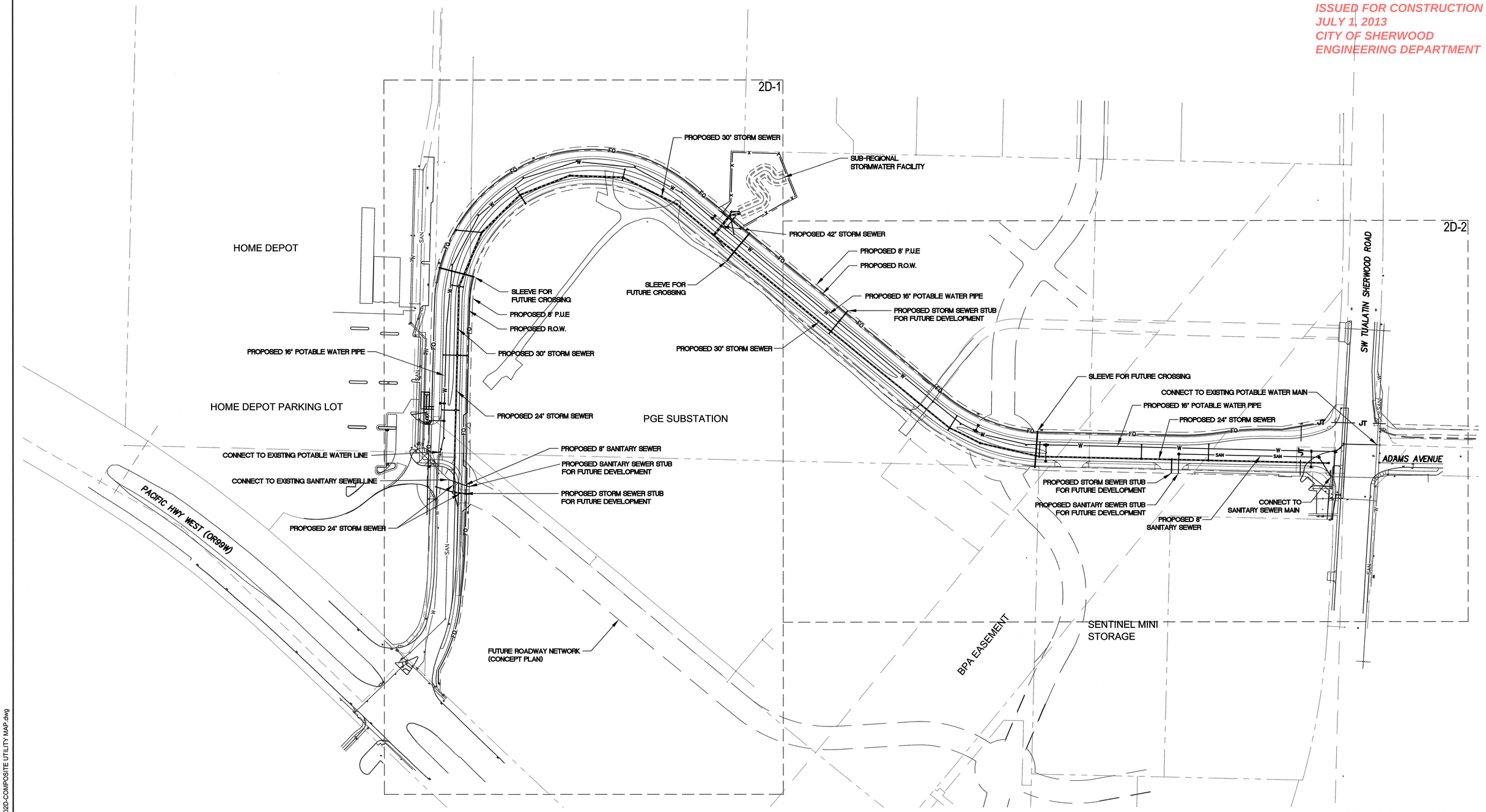
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



FINAL DESIGN

0 50 100 200
SCALE: 1" = 100'

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
COMPOSITE UTILITY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2D

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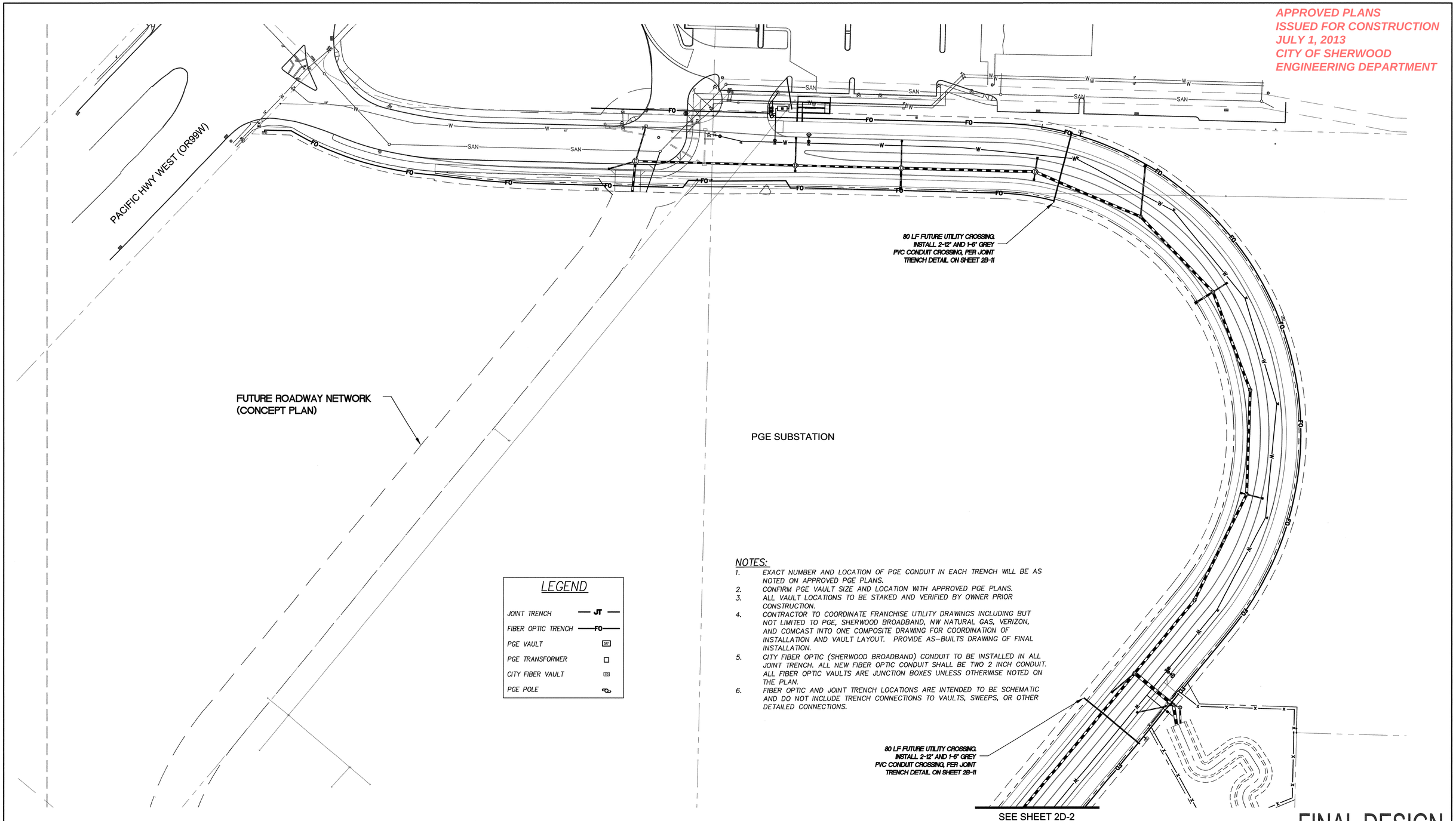
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



LEGEND

JOINT TRENCH	JT
FIBER OPTIC TRENCH	FO
PGE VAULT	
PGE TRANSFORMER	
CITY FIBER VAULT	
PGE POLE	

NOTES:

1. EXACT NUMBER AND LOCATION OF PGE CONDUIT IN EACH TRENCH WILL BE AS NOTED ON APPROVED PGE PLANS.
2. CONFIRM PGE VAULT SIZE AND LOCATION WITH APPROVED PGE PLANS.
3. ALL VAULT LOCATIONS TO BE STAKED AND VERIFIED BY OWNER PRIOR CONSTRUCTION.
4. CONTRACTOR TO COORDINATE FRANCHISE UTILITY DRAWINGS INCLUDING BUT NOT LIMITED TO PGE, SHERWOOD BROADBAND, NW NATURAL GAS, VERIZON, AND COMCAST INTO ONE COMPOSITE DRAWING FOR COORDINATION OF INSTALLATION AND VAULT LAYOUT. PROVIDE AS-BUILTS DRAWING OF FINAL INSTALLATION.
5. CITY FIBER OPTIC (SHERWOOD BROADBAND) CONDUIT TO BE INSTALLED IN ALL JOINT TRENCH. ALL NEW FIBER OPTIC CONDUIT SHALL BE TWO 2 INCH CONDUIT. ALL FIBER OPTIC VAULTS ARE JUNCTION BOXES UNLESS OTHERWISE NOTED ON THE PLAN.
6. FIBER OPTIC AND JOINT TRENCH LOCATIONS ARE INTENDED TO BE SCHEMATIC AND DO NOT INCLUDE TRENCH CONNECTIONS TO VAULTS, SWEEPS, OR OTHER DETAILED CONNECTIONS.

0 25 50 100
SCALE: 1" = 50'

FINAL DESIGN

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
COMPOSITE UTILITY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2D-1

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APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

SEE SHEET 2D-1

FUTURE ROADWAY NETWORK
(CONCEPT PLAN)

80 LF FUTURE UTILITY CROSSING.
INSTALL 2-12" AND 1-6" GREY
PVC CONDUIT CROSSING, PER JOINT
TRENCH DETAIL ON SHEET 2B-11

SW TUALATIN SHERWOOD ROAD

ADAMS AVENUE

LEGEND

JOINT TRENCH	—JT—
FIBER OPTIC TRENCH	—FO—
PGE VAULT	
PGE TRANSFORMER	
CITY FIBER VAULT	
PGE POLE	

NOTES:

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6. FIBER OPTIC AND JOINT TRENCH LOCATIONS ARE INTENDED TO BE SCHEMATIC AND DO NOT INCLUDE TRENCH CONNECTIONS TO VAULTS, SWEEPS, OR OTHER DETAILED CONNECTIONS.

0 25 50 100
SCALE: 1" = 50'

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ROADWAY PLANS & DETAILS

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
COMPOSITE UTILITY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2D-2

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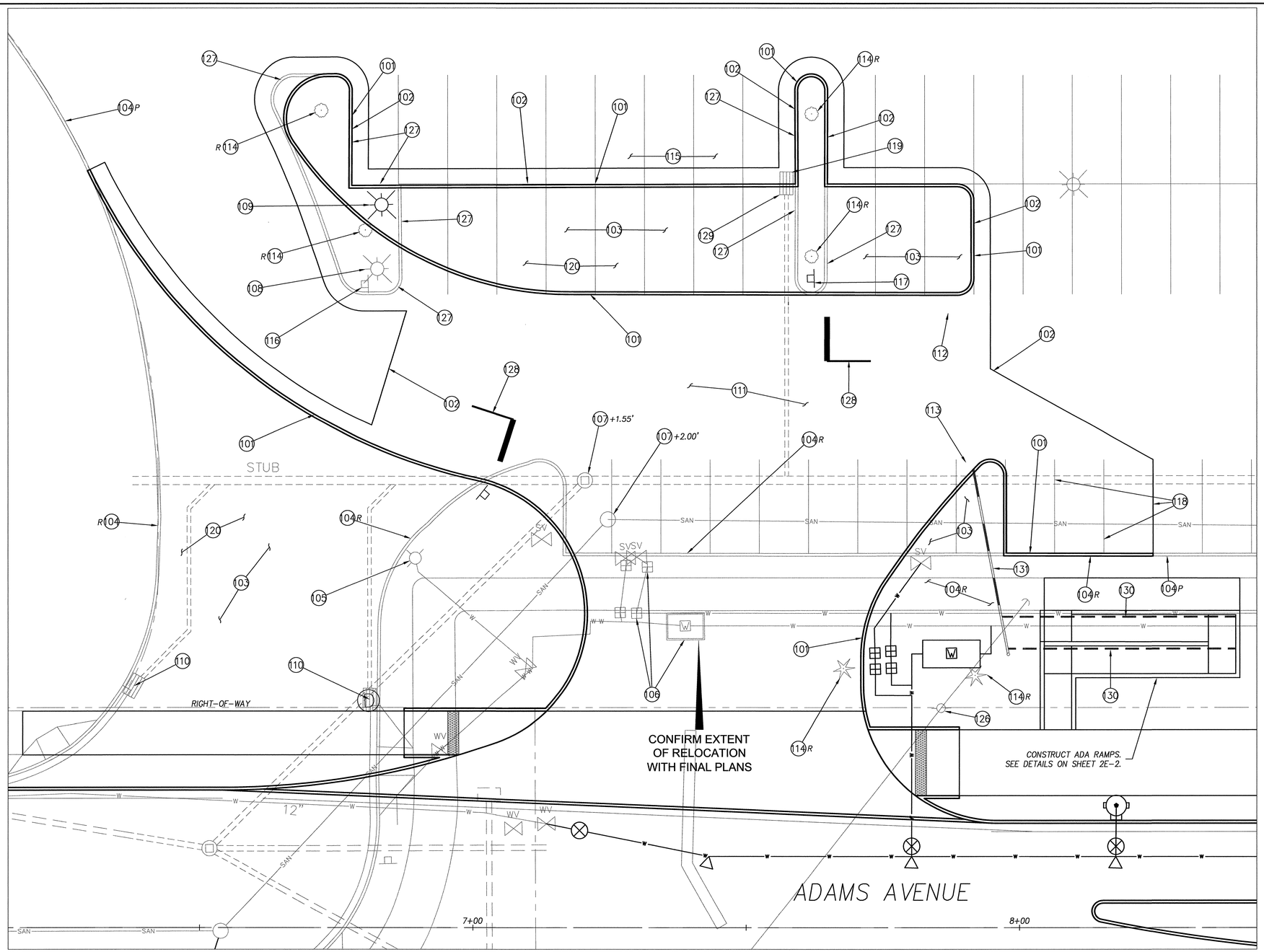
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



DRIVEWAY DETAIL 1

SCALE: 1"=10'

CONSTRUCTION NOTES

101 CONSTRUCT STANDARD VERTICAL CURB. SEE DETAIL ON SHEET 2B-1.

102 SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.

103 REMOVE EXISTING ASPHALT PAVING. SAWCUT NEAT LINE AT LIMIT OF REMOVAL.

104 REMOVE (R) OR PROTECT (P) EXISTING CURB/SIDEWALK.

105 RELOCATE EXISTING FIRE HYDRANT. SEE SHEETS 12'S FOR WATER RELOCATION DETAILS.

106 RELOCATE EXISTING PRIVATE WATER. SEE SHEET 2E-2 FOR WATER RELOCATION DETAILS. PROTECT EXISTING POWER SOURCE TO FIRE VAULT, TO BE USED IN THE RELOCATED FIRE VAULT LOCATION. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.

107 ADJUST EXISTING MANHOLE TO FINISH GRADE. VERIFY FINISH GRADE PRIOR TO CONSTRUCTION.

108 REMOVE AND RELOCATE EXISTING LIGHT POLE.

109 REINSTALL LIGHT POLE.

110 SEE PLAN SHEETS FOR STORMWATER IMPROVEMENTS.

111 CONSTRUCT HEAVY VEHICLE AC PAVEMENT SECTION OR TO THE EXISTING SECTION, WHICHEVER IS GREATER. SEE SECTION BELOW ON THIS SHEET.

112 INSTALL AREA DRAIN AND CONNECT TO EXISTING STORM LINE. RIM= 166.99, 8" IE OUT = 164.33, 29 LF OF 8" STORM, S=0.5% MINIMUM. FIELD VERIFY LOCATION AND ELEVATION OF EXISTING STORM PRIOR TO CONNECTION. SEE DETAIL ON SHEET 2B-4.

113 INSTALL AREA DRAIN CONNECT WALL DRAIN AND CONNECT TO EXISTING STORM LINE. RIM= 167.50, 4" IE IN = 164.67, 8" IE OUT = 164.34, 5 LF OF 8" STORM, S=0.5% MINIMUM. FIELD VERIFY LOCATION AND ELEVATION OF EXISTING STORM PRIOR TO CONNECTION. SEE DETAILS ON SHEET 2B-4 AND 2B-6.

114 REMOVE (R), TRIM (T), OR PROTECT (P) EXISTING TREE OR SHRUB AS INDICATED OR DIRECTED. REMOVAL IS TYPICAL WITHIN THE PROPOSED LIMITS OF GRADING (CATCH POINTS).

115 PROTECT EXISTING PARKING STALL STRIPING.

116 REMOVE EXISTING STOP SIGN.

117 INSTALL STOP SIGN.

118 RESTRIPE PARKING STALL.

119 INSTALL AREA DRAIN AND CONNECT TO EXISTING STORM LINE. RIM= 167.33, 8" IE OUT = 164.66, 5 LF OF 8" STORM, S=0.5% MINIMUM. FIELD VERIFY LOCATION AND ELEVATION OF EXISTING STORM PRIOR TO CONNECTION. SEE DETAIL ON SHEET 2B-4.

120 SEE SHEETS 16'S FOR LANDSCAPING DETAILS.

126 PROTECT EXISTING POWER POLE AND GUY.

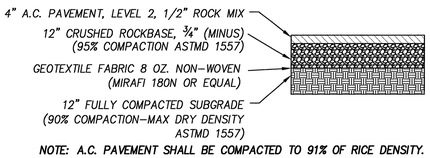
127 REMOVE EXISTING CURB AND LANDSCAPE ISLAND. INSTALL TEMPORARY PAVEMENT PER HOME DEPOT CONSTRUCTION SEQUENCING.

128 INSTALL STOP BAR.

129 REMOVE EXISTING AREA DRAIN. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.

130 INSTALL 4" PERF PIPE WALL DRAIN, S=0.5% MINIMUM. CONNECT TO 4" STORM PIPE. SEE DETAIL ON SHEET 2B-6.

131 INSTALL 4" STORM PIPE, S=0.5% MINIMUM. PROVIDE 4" CLEANOUT AT END. CONNECT TO AREA DRAIN.



NOTE: A.C. PAVEMENT SHALL BE COMPACTED TO 91% OF RICE DENSITY.

HEAVY VEHICLE A.C. PAVEMENT SECTION

N.T.S.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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LANDSCAPE ARCHITECTS • SURVEYORS
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phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DRIVEWAY DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02-E-DWY DETAILS.dwg

APPROVED PLANS
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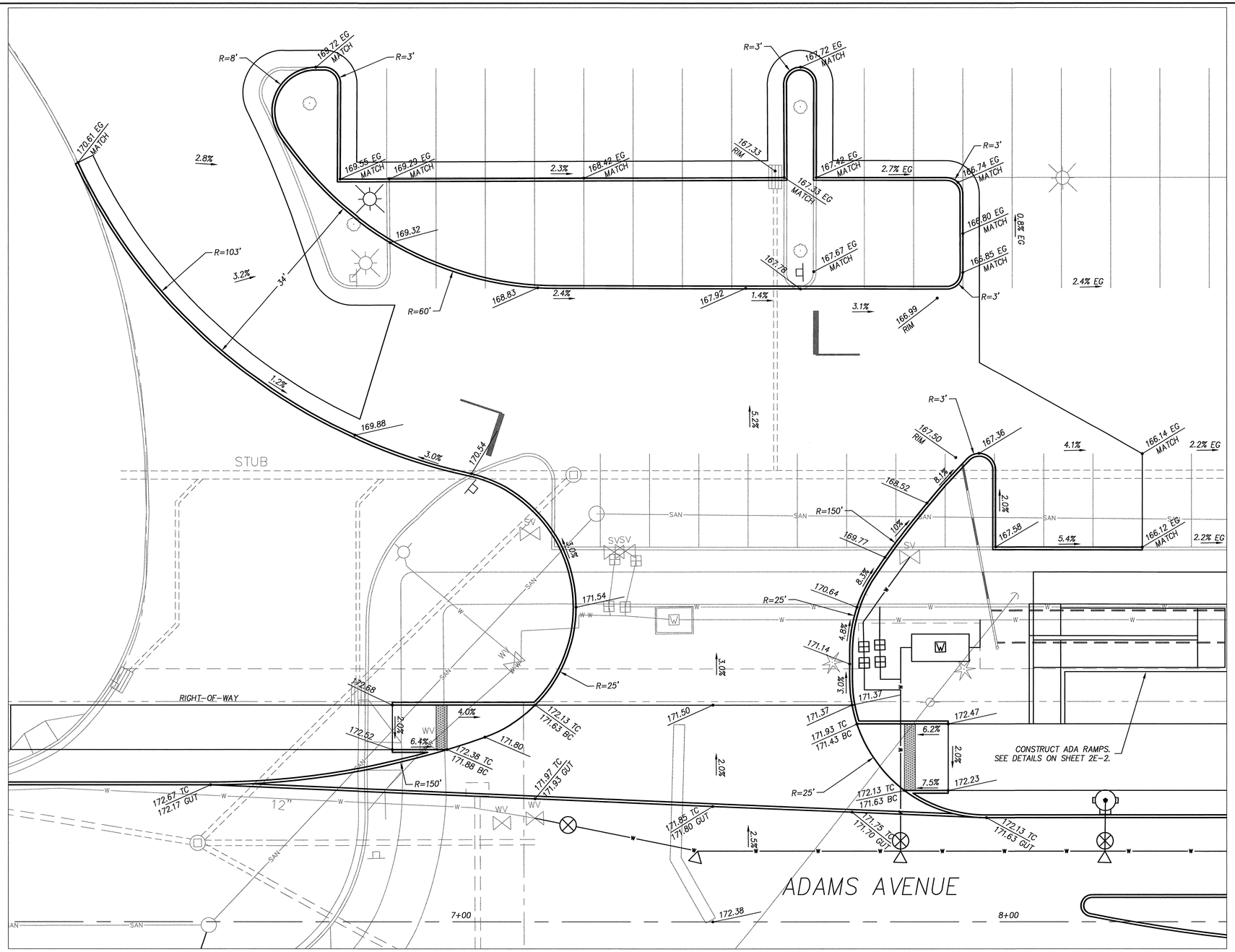
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



DRIVEWAY DETAIL 1

SCALE: 1"=10'

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FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-1

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-02-E-DWY DETAILS.dwg

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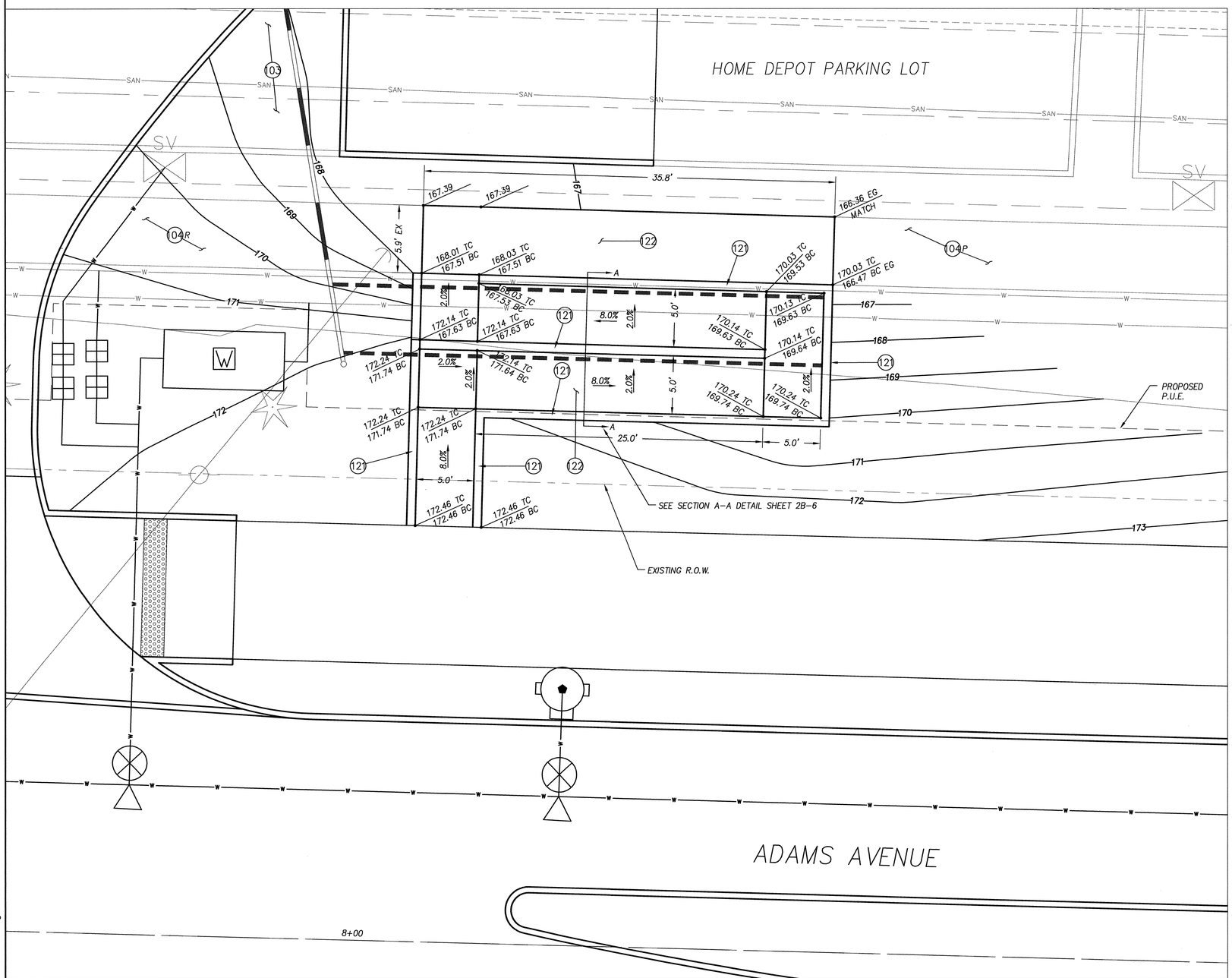
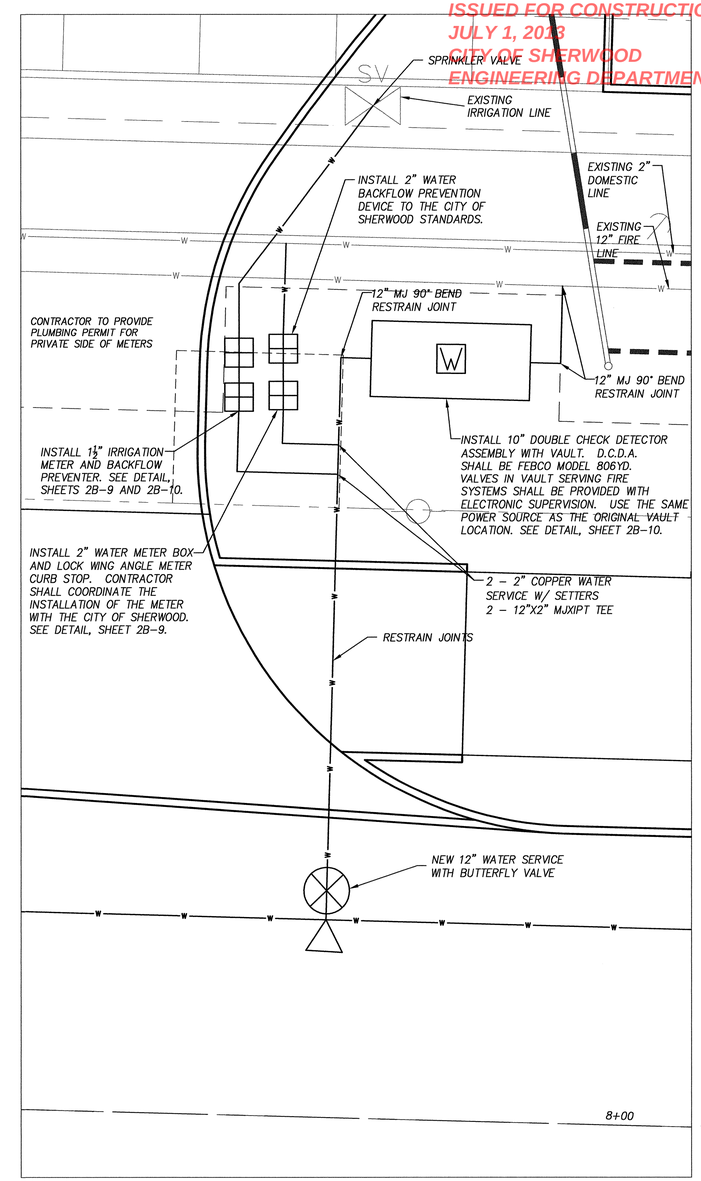


HOME DEPOT ADA RAMP ACCESS DETAIL

SCALE: 1"=5'



HOME DEPOT WATER SYSTEM RELOCATION

SCALE: 1"=5'

CONSTRUCTION NOTES

(103) REMOVE EXISTING ASPHALT PAVING. SAWCUT NEAT LINE AT LIMIT OF REMOVAL.

(104) REMOVE (R) OR PROTECT (P) EXISTING CURB/SIDEWALK.

(121) CONSTRUCT RETAINING CURB WITH HAND RAIL. SEE DETAIL ON SHEET 2B-6.

(122) CONSTRUCT TYPICAL SIDEWALK. SEE DETAIL ON SHEET 2B-1.

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ADAMS AVENUE NORTH
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SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-2

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APPROVED PLANS
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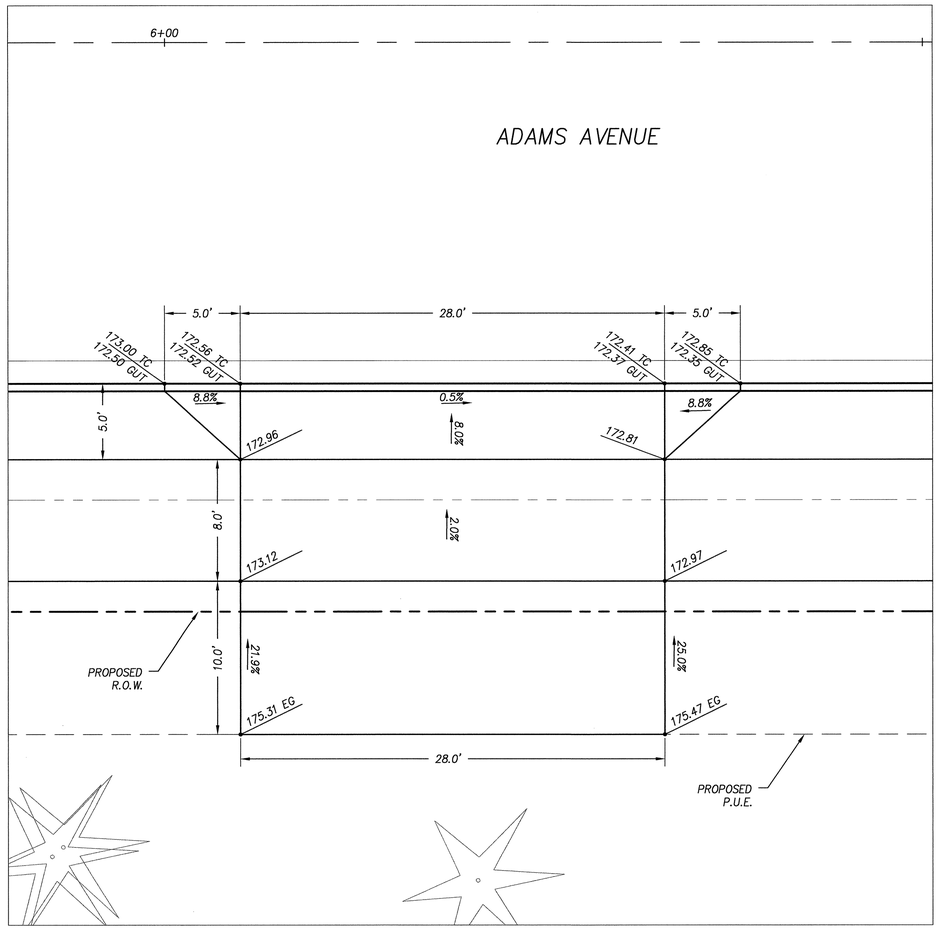
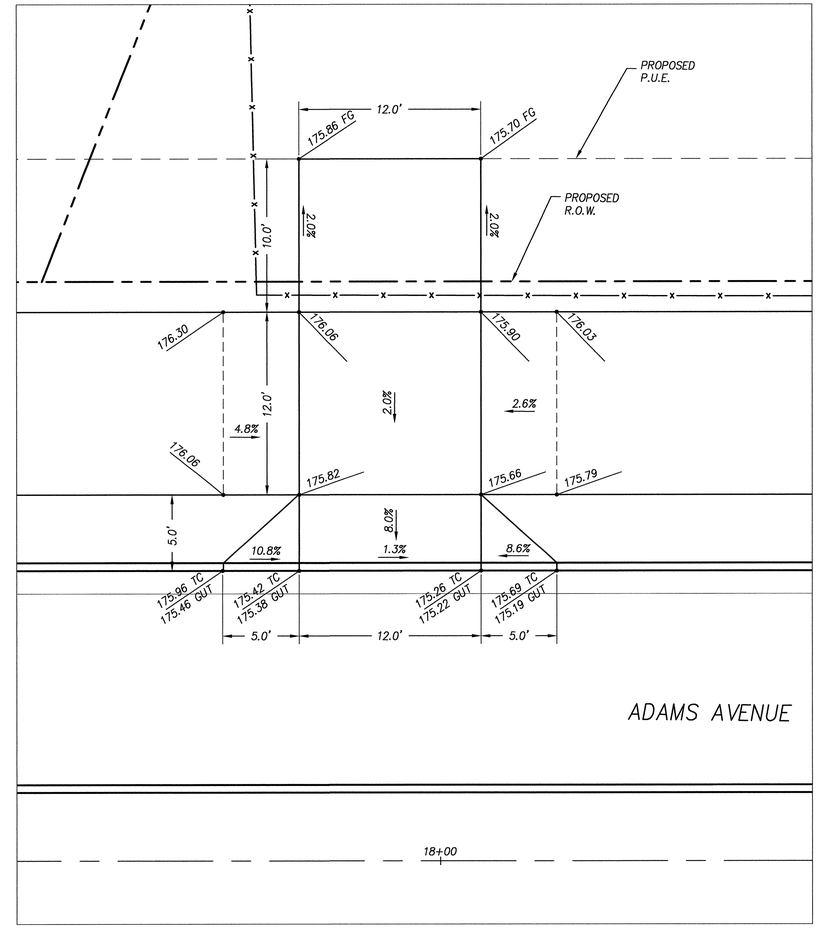


DRIVEWAY DETAIL 2

SCALE: 1"=5'



DRIVEWAY DETAIL 3

SCALE: 1"=5'

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DRIVEWAY DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-3

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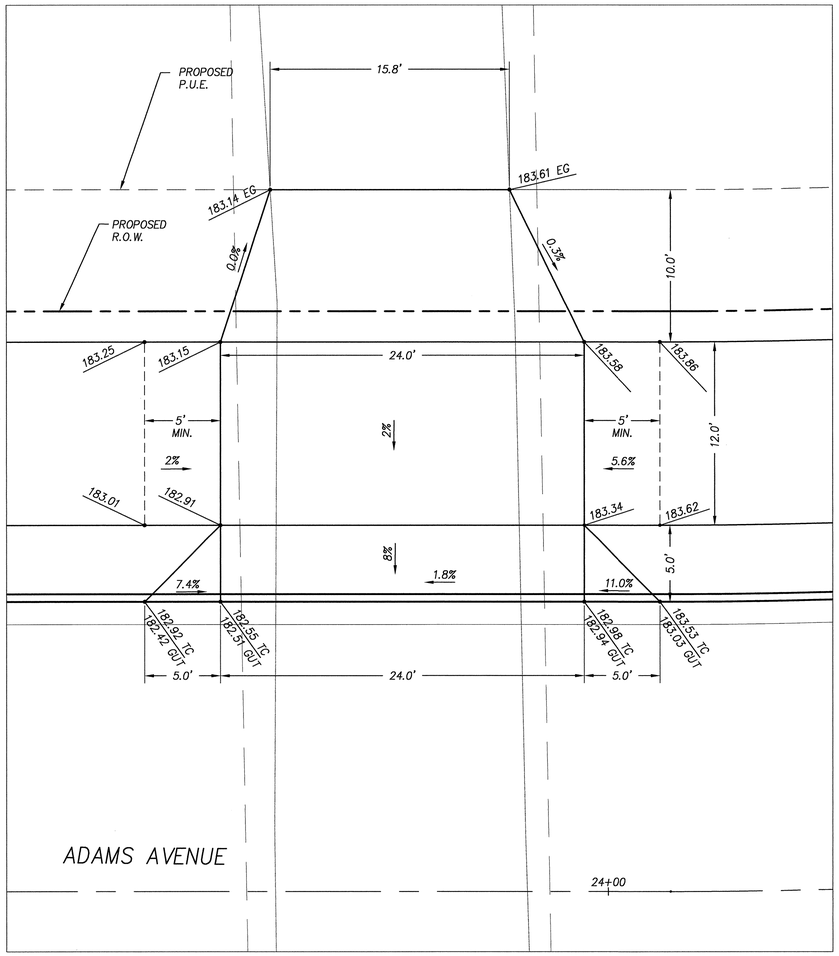
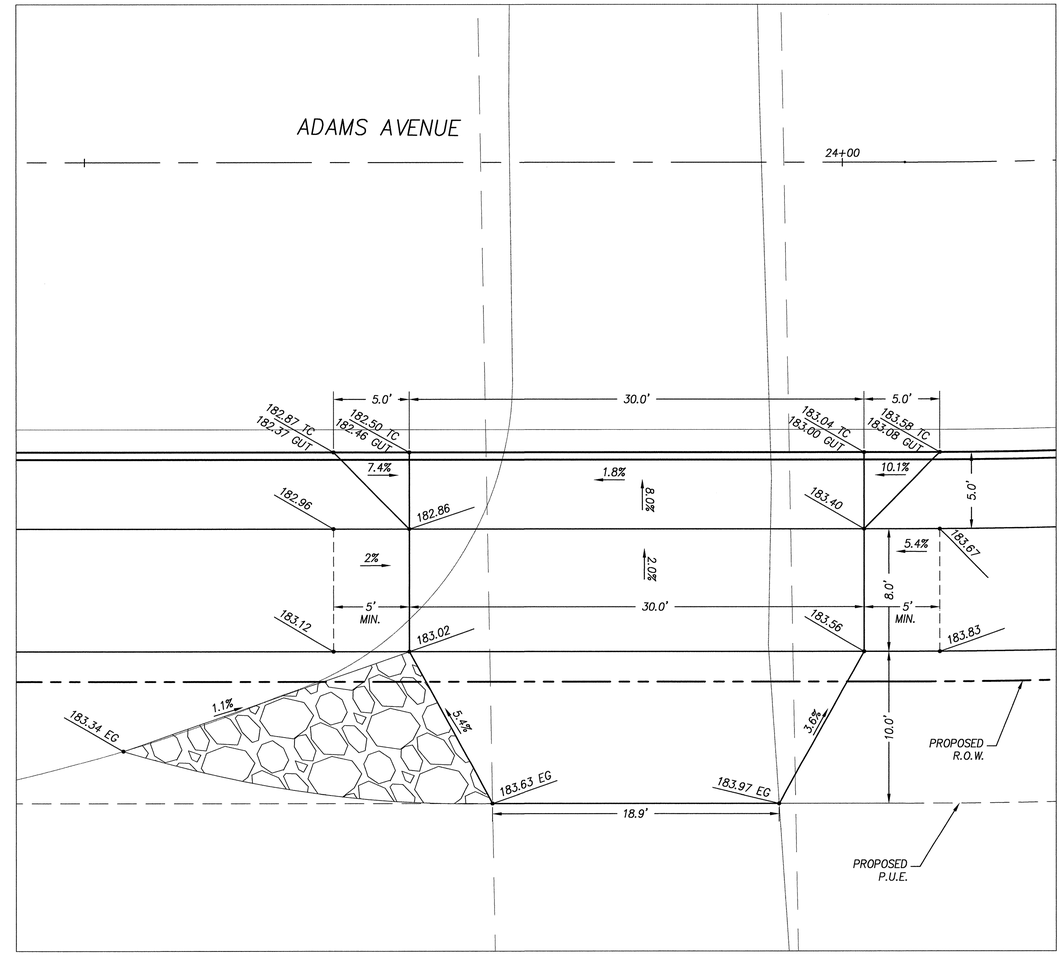
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



DRIVEWAY DETAIL 4
SCALE: 1"=5'



DRIVEWAY DETAIL 5
SCALE: 1"=5'

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DRIVEWAY DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-4

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APPROVED PLANS
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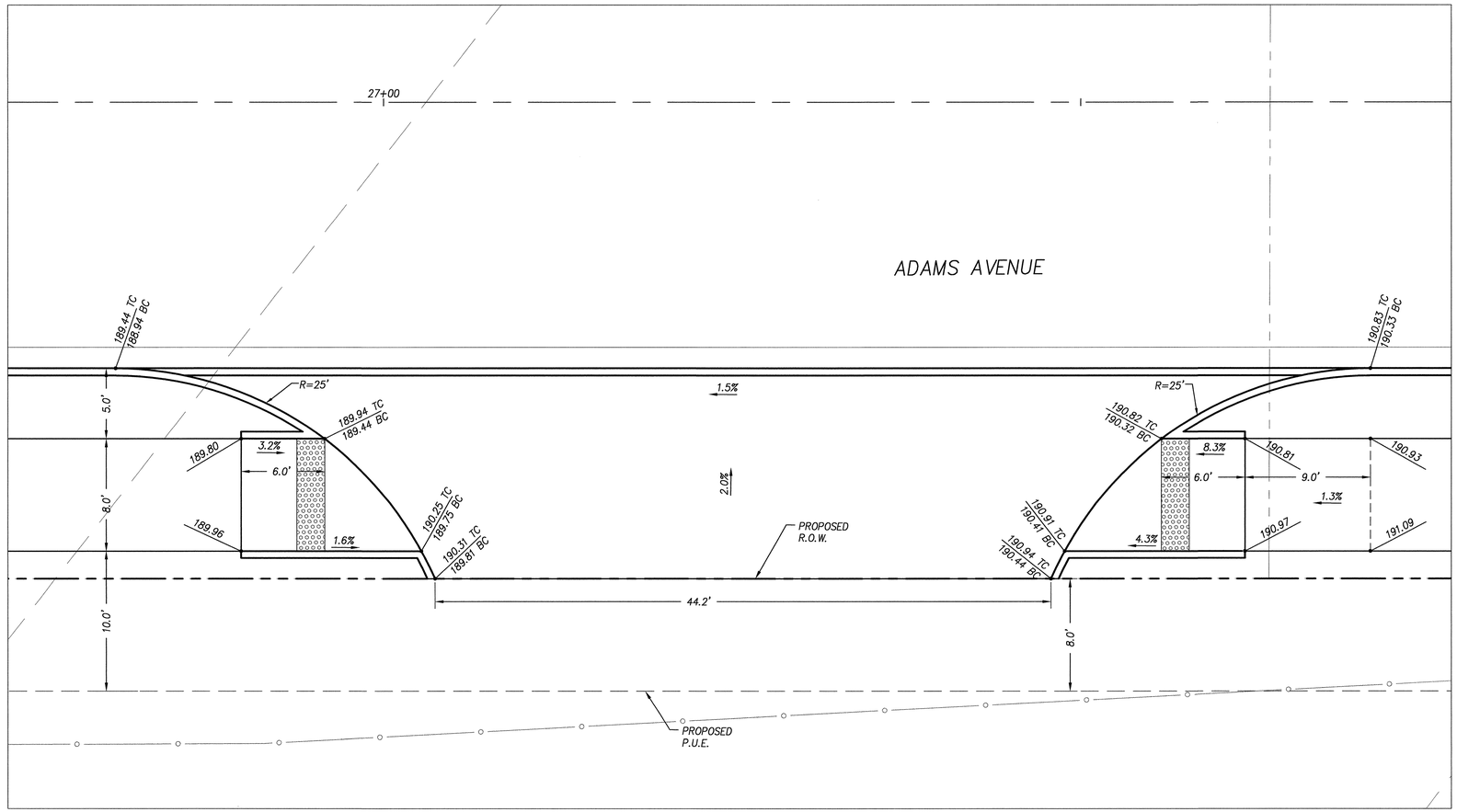
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



DRIVEWAY DETAIL 6A

SCALE: 1"=5'

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REGION 10	OREGON DIVISION	SHR-08	2E-5

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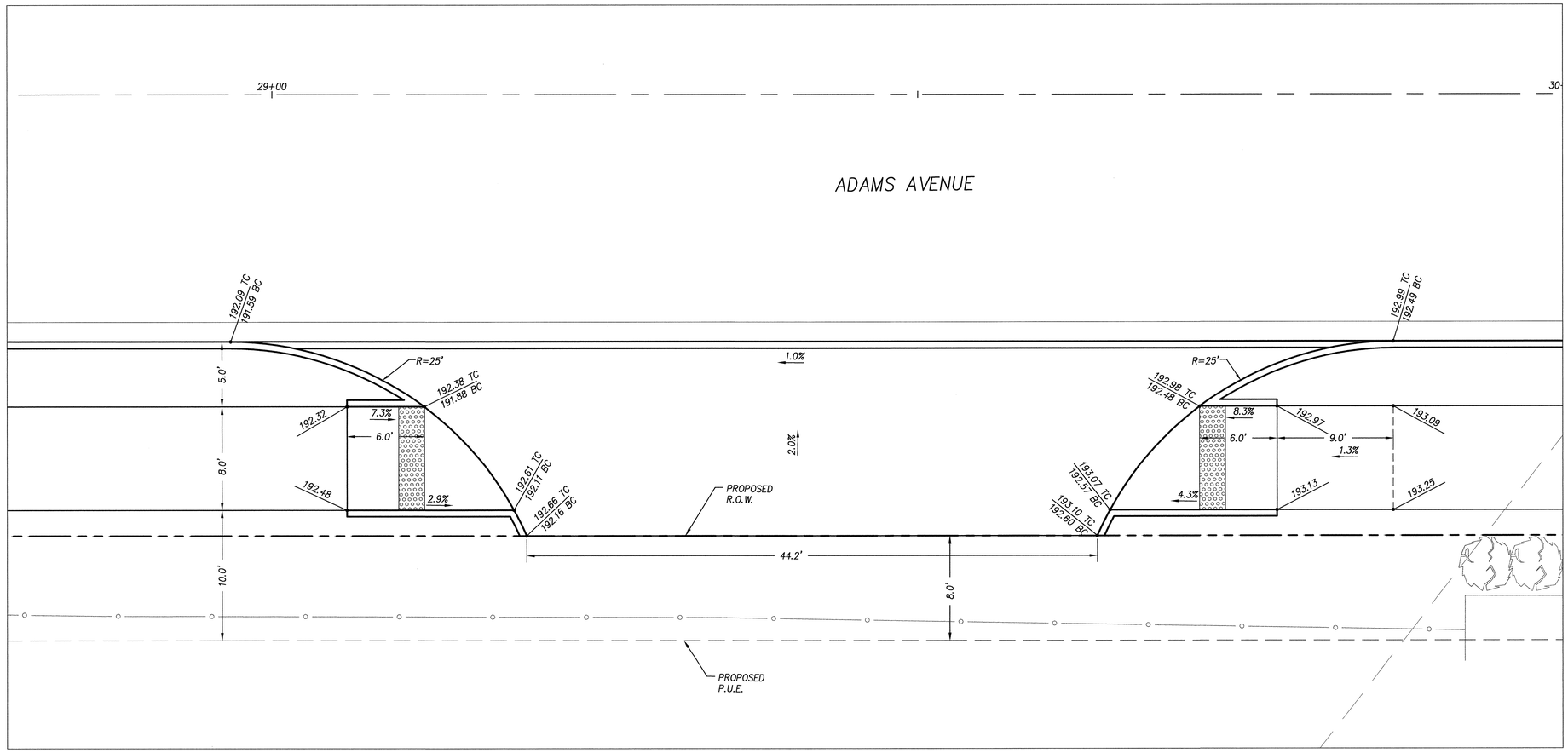

DRIVEWAY DETAIL 6B

SCALE: 1"=5'

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DRIVEWAY DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-6

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APPROVED PLANS
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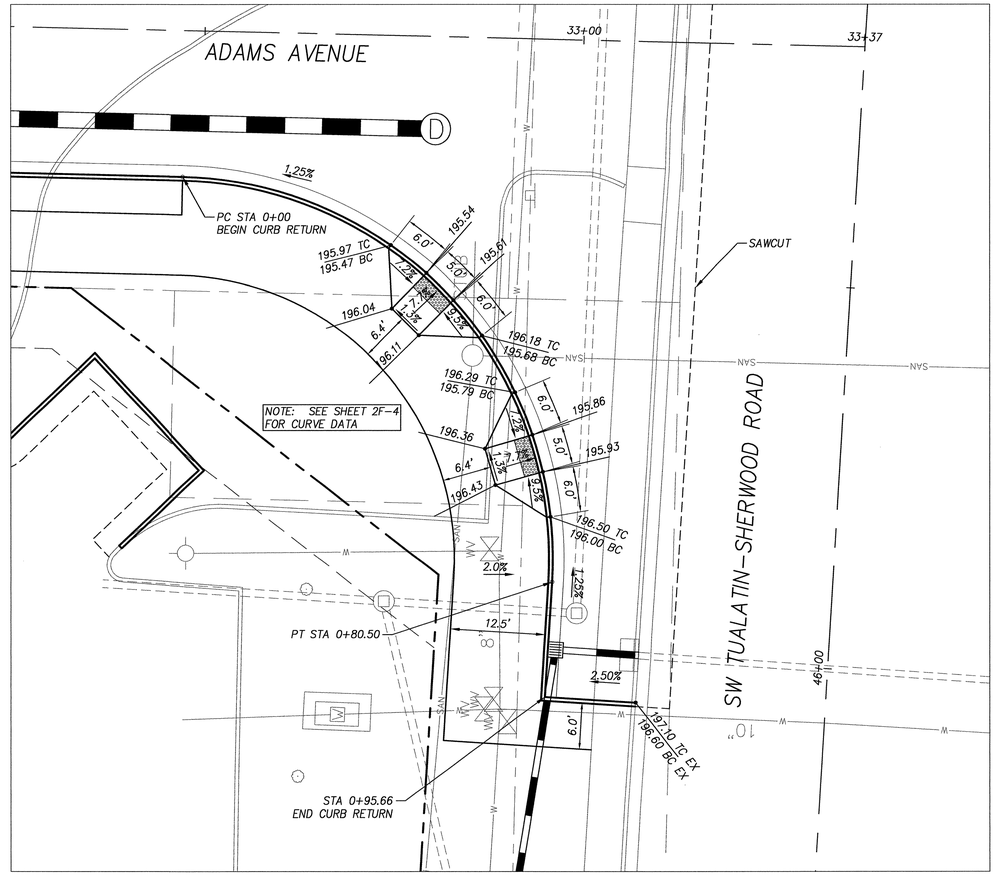
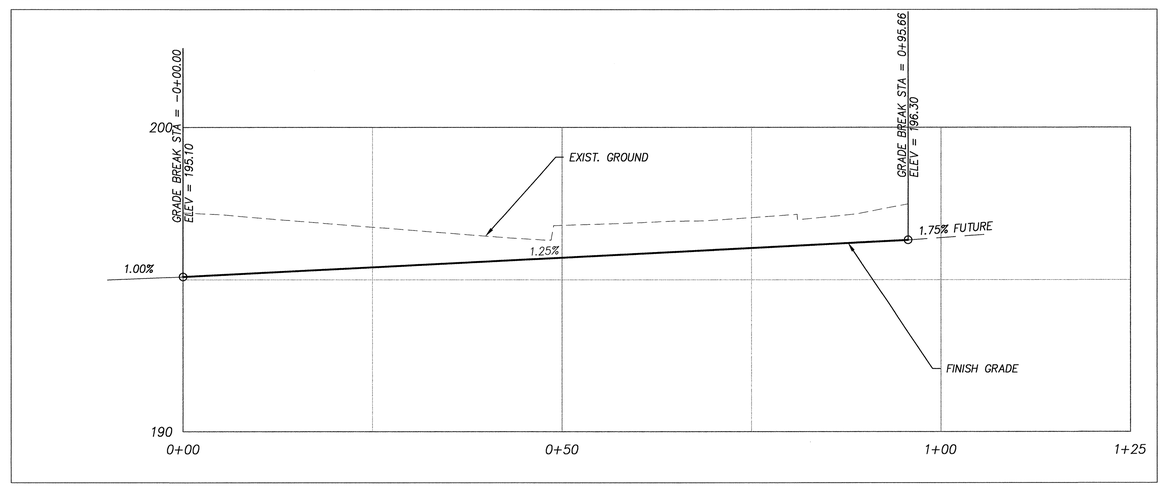
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT





CURB RETURN 1

STA. 0+00 TO 1+35.32
SCALE: 1"=10'H 1"=2.5'V

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ADAMS AVENUE NORTH
DRIVEWAY DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-7

FINAL DESIGN

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APPROVED PLANS
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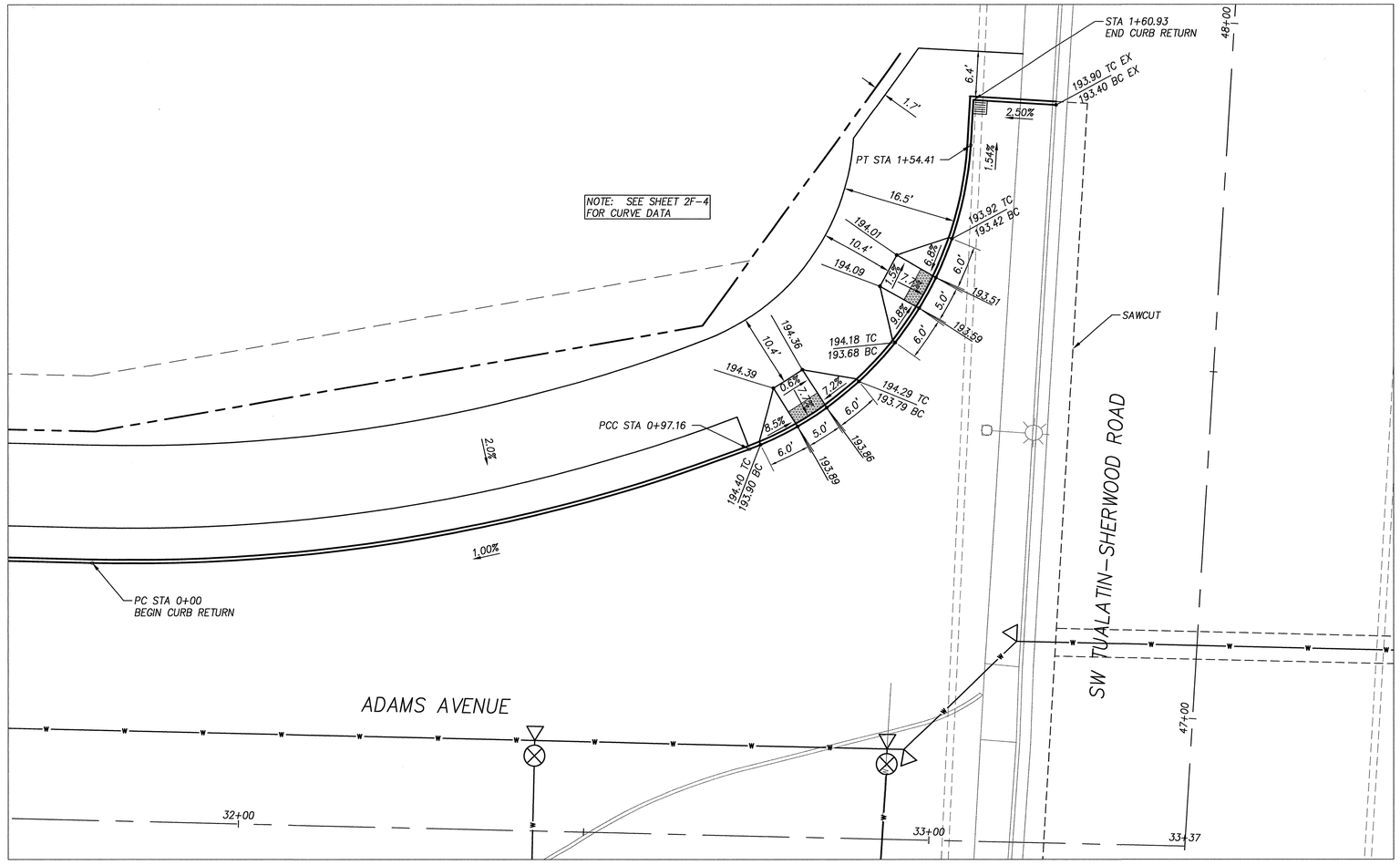
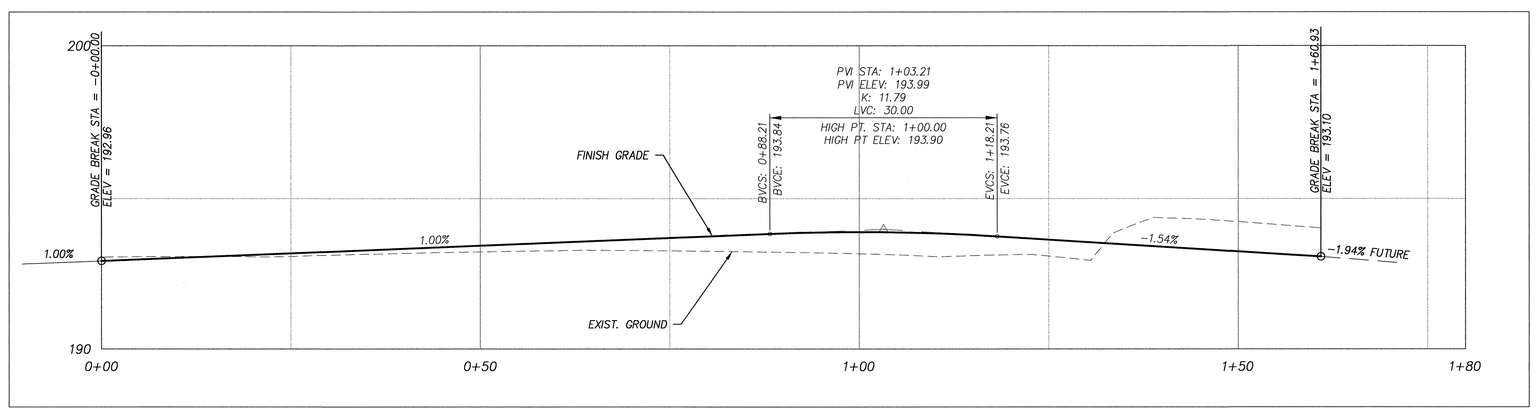
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT





CURB RETURN 2

STA. 0+00 TO 1+56.44
SCALE: 1"=10'H 1"=2.5'V

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DRIVEWAY DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2E-8

FINAL DESIGN

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APPROVED PLANS
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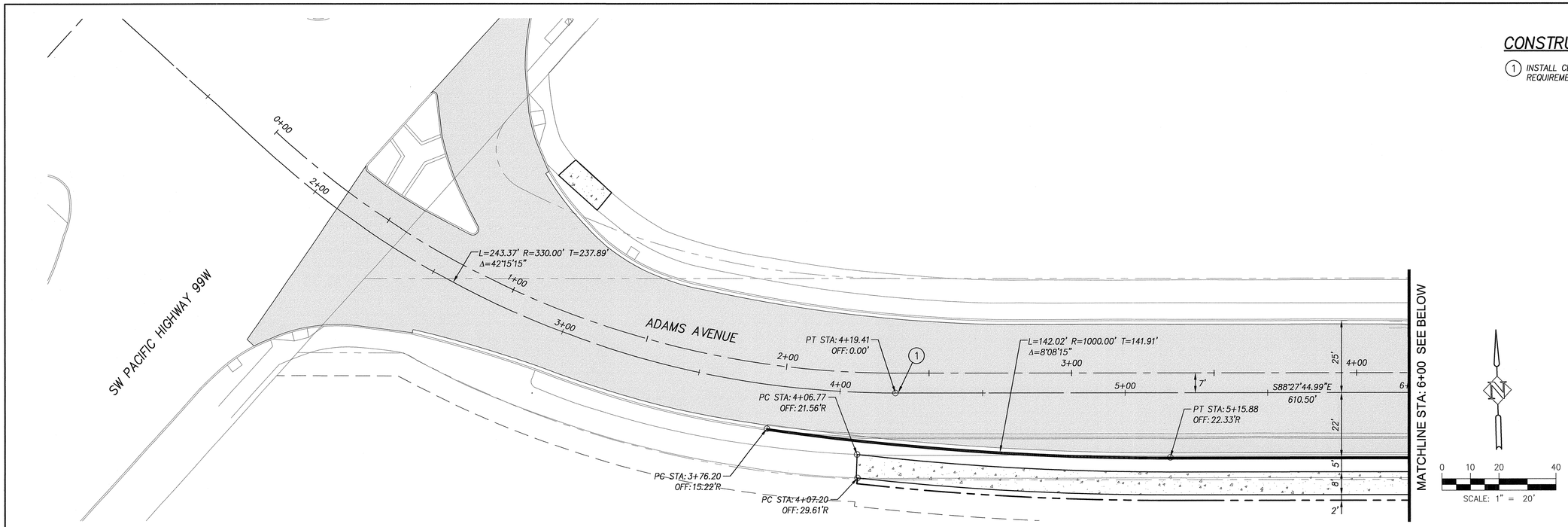
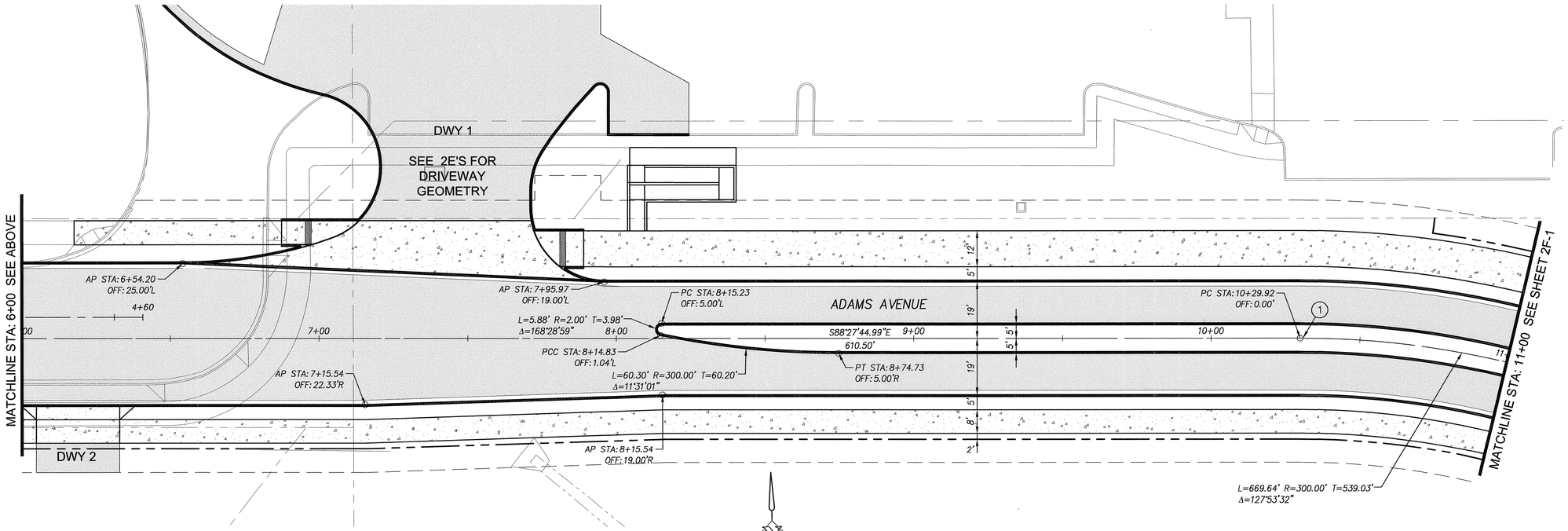
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

CONSTRUCTION NOTES

1. INSTALL CENTERLINE MONUMENT BOX, PER WASHINGTON COUNTY REQUIREMENTS.





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ADAMS AVENUE NORTH
ROADWAY GEOMETRY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2F

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APPROVED PLANS
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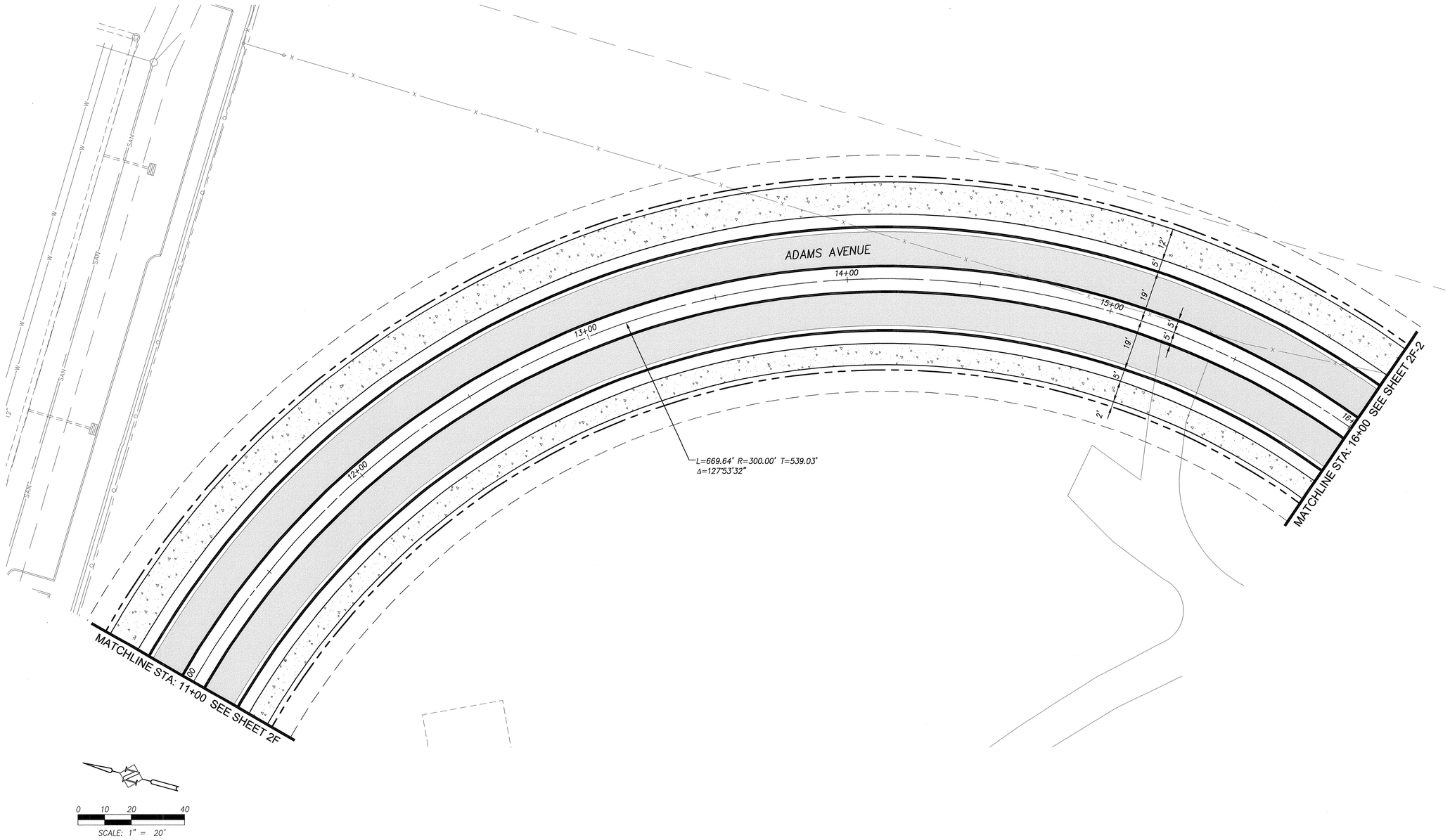

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DESIGNED BY: BRA/HHPR TEAM
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DATE: MAY 2012

ADAMS AVENUE NORTH
ROADWAY GEOMETRY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2F-1

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APPROVED PLANS
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JULY 9, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

CONSTRUCTION NOTES

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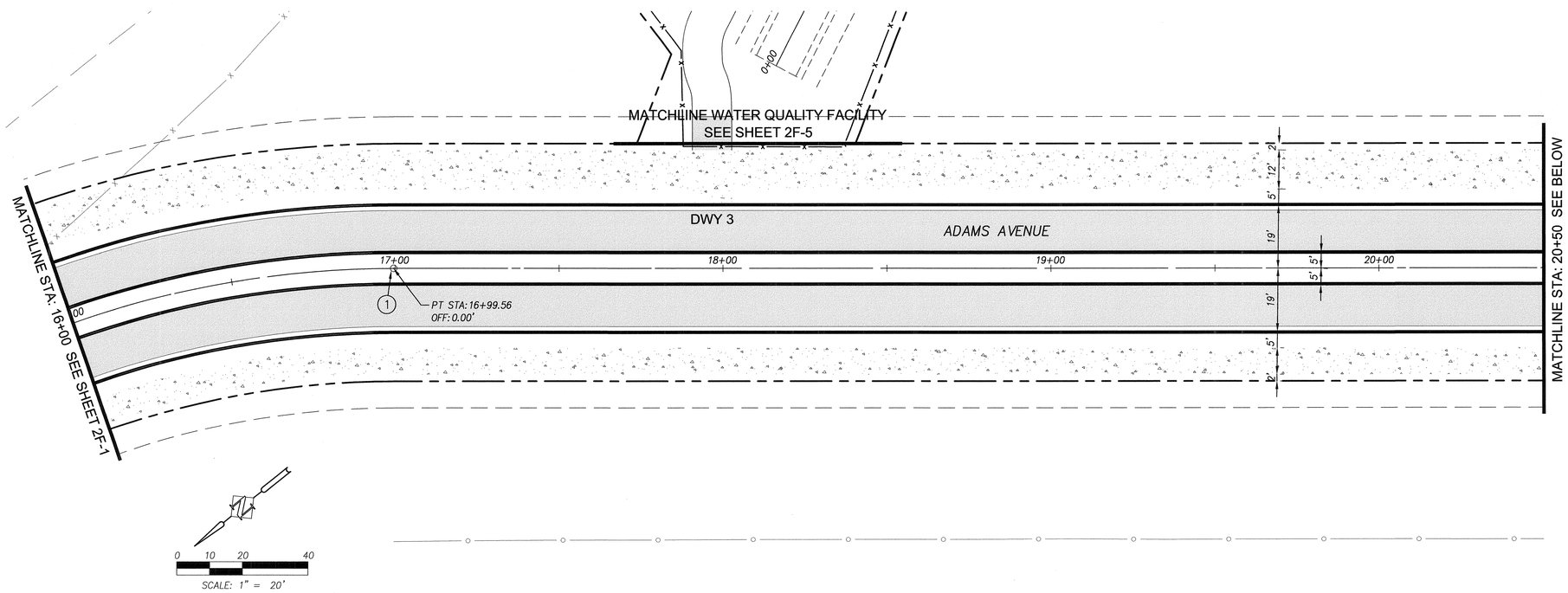

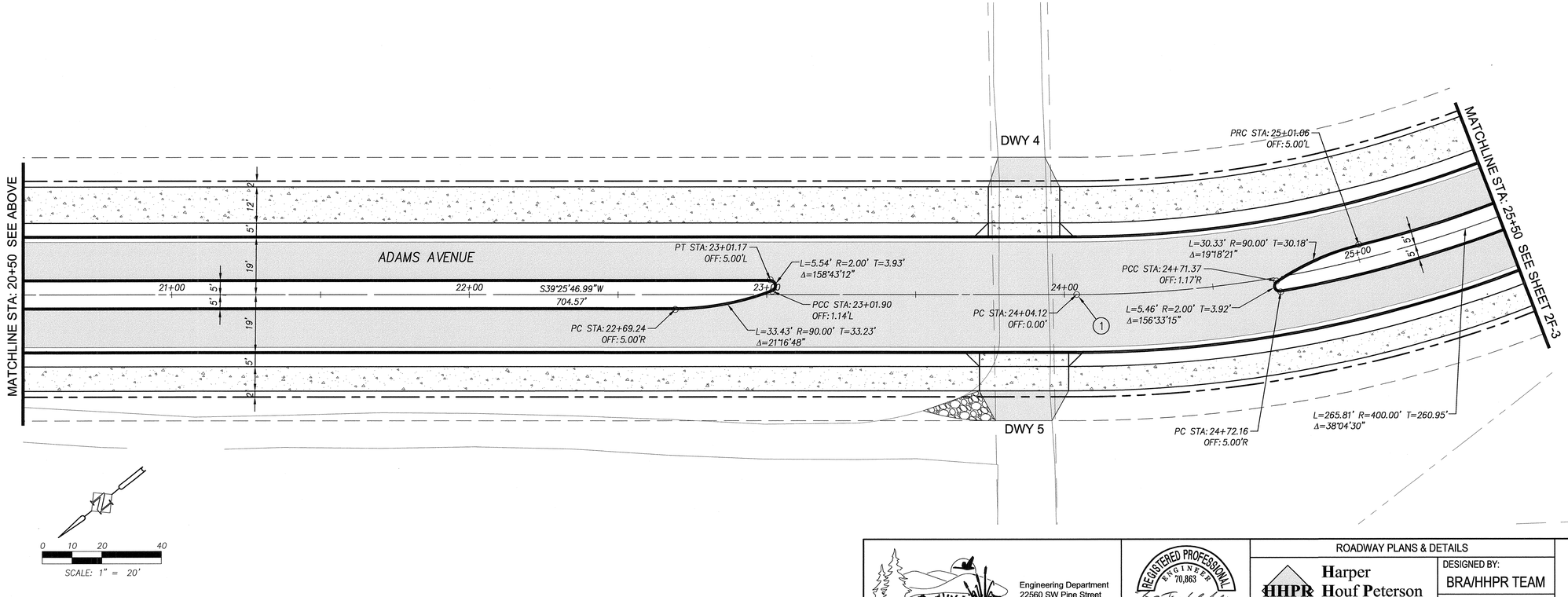

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ADAMS AVENUE NORTH
ROADWAY GEOMETRY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2F-2

APPROVED PLANS
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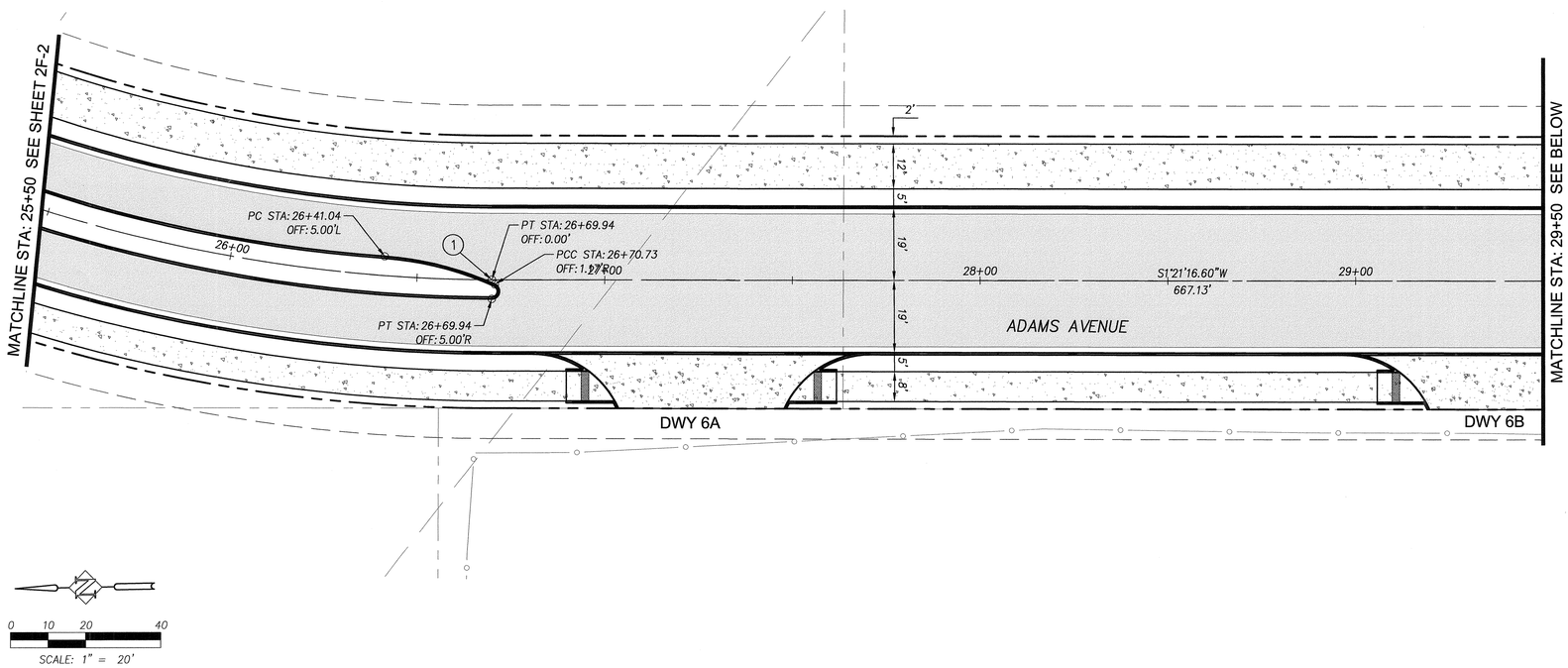

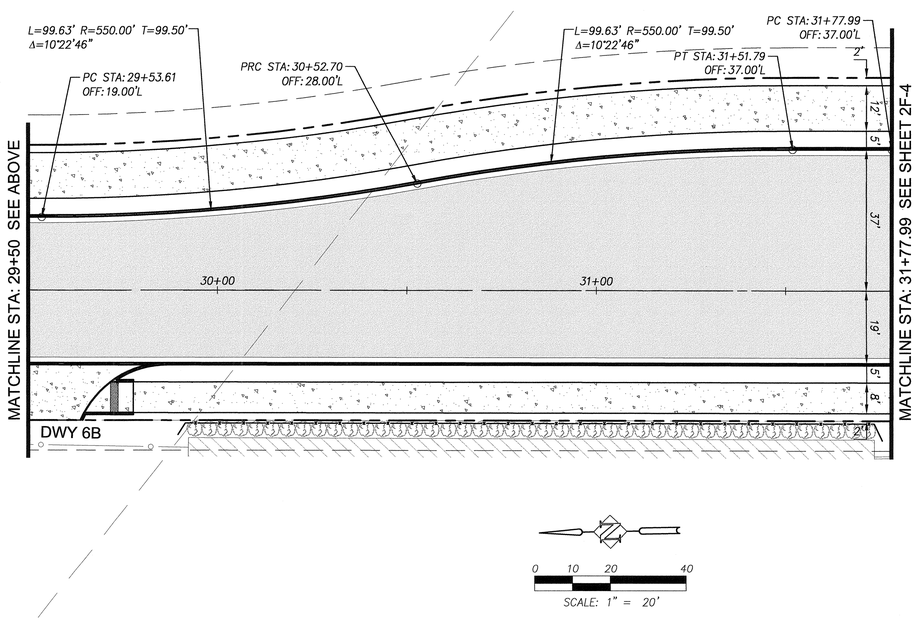

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LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
ROADWAY GEOMETRY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2F-3

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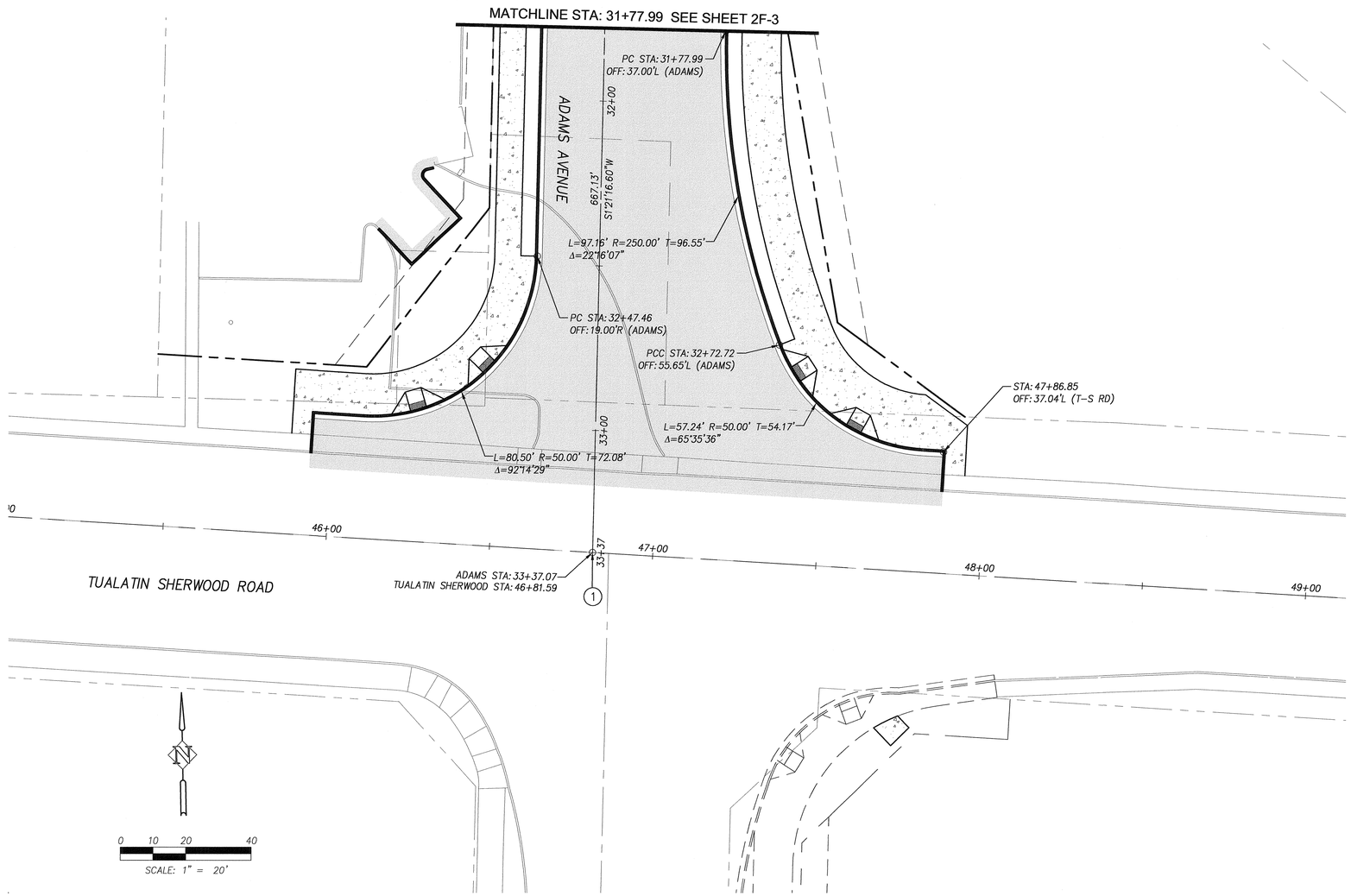
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

1. INSTALL CENTERLINE MONUMENT BOX PER WASHINGTON COUNTY REQUIREMENTS.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
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DATE: MAY 2012

ADAMS AVENUE NORTH
ROADWAY GEOMETRY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2F-4

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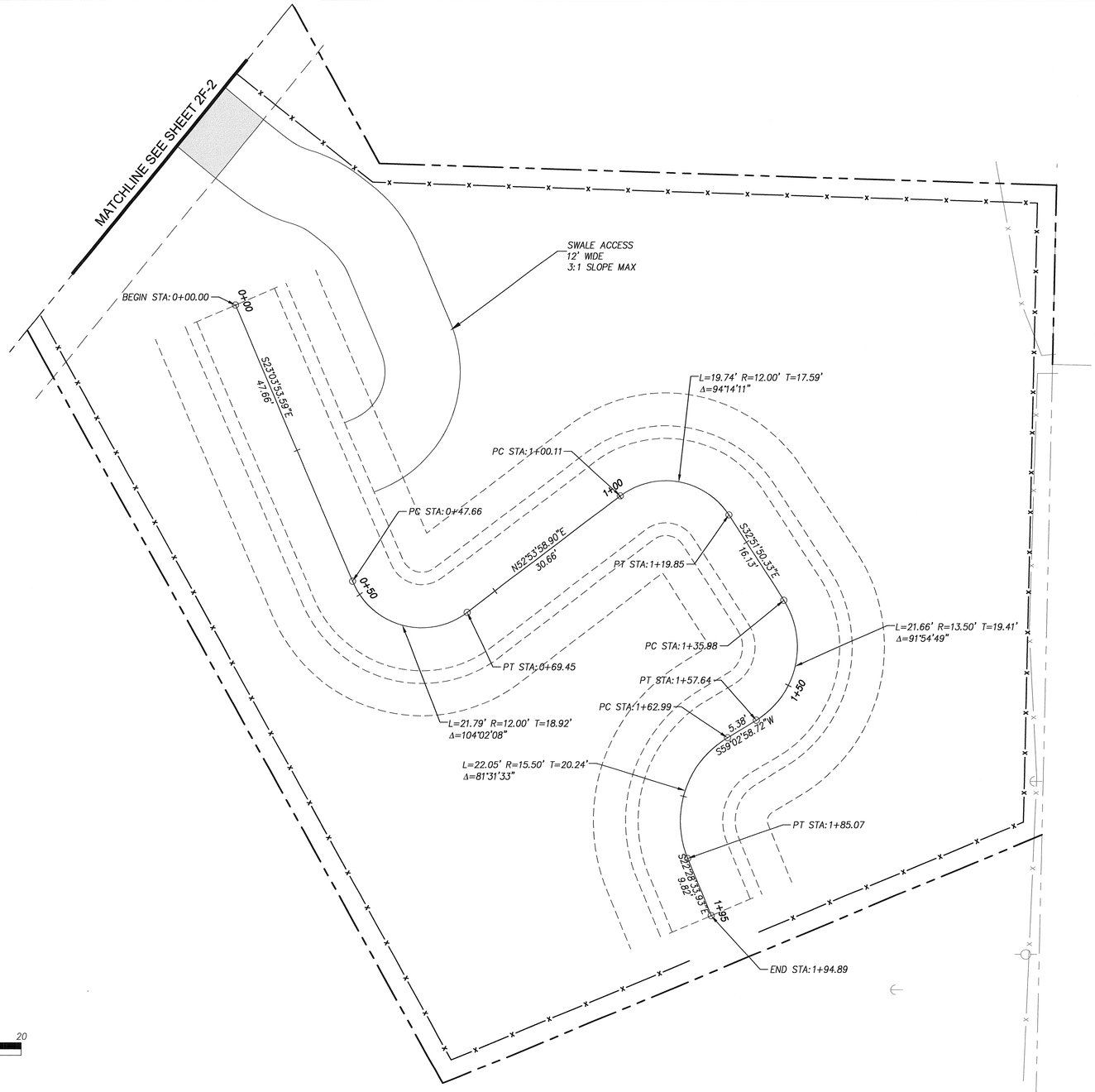
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



WATER QUALITY FACILITY

FINAL DESIGN

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Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
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DESIGNED BY: BRA/HHPR TEAM
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ADAMS AVENUE NORTH
ROADWAY GEOMETRY PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	2F-5

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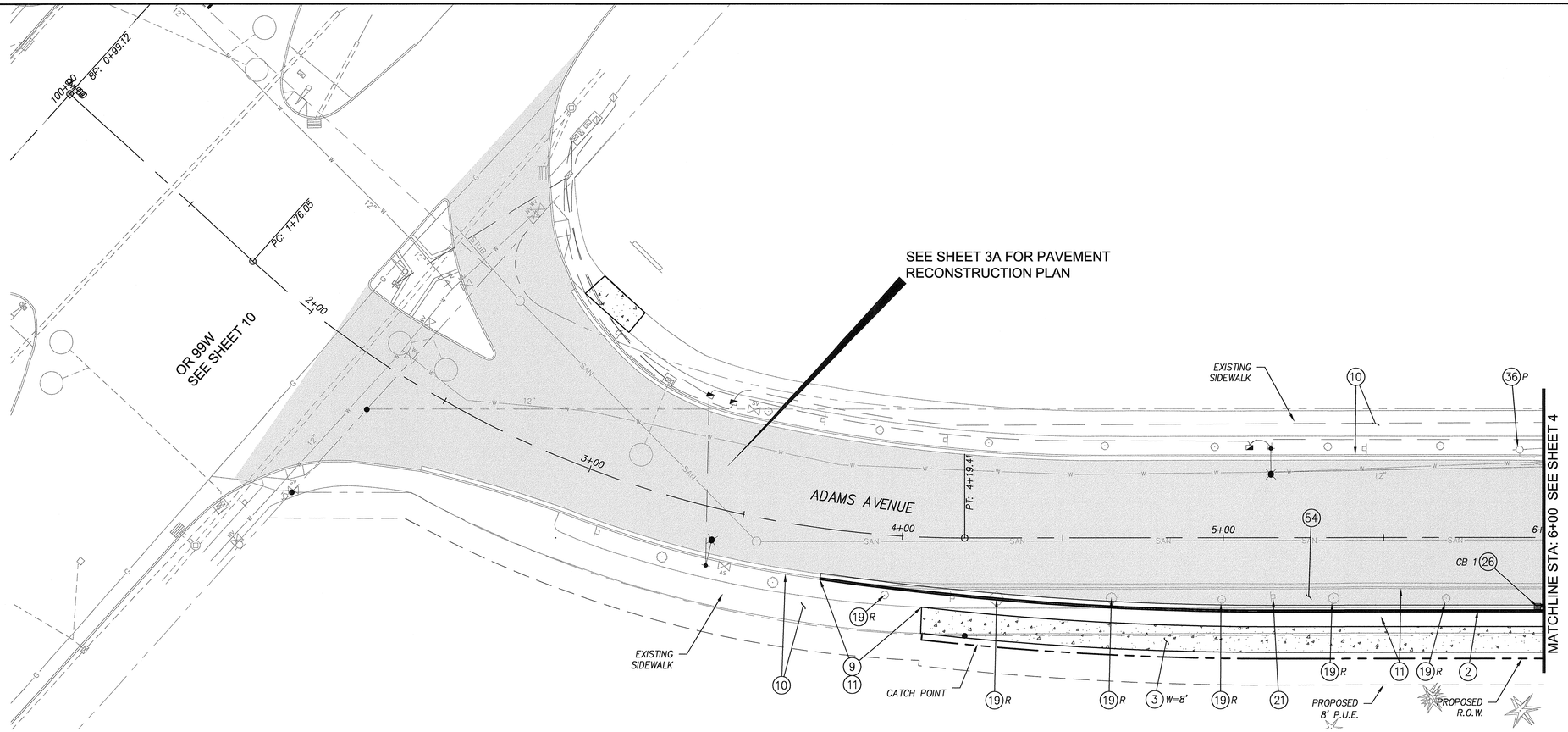
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JUL 11, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

(2) CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.

(3) CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.

(9) MATCH NEW CURB TO EXISTING CURB AND/OR MATCH NEW SIDEWALK TO EXISTING SIDEWALK, AS REQUIRED AND DIRECTED.

(10) PROTECT EXISTING CURB AND/OR CONCRETE SIDEWALK.

(11) REMOVE EXISTING CONCRETE CURB AND/OR SIDEWALK. SAWCUT NEAT LINE AT LIMIT OF REMOVAL.

(19) REMOVE (R), TRIM (T), OR PROTECT (P) EXISTING TREE OR SHRUB AS INDICATED OR DIRECTED. REMOVAL IS TYPICAL WITHIN THE PROPOSED LIMITS OF GRADING (CATCH POINTS).

(21) EXISTING SIGN TO BE RELOCATED. SEE 13'S FOR ADDITIONAL INFORMATION.

(26) CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.

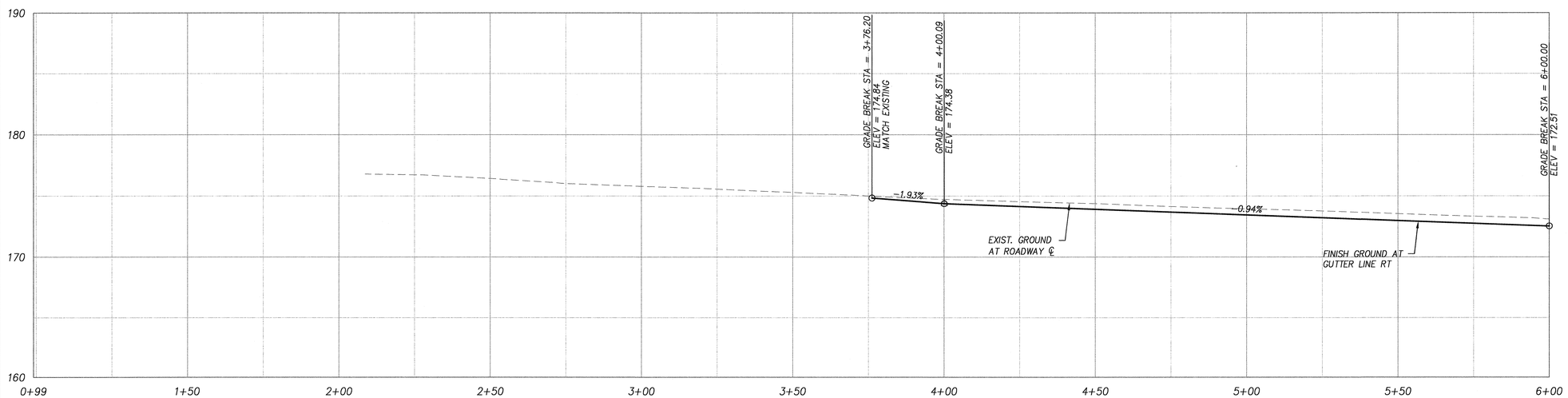
(36) RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING FIRE HYDRANT AS SHOWN. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.

(54) CONSTRUCT FULL DEPTH PAVEMENT SECTION. SEE SECTION ON SHEET 2.

STORM DRAINAGE DATA

CB 1
CG-2 CATCH BASIN
STA: 5+97.98 , 22.33' R (ADAMS)
RIM = 172.53
10" IE OUT: 168.81
30.6 LF 10" C900 STM S = 0.0050

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE



ADAMS AVENUE

STA. 0+99.12 TO 6+00.00
SCALE: 1"=20'H 1"=5'V

0 10 20 40
SCALE: 1" = 20'

FINAL DESIGN

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DESIGNED BY: BRA/HHPR TEAM
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DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 0+99.12 TO STA. 6+00
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	3

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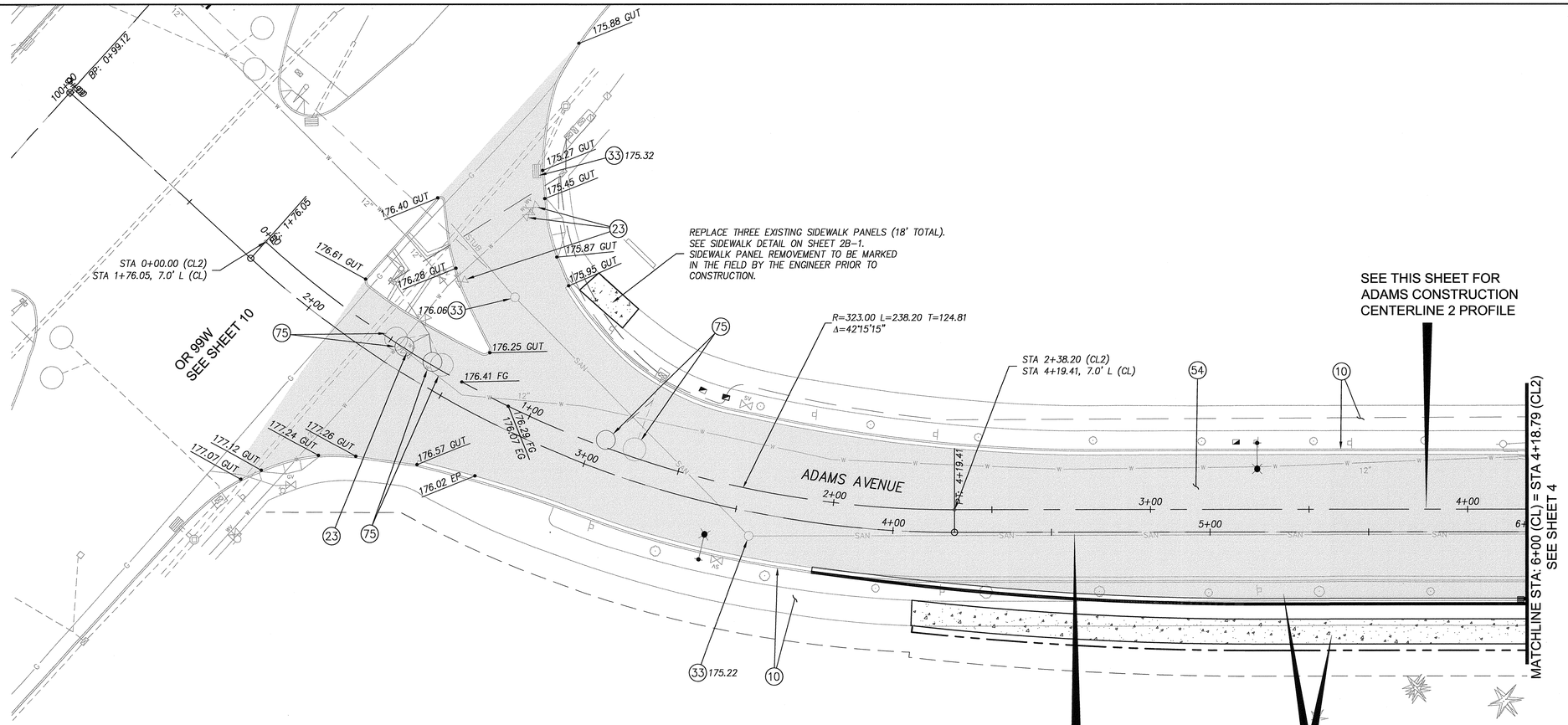

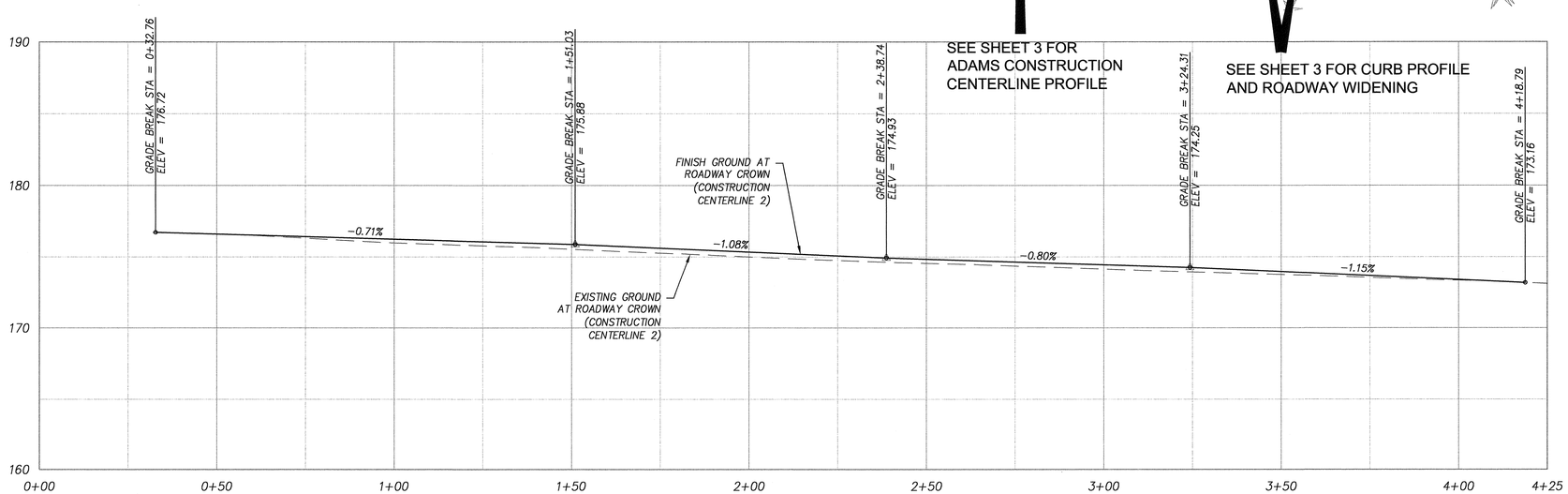

ADAMS AVENUE CENTERLINE 2

STA. 0+32.76 TO 4+18.79

SCALE: 1"=20'H 1"=5'V

SCALE: 1" = 20'

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JUL 11, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

CONSTRUCTION NOTES

(10) PROTECT EXISTING CURB AND/OR CONCRETE SIDEWALK.

(23) ADJUST RIM, COVER, OR FRAME TO FINISH GRADE. TYPICAL FOR ALL ITEMS LOCATED WITHIN NEW AC OR CONC. AREAS.

(33) PROTECT EXISTING CATCH BASIN OR MANHOLE. ADJUST RIM AS REQUIRED AND DIRECTED. NEW RIM ELEVATION IS NOTED FOR ANY REQUIRED RIM ADJUSTMENT.

(54) CONSTRUCT FULL DEPTH PAVEMENT SECTION. SEE SECTION ON SHEET 2.

(75) SEE 15'S FOR TRAFFIC SIGNAL LOOP REPLACEMENT.

FINAL DESIGN

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EXPIRES: 12/31/13

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 0+99.12 TO STA. 6+00
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	3A

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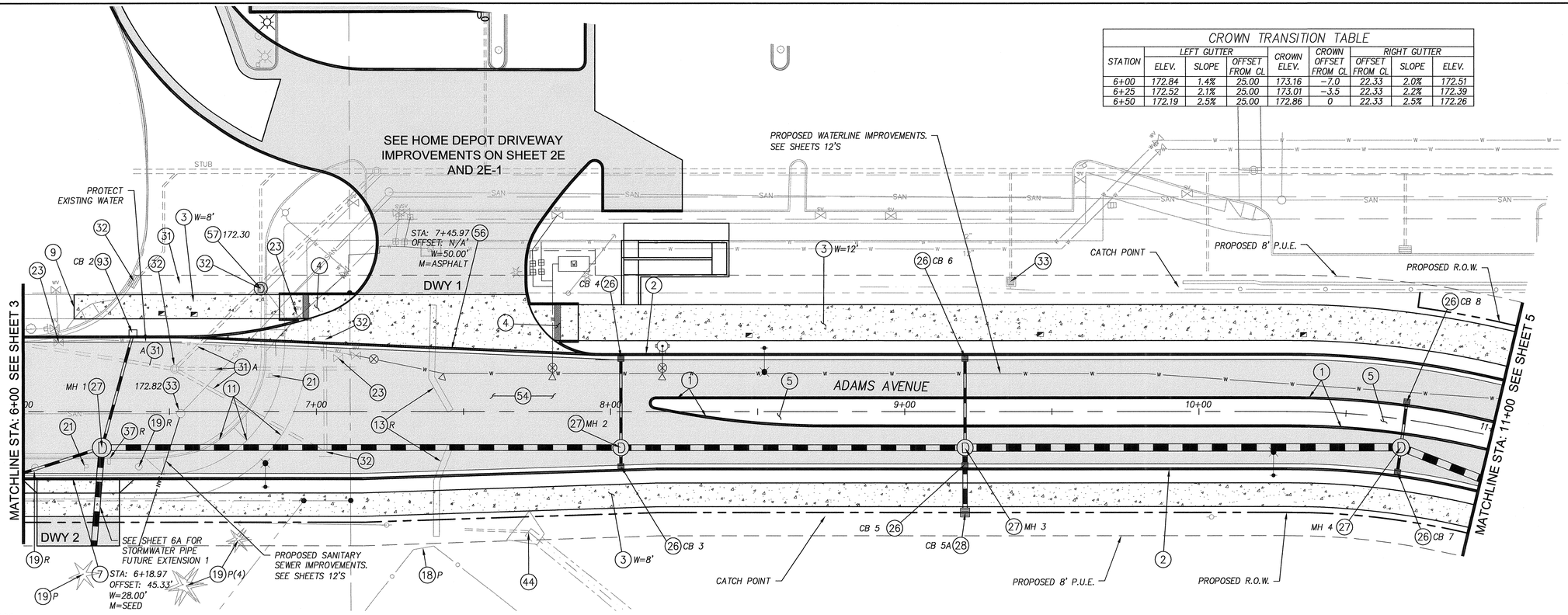
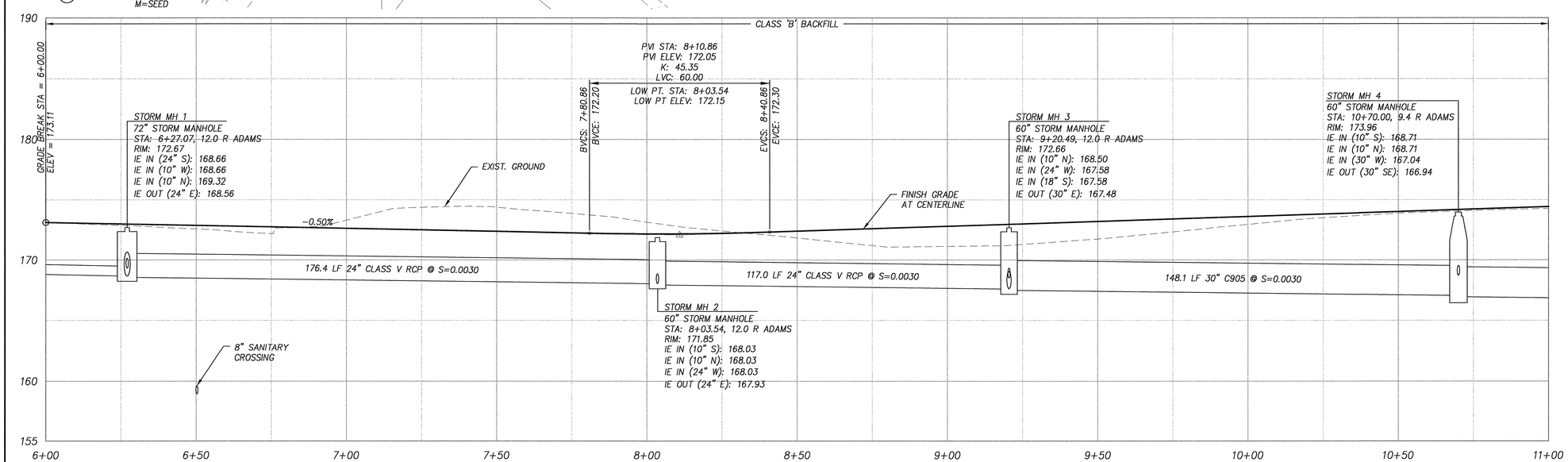


CROWN TRANSITION TABLE

STATION	LEFT GUTTER ELEV.	LEFT GUTTER SLOPE	LEFT GUTTER OFFSET FROM CL	CROWN ELEV.	CROWN OFFSET FROM CL	RIGHT GUTTER OFFSET FROM CL	RIGHT GUTTER SLOPE	RIGHT GUTTER ELEV.
6+00	172.84	1.4%	25.00	173.16	−7.0	22.33	2.0%	172.51
6+25	172.52	2.1%	25.00	173.01	−3.5	22.33	2.2%	172.39
6+50	172.19	2.5%	25.00	172.86	0	22.33	2.5%	172.26



CONSTRUCTION NOTES

1. CONSTRUCT CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B.
2. CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.
3. CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.
4. CONSTRUCT SIDEWALK RAMP. SEE DETAIL ON SHEET 2B-2. SEE SPOT GRADES ON SHEET 2E'S.
5. CONSTRUCT LANDSCAPED MEDIAN. SEE LANDSCAPE PLANS.
7. CONSTRUCT COMMERCIAL DRIVEWAY APPROACH AS SHOWN OR DIRECTED. SEE DETAIL ON SHEET 2B-2. DRIVEWAY CENTERLINE STATION SHOWN ON PLAN. OFFSET=DISTANCE FROM CENTERLINE TO DRIVEWAY MATCH POINT. W=THROAT WIDTH. M=DRIVEWAY MATERIAL. WIDTH AND MATERIAL BEHIND APPROACH TO MATCH MATCH EXISTING DRIVEWAY UNLESS NOTED OTHERWISE. SAWCUT AND REMOVE EXIST. SURFACE AS REQUIRED. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE. SEE SPOT GRADES ON SHEET 2E'S.
9. MATCH NEW CURB TO EXISTING CURB AND/OR MATCH NEW SIDEWALK TO EXISTING SIDEWALK, AS REQUIRED AND DIRECTED.
11. REMOVE EXISTING CONCRETE CURB AND/OR SIDEWALK. SAWCUT NEAT LINE AT LIMIT OF REMOVAL.
13. REMOVE (R) OR PROTECT (P) EXISTING CONCRETE BARRIERS.
18. PROTECT (P), REMOVE (R) EXISTING FENCE, OR REMOVE EXISTING FENCE AND BUILD (B) NEW FENCE IN KIND AS REQUIRED AND DIRECTED.
19. REMOVE (R), TRIM (T), OR PROTECT (P) EXISTING TREE OR SHRUB AS INDICATED OR DIRECTED. REMOVAL IS TYPICAL WITHIN THE PROPOSED LIMITS OF GRADING (CATCH POINTS).
21. EXISTING SIGN TO BE RELOCATED. SEE 13'S FOR ADDITIONAL INFORMATION.
23. ADJUST RIM, COVER, OR FRAME TO FINISH GRADE. TYPICAL FOR ALL ITEMS LOCATED WITHIN NEW AC OR CONC. AREAS.
26. CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
27. CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.
28. CONSTRUCT DITCH INLET. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
31. PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.
32. REMOVE EXISTING CATCH BASIN OR MANHOLE. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.
33. PROTECT EXISTING CATCH BASIN OR MANHOLE. ADJUST RIM AS REQUIRED AND DIRECTED. NEW RIM ELEVATION IS NOTED FOR ANY REQUIRED RIM ADJUSTMENT.
37. RELOCATE (R), PROTECT (P), OR DEMOLISH (D) EXISTING MAILBOX(ES). SEE ODOT STD. DRG. NO. RD100 FOR DETAILS. COORDINATE LOCATION WITH ENGINEER.
44. PROTECT EXISTING STORMWATER INFILTRATION FACILITY. COORDINATE GRADING WITH ENGINEER.
54. CONSTRUCT FULL DEPTH PAVEMENT SECTION. SEE SECTION ON SHEET 2.
56. CONSTRUCT HIGH VOLUME COMMERCIAL DRIVEWAY APPROACH AS SHOWN OR DIRECTED. SEE DETAIL ON SHEET 2B-2. DRIVEWAY CENTERLINE STATION SHOWN ON PLAN. SAWCUT AND REMOVE EXIST. SURFACE AS REQUIRED. OFFSET=DISTANCE FROM CENTERLINE TO DRIVEWAY MATCH POINT. W=THROAT WIDTH. M=DRIVEWAY MATERIAL. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE. SEE SPOT GRADES ON 2E'S.
57. CONSTRUCT 48" STORM SEWER MANHOLE OVER EXISTING PIPES. RIM ELEVATION SHOWN ON PLANS. SEE DETAILS ON SHEET 2B-3.
93. CONSTRUCT CG-30 CATCH BASIN AND LATERAL. SEE DETAILS ON SHEET 2B-2. SEE PLAN FOR INVERTS AND DATA.

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE

APPROVED PLANS FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD ENGINEERING DEPARTMENT

FINAL DESIGN

STORM DRAINAGE DATA

CB 2
CG-30 CATCH BASIN
STA: 6+37.65 , 27.33' L (ADAMS)
RIM = 172.35
10" IE OUT: 169.52
39.8 LF 10" C900 STM S = 0.0050

CB 3
CG-2 CATCH BASIN
STA: 8+03.55 , 19.40' R (ADAMS)
RIM = 171.62
10" IE OUT: 168.06
6.4 LF 10" C900 STM S = 0.0050

CB 4
CG-2 CATCH BASIN
STA: 8+03.54 , 19.00' L (ADAMS)
RIM = 171.63
10" IE OUT: 168.18
30.0 LF 10" C900 STM S = 0.0050

CB 5
CG-2 CATCH BASIN
STA: 9+20.49 , 19.00' R (ADAMS)
RIM = 172.44
18" IE IN: 167.61
18" IE OUT: 167.61
6.0 LF 18" PVC STM S = 0.0053

CB 5A
DITCH INLET
STA: 9+20.49 , 34.00' R (ADAMS)
RIM = 171.88
18" IE OUT: 167.69
16.0 LF 18" PVC STM S = 0.0053

CB 6
CG-2 CATCH BASIN
STA: 9+20.49 , 19.00' L (ADAMS)
RIM = 172.44
10" IE OUT: 168.65
30.0 LF 10" C900 STM S = 0.0050

CB 7
CG-2 CATCH BASIN
STA: 10+70.00 , 19.00' R (ADAMS)
RIM = 173.67
10" IE OUT: 169.67
8.6 LF 10" PVC STM S = 0.1269

CB 8
CG-2 CATCH BASIN
STA: 10+70.00 , 5.00' L (ADAMS)
RIM = 174.30
10" IE OUT: 170.30
15.4 LF 10" PVC STM S = 0.1008

ADAMS AVENUE

STA. 6+00.00 TO 11+00.00
SCALE: 1"=20'H 1"=5'V

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JULY 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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ADAMS AVENUE NORTH
STA. 6+00 TO STA. 11+00
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	4

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APPROVED PLANS
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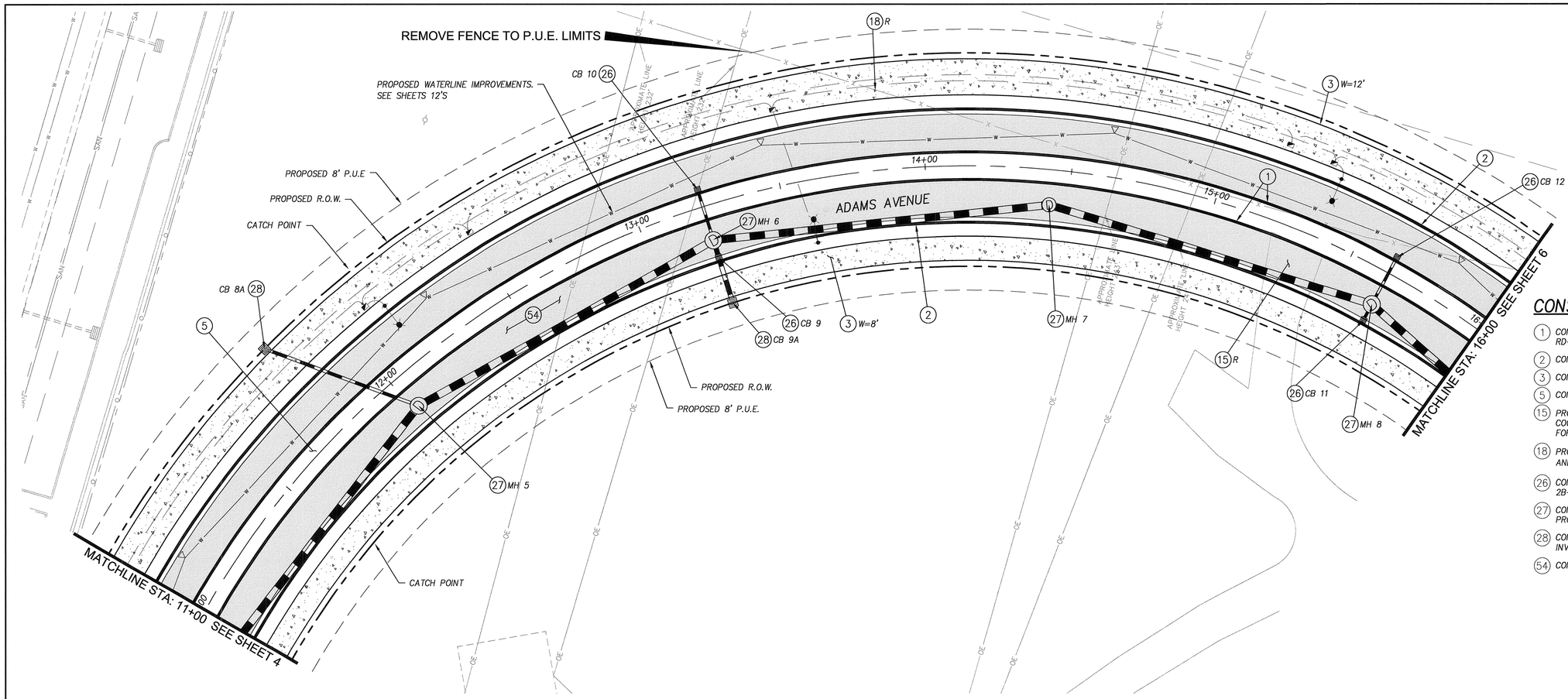
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

1. CONSTRUCT CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B-1.
2. CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.
3. CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.
5. CONSTRUCT LANDSCAPED MEDIAN. SEE LANDSCAPE PLANS.
15. PROTECT (P), REMOVE (R), OR ABANDON (A) EXISTING GRAVEL ACCESS. COORDINATE WITH ENGINEER AND OWNER. PLANT PER LANDSCAPE PLANS FOR ANY REMOVAL.
18. PROTECT (P), REMOVE (R) EXISTING FENCE, OR REMOVE EXISTING FENCE AND BUILD (B) NEW FENCE IN KIND AS REQUIRED AND DIRECTED.
26. CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
27. CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.
28. CONSTRUCT DITCH INLET. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
54. CONSTRUCT FULL DEPTH PAVEMENT SECTION. SEE SECTION ON SHEET 2.

STORM DRAINAGE DATA

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE

CB 8A
DITCH INLET
STA: 11+77.98 , 37.00' L (ADAMS)
RIM = 175.34
12" IE OUT: 170.34
56.0 LF 12" C900 STM S = 0.0489

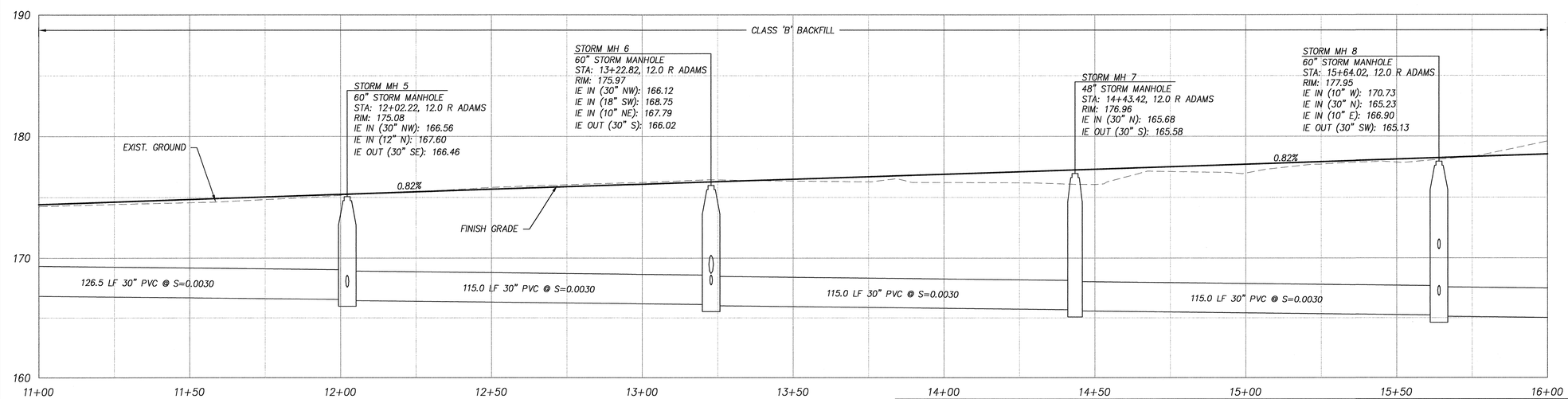
CB 9
CG-2 CATCH BASIN
STA: 13+22.82 , 19.00' R (ADAMS)
RIM = 175.75
18" IE IN: 170.75
18" IE OUT: 170.75
6.0 LF 18" PVC STM S = 0.3488

CB 9A
DITCH INLET
STA: 13+22.82 , 34.00' R (ADAMS)
RIM = 175.85
18" IE OUT: 170.85
16.0 LF 18" PVC STM S = 0.0062

CB 10
CG-2 CATCH BASIN
STA: 13+22.82 , 5.00' L (ADAMS)
RIM = 176.40
10" IE OUT: 172.40
18.0 LF 10" PVC STM S = 0.2561

CB 11
CG-2 CATCH BASIN
STA: 15+64.02 , 19.00' R (ADAMS)
RIM = 177.73
10" IE OUT: 172.73
6.0 LF 10" PVC STM S = 0.3864

CB 12
CG-2 CATCH BASIN
STA: 15+64.02 , 5.00' L (ADAMS)
RIM = 178.38
10" IE OUT: 174.38
18.0 LF 10" PVC STM S = 0.4156



ADAMS AVENUE

STA. 11+00.00 TO 16+00.00
SCALE: 1"=20'H 1"=5'V

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
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DESIGNED BY: BRA/HHPR TEAM
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DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 11+00 TO STA. 16+00
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	5

FINAL DESIGN

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-03-PLAN.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
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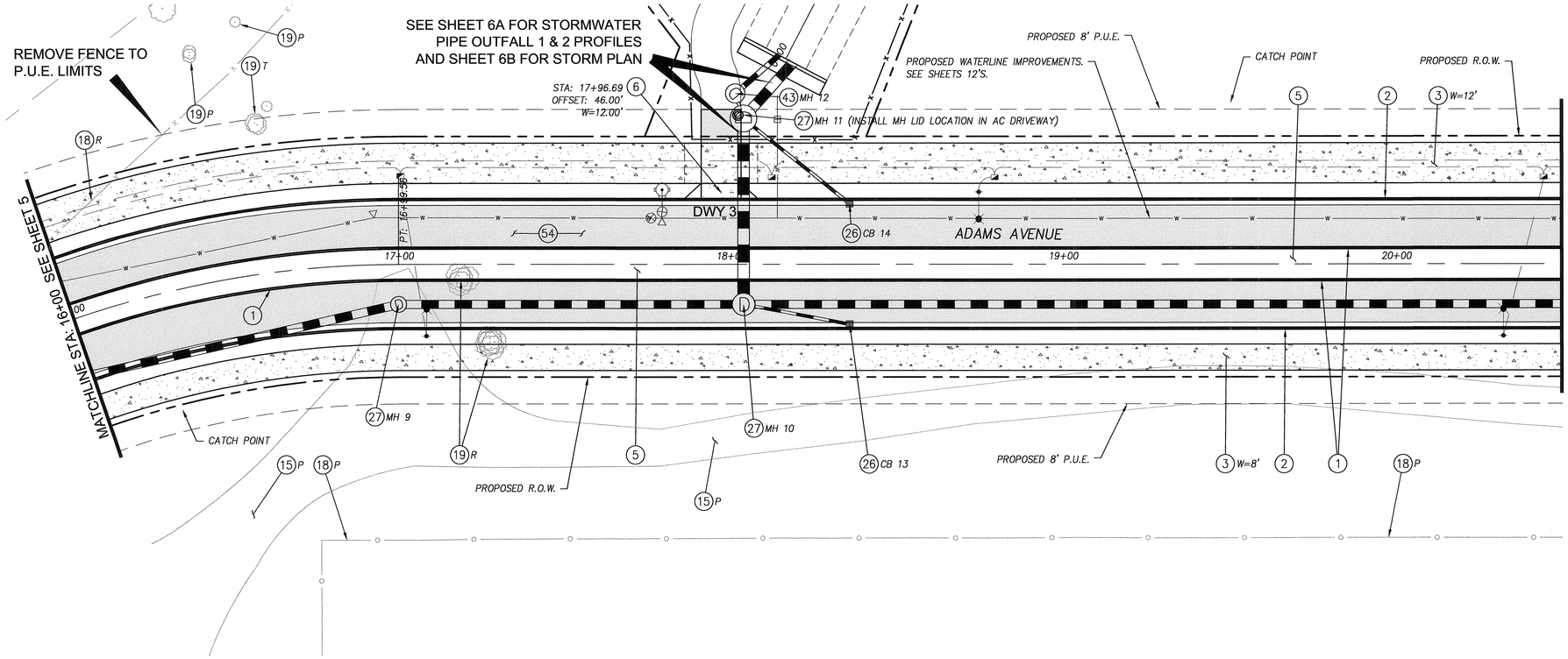
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

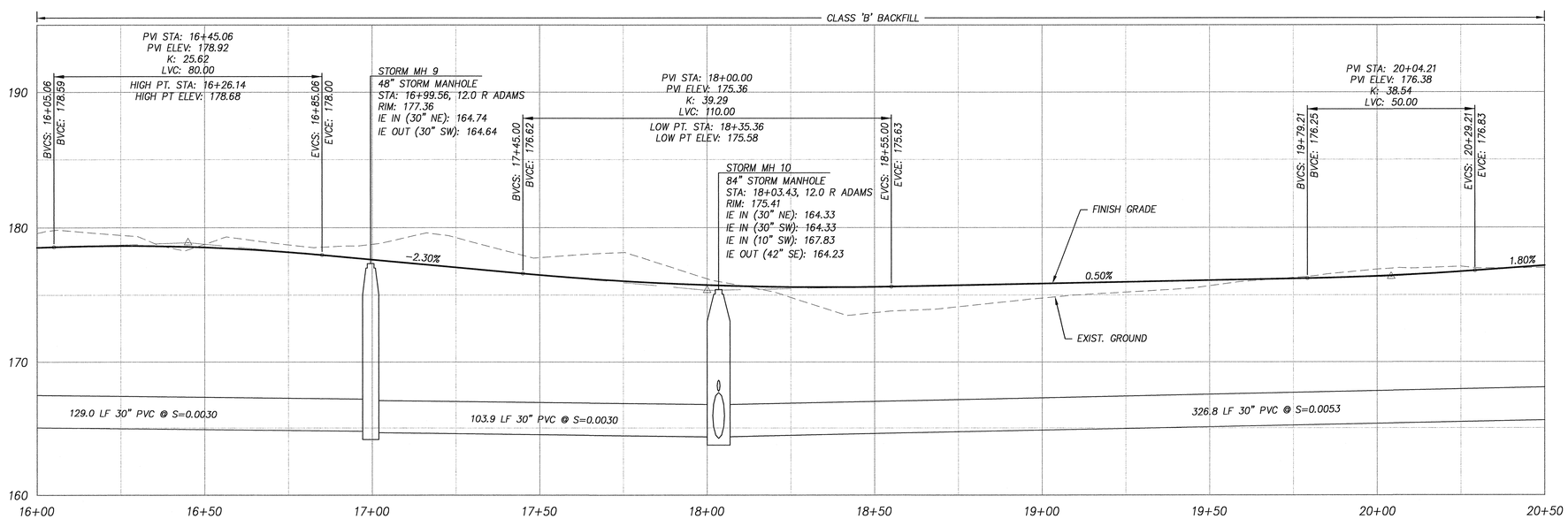
1. CONSTRUCT CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B-1.
2. CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.
3. CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.
5. CONSTRUCT LANDSCAPED MEDIAN. SEE LANDSCAPE PLANS.
6. CONSTRUCT COMMERCIAL DRIVEWAY APPROACH AS SHOWN. SEE DETAIL ON SHEET 2B-2. DRIVEWAY CENTERLINE STATION SHOWN ON PLAN. OFFSET=DISTANCE FROM CENTERLINE TO DRIVEWAY MATCH POINT. W=THROAT WIDTH. SEE MAINTENANCE ACCESS ROAD SECTION DETAIL ON SHEET 2B-6 FOR DRIVEWAY MATERIAL.
15. PROTECT (P), REMOVE (R), OR ABANDON (A) EXISTING GRAVEL ACCESS. COORDINATE WITH ENGINEER AND OWNER. PLANT PER LANDSCAPE PLANS FOR ANY REMOVAL.
18. PROTECT (P), REMOVE (R) EXISTING FENCE, OR REMOVE EXISTING FENCE AND BUILD (B) NEW FENCE IN KIND AS REQUIRED AND DIRECTED.
19. REMOVE (R), TRIM (T), OR PROTECT (P) EXISTING TREE OR SHRUB AS INDICATED OR DIRECTED. REMOVAL IS TYPICAL WITHIN THE PROPOSED LIMITS OF GRADING (CATCH POINTS).
26. CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
27. CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.
43. CONSTRUCT WATER QUALITY MANHOLE. SEE DETAILS ON SHEET 2B-4. SEE PLAN FOR INVERTS AND DATA.
54. CONSTRUCT FULL DEPTH PAVEMENT SECTION. SEE SECTION ON SHEET 2.

STORM DRAINAGE DATA

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE

CB 13
CG-2 CATCH BASIN
STA: 18+35.36 , 19.00' R (ADAMS)
RIM = 175.06
10" IE OUT: 171.06
32.5 LF 10" PVC STM S = 0.0994

CB 14
CG-2 CATCH BASIN
STA: 18+35.36 , 19.00' L (ADAMS)
RIM = 175.06
10" IE OUT: 171.06
40.8 LF 10" PVC STM S = 0.0613



ADAMS AVENUE

STA. 16+00.00 TO 20+50.00

SCALE: 1"=20'H 1"=5'V

SCALE: 1" = 20'

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JULY 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 16+00 TO STA. 20+50
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	6

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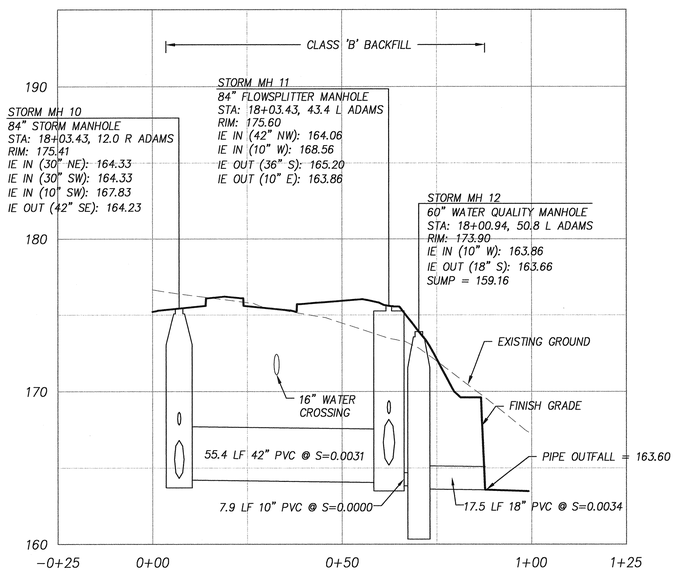
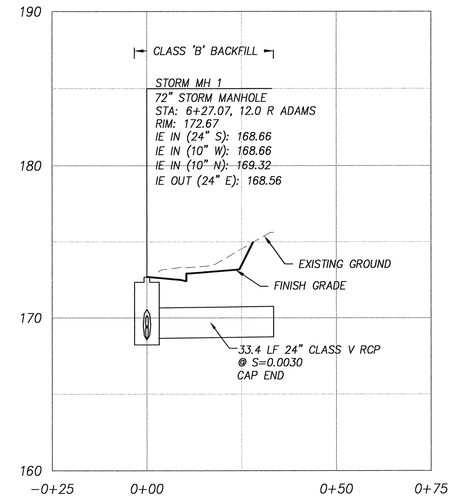
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



STORMWATER PIPE OUTFALL 1

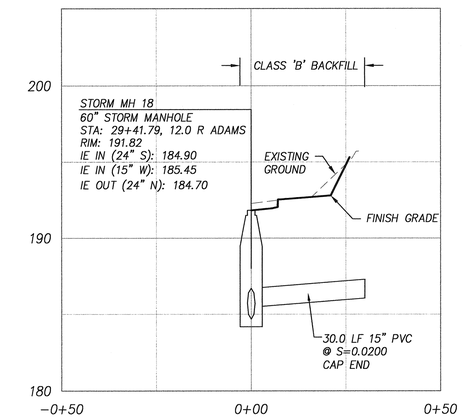
SCALE: 1"=20'H 1"=5'V



STORMWATER PIPE FUTURE EXTENSION 1

SCALE: 1"=20'H 1"=5'V

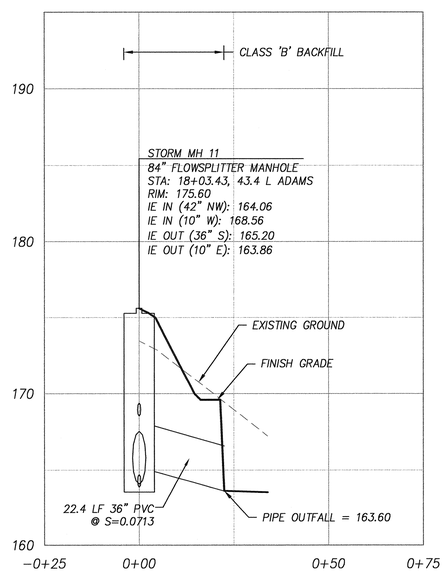
SEE SHEET 4 FOR PLAN



STORMWATER PIPE FUTURE EXTENSION 3

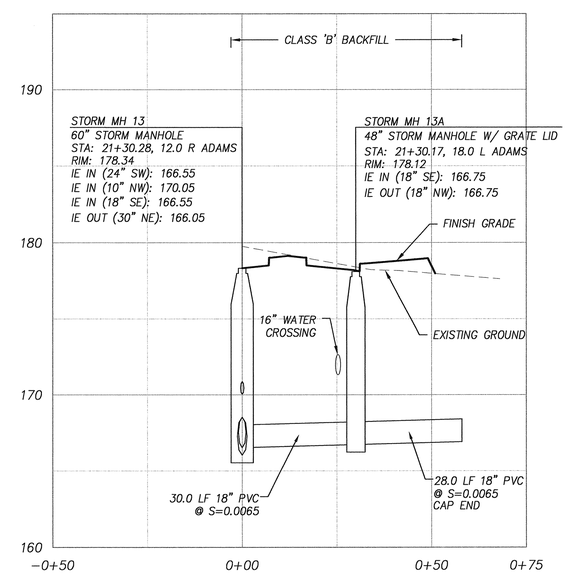
SCALE: 1"=20'H 1"=5'V

SEE SHEET 8 FOR PLAN



STORMWATER PIPE OUTFALL 2

SCALE: 1"=20'H 1"=5'V



STORMWATER PIPE FUTURE EXTENSION 2

SCALE: 1"=20'H 1"=5'V

SEE SHEET 7 FOR PLAN

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
STORMWATER PIPE PROFILE
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	6A

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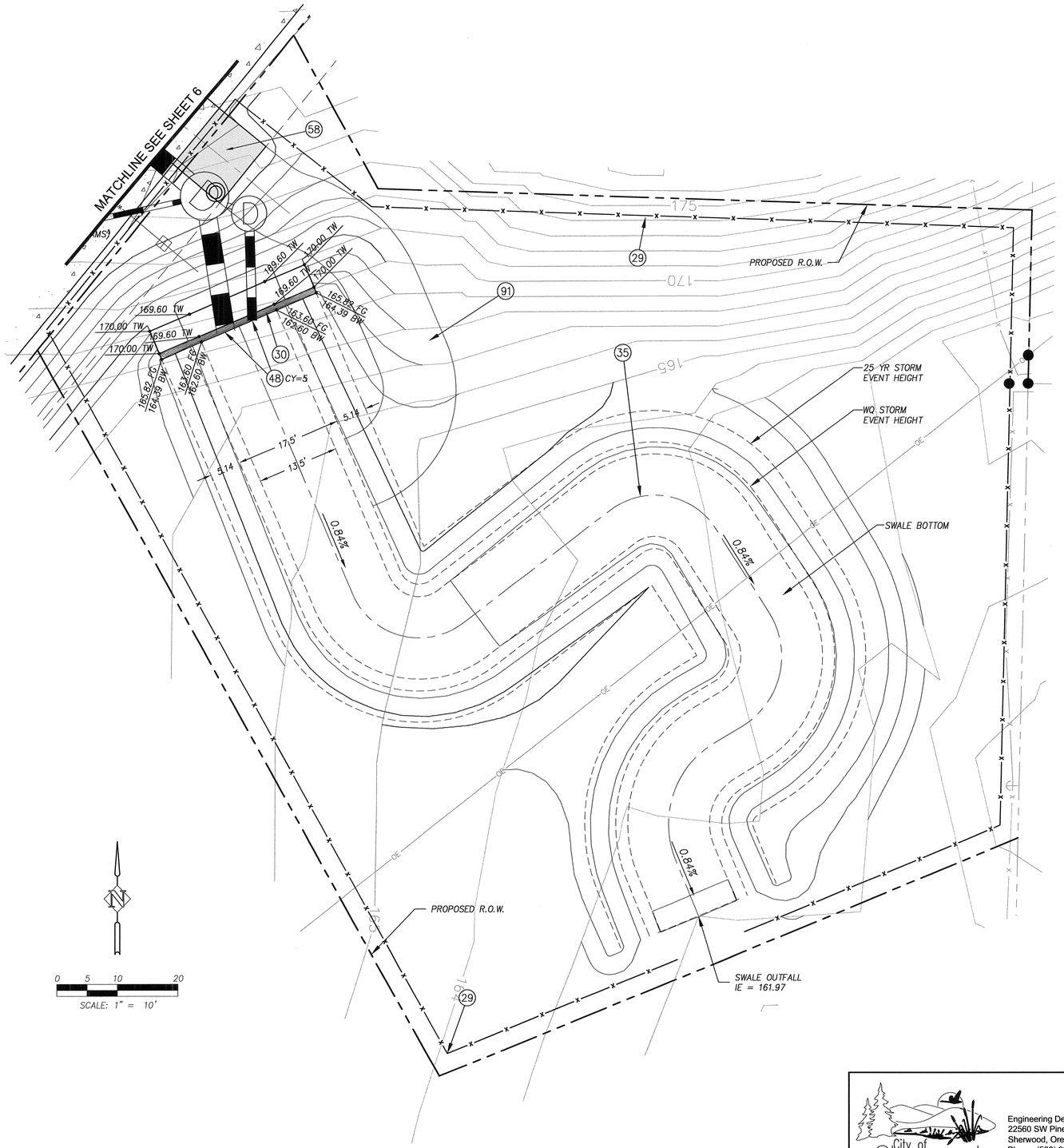
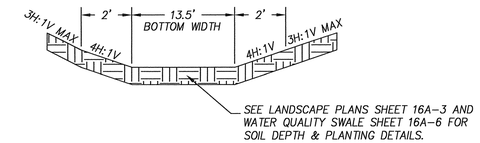
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT





WATER QUALITY SWALE SECTION

N.T.S.

CONSTRUCTION NOTES

29 CONSTRUCT CHAIN LINK FENCE AND GATE AT DRIVEWAY ENTRANCE. SEE DETAIL ON SHEET 2B-4.

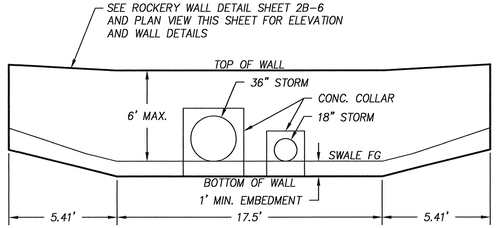
30 CONSTRUCT ROCKERY WALL. SEE PROFILE THIS SHEET AND DETAIL ON SHEET 2B-6.

35 CONSTRUCT STORM WATER TREATMENT FACILITY. SEE DETAIL ON THIS SHEET.

48 INSTALL CLASS 50 RIPRAP OUTFALL (13.5' W, 6.0' L, 1.5' D). CY=RIPRAP VOLUME REQUIREMENT IN CUBIC YARDS.

58 CONSTRUCT MAINTENANCE ACCESS ROAD. SEE DETAIL ON SHEET 2B-6.

91 MAINTENANCE ACCESS ROUTE. 3:1 MAXIMUM SLOPE.



ROCKERY WALL PROFILE

N.T.S.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
DRAINAGE SWALE
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	6B

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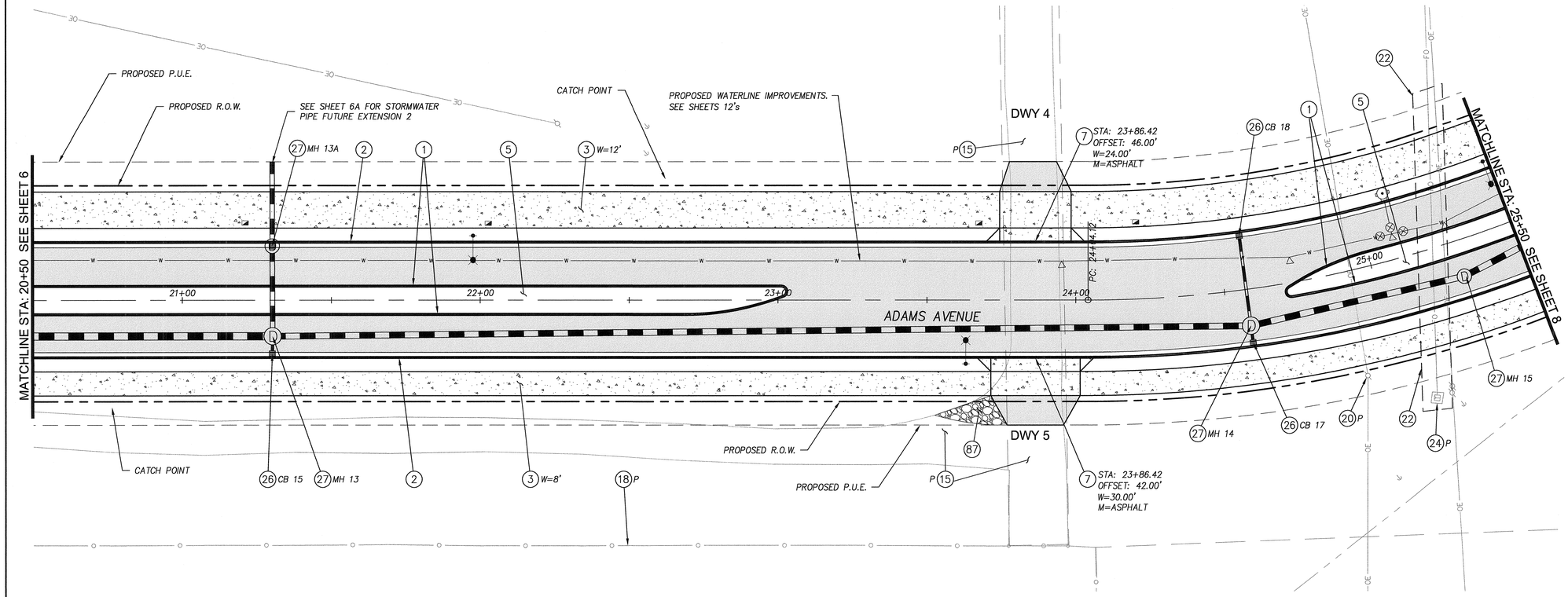
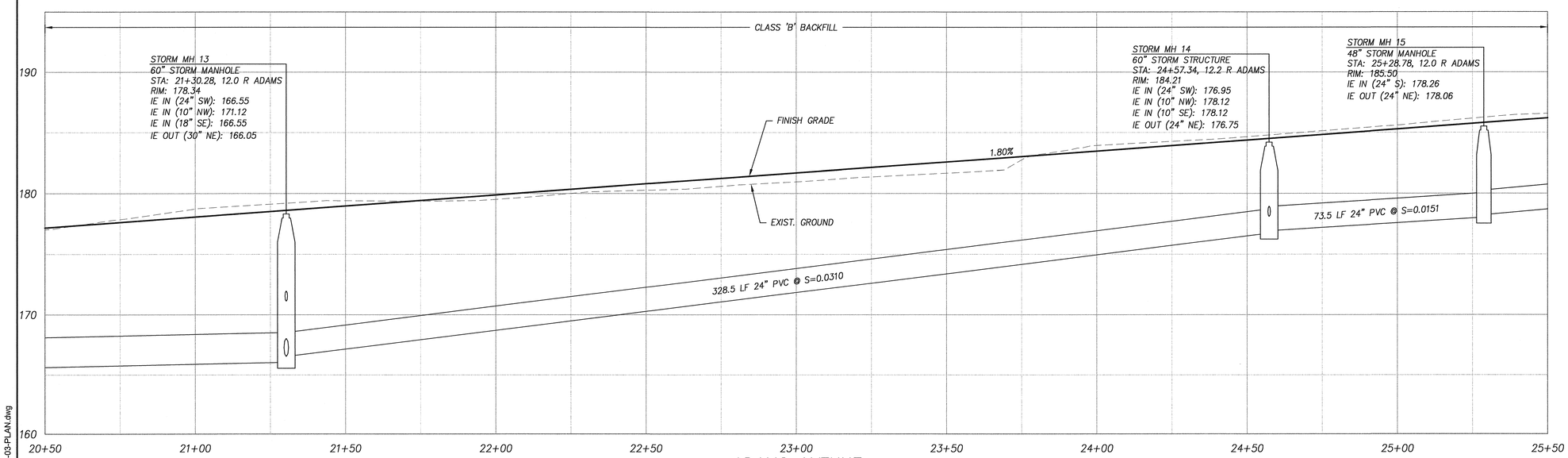
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

1. CONSTRUCT CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B-1.
2. CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.
3. CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.
5. CONSTRUCT LANDSCAPED MEDIAN. SEE LANDSCAPE PLANS.
7. CONSTRUCT COMMERCIAL DRIVEWAY APPROACH AS SHOWN OR DIRECTED. SEE DETAIL ON SHEET 2B-2. DRIVEWAY CENTERLINE STATION SHOWN ON PLAN. OFFSET=DISTANCE FROM CENTERLINE TO DRIVEWAY MATCH POINT. W=THROAT WIDTH. M=DRIVEWAY MATERIAL. WIDTH AND MATERIAL BEHIND APPROACH TO MATCH MATCH EXISTING DRIVEWAY UNLESS NOTED OTHERWISE. SAWCUT AND REMOVE EXIST. SURFACE AS REQUIRED. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE. SEE SPOT GRADES ON SHEET 2E'S.
15. PROTECT (P), REMOVE (R), OR ABANDON (A) EXISTING GRAVEL ACCESS. COORDINATE WITH ENGINEER AND OWNER. PLANT PER LANDSCAPE PLANS FOR ANY REMOVAL.
18. PROTECT (P), REMOVE (R) EXISTING FENCE, OR REMOVE EXISTING FENCE AND BUILD (B) NEW FENCE IN KIND AS REQUIRED AND DIRECTED.
20. REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE OR STREET LIGHT. RELOCATION OF UTILITY POLE BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES. NOTE: REFER TO STREET LIGHTING PLANS FOR STREET LIGHT ADJUSTMENTS. RELOCATION OF STREET LIGHT BY CONTRACTOR.
22. CAUTION! EXISTING UNDERGROUND FIBER OPTIC LINE. A REPRESENTATIVE FOR THE FIBER OPTIC LINE MUST BE PRESENT WHILE PERFORMING ANY CONSTRUCTION WORK WITHIN 5 FEET OF THE FIBER OPTIC LINE. CONTRACTOR TO COORDINATE AND CONTACT UTILITY AT LEAST 24 HOURS PRIOR TO EXCAVATION. CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION.
24. RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING TELEPHONE, CABLE TV, OR POWER PEDESTAL. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE ANY RELOCATIONS OR ADJUSTMENTS.
26. CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
27. CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.
87. CONSTRUCT 1" AGGREGATE ACCESS. GRADE ROCK FROM DRIVEWAY TO THE EXISTING GRADE PER THE DETAIL ON SHEET 2E-4.



ADAMS AVENUE

STA. 20+50.00 TO 25+50.00

SCALE: 1"=20'H 1"=5'V

STORM DRAINAGE DATA

CB 15
CG-2 CATCH BASIN
STA: 21+30.17 , 19.00' R (ADAMS)
RIM = 178.12
10" IE OUT: 173.12
6.0 LF 10" PVC STM S = 0.3333

CB 17
CG-2 CATCH BASIN
STA: 24+57.34 , 19.00' R (ADAMS)
RIM = 184.00
10" IE OUT: 179.00
5.8 LF 10" PVC STM S = 0.1542

CB 18
CG-2 CATCH BASIN
STA: 24+57.34 , 19.00' L (ADAMS)
RIM = 184.00
10" IE OUT: 180.00
30.2 LF 10" PVC STM S = 0.0629

STORM MH 13A
48" STORM MANHOLE W/ GRATE LID
STA: 21+30.17 , 19.00' L (ADAMS)
RIM = 178.12
18" IE IN: 166.75
18" IE OUT: 166.75
30.0 LF 18" PVC STM S = 0.0065

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE

90% DESIGN

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

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Sherwood, Oregon 97140
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Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 20+50 TO STA. 25+50
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	7

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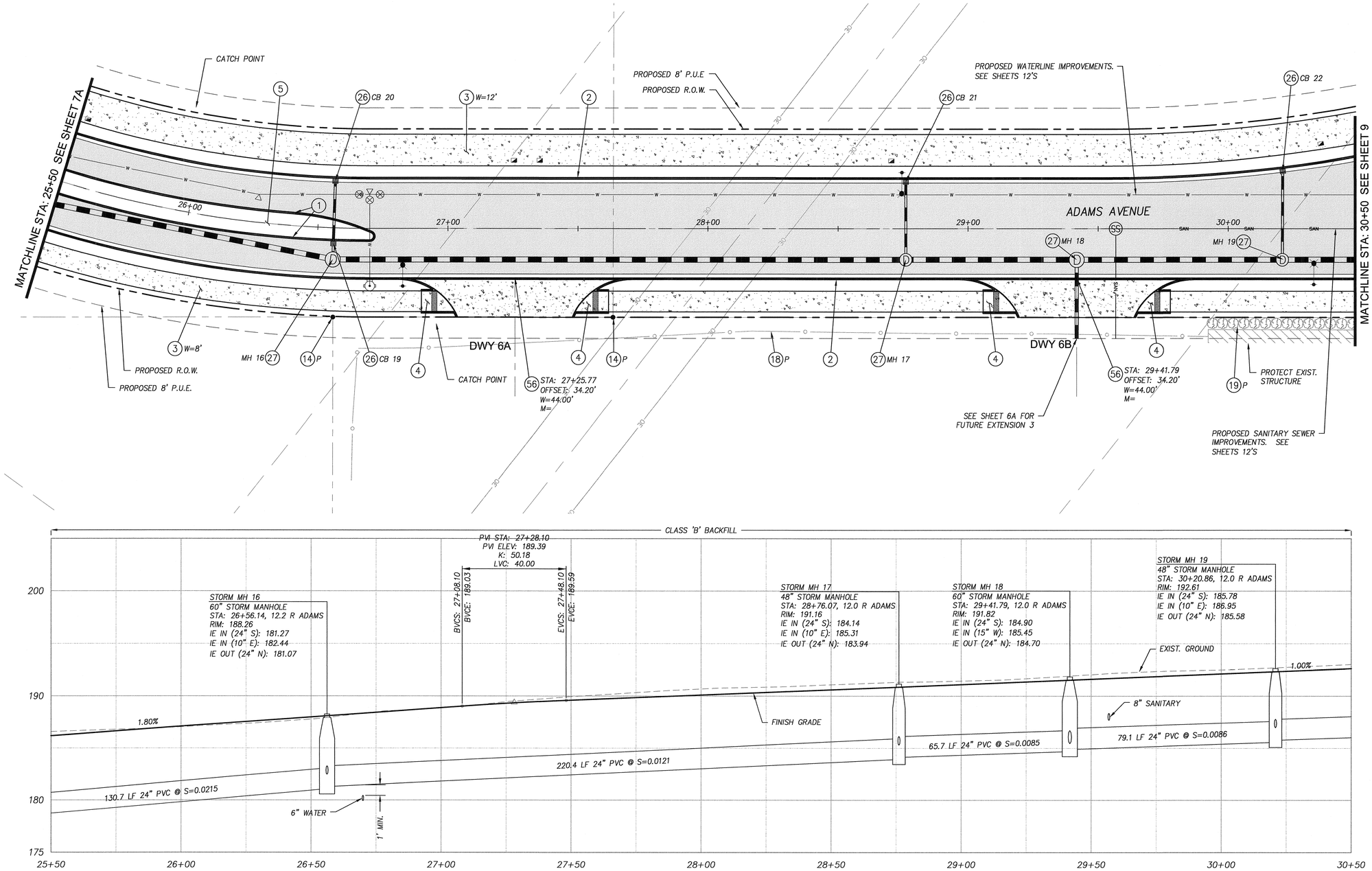

CONSTRUCTION NOTES

1. CONSTRUCT CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B-1.
2. CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.
3. CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.
4. CONSTRUCT SIDEWALK RAMP. SEE DETAIL ON SHEET 2B-2. SEE SPOT GRADES ON SHEET 2E'S.
5. CONSTRUCT LANDSCAPED MEDIAN. SEE LANDSCAPE PLANS.
14. REMOVE (R), ADJUST (A), OR PROTECT (P) EXISTING MONUMENT. COORDINATE WITH ENGINEER PRIOR TO ANY REMOVAL OR ADJUSTMENT.
18. PROTECT (P), REMOVE (R) EXISTING FENCE, OR REMOVE EXISTING FENCE AND BUILD (B) NEW FENCE IN KIND AS REQUIRED AND DIRECTED.
19. REMOVE (R), TRIM (T), OR PROTECT (P) EXISTING TREE OR SHRUB AS INDICATED OR DIRECTED. REMOVAL IS TYPICAL WITHIN THE PROPOSED LIMITS OF GRADING (CATCH POINTS).
26. CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
27. CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.
56. CONSTRUCT HIGH VOLUME COMMERCIAL DRIVEWAY APPROACH AS SHOWN OR DIRECTED. SEE DETAIL ON SHEET 2B-2. DRIVEWAY CENTERLINE STATION SHOWN ON PLAN. SAWCUT AND REMOVE EXIST. SURFACE AS REQUIRED. OFFSET=DISTANCE FROM CENTERLINE TO DRIVEWAY MATCH POINT. W=THROAT WIDTH. M=DRIVEWAY MATERIAL. MINIMUM STRUCTURAL SECTION BEHIND APPROACH: 4" AC PAVEMENT OVER 8" AGGREGATE BASE. SEE SPOT GRADES ON 2E'S.

STORM DRAINAGE DATA

CB 19
CG-2 CATCH BASIN
STA: 26+56.14 , 7.00' R (ADAMS)
RIM = 188.16
10" IE IN: 183.10
10" IE OUT: 183.10
6.2 LF 10" PVC STM S = 0.1057

CB 20
CG-2 CATCH BASIN
STA: 26+56.14 , 19.00' L (ADAMS)
RIM = 187.57
10" IE OUT: 183.57
24.0 LF 10" PVC STM S = 0.0200

CB 21
CG-2 CATCH BASIN
STA: 28+76.07 , 19.00' L (ADAMS)
RIM = 190.34
10" IE OUT: 186.34
30.0 LF 10" PVC STM S = 0.0343

CB 22
CG-2 CATCH BASIN
STA: 30+20.98 , 23.13' L (ADAMS)
RIM = 191.70
10" IE OUT: 188.87
34.1 LF 10" C900 STM S = 0.0562

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE

ADAMS AVENUE

STA. 25+50.00 TO 30+50.00

SCALE: 1"=20'H 1"=5'V

0 10 20 40

SCALE: 1" = 20'

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
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Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/12

ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 25+50 TO STA. 30+50
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	8

APPROVED PLANS
FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
PUBLIC WORKS DEPARTMENT

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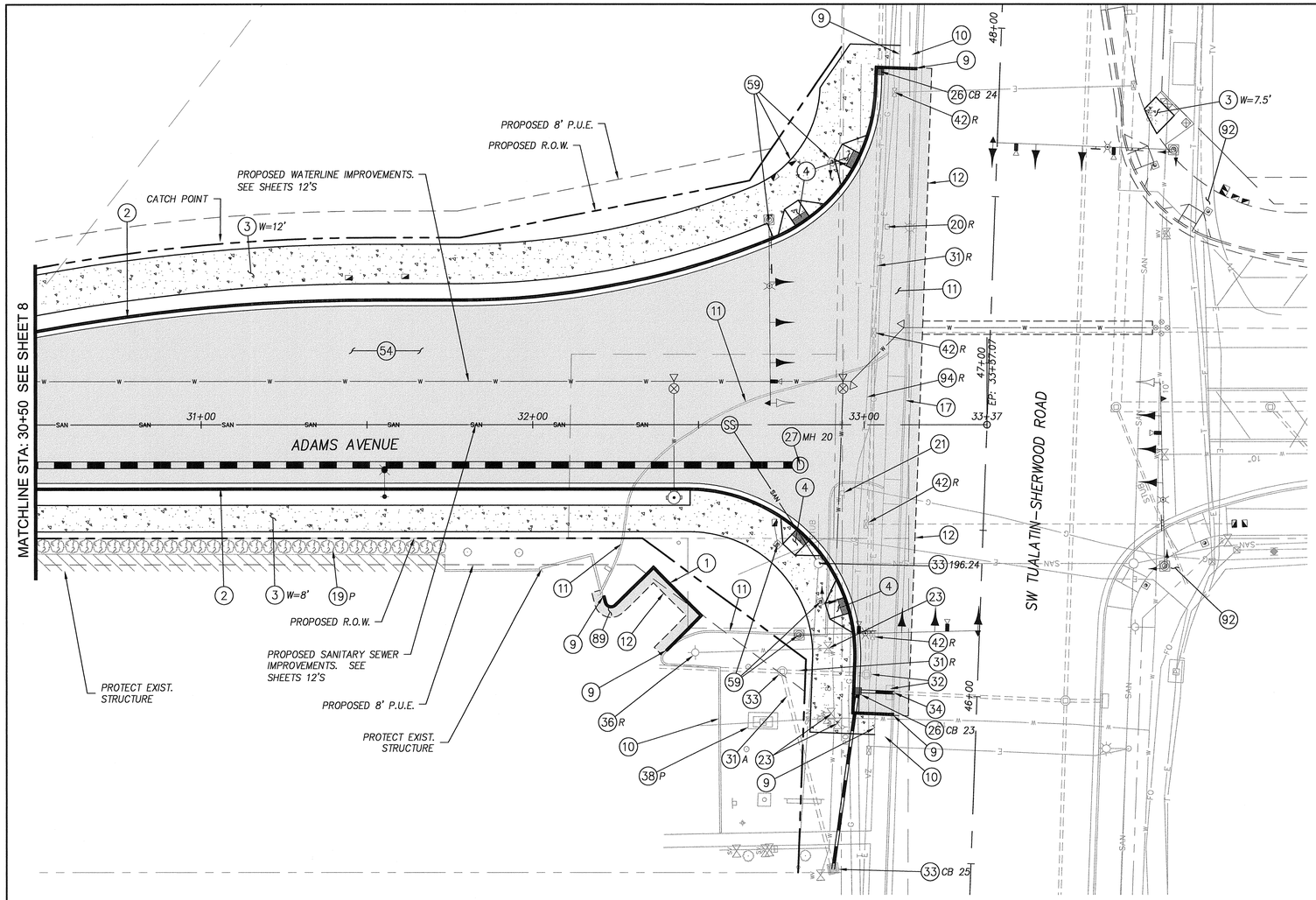
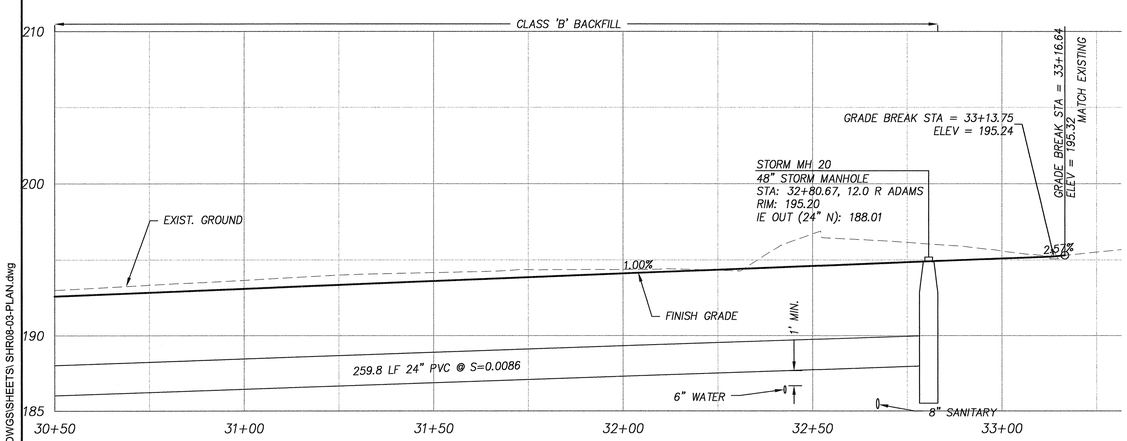




ADAMS AVENUE

STA. 30+50.00 TO 31+90.41

SCALE: 1"=20'H 1"=5'V

0 10 20 40

SCALE: 1" = 20'

CONSTRUCTION NOTES

APPROVED PLANS ISSUED FOR CONSTRUCTION JULY 1, 2013 CITY OF SHERWOOD ENGINEERING DEPARTMENT

1. CONSTRUCT CURB, NON-MOUNTABLE FOR USE ON MEDIANS. SEE DETAIL RD-21 ON SHEET 2B-1.
2. CONSTRUCT CURB AND GUTTER. SEE DETAIL ON SHEET 2B-1.
3. CONSTRUCT TYPICAL SIDEWALK. W=WIDTH. SEE DETAIL ON SHEET 2B-1.
4. CONSTRUCT SIDEWALK RAMP. SEE DETAIL ON SHEET 2B-2. SEE SPOT GRADES ON SHEET 2E'S.
9. MATCH NEW CURB TO EXISTING CURB AND/OR MATCH NEW SIDEWALK TO EXISTING SIDEWALK, AS REQUIRED AND DIRECTED.
10. PROTECT EXISTING CURB AND/OR CONCRETE SIDEWALK.
11. REMOVE EXISTING CONCRETE CURB AND/OR SIDEWALK. SAWCUT NEAT LINE AT LIMIT OF REMOVAL.
12. SAWCUT EXISTING ASPHALT OR CONCRETE AND REMOVE AS REQUIRED AND DIRECTED.
17. REMOVE EXISTING DRIVEWAY. SAWCUT AND REMOVE ASPHALT/CONCRETE AS SHOWN ON THE PLANS.
19. REMOVE (R), TRIM (T), OR PROTECT (P) EXISTING TREE OR SHRUB AS INDICATED OR DIRECTED. REMOVAL IS TYPICAL WITHIN THE PROPOSED LIMITS OF GRADING (CATCH POINTS).
20. REMOVE OR RELOCATE (R), OR PROTECT (P) EXISTING UTILITY POLE OR STREET LIGHT. RELOCATION OF UTILITY POLE BY UTILITY. CONTRACTOR TO COORDINATE POLE AND WIRE RELOCATIONS WITH APPROPRIATE UTILITIES. NOTE: REFER TO STREET LIGHTING PLANS FOR STREET LIGHT ADJUSTMENTS. RELOCATION OF STREET LIGHT BY CONTRACTOR.
21. EXISTING SIGN TO BE RELOCATED. SEE 13'S FOR ADDITIONAL INFORMATION.
23. ADJUST RIM, COVER, OR FRAME TO FINISH GRADE. TYPICAL FOR ALL ITEMS LOCATED WITHIN NEW AC OR CONC. AREAS.
26. CONSTRUCT CG-2 CATCH BASIN AND LATERALS. SEE DETAILS ON SHEET 2B-5. SEE PLAN FOR INVERTS AND DATA.
27. CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.
31. PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING STORM PIPE IN-PLACE AS REQUIRED AND DIRECTED. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.
32. REMOVE EXISTING CATCH BASIN OR MANHOLE. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.
33. PROTECT EXISTING CATCH BASIN OR MANHOLE. ADJUST RIM AS REQUIRED AND DIRECTED. NEW RIM ELEVATION IS NOTED FOR ANY REQUIRED RIM ADJUSTMENT.
34. CONNECT TO EXISTING PIPE OR MANHOLE. SEE DETAIL ON SHEET 2B-5.
36. RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING FIRE HYDRANT AS SHOWN. RELOCATIONS AND ADJUSTMENTS BY OTHERS. CONTRACTOR TO COORDINATE.
38. RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING UTILITY VAULT. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE ANY RELOCATIONS OR ADJUSTMENTS.
42. REMOVE (R), ADJUST (A), OR PROTECT (P) EXISTING TRAFFIC CONTROL SIGNAL DEVICES. PRIOR TO CONSTRUCTION, COORDINATE REMOVAL OR ADJUSTMENT WITH ENGINEER, INSPECTOR, AND APPROPRIATE UTILITY. REFER TO TRAFFIC SIGNAL PLANS FOR SIGNAL IMPROVEMENTS.
54. CONSTRUCT FULL DEPTH PAVEMENT SECTION. SEE SECTION ON SHEET 2.
59. INSTALL TRAFFIC SIGNAL. SEE SHEETS 15'S FOR DETAILS.
89. INSTALL 4" AC PAVEMENT OVER 8" AGGREGATE BASE.
92. REPAIR SIDEWALK AS NECESSARY FOR INSTALLATION OF SIGNAL EQUIPMENT PER TYPICAL SIDEWALK DETAIL ON SHEET 2B-1.
94. RELOCATE (R), ADJUST (A), OR PROTECT (P) EXISTING TELEPHONE, CABLE TV, OR POWER. RELOCATION OR ADJUSTMENT BY UTILITY. CONTRACTOR TO COORDINATE ANY RELOCATIONS OR ADJUSTMENTS.

STORM DRAINAGE DATA

NOTE: CATCH BASIN STATION, OFFSET AND RIM ARE TO THE CENTER OF THE STRUCTURE AT THE CURB GUTTER LINE

CB 23
CG-2 CATCH BASIN
STA: 46+00.27 , 36.99' L (TUALATIN-SHERWOOD)
RIM = 196.22
10" IE IN: 192.63
10" IE OUT: 192.63
10.9 LF 10" C900 STM S = 0.0065

CB 24
CG-2 CATCH BASIN
STA: 47+85.85 , 37.04' L (TUALATIN-SHERWOOD)
RIM = 193.10
12" IE OUT: 188.15 EX

CB 25
EXISTING CATCH BASIN
STA: 45+46.77 , 42.50' L (TUALATIN-SHERWOOD)
RIM = 197.08 EX
10" IE OUT: 193.33
53.8 LF 10" C900 STM S = 0.0130

90% DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

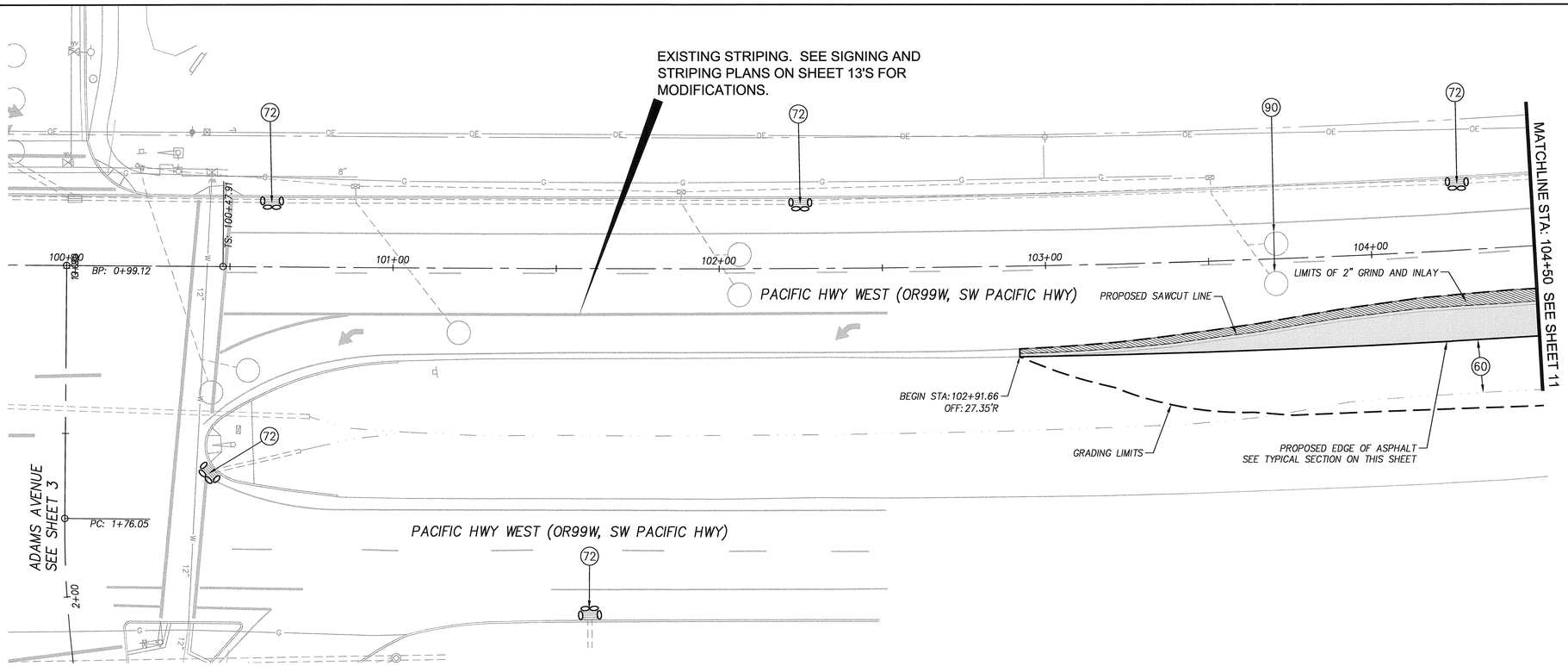
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 30+50 TO STA. 33+16.24
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	9

P:\SHR-08\SHR09-DWGS\SHEETS\ SHR08-03-PLAN.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



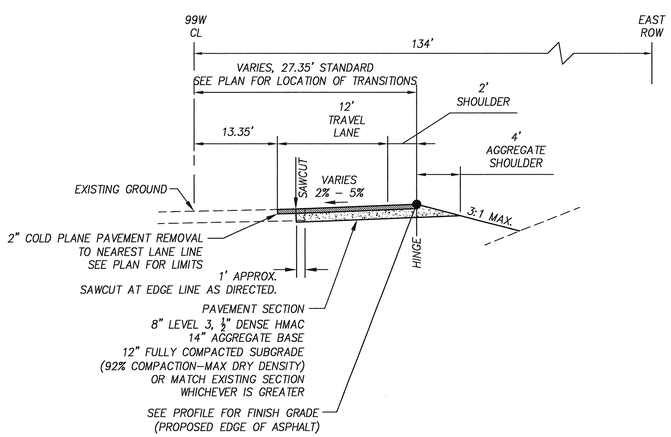
CONSTRUCTION NOTES

(60) GRADE FROM PROPOSED EDGE OF ASPHALT TO EXISTING FLOW LINE. GRADE TO PROVIDE POSITIVE DRAINAGE.

(72) INSTALL INLET PROTECTION. SEE ODOT STANDARD DRAWINGS RD1010 AND RD1015.

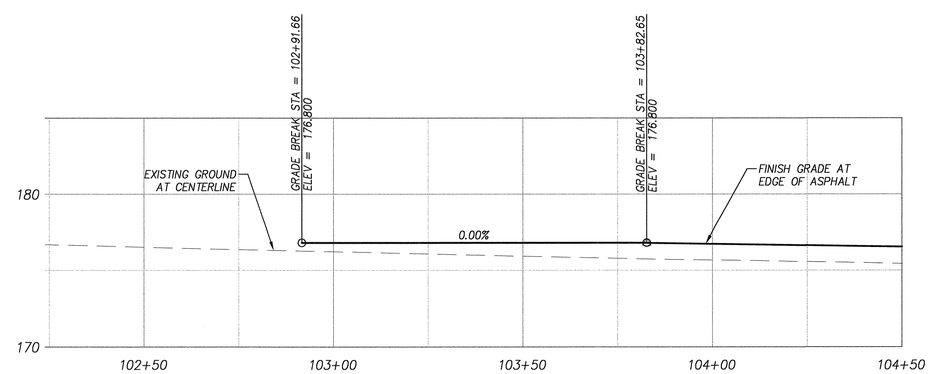
(90) PROTECT EXISTING TRAFFICL LOOP DETECTOR

INSTALL TRAFFIC DELINEATORS PER STD. DRG. TM570, TM571 AND TM576



OR 99W – STANDARD SECTION

STA: 102+91.66 TO STA: 107+68.11



OR 99W CL

STA. 100+00.00 TO 104+50.00

SCALE: 1"=20'H 1"=5'V

FINAL DESIGN

0 10 20 40

SCALE: 1" = 20'

City of Sherwood Oregon
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Sherwood, Oregon 97140
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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JULY 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

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LANDSCAPE ARCHITECTS • SURVEYORS
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ROADWAY PLANS & DETAILS

DESIGNED BY: BRA/HHPR TEAM

DRAFTED BY: HHPR TEAM

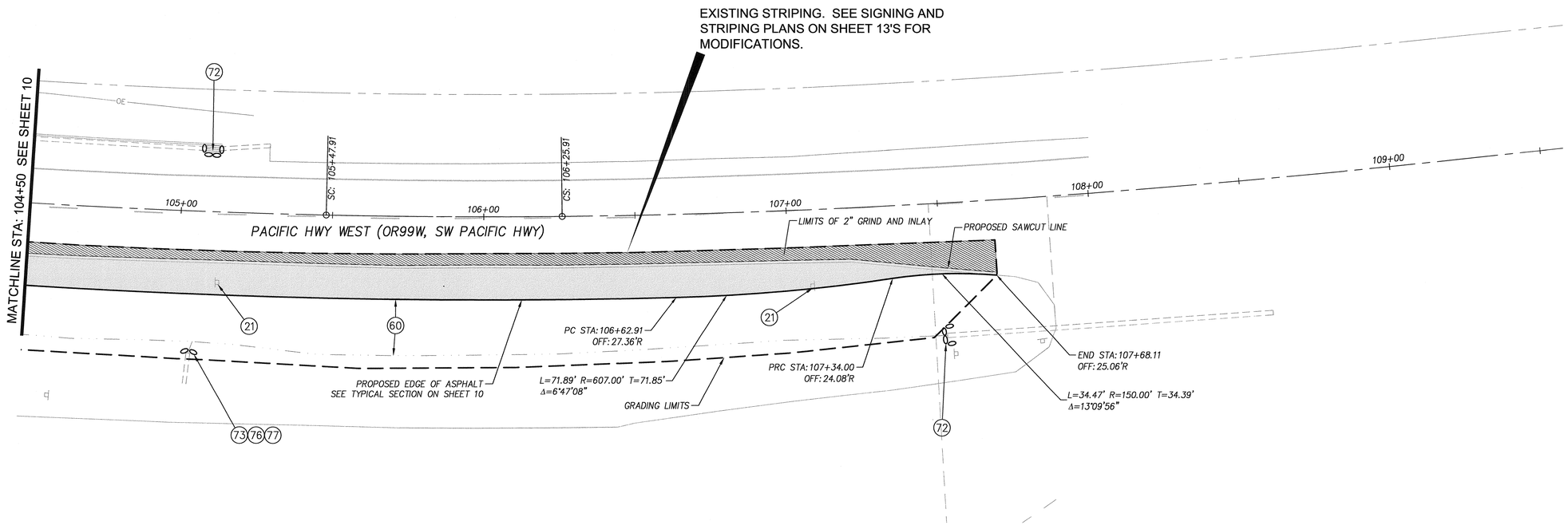
DATE: MAY 2012

ADAMS AVENUE NORTH
STA. 100+00 TO STA. 104+50
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	10

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-10-PLAN-OR99W.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

(21) EXISTING SIGN TO BE RELOCATED. SEE 13'S FOR ADDITIONAL INFORMATION.

(60) GRADE FROM PROPOSED EDGE OF ASPHALT TO EXISTING FLOW LINE. GRADE TO PROVIDE POSITIVE DRAINAGE.

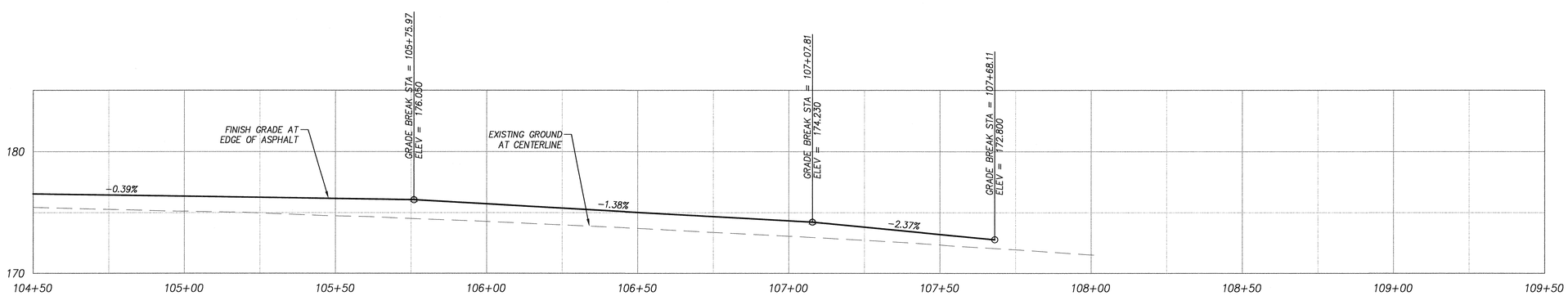
(72) INSTALL INLET PROTECTION. SEE ODOT STANDARD DRAWINGS RD1010 AND RD1015.

(73) INSTALL TYPE 2 SEDIMENT BARRIER. SEE ODOT STANDARD DRAWING RD1030.

(76) INSTALL 3'X4'X12" THICK CLASS 50 RIP-RAP OUTFALL.

(77) CUT EXISTING PIPE END TO FLOW LINE OF DITCH.

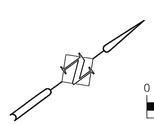
INSTALL TRAFFIC DELINEATORS PER STD. DRG. TM570, TM571 AND TM 576



OR 99W

STA. 104+50.00 TO 108+00.00
SCALE: 1"=20'H 1"=5'V

FINAL DESIGN



0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
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Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

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ROADWAY PLANS & DETAILS

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

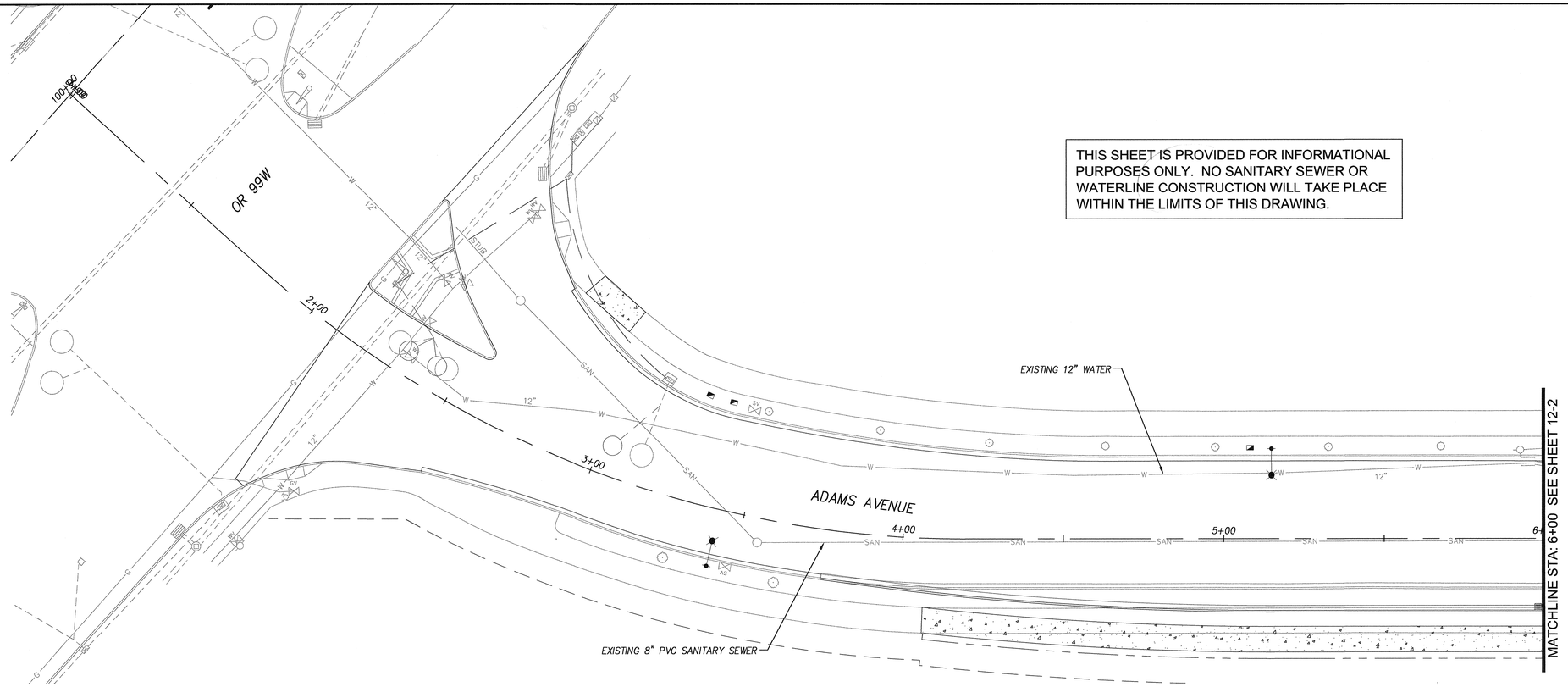
ADAMS AVENUE NORTH
STA. 104+50 TO STA. 108+00
SHERWOOD, OREGON

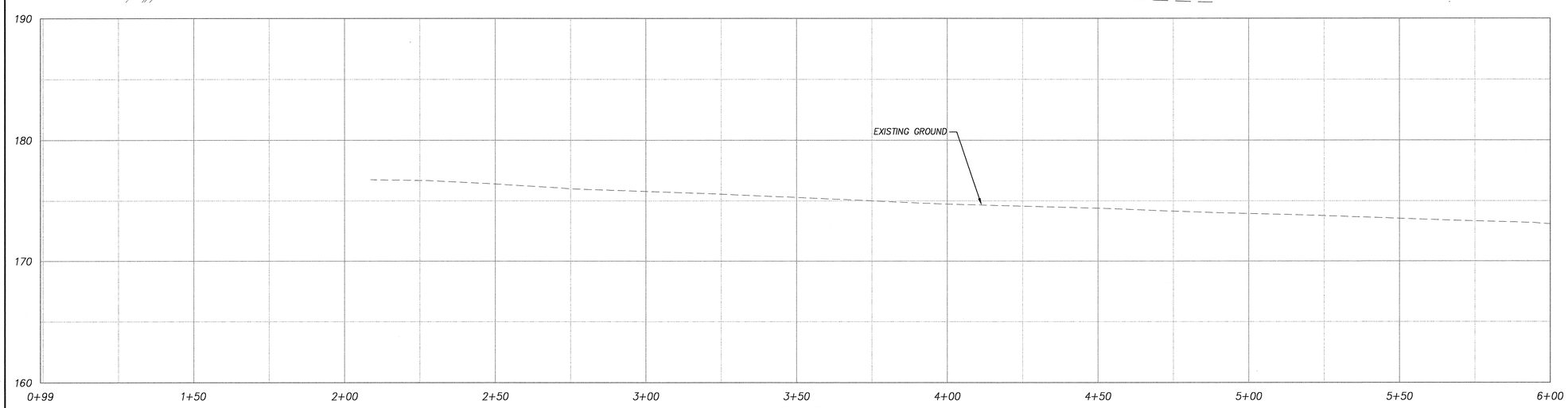
FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	11

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-10-PLAN-OR99W.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

THIS SHEET IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO SANITARY SEWER OR WATERLINE CONSTRUCTION WILL TAKE PLACE WITHIN THE LIMITS OF THIS DRAWING.





ADAMS AVENUE
STA. 0+99.12 TO 6+00.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

FINAL DESIGN

SCALE: 1" = 20'

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EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
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DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-1

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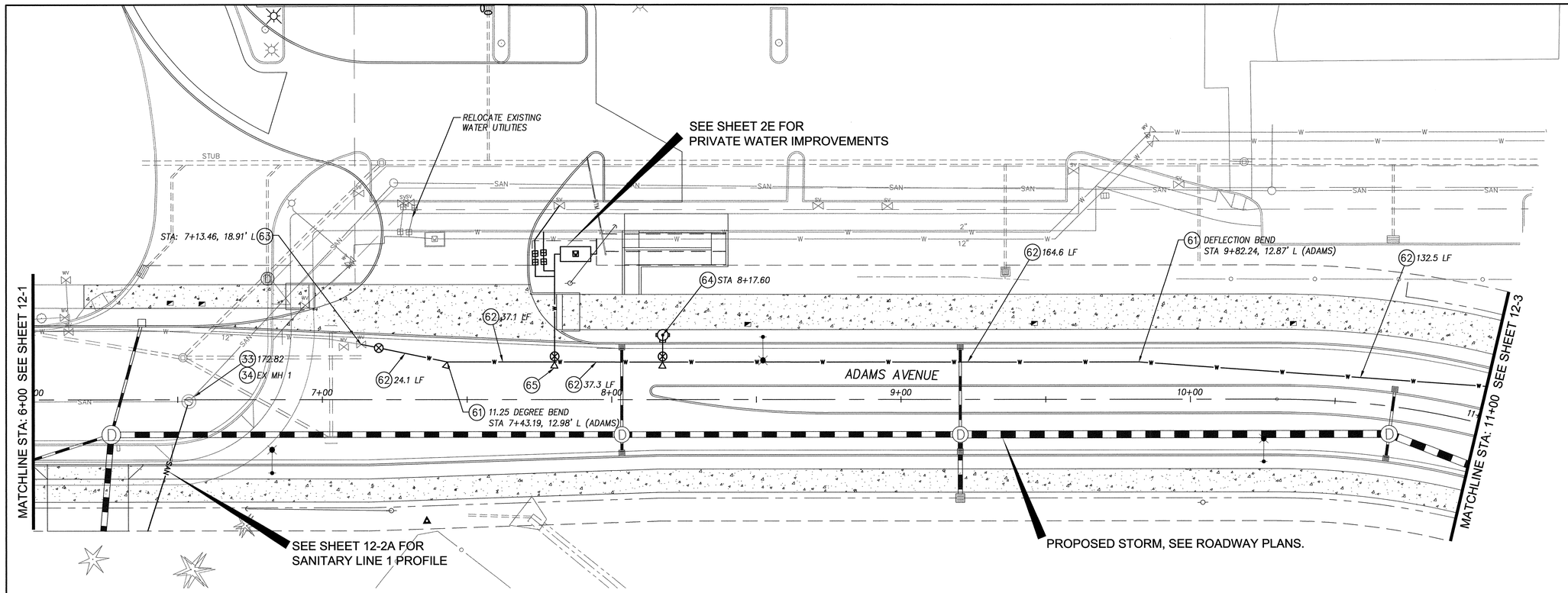
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

(33) PROTECT EXISTING CATCH BASIN OR MANHOLE. ADJUST RIM AS REQUIRED AND DIRECTED. NEW RIM ELEVATION IS NOTED FOR ANY REQUIRED RIM ADJUSTMENT.

(34) CONNECT TO EXISTING PIPE OR MANHOLE. SEE DETAIL ON SHEET 2B-5.

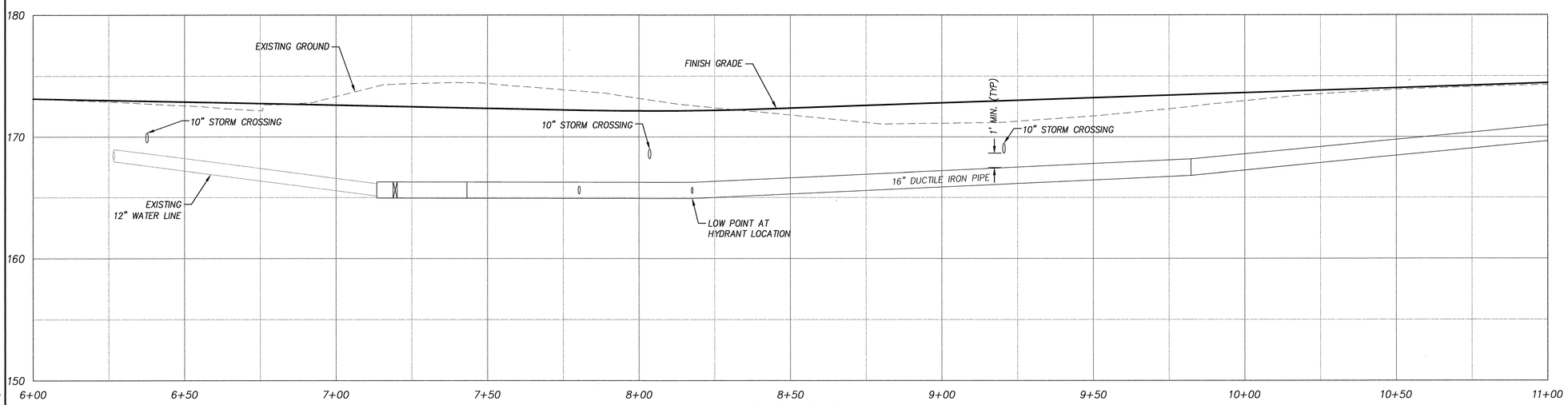
(61) DEFLECT WATERLINE AS REQUIRED. DO NOT EXCEED MANUFACTURER'S MAXIMUM DEFLECTION. INSTALL BENDS AND THRUST BLOCKS AS NECESSARY.

(62) INSTALL 16" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED ON PLANS.

(63) REMOVE EXISTING BLOW OFF ASSEMBLY, CONNECT W/ 12"X16" MJ REDUCER. *LAY WITHIN 1 PIPE LENGTH – CONNECT AFTER TESTING IS COMPLETE. RESTRAIN JOINTS

(64) INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL ON SHEET 2B-8.

(65) INSTALL 16"X12" MJ X FLG TEE W/ 12" FLG X MJ BUTTERFLY VALVE.



ADAMS AVENUE
STA. 6+00.00 TO 11+00.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

FINAL DESIGN

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
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Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2008 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-2

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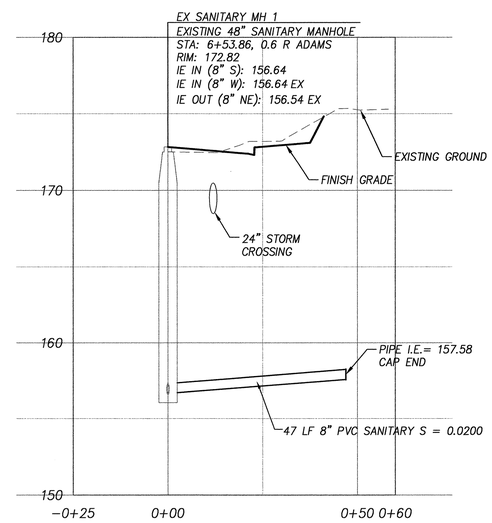
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



SANITARY LINE 1
STA. 0+00.00 TO 0+45.87
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

P:\SHR-08\SHR08-DWGS\SHEETS\SHR08-12-WAT-SAN.dwg

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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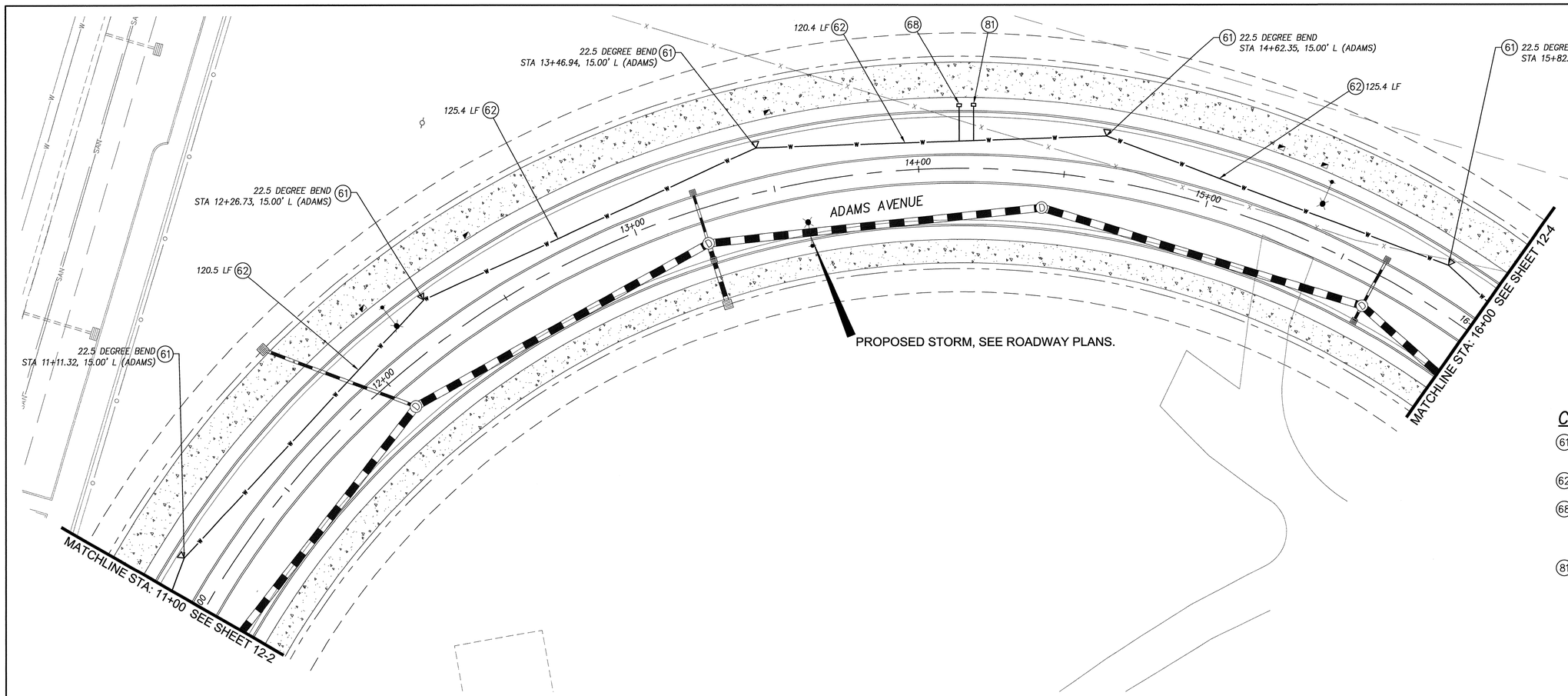
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-2A

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



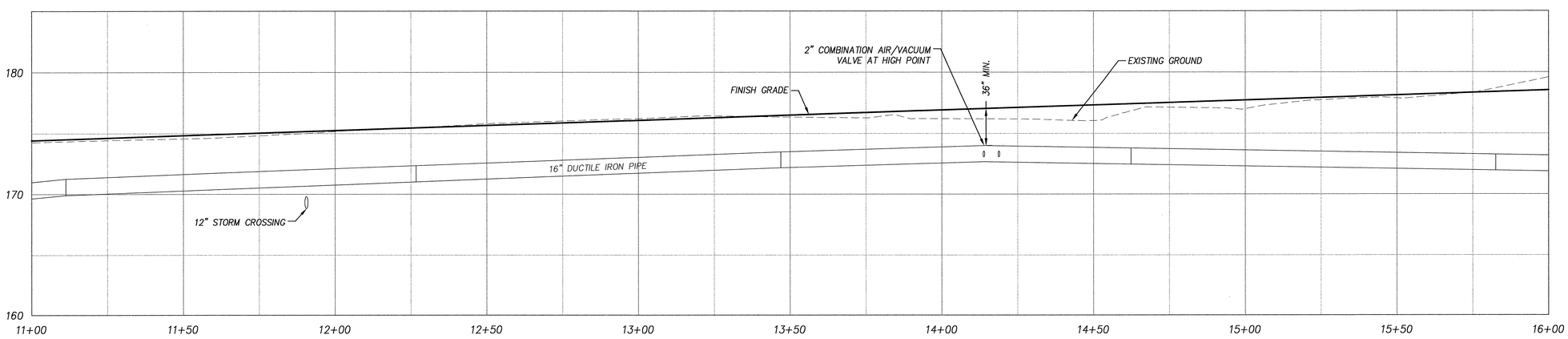
CONSTRUCTION NOTES

(61) DEFLECT WATERLINE AS REQUIRED. DO NOT EXCEED MANUFACTURER'S MAXIMUM DEFLECTION. INSTALL BENDS AND THRUST BLOCKS AS NECESSARY.

(62) INSTALL 16" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED ON PLANS.

(68) INSTALL 2" COMBINATION AIR/VACUUM VALVE AT HIGH POINT PER DETAIL ON SHEET 2B-9. 1-16"X2" MJXIPT TEE. AIR RELEASE TO BE LOCATED AT HIGH POINT; FIELD VERIFY LOCATION. VENT TO BE LOCATED IN LANDSCAPE AREA.

(81) INSTALL SAMPLE STATION. SEE DETAIL ON 2B-8.



ADAMS AVENUE
STA. 11+00.00 TO 16+00.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

0 10 20 40
SCALE: 1" = 20'

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

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Sherwood, Oregon 97140
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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
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ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
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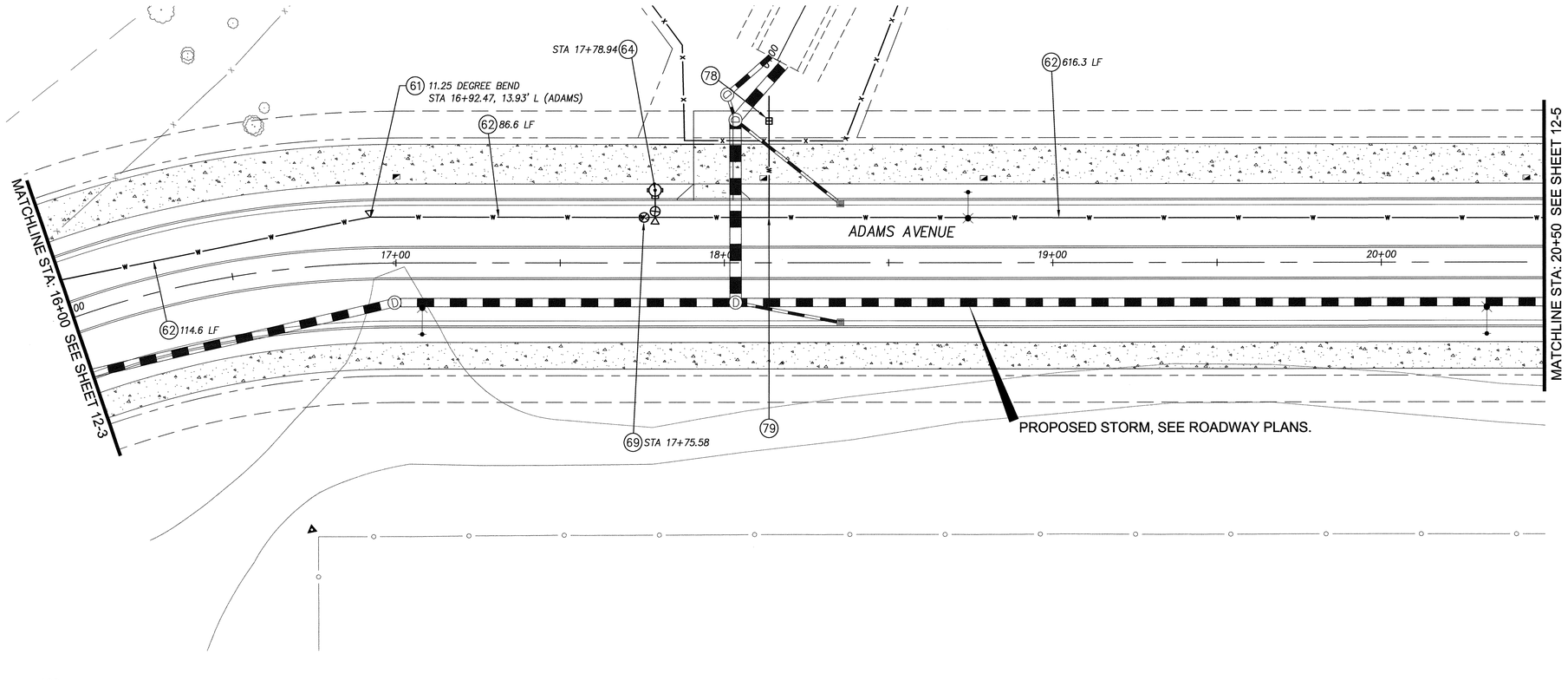
DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-3

P:\SHR-08\SHR08-DWGS\SHEETS\SHR08-12-WAT-SAN.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

(61) DEFLECT WATERLINE AS REQUIRED. DO NOT EXCEED MANUFACTURER'S MAXIMUM DEFLECTION. INSTALL BENDS AND THRUST BLOCKS AS NECESSARY.

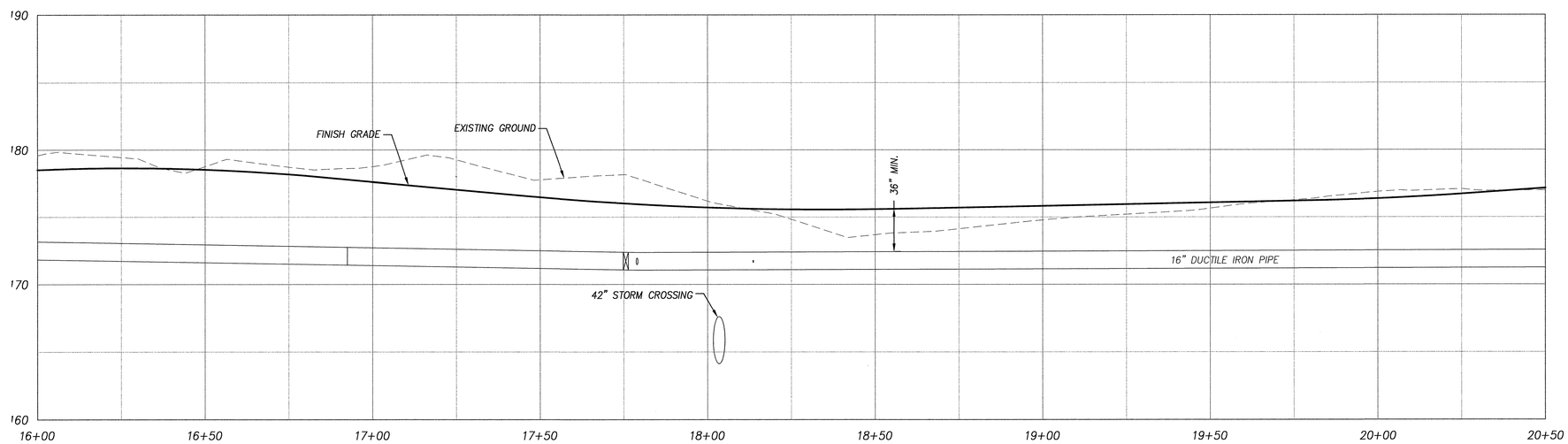
(62) INSTALL 16" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED ON PLANS.

(64) INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL ON SHEET 2B-8.

(69) INSTALL 16" BUTTERFLY VALVE ASSEMBLY. SEE DETAIL ON SHEET 2B-7.

(78) IRRIGATION WATER SERVICE. INSTALL 16" MJ X 2" IPT TEE WITH 2" IPT AND CC CORP STOP. MARK LOCATION FOR CITY OF SHERWOOD TO INSTALL METER SERVICE. SEE 17'S FOR POINT OF CONNECTION AND IRRIGATION BACKFLOW.

(79) INSTALL 16"X2" MJ X TAPPED TEE



ADAMS AVENUE
STA. 16+00.00 TO 20+50.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

FINAL DESIGN

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
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REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JULY 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-4

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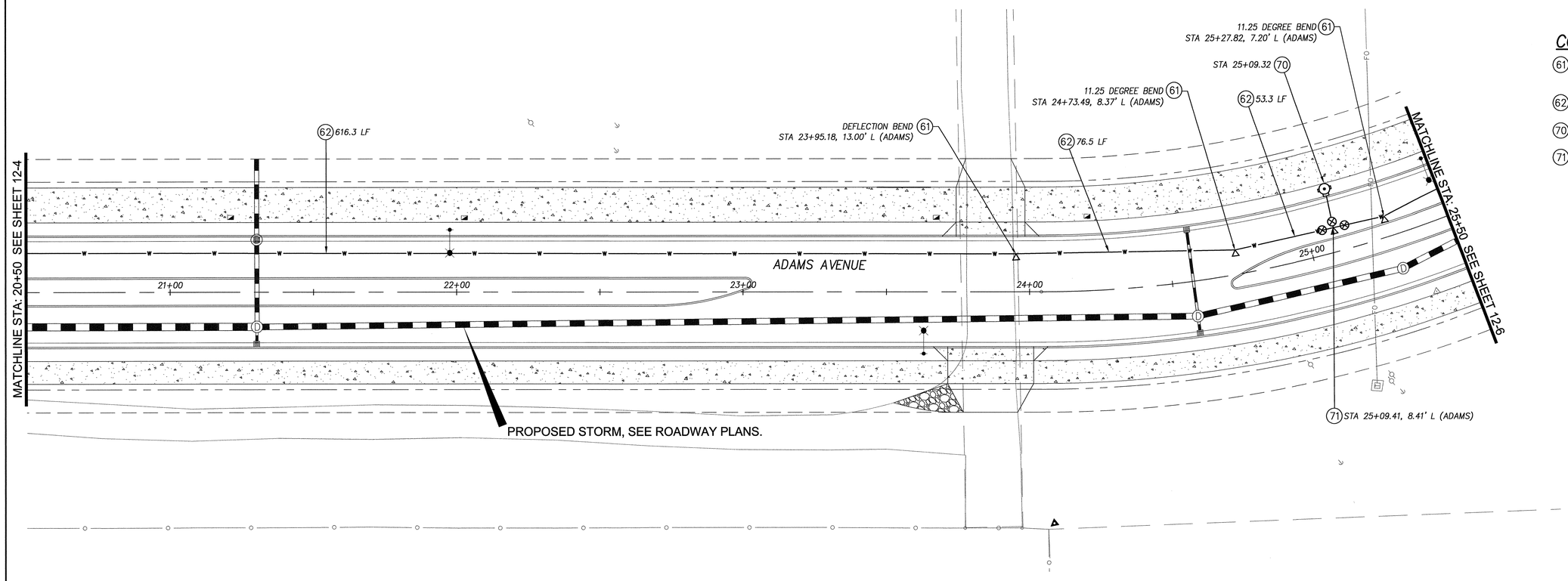
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2012
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



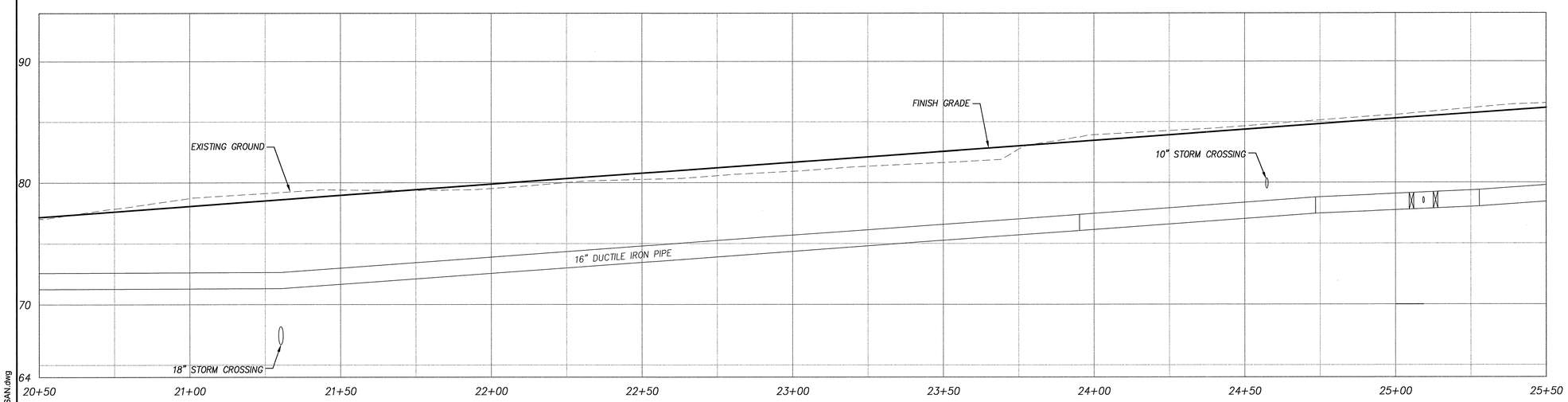
CONSTRUCTION NOTES

(61) DEFLECT WATERLINE AS REQUIRED. DO NOT EXCEED MANUFACTURER'S MAXIMUM DEFLECTION. INSTALL BENDS AND THRUST BLOCKS AS NECESSARY.

(62) INSTALL 16" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED ON PLANS.

(70) INSTALL FIRE HYDRANT ON FUTURE MAIN EXTENSION PER DETAIL ON SHEET 2B-11.

(71) INSTALL 16"X8" MJ X FLG TEE, 2-16" MJ BUTTERFLY VALVES, 1-8" FLG X MJ GATE VALVE, AND THRUST BLOCK. SEE DETAIL ON SHEET 2B-7.



ADAMS AVENUE
STA. 20+50.00 TO 25+50.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

FINAL DESIGN

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
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ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
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DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-5

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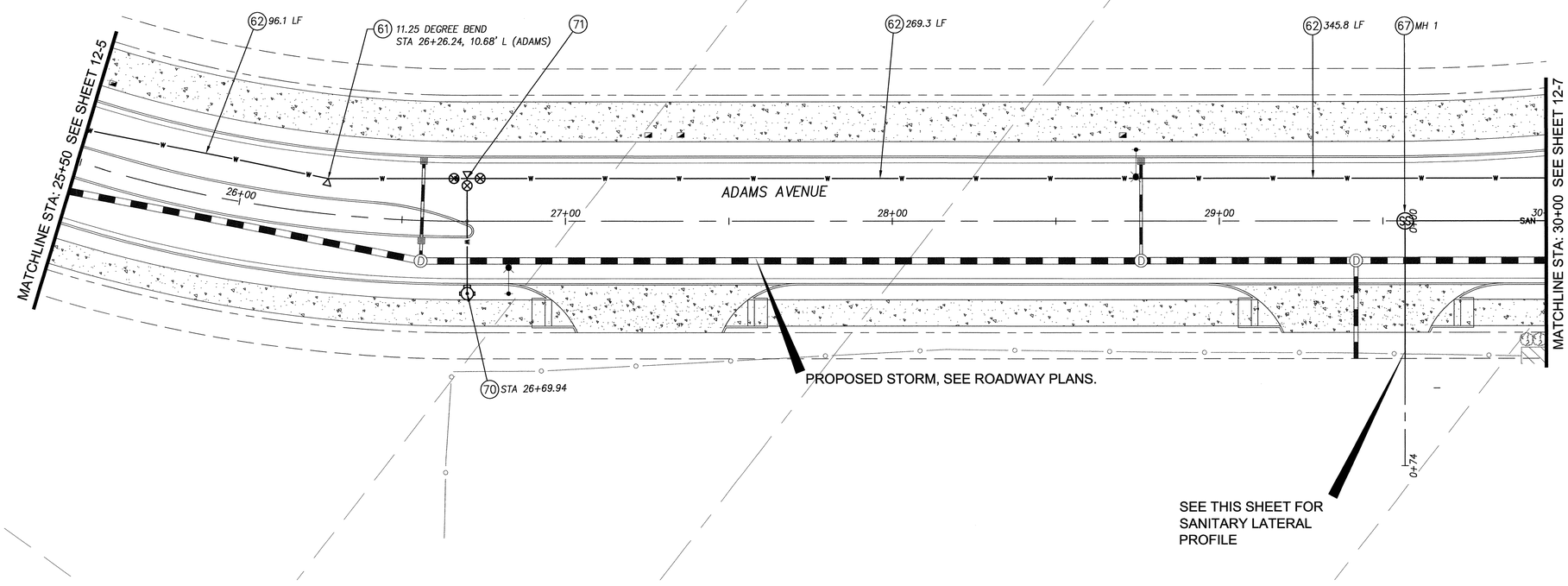
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

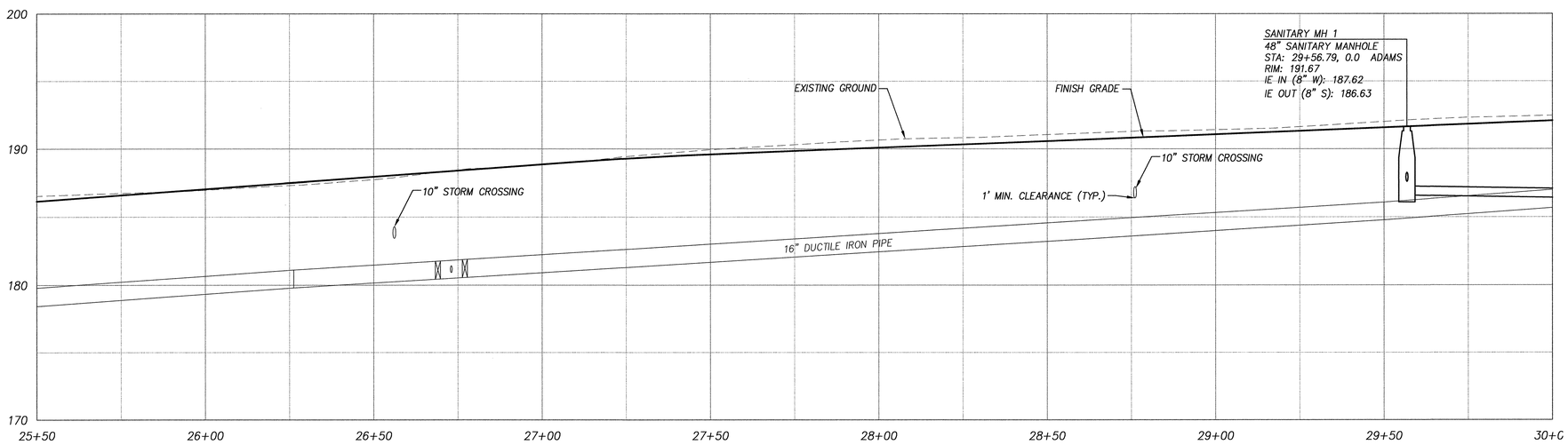
(61) DEFLECT WATERLINE AS REQUIRED. DO NOT EXCEED MANUFACTURER'S MAXIMUM DEFLECTION. INSTALL BENDS AND THRUST BLOCKS AS NECESSARY.

(62) INSTALL 16" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED ON PLANS.

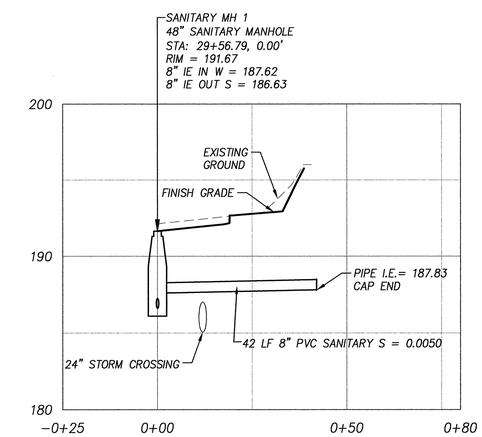
(67) CONSTRUCT STORM SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.

(70) INSTALL FIRE HYDRANT ON FUTURE MAIN EXTENSION PER DETAIL ON SHEET 2B-11.

(71) INSTALL 16"X8" MJ X FLG TEE, 2-16" MJ BUTTERFLY VALVES, 1-8" FLG X MJ GATE VALVE, AND THRUST BLOCK. SEE DETAIL ON SHEET 2B-7.



ADAMS AVENUE
STA. 25+50.00 TO 30+00.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)



SANITARY LATERAL
STA. 0+00.00 TO 0+42.00
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

FINAL DESIGN

0 10 20 40
SCALE: 1" = 20'

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

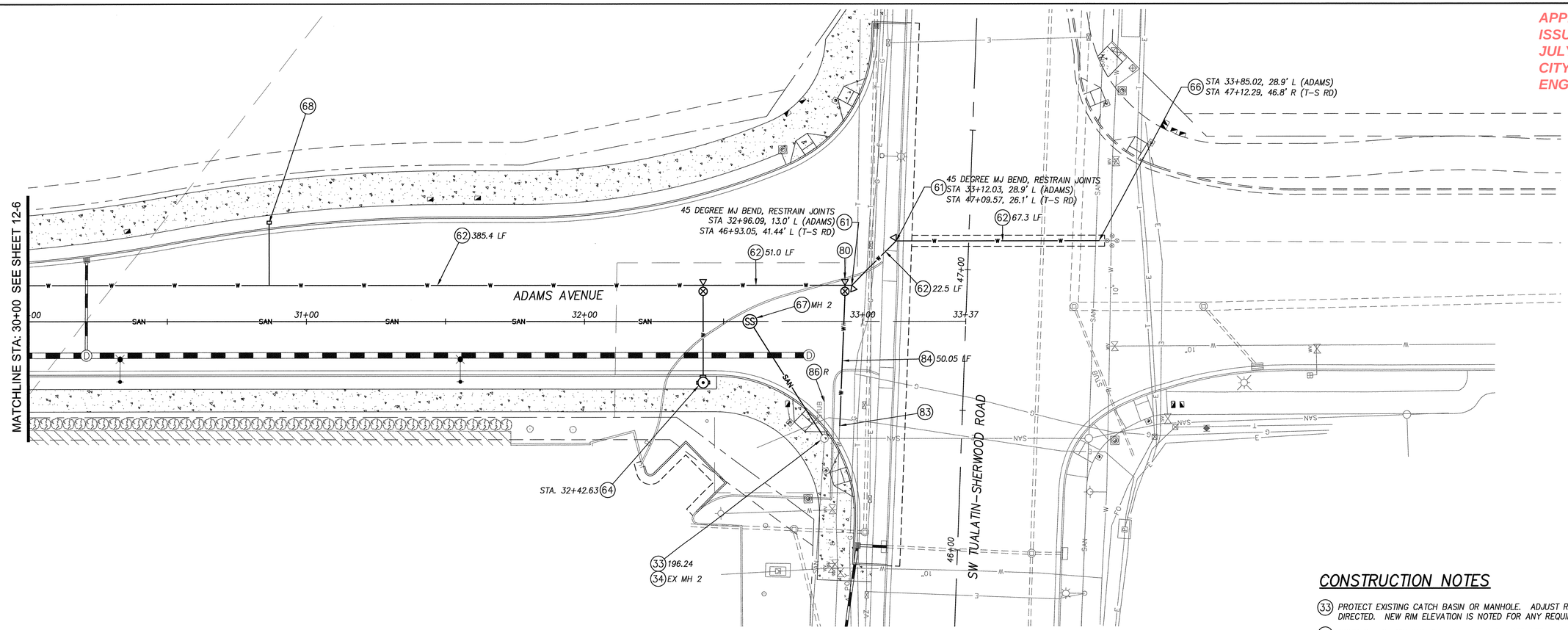
DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

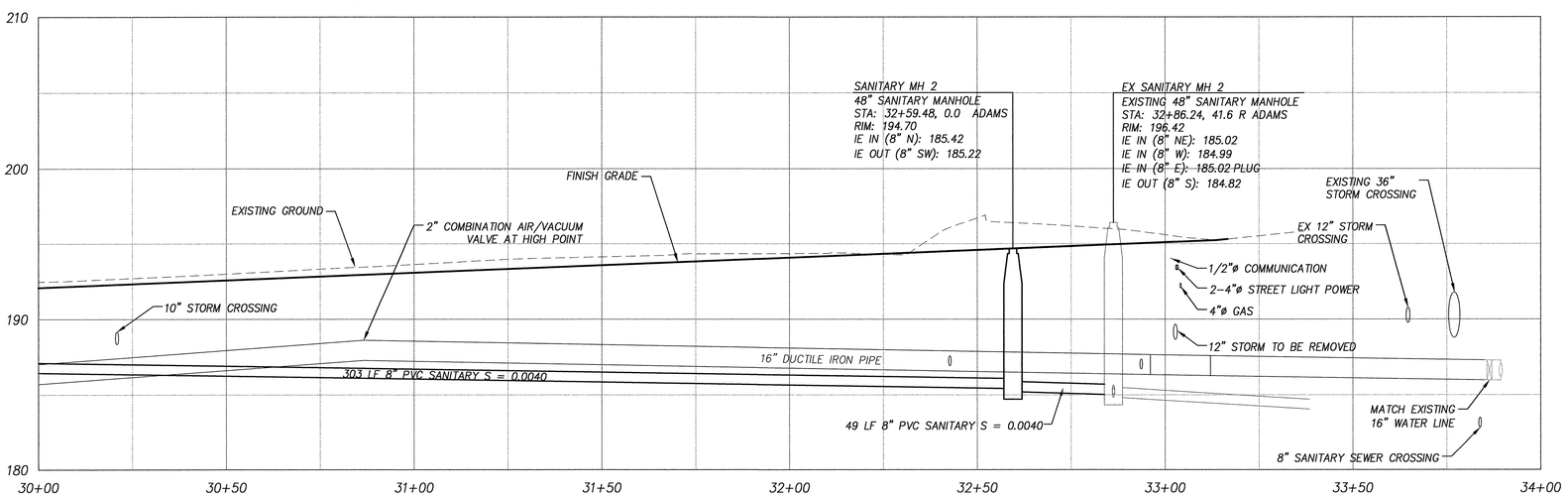
ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-6

P:\SHR-08\SHR08-DWGS\SHEETS\ SHR08-12-WAT-SAN.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT





ADAMS AVENUE
STA. 30+50.00 TO 33+38.48
SCALE: 1" = 20' (HORIZ.)
1" = 5' (VERT.)

0 10 20 40
SCALE: 1" = 20'

CONSTRUCTION NOTES

33 PROTECT EXISTING CATCH BASIN OR MANHOLE. ADJUST RIM AS REQUIRED AND DIRECTED. NEW RIM ELEVATION IS NOTED FOR ANY REQUIRED RIM ADJUSTMENT.

34 CONNECT TO EXISTING PIPE OR MANHOLE. SEE DETAIL ON SHEET 2B-5.

61 DEFLECT WATERLINE AS REQUIRED. DO NOT EXCEED MANUFACTURER'S MAXIMUM DEFLECTION. INSTALL BENDS AND THRUST BLOCKS AS NECESSARY.

62 INSTALL 16" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED ON PLANS.

64 INSTALL FIRE HYDRANT ASSEMBLY PER DETAIL ON SHEET 2B-8.

66 REMOVE EXISTING TEMPORARY BLOW OFF ASSEMBLY AND CONNECT TO EXISTING 16" WATER LINE. CONTACT CITY OF SHERWOOD FOR VALVE CLOSURE.

67 CONSTRUCT SANITARY SEWER MANHOLE. SEE DETAILS ON SHEET 2B-3. SEE PROFILE FOR INVERTS AND DATA.

68 INSTALL 2" COMBINATION AIR/VACUUM VALVE AT HIGH POINT PER DETAIL ON SHEET 2B-9. 1-16"X2" MJXIPT TEE. AIR RELEASE TO BE LOCATED AT HIGH POINT; FIELD VERIFY LOCATION. VENT TO BE LOCATED IN LANDSCAPE AREA.

80 INSTALL 16" X 8" TEE, 1-8" MJ GATE VALVE, THURST BLOCK. SEE DEATIL ON 2B-7.

83 REMOVE EXISTING TEMPORARY BLOW OFF ASSEMBLY AND CONNECT TO EXISTING 8" WATER LINE AFTER TEST IS COMPLETE.

84 INSTALL 8" CLASS 52 DUCTILE IRON WATER LINE. LENGTH AS NOTED IN PLANS.

86 PROTECT (P), REMOVE (R), OR PLUG AND ABANDON (A) EXISTING SANITARY PIPE IN-PLACE AS REQUIRED AND DIRECTED. FILL ANY VOID WITH 3/4"-0 AGGREGATE COMPACTED IN 12" LIFTS, MAX.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
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EXPIRES: 12/31/

ROADWAY PLANS & DETAILS

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DESIGNED BY: BRA/HHPR TEAM
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DATE: MAY 2012

ADAMS AVENUE NORTH
SANITARY AND WATER
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	12-7

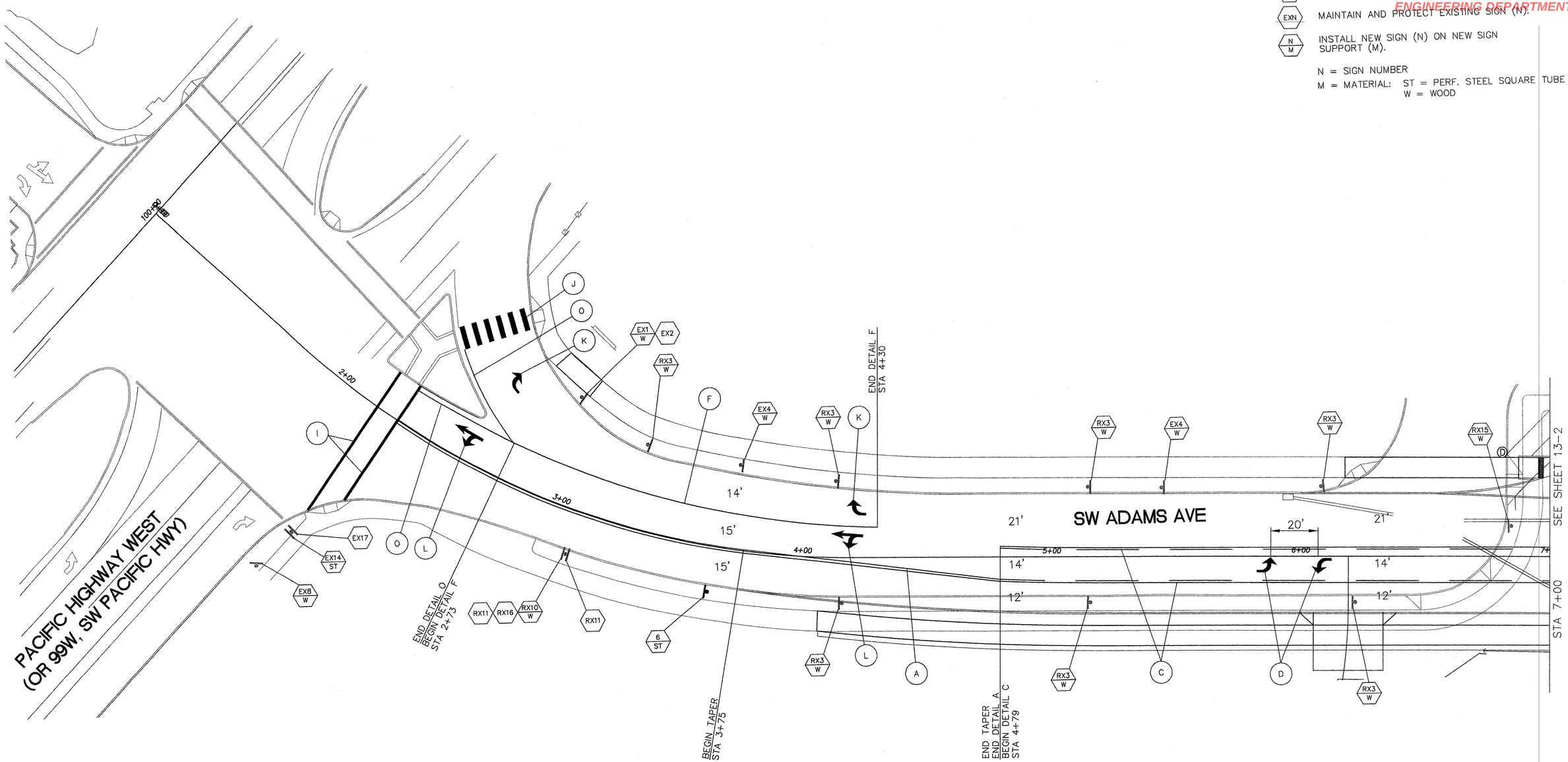
P:\SHR-08\SHR08-DWGS\SHEETS\SHR08-12-WAT-SAN.dwg

LEGEND

- (X) STRIPING DETAIL, SEE SHEET 13-8.
- (EXN / M) MAINTAIN AND PROTECT EXISTING SIGN (N) AND SIGN SUPPORT (M).
- (EXN) MAINTAIN AND PROTECT EXISTING SIGN (N).
- (N / M) INSTALL NEW SIGN (N) ON NEW SIGN SUPPORT (M).

N = SIGN NUMBER
M = MATERIAL: ST = PERF. STEEL SQUARE TUBE
W = WOOD

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2012
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



N

40 20 0 40

FINAL DESIGN

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Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 90,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

ROADWAY PLANS & DETAILS

DESIGNED BY:	NNS
DRAFTED BY:	DKS CAD
DATE:	MAY 2012

ADAMS AVENUE NORTH
SIGNING/STRIPING PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-1

X:\Projects\2006\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-13-1.dwg

LEGEND

(X) STRIPING DETAIL, SEE SHEET 13-8.

(N/M) INSTALL NEW SIGN (N) ON NEW SIGN SUPPORT (M).

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APPROVED PLANS
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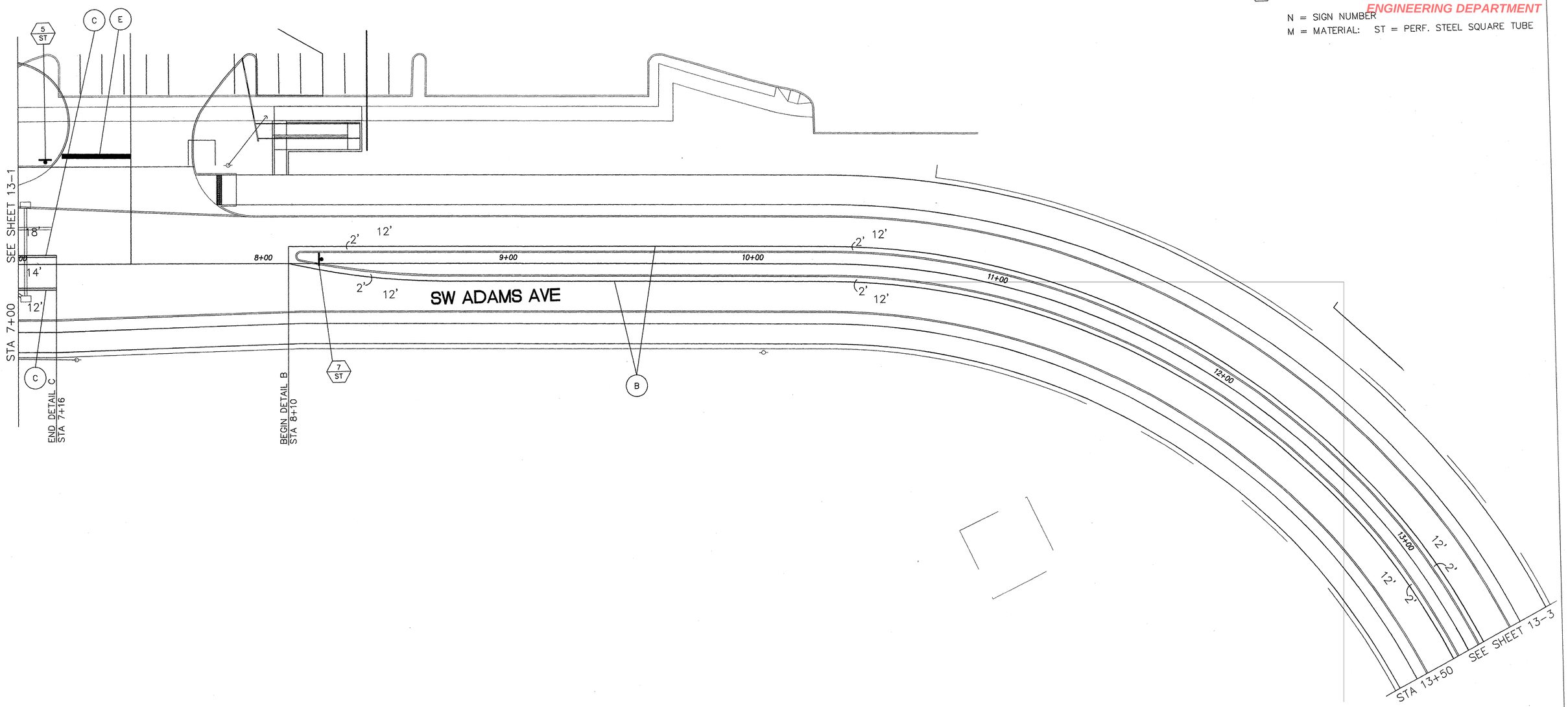
JULY 11, 2012
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



N

40 20 0 40

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DESIGNED BY:	DRAFTED BY:	DATE:
NNS	DKS CAD	MAY 2012

ADAMS AVENUE NORTH
SIGNING/STRIPING PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-2

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-13-2.dwg

APPROVED PLANS
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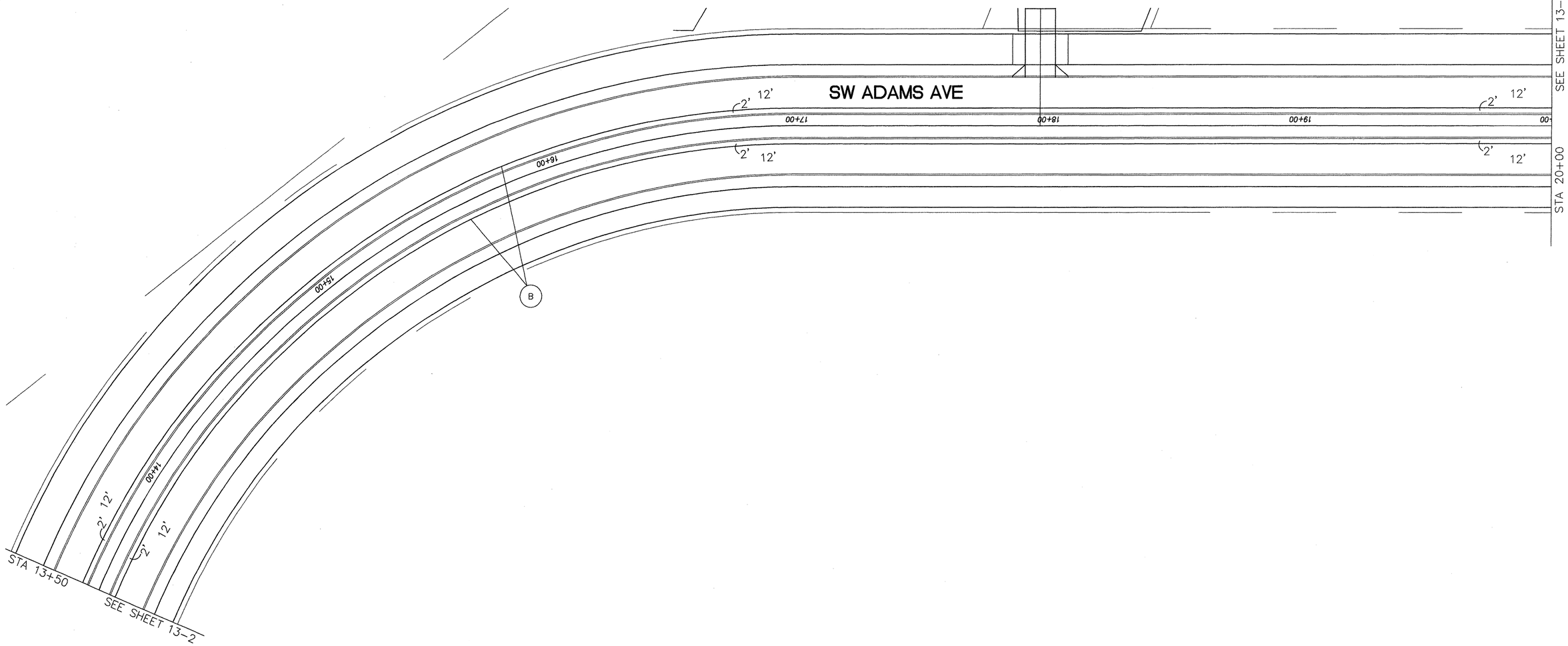
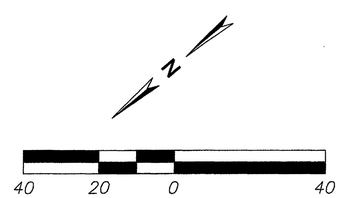
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



LEGEND

(X) STRIPING DETAIL, SEE SHEET 13-8.



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Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
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REGISTERED PROFESSIONAL ENGINEER 52,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

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ROADWAY PLANS & DETAILS

DESIGNED BY:	NNS
DRAFTED BY:	DKS CAD
DATE:	MAY 2012

ADAMS AVENUE NORTH
SIGNING/STRIPING PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-3

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APPROVED PLANS
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JULY 1, 2013
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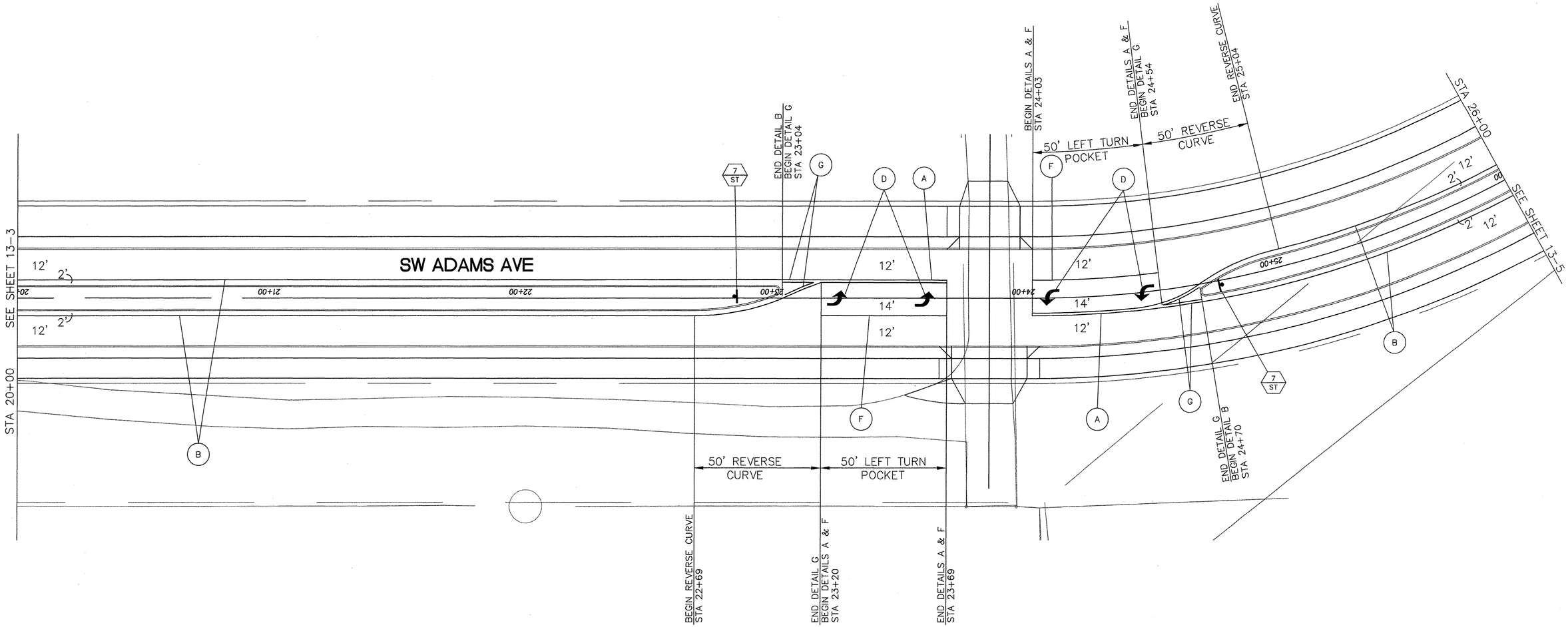
ENGINEERING DEPARTMENT



LEGEND

(X) STRIPING DETAIL, SEE SHEET 13-8.

(N/M) INSTALL NEW SIGN (N) ON NEW SIGN SUPPORT (M).

N = SIGN NUMBER

M = MATERIAL: ST = PERF. STEEL SQUARE TUBE

N

40 20 0 40

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
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Sherwood, Oregon 97140
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ROADWAY PLANS & DETAILS

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www.dksassociates.com

DESIGNED BY: NNS
DRAFTED BY: DKS CAD
DATE: MAY 2012

FINAL DESIGN

ADAMS AVENUE NORTH
SIGNING/STRIPING PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-4

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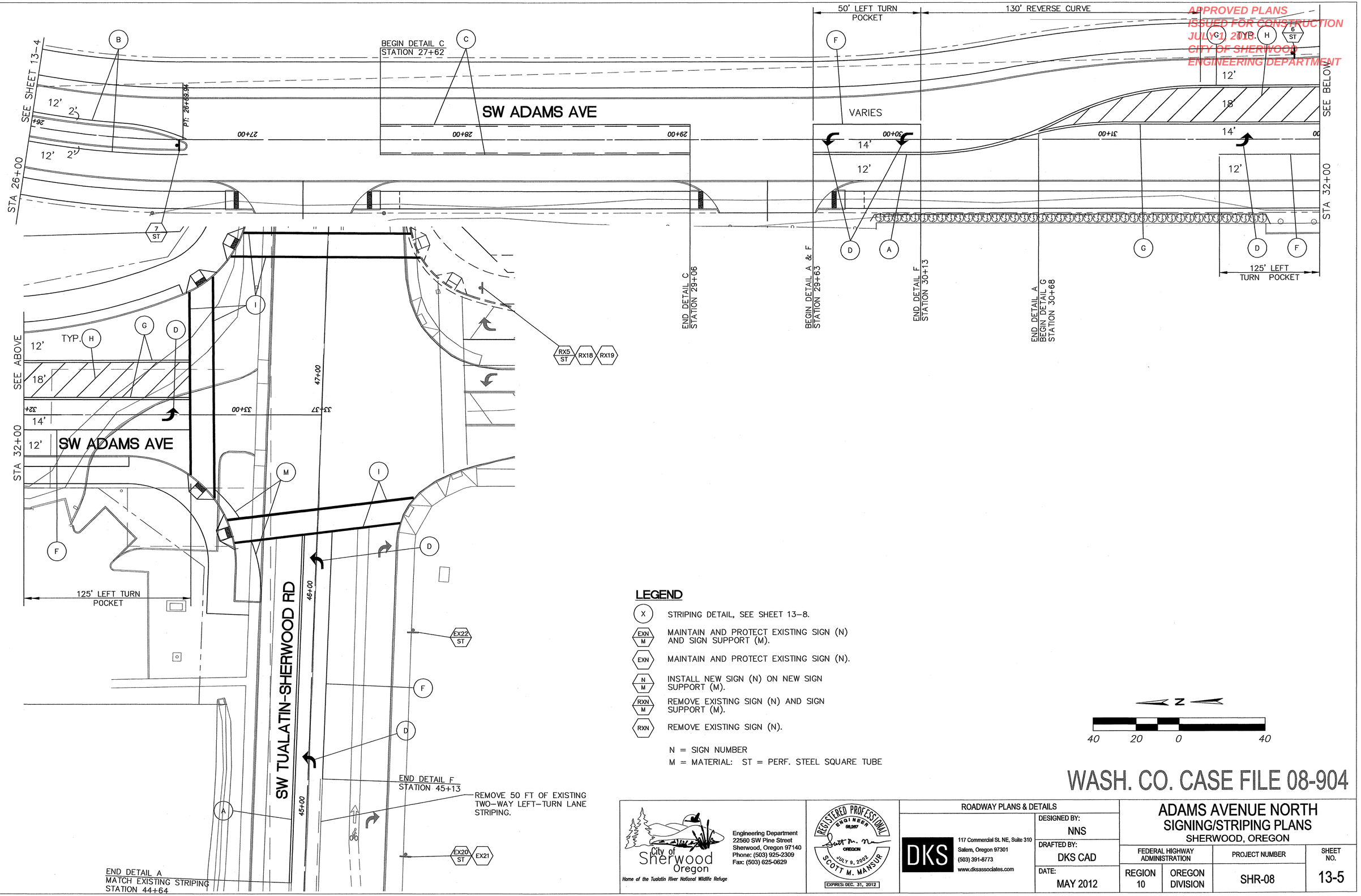

LEGEND

- (X) STRIPING DETAIL, SEE SHEET 13–8.
- (EXN / M) MAINTAIN AND PROTECT EXISTING SIGN (N) AND SIGN SUPPORT (M).
- (EXN) MAINTAIN AND PROTECT EXISTING SIGN (N).
- (N / M) INSTALL NEW SIGN (N) ON NEW SIGN SUPPORT (M).
- (RXN / M) REMOVE EXISTING SIGN (N) AND SIGN SUPPORT (M).
- (RXN) REMOVE EXISTING SIGN (N).

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WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

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DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
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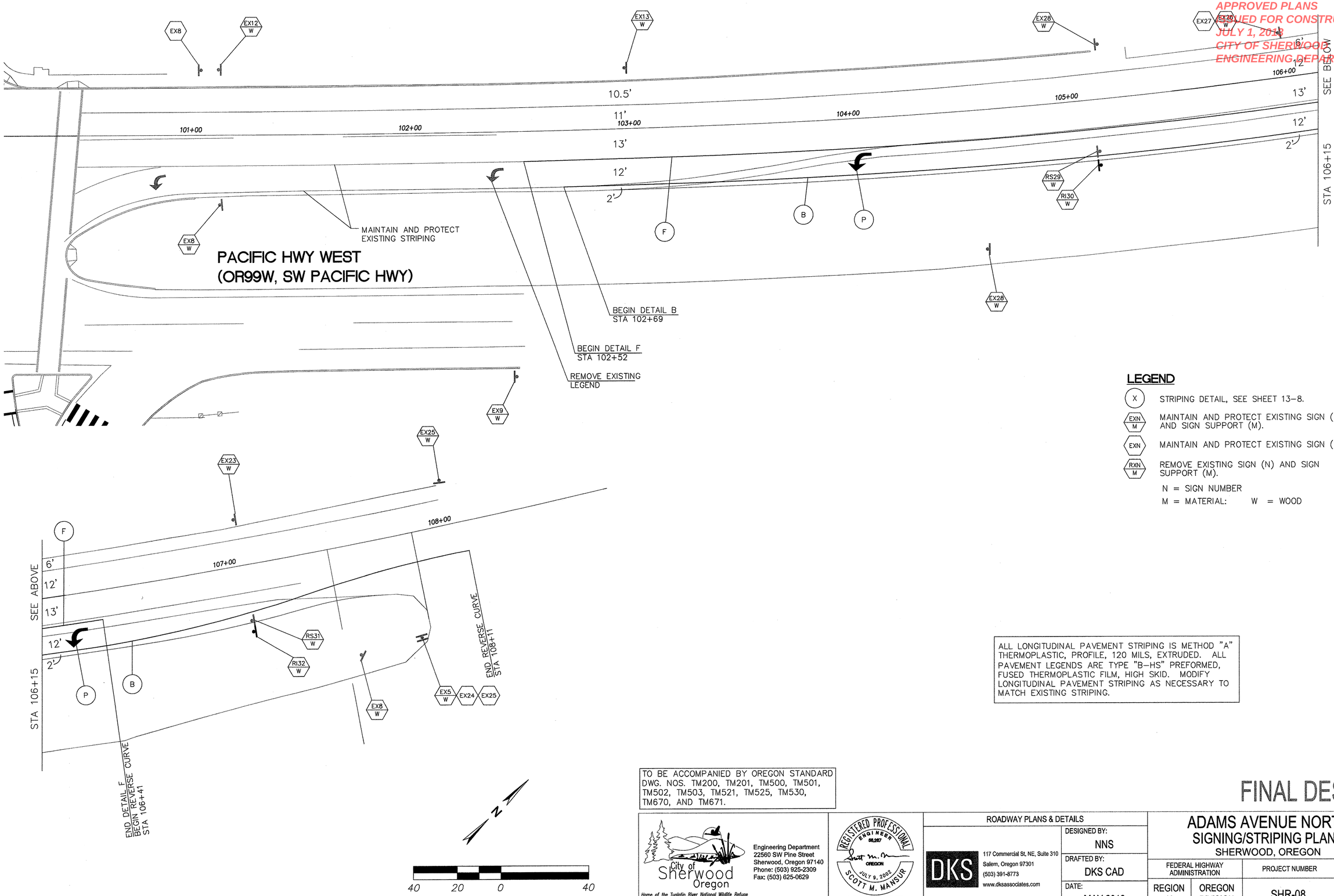
ROADWAY PLANS & DETAILS				
DESIGNED BY: NNS	ADAMS AVENUE NORTH SIGNING/STRIPING PLANS SHERWOOD, OREGON			
DRAFTED BY: DKS CAD	FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.	
DATE: MAY 2012	REGION 10 / OREGON DIVISION	SHR-08	13-5	

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-13-5.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



LEGEND

(X)	STRIPING DETAIL, SEE SHEET 13-8.
EXN / M	MAINTAIN AND PROTECT EXISTING SIGN (N) AND SIGN SUPPORT (M).
EXN	MAINTAIN AND PROTECT EXISTING SIGN (N).
RXN / M	REMOVE EXISTING SIGN (N) AND SIGN SUPPORT (M).

N = SIGN NUMBER

M = MATERIAL: W = WOOD

ALL LONGITUDINAL PAVEMENT STRIPING IS METHOD "A" THERMOPLASTIC, PROFILE, 120 MILS, EXTRUDED. ALL PAVEMENT LEGENDS ARE TYPE "B-HS" PREFORMED, FUSED THERMOPLASTIC FILM, HIGH SKID. MODIFY LONGITUDINAL PAVEMENT STRIPING AS NECESSARY TO MATCH EXISTING STRIPING.

TO BE ACCOMPANIED BY OREGON STANDARD DWG. NOS. TM200, TM201, TM500, TM501, TM502, TM503, TM521, TM525, TM530, TM670, AND TM671.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
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Fax: (503) 625-0629

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ROADWAY PLANS & DETAILS

DESIGNED BY:	NNS
DRAFTED BY:	DKS CAD
DATE:	MAY 2012

ADAMS AVENUE NORTH
SIGNING/STRIPING PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-6

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-13-6.dwg

APPROVED PLANS
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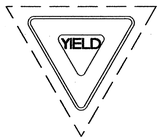
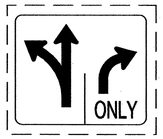
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



SIGN NO. 1

SIGN NO. 2

SIGN NO. 3



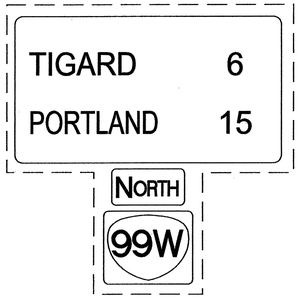
SIGN NO. 4

30"X30"
R1–1
SIGN NO. 5, 33

24"X30"
R2–1
SIGN NO. 6

24"X30"
R4–7
SIGN NO. 7

SIGN NO. 8



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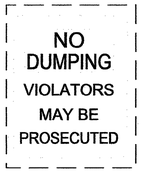
SIGN NO. 10



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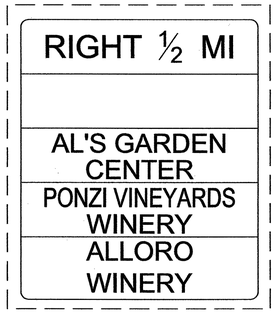

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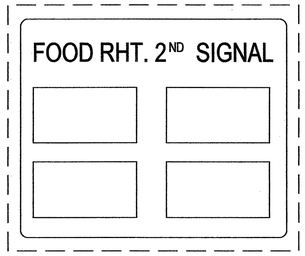


SIGN NO. 13

SIGN NO. 14

SIGN NO. 15

SIGN NO. 16

SIGN NO. 17

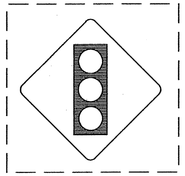
SIGN NO. 18

SIGN NO. 19

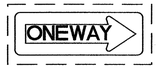
SIGN NO. 20

SIGN NO. 21

SIGN NO. 22



SIGN NO. 23, 31, 32



SIGN NO. 24

SIGN NO. 25

SIGN NO. 26

SIGN NO. 27

SIGN NO. 28, 29, 30

NOTE:
SIGNS SHOWN WITH BROKEN BORDERS ARE EXISTING.

SIGN TABLE

NO.	CODE	TYPE	QTY	LEGEND	SIZE	REMARKS
1			1	YIELD		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
2			1	RIGHT ONLY		MAINTAIN AND PROTECT EXISTING SIGN
3			7	NO PARKING		REMOVE AND SALVAGE EXISTING SIGN
4			2	LEFT THROUGH, RIGHT ONLY SYMBOL		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
5			1	STOP		REMOVE EXISTING SIGN AND SUPPORT
6	R2-1	W1	2	SPEED LIMIT 30	24"X30"	INSTALL NEW SIGN ON NEW 2" GALVANIZED STEEL PERFORATED POST
7	R4-7	W1	4	KEEP RIGHT SYMBOL	24"X30"	INSTALL NEW SIGN ON NEW 2" GALVANIZED STEEL PERFORATED POST
8			4	DO NOT ENTER		MAINTAIN AND PROTECT EXISTING SIGN
9			1	TIGARD 6, PORTLAND 15		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
10			1	PRIVATE ROAD NOT MAINTAINED BY WASHINGTON COUNTY		REMOVE AND SALVAGE EXISTING SIGN AND SUPPORT
11			2	NO DUMPING		REMOVE AND SALVAGE EXISTING SIGN
12			1	RIGHT 1/2 MILE, AL'S GARDEN CENTER		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
13			1	FOOD RIGHT. 2ND SIGNAL		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
14			1	CROSSWALK CLOSED (LEFT ARROW)		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
15			1	DEAD END		REMOVE AND SALVAGE EXISTING SIGN AND SUPPORT
16			1	NO PARKING		REMOVE AND SALVAGE EXISTING SIGN
17			1	CROSSWALK CLOSED (RIGHT ARROW)		REMOVE AND SALVAGE EXISTING SIGN
18			1	SW TUALATIN-SHERWOOD RD		REMOVE EXISTING SIGN
19			1	SW LANGER FARMS PKWY		REMOVE EXISTING SIGN
20			1	LANE USE SIGN (THRU, RIGHT)		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
21			1	ADAMS AVE (REGULATORY)		MAINTAIN AND PROTECT EXISTING SIGN
22			1	RIGHT LANE MUST TURN RIGHT		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
23			1	SIGNAL AHEAD		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
24			1	ONE WAY (RIGHT)		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
25			1	ONE WAY (LEFT)		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
26			1	ADOPT-A-HIGHWAY PROGRAM		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
27			1	SHERWOOD VALLEY JUICE COMPANY		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
28			1	WRONG WAY		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT
29			1	WRONG WAY		REMOVE AND SAVE EXISTING SIGN AND SALVAGE EXISTING SUPPORT
30			1	WRONG WAY		REINSTALL EXISTING SIGN ON NEW 4"x6" WOOD POST
31			1	SIGNAL AHEAD		REMOVE AND SAVE EXISTING SIGN AND SALVAGE EXISTING SUPPORT
32			1	SIGNAL AHEAD		REINSTALL EXISTING SIGN ON NEW 4"x6" WOOD POST
33			1	STOP		MAINTAIN AND PROTECT EXISTING SIGN AND SUPPORT

WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
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Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 56,257 OREGON JULY 9, 2008 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

ROADWAY PLANS & DETAILS

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DESIGNED BY: NNS
DRAFTED BY: DKS CAD
DATE: MAY 2012

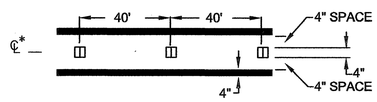
ADAMS AVENUE NORTH
SIGN DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-7

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-13-7.dwg

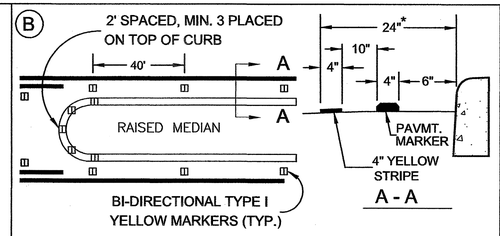
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

(A)



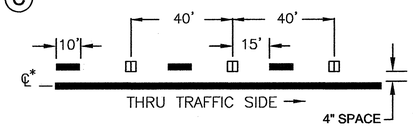
CENTER LINES - TWO 4" YELLOW LINES WITH 4" YELLOW BI-DIRECTIONAL TYPE I REFLECTORS.

(B)



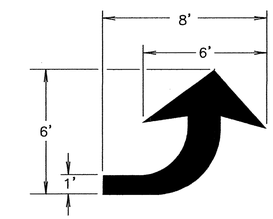
RAISED MEDIAN STRIPE - 4" YELLOW LINE WITH 4" YELLOW BI-DIRECTIONAL TYPE I REFLECTORS.

(C)



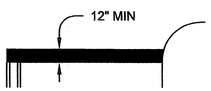
TWO WAY LEFT TURN STRIPE - 4" YELLOW LINES WITH 4" YELLOW BI-DIRECTIONAL TYPE I REFLECTORS.

(D)



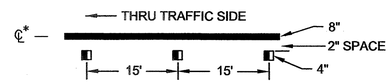
LEFT TURN ARROW (white)
For arrow proportion details, see current version of Standard Highway Signs

(E)



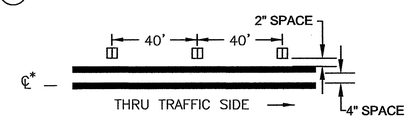
STOP BAR - SHALL BE 120 mil. WHITE THERMOPLASTIC PAVEMENT MARKING MATERIAL, **SEE NOTE** 1.

(F)



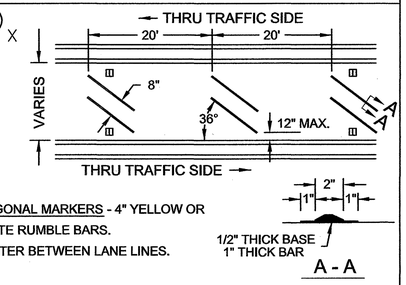
TURN LANE LINE - 8" WHITE LINE WITH 4" WHITE MONO-DIRECTIONAL TYPE I REFLECTORS.

(G)



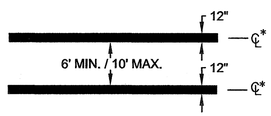
MEDIAN STRIPE - TWO 4" YELLOW LINES WITH 4" YELLOW BI-DIRECTIONAL TYPE I REFLECTORS.

(H) X



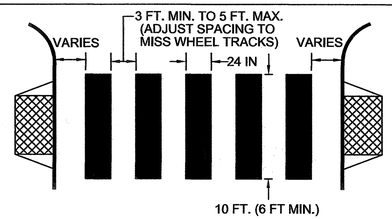
DIAGONAL MARKERS - 4" YELLOW OR WHITE RUMBLE BARS. CENTER BETWEEN LANE LINES.

(I)



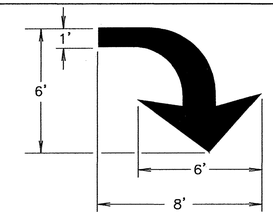
CROSSWALK - CROSSWALK SHALL BE 120 mil. WHITE THERMOPLASTIC PAVEMENT MARKING MATERIAL. SEE NOTE 2.

(J)



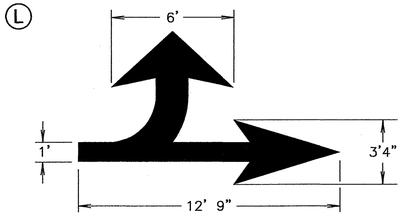
STAGGERED CONTNENTAL CROSSWALK - SHALL BE 120 mil. WHITE THERMOPLASTIC PAVEMENT MARKING MATERIAL.

(K)



RIGHT TURN ARROW (white)
FOR ARROW PROPORTION DETAILS, SEE CURRENT VERSION OF STANDARD HIGHWAY SIGNS

(L)



LEFT TURN STRAIGHT ARROW (white)
FOR ARROW PROPORTION DETAILS, SEE CURRENT VERSION OF STANDARD HIGHWAY SIGNS

NOTES:

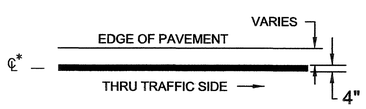
1. LOCATE STOP BARS 10' BACK OF THE EXTENDED FOG LINE, EDGE OF PAVEMENT, OR CURB FACE. VERIFY SIGHT DISTANCE.
2. LOCATE CROSSWALKS AS PER ADA RAMP LOCATIONS OR 5' BACK OF EXTENDED FOGLINE, EDGE OF PAVEMENT OR CURB FACE.
3. REMOVAL OF EXISTING STRIPING IS TO BE DETERMINED IN THE FIELD. STRIPING SHALL BE REMOVED AS DIRECTED BY THE ENGINEER.
4. ALL THERMOPLASTIC PAVEMENT MARKING MATERIAL SHALL BE INSTALLED AS PER SECTION 00850 OF THE OREGON STANDARD SPECIFICATIONS FOR HWY. CONSTUCTION.
5. ALL PAVEMENT MARKING SHALL CONFORM TO THE MOST CURRENT ODOT SPECIFICATION. COPIES OF THE MATERIALS SPECIFICATIONS ARE AVAILABLE FROM:

   ENGINEER OF MATERIALS AND RESEARCH
   HWY. MATERIALS LABORATORY
   600 AIRPORT ROAD S.E.
   SALEM, OR 97310
   (503) 986-3100
6. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC WITHIN THE URBAN GROWTH BOUNDARY.
7. FOR DIAGONAL MARKERS, USE "PREMARK IN-LANE RUMBLE BARS" BY FLINT TRADING INC., OR EQUIVALENT.

X SUBSCRIPT FOR PAVEMENT MARKING. DENOTES COLOR. (Y) YELLOW OR (W) WHITE.

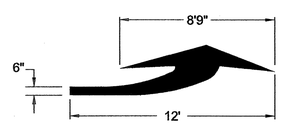
* LANE MARKING DIMENSION LOCATION AT ℄ OF STRIPING UNLESS NOTED OTHERWISE.

(O) X



EDGE LINE - 4" YELLOW OR WHITE LINE AS SHOWN ON PLANS.

(P)



ELONGATED LEFT TURN ARROW (white)
FOR ARROW PROPORTION DETAILS, SEE CURRENT VERSION OF STANDARD HIGHWAY SIGNS

WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 56,267 OREGON JULY 9, 2003 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

ROADWAY PLANS & DETAILS			
DESIGNED BY: NNS	ADAMS AVENUE NORTH STRIPING DETAILS SHERWOOD, OREGON		
DRAFTED BY: DKS CAD	FEDERAL HIGHWAY ADMINISTRATION	PROJECT NUMBER	SHEET NO.
DATE: MAY 2012	REGION 10 / OREGON DIVISION	SHR-08	13-8

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PERMANENT SIGNING INSTALLATION DETAILS

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JUL 1, 2012
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

GENERAL SIGNING NOTES:

1) Contractor Shall Supply And Install All Signs, And Is Responsible For Staking Sign Locations And Obtaining Utility Locates For Staked Sign Locations. Signs Shall Be Located Per Typical Sign Location Or As Shown On Plans. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE FINAL STREET NAMES WITH THE COUNTY SURVEY OFFICE AT 846-8723 BEFORE ORDERING AND INSTALLING STREET NAME SIGNS.

2) All Signing Shall Conform To The Manual on Uniform Traffic Control Devices And The County's Permanent Signing Legend.

3) Street Name Signs Shall Be: (Verify FINAL Street Names Before Ordering And Installing)

A) FOR LOCAL AND COLLECTOR STREET INTERSECTIONS: Six (6) Inch 0.080 Inch Flat Blade Aluminum Blanks, Mounted On Top Of Post With Special Brackets.
Lettering: Four (4) Inch Upper Case Series C
Pre-fixes And Suffixes: Three (3) Inch Uppercase Series C
Superscript For Numerical Street Names: Two (2) Inch Uppercase Series C
Layout Per "Typical Street Name Sign Layout" Two (2) Sided

B) FOR ARTERIAL STREET INTERSECTIONS: Nine (9) Inch 0.080 Inch Flat Blade Aluminum Blanks, Mounted Directly To Post With Rivets For Street Name Sign Facing The Arterial Traffic Approach. For Sign Facing Collector Or Local Street Approach Use 3)A) Above. See Diagram*.
Lettering: Six (6) Inch Upper Case Series C
Pre-fixes And Suffixes: Four (4) Inch Uppercase Series C
Superscript For Numerical Street Names: Three (3) Inch Uppercase Series C
Layout Per "Typical Street Name Sign Layout" One (1) Sided, Two (2) Signs Per Street Name.

C) FOR SIGNALIZED INTERSECTIONS: Twelve (12) Inch 0.125 mm Flat Blade Aluminum Blanks, Mounted To Mast Arm Or Strain Pole For Span Wire Signal Systems.
Lettering: Eight (8) Inch Upper Case Series C
Pre-fixes And Suffixes: Five (5) Inch Uppercase Series C
Superscript For Numerical Street Names: Four (4) Inch Uppercase Series C
Layout Per "Typical Street Name Sign Layout" One (1) Sided WITH BORDER

Material For All Street Name Signs Per "Signing Materials"
Width Of Sign Per Below Tables For Six (6) And Nine (9) Inch Blanks.
Suffixes Abbreviations Per "Common Abbreviations"

6 INCH BLANKS (TWO SIDED) # Of Characters (Not Includ. Prefixes And Suffixes)	Blank Width	9 INCH BLANKS (ONE SIDED) # Of Characters (Not Includ. Prefixes And Suffixes)	Blank Width
Up To 6	24 Inch	Up To 6	38 Inch
7 To 9	30 Inch	7 To 9	48 Inch
10 To 11	36 Inch	10 To 11	55 Inch
12 To 13	42 Inch	12 To 13	61 Inch
Over 13	48 Inch	14 To 15	68 Inch

For Mast Arm Street Name Sign Letter Spacing Use ODOT's Standards

COMMON ABBREVIATIONS

Ave = Avenue	Ln = Lane	Rd = Road
Blvd= Boulevard	Lp = Loop	St = Street
Cir = Circle	Pkwy = Parkway	Ter = Terrace
Ct = Court	Pl = Place	Wy = Way
Dr = Drive		

4) Posts

A Minimum Of 2 X 2 Inch X 10 Foot Galvanized "Unistrut Telespar" Or 12 Gauge Perforated Posts Or Approved Equivalent Shall Be Used.

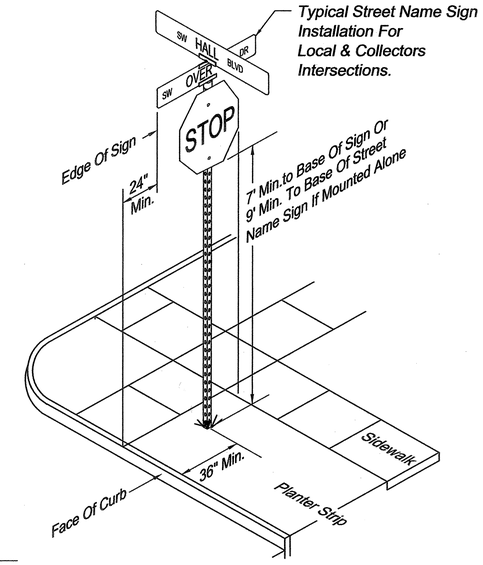
A 2 X 2 Inch X 12 Foot (min.) 12 Gauge Galvanized "Unistrut Telespar" Or 12 Gauge Perforated Posts Or Approved Equivalent Shall Be Used When A Combination Of Signs Is More Than 36 Inches In Height. Sign Combination And Minimum Sign Mounting Height Shall Determine Post Length.

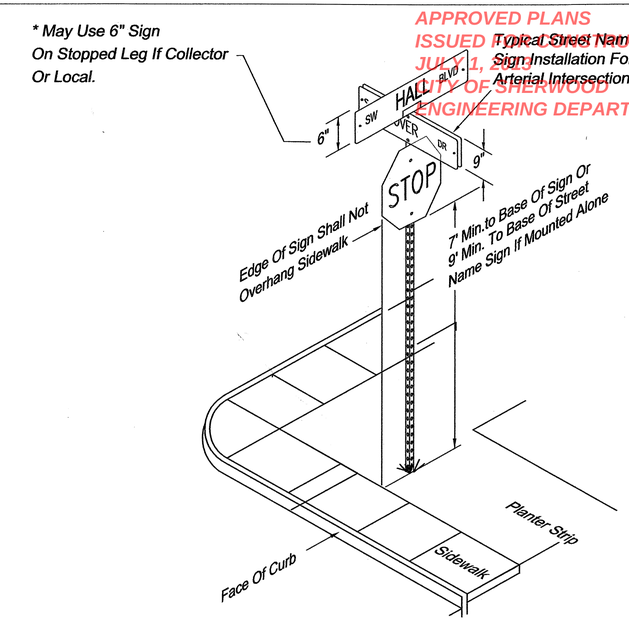
Sign Posts And Anchors Shall Be Installed Per "Typical Sign Installation"

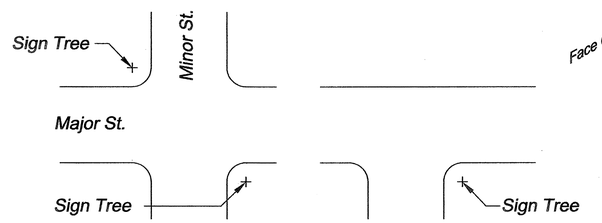
No Other Type Of Post Shall Be Used Unless Prior Approval Of The County Traffic Engineer Is Obtained.

PERMANENT SIGNING LEGEND

N	Install New Sign	N = Sign Number M = Materials, Options Are: S = Steel "Telespar" CCB = Crosswalk Closure Barricade
N / M	Install New Sign (N) On New (M) Support	
EXN	Maintain And Protect Existing Sign (N)	



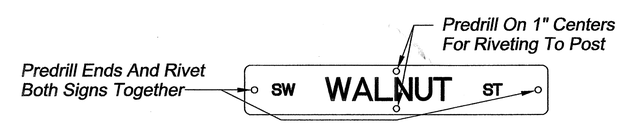




Cross Intersection Tee Intersecton

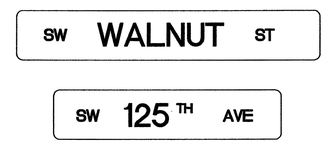
TYPICAL SIGN LOCATIONS

NTS



9" STREET NAME SIGN BLANKS

NTS

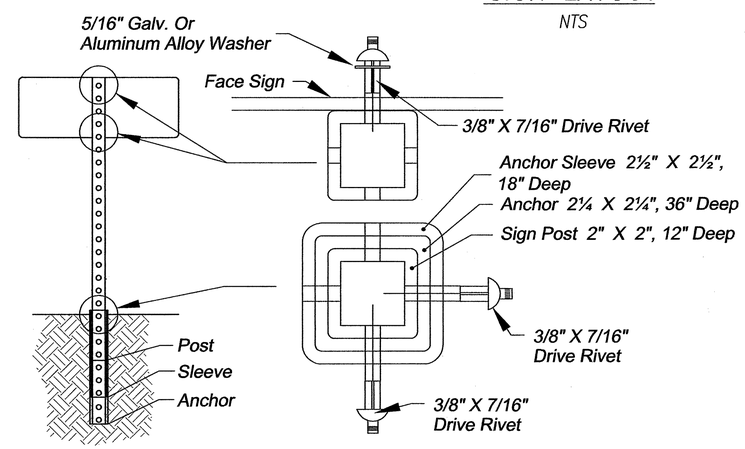


TYPICAL "STREET NAME" SIGN LAYOUT

NTS

SIGNING MATERIALS	
Stop & Yield Signs	Reflective Sheeting. Type III
School Advance And Crossing Signs	Yellow/green Reflective Sheeting Type 9
Street Name Signs (Post & Overhead Mounted)	Letters - Sheeting. Type III Background - Reflective Sheeting. Type III
All Other Signs (Post Mounted)	Reflective Sheeting. Type III
Overhead Signing (Except Street Name Signs)	Reflective Sheeting. Type III
Typical Sign Sizes	
Stop Signs - 30"x30"	
Speed Signs - 24"x30" On Local Streets 30"x36" On Collector And Arterial Roads.	(The Word Limit SHALL NOT Be Used On Speed Signs)
No Parking Signs; R7-2A Is Standard, With A R7-201 12"x6" "Tow Away Zone" 12"x18" On Local Roads, 18"x24" On Collectors And Above, When Arrows Are Used, Signs At Both Ends Of The Zone Shall Have Single Arrows Pointing In The Appropriate Direction With Double Arrows In Between. "NO PARKING" SIGNS ARE TO BE 45° TO ROADWAY.	

For Specific Sign Details (Such As The "Street Stub Sign") Contact The County Traffic Engineering Section At (503) 846-7950.



TYPICAL SIGN INSTALLATION

NTS

WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 66,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

ROADWAY PLANS & DETAILS

DESIGNED BY:	NNS
DRAFTED BY:	DKS CAD
DATE:	MAY 2012

ADAMS AVENUE NORTH
PERMANENT SIGNING INSTALLATION DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	13-9

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APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

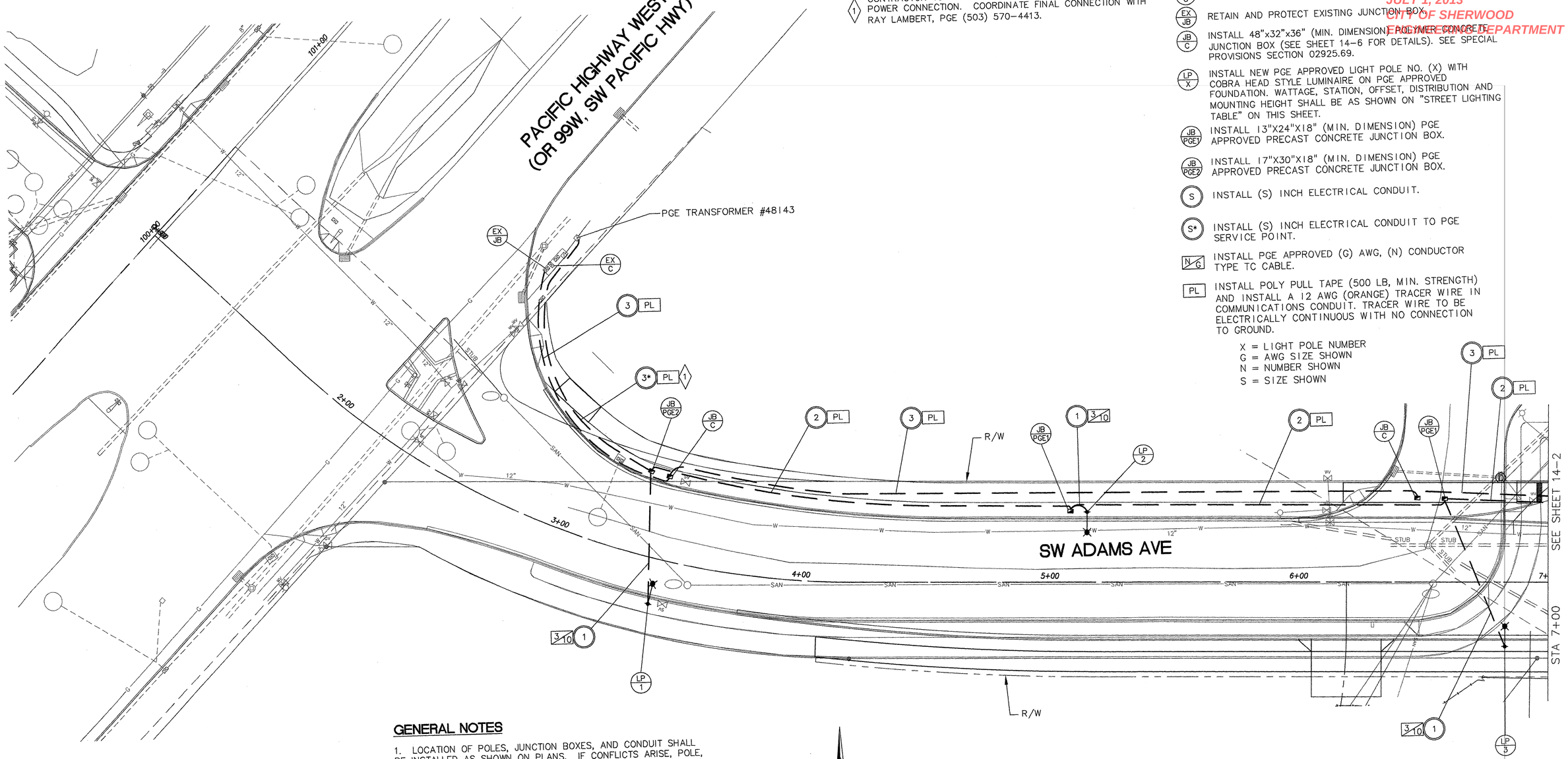
CONSTRUCTION NOTES:

1. CONTRACTOR TO INSTALL 3-INCH SERVICE CONDUIT FOR PGE POWER CONNECTION. COORDINATE FINAL CONNECTION WITH RAY LAMBERT, PGE (503) 570-4413.

LEGEND

- EX/C — RETAIN AND PROTECT EXISTING CONTROLLER.
- EX/JB — RETAIN AND PROTECT EXISTING JUNCTION BOX.
- JB/C — INSTALL 48"x32"x36" (MIN. DIMENSION) POLYMER CONCRETE JUNCTION BOX (SEE SHEET 14-6 FOR DETAILS). SEE SPECIAL PROVISIONS SECTION 02925.69.
- LP/X — INSTALL NEW PGE APPROVED LIGHT POLE NO. (X) WITH COBRA HEAD STYLE LUMINAIRE ON PGE APPROVED FOUNDATION. WATTAGE, STATION, OFFSET, DISTRIBUTION AND MOUNTING HEIGHT SHALL BE AS SHOWN ON "STREET LIGHTING TABLE" ON THIS SHEET.
- JB/PGE1 — INSTALL 13"X24"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.
- JB/PGE2 — INSTALL 17"X30"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.
- S — INSTALL (S) INCH ELECTRICAL CONDUIT.
- S* — INSTALL (S) INCH ELECTRICAL CONDUIT TO PGE SERVICE POINT.
- N/G — INSTALL PGE APPROVED (G) AWG, (N) CONDUCTOR TYPE TC CABLE.
- PL — INSTALL POLY PULL TAPE (500 LB, MIN. STRENGTH) AND INSTALL A 12 AWG (ORANGE) TRACER WIRE IN COMMUNICATIONS CONDUIT. TRACER WIRE TO BE ELECTRICALLY CONTINUOUS WITH NO CONNECTION TO GROUND.

X = LIGHT POLE NUMBER
G = AWG SIZE SHOWN
N = NUMBER SHOWN
S = SIZE SHOWN



GENERAL NOTES

1. LOCATION OF POLES, JUNCTION BOXES, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON PLANS. IF CONFLICTS ARISE, POLE, JUNCTION BOX, AND CONDUIT LOCATION MAY BE MODIFIED IN THE FIELD PER ENGINEER APPROVAL. ALL EQUIPMENT MUST BE PLACED WITHIN THE RIGHT OF WAY. PLACE CONDUIT IN SAME TRENCH AS OTHER CONDUITS WHENEVER POSSIBLE.

2. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED. COORDINATE ALL WORK WITH UTILITY COMPANIES TO ELIMINATE CONFLICTS.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE OREGON DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS, THE STANDARD SPECIFICATION FOR CONSTRUCTION (2008), AND THE SPECIAL PROVISIONS FOR THIS CONSTRUCTION.

4. CONTRACTOR SHALL FURNISH AND INSTALL STREET LIGHTING EQUIPMENT PER PGE OPTION B.

5. CONTRACTOR SHALL COORDINATE WITH RAY LAMBERT, PGE (503-570-4413) FOR ALL POWER REQUIREMENTS.

6. ALL STREET LIGHTING EQUIPMENT SHALL BE APPROVED BY PGE PRIOR TO FURNISHING AND INSTALLATION.

STREET LIGHTING TABLE

POLE NO.	STATION	OFFSET (FT)*	WATTAGE	DISTRIBUTION	LIGHT LOSS FACTOR	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)
1	3+42.0	17.9' R	200	M-C-III	0.70	35	8
2	5+14.9	27.7' L	200	M-C-III	0.70	35	8
3	6+82.6	25.3' R	200	M-C-III	0.70	35	8

* OFFSET IS MEASURED FROM CENTERLINE OF ROADWAY TO CENTER OF POLE UNLESS OTHERWISE NOTED.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 56,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

ROADWAY PLANS & DETAILS	DESIGNED BY: NNS	ADAMS AVENUE NORTH ILLUMINATION PLANS SHERWOOD, OREGON			
	DRAFTED BY: DKS CAD	FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
	DATE: MAY 2012	REGION 10	OREGON DIVISION	SHR-08	14-1

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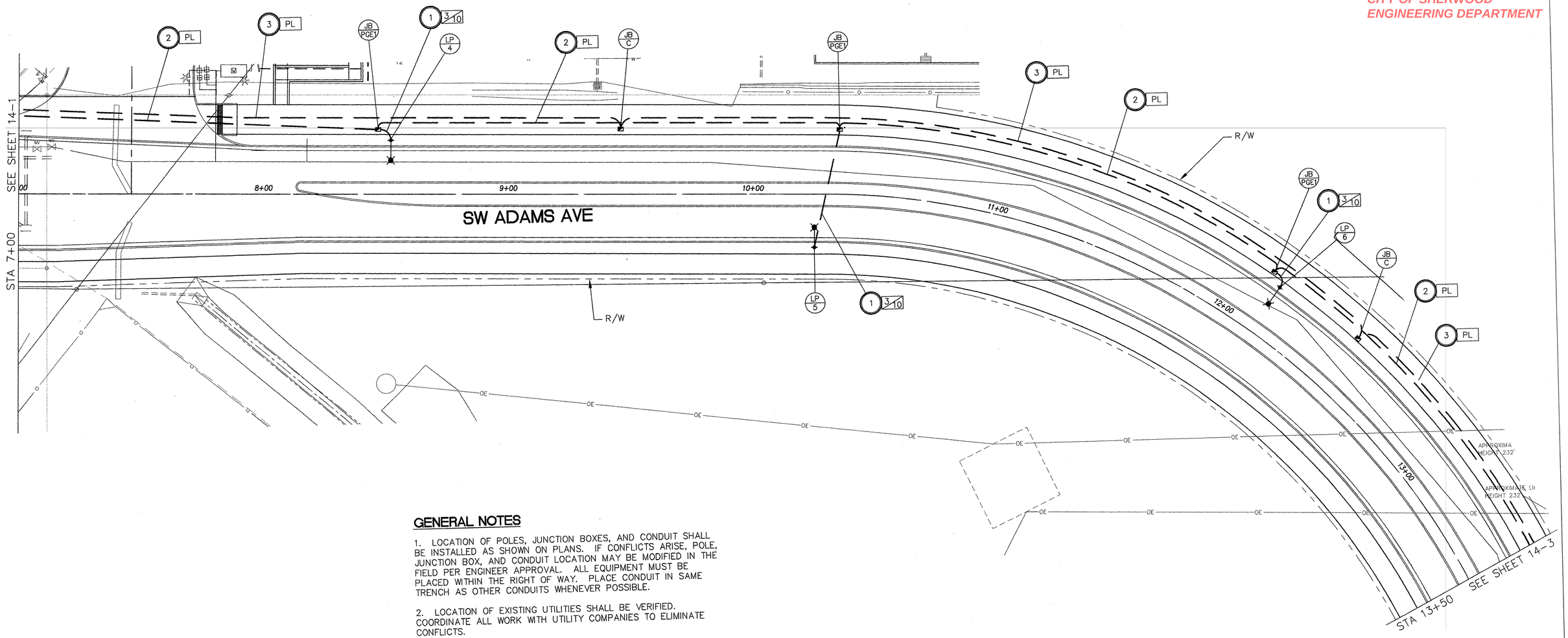
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



LEGEND

- (LP/X) INSTALL NEW PGE APPROVED LIGHT POLE NO. (X) WITH COBRA HEAD STYLE LUMINAIRE ON PGE APPROVED FOUNDATION. WATTAGE, STATION, OFFSET, DISTRIBUTION AND MOUNTING HEIGHT SHALL BE AS SHOWN ON "STREET LIGHTING TABLE" ON THIS SHEET.
- (JB/C) INSTALL 48"x32"x36" (MIN. DIMENSION) POLYMER CONCRETE JUNCTION BOX (SEE SHEET 14-6 FOR DETAILS). SEE SPECIAL PROVISIONS SECTION 02925.69.
- (JB/PGE) INSTALL 13"X24"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.
- (S) INSTALL (S) INCH ELECTRICAL CONDUIT.
- (N/G) INSTALL PGE APPROVED (G) AWG, (N) CONDUCTOR TYPE TC CABLE.
- [PL] INSTALL POLY PULL TAPE (500 LB, MIN. STRENGTH) AND INSTALL A 12 AWG (ORANGE) TRACER WIRE IN COMMUNICATIONS CONDUIT. TRACER WIRE TO BE ELECTRICALLY CONTINUOUS WITH NO CONNECTION TO GROUND.

X = LIGHT POLE NUMBER
G = AWG SIZE SHOWN
N = NUMBER SHOWN
S = SIZE SHOWN

GENERAL NOTES

1. LOCATION OF POLES, JUNCTION BOXES, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON PLANS. IF CONFLICTS ARISE, POLE, JUNCTION BOX, AND CONDUIT LOCATION MAY BE MODIFIED IN THE FIELD PER ENGINEER APPROVAL. ALL EQUIPMENT MUST BE PLACED WITHIN THE RIGHT OF WAY. PLACE CONDUIT IN SAME TRENCH AS OTHER CONDUITS WHENEVER POSSIBLE.

2. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED. COORDINATE ALL WORK WITH UTILITY COMPANIES TO ELIMINATE CONFLICTS.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE OREGON DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS, THE STANDARD SPECIFICATION FOR CONSTRUCTION (2008), AND THE SPECIAL PROVISIONS FOR THIS CONSTRUCTION.

4. CONTRACTOR SHALL FURNISH AND INSTALL STREET LIGHTING EQUIPMENT PER PGE OPTION B.

5. CONTRACTOR SHALL COORDINATE WITH RAY LAMBERT, PGE (503-570-4413) FOR ALL POWER REQUIREMENTS.

6. ALL STREET LIGHTING EQUIPMENT SHALL BE APPROVED BY PGE PRIOR TO FURNISHING AND INSTALLATION.

STREET LIGHTING TABLE

POLE NO.	STATION	OFFSET (FT)*	WATTAGE	DISTRIBUTION	LIGHT LOSS FACTOR	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)
4	8+51.9	21.6' L	200	M-C-III	0.70	35	8
5	10+24.9	21.4' R	200	M-C-III	0.70	35	8
6	12+14.2	21.4' L	200	M-C-III	0.70	35	8

* OFFSET IS MEASURED FROM CENTERLINE OF ROADWAY TO CENTER OF POLE UNLESS OTHERWISE NOTED.

N

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FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 88,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

ROADWAY PLANS & DETAILS

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

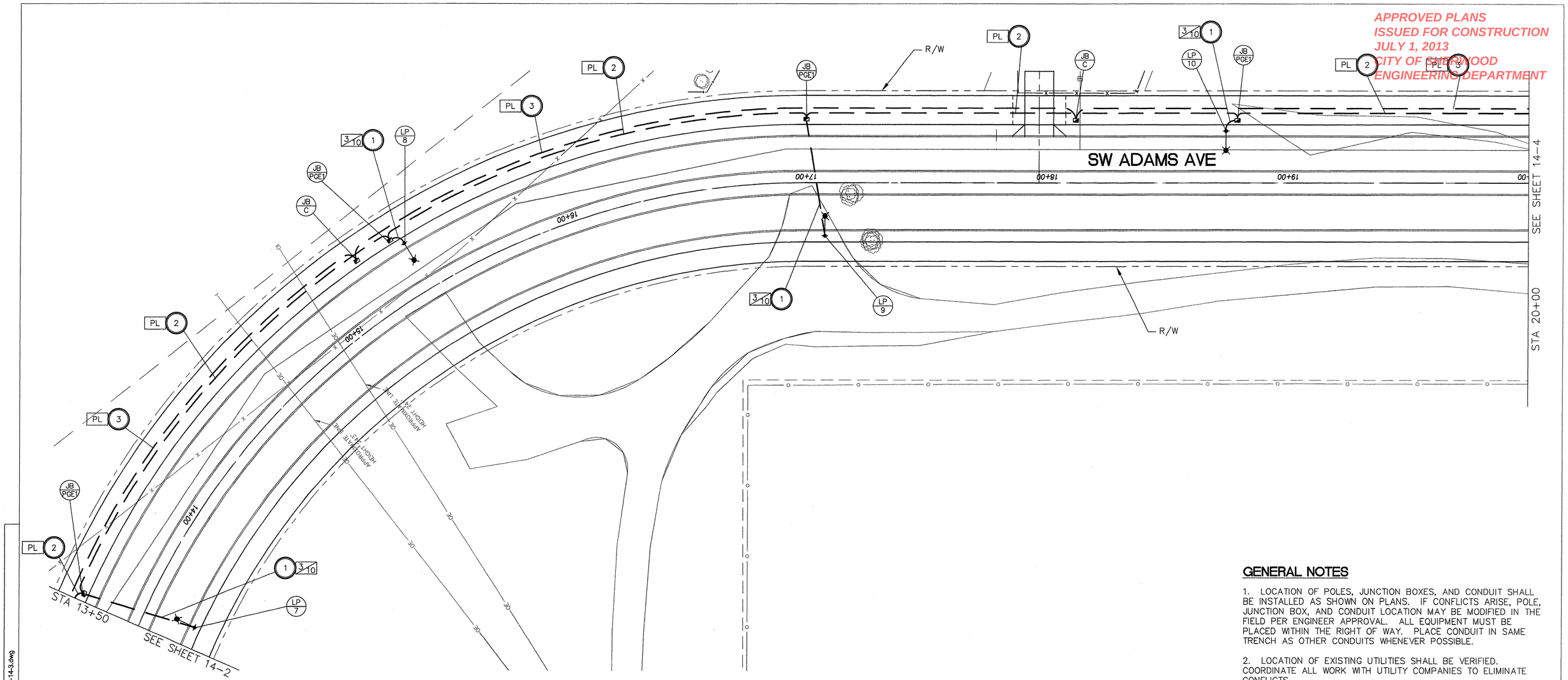
DESIGNED BY: NNS
DRAFTED BY: DKS CAD
DATE: MAY 2012

ADAMS AVENUE NORTH
ILLUMINATION PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	14-2

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-14-2.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



GENERAL NOTES

1. LOCATION OF POLES, JUNCTION BOXES, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON PLANS. IF CONFLICTS ARISE, POLE, JUNCTION BOX, AND CONDUIT LOCATION MAY BE MODIFIED IN THE FIELD PER ENGINEER APPROVAL. ALL EQUIPMENT MUST BE PLACED WITHIN THE RIGHT OF WAY. PLACE CONDUIT IN SAME TRENCH AS OTHER CONDUITS WHENEVER POSSIBLE.

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3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE OREGON DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS, THE STANDARD SPECIFICATION FOR CONSTRUCTION (2008), AND THE SPECIAL PROVISIONS FOR THIS CONSTRUCTION.

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5. CONTRACTOR SHALL COORDINATE WITH RAY LAMBERT, PGE (503-570-4413) FOR ALL POWER REQUIREMENTS.

6. ALL STREET LIGHTING EQUIPMENT SHALL BE APPROVED BY PGE PRIOR TO FURNISHING AND INSTALLATION.

LEGEND

(LP/X) INSTALL NEW PGE APPROVED LIGHT POLE NO. (X) WITH COBRA HEAD STYLE LUMINAIRE ON PGE APPROVED FOUNDATION. WATTAGE, STATION, OFFSET, DISTRIBUTION AND MOUNTING HEIGHT SHALL BE AS SHOWN ON "STREET LIGHTING TABLE" ON THIS SHEET.

(JB/C) INSTALL 48"x32"x36" (MIN. DIMENSION) POLYMER CONCRETE JUNCTION BOX (SEE SHEET 14-6 FOR DETAILS). SEE SPECIAL PROVISIONS SECTION 02925.69.

(JB/PGE1) INSTALL 13"X24"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.

(S) INSTALL (S) INCH ELECTRICAL CONDUIT.

(N/G) INSTALL PGE APPROVED (G) AWG, (N) CONDUCTOR TYPE TC CABLE.

[PL] INSTALL POLY PULL TAPE (500 LB, MIN. STRENGTH) AND INSTALL A 12 AWG (ORANGE) TRACER WIRE IN COMMUNICATIONS CONDUIT. TRACER WIRE TO BE ELECTRICALLY CONTINUOUS WITH NO CONNECTION TO GROUND.

X = LIGHT POLE NUMBER
G = AWG SIZE SHOWN
N = NUMBER SHOWN
S = SIZE SHOWN

STREET LIGHTING TABLE

POLE NO.	STATION	OFFSET (FT)*	WATTAGE	DISTRIBUTION	LIGHT LOSS FACTOR	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)
7	13+59.3	21.5' R	200	M-C-III	0.70	35	8
8	15+36.7	21.5' L	200	M-C-III	0.70	35	8
9	17+08.0	21.5' R	200	M-C-III	0.70	35	8
10	18+74.2	21.5' L	200	M-C-III	0.70	35	8

* OFFSET IS MEASURED FROM CENTERLINE OF ROADWAY TO CENTER OF POLE UNLESS OTHERWISE NOTED.

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FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 90,207 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

ROADWAY PLANS & DETAILS

DKS
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www.dksassociates.com

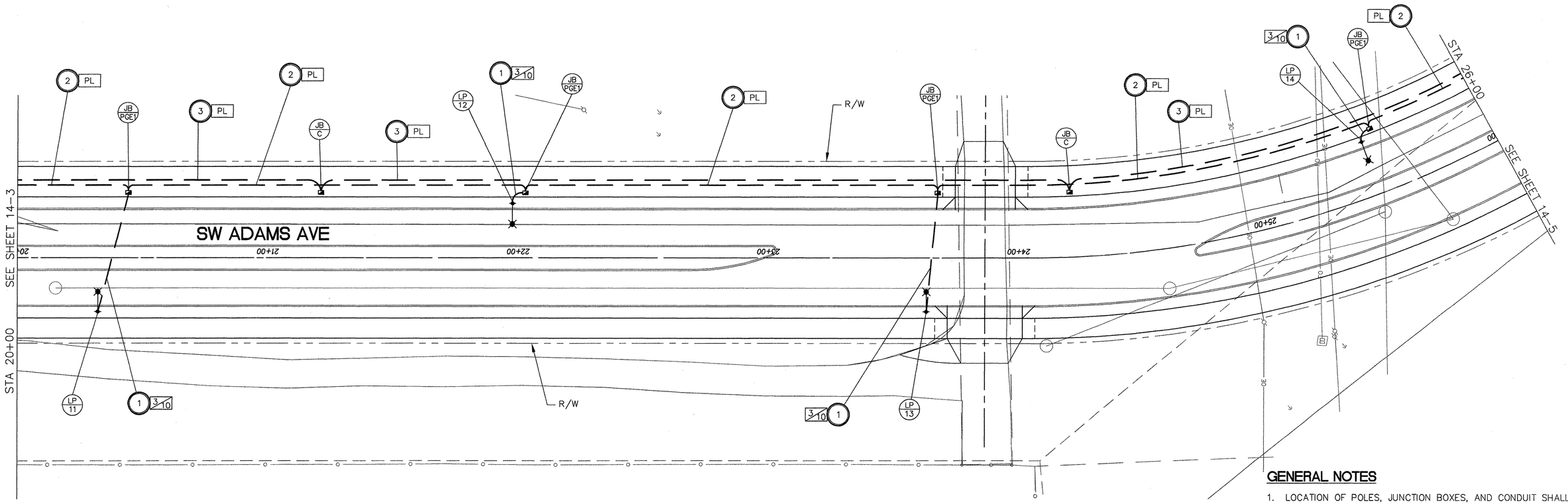
DESIGNED BY: NNS
DRAFTED BY: DKS CAD
DATE: MAY 2012

ADAMS AVENUE NORTH
ILLUMINATION PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	14-3

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-14-3.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



GENERAL NOTES

1. LOCATION OF POLES, JUNCTION BOXES, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON PLANS. IF CONFLICTS ARISE, POLE, JUNCTION BOX, AND CONDUIT LOCATION MAY BE MODIFIED IN THE FIELD PER ENGINEER APPROVAL. ALL EQUIPMENT MUST BE PLACED WITHIN THE RIGHT OF WAY. PLACE CONDUIT IN SAME TRENCH AS OTHER CONDUITS WHENEVER POSSIBLE.

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3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE OREGON DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS, THE STANDARD SPECIFICATION FOR CONSTRUCTION (2008), AND THE SPECIAL PROVISIONS FOR THIS CONSTRUCTION.

4. CONTRACTOR SHALL FURNISH AND INSTALL STREET LIGHTING EQUIPMENT PER PGE OPTION B.

5. CONTRACTOR SHALL COORDINATE WITH RAY LAMBERT, PGE (503-570-4413) FOR ALL POWER REQUIREMENTS.

6. ALL STREET LIGHTING EQUIPMENT SHALL BE APPROVED BY PGE PRIOR TO FURNISHING AND INSTALLATION.

LEGEND

(LP X) INSTALL NEW PGE APPROVED LIGHT POLE NO. (X) WITH COBRA HEAD STYLE LUMINAIRE ON PGE APPROVED FOUNDATION. WATTAGE, STATION, OFFSET, DISTRIBUTION AND MOUNTING HEIGHT SHALL BE AS SHOWN ON "STREET LIGHTING TABLE" ON THIS SHEET.

(JB C) INSTALL 48"x32"x36" (MIN. DIMENSION) POLYMER CONCRETE JUNCTION BOX (SEE SHEET 14-6 FOR DETAILS). SEE SPECIAL PROVISIONS SECTION 02925.E9.

(JB PGE1) INSTALL 13"X24"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.

(S) INSTALL (S) INCH ELECTRICAL CONDUIT.

(N/G) INSTALL PGE APPROVED (G) AWG, (N) CONDUCTOR TYPE TC CABLE.

[PL] INSTALL POLY PULL TAPE (500 LB, MIN. STRENGTH) AND INSTALL A 12 AWG (ORANGE) TRACER WIRE IN COMMUNICATIONS CONDUIT. TRACER WIRE TO BE ELECTRICALLY CONTINUOUS WITH NO CONNECTION TO GROUND.

X = LIGHT POLE NUMBER
G = AWG SIZE SHOWN
N = NUMBER SHOWN
S = SIZE SHOWN

STREET LIGHTING TABLE

POLE NO.	STATION	OFFSET (FT)*	WATTAGE	DISTRIBUTION	LIGHT LOSS FACTOR	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)
11	20+32.1	21.5' R	200	M-C-III	0.70	35	8
12	21+97.6	21.5' L	200	M-C-III	0.70	35	8
13	23+63.0	21.5' R	200	M-C-III	0.70	35	8
14	25+47.7	21.9' L	200	M-C-III	0.70	35	8

* OFFSET IS MEASURED FROM CENTERLINE OF ROADWAY TO CENTER OF POLE UNLESS OTHERWISE NOTED.

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FINAL DESIGN

City of Sherwood Oregon
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Engineering Department
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Sherwood, Oregon 97140
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Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 56,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

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ROADWAY PLANS & DETAILS

DESIGNED BY: NNS
DRAFTED BY: DKS CAD
DATE: MAY 2012

ADAMS AVENUE NORTH
ILLUMINATION PLANS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	14-4

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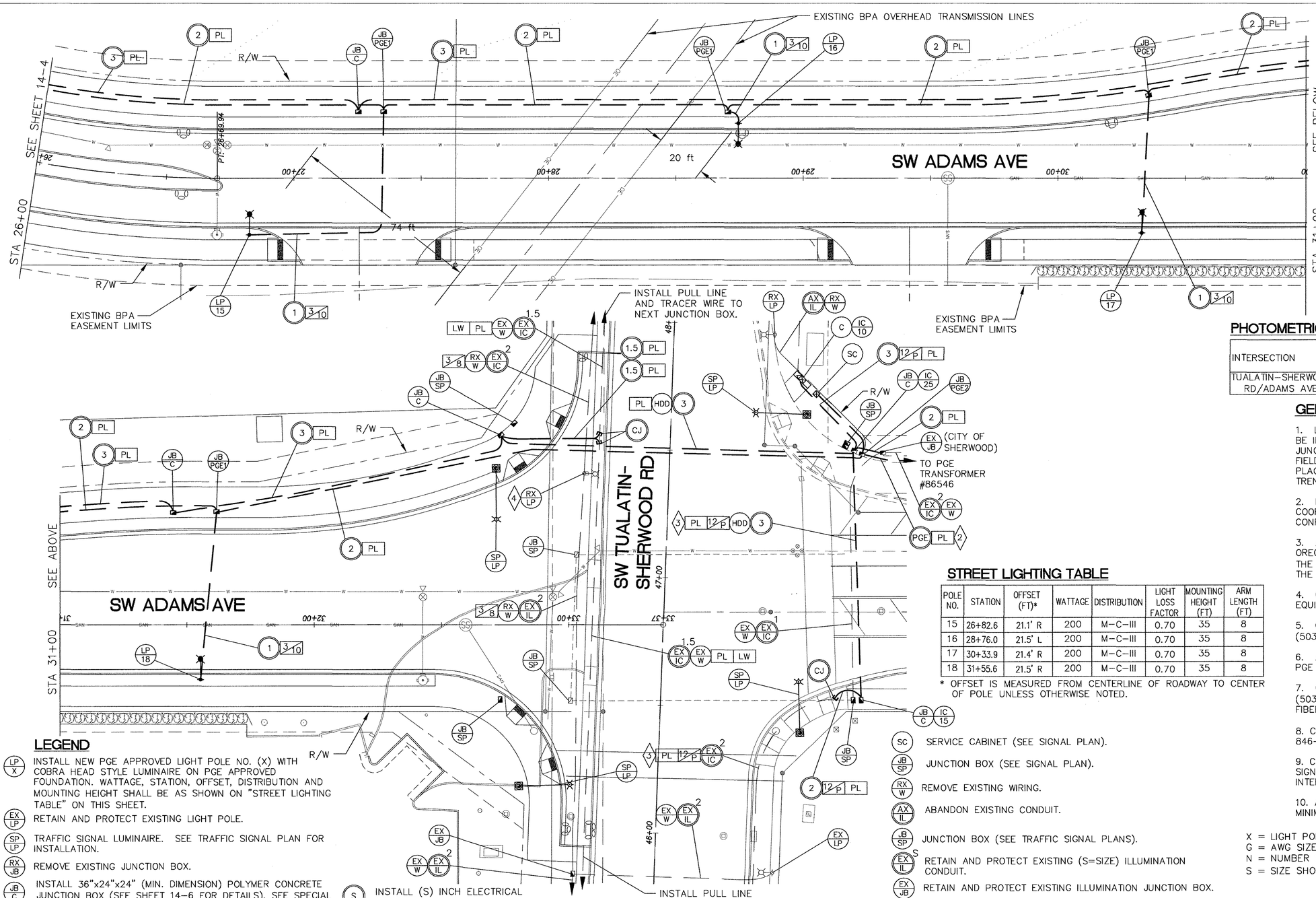

CONSTRUCTION NOTES:

2. CONTRACTOR TO INSTALL APPROXIMATELY 500' OF 3-INCH SERVICE CONDUIT FOR PGE POWER CONNECTION. COORDINATE FINAL CONNECTION WITH RAY LAMBERT PGE (503) 570-4413.

3. CONTRACTOR TO INSTALL APPROXIMATELY 820' OF 12-PAIR COPPER INTERCONNECT THROUGH EXISTING CONDUIT TO THE TUALATIN-SHERWOOD RD / BALER WAY INTERSECTION CONTROLLER CABINET.

4. SPLICE AND BURY EXISTING ILLUMINATION CONDUITS. NEW WIRING SHALL BE INSTALLED BETWEEN NEAREST JUNCTION BOXES.

CONTRACTOR TO COORDINATE WITH WASHINGTON COUNTY FOR FUTURE TRAFFIC SIGNAL COMMUNICATIONS PROJECT ON TUALATIN-SHERWOOD ROAD.

APPROVED PLANS
FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

PHOTOMETRICS

INTERSECTION	CLASSICATION	LIGHT LEVEL RECOMMENDED (fc)	LIGHT LEVEL DESIGN (fc)	UNIFORMITY RECOMMENDED	UNIFORMITY DESIGN
TUALATIN-SHERWOOD RD/ADAMS AVE	ARTERIAL/ COLLECTOR	≥ 1.5	1.50	≤ 3.0:1	2.17:1

GENERAL NOTES

1. LOCATION OF POLES, JUNCTION BOXES, AND CONDUIT SHALL BE INSTALLED AS SHOWN ON PLANS. IF CONFLICTS ARISE, POLE, JUNCTION BOX, AND CONDUIT LOCATION MAY BE MODIFIED IN THE FIELD PER ENGINEER APPROVAL. ALL EQUIPMENT MUST BE PLACED WITHIN THE RIGHT OF WAY. PLACE CONDUIT IN SAME TRENCH AS OTHER CONDUITS WHENEVER POSSIBLE.

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4. CONTRACTOR SHALL FURNISH AND INSTALL STREET LIGHTING EQUIPMENT ALONG ADAMS AVE. PER PGE OPTION B.

5. CONTRACTOR SHALL COORDINATE WITH RAY LAMBERT, PGE (503-570-4413) FOR ALL POWER REQUIREMENTS.

6. ALL STREET LIGHTING EQUIPMENT SHALL BE APPROVED BY PGE PRIOR TO FURNISHING AND INSTALLATION.

7. CONTACT BRAD CRAWFORD, CITY OF SHERWOOD, AT (503)-625-4203 FOR INFORMATION CONCERNING THE CITY'S FIBER OPTIC CABLE CONDUIT.

8. CONTACT KEVIN ELLINGTON, WASHINGTON COUNTY, AT (503) 846-7959 FOR ACCESS INTO TRAFFIC SIGNAL CABINET.

9. CONTRACTOR SHALL PULL INTERCONNECT CABLE INTO TRAFFIC SIGNAL CABINETS. WASHINGTON COUNTY WILL TERMINATE INTERCONNECT CABLE.

10. ALL INTERCONNECT CONDUIT SHALL BE INSTALLED WITH A MINIMUM BEND RADIUS OF 36 INCHES.

STREET LIGHTING TABLE

POLE NO.	STATION	OFFSET (FT)*	WATTAGE	DISTRIBUTION	LIGHT LOSS FACTOR	MOUNTING HEIGHT (FT)	ARM LENGTH (FT)
15	26+82.6	21.1' R	200	M-C-III	0.70	35	8
16	28+76.0	21.5' L	200	M-C-III	0.70	35	8
17	30+33.9	21.4' R	200	M-C-III	0.70	35	8
18	31+55.6	21.5' R	200	M-C-III	0.70	35	8

* OFFSET IS MEASURED FROM CENTERLINE OF ROADWAY TO CENTER OF POLE UNLESS OTHERWISE NOTED.

LEGEND

- (LP/X) INSTALL NEW PGE APPROVED LIGHT POLE NO. (X) WITH COBRA HEAD STYLE LUMINAIRE ON PGE APPROVED FOUNDATION. WATTAGE, STATION, OFFSET, DISTRIBUTION AND MOUNTING HEIGHT SHALL BE AS SHOWN ON "STREET LIGHTING TABLE" ON THIS SHEET.
- (EX/LP) RETAIN AND PROTECT EXISTING LIGHT POLE.
- (SP/LP) TRAFFIC SIGNAL LUMINAIRE. SEE TRAFFIC SIGNAL PLAN FOR INSTALLATION.
- (RX/JB) REMOVE EXISTING JUNCTION BOX.
- (JB/C) INSTALL 36"x24"x24" (MIN. DIMENSION) POLYMER CONCRETE JUNCTION BOX (SEE SHEET 14-6 FOR DETAILS). SEE SPECIAL PROVISION SECTION 02925.69.
- (JB/PGE1) INSTALL 13"X24"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.
- (JB/PGE2) INSTALL 17"X30"X18" (MIN. DIMENSION) PGE APPROVED PRECAST CONCRETE JUNCTION BOX.
- (C) CONTROLLER (SEE SIGNAL PLAN).
- (HDD) INSTALL CONDUIT BY HORIZONTAL DIRECTIONAL DRILLING, OPEN TRENCH NOT ALLOWED.
- (EX/IC S) RETAIN AND PROTECT EXISTING (S=SIZE) INCH INTERCONNECT CONDUIT.
- (CS) INSTALL 3-INCH CONDUIT STUB.
- (S) INSTALL (S) INCH ELECTRICAL CONDUIT.
- (PGE) INSTALL (S) INCH ELECTRICAL SERVICE CONDUIT TO PGE SERVICE POINT.
- (N/G) INSTALL PGE APPROVED (G) AWG, (N) CONDUCTOR TYPE TC CABLE.
- (N/P) INSTALL (N=NUMBER) TWISTED PAIR P-39 (GEL-FILLED) INTERCONNECT CABLE.
- (PL) INSTALL POLY PULL TAPE (500 LB, MIN. STRENGTH).
- (LW) INSTALL ONE NO. 10 AWG THWN (LOCATE WIRE).
- (SC) SERVICE CABINET (SEE SIGNAL PLAN).
- (JB/SP) JUNCTION BOX (SEE SIGNAL PLAN).
- (RX/W) REMOVE EXISTING WIRING.
- (AX/IL) ABANDON EXISTING CONDUIT.
- (JB/SP) JUNCTION BOX (SEE TRAFFIC SIGNAL PLANS).
- (EX/IL S) RETAIN AND PROTECT EXISTING (S=SIZE) ILLUMINATION CONDUIT.
- (EX/JB) RETAIN AND PROTECT EXISTING ILLUMINATION JUNCTION BOX.
- (IC/N) COIL (N=NUMBER OF FEET) OF INTERCONNECT CABLE.
- (CJ) SPLICE NEW CONDUIT INTO EXISTING CONDUIT.
- (EX/W) MAINTAIN AND PROTECT EXISTING WIRING.

X = LIGHT POLE NUMBER
G = AWG SIZE SHOWN
N = NUMBER SHOWN
S = SIZE SHOWN

N

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WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
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Engineering Department
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Sherwood, Oregon 97140
Phone: (503) 925-2309
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REGISTERED PROFESSIONAL ENGINEER 56,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2014

ROADWAY PLANS & DETAILS

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

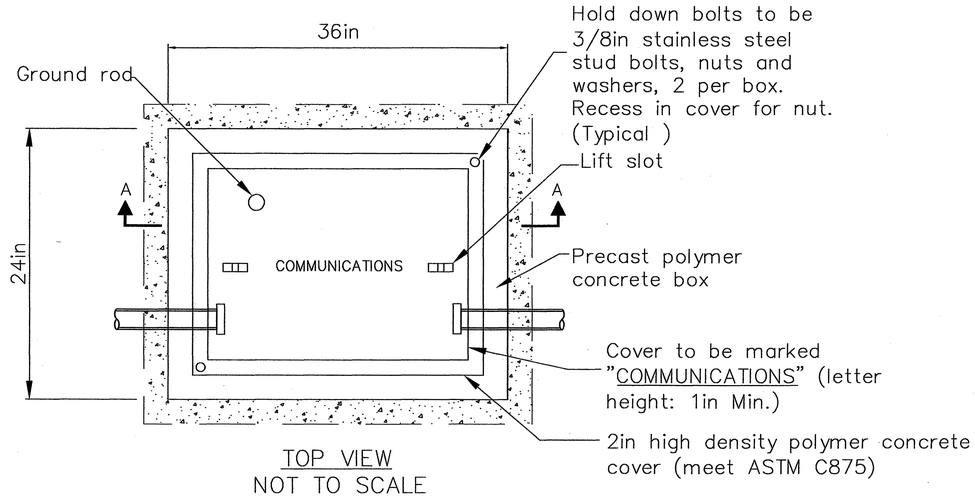
DESIGNED BY: ANM
DRAFTED BY: DKS CAD
DATE: JAN 2013

ADAMS AVENUE NORTH ILLUMINATION & INTERCONNECT PLANS
SHERWOOD, OREGON

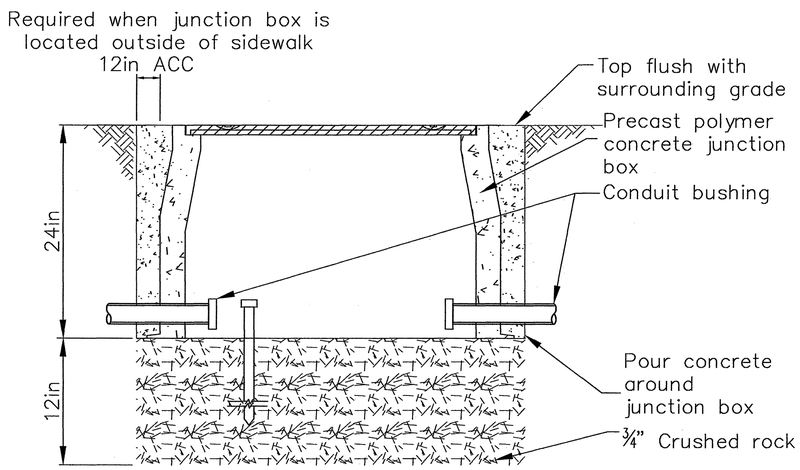
FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	14-5

X:\Projects\2008\P08232-000 (Sherwood Adams Ave N Imps)\Task 7 - Traffic Engineering Design\CAD\ 08232-14-5.dwg

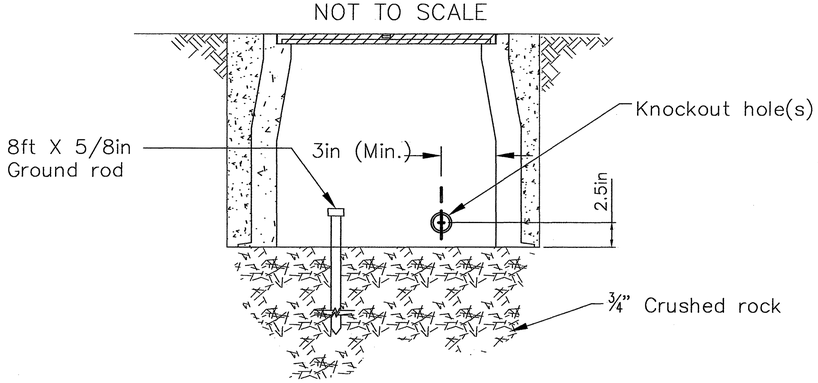
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



TOP VIEW
NOT TO SCALE



SECTION A–A
NOT TO SCALE



SIDE VIEW

COMMUNICATIONS JUNCTION BOX TYPE "C"
NOT TO SCALE

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WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
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Engineering Department
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Sherwood, Oregon 97140
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EXPIRES: DEC. 31, 2012

ROADWAY PLANS & DETAILS

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DESIGNED BY:	NNS
DRAFTED BY:	DKS CAD
DATE:	MAY 2012

ADAMS AVENUE NORTH
ILLUMINATION DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	14-6

TRAFFIC SIGNAL AND DETECTOR PLAN LEGEND

APPROVED PLANS
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JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

CABINETS AND CONTROLLERS

- (332) INSTALL A MODEL 332 CABINET WITH RISER FRAME, ORIENT LOUVERED DOOR AS SHOWN.
- (C / 2070) INSTALL MODEL 2070L CONTROLLER IN MODEL 332 CABINET.
- (C) CONTROLLER (SEE SIGNAL PLAN).
- (BMCL) INSTALL BASE MOUNTED SERVICE CABINET, 120/240 VOLT, FOR BOTH SIGNAL AND ILLUMINATION CIRCUITS.
- (TC) INSTALL TERMINAL CABINET.
- (ES / 930L) INSTALL RUGGEDCOM 930L EDGE SWITCH. (SEE SPECIAL PROVISIONS)
- (CP / DSC) INSTALL COMMUNICATIONS PANEL. (SEE SPECIAL PROVISIONS)

POLES

- (MPL / X) INSTALL SPECIAL (NON-STANDARD) TRAFFIC SIGNAL MAST ARM POLE WITH LUMINAIRE EXTENSION (SEE POLE ENTRANCE CHART AND SPECIAL PROVISIONS).
- (LA / L) INSTALL (L) FT. LUMINAIRE ARM.
- (MA / L) INSTALL (L) FT. TRAFFIC SIGNAL MAST ARM.
- (PP) INSTALL PEDESTRIAN SIGNAL POLE WITH FRANGIBLE BASE.
- (PS) INSTALL PUSHBUTTON POST.
- (LP) LIGHT POLE (SEE ILLUMINATION & INTERCONNECT PLAN 14-5).

SIGNALS

- (V / Ph) INSTALL PHASE (Ph) VEHICLE SIGNAL WITH LED'S.
- (FV) FUTURE VEHICLE SIGNAL HEAD.
- (C/B / Ph) INSTALL PHASE (Ph) COUNTDOWN PEDESTRIAN SIGNAL WITH LED'S, STANDARD TYPE 'H' PUSHBUTTON AND INSTRUCTION SIGN.
- (PB / Ph) INSTALL PHASE (Ph) STANDARD TYPE "H" PUSHBUTTON AND INSTRUCTION SIGN.
- (C / Ph) INSTALL PHASE (Ph) COUNTDOWN PEDESTRIAN SIGNAL WITH CLAMSHELL MOUNT.

SIGNS

- (AL / 5R) INSTALL ALUMINUM (30"x36", TYPE "W7") RIGHT ARROW "ONLY" SIGN (R3-5R).
- (AL / 12R) INSTALL ALUMINUM (30"x36", TYPE "W7 mod") RIGHT TURNS YIELD TO PEDS ON GREEN ● SIGN (OR22-14).
- (SNS / 1) INSTALL STREET NAME SIGN "SW Tualatin-Sherwood RD" (SEE SIGN NO. 1 DETAIL).
- (SNS / 2) INSTALL STREET NAME SIGN "SW Langer Farms Pkwy/SW Adams Ave" (SEE SIGN NO. 2 DETAIL).
- (SNS / 3) INSTALL STREET NAME SIGN "SW Adams Ave/SW Langer Farms Pkwy" (SEE SIGN NO. 3 DETAIL).

JUNCTION BOXES

- (JB / 2) INSTALL 22"x 12"x 12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX.
- (JB / 3) INSTALL 30"x 17"x 12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX. WITH CONCRETE APRON.
- (JB / 3TA) INSTALL TANDEM 30"x 17"x 12" (MIN. DIMENSION) PRECAST CONCRETE JUNCTION BOX WITH CONCRETE APRON.
- (RX / JB) REMOVE EXISTING JUNCTION BOX.
- (EX / JB) RETAIN AND PROTECT EXISTING JUNCTION BOX.
- (JB / IC) JUNCTION BOX (SEE ILLUMINATION & INTERCONNECT PLAN, 14-5).
- (JB / PGE) PGE JUNCTION BOX (SEE ILLUMINATION & INTERCONNECT PLAN, 14-5).

PREEMPTION

- (FN / Ch) INSTALL CHANNEL (Ch), (N) BARREL FIRE PRE-EMPTION DETECTOR UNIT.
- (FF / Ch) INSTALL CHANNEL (Ch) FIRE PRE-EMPTION DETECTOR FEEDER CABLE.

VIDEO DETECTION

- (CAM / N) INSTALL VIDEO DETECTION CAMERA HOUSING AND SUNSHIELD NUMBER (N=NUMBER) ON LUMINAIRE ARM CAMERA LOCATION SHALL BE FIELD APPROVED BY ENGINEER.
- (VDF / Ph) INSTALL IMAGE SENSOR AND POWER CABLE FOR VIDEO DETECTION SYSTEM FOR PHASE (Ph) PER MANUFACTURER'S RECOMMENDATION.
- (VDZ / Ph) VIDEO DETECTION ZONE FOR PHASE (Ph).

CONDUIT

- (EX / EC) (S) RETAIN AND PROTECT EXISTING (S) INCH ELECTRICAL CONDUIT.
- (AX / EC) ABANDON EXISTING ELECTRICAL CONDUIT.
- (S) INSTALL (S) INCH ELECTRICAL CONDUIT.
- (S*) INSTALL (S) INCH ELECTRICAL SERVICE CONDUIT TO PGE SERVICE POINT.
- (EC) ELECTRICAL CONDUIT (SEE SIGNAL PLAN).
- (IC) INTERCONNECT CONDUIT (SEE ILLUMINATION & INTERCONNECT PLAN 14-5).
- (CJ) SPLICE NEW ELECTRICAL CONDUIT TO EXISTING ELECTRICAL CONDUIT.
- (LP) ILLUMINATION CONDUIT (SEE ILLUMINATION & INTERCONNECT PLAN, 14-5)
- (HDD) INSTALL CONDUIT BY HORIZONTAL DIRECTIONAL DRILLING, OPEN TRENCH NOT ALLOWED.

LUMINAIRES

- (LED) INSTALL LEOTEK GREEN COBRA LED FIXTURE GC2-120E-MV-NW-3-GY-530. MOUNT ON 15' LUMINAIRE ARM WITH 35' MOUNTING HEIGHT. BOND LUMINAIRE TO POLE GROUNDING TERMINAL WITH NO. 10 AWG THWN WIRE.
- (PE / 1) INSTALL PHOTOCONTROL ELECTRONIC RELAY ON POLE AS PER T.M.S. DWG. NO. TM465.

WIRES

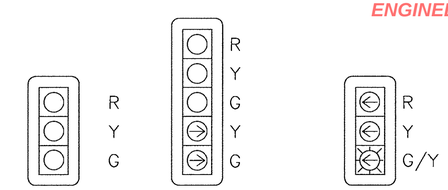
- [N | G] INSTALL (N) NO. (G) AWG TYPE XHHW WIRES.
- [N / G] INSTALL (N) NO. (G) TYPE THWN WIRES.
- [N-12C] INSTALL (N) NO. 12 TYPE THWN (PEDESTRIAN SIGNAL COMMON).
- [N-C] INSTALL (N) NO. 8 TYPE THWN (SIGNAL SYSTEM COMMON).
- [PL] INSTALL POLY PULL TAPE (500 LB, MIN. STRENGTH) AND A 12 AWG (ORANGE) TRACER WIRE. TRACER WIRE TO BE ELECTRICALLY CONTINUOUS WITH NO CONNECTION TO GROUND.

X = LIGHT POLE NUMBER
G = AWG SIZE SHOWN
N = NUMBER SHOWN
S = SIZE SHOWN

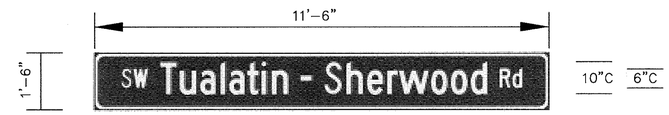
ACCOMPANIED BY DRAWINGS: 15-2 TO 15-5, TM450, TM457, TM458, TM460, TM465, TM467, TM470, TM472, TM482, TM485, TM488, TM498, ARCHIVED ODOT STANDARD DRAWING TM631 THRU TM632.

CONSTRUCTION NOTES:

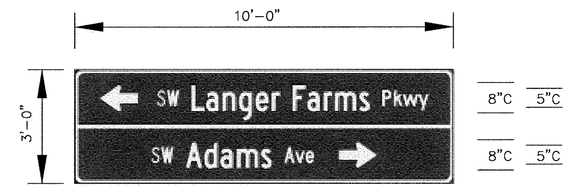
1. CONTRACTOR TO SPLICE EXISTING CONDUIT AS SHOWN ON PLANS AND AS DIRECTED BY THE ENGINEER. CONTRACTOR IS RESPONSIBLE FOR ALL EQUIPMENT AND MATERIALS REQUIRED FOR MODIFICATION, INCLUDING, BUT NOT LIMITED TO, BENDS AND CONDUIT.
2. REPLACE SIDEWALK PANELS AS NECESSARY FOR JUNCTION BOX REPLACEMENT.
3. SERVICE CABINET CONNECTION TO PGE TRANSFORMER #86546. COORDINATE FINAL CONNECTION WITH RAY LAMBERT PGE (503) 570-4413.
4. INSTALL STREET NAME SIGN USING TWO ADJUSTABLE SIGN BRACKETS.



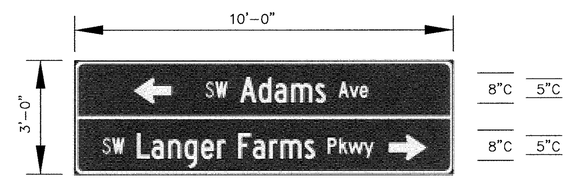
TYPE 2 SIGNAL HEAD — TYPE 5 SIGNAL HEAD — TYPE 6LX SIGNAL HEAD



SIGN NO. 1 DETAIL



SIGN NO. 2 DETAIL



SIGN NO. 3 DETAIL

SP = SIGNAL POLE SIGN MOUNT
B = ADJUSTABLE SIGNAL BRACKET ASSEMBLY W/RAIN CAP(S)
AB = ADJUSTABLE SIGN BRACKET
Ch = CHANNEL SHOWN
G = AWG SIZE SHOWN
L = LENGTH SHOWN
N = NUMBER SHOWN
Ph = PHASE SHOWN
Ⓟ Ph = INCLUDES 3 SPARE WIRES FOR PHASE (Ph)
2 = 12" R, 12" Y, 12" G
3L = 12" RLTA, 12" YLTA, 12" GLTA
5 = VERTICAL 12" R, 12" Y, 12" G, 12" YRTA, 12" GRTA
6L = VERTICAL 12" RLTA, 12" YLTA, 12" FYLTA, 12" GLTA
6LX = 12" RLTA, 12" YLTA, 12" Y/GLTA (BI-MODAL)

WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 98,207 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2014

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

ROADWAY PLANS & DETAILS				
DESIGNED BY: ANM	ADAMS AVENUE NORTH TRAFFIC SIGNAL PLAN SHERWOOD, OREGON			
DRAFTED BY: DKS CAD	FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
DATE: JAN 2013	REGION 10	OREGON DIVISION	SHR-08	15-1

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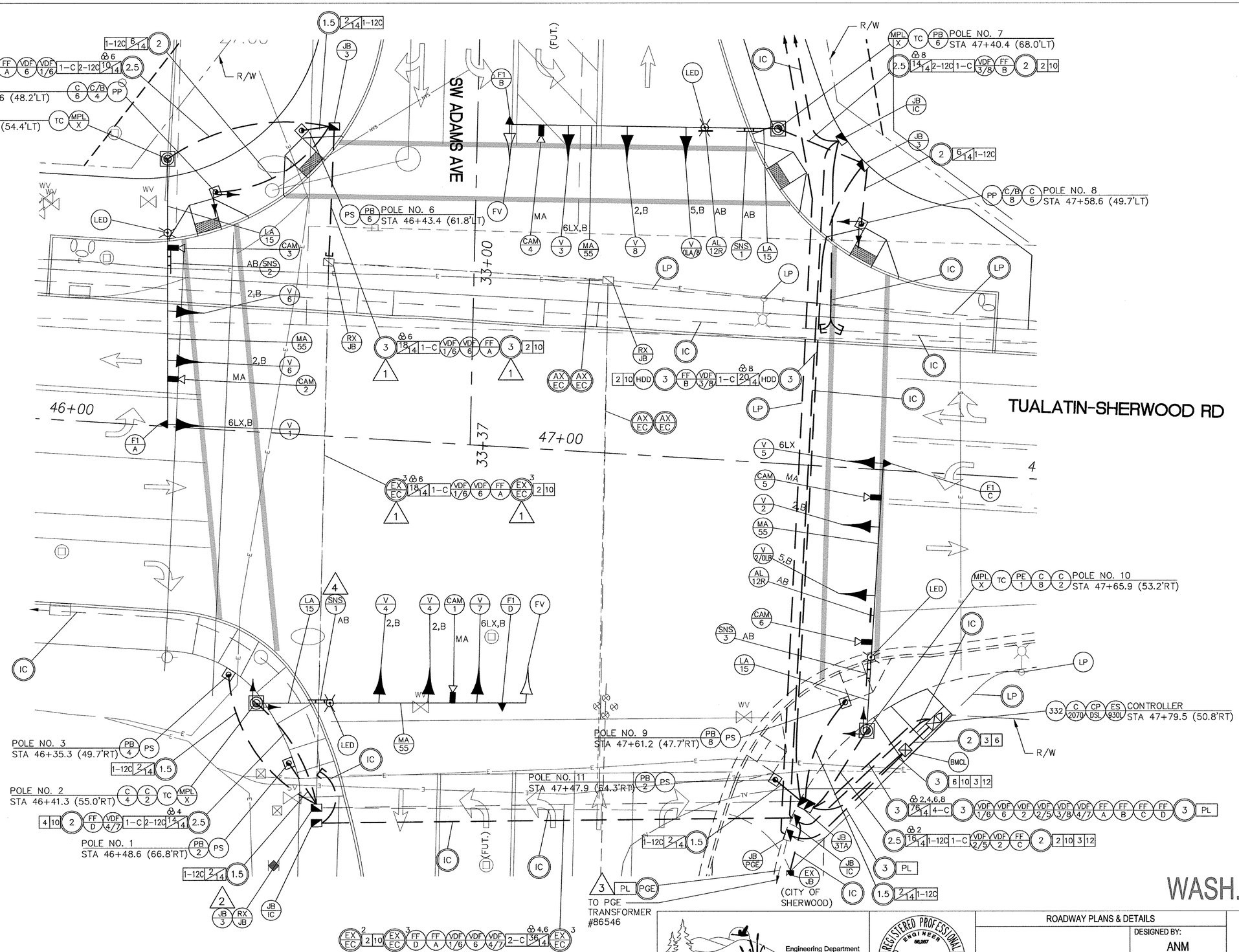
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
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REGISTERED PROFESSIONAL ENGINEER 56,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2014

ROADWAY PLANS & DETAILS

DKS
117 Commercial St. NE, Suite 310
Salem, Oregon 97301
(503) 391-8773
www.dksassociates.com

DESIGNED BY:	ANM
DRAFTED BY:	DKS CAD
DATE:	JAN 2013

ADAMS AVENUE NORTH
TRAFFIC SIGNAL PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	15-2

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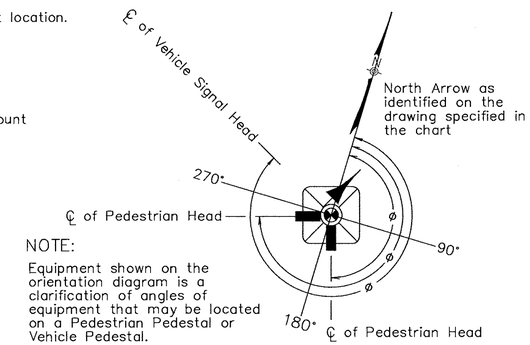
POLE ENRANCE CHART

See ODOT archived drawings TM631 and TM632			EQUIPMENT ON POLE						EQUIPMENT ON MAST ARM (Length in Feet and Equipment Type)										FOUNDATION INFORMATION (See ODOT Archived Standard Drg. TM631 Thru TM632, and HHPR foundation verification memo 5/3/12)		LUMINAIRES				FIXTURE	
POLE NO.	DWG. NO.	TYPE	PED. SIGNAL DEG.	PED. PUSHBUTTON DEG.	TERM. CABINET DEG.	SIGN DEG.	TRAFFIC SIGNAL DEG.	PHOTO ELECTRIC CELL	ARM LENGTH	D 1	D 2	D 3	D 4	D 5	D 6	D 7	D 8	D 9	FOUNDATION NUMBER	REQUIRED FOUNDATION DEPTH	ARM LENGTH	ARM DEG.	MOUNTING HEIGHT	TYPE	TYPE	# OF LED'S
1	15–2	PS	–	90	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–
2	15–2	MPL-X	0/270	–	180	–	–	–	55	*0.5 / FV	5.0 / F	10.0 / 6LX	15.0 / VC	20.0 / V2	30.0 / V2	42.0 / SNS	—	—	MPLX–SD	12'–0"	15	0	35	LED	M-C-III	120
3	15–2	PS	–	355	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–
4	15–2	MPL-X	–	–	180	–	–	–	55	1.0 / 6LX	0.5 / F	10.0 / VC	14.0 / V2	24.0 / V2	34.0 / SNS	—	—	—	MPLX–SD	12'–0"	15	0	35	LED	M-C-III	120
5	15–2	PP	89/175	355	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–
6	15–2	PS	–	270	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–
7	15–2	MPL-X	0	180	180	270	–	–	55	*0.5 / FV	0.5 / F	7.0 / VC	12.5 / 6LX	24.5 / V2	36.5 / V5	40.5 / SA	48.0 / SNS	—	MPLX–SD	12'–0"	15	0	35	LED	M-C-III	120
8	15–2	PP	182	0	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–
9	15–2	PS	–	2	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–
10	15–2	MPL-X	0/270	–	180	–	–	180	55	0.5 / 6LX	0.5 / F	7.5 / VC	13.5 / V2	27.5 / V5	31.5 / SA	43.5 / SNS	—	—	MPLX–SD	12'–0"	15	0	35	LED	M-C-III	120
11	15–2	PP	–	270	–	–	–	–	–	—	—	—	—	—	—	—	—	—			–	–	–	–	–	–

NOTES:

Blanks in the chart shown indicate no equipment at that location.

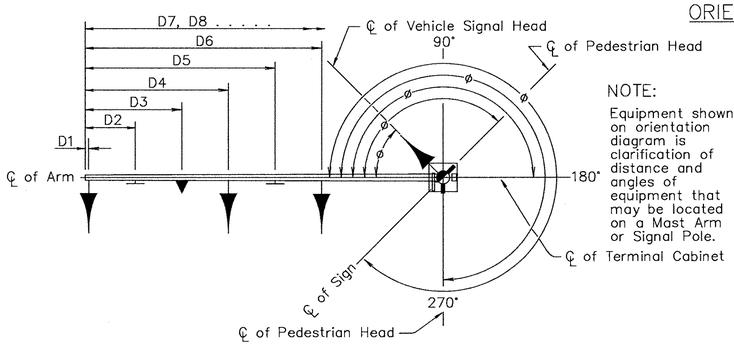
V2 = Traffic signal type 2, Adjustable Bracket mount
V3L = Traffic signal type 3L, Adjustable Bracket mount
V5 = Traffic signal type 5, Adjustable Bracket mount
V6L = Traffic signal type 6L, Adjustable Bracket mount
FV = Future V3L Signal Head
SA = Aluminum sign 30"x36" w/ adjustable bracket mount
SNS = Street name sign w/ adjustable bracket mount
F = Fire preemption
VC = Video Camera
* = For future use
FG = Flat Glass
MPLX–SD = Special Design Foundation



NOTE:

Equipment shown on the orientation diagram is a clarification of angles of equipment that may be located on a Pedestrian Pedestal or Vehicle Pedestal.

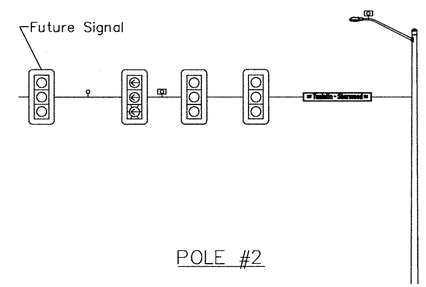
PEDESTRIAN PEDESTAL/VEHICLE PEDESTAL ORIENTATION DIAGRAM



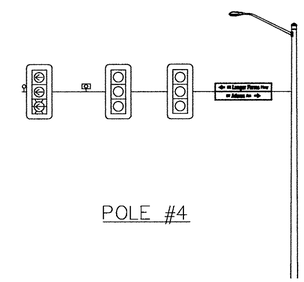
NOTE:

Equipment shown on orientation diagram is clarification of distance and angles of equipment that may be located on a Mast Arm or Signal Pole.

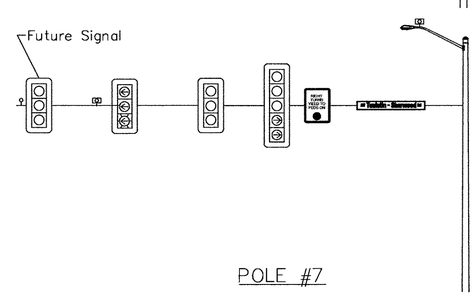
MAST ARM POLE ORIENTATION DIAGRAM



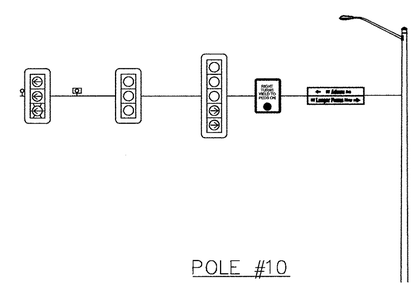
POLE #2



POLE #4



POLE #7



POLE #10

WASH. CO. CASE FILE 08-904

APPROVED PLANS
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JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 58,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2014

DKS
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Salem, Oregon 97301
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www.dksassociates.com

ROADWAY PLANS & DETAILS

DESIGNED BY:	ANM
DRAFTED BY:	DKS CAD
DATE:	JAN 2013

ADAMS AVENUE NORTH
TRAFFIC SIGNAL PLAN DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	15-3

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APPROVED PLANS
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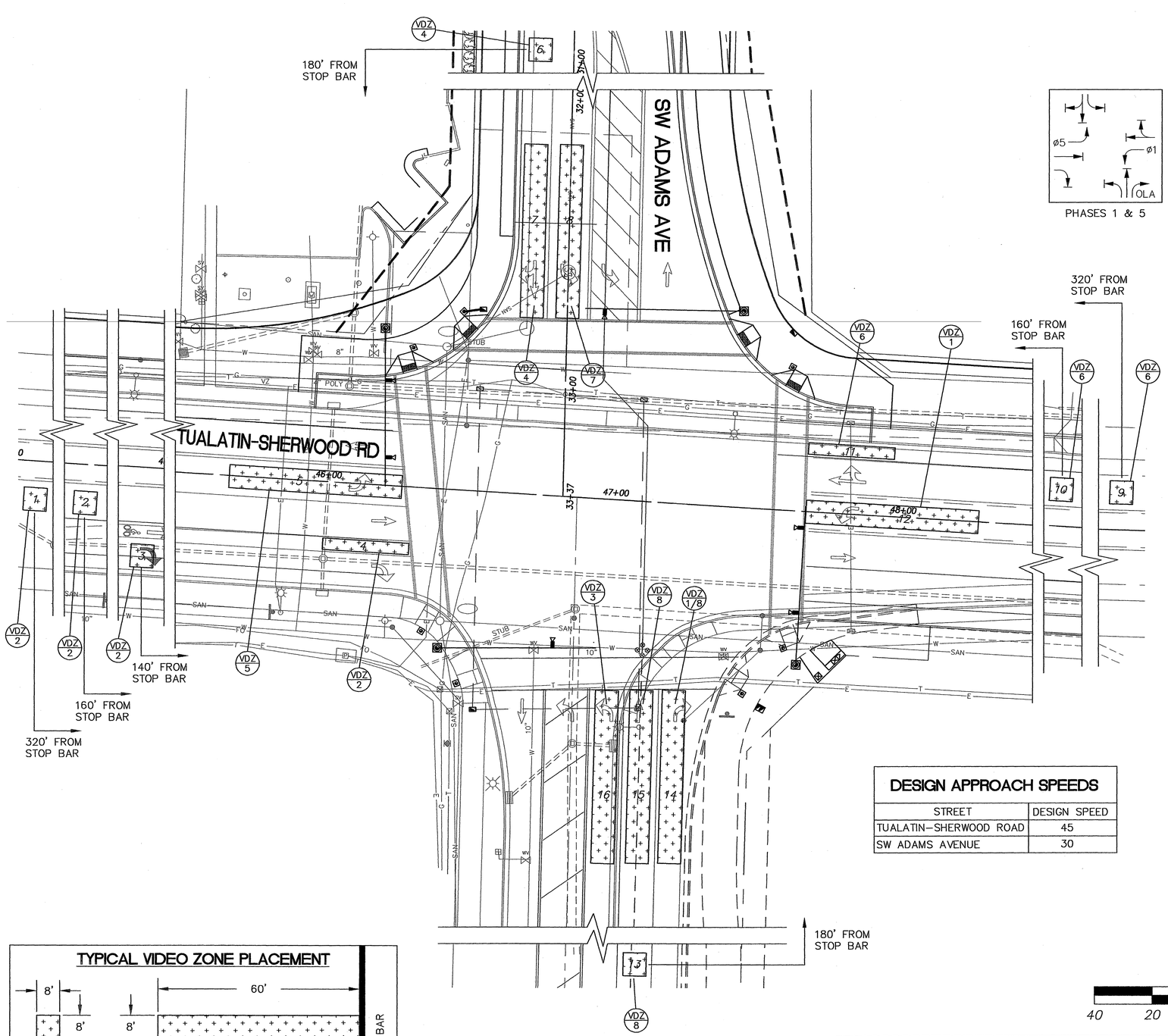
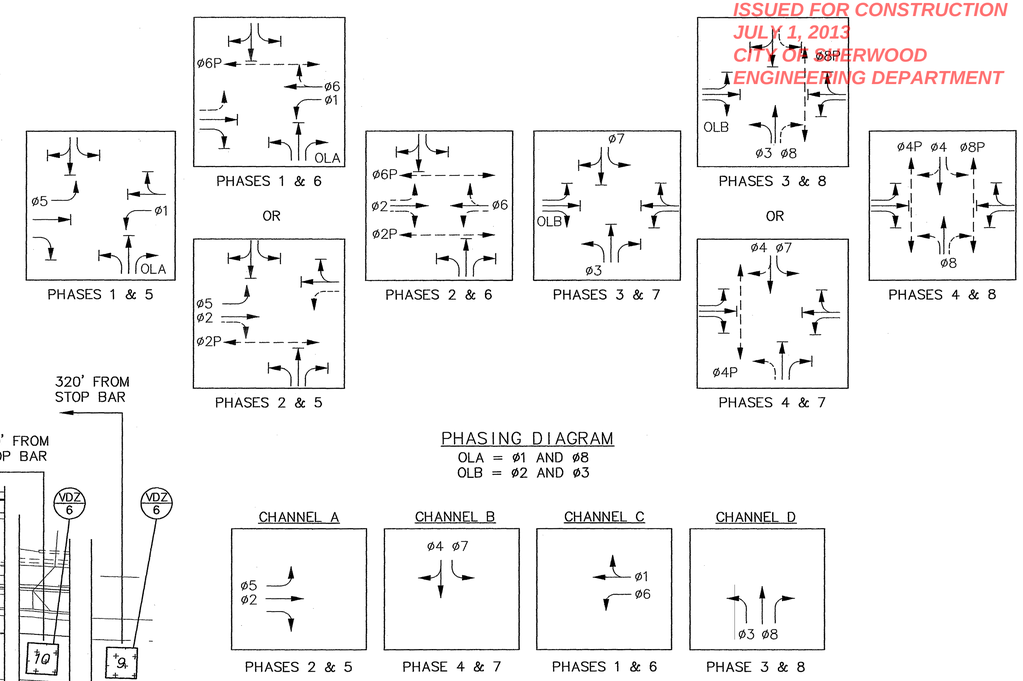
CITY OF SHERWOOD
ENGINEERING DEPARTMENT





FIRE PRE-EMPTION OPERATION

Detection Zone	Camera No.	Distance Feet	Phase	Slot	2070 Detector #
1	6	320	2	I2U	VD 9
2	6	160	2	I2L	VD 10
3	6	140	2	I3U	VD 11
4	5	30*	2	I3L	VD 12
5	5	60*	5	J1U	VD 5
6	1	180	4	I6L	VD 15
7	1	60*	4	I7U	VD 16
8	1	60*	7	J5U	VD 7
9	3	320	6	J2U	VD 19
10	3	160	6	J2L	VD 20
11	2	30*	6	J3U	VD 21
12	2	60*	1	I1U	VD 1
13	4	180	8	J6L	VD 25
14	4	60*	8	J7U	VD 26
15	4	60*	8	J7L	VD 27
16	4	60*	3	I5U	VD 3

Controller Cabinet

DESIGN APPROACH SPEEDS

STREET	DESIGN SPEED
TUALATIN-SHERWOOD ROAD	45
SW ADAMS AVENUE	30

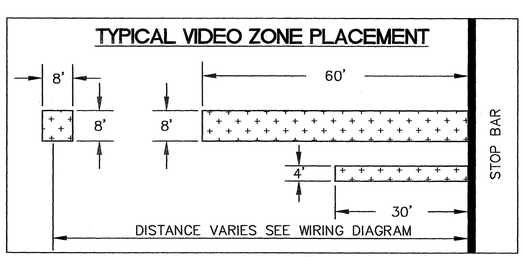
LOOP DETECTOR WIRING DIAGRAM

"DISTANCE" IS FROM CROSSWALK TO CENTER OF LOOP IN FEET.
* "DISTANCE" IS FROM CROSSWALK TO BACK OF LOOP IN FEET.

N

40 20 0 40

TYPICAL VIDEO ZONE PLACEMENT



GENERAL NOTES

1. COORDINATE INSTALLATION OF VIDEO DETECTION ZONES WITH KEVIN ELLINGTON (503) 846-7959.

WASH. CO. CASE FILE 08-904

City of Sherwood Oregon
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Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
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Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 06,267 OREGON JULY 9, 2002 SCOTT M. MANSUR
EXPIRES: DEC. 31, 2012

DKS
117 Commercial St. NE, Suite 310
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www.dksassociates.com

ROADWAY PLANS & DETAILS

DESIGNED BY:	DRAFTED BY:	DATE:
NNS	DKS CAD	MAY 2012

ADAMS AVENUE NORTH
DETECTOR PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	15-4

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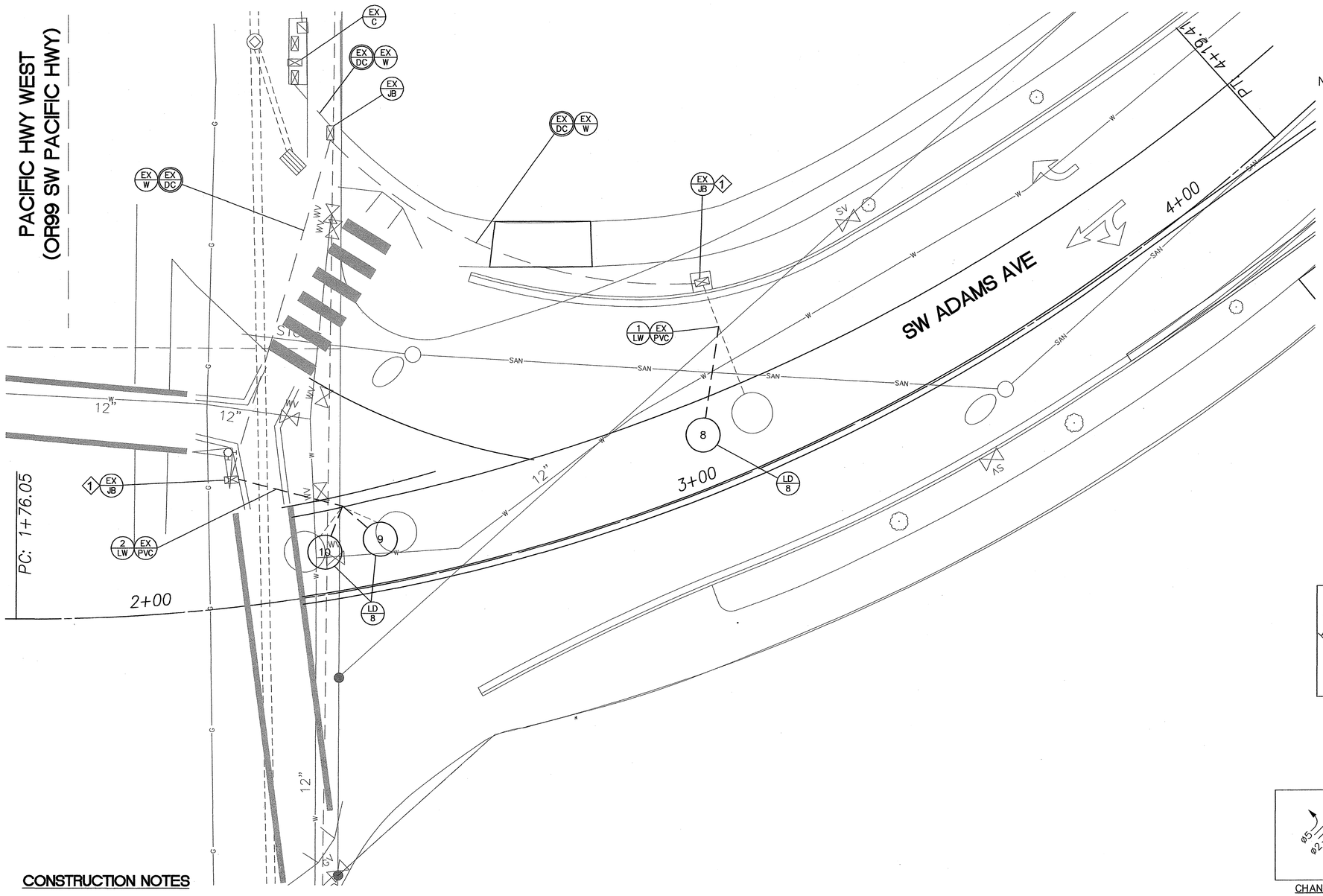

APPROVED PLANS
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JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

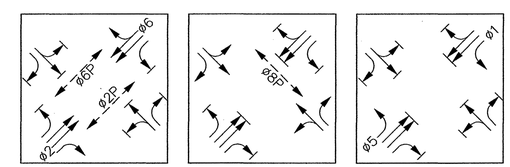
DETECTION PLAN
SW PACIFIC HWY AT SW ADAMS AVE.
OR 99W: M.P. 14.58

Loop Number	Distance Feet	Phase	Function	Slot	
1	EX	6	E,C,CO	J2U	
2	EX	6	E,C,CO	J2L	
3	EX	6	E,C,CO	J3U	
4	EX				
5	EX	1	E,C,CO	I1	Controller Cabinet
6	EX	1	E,C	I9U	
7	EX				
8	75	8	E,C,CO	J6U	
9	15	8	E,C	J6L	
10	5				
11	EX	2	E,C,CO	I2U	
12	EX	2	E,C,CO	I2L	
13	EX	2	E,C	I3U	
14	EX				
15	EX	2	E,C,CO	I3L	
16	EX	2	E,C	I4	Transfer to I3U
17	EX	5	E,C,CO	J1U	
18	EX	5	E,C	J9U	
19	EX				
20	EX	4	E,C	I7U	
21	EX				
22	EX	4	E,C	I7L	Transfer to J8
23	EX				
24	EX	4	E,C	I6U	
25	EX	4	E,C	I6L	

C=Call, S=Series, E=Extension, D=Delay, CO=Carry Over, EX=Existing

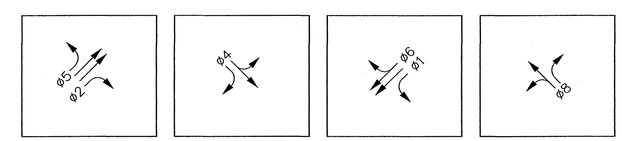
LOOP DETECTOR WIRING DIAGRAM

"Distance" is from crosswalk to center of loop in feet.



PHASES 2 & 6 PHASES 4 & 8 PHASES 1 & 5

PHASING DIAGRAM



CHANNEL A CHANNEL B CHANNEL C CHANNEL D

FIRE PRE-EMPTION OPERATION

CONSTRUCTION NOTES

1. SPLICE EXISTING LOOP FEEDER CABLES TO NEW LOOP WIRES IN EXISTING JUNCTION BOX.

LEGEND

- EX C — RETAIN AND PROTECT EXISTING CONTROLLER.
- EX JB — RETAIN AND PROTECT EXISTING JUNCTION BOX.
- EX PVC — RETAIN AND PROTECT EXISTING PVC CONDUIT SLEEVE STREET ENTRANCE WITH CONDUIT TO JUNCTION BOX.
- EX DC — RETAIN AND PROTECT EXISTING DETECTOR CONDUIT.
- N LW — INSTALL (N=NUMBER) PAIR OF LOOP WIRES.
- LD Ph — INSTALL PHASE (Ph=PHASE) 6' ROUND OR 4' DIAMOND VEHICLE DETECTOR LOOP.

N

20 10 0 20

WASH. CO. CASE FILE 08-904

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EXPIRES: DEC. 31, 2012

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ROADWAY PLANS & DETAILS

DESIGNED BY:	NNS
DRAFTED BY:	DKS CAD
DATE:	MAY 2012

ADAMS AVENUE NORTH
LOOP DETECTOR PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	15-5

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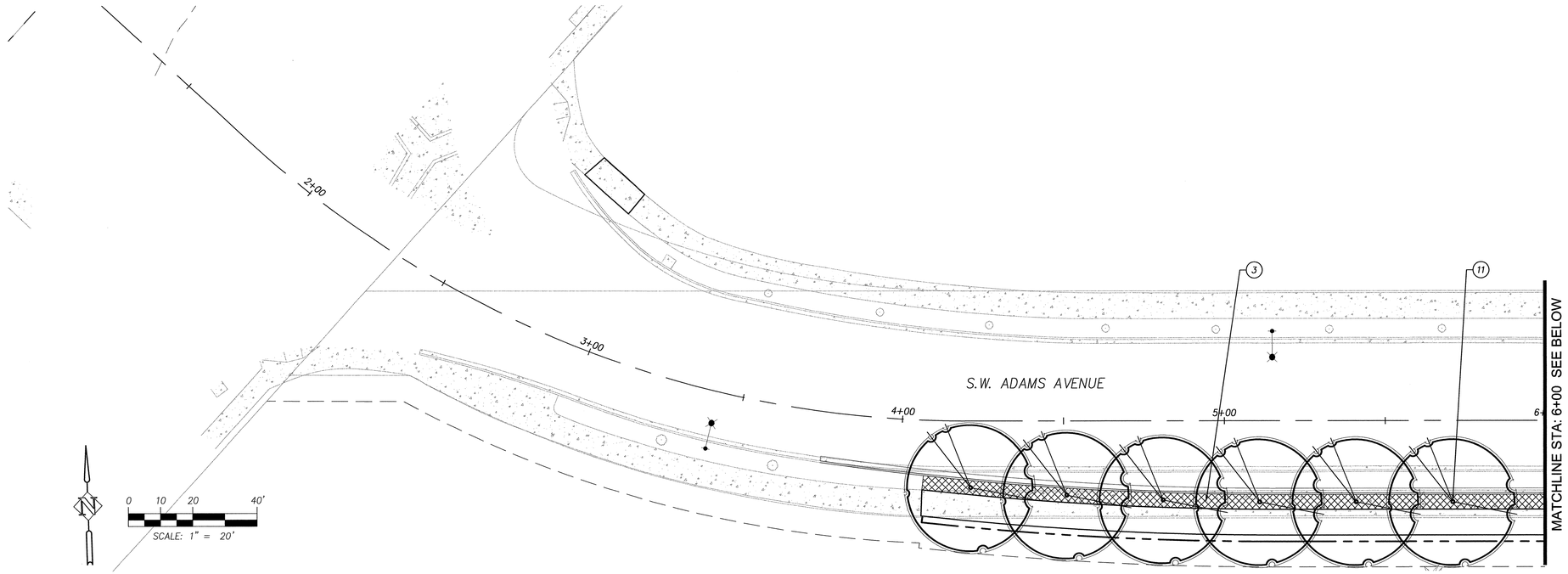


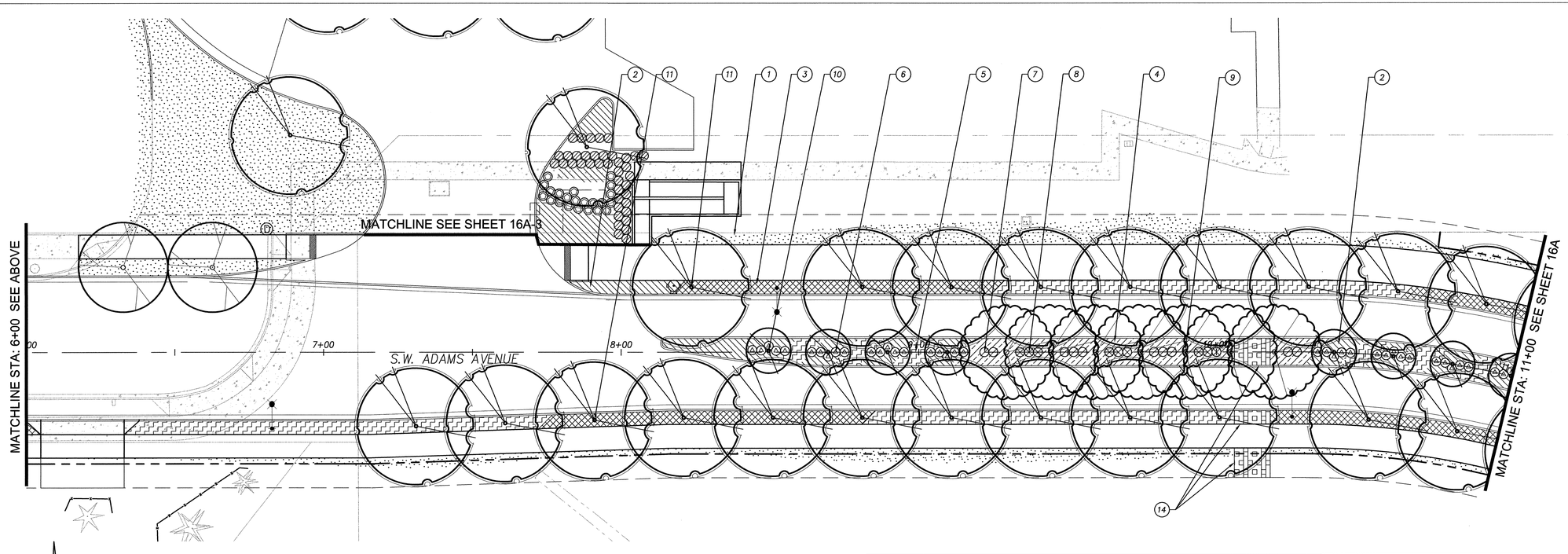
CONSTRUCTION NOTES

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

1. SEED ALL DISTURBED AREAS, INSTALL SEED MIX NO.1
2. INSTALL ARCTOSTAPHYLOS UVA-URSI
3. INSTALL FRAGARIA CHILOENSIS
4. INSTALL JUNIPERUS HORIZONTALIS 'WILTONI'
5. INSTALL MAHONIA REPENS
6. INSTALL BERBERIS THUNBERGII VAR. ATROPURPREA 'CRIMSON PYGMY'
7. INSTALL MAHONIA NERVOSA
8. INSTALL NANDINA DOMESTICA 'MOONBAY'
9. INSTALL FRAXINUS EXCELSIOR 'GLOBOSA'
10. INSTALL PYRUS CALLERYANA 'CLEVELAND SELECT'
11. INSTALL ACER RUBRUM 'RED SUNSET'
14. INSTALL 'TURFSTONE' PAVERS AND SEED MIX NO. 1

NOTES

1. SEE SHEET 16A-5 FOR PLANTING SCHEDULE AND NOTES
2. SEE SHEETS IN 12 SERIES FOR UTILITY LOCATIONS
3. SEE SHEET 17 FOR PUBLIC ROW IRRIGATION SYSTEM



FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

PLANTING PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

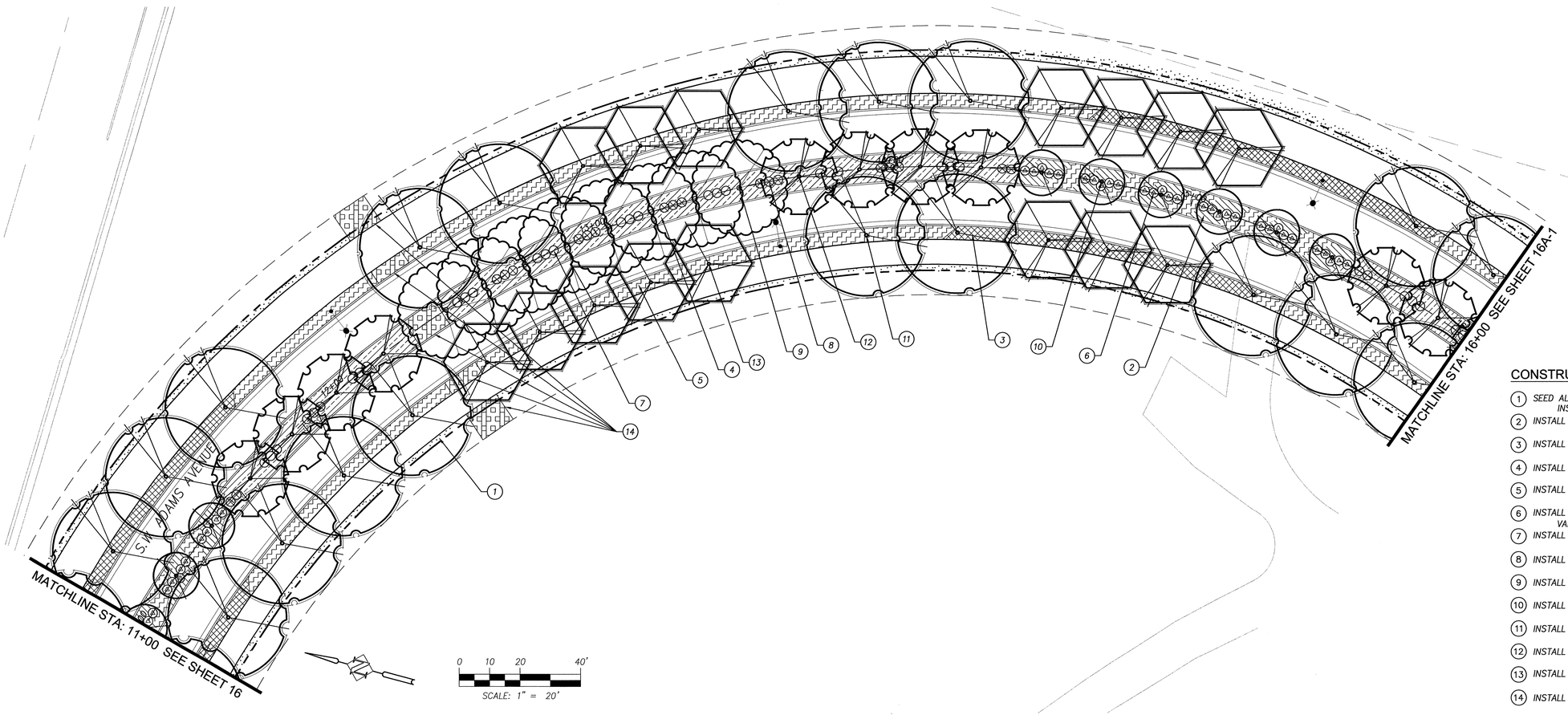
DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
PLANTING PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-16.0.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

1. SEED ALL DISTURBED AREAS, INSTALL SEED MIX NO.1
2. INSTALL ARCTOSTAPHYLOS UVA–URSI
3. INSTALL FRAGARIA CHILOENSIS
4. INSTALL JUNIPERUS HORIZONTALIS 'WILTONI'
5. INSTALL MAHONIA REPENS
6. INSTALL BERBERIS THUNBERGII VAR. ATROPURPREA 'CRIMSON PYGMY'
7. INSTALL MAHONIA NERVOSA
8. INSTALL NANDINA DOMESTICA 'MOONBAY'
9. INSTALL FRAXINUS EXCELSIOR 'GLOBOSA'
10. INSTALL PYRUS CALLERYANA 'CLEVELAND SELECT'
11. INSTALL ACER RUBRUM 'RED SUNSET'
12. INSTALL FRAXINUS OXYCARPA 'FLAME'
13. INSTALL CERCIS CANADENSIS
14. INSTALL 'TURFSTONE' PAVERS AND SEED MIX NO. 1

NOTES

1. SEE SHEET 16A–5 FOR PLANTING SCHEDULE AND NOTES
2. SEE SHEETS IN 12 SERIES FOR UTILITY LOCATIONS
3. SEE SHEET 17 FOR PUBLIC ROW IRRIGATION SYSTEM

FINAL DESIGN

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ADAMS AVENUE NORTH
PLANTING PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A

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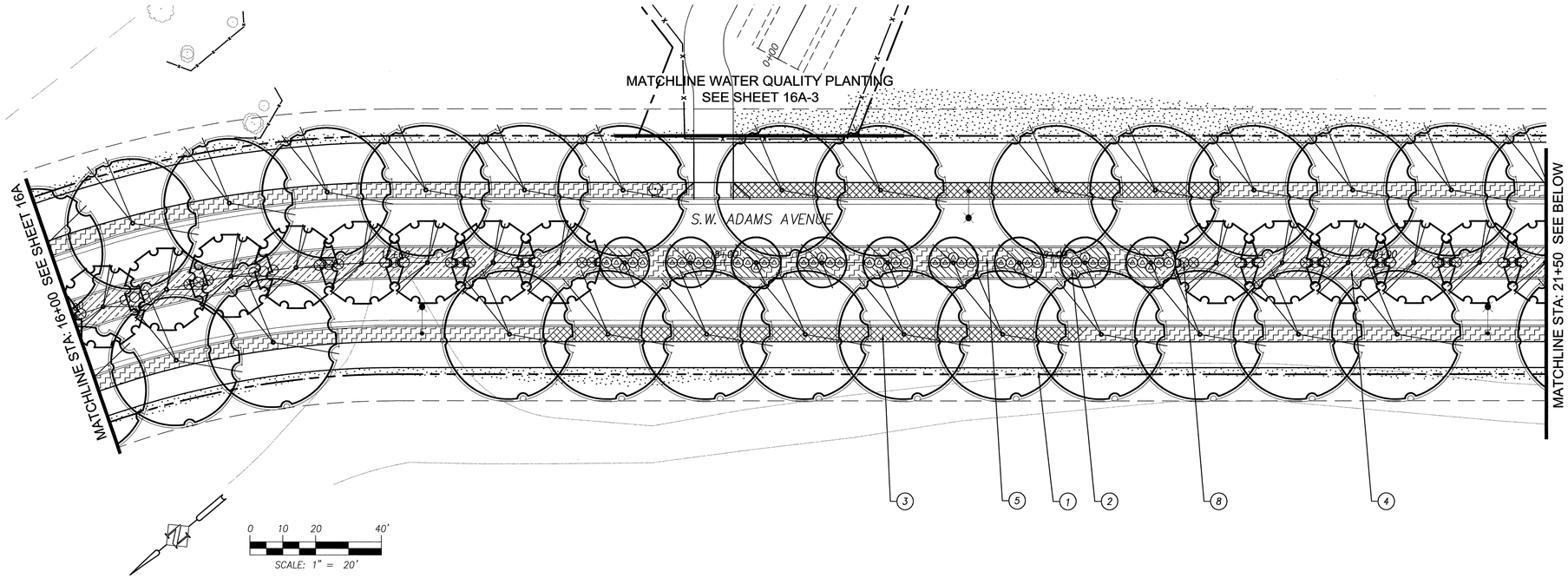

CONSTRUCTION NOTES

APPROVED PLANS
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JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

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NOTES

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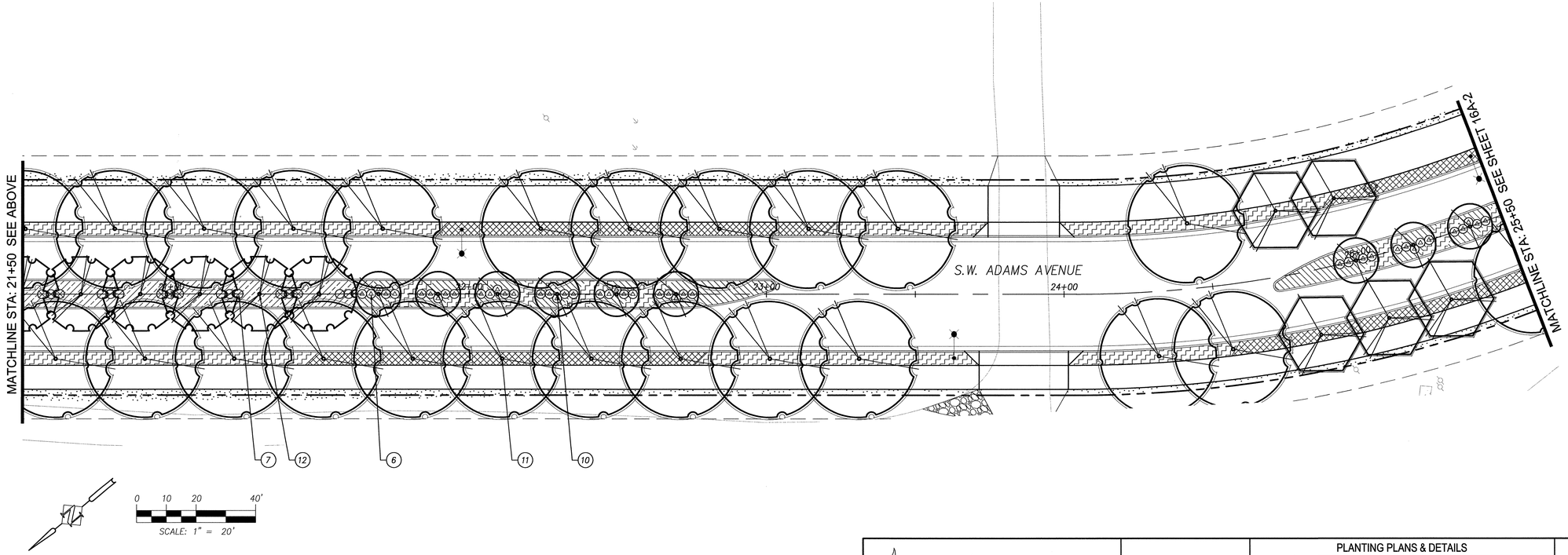

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ADAMS AVENUE NORTH
PLANTING PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-1

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APPROVED PLANS
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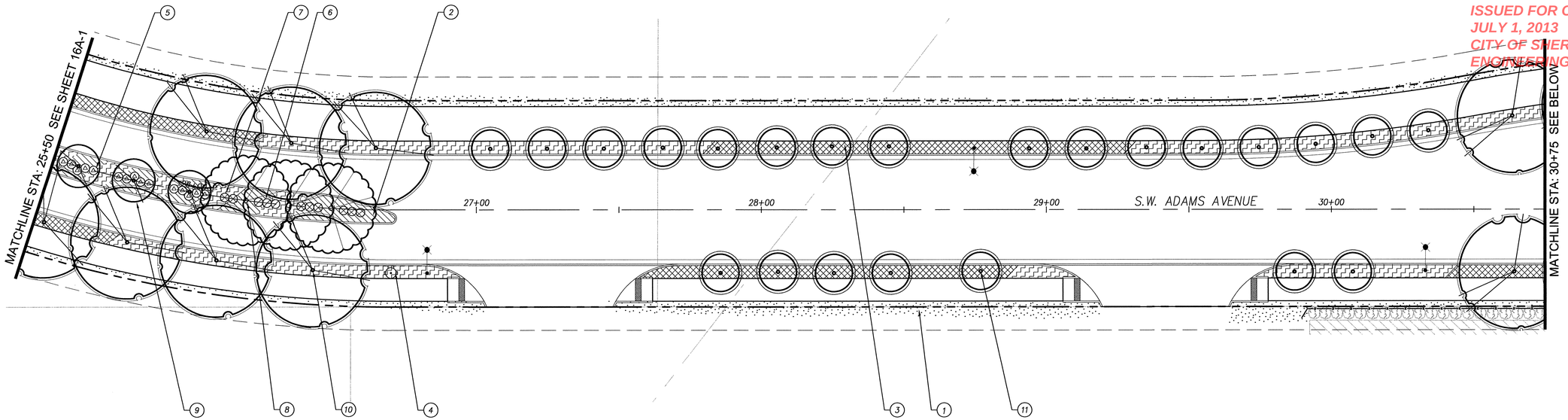
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



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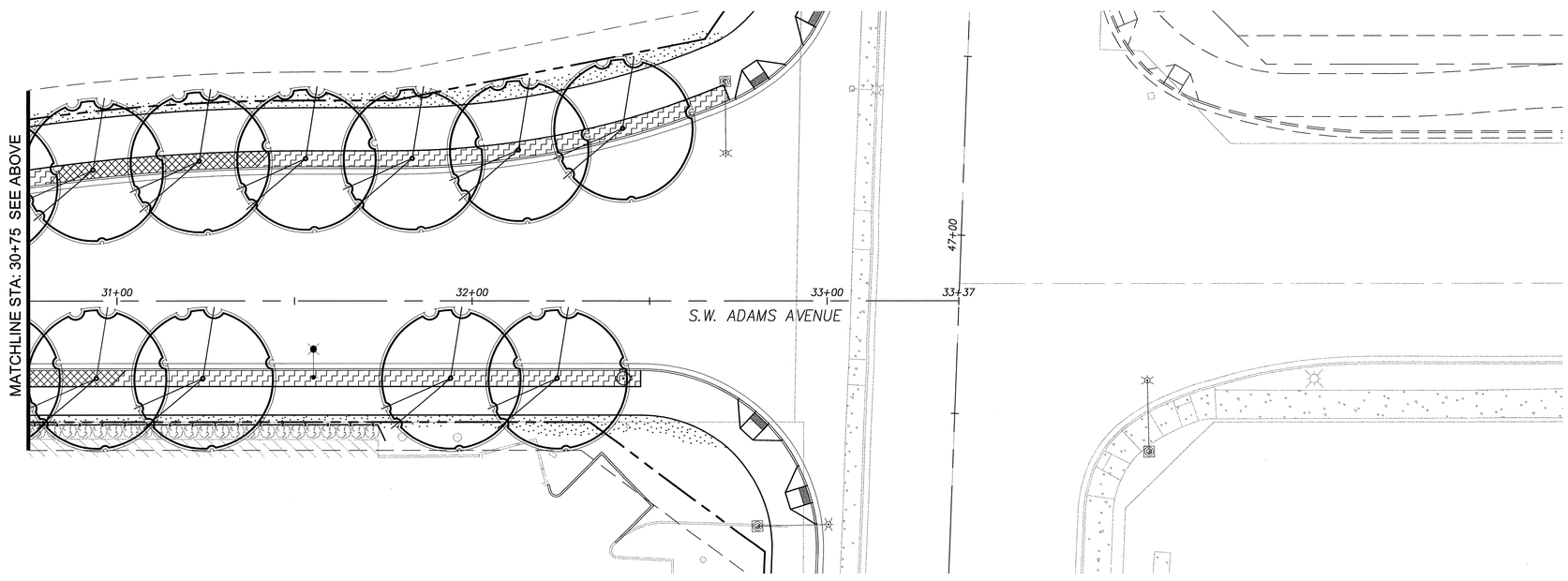

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8. INSTALL FRAXINUS EXCELSIOR 'GLOBOSA'
9. INSTALL PYRUS CALLERYANA 'CLEVELAND SELECT'
10. INSTALL ACER RUBRUM 'RED SUNSET'
11. INSTALL ACER CIRCINATUM 'PACIFIC FIRE'

NOTES

1. SEE SHEET 16A–5 FOR PLANTING SCHEDULE AND NOTES
2. SEE SHEETS IN 12 SERIES FOR UTILITY LOCATIONS
3. SEE SHEET 17 FOR PUBLIC ROW IRRIGATION SYSTEM

FINAL DESIGN

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Home of the Tualatin River National Wildlife Refuge

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Sherwood, Oregon 97140
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REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

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PLANTING PLANS & DETAILS

DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
PLANTING PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-2

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APPROVED PLANS
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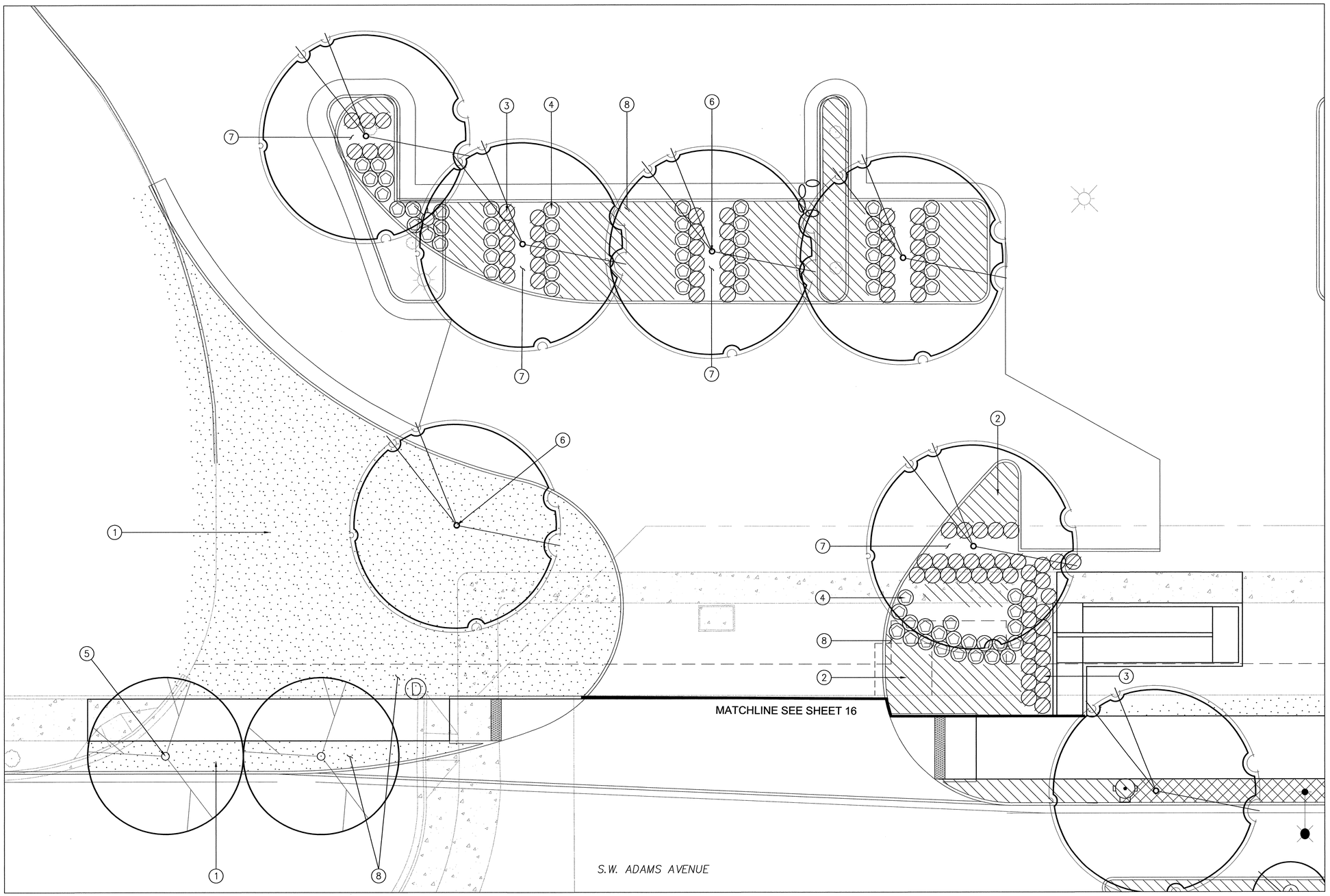
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



CONSTRUCTION NOTES

1. SEED ALL DISTURBED AREAS, INSTALL SEED MIX NO.1
2. INSTALL ARCTOSTAPHYLOS UVA–URSI
3. INSTALL SPIRAEA JAPONICA 'GOLDFLAME'
4. INSTALL BERBERIS THUNBERGII 'KOBOLD'
5. INSTALL LIRIODENDRON TULIPIFERA
6. INSTALL ACER RUBRUM 'RED SUNSET'
7. INSTALL BARK MULCH ONLY
8. PROTECT AND REPAIR EXISTING IRRIGATION AND INSTALL NEW EQUIPMENT IN PARKING ISLANDS. TIE TO EXISTING HOME DEPOT IRRIGATION SYSTEM

NOTES

1. SEE SHEET 16A–5 FOR PLANTING SCHEDULE AND NOTES
2. SEE SHEETS IN 12 SERIES FOR UTILITY LOCATIONS
3. SEE SHEET 17 FOR PUBLIC ROW IRRIGATION SYSTEM

0 5 10 20
SCALE: 1" = 10'

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Sherwood, Oregon 97140
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REGISTERED 6726 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

PLANTING PLANS & DETAILS

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ADAMS AVENUE NORTH
PLANTING PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-3

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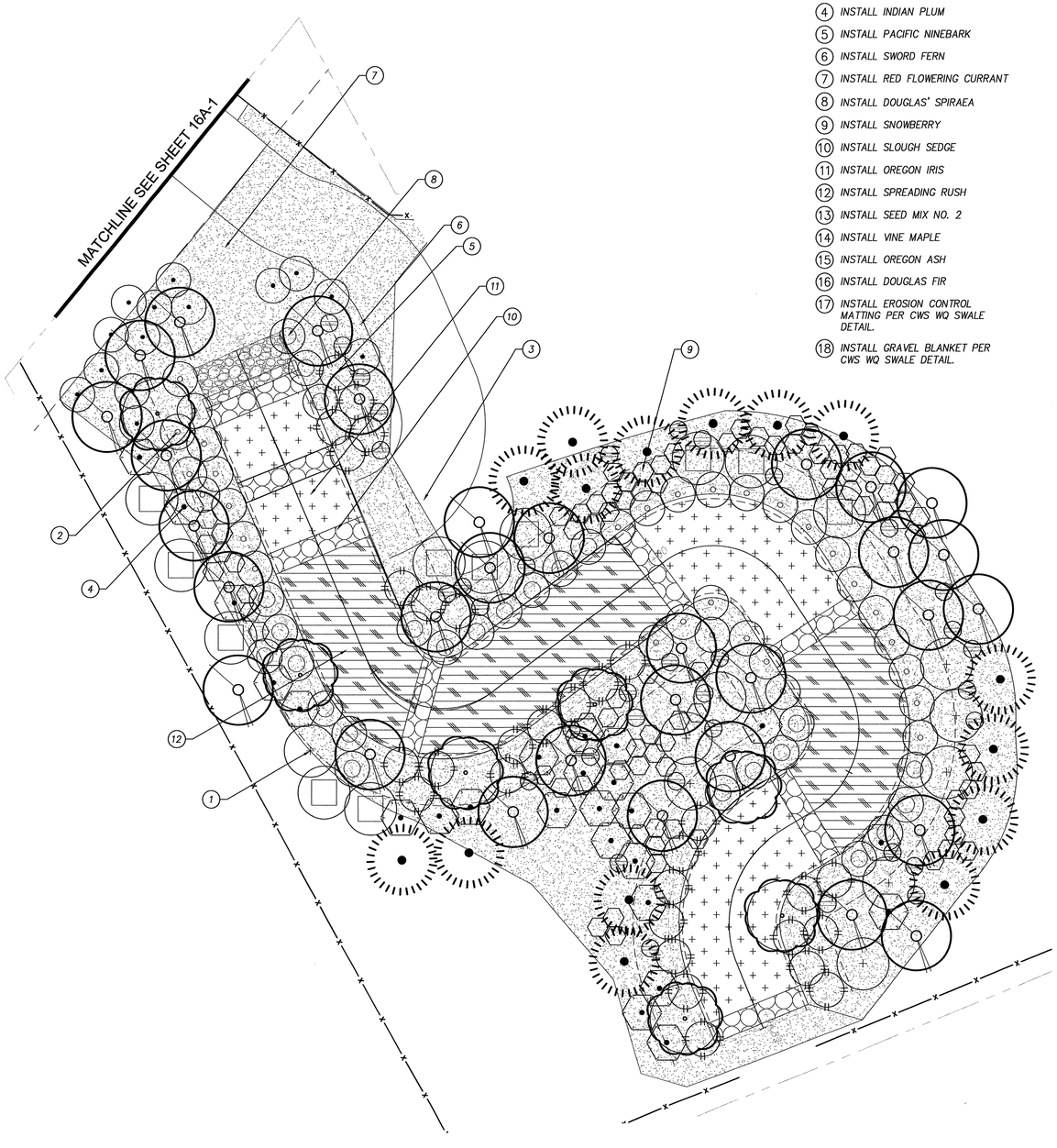
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

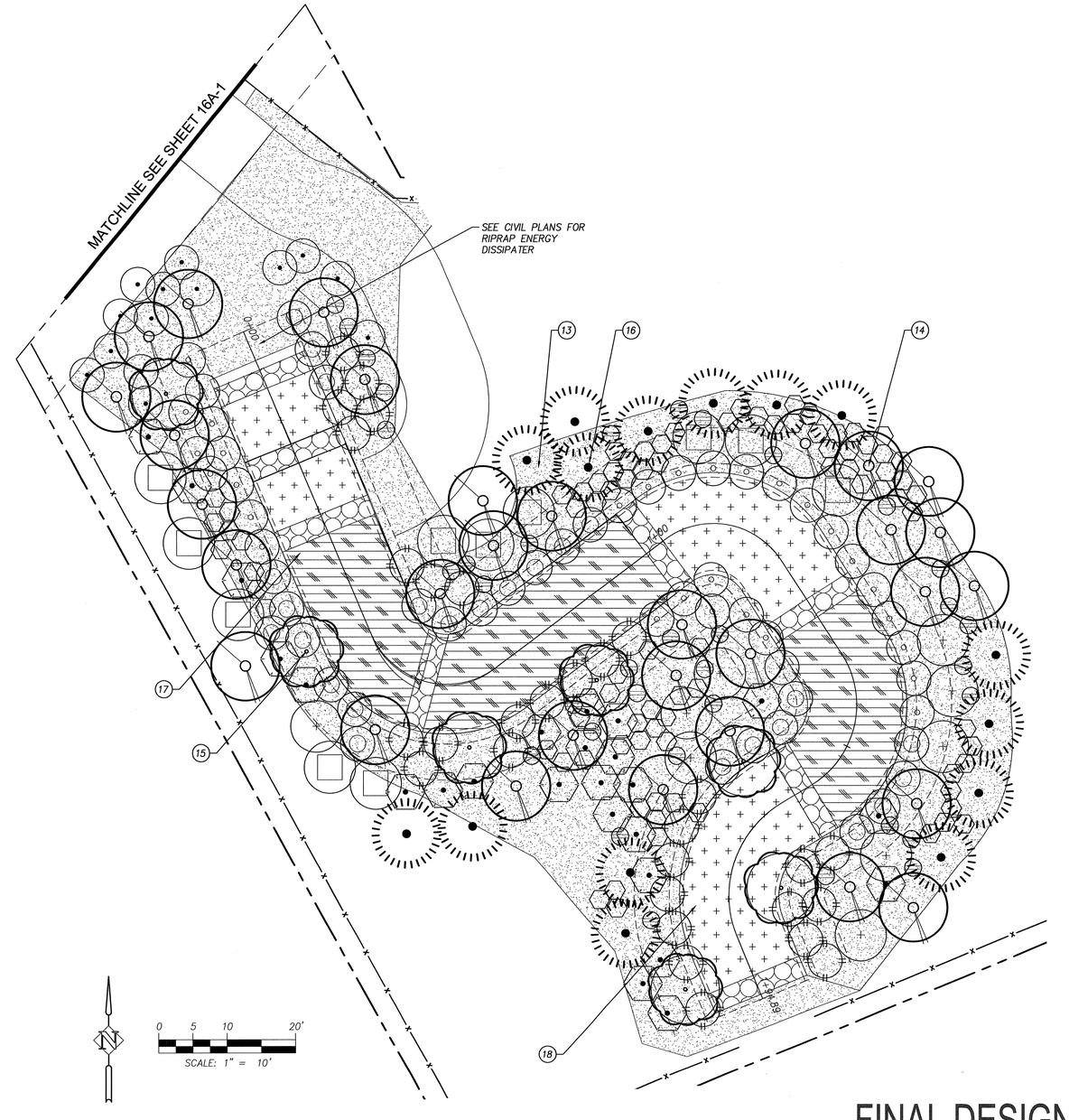
CONSTRUCTION NOTES

1. INSTALL WESTERN SERVICEBERRY
2. INSTALL RED OZIER DOGWOOD
3. INSTALL OCEANSPRAY
4. INSTALL INDIAN PLUM
5. INSTALL PACIFIC NINEBARK
6. INSTALL SWORD FERN
7. INSTALL RED FLOWERING CURRANT
8. INSTALL DOUGLAS' SPIRAEA
9. INSTALL SNOWBERRY
10. INSTALL SLOUGH SEDGE
11. INSTALL OREGON IRIS
12. INSTALL SPREADING RUSH
13. INSTALL SEED MIX NO. 2
14. INSTALL VINE MAPLE
15. INSTALL OREGON ASH
16. INSTALL DOUGLAS FIR
17. INSTALL EROSION CONTROL MATTING PER CWS WQ SWALE DETAIL.
18. INSTALL GRAVEL BLANKET PER CWS WQ SWALE DETAIL.

NOTES

1. SEE SHEET 16A-5 FOR PLANTING SCHEDULE AND NOTES.
2. SEE SHEET 16A-7 FOR CWS WQ SWALE DETAIL.





0 5 10 20'
SCALE: 1" = 10'

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Home of the Tualatin River National Wildlife Refuge

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REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

PLANTING PLANS & DETAILS

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DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
WQ PLANTING PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-4

N:\SHR (City of Sherwood)\SHR-08(Adams Ave)\SHR08-DWGS\SHEETS\ SHR08-16.0.dwg

PLANT LEGEND (Water Quality Swale)

TREES

		1 16A-5	2 16A-5	3 16A-5	4 16A-5	8 16A-5
31	ACER CIRCINATUM					
3 GAL.	VINE MAPLE; CONT.; MULTI-TRUNKED					
7	FRAXINUS LATIFOLIA					
3 GAL.	OREGON ASH: CONT.; WELL BRANCHED					
15	PSEUDOTSUGA MENZIESII					
5-6'	DOUGLAS FIR; CONT.					

SHRUBS

		5 16A-5	7 16A-5	2 16A-6
9	AMELANCHIER ALNIFOLIA			
1 GAL.	WESTERN SERVICEBERRY			
31	CORNUS SERICEA			
1 GAL	RED-OZIER DOGWOOD			
11	HOLODISCUS DISCOLOR			
1 GAL.	OCEANSPRAY			
25	OEMLERIA CERASIFORMIS			
1 GAL.	INDIAN PLUM			
30	PHYSOCARPUS CAPITATUS			
1 GAL.	PACIFIC NINEBARK			
35	POLYSTICHUM MUNITUM			
1 GAL.	SWORD FERN			
14	RIBES SANGUINEUM			
3 GAL.	RED FLOWERING CURRANT			
25	SPIRAEA DOUGLASII			
1 GAL.	DOUGLAS' SPIRAEA			
85	SYMPHORICARPOS ALBA			
2 GAL.	SNOWBERRY			

HERBACEOUS

		6 16A-5	7 16A-5	1 16A-6	2 16A-6
360	CAREX OBNUPTA				
CONT.	SLOUGH SEDGE; 12" O.C., 1 GAL				
1,090	IRIS TENAX				
CONT.	OREGON IRIS; 12" O.C., 1 GAL				
1,360	JUNCUS PATENS				
CONT.	SPREADING RUSH; 12" O.C., 1 GAL				

SEEDING

			LBS OF PLS/
0.14 AC	SEED MIX 2 (WQ Slopes)	% PLS	ACRE
	Agrostis oregonensis	20	0.56
	Bromus carinatus	30	31.76
	Elymus glaucus	25	24.06
	Festuca rubra var rubra	25	10.76
		TOTAL	67.18

PLANT SCHEDULE

TREES

		1 16A-5	3 16A-5	4 16A-5	8 16A-5
23	Acer circinatum 'Pacific Fire'				
4" Ti	Pacific Fire Vine Maple				
	CONT., SPACING AS SHOWN				
119	Acer rubrum 'Red Sunset'				
2" CAL	Red Sunset Maple				
	B&B, HEADED AT 6'-0", SPACING AS SHOWN				
20	Cercis canadensis				
2" CAL	Eastern Redbud				
	B&B, HEADED AT 6'-0", SPACING AS SHOWN				
18	Fraxinus excelsior 'Globosa'				
2" CAL	Globehead European Ash				
	B&B, HEADED AT 6'-0", SPACING AS SHOWN				
29	Fraxinus oxycarpa 'Flame'				
2" CAL	Flame Ash				
	B&B, HEADED AT 6'-0", SPACING AS SHOWN				
2	Liriodendron tulipifera				
2" CAL	Tulip Tree				
	B&B, HEADED AT 6'-0", SPACING AS SHOWN				
37	Pyrus calleryana 'Cleveland Select'				
2" CAL	Cleveland Select Flowering Pear				
	B&B, HEADED AT 6'-0", SPACING AS SHOWN				

SHRUBS

		5 16A-5	7 16A-5
VARIES	EXISTING SHRUB TO BE RETAINED		
185	Berberis thunbergii var. atropurpurea 'Crimson Pygmy'		
2 GAL	Red Japanese Barberry; FULL PLANTS, SPACING AS SHOWN		
69	Berberis thunbergii 'Kobold'		
2 GAL	Warty Barberry; FULL PLANTS, SPACING AS SHOWN		
72	Mahonia nervosa		
2 GAL	Cascade Mahonia; FULL PLANTS, SPACING AS SHOWN		
69	Nandina domestica 'Moonbay'		
2 GAL	Moonbay Heavenly Bamboo; FULL PLANTS, SPACING AS SHOWN		
80	Spirgea japonica 'Goldflame'		
2 GAL	Goldflame Spiraea; FULL PLANTS, SPACING AS SHOWN		

GROUNDCOVER

		6 16A-5	7 16A-5
3,744	Arctostaphylos uva-ursi		
1 GAL	Kinnikinnick; FULL PLANTS, SPACING 15" O.C.		
2,322	Fragaria chiloensis		
1 GAL	Wild Strawberry; FULL PLANTS, SPACING 24" O.C.		
470	Juniperus horizontalis 'Wiltonii'		
1 GAL	Blue Rug Juniper; FULL PLANTS, SPACING 4' O.C.		
2,326	Mahonia repens		
1 GAL	Creeping Mahonia; FULL PLANTS, SPACING AS 30" O.C.		

SEEDMIXES

			LBS OF PLA/
0.43 AC	SEED MIX 1 (LAWN AREAS)	% PLS	ACRE
	Festuca rubra 'Gibraltar'	40	14.05
	Festuca rubra 'Silhouette'	40	14.05
	Lolium perenee 'Delaware Dwarf'	10	35.75
	Lolium perenee 'Amazing'	10	17.32
		TOTAL	81.16

OTHER

631	GRASSPAVE
	SEED WITH SEED MIX 1

GENERAL PLANTING NOTES

APPROVED PLANS
ISSUED FOR CONSTRUCTION
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH: CURRENT CITY OF SHERWOOD STANDARDS AND THE STATE OF OREGON BUILDING AND SPECIALITY CODES.
2. INSTALL EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CITY OF SHERWOOD STANDARDS PRIOR TO SITE WORK AND LANDSCAPE INSTALLATION.
3. MARK AND PROTECT ALL UTILITIES, SITE FEATURES, AND VEGETATION TO REMAIN IN PLACE.
4. PRIOR TO PLANTING, ON-SITE AND IMPORTED TOPSOIL SHALL BE TESTED FOR SOIL FERTILITY BY A CERTIFIED TESTING LAB. IF NECESSARY, TOPSOIL FOR TREE PITS, SHRUB PITS, AND GROUND COVER BEDS SHALL BE AMENDED AS RECOMMENDED BY THE SOIL FERTILITY REPORT.
5. LANDSCAPE INSTALLATION SHALL INCLUDE PROVISION OF AN AUTOMATIC IRRITATION SYSTEM TO SUSTAIN LANDSCAPE PLANTINGS, MEETING LOCAL AND STATE BUILDING CODES.
6. PLANT MATERIAL INSTALLED SHALL CONFORM IN SIZE AND GRADE TO THE "AMERICAN STANDARD FOR NURSERY STOCK" CURRENT EDITION.
7. LANDSCAPE CONTRACTOR SHALL WATER PLANTINGS FOR THE DURATION OF ONE-YEAR WARRANTY PERIOD AFTER INSTALLATION AND GUARANTEE ALL PLANTINGS TO BE ALIVE AND IN SATISFACTORY HEALTH.
8. PLANTS SHALL BE INSPECTED AND APPROVED ON-SITE (BY OWNER OR OWNER'S REPRESENTATIVE) PRIOR TO PLANTING.

FINAL DESIGN

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REGISTERED 672 Scott W. Barker OREGON 06/19/08 LANDSCAPE ARCHITECT

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ADAMS AVENUE NORTH
PLANTING SCHEDULE & NOTES
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-5

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-16.0.dwg

APPROVED PLANS
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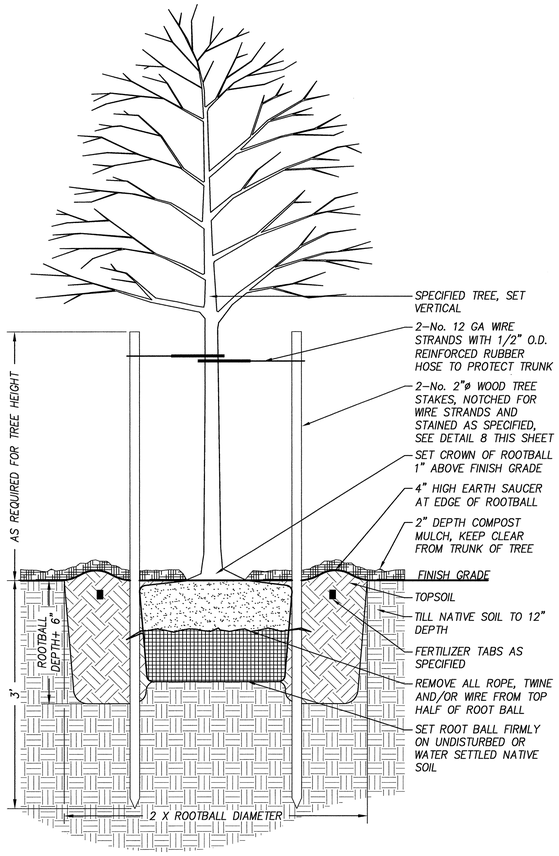
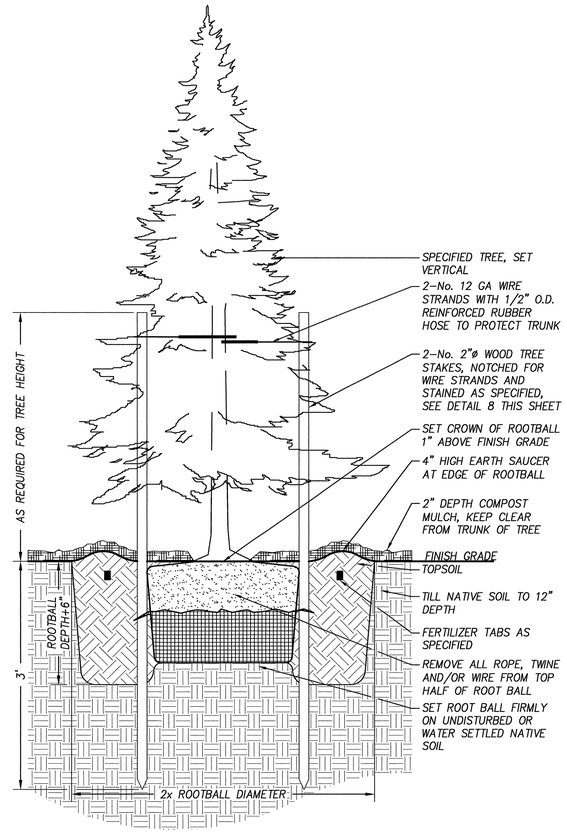
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

NOTES:

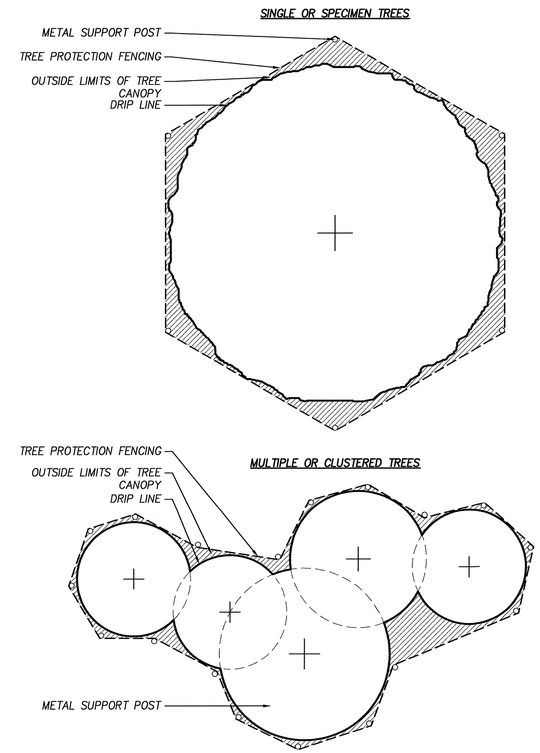
1. TREE PROTECTION SHALL BE A MINIMUM OF 6'-0" ORANGE PLASTIC MESH AND BE SECURED TO THE GROUND WITH 8'-0" METAL POSTS OR 6'-0" HIGH CHAIN LINK FENCE SUPPORTED BY CONCRETE BLOCKS.
2. TREE PROTECTION FENCING SHALL BE ERECTED OUTSIDE OF THE DRIP LINE ZONE PRIOR TO ANY CLEARING, GRADING OR OTHER CONSTRUCTION ACTIVITY. CONTRACTOR TO MAINTAIN TREE PROTECTION FENCING IN PLACE DURING CONSTRUCTION.



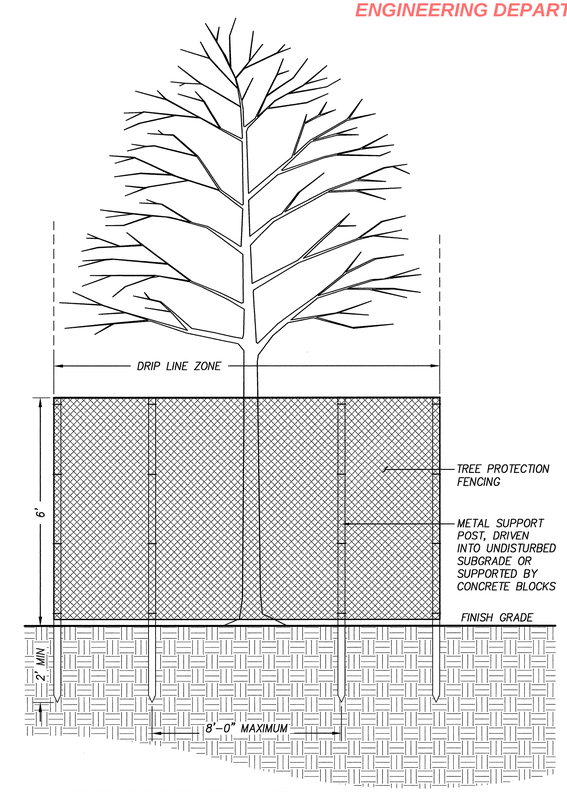
1 DECIDUOUS TREE PLANTING
Section
NOT TO SCALE



2 CONIFER TREE PLANTING
Section
NOT TO SCALE

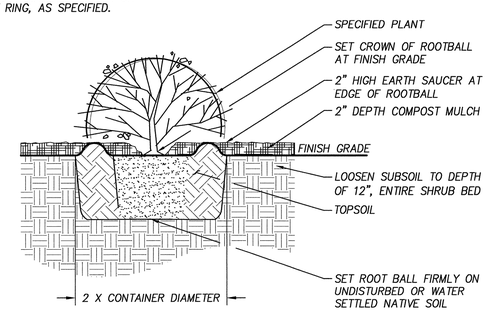


3 TREE PROTECTION FENCING
Plan
NOT TO SCALE

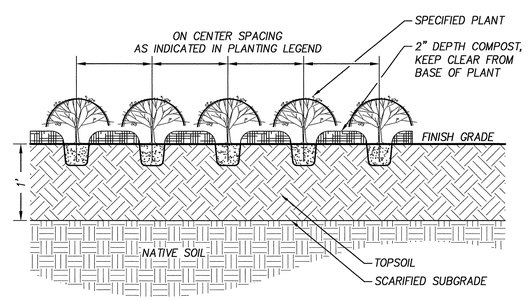


4 TREE PROTECTION FENCING
Section
NOT TO SCALE

NOTE:
PROVIDE 36" DIAMETER MULCH OR COMPOST RING, AS SPECIFIED.

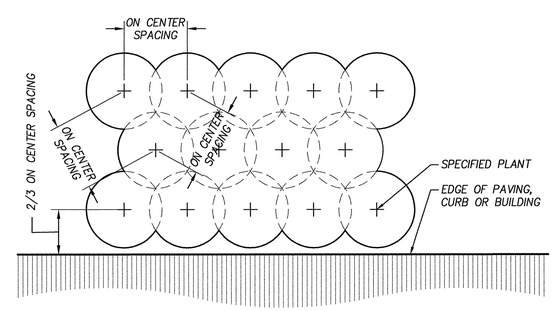


5 SHRUB PLANTING
Section
NOT TO SCALE



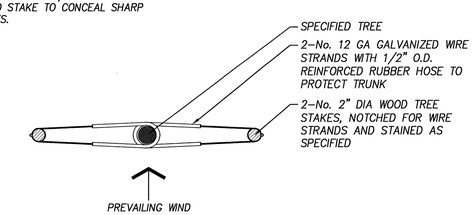
6 GROUND COVER PLANTING
Section
NOT TO SCALE

NOTE:
ON CENTER SPACING SHALL BE AS INDICATED IN PLANTING LEGEND.



7 TRIANGULAR SPACING
Section
NOT TO SCALE

NOTE:
TWICE WRAP WIRE STRAND AROUND NOTCHED STAKE AND TWIST ENDS TO SECURE (ALLOWING TRUNK TO MOVE 3" IN ALL DIRECTIONS). POUND TIE ENDS INTO STAKE TO CONCEAL SHARP WIRE EDGES.



8 TREE STAKING
Section
NOT TO SCALE

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

PLANTING PLANS & DETAILS

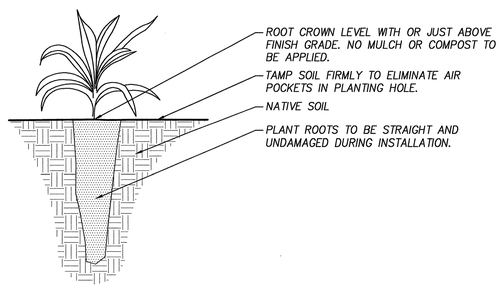
DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
PLANTING DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-6

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\SHR08-16.0.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

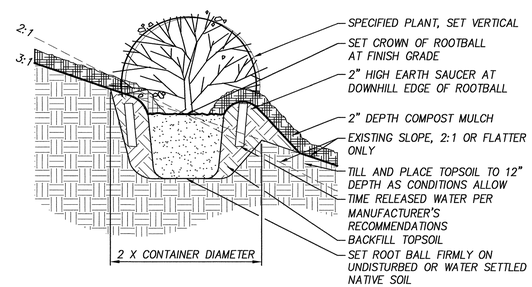


NOTE:
CREATE PLANTING HOLE BY DRIVING A STEEL SPIKE OR DIBBLE INTO THE GROUND AND WORKING BACK AND FORTH.

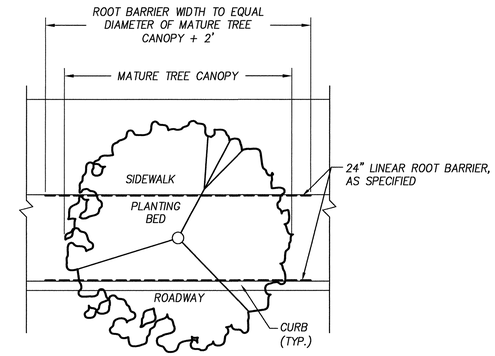
1 PLUG PLANTING
Section — NOT TO SCALE

NOTE:

1. PROVIDE 36" DIAMETER MULCH OR COMPOST RING, AS SPECIFIED.
2. REFER TO TREE PLANTING DETAILS FOR TREE PLANTING
3. SLOPE PROVIDED AS RUN:RISE

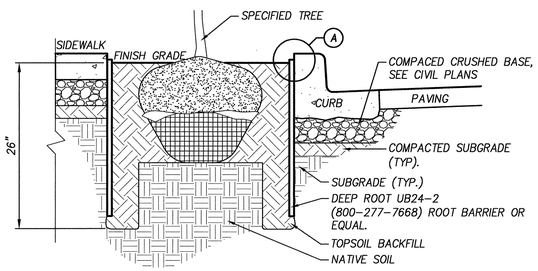


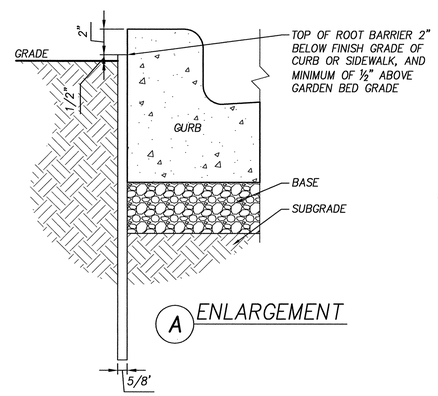
2 PLANTING ON SLOPE
Section — NOT TO SCALE



LINEAR ROOT BARRIER LAYOUT

3 TYPICAL ROOT BARRIER LAYOUT – ALL TREES NEAR PAVING
Plan — NOT TO SCALE



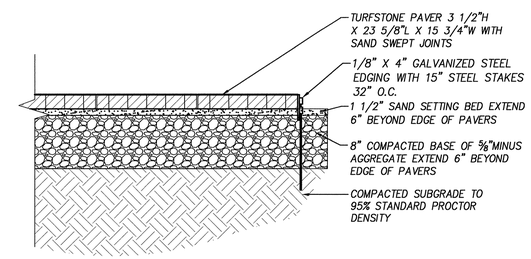


A ENLARGEMENT

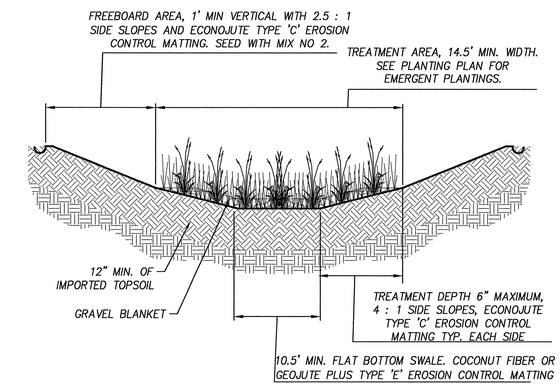
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. THE RAISED ROOT GUIDING RIBS MUST BE FACING TOWARDS THE TREE ROOTS.
3. THE TOP OF THE BARRIER PANELS MUST BE ½" ABOVE FINISHED GRADE.
4. POSITION BARRIER PANELS VERTICALLY WITH TOP AGAINST THE STRUCTURE TO BE PROTECTED.
5. SEE LANDSCAPE SITE PLAN TO DETERMINE TREES THAT REQUIRE BARRIER PANEL.

4 ROOT BARRIER
Section — NOT TO SCALE



5 TURFSTONE PAVER
Section — NOT TO SCALE



6 WATER QUALITY SWALE (CWS NO 700)
Section — NOT TO SCALE

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
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REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

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PLANTING PLANS & DETAILS

DESIGNED BY: SWB/KJO
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ADAMS AVENUE NORTH
PLANTING DETAILS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-7

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\SHR08-16.0.dwg

LANDSCAPE CONSTRUCTION SPECIFICATIONS

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
PLANNING DEPARTMENT

GENERAL

1. MUNICIPAL, COUNTY, STATE AND FEDERAL LAWS, REGARDING USES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THE WORK DEPICTED ON THESE PLANS ARE HEREBY INCORPORATED INTO AND MADE PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND SERVICES BEFORE COMMENCING WORK. THE LOCATION OF UTILITIES, STRUCTURES, SERVICES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES AND FEATURES ON AND ADJACENT TO THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ALL DAMAGE RESULTING FROM HIS OPERATIONS OR NEGLIGENCE.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY VALID LICENSES, PERMITS, AND INSURANCE REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE COMMENCING WORK, AND SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH ALL PARTIES INVOLVED, INCLUDING JURISDICTIONAL AGENCIES.
5. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PROTECT THE PUBLIC AT ALL TIMES DURING THE CONSTRUCTION PROCESS.
6. IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES, REGULATIONS, STRUCTURAL NOTES, AND/OR REQUIREMENTS, OR THE REFERENCED STANDARDS OF THESE SPECIFICATIONS, THE PROVISIONS OF THE MORE STRINGENT SHALL GOVERN.

MANDATORY SITE INSPECTION SCHEDULE

1. SCHEDULE FOR MANDATORY SITE INSPECTION PROCEDURES. THE MANDATORY SITE INSPECTIONS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

   PRE-CONSTRUCTION SITE MEETING – CONTRACTOR SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO MEETING TO REVIEW SITE CONDITIONS, PROPOSED CONSTRUCTION AND CONSTRUCTION SCHEDULE, AND REVIEW CONSTRUCTION SPECIFICATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS.

   ROUGH GRADING INSPECTION – CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE A MINIMUM 48 HOURS PRIOR TO REQUEST FOR INSPECTION OF ROUGH SOIL GRADES. ALL ROUGH GRADING OPERATIONS SHALL BE COMPLETED PER SPECIFICATIONS AND PREPARED FOR INSPECTION. NO TOPSOIL PLACEMENT OR BACKFILLING IN AREAS TO BE LANDSCAPED SHOULD OCCUR UNTIL WRITTEN APPROVAL BY OWNER'S REPRESENTATIVE HAS BEEN ISSUED.

   OPEN TRENCH IRRIGATION INSPECTION – CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE 24 HOURS PRIOR TO INSPECTION FOR WRITTEN APPROVAL OF IRRIGATION TRENCH DEPTHS, PIPING CONDITIONS, AND PRESSURE TESTING. (REFER TO IRRIGATION SPECIFICATION FOR INSPECTION PROCEDURES)

   PLANT MATERIAL INSPECTION – PLANT MATERIAL QUALITY AND LAYOUT INSPECTION AND WRITTEN APPROVAL SHALL OCCUR WITH 24 HOURS NOTICE TO OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF ANY PLANT MATERIAL. (REFER TO PLANTING SPECIFICATION FOR INSPECTION PROCEDURES)

   FINAL LANDSCAPE AREAS AND IRRIGATION PERFORMANCE INSPECTION – CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO INSPECTION FOR APPROVAL OF LANDSCAPE AND IRRIGATION WORK. IRRIGATION OPERATIONS AND COVERAGE SHALL BE INSPECTED. PLANT QUALITY AND LAYOUT SHALL BE INSPECTED. WRITTEN APPROVAL SHALL BE ISSUED UPON INSPECTION APPROVAL OF SPECIFIED CONSTRUCTION. (REFER TO RELATIVE SPECIFICATION SECTIONS)

LANDSCAPE AREA PREPARATION

1. VERIFY LOCATION OF DELINEATED HORIZONTAL AND VERTICAL PROJECT LIMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION. VERIFY THAT STAKING, SURVEY MARKINGS, ELEVATIONS, STATION POINTS , PHASE LINES, ETC. COORDINATE WITH SPECIFIED PARAMETERS INDICATED ON DRAWINGS AND SPECIFICATIONS, PRIOR TO COMMENCEMENT OF CONSTRUCTION. CONTRACTOR TO CLEARLY EXHIBIT AND MAINTAIN PROJECT LIMITS THROUGHOUT THE CONSTRUCTION PROCESS.
2. VERIFY THAT COMPLETED ROUGH GRADES ARE TO BE HELD SUFFICIENTLY BELOW FINISH GRADE IN LANDSCAPE AREAS FOR PLACEMENT OF SPECIFIED TOPSOIL MIX. (REFER TO SOIL PREPARATION SECTION FOR DEPTHS OF TOPSOIL PLACEMENT.) ROUGH GRADE TO FACILITATE ALL PROPOSED DRAINAGE PATTERNS AND SLOPE AWAY FROM ALL STRUCTURES OR SITE FACILITIES AT A MINIMUM OF 2% GRADE. PRIOR TO LANDSCAPE OPERATIONS, ROUGH GRADING SHALL BE CLEAN AND NOT EXHIBIT CLODS, ROOTS, STONES OR CONSTRUCTION DEBRIS IN LANDSCAPE AREAS. LANDSCAPE AREAS SHALL BE COMPLETELY ACCESSIBLE FOR COMMENCEMENT OF IRRIGATION AND LANDSCAPE INSTALLATION AT THE TIME SPECIFIED FOR INSTALLATION.
3. INSTALL IRRIGATION SLEEVING FOR PIPING AND WIRING AS REQUIRED BY IRRIGATION SYSTEM INSTALLATION, AT DEPTHS AND TYPES SPECIFIED IN THE IRRIGATION SPECIFICATIONS. INSTALL AT THE LOCATIONS SPECIFIED FOR IRRIGATION INSTALLATION, VERIFY LOCATIONS PRIOR TO INSTALLATION. NOTIFY OWNER'S REPRESENTATIVE OF CONFLICTS WITH SLEEVING INSTALLATION AS SPECIFIED.
4. VERIFY THAT A 120 V.A.C. ELECTRICAL SOURCE FOR THE AUTOMATIC IRRIGATION CONTROLLER SHALL BE AVAILABLE AT THE LOCATION REQUIRED BY IRRIGATION SYSTEM. VERIFY THAT A MINIMUM 1 1/2" CONDUIT (IN SLEEVE) FROM CONTROLLER LOCATION SHALL DAYLIGHT INTO THE LANDSCAPE AREA WITH ACCESS TO ALL AUTOMATIC ZONE VALVES FOR WIRING. CONTACT OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION IF ANY FIELD DEVIATIONS OCCUR.
5. INSPECTION AND TESTING OF EXISTING AND PROPOSED SOIL CONDITIONS SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. COST FOR THESE SERVICES SHALL BE PAID BY THE CONTRACTOR.

PROJECT CONDITIONS

1. INSPECTION OF THE SITE: THE CONTRACTOR SHALL INSPECT THE SITE PRIOR TO CONSTRUCTION AND VERIFY THE EXTENT OF THE CONSTRUCTION PROCESS FOR LANDSCAPE AREA PREPARATION. IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE OF JOB CONDITIONS DETRIMENTAL TO CONSTRUCTION PROCESS. COMMENCEMENT OF CONSTRUCTION DESIGNATES ACCEPTANCE OF CONDITIONS APPARENT AT OUTSET. WEATHER LIMITATIONS: SOIL WORK SHALL BE PERFORMED ONLY WHEN THE WEATHER CONDITIONS DO NOT DETRIMENTALLY AFFECT THE QUALITY OF WORK.
2. PROTECTION: THE CONTRACTOR SHALL INSPECT AND VERIFY EXISTING AND PROPOSED UNDERGROUND AND OVERHEAD UTILITIES AND OTHER ITEMS SPECIFIED TO REMAIN. BARRICADE OPEN EXCAVATIONS, LIMITED ACCESS AREAS OR PUBLIC RIGHT OF WAY, AS SPECIFIED BY GOVERNING AUTHORITY, AND PROVIDE ADEQUATE WARNING 24 HOURS PER DAY DURING CONSTRUCTION PROCESS.
3. NOTIFY OWNER'S REPRESENTATIVE 24 HOURS PRIOR TO SCHEDULE INSPECTION OF THE SOIL SURFACE IN THE AREAS DESIGNATED FOR LANDSCAPE PLANTING. LANDSCAPE CONSTRUCTION SHALL NOT COMMENCE UNTIL SOIL SURFACE INSPECTION HAS INSPECTED AND APPROVED BY OWNER'S REPRESENTATIVE.

EROSION CONTROL

1. PROVIDE AND MAINTAIN POSITIVE DRAINAGE PATTERNS THROUGHOUT THE CONSTRUCTION PROCESS, AND AS DIRECTED BY THE OWNER'S REPRESENTATIVE IF WEATHER OR CONSTRUCTION ACTIVITY CREATES DRAINAGE CONFLICTS DETRIMENTAL TO CONSTRUCTION PROCESS OR ENVIRONMENTAL CONDITIONS. COMPLY WITH JURISDICTIONAL REQUIREMENTS.
2. MAINTAIN EROSION MEASURES THROUGHOUT THE LANDSCAPING PROCESS. RESTORE EROSION CONTROL MEASURES DISTURBED BY LANDSCAPING OPERATIONS. REMOVE ONLY UPON APPROVAL OF OWNER'S REPRESENTATIVE.

INVASIVE WEED CONTROL PRIOR TO CONSTRUCTION

1. VERIFY AND IDENTIFY CONDITIONS REQUIRING ERADICATION OF INVASIVE WEEDS AND GRASSES PRIOR TO EXISTING SOIL SURFACE DISTURBANCE AS DIRECTED BY OWNER'S REPRESENTATIVE. STOCKPILED TOPSOIL SHALL BE TREATED TO ERADICATE WEEDS PRIOR TO SOIL RIPPING AND STOCKPILING. WEED ERADICATION SHALL INCLUDE HERBICIDE AND NON-HERBICIDE METHODS ONLY ADMINISTERED BY A CURRENTLY LICENSED APPLICATOR. ERADICATION SHALL INCLUDE AND IS NOT LIMITED TO ELIMINATION OF THE FOLLOWING INVASIVE SPECIES FROM AREAS TO BE LANDSCAPED:

   CIRSIUM ARVENSE (CANADIAN THISTLE) LOTUS CORNICULATUS (BIRD'S FOOT TREFOIL)
   CONVOLVULUS SPP (MORNING GLORY) LYTHRIUM SALICARIA (PURPLE LOOSESTRIFE)
   CYTISUS SCOPARUS (SCOTCH BROOM) MELILOTUS SPP. (SWEET CLOVER)
   DIPSACUS SYLVESTRIS (COMMON TEASEL) MYRIOPHYLLUM SPICATUM (EURASIAN MILFOIL)
   EQUISETUM SPP. (HORSETAIL) PHALARIS ARUNDINACEAE (REED CANARY GRASS)
   FESTUCA ARUNDINACEAE (TALL FESCUE) RUBUS DISCOLOR (HIMALAYAN BLACKBERRY)
   HEDERA HELIX (ENGLISH IVY) SOLANUM SPP. (NIGHTSHADE)
   HOLCUS CANATUS (VELVET GRASS) TRIFOLIUM SPP. (CLOVERS)
   LOLIUM SPP. (RYE GRASSES)

ROUGH GRADE INSPECTION

1. CONDITIONS AND QUALITY OF ROUGH GRADE SHALL BE INSPECTED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF SPECIFIED WORK IN AREAS TO BE LANDSCAPED. THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR COMPLETION OF ACTIVITIES SPECIFIED HEREIN, AND DEFINED ON THE PLAN.
2. THE OWNER'S REPRESENTATIVE, AT THEIR DISCRETION, SHALL DIRECT FURTHER ROUGH GRADING OR SOIL PREPARATION IF SPECIFIED ACTIVITIES HAVE NOT CREATED A SURFACE SATISFACTORY FOR FURTHER WORK TO COMMENCE. COMPENSATION FOR ADDITIONAL SURFACE WORK CREATED BY CONDITIONS UNKNOWN AT THE OUTSET AND AS DIRECTED IN WRITING BY THE OWNER'S REPRESENTATIVE SHALL BE NEGOTIATED AT THE TIME OF THE DIRECTIVE, AND PRIOR TO THE COMMENCEMENT OF PARTICULAR CONSTRUCTION ACTIVITIES.

FINISH GRADING

1. VERIFY THAT ROUGH GRADE IN LANDSCAPE AREAS IS SUFFICIENTLY BELOW PROPOSED FINAL GRADE FOR PLANTING BEDS AND LAWN AREAS TO ALLOW FOR PLACEMENT OF TOPSOIL MIX. REFER TO GRADING PLANS FOR FINISH GRADE REFERENCES. VERIFY THAT GRADES PROVIDE POSITIVE DRAINAGE AT ALL LANDSCAPE AREAS, AND SLOPE AWAY FROM STRUCTURES AT A MINIMUM OF 2% SLOPE. FINAL GRADES IN ALL LANDSCAPE AREAS SHALL BE CROWNED AT CENTER TO FACILITATE PROPOSED DRAINAGE.

TOPSOIL PLACEMENT AND SOIL PREPARATION

1. AT LEAST 7 WORKING DAYS PRIOR TO USE ON SITE OR THE START OF WORK, THE CONTRACTOR SHALL SUBMIT CERTIFIED ANALYSIS OF TOPSOIL, FERTILIZER AND COMPOST SHOWING CONFORMANCE WITH THE REQUIREMENTS AS DESCRIBED BELOW. WHERE ANY TESTS SHOW FAILURE TO CONFORM TO THE REQUIRED STANDARDS THE CONTRACTOR SHALL INCLUDE A RECOMMENDED TREATMENT PLAN TO BRING THE MATERIAL INTO CONFORMANCE.
2. TOPSOIL SHALL BE IMPORTED, WITH ADDED SOIL AMENDMENTS AS SPECIFIED. IT SHALL NOT BE DELIVERED WHILE IN A FROZEN OR MUDDY CONDITION. PROTECT FROM EROSION AT ALL TIMES. UTILIZE EXISTING STOCKPILED TOPSOIL ONLY UNDER THE DIRECTION OF THE OWNER'S REPRESENTATIVE. DO NOT PLACE TOPSOIL IN AREAS THAT HAVE NOT BEEN CLEARED OF WEEDS LISTED HEREIN. TOPSOIL SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. FREE OF ROOTS AND ROCKS LARGER THAN 1/2 INCH,
   B. FREE OF SUBSOIL, DEBRIS, LARGE WEEDS, FOREIGN MATTER AND ANY OTHER MATERIAL DELETERIOUS TO PLANT MATERIAL HEALTH.
   C. ACIDITY RANGE (PH) OF 5.5 TO 7.5.
   D. CONTAINING A MINIMUM OF 4 PERCENT AND A MAXIMUM OF 25 PERCENT INORGANIC MATTER. WITH DECAYING MATTER OF 25 PERCENT CONTENT BY VOLUME OR LESS.
3. COMMERCIAL FERTILIZER SHALL BE AN ORGANIC BASE, COMPLETE FERTILIZER CONTAINING IN AVAILABLE FORM BY WITHIN A MINIMUM OF 10N 10P 5K – WITH 50 PERCENT OF THE AVAILABLE NITROGEN IN SLOW-RELEASE FORMULA, WEBFOOT ORGANIC DELUXE, OR APPROVED EQUAL.
4. COMPOST SHALL BE YARD DEBRIS COMPOST THAT IS STABLE, WEED-FREE ORGANIC MATERIAL, PH RANGE OF 5.5-8; MOISTURE CONTENT 35-55%; 100% PASSING THROUGH 3/4" SIEVE; SOLUBLE SALT CONTENT 5-10 DECISEIMENS/M; NOT EXCEEDING 0.5% INERT CONTAMINANTS AND FREE OF SUBSTANCES TOXIC TO PLANTING; AND AN ORGANIC MATTER CONTENT OF 50-60% OF DRY WEIGHT.
5. CONTRACTOR SHALL REMOVE ALL DEBRIS, ROCKS ONE INCH IN DIAMETER OR LARGER, STICKS, MORTAR, CONCRETE, ASPHALT, PAPER, CONTAMINATED SOIL AND ANY MATERIAL HARMFUL TO PLANT LIFE, IN ALL PLANTING AREAS.
6. CONTRACTOR SHALL ROTOTILL SUBGRADE SIX INCHES DEEP BEFORE PLACING TOPSOIL. SPECIFIED IMPORTED TOPSOIL SHALL BE PLACED AT A MINIMUM DEPTH OF 12" IN ALL PLANTING AREAS, FLOATED TO A LEVEL, SLOPED OR MOUNDED GRADE BETWEEN ANY EXISTING OR CONSTRUCTED POINT ON THE SITE, SUCH AS CURBS, WALLS, WALKS, PAVING AND THE LIKE. FINAL SOIL GRADES IN PLANTING BEDS SHALL BE 2" BELOW ADJACENT PAVING AND CURBS FOR MULCH APPLICATION.
7. DISTRIBUTE FOLLOWING SOIL AMENDMENTS TO ALL LANDSCAPE AREAS IN EVEN LAYERS AND POWER ROTOTILL OR SPADE TO A MINIMUM DEPTH OF 4-6 INCHES INTO TOPSOIL, AS FOLLOWS;

   PLANTING BEDS
   A. COMPOST: APPLY NINE CUBIC YARDS PER 1000 SQ. FT.
   B. COMMERCIAL FERTILIZER: APPLY 20 POUNDS PER 1000 SQ. FT
   SEEDED AREAS
   A. COMPOST: APPLY THREE CUBIC YARDS PER 1000 SQ. FT
   B. COMMERCIAL FERTILIZER: APPLY 10 POUNDS PER 1000 SQ. FT.

8. PREPARATION OF BACKFILL PLANTING SOIL MIX SHALL BE AS FOLLOWS: THOROUGHLY BLEND AND MIX THE FOLLOWING PROPORTION OF MATERIALS WHILE IN A MOIST CONDITION:
   - THREE CUBIC YARDS TOPSOIL
   - 1 1/2 CUBIC YARDS COMPOST
   - 1 1/2 CUBIC YARDS MEDIUM BARK
   - 10 POUNDS COMMERCIAL FERTILIZER
   - FIVE POUNDS BONEMEAL

9. KEEP PROJECT FREE FROM ACCUMULATION OF DEBRIS, TOPSOIL AND OTHER MATERIAL. AT COMPLETION OF EACH AREA OF WORK, REMOVE DEBRIS, EQUIPMENT AND SURPLUS MATERIALS. ANY PAVED AREA OR SURFACES STAINED OR SOILED FROM LANDSCAPING MATERIALS SHALL BE CLEANED WITH A POWER SWEEPER USING WATER UNDER PRESSURE. BUILDING SURFACES SHALL BE WASHED WITH PROPER EQUIPMENT AND MATERIALS AS APPROVED BY THE OWNER'S REPRESENTATIVE.

SEEDED LAWN INSTALLATION

1. SEEDING OPERATIONS SHALL OCCUR ONLY BETWEEN MARCH 15 AND OCTOBER 15.
2. SEEDING IS NOT PERMITTED DURING COLD WEATHER (LESS THAN 32 DEGREES F), HOT WEATHER (GREATER THAN 80 DEGREES F), WHEN SOIL TEMPERATURE IS LESS THAN 55 DEGREES F, WHEN GROUND IS SATURATED, OR WHEN WIND VELOCITY IS GREATER THAN 10 MPH.
3. CONTRACTOR SHALL FLOAT ROUGH GRADED SEEDBED. DO NOT DISTURB NATURAL DRAINAGE PATTERNS. REMOVE ROCKS, CLUMPS, OR DEBRIS AT SURFACE. LIGHTLY SCARIFY SURFACE.
4. CONTRACTOR SHALL APPLY 50 POUNDS COMMERCIAL FERTILIZER PER 1,000 SQUARE FEET OF SURFACE AREA BEFORE SPREADING SEED.
5. CONTRACTOR SHALL MANUALLY BROADCAST OR HYDRO-SEED SEED MIXES AS CALLED OUT ON SHEET 16A-5.
6. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREA BY FENCING, WATERING, FEEDING, RESEEDING, MOWING AND REPAIRING AS NECESSARY TO ESTABLISH A THICK, UNIFORM STAND OF GRASS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE.

TREES, SHRUBS, & GROUNDCOVER INSTALLATION

1. CONTRACTOR SHALL GUARANTEE MATERIALS AND WORKMANSHIP FOR ONE YEAR FROM DATE OF CONDITIONAL ACCEPTANCE. PLANT MATERIAL SHALL BE IN ACCORDANCE WITH AMERICAN NURSERY ASSOCIATION STANDARDS SET FOR GRADING AND ROOT BALL SIZES AND SHALL COMPLY WITH STATE AND FEDERAL LAWS WITH RESPECT TO INSPECTION FOR INSECT INFESTATION AND PLANT DISEASES AND SHALL BE FREE OF INSECT PESTS AND PLANT DISEASES.
2. PLANT MATERIALS SHALL HAVE A MINIMUM OF 6 INCHES OF PREPARED SOIL UNDER THE ROOT BALL, AND A MINIMUM OF 6 INCHES ON EACH SIDE OF THE ROOT BALL. TREE ROOTS OR ROOT BALL SHALL HAVE A MINIMUM OF 12 INCHES OF PLANT SOIL UNDER THE ROOT BALL AND A MINIMUM OF 12 INCHES ON EACH SIDE OF THE ROOT BALL, OR ROOTS. FINAL GRADE SHOULD MAINTAIN ROOT BALL SLIGHTLY ABOVE SURROUNDING GRADE (NOT TO EXCEED ONE INCH) FOR BARK MULCH INSTALLATION.
3. MULCH ALL PLANTING BEDS AFTER PLANTING, FINAL RAKING, GRADING AND LEVELING OF THE PLANTING BEDS WITH 2-INCH LAYER OF HEM/FIR MEDIUM SCREENED BARK MULCH.
4. BALLED AND BURLAPPED TREES, BOXED TREES OR BARE ROOT TREES SHALL BE EITHER GUYED OR STAKED AS DETAILED ON THE PLANS.
5. REMOVE ALL DEAD OR DYING BRANCHES AND CRISS-CROSSING BRANCHES FROM TREES. DO NOT CUT LEADER.
6. KEEP PROJECT FREE FROM ACCUMULATION OF DEBRIS, TOPSOIL AND OTHER MATERIAL. AT COMPLETION OF EACH AREA OF WORK, REMOVE DEBRIS, EQUIPMENT AND SURPLUS MATERIAL ALL PAVED AREAS OR SURFACES STAINED OR SOILED FROM LANDSCAPE MATERIAL SHALL BE CLEANED WITH A WATER-PRESSURE POWER SWEEPER. BUILDING SURFACES SHALL BE WASHED WITH PROPER EQUIPMENT AND MATERIALS AS APPROVED BY THE OWNER.

MAINTENANCE

1. CONTRACTOR SHALL MAINTAIN ALL LANDSCAPE AREAS FOR ONE YEAR AFTER ACCEPTED COMPLETION OF PROJECT.
2. MAINTENANCE SHALL INCLUDE; ALL GRADE RESETTLEMENT, MOWING ,EDGING, WEEDING, POLICING AND REMOVAL OF PLANT MATERIAL DEBRIS DURING MAINTENANCE PERIOD. SEASONAL LEAF FALL REMOVAL IS OUTSIDE THE SCOPE OF THIS MAINTENANCE SPECIFICATION.
3. BARK MULCH SHALL BE MAINTAINED OR BROUGHT UP TO THE TWO INCH DEPTH DURING THIS MAINTENANCE PERIOD.
4. ANY UNSATISFACTORY CONDITION ARISING DURING THIS MAINTENANCE PERIOD SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE IMMEDIATELY.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED 673 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

PLANTING PLANS & DETAILS

DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
PLANTING SPECIFICATIONS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	16A-8

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-16A-8.dwg

PLAN INTENT

CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF IRRIGATION SYSTEM SHOP DRAWINGS FOR REVIEW AND APPROVAL BY PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF SYSTEM COMPONENTS.

CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF A FULLY AUTOMATED IRRIGATION SYSTEM WHICH PROVIDES FULL AND EVEN COVERAGE OF ALL IDENTIFIED PLANTING AREAS SHOWN ON PLANS.

CONSTRUCTION NOTES

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

1. INSTALL MAINLINE PIPING / IRRIGATION CONTROL WIRE
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3. INSTALL POINT OF CONNECTION
4. INSTALL DOUBLE CHECK VALVE
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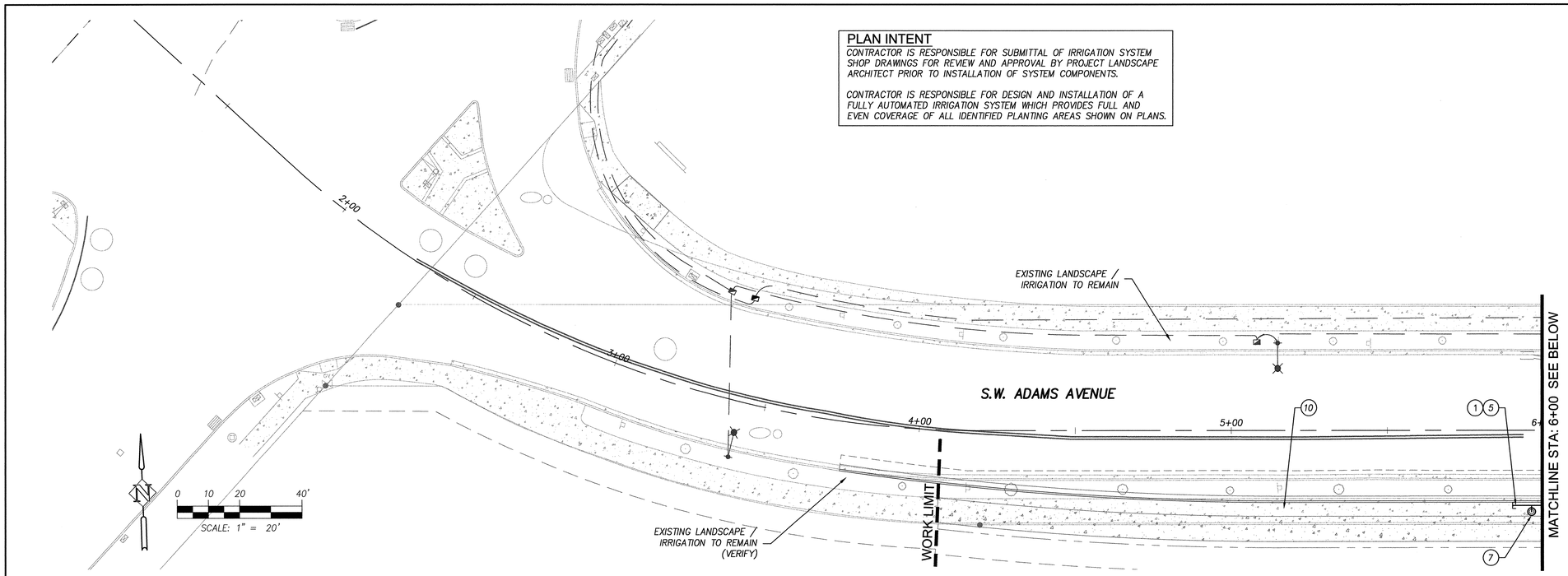
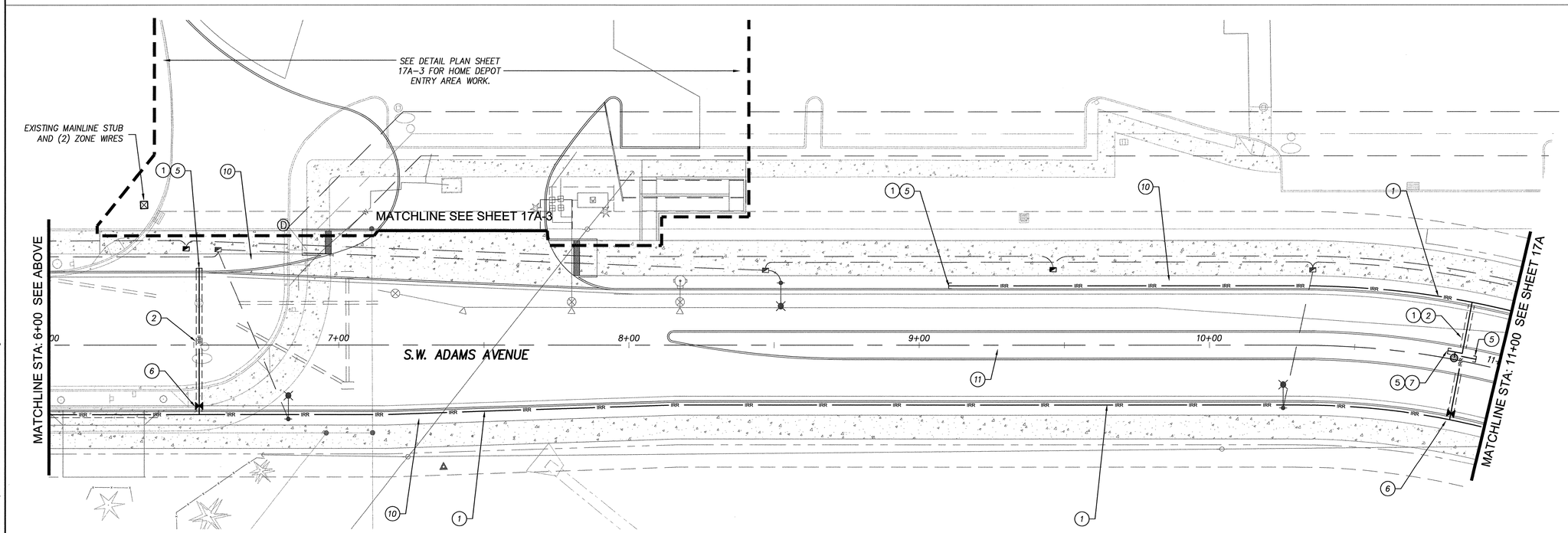
11. INSTALL SPRAY HEAD IRRIGATION ZONES
12. INSTALL ROTOR HEAD IRRIGATION ZONES



NOTES

1. SEE SHEET 16A-5 FOR PLANTING SCHEDULE AND NOTES



GPM	PIPE SIZE
0–9	3/4"
10–18	1"
19–27	1-1/4"
28–34	1-1/2"
35–50	2"

PIPE SIZING SCHD.
Schedule

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DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
IRRIGATION PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-17.0.dwg

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ENGINEERING DEPARTMENT

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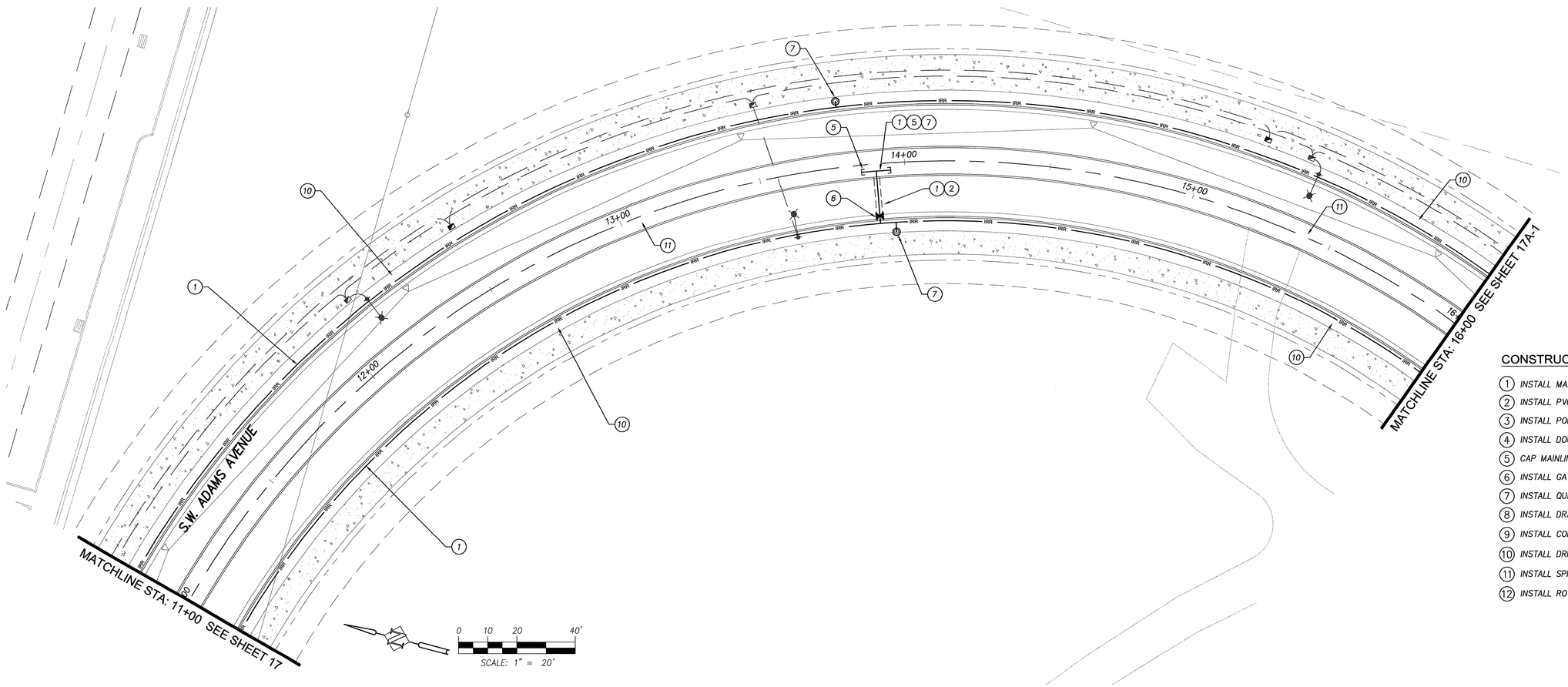

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NOTES

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PLAN INTENT

CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF IRRIGATION SYSTEM SHOP DRAWINGS FOR REVIEW AND APPROVAL BY PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF SYSTEM COMPONENTS.

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DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
IRRIGATION PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17A

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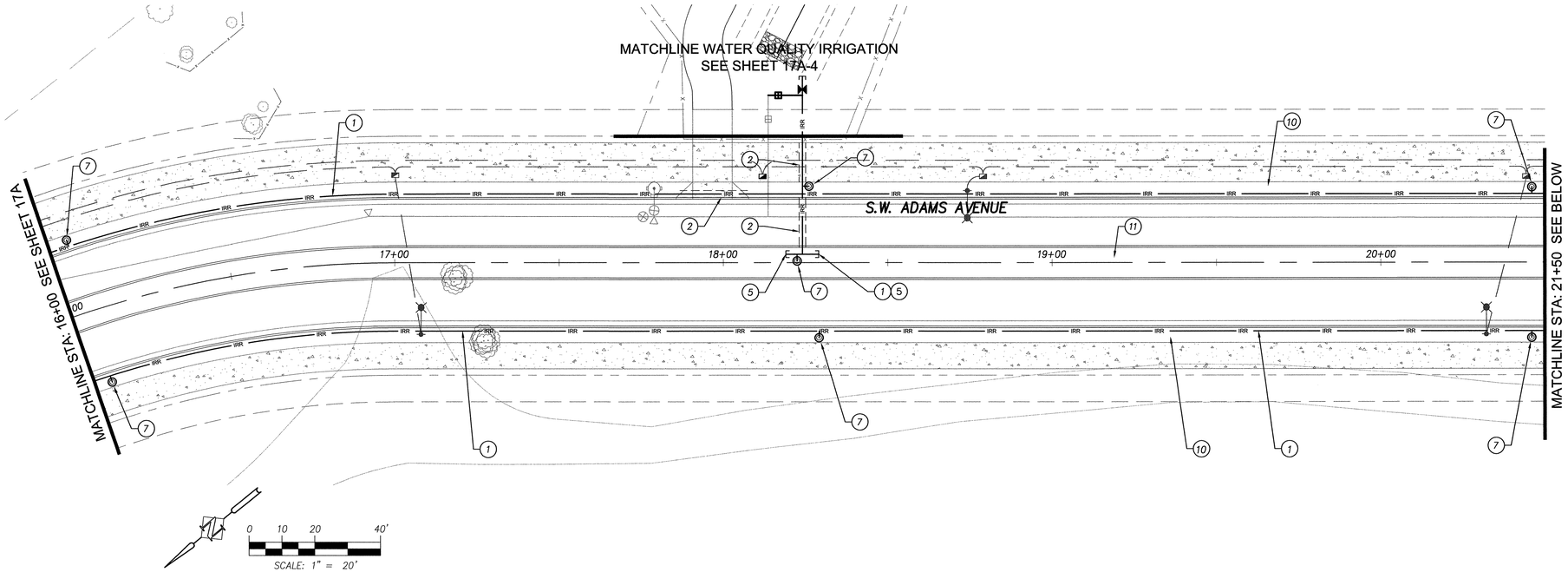

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JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

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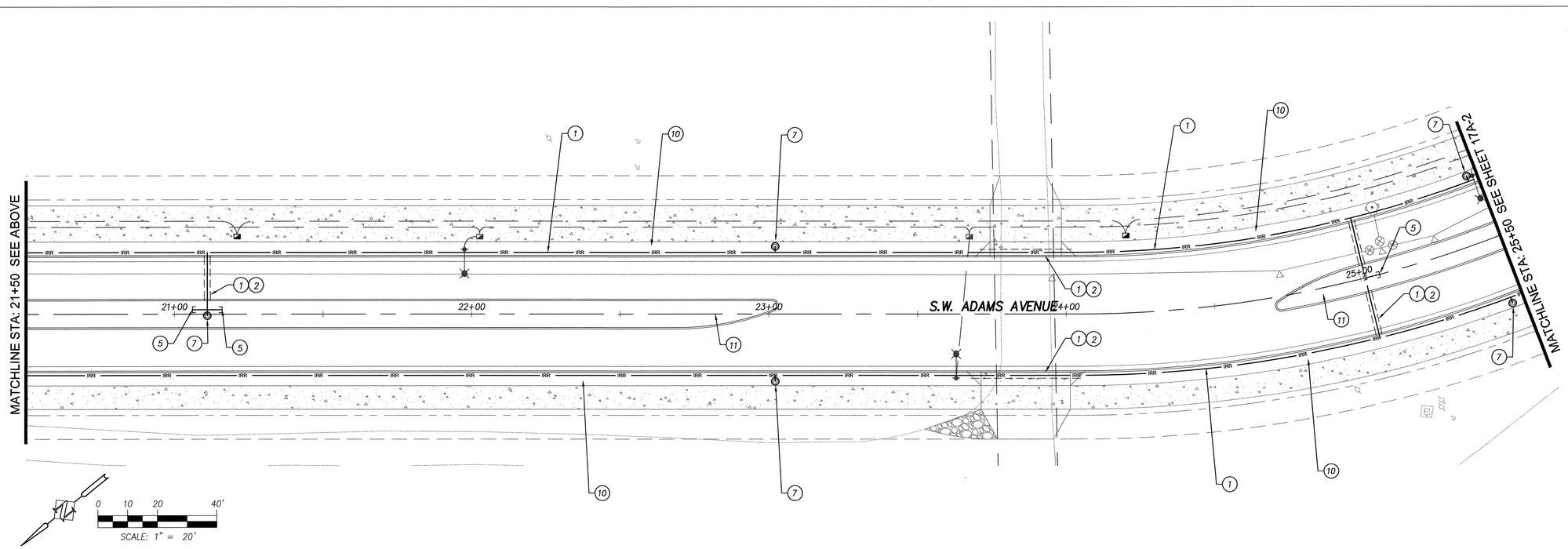

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PIPE SIZING SCHD.
Schedule

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IRRIGATION PLANS & DETAILS

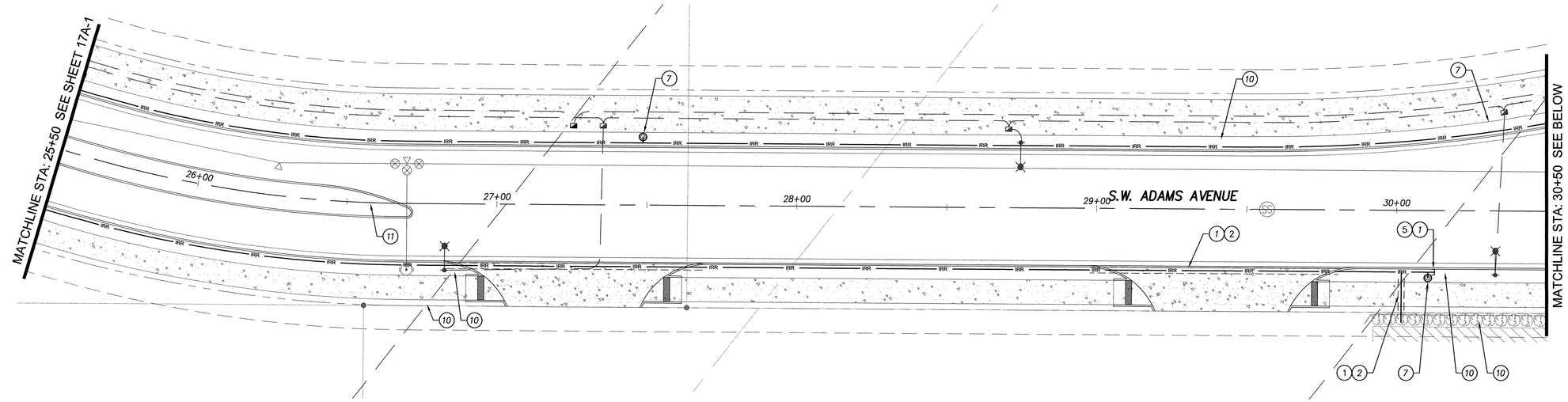
DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
IRRIGATION PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17A-1

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-17.0.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



0 10 20 40'
SCALE: 1" = 20'

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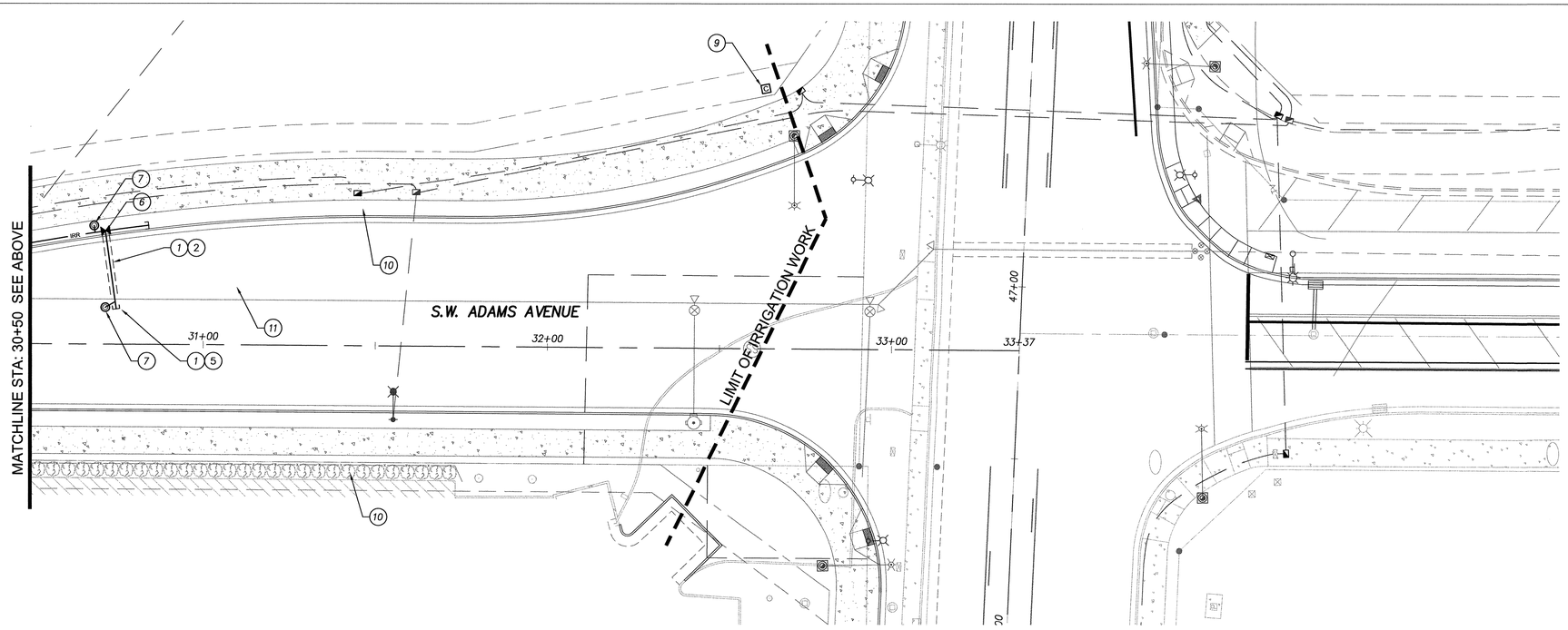

0 10 20 40'
SCALE: 1" = 20'

CONSTRUCTION NOTES

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NOTES

1. SEE SHEET 16A–5 FOR PLANTING SCHEDULE AND NOTES

FINAL DESIGN

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DESIGNED BY: SWB/KJO
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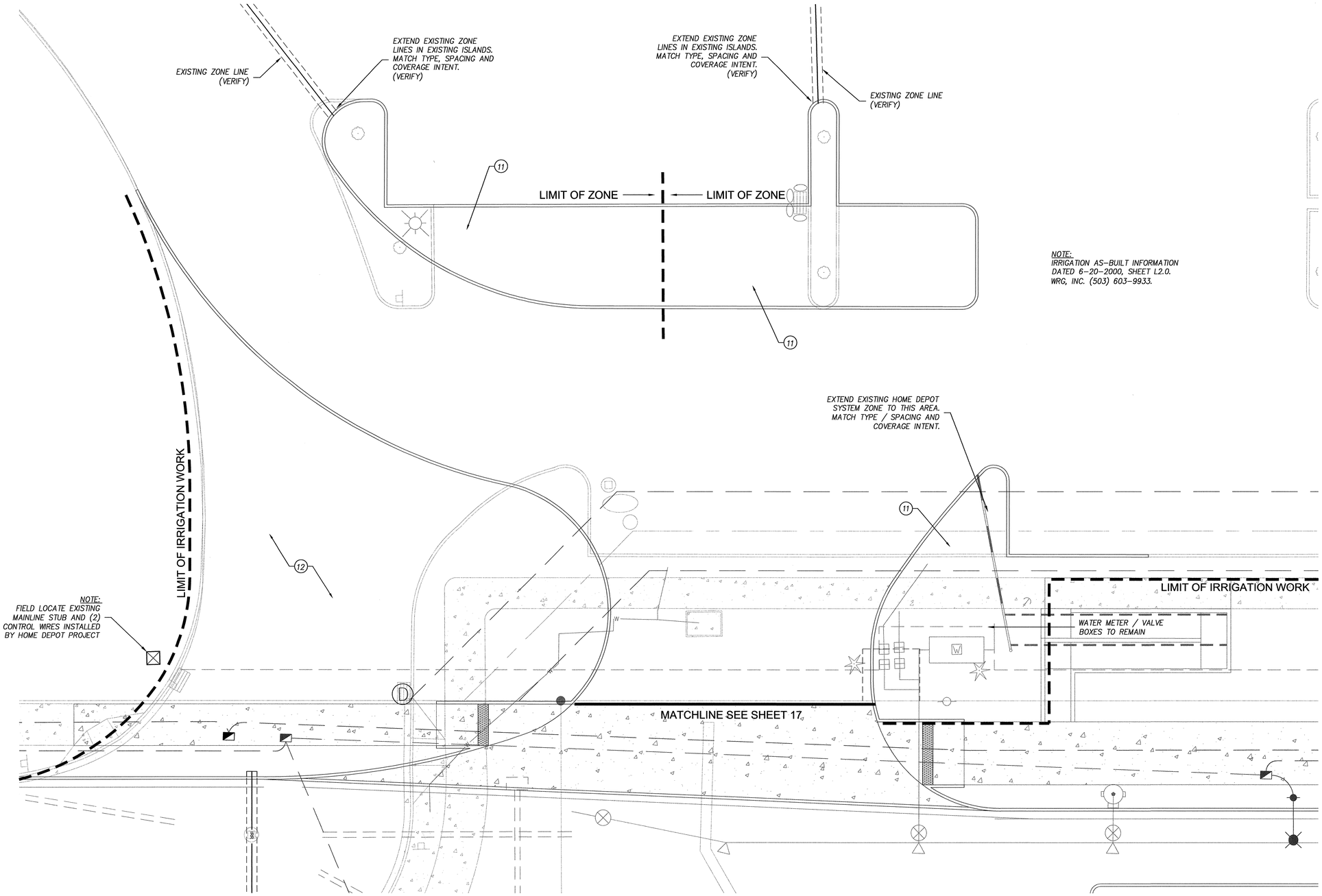
ADAMS AVENUE NORTH
IRRIGATION PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17A-2

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-17.0.dwg



APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

CONSTRUCTION NOTES

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NOTES

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PIPE SIZING SCHD.
Schedule

FINAL DESIGN

0 5 10 20
SCALE: 1" = 10'

PLAN INTENT

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IRRIGATION PLANS & DETAILS

DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
IRRIGATION PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17A-3

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-17.0.dwg

APPROVED PLANS
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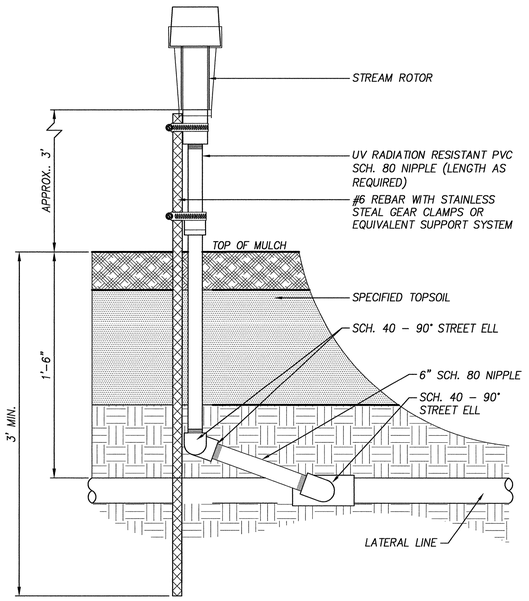
NOTE

INSTALL ROTOR HEADS ON 36" RISERS. LOCATE HEADS TO PROVIDE EVEN COVERAGE OVER ALL PLANTED AREAS. DO NOT INSTALL HEADS OR PIPING IN BOTTOM OF CWS SWALE.



NOTE:

1. RISER MOUNTED ROTOR HEADS TO ONLY BE INSTALLED IN THE SENSITIVE AREA BUFFER, UNLESS NOTED OTHERWISE ON THE PLANS.

A RISER MOUNTED ROTOR
Section
NOT TO SCALE

GPM	PIPE SIZE
0–9	3/4"
10–18	1"
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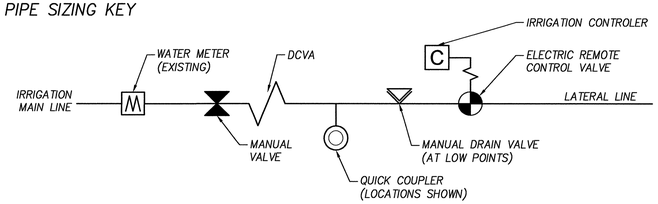
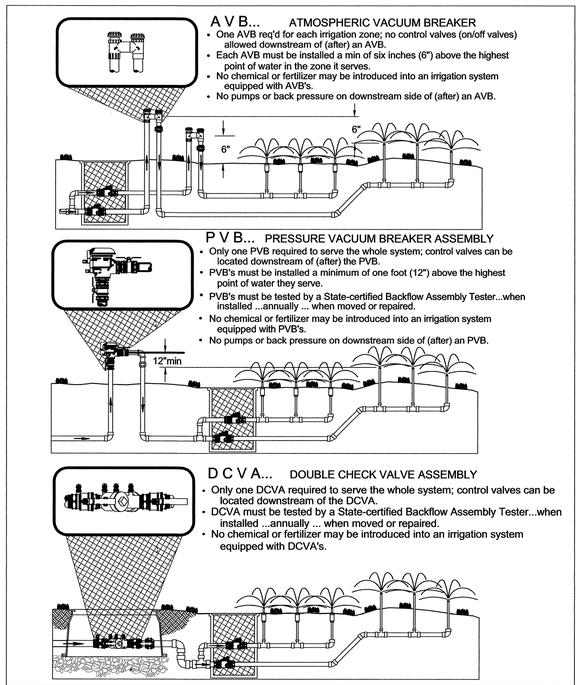
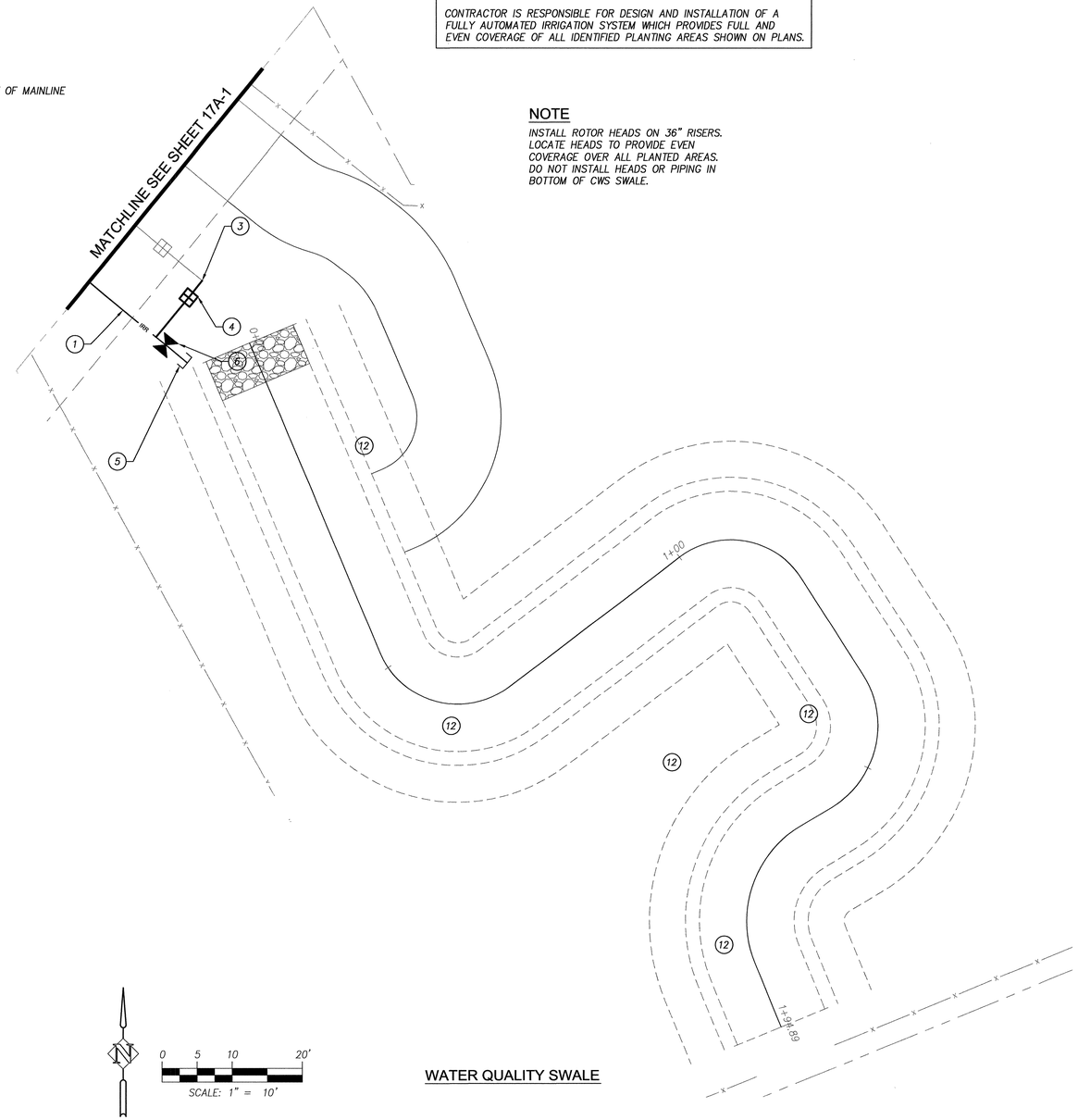
PIPE SIZING KEY



B POINT OF CONNECTION SCHEMATIC
Plan
NOT TO SCALE



City of Sherwood Oregon	STANDARD DRAWING TITLE	DRAWING NUMBER
	TYPICAL BACKFLOW PREVENTERS FOR LAWN SPRINKLER SYSTEMS	W-70
Any alteration of this drawing may not be associated in any way with the City of Sherwood Standard Drawings.	SCALE: N.T.S.	DATE: JUL' 09



WATER QUALITY SWALE

FINAL DESIGN

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REGISTERED 678 Scott W. Barker OREGON 06/19/08 LANDSCAPE ARCHITECT

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ADAMS AVENUE NORTH
IRRIGATION PLAN
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
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N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-17.0.dwg

APPROVED PLANS
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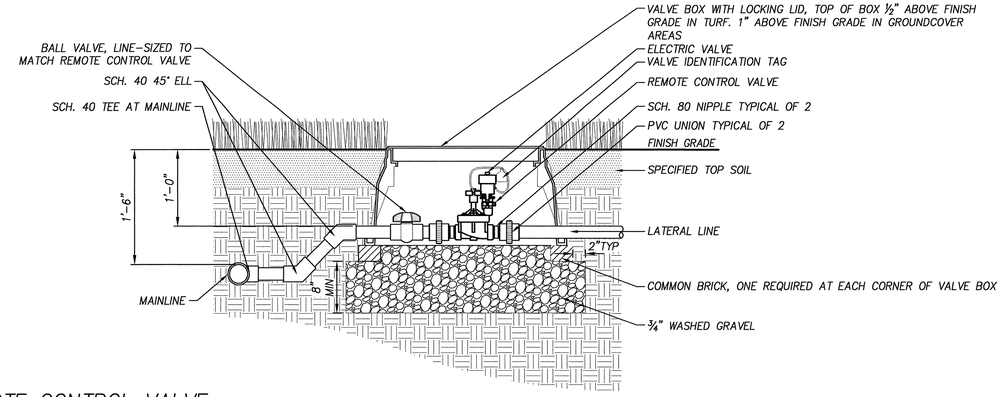
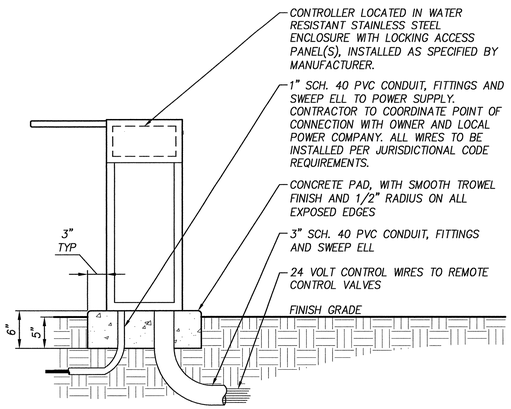


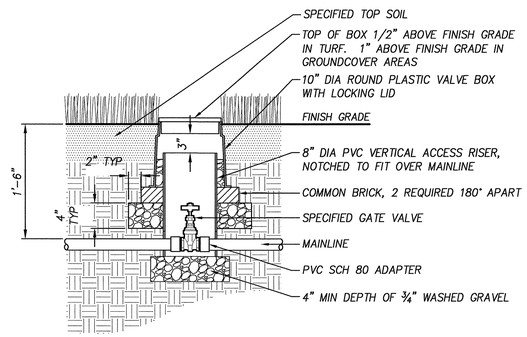
1 REMOTE CONTROL VALVE
Section

NOT TO SCALE



2 CONTROLLER
Section

NOT TO SCALE



3 ISOLATION VALVE
Section

NOT TO SCALE

IRRIGATION LEGEND

EQUIPMENT

SYMBOL	DESCRIPION
⊠	BACKFLOW PREVENTOR – FEBCO MODEL 850 Y, 2 1/2" OR APPROVED EQ.
⋈	BALL VALVE – NIBCO T-560 OR APPROVED EQUAL.
◔	REMOTE CONTROL VALVE – RAINBIRD PEB OR APPVD EQ, SIZE AS SHOWN REMOTE CONTROL VALVE – LOW ZONE VALVES NOTED ON PLAN
◎	QUICK COUPLER – RAINBIRD 44 LRC OR APPROVED EQUAL.
- - - - -	SLEEVING – 4" DIAMETER OF PIPE, CLASS 200 PVC NOTE: ADD TWO SLEEVES WHERE APPLICABLE.
———	MAINLINE – 2 1/2" SCH. 40 PVC
C	CONTROLLER – CALSENSE ET 2000e, 28 STATION, PEDESTAL MOUNT OR APPROVED EQUAL.

HEAD SCHEDULE

SYMBOL	DESCRIPION	PSI	RADIUS	GPM
	1800-8 SERIES MPR OR APPROVED EQUAL. PART-CIRCLE, CONTRACTOR TO ADJUST ARC TO FIT SITE	30	8'	0.26-0.52
	1800-8 SERIES MPR OR APPROVED EQUAL. FULL-CIRCLE	30	8'	0.74
	1800-5 SERIES MPR OR APPROVED EQUAL. PART-CIRCLE, CONTRACTOR TO ADJUST ARC TO FIT SITE	30	5'	0.10-0.20
	1800-5 SERIES MPR OR APPROVED EQUAL. FULL-CIRCLE	30	5'	0.41

RAINBIRD POT IRRIGATION KIT OR APPROVED EQUAL.
3/4" XERI CONTROL ZONE KIT
6 OUTLET PC MANIFOLD W/ BARB INLET
XERI BLACK STRIPE POLY TUBING
1/4" DISTRIBUTION TUBING
1/4" TUBING STAGE W / BUG CAP

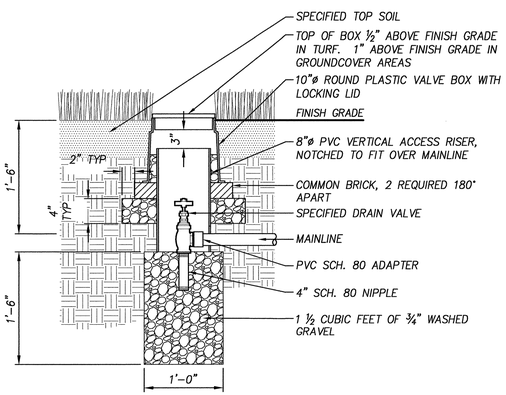
NOTE:
ALL SPRINLER HEADS SHALL BE POP-UP TYPE HEADS. SPRAY HEAD SPRINKLERS LOCATED WITHIN SHRUB AND GROUNDCOVER AREAS ARE TO BE 12-INCH POP-UP HEADS.

IRRIGATION NOTES

1. THE CONTRACTOR SHALL INSPECT THE SITE AND VERIFY CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION.
2. IRRIGATION PLANS ARE SCHEMATIC REPRESENTATIONS ONLY. PLACE LINES IN A COMMON TRENCH WHENEVER POSSIBLE. FIELD ADJUST LINES TO AVOID CONFLICT WITH UTILITIES.
3. IRRIGATION SHALL BE COORDINATED WITH THE PLANTING PLAN AND SITE IMPROVEMENTS AND SHOULD BE DESIGNED WITH TRIANGULAR SPACING GIVING HEAD TO HEAD COVERAGE. COORDINATE IRRIGATION HEAD LAYOUT WITH NEW PLANT MATERIALS, LOCATE SPRAY HEADS 30" FROM BASE OF TREES.
4. ALL COMPONENTS OF IRRIGATION SYSTEM SHALL BE INSTALLED AND PROPERLY ADJUSTED TO PROVIDE ADEQUATE COVERAGE AND MINIMIZATION OF OVER SPRAY ONTO WALKS, BUILDINGS, PARKING AREAS, ETC.
5. ALL PIPE SIZES INDICATED ARE MINIMUMS. CONTRACTOR MAY NOT DECREASE PIPE SIZE. LARGER PIPE SIZES MAY BE USED AT NO ADDITIONAL COST TO OWNER.
6. INSTALL ALL IRRIGATION PIPE AND CONTROL WIRES IN MINIMUM 4" PVC SLEEVE BELOW ALL PAVED SURFACES UNLESS OTHERWISE INDICATED ON THE PLANS. INSTALL SLEEVES PRIOR TO PLACEMENT OF PAVEMENTS AND PAVEMENT SUB-BASE.
7. COORDINATE IRRIGATION POINTS OF CONNECTION AND LOCATION OF AUTOMATIC CONTROL VALVES WITH PROJECT REPRESENTATIVE. COORDINATE ALL WORK WITH OTHER TRADES, I.E. ELECTRICAL, MASONRY, ETC.
8. CONTRACTOR TO PROGRAM AUTOMATIC CONTROLLER TO ALLOW FOR THE EQUIVALENT OF 1" OF WATER PER WEEK, OR PER SITE AND PLANTING NEEDS FOR BEST PLANT HEALTH.
9. ALL PIPES SHALL BE TRENCHED. PROVIDE POSITIVE DRAINAGE OF MAINLINE. PLACE MANUAL DRAIN AT LOW POINTS IN MAINLINE. IDENTIFY LOCATIONS ON AS-BUILTS.
10. USE 45° ELLS INSTEAD OF 90° ELLS ON ALL MAINLINES 2-1/2" AND LARGER. INSTALL CONCRETE THRUST BLOCKS AT ALL MAINLINE CHANGES IN DIRECTION (2-1/2" MAINLINE AND LARGER). POUR MINIMUM OF 1 CUBIC FOOT OF CONCRETE ON UNDISTURBED SOIL. WRAP PIPE IN PLASTIC WRAP PRIOR TO COVERING WITH CONCRETE.
11. CONTRACTOR TO INSTALL CONTROLLER AND ACCESSORIES AS REQUIRED. CONTRACTOR TO FURNISH CONTROL WIRES FROM VALVES TO CONTROLLER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING 110 VOLT SERVICE FROM PGE VAULT TO CONTROLLER.
12. INSTALL THREE (3) ADDITIONAL CONTROL WIRES FROM CONTROLLER TO END OF MAINLINE.

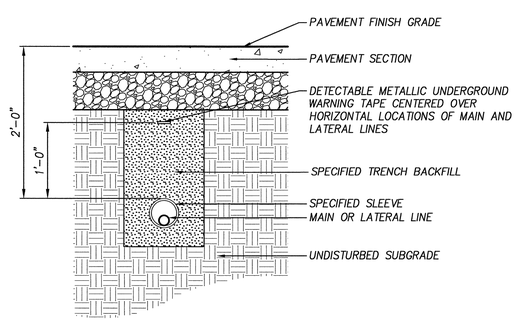
PLAN INTENT:

13. CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF IRRIGATION SYSTEM SHOP DRAWINGS FOR REVIEW AND APPROVAL BY PROJECT LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF SYSTEM COMPONENTS.
14. CONTRACTOR IS RESPONSIBLE FOR DESIGN AND INSTALLATION OF A FULLY AUTOMATED IRRIGATION SYSTEM WHICH PROVIDES FULL AND EVEN COVERAGE OF ALL IDENTIFIED PLANTING AREAS SHOWN ON PLANS.



4 MANUAL DRAIN VALVE
Section

NOT TO SCALE

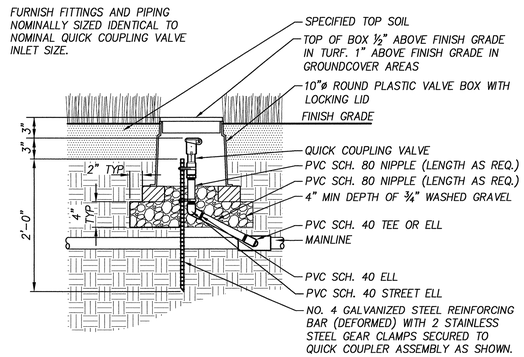


5 SLEEVING
Section

NOT TO SCALE

NOTE:

1. FURNISH FITTINGS AND PIPING NOMINALLY SIZED IDENTICAL TO NOMINAL QUICK COUPLING VALVE INLET SIZE.



6 QUICK COUPLER
Section

NOT TO SCALE

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

IRRIGATION PLANS & DETAILS
Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
IRRIGATION SCHEDULE & NOTES
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17A-5

N:\SHR (City of Sherwood)\SHR-08(AdamsAve)\SHR08-DWGS\SHEETS\ SHR08-17.0.dwg

APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

IRRIGATION DESIGN/BUILD SPECIFICATIONS

GENERAL

1. MUNICIPAL, COUNTY, STATE AND FEDERAL LAWS, REGARDING USES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THE WORK DEPICTED ON THESE PLANS ARE HEREBY INCORPORATED INTO AND MADE PART OF THESE SPECIFICATIONS, AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND SERVICES BEFORE COMMENCING WORK. THE LOCATION OF UTILITIES, STRUCTURES, SERVICES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING UTILITIES AND FEATURES ON AND ADJACENT TO THE PROJECT SITE DURING CONSTRUCTION. CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ALL DAMAGE RESULTING FROM HIS OPERATIONS OR NEGLIGENCE.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY VALID LICENSES, PERMITS, AND INSURANCE REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE COMMENCING WORK, AND SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH ALL PARTIES INVOLVED, INCLUDING JURISDICTIONAL AGENCIES.
5. THE CONTRACTOR SHALL USE ALL MEANS NECESSARY TO PROTECT THE PUBLIC AT ALL TIMES DURING THE CONSTRUCTION PROCESS.
6. IN THE EVENT OF CONFLICT BETWEEN PERTINENT CODES, REGULATIONS, STRUCTURAL NOTES, AND/OR REQUIREMENTS, OR THE REFERENCED STANDARDS OF THESE SPECIFICATIONS, THE PROVISIONS OF THE MORE STRINGENT SHALL GOVERN.

PROJECT CONDITIONS

1. INSPECTION OF THE SITE: THE CONTRACTOR SHALL INSPECT THE SITE PRIOR TO CONSTRUCTION AND VERIFY THE EXTENT OF THE CONSTRUCTION PROCESS FOR LANDSCAPE AREA PREPARATION. IMMEDIATELY NOTIFY OWNER'S REPRESENTATIVE OF JOB CONDITIONS DETRIMENTAL TO CONSTRUCTION PROCESS. COMMENCEMENT OF CONSTRUCTION DESIGNATES ACCEPTANCE OF CONDITIONS APPARENT AT OUTSET.
   WEATHER LIMITATIONS: SOIL WORK SHALL BE PERFORMED ONLY WHEN THE WEATHER CONDITIONS DO NOT DETRIMENTALLY AFFECT THE QUALITY OF WORK.
2. PROTECTION: THE CONTRACTOR SHALL INSPECT AND VERIFY EXISTING AND PROPOSED UNDERGROUND AND OVERHEAD UTILITIES AND OTHER ITEMS SPECIFIED TO REMAIN. BARRICADE OPEN EXCAVATIONS, LIMITED ACCESS AREAS OR PUBLIC RIGHT OF WAY, AS SPECIFIED BY GOVERNING AUTHORITY, AND PROVIDE ADEQUATE WARNING 24 HOURS PER DAY DURING CONSTRUCTION PROCESS.
3. NOTIFY OWNER'S REPRESENTATIVE 24 HOURS PRIOR TO SCHEDULE INSPECTION OF THE SOIL SURFACE IN THE AREAS DESIGNATED FOR LANDSCAPE PLANTING. LANDSCAPE CONSTRUCTION SHALL NOT COMMENCE UNTIL SOIL SURFACE INSPECTION HAS INSPECTED AND APPROVED BY OWNER'S REPRESENTATIVE.

INSTALLATION OF IRRIGATION SLEEVING

1. SLEEVING CONDUIT SHALL BE INSTALLED AT LOCATIONS AS PER PLANS AND SPECIFICATIONS, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE, OR IRRIGATION INSTALLATION REQUIREMENTS, PRIOR TO PREPARATION FOR PAVING CONSTRUCTION. SET PIPING TO PROVIDE MINIMUM COVERS OF:
   18-INCH FOR SLEEVING BENEATH WALKWAYS;
   24-INCH FOR SLEEVING BENEATH VEHICULAR TRAFFIC OR STRUCTURES.

   MARK EACH END OF SLEEVING WITH A 2 X 4 STAKE WITH 24" EXPOSED, CLEARLY MARKED 'SLEEVE LOCATION'. CONTRACTOR SHALL MAINTAIN STAKING IDENTIFICATION AND LOCATION THROUGHOUT CONSTRUCTION PROCESS. PROTECT ALL EXISTING PAVING WHEN INSTALLING SLEEVING. RESTORE ALL PAVING DAMAGED BY SLEEVE INSTALLATION.
2. SIZE OF SLEEVING CONDUIT PIPE SHALL BE A MINIMUM OF TWO TIMES THE DIAMETER OF THE BELL END OF THE PIPE THAT IS TO BE FED INTO THE SLEEVE.
3. SET SLEEVING IN A COMPACTED BED OF MATERIAL THAT WILL NOT DAMAGE THE PIPE DURING COMPACTION OF SURFACE BACKFILL MATERIAL.

DESIGN / BUILD IRRIGATION SPECIFICATION

1. CONTRACTOR SHALL PROVIDE A DESIGN / BUILD AUTOMATIC UNDERGROUND IRRIGATION SYSTEM FOR ALL LANDSCAPE AREAS SHOWN ON PLANS. CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN DRAWINGS TO CITY OF SHERWOOD FOR REVIEW AT LEAST TWO WEEKS PRIOR TO INSTALLATION. SPRINKLER SHALL BE SPACED TO PROVIDE 100% HEAD TO HEAD COVERAGE. ALL AREAS SHALL BE SPRAYED FROM AT LEAST TWO DIRECTIONS.
2. UPON COMPLETION OF THE IRRIGATION SYSTEM INSTALLATION AND AS A CONDITION OF IT'S ACCEPTANCE, DELIVER TO THE CITY OF SHERWOOD THE FOLLOWING 'AS- BUILT' DRAWINGS; THREE PRINTS AND ONE REPRODUCIBLE SEPIA OF ALL CHANGES TO THE IRRIGATION SYSTEM INCLUDING A CONTROLLER ZONE REFERENCE CHART. INSTRUCT OWNER OF SYSTEM COMPONENTS OPERATION, SYSTEM WINTERIZATION, AND CONTROLLER ADJUSTMENT PROCESSES. INSTRUCT OWNER OF PRECIPITATION REQUIREMENTS AND SCHEDULE OF ANTICIPATED CONTROLLER ADJUSTMENTS AS LANDSCAPE MATURES.
3. PROTECT EXISTING BUILDINGS, WALLS, PAVEMENTS, REFERENCE POINTS, MONUMENTS, AND MARKERS ON THIS SITE. VERIFY LOCATION OF AND PROTECT ALL UTILITIES. PROTECT ADJACENT PROPERTY. PROTECT WORK AND MATERIALS OF OTHER TRADES. PROTECT IRRIGATION SYSTEM MATERIALS BEFORE, DURING, AND AFTER INSTALLATION. IN THE EVENT OF DAMAGE, REPAIR OR REPLACE ITEMS AS NECESSARY TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE AND AT NO ADDITIONAL COST TO THE OWNER. USE ALL MEANS NECESSARY TO PROTECT THE PUBLIC FROM INJURY AT ALL TIMES.
4. GUARANTEE ALL INSTALLED MATERIALS AND WORK FOR ONE YEAR BEYOND THE DATE OF FINAL ACCEPTANCE OF THE IRRIGATION SYSTEM INSTALLATION.
5. VERIFY GALLONAGE, PRESSURE, SIZE, AND LOCATION OF SERVICE WATER LINE. THE CONTRACTOR SHALL GUARANTEE AN IRRIGATION SYSTEM THAT FUNCTIONS TO MANUFACTURER'S SPECIFICATIONS WITH THE SOURCE VOLUME AND PRESSURE AFFORDED TO SITE. MAKE ARRANGEMENTS FOR WATER SHUT-OFF DURING CONSTRUCTION IF NECESSARY, NOTIFY OWNER 24 HOURS PRIOR TO SUSPENSION OF WATER SERVICE
6. VERIFY SLEEVING INSTALLATION AT EXISTING AND PROPOSED PAVED AREAS. COMBINE WIRE AND PIPING WHERE POSSIBLE.
7. IRRIGATION TRENCHES SHALL BE A DEPTH TO PROVIDE A MINIMUM COVER OF 18 INCHES FOR SLEEVING BENEATH WALKWAYS; 18 INCHES FOR ALL PRESSURIZED MAIN LINES; 24 INCHES FOR SLEEVING BENEATH ASPHALT PAVING, AND 12 INCHES FOR ALL LATERAL LINES. BACKFILL WITH CLEAN FILL VOID OF MATERIAL INJURIOUS TO SYSTEM COMPONENTS. ALL SLEEVING UNDER VEHICULAR TRAFFIC TO BE CLASS 200 PVC, ALL OTHER SLEEVING SHALL BE CLASS 200 PVC, LOCATE TOP OF ZONE VALVES A MINIMUM OF 6" BELOW FINISH GRADE.
8. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTRUCTIONS FOR SOLVENT WELDING OF PVC PIPE AND FITTINGS TO ACHIEVE TIGHT AND INSEPARABLE JOINTS. UTILIZE SINGLE WRAP TEFLON TAPE AT ALL THREADED JOINTS.
9. INSTALL ALL VALVES WITH FITTINGS THAT FACILITATE MAINTENANCE REMOVAL AND PLACE VALVE BOXES AT LOCATION THAT ARE EASILY SERVICED BUT NOT IN CONSPICUOUS LOCATIONS. LOCATE IN PLANTING BEDS WHEREVER POSSIBLE, AWAY FROM MOWER, EDGER, OR DE-THATCHER OPERATIONS.
10. CONTRACTOR SHALL INSTALL ONE MANUAL DRAIN VALVE AT DISCHARGE SIDE OF EACH REMOTE CONTROL VALVE AND AT ALL LOW POINTS IN MAINLINE PIPE SO AS TO ALLOW FOR COMPLETE DRAINAGE OF ALL MAIN LINES. MARK WITH A PAINTED SLEEVE COVER AND INDICATE LOCATIONS ON AS-BUILT DRAWINGS.
11. CONTRACTOR SHALL PROVIDE BACKFLOW PREVENTION AS REQUIRED PER LOCAL AND STATE CODES, INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
12. CONTRACTOR SHALL INSTALL IRRIGATION CONTROLLER IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. VERIFY A 120 V.A.C. ELECTRICAL SOURCE AND A MIN. 1 1/2" CONDUIT FROM CONTROLLER LOCATION OPEN TO ALL ELECTRICAL ZONE VALVES IN FIELD. WEATHERPROOF ANY EXTERIOR WALL PENETRATIONS.
13. INSTALL ALL WIRE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS WITH A MINIMUM OF 18 INCH LOOPED INSIDE VALVE BOX AT EACH REMOTE CONTROL VALVE AND AT THE CONTROLLER. ALL SPLICES SHALL OCCUR WITHIN VALVE BOXES WITH WATER-PROOF CONNECTORS.
14. CONTRACTOR SHALL INSTALL ALL SPRINKLER HEADS WITH FLEXIBLE RISERS, USING FLEXIBLE POLYETHYLENE PIPE NOT TO EXCEED 18 INCHES IN LENGTH OR PVC SWING JOINTS. TEE FITTINGS SHALL EXTEND HORIZONTALLY FROM PIPE.
15. CONTRACTOR SHALL THOROUGHLY FLUSH IRRIGATION SYSTEM AFTER PIPING, RISERS, AND VALVES ARE INSTALLED BUT PRIOR TO INSTALLING SPRINKLER HEADS. THOROUGHLY CLEAN, ADJUST AND BALANCE THE INSTALLED IRRIGATION SYSTEM. ADJUST SPRAY PATTERN OF NOZZLES TO MINIMIZE THROW OF WATER ONTO BUILDINGS, WALLS, ROADS AND PARKING LOTS. ADJUST CONTROLLER FOR OPTIMUM PERFORMANCE AND PRECIPITATION RATES UTILIZING PROPER WATER CONSERVATION MEASURES.

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge
Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED 672 Scott W. Banker OREGON 06/19/08 LANDSCAPE ARCHITECT

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ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

IRRIGATION PLANS & DETAILS

DESIGNED BY: SWB/KJO
DRAFTED BY: SWB/KJO
DATE: MAY 2012

ADAMS AVENUE NORTH
IRRIGATION SPECIFICATIONS
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	17A-6

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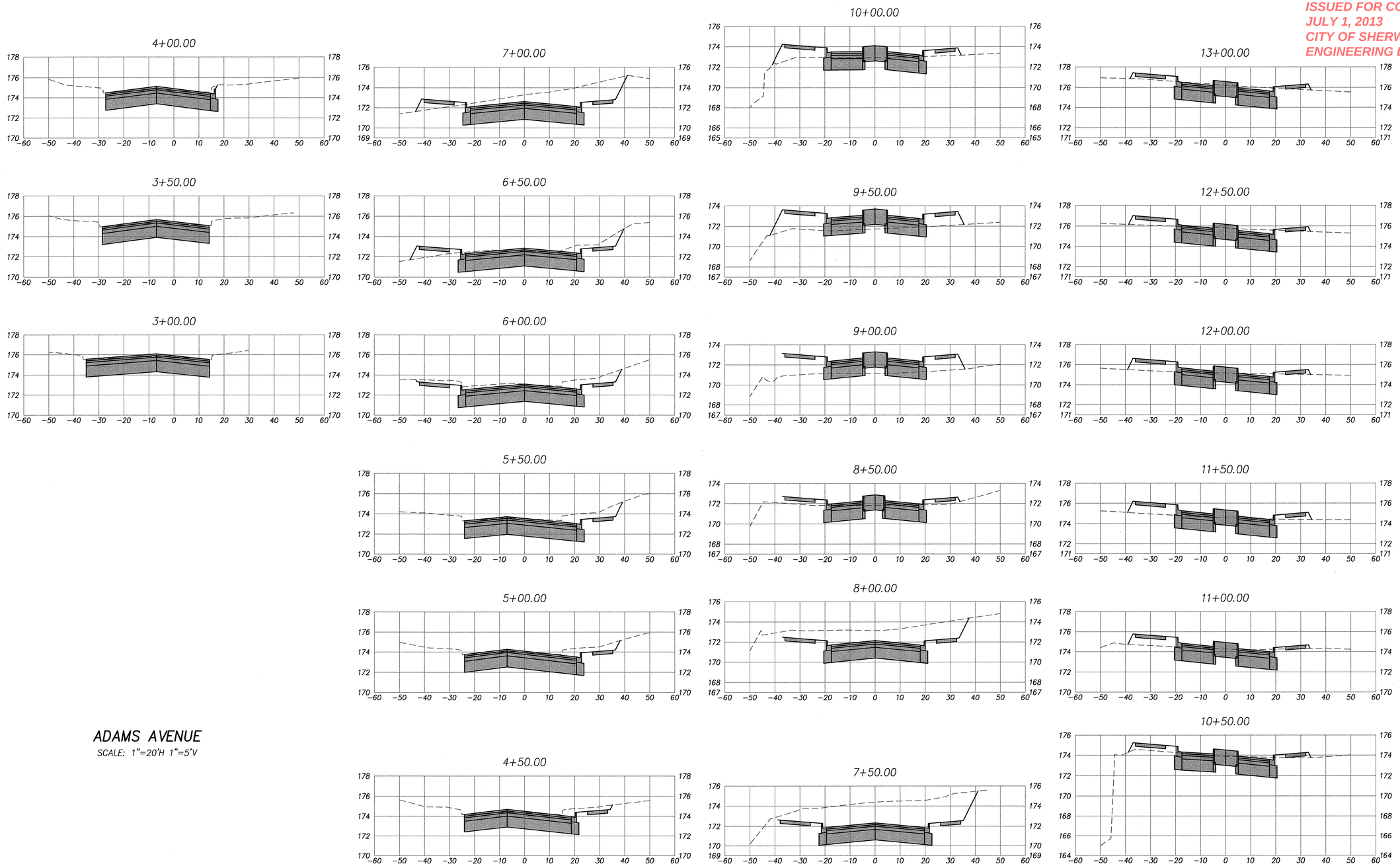
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



ADAMS AVENUE

SCALE: 1"=20'H 1"=5'V

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
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phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
CROSS SECTION INFORMATION
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	18

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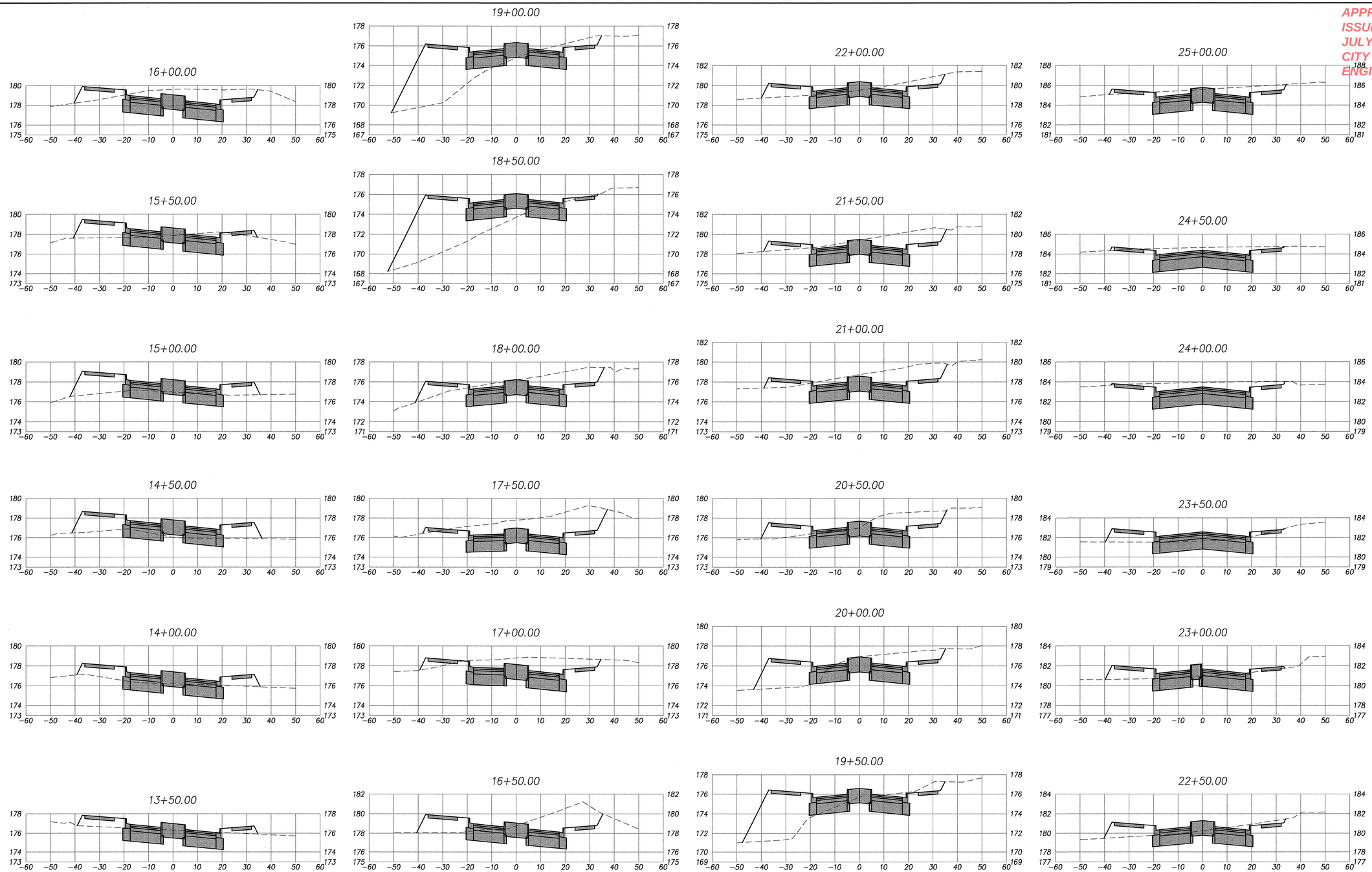
APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT



FINAL DESIGN

ADAMS AVENUE
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City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

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DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
CROSS SECTION INFORMATION
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	18A

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APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

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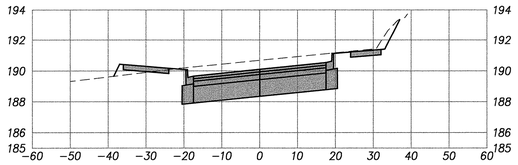

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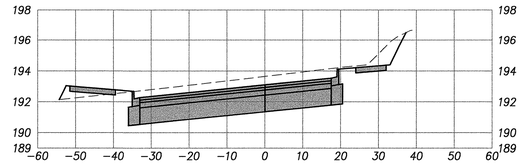

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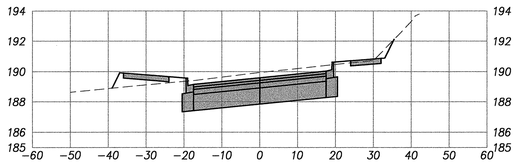

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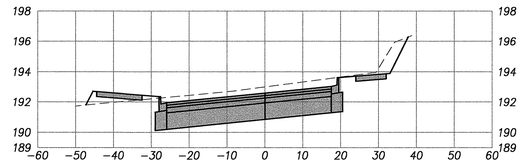

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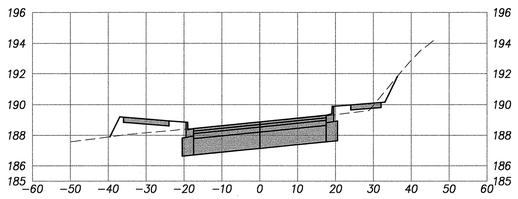

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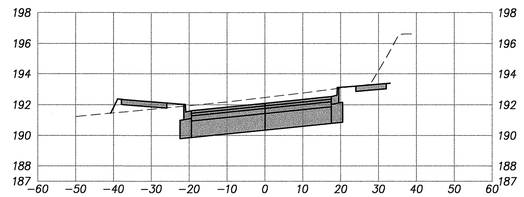

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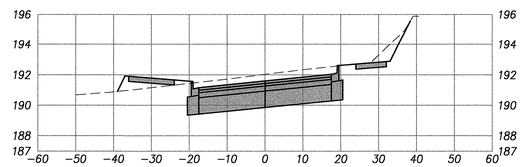

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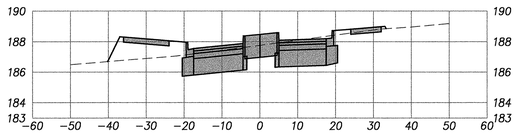

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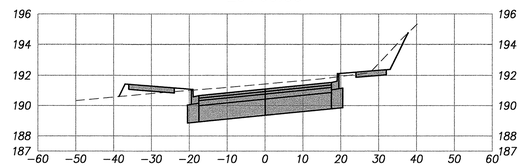

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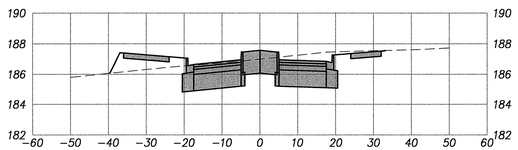

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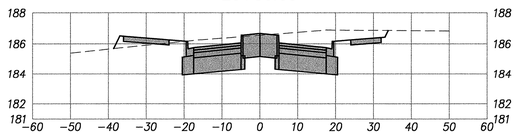

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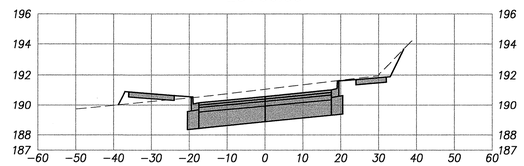

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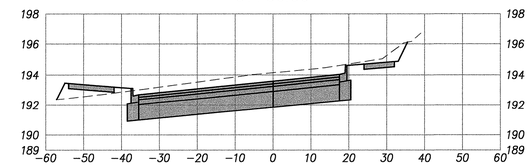

ADAMS AVENUE
SCALE: 1"=20'H 1"=5'V

FINAL DESIGN

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Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
EXPIRES: 12/31/13

ROADWAY PLANS & DETAILS

HHPR Harper Houf Peterson Righellis Inc.
ENGINEERS • PLANNERS
LANDSCAPE ARCHITECTS • SURVEYORS
205 SE Spokane Street, Suite 200, Portland, OR 97202
phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DESIGNED BY: BRA/HHPR TEAM
DRAFTED BY: HHPR TEAM
DATE: MAY 2012

ADAMS AVENUE NORTH
CROSS SECTION INFORMATION
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	18A-1

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APPROVED PLANS
ISSUED FOR CONSTRUCTION
JULY 1, 2013
CITY OF SHERWOOD
ENGINEERING DEPARTMENT

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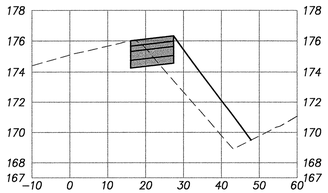

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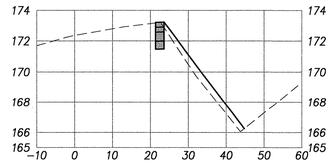

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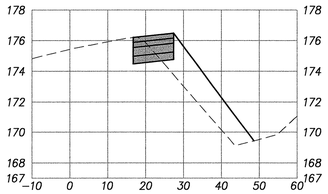

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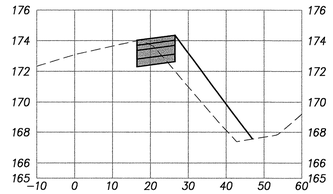

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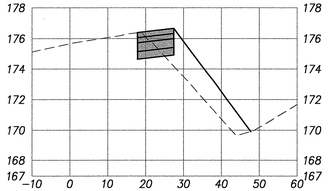

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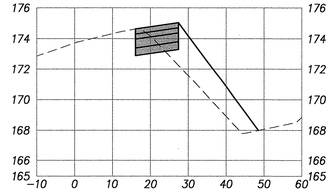

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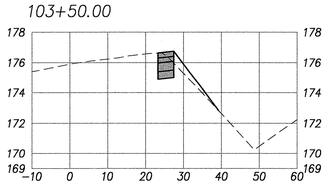

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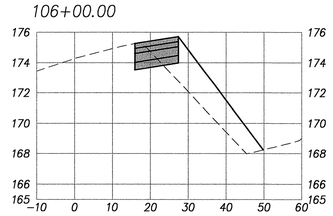

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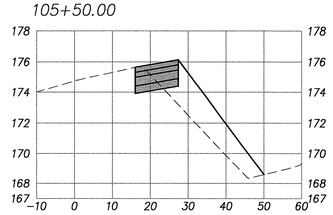

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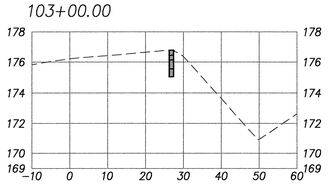

OR 99W
SCALE: 1"=20'H 1"=5'V

FINAL DESIGN

City of Sherwood Oregon
Home of the Tualatin River National Wildlife Refuge

Engineering Department
22560 SW Pine Street
Sherwood, Oregon 97140
Phone: (503) 925-2309
Fax: (503) 625-0629

REGISTERED PROFESSIONAL ENGINEER 70,863 OREGON JUL. 11, 2006 BENJAMIN R. AUSTIN
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CROSS SECTION INFORMATION
SHERWOOD, OREGON

FEDERAL HIGHWAY ADMINISTRATION		PROJECT NUMBER	SHEET NO.
REGION 10	OREGON DIVISION	SHR-08	18A-2

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