

GENERAL NOTES:

1. ALL REFERENCES TO THE CITY OF WEST LINN STANDARDS REFER TO THE CURRENT PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS.
2. THE DESIGN ENGINEER WILL BE RESPONSIBLE FOR INSPECTION OF THE PROPOSED IMPROVEMENTS WITH OVERSIGHT FROM THE CITY OF WEST LINN.
3. THE CONTRACTOR SHALL PROVIDE A WORK SCHEDULE TO THE ENGINEER AND CITY AND PROVIDE 24-HOUR NOTICE OF ANY TESTING REQUIRING WITNESSING BY THE CITY OR ENGINEER.
4. ANY CHANGES TO THE PLANS MUST RECEIVE APPROVAL BY THE ENGINEER AND CITY IN WRITING BEFORE PROCEEDING WITH THE WORK.
5. A PUBLIC IMPROVEMENT GUARANTEE AGREEMENT, A PRE-CONSTRUCTION MEETING, AND INSTALLATION OF THE EROSION CONTROL MEASURES, ARE ALL REQUIRED PRIOR TO BEGINNING CONSTRUCTION.
6. A CITY AND ENGINEER REPRESENTATIVE MUST BE PRESENT FOR ALL TESTING, AND THE CITY SHALL BE FURNISHED A COPY OF ALL TEST RESULTS.
7. CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION PRIOR TO ORDERING MATERIALS. OTHER EXISTING UTILITIES MAY EXIST AND IF DISCREPANCIES ARE FOUND THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
8. THE CONTRACTOR SHALL ERECT AND MAINTAIN TRAFFIC CONTROL PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART VI. CONSTRUCTION AND MAINTENANCE, AND SUBMIT A TRAFFIC PLAN TO THE CITY PRIOR TO BEGINNING WORK. FOR TEMPORARY TRAFFIC CONTROL, REFER TO ODOT TEMPORARY TRAFFIC CONTROL MANUAL.
9. OREGON LAW REQUIRES THAT THE RULES ADOPTED BY OREGON UTILITY NOTIFICATION CENTER BE FOLLOWED. THOSE RULES ARE SET FORTH IN OAR 952-001-0090. COPIES OF THE RULES ARE AVAILABLE BY CALLING THE CENTER OR ACCESSING VIA INTERNET AT WWW.CALLBEFOREYOU.DIG.ORG, PORTLAND METRO AREA 503-248-6699.

STREET NOTES:

1. ALL STREET SECTIONS TO BE GRUBBED AND GRADED TO A MINIMUM OF 8-INCHES BELOW THE SUBGRADE.
2. THE STREET SUBGRADE SHALL CONFORM TO DIVISION 501 OF THE CITY OF WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. AREAS TO RECEIVE FILL ARE TO BE INSPECTED BY THE CITY OF WEST LINN PERSONNEL AND PROJECT GEOTECHNICAL PRIOR TO PLACEMENT OF FILL. THE PROJECT GEOTECHNICAL SHALL TEST FOR COMPACTION PER DIVISION 501.03.08 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS.
3. AGGREGATE BASE ROCK SHALL CONFORM TO THE REQUIREMENTS OF DIVISION 205 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. BASE COURSE IS 1 1/2" - 0" CRUSHED ROCK AND LEVELING COURSE IS 3/4" - 0" CRUSHED ROCK. THE CITY OF WEST LINN REQUIRES A PROOF ROLL WITH A LOADED 10-CUBIC YARD OR LARGEST USED (IE SUPER SOLO) DUMP TRUCK OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE ROCK AND AT TOP OF ROCK JUST PRIOR TO PAVING.
4. ASPHALT CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS, DIVISION 205. THE BASE LIFT SHALL BE CLASS "B" AC AND THE TOP LIFT SHALL BE CLASS "C" AC MEETING THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS, DIVISION 505. THE TOP LIFT OF ASPHALT CONCRETE SHALL NOT BE PLACED PRIOR TO RECEIVING AUTHORIZATION FROM THE CITY OF WEST LINN.
5. CURB AND GUTTER SHALL HAVE A COMPRESSIVE STRENGTH OF 3300 PSI, AND MAXIMUM AGGREGATE PER DIVISION 205 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. A PROOF ROLL OF THE CURB LINES IS REQUIRED PRIOR TO CURB PLACEMENT. CONTRACTION JOINTS ARE TO BE INSTALLED AT 15-FOOT MAXIMUM. THE CONTRACTOR IS TO STAMP LOCATION OF SEWER AND WATER LINES CROSSING THE CURB LINE WITH AN "S" OR "W".

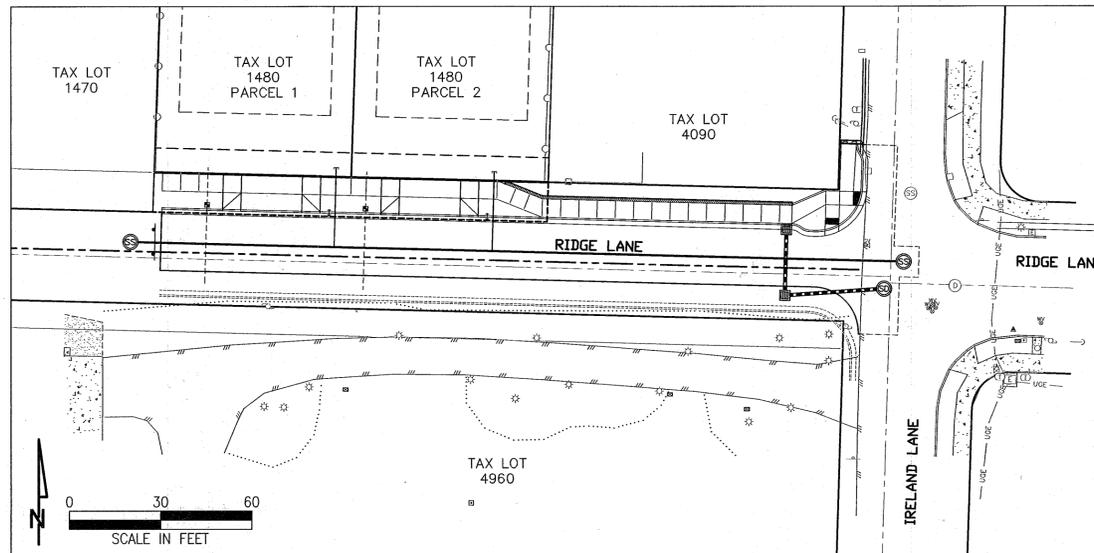
STORM SEWER NOTES:

1. RIBBED PVC ASTM 794 OR DUCTILE IRON CONFORMING TO ASTM C 151, CLASS 52, WITH RUBBER JOINTS REQUIRED.
2. GUTTER INLETS SHALL BE Poured IN PLACE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI. FRAMES SHALL BE FABRICATED OF STRUCTURAL STEEL, ASTM A-3733.
3. MANHOLE BASES MAY BE Poured IN PLACE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI OR PRECAST. MANHOLE RISERS AND TOPS SHALL BE PRECAST WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. TOPS SHALL BE ECCENTRIC CONES EXCEPT WHERE THERE IS INSUFFICIENT HEADROOM REQUIRES A FLAT TOP. THE INTERIOR DIMENSIONS NOTED ON THE PLANS ARE MINIMUMS, AND SOME OR ALL OF THE MANHOLES MAY BE REQUIRED TO BE OVERSIZED. THE CONTRACTOR SHALL VERIFY WITH THE MANHOLE MANUFACTURER FOR THE ACTUAL SIZE OF MANHOLE NEEDED FOR TYPE AND SIZE OF PIPE TO BE USED. INVERTS SHALL BE CONSTRUCTED SO AS TO PROVIDE A SMOOTH FLOW AND PIPES SHALL BE CONNECTED TO THE MANHOLE BY MEANS OF A FLEXIBLE CONNECTION AND SHALL HAVE A SHEAR JOINT LOCATED 18-INCHES OUTSIDE THE MANHOLE.
4. MANHOLES LOCATED IN EASEMENTS REQUIRE A TAMPER PROOF FRAME AND COVER AND SET 12-INCHES ABOVE FINISHED GRADE IN UNPAVED AREAS.
5. GRANULAR BACKFILL (3/4" - 0") IS TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL.
6. A VIDEO INSPECTION IN ACCORDANCE WITH DIVISION 601.03.11 PER THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS IS REQUIRED. ALL TESTS SHALL BE WITNESSED BY THE ENGINEER AND A REPRESENTATIVE OF THE CITY.
7. A PLUMBING PERMIT IS REQUIRED FOR ALL STORM DRAINS BEYOND THE FIRST CLEANOUT.

SANITARY SEWER NOTES:

1. PIPE SHALL BE PVC SEWER PIPE CONFORMING TO ASTM D-3034 SDR 35, MINIMUM STIFFNESS SHALL BE 46 PSI AND JOINT TYPE SHALL BE ELASTOMERIC GASKET CONFORMING TO ASTM D-3212.
2. MANHOLE BASE MAY BE Poured IN PLACE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI OR PRECAST. MANHOLE RISERS AND TOPS SHALL BE PRECAST WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. TOPS SHALL BE ECCENTRIC CONES EXCEPT WHERE THERE IS INSUFFICIENT HEADROOM REQUIRES A FLAT TOP. INVERTS SHALL BE CONSTRUCTED TO PROVIDE A SMOOTH FLOW WITH THE CHANNEL BEING ABLE TO PAS A 6" X 36" CYLINDER INTO THE PIPES. PVC PIPE SHALL BE CONNECTED TO THE MANHOLE BY MEANS OF A FLEXIBLE CONNECTION AND SHALL HAVE A SHEAR JOINT LOCATED 18-INCHES OUTSIDE THE MANHOLE. CEMENT GROUT FOR CONNECTING PVC SEWER PIPE WILL NOT BE PERMITTED.
3. ALL MANHOLES LOCATED IN EASEMENT AREAS WILL HAVE TAMPER PROOF FRAMES AND COVERS WITH THE COVER SET 12-INCHES ABOVE FINISH GRADE IN UNPAVED AREAS.
4. GRANULAR BACKFILL (3/4" - 0") IS TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL. EXCAVATION, BEDDING, AND BACKFILL SHALL BE IN CONFORMANCE WITH DIVISION 204 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. BACKFILL WITHIN NEW AND EXISTING STREETS SHALL BE CLASS B.
5. PVC SERVICE LATERALS SHALL BE 4-INCH CONFORMING TO THE SAME MATERIALS AS THE MAINLINE SEWERS. SERVICE LATERALS SHALL BE INSTALLED TO A POINT BEYOND THE UTILITY EASEMENT AS SHOWN ON THE PLAN. THE SERVICE LATERALS SHALL BE PLUGGED WITH THE LOCATION MARKED WITH A 2X4 PAINTED GREEN.
6. SANITARY SEWER PIPE, INCLUDING SERVICE LATERALS, SHALL BE TESTED IN ACCORDANCE WITH WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS DIVISION 301.03.09 AND MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH DIVISION 302.03.07. TESTS SHALL BE WITNESSED BY THE ENGINEER AND THE CITY OF WEST LINN. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE TESTING AND PROVIDING PASSING TESTS PRIOR TO CONNECTION TO THE EXISTING SYSTEM.
7. A PLUMBING PERMIT FROM THE CITY IS REQUIRED FOR SANITARY SEWER LATERALS BEYOND THE FIRST CLEANOUT.
8. ALL MATERIALS, INSTALLATION, TESTING, AND INSPECTIONS TO BE IN STRICT ACCORDANCE WITH THE CITY OF WEST LINN PUBLIC WORKS STANDARDS AND THE DEQ.

PUBLIC IMPROVEMENT PLANS FOR RIDGE LANE 2-LOT PARTITION 1480 ROSEMONT ROAD, CITY OF WEST LINN, CLACKAMAS COUNTY



PROJECT OWNER

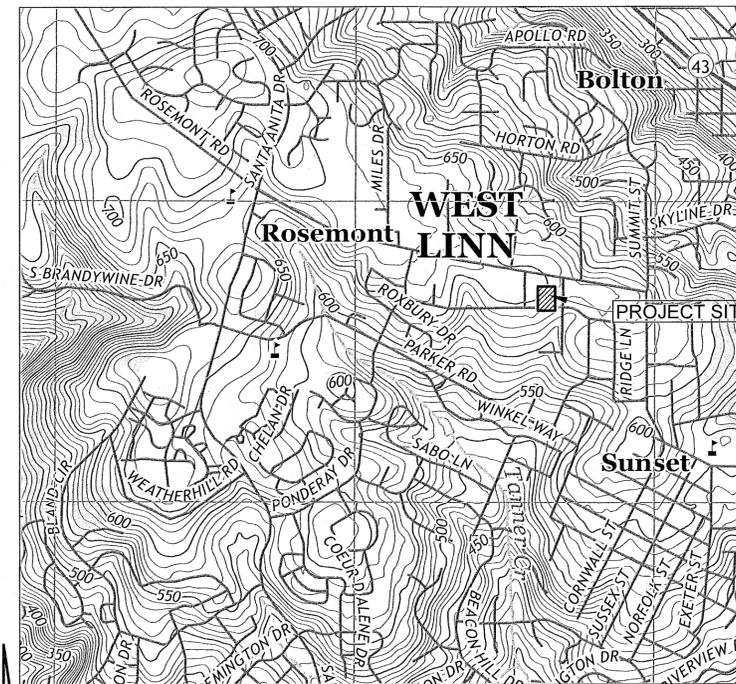
WILL HUFFMAN
WILLH@CLOPTONEXCAVATING.COM
PHONE (503) 682-0420

PROJECT CIVIL ENGINEER

KELLI GROVER, PE
FIRWOOD DESIGN GROUP, LLC
359 E. HISTORIC COLUMBIA RIVER HWY
TROUTDALE, OR 97060
PHONE (503) 668-3737

WATER NOTES:

1. WATER MAINS SHALL BE DUCTILE IRON PIPE CONFORMING TO AWWA C151, CLASS 52. PIPE IS TO HAVE CEMENT MORTAR LINING AND BITUMINOUS SEAL COAT CONFORMING TO AWWA C104. JOINTS ARE TO BE PUSH-ON RUBBER GASKETED JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. PIPE FITTINGS ARE TO BE THE SAME MATERIAL AND CLASS AS THE PIPE AND OF DOMESTIC ORIGIN.
2. WATER MAINS TO HAVE A MINIMUM COVER OF 36-INCHES.
3. ALL TEES, BENDS (HORIZONTAL AND VERTICAL), OR SIGNIFICANT CHANGES IN DIRECTION IN ALIGNMENT SHALL BE RESTRAINED WITH FIELD LOCK GASKETS AND MEGA LUG FITTINGS (SEE SPEC 4.0014).
4. GRANULAR BACKFILL (3/4" - 0") IS TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL. EXCAVATION, BEDDING, AND BACKFILL SHALL BE IN CONFORMANCE WITH DIVISION 204 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. BACKFILL WITHIN NEW AND EXISTING STREETS SHALL BE CLASS B.
5. SERVICES SHALL BE 1-INCH TYPE K COPPER. CORPORATION STOPS SHALL BE MUELLER B-25008 OR APPROVED EQUAL. ANGLE STOPS SHALL BE MUELLER B-24258 OR APPROVED EQUAL. METER BOXES SHALL BE DFW PLASTICS MODEL DF846WBC OR APPROVED EQUAL. METER BOXES ARE TO BE INSTALLED 2 1/2" FROM THE CURB IN PLANTER STRIPS OR BEHIND SIDEWALK. METER BOX LOCATION TO BE DETERMINED IN THE FIELD.
6. ALL WATER LINES SHALL BE PRESSURE TESTED AND BIOLOGICALLY TESTED BEFORE CONNECTION TO THE CITY WATER SYSTEM. CHLORINATION SHALL BE PER DIVISION 403.13 OF THE CITY OF WEST LINN CONSTRUCTION SPECIFICATIONS. PRESSURE TESTING SHALL BE IN ACCORDANCE WITH THE CITY OF WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS, DIVISION 403.14. TEST PRESSURE WILL BE 180 PSI OR 1.5 TIMES THE NORMAL WORKING PRESSURE, WHICHEVER IS HIGHER.
7. CONNECTION OF THE NEW PIPE SYSTEMS WILL NOT BE MADE UNTIL ALL TESTS ARE MADE AND ACCEPTED BY THE CITY OF WEST LINN.
8. A PLUMBING PERMIT IS REQUIRED FOR EXTENSIONS OF WATERLINES BEYOND THE METER.
9. ALL MATERIALS, INSTALLATION, AND TESTS TO BE IN STRICT ACCORDANCE WITH THE CITY OF WEST LINN PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS DIVISION 204, AND THE OREGON STATE HEALTH DIVISION ADMINISTRATION RULES, CHAPTER 333.
10. ALL SURPLUS APPURTENANCES SHALL BE RETURNED TO THE CITY OF WEST LINN WATER DEPARTMENT.
11. SERVICES TO BE INSTALLED BY WEST LINN STAFF. METERS TO BE PLACED IN PLANTER STRIP OR BACK OF SIDEWALK (NOT IN CONCRETE).



VICINITY MAP
SCALE: 1"=2000'

PROJECT DATUM

VERTICAL DATUM: OPUS SOLUTION, NAVD88 USING
GEOID 12B ON CONTROL POINT 900
HORIZONTAL DATUM: STATE PLANE COORDINATES
(OR-NORTH)
FIELD WORK: JULY 31, 2019

PROPOSED LEGEND

1 - COVER SHEET & NOTES	MAJOR CONTOUR
2 - EXISTING CONDITIONS & DEMO PLAN	MINOR CONTOUR
3 - PRELIMINARY PLAN	DEDICATED RIGHT-OF-WAY
4 - GRADING, ESC, & TREE PROTECTION PLAN	BUILDING EXTERIOR WALL
5 - RIDGE LANE PLAN & PROFILE	BUILDING ROOFLINE
6 - STORM PLAN & PROFILE	PAVEMENT SAWCUT LINE
7 - CURB RETURN & INTERSECTION PLAN	ASPHALT PAVEMENT
8 - WALK & DRIVEWAY DETAILED GRADING	SIDEWALK
9 - ESC NOTES AND DETAILS	DRIVEWAY APPROACH
10 - DETAILS SHEET - ROADWAY	STANDARD CURB & GUTTER
11 - DETAILS SHEET - ROADWAY	CURB WEEPHOLE
12 - DETAILS SHEET - UTILITIES	BLOCK RETAINING WALL
13 - DETAILS SHEET - UTILITIES	ROCK RETAINING WALL
14 - DETAILS SHEET - UTILITIES	DRAINAGE DITCH
15 - DETAILS SHEET - UTILITIES	EARTHEN BERM
	WATER SERVICE & METER
	SANITARY SERVICE
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	CATCH BASIN
	STORM LINE

NOTICE TO EXCAVATORS:

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.

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

EMERGENCY TELEPHONE NUMBERS

PGE	503-464-7777
NW NATURAL GAS	503-220-2415
CLACKAMAS COUNTY	503-742-4400
COMCAST CABLE	503-617-1212
VERIZON	800-837-4966



EXPIRES: 06/30/21
SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION

DRAWN: BD	DESIGNED: BD	CHECKED: KG
SCALE: AS SHOWN	DATE: JAN 22, 2020	
PROJECT NO. E19-035		

FDG
Firwood Design Group, LLC
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TROUTDALE, OREGON 97060
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503-682-0420

COVER SHEET & NOTES
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION

1418 CB
RIM=629.09'
IE 12" OUT E. =625.19'
SUMP =623.79'

1419 CB
RIM=629.34'
IE 12" IN W. =625.14'
IE 12" OUT S. =625.04'
SUMP =623.44'

1428 SDMH
RIM=624.75
IE 18" IN E. =614.55'
IE 18" OUT W. =614.45'

1429 SDMH
RIM=626.92'
IE 18" IN E. =613.72'
IE 12" IN N. =617.02'
IE 18" OUT S. =613.52'

1432 SSMH
RIM=619.20'
IE 8" IN N. =609.10'
IE 8" OUT S. =609.00'

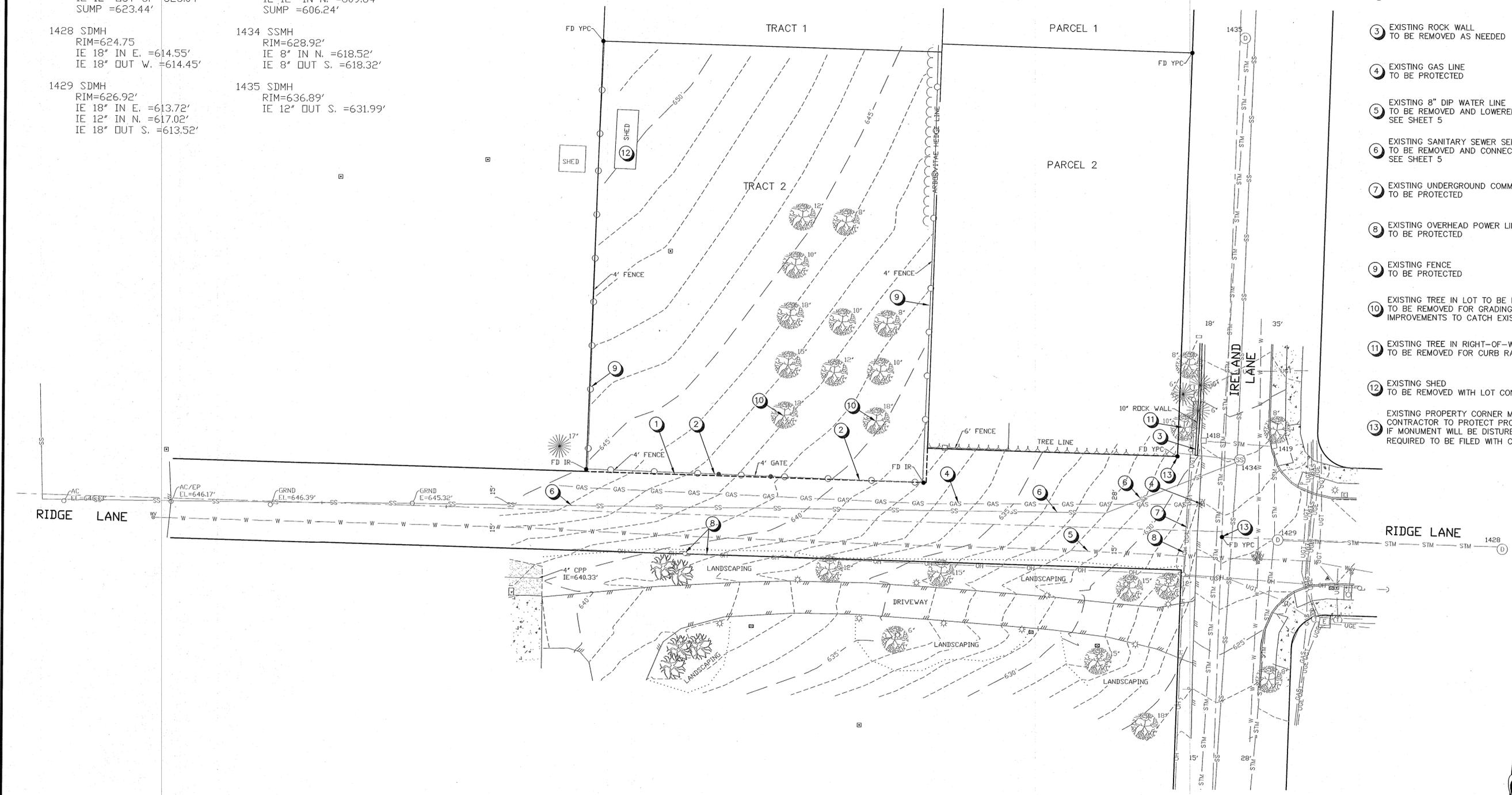
1433 SDMH
RIM=619.34'
IE 12" IN N. =609.84'
SUMP =606.24'

1434 SSMH
RIM=628.92'
IE 8" IN E. =618.52'
IE 8" OUT S. =618.32'

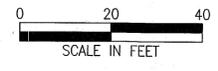
1435 SDMH
RIM=636.89'
IE 12" OUT S. =631.99'

KEY NOTES

- 1 EXISTING RIGHT-OF-WAY LINE TO BE REPLATTED
- 2 EXISTING FENCE AND GATE TO BE REMOVED
- 3 EXISTING ROCK WALL TO BE REMOVED AS NEEDED
- 4 EXISTING GAS LINE TO BE PROTECTED
- 5 EXISTING 8" DIP WATER LINE TO BE REMOVED AND LOWERED AS NEEDED SEE SHEET 5
- 6 EXISTING SANITARY SEWER SERVICE TO BE REMOVED AND CONNECTED TO PROPOSED SANITARY MH SEE SHEET 5
- 7 EXISTING UNDERGROUND COMMUNICATIONS LINE TO BE PROTECTED
- 8 EXISTING OVERHEAD POWER LINE AND POLES TO BE PROTECTED
- 9 EXISTING FENCE TO BE PROTECTED
- 10 EXISTING TREE IN LOT TO BE DEVELOPED TO BE REMOVED FOR GRADING OF RIDGE LANE IMPROVEMENTS TO CATCH EXISTING SLOPE
- 11 EXISTING TREE IN RIGHT-OF-WAY TO BE REMOVED FOR CURB RAMP INSTALLATION
- 12 EXISTING SHED TO BE REMOVED WITH LOT CONSTRUCTION
- 13 EXISTING PROPERTY CORNER MONUMENT CONTRACTOR TO PROTECT PROPERTY MONUMENTS IF MONUMENT WILL BE DISTURBED A PRE-SURVEY WILL BE REQUIRED TO BE FILED WITH COUNTY SURVEYOR'S OFFICE



City of West Linn
APPROVED
DATE: 1/24/20



REGISTERED PROFESSIONAL
ENGINEER
WILL HUFFMAN
6714997
OREGON
EXPIRES: 06/30/21
SIGNATURE DATE: 1-22-2020
KEELI A. GROVER

DATE:	NO.	REVISION

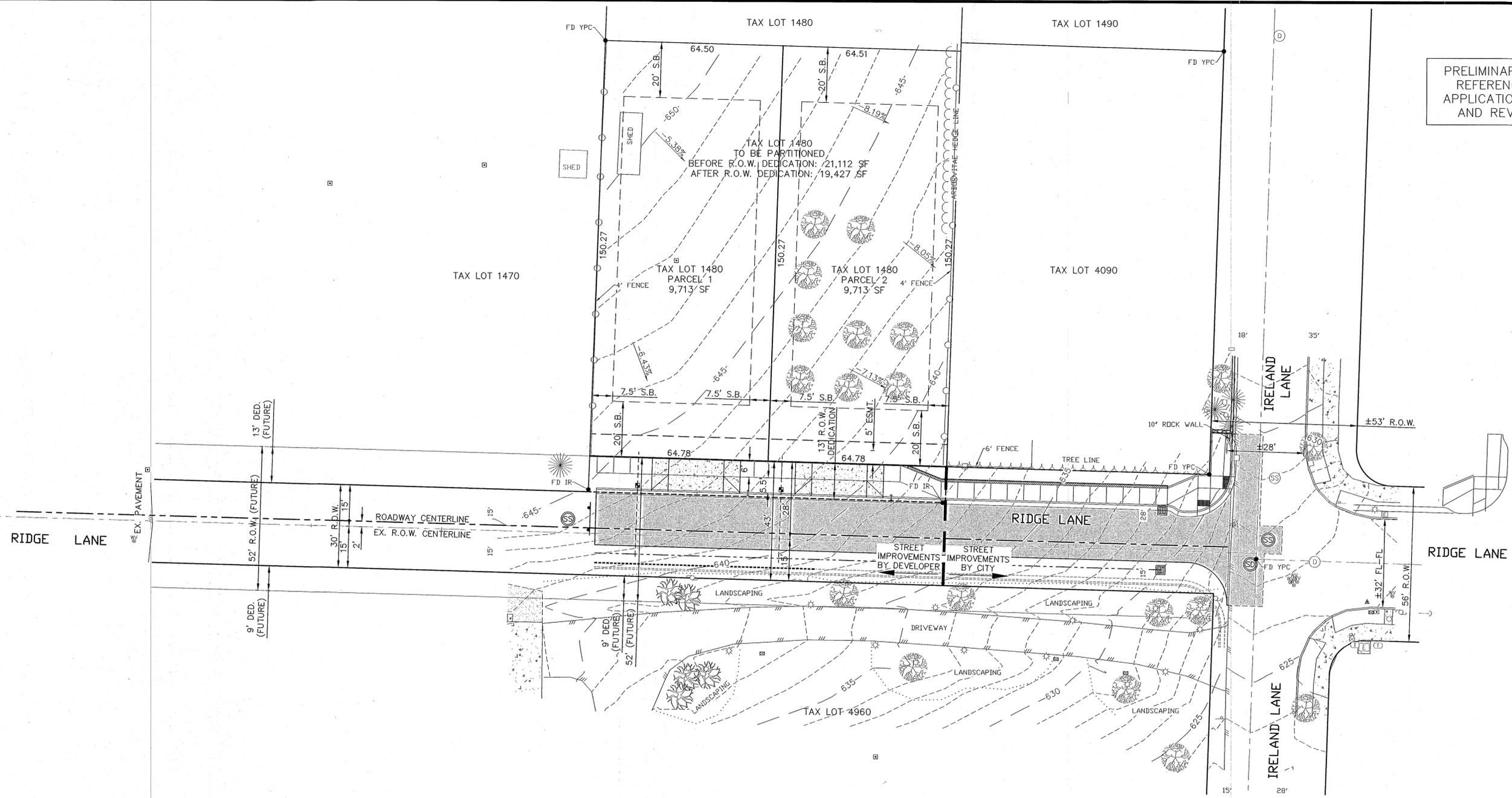
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SCALE: AS SHOWN	DATE: JAN 22, 2020	
PROJECT NO. E19-035		

FDG
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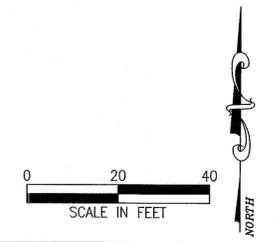
EXISTING CONDITIONS & DEMO PLAN
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION

PRELIMINARY PLAT DATA IS FOR REFERENCE ONLY. PARTITION APPLICATION WILL BE SUBMITTED AND REVIEWED SEPARATELY.



- NOTES:**
1. ZONING: ALL LOTS AND ADJACENT PROPERTIES ARE ZONED R-10. CLASS 1 VARIANCE IS REQUESTED FOR MINIMUM LOT AREA MODIFICATION OF LESS THAN 5% PER CDC 75.020. PROPOSED LOT AREA FOR EACH LOT IS 9,713 SF, A 2.87% REDUCTION FROM THE 10,000 SF MINIMUM FOR R-10 ZONING. ALL OTHER DIMENSIONAL CRITERIA IS MET.
 2. ALL SITE SLOPES ARE LESS THAN 10%. SITE IS 100% TYPE IV LANDS AS DEFINED BY COMMUNITY DEVELOPMENT CODE (CDC) CHAPTER 2.

West Linn Engineering
 Linn
 DATE: 1/24/20

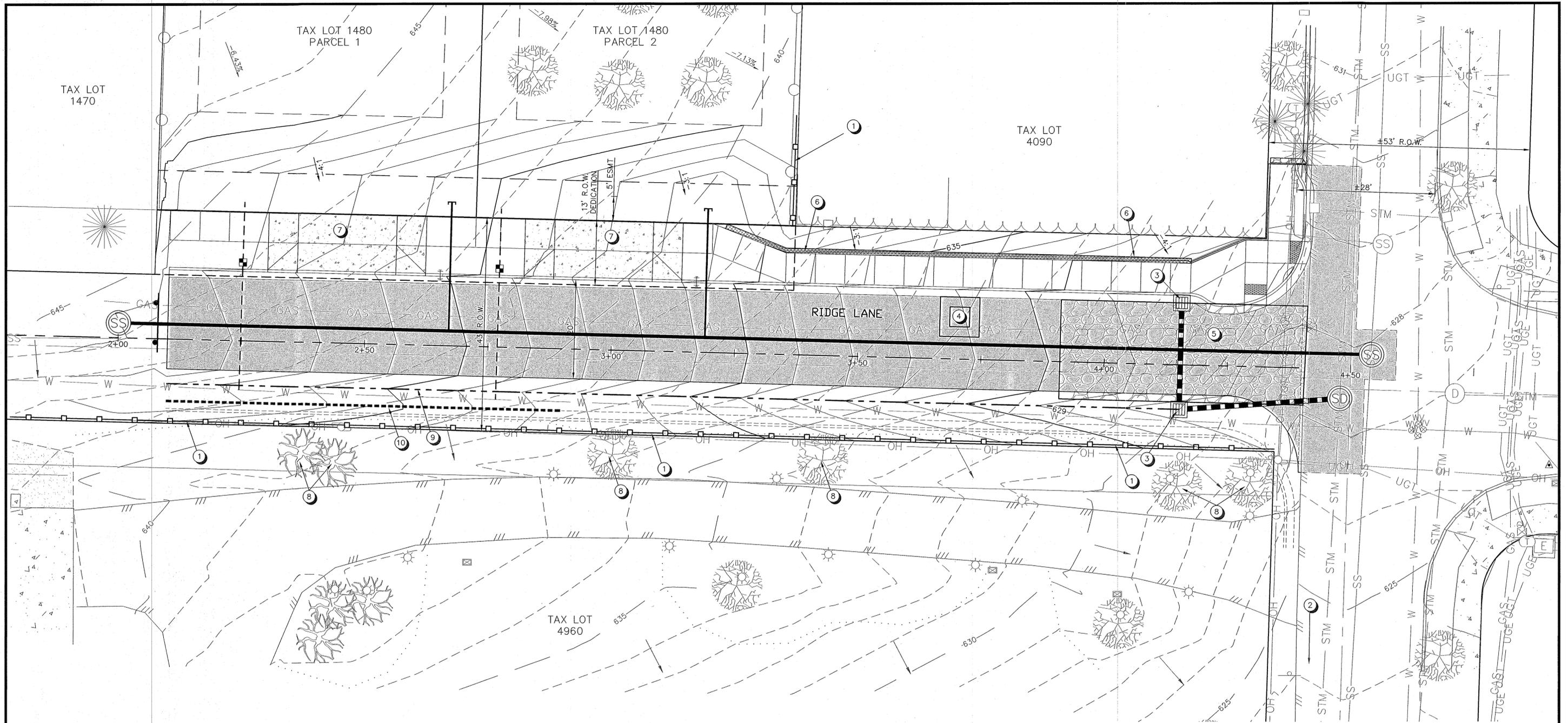


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PRELIMINARY PLAT
 PUBLIC IMPROVEMENT PLANS
 RIDGE LANE 2-LOT PARTITION



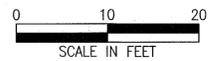
ESTIMATED SITE DATA

AREA OF DISTURBANCE: ±0.30 ACRES
 PROPOSED FINISH GRADE TO EXISTING FINISH GRADE (UNADJUSTED COMPARISON):
 IMPROVEMENTS BY DEVELOPER:
 CUT: 435 CY
 FILL: 15 CY
 IMPROVEMENTS BY CITY:
 CUT: 415 CY
 FILL: 0 CY
 ENGINEER'S ESTIMATE IS APPROXIMATE AND PROVIDED FOR REFERENCE ONLY.
 CONTRACTOR RESPONSIBLE FOR TAKEOFFS USED IN BIDDING AND ACTUAL
 QUANTITIES OF IMPORTED/EXPORTED MATERIAL AS NEEDED FOR CONSTRUCTION.

KEY NOTES

- ① TEMPORARY SEDIMENT FENCE
SEE DETAIL SHEET 9
- ② TEMPORARY INLET PROTECTION ON EX. CATCH BASIN
APPROX. 190' SOUTH OF INTERSECTION
SEE DETAIL SHEET 9
- ③ TEMPORARY INLET PROTECTION ON CATCH BASIN
INSTALL IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION
SEE DETAIL SHEET 9
- ④ TEMPORARY CONCRETE WASHOUT
SEE DETAIL SHEET 9
- ⑤ TEMPORARY CONSTRUCTION ENTRANCE
SEE DETAIL SHEET 9
- ⑥ RETAINING WALL
SEE SHEETS 7 AND 8
- ⑦ SEE DETAILED DRIVEWAY GRADING SHEET 8
- ⑧ CITY ARBORIST TO INSPECT AND VERIFY NO TREE ROOT
PROTECTION ZONE IMPACT PRIOR TO CONSTRUCTION
- ⑨ DRAINAGE DITCH
SEE TYPICAL SECTION SHEET 5
- ⑩ EARTHEN BERM
SEE TYPICAL SECTION SHEET 5

West Linn
 ENGINEERING
 APPROVED
 DATE: 1/24/20



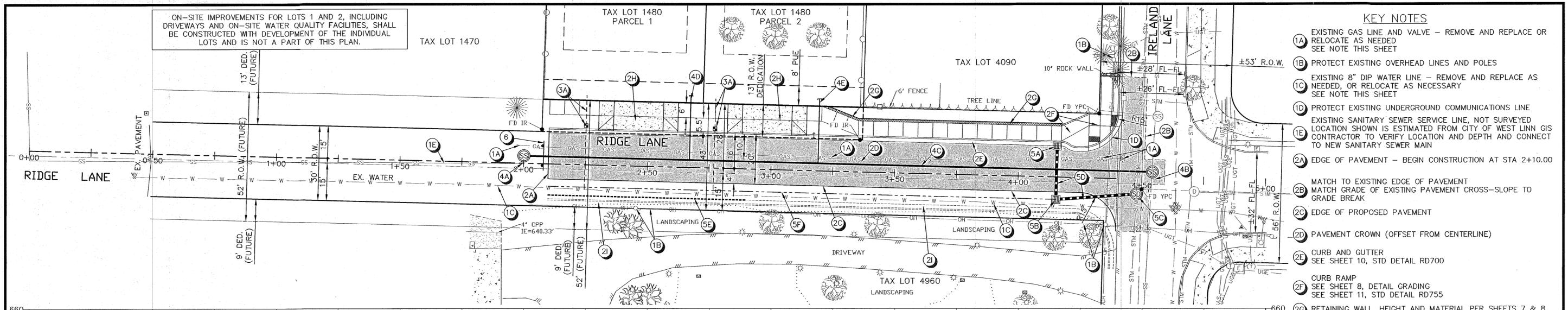
REGISTERED PROFESSIONAL
 ENGINEER
 Kelli A. Grover
 OREGON
 Jan. 14, 2003
 EXPIRES: 06/30/21
 SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION	DRAWN: BD	DESIGNED: BD	CHECKED: KG
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			PROJECT NO. E19-035		

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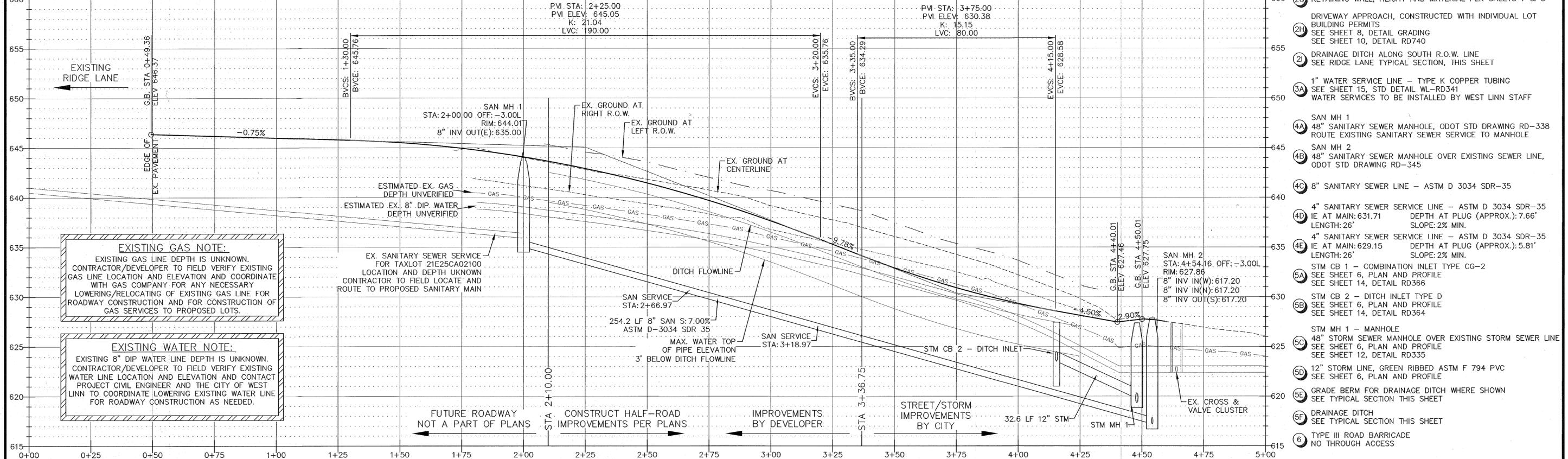
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GRADING, ESC, & TREE PROTECTION PLAN 4
 PUBLIC IMPROVEMENT PLANS
 RIDGE LANE 2-LOT PARTITION
 15



KEY NOTES

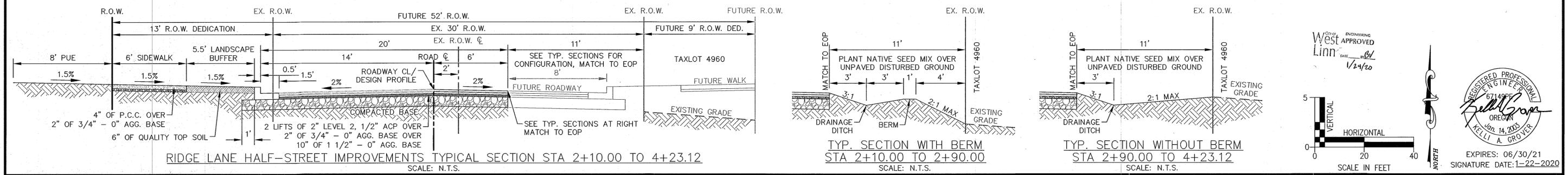
- 1A EXISTING GAS LINE AND VALVE - REMOVE AND REPLACE OR RELOCATE AS NEEDED SEE NOTE THIS SHEET
- 1B PROTECT EXISTING OVERHEAD LINES AND POLES
- 1C EXISTING 8" DIP WATER LINE - REMOVE AND REPLACE AS NEEDED, OR RELOCATE AS NECESSARY SEE NOTE THIS SHEET
- 1D PROTECT EXISTING UNDERGROUND COMMUNICATIONS LINE
- 1E EXISTING SANITARY SEWER SERVICE LINE, NOT SURVEYED LOCATION SHOWN IS ESTIMATED FROM CITY OF WEST LINN GIS CONTRACTOR TO VERIFY LOCATION AND DEPTH AND CONNECT TO NEW SANITARY SEWER MAIN
- 2A EDGE OF PAVEMENT - BEGIN CONSTRUCTION AT STA 2+10.00
- 2B MATCH TO EXISTING EDGE OF PAVEMENT
- 2C MATCH GRADE OF EXISTING PAVEMENT CROSS-SLOPE TO GRADE BREAK
- 2D EDGE OF PROPOSED PAVEMENT
- 2E PAVEMENT CROWN (OFFSET FROM CENTERLINE)
- 2F CURB AND GUTTER SEE SHEET 10, STD DETAIL RD700
- 2G CURB RAMP SEE SHEET 8, DETAIL GRADING SEE SHEET 11, STD DETAIL RD755
- 2H RETAINING WALL, HEIGHT AND MATERIAL PER SHEETS 7 & 8
- 2I DRIVEWAY APPROACH, CONSTRUCTED WITH INDIVIDUAL LOT BUILDING PERMITS SEE SHEET 8, DETAIL GRADING SEE SHEET 10, DETAIL RD740
- 2J DRAINAGE DITCH ALONG SOUTH R.O.W. LINE SEE RIDGE LANE TYPICAL SECTION, THIS SHEET
- 3A 1" WATER SERVICE LINE - TYPE K COPPER TUBING SEE SHEET 15, STD DETAIL WL-RD341 WATER SERVICES TO BE INSTALLED BY WEST LINN STAFF
- 3A SAN MH 1 48" SANITARY SEWER MANHOLE, ODOT STD DRAWING RD-338 ROUTE EXISTING SANITARY SEWER SERVICE TO MANHOLE
- 3B SAN MH 2 48" SANITARY SEWER MANHOLE OVER EXISTING SEWER LINE, ODOT STD DRAWING RD-345
- 3C 8" SANITARY SEWER LINE - ASTM D 3034 SDR-35
- 3D 4" SANITARY SEWER SERVICE LINE - ASTM D 3034 SDR-35 IE AT MAIN: 631.71 DEPTH AT PLUG (APPROX.): 7.66' LENGTH: 26' SLOPE: 2% MIN.
- 3E 4" SANITARY SEWER SERVICE LINE - ASTM D 3034 SDR-35 IE AT MAIN: 629.15 DEPTH AT PLUG (APPROX.): 5.81' LENGTH: 26' SLOPE: 2% MIN.
- 3A STM CB 1 - COMBINATION INLET TYPE CG-2 SEE SHEET 6, PLAN AND PROFILE SEE SHEET 14, DETAIL RD366
- 3B STM CB 2 - DITCH INLET TYPE D SEE SHEET 6, PLAN AND PROFILE SEE SHEET 14, DETAIL RD364
- 3C STM MH 1 - MANHOLE 48" STORM SEWER MANHOLE OVER EXISTING STORM SEWER LINE SEE SHEET 6, PLAN AND PROFILE SEE SHEET 12, DETAIL RD335
- 3D 12" STORM LINE, GREEN RIBBED ASTM F 794 PVC SEE SHEET 6, PLAN AND PROFILE
- 3E GRADE BERM FOR DRAINAGE DITCH WHERE SHOWN SEE TYPICAL SECTION THIS SHEET
- 3F DRAINAGE DITCH SEE TYPICAL SECTION THIS SHEET
- 3G TYPE III ROAD BARRICADE NO THROUGH ACCESS



EXISTING GAS NOTE:
 EXISTING GAS LINE DEPTH IS UNKNOWN. CONTRACTOR/DEVELOPER TO FIELD VERIFY EXISTING GAS LINE LOCATION AND ELEVATION AND COORDINATE WITH GAS COMPANY FOR ANY NECESSARY LOWERING/RELOCATING OF EXISTING GAS LINE FOR ROADWAY CONSTRUCTION AND FOR CONSTRUCTION OF GAS SERVICES TO PROPOSED LOTS.

EXISTING WATER NOTE:
 EXISTING 8" DIP WATER LINE DEPTH IS UNKNOWN. CONTRACTOR/DEVELOPER TO FIELD VERIFY EXISTING WATER LINE LOCATION AND ELEVATION AND CONTACT PROJECT CIVIL ENGINEER AND THE CITY OF WEST LINN TO COORDINATE LOWERING EXISTING WATER LINE FOR ROADWAY CONSTRUCTION AS NEEDED.

EX. SANITARY SEWER SERVICE FOR TAXLOT 21E25CA02100 LOCATION AND DEPTH KNOWN CONTRACTOR TO FIELD LOCATE AND ROUTE TO PROPOSED SANITARY MAIN

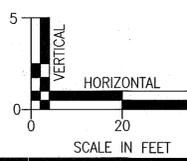


RIDGE LANE HALF-STREET IMPROVEMENTS TYPICAL SECTION STA 2+10.00 TO 4+23.12 SCALE: N.T.S.

TYP. SECTION WITH BERM STA 2+10.00 TO 2+90.00 SCALE: N.T.S.

TYP. SECTION WITHOUT BERM STA 2+90.00 TO 4+23.12 SCALE: N.T.S.

West Linn
 ENGINEERING APPROVED
 DATE: 1/24/20



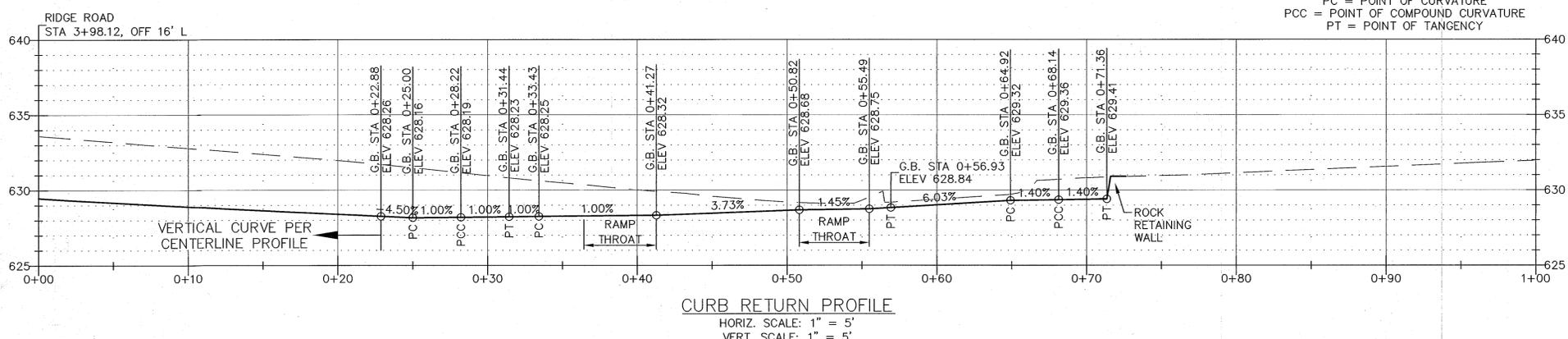
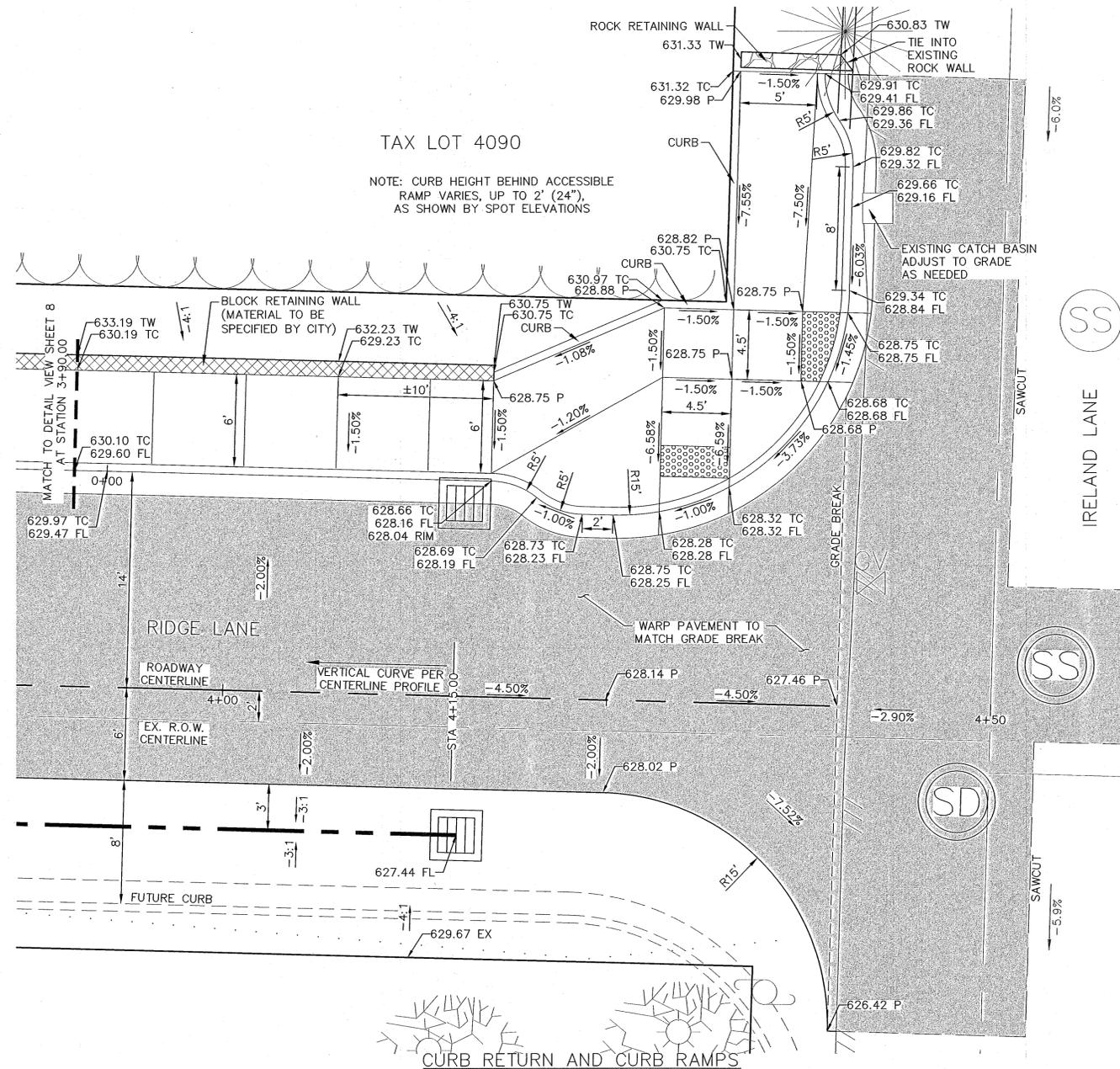
REGISTERED PROFESSIONAL ENGINEER
 Kelli A. Grover
 OREGON
 Jan 14 2005
 EXPIRES: 06/30/21
 SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION
DRAWN: BD	DESIGNED: BD	CHECKED: KG
SCALE: AS SHOWN	DATE: JAN 22, 2020	
PROJECT NO. E19-035		

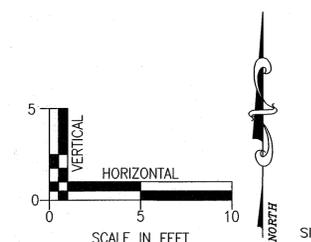
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RIDGE LANE PLAN & PROFILE
 PUBLIC IMPROVEMENT PLANS
 RIDGE LANE 2-LOT PARTITION



West Linn ENGINEERING APPROVED
DATE: 1/24/20



REGISTERED PROFESSIONAL ENGINEER
KELLI A. GROVER
EXPIRES: 06/30/21
SIGNATURE DATE: 1-22-2020

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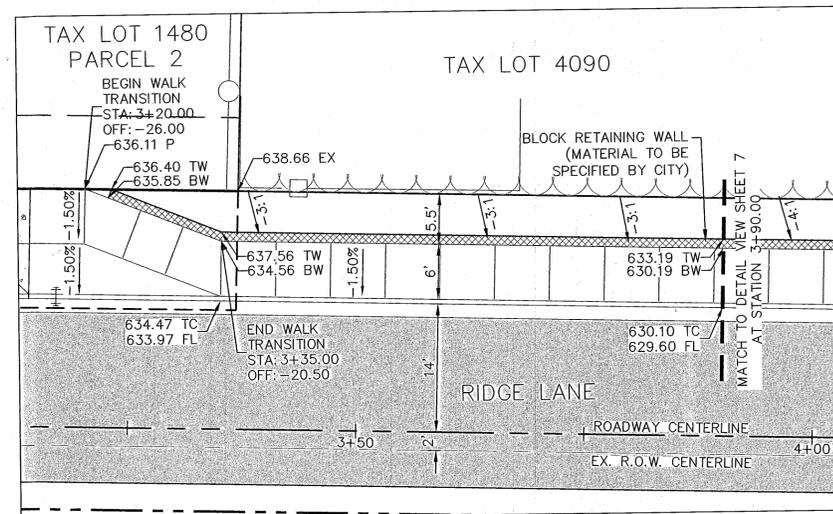
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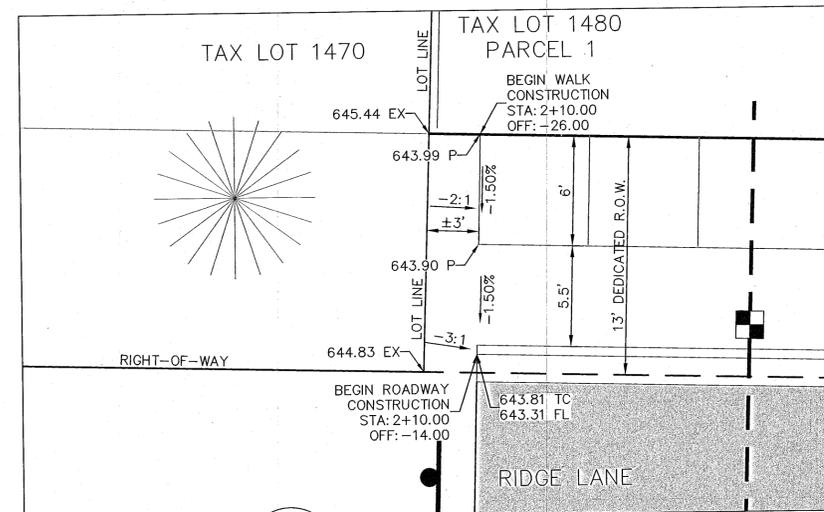
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CURB RETURN & INTERSECTION PLAN
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION

7
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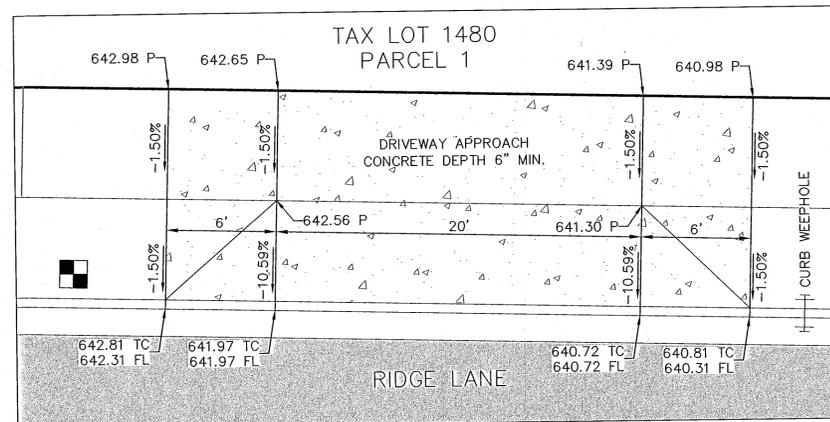


SIDEWALK TRANSITION & RETAINING WALL DETAIL VIEW
SCALE: 1" = 10'

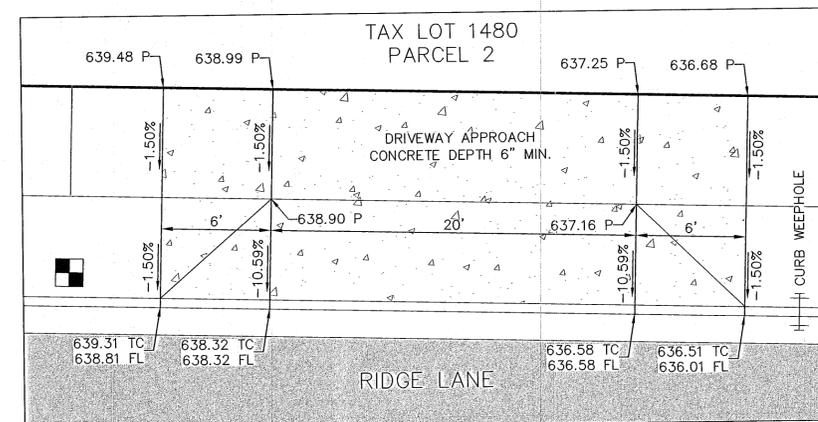


SIDEWALK GRADING DETAIL VIEW
SCALE: 1" = 5'

SPOT ELEVATION DESCRIPTIONS
 P = PAVEMENT
 TC = TOP OF CURB
 FL = FLOWLINE
 G = GROUND
 RIM = STRUCTURE RIM OR GRATE
 TW = TOP OF WALL
 BW = BOTTOM OF WALL



LOT 1 DRIVEWAY APPROACH DETAIL VIEW
SCALE: 1" = 5'



LOT 2 DRIVEWAY APPROACH DETAIL VIEW
SCALE: 1" = 5'

PARCELS 1 AND 2 DRIVEWAY APPROACHES AND SIDEWALKS SHALL BE CONSTRUCTED WITH DEVELOPMENT OF THE INDIVIDUAL LOTS. DRIVEWAY DROPS WILL BE CONSTRUCTED WITH RIDGE LANE IMPROVEMENTS.

CITY OF WEST Linn ENGINEERING APPROVED
 DATE: 1/24/20



EXPIRES: 06/30/21
 SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION

DRAWN: BD DESIGNED: BD CHECKED: KG
 SCALE: AS SHOWN DATE: JAN 22, 2020
 PROJECT NO. E19-035

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WALK & DRIVEWAY DETAILED GRADING
 PUBLIC IMPROVEMENT PLANS
 RIDGE LANE 2-LOT PARTITION

EROSION AND SEDIMENT CONTROL NOTES

GENERAL :

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CURRENT CLACKAMAS COUNTY ORDINANCES & REFERENCED DOCUMENTS & CITY OF PORTLAND EROSION CONTROL MANUAL.
- THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
- THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENT FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR EXPECTED STORM EVENTS AND TO ENSURE THE SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE.
- NO VISIBLE AND MEASURABLE SEDIMENT OR POLLUTANT SHALL EXIT THE SITE, ENTER THE PUBLIC RIGHT-OF-WAY, OR BE DEPOSITED INTO ANY WATER BODY OR STORM DRAINAGE SYSTEM.
- ANY SOIL THAT ENTERS THE PUBLIC RIGHT-OF-WAY SHALL BE REMOVED WITHIN 24 HOURS.
- CONTRACTOR SHALL PROVIDE ANY ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED TO MEET DEQ AND CLACKAMAS COUNTY STANDARDS AS NECESSARY TO PREVENT SEDIMENT DISCHARGE FROM THE SITE.
- ESC FACILITIES SHALL BE INSPECTED EVERY 24 HOURS DURING STORM OR RAIN EVENTS TO ENSURE THE MEASURES ARE FUNCTIONING PROPERLY.
- PERMANENT OR TEMPORARY SOIL STABILIZATION MEASURES SHALL BE APPLIED TO DENUDED DEVELOPMENT SITES IN CONFORMANCE WITH THE FOLLOWING SCHEDULE:
 - BETWEEN OCTOBER 1 AND APRIL 30, ALL DENUDED SITES SHALL IMMEDIATELY BE PROVIDED WITH EITHER TEMPORARY OR PERMANENT SOIL STABILIZATION.
 - BETWEEN MAY 1 AND SEPTEMBER 30, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES TO REDUCE DUST AND SEDIMENT TRANSPORT SHALL BE APPLIED AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER GROUND DISTURBING ACTIVITY OCCURS.
 - GROUND COVER SHALL BE INSTALLED ON ANY PORTION OF A SITE THAT IS DENUDED FOR MORE THAN 6 MONTHS.
 - TEMPORARY MEASURES SHALL BE MAINTAINED UNTIL PERMANENT MEASURES ARE ESTABLISHED.
 - STOCKPILES SHALL BE SECURED OR PROTECTED THROUGHOUT THE PROJECT WITH TEMPORARY OR PERMANENT SOIL STABILIZATION MEASURES.
 - REPLACEMENT GROUND COVER VEGETABLE SHALL NOT INCLUDE PLANTS LISTED AS NUISANCE OR PROHIBITED PLANTS ON THE CITY OF PORTLAND PLANT LIST.
 - EROSION CONTROL MEASURES SHALL BE MAINTAINED DURING CONSTRUCTION AND FOR 1 YEAR AFTER DEVELOPMENT IS COMPLETED (MAY BE REDUCED BY THE BUILDING OFFICIAL UPON FINDING THAT SOILS ARE COMPLETELY STABILIZED).
- THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE EVERY TWO WEEKS, OR WITHIN 24 HOURS FOLLOWING A STORM EVENT. DAILY INSPECTIONS SHALL BE PERFORMED DURING PROLONGED RAINFALL. LOG OF INSPECTIONS TO BE KEPT AVAILABLE AT THE SITE.

SEDIMENT CONTROL FENCES :

- AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND A SEDIMENT FENCE MORE THAN ONE-THIRD OF THE FENCE HEIGHT ABOVE GROUND. SEDIMENT SHOULD BE REMOVED OR REGRADED ONTO SLOPES, AND THE SEDIMENT FENCES REPAIRED AND REESTABLISHED AS NEEDED.

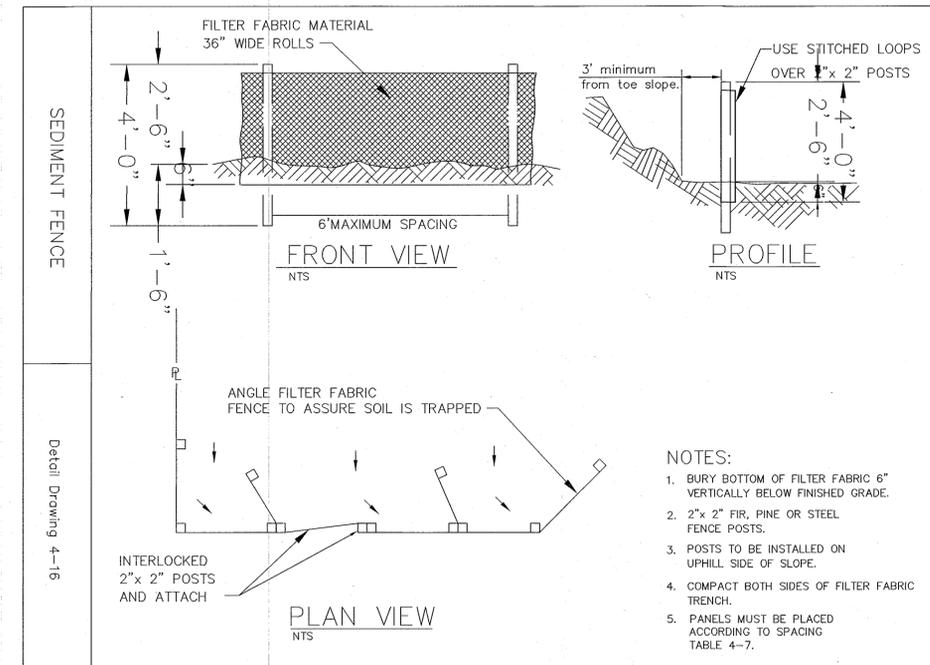
- FENCE SHALL BE REMOVED ONLY WHEN UPSLOPE AREAS ARE PERMANENTLY STABILIZED.

BIO-FILTER BAGS/INLET PROTECTION :

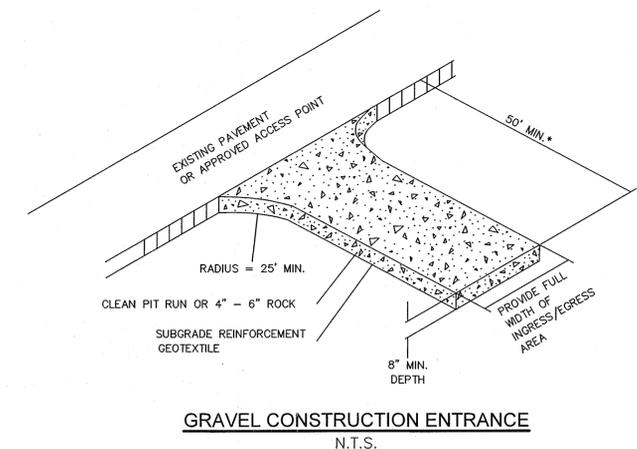
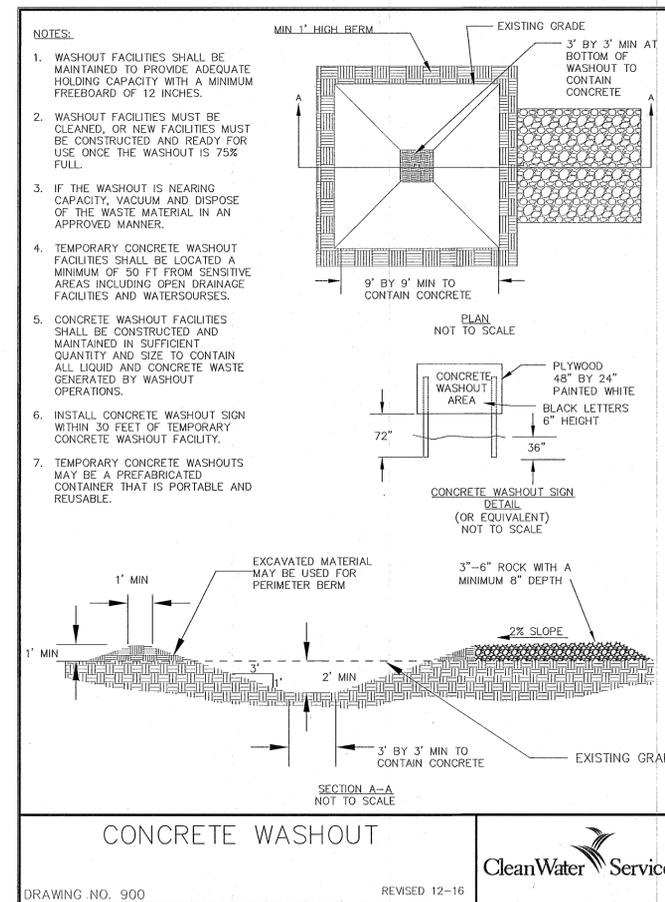
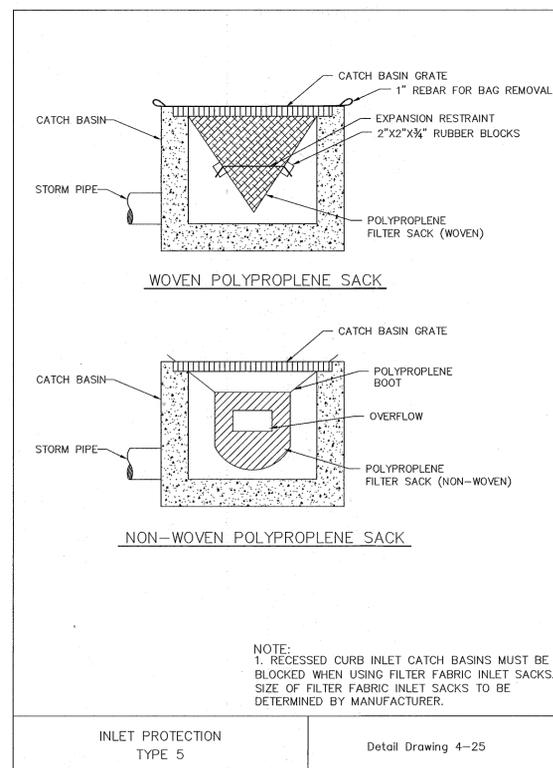
- AT NO TIME SHALL MORE THAN 2 INCHES DEPTH OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND BIO-FILTER BAGS. SEDIMENT SHOULD BE REMOVED OR REGRADED ONTO SLOPE, OR NEW LINES OF BARRIERS INSTALLED UPHILL OF THE SEDIMENT-LADEN BARRIERS.
- ONCE THE UPSLOPE AREA IS STABILIZED, BIOFILTER BAGS SHALL BE REMOVED OR REUSED ONSITE.
- BIOFILTER BAGS ARE NOT ALLOWED FOR INLET PROTECTION USE FOR MORE THAN 3 MONTHS. IF BIOBAGS ARE TO BE USED FOR CATCH BASIN PROTECTION, THEY ARE TO BE REPLACED WITH CATCH BASIN INSERT BAGS WITHOUT OVERFLOW SLOTS AFTER THE FIRST LIFT OF ASPHALT.
- INLET PROTECTION TO BE THE LAST BMP REMOVED FROM THE SITE AFTER CONSTRUCTION.
- INLET INSERTS TO BE INSPECTED AFTER EVERY MAJOR RAINSTORM.
- INSERTS TO BE MAINTAINED WHEN SEDIMENT CONSUMES 1/3 OR ACTUAL DEVISE STORAGE AREA OR DESIGN STORAGE CAPACITY.

RESEEDING/ESTABLISHMENT OF VEGETATIVE COVER :

- RECOMMENDED EROSION CONTROL GRASS SEED MIXES ARE AS SPECIFIED AS BELOW. SIMILAR MIXES DESIGNED TO ACHIEVE EROSION CONTROL MAY BE SUBSTITUTED WITH APPROVAL. IN GENERAL, USE OF QUICK GROWING, STERILE GRASSES AND GRAINS IN MIXTURE WITH PERMANENT VEGETATIVE COVER IS RECOMMENDED TO ACHIEVE QUICK COVER OF EXPOSED SOILS.
 - DWARF GRASS MIX (LOW HEIGHT, LOW MAINTENANCE), 100 POUNDS PER ACRE SEED RATE (MINIMUM):
 - DWARF PERENNIAL RYEGRASS, 80% BY SEED COUNT.
 - CREeping RED FESCUE, 20% BY SEED COUNT.
 - STANDARD HEIGHT GRASS MIX, 100 POUNDS PER ACRE SEED RATE, MINIMUM.
 - ANNUAL RYEGRASS, 40% BY SEED COUNT.
 - TURF-TYPE FESCUE, 60% BY SEED COUNT.
- IT IS RECOMMENDED THAT TOP SOIL ON SLOPES BE PREPARED BY ROUGHENING THE SLOPES BEFORE SEEDING.
- AREAS THAT FAIL TO ESTABLISH GRASS COVER ADEQUATE TO PREVENT EROSION SHALL BE RESEED AS SOON AS SUCH AREAS ARE IDENTIFIED, AND ALL APPROPRIATE MEASURES TAKEN TO ESTABLISH COVER.
- EROSION CONTROL MEASURES SHALL BE MAINTAINED BY CONTRACTOR UNTIL GRASS COVER IS ESTABLISHED AND UP TO ONE YEAR AFTER COMPLETION OF CONSTRUCTION, WHICHEVER IS SOONER.
- MULCH SHALL BE SPREAD UNIFORMLY IMMEDIATELY FOLLOWING SEEDING.



SEDIMENT FENCE



CITY OF ENGINEERING
West Linn
DATE: 01/14/20
VJW/20

REGISTERED PROFESSIONAL ENGINEER
67140PE
Kelli A. Grover
OREGON
EXPIRES: 06/30/21
SIGNATURE DATE: 1-22-2020

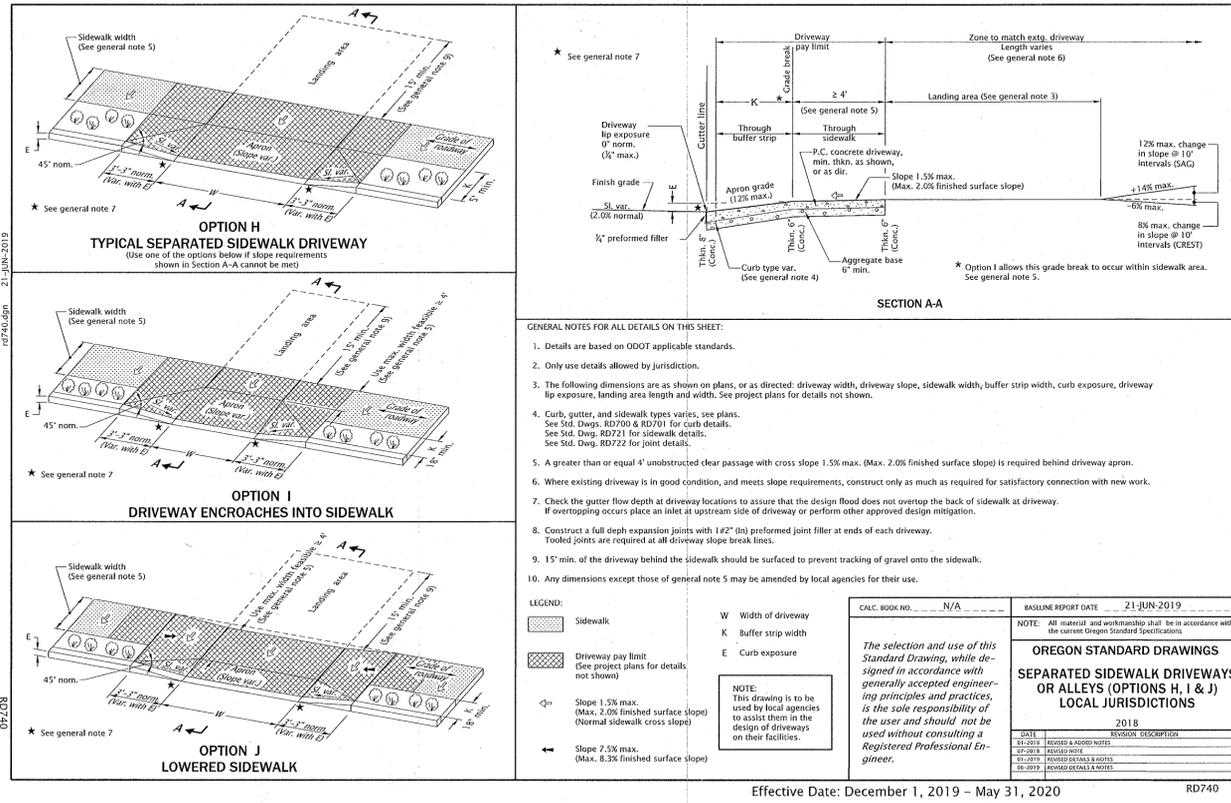
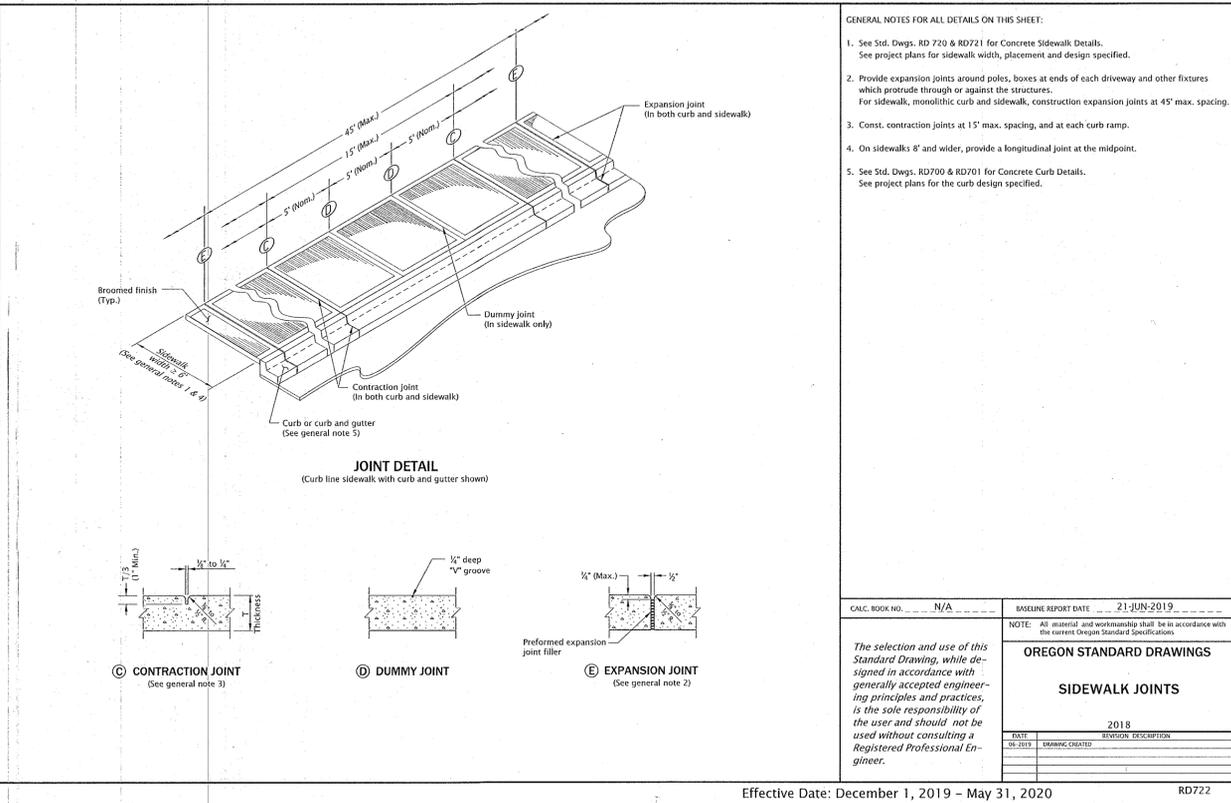
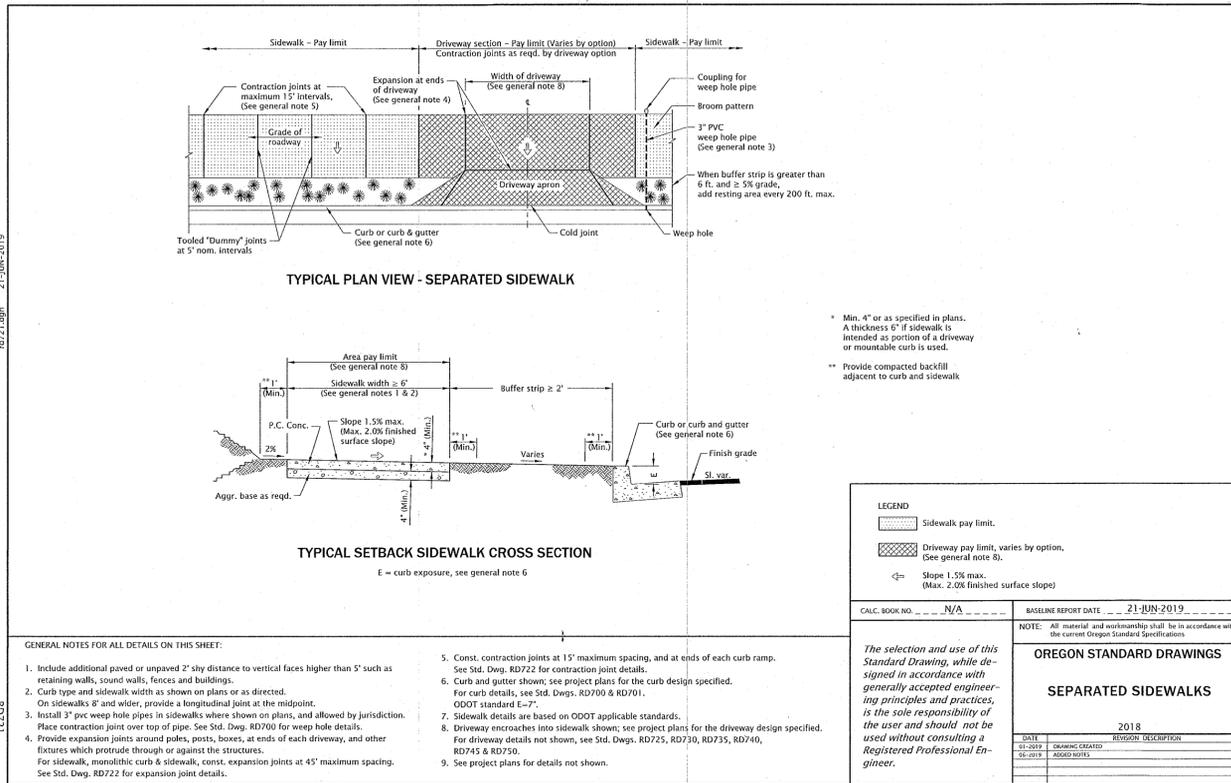
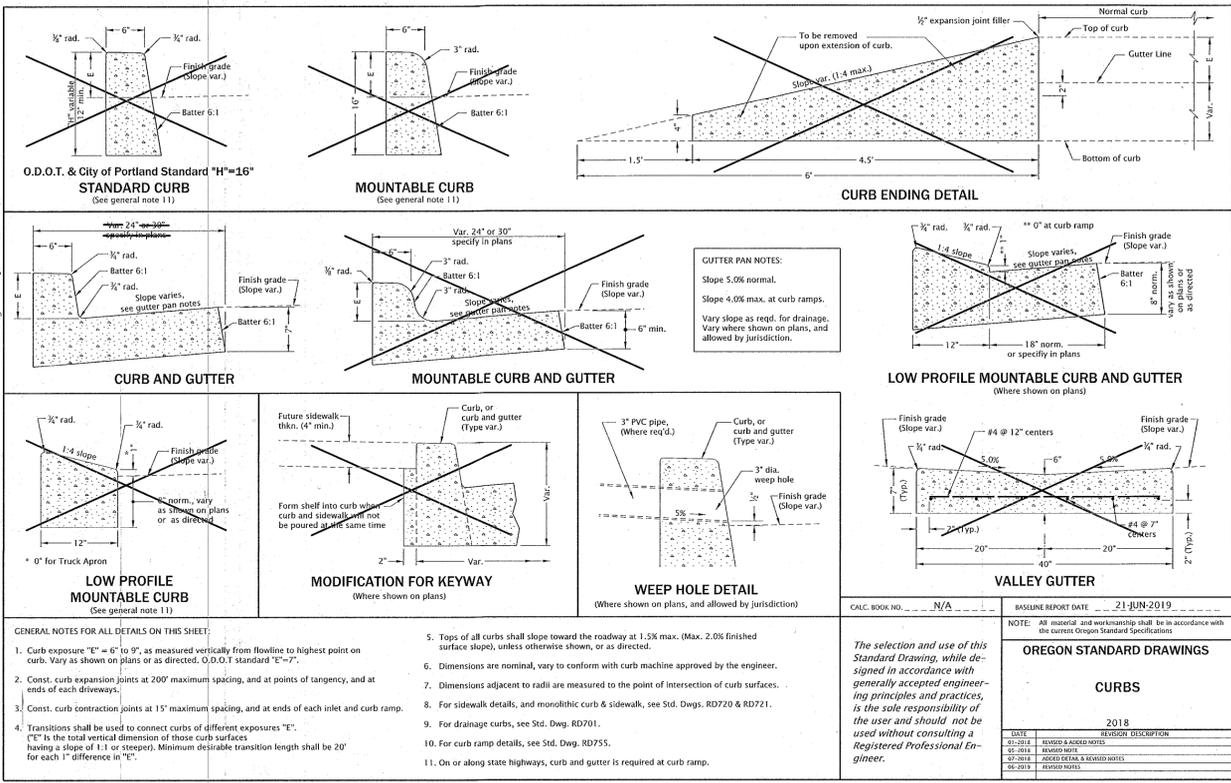
DRAWN: BD	DESIGNED: BD	CHECKED: KG
SCALE: AS SHOWN	DATE: JAN 22, 2020	
PROJECT NO. E19-035		
DATE:	NO.	REVISION

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ESC NOTES AND DETAILS
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION



City of West Linn
ENGINEERING APPROVED
DATE: 1/24/20
V/24/20

REGISTERED PROFESSIONAL ENGINEER
Kelli A. Grover
OREGON
Jan 14, 2005

EXPIRES: 06/30/21
SIGNATURE DATE: 1-22-2020

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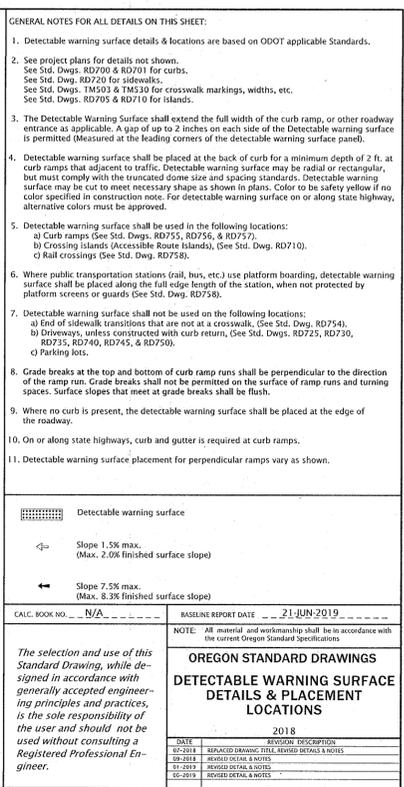
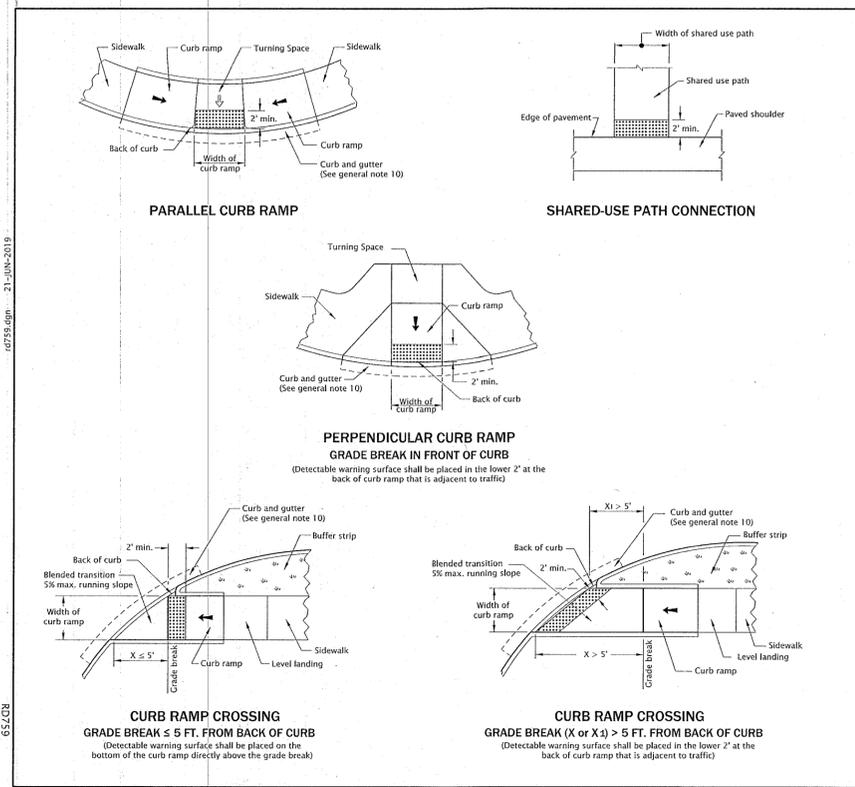
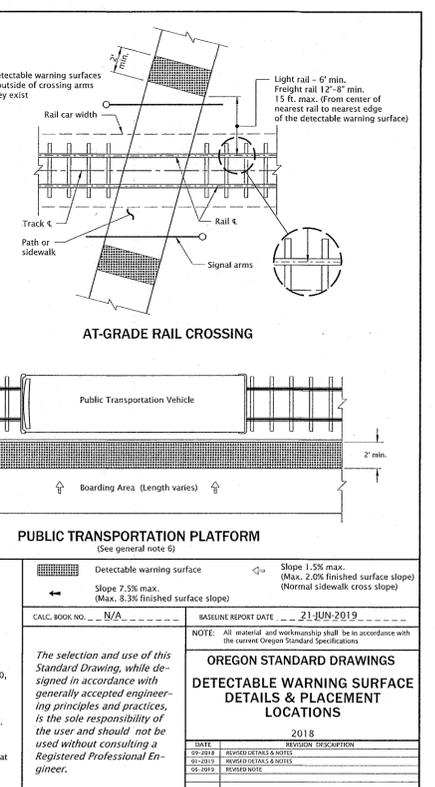
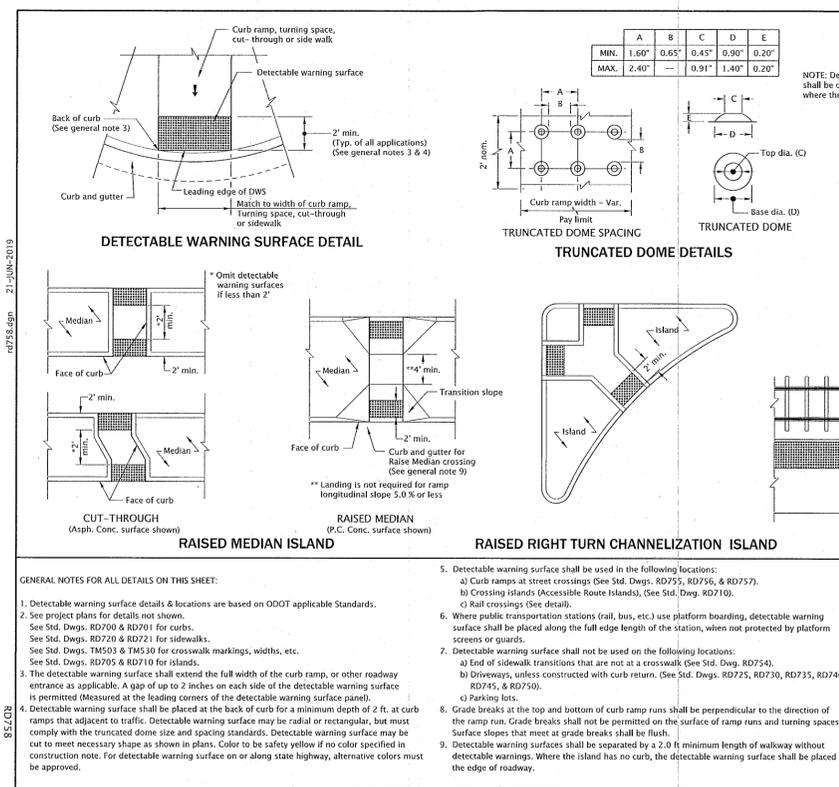
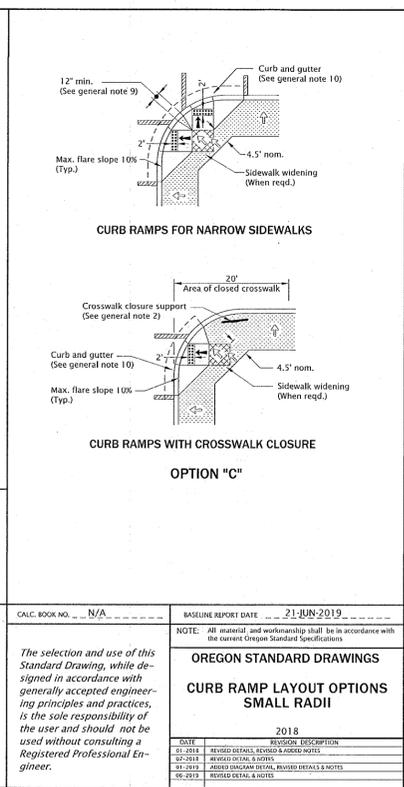
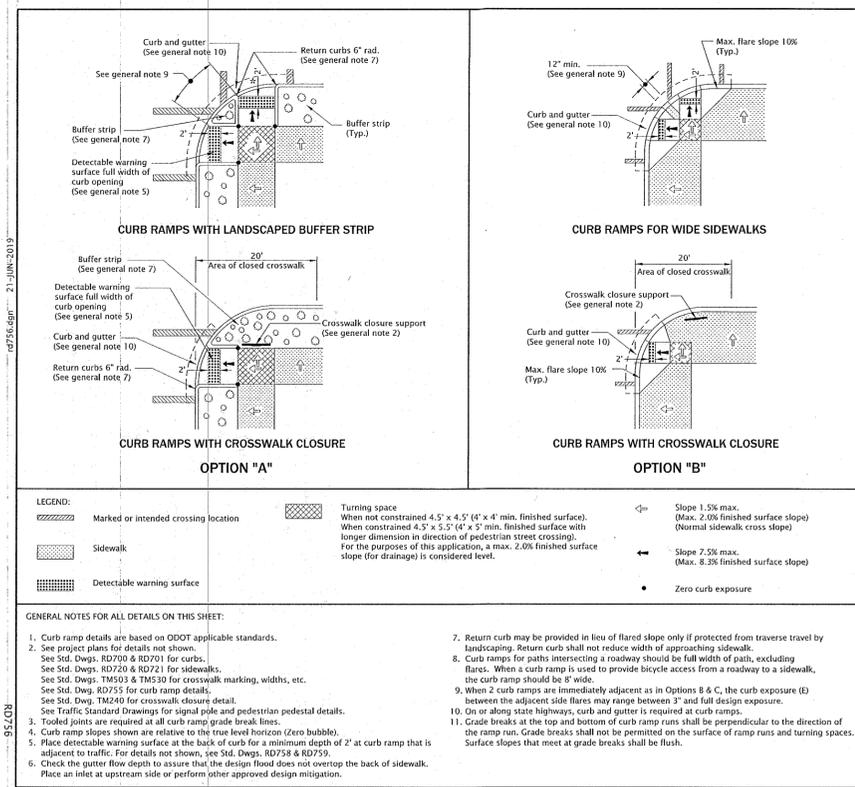
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DETAILS SHEET - ROADWAY PUBLIC IMPROVEMENT PLANS RIDGE LANE 2-LOT PARTITION

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DETAILS SHEET - ROADWAY
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION

11
 15

ENGINEERING APPROVED
 Linn
 DATE: 1/24/20

REGISTERED PROFESSIONAL ENGINEER
 OREGON
 Jan 14, 2003
 KELLI A. GROVER

EXPIRES: 06/30/21
 SIGNATURE DATE: 1-22-2020

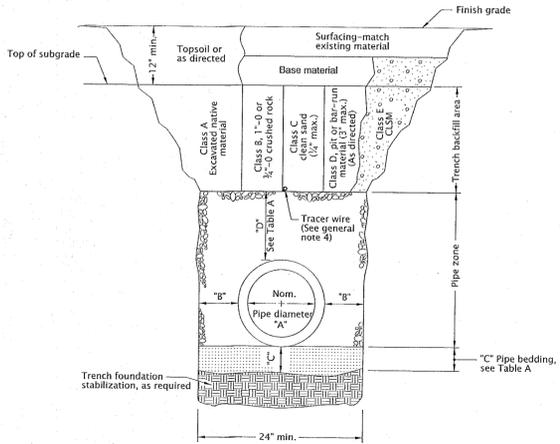
05300.dgn 25-JUL-2017

RD300

TABLE A

"A" (in)	"B" (in)	"C" (in)	"D" (in)
4	10	4	8
6	10	4	8
8	10	6	10
10	10	6	10
12	12	6	10
15	12	6	10
18	16	6	12
21	16	6	12
24	18	6	12
30	18	6	12
36	24	6	14
42	24	6	14
48	24	6	14
54	24	6	14
60	24	6	14
66	24	6	14
72	24	6	14

For pipes over 72" diameter, see general note 3.



MULTIPLE INSTALLATIONS

DIAMETER	MIN. SPACE BETWEEN PIPES
Up to 48"	24"
48" to 72"	One half (1/2) dia. of pipe

- GENERAL NOTES FOR ALL DETAILS:**
- Surfacing of paved areas shall comply with street cut Std. Dwg. RD302.
 - For pipe installation in embankment areas where the trench method will not be used and the pipe is $\geq 36"$ diameter, increase dimension "B" to nominal pipe diameter.
 - Pipes over 72" diameter are structures, and are not applicable to this drawing.
 - See Std. Dwg. RD336 for tracer wire details (When required).

Calc. Book No. N/A Baseline Report Date 14-JUL-2014

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

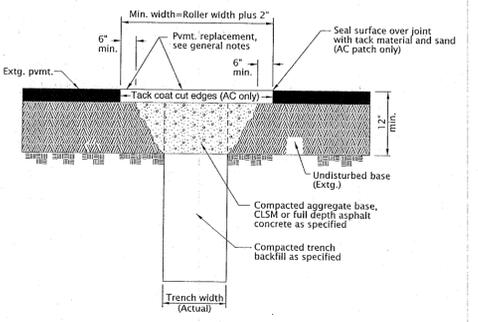
OREGON STANDARD DRAWINGS
TRENCH BACKFILL, BEDDING, PIPE ZONE AND MULTIPLE INSTALLATIONS

DATE 2018

Effective Date: December 1, 2019 - May 31, 2020 RD300

05300.dgn 25-JUL-2017

RD302



- GENERAL NOTES FOR ALL DETAILS:**
- All existing AC or PCC pavement shall be sawcut prior to repaving.
 - Concrete pavement shall be replaced with concrete to a minimum thickness of 6" or to the thickness of removed pavement, whichever is greater.
 - Place AC mix minimum thkn. of 4" or the thkn. of the removed pavement, whichever is greater. Compact as specified.

Calc. Book No. N/A Baseline Report Date 12-JUN-2008

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

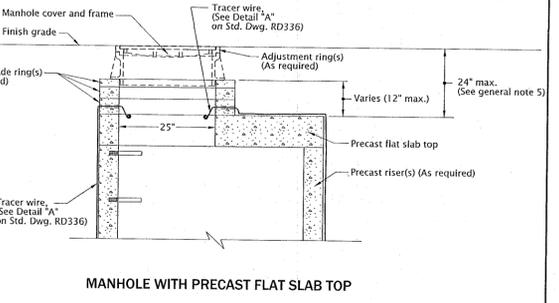
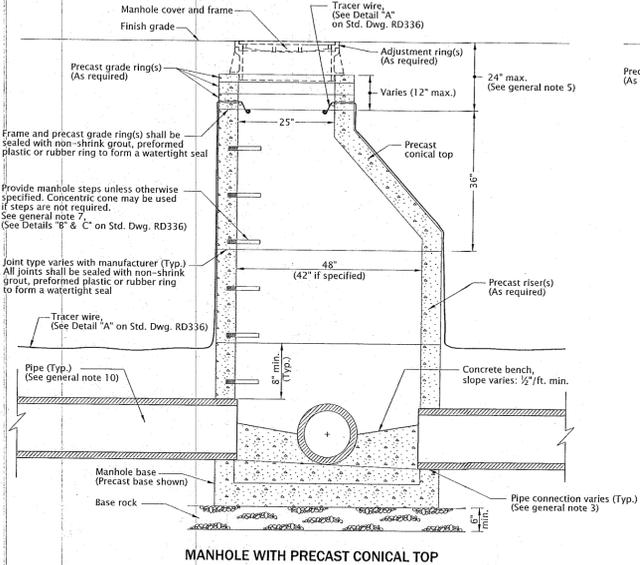
OREGON STANDARD DRAWINGS
STREET CUT

DATE 2018

Effective Date: December 1, 2019 - May 31, 2020 RD302

05316.dgn 21-JUN-2019

RD336



MANHOLE WITH PRECAST FLAT SLAB TOP

- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- All precast products shall conform to requirements of ASTM C478.
 - Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
 - See Std. Dwg. RD345 for pipe to manhole connections.
 - See Std. Dwg. RD344 for manhole base section.
 - Adjust 24" maximum.
 - All connecting pipes shall have a tracer wire, or approved alternate.
 - See Std. Dwg. RD336 for manhole steps.
 - See Std. Dwg. RD336 for details not shown.
 - See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
 - Max. pipe diameter varies with pipe material.
 - See Std. Dwg. RD342 for shallow manholes.
 - Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

Calc. Book No. N/A Baseline Report Date 21-JUN-2019

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

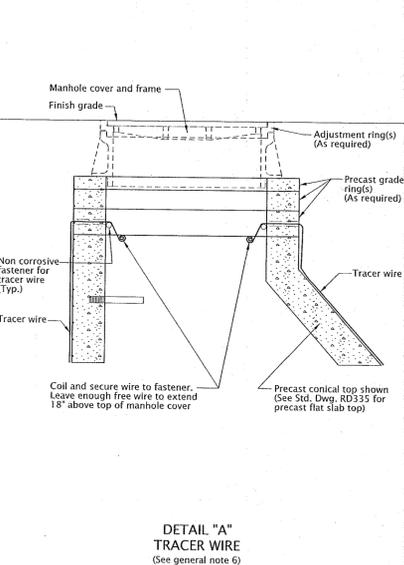
OREGON STANDARD DRAWINGS
STANDARD STORM SEWER MANHOLE

DATE 2018

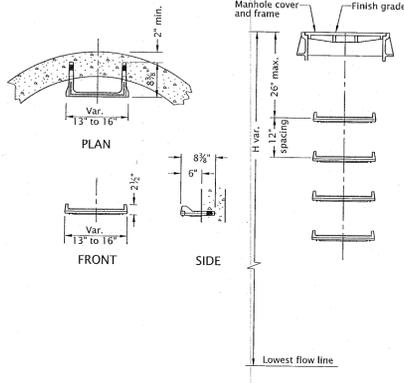
Effective Date: December 1, 2019 - May 31, 2020 RD335

05316.dgn 21-JUN-2019

RD336



DETAIL "A" TRACER WIRE



DETAIL "B" MANHOLE STEPS

- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- All precast products shall conform to requirements of ASTM C478.
 - Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
 - See Std. Dwg. RD345 for pipe to manhole connections.
 - See Std. Dwg. RD344 for manhole base section.
 - Adjust 24" maximum.
 - All connecting pipes shall have a tracer wire, or approved alternate. Place tracer wire directly over pipe centerline and on top of the pipe zone material.
 - Steps shall conform to requirements of ASTM C478. When H=42" or less omit steps. See Detail "C" for alignment of steps, and manhole cover and frame.
 - See Std. Dwg. RD335 for details not shown.
 - See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
 - Max. pipe diameter varies with pipe material.
 - See Std. Dwg. RD342 for shallow manholes.
 - See project plans for details not shown.

Calc. Book No. N/A Baseline Report Date 16-JAN-2019

NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS
STANDARD MANHOLE DETAILS

DATE 2018

Effective Date: December 1, 2019 - May 31, 2020 RD336

West Linn Engineering APPROVED DATE 1/29/20

REGISTERED PROFESSIONAL ENGINEER Kelli A. Grover

EXPIRES: 06/30/21 SIGNATURE DATE: 1-22-2020

DRAWN: BD	DESIGNED: BD	CHECKED: KG
SCALE: AS SHOWN	DATE: JAN 22, 2020	
PROJECT NO. E19-035		

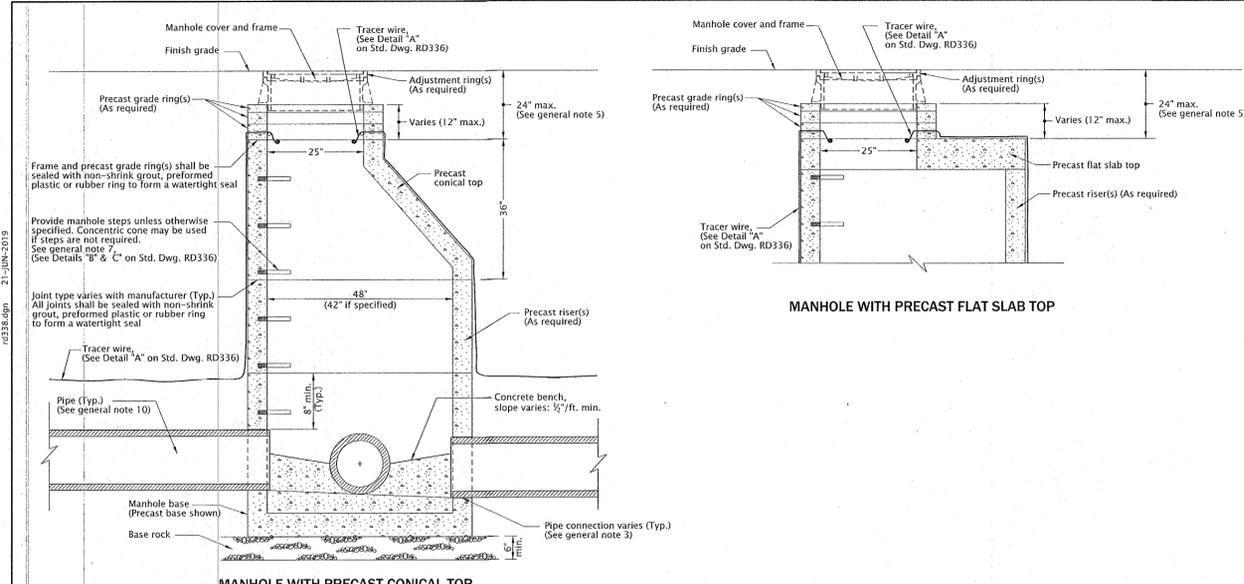
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359 E. HISTORIC COLUMBIA RIVER HIGHWAY
TROUTDALE, OREGON 97060
BUS: (503) 668-3737 FAX: (503) 668-3788

WILL HUFFMAN
WILLH@CLOPTONEXCAVATING.COM
503-682-0420

DETAILS SHEET - UTILITIES
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION

12
15



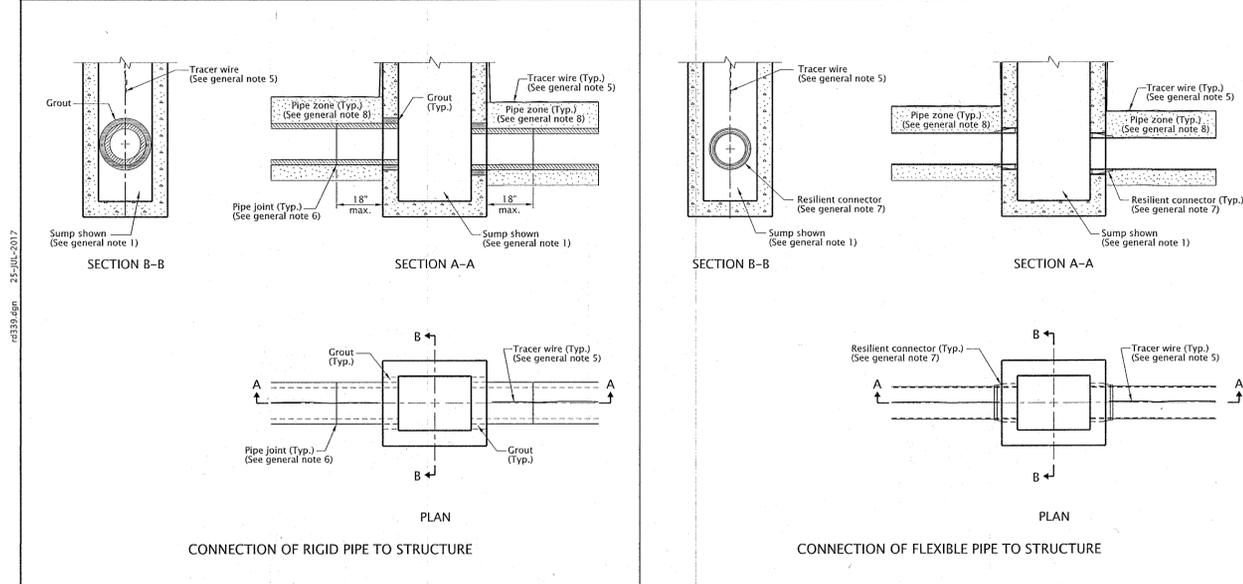
MANHOLE WITH PRECAST FLAT SLAB TOP

MANHOLE WITH PRECAST CONICAL TOP

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

- All precast products shall conform to requirements of ASTM C478.
- Standard precast manhole section diameter shall be 48". Use 42" if specified by the Engineer.
- See Std. Dwg. RD345 for pipe to manhole connections.
- See Std. Dwg. RD344 for manhole base section.
- Adjust 24" maximum.
- All connecting pipes shall have a tracer wire, or approved alternate.
- See Std. Dwg. RD336 for manhole steps.
- See Std. Dwg. RD336 for details not shown.
- See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
- Max. pipe diameter varies with pipe material.
- See Std. Dwg. RD342 for shallow manholes.
- Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
- This detail limited to interior drop of 24".
- See Std. Dwg. RD350 or RD352 for drop manhole details for drops in excess of 24".

Effective Date: December 1, 2019 – May 31, 2020



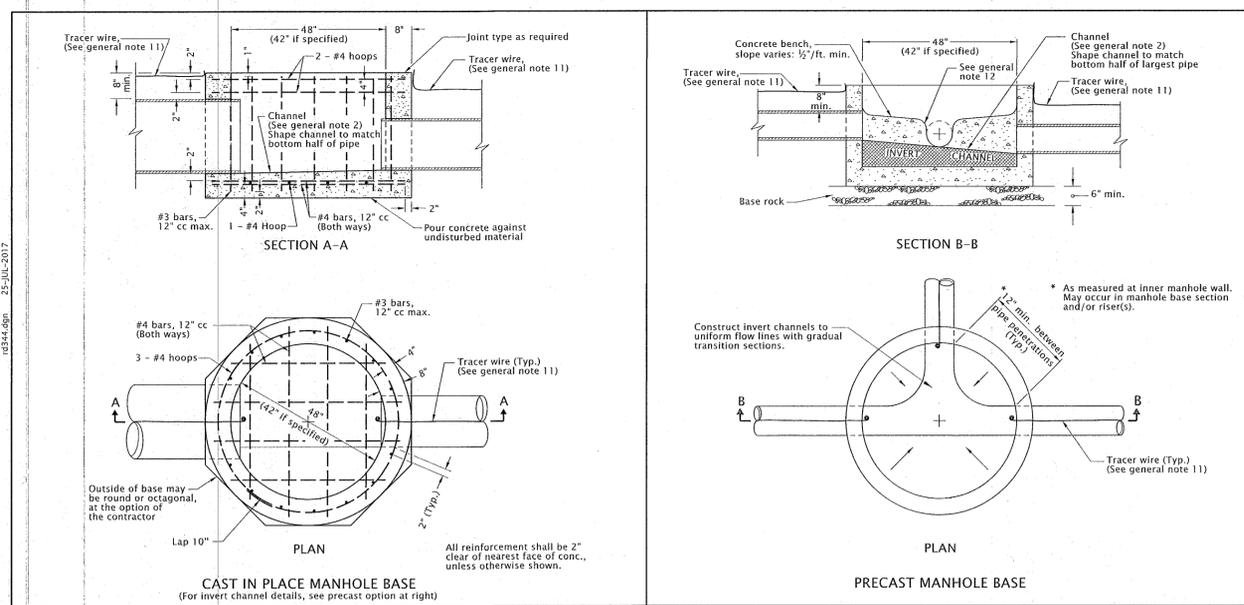
CONNECTION OF RIGID PIPE TO STRUCTURE

CONNECTION OF FLEXIBLE PIPE TO STRUCTURE

GENERAL NOTES FOR ALL DETAILS:

- See Std. Dwg. RD364, RD365, and RD366 for inlet details not shown.
- See appropriate standard drawings or special project details for other similar structures.
- Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
- Max. pipe diameter varies with pipe material.
- All connecting pipes shall have a tracer wire, or approved alternate. See Std. Dwg. RD336 for tracer wire details.
- When rigid pipe is used, the connecting pipe shall have a flexible, gasketed and unrestrained joint within 18" of manhole wall. Joint type varies with manufacturer.
- When flexible pipe is used, install resilient connectors conforming to requirements of ASTM C923.
- Pipe zone varies, see Std. Dwg. RD300.

Effective Date: December 1, 2019 – May 31, 2020



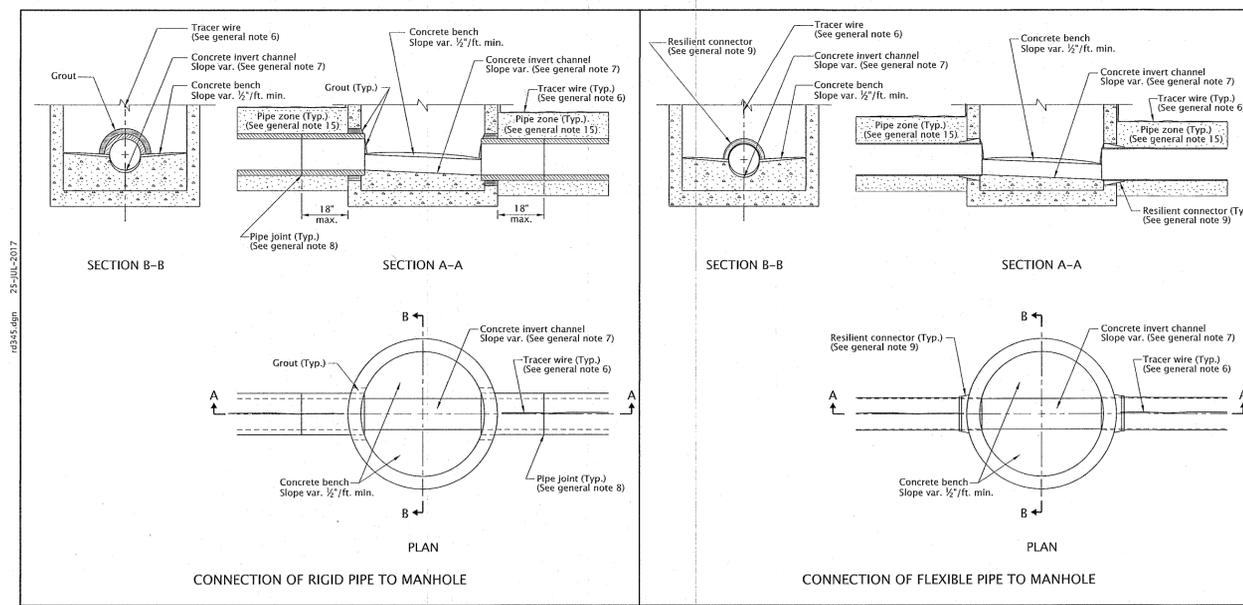
CAST IN PLACE MANHOLE BASE

PRECAST MANHOLE BASE

GENERAL NOTES FOR ALL DETAILS:

- All concrete shall be commercial grade concrete.
- Channels shall be constructed to provide smooth slopes and radii to outlet pipe.
- Bases may be precast or cast in place.
- Max. pipe diameter varies with pipe material.
- Use on 42" and 48" diameter manhole.
- Extend pipe into manhole and grout smooth. Pipe(s) may extend 2" max. beyond the interior manhole wall.
- Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
- All precast products shall conform to the requirements of ASTM C478.
- See Std. Dwg. RD345 for pipe to manhole connections.
- See Std. Dwg. RD336 for manhole steps details.
- See Std. Dwg. RD336 for tracer wire details.
- At spring line of pipe, extend channel up to crown line on 12:1 batter.

Effective Date: December 1, 2019 – May 31, 2020



CONNECTION OF RIGID PIPE TO MANHOLE

CONNECTION OF FLEXIBLE PIPE TO MANHOLE

GENERAL NOTES FOR ALL DETAILS:

- All precast sections shall conform to requirements of ASTM C478.
- Manhole base sections may be precast or cast-in-place.
- All concrete shall be commercial grade concrete.
- Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
- Max. pipe diameter varies with pipe material.
- All connecting pipes shall have a tracer wire, or approved alternate. See Std. Dwg. RD336 for tracer wire details.
- Invert channels shall be constructed to provide smooth slopes and radii to outlet pipe.
- When rigid pipe is used, the connecting pipe shall have a flexible, gasketed and unrestrained joint within 18" of manhole wall. Joint type varies with manufacturer.
- When flexible pipe is used, install resilient connectors conforming to requirements of ASTM C923.
- See Std. Dwg. RD335, RD336, and RD338 for details not shown.
- See Std. Dwg. RD336 for manhole steps details.
- See Std. Dwg. RD342 for shallow manholes.
- See Std. Dwg. RD344 for manhole base section.
- See Std. Dwg. RD356 for manhole covers and frames, manhole adjustment rings, etc.
- Pipe zone varies, see Std. Dwg. RD300.

Effective Date: December 1, 2019 – May 31, 2020

West Linn
 1/24/20

REGISTERED PROFESSIONAL
 WILL HUFFMAN
 OREGON
 Jan. 14, 2005
 KELLI A. GROVER

EXPIRES: 06/30/21
 SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION

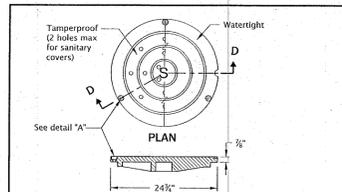
DRAWN: BD	DESIGNED: BD	CHECKED: KG
SCALE: AS SHOWN	DATE: JAN 22, 2020	
PROJECT NO. E19-035		

FDG
 Firwood Design Group, LLC
 SURVEYING + ENGINEERING + PLANNING

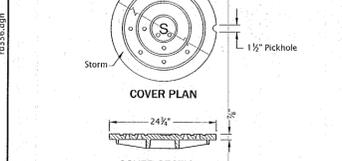
359 E. HISTORIC COLUMBIA RIVER HIGHWAY
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 BUS: (503) 668-3737 + FAX: (503) 668-3788

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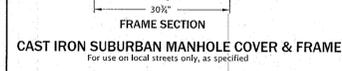
DETAILS SHEET - UTILITIES
 PUBLIC IMPROVEMENT PLANS
 RIDGE LANE 2-LOT PARTITION



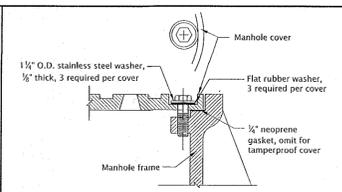
SECTION D-D
CAST IRON TAMPERPROOF & WATERTIGHT COVER
 (Frames available in standard or suburban pattern)



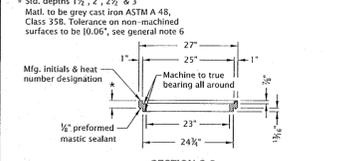
COVER PLAN
COVER SECTION



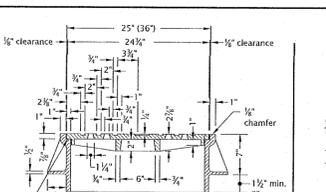
FRAME SECTION
CAST IRON SUBURBAN MANHOLE COVER & FRAME
 For use on local streets only, as specified



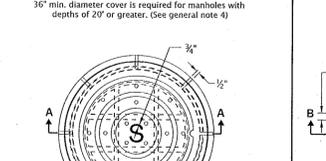
BOLT-DOWN (FOR TAMPERPROOF AND WATERTIGHT) DETAIL 'A'



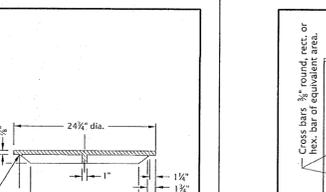
SECTION C-C
MANHOLE ADJUSTMENT RING
 For use with Standard Manhole Frame



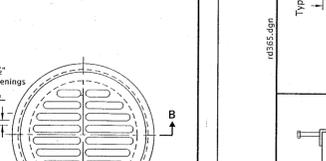
SECTION A-A
STANDARD MANHOLE COVER & FRAME



PLAN
STANDARD MANHOLE COVER & FRAME



SECTION B-B
STANDARD MANHOLE GRATE



PLAN
STANDARD MANHOLE GRATE

- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
1. Tamperproof covers required on sanitary or storm drain manhole where located in pedestrian ways or easement areas. Covers for sanitary manholes shall have 2 holes maximum.
 2. Watertight covers required if located where cover may be submerged (no holes).
 3. Covers and frames shall be stamped with manufacturer's initials, heat number and point of origin.
 4. See Std. Dwg. RD336 for manhole steps.

5. See Std. Dwg. RD360 for manhole frame adjustment.
6. See ODOT's QPL for alternate manhole adjustment rings.
7. Manhole grate allowed only in locations not subject to bicycle or pedestrian use.
8. See ODOT's QPL for alternate bolt-down products.

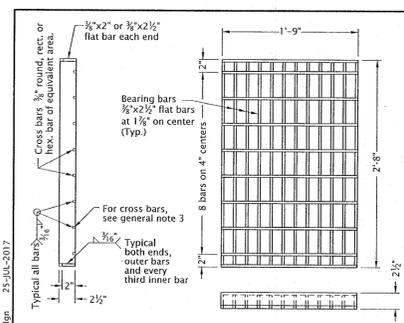
Effective Date: December 1, 2019 – May 31, 2020

RD356

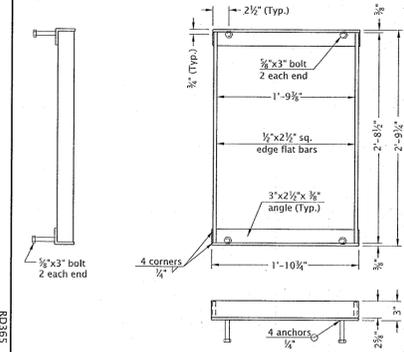
OREGON STANDARD DRAWINGS
MANHOLE COVERS AND FRAMES

2018

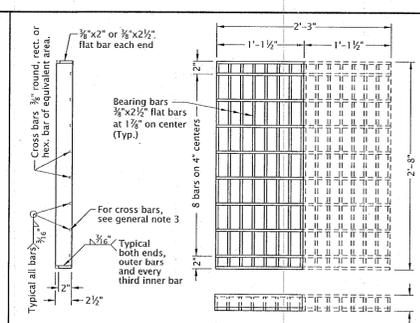
DATE: 06-2019 REVISION: 01-2019 DESCRIPTION: REVISION DESCRIPTION



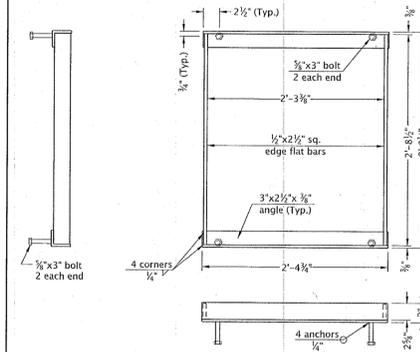
G-1, CG-1 GRATE (TYPE 2)
 (Bicycle-safe)



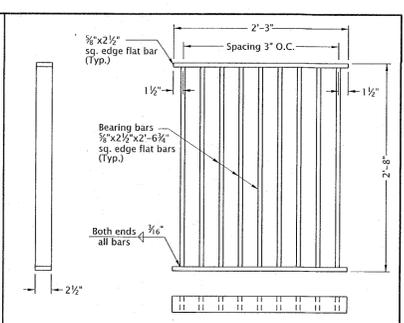
G-1, CG-1 FRAME



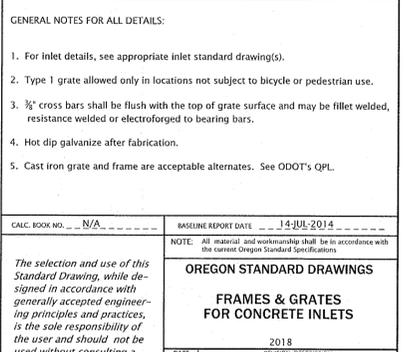
G-2, G-2M, G-2MA, CG-2 GRATE (TYPE 2)
 (Bicycle-safe)
 (2 grates required per inlet, as shown)



G-2, G-2M, G-2MA, CG-2 FRAME



G-2, G-2M, G-2MA, CG-2 GRATE (TYPE 1)
 (See general note 2)



G-2, G-2M, G-2MA, CG-2 FRAME

- GENERAL NOTES FOR ALL DETAILS:**
1. For inlet details, see appropriate inlet standard drawing(s).
 2. Type 1 grate allowed only in locations not subject to bicycle or pedestrian use.
 3. 1/2 inch cross bars shall be flush with the top of grate surface and may be fillet welded, resistance welded or electroforged to bearing bars.
 4. Hot dip galvanize after fabrication.
 5. Cast iron grate and frame are acceptable alternates. See ODOT's QPL.

Effective Date: December 1, 2019 – May 31, 2020

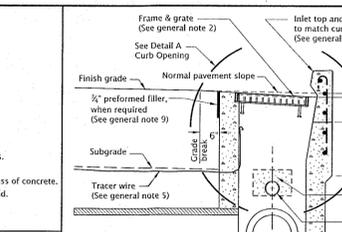
RD365

OREGON STANDARD DRAWINGS
FRAMES & GRATES FOR CONCRETE INLETS

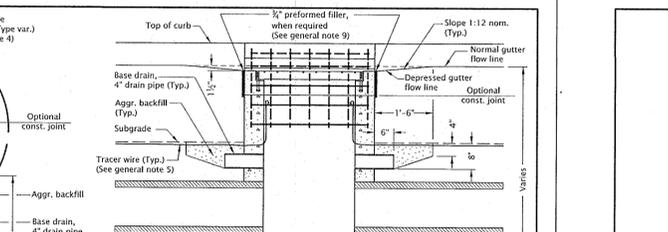
2018

DATE: 06-2019 REVISION: 01-2019 DESCRIPTION: REVISION DESCRIPTION

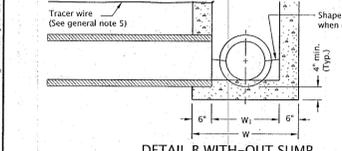
- GENERAL NOTES FOR ALL DETAILS:**
1. Where precast inlets are used as an alternate to cast-in-place inlets, a 4" compacted leveling bed of sand or 1/2" crushed aggregate shall be provided. All precast inlets shall conform to requirements of ASTM C913.
 2. Graphics show CG-1 inlet with Type 2 grate. See Table A for inlet dimensions. Type 1 grate allowed only in locations not subject to bicycle or pedestrian use. For frame and grate details, see Std. Dwg. RD365.
 3. Provide sump only where shown on plans, and allowed by jurisdiction. See Detail B for inlet without sump.
 4. For curb details, see Std. Dwg. RD700 & RD701.
 5. See Std. Dwg. RD336 for tracer wire details, or approved alternate.
 6. Max. pipe diameter varies with pipe material.
 7. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
 8. All concrete shall be commercial grade concrete.
 9. 1/2" preformed filler (in concrete pavement or gutter only) to extend through thickness of concrete.
 10. See Std. Dwg. RD363 for gutter transition section, when curb and gutter are required. (Pay limit for inlet is expanded when curb and gutter are monolithic)
 11. See Std. Dwg. RD339 for pipe to structure connections.



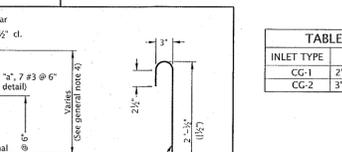
SECTION B-B



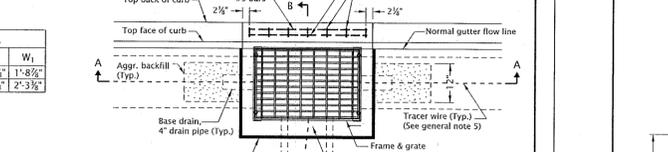
SECTION A-A



DETAIL B WITH-OUT SUMP



DETAIL A CURB OPENING



PLAN

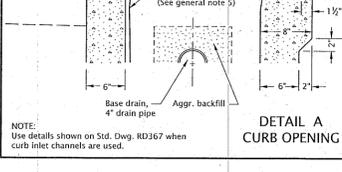
Effective Date: June 1, 2019 – November 30, 2019

RD366

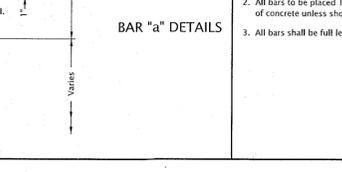
OREGON STANDARD DRAWINGS
CONCRETE INLETS TYPE CG-1, CG-2

2018

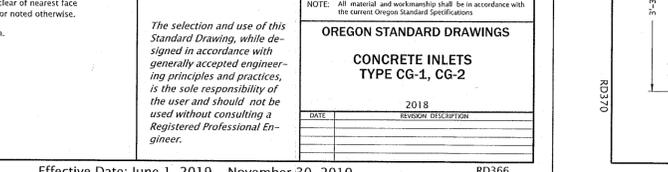
DATE: 06-2019 REVISION: 01-2019 DESCRIPTION: REVISION DESCRIPTION



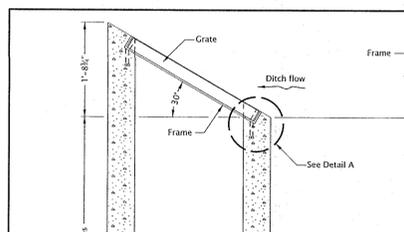
DETAIL A CURB OPENING



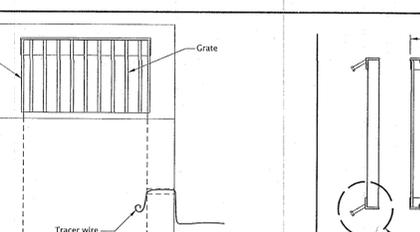
DETAIL A CURB OPENING



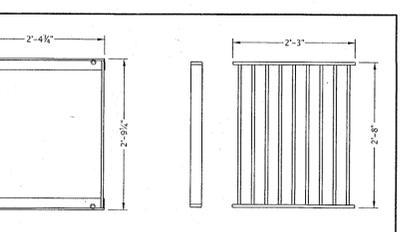
DETAIL A CURB OPENING



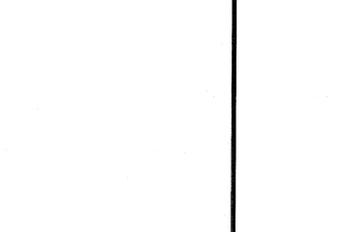
SECTION A-A



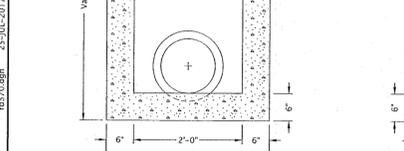
ELEVATION



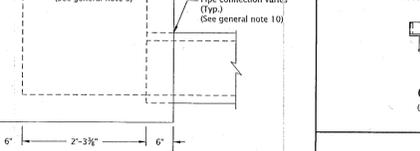
G-2 FRAME
 (See general note 2)



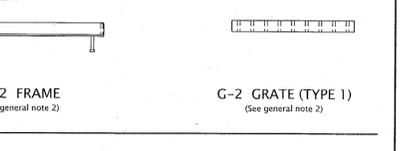
G-2 GRATE (TYPE 1)
 (See general note 2)



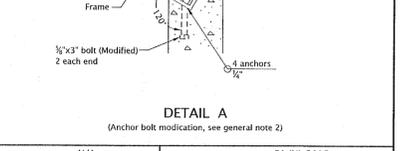
SECTION A-A



ELEVATION



DETAIL A
 (Anchor bolt modification, see general note 2)



DITCH INLET TYPE D

Effective Date: December 1, 2019 – May 31, 2020

RD370

OREGON STANDARD DRAWINGS
CONCRETE INLETS TYPE CG-1, CG-2

2018

DATE: 06-2019 REVISION: 01-2019 DESCRIPTION: REVISION DESCRIPTION

- GENERAL NOTES FOR ALL DETAILS:**
1. All concrete shall be commercial grade concrete.
 2. For frame & grate details not shown, see Std. Dwg. RD365. Modify anchor bolt attachment to frame as shown in Detail A.
 3. G-2 (Type 2) grates may be used if approved by the engineer.
 4. Catch basins, frames, and grates shall meet H20 loading.
 5. Provide sump only when shown on plans, and allowed by jurisdiction. For sump details, see Std. Dwg. RD364.
 6. 1/2 inch cross bars shall be flush with the grate surface and may be fillet welded, resistance welded or electroforged to bearing bars.
 7. Max. pipe diameter varies with pipe material.
 8. Do not use in locations where inlet can be struck by an errant vehicle, or provide shielding of inlet.
 9. Inlet base may be cast-in-place or precast. Where precast inlet base is used as an alternate, a 4" compacted leveling bed of sand or 1/2" crushed aggregate shall be provided.
 10. See Std. Dwg. RD339 for pipe to structure connections.
 11. Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.

Effective Date: December 1, 2019 – May 31, 2020

RD370

OREGON STANDARD DRAWINGS
DITCH INLET TYPE D

2018

DATE: 06-2019 REVISION: 01-2019 DESCRIPTION: REVISION DESCRIPTION

West Linn Engineering
 APPROVED
 DATE: 1/24/20
 67149P
 KELLY A. GROVER

EXPIRES: 06/30/21
 SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION

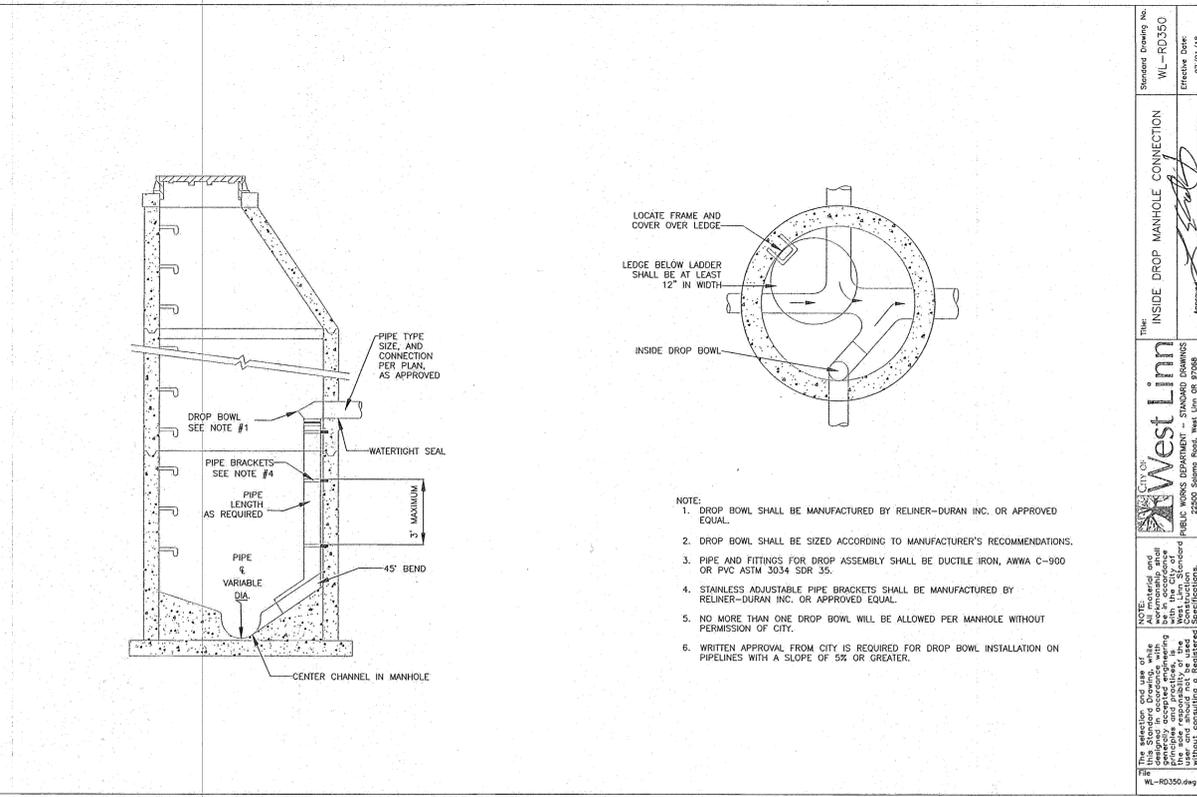
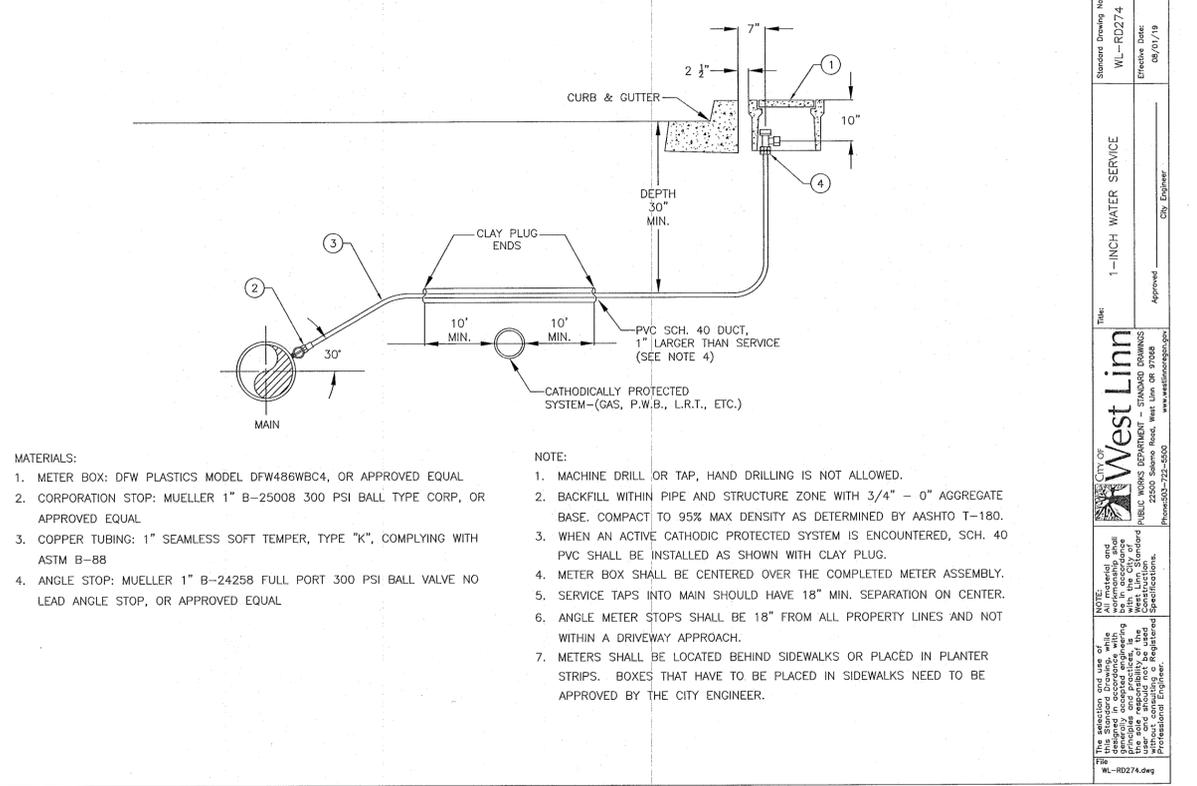
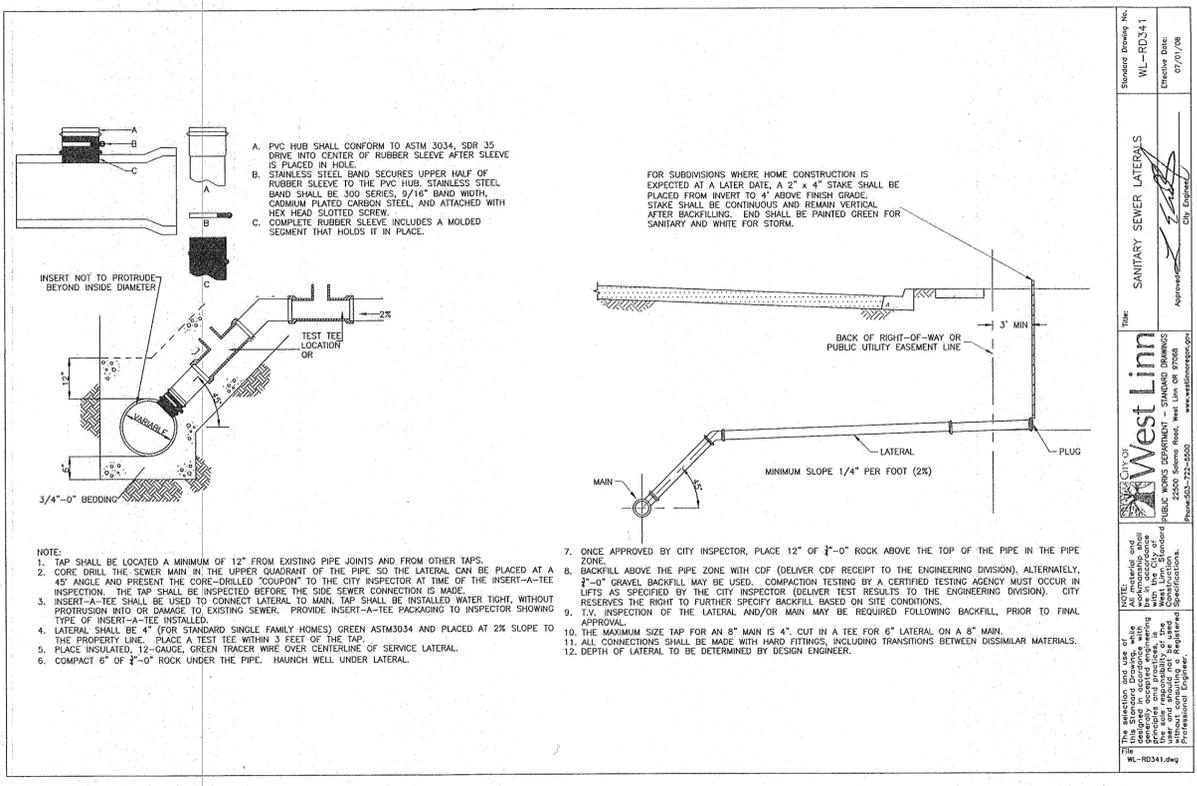
FDG
 Firwood Design Group, LLC
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DETAILS SHEET - UTILITIES
PUBLIC IMPROVEMENT PLANS
RIDGE LANE 2-LOT PARTITION

14
 15



City of West Linn
ENGINEERING APPROVED
DATE: 1/24/20

REGISTERED PROFESSIONAL ENGINEER
67149PE
Kelli A. Grover
OREGON
EXPIRES: 06/30/21
SIGNATURE DATE: 1-22-2020

DATE:	NO.	REVISION

DRAWN: BD DESIGNED: BD CHECKED: KG
SCALE: AS SHOWN DATE: JAN 22, 2020
PROJECT NO. E19-035

FDG
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