MS/PILE COPY

1. At least 48 hours before beginning work, Applicant must notify the City of King City
2. Notify City Engineer for inspection (24-hour-notification) before rock placement on subgrades, before curbs are poured, and before asphalt placement.

8/10/2020

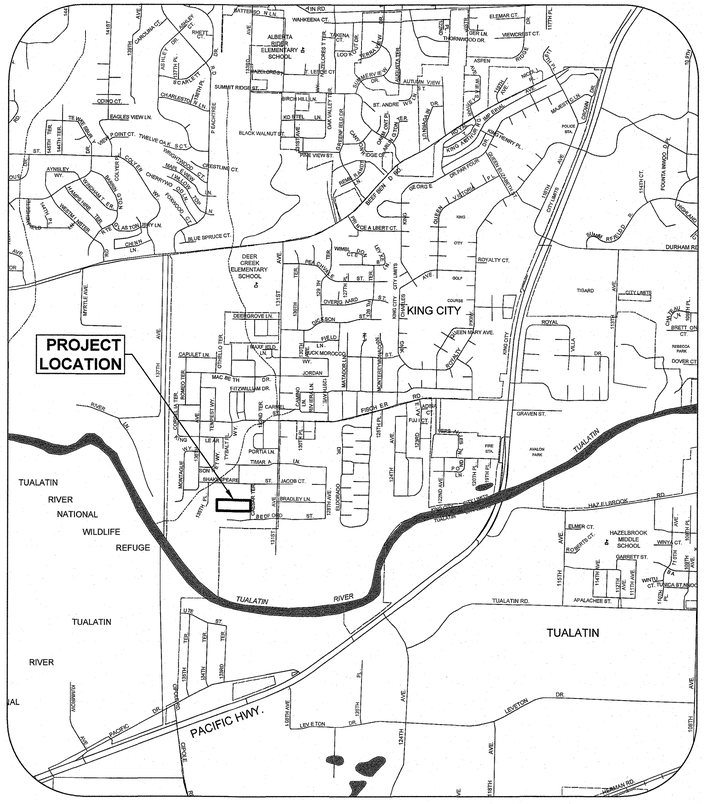
PERMIT SET

FOR

PONDEROSA PINES SUBDIVISION

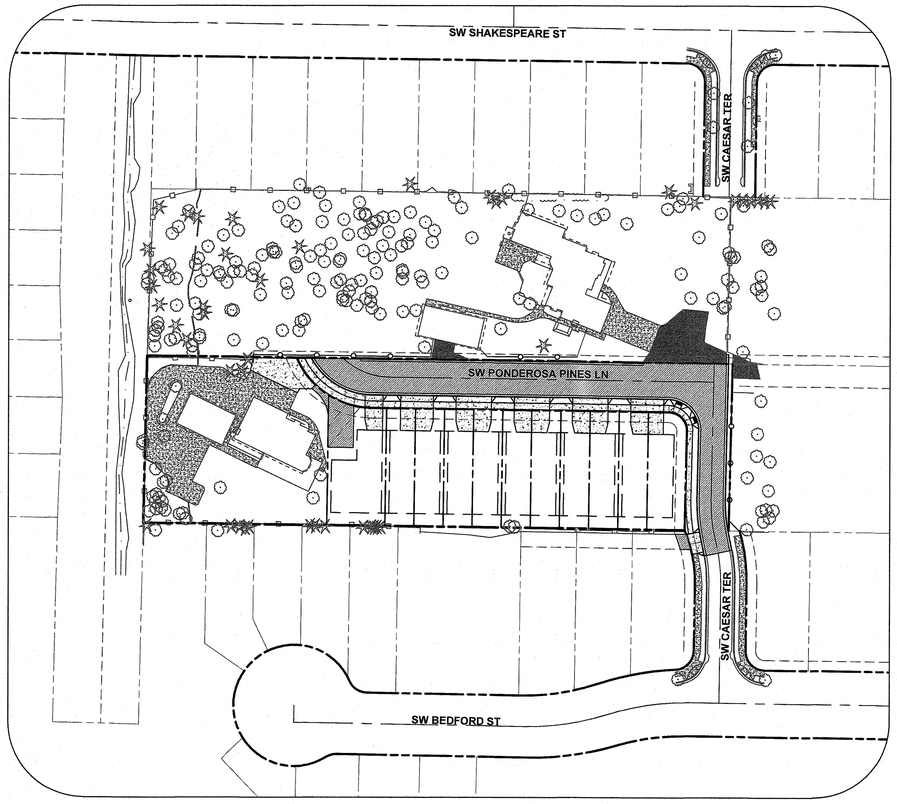
PREPARED FOR

PIN OAKS DEVELOPMENT COMPANY INC.



VICINITY MAP

NOT TO SCALE



SITE MAP

1" = 60'

SHEET LIST TABLE

SHEET NUMBER	SHEET TITLE
C000	COVER
C010	GENERAL NOTES
C040	TENTATIVE PLAT
C100	EXISTING CONDITIONS & DEMOLITION PLAN
C121	TREE PRESERVATION PLAN
C122	TREE PRESERVATION NOTES
C220	HORIZONTAL CONTROL PLAN
C225	TYPICAL SECTIONS
C230	OVERALL GRADING & EROSION CONTROL PLAN
C241	GRADING DETAILS I
C242	GRADING DETAILS II
C260	FIRE ACCESS PLAN
C300	COMPOSITE UTILITY PLAN
C310	SW PONDEROSA PINES LN - STREET AND STORM PLAN & PROFILE
C311	SW CAESAR TERRACE - STREET AND STORM PLAN & PROFILE
C410	SW PONDEROSA PINES LN - SANITARY AND WATER PLAN & PROFILE
C411	SW CAESAR TERRACE - SANITARY AND WATER PLAN & PROFILE
C600	PHOTOMETRICS PLAN
C901	SITE CONSTRUCTION DETAILS I
C902	SITE CONSTRUCTION DETAILS II
C921	EROSION AND SEDIMENT CONTROL DETAILS
C931	STORM DETAILS I
C932	STORM DETAILS II
C933	STORM DETAILS III
C934	STORM DETAILS IV
C941	SANITARY SEWER DETAILS I
C942	SANITARY SEWER DETAILS II
C951	WATER SYSTEM DETAILS
L101	PLANTING PLAN
L102	VEGETATED COORIDOR DETAILS & NOTES
L103	IRRIGATION PLAN
L104	IRRIGATION DETAILS & NOTES

WATER QUALITY DATA

EXISTING BASIN AREAS

EXISTING PRIVATE BASIN AREA	AREA
IMPERVIOUS AREA	14,240 SF
ROOF AREA	3,999 SF
ASPHALT / CONCRETE AREA	10,241 SF
PERVIOUS AREA	47,138 SF
TOTAL AREA	61,378 SF

EXISTING RIGHT-OF-WAY BASIN AREA	AREA
IMPERVIOUS AREA	529 SF
PERVIOUS AREA	72 SF
TOTAL AREA	601 SF

POST-DEVELOPED BASIN AREAS

POST-DEVELOPED PRIVATE (EXCLUDING LOT 12) BASIN AREA	AREA
NEW IMPERVIOUS AREA	18,572 SF
ROOF AREA	15,291 SF
ASPHALT / CONCRETE AREA	3,281 SF
MODIFIED IMPERVIOUS AREA	145 SF
EXISTING IMPERVIOUS AREA	0 SF
PERVIOUS AREA	7,875 SF
TOTAL AREA	26,592 SF

POST-DEVELOPED RIGHT-OF-WAY BASIN AREA	AREA
NEW IMPERVIOUS AREA	11,449 SF
MODIFIED IMPERVIOUS AREA	4,005 SF
EXISTING IMPERVIOUS AREA	0 SF
PERVIOUS AREA	1,244 SF
TOTAL AREA	16,698 SF

POST-DEVELOPED PRIVATE (LOT 12) BASIN AREA	AREA
NEW IMPERVIOUS AREA	324 SF
ROOF AREA	0 SF
ASPHALT / CONCRETE AREA	324 SF
MODIFIED IMPERVIOUS AREA	612 SF
EXISTING IMPERVIOUS AREA	9,973 SF
PERVIOUS AREA	7,780 SF
TOTAL AREA	18,689 SF

CITY OF KING CITY ENGINEERING
APPROVED FOR CONSTRUCTION
DATE 8/10/2020

NATURE OF CONSTRUCTION ACTIVITY AND ESTIMATED TIME TABLE

* CLEARING (SEPTEMBER 2020 TO SEPTEMBER 2020)
* MASS GRADING (OCTOBER 2020 TO NOVEMBER 2020)
* UTILITY INSTALLATION (NOVEMBER 2020 TO DECEMBER 2020)
* FINAL STABILIZATION (DECEMBER 2020 TO JANUARY 2021)

TOTAL DISTURBED AREA = 43,341 SF

PROJECT TEAM

OWNER / APPLICANT
JAMES A. GATES
17435 SW 131ST AVENUE
TIGARD, OR 97224
PHONE: 503-707-1880
EMAIL: gates.james@comcast.net

PLANNING CONSULTANT
3J CONSULTING, INC.
9600 SW NIMBUS AVE, SUITE 100
BEAVERTON, OR 97008
CONTACT: MERCEDES SERRA
PHONE: 503-946-9365
EMAIL: mercedes.serra@3j-consulting.com

CIVIL ENGINEER
3J CONSULTING, INC.
9600 SW NIMBUS AVE, SUITE 100
BEAVERTON, OR 97008
CONTACT: AARON MURPHY, PE
PHONE: 503-946-9365
EMAIL: aaron.murphy@3j-consulting.com

LAND SURVEYOR
AKS ENGINEERING & FORESTRY LLC
12965 SW HERMAN RD, SUITE 100
TUALATIN, OR 97062
PHONE: 503-563-6151

GEOTECHNICAL ENGINEER
GEOPACIFIC ENGINEERING, INC.
14835 SW 72ND AVE
PORTLAND, OR 97224
CONTACT: STACI R. SHUB
PHONE: 503-598-8445

SITE INFORMATION

SITE ADDRESS
17435 SW 131ST AVENUE
TIGARD, OR 97224

TAX LOT(S)
2S 1 16DB 01700

FLOOD HAZARD
MAP NUMBER: 41067C0539F

JURISDICTION
CITY OF KING CITY

ZONING
R-9

LOCATION
NW 1/4 SE 1/4 OF SECTION 16,
T.2S., R.1W., W.M.,
WASHINGTON COUNTY, OREGON

UTILITIES & SERVICES

STORM & SEWER
CLEAN WATER SERVICES
2550 SW HILLSBORO HWY
HILLSBORO, OR 97123
PHONE:503-547-8100

WATER
CITY OF TIGARD
13125 SW HALL BLVD
TIGARD, OR 97223
PHONE: 503-639-4171

POWER
PORTLAND GENERAL ELECTRIC
2213 SW 153RD DR
BEAVERTON, OR 97006
PHONE: 800-544-1793

GAS
NORTHWEST NATURAL
NW AMBERWOOD DR
HILLSBORO, OR 97124
PHONE: 503-220-2415

TELEPHONE
FRONTIER COMMUNICATIONS
4650 SW BETTS AVE #2813
BEAVERTON, OR 97005
PHONE: 877-462-8188

CABLE
COMCAST
7219 SW HAZEL FERN RD
TIGARD, OR 97224
PHONE: 800-934-6489

ROADS
CITY OF KING CITY
15300 SW 116TH AVE
KING CITY, OR 97224
PHONE: 503-639-4082

FIRE
TUALATIN VALLEY FIRE & RESCUE
11945 SW 70TH AVE
TIGARD, OR 97223
PHONE: 503-649-8577

WASTE & RECYCLING
PRIDE DISPOSAL
13980 SW TUALATIN-SHERWOOD RD
SHERWOOD, OR 97140
PHONE: 503-625-6177

POLICE, SCHOOLS, PARKS
CITY OF KING CITY
15300 SW 116TH AVE
KING CITY, OR 97224
PHONE: 503-639-4082

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 4:29:31 PM PDT

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

COVER
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC. LUXURY LIVING LLC
KING CITY, OR

TYP. All sheets

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C000

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-COVER.DWG

EXISTING CONDITIONS & DEMOLITION LEGEND

- PROJECT BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING RIGHT OF WAY CENTERLINE
- EXISTING LOT LINE
- EXISTING EASEMENT LINE
- EXISTING WETLAND BOUNDARY
- BFE — EXISTING BASE FLOOD ELEVATION
- EXISTING CONCRETE
- EXISTING ASPHALT
- EXISTING CURB
- EXISTING FENCE LINE
- T — EXISTING TELECOM. LINE
- G — EXISTING GAS LINE
- C — EXISTING CABLE LINE
- UGP — EXISTING UNDERGROUND POWER
- OHP — EXISTING OVERHEAD POWER
- OH — EXISTING UNSPECIFIED OVERHEAD WIRE
- EXISTING VEGETATION LIMITS LINE
- SS — EXISTING SANITARY SEWER
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER MAIN
- 100 — EXISTING MAJOR CONTOUR
- 92 — EXISTING MINOR CONTOUR
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- EXISTING SIGN
- EXISTING STREET LIGHT
- EXISTING UTILITY POLE
- (S) EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- (D) EXISTING STORM MANHOLE
- EXISTING STORM CATCH BASIN
- SAW — PROPOSED ASPHALT/CONCRETE SAWCUT LIMITS
- PROPOSED ASPHALT/CONCRETE REMOVAL
- REMOVE EXISTING FENCE
- TREE TO BE REMOVED

TENTATIVE PLAT LEGEND

- PROJECT BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING RIGHT OF WAY CENTERLINE
- EXISTING LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLINE
- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED SETBACK LINE

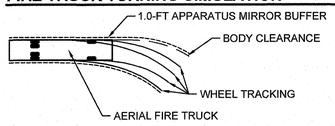
GRADING & EROSION CONTROL LEGEND

- 100 — EXISTING MAJOR CONTOUR
- 92 — EXISTING MINOR CONTOUR
- 110 — PROPOSED MAJOR CONTOUR
- 108 — PROPOSED MINOR CONTOUR
- LIMITS OF DISTURBANCE
- PROPOSED CONSTRUCTION ENTRANCE
- X — PROPOSED SEDIMENT FENCING
- PROPOSED TREE PROTECTING FENCING
- PROPOSED INLET PROTECTION
- SURFACE RUN-OFF FLOW ARROW

UTILITIES LEGEND

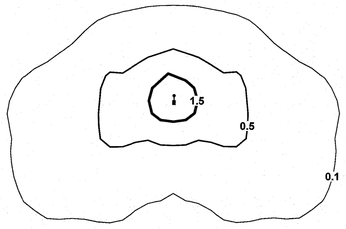
- T — EXISTING TELECOM. LINE
- G — EXISTING GAS LINE
- C — EXISTING CABLE LINE
- UGP — EXISTING UNDERGROUND POWER
- OHP — EXISTING OVERHEAD POWER
- OH — EXISTING UNSPECIFIED OVERHEAD WIRE
- EXISTING VEGETATION LIMITS LINE
- SS — EXISTING SANITARY SEWER
- SD — EXISTING STORM DRAIN
- W — EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- (S) EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- (SD) EXISTING STORM MANHOLE
- EXISTING STORM CATCH BASIN
- SD — PROPOSED STORM PIPE
- SS — PROPOSED SANITARY PIPE
- W — PROPOSED WATER MAIN
- PROPOSED WATER METER
- PROPOSED VALVE
- PROPOSED HYDRANT
- (S) PROPOSED SEWER MANHOLE
- (D) PROPOSED STORM MANHOLE
- PROPOSED STORM CURB GRATE INLET
- PROPOSED STORM CATCH BASIN
- PIPE CAP / STUB
- PROPOSED LIGHTING

FIRE TRUCK TURNING SIMULATION



PHOTOMETRICS LEGEND

- EXISTING STREET LIGHT
- PROPOSED STREET LIGHT
- 0.7 — ILLUMINATION ANALYSIS POINT (Fc)
- Fc — FOOT CANDLE UNIT



ACRONYMS AND ABBREVIATIONS

BC	BOTTOM OF CURB	PVC	POLYVINYL CHLORIDE
C/L	CENTERLINE	R	RADIUS
C	CONCRETE	RD	ROAD
DI	DUCTILE IRON	ROW	RIGHT-OF-WAY
E	EAST	S	SOUTH
EG	EXISTING GRADE	SDMH	STORM DRAIN MANHOLE
FF	FINISH FLOOR		
FL	FLOWLINE	SE	SOUTHEAST
FT	FOOT / FEET	SF	SQUARE FEET
I.P.	IRON PIN	SSMH	SANITARY SEWER MANHOLE
LN	LANE		
MAX.	MAXIMUM	ST	STREET
MIN.	MINIMUM	SW	SOUTHWEST
N	NORTH	TER	TERRACE
NE	NORTHEAST	TR	TOP OF RIM
NO.	NUMBER	TYP	TYPICAL
NW	NORTHWEST	W	WEST

CITY OF TIGARD WATER CONSTRUCTION NOTES

1. ALL JOINTS TO BE RESTRAINED.
2. OPERATION OF VALVES BY TIGARD WATER PERSONNEL ONLY.
3. OPERATION OF VALVES IN THE TIGARD WATER SERVICE AREA BY ANYONE OTHER THAN TIGARD WATER PERSONNEL IS PROHIBITED.
4. THE CONTRACTOR SHALL MAINTAIN ONE SET OF STAMPED, APPROVED PLANS ON THE CONSTRUCTION SITE AT ALL TIMES.
5. ALL WORK SHALL BE IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS.
6. ALL WORK SHALL BE APPROVED BY THE CITY PROJECT INSPECTOR.
7. ALL PIPE AND FITTINGS SHALL BE DUCTILE IRON, CEMENT LINED, OF NEW MANUFACTURE, AND MADE IN THE UNITED STATES OF AMERICA (USA). PIPE SHALL BE "TYTON" JOINT DUCTILE IRON, CLASS 52. ALL FITTINGS SHALL BE MECHANICAL JOINT (MJ) UNLESS OTHERWISE SPECIFIED.
8. COVER FOR ALL WATER MAINS IN THE STREET AND RIGHTS-OF-WAY SHALL BE 36 INCHES. BACKFILL SHALL BE 3/4-INCH - 0-INCH GRAVEL.
9. ALL VALVE-OPERATING NUTS SHALL BE WITHIN 36 INCHES OF FINISHED GRADE, OTHERWISE VALVE OPERATING NUT EXTENSIONS WILL BE REQUIRED.
10. THRUST BLOCKS MAY BE REQUIRED AT TEES, CROSSES, OR BENDS AND WILL BE SPECIFIED BY THE CITY PROJECT INSPECTOR OR ENGINEER. POURED CONCRETE THRUST BLOCKS WILL HAVE AT LEAST EIGHTS SQUARE FEET OF BEARING SURFACE AT EACH TEE, CROSS AND BEND LOCATIONS (SEE DETAILS FOR MINIMUM BEARING AREAS).
11. EVERY 2-INCH WATER SERVICE LOCATION TO BE MARKED, AND MARKER TO REMAIN IN PLACE UNTIL THE WATER METER IS INSTALLED. ALL 2-INCH WATER SERVICES SHALL CONSIST OF AN MJ X 2-INCH IPT TEE AND 2-INCH IPT X 110 COMPRESSION FITTING AS MANUFACTURED BY MUELLER COMPANY.
12. FIRE HYDRANT ASSEMBLY CONSISTS OF AN MJ X 6-INCH FLANGE (FLG.) TEE, 6-INCH FLG. X MJ GATE VALVE, 6-INCH MJ X MJ HOLDING SPOOL AND A MODERN MUELLER CENTURION FIRE HYDRANT, A-443, 6-INCH MJ, 5 1/4-INCH MVO, 3 PORT (2-2 1/2-INCH NST HOSE CONNECTION, 1-4 1/2-INCH NST PUMPER,) 1 1/2-INCH PENTAGON OPERATING NUT OPENING LEFT, COLOR BEING YELLOW OR APPROVED EQUAL; WATERIOUS PACER 6790, CLOW MEDALLION.
13. EACH FIRE HYDRANT SHALL BE INSTALLED UPON A PRE-FORMED CONCRETE BLOCK WITH 1 1/2 CUBIC YARDS OF CRUSHED 2-INCH - 3/4-INCH DRAIN ROCK. GEOTEXTILE FABRIC WILL BE LAID ON TOP OF THE DRAIN ROCK TO SEPARATE THE ROCK FROM THE EARTH COVER.
14. ALL SANITARY SEWER LINES WITHIN 10 FEET LATERALLY OR 3 FEET VERTICALLY OF A WATER MAIN SHALL BE INCASED IN A REINFORCED CONCRETE JACKET 6 INCHES THICK FOR A DISTANCE OF 10 FEET ON BOTH SIDES OF THE CROSSING. WHERE CROSSINGS ARE NECESSARY, THEY MUST BE MADE AT APPROXIMATELY 90 DEGREES WITH AT LEAST 18 INCHES OF SEPARATION BELOW THE WATER LINE.
15. THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION WORK SPECIFIED HEREIN TO MAINTAIN CONTINUOUS WATER SERVICE TO EXISTING WATER USERS. WHERE IT IS NECESSARY TO SHUT DOWN SERVICE TO MAKE REQUIRED INTERTIES, THE CONTRACTOR SHALL NOTIFY THE CITY PROJECT INSPECTOR AT LEAST FIVE WORKING DAYS PRIOR TO A PLANNED WATER SERVICE SHUT DOWN TO ALLOW THE OWNER TO NOTIFY USERS OF THE UPCOMING TEMPORARY SUSPENSION OF WATER SERVICE.
16. PRIOR TO ANY CUT-IN OR CONNECTION, THE CONTRACTOR SHALL HOLD AN ONSITE PRE-CONSTRUCTION MEETING WHERE THE CUT-IN SCHEDULE AND COORDINATION WILL BE DISCUSSED. THOSE TO ATTEND SHALL INCLUDE THE ONSITE FOREMAN, CITY PROJECT INSPECTOR, AND TIGARD WATER PERSONNEL. THIS MEETINGS SHALL TAKE PLACE PRIOR TO EACH CONNECTION AND BE HELD NO LONGER THAN ONE WEEK PRIOR TO THE CONNECTION. THE CONTRACTOR SHALL HAVE ALL FITTINGS, PIPE, CHLORINE SWABBING EQUIPMENT, PUMPS AND HOSES, AND ALL EQUIPMENT NEEDED TO MAKE THE CUT-IN CONNECTION AT THE MEETING AND AVAILABLE FOR CITY INSPECTION.
17. THE NEW PIPELINE SHALL BE FLUSHED, PRESSURE TESTED, AND DISINFECTED BEFORE ANY CONNECTION TO THE EXISTING WATER SYSTEM IS MADE. TEMPORARY BLOW-OFFS SHALL BE PROVIDED BY THE CONTRACTOR AT ALL DEAD-ENDS. A CERTIFIED BACKFLOW DEVICE USED FOR FLUSHING.
18. ALL PIPES, VALVES, AND FITTINGS SHALL BE THOROUGHLY FLUSHED PRIOR TO PRESSURE TESTING AND CHLORINATION. FLUSHING SHALL BE DONE THROUGH BLOW-OFF UNITS, HYDRANTS, INDIVIDUAL SERVICES, AND MAIN AT A VELOCITY OF AT LEAST 2.5 FEET PER SECOND (FPS).
19. PRIOR TO ANY FLUSHING PROCEDURES, THE CONTRACTOR SHALL ISSUE A FLUSHING PLAN PROVIDING DIRECTION OF FLOW, SURFACE WATER MANAGEMENT BEST MANAGEMENT PRACTICES (BMP'S), AND A WRITTEN SCHEDULE TO THE CITY PROJECT INSPECTOR FOR APPROVAL. A 48-HOUR NOTICE SHALL BE GIVEN TO THE CITY PROJECT INSPECTOR PRIOR TO ANY SYSTEM SHUT-DOWN OR FLUSHING PROCEDURES. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR OPERATE ANY CITY VALVES.
20. PRESSURE TESTING SHALL COMMENCE ONLY AFTER BACKFILL HAS PASSED THE REQUIRED COMPACTION TESTS PER AASHTO T-180 AND THE ROADWAY BASE ROCK HAS BEEN PLACED, COMPACTED, PROOF ROLLED, AND APPROVED BY THE CITY PROJECT INSPECTOR.
21. ALL MAINS WITH A STATIC PRESSURE UP TO 100 POUNDS PER SQUARE INCH (PSI) SHALL BE TESTED AT 150 PSI FOR 1 HOUR WITH A MAXIMUM ALLOWABLE LOSS OF 5 PSI. WATER MAINS WITH A STATIC PRESSURE GREATER THAN 100 PSI SHALL BE PRESSURE TESTED AT 1.5 TIMES THE STATIC PRESSURE FOR 1 HOUR WITH A MAXIMUM LOSS OF 5 PSI. ALL PRESSURE TESTING SHALL BE COMPLETED IN THE PRESENCE OF THE CITY PROJECT INSPECTOR.
22. UPON SATISFACTORY COMPLETION OF PRESSURE TESTING, THE NEW MAINS SHALL BE CLEANED AND FLUSHED WITH POTABLE WATER PRIOR TO DISINFECTION. FLUSHING VELOCITIES SHALL BE AT LEAST 2.5 FPS. THE PIPELINE SHALL BE THOROUGHLY FLUSHED, CHLORINATED, AND TESTED IN ACCORDANCE WITH AWWA STANDARD C651-92, THE STATE HEALTH DIVISION AND CITY REQUIREMENTS. THE CONTINUOUS FEED METHOD OF DISINFECTION SHALL BE USED. DISINFECTING MIXTURE SHALL BE A CHLORINE-WATER SOLUTION HAVING A FREE CHLORINE RESIDUAL OF 40 TO 50 MILLIGRAMS PER LITER (MG/L), AND IT SHALL BE INTRODUCED INTO THE MAIN THROUGH A TAP NO MORE THAN 18 INCHES FROM THE CONNECTION POINT TO THE EXISTING SYSTEM. THE DISINFECTION MIXTURE WILL BE PREPARED BY INJECTING A CALCIUM OR SODIUM HYPOCHLORITE AND WATER SOLUTION INTO THE PIPELINE AT A MEASURED RATE WHILE FRESH, POTABLE WATER IS ALLOWED TO FLOW THROUGH THE PIPELINE SO THAT THE CHLORINE WATER SOLUTION IS OF THE SPECIFIED STRENGTH. TREATED (CHLORINATED) WATER SHALL BE RETAINED IN THE PIPELINE LONG ENOUGH TO DESTROY ALL NON-SPORE-FORMING BACTERIA. DURING THE CHLORINATION PROCESS, ALL VALVES AND ACCESSORIES SHALL BE OPERATED. ALL PARTS OF THE LINES AND SERVICES SHALL BE DISINFECTED. TYPICAL RETENTION PERIOD IS 24 HOURS. AT THE END OF THE 24-HOUR PERIOD, THE PIPELINE IS TO HAVE A FREE CHLORINE RESIDUAL OF AT LEAST 10 MG/L. AFTER SATISFACTORY DISINFECTION, FLUSH THE CHLORINATION WATER FROM THE LINE UNTIL THE WATER THROUGHOUT THE PIPELINE IS EQUAL CHEMICALLY AND BACTERIOLOGICALLY TO THE PERMANENT SOURCE OF SUPPLY. THE DISINFECTION WATER MUST BE DISPOSED OF IN AN APPROVED MANNER. DO NOT ALLOW DISINFECTION WATER TO FLOW INTO A WATERWAY WITHOUT ADEQUATE DILUTION OR OTHER SATISFACTORY METHODS OF REDUCING CHLORINE RESIDUALS TO A SAFE LEVEL AS MANDATED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ). AFTER FLUSHING AND DISPOSAL OF THE DISINFECTION SOLUTION THERE WILL BE ANOTHER 24-HOUR PERIOD PRIOR TO BACTERIOLOGICAL TESTING. BACTERIOLOGICAL TEST SAMPLES WILL BE COLLECTED BY A TRAINED TIGARD WATER PERSONNEL WORKER.
23. PROVIDE AN ECLIPSE NO. 88 SAMPLING STATION MANUFACTURED BY KUPFERTE FOUNDRY, ST. LOUIS, MO 63102. THE SAMPLING STATION SHALL BE 2-INCH - 0-INCH BURY, WITH A 3/4-INCH FEMALE IRON PIPE THREAD (FIPT) INLET, AND A 3/4-INCH UNTHREADED HOSE NOZZLE. ALL SAMPLING STATION SHALL BE ENCLOSED IN A LOCKABLE, NON-REMOVABLE, ALUMINUM-CAST HOUSING. WHEN OPENED, THE SAMPLING STATION SHALL REQUIRE NO KEY FOR OPERATION AND THE WATER WILL FLOW IN AN ALL-BRASS WATERWAY. ALL WORKING PARTS WILL BE OF BRASS AND BE REMOVABLE FROM ABOVE GROUND WITH NO DIGGING. A COPPER VENT TUBE (STANDARD) WILL ENABLE THE SAMPLING STATION TO BE PUMPED FREE OF STANDING WATER TO PREVENT FREEZING AND TO MINIMIZE BACTERIA GROWTH. THE EXTERIOR PIPING WILL BE BRASS, AND A 1/4-INCH BALL VALVE SHALL BE PROVIDED IN PLACE OF THE 1/4-INCH PET COCK ON THE VENT PIPE.
24. ALL WATER METERS CONNECTED TO AN IRRIGATION SYSTEM MUST HAVE THE PROPER OREGON STATE APPROVED BACKFLOW PREVENTION DEVICE, MINIMUM OF A DOUBLE CHECK VALVE ASSEMBLY (DCVA) INSTALLED ON THE PROPERTY SIDE OF THE WATER METER. IN ADDITION, EVERY METER FOR COMMERCIAL, MULTI-FAMILY, INDUSTRIAL, AND INSTITUTIONAL SERVICE, REGARDLESS OF SIZE, SHALL HAVE THE PROPER OREGON STATE APPROVED BACKFLOW PREVENTION DEVICE MINIMUM OF A DCVA INSTALLED ON THE PROPERTY SIDE OF THE METER. THE BACKFLOW PREVENTION DEVICE SHALL BE INSTALLED AND TESTED BY THE OWNER, WITH THE RESULTS FORWARDED TO THE TIGARD PUBLIC WORKS WATER DIVISION BEFORE WATER SERVICE CAN BEGIN.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 12:31PM

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

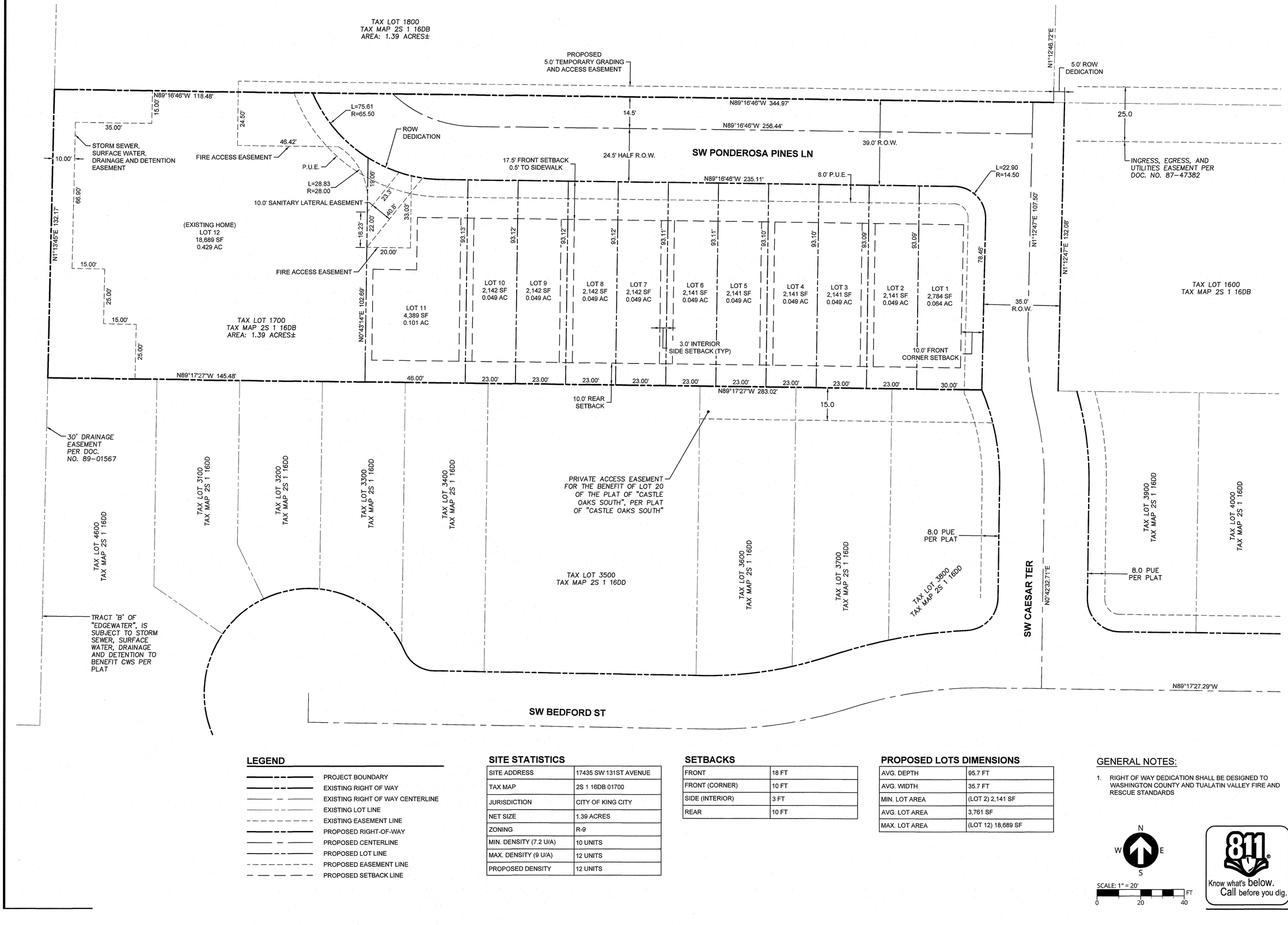
GENERAL NOTES
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C010

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-COVER.DWG



LEGEND

- PROJECT BOUNDARY
- EXISTING RIGHT OF WAY
- EXISTING RIGHT OF WAY CENTERLINE
- EXISTING LOT LINE
- EXISTING EASEMENT LINE
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLINE
- PROPOSED LOT LINE
- PROPOSED EASEMENT LINE
- PROPOSED SETBACK LINE

SITE STATISTICS

SITE ADDRESS	17435 SW 131ST AVENUE
TAX MAP	2S 1 16DB 01700
JURISDICTION	CITY OF KING CITY
NET SIZE	1.39 ACRES
ZONING	R-9
MIN. DENSITY (7.2 U/A)	10 UNITS
MAX. DENSITY (9 U/A)	12 UNITS
PROPOSED DENSITY	12 UNITS

SETBACKS

FRONT	18 FT
FRONT (CORNER)	10 FT
SIDE (INTERIOR)	3 FT
REAR	10 FT

PROPOSED LOTS DIMENSIONS

AVG. DEPTH	95.7 FT
AVG. WIDTH	35.7 FT
MIN. LOT AREA	(LOT 2) 2,141 SF
AVG. LOT AREA	3,761 SF
MAX. LOT AREA	(LOT 12) 18,689 SF

GENERAL NOTES:

1. RIGHT OF WAY DEDICATION SHALL BE DESIGNED TO WASHINGTON COUNTY AND TUALATIN VALLEY FIRE AND RESCUE STANDARDS

N
W E
S

SCALE: 1" = 20'
0 20 40 FT

Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Aug 5 2020 at 2:07 PM

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

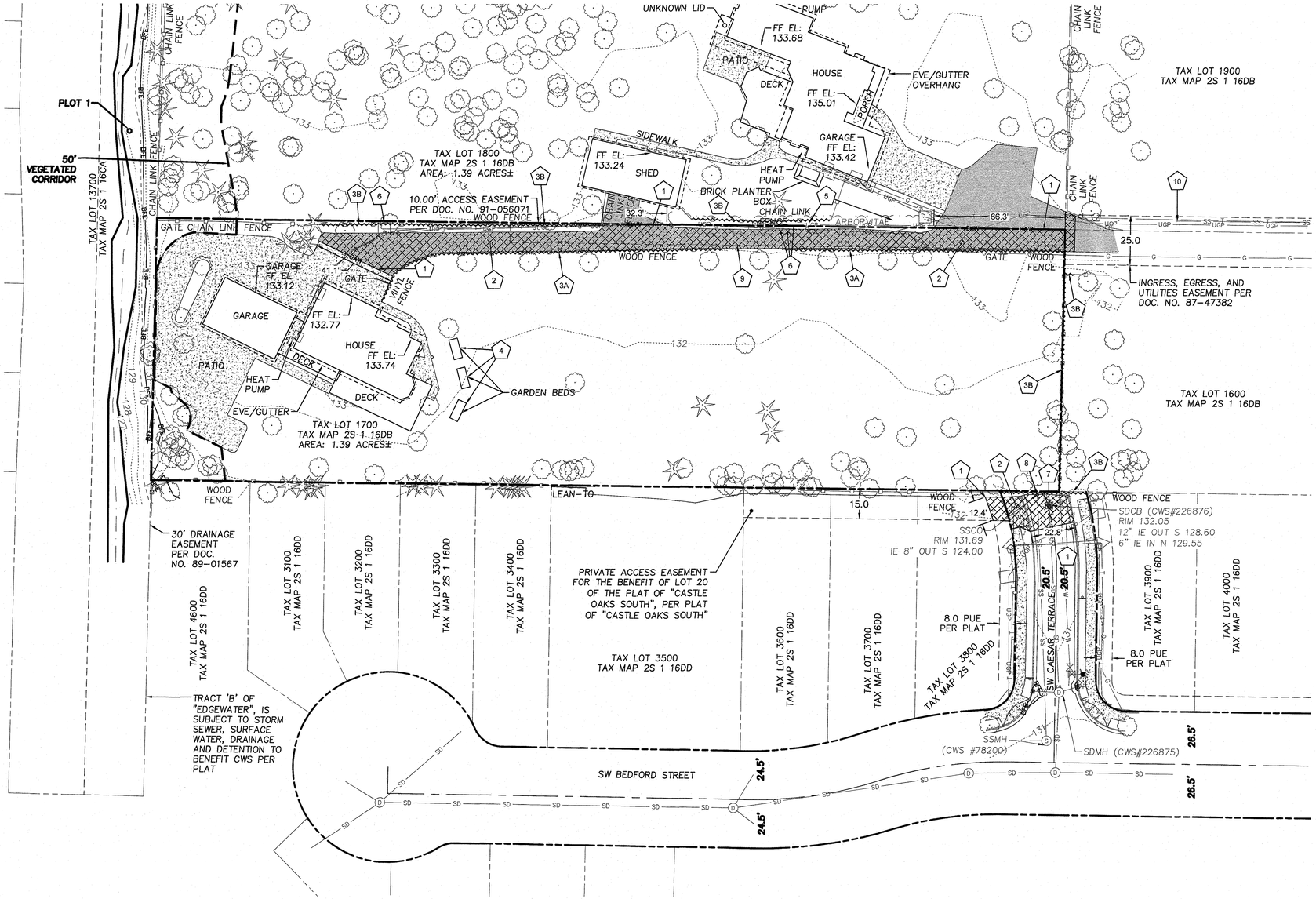
TENTATIVE PLAT
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100, BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C040

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-TENTATIVE PLAT.DWG



DEMOLITION KEY NOTES

1. SAWCUT CONCRETE PAVEMENT AT NEAREST JOINT TO FULL SLAB DEPTH AND/OR SAWCUT ASPHALT PAVEMENT AT LOCATION SHOWN TO FULL EXISTING PAVEMENT DEPTH. PAVEMENT REMOVAL LIMITS TO BE INSPECTED BY OWNER AND ENGINEER PRIOR TO REPAVING. PROTECT ALL ADJACENT SURFACES FROM DAMAGE.
2. REMOVE AND DISPOSE OF EXISTING ASPHALT/CONCRETE WITHIN LIMITS SHOWN.
3A. REMOVE FENCING, POSTS, CONCRETE FOOTINGS AND ALL ASSOCIATED APPURTENANCES. DISPOSE OF FENCING OFF SITE, UNLESS OTHERWISE DIRECTED BY OWNER.
3B. REMOVE AND REPLACE FENCING, POSTS, CONCRETE FOOTINGS AND ALL ASSOCIATED APPURTENANCES. REPLACE FENCING TO LOCATION SHOWN ON SHEET C310.
4. REMOVE GARDEN BED. DISPOSE OF MATERIAL OFF SITE, UNLESS OTHERWISE DIRECTED BY OWNER.
5. REMOVE ARBORVITAE. DISPOSE OF VEGETATION OFF SITE, UNLESS OTHERWISE DIRECTED BY OWNER.
6. CONTRACTOR TO COORDINATE WITH EXISTING UTILITY OWNERS FOR RELOCATION OF ELECTRICAL, GAS, AND TELECOMMUNICATION STRUCTURES AND ASSOCIATED LINES (BY OTHERS).
7. REMOVE EXISTING STORM DRAIN CATCH BASIN.
8. REMOVE EXISTING SANITARY SEWER CLEANOUT.
9. VACATE EXISTING ACCESS EASEMENT.
10. FOLLOWING CONNECTION OF LOTS 1700 AND 1800 TO PROPOSED SANITARY SEWER MAIN, CUT AND CAP EXISTING SANITARY SEWER PIPE(S) SERVING LOTS 1700 AND 1800 AT EAST PROPERTY LINE.

GENERAL NOTES

1. PROTECT EXISTING PAVEMENT ADJACENT TO WORK LIMITS. REPLACE DAMAGED CONCRETE IN WHOLE PANELS.
2. PROTECT EXISTING BUILDINGS ADJACENT TO WORK LIMITS. REPAIR DAMAGE TO SATISFACTION OF OWNER, AT NO EXPENSE TO OWNER.
3. VERIFY PRESENCE, LOCATION, AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING WORK. NOTIFY OWNER AND ENGINEER FOR ANY CONFLICTS WITH PROPOSED DESIGN.
4. COORDINATE WITH TAX LOTS 1600 AND 1800 PROPERTY OWNERS TO RELOCATE/REPLACE VEGETATION AND PROPERTY LINE FENCES AND PROVIDE TEMPORARY CONSTRUCTION FENCING REQUIRED DURING CONSTRUCTION.
5. CONTRACTOR TO MAINTAIN CONTINUOUS ACCESS FOR TAX LOT 1800 DURING CONSTRUCTION.
6. LOCATE AND MAINTAIN UTILITY SERVICES TO EXISTING HOMES ON TAX LOTS 1700 AND 1800 THROUGHOUT THE DURATION OF CONSTRUCTION UNTIL SWITCH OVER OCCURS.
7. CONTRACTOR TO INFORM HOME OWNERS 48 HOURS IN ADVANCE TO ACCESS TAX LOT 1800. DAVID BRUCE (503) 380-0261 davidb@irvingdevelopment.com

EXISTING CONDITIONS PLAN

THIS PLAN HAS BEEN PREPARED FOR ILLUSTRATIVE PURPOSES ONLY. SITE BACKGROUND INFORMATION AND FEATURES HAVE BEEN GENERATED FROM A COMBINATION OF PUBLIC GIS DATA SOURCES, AERIAL PHOTOS, TAX ASSESSOR MAPS AND PHYSICAL SITE OBSERVATIONS. PROPOSED SITE FEATURES ARE PRELIMINARY IN NATURE AND SUBJECT TO CHANGE. NO WARRANTY OR GUARANTEE IS EXPRESSED OR IMPLIED.

ZONE X (SHADED) THE SITE IS LOCATED WITHIN ZONE X (SHADED) PER FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY-PANEL NUMBER **41067C0539F**
FEMA'S DEFINITION OF ZONE X (SHADED) IS AN AREA OF MODERATE FLOOD HAZARD, USUALLY THE AREA BETWEEN THE LIMITS OF THE 100-YEAR AND 500-YEAR FLOODS. IN COMMUNITIES THAT PARTICIPATE IN THE NFIP, FLOOD INSURANCE IS AVAILABLE TO ALL PROPERTY OWNERS AND RENTERS IN THESE ZONES.

ZONE AE THE SITE IS LOCATED WITHIN ZONE AE PER FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY-PANEL NUMBER **41067C0539F**
FEMA'S DEFINITION OF ZONE AE ARE IS BASE FLOODPLAIN WHERE BASE FLOOD ELEVATIONS ARE PROVIDED. AE ZONES ARE NOW USED ON NEW FORMAT FIRMS INSTEAD OF A1-A30 ZONES. IN COMMUNITIES THAT PARTICIPATE IN THE NFIP, MANDATORY FLOOD INSURANCE PURCHASE REQUIREMENTS APPLY.
BASE FLOOD ELEVATION (BFE) IS 134.0' (NAVD88).
ORTHOMETIC HEIGHT CONVERSION FROM NAVD88 TO NGVD29 AT 45°23'36.6" N, 122°48'51.9" ACCORDING TO VERTCON PROVIDED BY THE NATIONAL ATMOSPHERIC AND OCEANIC ADMINISTRATION IS -3.481'. THE RESULTING BFE IS 130.519'.

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.

ELEVATION DATUM AND BASIS OF BEARINGS

ELEVATIONS AND CONTOURS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 934, ELEVATION = 157.815 FEET (NGVD 29). CONTOUR INTERVAL IS 1 FOOT.

THE BASIS OF BEARINGS FOR THIS SURVEY IS ASSUMED TO BE OREGON STATE PLANE COORDINATE SYSTEM OF 1983, NORTH ZONE.

SURVEYOR'S NOTES

1. THE PROPERTY IS LOCATED IN THE N.W. 1/4 S.E. 1/4 OF SECTION 16, T.2.S., R.1.W., W.M. WASHINGTON COUNTY OREGON
2. THE BASIS OF BEARINGS AND HORIZONTAL POSITIONS: ASSUMED OREGON STATE PLANE COORDINATE SYSTEM OF 1983, NORTH ZONE.
3. UNDERGROUND UTILITIES ARE SHOWN PER SURFACE MARKINGS AND AS-BUILT INFORMATION PROVIDED BY THE CONTROLLING JURISDICTIONS. THE SURVEYOR MAKES NO GUARANTEE AS TO THE EXACT LOCATION, EXISTENCE, NON-EXISTENCE OR COMPLETENESS OF ANY SUBSURFACE UTILITIES SHOWN, OR NOT SHOWN ON THE MAP. CALL 811 BEFORE DIGGING.
4. ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 934 LOCATED AT THE SE CORNER OF THE INTERSECTION OF SW 125TH PLACE AND SW FISCHER ROAD. ELEVATION = 157.815 FEET (NGVD 29).

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W E
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SCALE: 1" = 30'
0 30 60 FT

Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

EXISTING CONDITIONS & DEMOLITION PLAN
PONDEROSA PINES SUBDIVISION

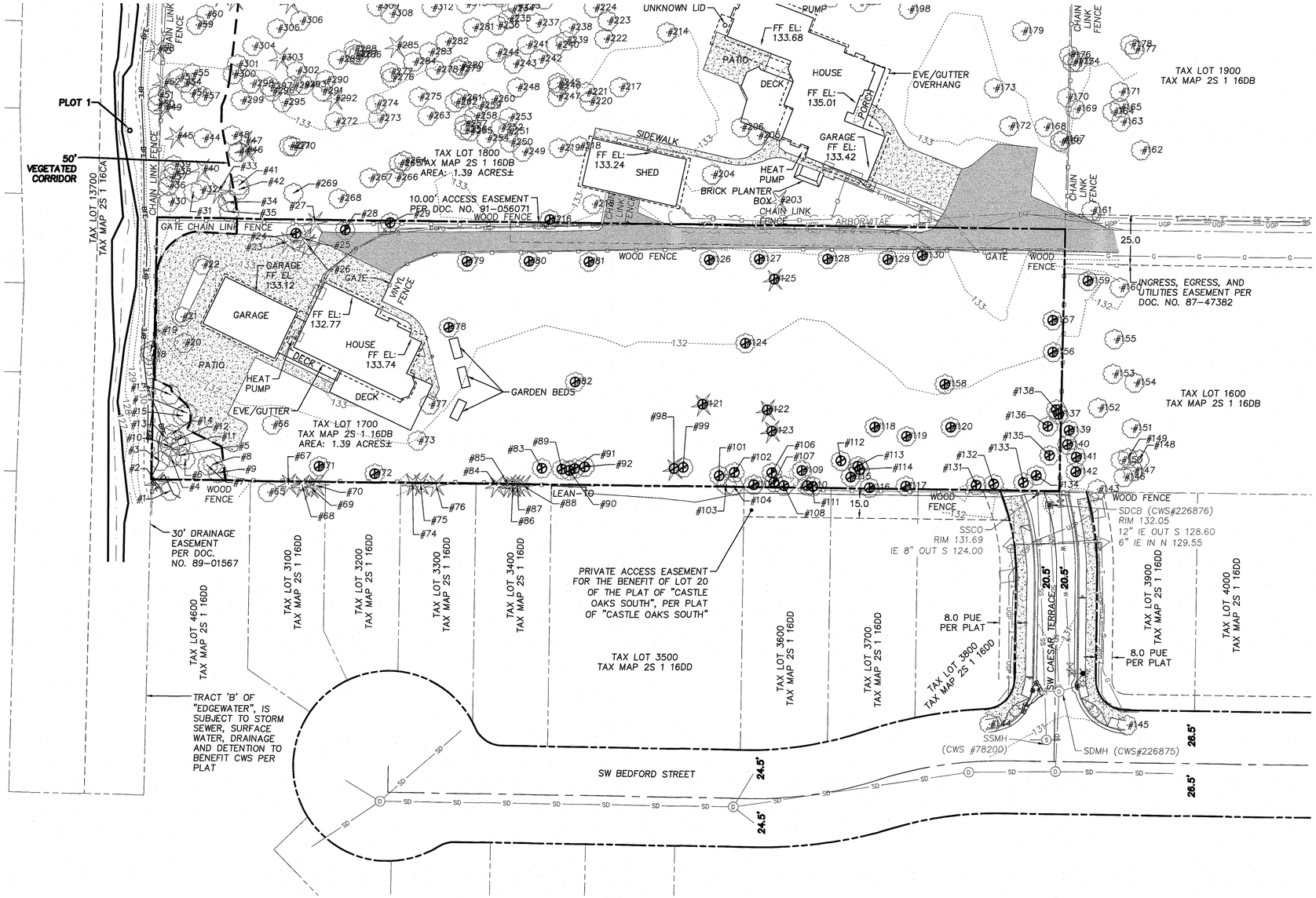
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100, BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C100

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-EXISTING CONDITIONS.DWG



LEGEND

- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- TREE TO BE REMOVED

GENERAL TREE INVENTORY NOTES

EXISTING TREES ON PROPERTY	83
TREES ON PROPERTY TO BE REMOVED	56
TREES ON PROPERTY TO BE RETAINED	27
TREES ON ADJOINING PROPERTIES TO BE REMOVED*	6

*TREES #139, 140, 141, 142, 159, AND 216

TREE PROTECTION GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE PROJECT ARBORIST PRIOR TO ADJUSTING TREE PROTECTION FENCING FOR WORK BENEATH PROTECTED TREE DRIPLINES.

2. OBTAIN WRITTEN CONSENT OF ADJACENT PROPERTY OWNER PRIOR TO REMOVAL OF BOUNDARY TREES.

3. FOR FULL TREE INVENTORY: SEE TREE TABLE. BOLDED ITEMS TO BE REMOVED.

TREE PROTECTION SPECIFICATIONS:

1. PROTECTION FENCING. ALL TREES TO BE RETAINED SHALL BE PROTECTED BY 5-FOOT TALL STEEL WELDED WIRE FENCING UNLESS OTHERWISE APPROVED BY THE CITY MANAGER OR DESIGNEE. PROTECTION FENCING SHALL BE SECURED TO STEEL POSTS PLACED NO FURTHER THAN 8-FEET APART AND SHALL BE INSTALLED AT THE EDGE OF THE TPZ.

2. TREE PROTECTION ZONE MAINTENANCE. PROTECTION FENCING SHALL REMAIN IN PLACE AND IN GOOD REPAIR THROUGHOUT CONSTRUCTION. WORK WITHIN A TPZ MAY BE ALLOWED IF THE PROJECT ARBORIST DETERMINES THAT THE TREES WILL NOT BE UNDULY DAMAGED. THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ARBORIST PRIOR TO OPENING, ADJUSTING OR REMOVING TREE PROTECTION MEASURES.

3. STORAGE OF MATERIAL OR EQUIPMENT. THE CONTRACTOR SHALL NOT STORE MATERIALS OR EQUIPMENT WITHIN THE TPZ.

4. PRUNING. THE PROJECT ARBORIST CAN HELP IDENTIFY IF AND WHERE PRUNING IS NECESSARY ONCE TREES RECOMMENDED FOR REMOVAL HAVE BEEN REMOVED AND THE SITE IS STAKED AND PREPARED FOR CONSTRUCTION. PRUNING SHALL BE PERFORMED BY A QUALIFIED TREE SERVICE.

5. EXCAVATION. EXCAVATION WITHIN THE TPZ SHALL BE AVOIDED IF ALTERNATIVES ARE AVAILABLE. IF EXCAVATION WITHIN THE TPZ IN UNAVOIDABLE, THE PROJECT ARBORIST SHALL EVALUATE THE PROPOSED EXCAVATION TO DETERMINE METHODS TO MINIMIZE IMPACTS TO TREES. ALL CONSTRUCTION WITHIN THE TPZ SHALL BE UNDER THE ON-SITE TECHNICAL SUPERVISION OF THE PROJECT ARBORIST.

6. FENCE CONSTRUCTION. PROPERTY BOUNDARY FENCE CONSTRUCTION SHALL BE BY HAND AND WITH HAND TOOLS ONLY WITHIN TPZs. PROTECTION FENCING MAY BE OPENED TEMPORARILY TO ALLOW ACCESS OR REMOVED IF APPROVED IN ADVANCE BY THE PROJECT ARBORIST DEPENDING ON THE TIMING OF WORK. DO NOT STOCKPILE MATERIALS WITHIN TPZs. DIG POST HOLES BY HAND AND AVOID TREE ROOT IMPACTS; IF ROOTS ARE ENCOUNTERED, ADJUST POST HOLE LOCATIONS TO AVOID ROOTS. MIX CONCRETE IN POST HOLES, BUCKETS, OR WHEEL BARROWS; NO SPOILS OR CONCRETE WASH SHALL BE DISCARDED IN TPZs. WHERE TREES ARE LOCATED ON PROPERTY BOUNDARIES, BUILD FENCES AROUND TREES WITH SUFFICIENT ROOM TO GROW. IF PROTECTION FENCING IS OPENED FOR ACCESS, IT SHALL BE CLOSED AT THE END OF EACH WORK DAY. NO HEAVY EQUIPMENT IS ALLOWED WITHIN TPZs, ONLY PEOPLE, HAND TOOLS, AND BUILDING SUPPLIES FOR IMMEDIATE USE. BRANCHES MAY BE TRIMMED UP TO THE PROPERTY BOUNDARY IF NEEDED TO PROVIDE CLEARANCE FOR FENCE CONSTRUCTION.

7. TREE PROTECTION INSPECTION. THE PROJECT ARBORIST SHALL INSPECT AND VERIFY THE LOCATION OF PROTECTION MEASURES PRIOR TO CONSTRUCTION, MONITOR TREE PROTECTION MEASURES REGULARLY, AND PROVIDE BIWEEKLY WRITTEN REPORTS TO THE CITY DURING PERIODS OF ACTIVE CONSTRUCTION.

8. FINAL REPORT. AFTER THE PROJECT HAS BEEN COMPLETED, THE PROJECT ARBORIST SHALL PROVIDE A FINAL REPORT THAT DESCRIBES THE MEASURES NEEDED TO MAINTAIN AND PROTECT THE REMAINING TREES.

PRIOR TO TREE REMOVAL, ARBORIST TO SCHEDULE A SITE MEETING WITH CITY PLANNER TO GO OVER THE TREE REMOVAL AND PROTECTION PLAN

8/10/2020

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 1995
AARON J. MURPHY
Jun 2021
EXPIRES: 12/31/21

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

TREE PRESERVATION PLAN
PONDEROSA PINES SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C121

N W E S

SCALE: 1" = 30'
0 30 60 FT

811 Know what's below. Call before you dig.

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-EXISTING CONDITIONS.DWG

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION
3	6" OREGON ASH	RETAIN
4	6" OREGON ASH	RETAIN
5	10" OREGON ASH	RETAIN
6	4" OREGON ASH	RETAIN
7	6" OREGON ASH	RETAIN
8	28" OREGON WHITE OAK	RETAIN
9	7" OREGON ASH	RETAIN
10	10" OREGON ASH	RETAIN
11	12" OREGON ASH	RETAIN
12	8" OREGON ASH	RETAIN
13	13" OREGON ASH	RETAIN
14	7" OREGON ASH	RETAIN
15	15" OREGON ASH	RETAIN
16	11" OREGON ASH	RETAIN
17	12" OREGON ASH	RETAIN
20	37" OREGON WHITE OAK	RETAIN
21	34" OREGON WHITE OAK	RETAIN
22	24",22" OREGON ASH	RETAIN
23	27" PONDEROSA PINE	RETAIN
24	13" OREGON WHITE OAK	REMOVE
25	24" PONDEROSA PINE	RETAIN
26	37" PONDEROSA PINE	RETAIN
27	23" PONDEROSA PINE	RETAIN
28	16" OREGON ASH	REMOVE
29	6" OREGON ASH	REMOVE

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION
66	23" OREGON WHITE OAK	RETAIN
71	22" SCOULERS WILLOW	REMOVE
72	16",15" OREGON ASH	REMOVE
73	27" OREGON WHITE ASH	RETAIN
77	8" SAUCER MAGNOLIA	RETAIN
78	38" OREGON WHITE OAK	REMOVE
79	8" NORWAY MAPLE	REMOVE
80	7" NORWAY MAPLE	REMOVE
81	8" NORWAY MAPLE	REMOVE
82	28" OREGON WHITE OAK	REMOVE
83	17" OREGON ASH	REMOVE
89	8" PACIFIC WILLOW	REMOVE
90	7" PACIFIC WILLOW	REMOVE
91	10" PACIFIC WILLOW	REMOVE
92	9" WILD PLUM	REMOVE
98	32" PONDEROSA PINE	REMOVE
99	13" OREGON ASH	REMOVE

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION
101	11" OREGON ASH	REMOVE
102	17" OREGON ASH	REMOVE
103	6" OREGON ASH	RETAIN
104	6" OREGON ASH	RETAIN
105	22" OREGON ASH	REMOVE
106	9" OREGON ASH	REMOVE
107	7" OREGON ASH	REMOVE
108	12" OREGON ASH	REMOVE
109	8" OREGON ASH	REMOVE
110	7" OREGON ASH	REMOVE
111	11" OREGON ASH	REMOVE
112	12" OREGON WHITE OAK	REMOVE
113	18" OREGON WHITE OAK	REMOVE
114	8" OREGON ASH	REMOVE
115	12" OREGON WHITE OAK	REMOVE
116	13" OREGON ASH	REMOVE
117	5",3",3" OREGON ASH	REMOVE
118	8" OREGON ASH	REMOVE
119	18" OREGON ASH	REMOVE
120	14" PACIFIC WILLOW	REMOVE
121	36" PONDEROSA PINE	REMOVE
122	30" PONDEROSA PINE	REMOVE
123	42" PONDEROSA PINE	REMOVE
124	40" BLACK COTTONWOOD	REMOVE
125	38" PONDEROSA PINE	REMOVE
126	10" NORWAY MAPLE	REMOVE
127	6" NORWAY MAPLE	REMOVE
128	7" NORWAY MAPLE	REMOVE
129	7" NORWAY MAPLE	REMOVE
130	28" BLACK COTTONWOOD	REMOVE
131	7" OREGON ASH	REMOVE
132	10",10" OREGON ASH	REMOVE
133	21" OREGON ASH	REMOVE
134	22" OREGON WHITE OAK	REMOVE
135	12" OREGON ASH	REMOVE
136	11" OREGON ASH	REMOVE
137	9",6" OREGON ASH	REMOVE
138	9" OREGON ASH	REMOVE
139	6" OREGON ASH	REMOVE*
140	6" OREGON ASH	REMOVE*
141	4" OREGON ASH	REMOVE*
142	5" OREGON ASH	REMOVE*

*TREE ON ADJOINING PROPERTY TO BE REMOVED

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION
156	12" RED MAPLE	REMOVE
157	12" RED MAPLE	REMOVE
158	42" BLACK COTTONWOOD	REMOVE
159	16" OREGON ASH	REMOVE*

*TREE ON ADJOINING PROPERTY TO BE REMOVED

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION
216	12",10",6" OREGON ASH	REMOVE*

*TREE ON ADJOINING PROPERTY TO BE REMOVED

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION

TREE TABLE		
TREE #	DIAMETER, DESCRIPTION	ACTION

TREE TABLE NOTES:

1. TABLE ENTRIES WITH SHADING REPRESENT TREES THAT ARE ON ADJOINING PROPERTIES AND WILL BE RETAINED.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 at 2:31 PM
EXPIRES: 12/31/20

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

TREE PRESERVATION NOTES
PONDEROSA PINES SUBDIVISION

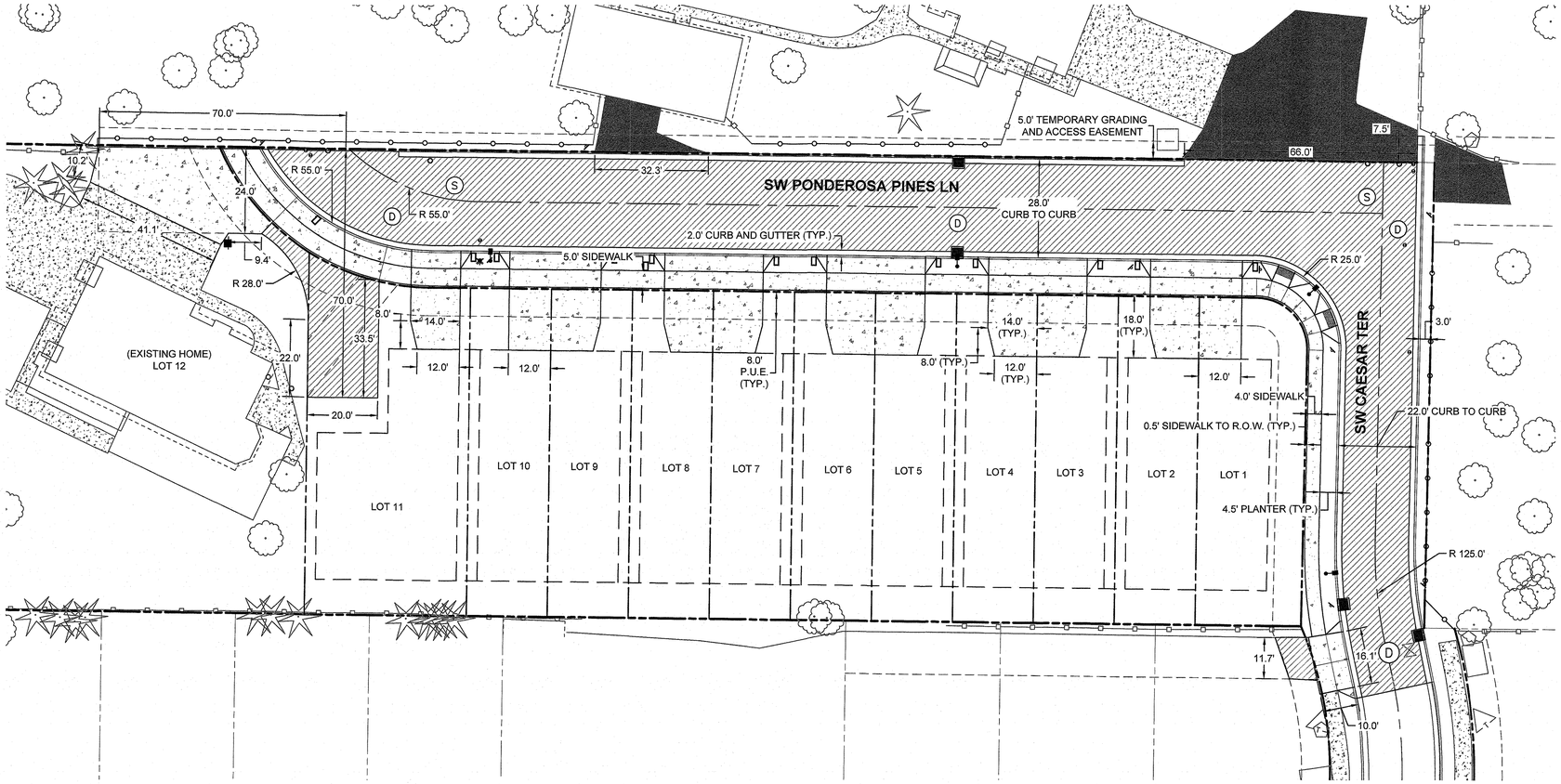
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C122

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-EXISTING CONDITIONS.DWG



P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-HORIZONTAL CONTROL.DWG

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SCALE: 1" = 20'
0 20 40 FT

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
EXPIRES: 12/31/20

Jun 25 2020 4:21 PM

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

HORIZONTAL CONTROL PLAN
PONDEROSA PINES SUBDIVISION

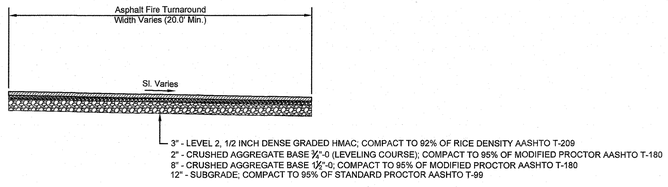
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

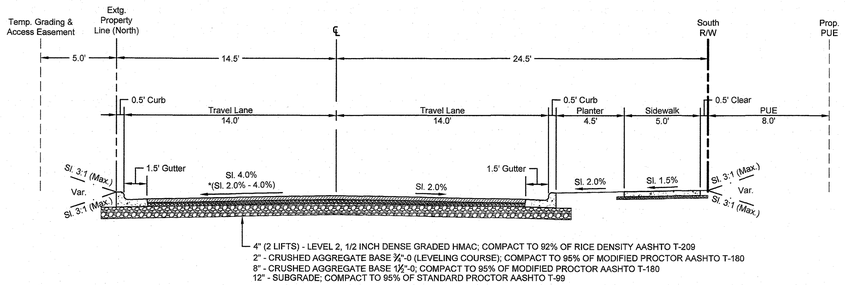
PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C220



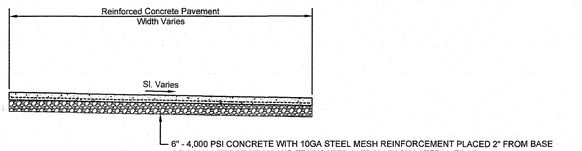
ASPHALT FIRE TURNAROUND - TYPICAL SECTION



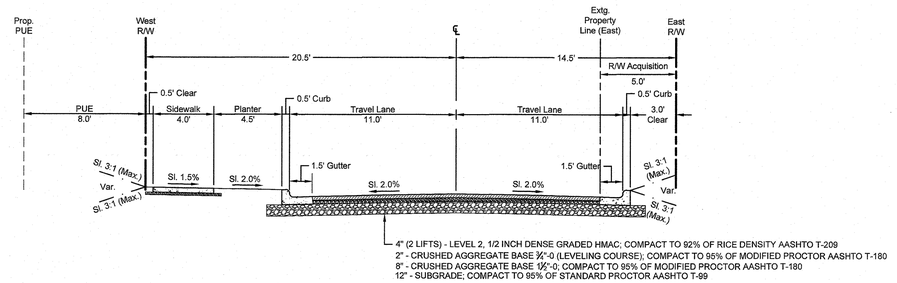
NOTES:
1. CONSTRUCT CURB AND GUTTER PER WASHINGTON COUNTY STD. DWG. 2010 ON SHEET C901.
2. CONSTRUCT CONCRETE SIDEWALK PER WASHINGTON COUNTY STD. DWG. 2110 ON SHEET C901.
3. EXTEND CRUSHED AGGREGATE BASE 1.0 FT BEHIND BACK OF CURB.
4. EXTEND CRUSHED AGGREGATE BASE 0.5 FT BEYOND EDGE OF SIDEWALK ON BOTH SIDES.

SW PONDEROSA PINES LANE - TYPICAL SECTION

STA: 2+78.0 TO STA: 4+53.1
*STA: 4+53.1 TO STA: 4+78.1



REINFORCED CONCRETE PAVEMENT - TYPICAL SECTION



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2. CONSTRUCT CONCRETE SIDEWALK PER WASHINGTON COUNTY STD. DWG. 2110 ON SHEET C901.
3. EXTEND CRUSHED AGGREGATE BASE 1.0 FT BEHIND BACK OF CURB.
4. EXTEND CRUSHED AGGREGATE BASE 0.5 FT BEYOND EDGE OF SIDEWALK ON BOTH SIDES.

SW CAESAR TERRACE - TYPICAL SECTION

STA: 2+19.0 TO STA: 3+15.5

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 8:22 AM
EXPIRES: 12/31/20

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

TYPICAL SECTIONS
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
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COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
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LAND USE # | 19-02
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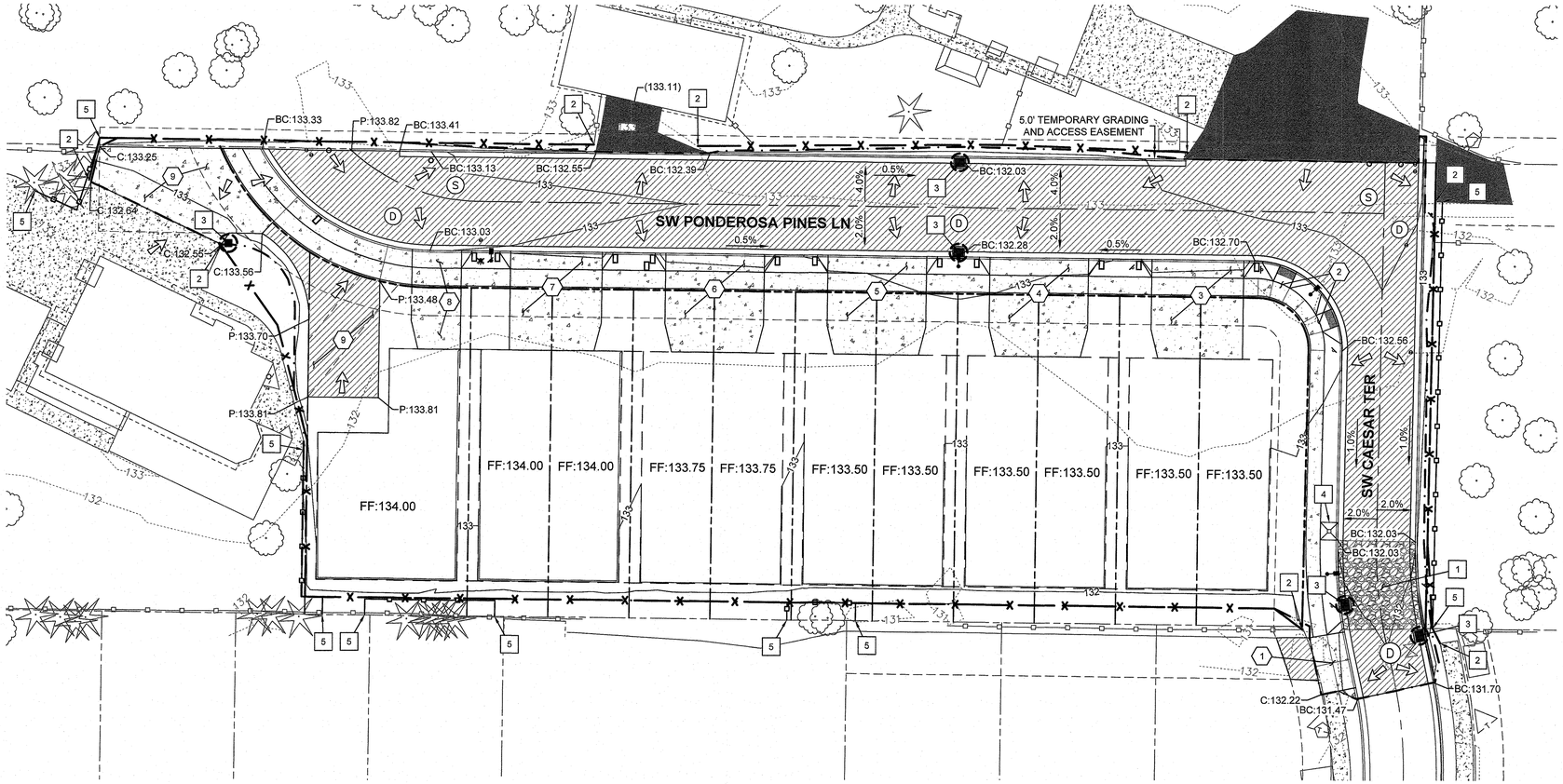
CHECKED BY | AJM

SHEET NUMBER
C225

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-TYPICAL SECTIONS.DWG



EROSION CONTROL KEY NOTES

1. CONSTRUCT GRAVEL CONSTRUCTION ENTRANCE AT LOCATION SHOWN AND PER CWS DWG. NO. 855 ON SHEET C921.
2. INSTALL SEDIMENT FENCING AT LOCATION SHOWN AND PER CWS DWG. NO. 875 ON SHEET C921.
3. INSTALL INLET PROTECTION PER CWS DWG. NO. 920 ON SHEET C921.
4. INSTALL CONCRETE WASHOUT PER CWS DWG. NO. 900 ON SHEET C921.
5. INSTALL TREE PROTECTION FENCING.

GRADING KEY NOTES

1. SEE GRADING DETAIL "TAX LOT 3500 DRIVEWAY" ON SHEET C241.
2. SEE GRADING DETAIL "ADA RAMPS" ON SHEET C241.
3. SEE GRADING DETAIL "LOTS 1&2 DRIVEWAY" ON SHEET C241.
4. SEE GRADING DETAIL "LOTS 3&4 DRIVEWAY" ON SHEET C241.
5. SEE GRADING DETAIL "LOTS 5&6 DRIVEWAY" ON SHEET C241.
6. SEE GRADING DETAIL "LOTS 7&8 DRIVEWAY" ON SHEET C241.
7. SEE GRADING DETAIL "LOTS 9&10 DRIVEWAY" ON SHEET C242.
8. SEE GRADING DETAIL "LOT 11 DRIVEWAY" ON SHEET C242.
9. SEE GRADING DETAIL "FIRE TURNAROUND" ON SHEET C242.

SITE GRADING INFORMATION

NEAT LINE CUT	74 CY
NEAT LINE FILL	1,878 CY
NEAT LINE NET BALANCE	1,804 CY (FILL)
MAXIMUM CUT DEPTH	1.42 FT
MAXIMUM FILL DEPTH	2.78 FT
MAXIMUM PROPOSED SLOPE	3:1
TOTAL AREA OF DISTURBANCE	43,341 SF

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 12:22 PM
EXPIRES: 12-31-20

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

OVERALL GRADING & EROSION CONTROL PLAN

PONDEROSA PINES SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

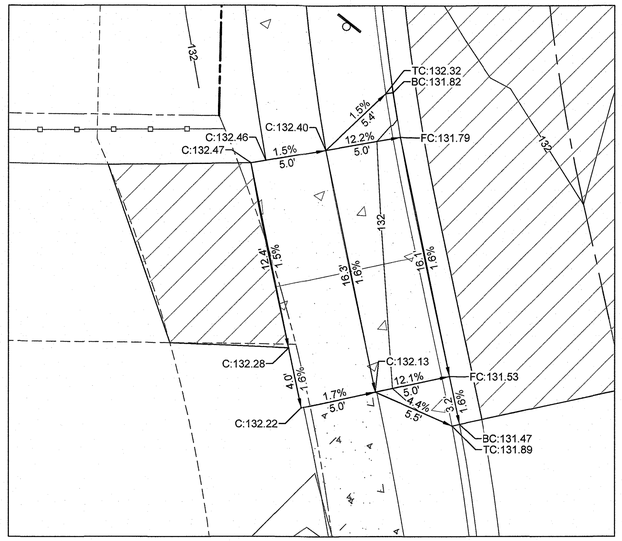
PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

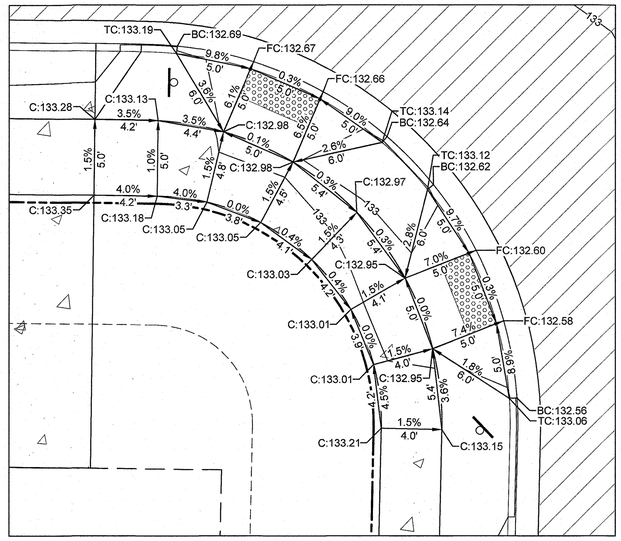
SHEET NUMBER
C230

811 Know what's below. Call before you dig.

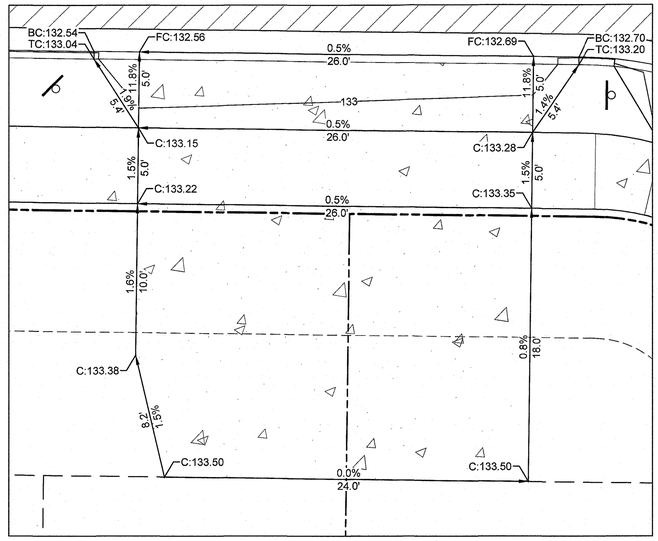
P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-GRADING & EC.DWG



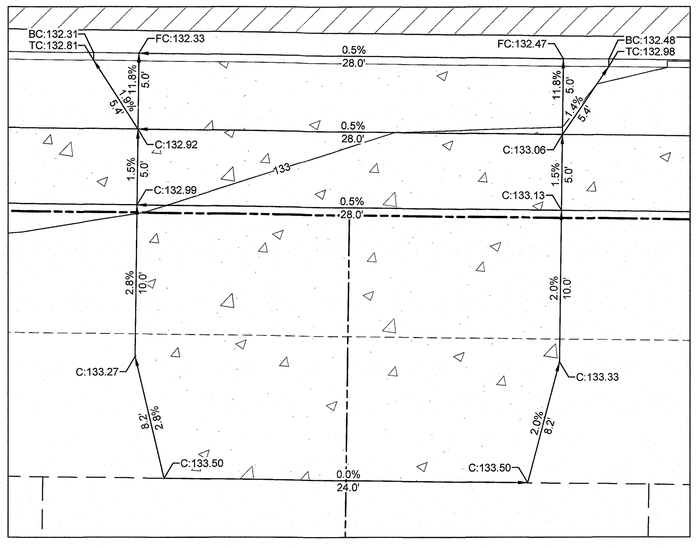
TAX LOT 3500 DRIVEWAY
SCALE: 1" = 5'



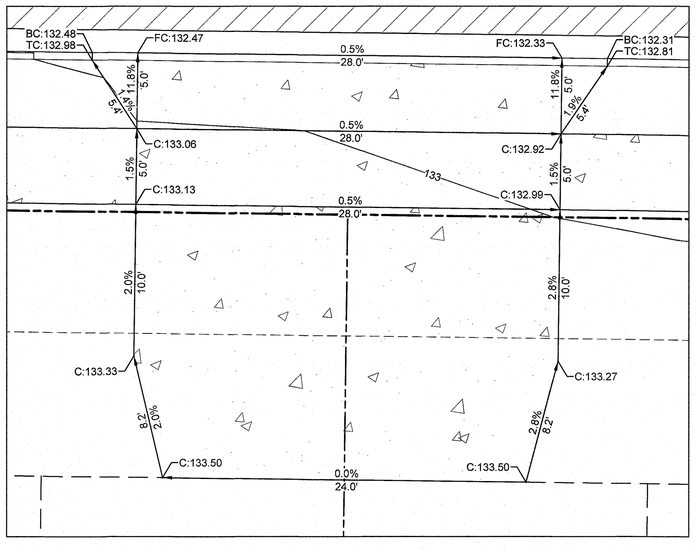
ADA RAMPS
SCALE: 1" = 5'



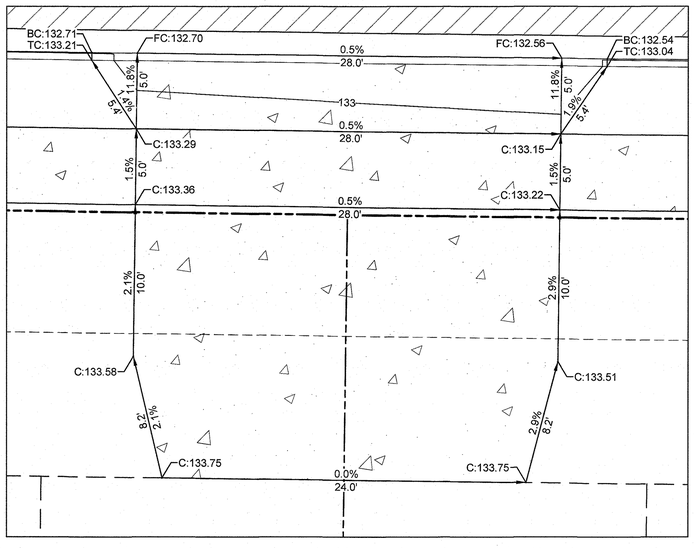
LOTS 1&2 DRIVEWAY
SCALE: 1" = 5'



LOTS 3&4 DRIVEWAY
SCALE: 1" = 5'



LOTS 5&6 DRIVEWAY
SCALE: 1" = 5'



LOTS 7&8 DRIVEWAY
SCALE: 1" = 5'

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-GRADING DETAILS.DWG

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 12:31 PM PDT

PUBLISH DATE
2020-06-15
ISSUED FOR
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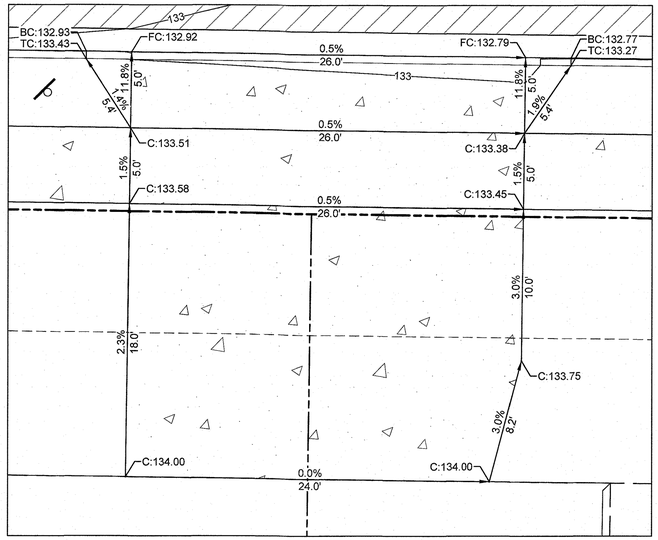
REVISIONS

GRADING DETAILS I
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

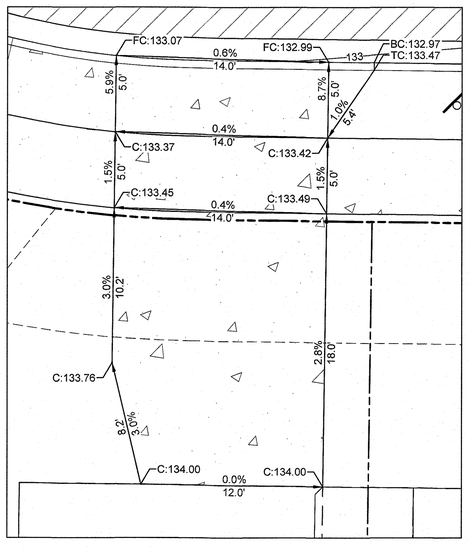
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

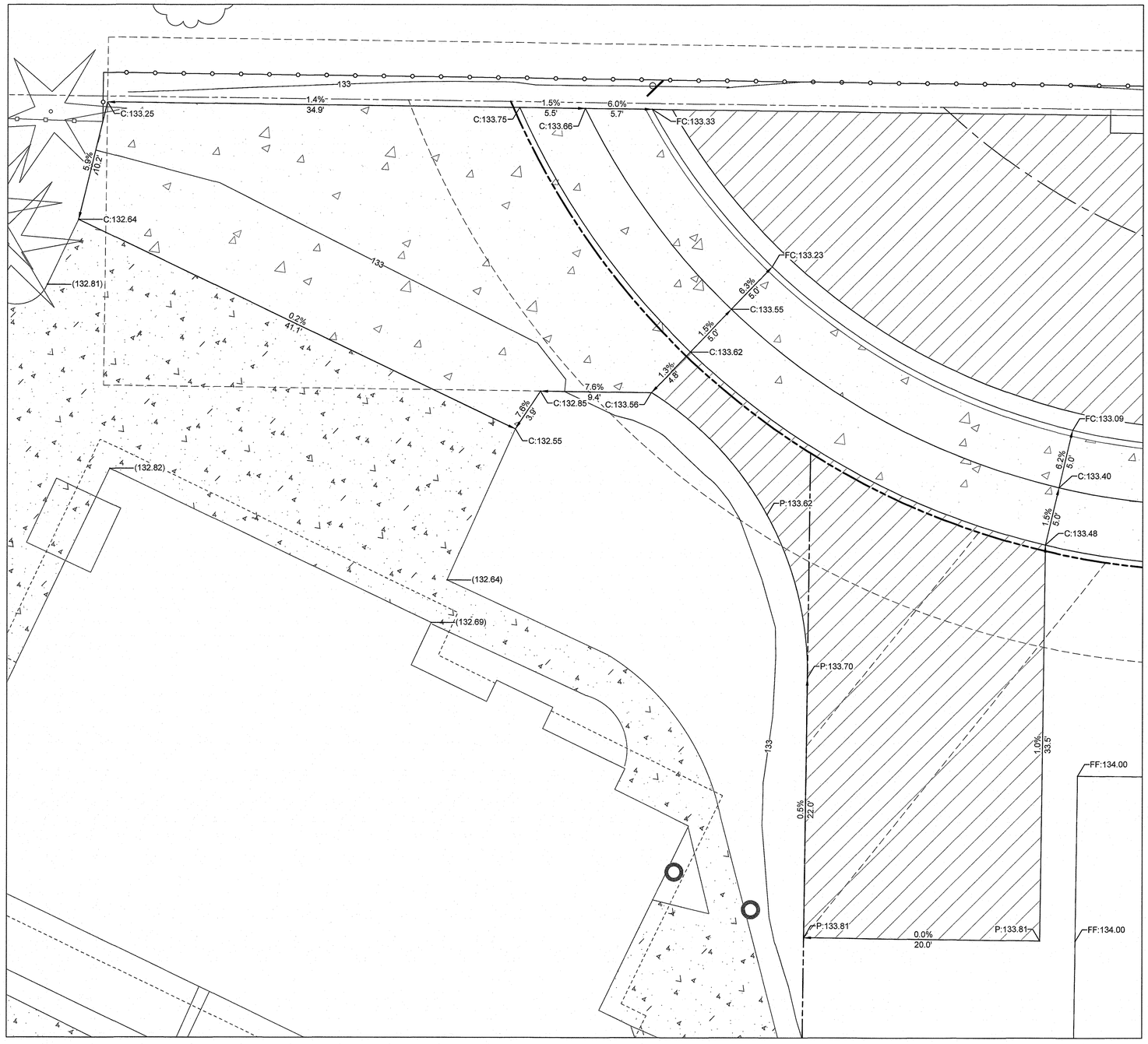
SHEET NUMBER
C241



LOTS 9&10 DRIVEWAY
SCALE: 1" = 5'



LOT 11 DRIVEWAY
SCALE: 1" = 5'



FIRE TURNAROUND
SCALE: 1" = 5'

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY

PUBLISH DATE
2020-06-15

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PERMIT SET

REVISIONS

GRADING DETAILS II
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

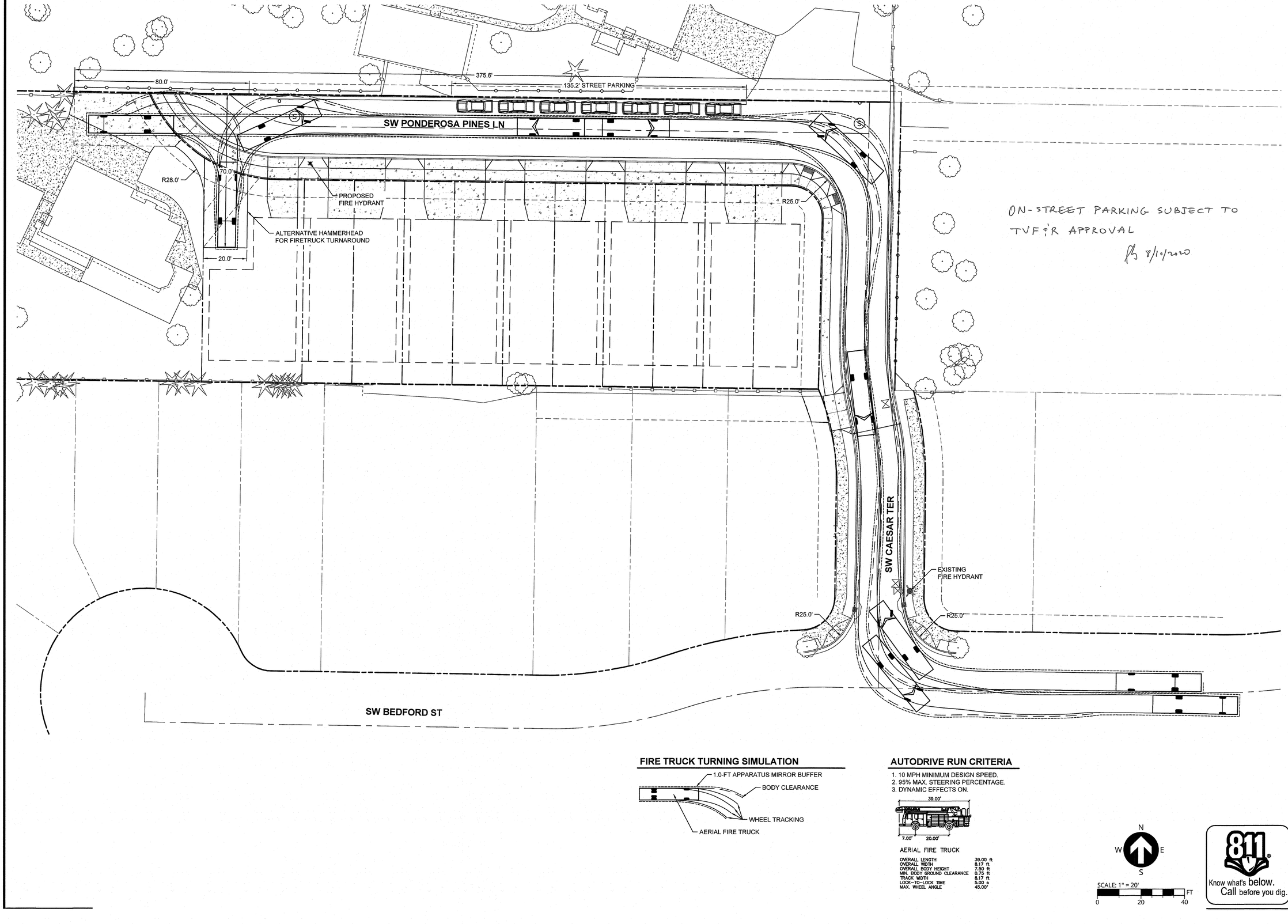
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C242

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-GRADING DETAILS.DWG



FIRE TRUCK TURNING SIMULATION

AUTODRIVE RUN CRITERIA

1. 10 MPH MINIMUM DESIGN SPEED.
2. 95% MAX. STEERING PERCENTAGE.
3. DYNAMIC EFFECTS ON.

AERIAL FIRE TRUCK

OVERALL LENGTH	39.00 ft
OVERALL WIDTH	8.17 ft
OVERALL BODY HEIGHT	7.50 ft
MIN. BODY GROUND CLEARANCE	0.75 ft
TRACK WIDTH	8.17 ft
LOCK-TO-LOCK TIME	5.00 s
MAX. WHEEL ANGLE	45.00°

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REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY

Jun 2, 2020 4:22 PM PDT

PUBLISH DATE
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FIRE ACCESS PLAN
PONDEROSA PINES SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

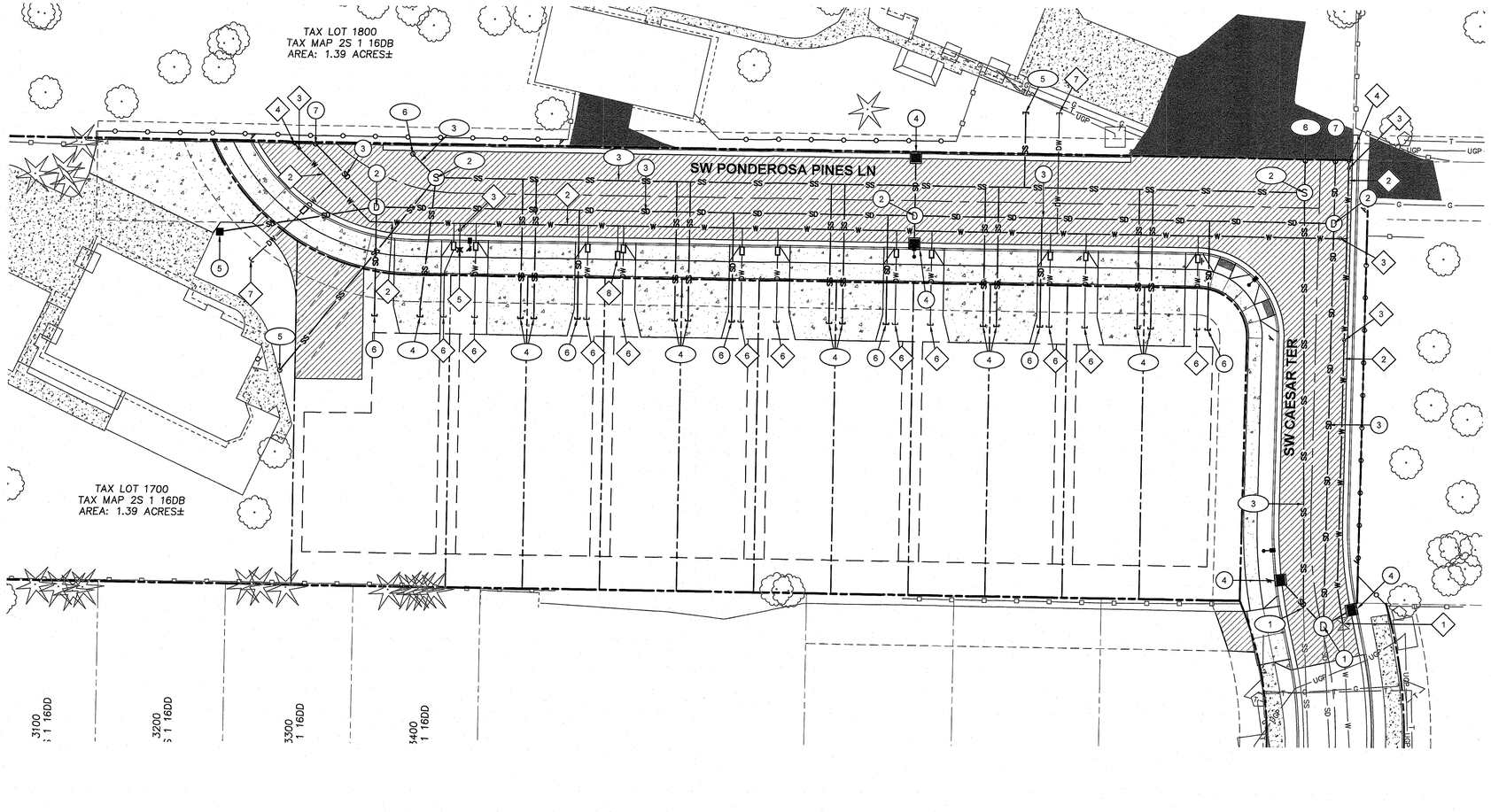
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C260

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-FIRE ACCESS PLAN.DWG



STORM DRAIN KEY NOTES

1. PROPOSED PUBLIC 60" STORM WATER QUALITY SEDIMENTATION MANHOLE WITH 36" SUMP. CONNECT TO EXISTING STORM MAIN.
2. PROPOSED PUBLIC 48" SHALLOW RUBBER GASKET FLAT TOP STORM MANHOLE.
3. PROPOSED PUBLIC 12" STORM MAIN.
4. PROPOSED PUBLIC CG-2 CURB GRATE INLET WITH 10" STORM LATERAL.
5. PROPOSED PRIVATE 12" AREA DRAIN WITH 6" STORM LATERAL.
6. PROPOSED PRIVATE 6" STORM LATERAL TO ROOF DRAIN CONNECTION.
7. PROPOSED PUBLIC 12" STORM TERMINAL CLEANOUT.

SANITARY SEWER KEY NOTES

1. PROPOSED CONNECTION TO EXISTING SANITARY SEWER MAIN.
2. PROPOSED PUBLIC 48" STANDARD SANITARY SEWER MANHOLE.
3. PROPOSED PUBLIC 8" SANITARY SEWER MAIN.
4. PROPOSED PRIVATE 4" SANITARY SEWER LATERAL.
5. PROPOSED PRIVATE 4" SANITARY SEWER LATERAL. CONNECT TO EXISTING PRIVATE SANITARY SEWER FOR EXISTING HOME.
6. PROPOSED PUBLIC 8" SANITARY SEWER TERMINAL CLEANOUT.

WATER SYSTEM KEY NOTES

1. PROPOSED CONNECTION TO EXISTING GATE VALVE. PRIOR TO CONNECTION, THE NEW PIPELINE SHALL BE FLUSHED, PRESSURE TESTED, AND DISINFECTED.
2. PROPOSED PUBLIC 8" WATER MAIN.
3. PROPOSED PUBLIC GATE VALVE.
4. PROPOSED PUBLIC TEMPORARY BLOW-OFF VALVE.
5. PROPOSED PUBLIC FIRE HYDRANT ASSEMBLY.
6. PROPOSED PRIVATE SERVICE CONNECTION LATERAL AND WATER METER AT BACK OF CURB INSTALLED IN LANDSCAPED AREA.
7. PROPOSED PRIVATE SERVICE CONNECTION LATERAL AND WATER METER INSTALLED IN CONCRETE. CONNECT TO EXISTING WATER SERVICE FOR EXISTING HOME.
8. PROPOSED PRIVATE SERVICE CONNECTION LATERAL AND IRRIGATION WATER METER.

GENERAL NOTES:

1. CONTRACTOR TO COORDINATE WITH TAX LOT 1800 PROPERTY OWNER TO RELOCATE/REPLACE DRY UTILITY SERVICE AND IRRIGATION LINES TO THE EXISTING HOUSE.
2. CONTRACTOR TO COORDINATE WITH OWNER TO RELOCATE/REPLACE DRY UTILITY SERVICE AND IRRIGATION LINES TO THE EXISTING HOUSE ON LOT 12.
3. ALL WATERLINES TO BE RESTRAINED.

- WATER SYSTEM TO BE APPROVED BY TIGARD WATER
- STORM DRAIN & SANITARY SEWER TO BE APPROVED BY CWS

8/10/2020

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W E
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SCALE: 1" = 20'
0 20 40 FT

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REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020

PUBLISH DATE
2020-06-15
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REVISIONS

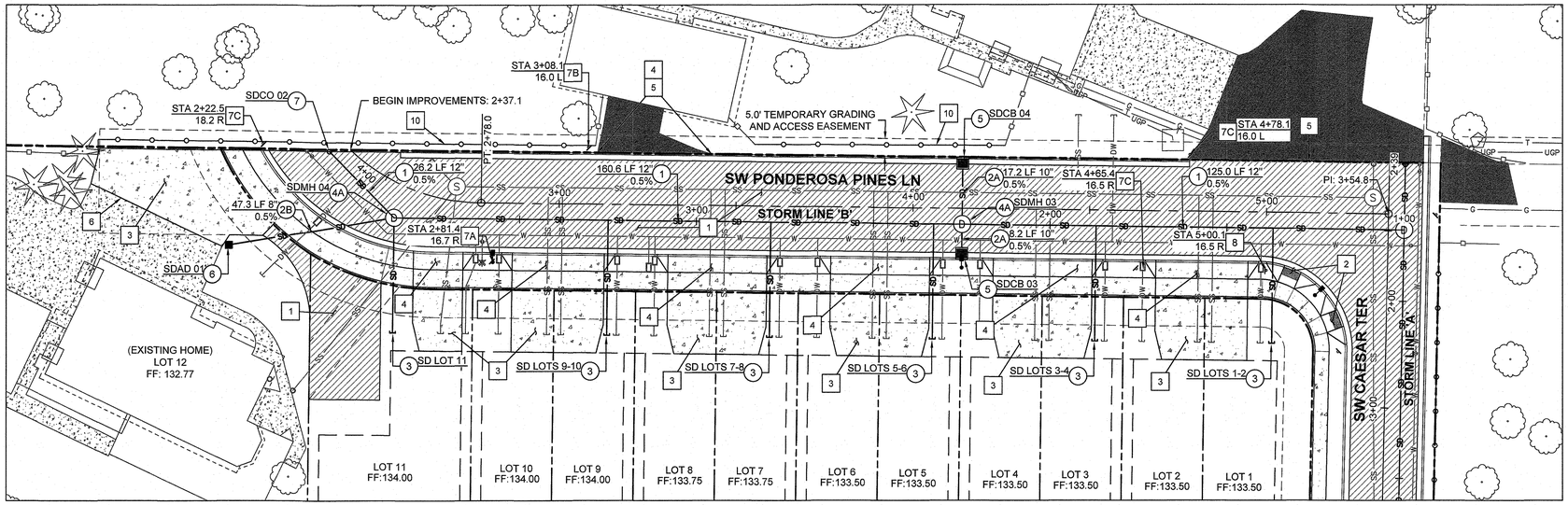
COMPOSITE UTILITY PLAN
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C300

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-COMPOSITE UTILITY.DWG



SW PONDEROSA PINES LANE PLAN

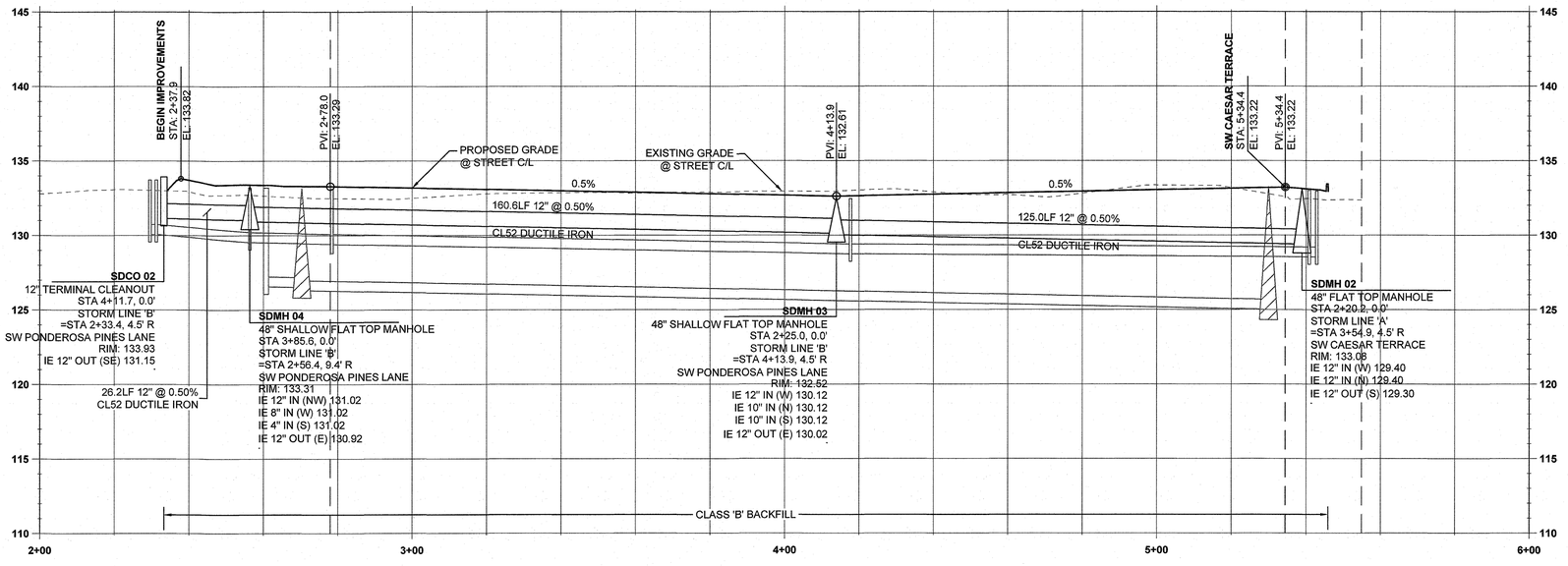
STORM DRAIN PIPES RELATIVELY SHALLOW, SUBJECT TO CWS APPROVAL

8/10/2020

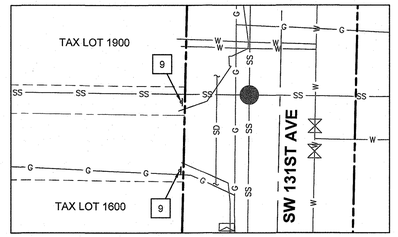
INLET TABLE
SDAD 01 12" X 12" AREA DRAIN (PRIVATE) STA: 4+12.6, 38.8 L STORM LINE 'B' RIM: 132.60 8" IE OUT (E): 131.26 SUMP: 129.26
SDCB 03 CG-2 CURB INLET STA: 2+25.0, 8.2 L STORM LINE 'B' RIM: 132.35 10" IE OUT (N): 130.16 SUMP: 128.66
SDCB 04 CG-2 CURB INLET STA: 2+25.0, 17.2 R STORM LINE 'B' RIM: 132.10 10" IE OUT (S): 130.21 SUMP: 128.71

STORM LATERAL TABLE

NAME	SIZE	LENGTH	SLOPE	INVERT AT MAIN	INVERT AT END	DEPTH AT END	STATION
SD LOT 11	4"	32.5 LF	2.0%	131.02	131.67	2.2 FT	STA: 3+85.6, STORM LINE 'B'
SD LOTS 1-2	4"	32.5 LF	2.0%	129.92	130.57	2.9 FT	STA: 1+37.0, STORM LINE 'B'
SD LOTS 3-4	4"	32.5 LF	2.0%	130.17	130.82	2.6 FT	STA: 1+87.0, STORM LINE 'B'
SD LOTS 5-6	4"	32.5 LF	2.0%	130.49	131.14	2.2 FT	STA: 2+33.0, STORM LINE 'B'
SD LOTS 7-8	4"	32.5 LF	2.0%	130.72	131.37	2.2 FT	STA: 2+79.0, STORM LINE 'B'
SD LOTS 9-10	4"	32.5 LF	2.0%	130.95	131.60	2.2 FT	STA: 3+25.0, STORM LINE 'B'



SW PONDEROSA PINES LANE PROFILE
(STA: 2+00 - STA: 6+00)
SCALE: 1" = 20' H; 1" = 5' V



TAX LOTS 1600 & 1900
PRIVATE DRIVEWAY SIGN PLAN

CONSTRUCTION KEY NOTES

1. CONSTRUCT STREET PER TYPICAL SECTION ON SHEET C225.
2. CONSTRUCT ADA COMPLIANT RAMP PER WASHCO STD. DWG. 2130 ON SHEET C901.
3. CONSTRUCT REINFORCED CONCRETE PAVEMENT WITHIN LIMITS SHOWN PER TYPICAL SECTION ON SHEET C225.
4. CONSTRUCT STANDARD DRIVEWAY DROP PER WASHCO STD. DWG. 1010 ON SHEET C901.
5. MATCH EXISTING ASPHALT PAVEMENT.
6. MATCH EXISTING CONCRETE.
7A. INSTALL NO PARKING SIGN (DOUBLE ARROW) AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6512 ON SHEET C901.
7B. INSTALL NO PARKING SIGN (LEFT ARROW) AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6512 ON SHEET C901.
7C. INSTALL NO PARKING SIGN (RIGHT ARROW) AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6512 ON SHEET C901.
8. INSTALL STOP SIGN AND STREET NAME SIGN TREE AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6511 ON SHEET C901 AND DETAIL 1 ON SHEET C902.
9. INSTALL PRIVATE ROAD SIGN AT LOCATION SHOWN. SEE DETAIL 2 ON SHEET C902.
10. INSTALL 6' CEDAR FENCE AT LOCATION SHOWN. CONFIRM FENCE TYPE MATCHES EXSITING.

STORM DRAIN KEY NOTES

1. INSTALL PUBLIC STORM MAIN (DUCTILE IRON, CL52) AT SIZE AND LOCATION SHOWN. SEE CWS DWG. NO. 590 ON SHEET C933 FOR TRENCH BACKFILL DETAIL. SEE ELEVATION DATA IN PROFILE.
2A. INSTALL PUBLIC STORM LATERAL (ASTM D3034, SDR 35) AT SIZE, SLOPE, ELEVATIONS, AND LOCATION SHOWN ON PLAN. SEE CWS DWG. NO. 590 ON SHEET C933 FOR TRENCH BACKFILL DETAIL.
2B. INSTALL PRIVATE STORM LATERAL (ASTM D3034, SDR 35) AT SIZE, SLOPE, ELEVATIONS, AND LOCATION SHOWN ON PLAN. SEE CWS DWG. NO. 590 ON SHEET C933 FOR TRENCH BACKFILL DETAIL.
3. INSTALL PRIVATE STORM SERVICE LATERAL (ASTM D3034, SDR 35) AT SIZE, SLOPE, ELEVATIONS, AND LOCATION SHOWN IN STORM LATERAL TABLE. SEE CWS DWG. NO. 590 ON SHEET C933 FOR TRENCH BACKFILL DETAIL. STORM LATERAL CONNECTION PER CWS DWG. NO. 520 ON SHEET C933.
4A. INSTALL PUBLIC 48" SHALLOW FLAT TOP STORM MANHOLE AT LOCATION SHOWN PER CWS DWG. NO. 040 ON SHEET C931. SEE ELEVATION DATA IN PROFILE.
5. INSTALL PUBLIC CG-2 CURB GRATE INLET PER CWS DWG. NO. 300 ON SHEET C932. SEE ELEVATION DATA IN INLET TABLE THIS SHEET.
6. INSTALL PRIVATE 12" AREA DRAIN AT LOCATION SHOWN. SEE DETAIL ON SHEET C934. SEE ELEVATION DATA IN INLET TABLE THIS SHEET.
7. INSTALL PUBLIC 12" TERMINAL CLEANOUT AT LOCATION SHOWN PER CWS DWG. NO. 500 ON SHEET C933. SEE ELEVATION DATA IN PROFILE.

N
W E
S

SCALE: 1" = 20'
0 20 40 FT

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 at 2:24 PM
Expires: 12/31/20

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

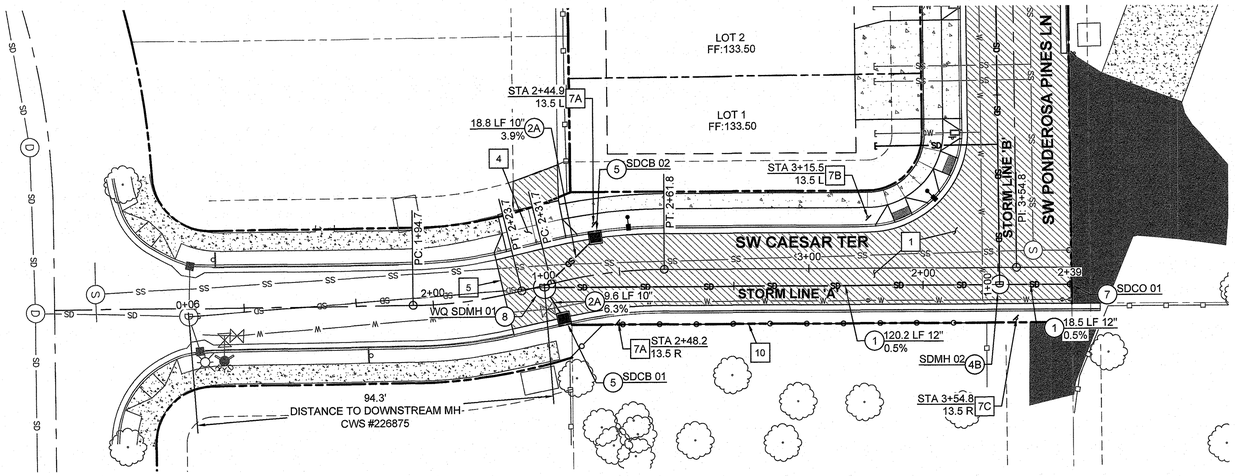
SW PONDEROSA PINES LN - STREET AND STORM PLAN & PROFILE
SW PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

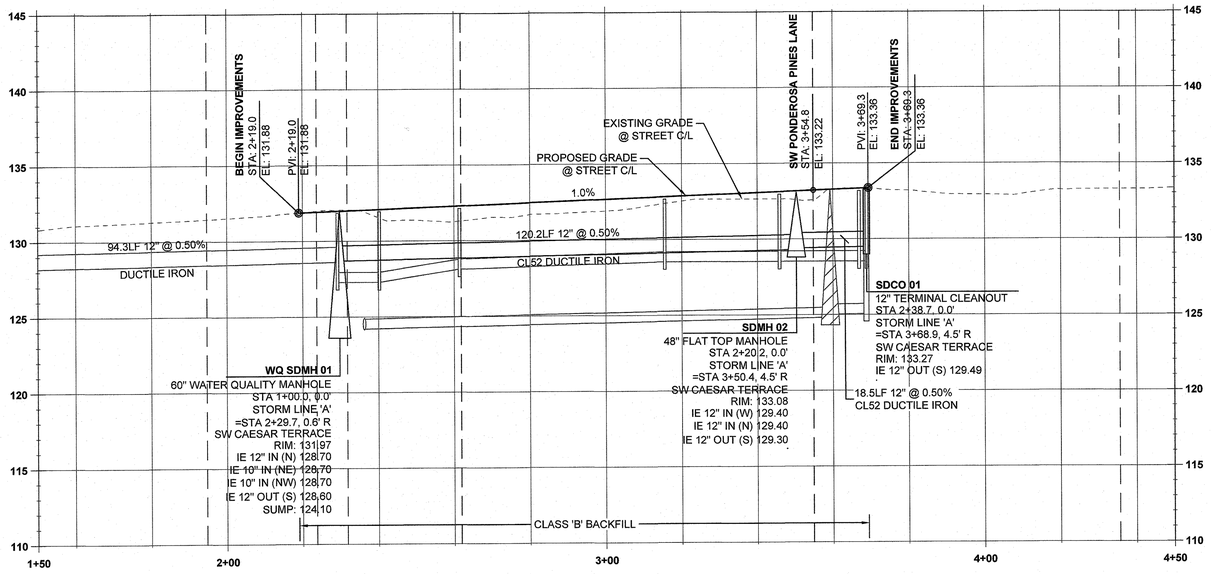
PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C310

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-STREET&STORM P&P-UNNAMED ROAD.DWG



SW CAESAR TERRACE PLAN



SW CAESAR TERRACE PROFILE

(STA: 1+50 - STA: 4+50)
SCALE: 1" = 20' H; 1" = 5' V

CONSTRUCTION KEY NOTES

1. CONSTRUCT STREET PER TYPICAL SECTION ON SHEET C225.
4. CONSTRUCT STANDARD DRIVEWAY DROP PER WASHCO STD. DWG. 1010 ON SHEET C901.
5. MATCH EXISTING PAVEMENT.
6. MATCH EXISTING SIDEWALK.
7A. INSTALL NO PARKING SIGN (DOUBLE ARROW) AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6512 ON SHEET C901.
7B. INSTALL NO PARKING SIGN (LEFT ARROW) AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6512 ON SHEET C901.
7C. INSTALL NO PARKING SIGN (RIGHT ARROW) AT LOCATION SHOWN. SEE WASHCO STD. DWG. 6512 ON SHEET C901.
10. INSTALL 6' CEDAR FENCE AT LOCATION SHOWN. CONFIRM FENCE TYPE MATCHES EXSITING.

STORM DRAIN KEY NOTES

1. INSTALL PUBLIC STORM MAIN (DUCTILE IRON, CL52) AT SIZE AND LOCATION SHOWN. SEE CWS DWG. NO. 590 ON SHEET C933 FOR TRENCH BACKFILL DETAIL. SEE ELEVATION DATA IN PROFILE. STREET BASE SECTION SHALL BE CONSTRUCTED PRIOR TO PIPE INSTALLATION.
2A. INSTALL PUBLIC STORM LATERAL (ASTM D3034, SDR 35) AT SIZE, SLOPE, ELEVATIONS, AND LOCATION SHOWN ON PLAN. SEE CWS DWG. NO. 590 ON SHEET C933 FOR TRENCH BACKFILL DETAIL.
4B. INSTALL PUBLIC 48" FLAT TOP STORM MANHOLE AT LOCATION SHOWN PER CWS DWG. NO. 050 ON SHEET C931. SEE ELEVATION DATA IN PROFILE.
5. INSTALL PUBLIC CG-2 CURB GRATE INLET PER CWS DWG. NO. 300 ON SHEET C932. SEE ELEVATION DATA IN INLET TABLE THIS SHEET.
7. INSTALL PUBLIC 12" TERMINAL CLEANOUT AT LOCATION SHOWN PER CWS DWG. NO. 500 ON SHEET C933. SEE ELEVATION DATA IN PROFILE.
8. INSTALL 60" STORM WATER QUALITY MANHOLE WITH 38" SUMP. SEE CWS DWG. NO. 250 AND 260 ON SHEET C932. CONNECT TO EXISTING STORM MAIN.

INLET TABLE

SDCB 01 CG-2 CURB INLET STA: 1+05.1, 8.2 R STORM LINE 'A' RIM: 131.81 10" IE OUT (SW): 129.31 SUMP: 127.81
SDCB 02 CG-2 CURB INLET STA: 1+13.4, 13.1 L STORM LINE 'A' RIM: 131.93 10" IE OUT (SE): 129.43 SUMP: 127.93

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2 2020 3:24 PM

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

SW CAESAR TERRACE - STREET AND STORM PLAN & PROFILE
PONDEROSA PINES SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

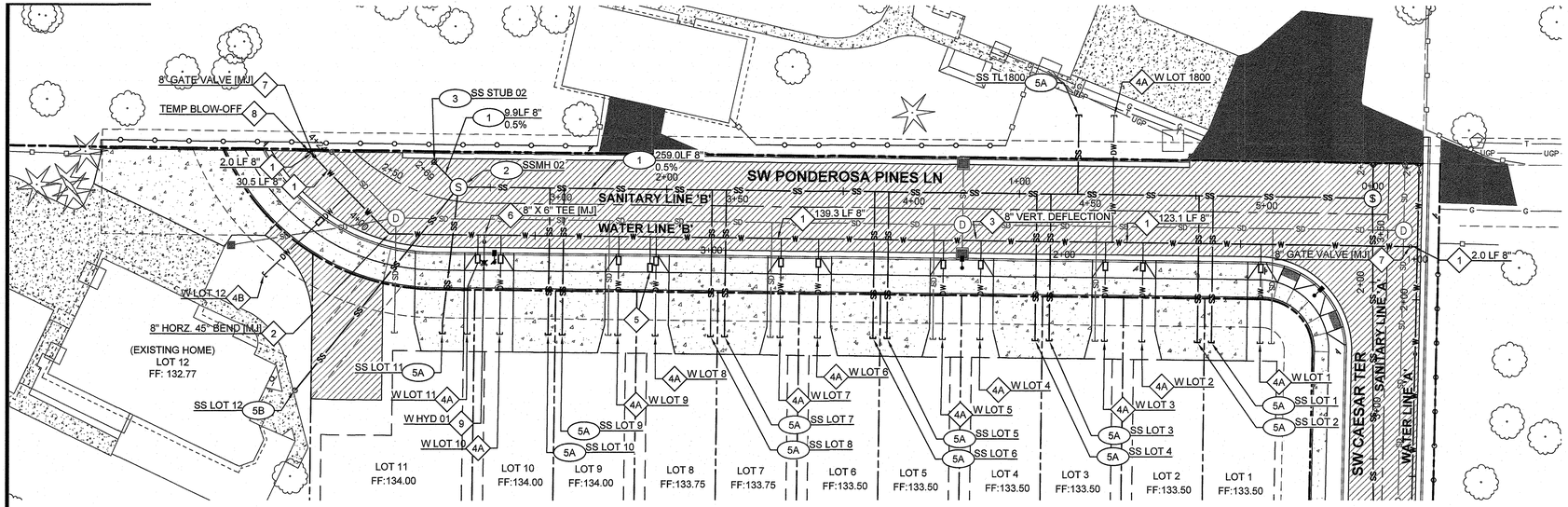
PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C311

SCALE: 1" = 20'
0 20 40 FT

Know what's below. Call before you dig.

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-STREET&STORM P&P-CAESAR.DWG



SW PONDEROSA PINES LANE PLAN

SANITARY LATERAL TABLE

NAME	SIZE	LENGTH	SLOPE	INVERT AT MAIN	INVERT AT END	DEPTH AT END	STATION
SS LOT 1	4"	41.5 LF	2.0%	125.41	126.24	7.2 FT	STA: 0+45.0, SANITARY LINE 'B'
SS LOT 2	4"	41.5 LF	2.0%	125.43	126.26	7.2 FT	STA: 0+49.0, SANITARY LINE 'B'
SS LOT 3	4"	41.5 LF	2.0%	125.64	126.47	6.9 FT	STA: 0+91.0, SANITARY LINE 'B'
SS LOT 4	4"	41.5 LF	2.0%	125.66	126.49	6.9 FT	STA: 0+95.0, SANITARY LINE 'B'
SS LOT 5	4"	41.5 LF	2.0%	125.87	126.70	6.6 FT	STA: 1+37.0, SANITARY LINE 'B'
SS LOT 6	4"	41.5 LF	2.0%	125.89	126.72	6.6 FT	STA: 1+41.0, SANITARY LINE 'B'
SS LOT 7	4"	41.5 LF	2.0%	126.10	126.93	6.7 FT	STA: 1+83.0, SANITARY LINE 'B'

SANITARY LATERAL TABLE

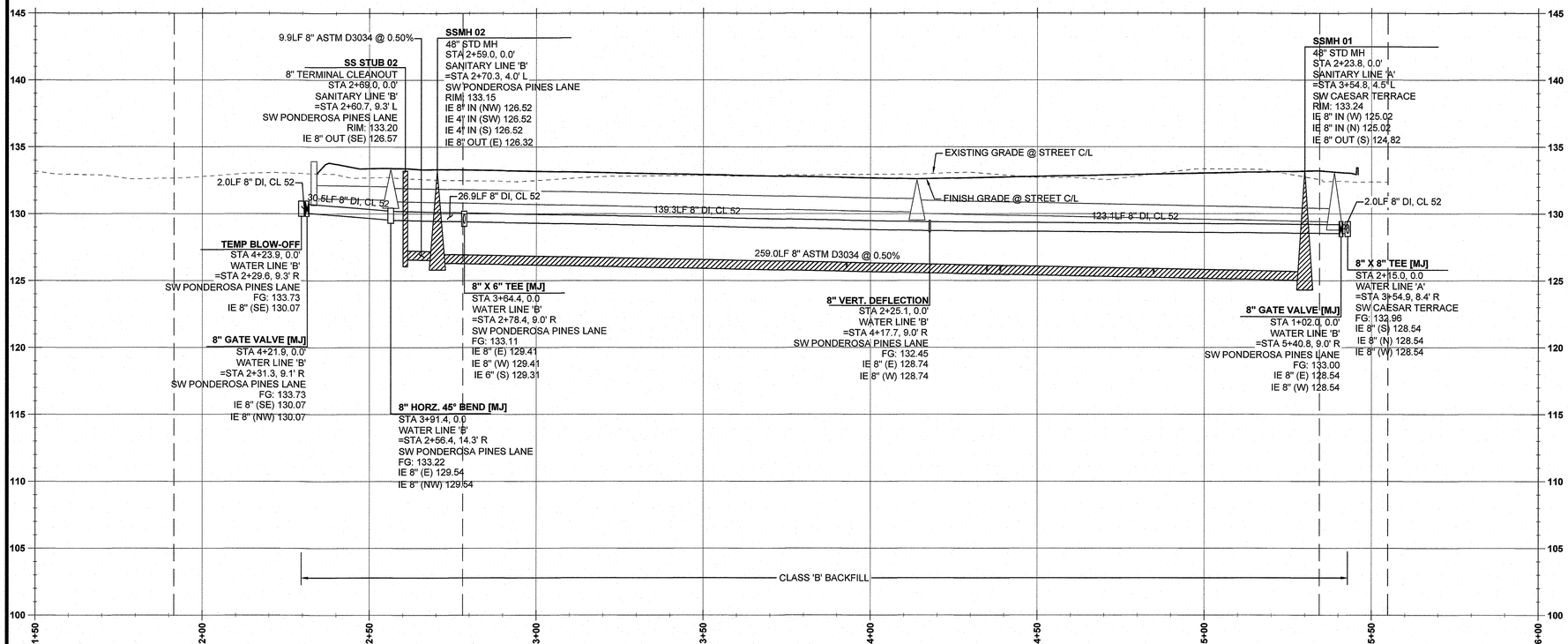
NAME	SIZE	LENGTH	SLOPE	INVERT AT MAIN	INVERT AT END	DEPTH AT END	STATION
SS LOT 8	4"	41.5 LF	2.0%	126.12	126.95	6.6 FT	STA: 1+87.0, SANITARY LINE 'B'
SS LOT 9	4"	41.5 LF	2.0%	126.33	127.16	6.7 FT	STA: 2+29.0, SANITARY LINE 'B'
SS LOT 10	4"	41.5 LF	2.0%	126.35	127.18	6.7 FT	STA: 2+33.0, SANITARY LINE 'B'
SS LOT 11	4"	41.7 LF	2.0%	126.52	127.35	6.5 FT	STA: 2+59.0, SANITARY LINE 'B'
SS LOT 12	4"	73.9 LF	2.0%	126.52	128.00	4.4 FT	STA: 2+59.0, SANITARY LINE 'B'
SS TL1800	4"	22.4 LF	2.0%	125.60	126.05	7.2 FT	STA: 0+83.4, SANITARY LINE 'B'

WATER SYSTEM KEY NOTES

1. INSTALL DUCTILE IRON, CL 52 WATER MAIN, AT SIZE, LENGTH, AND LOCATION SHOWN. PIPE TO BE FULLY RESTRAINED. TRENCH TO BE CLASS B GRANULAR BACKFILL (SEE CITY OF TIGARD DWG. NO. 180 ON SHEET C951). SEE PROFILE FOR ELEVATION DATA.
2. INSTALL DUCTILE IRON, CL52 BEND PER LOCATION, ANGLE, SIZE AND JOINT TYPE SHOWN. SEE PROFILE FOR ELEVATION DATA. JOINTS SHALL BE FULLY RESTRAINED.
3. VERTICALLY DEFLECT PIPE AT LOCATION SHOWN. MAXIMUM DEFLECTIONS TO BE 80% OF THE MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION. SEE PROFILE FOR ELEVATION DATA.
4A. INSTALL TYPE K SOFT COPPER TUBING WATER SERVICE AND METER BOX AT SIZE, ELEVATIONS, AND LOCATION SHOWN IN WATER SERVICE TABLE. CONTACT CITY OF TIGARD WATER DEPARTMENT TO COORDINATE CITY INSTALLATION OF SERVICE METER. SEE CITY OF TIGARD DWG. NO. 520 ON SHEET C951.
4B. INSTALL TYPE K SOFT COPPER TUBING WATER SERVICE AND METER BOX SET IN CONCRETE AT SIZE, ELEVATIONS, AND LOCATION SHOWN IN WATER SERVICE TABLE. CONTACT CITY OF TIGARD WATER DEPARTMENT TO COORDINATE CITY INSTALLATION OF SERVICE METER. SEE CITY OF TIGARD DWG. NO. 520 ON SHEET C951. SEE NOTE 2 OF CITY OF TIGARD DWG. NO. 520 ON SHEET C951 FOR METER BOX SET IN CONCRETE.
5. INSTALL 1" TYPE K SOFT COPPER TUBING IRRIGATION LINE AND METER BOX AT LOCATION SHOWN. CONTACT CITY OF TIGARD WATER DEPARTMENT TO COORDINATE CITY INSTALLATION OF 5/8" IRRIGATION METER WITH IRRIGATION DOUBLE CHECK. SEE CITY OF TIGARD DWG. NO. 531 ON SHEET C951.
6. INSTALL DUCTILE IRON, CL52 TEE PER SIZE, LOCATION, AND JOINT TYPE SHOWN. JOINTS SHALL BE FULLY RETRAINED. SEE PROFILE FOR ELEVATION DATA.
7. INSTALL RESILIENT WEDGE GATE VALVE PER LOCATION, SIZE, AND JOINT TYPE SHOWN. JOINTS SHALL BE FULLY RETRAINED. SEE PROFILE FOR ELEVATION DATA. SEE CITY OF TIGARD DWG. NO. 503 ON SHEET C951.
8. INSTALL 2" TEMPORARY BLOW-OFF AT LOCATION SHOWN. SEE CITY OF TIGARD DWG. NO. 570 ON SHEET C951.
9. INSTALL FIRE HYDRANT ASSEMBLY AT LOCATION SHOWN. SEE CITY OF TIGARD DWG. NO. 542 ON SHEET C951.

SANITARY SEWER KEY NOTES

1. INSTALL PUBLIC SANITARY SEWER MAIN (ASTM D3034, SDR 35) AT SIZE AND LOCATION SHOWN. SEE CWS DWG. NO. 590 ON SHET C942 FOR TRENCH BACKFILL DETAIL. SEE ELEVATION DATA IN PROFILE.
2. INSTALL PUBLIC 48" STANDARD MANHOLE AT LOCATION SHOWN PER CWS DWG. NO. 010 ON SHEET C941. SEE ELEVATION DATA IN PROFILE.
3. INSTALL 8" PUBLIC TERMINAL CLEAN AT LOCATION SHOWN PER CWS DWG. NO. 500 ON SHEET C942. SEE ELEVATION DATA IN PROFILE.
5A. INSTALL PRIVATE SANITARY SEWER LATERAL (ASTM D3034, SDR 35) AT SIZE, SLOPE, ELEVATIONS, AND LOCATION SHOWN IN SANITARY LATERAL TABLE. NEW SEWER IS TO BE TESTED AND ACCEPTED AS COMPLETE AND READY FOR SERVICE BY CWS PRIOR TO CONNECTION. SEE CWS DWG. NO. 590 ON SHEET C942 FOR TRENCH BACKFILL DETAIL. SEWER LATERAL CONNECTION PER CWS DWG. NO. 520 ON SHEET C942.
5B. INSTALL PRIVATE SANITARY SEWER LATERAL (DUCTILE IRON, CL 50) AT SIZE, SLOPE, ELEVATIONS, AND LOCATION SHOWN IN SANITARY LATERAL TABLE. CONNECT TO EXISTING LOT 12 SANITARY SEWER. NEW SEWER IS TO BE TESTED AND ACCEPTED AS COMPLETE AND READY FOR SERVICE BY CWS PRIOR TO CONNECTION. SEE CWS DWG. NO. 590 ON SHEET C942 FOR TRENCH BACKFILL DETAIL. SEWER LATERAL CONNECTION PER CWS DWG. NO. 520 ON SHEET C942.



SW PONDEROSA PINES LANE PROFILE
(STA: 1+50 - STA: 6+00)
SCALE: 1" = 20' H; 1" = 5' V

WATER SERVICE TABLE

NAME	SIZE	LENGTH	℄ AT MAIN	℄ AT END	STATION
W LOT 1	1"	28.0 LF	128.94	128.94	STA: 1+44.2, WATER LINE 'B'
W LOT 2	1"	28.0 LF	128.99	128.99	STA: 1+77.6, WATER LINE 'B'
W LOT 3	1"	28.0 LF	129.01	129.01	STA: 1+88.2, WATER LINE 'B'
W LOT 4	1"	28.0 LF	129.07	129.07	STA: 2+23.6, WATER LINE 'B'
W LOT 5	1"	28.0 LF	129.11	129.11	STA: 2+34.2, WATER LINE 'B'
W LOT 6	1"	28.0 LF	129.29	129.29	STA: 2+69.6, WATER LINE 'B'
W LOT 7	1"	28.0 LF	129.34	129.34	STA: 2+80.2, WATER LINE 'B'
W LOT 8	1"	28.0 LF	129.51	129.51	STA: 3+15.6, WATER LINE 'B'
W LOT 9	1"	28.0 LF	129.56	129.56	STA: 3+26.2, WATER LINE 'B'
W LOT 10	1"	28.0 LF	129.72	129.72	STA: 3+59.6, WATER LINE 'B'
W LOT 11	1"	28.1 LF	129.75	129.75	STA: 3+68.9, WATER LINE 'B'
W LOT 12	1"	33.6 LF	130.16	130.16	STA: 4+07.6, WATER LINE 'B'
W TL 1800	1"	35.9 LF	129.01	129.02	STA: 1+86.3, WATER LINE 'B'

N W E S

SCALE: 1" = 20'
0 20 40 FT

811 Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 3:24 PM

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

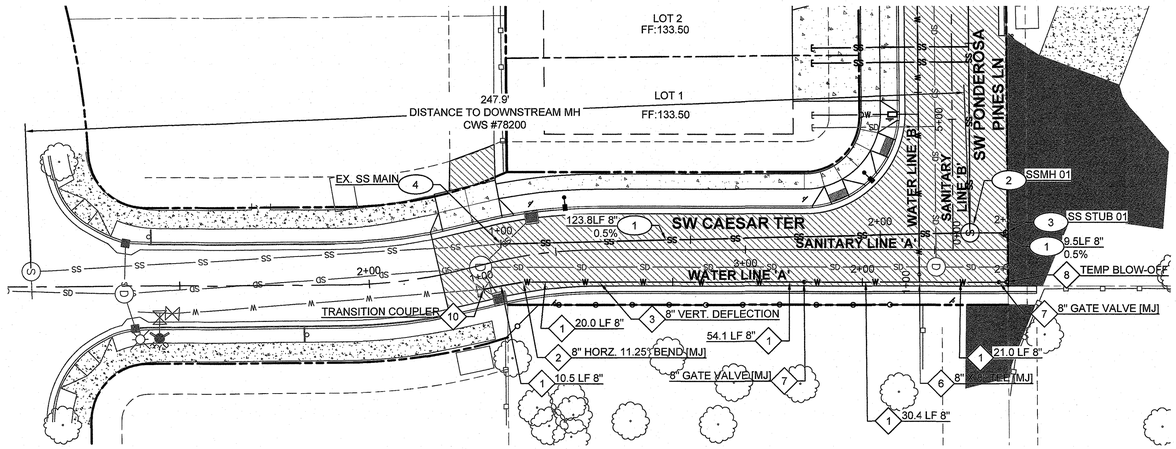
SW PONDEROSA PINES LN - SANITARY AND WATER PLAN & PROFILE
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

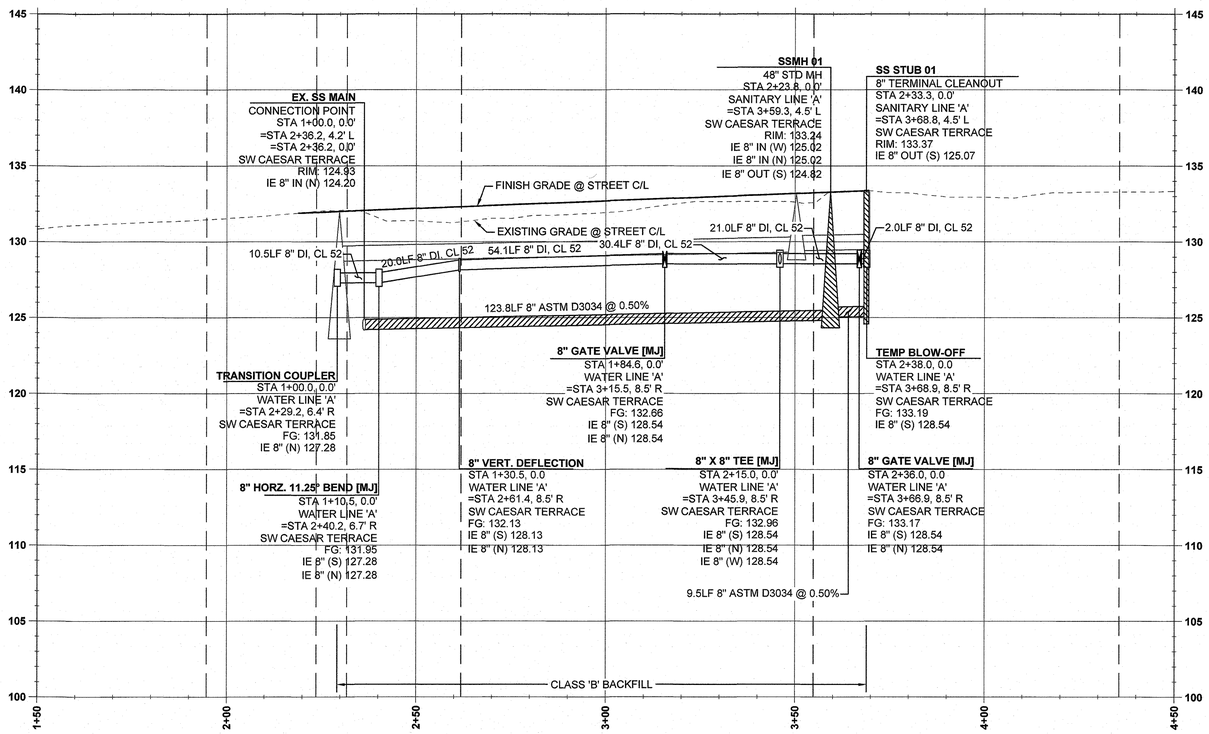
PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C410

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-SEWER&WATER P&P-UNNAMED ROAD.DWG



SW CAESAR TERRACE PLAN



SW CAESAR TERRACE PROFILE
(STA: 1+50 - STA: 4+50)
SCALE: 1" = 20' H; 1" = 5' V

WATER SYSTEM KEY NOTES

1. INSTALL DUCTILE IRON, CL 52 WATER MAIN, AT SIZE, LENGTH, AND LOCATION SHOWN. PIPE TO BE FULLY RESTRAINED. TRENCH TO BE CLASS B GRANULAR BACKFILL (SEE CITY OF TIGARD DWG. NO. 180 ON SHEET C951). SEE PROFILE FOR ELEVATION DATA.
2. INSTALL DUCTILE IRON, CL52 BEND PER LOCATION, ANGLE, SIZE AND JOINT TYPE SHOWN. SEE PROFILE FOR ELEVATION DATA. JOINTS SHALL BE FULLY RESTRAINED.
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6. INSTALL DUCTILE IRON, CL52 TEE PER SIZE, LOCATION, AND JOINT TYPE SHOWN. JOINTS SHALL BE FULLY RETRAINED. SEE PROFILE FOR ELEVATION DATA.
7. INSTALL RESILIENT WEDGE GATE VALVE PER LOCATION, SIZE, AND JOINT TYPE SHOWN. JOINTS SHALL BE FULLY RETRAINED. SEE PROFILE FOR ELEVATION DATA. SEE CITY OF TIGARD DWG. NO. 503 ON SHEET C951.
8. INSTALL 2" TEMPORARY BLOW-OFF AT LOCATION SHOWN. SEE CITY OF TIGARD DWG. NO. 570 ON SHEET C951.
10. CONNECT TO EXISTING WATER LINE WITH CITY OF TIGARD APPROVED RESTRAINED COUPLING. PRIOR TO CONNECTION, THE NEW PIPELINE SHALL BE FLUSHED, PRESSURE TESTED, AND DISINFECTED. CONTACT CITY OF TIGARD WATER DEPARTMENT PRIOR MAKING CONNECTION TO EXISTING MAIN.

SANITARY SEWER KEY NOTES

1. INSTALL PUBLIC SANITARY SEWER MAIN (ASTM D3034, SDR 35) AT SIZE AND LOCATION SHOWN. SEE CWS DWG. NO. 590 ON SHET C942 FOR TRENCH BACKFILL DETAIL. SEE ELEVATION DATA IN PROFILE.
2. INSTALL PUBLIC 48" STANDARD MANHOLE AT LOCATION SHOWN PER CWS DWG. NO. 010 ON SHEET C941. SEE ELEVATION DATA IN PROFILE.
3. INSTALL PUBLIC TERMINAL CLEAN AT LOCATION SHOWN PER CWS DWG. NO. 500 ON SHEET C942. SEE ELEVATION DATA IN PROFILE.
4. CONNECT TO EXISTING SANITARY SEWER MAIN AT LOCATION SHOWN. CONTRACTOR TO FIELD VERIFY EXISTING PIPE INVERT AT POINT OF CONNECTION PRIOR TO ORDERING CONSTRUCTION MATERIALS.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 12:31:00 PM

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

SW CAESAR TERRACE - SANITARY AND WATER PLAN & PROFILE
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

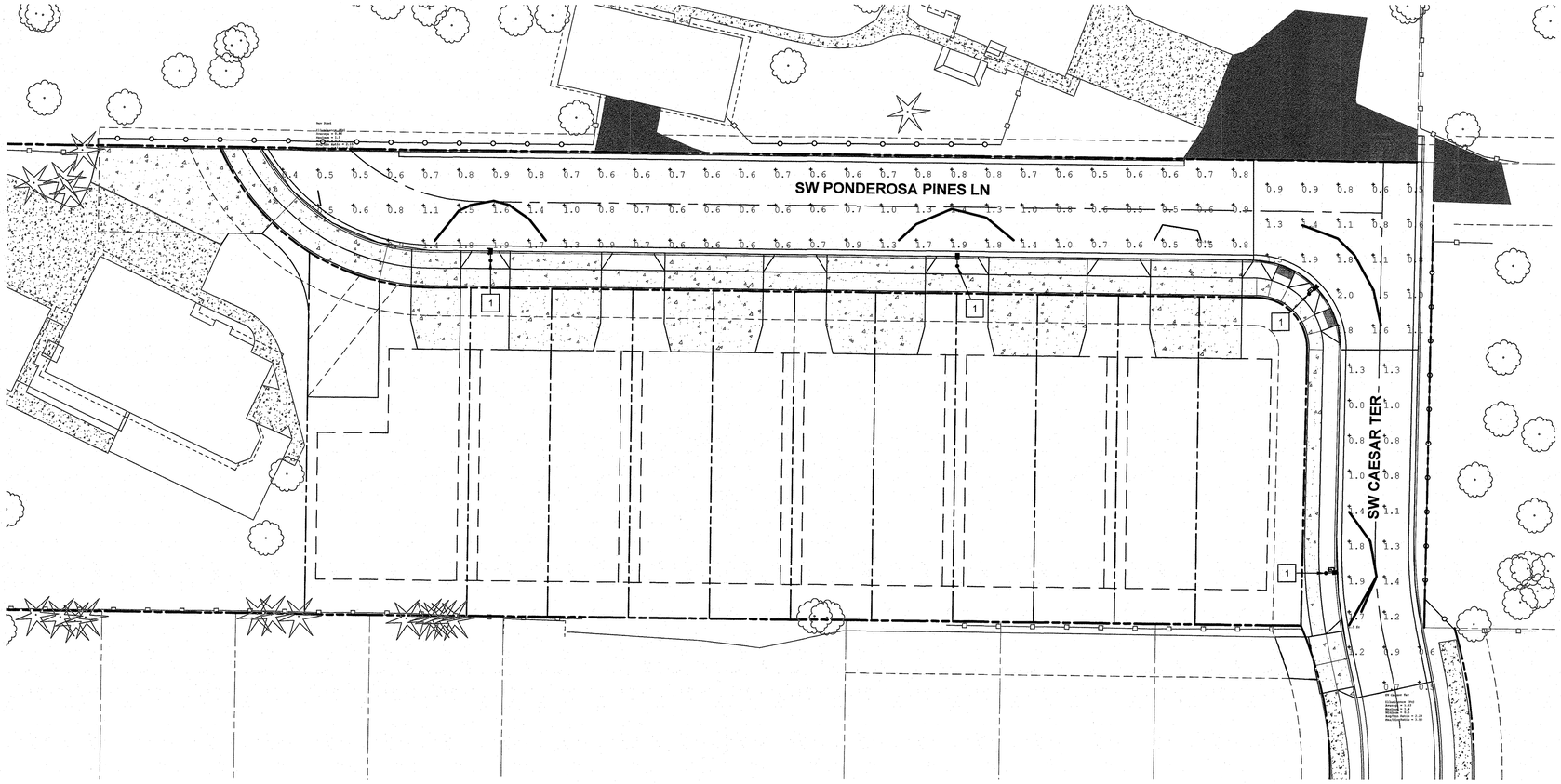
PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C411

SCALE: 1" = 20'
0 20 40 FT

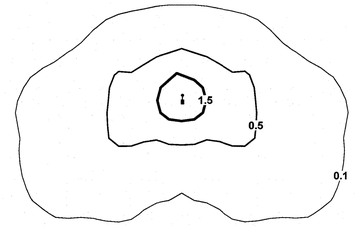
811 Know what's below. Call before you dig.

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-SEWER&WATER P&P-CAESAR.DWG



LEGEND

☼	EXISTING STREET LIGHT
!	PROPOSED STREET LIGHT
0.7	ILLUMINATION ANALYSIS POINT (Fc)
Fc	FOOT CANDLE UNIT



CONSTRUCTION KEY NOTES

1 INSTALL NEW FIBERGLASS POLE AND LED LUMINAIRE AT LOCATION SHOWN.

GENERAL NOTES:
1. STREET LIGHTING TO BE SCHEDULE 95, OPTION A.

LIGHTING ANALYSIS NOTES

1. AGI32 (BY LIGHTING ANALYSTS INC.) WAS USED TO GENERATE PHOTOMETRIC DATA.
2. SEE THIS SHEET FOR FIXTURE AND POLE DATA.
3. CALCULATIONS ARE FOR CURB TO CURB ROADWAY AREA ONLY.

SW CAESAR TERRACE (LOCAL)		
LOW PEDESTRIAN CONFLICT AREA	TARGET	CALCULATED
AVERAGE ILLUMINANCE (Fc)	MINIMUM = 0.4	1.12
AVERAGE / MINIMUM UNIFORMITY	MAXIMUM = 6.0	2.24
SW CAESAR TERRACE / SW PONDEROSA PINES LN (LOCAL/LOCAL)		
LOW PEDESTRIAN CONFLICT AREA	TARGET	CALCULATED
AVERAGE ILLUMINANCE (Fc)	MINIMUM = 0.8	1.19
AVERAGE / MINIMUM UNIFORMITY	MAXIMUM = 4.0	2.38
SW PONDEROSA PINES LN (LOCAL)		
LOW PEDESTRIAN CONFLICT AREA	TARGET	CALCULATED
AVERAGE ILLUMINANCE (Fc)	MINIMUM = 0.4	0.86
AVERAGE / MINIMUM UNIFORMITY	MAXIMUM = 6.0	2.15

KING CITY STREET LIGHTING NOTES

1. LIGHT POLES SHALL BE 30-FOOT DIRECT BURIED, 25-FOOT MOUNTING HEIGHT, TWO-PIECE BRONZE, FIBERGLASS LIGHT POLE.

   PGE APPROVED LIGHT POLES ARE:
   SHAKESPEARE BHT3099S5BL9901
   CMT MDS30-F-100-S2-HS-PC-NP-1B-22

   PGE APPROVED STUBS ARE:
   SHAKESPEARE BHS3099N3BL9901
   CMT 25-STUB-UP

2. JUNCTION BOXES SHALL BE PGE APPROVED SPLICE BOXES.

   PGE APPROVED JUNCTION BOXES ARE:
   NEWBASIS FCA132418T-00043
   QUAZITE A4213418A017
   ARMORCAST A6001946TAX18-PGE
   HIGHLINE CHA132418HE1

   "ELECTRIC" OR "POWER" SHALL BE IN THE LID MARKING AREA.

3. LUMINAIRES SHALL BE PGE APPROVED 45 WATT LED, 240V, MAST-ARM MOUNTED, BRONZE SHOEBOX FLAT LENS FIXTURE WITH A NORMAL POWER FACTOR REACTOR BALLAST, WITH TWISTLOCK P.E. RECEPTACLE.

   PGE APPROVED SHOEBOX LUMINAIRES ARE:
   LEOTEK BRONZE 45W 5020
   GCJ2-20H-MV-WW-2R-DB-700-PCR7-RWG-WL-FDC-PGE

4. THE PHOTOELECTRIC CONTROL SHALL BE PGE APPROVED EXTENDED LIFE TWISTLOCK, FAIL-ON, ELECTRONIC, 105-300 VAC, 60 HZ, PER ANSI 136.10, BRONZE HOUSING, 1.5 LUMEN TURN-ON, RATED 1000W TUNGSTEN (1800 VA BALLAST) 1.5:1 TURN-OFF/TURN-ON RATIO, SOLID BRASS PLUG BLADES, CONFORMALLY COATED CDS CELL, 160 JOULE MOV, 2-4 SEC. TURN-OFF DELAY.

   PGE APPROVED PHOTOELECTRIC CONTROLS ARE:
   SELC 8483

5. THE WIRING FROM THE SPLICE BOX TO THE LUMINAIRE SHALL BE PGE APPROVED #10AWG, 600-VOLT, 3-CONDUCTOR, CLASS B STANDING TYPE TC WITH 45-MIL SUNLIGHT RESISTANT PVC JACKET, SUITABLE FOR DIRECT BURIED APPLICATIONS. RATED 90°C DRY AND 75°C WET.

   FOR 240-VOLT APPLICATIONS, THE PGE WIRING CONFIGURATION IS:
   BLACK AND RED (HOT)
   GREEN (GROUND)

6. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO P.G.E. SCHEDULE "95" OPTION "A" SPECIFICATIONS. ALL MATERIALS AND INSTALLATION SHALL BE APPROVED BY PGE. LIGHT POLES AND STREET LIGHTS TO BE INSTALLED BY PGE.

7. LIGHTING CONTRACTOR/INSTALLER IS SOLELY RESPONSIBLE FOR INSTALLATION OF CORRECT MATERIAL BASED ON CURRENT PGE APPROVED MATERIAL AND JURISDICTION SPECIFICATIONS AND STANDARDS. LIGHT POLE AND FIXTURE SUBMITTAL TO PROPER JURISDICTION RECOMMENDED.

N
W E
S

SCALE: 1" = 20'
0 20 40 FT

Know what's below. Call before you dig.

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, 2020 12:31:00

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

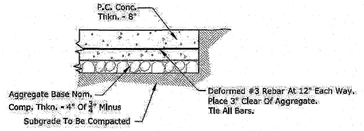
PHOTOMETRICS PLAN
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C600

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-PHOTOMETRICS.DWG

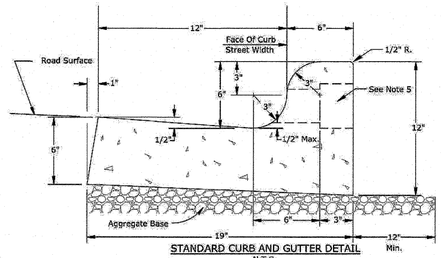


DRIVEWAY AND DRIVEWAY APPROACH PAVEMENT SECTION

Not to Scale

NOTES:
1) Use Oregon Commercial Grade Concrete Per Section 00440 For Driveways And Approaches.
2) Sterilize Subgrade.
3) Compact Aggregate Base To 100% Density Of AASHTO T-99.
4) Compact Subgrade To 95% Density Of AASHTO T-99.

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	DRIVEWAY AND DRIVEWAY APPROACH PAVEMENT SECTION		
PLOT STAMP: 07/23/18 3:37P ANTHONYD CAD: 1010.DWG	EFFECTIVE DATE: 8/01/2018	WASH. CO. #	1010

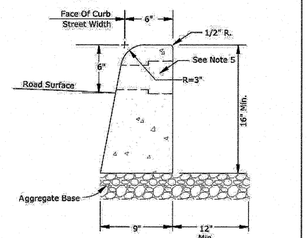


STANDARD CURB AND GUTTER DETAIL

N.T.S.

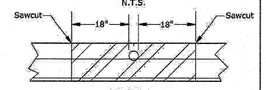
Notes:

1. Use Oregon Commercial Grade Concrete Per Section 00440.
   A. Broom Finish
2. Expansion Joints
   A. Place 1/2" Pre-Molded, Asphalt Impregnated, Non-Extruding Material At:
      1) Cold Joints.
      2) Each End Of Driveways.
      3) Each Side Of Inlet Structures.
      4) Each Point Of Tangency Of The Curb.
      5) Locations Necessary To Limit Spacing To 200 Feet.
3. Contraction Joints
   A. Space Not More Than 10 Feet.
   B. The Depth Of The Joint Shall Be At Least 1/3 Depth Of Concrete.
   C. Center Weepholes With Contraction Joints.
   D. Locate Weepholes As Close As Possible To Property Lines.
4. Use 1" - 0" Or 3/4" - 0" Aggregate Base Compacted To 100% Of AASHTO T-99, Method D. Place To Subgrade, Street Structure, Or 4" In Depth, Whichever Is Greater. Extend At Least 12" Behind The Curb.
5. Drainage Blockout
   A. 3" Dia. Plastic Pipe With Coupling.
   B. Core Drill Drainage Access Thru Existing Curb Or Vertically Sawcut Curb And Gutter 18" Each Side Of Drain And Repour To Full Depth Of Curb (See Detail A).
6. Standard Curb Detail Shall Only Be Used For Interim Conditions Or When Approved By The County Engineer.



STANDARD CURB DETAIL

N.T.S.



DETAIL A

N.T.S.

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	STANDARD CURB AND GUTTER		
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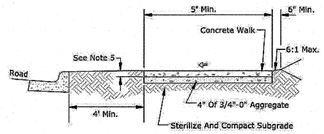
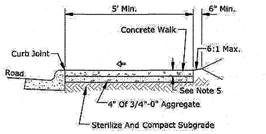


SIDEWALK AWAY FROM CURB



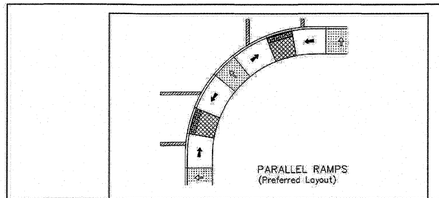
SIDEWALK ADJACENT TO CURB

LEGEND:
Slope 1.5% Max Design
Slope 2% Max Finish Grade

Notes:

1. Use Oregon Commercial Grade Concrete Per Section 00440.
2. Panel Dimensions To Be Nominal 5 Feet Or As Directed By Engineer. Trowel Finish (shined) Perimeters Of Each Panel. Broom Finish All Panels.
3. Place Expansion Joints Adjacent To Driveway Approaches, Utility Vaults, Drainage Inlets, Sidewalk Ramps, Curb Joints And At Spacing Not To Exceed 100 Feet.
4. Trowel Surfaces At Curb Joints With A Minimum 1/2" Radius.
5. Place 4" Thick Sidewalk Unless Noted Otherwise. Place 6" Thick Sidewalk At Driveways, Bus Stops, Emergency Accesses, And Other Locations Directed By The Engineer.
6. Extend Drain Blockouts In Curbs To Back Of Sidewalk With 3" Dia. Plastic Pipe At 2% Max. Slope. Install Construction Joint Over Pipe.
7. At Each CG-30 And CG-48 Inlet Location, Place A 10 Ft. Long #4 Bar Centered Between Back Of The Inlet Structure And Back Of Walk. Install Joints And Rebar At Direction Of Engineer.
8. Design Slopes May Be Exceeded To Fit Existing Conditions, Not To Exceed Finish Grade Slope.

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	P.C. CONCRETE SIDEWALK DETAIL		
PLOT STAMP: 08/02/19 2:01P MACHENNAB CAD: 2110-2(2).DWG	EFFECTIVE DATE: 9/01/2019	WASH. CO. #	2110



NOTES:

1. Sidewalk Ramps Shall Meet Access Board Direction Published as ADA Accessibility Guidelines (ADAAG). See WWW.Access-board.Gov For Additional Information.
2. For Truncated Domes and Ramp Details, See Oregon Standard Drawings RD710, RD755, RD756, RD757, RD759. Use Current Year And Month Details Corresponding To Project Construction Date.
3. Furnish "Safety Yellow" Colored Cast-In-Place Truncated Dome Detectable Warning Surfaces For Sidewalk Ramps And Accessible Route Islands. Use Any Product Listed On The ODOT QPL.

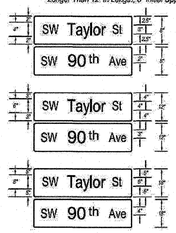
   A Minimum Of 30 Days Prior To Expected Use, Submit Samples Of Alternate Material And The Locations Where They Have Been Used For Review And Approval. Only Use Adhesives Recommended Or Supplied By The Manufacturer.
4. Site Conditions Normally Require A Project Specific Design. See Project Plans For Details Not Shown.

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	SIDEWALK RAMP DETAIL		
PLOT STAMP: 07/24/18 8:44A ANTHONYD CAD: 2130.DWG	EFFECTIVE DATE: 8/01/2018	WASH. CO. #	2130

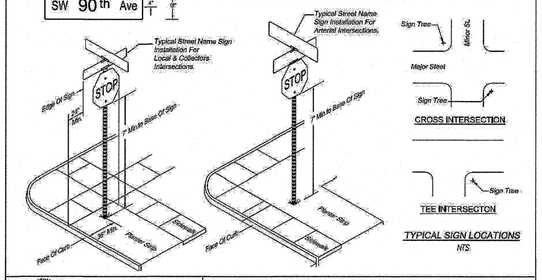
MUTCD TABLE 2D-2: RECOMMENDED MINIMUM LETTER HEIGHTS ON STREET NAME SIGNS

Type Of Mounting	Type Of Street Or Highway	Speed Limit	Blank Height	Recommended Minimum Letter Height		
				Initial Upper Case	Lower Case	Prefix/Suffix
Overhead	All Types	All Speed Limits	24 Inches	12 Inches*'	9 Inches*'	6 Inches
Post Mounted	Multi - Lane	More Than 40 MPH	18 Inches	8 Inches	6 Inches	4 Inches
Post Mounted	Multi - Lane	Less Than 40 MPH	12 Inches	6 Inches	4.5 Inches	3 Inches
Post Mounted	2 - Lane	All Speed Limits	12 Inches*	6 Inches*	4.5 Inches*	3 Inches

*On local 2-Lane Streets With Speed Limits of 25 MPH or Less, 8" Blank With 4" Initial Upper-Case Letters And 3" Lower-Case Letters May Be Used.
**For Dual Stacked Overhead Signs Or Overhead Signs Where Standard Letter Heights Yield Sign Sizes Longer Than 12' In Length, 8" Initial Upper-Case with 6" Lower-Case Letters May Be Used.

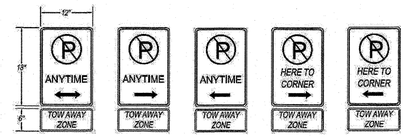


1) Street Name Signs:
A) It is the contractors responsibility to verify the final street names with the County Survey Office at (503) 846-8723 before ordering and installing street name signs.
B) Street name signs for cross streets shall be designed to the standard for the road approaching the cross street.
C) Use flat blade aluminum blanks.
D) Post mounted street name signs shall be two (2) sided, without borders and be installed on top of post with special brackets, unless they meet the following conditions:
Any street name sign 48" or greater in length or 12" or greater in height will need to be single-sided and riveted to the post. Double-sided signs with brackets are not allowed for larger sign sizes.
E) Overhead street name signs shall be one (1) sided, without borders and be installed with Pelco brackets or equivalent banding type adjustable brackets.
F) Prefixes shall be used for all street name signs.
Prefixes: all upper case letters
Suffixes: upper and lower case letters
Superscript for numerical street names: all lower case letters
G) All street name sign text, excluding superscript, shall be center justified type C font.
H) Common abbreviations : use MUTCD table 1A-1, with these exceptions:
Ave=Avenue; Lp=Loop; Ln=Lane; Wy=Way.



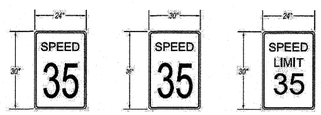
TYPICAL SIGN LOCATIONS
NTS

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	STREET NAME SIGNS		
PLOT STAMP: 07/05/17 12:09P KELLYE CAD: 6511.DWG	EFFECTIVE DATE: 7/01/17	WASH. CO. #	6511



No Parking Signs: use County standard 12" x 18" with 12" x 6" TOW AWAY ZONE rider. 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. 45° brackets are acceptable when mounted below another sign.



Speed Signs: 24" x 30" on local streets and neighborhood routes 30" x 36" on collector and arterial roads

The word "LIMIT" shall only be used on speed signs within city limits and for all school speed zones.

See MUTCD R2-1 and OR2-1 for sign details.

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	NO PARKING AND SPEED SIGNS		
PLOT STAMP: 03/13/14 6:01P KELLYE CAD: 6512.DWG	EFFECTIVE DATE: 3/13/14	WASH. CO. #	6512

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

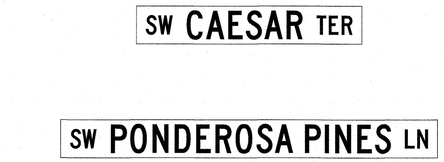
SITE CONSTRUCTION DETAILS I
PONDEROSA PINES
SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100, BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C901

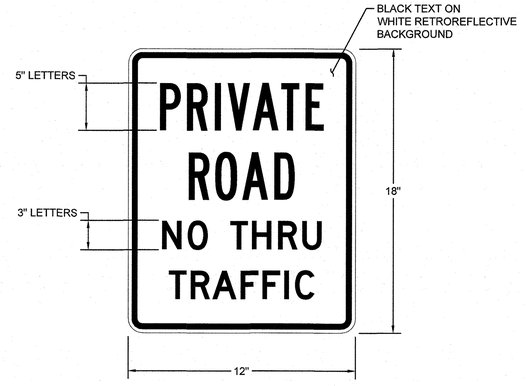
P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-SITE.DWG



NOTES:

1. STREET NAME SIGNS PER WASHINGTON COUNTY DWG. NO. 6511 FOR LOCAL 2-LANE STREET.

NOT TO SCALE	STREET NAME SIGNS	3J CONSULTING
DETAIL NUMBER 1		CIVIL ENGINEERING . WATER RESOURCES . COMMUNITY PLANNING



NOT TO SCALE	PRIVATE ROAD SIGN	3J CONSULTING
DETAIL NUMBER 2		CIVIL ENGINEERING . WATER RESOURCES . COMMUNITY PLANNING

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
EXPIRES: 12/31/20

Jun 2[illegible] 2020 4:36 PM

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

SITE CONSTRUCTION DETAILS II

PONDEROSA PINES SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

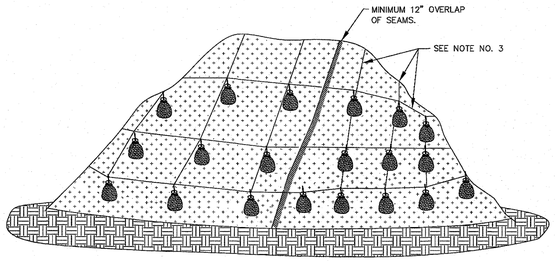
PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C902

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-SITE-PRIVATE.DWG

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:

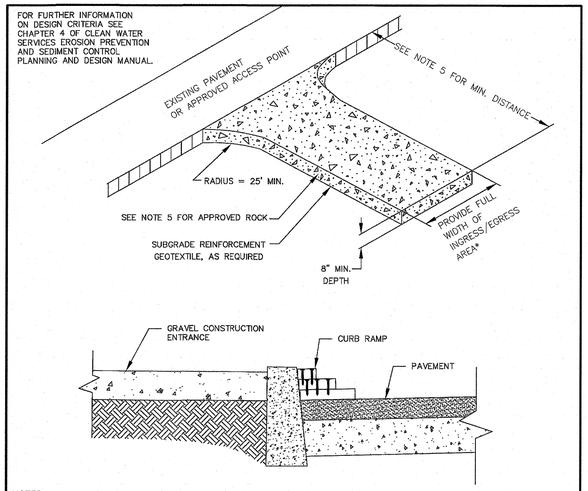
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. PERIMETER SEDIMENT CONTROL BMP TO BE INSTALLED A MINIMUM OF 3' FROM TOE OF STOCKPILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR APPROVED EQUAL ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
4. PLASTIC TO EXTEND MINIMUM 1' BEYOND TOE OF SLOPE.
5. AS APPROPRIATE, BMP'S SHALL BE INSTALLED TO CONVEY WATER DISCHARGE FROM STOCKPILE AREAS.

PLASTIC SHEETING

DRAWING NO. 810 REVISED 10-31-19

CleanWater Services

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



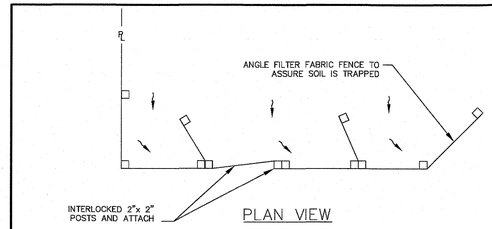
NOTES:

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/SITE DEVELOPMENT
   50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

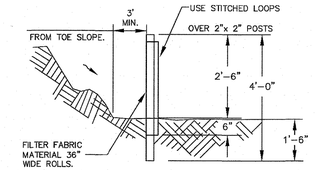
CONSTRUCTION ENTRANCE

DRAWING NO. 855 REVISED 10-31-19

CleanWater Services



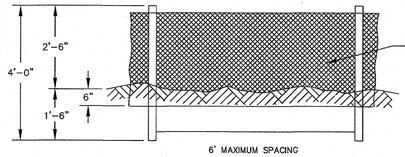
PLAN VIEW



PROFILE

NOTES:

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



FRONT VIEW

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

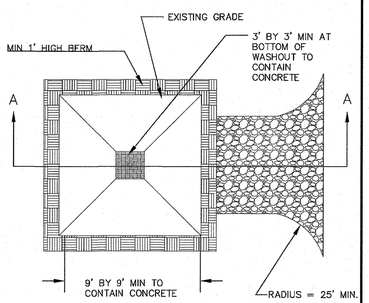
SEDIMENT FENCE

DRAWING NO. 875 REVISED 10-31-19

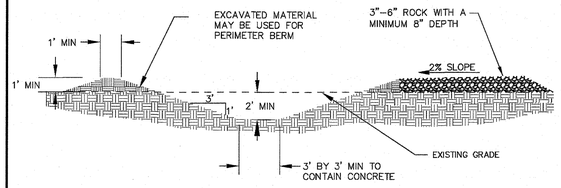
CleanWater Services

NOTES:

1. WASHOUT FACILITIES SHALL BE MAINTAINED TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM FREEBOARD OF 12 INCHES.
2. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL.
3. IF THE WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE LOCATED A MINIMUM OF 50 FT FROM SENSITIVE AREAS INCLUDING OPEN DRAINAGE FACILITIES AND WATER SOURSES.
5. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
6. INSTALL CONCRETE WASHOUT SIGN WITHIN 30 FEET OF TEMPORARY CONCRETE WASHOUT FACILITY.
7. TEMPORARY CONCRETE WASHOUTS MAY BE A PREFABRICATED CONTAINER THAT IS PORTABLE AND REUSABLE.



PLAN

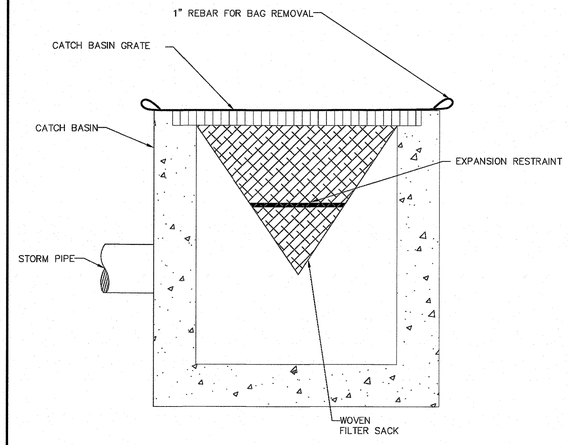


SECTION A-A

CONCRETE WASHOUT

DRAWING NO. 900 REVISED 10-31-19

CleanWater Services



CATCH BASIN INSERT

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 10-31-19

CleanWater Services

NOTES:

1. WHEN RAINFALL AND RUNOFF OCCURS, A KNOWLEDGEABLE AND EXPERIENCED PERSON IN THE PRINCIPLES, PRACTICES, INSTALLATION, AND MAINTENANCE OF EROSION AND SEDIMENT CONTROLS WHO WORKS FOR THE PERMITTEE MUST PROVIDE DAILY INSPECTIONS OF THE EROSION AND SEDIMENT CONTROLS AND DISCHARGE OUTFALLS.
2. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND FROM OCTOBER 1 THROUGH MAY 31ST EACH YEAR.
3. DURING WET WEATHER PERIOD, TEMPORARY STABILIZATION OF THE SITE MUST OCCUR AT THE END OF EACH WORK DAY.
4. SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ON ALL DOWN GRADIENT SIDES OF THE CONSTRUCTION SITE AT ALL TIMES DURING CONSTRUCTION. THEY MUST REMAIN IN PLACE UNTIL PERMANENT VEGETATION OR OTHER PERMANENT COVERING OF EXPOSED SOIL IS ESTABLISHED.
5. ALL ACTIVE INLETS MUST HAVE SEDIMENT CONTROLS INSTALLED AND MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
6. SIGNIFICANT AMOUNTS OF SEDIMENT THAT LEAVES THE SITE MUST BE CLEANED UP WITHIN 24 HOURS AND PLACED BACK ON THE SITE AND STABILIZED OR PROPERLY DISPOSED. THE CAUSE OF THE SEDIMENT RELEASE MUST BE FOUND AND PREVENTED FROM CAUSING A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PREFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIME FRAME.
7. SEDIMENT MUST NOT BE INTENTIONALLY WASHED INTO STORM SEWERS, DRAINAGE WAYS, OR WATER BODIES.
8. SEDIMENT MUST BE REMOVED FROM BEHIND ALL SEDIMENT CONTROL MEASURES WHEN IT HAS REACHED A HEIGHT OF 1/3-RD THE BARRIER HEIGHT AND PRIOR TO THE CONTROL MEASURES REMOVAL.
9. CLEANING OF ALL STRUCTURES WITH SUMPS MUST OCCUR WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 50% AND AT COMPLETION OF PROJECT.
10. ANY USE OF TOXIC OR OTHER HAZARDOUS MATERIALS MUST INCLUDE PROPER STORAGE, APPLICATION, AND DISPOSAL.
11. THE PERMITTEE MUST PROPERLY MANAGE HAZARDOUS WASTES, USED OILS, CONTAMINATED SOILS, CONCRETE WASTE, SANITARY WASTE, LIQUID WASTE, OR OTHER TOXIC SUBSTANCES DISCOVERED OR GENERATED DURING CONSTRUCTION.
12. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS. NUTRIENT RELEASES FROM FERTILIZERS TO SURFACE WATERS MUST BE MINIMIZED. TIME RELEASE FERTILIZERS SHOULD BE USED AND CARE SHOULD BE MADE IN APPLICATION OF FERTILIZERS WITHIN ANY WATER WAY RIPARIAN ZONE.
13. OWNER OR DESIGNATED PERSON SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, IN ACCORDANCE WITH CURRENT CLEAN WATER SERVICES STANDARDS AND STATE, AND FEDERAL REGULATIONS.
14. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BOUNDARIES OF THE CLEARING LIMITS, VEGETATED BUFFERS, AND ANY SENSITIVE AREAS SHOWN ON THIS PLAN SHALL BE CLEARLY DELINEATED IN THE FIELD. UNLESS OTHERWISE APPROVED, NO DISTURBANCE IS PERMITTED BEYOND THE CLEARING LIMITS. THE OWNER/PERMITTEE MUST MAINTAIN THE DELINEATION FOR THE DURATION OF THE PROJECT. NOTE: VEGETATED CORRIDORS TO BE DELINEATED WITH ORANGE CONSTRUCTION FENCE OR APPROVED EQUAL.
15. PRIOR TO ANY LAND DISTURBING ACTIVITIES, THE BMPS THAT MUST BE INSTALLED ARE GRAVEL CONSTRUCTION ENTRANCE, PERIMETER SEDIMENT CONTROL, AND INLET PROTECTION. THESE BMPS MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT.
16. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1ST; THE TYPE AND PERCENTAGES OF SEED IN THE MIX ARE AS IDENTIFIED ON THE PLANS OR AS SPECIFIED BY THE DESIGN ENGINEER.
17. WATERTIGHT TRUCKS MUST BE USED TO TRANSPORT SATURATED SOILS FROM THE CONSTRUCTION SITE. AN APPROVED EQUIVALENT IS TO DRAIN THE SOIL ON SITE AT A DESIGNATED LOCATION USING APPROPRIATE BMPS; SOIL MUST BE DRAINED SUFFICIENTLY FOR MINIMAL SPILLAGE.
18. ALL PUMPING OF SEDIMENT LADEN WATER MUST BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP (I.E. FILTER BAG).
19. THE ESC PLAN MUST BE KEPT ONSITE. ALL MEASURES SHOWN ON THE PLAN MUST BE INSTALLED PROPERLY TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER A SURFACE WATER SYSTEM, ROADWAY, OR OTHER PROPERTIES.
20. THE ESC MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE MEASURES SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
21. WRITTEN ESC LOGS ARE SUGGESTED TO BE MAINTAINED ONSITE AND AVAILABLE TO DISTRICT INSPECTORS UPON REQUEST.
22. IN AREAS SUBJECT TO WIND EROSION, APPROPRIATE BMPS MUST BE USED, WHICH MAY INCLUDE THE APPLICATION OF FINE WATER SPRAYING, PLASTIC SHEETING, MULCHING, OR OTHER APPROVED MEASURES.
23. ALL EXPOSED SOILS MUST BE COVERED, AT END OF BUSINESS DAY, DURING WET WEATHER PERIOD, FROM OCTOBER 1 - MAY 31.

STANDARD EROSION CONTROL NOTES FOR SITES LESS THAN 1 ACRE

DRAWING NO. 945 REVISED 10-31-19

CleanWater Services

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

EROSION AND SEDIMENT CONTROL DETAILS

PONDEROSA PINES SUBDIVISION

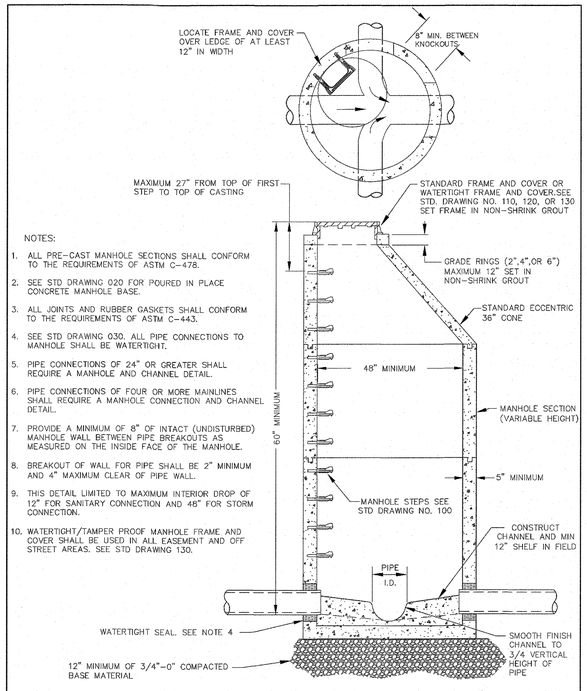
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C921

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-ESC.DWG



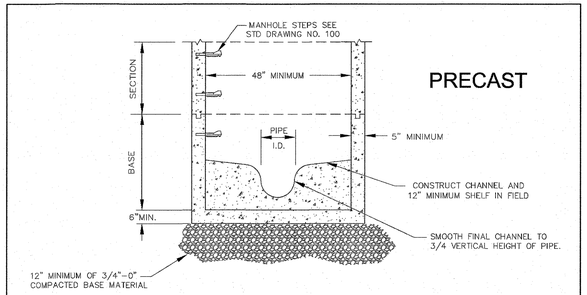
NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. SEE STD DRAWING 020 FOR POURED IN PLACE CONCRETE MANHOLE BASE.
3. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
4. SEE STD DRAWING 030. 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 12" 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. SEE STD DRAWING 130.

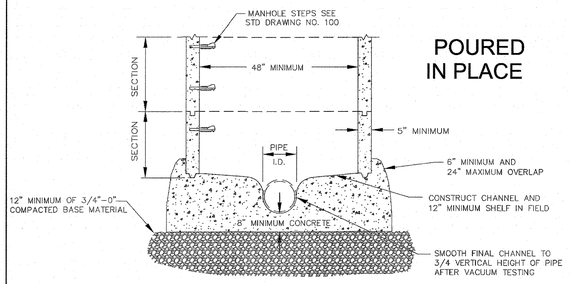
STANDARD MANHOLE

DRAWING NO. 010 REVISED 10-31-19

CleanWater Services



PRECAST



POURED IN PLACE

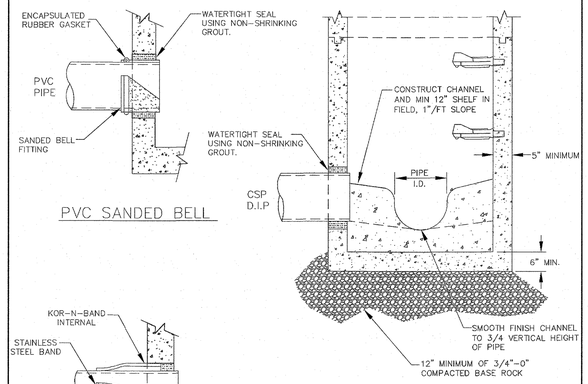
NOTES:

1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, DRAWING NO. 010.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".

PRE-CAST/POURED IN PLACE MANHOLE BASE

DRAWING NO. 020 REVISED 10-31-19

CleanWater Services



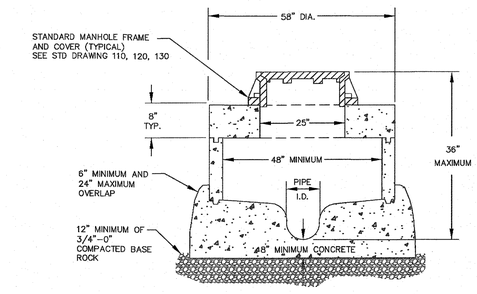
NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD DRAWING NO. 010.
2. ALTERNATE METHODS TO BE APPROVED BY CITY/DISTRICT.
3. BOOTS TO BE SIZED PER MANUFACTURER'S RECOMMENDATIONS/SPECIFICATIONS.

MANHOLE CONNECTIONS

DRAWING NO. 030 REVISED 10-31-19

CleanWater Services



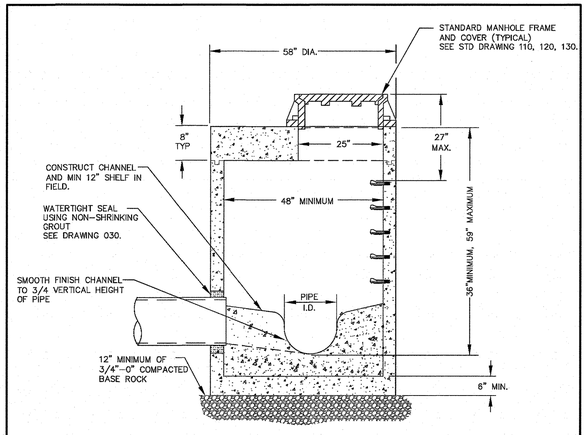
NOTES:

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, SEE STD DRAWING NO. 010.
3. CENTER OPENING FLATOP REQUIRED.
4. NO STEPS ALLOWED IN SHALLOW FLATTOP MANHOLE.
5. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".
6. SEE DRAWING 030 FOR WATERTIGHT MANHOLE CONNECTIONS.
7. ALL MANHOLE FLAT TOPS SHALL CONFORM TO ASTM C-478 AND ARE DESIGNED TO MEET H-20 TRAFFIC LOADING.

SHALLOW FLAT TOP MANHOLE

DRAWING NO. 040 REVISED 10-31-19

CleanWater Services



FLAT TOP

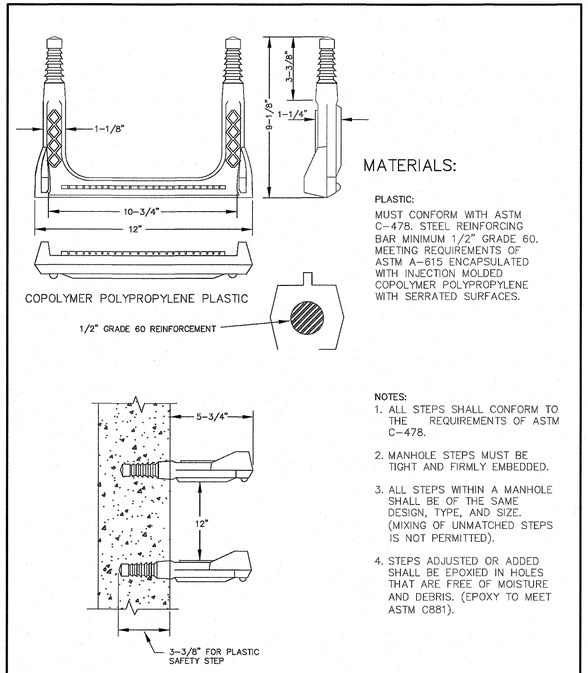
NOTES:

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, SEE STD DRAWING NO. 010.
3. STEPS REQUIRED ON FLAT TOP MANHOLES DEEPER THAN 48" FROM FINISHED GRADE TO I.E. OUT.
4. SEE DRAWING 030 FOR WATERTIGHT MANHOLE CONNECTIONS.
5. ALL MANHOLE FLAT TOPS SHALL CONFORM TO ASTM C-478 AND ARE DESIGNED TO MEET H-20 TRAFFIC LOADING.

FLAT TOP MANHOLE

DRAWING NO. 050 REVISED 10-31-19

CleanWater Services



MATERIALS:

PLASTIC:

MUST CONFORM WITH ASTM C-478. STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60. MEETING REQUIREMENTS OF ASTM A-615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.

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).
4. STEPS ADJUSTED OR ADDED SHALL BE EPOXIED IN HOLES THAT ARE FREE OF MOISTURE AND DEBRIS. (EPOXY TO MEET ASTM C881).

MANHOLE STEP

DRAWING NO. 100 REVISED 10-31-19

CleanWater Services

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

STORM DETAILS I

PONDEROSA PINES

SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

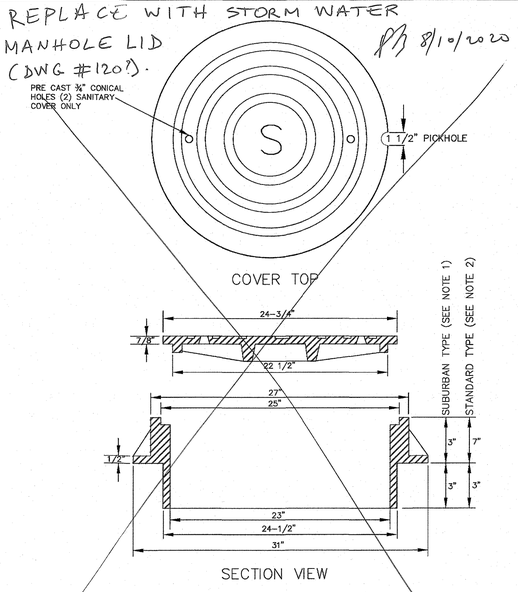
PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C931

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-STORM.DWG

REPLACE WITH STORM WATER MANHOLE LID (DWG #1207). 8/10/2020



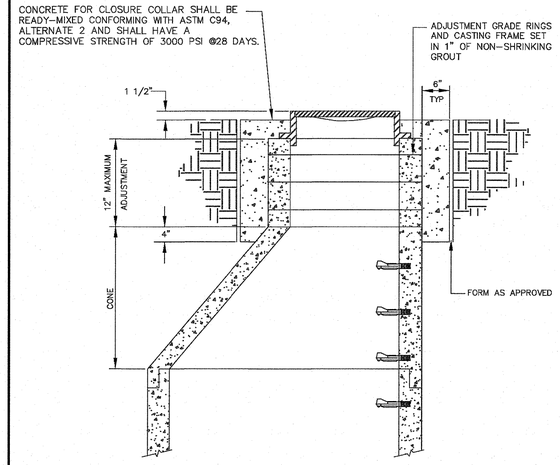
NOTES:

1. SUBURBAN TYPE FOR USE IN TRAFFIC AREAS OF LOCAL AND NEIGHBORHOOD STREETS.
2. STANDARD TYPE FOR USE IN TRAFFIC AREAS OF COLLECTOR AND ARTERIAL STREETS.
3. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
4. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
5. 1 1/2" PICKHOLE IN LID FOR LIFTING HOOK.

SUBURBAN AND STANDARD MANHOLE FRAME AND COVER SANITARY

DRAWING NO. 110 REVISED 10-31-19

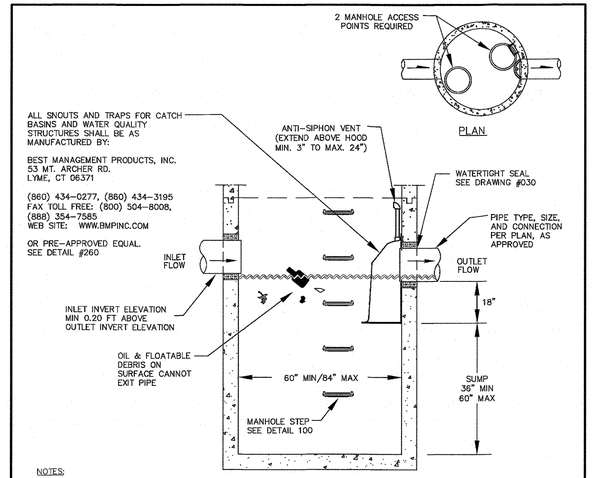
CleanWater Services



CONCRETE MANHOLE CLOSURE COLLAR

DRAWING NO. 140 REVISED 10-31-19

CleanWater Services



NOTES:

1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STD. MANHOLE DRAWING NO. 010.
2. INLET AND OUTLET PIPE NOT TO EXCEED 18" DIA.
3. PROVIDE SPECIAL DETAIL FOR SNOUT, EXCEEDING 18" DIA.
4. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY THE OUTLET PIPE SIZE AS PER MANUFACTURER'S RECOMMENDATIONS.
5. ANCHORING HARDWARE FOR THE HOOD SHALL BE EMBEDDED INTO CONCRETE; ANCHORING INTO GROUT IS NOT AUTHORIZED.
6. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
7. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
8. ALL MANHOLE FLAT TOPS SHALL CONFORM TO ASTM C-478 AND ARE DESIGNED TO MEET H-20 TRAFFIC LOADING.

SUMP VOLUME AVAILABLE PER DEPTH OF SUMP

	36" MINIMUM	60" 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	192.4 CF

PROVIDE SPECIAL DETAIL FOR VOLUME REQUIREMENTS EXCEEDING 192.4 CF

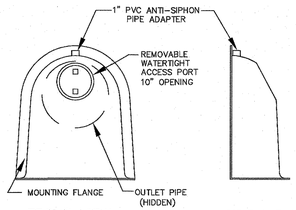
SUMP VOLUME REQUIREMENTS
20 CF/1.0 CFS OF INFLOW
58.9 CF MINIMUM REQUIRED

WATER QUALITY MANHOLE (SNOUT) A

DRAWING NO. 250 REVISED 10-31-19

CleanWater Services

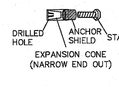
CONFIGURATION DETAIL



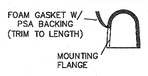
FRONT VIEW SIDE VIEW

INSTALLATION DETAIL

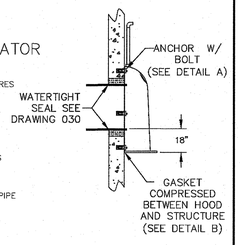
DETAIL A



DETAIL B



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. 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 MINIMUM 10", 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 STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET.
9. ANCHOR BOLTS SHALL BE INSTALLED INTO THE CONCRETE OF THE STRUCTURE'S WALL. (NOT WITHIN GROUT)
10. INSTALLATION INSTRUCTIONS SHALL BE FURNISHED WITH MANUFACTURER SUPPLIED INSTALLATION KIT.
    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

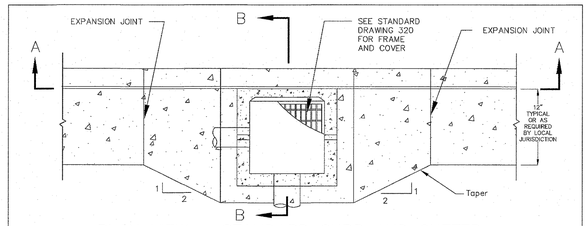
BEST MANAGEMENT PRODUCTS, INC.
53 MT. ARCHER RD.
LYME, CT 06371
TOLL FREE: (800) 504-8008 (888) 354-7585
WEB SITE: WWW.BMPINC.COM

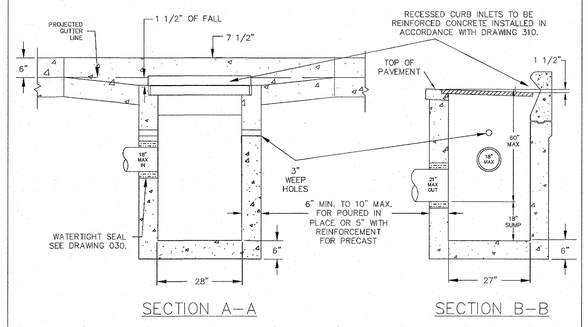
WHEN ORDERING, SPECIFY IF THE STRUCTURE IN WHICH THE HOOD WILL BE ATTACHED IS FLAT OR ROUND.

WATER QUALITY MANHOLE (SNOUT) B

DRAWING NO. 260 REVISED 10-31-19

CleanWater Services





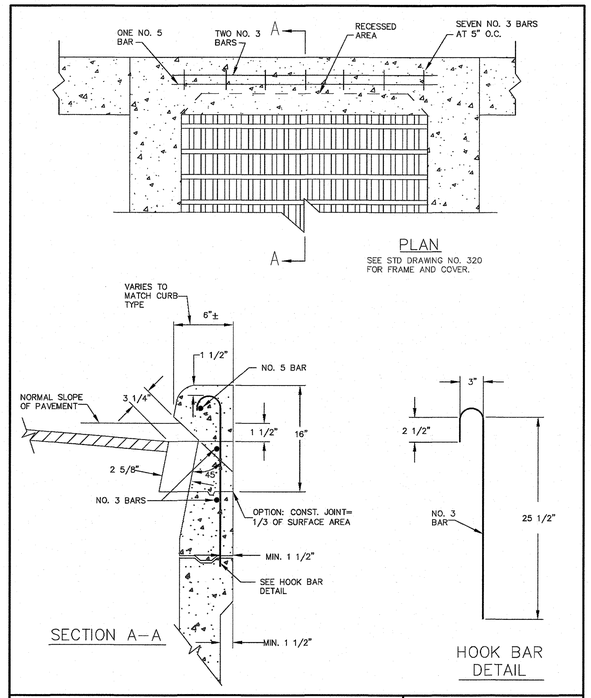
NOTES:

1. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C-478.
2. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4"-0" COMPACTED BASE MATERIAL.
3. PRECAST STRUCTURE TO BE APPROVED BY DISTRICT OR CITY. REINFORCEMENT FOR PRECAST CATCH BASIN SHALL BE REBAR MEETING ASTM A-615 GRADE 60 OR WELDED WIRE MEETING ASTM A-497.
4. ALL POURED IN-PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".
5. CHANNEL REQUIRED IN FLOW THROUGH APPLICATIONS, AS APPROVED. ALL OTHER APPLICATIONS REQUIRE AN 18" SUMP BELOW LOWEST PIPE INVERT.
6. FULL CURB EXPOSURE REQUIRED CANNOT BE LOCATED IN SIDEWALK RAMPS OR RAMP WINGS.

GUTTER & CURB INLET CATCH BASIN (CG-2)

DRAWING NO. 300 REVISED 10-31-19

CleanWater Services



GUTTER & CURB INLET CATCH BASIN (CG-2) REINFORCEMENT

DRAWING NO. 310 REVISED 10-31-19

CleanWater Services

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

STORM DETAILS II

PONDEROSA PINES

SUBDIVISION

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

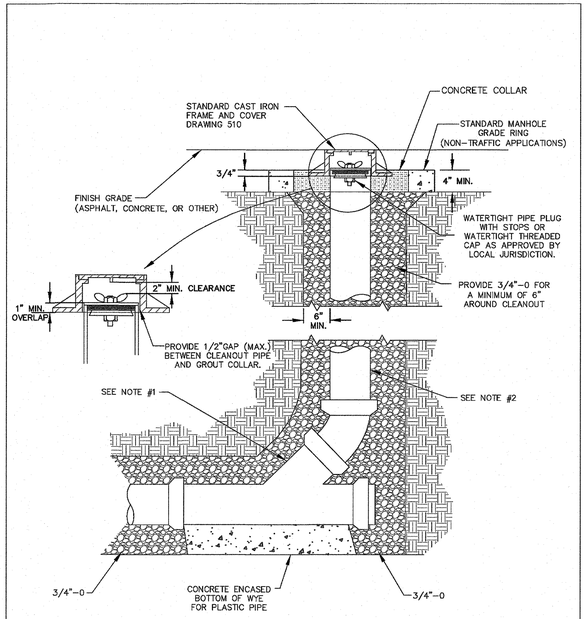
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C932

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-STORM.DWG

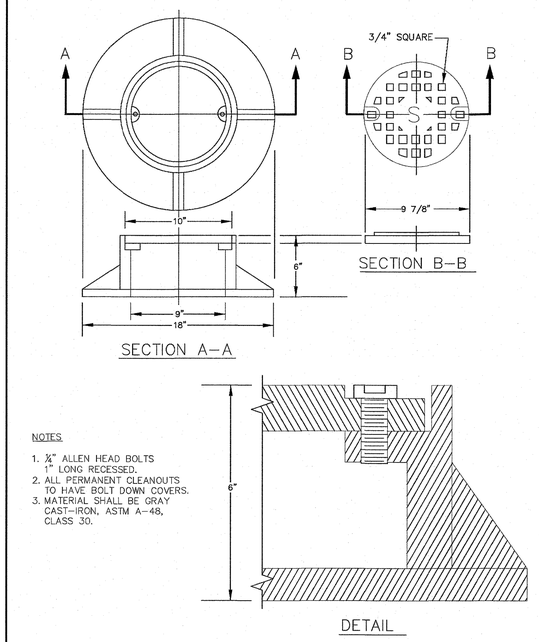


NOTES:
1. CONCRETE ENCASE ENTIRE WYE SECTION AND 45 DEGREE BEND IF CONCRETE OR DUCTILE IRON PIPE.
2. STANDPIPE TO BE SAME SIZE AS MAINLINE UP TO AND INCLUDING 8" PIPE. MAINLINE GREATER THAN 8" SHALL HAVE A 8" STANDPIPE.

STANDARD CLEANOUT

DRAWING NO. 500 REVISED 10-31-19

CleanWater Services

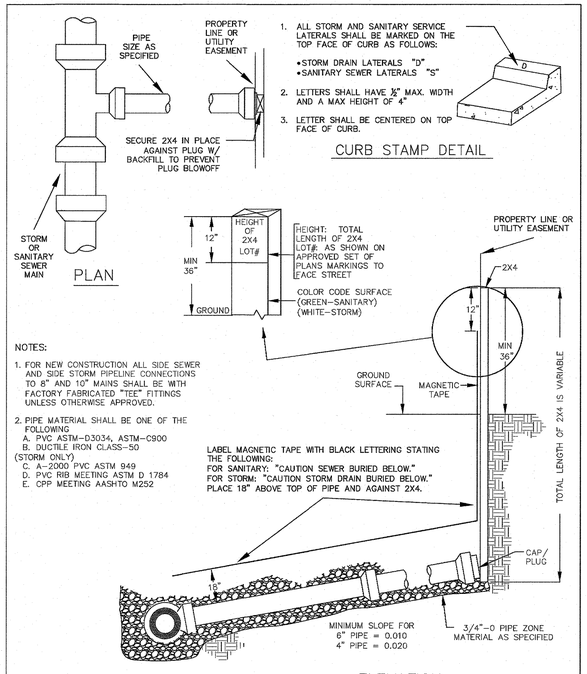


NOTES:
1. ¼" ALLEN HEAD BOLTS 1" LONG RECESSED.
2. ALL PERMANENT CLEANOUTS TO HAVE BOLT DOWN COVERS.
3. MATERIAL SHALL BE GRAY CAST-IRON, ASTM A-48, CLASS 30.

CLEANOUT FRAME AND COVER

DRAWING NO. 510 REVISED 10-31-19

CleanWater Services

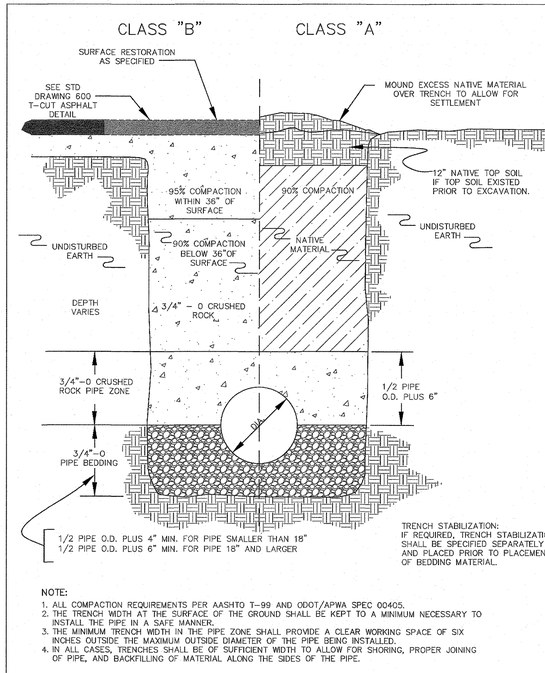


NOTES:
1. FOR NEW CONSTRUCTION ALL SIDE SEWER AND SIDE STORM PIPELINE CONNECTIONS TO 8" AND 10" MAINS SHALL BE WITH FACTORY FABRICATED "TEE" FITTINGS UNLESS OTHERWISE APPROVED.
2. PIPE MATERIAL SHALL BE ONE OF THE FOLLOWING
A. PVC ASTM-D3034, ASTM-C900
B. DUCTILE IRON CLASS-50
(STORM ONLY)
C. A-2000 PVC ASTM 949
D. PVC RIB MEETING ASTM D 1784
E. CPP MEETING AASHTO M252

SIDE SEWER / SIDE STORM PIPELINE

DRAWING NO. 520 REVISED 10-31-19

CleanWater Services



NOTE:
1. ALL COMPACTION REQUIREMENTS PER AASHTO T-99 AND ODOT/APWA SPEC 00405.
2. THE TRENCH WIDTH AT THE SURFACE OF THE GROUND SHALL BE KEPT TO A MINIMUM NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER.
3. THE MINIMUM TRENCH WIDTH IN THE PIPE ZONE SHALL PROVIDE A CLEAR WORKING SPACE OF SIX INCHES OUTSIDE THE MAXIMUM OUTSIDE DIAMETER OF THE PIPE BEING INSTALLED.
4. IN ALL CASES, TRENCHES SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR SHORING, PROPER JOINING OF PIPE, AND BACKFILLING OF MATERIAL ALONG THE SIDES OF THE PIPE.

TRENCH BACKFILL DETAILS

DRAWING NO. 590 REVISED 10-31-19

CleanWater Services

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

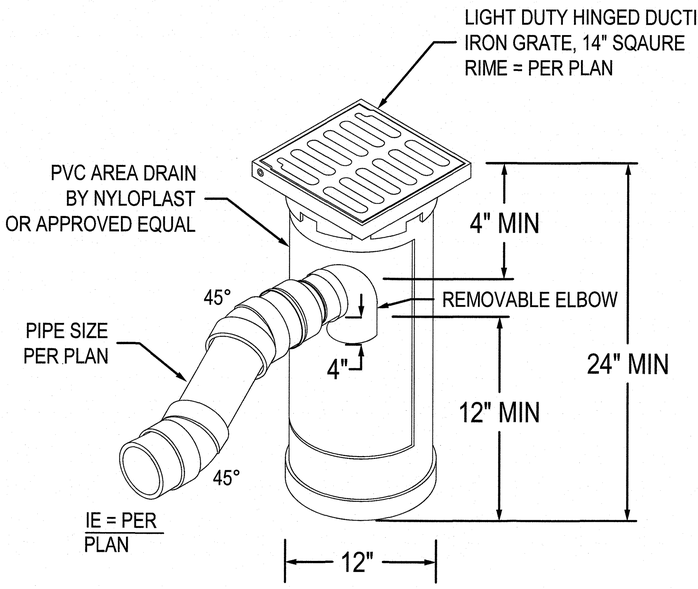
STORM DETAILS III
PONDEROSA PINES
SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C933

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-STORM.DWG



NOTES:

① - TRAP TO BE REMOVABLE TO ALLOW FOR FULL ACCESS TO OUTLET PIPE.
② - FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
③ - THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS II MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTEDUNIFORMLY IN ACCORDANCE WITH ASTM D2321.
④ - PVC AREA DRAIN BASIN SHALL BE OREGON PLUMBING CODE APPROVED.

TRAPPED AREA DRAIN

NTS

REGISTERED PROFESSIONAL ENGINEER
OREGON
MAR. 10, 2015
AARON J. MURPHY
Jun 2, EXPIRES: 12/31/20

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

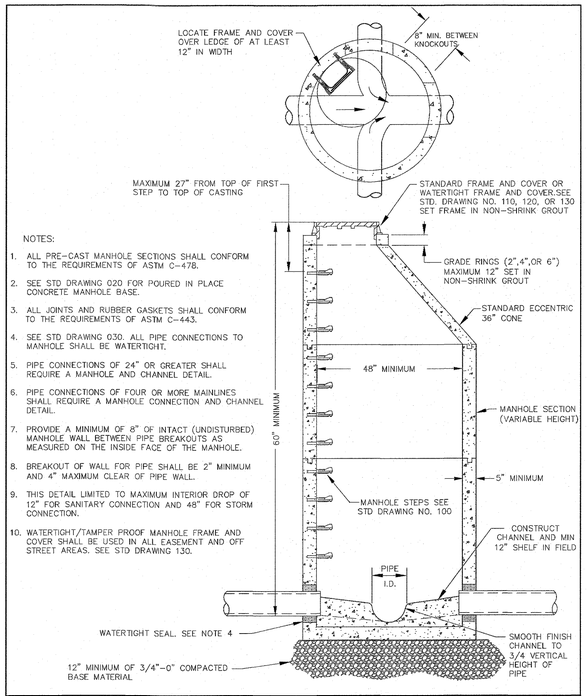
STORM DETAILS IV
PONDEROSA PINES SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C934

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-STORM-PRIVATE.DWG



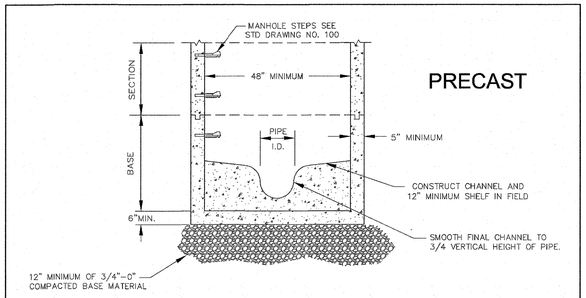
NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. SEE STD DRAWING 020 FOR POURED IN PLACE CONCRETE MANHOLE BASE.
3. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
4. SEE STD DRAWING 030. 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 12" 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. SEE STD DRAWING 130.

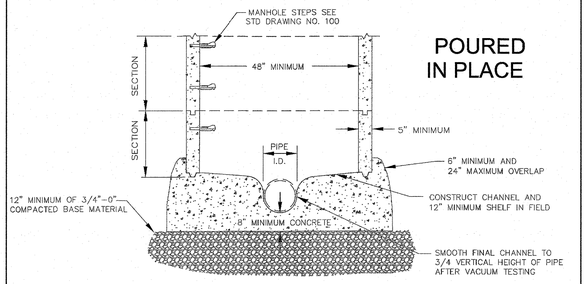
STANDARD MANHOLE

DRAWING NO. 010 REVISED 10-31-19

CleanWater Services



PRECAST



POURED IN PLACE

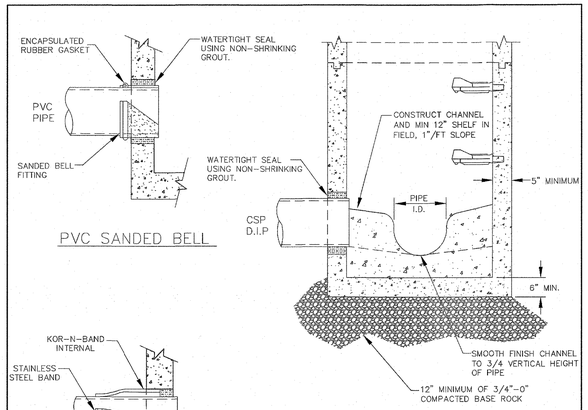
NOTES:

1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, DRAWING NO. 010.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".

PRE-CAST/POURED IN PLACE MANHOLE BASE

DRAWING NO. 020 REVISED 10-31-19

CleanWater Services



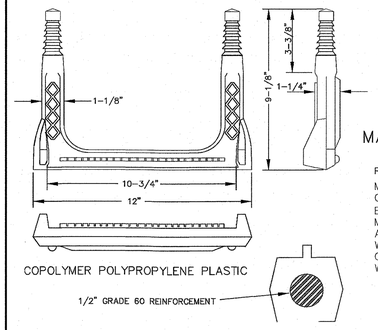
NOTES:

1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD DRAWING NO. 010.
2. ALTERNATE METHODS TO BE APPROVED BY CITY/DISTRICT.
3. BOOTS TO BE SIZED PER MANUFACTURER'S RECOMMENDATIONS/SPECIFICATIONS.

MANHOLE CONNECTIONS

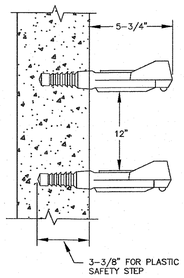
DRAWING NO. 030 REVISED 10-31-19

CleanWater Services



MATERIALS:

PLASTIC:
MUST CONFORM WITH ASTM C-478. STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60. MEETING REQUIREMENTS OF ASTM A-615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.



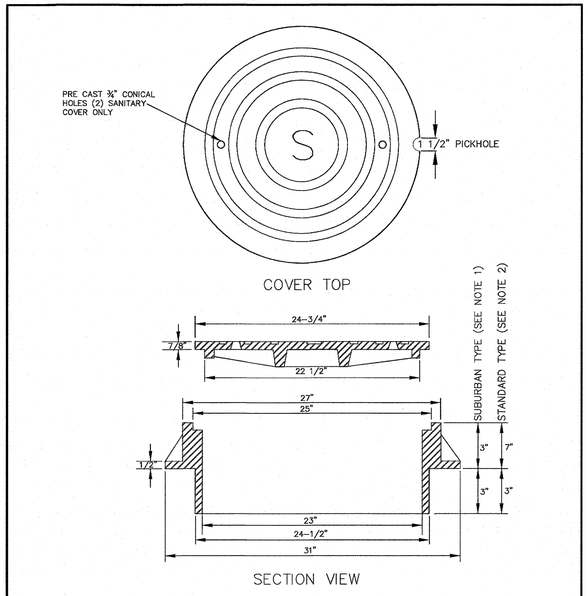
NOTES:

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).
4. STEPS ADJUSTED OR ADDED SHALL BE EPOXIED IN HOLES THAT ARE FREE OF MOISTURE AND DEBRIS. (EPOXY TO MEET ASTM C881).

MANHOLE STEP

DRAWING NO. 100 REVISED 10-31-19

CleanWater Services



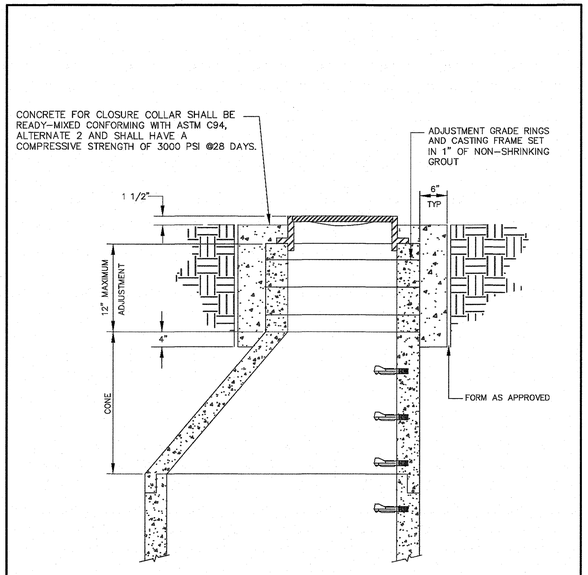
NOTES:

1. SUBURBAN TYPE FOR USE IN TRAFFIC AREAS OF LOCAL AND NEIGHBORHOOD STREETS.
2. STANDARD TYPE FOR USE IN TRAFFIC AREAS OF COLLECTOR AND ARTERIAL STREETS.
3. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
4. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
5. 1 1/2" PICKHOLE IN LID FOR LIFTING HOOK.

SUBURBAN AND STANDARD MANHOLE FRAME AND COVER SANITARY

DRAWING NO. 110 REVISED 10-31-19

CleanWater Services



CONCRETE MANHOLE CLOSURE COLLAR

DRAWING NO. 140 REVISED 10-31-19

CleanWater Services

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-SANITARY.DWG

PUBLISH DATE
2020-06-15

ISSUED FOR
PERMIT SET

REVISIONS

SANITARY SEWER DETAILS I

PONDEROSA PINES

SUBDIVISION

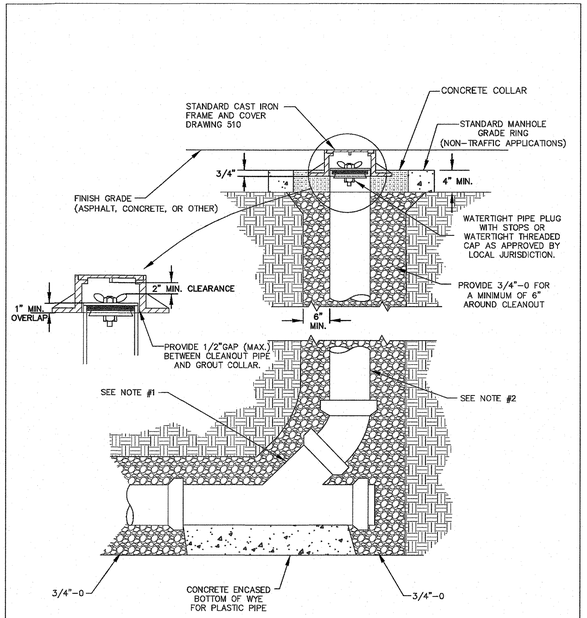
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION

3J PROJECT #	19554
TAX LOT(S)	01700
LAND USE #	19-02
DESIGNED BY	KDO
CHECKED BY	AJM

SHEET NUMBER
C941

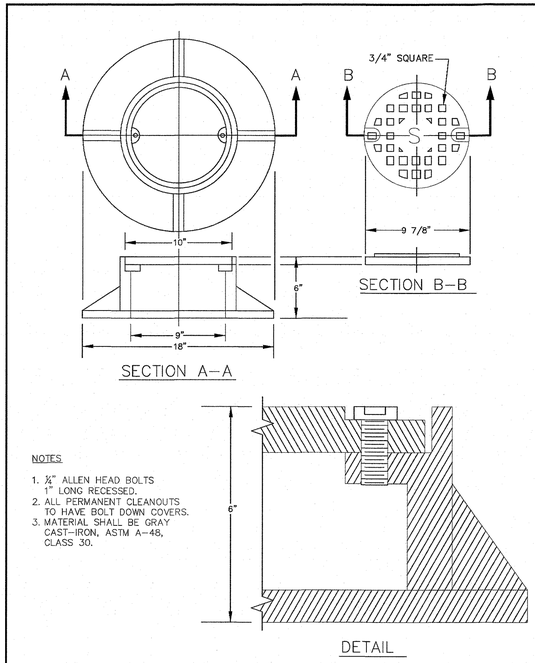


NOTES:
1. CONCRETE ENCASE ENTIRE WYE SECTION AND 45 DEGREE BEND IF CONCRETE OR DUCTILE IRON PIPE.
2. STANDPIPE TO BE SAME SIZE AS MAINLINE UP TO AND INCLUDING 8" PIPE. MAINLINE GREATER THAN 8" SHALL HAVE A 8" STANDPIPE.

STANDARD CLEANOUT

DRAWING NO. 500 REVISED 10-31-19

CleanWater Services

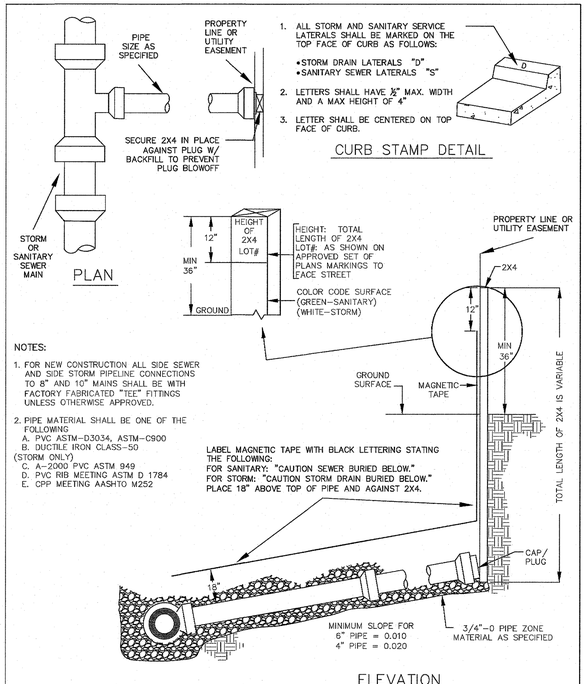


NOTES
1. ½" ALLEN HEAD BOLTS 1" LONG RECESSED.
2. ALL PERMANENT CLEANOUTS TO HAVE BOLT DOWN COVERS.
3. MATERIAL SHALL BE GRAY CAST-IRON, ASTM A-48, CLASS 30.

CLEANOUT FRAME AND COVER

DRAWING NO. 510 REVISED 10-31-19

CleanWater Services

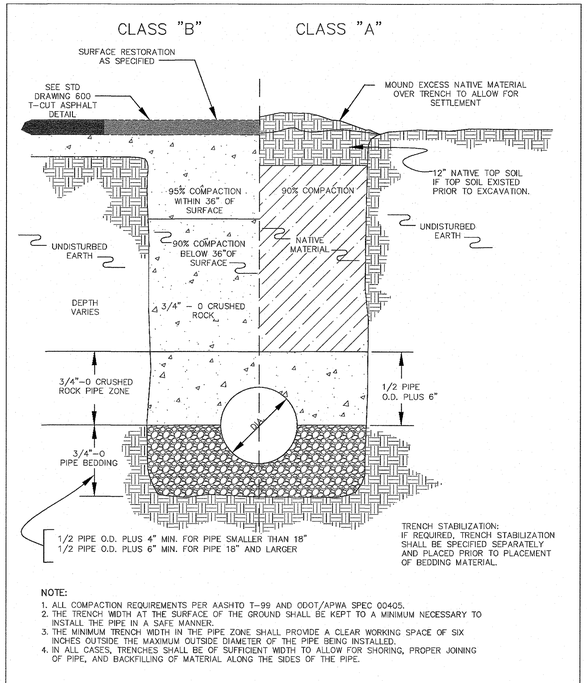


NOTES:
1. FOR NEW CONSTRUCTION ALL SIDE SEWER AND SIDE STORM PIPELINE CONNECTIONS TO 8" AND 10" MAINS SHALL BE WITH FACTORY FABRICATED "TEE" FITTINGS UNLESS OTHERWISE APPROVED.
2. PIPE MATERIAL SHALL BE ONE OF THE FOLLOWING
A. PVC ASTM-D3034, ASTM-C900
B. DUCTILE IRON CLASS-50
(STORM ONLY)
C. A-2000 PVC ASTM 949
D. PVC RIB MEETING ASTM D 1784
E. CPP MEETING AASHTO M252

SIDE SEWER / SIDE STORM PIPELINE

DRAWING NO. 520 REVISED 10-31-19

CleanWater Services



NOTE:
1. ALL COMPACTION REQUIREMENTS PER AASHTO T-99 AND ODOT/APWA SPEC 00405.
2. THE TRENCH WIDTH AT THE SURFACE OF THE GROUND SHALL BE KEPT TO A MINIMUM NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER.
3. THE MINIMUM TRENCH WIDTH IN THE PIPE ZONE SHALL PROVIDE A CLEAR WORKING SPACE OF SIX INCHES OUTSIDE THE MAXIMUM OUTSIDE DIAMETER OF THE PIPE BEING INSTALLED.
4. IN ALL CASES, TRENCHES SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR SHORING, PROPER JOINING OF PIPE, AND BACKFILLING OF MATERIAL ALONG THE SIDES OF THE PIPE.

TRENCH BACKFILL DETAILS

DRAWING NO. 590 REVISED 10-31-19

CleanWater Services

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

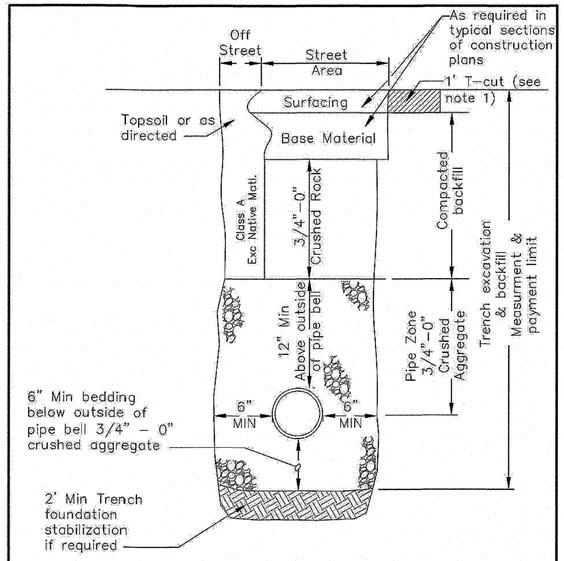
SANITARY SEWER DETAILS II
PONDEROSA PINES
SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100, BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

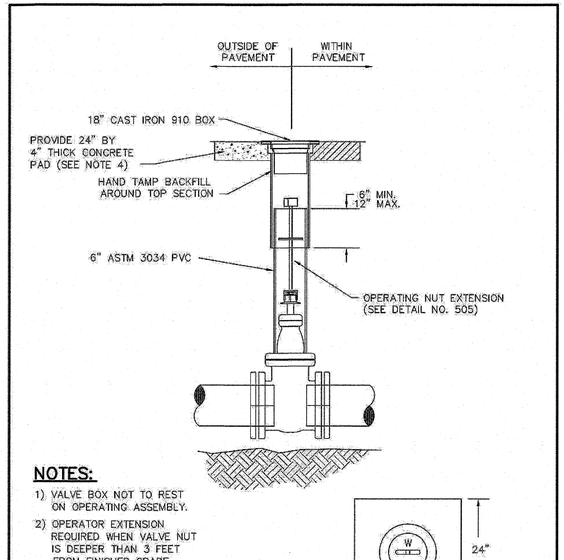
SHEET NUMBER
C942

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-SANITARY.DWG



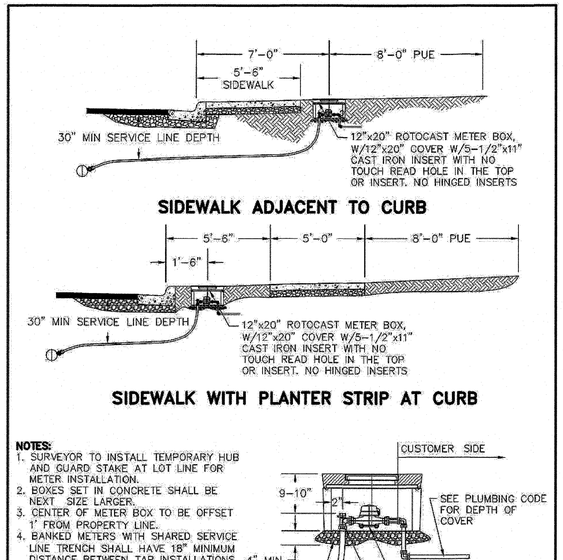
NOTE:
1. 1' T-CUT FOR PIPE ONLY PROJECTS.
2. JOINTS TO BE TACK AND SANDED.
3. SAWCUT SHALL BE TACK COATED WITH BITUMINUS ASPHALT EMULSION.

CITY OF TIGARD OREGON ENGINEERING DIVISION PUBLIC WORKS DEPARTMENT 13125 S.W. HALL BLVD. TIGARD, OREGON 97223 VOICE: (503) 639-4171 FAX: (503) 684-7297	APPROVED BY: MICHAEL A. STONE, P.E. CITY ENGINEER JANUARY 2013 APPROVAL DATE	**TRENCH BACKFILL**	NO SCALE DWG. NO. **180**



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 AS SHOWN IN CONCRETE PAD DETAIL

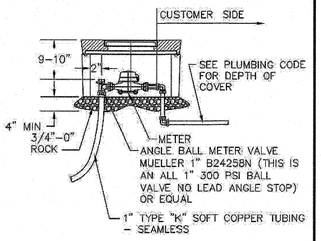
CITY OF TIGARD OREGON ENGINEERING DIVISION PUBLIC WORKS DEPARTMENT 13125 S.W. HALL BLVD. TIGARD, OREGON 97223 VOICE: (503) 639-4171 FAX: (503) 684-7297	APPROVED BY: THEODORE S. KYLE, P.E. CITY ENGINEER JANUARY 2011 APPROVAL DATE	**TYPICAL GATE VALVE**	NO SCALE DWG. NO. **503**



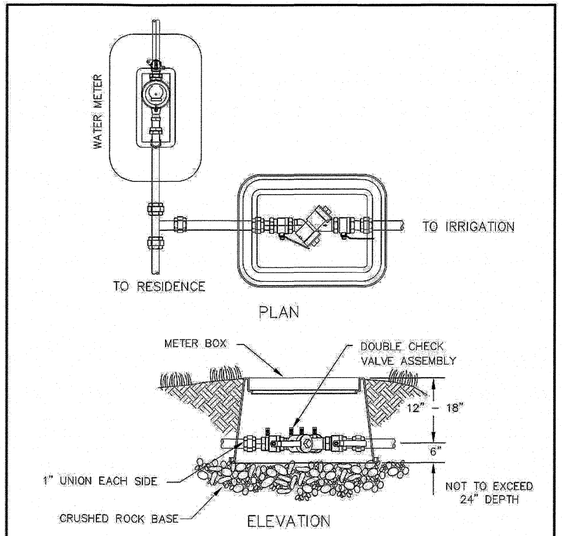
SIDEWALK ADJACENT TO CURB

SIDEWALK WITH PLANTER STRIP AT CURB

NOTES:
1. SURVEYOR TO INSTALL TEMPORARY HUB AND GUARD STAKE AT LOT LINE FOR METER INSTALLATION.
2. BOXES SET IN CONCRETE SHALL BE NEXT SIZE LARGER.
3. CENTER OF METER BOX TO BE OFFSET 1' FROM PROPERTY LINE.
4. BANKED METERS WITH SHARED SERVICE LINE TRENCH SHALL HAVE 18" MINIMUM DISTANCE BETWEEN TAP INSTALLATIONS.
5. IF WATER METER IS LOCATED IN A SIDEWALK AREA THE BOX SIZE WILL BE ARMORCAST 17"X30"X12" RPM 20K COVER OR EQUIVALENT. IF TWO METERS ARE BANKED IN SIDEWALK AREA THEN DISTANCE BETWEEN ANGLE STOPS WILL BE 24".



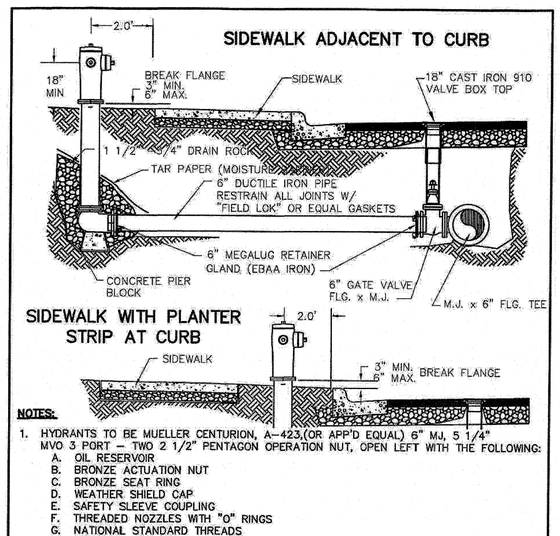
CITY OF TIGARD OREGON ENGINEERING DIVISION PUBLIC WORKS DEPARTMENT 13125 S.W. HALL BLVD. TIGARD, OREGON 97223 VOICE: (503) 639-4171 FAX: (503) 684-7297	APPROVED BY: LORI FAHA, P.E. CITY ENGINEER MARCH 2017 APPROVAL DATE	**1" WATER SERVICE**	NO SCALE DWG. NO. **520**



INSTALLATION SHOWN IS ONLY A SUGGESTION.

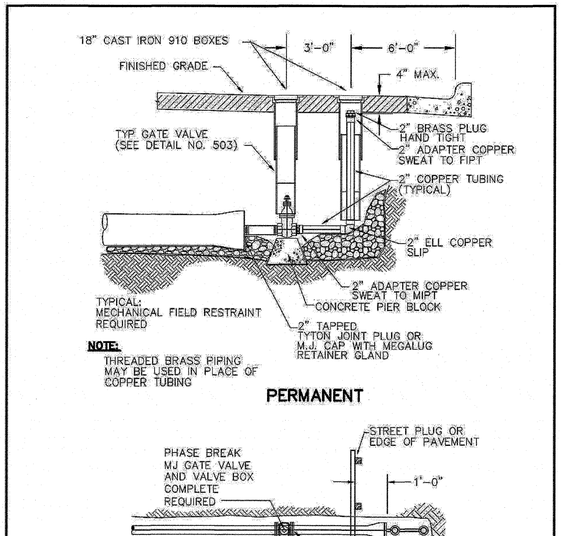
1. DOUBLE CHECK TO BE LOCATED DIRECTLY BEHIND WATER METER.
2. BRASS, STAINLESS, OR PLASTIC PLUGS TO BE INSTALLED IN TEST COCKS IF BELOW GROUND INSTALLATION.
3. DISTANCE FROM BOTTOM OF DEVICE TO FINISH GRADE, FREEZE PROTECTION, AND CLEARENCE FOR TESTING AND REPAIR ARE THE MAJOR CONSIDERATIONS FOR INSTALLATION.

CITY OF TIGARD OREGON ENGINEERING DIVISION PUBLIC WORKS DEPARTMENT 13125 S.W. HALL BLVD. TIGARD, OREGON 97223 VOICE: (503) 639-4171 FAX: (503) 684-7297	APPROVED BY: THEODORE S. KYLE, P.E. CITY ENGINEER JANUARY 2011 APPROVAL DATE	**IRRIGATION DOUBLE CHECK ASSEMBLY**	NO SCALE DWG. NO. **531**



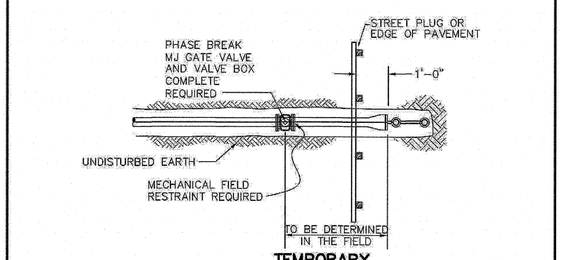
NOTES:
1. HYDRANTS TO BE MUELLER CENTURION, A-423,(OR APP'D EQUAL) 6" MJ, 5 1/4" MVO 3 PORT – TWO 2 1/2" PENTAGON OPERATION NUT, OPEN LEFT WITH THE FOLLOWING:
   A. OIL RESERVOIR
   B. BRONZE ACTUATION NUT
   C. BRONZE SEAT RING
   D. WEATHER SHIELD CAP
   E. SAFETY SLEEVE COUPLING
   F. THREADED NOZZLES WITH "O" RINGS
   G. NATIONAL STANDARD THREADS
2. SAFETY CHAINS TO BE REMOVED.
3. HYDRANTS TO BE PAINTED USING R-1317 SAFETY YELLOW OR AN ALTERNATE APPROVED BY DISTRICT FIRE MARSHALL.
4. HYDRANT TO BE INSTALLED TRUE AND PLUMB.
5. NO OBSTRUCTIONS WITHIN 3' 0" RADIUS OF HYDRANT.
6. IF SUBJECT TO VEHICLE DAMAGED, PROTECTIVE POST TO BE PROVIDED.
7. VALVE BOX TO BE IN ACCORDANCE WITH STANDARD DRAWING NO. 503 OR AS APPROVED BY ENGINEER.
8. THRUST BLOCKS SHALL NOT BE PLACED AT HYDRANT LOCATIONS.
9. INSTALL A STORZ HPHA50-45NH PERMANENT HYDRANT ADAPTER (OR EQUIVALENT) ON THE 4 1/2" PORT.

CITY OF TIGARD OREGON ENGINEERING DIVISION PUBLIC WORKS DEPARTMENT 13125 S.W. HALL BLVD. TIGARD, OREGON 97223 VOICE: (503) 639-4171 FAX: (503) 684-7297	APPROVED BY: LORI FAHA, P.E. CITY ENGINEER AUGUST 2015 APPROVAL DATE	**FIRE HYDRANT ASSEMBLY**	NO SCALE DWG. NO. **542**



NOTE:
THREADED BRASS PIPING MAY BE USED IN PLACE OF COPPER TUBING

PERMANENT



TEMPORARY

CITY OF TIGARD OREGON ENGINEERING DIVISION PUBLIC WORKS DEPARTMENT 13125 S.W. HALL BLVD. TIGARD, OREGON 97223 VOICE: (503) 639-4171 FAX: (503) 684-7297	APPROVED BY: THEODORE S. KYLE, P.E. CITY ENGINEER JANUARY 2011 APPROVAL DATE	**2" STANDARD BLOWOFF**	NO SCALE DWG. NO. **570**

PUBLISH DATE
2020-06-15
ISSUED FOR
PERMIT SET
REVISIONS

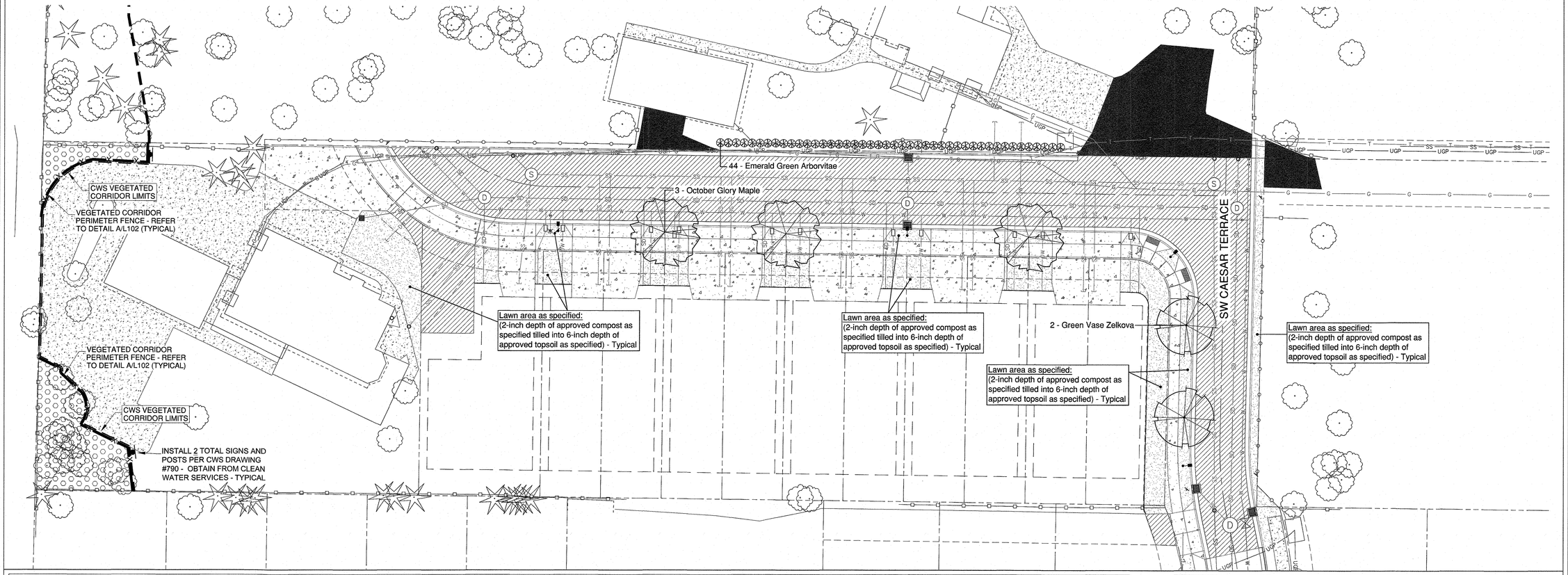
WATER SYSTEM DETAILS
PONDEROSA PINES
SUBDIVISION
PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OR

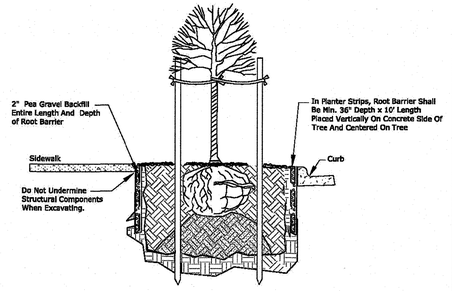
3J CONSULTING
CIVIL ENGINEERING
WATER RESOURCES
COMMUNITY PLANNING
9600 SW NIMBUS AVE., SUITE 100; BEAVERTON, OR 97008

PROJECT INFORMATION
3J PROJECT # | 19554
TAX LOT(S) | 01700
LAND USE # | 19-02
DESIGNED BY | KDO
CHECKED BY | AJM

SHEET NUMBER
C951

P:\19554-PONDEROSA PINES SUBDIVISION\CAD\CD\19554-DETAILS-WATER.DWG





TREE ROOT BARRIER INSTALLATION

(Not to Scale)

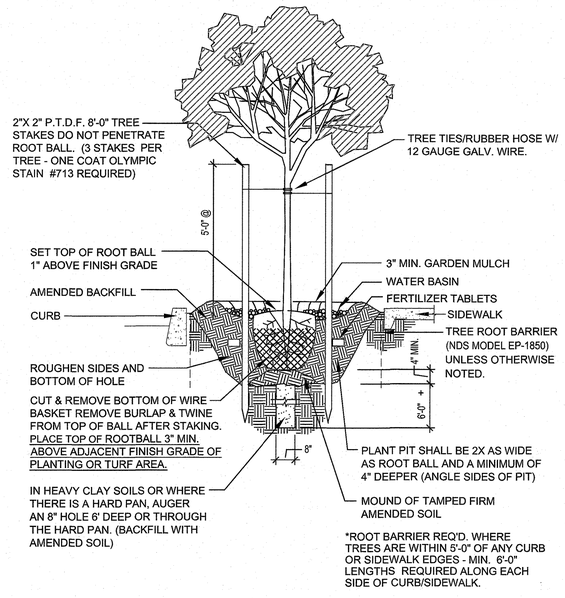
NOTES:

All Street Trees With Trunks Closer Than 4 Ft. To Paved Surfaces Shall Be Planted With Root Barrier Between the Root Ball And Paving.

Plantings Within Tree Wells Require Root Barriers Along All Sides Of The Tree Well.

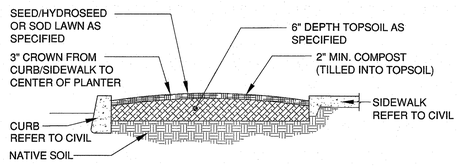
Installation To Be Completed In Accordance With Manufacturer's Specifications.

WASHINGTON COUNTY DEPARTMENT OF LAND USE & TRANSPORTATION ENGINEERING SECTION	TREE ROOT BARRIER INSTALLATION	
PLOT STAMP: 02/24/11 5:33P KELLYE CAD: 4010.DWG	EFFECTIVE DATE: 3/18/2011	WASH. CO. # 4010



STREET TREE PLANTING DETAIL

N.T.S.



LANDSCAPE PLANTER STRIP DETAIL

N.T.S.

TYPICAL PLANTING NOTES:

1. B&B stock may be substituted with container stock of equal grade.
2. Container stock may be substituted with B&B stock of equal grade.
3. Plant material shall conform with American Standard for Nursery Stock, ANSI Z60.1, 2004 edition.
4. All trees shall be branched.
5. Refer to project technical specification for topsoil requirement. All planting beds shall have a minimum of 18 inches topsoil. Re-use of existing topsoil is recommended, but must meet specifications.
6. Garden mulch all planting beds with 3" min. Layer of specified garden mulch.
7. In the event of a discrepancy between this material listing and the drawings, the drawings shall govern the plant species and quantities required.
8. In the event of question or lack of clarity on drawings, Landscape Contractor is to contact Landscape Architect before proceeding.
9. Landscape contractor is to notify Landscape Architect prior to installation of plant material to approve final placement.
10. Landscape Contractor to verify plant material quantities.
11. Contractor will provide a one year warranty on all provided & installed plant material from date of final approval by owner's representative.
12. Irrigation is required for all planted areas.

SUGGESTED PLANT SCHEDULE
RIGHT-OF-WAY PLANTING

	TREES SYM Scientific name / Common Name	Minimum Species Quantity	Plant Catagory	Minimum Size	Condition	Remarks
	Acer rubrum 'October Glory' / October Glory Maple	3	Tree	2" Cal.	B&B	Street Tree
	Zelkova serrata var. 'Green Vase' / Green Vase Zelkova	2	Tree	2" Cal.	B&B	Street Tree
	Total Street Trees	5				

SYM	SHRUBS					
	Thuja plicata 'Smaragd' / Emerald Green Arborvitae	44	Shrub	5-6'	B&B	36" o/c.

NOTES:

1. Street Tree quantities and locations are subject to change due to future determination of residential lot driveway locations and 10 feet clearance each direction from future water meter and street light locations.
2. Due to limited availability of desirable tree species in acceptable caliper, the final species of trees shown on this plan will be determined in collaboration between the landscaper and the city nearer to the time of actual installation. The purpose of this is to facilitate installation of more desirable tree species as they become available over time. The City will retain authority over the final species selection.

LANDSCAPE LEGEND

SYM	GROUND COVER	Approximate area
	Lawn (sod or hydroseed)	Sunmark Seeds 'Shadow' Rate: 6-8 lbs./1000 sf. (4,175 sq. ft.)

REFER TO SHEET L102 FOR CWS VEGETATED CORRIDOR PLANT TABLE, DETAILS AND NOTES

SCALE: 1" = 20'-0"

20' 10' 0' 20' 40'

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23338 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4668

REGISTERED 540 TROY A. MEARS OREGON 11/21/2003 LANDSCAPE ARCHITECT

PONDEROSA PINES SUBDIVISION

LANDSCAPE PLAN

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OREGON

REVISIONS

REV.	DATE	DESCRIPTION
	4/7/2020	Design Change
	6/10/2020	City Comments
	6/25/2020	Comments

SHEET NAME: PLANTING PLAN

DRAWN BY: TM
CHECKED BY: TM
ISSUE DATE: 12/10/2019
JOB NO.: 1938

SHEET: L101

OF 4

PLANT TABLE - VEGETATED CORRIDOR PLANTING

VEGETATED CORRIDOR AREA "DEGRADED CONDITION"

1,605 sf / 0.037 ac.	Existing conditions per Pacific Habitat Tree canopy (<25%) Native plants (<50%)	Minimum Species Composition	Planting Size	Minimum Plant Height
Common Name *(Botanical name)*				
Trees				
Douglas Fir (Pseudotsuga menziesii)		6	2 gal.	2'
Cascara (Rhamnus purshiana)		6	2 gal.	2'
Tree Total		12		
Shrubs				
Tall Oregon Grape *(Mahonia aquifolium)*		20	1 gal.	2'
Sword Fern *(Polystichum munitum)*		20	1 gal.	na
Snowberry *(Symphoricarpos albus)*		20	1 gal.	1.5'
Shrub subtotal		60		
Herbs/Groundcover				
Spike bentgrass (Agrostis exarata)	Broadcast a seed mix of these species as necessary in all bare areas greater than 25 sf following invasive species removal.			
Blue wild-rye (Elymus glaucus)				
California brome (Bromus carinatus)				

SITE REQUIREMENTS:

1. All invasive, non-native or noxious plant material are to be removed.

Methods for removal and control of invasive / non-native and/or noxious plants are to follow strategies as outlined within the CWS *IVAM Guidance* manual. The subject site is to employ manual / mechanical management strategies and pesticide management strategies throughout maintenance period or until healthy stand of desirable vegetation is established.

2. Preserve site's existing native vegetation to the maximum extent practicable. Every effort shall be made to protect a site's existing native vegetation. Native vegetation along Sensitive Areas and Vegetated Corridors shall be retained to the maximum extent practicable.

3. Replanting / Enhancement as follows:

- Refer to plant table and plan for plant species, location, distribution, quantities, size, condition and requirements.
- Per CWS Design and Construction Standards, Appendix A, Quantities for Vegetated Corridors and Sensitive Areas; Groundcover = Plant and Seed to achieve 100% aerial coverage.
- A native seed mix has been specified for the buffer area only. All plants to be pit planted with additional organic matter if required but no traditional fertililizer is necessary. Plant placement shall be consistent with the form of the naturally occurring plant community. Shrubs shall be placed in singles or clusters of the same species to provide a natural planting scheme.

4. Plant installation requirements. Permittee is responsible for installation of site planting as specified. All trees and shrubs planted in the upland area are to be mulched a minimum of three inches in depth and 18 inches in dia. Appropriate mulches include those made from composted leaves or bark that have not been chemically treated. Temporary irrigation will be provided and used during the two year maintenance period.

5. Monitoring and maintenance. Permittee is responsible for monitoring and maintaining the site. All new plant material is to be tagged. The removal of non-native, invasive weeds is necessary throughout the two year maintenance period, or until a healthy stand of desirable vegetation is established. The site is to be monitored a min. of two times per year, by June 1 and September 30. If at any time the landscaping falls below the 80% survival level, the owner shall reinstall all deficient planting at the next appropriate planting opportunity and the two year maintenance period shall begin again from the date of replanting.

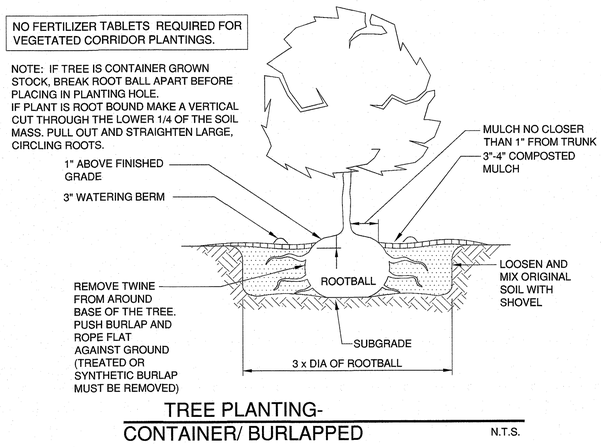
6. Permittee is required to provide and install a temporary irrigation system to maintain vegetative corridor plant establishment during the monitoring and maintenance period. The irrigation system will be fed from a owner provided TVWD meter (see Civil) and shall be designed to not exceed site available GPM and PSI. Refer to irrigation industry best practices and standards for acceptable design/build practices. Landscape Contractor to provide irrigation as-built record drawing upon completion and acceptance of irrigation system.

Permittee: Pin Oaks Development Company, LLC
Jim Gates (503) 563-6151

Note: Erosion control per separate plan by others

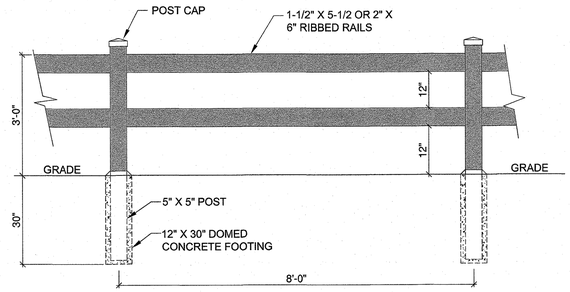
NO FERTILIZER TABLETS REQUIRED FOR VEGETATED CORRIDOR PLANTINGS.

NOTE: IF TREE IS CONTAINER GROWN STOCK, BREAK ROOT BALL APART BEFORE PLACING IN PLANTING HOLE.
IF PLANT IS ROOT BOUND MAKE A VERTICAL CUT THROUGH THE LOWER 1/4 OF THE SOIL MASS. PULL OUT AND STRAIGHTEN LARGE, CIRCLING ROOTS.



TREE PLANTING-
CONTAINER/ BURLAPPED

N.T.S.



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2-RAIL VINYL FENCE (WHITE)

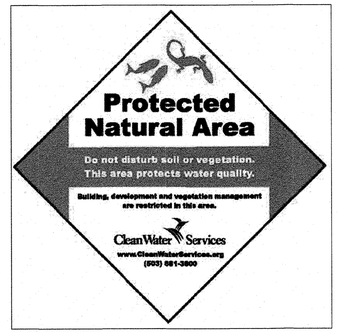
VEGETATED CORRIDOR FENCE (ONLY)

NTS

NO FERTILIZER TABLETS REQUIRED FOR VEGETATED CORRIDOR PLANTINGS.

SHRUB PLANTING DETAIL

N.T.S.



4"X4" SIGNS SHALL BE USED FOR AREAS WHERE A LARGE NUMBER OF SIGNS ARE NEEDED SUCH AS THE BACK OR SIDE YARDS ON EACH LOT ADJACENT TO THE SENSITIVE AREA OR VEGETATED CORRIDOR IN NEW SUBDIVISIONS OF PARTITIONS.

VEGETATED CORRIDOR SIGNAGE

NTS

MEARS DESIGN GROUP
LANDSCAPE ARCHITECTURE & PLANNING
PO Box 23336 | Portland, Oregon | 97281
Phone: 503.601.4516 | Fax: 503.924.4668

REGISTERED
540
TROY A. MEARS
OREGON
11/21/2003
LANDSCAPE ARCHITECT

PONDEROSA PINES SUBDIVISION
LANDSCAPE PLAN

PIN OAKS DEVELOPMENT COMPANY INC.
KING CITY, OREGON

REVISIONS

REV.	DATE	DESCRIPTION
	4/7/2020	Design Change
	6/10/2020	City Comments
	6/25/2020	Comments

SHEET NAME:
VEGETATED CORRIDOR DETAILS & NOTES

DRAWN BY:	TM
CHECKED BY:	TM
ISSUE DATE:	12/10/2019
JOB NO.:	1938

SHEET:
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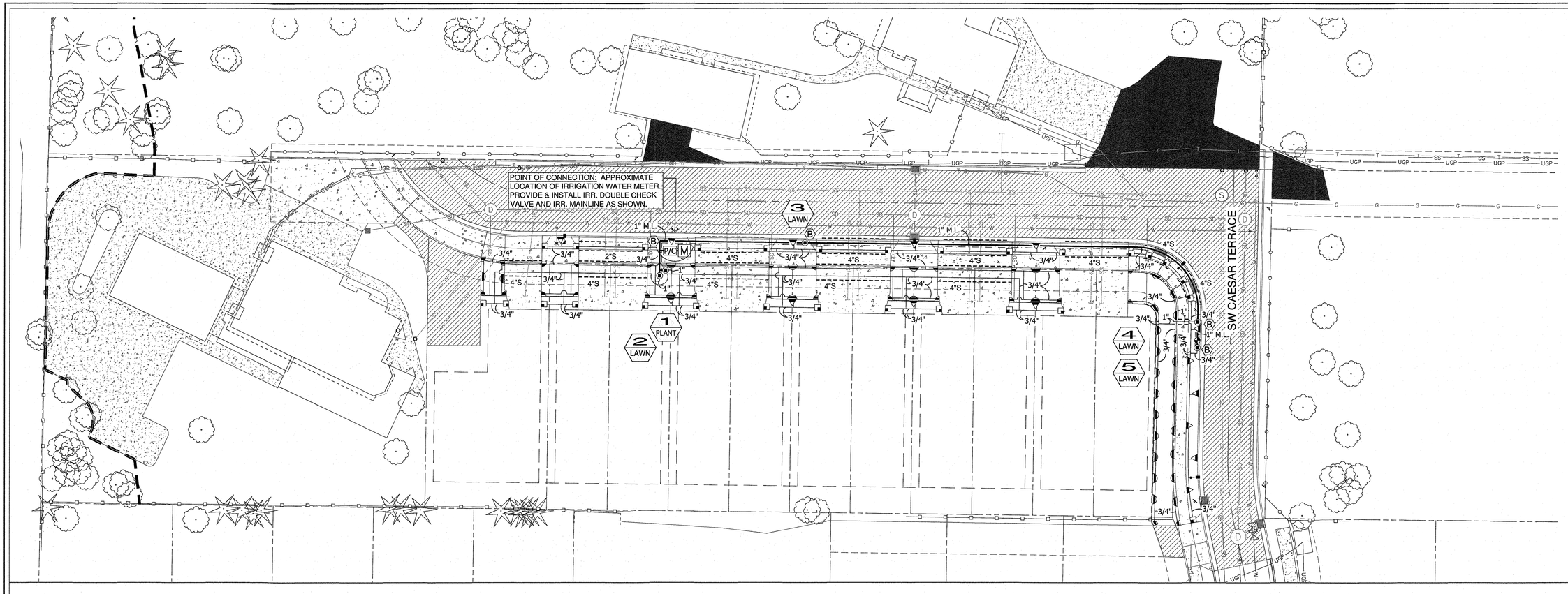

IRRIGATION GENERAL KEY

SYM.	DESCRIPTION
4"S	CLASS 200 PVC SLEEVE (3" OR SMALLER) 3034 PVC (4" OR LARGER) - SIZE AS NOTED - REFER TO DETAIL J/L104
1" M.L.	SCH. 40 PVC IRRIGATION MAINLINE - SIZE AS NOTED - REFER TO DETAIL F/L103 - TYPICAL
	MAINLINE GATE VALVE - SAME SIZE AS MAINLINE - REFER TO DETAIL H/L104
1"	SCH. 40 PVC IRRIGATION LATERALS - SIZE AS NOTED
	14 GAUGE CONTROL WIRE WITH 14 GAUGE COMMON WIRE
	HUNTER PGV CONTROL VALVE - REFER TO DETAIL D/L104
B	HUNTER BATTERY CONTROLLER - NODE REFER TO DETAILS D/L104 AND I/L104
1 LAWN	CONTROL VALVE NUMBER
	3/4" QUICK COUPLER VALVE - HUNTER HQ33D-LRC - REFER TO DETAIL C/L104
	1" MANUAL DRAIN VALVE - REFER TO DETAIL E/L104
P/C	POINT-OF-CONNECTION - REFER TO DETAIL A/L104
	DOUBLE CHECK BACKFLOW PREVENTER - REFER TO DETAIL B/L104
M	5/8" X 3/4" WATER METER - SEE CIVIL

SPRINKLER NOZZLE KEY

HEAD	COMPANY & CAT. NO.	RADIUS	G.P.M.	P.S.I.
360° 90°-210°	HUNTER MP1000 ROTATOR	8'-13'	.19-.75	40
360° 90°-270°	HUNTER MP2000 ROTATOR	14'-20'	.40-1.47	40
360° 90°-270°	HUNTER MP3000 ROTATOR	22'-30'	.86-3.64	40
	HUNTER MP SIDE STRIP	STRIP	.44	40
	HUNTER MP LEFT OR RIGHT STRIP	STRIP	.22	40

DESIGN CRITERIA

THE DESIGN OF THE IRRIGATION SYSTEM IS BASED ON 10 G.P.M. @ 70 P.S.I.

VALVE KEY

CONTROL VALVE NO.	1	2	3	4	5							
(P=PLANTINGS, L=LAWN)	L	L	L	L	L							
G.P.M.	4.4	10.6	4.4	9.7	4.0							
CONTROL VALVE SIZE	1.0	1.0	1.0	1.0	1.0							
VALVE TYPE (DR=DRIP, ST=STANDARD)	ST	ST	ST	ST	ST							

REFER TO SHEET L104 FOR IRRIGATION DETAILS & NOTES

SCALE: 1" = 20'-0"

20' 10' 0' 20' 40'

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Phone: 503.601.4516 | Fax: 503.924.4688

REGISTERED 540 TROY A. MEARS OREGON 11/21/2003 LANDSCAPE ARCHITECT

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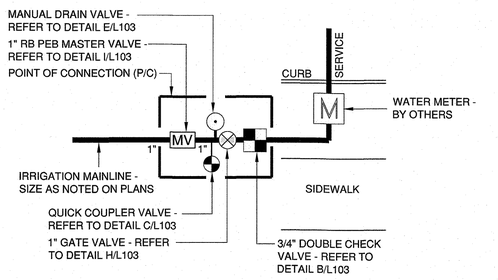
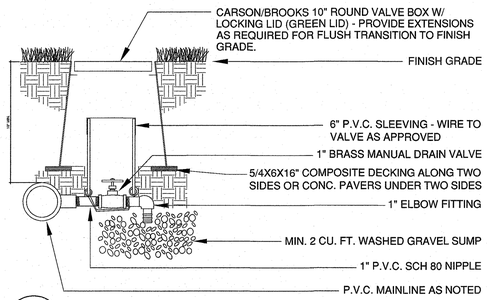
OF 4



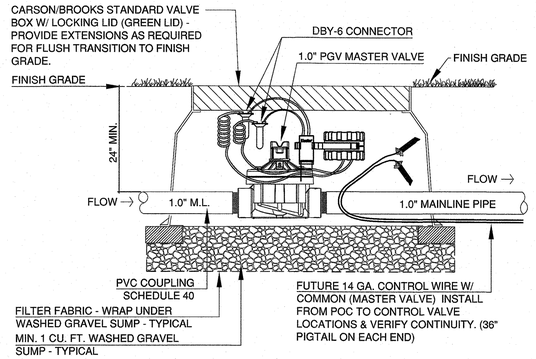
A L103 POINT-OF-CONNECTION DIAGRAM

NTS



E L103 MANUAL DRAIN VALVE DETAIL

NTS

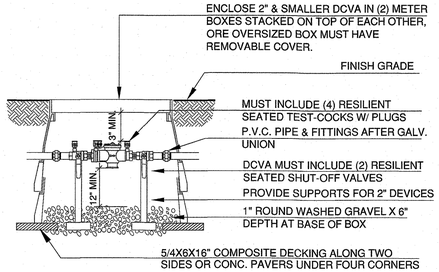


I L103 MASTER VALVE DETAIL

NTS

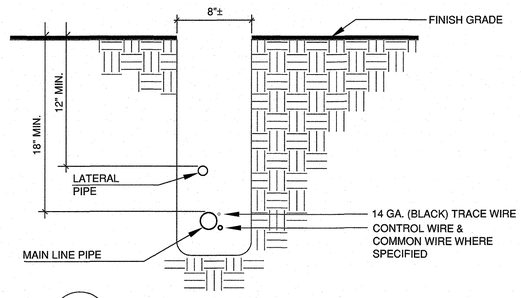
GENERAL NOTES

1. LANDSCAPE CONTRACTOR IS REQUIRED TO COORDINATE ALL IRRIGATION SLEEVING WITH GENERAL CONTRACTOR. (REFER TO DRAWINGS). ALL SLEEVING VARIATIONS FROM DRAWINGS ARE TO BE REVIEWED AND APPROVED BY IRRIGATION DESIGNER PRIOR TO INSTALLATION. AS-BUILT RECORD DRAWINGS ARE REQUIRED FOR ALL SLEEVING UPON COMPLETION. SLEEVES ARE TO BE A MIN. 2X THE SIZE OF THE LATERAL(S) AND/OR MAINLINE INSTALLED WITHIN IT. SLEEVING IN REQUIRED UNDER ALL HARD SURFACES AND WALLS.
2. MP ROTATOR NOZZLES ON HUNTER PROS-06-PRS40-CV IN LAWN & SHRUB BEDS WHERE INDICATED - PROS-06-PRS30-CV IN LAWN AND SHRUB BEDS WHERE MIN. RADIUS IS REQUIRED PER NOZZLE. DRAIN CHECK VALVES (CV) ARE REQUIRED ON ALL SPRINKLER HEADS WHERE THE ELEVATION DIFFERENCE IN ZONE LATERAL PLUMBING AT ITS HIGHEST POINT IS HIGHER THAN THE LOWEST SPRINKLER HEAD ELEVATION POINT WITHIN EACH CONTROL VALVE ZONE TO PREVENT LOW HEAD DRAINAGE.
3. ADJUST MP ROTATOR NOZZLES TO MEET HEAD-TO-HEAD COVERAGE AND ARC TO MATCH ZONE LANDSCAPE AREA.
4. INSTALL VALVE BOXES PERPENDICULAR TO WALLS, WALKS, AND CURBS.
5. INSTALL SPRINKLER HEADS PERPENDICULAR TO SLOPES OF FINISH GRADS.
6. INSTALL PIPING IN TRENCH WHERE POSSIBLE (6" MIN. SEPARATION REQUIRED).
7. PLACE (2) 1" VALVES PER STANDARD VALVE BOX AND (1) 1-1/2" VALVE PER STANDARD VALVE BOX.
8. INSTALL SPRINKLER HEADS FLUSH WITH TOP OF WALLS, WALKS AND CURBS.
9. INSTALL SPRINKLER HEADS A MIN. OF 12" SEPARATION FROM BUILDING WALLS AND 12" MIN. SEPARATION FROM ALL HARD SURFACES (CURBS, WALKS, ETC.)
10. WHERE Q.C.V. ARE SHOWN ADJACENT TO CONTROL VALVE, INSTALL IN VALVE BOX WITH CONTROL VALVE.
11. ADJUST HEAD LOCATIONS AS REQUIRED TO AVOID EXISTING FIXED OBJECTS.
12. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE AND FEDERAL REQUIREMENTS. IT SHALL BE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS OR APPROVALS.
13. THIS PLAN IS SCHEMATIC DUE TO THE NATURE OF CONSTRUCTION SLIGHT FIELD MODIFICATIONS MAY BE NECESSARY TO IMPLEMENT PLAN.
14. ALL IRRIGATION SPRINKLER HEADS ARE TO BE ADJUSTED TO PROVIDE COMPLETE AND EVEN COVERAGE (HEAD-TO-HEAD COVERAGE) WITH MINIMAL OVER SPRAY.
15. IRRIGATION LATERAL LINES, MAIN LINES AND EQUIPMENT MAY BE SHOWN OUTSIDE PROPERTY LINES FOR CLARITY. ALL IRRIGATION LINES AND EQUIPMENT ARE TO BE WITHIN AND INSTALLED WITHIN THE LIMITS OF THE PROPERTY LINES AND PLANTING AREAS.
16. IRRIGATION CONTRACTOR TO VERIFY ACTUAL AVAILABLE WATER PRESSURE PRIOR TO BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY IRRIGATION DESIGNER IF AVAILABLE WATER PRESSURE EXCEEDS 5 P.S.I. HIGHER OR LOWER THAN AVAILABLE WATER PRESSURE IS INDICATED ON PLANS.
17. SINGLE (BLUE) TRACE WIRE REQUIRED ON TOP OF ALL IRRIGATION MAIN LINE.
18. PLACE CONTROL WIRE 3" TO 6" AWAY FROM IRRIGATION MAIN LINE.
19. TRENCHING FOR INSTALLATION OF IRRIGATION LINES SHALL BE PERFORMED USING HAND TOOLS ONLY BENEATH PROTECTED TREE DRIPLINES WITH LINES PLACED ABOVE OR BELOW TREE ROOTS WHICH SHOULD REMAIN INTACT WITH THE TRENCH, IF FEASIBLE. IF ROOT PRUNING IS NEEDED, COORDINATE WITH THE PROJECT ARBORIST TO ASSESS EXPOSED ROOTS AND PROVIDE ON-THE-GROUND RECOMMENDATIONS AND DOCUMENTATION FOR ROOT PRUNING OR PROTECTION PRIOR TO IMPACTS.



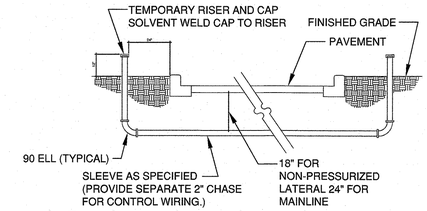
B L103 DOUBLE CHECK BACKFLOW PREVENTER DETAIL

INSTALL TO LOCAL CODE REQUIREMENTS NTS



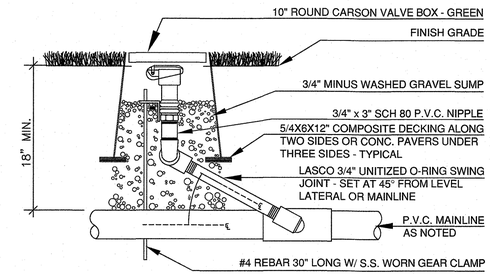
F L103 TRENCH DETAIL

REFER TO SPECIFICATIONS NTS



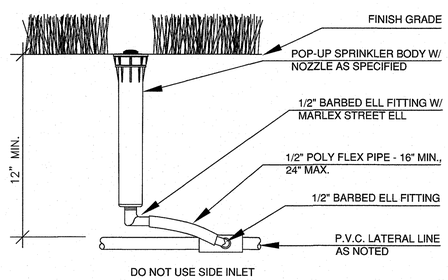
J L103 SLEEVE INSTALLATION DETAIL

NTS



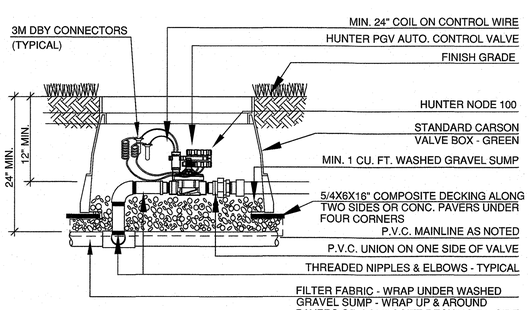
C L103 QUICK-COUPLING VALVE DETAIL (3/4")

NTS



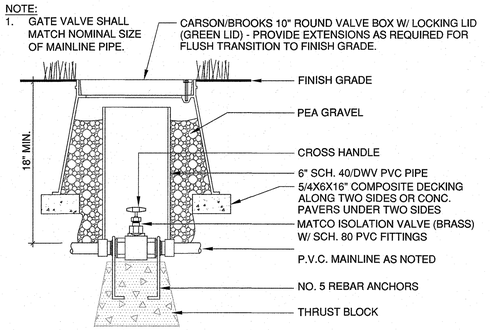
G L103 MP ROTATOR SPRINKLER DETAIL

HUNTER PROS-06-PRS40-CV NTS



D L103 CONTROL VALVE & BOX DETAIL

NTS



H L103 ISOLATION / GATE VALVE DETAIL

(MAINLINE GATE VALVE SIZE - 2" AND SMALLER) NTS

MEARS DESIGN GROUP
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