



NO WOODY LANDSCAPE SHALL BE PLANTED WITHIN TEN FEET (10") OF ANY FIRE HYDRANT. OVERREACHING BRANCHES OF TREES ADJACENT TO

5. GATE VALVES SHALL CONFORM TO THE LATEST AWWA SPECIFICATIONS FOR COLD WATER, RESILIENT SEATED WEDGE GATE VALVES, 200 PSI WORKING PRESSURE. THEY SHALL BE IRON—BODIED BRONZE—MOUNTED, NON—RISING STEM, COUNTER—CLOCKWISE OPENING, MECHANICAL JOINT BY FLANGED. VALVE STEMS SHALL BE PROVIDED WITH O—RING SEALS AND SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY OR APPROVED

. THE HOLDING SPOOL SHALL BE A MECHANICAL-JOINT (M.J.) HOLDING SPOOL, WITH THE USE OF MEGA-LUG CONNECTORS OR APPROVED EQUAL WITH CLASS 52 DUCTILE IRON PIPE.

8. IF DISTANCE BETWEEN WATER MAIN AND FIRE HYDRANT IS GREATER THAN 17 FEET, RESTRAINED JOINTS ARE REQUIRED ON ANY ADDITIONAL JOINTS.

THE MAXIMUM 6-INCH HYDRANT RUN ALLOWED IS 20 FEET. ANY PROPOSED HYDRANT RUN EXCEEDING 20' IN LENGTH SHALL BE SIZED USING AN ENGINEERED HYDRAULIC FIRE FLOW MODEL. ANY HYDRANT RUN EXCEEDING 50 FEET IN LENGTH SHALL BE NO LESS THAN 8-INCHES IN DIAMETER.

5. FIRE HYDRANTS SHALL BE AVK, CLOW MEDALLION, M & H 129S, MUELLER CENTURION, OR WATEROUS.

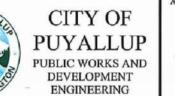
FIRE HYDRANTS SHALL BE LOCATED A MINIMUM OF 50 FEET FROM A BUILDING OR STRUCTURE.

10. THE CONTRACTOR SHALL PLACE A 6 OZ. GEOTEXTILE FABRIC AROUND THE WASHED ROCK AREA, ENDS TO OVERLAP.

11. A FLUORESCENT ORANGE BAG MUST COVER AND BE SECURED TO THE FIRE HYDRANT UNTIL APPROVED FOR USE BY CITY ENGINEER

FIRE HYDRANT ASSEMBLY





4-1/2"

CONCRETE COLLAR

SHALL BE USED AS REQUIRED, (SEE NOTES 2 & 3)

(SEE NOTE 6-G)

WATER VALVE DETAIL
NOT TO SCALE

NEAT LINE CUTS SHALL BE SEALED WITH A HOT PAVING GRADE ASPHALT AND FACE OF CUT TACKED.

ALL FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C 110 AND AWWA C 111.

48" IN UNIMPROVED RIGHT-OF-WAY AND UNIMPROVED EASEMENTS.

REQUIRED TO CONNECT TO VALVES OR OTHER EQUIPMENT.

GREATER THAN TEN (10) INCHES

SPRINKLER

IDENTIFICATION PLATECAST DETAIL



- 1" METAL STOCK

VALVE OPERATING NUT EXTENSION DETAIL
NOT TO SCALE

- 1/8" MIN. THICKNESS

2-1/4" INSIDE MEASUREMENT 2-1/4" DEPTH

THE FDC SHALL BE A MINIMUM OF 50 FEET FROM THE BUILDING, UNLESS APPROVED BY THE FIRE CODE OFFICIAL, BUT NEVER LESS THAN

THERE SHALL BE A MINIMUM OF 36" OF UNOBSTRUCTED CLEARANCE

SEE STANDARD DETAIL 03.05.01 FOR GUARD POST DETAIL AND SPACING.

IDENTIFICATION PLATECAST DETAIL NOTES:

IDENTIFICATION PLATECAST WILL BE BRASS

2. IDENTIFICATION PLATECAST WILL BE 1/4" THICK

3. LETTERS WILL BE ONE INCH HIGH AND RAISED

4. USE TWO (2) STAINLESS STEEL U-BOLTS TO AFFIX TO PIPE

IF THE PROJECT IS UTILIZING A FIRE BOOSTER PUMP, THE FDC MUST CONNECT TO THE SPRINKLER SYSTEM ON THE DISCHARGE SIDE OF THE

PUMP IN ACCORDANCE WITH NFPA REGULATIONS.

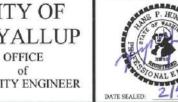
AROUND THE PERIMETER OF ANY FDC.

5 FEET FROM BUILDING.



OPERATING NU

1/8" MIN. THICKNESS



SEE NOTE 1

XXXXXXX

1. TRENCHING SHALL MEET THE REQUIREMENTS OF SECTION 7-08.3(1)A AND 2-06.3(1)

2. BEDDING MATERIAL SHALL CONFORM TO 9-03.12(3) GRAVEL BACKFILL FOR PIPE

GRAVEL BACKFILL SHALL CONFORM TO 9-03.12(1)A GRAVEL BACKFILL FOR

12" DIAMETER

STANDARD POST INDICATOR VALVE



BACKFILL MATERIAL

SEE NOTE 3

4" MIN. FOR 27" PIPE AND SMALLER

6" MIN. FOR PIPE LARGER THAN 27"

POST ASSEMBLY.

STANDPIPE GROUND LINE MARK.

THE TOP OF THE STANDPIPE.

APPROPRIATE VALVE SIZE.

POST ASSEMBLY.

5-ft FROM BUILDING.

. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE

SET THE "OPEN" AND "SHUT" TARGETS FOR THE

ELECTRONIC UL LISTED TAMPER SWITCH.

RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR

THERE SHALL BE 36" OF UNOBSTRUCTED CLEARANCE

AROUND THE PERIMETER OF ALL POST INDICATOR VALVES.

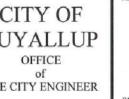
POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM

ALL POST INDICATOR VALVES SHALL BE INSTALLED WITH AN

STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH

. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE





THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN CONSTRUCTING THRUST BLOCKS:

D. RESTRAINED JOINTS SHALL BE INSTALLED, IN ADDITION TO CONCRETE THRUST BLOCKING.

E. BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.

BEARING SURFACE AREAS TO BE ADJUSTED BY THE ENGINEER FOR OTHER PRESSURE AND/OR SOIL CONDITIONS.

ALL PIPE SHALL BE PROPERLY BEDDED, SEE CITY OF PUYALLUP STANDARD BEDDING DETAIL NO. 06.01.01.

A. BLOCKS MUST BE POURED OR PLACED AGAINST UNDISTURBED SOIL.

CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE.

NOT TO SCALE)

B. THE PIPE FITTING(S) AND BOLTS MUST BE ACCESSIBLE. WRAP IN PLASTIC BEFORE POURING CONCRETE BLOCKING.

DIVIDE THRUST BY SAFE BEARING LOAD TO DETERMINE REQUIRED AREA (IN SQUARE FEET) OF CONCRETE TO DISTRIBUTE LOAD.

C. CONCRETE SHOULD BE CURED FOR AT LEAST 5 DAYS AND SHOULD HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28

HORIZONTAL THRUST **BLOCKING**

03.02.01-

OFFICE 03.10.02 THE CITY ENGINEER OT TO SCALE) - CLEAN AND TACK EDGES WITH SEALER CSS1 AND SEAL JOINTS WITH HOT ASPHALT CEMENT (AR4000W) - 4" (MIN.) COMPACTED THICKNESS ASPHALT CONCRETE (MATCH EXISTING THICKNESS) 1/3 TOTAL LENGTH HMA CL 1/2" PG 64-22 - EXISTING ASPHALT

BEDDING

MATERIAL,

SEE NOTE 2

OF THE WSDOT SPECIFICATIONS.

ZONE BEDDING.

FOUNDATIONS, CLASS A.

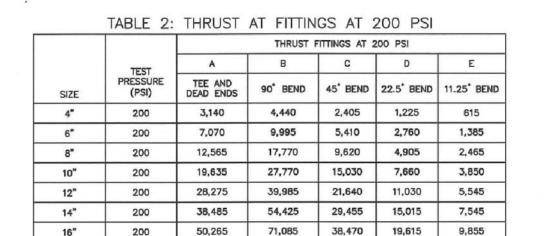


TABLE 3. READING VALUE OF SOIL

TABLE 3: BEARING VALUE	. OF SOIL
SOIL TYPE	SAFE BEARING LOAD LBS/SF
MUCK, PEAT, ETC.	0
SOFT CLAY/ALLUVIAL SOIL	1,000
SAND	2,000
SAND AND GRAVEL	3,000
SAND AND GRAVEL CEMENTED WITH CLAY	4,000

SEE CITY STANDARDS 03.02.01-1 AND 03.02.01-2 FOR ADDITIONAL INFORMATION.

TO DETERMINE THRUST AT PRESSURES OTHER THAN PSI SHOWN, MULTIPLY THE THRUST OBTAINED IN TABLE 2 BY THE RATIO OF THE PRESSURE TO 200 PSI.

THE THRUST ON A 12 INCH, 90° BEND AT 300 PSI.

 $39,985 \times \frac{300 \text{ PS}}{200 \text{ PS}} = 59,978 \text{ LBS}$

TO DETERMINE THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET (SF): SEE TABLE 3, BEARING VALUE OF SOIL

FOR SAND AND GRAVEL BEARING VALUE FROM TABLE 3 IS 3,000 LBS/SF

59,978 LBS + 3000 LB/SF = 20 SF OF AREA CONTRACTOR TO PROVIDE BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE

AREAS SHALL BE ADJUSTED FOR OTHER PRESSURE CONDITIONS.

NO WATER MAIN SHALL DEAD END AGAINST A MAIN LINE VALVE. DEAD END WATER MAINS SHALL BE BLOCKED AGAINST A RESTRAINED MECHANICAL JOINT (M.J.) PLUG OR CAP.



OFFICE THE CITY ENGINEER



THRUST BLOCKING TABLE

03.02.01-

OFFICE THE CITY ENGINEER



DETECTABLE MARKING TAPE, (SEE NOTE 7)

ALL VALVE OPERATING NUT EXTENSIONS ARE TO BE MADE OF STEEL, SIZED AS NOTED, AND PAINTED WITH TWO COATS OF METAL PAINT.

ONE-QUARTER (1-1/4) INCHES SHALL BE STEEL, ASTM A 307, GRADE B, WITH CADMIUM PLATING, ASTM A 165, TYPE NS.

PROVIDE A WASHER FOR EACH NUT, WHERE NEEDED. WASHERS SHALL BE OF THE SAME MATERIAL AS THE NUTS.

WATER MAINS SHALL HAVE A MINIMUM COVER OF 36" FROM PAVED FINAL GRADE IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM O

VALVE OPERATING NUT EXTENSIONS ARE REQUIRED WHEN THE VALVE NUT IS MORE THAN FIVE (5) FEET BELOW FINISHED GRADE. EXTENSIONS ARE TO BE MINIMUM OF TWO (2) FEET LONG, ONLY ONE EXTENSION TO BE USED PER VALVE. TOP OF EXTENSION SHALL BE 2 FEET 6 INCHES TO 3 FEET BELOW FINISHED GRADE.

VALVE BOXES SHALL BE TWO-PIECE, ADJUSTABLE, CAST IRON WITH EXTENSION PIECES (IF NECESSARY), AS MANUFACTURED BY THE VANRICH #940 SEATTLE OR

APPROVED EQUAL. THE WORD "WATER" SHALL BE CAST IN RELIEF ON THE VALVE BOX COVER. VALVE BOX TOPS INSTALLED IN ARTERIAL ROADWAYS SHALL BE

MANUFACTURED BY EAST JORDAN (EJ) IRONWORKS MODEL 8555 WITH LOCKING VALVE BOX COVER MODEL 6800 (PART# 06800025U) OR APPROVED EQUAL.

WATER MAINS SHALL BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH DIVISION 7 OF THE WSDOT STANDARD SPECIFICATIONS SUPPLEMENTED WITH THE

DUCTILE IRON PIPE SHALL CONFORM TO AWWA C 151, THICKNESS CLASS 52, AND THE EXTERIOR SHALL BE COATED WITH COAL TAR VARNISH. PIPE AN

FITTINGS SHALL BE MORTOR LINED AND SHALL CONFORM TO AWWA C 104. THE THICKNESS OF THE LINING SHALL BE NOT LESS THAN 1/16" THICK FOR 3" TO 12" PIPE, 3/32" THICK FOR 14" TO 24" PIPE, AND 1/8" THICK FOR 30" TO 54" PIPE. THE CEMENT LINING SHALL CONFORM TO THE

JOINTS SHALL BE TYTON PUSH-ON JOINTS, OR APPROVED EQUAL, OR MECHANICAL JOINT TYPE PER AWWA C 111 EXCEPT WHERE FLANGED JOINTS ARE

BOLTS AND NUTS FOR BURIED FLANGES LOCATED OUTDOORS, ABOVE GROUND, OR IN OPEN VAULTS IN STRUCTURES SHALL BE TYPE 316 STAINLESS

BOLTS USED IN FLANGE INSTALLATION SETS SHALL CONFORM TO ASTM B 193, GRADE B7. NUTS SHALL COMPLY WITH ASTM A 194, GRADE 2H.

STEEL COMFORMING TO ASTM A 193, GRADE B8M FOR BOLTS, AND ASTM A 194, GRADE BM FOR NUTS. BOLTS AND NUTS LARGER THAN ONE AND

RESILIENT SEATED WEDGE GATE VALVES SHALL BE USED FOR TEN (10) INCH MAINS AND SMALLER. BUTTERFLY VALVES SHALL BE USED FOR MAINS

) RESILIENT SEATED WEDGE GATE VALVE: GATE VALVES SHALL CONFORM TO THE LATEST AWWA SPECIFICATIONS FOR COLD WATER, DOUBLE-DISK GAT

2) BUTTERFLY VALVES: BUTTERFLY VALVES CONFORMING WITH AWWA C 504, CLASS 150 AND SHALL HAVE STANDARD AWWA TWO (2) INCH SQUARE NUT.

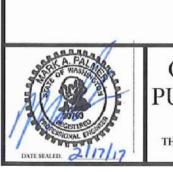
DETECTABLE MARKING TAPE SHALL BE INSTALLED 18" ABOVE PIPE, BE BLUE IN COLOR, AND READ "CAUTION WATER LINE BELOW" MEETING WSDOT SPEC 9-15.18.

VALVES, 200 PSI WORKING PRESSURE. THEY SHALL BE IRON-BODIED, BRONZE MOUNTED, NON-RISING STEM, WITH TWO (2) INCH SQUARE NUT

COUNTER-CLOCKWISE OPENING, MECHANICAL JOINT AND / OR FLANGED ENDS (6" VALVES ON FIRE HYDRANT LINES WHICH SHALL BE MECHANICAL

JOINTS BY FLANGED). VALVE STEMS SHALL BE PROVIDED WITH O-RING SEALS AND SHALL BE AS MANUFACTURED BY THE MUELLER COMPANY OR

WATER VALVES AND MAINS



03.01.01

PUYALLU OFFICE THE CITY ENGINEER

BEDDING AND BACKFILL

PIPE TRENCHING

UNDISTURBED OR COMPACTED

SUB-GRADE

City of Puyallup evelopment & Permitting Service: **ISSUED PERMIT** Building **Public Works** Engineering Traffic

FIRE HYDRANT/FDC LOCATION/ACCESS APPROVED CITY OF PUYALLUP FIRE CODE OFFICIAL DATE 10/21/2024 <u>NOTE:</u> THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL

THE CITY WILL NOT BE

OFFICIAL.

OMISSIONS ON THESE PLANS.

FIELD CONDITIONS MAY DICTATE

CHANGES TO THESE PLANS AS

DETERMINED BY THE FIRE CODE

DEVELOPMENT ENGINEERING 10/18/2024 NOTE: THIS APPROVAL IS VOID RESPONSIBLE FOR ERRORS AND/OR

AFTER 180 DAYS FROM APPROVAL THE CITY WILL NOT BE RESPONSIBL FOR ERRORS AND/OR OMISSIONS ON THESE PLANS. FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT ENGINEERING MANAGER.

APPROVED

ma Calous

CITY OF PUYALLUP

CD

rofessional of Record:

GROUP,

TDG# 2400

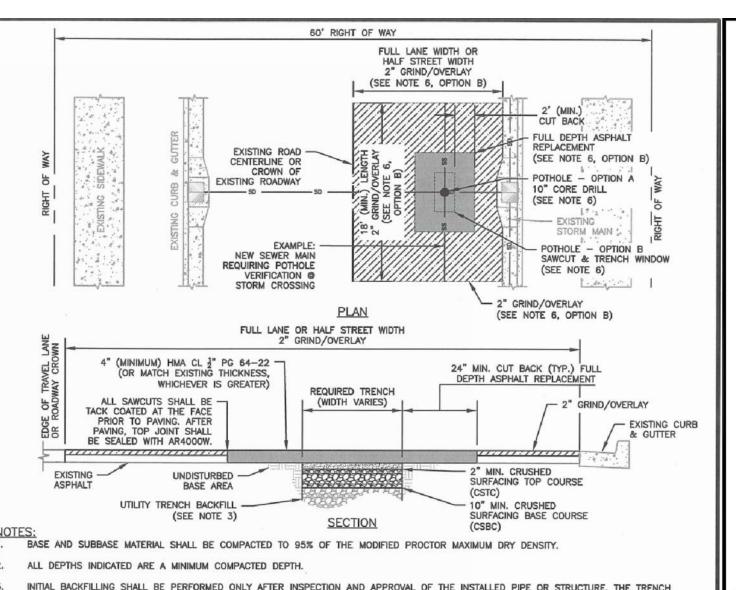
8/27/2

ORMA

3/5

CIVIL DETAILS

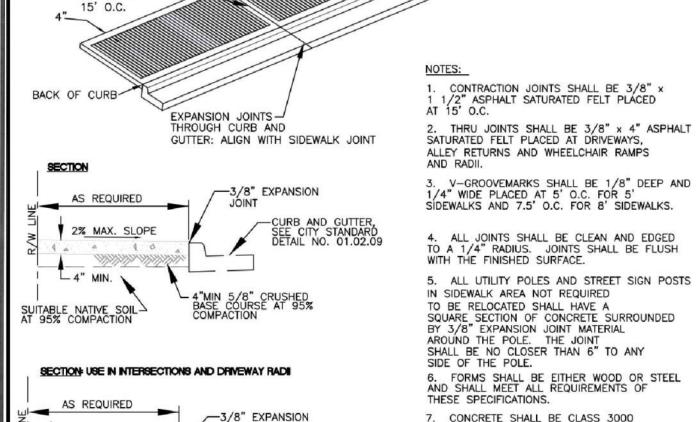
- 4" MAXIMUM (TYP)



- INITIAL BACKFILLING SHALL BE PERFORMED ONLY AFTER INSPECTION AND APPROVAL OF THE INSTALLED PIPE OR STRUCTURE, THE TRENCH BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL NO. 06.01.01.
- ALL BACKFILL FOR PIPE TRENCHES SHALL BE MECHANICALLY COMPACTED BY A POWER-OPERATED MECHANICAL TAMPER(S) AS SPECIFIED IN WSDOT STANDARD SPEC. 2-03.3 (14)C, COMPACTING EARTH EMBANKMENTS, METHOD C OF THE WSDOT STANDARD SPECIFICATIONS.
- IF PAVING SURFACES ADJACENT TO THE TRENCH OPENING MAY BE DAMAGED WHERE TRENCHES ARE MADE PARALLEL TO THE STREET, OR WHERE A NUMBER OF CROSS TRENCHES ARE LAID IN CLOSE PROXIMITY TO ONE ANOTHER OR WHERE THE EQUIPMENT USED MAY CAUSE SUCH DAMAGE, THE CITY ENGINEER MAY REQUIRE A NEGOTIATED CONTRIBUTION FROM THE PERMITTEE FOR RESURFACING IN LIEU OF PATCHING. IF THE TOTAL AREA OF THE PROPOSED PATCH OR PROBABLE DAMAGED AREA EXCEEDS 25 PERCENT OF THE TOTAL PAVEMENT SURFACING BETWEEN CURB FACES OR BETWEEN CONCRETE GUTTER EDGES IN ANY BLOCK, SUCH NEGOTIATIONS SHALL BE CARRIED ON AND CONTRIBUTIONS AGREED UPON PRIOR TO ISSUANCE OF A PERMIT. SUCH CONTRIBUTIONS SHALL BE IN ADDITION TO THE STANDARD PERMIT FEE.
- POTHOLING FOR UTILITIES:

OPTION A - UP TO A 10" DIAMETER CORE DRILL IS ALLOWED. CORE HOLES MADE DURING UTILITY POTHOLES SHALL BE BACKFILLED WITH CDF TO WITHIN 4" OF FINISHED GRADE. 4" OF HMA SHALL THEN BE PLACED AND COMPACTED, FLUSH WITH EXISTING GRADE. OPTION B - FOR POTHOLE WINDOWS LARGER THAN 10" IN DIAMETER OR TRENCHING COMPLETED IN EXISTING ROADWAY. THE CONTRACTOR SHALL MEET CITY STANDARD 06.01.01 FOR PIPE BEDDING AND BACKFILL REQUIREMENTS. PAVEMENT RESTORATION SHALL BE ACCOMPLISHED BY INSTALLING THE TRENCH PATCH, AS SHOWN HEREIN, AND THEN GRINDING/OVERLAYING TO A MINIMUM DEPTH OF 2". THE LIMITS OF THE REQUIRED GRIND/OVERLAY SHALL BE TO THE NEAREST LANE LINE, OR HALF STREET, AND SHALL BE A MINIMUM OF 18 FEET LONG (LONGITUDINALLY ALONG ROADWAY) CENTERED AT LOCATION OF PATCH. NOTE: IF EXISTING ASPHALT THICKNESS IS LESS THAN 3", FULL DEPTH PAVEMENT REPLACEMENT, IN LIEU OF GRIND/OVERLAY, TO MEET A MINIMUM ASPHALT THICKNESS OF 4" WILL BE REQUIRED. WHERE LOCATION OF TRENCH OR POTHOLE WINDOW INTERSECTS ROAD CENTERLINE, A MINIMUM GRIND AND OVERLAY OF ONE FULL LANE WIDTH

(12') IS REQUIRED CENTERED ON ROADWAY. NO LONGITUDINAL JOINTS WILL BE ALLOWED IN THE WHEEL PATH. ALL MANHOLE FRAMES, VALVE FRAMES AND MONUMENT COVERS SHALL BE INSTALLED AFTER PLACEMENT OF ASPHALT. IF MORE THAN ONE LIFT IS NECESSARY, FRAMES AND LIDS WILL BE ADJUSTED TO FINISH GRADE AT FIRST LIFT AS DIRECTED BY THE CITY



JOINTS AT

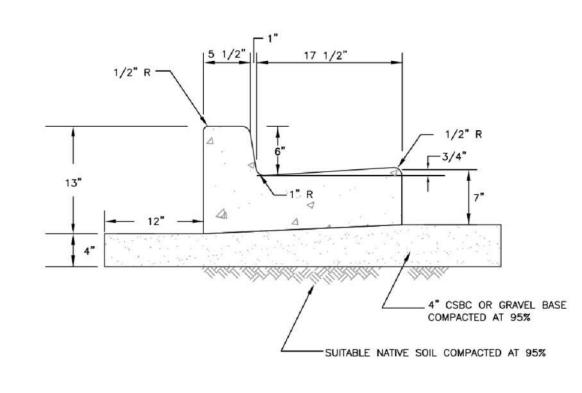
AASHTO GRADING 467 COARSE AGGREGATE, NO FLY ASH. SIDEWALK MINIMUM UNOBSTRUCTED CLEAR WIDTH SHALL BE 4', EXCLUSIVE OF THE WIDTH OF THE CURB. 9. GRATINGS, ACCESS COVERS, JUNCTION BOXES, CABLE VAULTS, PULL BOXES AND OTHER APPURTENANCES WITHIN THE SIDEWALK (RIGHT-OF-WAY)

> 10. CURB RAMPS SHALL BE CONSTRUCTED AT INTERSECTIONS USING A DESIGN PREPARED BY A LICENSED PROFESSIONAL ENGINEER. WHEN A RAMP DESIGN FAILS TO MEET ALL APPLICABLE DESIGN STANDARDS, THE ENGINEER SHALL DOCUMENT WHY THE PROPOSED RAMP ACHIEVES DESIGN STANDARDS TO THE MAXIMUM EXTENT FEASIBLE.

MUST HAVE SLIP RESISTANT SURFACE AND MATCH

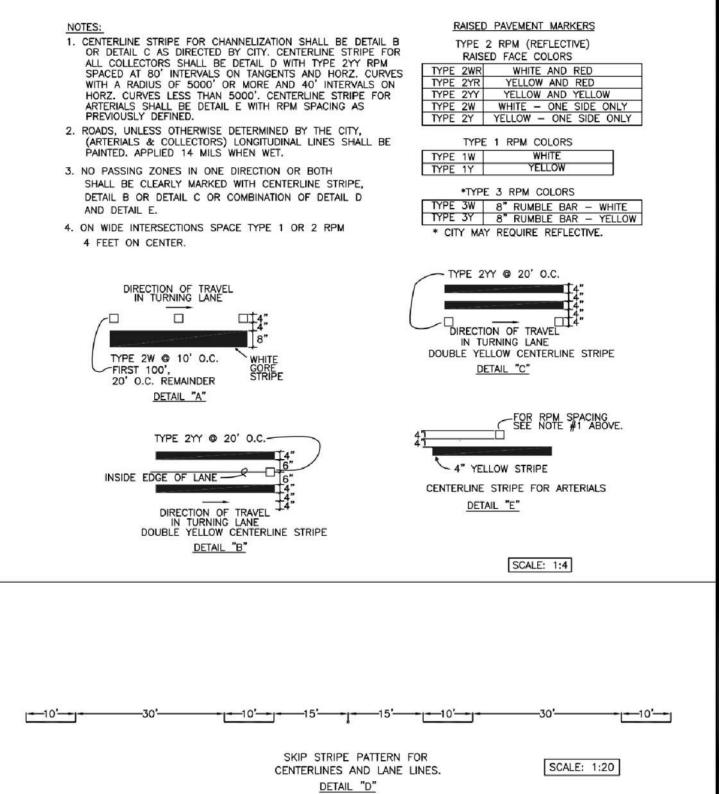
THE GRADE OF THE SIDEWALK.

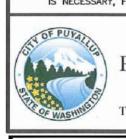
COMMERCIAL CONCRETE, 5.5 SACK MINIMUM,

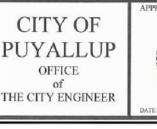


NOTES:

- CONTRACTION JOINTS SHALL BE 3/8" x 2 1/4" ASPHALT SATURATED FELT PLACED IN ALL EXPOSED SURFACES OF CURB AND GUTTER AND SPACED AT 15' MAX. 10' MIN. O.C.
- THRU JOINTS SHALL BE 3/8" ASPHALT SATURATED FELT PLACED AT POINTS OF TANGENCY ON CURVES, AT CATCH BASINS, AND AT EDGES OF ALLEY AND DRIVEWAYS. THE MAXIMUM DISTANCE BETWEEN THRU JOINTS SHALL BE 100'.
- CONCRETE SHALL BE CLASS 3000 COMMERCIAL CONCRETE, 5.5 SACK MINIMUM, AASHTO GRADING 467 COARSE AGGREGATE, NO FLY ASH.
- FORMS SHALL BE STEEL UNLESS PRIOR APPROVAL IS GIVEN BY THE CITY ENGINEER. FORMS SHALL BE SET TRUE TO LINE AND GRADE AND SECURELY STAKED PRIOR TO CONCRETE PLACEMENT. FULL DEPTH DIVISION PLATES ARE ONLY TO BE USED WHERE THRU JOINTS ARE TO BE PLACED.
- THE 1" RADIUS ON THE UPPER FACE OF THE CURB MAY BE FORMED BY AN EDGER TOOL OR BUILT INTO THE FACE FORM. THE 1" RADIUS AT THE BOTTOM FACE OF THE CURB SHALL BE FORMED BY THE FACE FORM.









STREET PATCH 01.01.20



AREAS (DETACHED DWELLINGS)

BY DEVELOPMENT SERVICES MANAGER

MULTI-FAMILY RESIDENTIAL AREAS

8'(RS ZONES) COMMERCIAL USES, WHEN REQUIRED

* MATCH GREATEST WIDTH FOR ANY ADJACENT ZONE

MINIMUM SIDEWALK WIDTHS

5'(RS ZONES) SINGLE FAMILY RESIDENTIAL

8'(RM ZONES) MEDIUM AND HIGH DENSITY

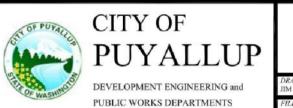
8'(CG, CBD ZONES) COMMERCIAL AREAS

8'(PF ZONES) PUBLIC FACILITIES AREAS

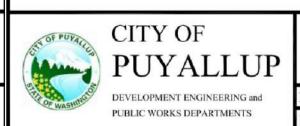
8'(ML ZONES) INDUSTRIAL AREAS

8'(F ZONES) FAIR AREAS





CURB AND GUTTER



PAVEMENT MARKING DETAILS

01.03.10

FOR SIGNIFICANT TREES, A MINIMUM OF 50 PERCENT OF

THE CRITICAL ROOT ZONE MUST BE PRESERVED AT

NATURAL GRADE, WITH NATURAL GROUND COVER. THE

PROTECTION ZONE MAY BE IRREGULAR. NO CUT OR FILL GREATER THAN FOUR (4) INCHES IN DEPTH MAY BE

LOCATED CLOSER TO THE TREE TRUNK THAN 1/2 THE CRPZ RADIUS DISTANCE. (EXAMPLE, 6-INCH DBH TREE

HAS A 12'CRPZ AREA (IN DIAMETER) - MEANING NO

CUT OR FILL GREATER THAN 4"IN DEPTH IS ALLOWED

NO CUT OR FILL WITHIN THE DISTANCE FROM THE TREE WHICH IS THREE (3) TIMES THE TRUNK DBH IS ALLOWED.

(EXAMPLE, 6-INCH DBH TREE X 3 = 18", MEANING NO

CUT IS ALLOWED WITHIN 18-INCHES OF A TREE WHICH

THESE CRITERIA REPRESENT MINIMUM STANDARDS FOR

ALLOWED, PROVIDED THAT ALL DESIGN ALTERNATIVES

PRECONDITIONING AND AFTER CARE MITIGATION PROGRAM

DETERMINING WHETHER OR NOT A TREE MAY BE REQUIRED TO BE RETAINED. GREATER IMPACTS MAY BE

HAVE BEEN PROVEN UNFEASIBLE AND THAT A

NOTE: EACH OF THE 6" DBH TREES HAVE A

CRPZ = 113 SF. NO CHANGES IN GRADE OR

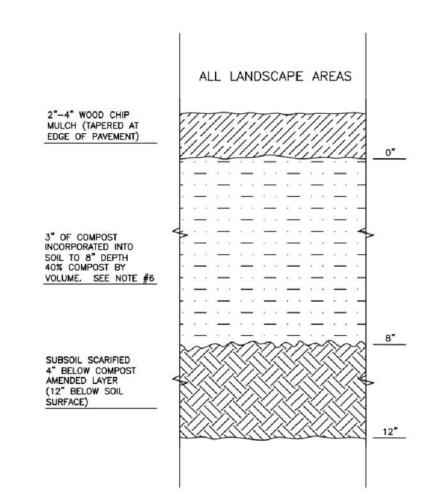
TRENCHING WITHIN THE CRPZ ARE ANTICIPATED.

TREE PROTECTION STANDARDS

WITHIN 6' OF THE TREE TRUNK).

HAS A 6-INCH DIAMETER TRUNK).

IS ESTABLISHED.



1. ALL SOIL AREAS DISTURBED OR COMPACTED DURING CONSTRUCTION, AND NOT COVERED BY BUILDINGS OR PAVEMENT, SHALL BE AMENDED WITH COMPOST AS DESCRIBED BELOW.

- 2. SUBSOIL SHOULD BE SCARIFIED (LOOSENED) 4 INCHES BELOW AMENDED LAYER, TO PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE 12-INCH DEPTH OF UN-COMPACTED SOIL, EXCEPT WHERE SCARIFFERD FOR SOIL STATES OF THE PRODUCE SOIL STATES OF THE PRO STEPS FOR STREET TREES.
- 3. COMPOST SHALL BE TILLED IN TO 8 INCH DEPTH INTO EXISTING SOIL, OR PLACE 8 INCHES OF COMPOST-AMENDED SOIL, PER SOIL SPECIFICATION.
- 4. PLANTING BEDS SHALL RECEIVE 3 INCHES OF COMPOST TILLED IN TO 8-INCH DEPTH, OR MAY SUBSTITUTE 8" OF IMPORTED SOIL CONTAINING 35-40% COMPOST BY VOLUME. MULCH AFTER PLANTING, WITH 4 INCHES OF ARBORIST WOOD CHIP MULCH OR APPROVED EQUAL (6" OF LOOSE
- 5. SETBACKS: TO PREVENT UNEVEN SETTLING, DO NOT COMPOST-AMEND SOILS WITHIN 3 FEET OF UTILITY INFRASTRUCTURES (POLES, VAULTS, METERS ETC.). WITHIN ONE FOOT OF PAVEMENT EDGE, CURBS AND SIDEWALKS SOIL SHOULD BE COMPACTED TO APPROXIMATELY 95% PROCTOR TO ENSURE A FIRM SURFACE.
- 6. SEE SECTION 8.2(B) OF THE VMS FOR SOIL AMENDMENT AND INSTRUCTION PROCEDURES FOR STREET TREE PLANTER STRIPS. ALL STREET TREE PLANTER STRIPS SHALL RECEIVE 40% COMPOST AMENDED SOIL TO THE FULL DEPTH OF THE STREET TREE ROOTBAL

PUYALLUI

DEVELOPMENT ENGINEERING and

PUBLIC WORKS DEPARTMENTS

SOIL AMENDMENT

AND DEPTH

. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION

2. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR CONSTRUCTION, ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITEE.

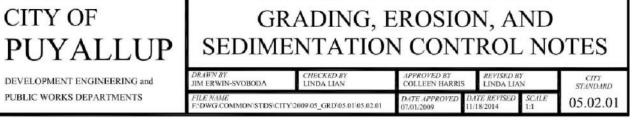
3. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.

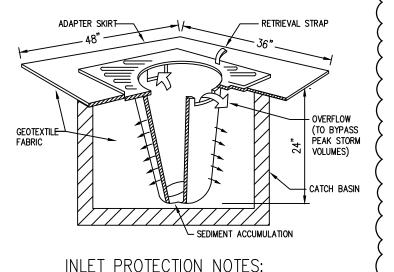
4. APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.

5. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION, GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER I IS IN THE INTEREST OF THE PERMITEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE

6. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES, ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.

. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.





1. FILTERS SHALL BE REMOVED AND CLEANED OR REPLACED AFTER EACH STORM EVENT AND ON A WEEKLY BASIS.

STRAW WATTLE ROLL

8" - 10" DIA.

FLOW

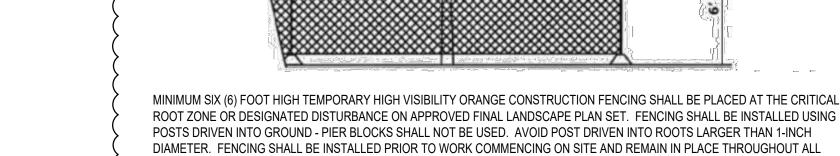


HOLD DOWN

STRAW WATTLE

STRAW WATTLES

WITH SANDBAGS



POSTS DRIVEN INTO GROUND - PIER BLOCKS SHALL NOT BE USED. AVOID POST DRIVEN INTO ROOTS LARGER THAN 1-INCH DIAMETER. FENCING SHALL BE INSTALLED PRIOR TO WORK COMMENCING ON SITE AND REMAIN IN PLACE THROUGHOUT ALL PHASES OF CONSTRUCTION -CALL THE CITY'S PLANNING DIVISION WITH REQUESTS TO MODIFY THE LOCATION OF THE TREE PROTECTION FENCING - (253) 864-4165.

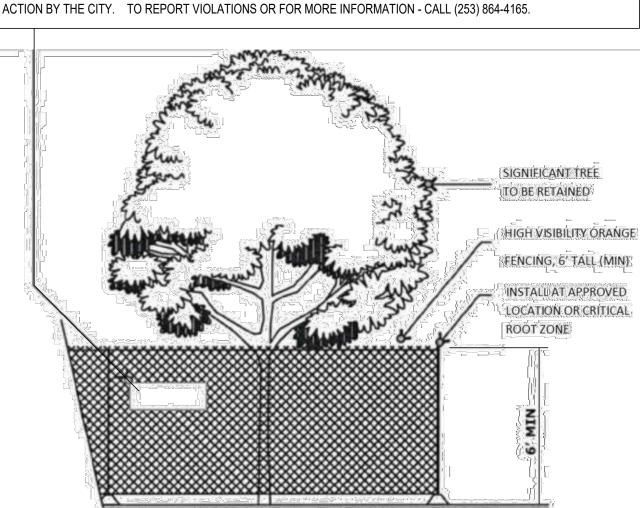
CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVED DAMAGED PORTION OF THE THE ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE. OTHER PRETREATMENT MEASURES MAY BE REQUIRED TO PROTECT ROOT SYSTEM - SEE APPROVED TREE PROTECTION OR FINAL LANDSCAPE PLAN FOR FURTHER DETAILS.

TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING

NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, PLACEMENT OF SOIL OR FILL MATERIAL, STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMITS OF THE ESTABLISHED FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING DIVISION,. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF AN ARBORIST WITH PRIOR WRITTEN APPROVAL OF THE CITY PLANNING DIVISION.

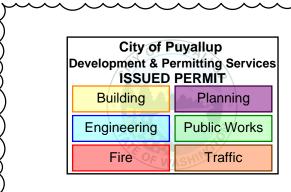
THE ABOVE REFERENCED TPZ SIGNS SHALL BE PLACED EVERY 15 FEET ALONG THE FENCING AND SHALL REMAIN IN PLACE THROUGHOUT ALL PHASES OF CONSTRUCTION.

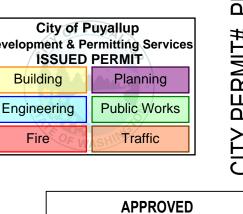




NO ENTRY, GRADE CHANGES, STORAGE/STOCKPILING OF MATERIALS OR EQUIPMENT, PLACEMENT OF FILL OR TOPSOIL. TRENCHING OR VEHICULAR / FOOT TRAFFIC WITHIN THE TPZ. THIS TREE BARRIER SHALL NOT BE REMOVED

WITHOUT AUTHORIZATION FROM THE PUYALLUP PLANNING DEPARTMENT - SUBJECT TO FINES AND ENFORCEMENT

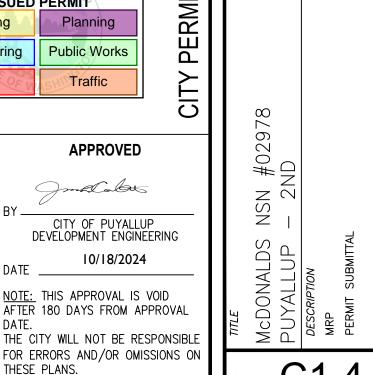




FIELD CONDITIONS MAY DICTATE

CHANGES TO THESE PLANS AS

ENGINEERING MANAGER.



DETERMINED BY THE DEVELOPMENT

(

ofessional of Record:

TDG# 2400

8/27/2

RMA P. INC.

CIVIL DETAILS

2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY"

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.

5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.

6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

7. ANY STRUCTURE AND/OR OBSTRUCTION THAT REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.

8. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE TRUE ELEVATIONS AND LOCATIONS OF HIDDEN UTILITIES. ALL VISIBLE ITEMS SHALL BE THE ENGINEER'S RESPONSIBILITY.

9. THE CONTRACTOR SHALL INSTALL, REPLACE, OR RELOCATE ALL SIGNS, AS SHOWN ON THE PLANS OR AS AFFECTED BY CONSTRUCTION, PER CITY STANDARDS.

10. POWER, STREET LIGHT, CABLE, AND TELEPHONE LINES SHALL BE IN A TRENCH LOCATED WITHIN A 10-FOOT UTILITY EASEMENT ADJACENT TO PUBLIC RIGHT-OF-WAY. RIGHT-OF-WAY CROSSINGS SHALL HAVE A MINIMUM HORIZONTAL SEPARATION FROM OTHER UTILITIES (SEWER, WATER, AND STORM) OF 5 FEET.

11. ALL CONSTRUCTION SURVEYING FOR EXTENSIONS OF PUBLIC FACILITIES SHALL BE DONE UNDER THE DIRECTION OF A WASHINGTON STATE LICENSED LAND SURVEYOR OR A WASHINGTON STATE LICENSED PROFESSIONAL CIVIL ENGINEER.

12. DURING CONSTRUCTION, ALL PUBLIC STREETS ADJACENT TO THIS PROJECT SHALL BE KEPT CLEAN OF ALL MATERIAL DEPOSITS RESULTING FROM ON-SITE CONSTRUCTION, AND EXISTING STRUCTURES SHALL BE PROTECTED AS DIRECTED BY

13. CERTIFIED RECORD DRAWINGS ARE REQUIRED PRIOR TO PROJECT ACCEPTANCE.

14. A NPDES STORMWATER GENERAL PERMIT MAY BE REQUIRED BY THE DEPARTMENT OF ECOLOGY FOR THIS PROJECT. FOR INFORMATION CONTACT THE DEPARTMENT OF ECOLOGY, SOUTHWEST REGION OFFICE AT (360)407-6300.

15. ANY DISTURBANCE OR DAMAGE TO CRITICAL AREAS AND ASSOCIATED BUFFERS, OR SIGNIFICANT TREES DESIGNATED FOR PRESERVATION AND PROTECTION SHALL BE MITIGATED IN ACCORDANCE WITH A MITIGATION PLAN REVIEWED AND APPROVED BY THE CITY'S PLANNING DIVISION. PREPARATION AND IMPLEMENTATION OF THE MITIGATION PLAN SHALL BE AT THE DEVELOPER'S EXPENSE.

CITY OF PUYALLUP ROADWAY STANDARD NOTES

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE

2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"). WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS").

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.

5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE ENGINEERING SERVICES STAFF PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.

6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

7. ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT, SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.

8. MONUMENTS SHALL BE INSTALLED AT ALL STREET INTERSECTIONS, AT ANGLE POINTS, AND POINTS OF CURVATURE IN EACH STREET. ALL BOUNDARY MONUMENTS MUST BE INSTALLED ACCORDING TO THE WASHINGTON STATE SUBDIVISION LAWS.

9. CURB AND GUTTER INSTALLATION SHALL CONFORM TO CITY STANDARD DETAIL 01.02.09.

10. SIDEWALKS AND DRIVEWAYS SHALL BE INSTALLED AS LOTS ARE BUILT ON. SIDEWALKS AND DRIVEWAYS SHALL CONFORM TO CITY STANDARD DETAIL 01.02.01, 01.02.02 AND 01.02.12. IF ASPHALT IS DAMAGED DURING REPLACEMENT OF CURB AND GUTTER, THE REPAIR SHALL CONFORM TO CITY STANDARD DETAIL

11. THE SURROUNDING GROUND (5 FEET BEYOND THE BASE) FOR ALL POWER TRANSFORMERS, TELEPHONE/TV PEDESTALS, AND STREET LIGHT MAIN DISCONNECTS SHALL BE GRADED TO A POSITIVE 2 PERCENT SLOPE FROM TOP OF

12. SIGNAGE AND TRAFFIC CONTROL DEVICES ARE SAFETY ITEMS AND SHALL BE INSTALLED PRIOR TO ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY OR PLAT APPROVAL. HOWEVER, IN LARGER DEVELOPMENTS, EXACT LOCATIONS OF STOP AND YIELD SIGNS MAY NEED TO BE DETERMINED AFTER FULL BUILDOUT WHEN TRAFFIC PATTERNS HAVE BEEN ESTABLISHED. IN THIS CASE, CONTRACTOR SHALL PROVIDE INDICATED "CITY-PLACED" SIGNS, SIGNPOSTS, AND BRACKETS TO THE CITY SIGN SPECIALIST (253) 841-5471 FOR LATER INSTALLATION BY THE CITY. ALL SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

13. PRIOR TO ANY SIGN OR STRIPING INSTALLATION OR REMOVAL THE CONTRACTOR SHALL CONTACT THE CITY SIGN SPECIALIST (253) 841-5471 TO ARRANGE FOR AN ON-SITE MEETING TO DISCUSS PLACEMENT AND

14. NEW OR REVISED STOP SIGNS OR YIELD SIGNS SHALL BE ADVANCE WARNED USING THE PROCEDURE OUTLINED IN THE MUTCD. ADVANCE WARNING SIGNS AND FLAGS SHALL BE MAINTAINED BY INSTALLER FOR 30 DAYS AND THEN REMOVED.

CITY OF PUYALLUP GRADING, EROSION AND SEDIMENT CONTROL STANDARD NOTES

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS, REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES, THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE

2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY SEWER SERVICE.

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HERINAFTER REFERRED TO AS THE "CITY STANDARDS").

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.

5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER AND THE CITY ENGINEER PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.

6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS HOURS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

7. ALL LIMITS OF CLEARING AND AREAS OF VEGETATION PRESERVATION AS PRESCRIBED ON THE PLANS SHALL BE CLEARLY FLAGGED IN THE FIELD AND OBSERVED DURING CONSTRUCTION.

8. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM. THE CONTRACTOR SHALL SCHEDULE AN INSPECTION OF THE EROSION CONTROL FACILITIES PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE CITY, UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ONSITE EROSION HAS PASSED. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITTEE.

9. THE EROSION AND SEDIMENTATION CONTROL SYSTEM FACILITIES DEPICTED ON THESE PLANS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SILTATION CONTROL ON THE SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE THE MINIMUM REQUIREMENTS, AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.

10. APPROVAL OF THESE PLANS IS FOR GRADING, TEMPORARY DRAINAGE, EROSION AND SEDIMENTATION CONTROL ONLY. IT DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT STORM DRAINAGE DESIGN, SIZE OR LOCATION OF PIPES, RESTRICTORS, CHANNELS, OR RETENTION FACILITIES.

11. ANY DISTURBED AREA WHICH HAS BEEN STRIPPED OF VEGETATION AND WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF 30 DAYS OR MORE, MUST BE IMMEDIATELY STABILIZED WITH MULCHING, GRASS PLANTING, OR OTHER APPROVED EROSION CONTROL TREATMENT APPLICABLE TO THE TIME OF YEAR IN QUESTION. GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH SEPTEMBER INCLUSIVE. SEEDING MAY PROCEED OUTSIDE THE SPECIFIED TIME PERIOD WHENEVER IT IS IN THE INTEREST OF THE PERMITTEE BUT MUST BE AUGMENTED WITH MULCHING, NETTING, OR OTHER TREATMENT APPROVED BY THE CITY.

12. IN CASE EROSION OR SEDIMENTATION OCCURS TO ADJACENT PROPERTIES. ALL CONSTRUCTION WORK WITHIN THE DEVELOPMENT THAT WILL FURTHER AGGRAVATE THE SITUATION MUST CEASE, AND THE OWNER/CONTRACTOR WILL IMMEDIATELY COMMENCE RESTORATION METHODS. RESTORATION ACTIVITY WILL CONTINUE UNTIL SUCH TIME AS THE AFFECTED PROPERTY OWNER IS SATISFIED.

13. NO TEMPORARY OR PERMANENT STOCKPILING OF MATERIALS OR EQUIPMENT SHALL OCCUR WITHIN CRITICAL AREAS OR ASSOCIATED BUFFERS, OR THE CRITICAL ROOT ZONE FOR VEGETATION PROPOSED FOR RETENTION.

CONCRETE HANDLING NOTES

CONCRETE WORK GENERATES PROCESS WATER AND SLURRY THAT CONTAIN FINE PARTICLES AND HIGH pH, BOTH OF WHICH CAN VIOLATE WATER QUALITY STANDARDS. UTILIZE THESE MANAGEMENT PRACTICES ANY TIME CONCRETE IS

1. CONCRETE TRUCK CHUTES, PUMPS, AND INTERNALS SHALL BE WASHED OUT ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR

2. WHEN NO FORMED AREAS ARE AVAILABLE, CONTAIN WASHWATER AND LEFTOVER PRODUCT IN A LINED CONTAINER. DISPOSE OF WASHWATER IN A MANNER THAT DOES NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.

3. UNUSED CONCRETE REMAINING IN THE TRUCK AND PUMP SHALL BE RETURNED TO THE ORIGINATING BATCH PLANT FOR RECYCLING.

4. HAND TOOLS INCLUDING. BUT NOT LIMITED TO, SCREEDS, SHOVELS, RAKES, FLOATS, AND TROWELS SHALL BE WASHED OFF ONLY INTO FORMED AREAS AWAITING INSTALLATION OF CONCRETE OR ASPHALT.

5. EQUIPMENT THAT CANNOT BE EASILY MOVED, SUCH AS CONCRETE PAVERS, SHALL ONLY BE WASHED IN AREAS THAT DO NOT DIRECTLY DRAIN TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.

6. WASHDOWN FROM AREAS SUCH AS CONCRETE AGGREGATE DRIVEWAYS SHALL NOT DRAIN DIRECTLY TO NATURAL OR CONSTRUCTED STORMWATER CONVEYANCES.

7. CONTAINERS SHALL BE CHECKED FOR HOLES IN THE LINER DAILY DURING CONCRETE POURS AND REPAIRED THE SAME DAY.

CITY OF PUYALLUP WATER STANDARD NOTES

1. ALL WORK IN CITY RIGHT-OF-WAY REQUIRES A PERMIT FROM THE CITY OF PUYALLUP. PRIOR TO ANY WORK COMMENCING, THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRECONSTRUCTION MEETING AT THE DEVELOPMENT SERVICES CENTER TO BE ATTENDED BY ALL CONTRACTORS THAT WILL PERFORM WORK SHOWN ON THE ENGINEERING PLANS. REPRESENTATIVES FROM ALL APPLICABLE UTILITY COMPANIES. THE PROJECT OWNER AND APPROPRIATE CITY STAFF. CONTACT ENGINEERING SERVICES TO SCHEDULE THE MEETING (253) 841-5568. THE CONTRACTOR IS RESPONSIBLE TO HAVE THEIR OWN APPROVED SET OF PLANS AT THE

2. AFTER COMPLETION OF ALL ITEMS SHOWN ON THESE PLANS AND BEFORE ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL OBTAIN A "PUNCH LIST" PREPARED BY THE CITY'S INSPECTOR DETAILING REMAINING ITEMS OF WORK TO BE COMPLETED. ALL ITEMS OF WORK SHOWN ON THESE PLANS SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY PRIOR TO ACCEPTANCE OF THE WATER SYSTEM AND PROVISION OF SANITARY

3. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"), WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER, LATEST EDITION, UNLESS SUPERSEDED OR AMENDED BY THE CITY OF PUYALLUP CITY STANDARDS FOR PUBLIC WORKS ENGINEERING AND CONSTRUCTION (HEREINAFTER REFERRED TO AS THE "CITY STANDARDS"), OR AS DIRECTED BY FRUITLAND MUTUAL WATER COMPANY (FMWC), VALLEY WATER (VW), OR TACOMA CITY WATER (TCW) IS THE PURVEYOR.

4. A COPY OF THESE APPROVED PLANS AND APPLICABLE CITY DEVELOPER SPECIFICATIONS AND DETAILS SHALL BE ON SITE DURING CONSTRUCTION.

5. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE DEVELOPER'S ENGINEER, THE ENGINEERING SERVICES STAFF, AND THE FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR, PRIOR TO ANY IMPLEMENTATION IN THE FIELD. THE CITY SHALL NOT BE RESPONSIBLE FOR ANY ERRORS AND/OR OMISSIONS ON THESE PLANS.

6. THE CONTRACTOR SHALL HAVE ALL UTILITIES VERIFIED ON THE GROUND PRIOR TO ANY CONSTRUCTION. CALL (811) AT LEAST TWO WORKING DAYS IN ADVANCE. THE OWNER AND HIS/HER ENGINEER SHALL BE CONTACTED IMMEDIATELY IF A CONFLICT EXISTS.

7. ANY STRUCTURE AND/OR OBSTRUCTION WHICH REQUIRES REMOVAL OR RELOCATION RELATING TO THIS PROJECT SHALL BE DONE SO AT THE DEVELOPER'S EXPENSE.

8. BACTERIOLOGICAL (COLIFORM AND IRON BACTERIA) TEST SAMPLES WILL BE TAKEN BY THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) AND PAID FOR BY THE CONTRACTOR, EXCEPT FOR CAPITAL IMPROVEMENT PROJECTS (CIP) WHICH SHALL BE PAID FOR BY THE CITY.

9. WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES FROM PAVED FINAL GRADE IN IMPROVED RIGHT-OF-WAY AND IMPROVED EASEMENTS, AND A MINIMUM OF 48 INCHES IN UNIMPROVED RIGHT-OF WAY AND UNIMPROVED EASEMENTS.

10. PIPE FOR WATER MAINS SHALL BE DUCTILE IRON CONFORMING TO SECTION 7-09 OF THE STANDARD SPECIFICATIONS, CLASS 52 WITH TYTON OR APPROVED EQUAL JOINTS. PIPE SHALL BE CEMENT LINED IN ACCORDANCE WITH A.S.A. SPECIFICATION A 21.4-1964.

11. CONNECTIONS TO EXISTING WATER MAINS TYPICALLY SHALL BE WET TAPS THROUGH A TAPPING TEE AND TAPPING VALVE AND SHALL BE MADE BY A CITY APPROVED CONTRACTOR. THE TAPPING SLEEVE SHALL BE ROMAC SST ALL STAINLESS STEEL TAPPING SLEEVE OR APPROVED EQUAL. A TWO-PIECE EPOXY COATED OR DUCTILE IRON TAPPING SLEEVE MAY BE USED ON DUCTILE IRON PIPE, WHEN THE TAP IS SMALLER THAN THE WATER MAIN SIZE I.E. 6-INCH TAP ON 8-INCH PIPE. THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) SHALL APPROVE THE TIME AND LOCATION FOR THESE CONNECTIONS.

12. ALL WATER MAINS AND APPURTENANCES SHALL BE HYDROSTATICALLY TESTED AT 200 PSI IN ACCORDANCE WITH STANDARD SPECIFICATION 7-09.3(23). PRESSURE TESTING SHALL NOT BE PERFORMED UNTIL SATISFACTORY PURITY SAMPLES HAVE BEEN RECEIVED, EXCEPT WHEN NEW WATER MAINS ARE INSTALLED INDEPENDENTLY FROM THE WATER SYSTEM PIPING.

13. FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAIL 03.05.01 AND AS DIRECTED BY THE CITY OF PUYALLUP FIRE CODE OFFICIAL.

14. VALVE MARKER POSTS SHALL BE INSTALLED WHERE VALVE BOXES ARE HIDDEN FROM VIEW OR IN UNPAVED AREAS. THE INSTALLATION SHALL BE IN ACCORDANCE WITH CITY STANDARD DETAIL 03.01.02.

15. RESILIENT SEATED WEDGE GATE VALVES SHALL BE USED FOR 10-INCH MAINS AND SMALLER. BUTTERFLY VALVES SHALL BE USED FOR MAINS GREATER THAN 10 INCHES.

16. PIPE FITTING FOR WATER MAINS SHALL BE DUCTILE IRON AND SHALL BE MECHANICAL JOINT CONFORMING TO AWWA SPECIFICATION C111-72.

17. WATER MAIN PIPE AND SERVICE CONNECTIONS SHALL BE A MINIMUM OF 10 FEET AWAY FROM BUILDING FOUNDATIONS AND/OR ROOF LINES.

18. WHERE A WATER MAIN CROSSES THE NORTHWEST GAS PIPELINE, THE WATER LINE SHALL BE CASED WITH PVC PIPE A MINIMUM OF 10 FEET BEYOND EACH SIDE OF THE GAS LINE EASEMENT. CONTACT WILLIAMS NORTHWEST PIPELINE BEFORE THE CROSSING IS MADE.

19. TRENCHING, BEDDING, AND BACKFILL FOR WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH CITY STANDARD DETAIL 06.01.01.

20. ALL COMMERCIAL AND INDUSTRIAL DEVELOPMENTS, IRRIGATION SYSTEMS, AND MULTI-FAMILY WATER SERVICE CONNECTIONS SHALL BE PROTECTED BY A DOUBLE CHECK VALVE ASSEMBLY OR A REDUCED PRESSURE BACKFLOW ASSEMBLY AS DIRECTED BY THE CITY (OR FMWC, VW OR TCW WHEN SERVED BY THAT PURVEYOR) CONFORMING TO CITY STANDARD DETAILS 03.04.01, 03.04.02, AND 03.04.03.

21. ANY LEAD JOINT FITTING DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH A MECHANICAL JOINT FITTING AT THE CONTRACTOR'S EXPENSE.

22. HYDRAULIC FIRE FLOW MODELING SHALL BE REQUIRED FOR FORMAL PLATS WITHIN OR TO BE ANNEXED INTO THE CITY OF PUYALLUP'S WATER SERVICE AREA. THE DEVELOPER SHALL BE RESPONSIBLE TO APPLY FOR A HYDRAULIC MODEL PERMIT PRIOR TO PLAT REVIEW. THE HYDRAULIC MODELING CRITERIA IS BASED ON THE PROJECTED WATER DEMAND WHILE MAINTAINING A MINIMUM SYSTEM PRESSURE OF 20 POUNDS PER SQUARE INCH (PSI) AND A MAXIMUM VELOCITY OF 10 FEET PER SECOND.

23. WHEN USING A FIRE HYDRANT FOR NON-FIREFIGHTING PURPOSES, A CITY HYDRANT METER MUST BE USED. COORDINATE THE ACQUISITION OF THE HYDRANT METER WITH THE CITY'S UTILITY BILLING DIVISION AT PUYALLUP CITY HALL. A CITY APPROVED BACKFLOW PROTECTION ASSEMBLY SHALL BE INSTALLED BY THE PERSON REQUESTING USE OF A FIRE HYDRANT. THE ASSEMBLY SHALL BE ACCOMPANIED BY A CURRENT BACKFLOW ASSEMBLY TEST REPORT. THE TEST REPORT SHALL BE AVAILABLE AT THE SITE FOR THE DURATION OF

24. SHOULD A BREAK OCCUR ON ANY CITY WATER MAIN, THE CONTRACTOR SHALL FOLLOW THE CITY'S ADOPTED "WATER MAIN BREAK PROCEDURE" ISSUED TO THEM AT THE PRE-CONSTRUCTION MEETING AND NOTIFY THOSE CONNECTED TO THE SYSTEM IN THE IMPACTED AREA AS OUTLINED IN THE PROCEDURE.

25. WATER MAIN REPAIRS (REFERENCES: AWWA C651-14 AND WSDOT STANDARD SPECIFICATION SECTION 7-09) (NOTE: A PLANNED WATER MAIN REPAIR SHALL BE APPROVED BY THE CITY INSPECTOR AND/OR WATER DIVISION SUPERVISOR PRIOR TO COMMENCING WORK.)

A. REPAIR WITHOUT DEPRESSURIZATION -SMALL LEAKS SHALL BE REPAIRED USING REPAIR BANDS WHILE MAINTAINING POSITIVE PRESSURE IN THE WATER MAIN. VALVES SURROUNDING THE LEAK WILL BE PARTIALLY SHUT BY THE CITY WATER DEPARTMENT TO REDUCE THE FLOW AND PRESSURE TO THE AREA. BLOWOFFS AND HYDRANTS IN THE REDUCED PRESSURE AREA MAY BE OPENED AS NEEDED TO FURTHER REDUCE THE PRESSURE. THE WATER MAIN TRENCH SHALL BE OVER-EXCAVATED TO ALLOW WATER IN THE TRENCH TO BE PUMPED OUT AND MAINTAINED BELOW THE LEVEL OF THE WATER MAIN. THE REPAIR SHALL BE COMPLETED WITH THE WATER MAIN PRESSURE REMAINING POSITIVE. AFTER THE REPAIR IS MADE, THE SYSTEM SHALL BE FULLY PRESSURIZED AND A VISUAL LEAK INSPECTION WILL BE COMPLETED. THE WATER MAIN IN THE AFFECTED AREA SHALL BE FLUSHED TO ACHIEVE THREE PIPE VOLUMES PULLED FROM THE PIPE (DISTANCE MEASURED FROM VALVE OPENED FOR FLUSHING TO THE EXIT HYDRANT OR BLOWOFF).

B. REPAIR/CUT-IN WITH DEPRESSURIZATION -TRENCH SHALL BE OVER EXCAVATED AND DEWATERED BELOW THE WATER MAIN. FLUSH WATER FROM PIPE FROM EACH DIRECTION UNTIL IT RUNS CLEAR. IMMEDIATELY PRIOR TO INSTALLATION OF A NEW PIPE SECTION FOR REPAIR OR CUT IN TEE, ALL NEW FITTINGS AND PIPE SPOOLS SHALL BE SWABBED WITH A FIVE PERCENT (5%) CHLORINE SOLUTION (MINIMUM). THE INTERIOR OF THE EXISTING PIPE SHALL BE SWABBED WITH A FIVE PERCENT (5%) CHLORINE SOLUTION AT LEAST 6 FEET IN EACH DIRECTION FROM EXPOSED CUT ENDS. THE WATER MAIN IN THE AFFECTED AREA SHALL BE FLUSHED TO ACHIEVE THREE PIPE VOLUMES PULLED FROM THE PIPE (DISTANCE MEASURED FROM THE VALVE OPENED FOR FLUSHING TO THE EXIT HYDRANT OR BLOWOFF). CUSTOMERS SHALL BE NOTIFIED AFTER THE WATER MAIN IS FLUSHED AND REPAIRS HAVE BEEN COMPLETED, AS OUTLINED IN THE "WATER MAIN BREAK PROCEDURE."

26. NEW WATER MAIN INSTALLATION:

A. EACH NEW WATER MAIN SECTION SHALL BE DELIVERED, STACKED AND STORED ONSITE WITH ENDS PLUGGED. THE PLUGS SHALL REMAIN IN THE PIPE UNTIL EACH PARTICULAR SECTION IS INSTALLED. NATIONAL SANITATION FOUNDATION (NSF) APPROVED SIXTY-FIVE PERCENT (65%) CALCIUM HYPOCHLORITE SHALL BE ADDED TO THE UPSTREAM END OF EACH PIPE SECTION, AND AT EACH HYDRANT TEE IN THE AMOUNT GIVEN IN THE TABLE BELOW (OR PER APPROVED MANUFACTURER SPECIFICATIONS). THE MINIMUM AMOUNT OF CALCIUM HYPOCHLORITE ADDED SHOULD BE SUFFICIENT TO ACHIEVE A 50 MG/L CONCENTRATION WITHIN THE IMPACTED AREA.

B. NEW WATER MAINS SHALL BE FILLED USING AN APPROVED BACKFLOW PREVENTION ASSEMBLY. THE WATER MAIN SHALL BE FILLED FROM THE LOWER ELEVATION END SO THAT AS THE WATER MAIN IS FILLED, THE CHORINE IS CONTACTED, DISSOLVED AND SPREAD RELATIVELY UNIFORM THROUGH THE LENGTH OF THE NEW WATER MAIN. THE FILL RATE SHALL BE MINIMIZED SO THAT THE VELOCITY OF THE WATER IS LESS THAN 1 FT/SEC (SEE TABLE ABOVE). SUCCESSFUL PRESSURE TEST AND BACTERIOLOGICAL TESTS SHALL BE COMPLETED AND PROVIDED TO THE CITY PRIOR TO ANY NEW MATER MAIN CONNECTION TO THE EXISTING WATER SYSTEM.

C. THE CHLORINATED WATER WILL BE ALLOWED TO REMAIN IN CONTACT WITH THE NEW WATER MAIN SYSTEM FOR 24 TO 72 HOURS. AFTER 24 HOURS, WATER MAY BE ADDED TO THE WATER MAIN FOR THE PURPOSES OF PRESSURE TESTING. THE WATER IN THE MAIN USED FOR PRESSURE TESTING MUST REMAIN IN THE WATER MAIN UNTIL PRESSURE TEST IS COMPLETED. IF NECESSARY, LIQUID CHLORINE SHALL BE INJECTED INTO THE WATER MAIN WITH FILL WATER TO MAINTAIN A CONCENTRATION IN THE WATER MAIN ABOVE 50 MG/L. UNDER NO CIRCUMSTANCE SHALL "SUPER" CHLORINATED WATER BE ALLOWED TO SIT WITHIN A NEW WATER MAIN FOR MORE THAN 5 DAYS.

D. PRESSURE TESTING INCLUDES TESTING AGAINST NEW VALVES AND HYDRANTS. EACH VALVE SHALL BE TESTED BY CLOSING EACH IN TURN AND REDUCING THE PRESSURE BEYOND THE VALVE. THE PRESSURE ON THE BACK SIDE OF THE VALVE SHOULD NOT BE ELIMINATED. CARE MUST BE TAKEN THAT, DURING THIS PROCESS, POSITIVE PRESSURE REMAINS THROUGHOUT THE SYSTEM BEING TESTED AT ALL TIMES. ALL HYDRANT FOOT VALVES SHALL BE OPEN DURING PRESSURE TESTING SO THAT THE PRESSURE TEST IS AGAINST THE HYDRANT VALVE. PRESSURE TESTING WILL NOT BE ALLOWED AGAINST ANY EXISTING VALVES.

E. AFTER SUCCESSFUL PRESSURE TESTING, THE WATER MAIN SHALL BE THOROUGHLY FLUSHED TO REMOVE ALL "SUPER" CHLORINATED WATER FROM THE NEW WATER MAIN. FLUSHING OF NEW OR EXTENDED WATER MAINS SHALL BE CONDUCTED PER WSDOT SPECIFICATION 7-09.3(24)A WITH A MINIMUM VELOCITY DEVELOPED WITHIN THE PIPE WHILE FLUSHING OF 2.5 FEET PER SECOND (FPS). ALL FLUSHED WATER SHALL BE DECHLORINATED PRIOR TO DISPOSAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL CHLORINATED WATER FLUSHED FROM MAINS. THE CITY SHALL APPROVE THE DISPOSAL METHOD PRIOR TO IMPLEMENTATION IN THE FIELD. THE CONTRACTOR SHALL UTILIZE ON SITE DISPOSAL METHODS, IF AVAILABLE. DISPOSAL OF FLUSH WATER TO THE SANITARY SEWER SYSTEM SHALL NOT BE ALLOWED WITHOUT WRITTEN PERMISSION FROM THE WATER POLLUTION CONTROL PLANT (WPCP) SUPERVISOR. ANY PLANNED DISCHARGE TO A STORMWATER SYSTEM SHALL BE DECHLORINATED TO A CONCENTRATION OF 0.1 PPM OR LESS, PH ADJUSTED (IF NECESSARY) TO BE BETWEEN 6.5 AND 8.5, AND VOLUMETRICALLY AND VELOCITY CONTROLLED TO PREVENT ANY RESUSPENSION OF SEDIMENTS. THE CITY WILL REQUIRE INDEPENDENT TESTING THROUGHOUT THE WATER DISCHARGE PROCESS TO ENSURE COMPLIANCE OF THESE STANDARDS ARE MET.

F. SAMPLES FOR BACTERIOLOGICAL ANALYSIS SHALL BE COLLECTED AFTER FLUSHING AND AGAIN 24 HOURS AFTER THE FIRST SET OF SAMPLES.

G. ALL CLOSURE/FINAL CONNECTION FITTINGS SHALL BE SPRAYED CLEAN AND THEN SWABBED WITH A FIVE PERCENT (5%) CHLORINE SOLUTION IMMEDIATELY PRIOR TO INSTALLATION PER AWWA STANDARD C651. ADDITIONAL SAMPLES FOR BACTERIOLOGICAL ANALYSIS SHALL BE COLLECTED FROM THE IMMEDIATE VICINITY OF THE NEW OR REPLACED WATER MAIN AND ANALYZED AFTER THE FINAL CONNECTIONS ARE MADE. IF NECESSARY, ADDITIONAL FLUSHING SHALL BE CONDUCTED AND ADDITIONAL SAMPLES SHALL BE COLLECTED UNTIL SATISFACTORY RESULTS ARE OBTAINED.

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City of Puyallup

Building

Engineering

10/18/2024 NOTE: THIS APPROVAL IS VOID AFTER 180 DAYS FROM APPROVAL THE CITY WILL NOT BE RESPONSIBLE FOR ERRORS AND/OR OMISSIONS ON THESE PLANS.

ENGINEERING MANAGER.

FIELD CONDITIONS MAY DICTATE CHANGES TO THESE PLANS AS DETERMINED BY THE DEVELOPMENT **CIVIL NOTES**