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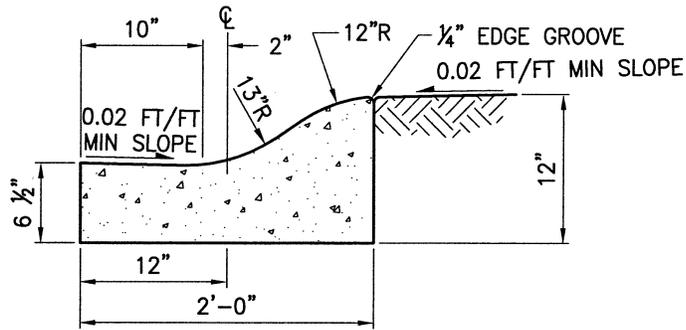
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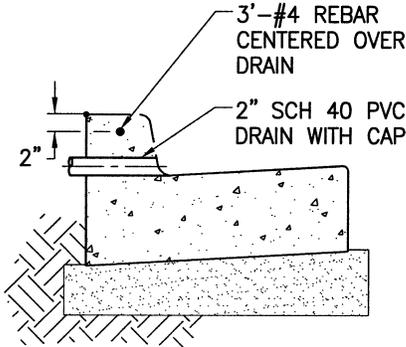
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- Appendix C – Bill of Sale
- Appendix D – Plan Requirements
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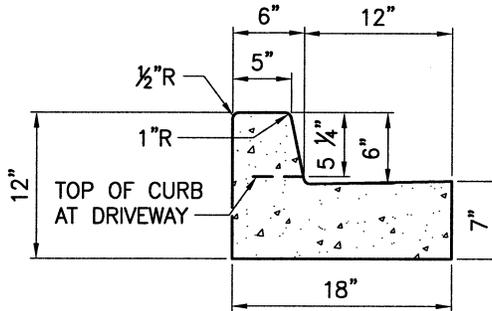


ROLLED CONCRETE CURB & GUTTER



PVC THROUGH CURB

(SEE NOTE 7)



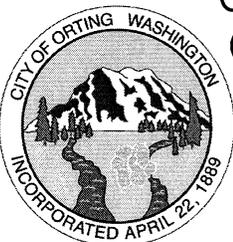
VERTICAL CONCRETE CURB & GUTTER

NOTES

1. 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 OC.
2. THRU JOINTS SHALL BE 3/4" 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'.
3. CONCRETE SHALL BE CLASS 3000 (6% AIR) (COARSE AGGR GR NO 2) (FINE AGGR CL 1).
4. 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.
5. 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.
6. ROLLED CURBS AND GUTTERS SHALL ONLY BE ALLOWED AS A REPLACEMENT TO EXISTING ROLLED CURBS AND GUTTERS.
7. 2" SCHEDULE 40 PVC SHALL BE PLACED THROUGH CURB AT LOW POINTS OF PROPERTY OR LOT WHEN GRADE SLOPES DOWN TO STREET AT LOCATIONS APPROVED BY THE CITY.

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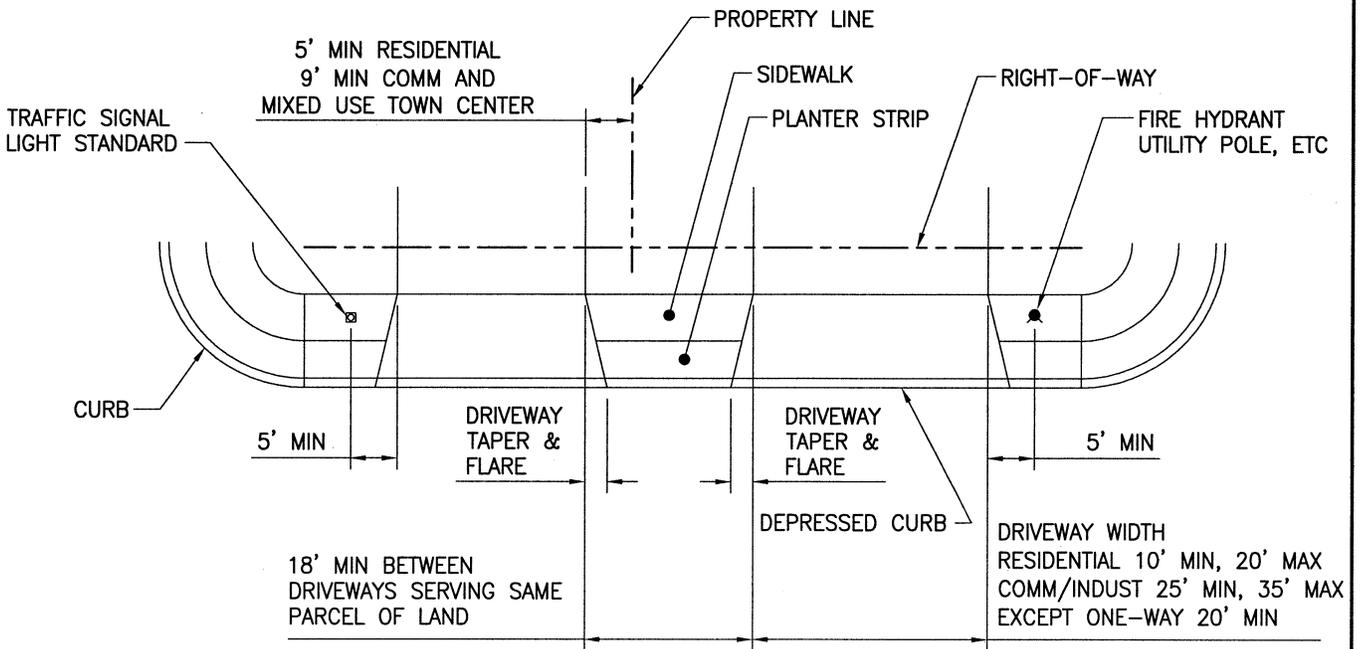
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CONCRETE CURB & GUTTER

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NOTES

1. NO PORTION OF ANY DRIVEWAY SHALL ENCROACH IN CURB RETURN.
2. COMMERCIAL/INDUSTRIAL DRIVEWAYS MUST BE APPROVED BY THE ENGINEER, CONSIDERING BOTH TRAFFIC SAFETY AND THE ACTIVITY BEING SERVED. ALL COMMERCIAL/INDUSTRIAL DRIVEWAYS SHALL HAVE AN EXPANSION JOINT LOCATED MID-WIDTH.
3. DRIVEWAYS SHALL BE LOCATED AS FAR FROM THE INTERSECTION AS POSSIBLE.

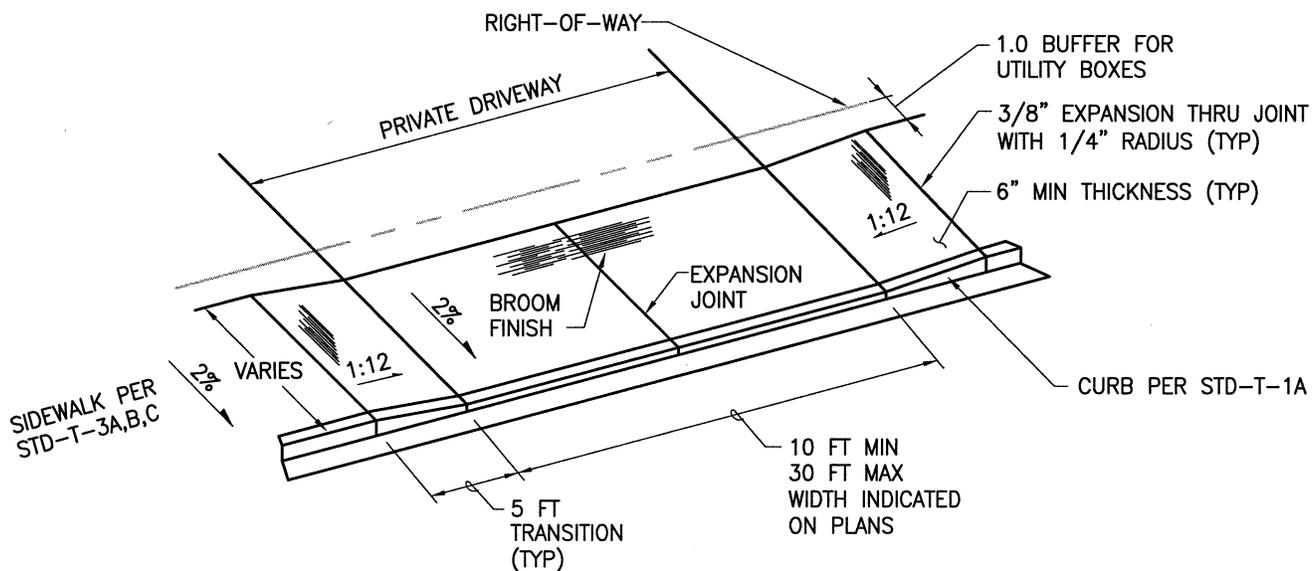
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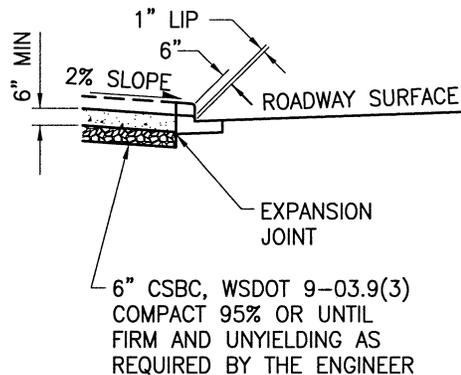
LOCATION & WIDTH OF NEW DRIVEWAYS

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NOTES

1. EXPANSION JOINTS SHALL BE PLACED AT 10' SPACING. ELASTOMERIC JOINT MATERIAL SHALL BE IN CONFORMANCE TO SECTION 9-04.1 (4) OF THE WSDOT STANDARD SPECIFICATIONS.
2. JOINTS SHALL BE STEEL TROWELED FOR FINISH.
3. BROOM FINISH SHALL BE PARALLEL TO ROADWAY IN DRIVEWAY ONLY (PERPENDICULAR IN SIDEWALKS).
4. APPROACHES TO EXISTING DRIVEWAYS THAT ARE IN USE BY HOME OWNERS, REQUIRE A 48 HOUR CONCRETE STRENGTH TIME LIMIT SO THAT DRIVEWAYS CAN BE PUT BACK INTO SERVICE.
5. DRIVEWAYS TO DEVELOPED LOTS SHALL NOT BE BLOCKED FOR MORE THAN 4 HOURS. CONTRACTOR SHALL PROVIDE IMMEDIATE TEMPORARY ACCESS FOR DEVELOPED LOTS WHEN SO DIRECTED BY THE ENGINEER.



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CEMENT CONCRETE
APPROACH

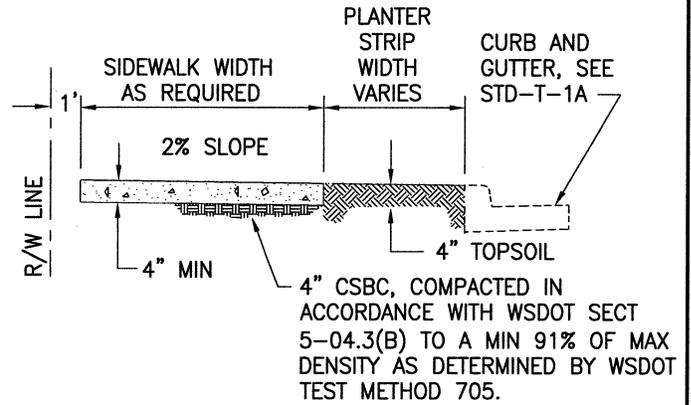
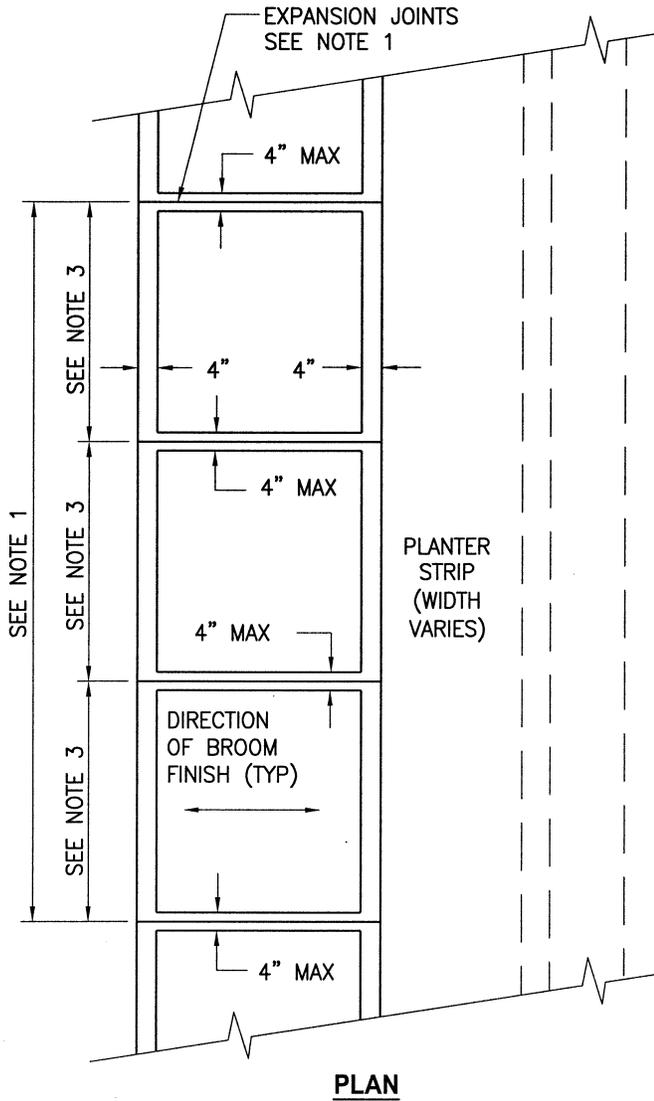
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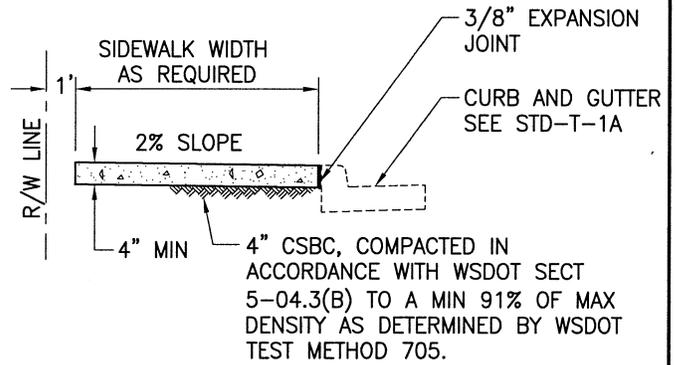
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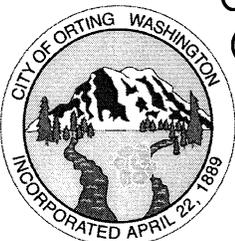


SECTION
SIDEWALK W/PLANTER STRIP



SECTION
SIDEWALK ONLY

FOR NOTES SEE STD-T-3B



CITY OF
ORTING

SIDEWALK W/PLANTER STRIP

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T-3A

MINIMUM SIDEWALK WIDTHS

- 5' SINGLE FAMILY RESIDENTIAL AREAS
(DETACHED DWELLINGS)
- 8' MEDIUM AND HIGH DENSITY MULTI-FAMILY
RESIDENTIAL AREAS
- 8' INDUSTRIAL AREAS
- 8' COMMERCIAL AREAS, MIXED USE TOWN CENTERS (MUTC)*

* MUTC PROPERTIES FRONTING SR-162 SHALL BE REQUIRED TO HAVE 10 FOOT SIDEWALKS UNLESS OTHERWISE NOTED BY PLANNING COMMISSION/CITY ENGINEER.

NOTES

1. EXPANSION JOINTS SHALL BE $\frac{3}{8}$ " x $1\frac{1}{2}$ " ELASTOMERIC JOINT MATERIAL CONFORMING TO WSDOT 9-04.1(4) PLACED AT 10' OC FOR 5' SIDEWALKS AND 15' OC FOR 8' SIDEWALKS.
2. THRU JOINTS SHALL BE $\frac{3}{8}$ " x 4" ASPHALT SATURATED FELT PLACED AT DRIVEWAYS, ALLEY RETURNS AND WHEELCHAIR RAMPS.
3. V-GROOVEMARKS SHALL BE $\frac{1}{8}$ " DEEP AND $\frac{1}{4}$ " WIDE PLACED AT 5' OC FOR 5' SIDEWALKS AND 7 $\frac{1}{2}$ ' OC FOR 8' AND 10' SIDEWALKS.
4. ALL JOINTS SHALL BE CLEAN AND EDGED TO A $\frac{1}{4}$ " RADIUS. JOINTS SHALL BE FLUSH WITH THE FINISHED SURFACE.
5. ALL UTILITY POLES AND STREET SIGN POSTS IN SIDEWALK AREA NOT REQUIRED TO BE RELOCATED BY THE CITY ENGINEER SHALL HAVE A SQUARE SECTION OF REINFORCED CONCRETE SURROUNDED BY $\frac{3}{8}$ " EXPANSION JOINT MATERIAL AROUND THE POLE. THE JOINT SHALL BE NO CLOSER THAN 6" TO ANY SIDE OF THE POLE.
6. FORMS SHALL BE EITHER WOOD OR STEEL AND SHALL MEET ALL REQUIREMENTS OF THESE SPECIFICATIONS.
7. CONCRETE SHALL BE CLASS 3000 PSI 5-1/2 SACK WITH 6% AIR COARSE AGGREGATE GRADING NO. 2, FINE AGGREGATE CLASS 1.

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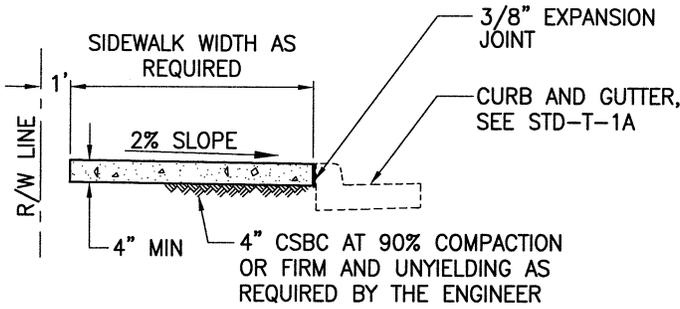
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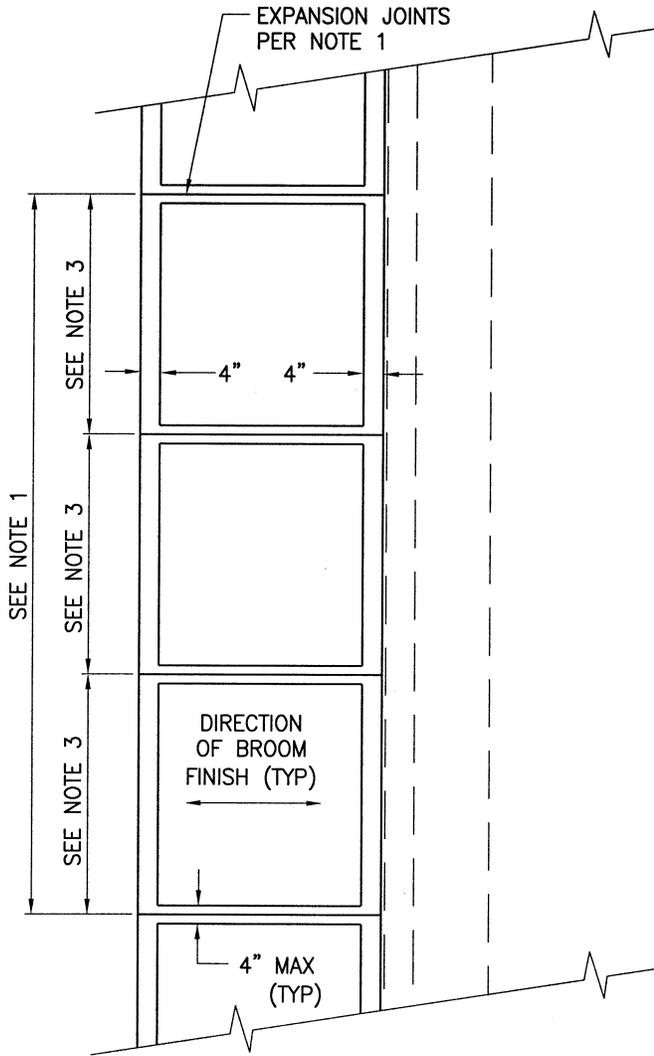
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SIDEWALK W/PLANTER STRIP
NOTES

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SECTION



PLAN

MINIMUM SIDEWALK WIDTHS

- 5' SINGLE FAMILY RESIDENTIAL AREAS (DETACHED DWELLINGS)
- 8' MEDIUM AND HIGH DENSITY MULTI-FAMILY RESIDENTIAL AREAS. MIXED USE TOWN CENTERS (MUTC)*
- 8' INDUSTRIAL AREAS
- 8' COMMERCIAL AREAS

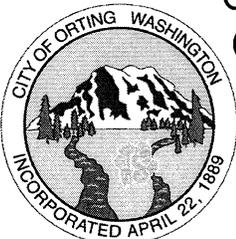
* MUTC PROPERTIES FRONTING SR-162 SHALL BE REQUIRED TO HAVE 10 FOOT SIDEWALKS UNLESS OTHERWISE NOTED BY PLANNING COMMISSION/CITY ENGINEER.

NOTES

1. EXPANSION JOINTS SHALL BE 3/8" x 1 1/2" ELASTOMERIC JOINT MATERIAL CONFORMING TO WSDOT 9-04.1(4) PLACED AT 10' OC FOR 5' SIDEWALKS AND 15' OC FOR 8' SIDEWALKS.
2. THRU JOINTS SHALL BE 3/8" x 4" ASPHALT SATURATED FELT PLACED AT DRIVEWAYS, ALLEY RETURNS AND WHEELCHAIR RAMPS.
3. V-GROOVEMARKS SHALL BE 1/8" DEEP AND 1/4" WIDE PLACED AT 5' OC FOR 5' SIDEWALKS AND 7 1/2' OC FOR 8' SIDEWALKS.
4. ALL JOINTS SHALL BE CLEAN AND EDGED TO A 1/4" RADIUS. JOINTS SHALL BE FLUSH WITH THE FINISHED SURFACE.
5. ALL UTILITY POLES AND STREET SIGN POSTS IN SIDEWALK AREA NOT REQUIRED TO BE RELOCATED BY THE CITY ENGINEER SHALL HAVE A SQUARE SECTION OF REINFORCED CONCRETE SURROUNDED BY 3/8" EXPANSION JOINT MATERIAL AROUND THE POLE. THE JOINT SHALL BE NO CLOSER THAN 6" TO ANY SIDE OF THE POLE.
6. FORMS SHALL BE EITHER WOOD OR STEEL AND SHALL MEET ALL REQUIREMENTS OF THESE SPECIFICATIONS.
7. CONCRETE SHALL BE CLASS 3000 PSI 5-1/2 SACK WITH 6% AIR COARSE AGGREGATE GRADING NO. 2, FINE AGGREGATE CLASS 1.

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SIDEWALK

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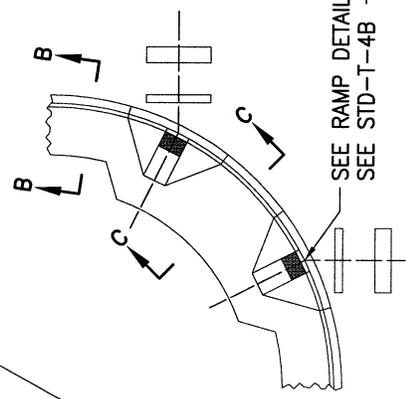
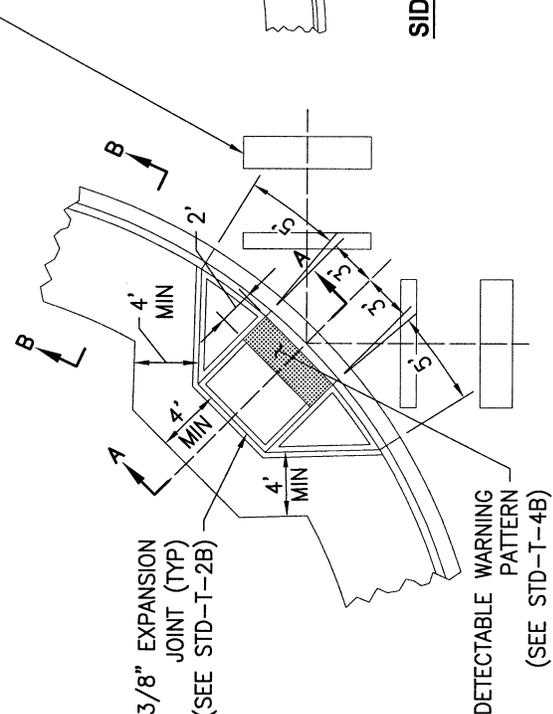
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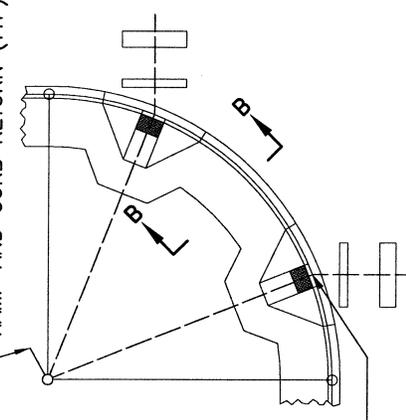
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CROSSWALK (TYP)
 (SEE STD-T-10)

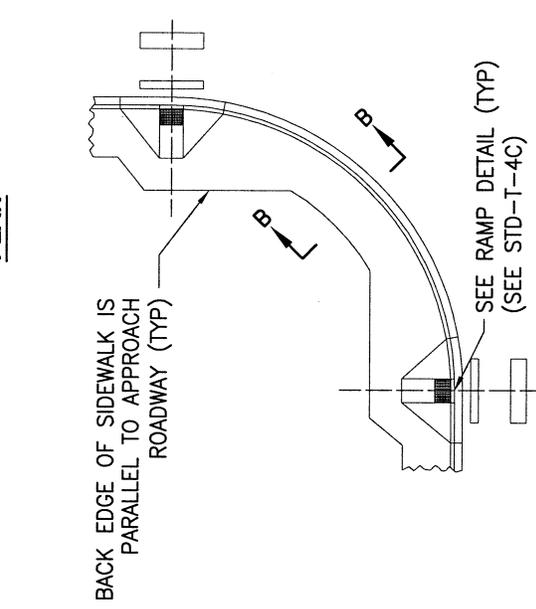


SIDEWALK RAMP TYPE 1B
 PLAN

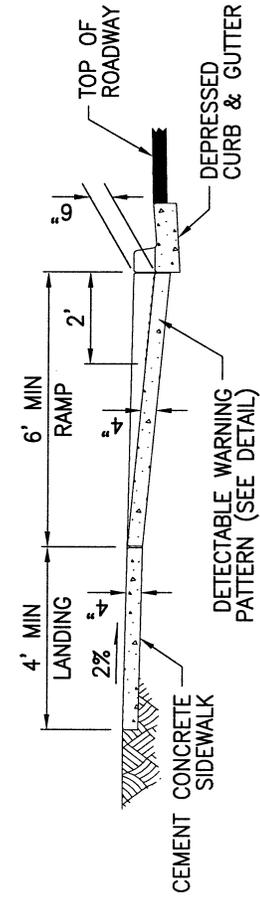


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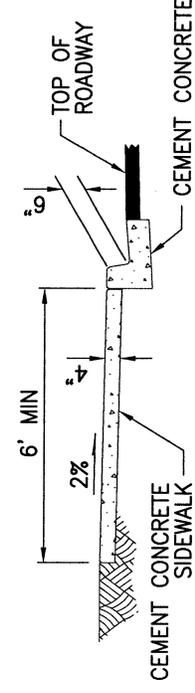
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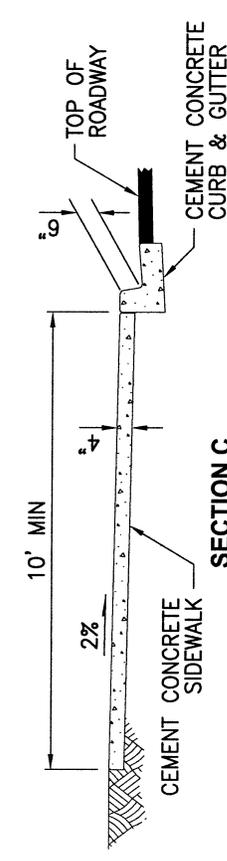
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SECTION A



SECTION B



SECTION C

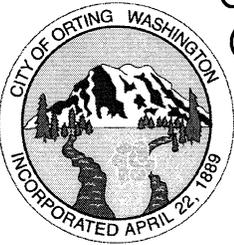
SEE STD-T-4B FOR ADDITIONAL RAMP DETAILS & NOTES.



CITY OF ORTING

SIDEWALK RAMP PLANS & SECTIONS

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**CITY OF
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**SIDEWALK RAMP
 DETAILS & NOTES**

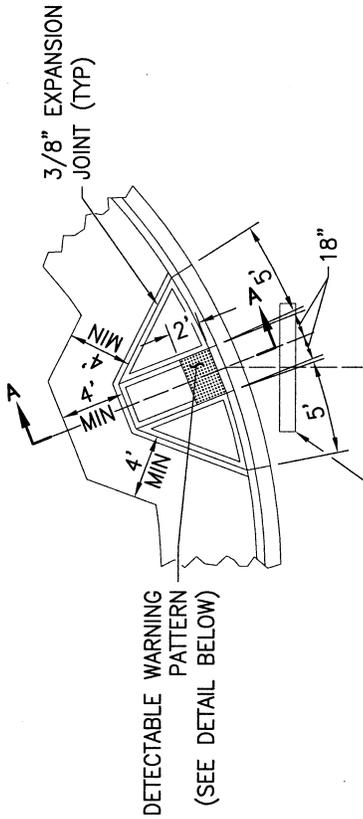
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CROSSWALK
 (SEE STD-T-10)

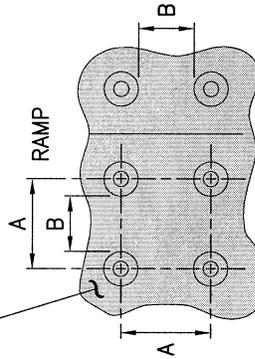
RAMP DETAIL

FOR SIDEWALK RAMP
 TYPES 1B, 1C, 1D

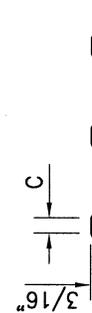
NOTES

1. AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
2. DETECTABLE WARNING PATTERNS SHALL BE AN ADA CAST IN PLACE TRUNCATED DOME TACTILE SYSTEM OR APPROVED EQUAL.
3. CURB AND GUTTER SHOWN, SEE THE CONTRACT PLANS FOR THE CURB DESIGN SPECIFIED. SEE STD-T-1A FOR CURB DETAILS.
4. THE PLAN VIEWS FOR SIDEWALK RAMP TYPES 1B, 1C & 1D ARE PROVIDED TO DEFINE EACH RAMP TYPE - SEE STD-T-4A.
5. RAMP SLOPES SHALL NOT BE STEEPER THAN 12H:1V.

DETECTABLE WARNING PATTERN AREA
 SHALL BE YELLOW, IN COMPLIANCE WITH
 STD SPEC 8-14.3(3)

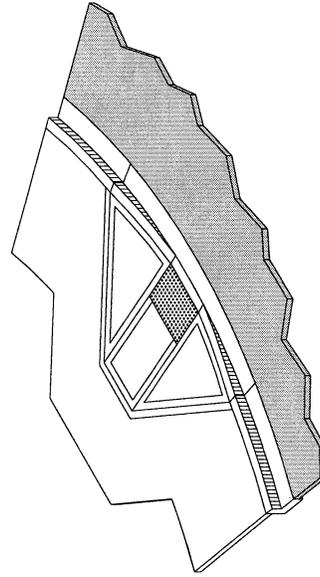


PLAN



ELEVATION

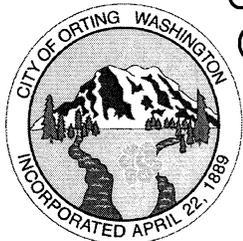
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| A | 1 5/8" | 2 3/8" |
| B | 5/8" | 1 1/2" |
| C | 7/16" | 3/4" |
| D | 7/8" | 1 7/16" |



ISOMETRIC VIEW

**TRUNCATED DOMES
 DETECTABLE WARNING
 PATTERN DETAIL**

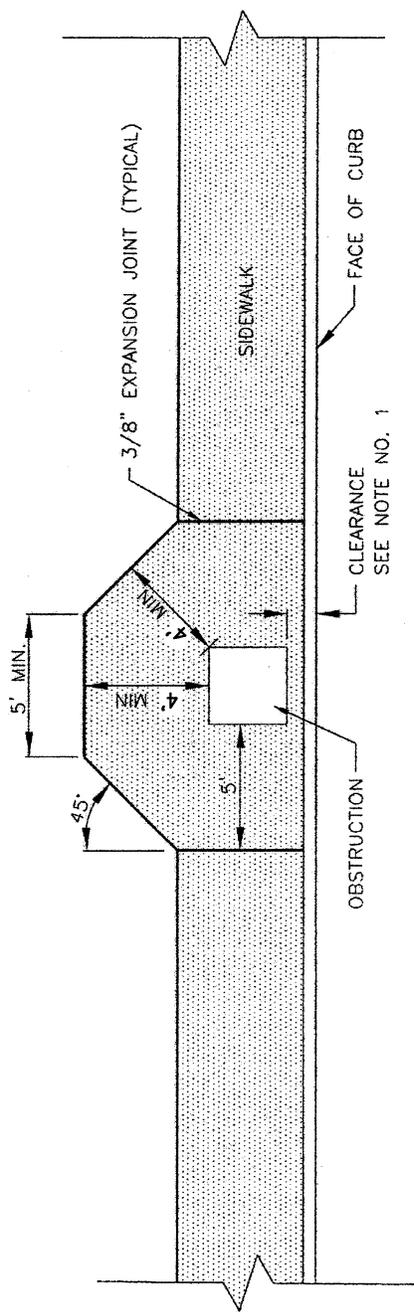
(SEE NOTE 2)



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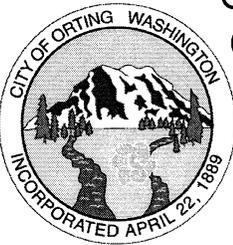
MINIMUM SIDEWALK
 WIDTH AT OBSTRUCTIONS

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NOTES

1. THE CLEARANCE BETWEEN THE FACE OF CURB AND ANY OBSTRUCTION, EXCEPT MAIL BOXES, SHALL BE A MINIMUM OF 1'-6". THE FRONT OF A MAIL BOX SHALL HAVE 1'-0" MINIMUM CLEARANCE FROM FACE OF CURB.
2. A MINIMUM CLEAR WIDTH OF 4' SHALL BE PROVIDED FOR CONTINUOUS PASSAGE AROUND THE OBSTRUCTION.



CITY OF ORTING

TYPICAL ROAD SECTION NOTES

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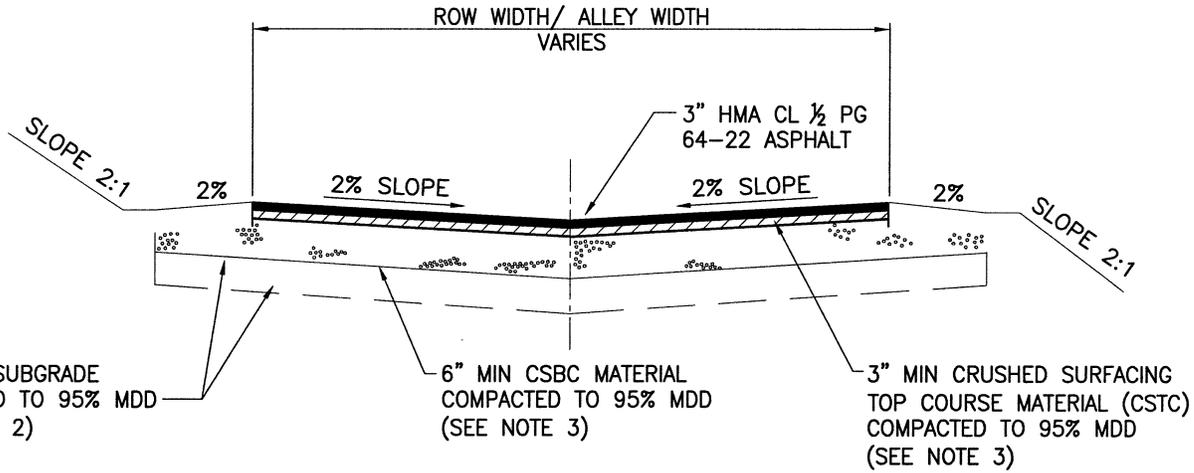
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T-5B

NOTES

1. THE ABOVE REPRESENTS THE MINIMUM ACCEPTABLE ROADWAY COURSE. ULTIMATE ROADWAY COURSE SHALL BE VERIFIED BY A LICENSED GEOTECHNICAL ENGINEER PRIOR TO PLAN APPROVAL.
2. ALL DEPTHS ARE MINIMUM COMPACTED DEPTHS.
3. SUBGRADE PREPARATION SHALL MEET THE REQUIREMENTS OF WSDOT SPEC. SECTION 2-06.3(1). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE COMPACTION REQUIREMENTS AND CONTROL ALL WORK. THE CITY OF ORTING RESERVES THE RIGHT TO CONDUCT COMPLIANCE TESTS, AT THE CONTRACTORS EXPENSE.
4. SUBBASE MATERIAL SHALL BE BANKRUN GRVEL MEETING THE REQUIREMENTS OF WSDOT SPEC. SECTION 9-03.10 OR CRUSHED BALLAST MEETING THE REQUIREMENTS OF WSDOT SPEC. SECTION 9-03.9(1). CRUSHED SURFACING SHALL MEET THE GRADATION REQUIREMENTS OF WSDOT SPEC SECTION 9-03.9(3). THE SUBBASE AND BASE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT SPEC SECTION 4-04.
5. SOIL STABILIZATION FABRIC MAY BE REQUIRED BY THE ENGINEER TO BE INSTALLED PRIOR TO THE INSTALLATION OF THE BASE MATERIAL. WHEN REQUIRED, THE CONTRACTOR SHALL PLACE A GEOTEXTILE FABRIC OVER THE PREPARED SUBGRADE WITH A 2 FOOT MINIMUM OVERLAP. THE MATERIAL SHALL BE A WOVEN GEOTEXTILE FOR SOIL STABILIZATION (WSDOT 9-33.2, TABLE 3) THE MATERIAL SHALL BE PROPERLY PACKED AND DELIVERED TO THE SITE AS RECOMMENDED BY THE MANUFACTURER.
6. SUBGRADE SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK. ANY SOFT SPOTS OR YIELDING EARTH SHALL BE REMOVED AND REPLACE WITH GRAVEL BASE, PRIOR TO PLACING THE NEXT LIFT OF MATERIAL.
7. ASPHALT CONCRETE PAVEMENT SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH WSDOT SPEC SECTION 5-04.
8. THE CITY RESERVES THE RIGHT TO MODIFY THE GRADATION OF THE ASPHALT CONCRETE PAVEMENT IF THE CONDITIONS WARRANT IT. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA TO BE REVIEWED BY THE CITY ENGINEER PRIOR TO ANY ASPHALT PLACEMENT.
9. THE MAXIMUM COMPACTED THICKNESS OF ANY SINGLE LIFT OF PAVEMENT SHALL BE 2". PAVEMENT SECTIONS OF THICKNESS GREATER THAN 3" SHALL BE PLACED IN MULTIPLE LIFTS. EACH LIFT SHALL BE COMPACTED IN ACCORDANCE WITH WSDOT SPEC. SECTION 5-04.3(10). PERIODIC COMPLIANCE TESTS SHALL BE MADE BY A CERTIFIED TESTING AGENCY AT THE EXPENSE OF THE CONTRACTOR.
10. THE FACE OF THE GUTTER LIP AND EDGES OF EXISTING ASPHALT MEET LINES SHALL BE TACK COATED PRIOR TO PAVEMENT PLACEMENT. WHEN SUCCESSIVE LIFTS OF ASPHALT ARE REQUIRED TACK COAT SHALL BE DISTRIBUTED UNIFORMLY OVER THE PREVIOUS LIFT AT A RATE OF 0.06-0.08 GALLONS PER SQUARE YARD AT A TEMPERATURE OF 100 F AND SHALL BE ALLOWED TO SET TO A TACKY STATE PRIOR TO THE PLACEMENT OF THE NEXT LIFT.
11. ALL MEET LINES BETWEEN LIFTS OF ASPHALT SHALL BE UNIFORM, WITH EDGES VERTICAL AND AT THE REQUIRED THICKNESS. IF SUBSEQUENT LIFTS ARE NOT COMPLETED WITHIN 48 HOURS OR THE EDGES HAVE BEEN CONTAMINATED, THE MEET LINES SHALL BE CLEANED AND TACK COATED.
12. ALL EXISTING MANHOLE COVERS AND MONUMENT CASES SHALL BE REMOVED AND STORED. THE MANHOLES AND MONUMENTS SHALL BE COVERED TO PREVENT DIRT AND DEBRIS FROM ENTERING DURING PAVING OPERATION. AFTER PAVING, THE CASTINGS SHALL BE REINSTALLED TO THE PROPER ELEVATION AND PATCHED IN ACCORDANCE WITH THE CITY OF ORTING SPECS.
13. ANY CHANGES TO THE MINIMUM PAVEMENT SECTION SHALL REQUIRE APPROVAL OF THE CITY ENGINEER. A STRUCTURAL PAVEMENT CROSS SECTION DESIGN WITH CALCULATIONS SHALL BE REQUIRED.
14. ALL MANHOLE FRAMES, VALVE FRAMES AND MONUMENT COVERS SHALL BE INSTALLED AFTER FINAL LIFT OF ASPHALT PAVEMENTS. SEE SPECIFIC DETAILS FOR METHOD OF INSTALLATION.
15. NEIGHBORHOOD STREET CROSS SECTION SHALL OBTAIN PLANNING COMMISSION APPROVAL PRIOR TO IMPLEMENTATION.



SUITABLE SUBGRADE
COMPACTED TO 95% MDD
(SEE NOTE 2)

6" MIN CSBC MATERIAL
COMPACTED TO 95% MDD
(SEE NOTE 3)

3" MIN CRUSHED SURFACING
TOP COURSE MATERIAL (CSTC)
COMPACTED TO 95% MDD
(SEE NOTE 3)

NOTES

1. ALL DEPTHS ARE MINIMUM COMPACTED DEPTHS.
2. SUBGRADE PREPARATION SHALL MEET THE REQUIREMENTS OF WSDOT SPEC SECTION 2-06.3(1). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE COMPACTION REQUIREMENTS AND CONTROL ALL WORK. THE CITY OF ORTING RESERVES THE RIGHT TO CONDUCT COMPLIANCE TESTS, AT THE CONTRACTORS EXPENSE.
3. SUBBASE MATERIAL SHALL BE BANKRUN GRAVEL MEETING THE REQUIREMENTS OF WSDOT SPEC SECTION 9-03.10 OR CRUSHED BALLAST MEETING THE REQUIREMENTS OF WSDOT SPEC SECTION 9-03.9(1). CRUSHED SURFACING SHALL MEET THE GRADATION REQUIREMENTS OF WSDOT SPEC SECTION 9-03.9(3). THE SUBBASE AND BASE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT SPEC SECTION 4-04.
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5. ALL EXISTING MANHOLE COVERS AND MONUMENT CASES SHALL BE REMOVED AND STORED. THE MANHOLES AND MONUMENTS SHALL BE COVERED TO PREVENT DIRT AND DEBRIS FROM ENTERING DURING PAVING OPERATION. AFTER PAVING, THE CASTINGS SHALL BE REINSTALLED TO THE PROPER ELEVATION AND PATCHED IN ACCORDANCE WITH THE CITY OF ORTING SPECS.
6. ALL MANHOLE FRAMES, VALVE FRAMES AND MONUMENT COVERS SHALL BE INSTALLED AFTER FINAL LIFT OF ASPHALT PAVEMENTS. SEE SPECIFIC DETAILS FOR METHOD OF INSTALLATION.

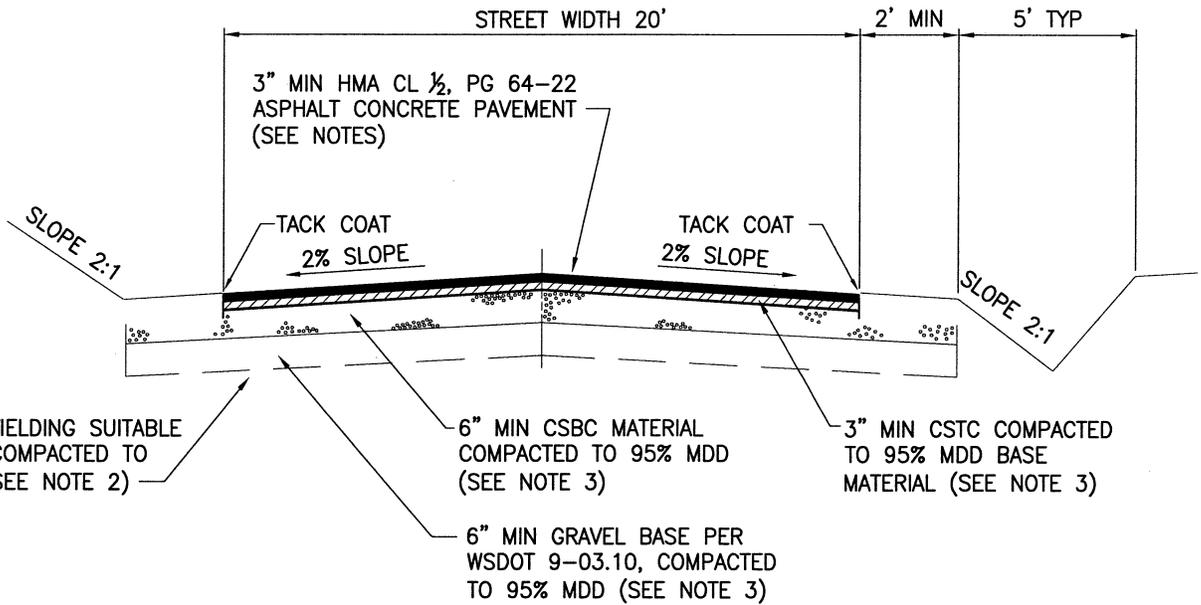
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**CITY OF
ORTING**

**PUBLIC & PRIVATE
ALLEY CROSS SECTION**

| | | |
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-T-5C | | T-5C |



| TYPE OF STREET | MAXIMUM CENTERLINE GRADES | MINIMUM STREET WIDTH | MINIMUM PAVEMENT THICKNESS |
|-----------------------------|---------------------------|----------------------|----------------------------|
| PRIVATE RESIDENTIAL STREETS | 10% | 20' | 3" |

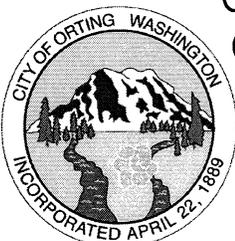
MINIMUM CENTERLINE AND FLOWLINE GRADE FOR ALL STREETS IS 0.5%

NOTES

1. ALL DEPTHS ARE MINIMUM COMPACTED DEPTHS.
2. SUBGRADE PREPARATION SHALL MEET THE REQUIREMENTS OF WSDOT SPEC. SECTION 2-06.3(1). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE COMPACTION REQUIREMENTS AND CONTROL ALL WORK. THE CITY OF ORTING RESERVES THE RIGHT TO CONDUCT COMPLIANCE TESTS, AT THE CONTRACTORS EXPENSE.
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5. SUBGRADE SHALL BE PROOF ROLLED WITH A LOADED DUMP TRUCK. ANY SOFT SPOTS OR YIELDING EARTH SHALL BE REMOVED AND REPLACED WITH GRAVEL BASE PRIOR TO PLACING THE NEXT LIFT OF MATERIAL.
6. ASPHALT CONCRETE PAVEMENT SHALL BE INSTALLED IN ACCORDANCE WITH WSDOT SPEC SECTION 5-04.
7. THE CITY RESERVES THE RIGHT TO MODIFY THE GRADATION OF THE ASPHALT CONCRETE PAVEMENT IF THE CONDITIONS WARRANT IT. THE CONTRACTOR SHALL SUBMIT A JOB MIX FORMULA TO BE REVIEWED BY THE CITY ENGINEER PRIOR TO ANY ASPHALT PLACEMENT.

NOTES CONTINUED ON STD-T-5E

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DATE: Feb 28, 2008 - 11:20am PLOTTED BY: maridea
IMAGES: OrtingLogo.bndw | XREF: S



CITY OF ORTING

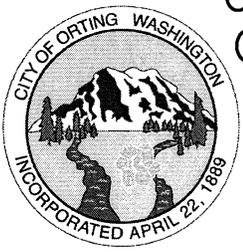
PRIVATE ROADWAY
MINIMUM CROSS SECTION

| | | |
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| FILE NAME: STD-T-5D | | T-5D |

NOTES (CONTINUED)

8. THE MAXIMUM COMPACTED THICKNESS OF ANY SINGLE LIFT OF PAVEMENT SHALL BE 3". PAVEMENT SECTIONS OF THICKNESS GREATER THAN 3" SHALL BE PLACED IN MULTIPLE LIFTS. EACH LIFT SHALL BE COMPACTED IN ACCORDANCE WITH WSDOT SPEC. SECTION 5-04.3(10). PERIODIC COMPLIANCE TESTS SHALL BE MADE BY A CERTIFIED TESTING AGENCY AT THE EXPENSE OF THE CONTRACTOR.
9. THE FACE OF THE GUTTER LIP AND EDGES OF EXISTING ASPHALT MEET LINES SHALL BE TACK COATED PRIOR TO PAVEMENT PLACEMENT. WHEN SUCCESSIVE LIFTS OF ASPHALT ARE REQUIRED TACK COAT SHALL BE DISTRIBUTED UNIFORMLY OVER THE PREVIOUS LIFT AT A RATE OF 0.06-0.08 GALLONS PER SQUARE YARD AT A TEMPERATURE OF 100 F AND SHALL BE ALLOWED TO SET TO A TACKY STATE PRIOR TO THE PLACEMENT OF THE NEXT LIFT.
10. ALL MEET LINES BETWEEN LIFTS OF ASPHALT SHALL BE UNIFORM, WITH EDGES VERTICAL AND AT THE REQUIRED THICKNESS. IF SUBSEQUENT LIFTS ARE NOT COMPLETED WITHIN 48 HOURS OR THE EDGES HAVE BEEN CONTAMINATED, THE MEET LINES SHALL BE CLEANED AND TACK COATED.
11. ALL EXISTING MANHOLE COVERS AND MONUMENT CASES SHALL BE REMOVED AND STORED. THE MANHOLES AND MONUMENTS SHALL BE COVERED TO PREVENT DIRT AND DEBRIS FROM ENTERING DURING PAVING OPERATION. AFTER PAVING, THE CASTINGS SHALL BE RE-INSTALLED TO THE PROPER ELEVATION AND PATCHED IN ACCORDANCE WITH THE CITY OF ORTING SPECS.
12. ANY CHANGES TO THE MINIMUM PAVEMENT SECTION SHALL REQUIRE APPROVAL OF THE CITY ENGINEER. A STRUCTURAL PAVEMENT CROSS SECTION DESIGN WITH CALCULATIONS SHALL BE REQUIRED.
13. ALL MANHOLE FRAMES, VALVE FRAMES, AND MONUMENT COVERS SHALL BE INSTALLED AFTER FINAL LIFT OF ASPHALT PAVEMENTS. SEE SPECIFIC DETAILS FOR METHOD OF INSTALLATION.
14. ADEQUATE DRAINAGE SHALL BE PROVIDED.

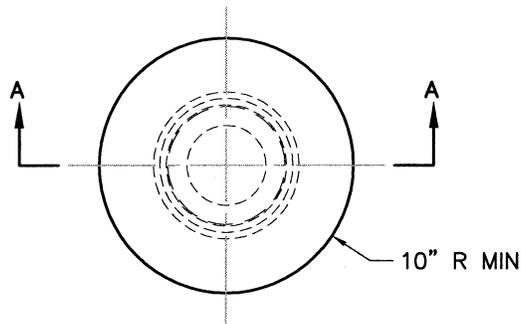
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**CITY OF
 ORTING**

**PRIVATE ROADWAY
 MINIMUM CROSS SECTION NOTES**

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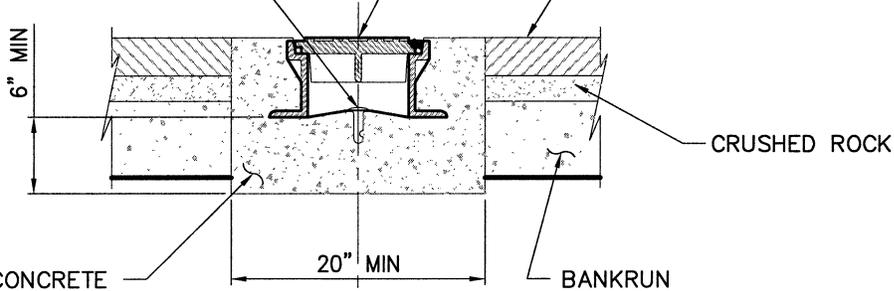


PLAN

BRONZE PLUG MARKER
(TO BE MARKED AND
RECORDED BY ENGINEER)
SEE RCW 5809.130 &
WAC332-120

MONUMENT AND
FRAME COVER PER
DETAIL STD-T-6B

ASPHALT OR CEMENT
CONCRETE PAVEMENT



CEMENT CONCRETE
SHALL BE CL 3000,
AND EITHER SQUARE
OR CYLINDRICAL.

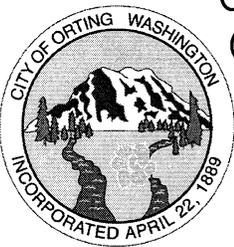
SECTION A-A

NOTES

1. THIS TYPE IS USED PRIMARILY ON BITUMINOUS OR ASPHALT CONCRETE PAVEMENT.
2. OWNER WILL FURNISH BRONZE PLUG MARKER FREE OF CHARGE.
3. CONCRETE BASE NEED NOT BE FORMED.
4. FOR RESURFACING PROJECTS, THE EXISTING PAVEMENT STRUCTURE MAY DIFFER FROM THAT AS SHOWN ON THIS PLAN.
5. THE REMOVAL OF ANY EXISTING MONUMENTS AND ALL PAVEMENT REQUIRED SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE MONUMENT.
6. SHALL BE LOCATED AT ALL POINTS OF INTERSECTION OF STREETS, PCS, PTS AND ALL CENTER POINTS OF CUL-DE-SAC BENDS.

IMAGES: OrttingLogoBanner |
XREF: S

FILE: Std-T-6A
DATE: Feb 21, 2008 - 4:35pm PLOTTED BY: mcarrideo



**CITY OF
ORTING**

**POURED IN
PLACE MONUMENT**

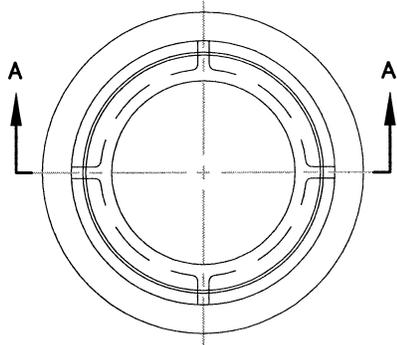
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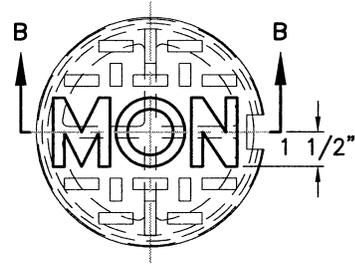
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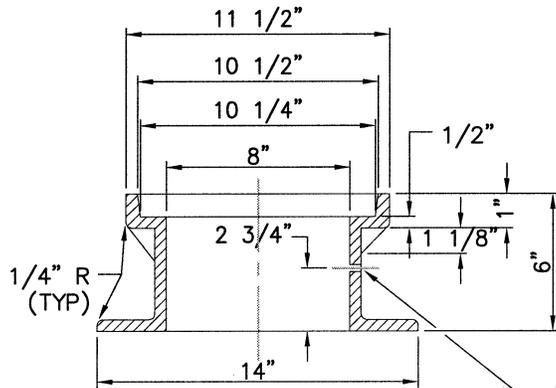
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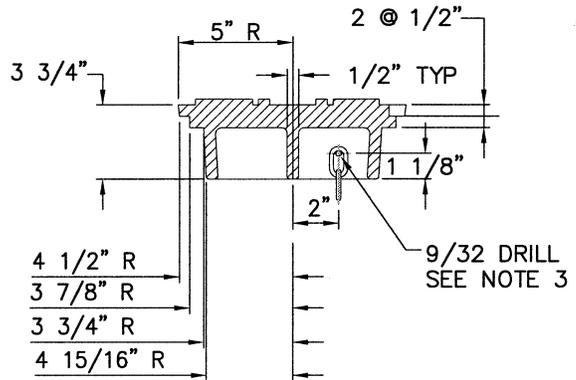
FRAME (PLAN VIEW)



COVER (PLAN VIEW)

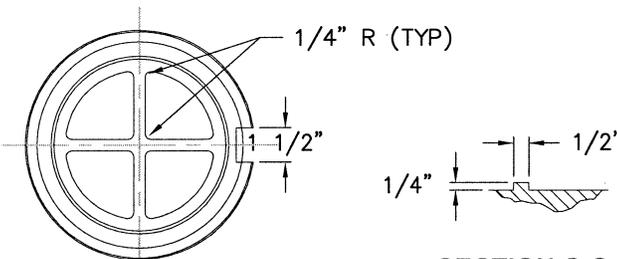


SECTION A-A

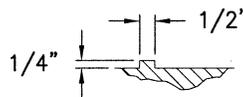


SECTION B-B

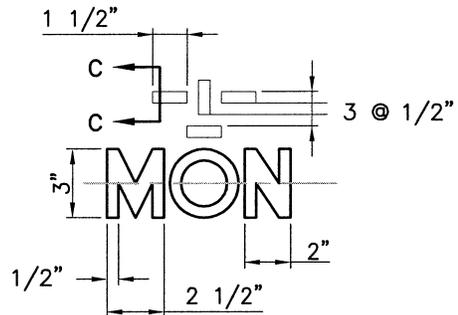
5/16" DRILL
SEE NOTE 3



BOTTOM VIEW



SECTION C-C



NOTES

1. MACHINE BEARING FACES OF COVER AND CASE TO INSURE POSITIVE FIT.
2. CASTINGS SHALL BE GRAY IRON, ASTM A-48, CLASS 40 AND SHALL CONFORM FURTHER TO APPLICABLE SECTION OF THE SPECIFICATIONS.
3. ATTACH 15" RETENTION CHAIN TO COVER WITH 1/4" RIVET AND OVERSIZE WASHER AND TO FRAME WITH 1/4"x1-1/2" BOLT AND OVERSIZE WASHER.

FILE: STD-T-6B
DATE: Feb 28, 2008 - 4:06pm PLOTTED BY: mcrriedge
IMAGES: OrtngLogbandw | XREF: S



**CITY OF
ORTING**

**MONUMENT
FRAME AND COVER**

SCALE: NO SCALE

APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-T-6B

T-6B

**SECTION 10.207 - UNIFORM FIRE CODE POLICY;
ACCESS ROADWAYS FOR FIRE APPARATUS**

1. ALL BUILDINGS THAT HAVE AN EXTERIOR WALL LOCATED OVER 150 FEET FROM THE CURB LINE OF A DEDICATED PUBLIC STREET SHALL BE PROVIDED WITH FIRE DEPARTMENT ACCESS WAYS WHICH SHALL BE TOTALLY UNOBSTRUCTED, INCLUDING THE PARKING OF MOTOR VEHICLES.
2. THE 150 FEET FROM THE REQUIRED ACCESS ROADWAY TO ALL EXTERIOR WALLS OF BUILDINGS SHALL BE MEASURED IN A STRAIGHT LINE AND SHALL RUN THROUGH ALL BUILDINGS AND OTHER OBSTRUCTIONS. IF TOPOGRAPHICAL CONDITIONS EXIST THAT WOULD MAKE IT IMPOSSIBLE FOR HOSE LINES TO BE ADVANCED TO A CERTAIN PORTION OF A BUILDING FROM A REQUIRED ACCESS WAY, AN ADDITIONAL ACCESS WAY WILL BE REQUIRED TO ACCOMMODATE ACCESS TO THAT PARTICULAR PORTION OF THE BUILDING.
3. THE FIRE DEPARTMENT ACCESS MAY BE MODIFIED IF THE BUILDING IS PROVIDED WITH AN APPROVED COMPLETE AUTOMATIC SPRINKLER SYSTEM OR OTHER APPROVED PROTECTION.
4. REQUIRED ACCESS ROADWAYS SHALL BE KEPT A MINIMUM OF 28 FEET IN WIDTH IN THE IMMEDIATE VICINITY OF ANY BUILDING OVER 35 FEET IN HEIGHT ABOVE NATURAL GRADE. AT LEAST ONE REQUIRED ACCESS ROADWAY SHALL BE LOCATED WITHIN A MINIMUM OF 15 FEET AND A MAXIMUM OF 25 FEET FROM THE BUILDING, AND SHALL BE POSITIONED PARALLEL TO ONE ENTIRE SIDE OF THE BUILDING.
5. ACCESS ROADWAYS ADJACENT TO REQUIRED FIRE HYDRANTS SHALL BE A MINIMUM OF 28 FEET IN WIDTH, 20 FEET IN EITHER DIRECTION FROM THE FIRE HYDRANT.
6. ACCESS DOORS SHALL BE REQUIRED EVERY 100 FEET OR OPENINGS AS SPECIFIED IN SECTION 3802(b) 1 OF THE UNIFORM BUILDING CODE ON THE EXTERIOR WALLS OF BUILDINGS ALONG REQUIRED ACCESS WAYS.
7. REQUIRED ACCESS ROADWAYS SHALL BE LOCATED ON TWO SIDES OF A BUILDING WHEN THE WIDTH OF THE BUILDING EXCEEDS 150 FEET AND THE LENGTH EXCEEDS 150 FEET.
8. REQUIRED ACCESS ROADWAYS SHALL BE LOCATED ALONG THE TWO LONG DIMENSIONS OF A BUILDING EXCEEDING 100 FEET IN WIDTH AND 600 FEET IN LENGTH.
9. MAXIMUM GRADES FOR ACCESS ROADWAYS WILL BE 10 PERCENT FOR CONCRETE AND 10 PERCENT FOR ASPHALT.
10. THE MINIMUM TURNING RADII FOR ALL TURNS SHALL BE 28 FEET INSIDE TURNING RADIUS AND 50 FEET OUTSIDE TURNING RADIUS.
11. IF ACCESS ROADWAYS ARE NOT LOOPED, THEN THE PROVIDED DEAD-END ACCESS ROADWAYS WILL MEET THE REQUIREMENTS AS SPECIFIED IN THE FOLLOWING TABLE:

REQUIREMENTS FOR DEAD-END ACCESSWAYS

| LENGTH | WIDTH | TURNAROUNDS REQUIRED |
|---------------------------------------|-------|--|
| * 0 - 150' | 22' | NONE REQUIRED |
| * 150' - 500' | 24' | 90' DIAMETER CUL-DE-SAC 60' HAMMERHEAD |
| 500' - 750' | 28' | 90' DIAMETER CUL-DE-SAC 120' HAMMERHEAD |
| OVER 750' - SPECIAL APPROVAL REQUIRED | | |

*CURVES AND TOPOGRAPHICAL CONDITIONS COULD ALTER THE REQUIREMENTS FOR TURNAROUNDS AND THE WIDTH OF ACCESSWAYS.

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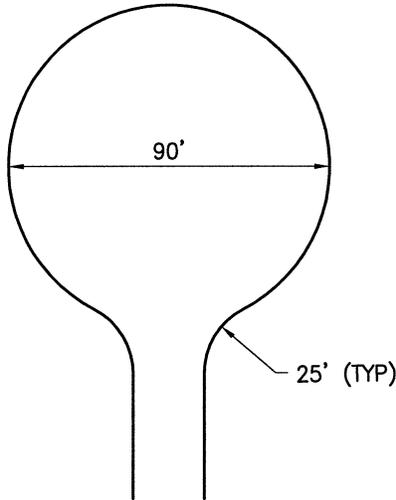


**CITY OF
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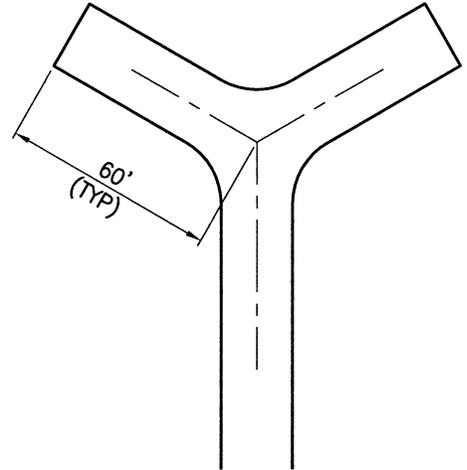
**FIRE ACCESS
REQUIREMENTS**

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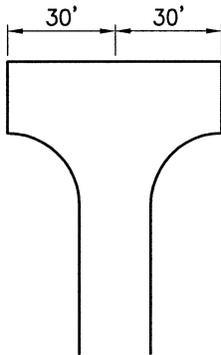
90' DIAMETER
CUL-DE-SAC



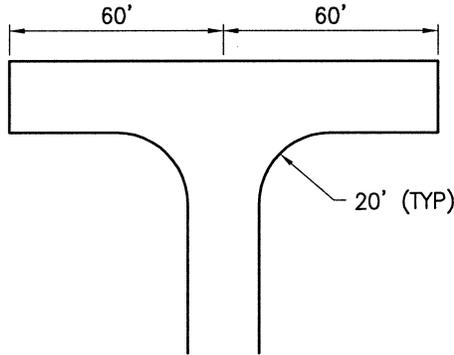
ACCEPTABLE
ALTERNATIVE TO
120' HAMMERHEAD



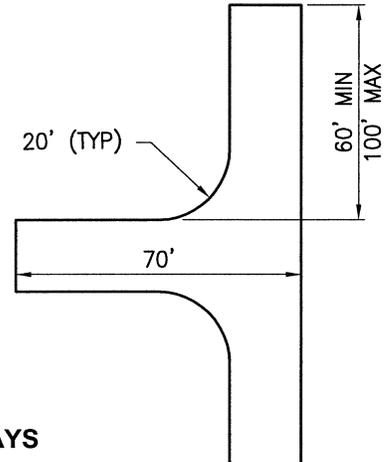
60' HAMMERHEAD



120' HAMMERHEAD



ACCEPTABLE
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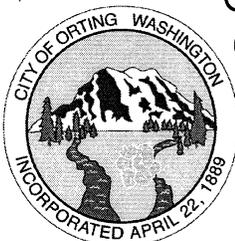


REQUIREMENTS FOR DEAD-END ACCESSWAYS

| LENGTH | WIDTH | TURNAROUNDS REQUIRED |
|---------------------------------------|-------|--|
| * 0 - 150' | 20' | NONE REQUIRED |
| * 150' - 500' | 24' | 90' DIAMETER CUL-DE-SAC 60' HAMMERHEAD |
| 500' - 750' | 28' | 90' DIAMETER CUL-DE-SAC 120' HAMMERHEAD |
| OVER 750' - SPECIAL APPROVAL REQUIRED | | |

*CURVES AND TOPOGRAPHICAL CONDITIONS COULD ALTER THE REQUIREMENTS FOR TURNAROUNDS AND THE WIDTH OF ACCESSWAYS.

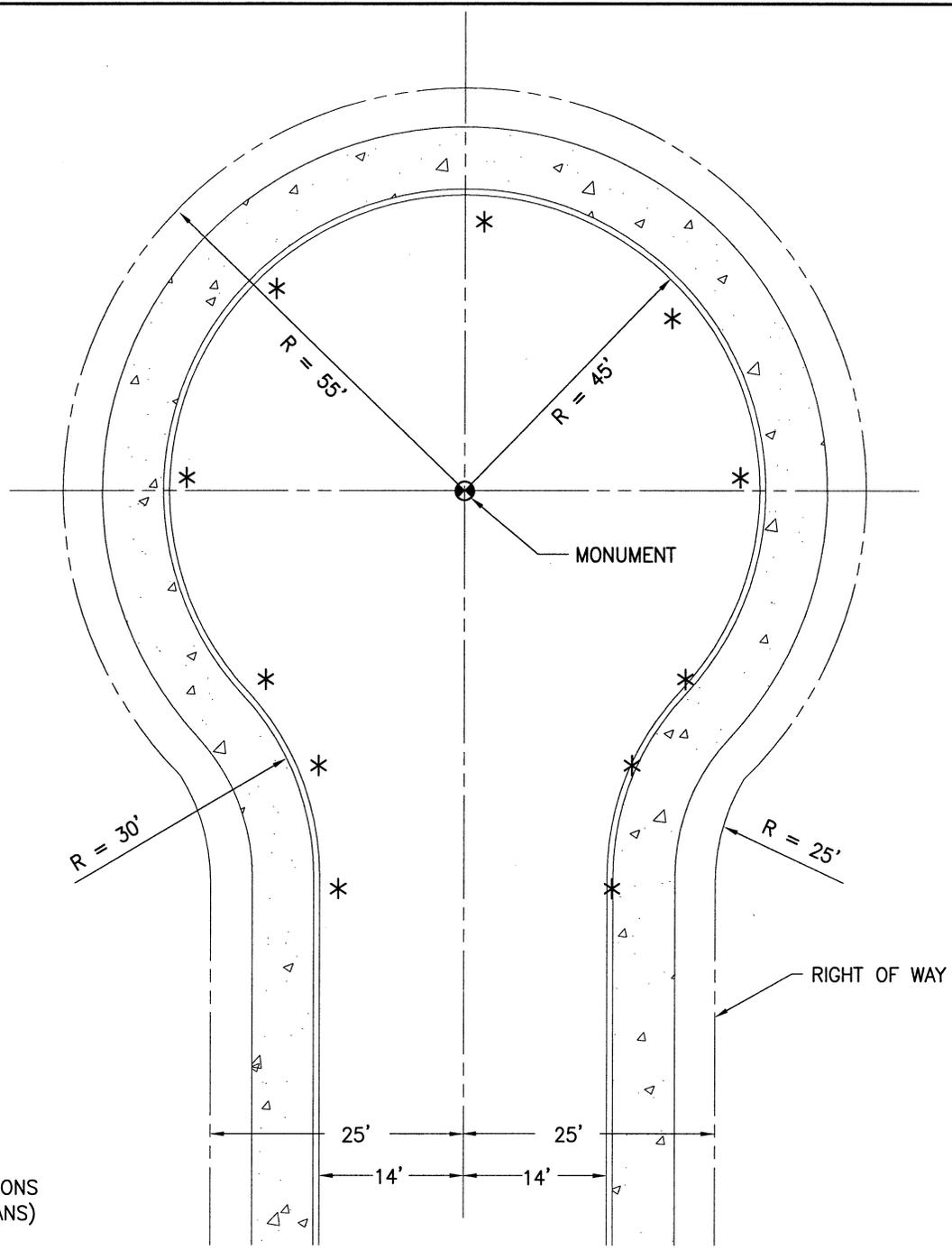
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CITY OF
ORTTING

**DEAD END PRIVATE
ROAD REQUIREMENTS**

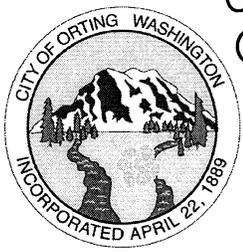
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LEGEND

* FLOW LINE ELEVATIONS
(REQUIRED ON PLANS)

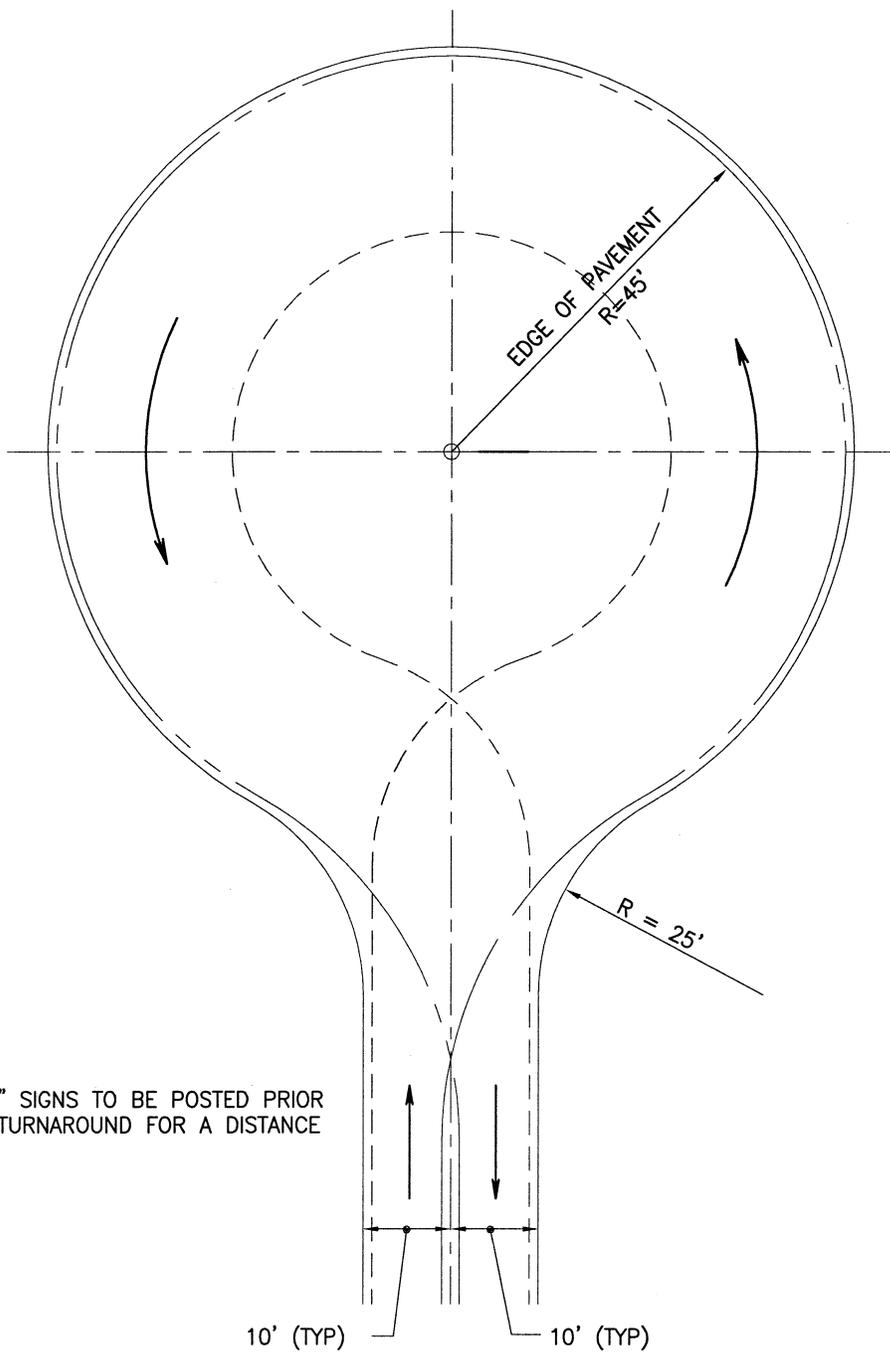
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**CITY OF
ORTING**

**CUL-DE-SAC BULB
NEIGHBORHOOD STREET**

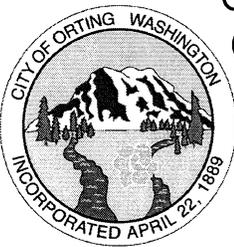
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NOTES

"NO PARKING PERMITTED" SIGNS TO BE POSTED PRIOR TO, ALONG, AND AFTER TURNAROUND FOR A DISTANCE OF 100 FT.

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**CITY OF
 ORTING**

**CUL-DE-SAC BULB
 PRIVATE ACCESS ROAD**

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CITY OF
 ORTLING

"T" INTERSECTION

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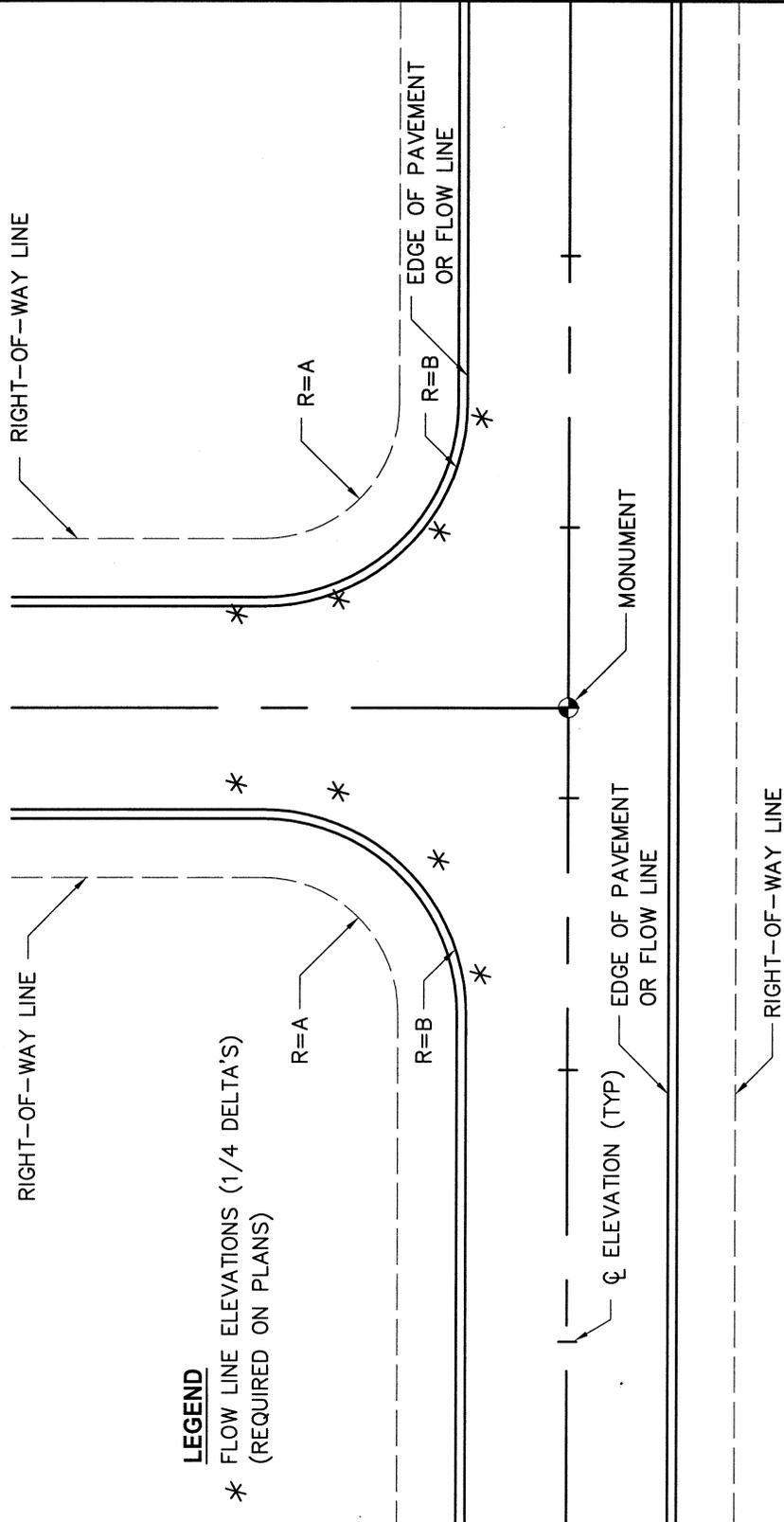
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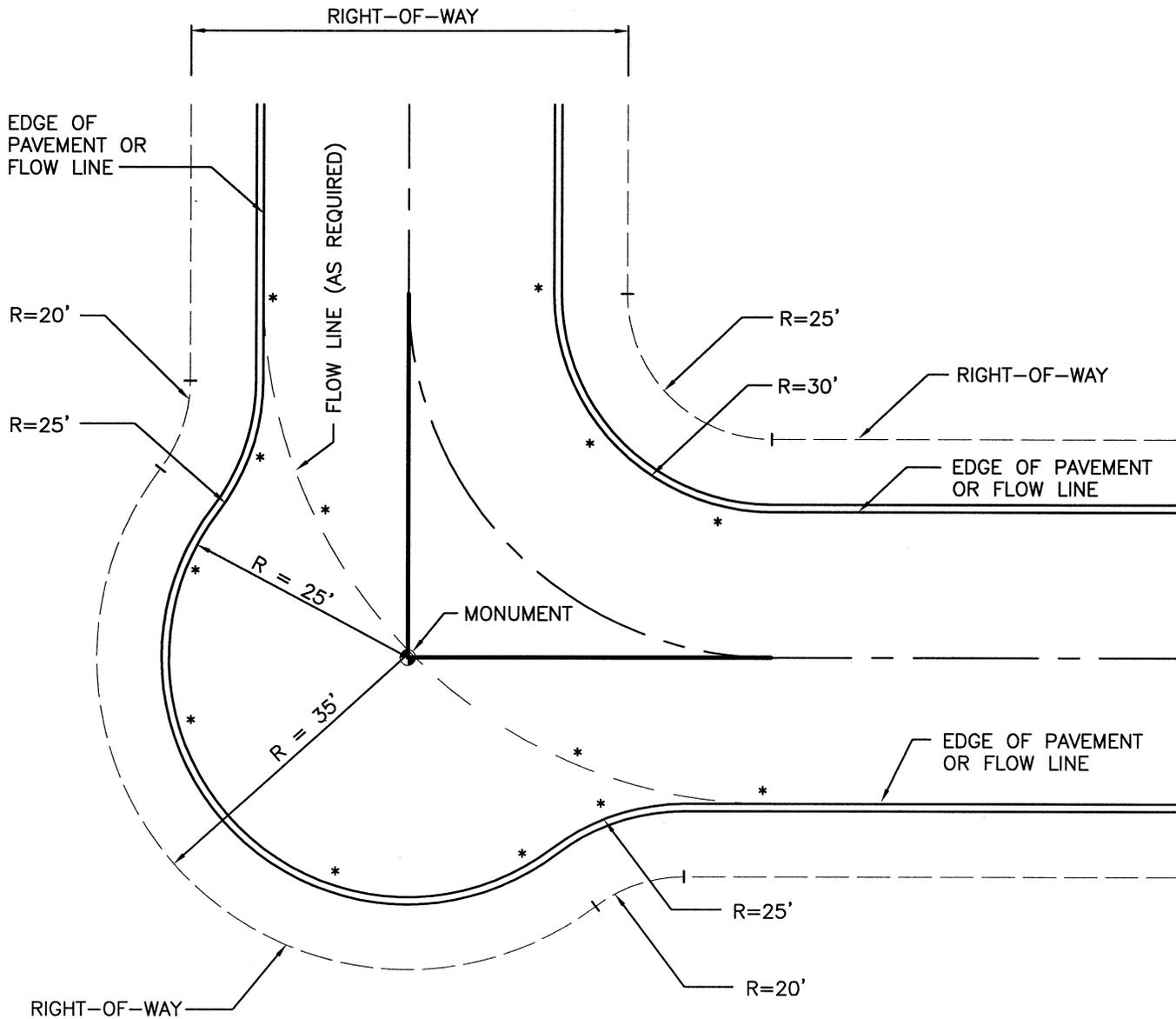
T-8D

| TYPE OF STREET | MIN ROW WIDTH | MIN STREET WIDTH | ROW RADII (A) | CURB RADII (B) |
|--------------------------|---------------|------------------|---------------|----------------|
| NEIGHBORHOOD STREET | 50' | 28' | 25' | 30' |
| LOCAL RESIDENTIAL STREET | 60' | 38' | 25' | 30' |
| RESIDENTIAL ARTERIAL | 60' | 44' | 30' | 35' |
| MAJOR ARTERIAL | 60' | 44' | 35' | 40' |
| PRINCIPAL ARTERIAL | 72' | 56' | 35' | 40' |



LEGEND

* FLOW LINE ELEVATIONS (1/4 DELTA'S)
 (REQUIRED ON PLANS)



LEGEND

- * FLOW LINE ELEVATIONS (REQUIRED ON PLANS)

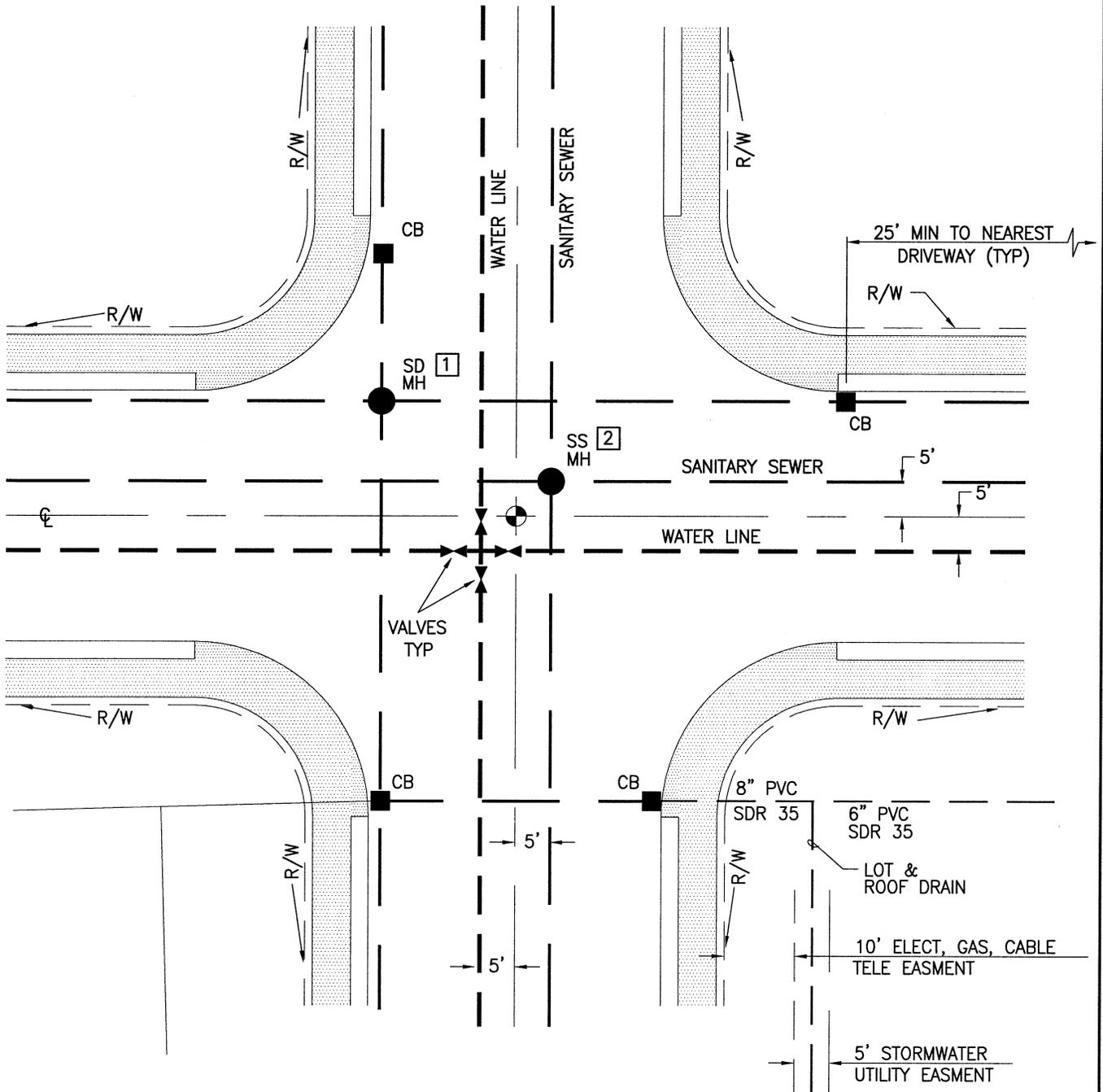
FILE: STD-T-8E
 DATE: Feb 21, 2008 - 4:49pm
 PLOTTED BY: morrison
 IMAGES: OrtlingLongbandw | XREF'S:



CITY OF ORTING

NEIGHBORHOOD STREET KNUCKLE

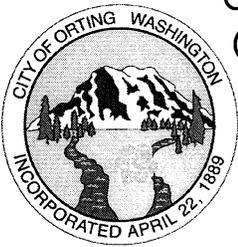
| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. T-8E |
| FILE NAME: STD-T-8E | | |



NOTES

- 1 MH LID SHALL BE MARKED "DRAIN" ON THE LID, SEE STD-S-1A.
- 2 MH LID SHALL BE MARKED "SEWER" ON THE LID, SEE STD-S-1A.

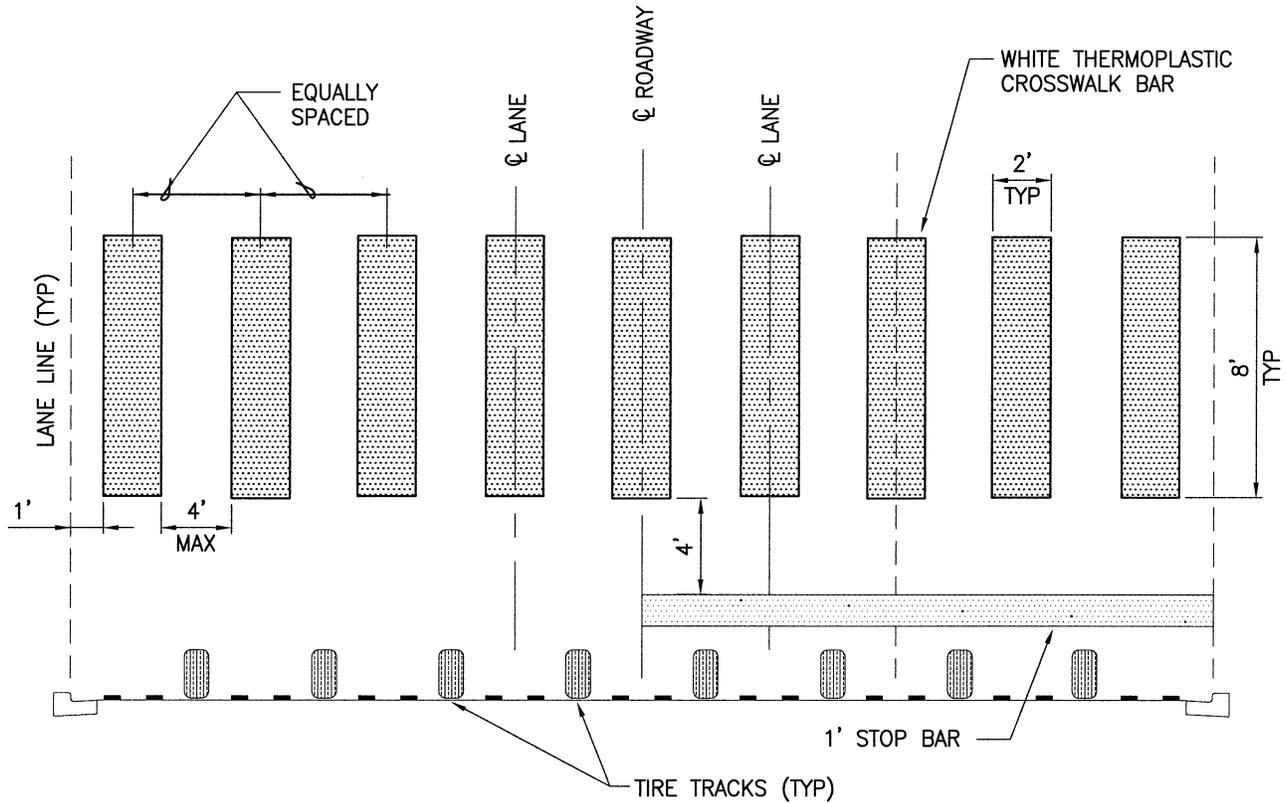
FILE: Std-T-9
 DATE: Feb 28, 2008 - 2:23pm PLOTTED BY: maridea
 IMAGES: OrttingLogoBand-1
 XREF'S:



**CITY OF
ORTING**

**TYPICAL ROADWAY
UTILITY LAYOUT**

| | | |
|--------------------|-------------------|------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. T-9 |
| FILE NAME: STD-T-9 | | |



*** TYPICAL 4 LANE ROADWAY CONFIGURATION**

***NOTES**

FOR ROADWAYS WITH MORE OR LESS LANES THE SAME CONFIGURATION APPLIES, KEEPING THERMOPLASTIC BARS CENTERED ON THE LANE LINES, AND IN THE CENTER OF THE TRAVELED PORTION OF THE LANE TO MINIMIZE TIRE WEAR ON THE THERMOPLASTIC.

IMAGES: OrttingLogoBandw | XREF'S:

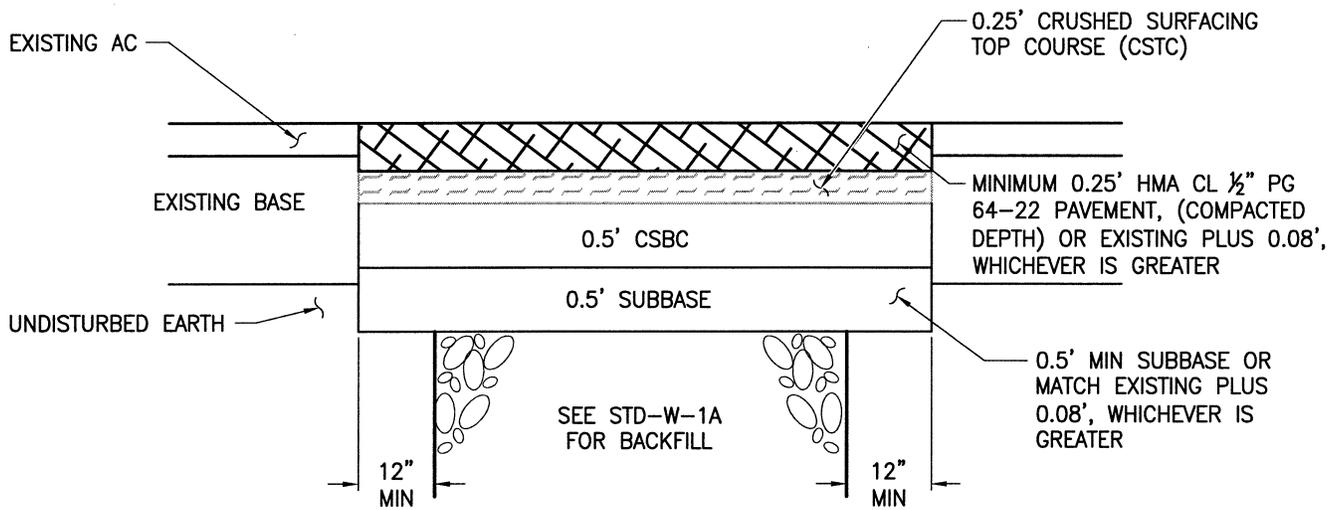
FILE: STD-T-10 DATE: Jan 04, 2008 - 9:35am PLOTTED BY: MarriDea



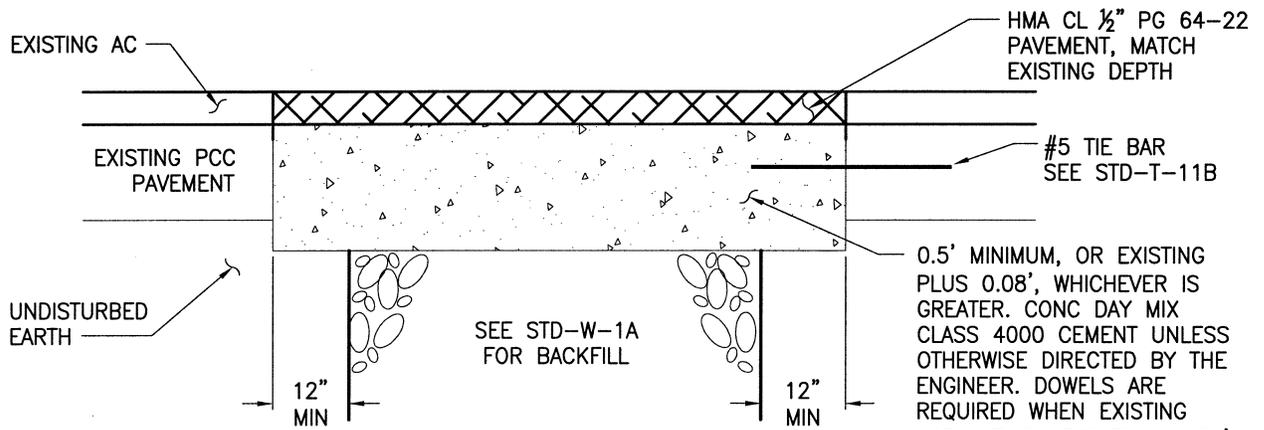
CITY OF ORTTING

THERMOPLASTIC CROSSWALK

| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. T-10 |
| FILE NAME: STD-T-10 | | |



CASE 1



CASE 2

(WITH AC PAVEMENT ON PCC PAVEMENT)

NOTES

1. WHEN CUT LINE IS LESS THAN THREE FEET FROM A CUT LINE, CURB OR PAVEMENT EDGE, THE EXISTING PAVEMENT SHALL BE REMOVED TO THE CUT LINES (CASE 1 & 2).

IMAGES:
XREF'S:

DATE: 01/19/05 3:24pm FILENAME: Std-T-11A



**CITY OF
ORTING**

PAVEMENT REPLACEMENT

SCALE: NO SCALE

APPROVAL
DATE:

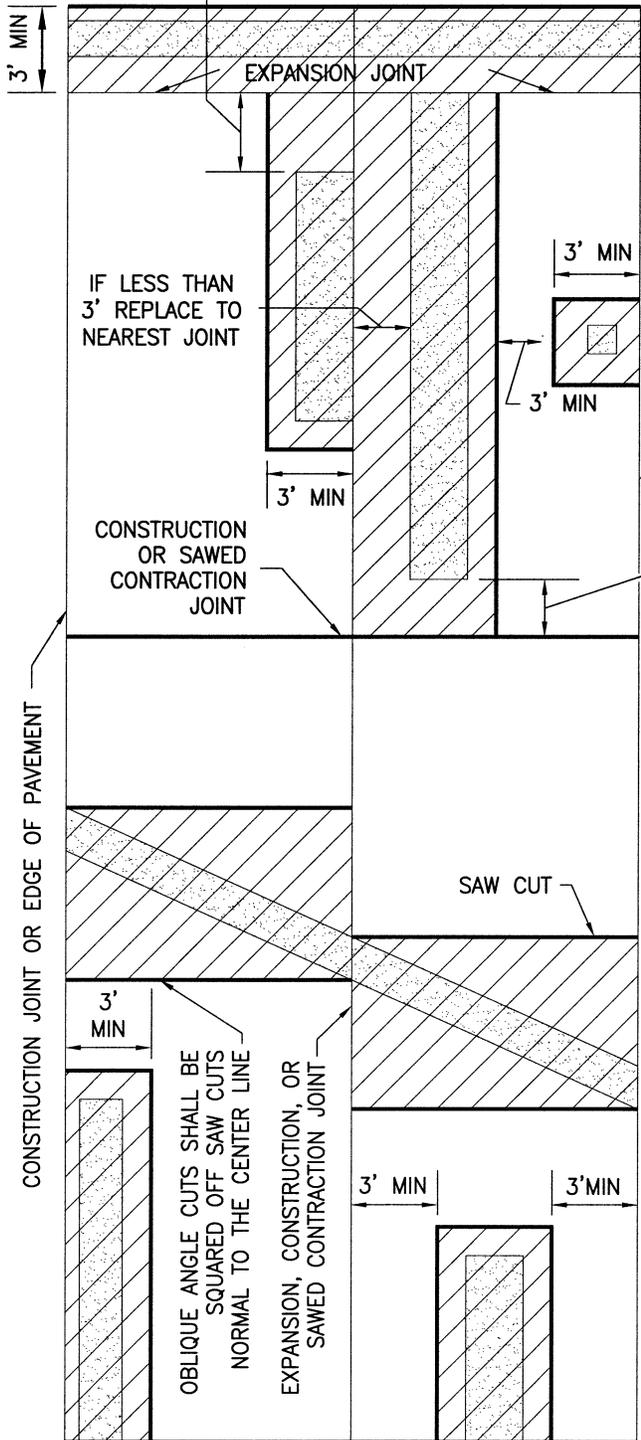
DRAWING
NO.

FILE NAME: STD-T-11A

T-11A

IF LESS THAN 3'
REPLACE TO
EXPANSION JOINT

PLAN VIEW

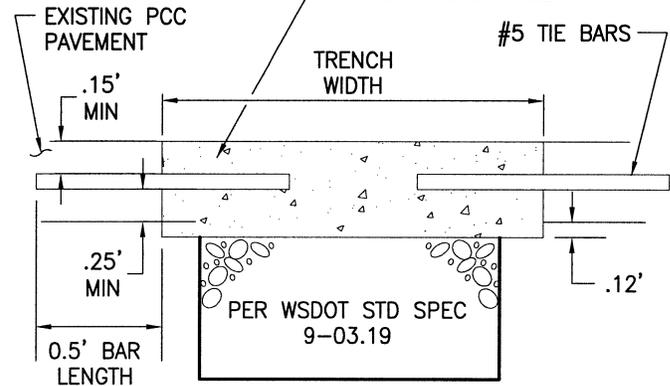


| CEMENT CONCRETE REPLACEMENT WIDTH | DOWEL BAR LENGTH | SPACING |
|-----------------------------------|------------------|-----------------|
| 4' OR LESS | 16 INCHES | 18 INCH CENTERS |
| 4' TO 6' | 24 INCHES | 18 INCH CENTERS |
| 6' OR GREATER | 30 INCHES | 18 INCH CENTERS |

CONSTRUCTION JOINT OR EDGE OF PAVEMENT

IF LESS THAN 3' REPLACE TO CONSTRUCTION OR SAWED CONTRACTION JOINT

CLASS 4000 CEMENT CONC MIX UNLESS OTHERWISE APPROVED BY THE ENGINEER



REPLACEMENT SECTION

LEGEND

- EXCAVATION
- AREA OF CONCRETE PAVEMENT TO BE REPLACED
- SAW CUT 1 1/2" DEPTH

SEE STD-T-11C FOR NOTES.

FILE: Std-T-11B
DATE: Feb 21, 2008 - 5:04pm PLOTTED BY: merridea



CITY OF ORTING

CONCRETE PAVEMENT REPLACEMENT

SCALE: NO SCALE

APPROVAL DATE:

DRAWING NO.

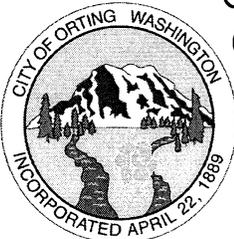
FILE NAME: STD-T-11B

T-11B

NOTES

1. THE EXTENT OF REPAIR OF CONCRETE CUTS NOT SHOWN ON THIS STANDARD, OR FOR CUTS MADE WITHIN THREE FEET OF EXISTING PATCHES, CRACKS, OR DETERIORATED SLABS, SHALL BE DETERMINED BY THE ENGINEER.
2. ALL TRANSVERSE AND LONGITUDINAL JOINTS AND OUTER EDGES OF THE PAVEMENT WHICH ARE PART OF THE REPLACED CONCRETE SHALL BE EDGED WITH AN EDGING TOOL HAVING A RADIUS OF 0.25 INCH.
3. REPLACED CONCRETE THAT JOINS A SAWED EDGE OF THE EXISTING PAVEMENT SHALL NOT BE EDGED.
4. REPLACED CONCRETE SHALL BE FINISHED TO THE SAME SURFACE TEXTURE AS THAT OF ADJACENT EXISTING CONCRETE.
5. ALL PAVEMENT REMOVALS SHALL BE MADE ON STRAIGHT LINE SAW CUTS A MINIMUM OF 1.5 INCHES DEEP. IF CUT LINE IS LESS THAN THREE FEET FROM A CUT LINE, EXPANSION JOINT OR EDGE, THE EXISTING PAVEMENT SHALL BE REMOVED TO THOSE CUT LINES, EXPANSION JOINT OR EDGE OR AS DIRECTED BY THE ENGINEER.
6. DURING EXCAVATION AND SUBGRADE PREPARATION, THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO INSURE THE PROTECTION OF ALL UTILITIES AND ADJACENT PAVEMENT SECTIONS.
7. DOWELS ARE NOT REQUIRED ON THE SIDE BORDERING CURBS, LONGITUDINAL EXPANSION JOINTS, OR TRANSVERSE CONSTRUCTION JOINTS.

FILE: Std-T-11C
 DATE: Feb 14, 2008 - 10:19am PLOTTED BY: morrinda
 IMAGES: OrtlingLogoBonde.r
 XREF'S:

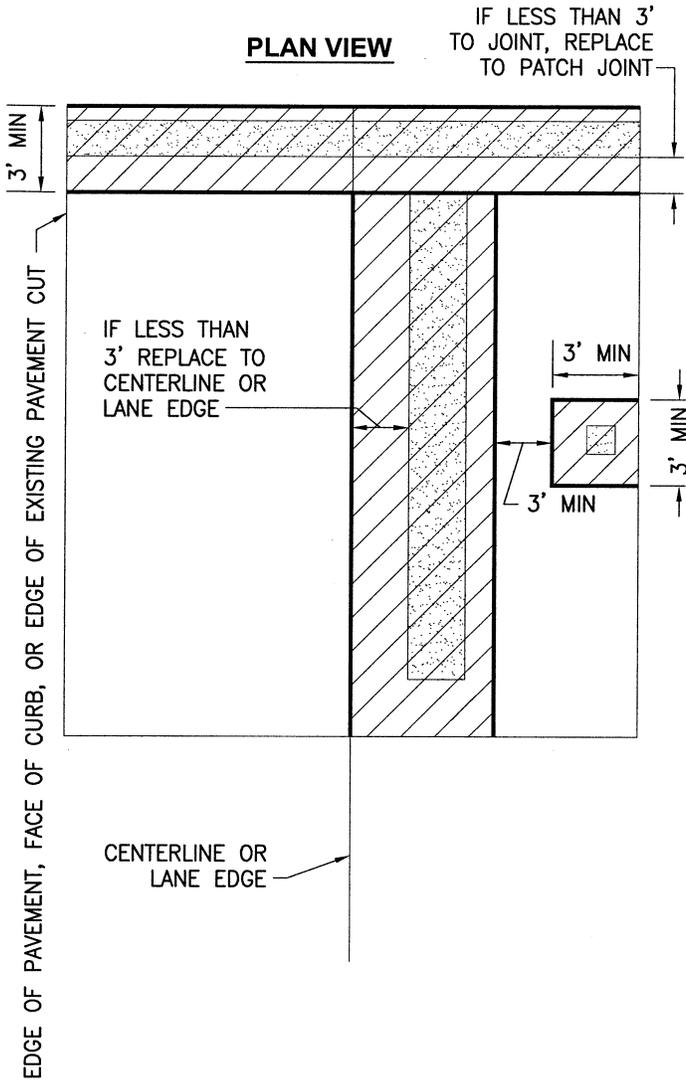


**CITY OF
 ORTING**

**CONCRETE PAVEMENT REPLACEMENT
 NOTES**

| | | |
|----------------------|-------------------|----------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-T-11C | | T-11C |

PLAN VIEW



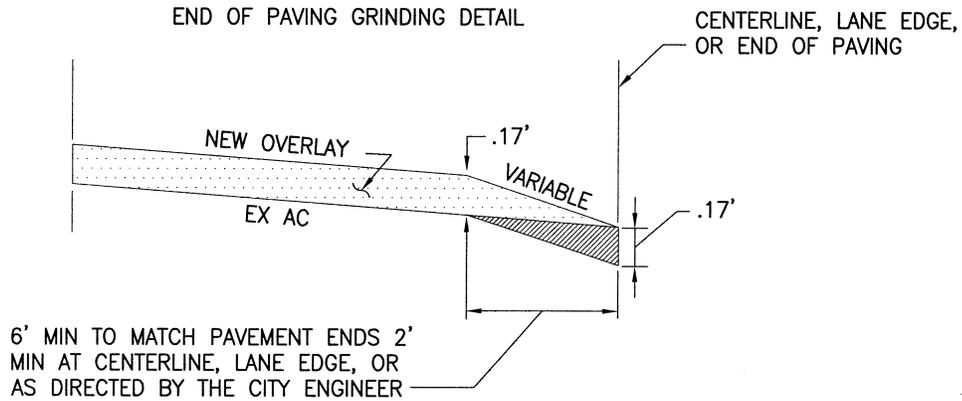
NOTES

1. THE EXTENT OF REPAIR OF ASPHALT CUTS NOT SHOWN ON THIS STANDARD, OR FOR CUTS MADE WITHIN THREE FEET OF EXISTING PATCHES, CRACKS, OR DETERIORATED PAVEMENTS, SHALL BE DETERMINED BY THE ENGINEER AND PERFORMED PER THE SUBMITTED RESTORATION/PAVEMENT DESIGN.
2. ALL PAVEMENT REMOVALS SHALL BE MADE ON STRAIGHT LINE SAW CUTS. IF CUT LINE IS LESS THAN THREE FEET FROM A CUT LINE, EXPANSION JOINT, OR EDGE, THE EXISTING PAVEMENT SHALL BE REMOVED TO THOSE CUT LINES, EXPANSION JOINT, OR EDGE, OR AS DIRECTED BY THE ENGINEER.
3. DURING EXCAVATION AND SUBGRADE PREPARATION, THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO INSURE THE PROTECTION OF ALL UTILITIES AND ADJACENT PAVEMENT SECTIONS.

LEGEND

- EXCAVATION
- AREA OF PAVEMENT TO BE REPLACED
- SAW CUT

PAVEMENT CROSS SECTION



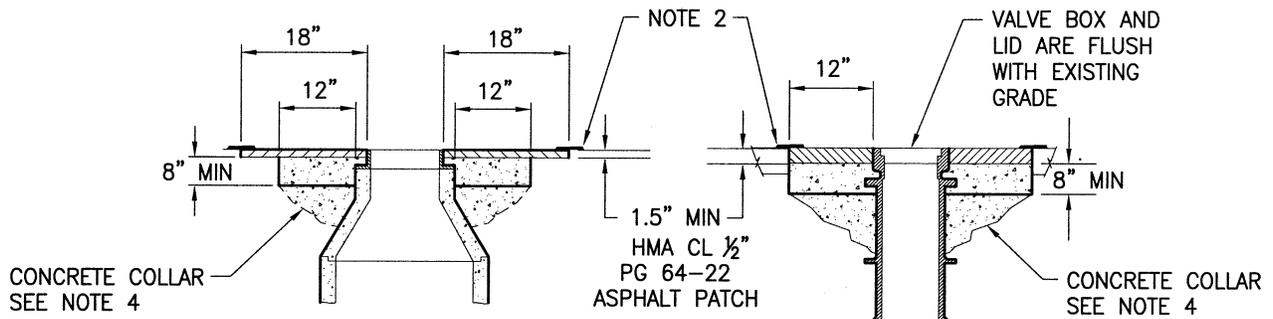
FILE: Std-T-110
 DATE: Feb 14, 2008 - 2:31pm PLOTTED BY: morrison
 IMAGES: OrtlingLogoborder | XREF'S:



CITY OF ORTING

ASPHALT PAVEMENT REPLACEMENT

| | | |
|----------------------|----------------|-----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. T-11D |
| FILE NAME: STD-T-11D | | |

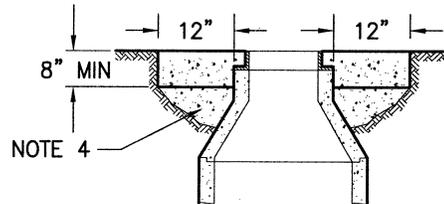


**MANHOLE OR CATCH BASIN
IN ASPHALT AREA**

SCALE: NONE

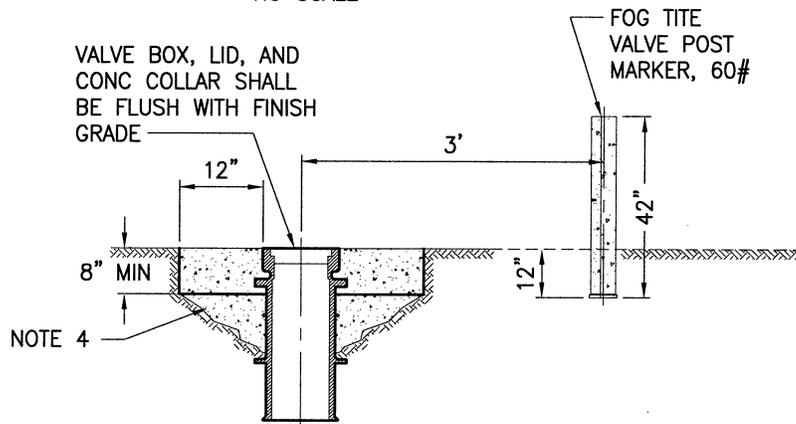
**VALVE BOX IN
ASPHALT AREA**

SCALE: NONE



**MANHOLE OR CATCH BASIN
IN UNIMPROVED AREA**

NO SCALE



**VALVE BOX IN
UNIMPROVED AREA**

NO SCALE

NOTES

1. ADJUSTMENT OF UTILITY STRUCTURES SHALL BE PER STANDARD SPECIFICATION SECTION 7-05.3(1).
2. SURFACE SEAL AT MATCHLINE SHALL BE PG 64.
3. VALVES IN UNIMPROVED AREAS SHALL HAVE A MARKER.
4. 3000 PSI CONCRETE COLLAR, IF OVER-EXCAVATED, BACKFILL WITH CONCRETE.

FILE: STD-T-12
 DATE: Feb 14, 2008 - 2:38pm PLOTTED BY: morrison
 IMAGES: OrtingLogobandw | XREF.S:



**CITY OF
ORTING**

**ADJUSTMENT OF NEW AND EXISTING
UTILITY STRUCTURES TO FINISH GRADE**

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. T-12 |
| FILE NAME: STD-T-12 | | |

SAW CUT 12" MIN FROM
EDGE OF EXCAVATION, FOR
PAVEMENT REPLACEMENT
SEE STD-T-11A,B,C

FOR
EX STREET
REPAIR

FOR
NEW STREET
CONST

SURFACE SEAL AT
MATCH LINE SHALL
BE PG-64

PROPOSED STREET
SECTION

EXIST ROAD
STRUCTURE

COMPACTED SUBGRADE

PIPE TRENCH BACKFILL SHALL
BE BANKRUN GRAVEL BORROW
FOR TRENCH BACKFILL PER
WSDOT STD SPEC 9-03.19 OR
AS DIRECTED BY THE ENGINEER

DETECTABLE MARKING TAPE
SEE WSDOT 9-15.18

PIPE BEDDING SHALL BE GRAVEL
BACKFILL FOR PIPE ZONE BEDDING
(SEE TABLE DWG W-1B) OR
CRUSHED SURFACING TOP COURSE
PER SEC 9-03.9(3) WHERE REQD
AND OR AS DIRECTED BY THE
ENGINEER

PIPE FOUNDATION MATERIAL PER
WSDOT 9-13.6 (QUARRY SPALLS)
WHERE REQD TO ACHIEVE A FIRM &
UNYIELDING BASE OR AS DIRECTED
BY THE ENGINEER

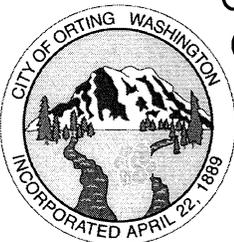
MAXIMUM PAY WIDTH SHALL
BE PIPE OD + 24" FOR PIPE

DEPTH VARIES WITH SHORING AND CRIBBING
REQUIRED WHERE TOTAL TRENCH DEPTH
EXCEEDS 48 INCHES, OVER 20 FEET MUST
BE ENGINEERED

NOTES

1. ALL BACKFILL SHALL BE COMPACTED TO 95% OPTIMUM DENSITY.
2. FOR PIPE COVER LESS THAN 36", PIPE TRENCH BACKFILL SHALL BE CRUSHED SURFACING TOP COURSE PER SECTION 9-03.9(3).
3. THIS DETAIL IS GENERALLY USED WHEN TRENCH RUNS PARALLEL WITH PAVED OR PROPOSED ROADWAY.
4. ALL WATER MAIN SHALL BE MECHANICALLY RESTRAINED.

FILE: S14-W-1A
DATE: Feb 22, 2008 - 9:19am PLOTTED BY: merrideo
IMAGES: OrtingLogoBandw |
XREF S:



CITY OF
ORTING

TYPICAL TRENCH AND BEDDING
SECTION FOR DIP WATERMAIN

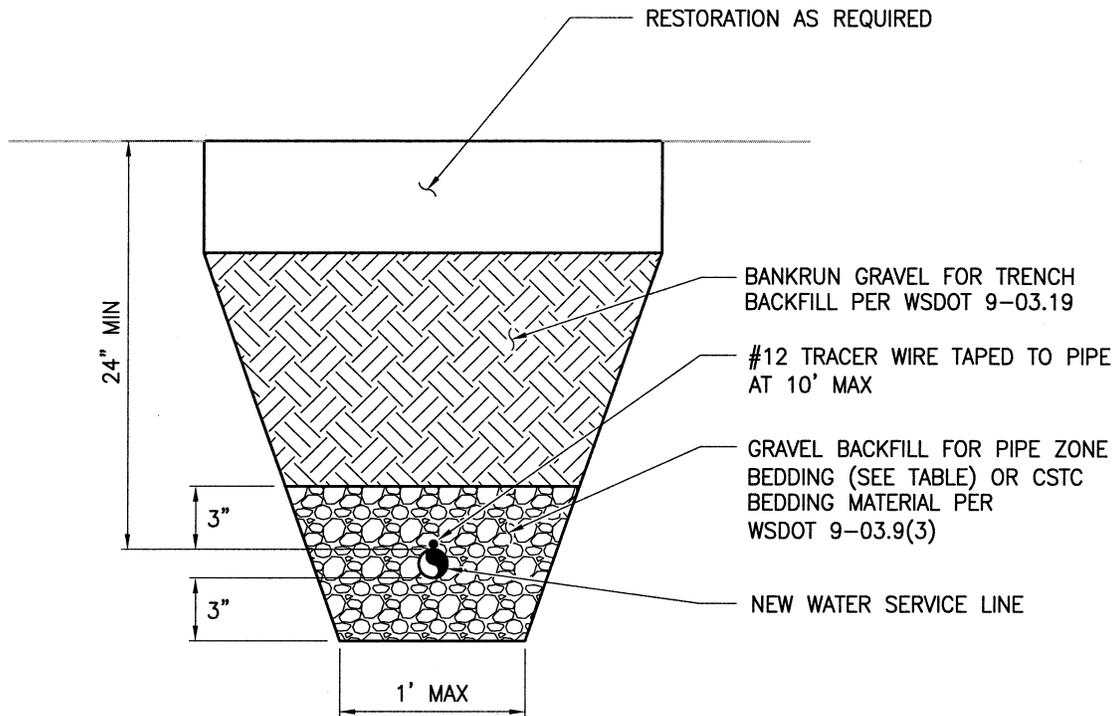
SCALE: NO SCALE

APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-W-1A

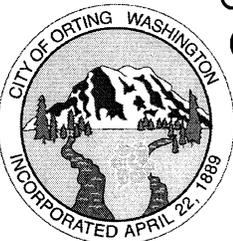
W-1A



GRAVEL BACKFILL FOR PIPE ZONE BEDDING

| <u>SIEVE SIZE</u> | <u>PERCENT PASSING</u> |
|-------------------|------------------------|
| ¾" SQUARE | 100 |
| ⅝" SQUARE | 95-100 |
| U.S. NUMBER 8 | 0-10 |
| U.S. NUMBER 200 | 0-3 |
| SAND EQUIVALENT | 35 MINIMUM |

FILE: Std-W-1B
 DATE: Feb 22, 2008 - 9:22am PLOTTED BY: morrideo
 IMAGES: OrtingLogo.bowen | XREFS:



**CITY OF
 ORTING**

**WATER SERVICE AND BEDDING
 WITHIN RIGHT-OF-WAY**

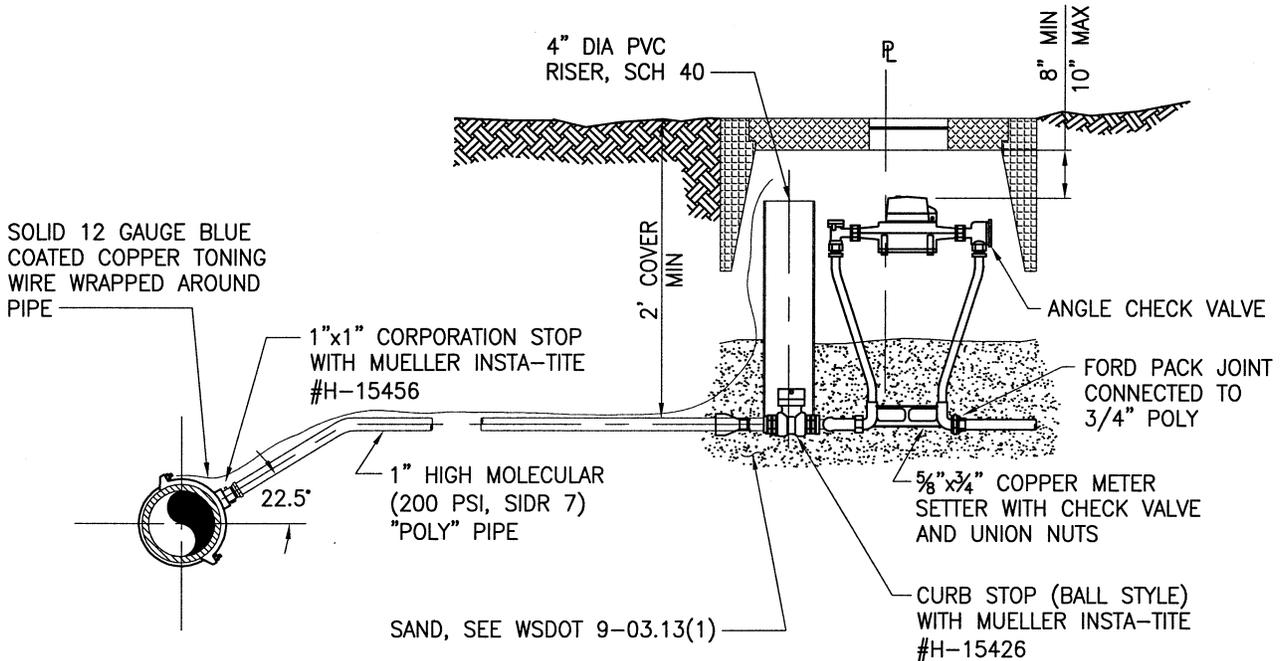
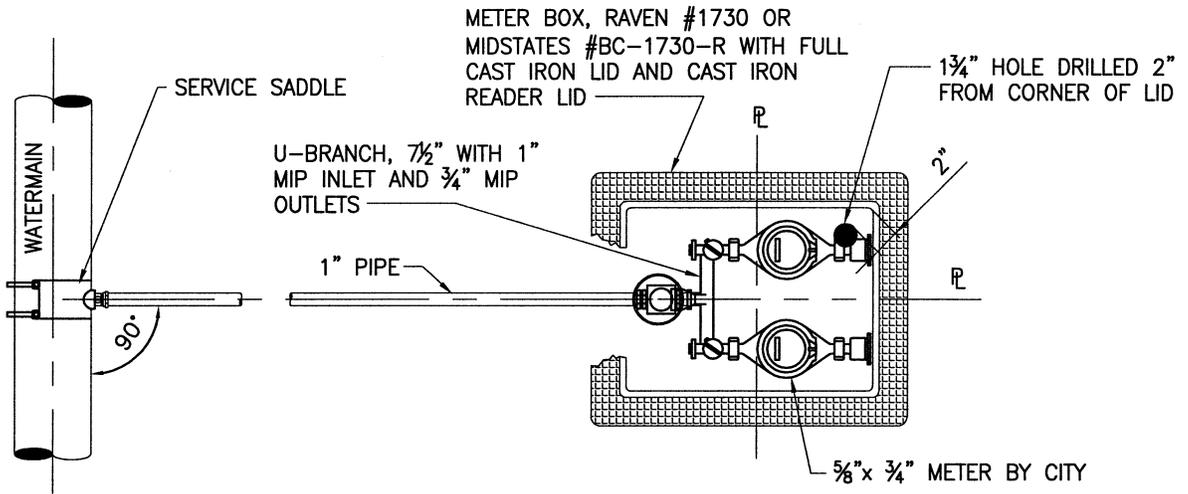
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APPROVAL
 DATE:

DRAWING
 NO.

W-1B

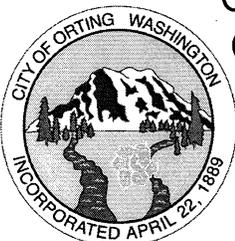
FILE NAME: STD-W-1B



NOTES

1. FOR SINGLE METER SERVICE, SEE NOTE 9, STD-W-2B.
2. SEE STD-W-2B FOR ADDITIONAL DOUBLE & SINGLE METER NOTES.

FILE: Std-W-2A
 DATE: Feb 28, 2008 - 2:24pm
 PLOTTED BY: morrison
 IMAGES: OrtlingLogobandw | XREF'S



CITY OF ORTING

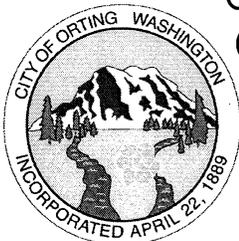
5/8" x 3/4" DOUBLE & SINGLE METER SERVICE

| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-2A |
| FILE NAME: STD-W-2A | | |

NOTES

1. THE CITY SHALL SUPPLY AND INSTALL THE METER AT TIME OF OCCUPANCY.
2. THE WATER METER SHALL BE LOCATED ON THE PROPERTY LINE OR AS DIRECTED BY THE CITY.
3. ALL CONNECTIONS OF "POLY" PIPING SHALL BE MUELLER INSTA-TITE.
4. SERVICE SADDLE: ROMAC 202ES OR FORD FS202. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET AND IP THREADS.
5. CORPORATION STOP: FORD FB500-4, AYMC DONALD 3131B, MUELLER B-20013.
6. CURB STOP: FORD B-11-444, AYMC DONALD 6101-1IN, MUELLER B-20283.
7. U-BRANCH: FORD U-88-43, AYMC DONALD 08UMM, MUELLER H15364.
8. METER SETTERS: FORD VBH72-15W-11-33, AYMC DONALD 20-215WCDD33, MUELLER B-2404-2 $\frac{5}{8}$ "x $\frac{3}{4}$ "X15".
9. FOR SINGLE SERVICE, SUBSTITUTE U-BRANCH WITH 1"x $\frac{3}{4}$ " BUSHING AND $\frac{3}{4}$ "x3" MIP NIPPLE. METER BOX SHALL BE 15"x27"x12".
10. DOUBLE METER SERVICES SHALL BE USED WHERE POSSIBLE AND SHALL BE LOCATED ON THE OPPOSITE PROPERTY LINE OF THE DOUBLE SEWER SERVICE. IF SERVICES CAN NOT BE LOCATED ON OPPOSITE PROPERTY LINES, 10' MIN SEPARATION IS REQUIRED.

FILE: Std-W-2B
 DATE: Feb 14, 2008 - 4:03pm PLOTTED BY: merridga
 IMAGES: OrttingLogobandw |
 XREF S:

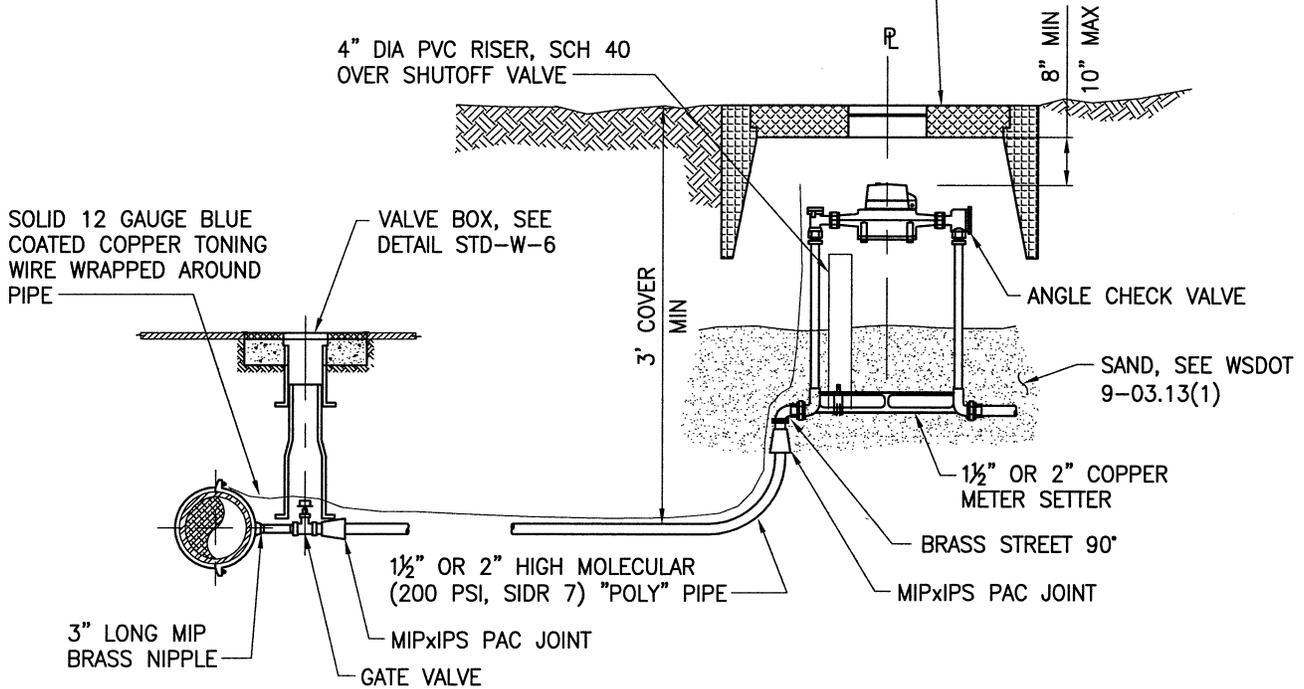


CITY OF
 ORTTING

5/8"x3/4" DOUBLE & SINGLE
 METER SERVICE NOTES

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-2B |
| FILE NAME: STD-W-2B | | |

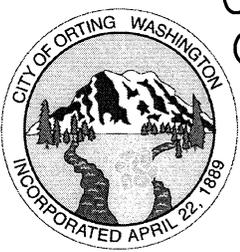
METER BOX, RAVEN #1730 OR
MIDSTATES #BC-1730-R WITH FULL
CAST IRON LID AND CAST IRON
READER LID W/ 1 3/4" HOLE DRILLED 2"
FROM CORNER OF LID



NOTES

1. THE CONTRACTOR SHALL SUPPLY AND INSTALL METER - T10 PROREAD NEPTUNE AND 6' WIRE WITH RADIO, OR AS SPECIFIED BY CITY.
2. THE WATER METER SHALL BE LOCATED ON THE PROPERTY LINE OR AS DIRECTED BY THE CITY.
3. ALL CONNECTIONS AND FITTINGS SHALL BE SAME DIAMETER AS METER.
4. ALL CONNECTIONS OF "POLY" PIPING SHALL BE PAC JOINT COUPLINGS W/ INSERT STIFFENERS: 2" FORD #C86-77-IDR7, 1 1/2" FORD #C86-66-IDR7 OR APPROVED EQUAL.
5. SERVICE SADDLE: ROMAC 202ES OR FORD FS202. ALL SERVICE SADDLES SHALL HAVE RUBBER GASKET AND IP THREADS.
6. GATE VALVE: 2" AWWA RESILIENT SEATED WEDGE FIPxFIP CI W/ 2" OPERATING NUT. 1 1/2" WATER SERVICES SHALL USE 2" GATE VALVE AND INSERT A BRASS BUSHING TO REDUCE 2" OPENING TO 1 1/2".
7. METER SETTER: 2" FORD VBH77-18B-44-77, 1 1/2" FORD VBH76-18B-44-66 OR APPROVED EQUAL.

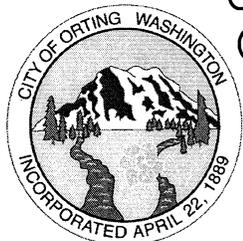
FILE: Std-W-3
 DATE: Feb 22, 2008 - 9:33am
 PLOTTED BY: morrison
 IMAGES: OrtlingLogobandw | XREF'S:



**CITY OF
ORTLING**

1 1/2" & 2" METER SERVICE

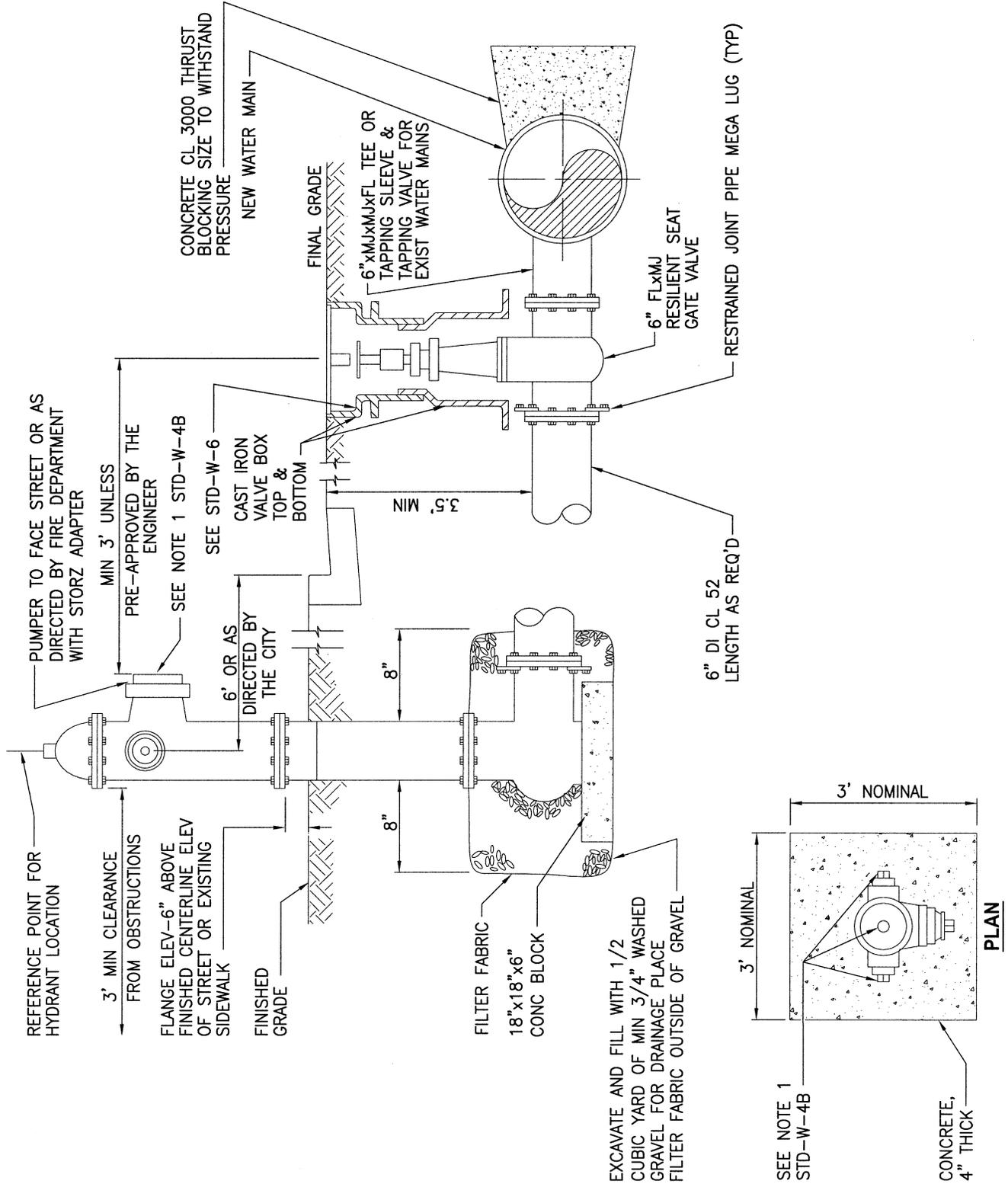
| | | |
|--------------------|----------------|---------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-3 |
| FILE NAME: STD-W-3 | | |



CITY OF ORTLING

STANDARD FIRE HYDRANT

| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-4A |
| FILE NAME: STD-W-4A | | |



NOTES

1. FIRE HYDRANT SHALL BE A CENTER OPERATING VALVE SUCH AS M&H, DRESSER, CLOW MEDALLION OR APPROVED EQUIVALENT MEETING AWWA STDS C502. ALL OPERATING NUTS SHALL BE 1 1/4" PENTAGONAL.
2. PAINT HYDRANTS WITH TWO (2) COATS OF "SIREN RED" SEMI-GLOSS DERUSTO PAINT.
3. ALL HYDRANTS SHALL BE 5 1/2" COMMERCIAL WITH 1-1/4 NTS THREADED PORT WITH 1-5" TWO LUG QUARTER TURN STORTZ OR APPROVED EQUAL PUMPER PORT CONNECTOR AND 2-2 1/2" NST, PUMPER PORT TO FACE STREET OR AS DIRECTED BY FIRE DEPARTMENT.
4. ALL FIRE HYDRANTS SHALL BE LOCATED BEHIND SIDEWALK OR AS SHOWN ON PLANS. THE PORT CAP SHALL NOT BE OVER THE SIDEWALK.
5. WHEN FIRE HYDRANTS FALL BEHIND DITCH LINE, PLACE CULVERT IN DITCH FOR MIN OF 10' & BACKFILL WITH CRUSHED SURFACING. RIPRAP ENDS AS NEEDED FOR EROSION CONTROL.
6. NO HYDRANT SHALL BE INSTALLED LESS THAN 10 FEET FROM THE EDGE OF A DRIVEWAY APPROACH.
7. FIRE HYDRANT SHALL FACE THE ADJACENT STREET UNLESS DIRECTED OTHERWISE BY CITY OFFICIALS.
8. ALL PIPE AND FITTINGS THAT WILL COME IN CONTACT WITH THRUST BLOCKS SHALL BE WRAPPED IN PLASTIC.
9. THE HOLDING SPOOL SHALL CLASS 52 DUCTILE IRON, MJ TYPE WITH MEGA-LUG CONNECTORS.
10. 3 GUARD POSTS TO BE INSTALLED IN UNPROTECTED AREAS (4' RADIUS).
11. SEE STD-W-4C FOR GUARD POST DETAILS.

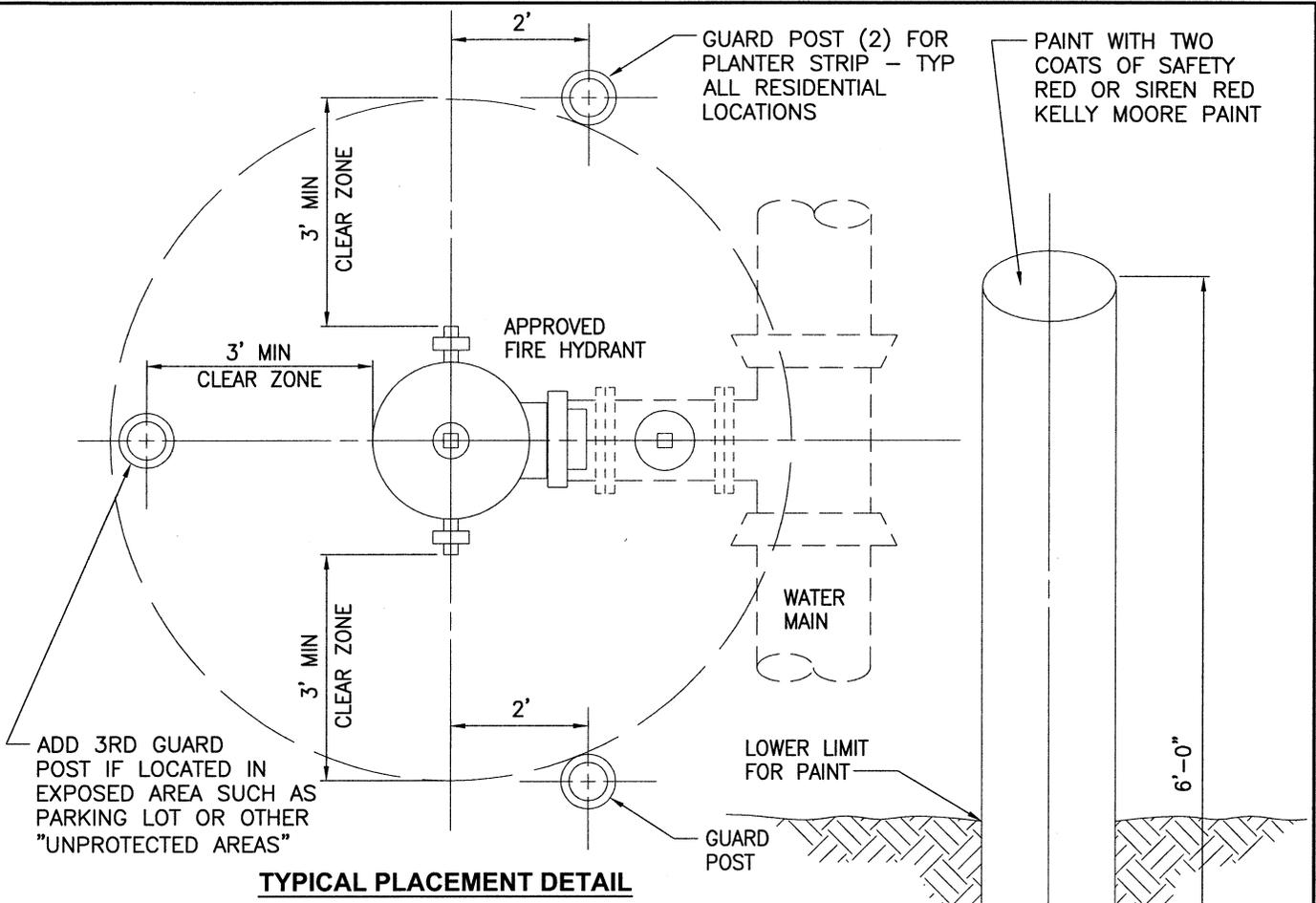
FILE: Std-W-4B
 DATE: Feb. 28, 2008 - 2:57pm PLOTTED BY: morrison
 IMAGES: OrttingLogo.bndw | XREF: S



**CITY OF
 ORTTING**

**STANDARD FIRE HYDRANT
 NOTES**

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-4B |
| FILE NAME: STD-W-4B | | |

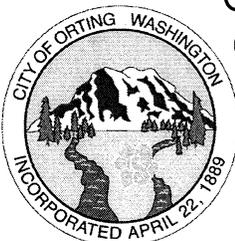


TYPICAL PLACEMENT DETAIL

NOTES

1. GUARD POSTS SET PLUMB AND BURIED AT LEAST 3-FOOT DEEP.
2. GUARD POSTS ARE INSTALLED WITH TOPS NO HIGHER THAN HYDRANT. IF MORE THAN ONE POST IS SET, THEY SHALL BE SET AT THE SAME HEIGHT.
3. GUARD POSTS ARE LOCATED NO CLOSER THAN 3 FEET FROM OUTSIDE FACE OF FIRE HYDRANT.
4. EXPOSED PORTION OF GUARD POSTS ARE TO BE PAINTED WITH TWO COATS OF WHITE PAINT.
5. SEE STD-W-4A FOR FIRE HYDRANT DETAILS.
6. GUARD POST DIAMETER TO BE 6" UNLESS IN AREAS OF HEAVY TRUCK TRAFFIC WHERE 10" DIAMETER POST WILL BE USED.
7. THE FOG-TITE HYDRANT GUARD POST IS PRE-APPROVED. ALL OTHERS REQUIRE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION.

FILE: Std-W-4C
 DATE: Feb 22, 2008 - 9:41am
 PLOTTED BY: merrideo
 IMAGES: OrttingLogobandw | XREF'S

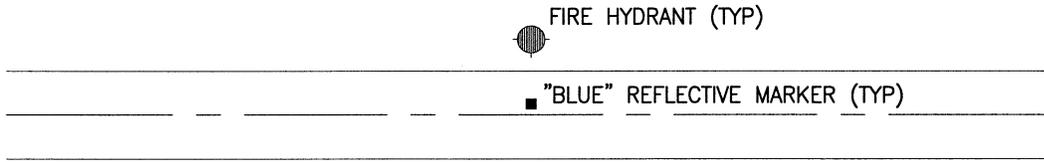


CITY OF ORTTING

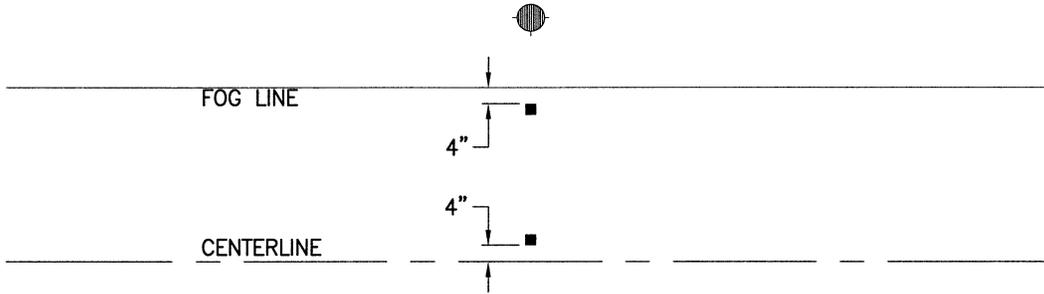
FIRE HYDRANT GUARD POST

| | | |
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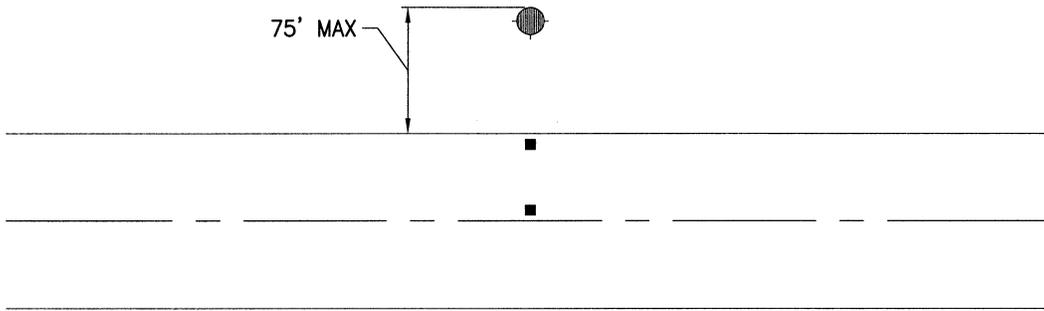
1. USE ONE REFLECTOR WHEN THE HYDRANT IS LESS THAN TWENTY FEET (20') FROM THE EDGE OF THE PAVEMENT.



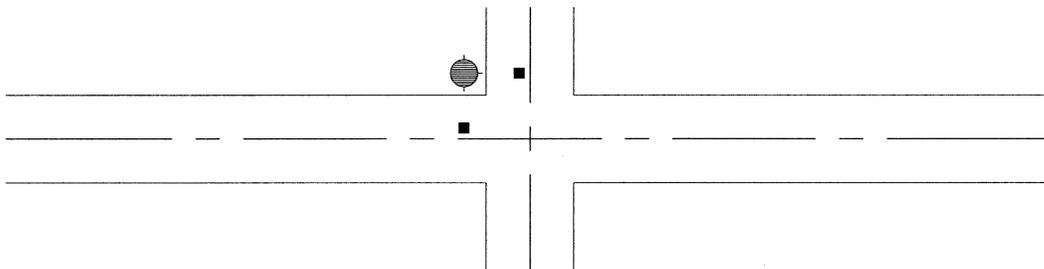
2. REFLECTOR TO BE ON THE HYDRANT SIDE OF THE CENTERLINE AND ON THE STREET SIDE OF THE FOG LINE TO BE IN LINE WITH THE HYDRANT. AT A DISTANCE OF FOUR INCHES (4") FROM THE LINE BEING USED.



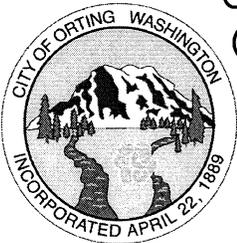
3. USE TWO REFLECTORS WHERE THE HYDRANT IS MORE THAN TWENTY FEET (20') FROM THE EDGE OF THE PAVEMENT UP TO SEVENTY-FIVE FEET (75') AND IS NOT OBSTRUCTED BY A FENCE.



4. USE TWO REFLECTORS WHERE A HYDRANT IS IN THE CORNER OF AN INTERSECTION.



FILE: Std-W-5
 DATE: Feb 14, 2008 - 4:50pm
 PLOTTED BY: morrifea
 IMAGES: OrtingLogbandw |
 XREFS:



**CITY OF
ORTING**

FIRE HYDRANT STREET MARKINGS

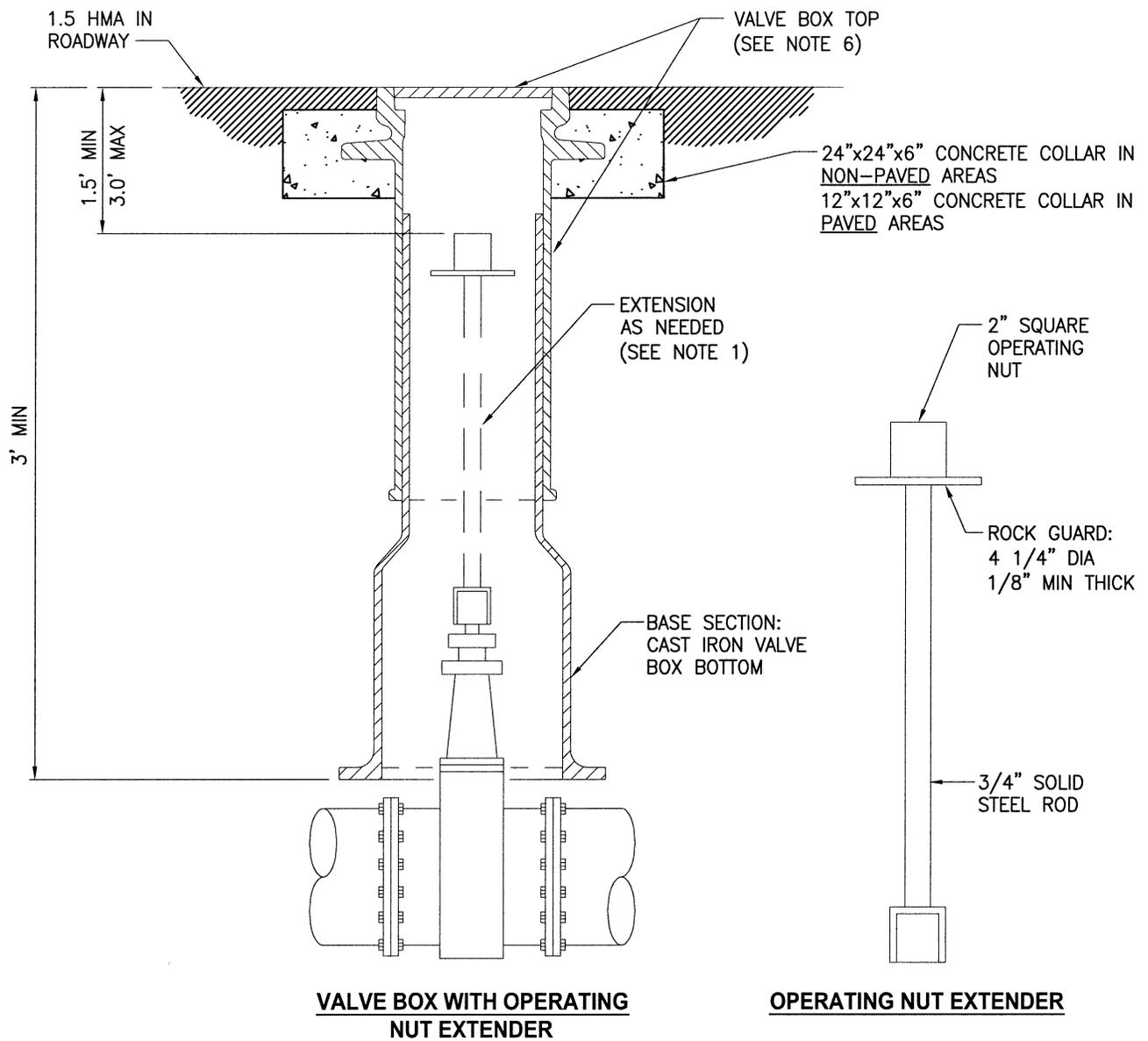
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APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-W-5

W-5



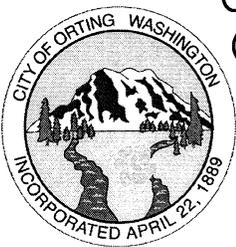
VALVE BOX WITH OPERATING NUT EXTENDER

OPERATING NUT EXTENDER

NOTES

1. EXTENSIONS ARE REQUIRED WHEN VALVE NUT IS MORE THAN FOUR FEET BELOW FINISHED GRADE.
2. EXTENSIONS SHALL BE A MINIMUM OF ONE FOOT LONG.
3. EXTENSIONS SHALL BE SIZED AS NOTED, AND PAINTED WITH TWO COATS OF METAL PAINT.
4. EXTENSIONS ARE AS AVAILABLE FROM HD FOWLER OR US FILTER WATERWORKS.
5. LUGS OR STAINLESS CAP SCREWS ON COVER SHALL BE ALIGNED WITH DIRECTION OF WATER FLOW.
6. CAST IRON VALVE BOX TOP WITH COVER MARKED "WATER", 5 7/8" INSIDE DIAMETER W/LID TABS POINTING IN DIRECTION OF PIPING.

FILE: Std-W-6
 DATE: Jan 04, 2008 - 10:34am
 PLOTTED BY: Morideo
 IMAGES: Ortling, Logabandw |
 XREFS:



CITY OF ORTING

VALVE BOX & OPERATING NUT EXTENDER

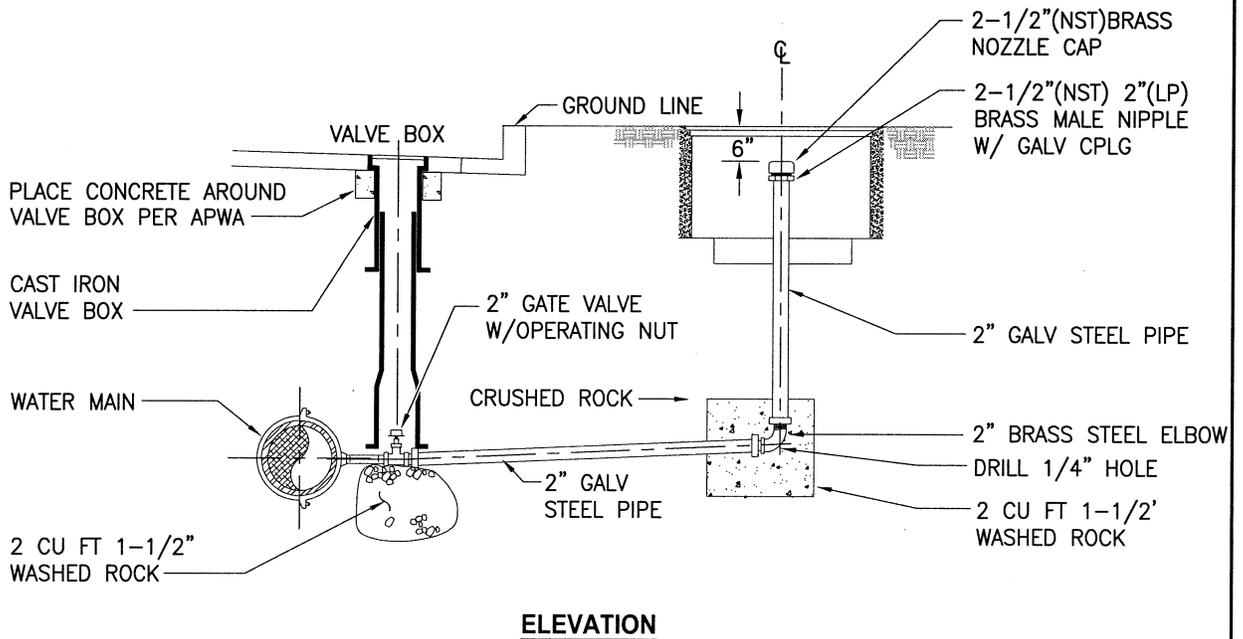
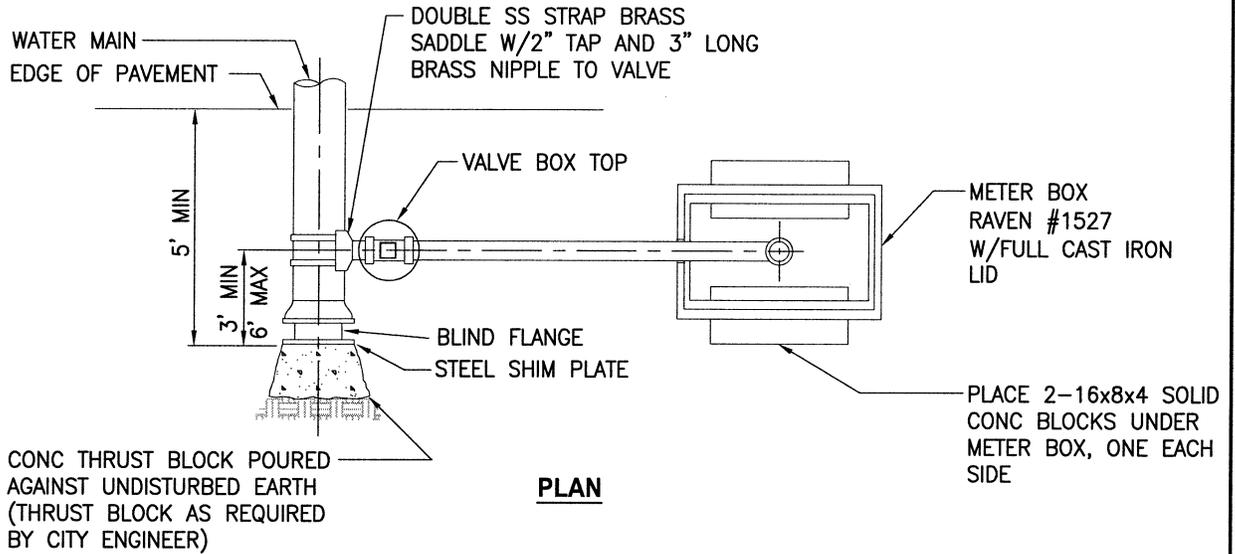
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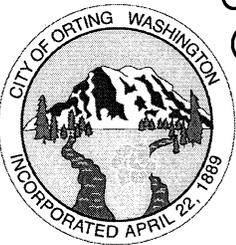
FILE NAME: STD-W-6

W-6



IMAGES:
XREF: S:

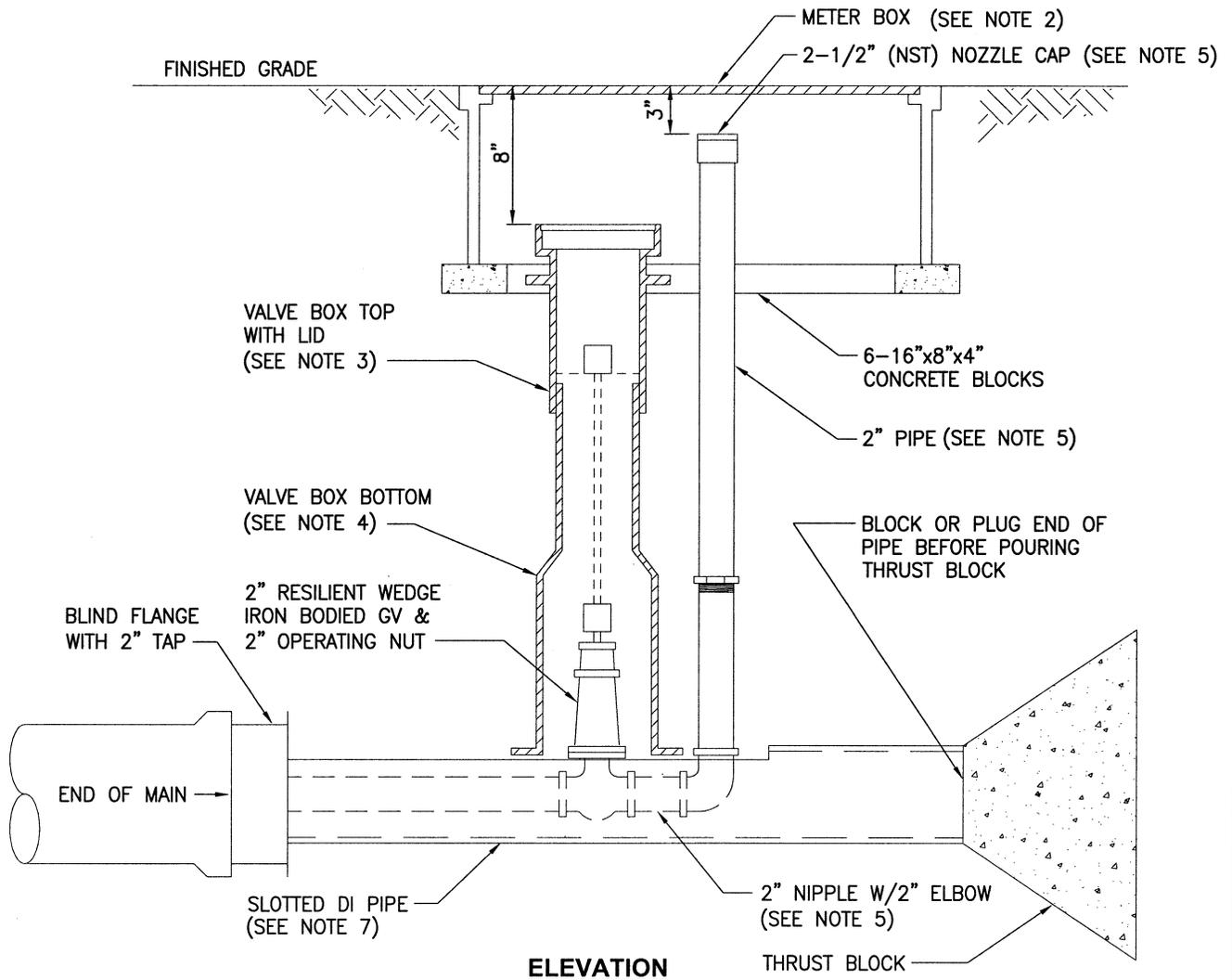
DATE: 02/15/08 09:06am FILENAME: Std-w-7a



CITY OF
ORTING

MID-RUN 2"
BLOWOFF ASSEMBLY

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-7A |
| FILE NAME: STD-W-7A | | |



ELEVATION

NOTES

1. THE FOLLOWING ITEMS ARE PRE-APPROVED. ALL OTHERS REQUIRE WRITTEN APPROVAL OF THE CITY ENGINEER.
2. REINFORCED CONCRETE NO. 2 BOX WITH 3/8" STEEL TRAFFIC LID.
3. CAST IRON VALVE BOX TOP OR PRE-APPROVED EQUAL WITH LUG TYPE COVER MARKED "WATER" 5-7/8" INSIDE DIAMETER.
4. BASE SHALL BE COMPATIBLE WITH TOP SECTION, LENGTH AS REQUIRED. USE CAST IRON BOTTOM SECTION OR PRE-APPROVED EQUAL.
5. ALL FITTINGS TO BE BRASS.
6. VALVE MARKER POST REQUIRED FOR PLANTER AREA INSTALLATIONS (SEE STD-W-16).
7. DI PIPE BRACE SHALL BE SLOTTED ON THE TOP AND BOTTOM TO ALLOW DRAINAGE FROM THE BLOW-OFF UPRIGHT.
8. GATE VALVE SHALL BE PLACED PRIOR TO THE BLIND FLANGE IF MAIN MAY POTENTIALLY BE EXTENDED IN THE FUTURE.

DATE: 01/04/08 10:48am FILENAME: STD-W-7B IMAGES: XREF: S:



**CITY OF
ORTING**

**END OF MAIN 2"
BLOWOFF ASSEMBLY**

SCALE: NO SCALE

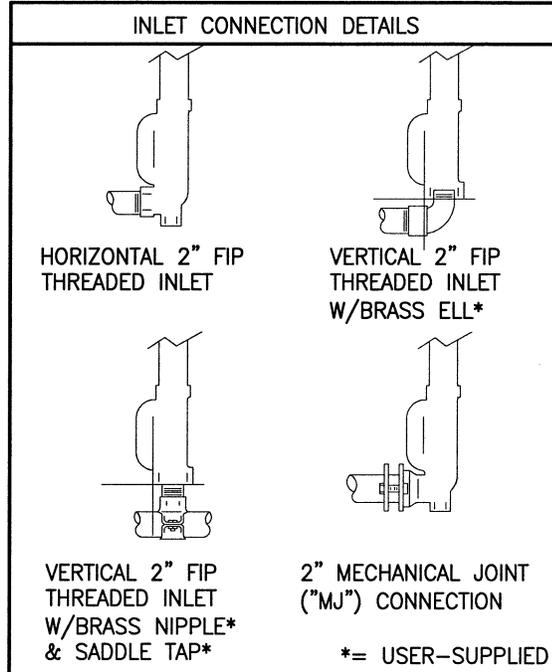
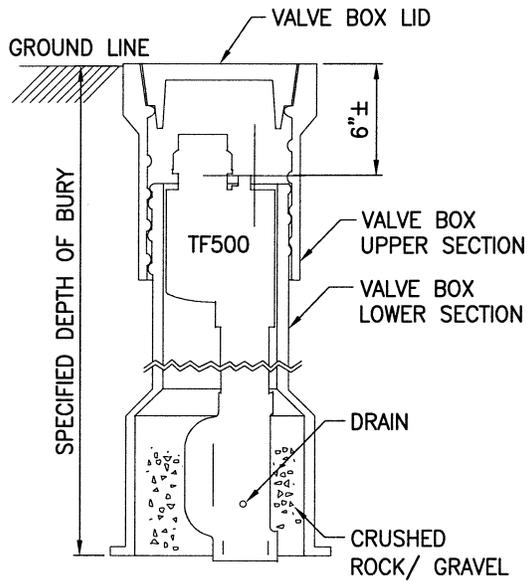
APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-W-7B

W-7B

TF500 HYDRANT



NOTES

1. HYDRANT SHALL BE _____' BURY, WITH (2" VERTICAL FIP / 2" HORIZONTAL FIP / 2" MJ) INLET AND 2" NPT NOZZLE OUTLET. HYDRANT SHALL FIT IN A 5-1/4" ID VALVE BOX. HYDRANT SHALL BE NON-FREEZING AND SELF-DRAINING. HYDRANT SHALL BE OPERATED BY TURNING A TOP-MOUNTED 9/16" SQUARE OPERATING NUT COUNTERCLOCKWISE TO OPEN, CLOCKWISE TO CLOSE. HYDRANT MUST SEAL THE DRAIN OUTLET IN ALL POSITIONS FROM 1/4"-OPEN TO FULLY-OPEN. ALL INTERNAL WORKING PARTS, THE INLET, AND THE OUTLET SHALL BE LEAD-FREE BRASS. ALL WORKING PARTS SHALL BE SERVICEABLE FROM ABOVE WITH NO DIGGING REQUIRED. DISASSEMBLY MUST BE ACCOMPLISHED WITH NO TURNING FORCES APPLIED TO THE HYDRANT. ALL WEAR PARTS (O-RINGS AND VALVE SEAT) SHALL BE OF COMMONLY AVAILABLE DIMENSIONS AND MATERIAL, AND NONE MAY BE OF VENDOR-UNIQUE DESIGN. HYDRANT SHALL BE THE MODEL TF500 AS MANUFACTURED BY THE KUPFERLE FOUNDRY CO, ST LOUIS, MO 63102.
2. INSURE THAT THE HYDRANT IS FREE TO MOVE VERTICALLY WITHIN THE VALVE BOX. IN ORDER TO PREVENT THE TRANSMISSION OF TRAFFIC LOADS TO THE HYDRANT, IT SHOULD NOT BE JAMMED OR WEDGED AGAINST THE VALVE BOX ID.
3. THE HYDRANT OPERATING NUT SHALL BE LOCATED 6" BELOW VALVE BOX TOP UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER
4. THE SUGGESTIONS OF THE AWWA SHALL BE FOLLOWED FOR HYDRANT INSTALLATIONS. IN PARTICULAR, SURROUNDING THE DRAIN PORT WITH A SUFFICIENT AMOUNT OF CRUSHED ROCK/GRAVEL TO PROVIDE AN ADEQUATE DRAIN FIELD.

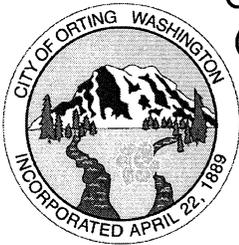
FILE: STD-W-7C
 DATE: Feb. 28, 2008 - 4:20pm
 PLOTTED BY: mrrfideo
 IMAGES: OrttingLogoandw | XREF: S:



CITY OF ORTTING

BLOW-OFF HYDRANT

| | | |
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| FILE NAME: STD-W-7C | | |



CITY OF ORTING

THRUST BLOCKING

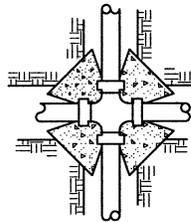
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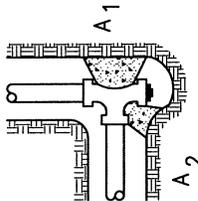
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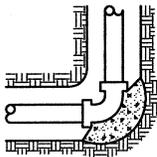
W-8



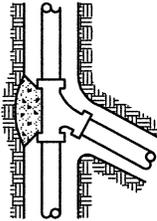
CROSS - PLAN



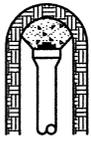
TEE



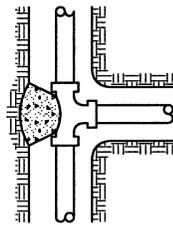
BEND



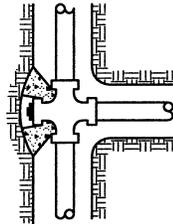
WYE



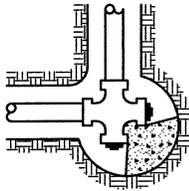
PLUG OR CAP



TEE



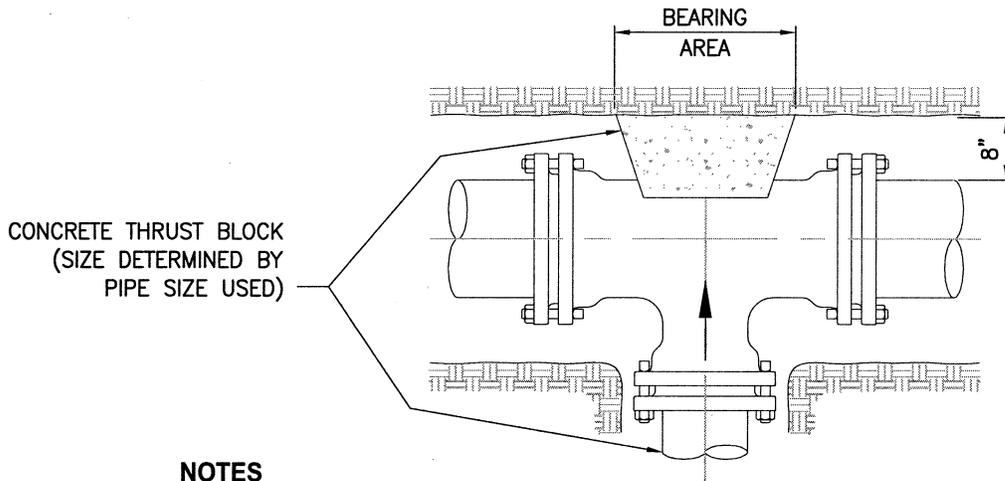
PLUGGED CROSS



PLUGGED CROSS

NOTES

1. FITTINGS FLANGED TOGETHER, I.E. VALVES TO TEES ETC., ARE NOT INDICATED FOR CLARITY.
2. REBAR USED IN THRUST BLOCKS SHALL BE ASPHALT TREATED AS FOR SHACKLE RODS.
3. CONCRETE SHALL NOT BE POURED ABOVE THE PIPE SPRINGLINE IN THRUST BLOCKS WITH REBAR.
4. FITTINGS SHALL BE PROTECTED FROM CONCRETE WITH PLASTIC FIRMLY WIRED OR TAPED TO THE FITTINGS.
5. CONCRETE THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
6. KEEP CONCRETE CLEAR OF JOINT AND ACCESSORIES.
7. THE REQUIRED THRUST BEARING AREAS FOR SPECIAL CONNECTIONS ARE SHOWN ENCIRCLED ON THE PLANS;
8. IF NOT SHOWN ON PLANS REQUIRED BEARING AREAS AT FITTING SHALL BE AS PRESSURE(S) ALLOWABLE SOIL BEARING STRESS(ES) STATED IN THE SPECIAL SPECIFICATIONS.
9. BEARING AREAS AND SPECIAL BLOCKING DETAILS SHOWN ON PLANS TAKE PRECEDENCE OVER BEARING AREAS AND BLOCKING DETAILS SHOWN ON THIS STANDARD DETAIL.
10. ALL PIPE FITTINGS & BENDS SHALL HAVE JOINT RESTRAINT, MEGA-LUG OR EQUAL. FIELD LOK GASKETS MAY NOT BE USED AT PIPE FITTINGS & BENDS. FIELD LOK GASKETS SHALL BE USED AT ALL PIPE JOINTS.



NOTES

1. BLOCK HEIGHT SHALL BE EQUAL OR LESS THAN ONE HALF OF TOTAL DEPTH FROM GROUND SURFACE TO BLOCK BASE.
2. BLOCK SIZE BASED ON 225 PSI TEST PRESSURE.
3. WRAP FITTINGS WITH POLYETHYLENE PLASTIC BEFORE POURING CONCRETE THRUST BLOCK.
4. SEE STD-W-8 FOR PLACING OF THRUST BLOCKS.

| FITTING SIZE (INCHES) | BEARING AREA OF BLOCK IN SQUARE FEET | | | | |
|--------------------------------|--------------------------------------|-------------|-------------|-----------------|-----------------|
| | TEES & PIPE ENDS | 90° BEND | 45° BEND | 22 1/2° BEND | 11 1/4° BEND |
| 1000 PSF SOIL BEARING STRENGTH | | | | | |
| 3 | 1.6 | 2.3 | 1.3 | 1.0 | 1.0 |
| 4 | 2.8 | 4.0 | 2.2 | 1.1 | 1.0 |
| 6 | 6.4 | 9.0 | 4.9 | 2.5 | 1.2 |
| 8 | 11.3 | 16.0 | 8.7 | 4.5 | 2.3 |
| 10 | 17.7 | 25.0 | 13.6 | 6.9 | 3.5 |
| 12 | 25.4* | 36.0* | 19.5 | 10.0 | 5.0 |
| 14 | 34.6* | 49.0* | 26.5* | 13.6 | 7.0 |
| 16 | 45.2* | 64.0* | 34.6* | 17.7 | 8.9 |
| 2500 PSF SOIL BEARING STRENGTH | | | | | |
| 3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 4 | 1.1 | 1.6 | 1.0 | 1.0 | 1.0 |
| 6 | 2.6 | 3.6 | 2.0 | 1.0 | 1.0 |
| 8 | 4.5 | 6.4 | 3.5 | 1.8 | 1.0 |
| 10 | 7.1 | 10.0 | 5.4 | 2.8 | 1.4 |
| 12 | 10.1 | 14.4 | 7.8 | 4.0 | 2.0 |
| 14 | 13.8 | 19.6 | 10.6 | 5.4 | 2.8 |
| 16 | 18.1 | 25.6* | 13.8 | 7.1 | 3.6 |

* MAXIMUM BEARING AREA ALLOWED IS 25 SQ FT; BEARING AREA MAY BE REDUCED BY USING RODS, RESTRAINED JOINT PIPE, OR CONDUCTING SOILS TEST TO CONFIRM HIGHER SOIL BEARING.

IMAGES: XREF'S

DATE: 01/04/08 10:57am FILENAME: Std-w-9



**CITY OF
ORTING**

WATER MAIN BLOCKING

SCALE: NO SCALE

APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-W-9

W-9

NOTES

1. ALL PIPE AND FITTINGS TO BE 2" DIA BRASS UNLESS OTHERWISE NOTED.
2. INSTALLATIONS IN AREAS REQUIRING TRAFFIC BEARING VAULTS WITH MANHOLE ENTRY REQUIRE ENGINEER'S APPROVAL.
3. A MANHOLE OF NOT LESS THAN 3'-6" DIAMETER MAY BE USED IN LIEU OF VAULT WITH ENGINEER'S APPROVAL.
4. DISCHARGE RISER SHALL BE INSTALLED IN PLANTER AREAS ONLY. ANCHOR RISER WITH 2"x1/4" STAINLESS STEEL STRAPS AND 3/8" HILTI EXPANSION BOLTS. PAINT THE ABOVE GROUND PIPING WITH TWO COATS OF FARWEST WONDERGLO QUICKSET HI-PERFORMANCE ENAMEL, #1100 SERIES, WHITE.
5. INSTALL COMBINATION VALVE IN DRY, FREE DRAINING AREAS WHERE POSSIBLE, OR INSTALL PVC DRAIN PIPE IN AN APPROVED LOCATION.
6. COMBINATION VALVES SHALL BE INSTALLED AT ALL PEAKS & SHARP CHANGES IN GRADIENT. AIR RELEASE VALVES SHALL BE INSTALLED ON LONG HORIZONTAL, ASCENDING, OR DESCENDING STRETCHES AND BE CENTERED WITHIN IT'S VAULT OR MANHOLE.

IMAGES: OrtlingLogo.bordw |
XREFS:

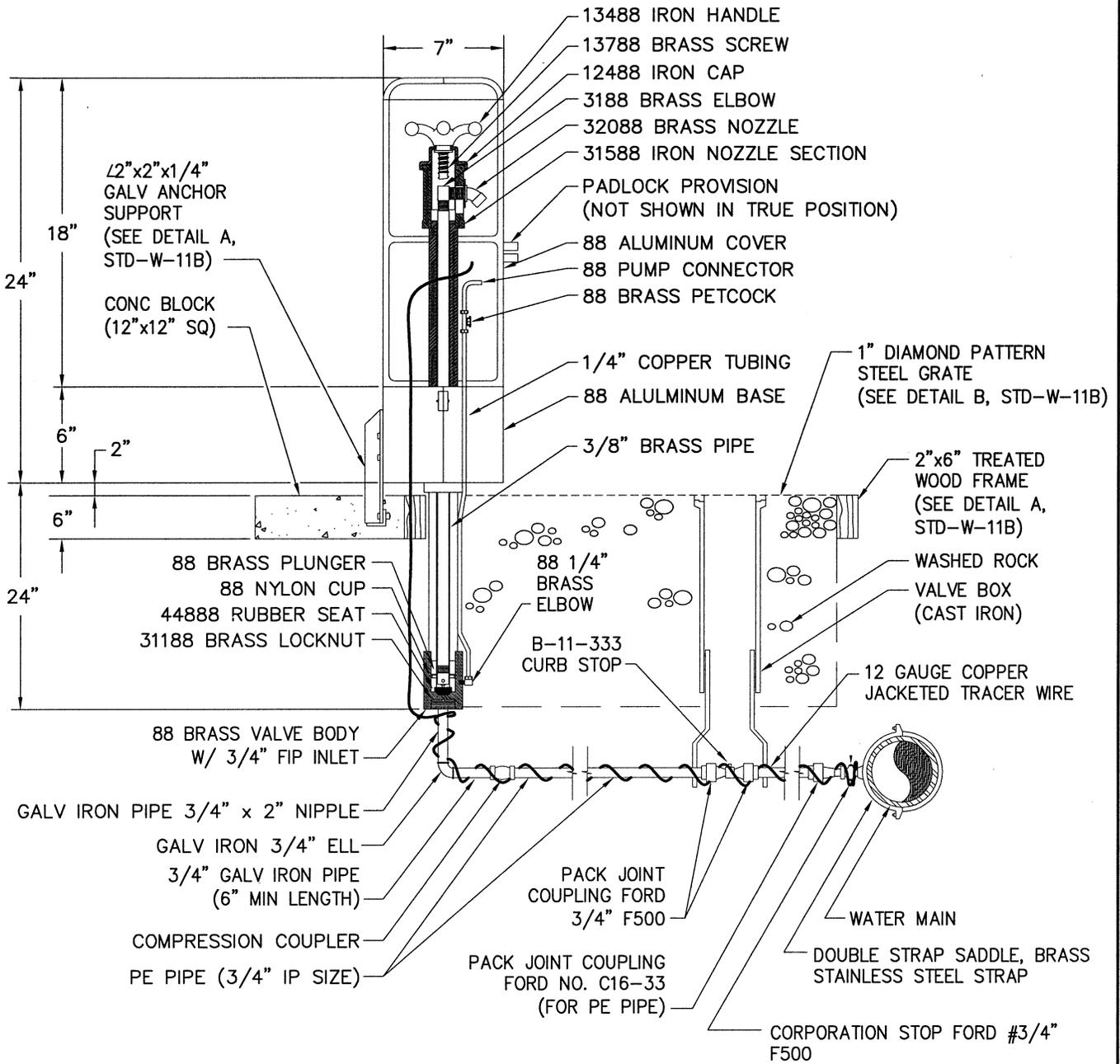
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**CITY OF
ORTLING**

**WATER MAIN 2" AIR RELEASE
VALVE ASSEMBLY**

| | | |
|----------------------|-------------------|--------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-10B |
| FILE NAME: STD-W-10B | | |



NOTE

SAMPLING STATION SHALL BE "ECLIPSE NO.88" OR AN APPROVED EQUIVALENT

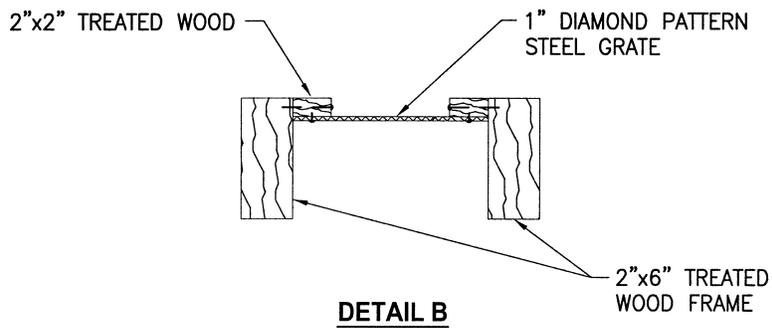
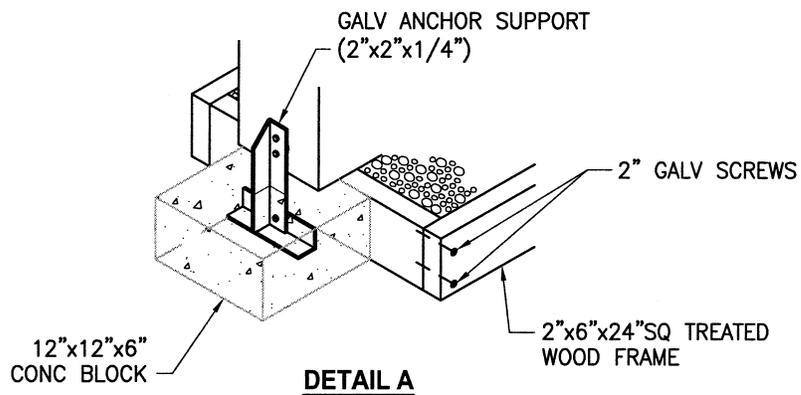
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CITY OF ORTING

WATER SAMPLING STATION

| | | |
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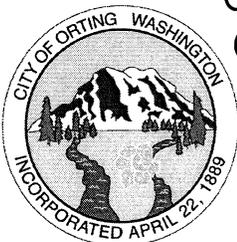


NOTES

1. ASSEMBLE TREATED WOOD FRAME WITH GALVANIZED SCREWS.
2. STEEL GRATE SHALL BE CUT AS NEEDED TO ALLOW ACCESS TO VALVE BOX.

I:\ACES: Orting\logbandrw |
 XREFS

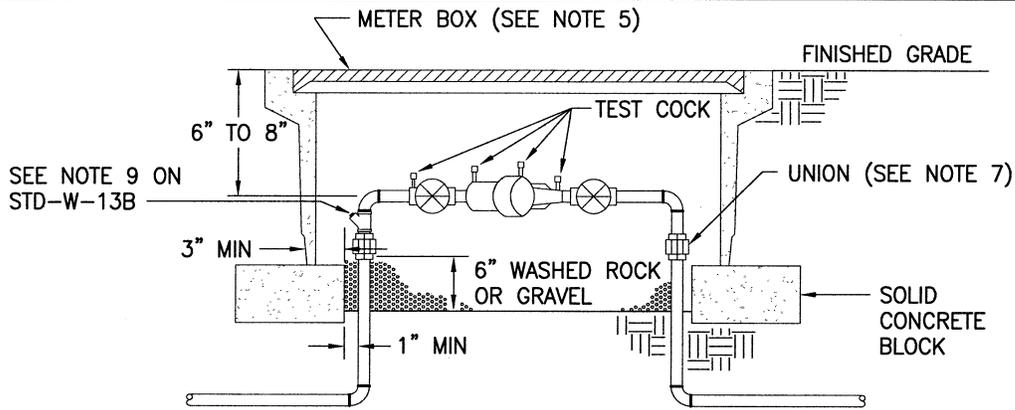
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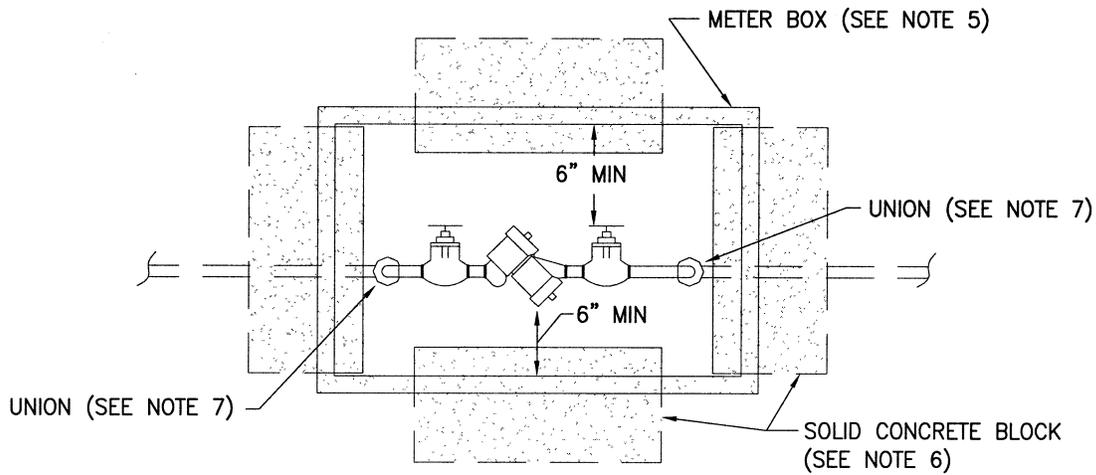
**CITY OF
ORTING**

**WATER SAMPLING STATION
DETAILS**

| | | |
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SECTION VIEW



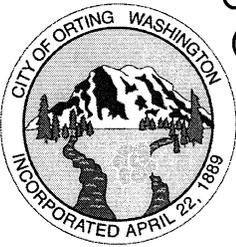
PLAN VIEW

NOTES:

1. DCVA SHALL BE DOH APPROVED AND SHALL BE TESTED, UPON INSTALLATION, BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER, AND THE REPORT FORM SHALL BE RECEIVED BY THE CITY OF ORTING PRIOR TO OCCUPANCY.
2. DCVA INSTALLATION AND MATERIALS SHALL CONFORM TO THE CITY OF ORTING CROSS CONNECTION CONTROL MANUAL.
3. DCVA SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF WATER METER.
4. DCVA SHALL BE PROTECTED FROM FREEZING.
5. METER BOX SHALL BE LARGE ENOUGH TO ALLOW THE MINIMUM SET BACKS ILLUSTRATED ABOVE. METER BOX LID SHALL BE A TRAFFIC METER READER LID WITH H-20 LOADING.
6. METER BOX SHALL BE SUPPORTED BY FOUR 16" X 8" X 4" SOLID CONCRETE BLOCKS.
7. DIELECTRIC UNIONS SHALL BE USED TO SEPARATE DISSIMILAR MATERIALS.

IMAGES:
XREF'S

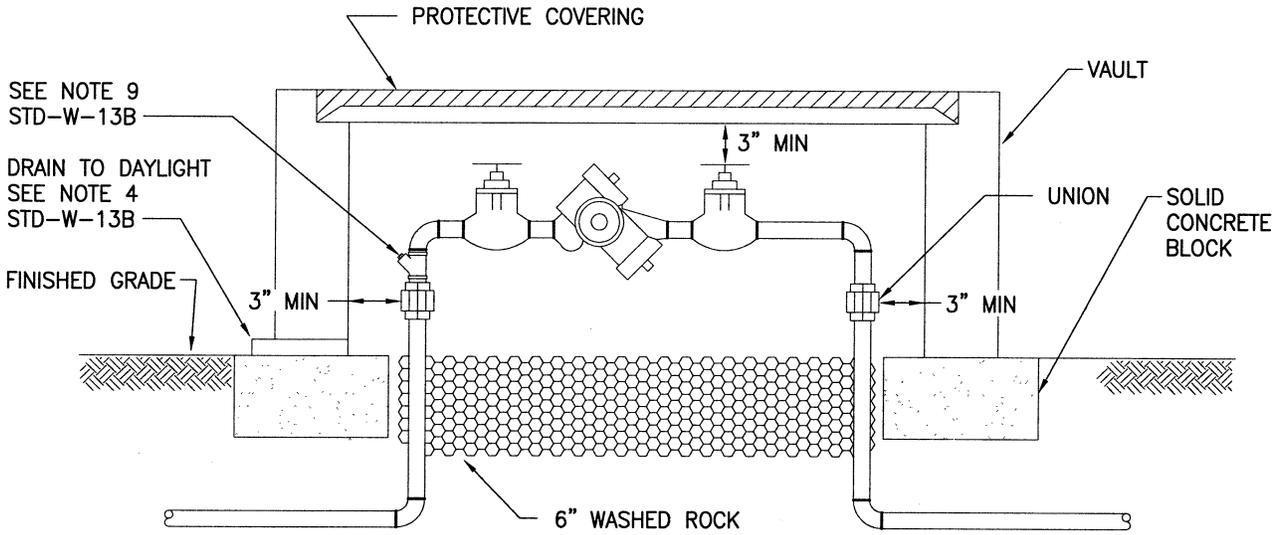
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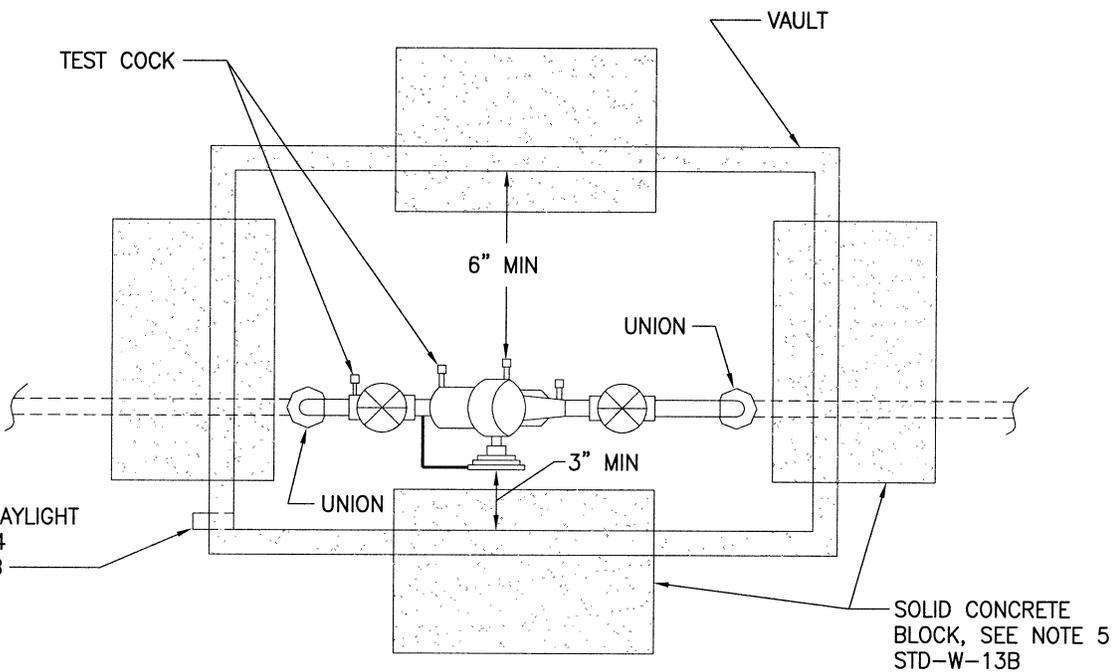
**CITY OF
ORTING**

**2" AND SMALLER DOUBLE
CHECK-VALVE ASSEMBLY**

| | | |
|---------------------|-------------------|----------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-W-12 | | W-12 |



SECTION VIEW



PLAN VIEW

FOR NOTES SEE STD-W-13B



**CITY OF
ORTING**

**2" AND SMALLER REDUCED
PRESSURE BACKFLOW ASSEMBLY**

| | | |
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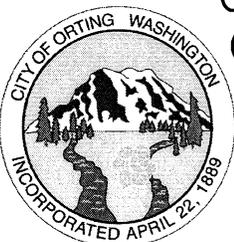
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NOTES:

1. THE RPBA SHALL BE INSTALLED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING. THE RPBA SHALL BE DOH APPROVED AND SHALL BE TESTED AFTER INSTALLATION, BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER, AND THE REPORT FORM SHALL BE RECEIVED BY THE CITY OF ORTING PRIOR TO OCCUPANCY.
2. THE RPBA INSTALLATION AND MATERIALS SHALL BE DOH APPROVED AND CONFORM TO THE CITY OF ORTING CROSS CONNECTION CONTROL MANUAL.
3. AN RPBA SHALL NOT BE INSTALLED IN A PIT BELOW GROUND LEVEL. SEMI-BURIED PITS MAY BE ACCEPTABLE IF THE RPBA IS INSTALLED ABOVE GROUND OR MAXIMUM FLOOD LEVEL IN A VAULT WITH AN APPROVED AIR GAP BETWEEN THE RELIEF VALVE PORT AND A BORE-SIGHTED DAYLIGHT DRAIN.
4. THE PROTECTIVE COVERING FOR THE RPBA SHALL INCLUDE A DAYLIGHT DRAIN. THE DRAIN SHALL BE ABLE TO BE BORE SIGHTED AND SHALL BE INSTALLED ABOVE GROUND OR MAXIMUM FLOOD LEVEL, WHICHEVER IS HIGHER. THE DRAIN SHALL ALSO BE ABLE TO HANDLE THE VOLUME OF WATER THAT POTENTIALLY COULD BE DISCHARGED FROM THE RELIEF VALVE PORT.
5. RPBA SHALL BE INSTALLED WITHIN A VAULT OR OTHER PROTECTIVE COVERING.
6. RPBA SHALL BE PROTECTED FROM FREEZING.
7. AN RPBA INSTALLED MORE THAN FIVE (5) FEET ABOVE FLOOR LEVEL SHALL HAVE A PLATFORM UNDER IT FOR THE TESTER OR MAINTENANCE PERSON TO STAND ON. THE PLATFORM SHALL MEET ALL APPLICABLE SAFETY STANDARDS AND CODES.
8. WHEN THE RPBA IS LOCATED INSIDE A BUILDING IT SHALL BE INSTALLED IN A LOCATION WHERE BOTH THE OCCASIONAL SPITTING FROM THE RELIEF VALVE PORT AND THE POSSIBLE CONSTANT DISCHARGE DURING A FOULED CHECK VALVE SITUATION WILL NOT BE OBJECTIONABLE. AN APPROVED AIR GAP FUNNEL ASSEMBLY, EITHER PROVIDED BY THE MANUFACTURER OR FABRICATED FOR THE SPECIFIC INSTALLATION, MAY BE INSTALLED TO HANDLE THE OCCASIONAL SPITTING OF THE RELIEF VALVE DUE TO PRESSURE FLUCTUATIONS. A LINE FROM THIS FUNNEL ASSEMBLY MAY THEN BE RUN TO AN ADEQUATELY SIZED FLOOR DRAIN OF EQUAL OR GREATER SIZE.
9. A STRAINER WITH BLOWOUT TAPPING SHALL BE INSTALLED AHEAD OF THE RPBA OR DCVA.

IMAGES:
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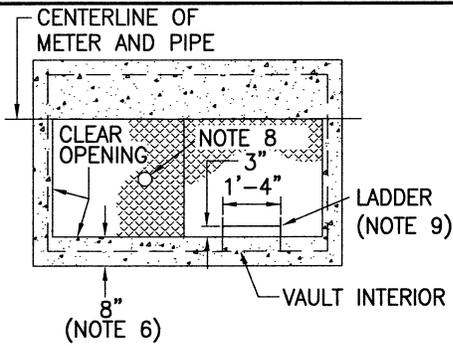
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CITY OF
ORTING

2" AND SMALLER REDUCED PRESSURE
BACKFLOW ASSEMBLY NOTES

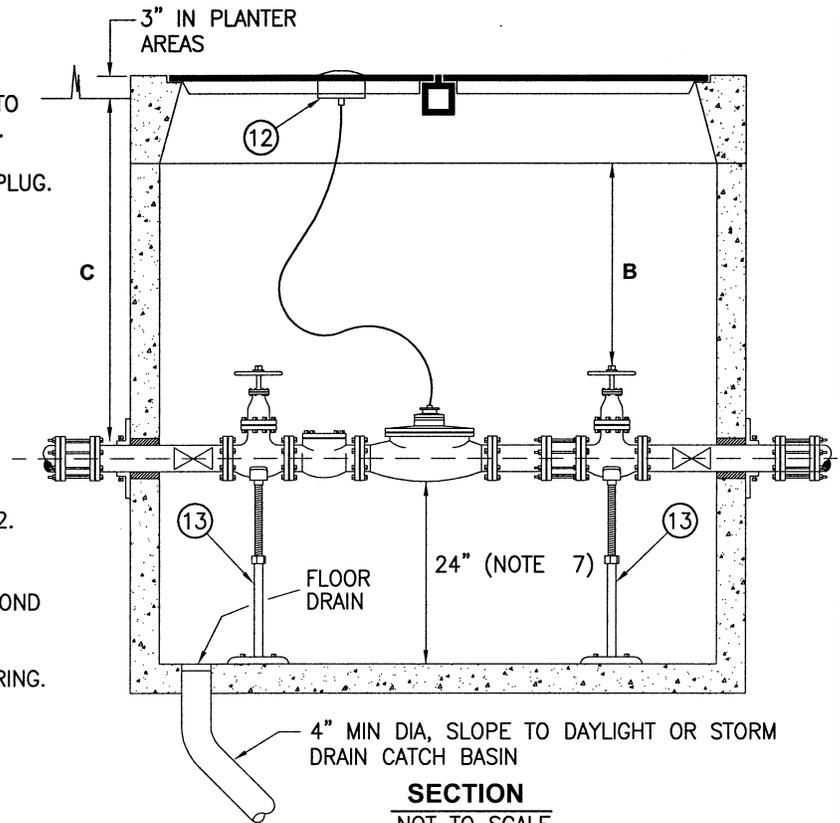
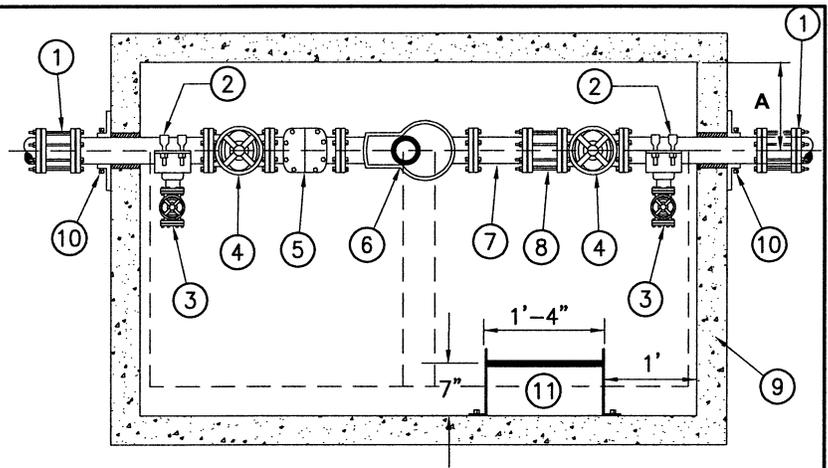
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-W-13B | | W-13B |



**VAULT COVER W/
LOCKING STEEL DOORS**
NOT TO SCALE

MATERIAL LIST:

- ① 1-FLEX CPLG TO FIT, EQUAL ROCKWELL 441 (4"x3" REDUCER, MJ FOR 3" METER INSTALLATION)
- ② 1- DOUBLE STRAP SERVICE SADDLE EQUAL TO FORD FC 202 WITH IPS TAP. ROCKWELL 313.
- ③ 1- 2" GATE VALVE WITH BLIND FLANGE OR PLUG.
- ④ 1- GATE VALVE FL EQUAL TO 'MUELLER' A-2360-6.
- ⑤ 1-NEPTUNE STRAINER
- ⑥ NEPTUNE TURBINE WATER METER SHALL BE FITTED WITH NEPTUNE'S PROREAD (ARB VI) METER READING SYSTEM.
- ⑦ 1-DI ADPT, FL X PE, LENGTH TO FIT.
- ⑧ 1- CPLG ADPT, FL EQUAL TO ROCKWELL 912.
- ⑨ PRECAST CONC VAULT BY 'UTILITY VAULT CO' (SEE TABLE FOR MODEL NO) WITH TWO DIAMOND PLATE DOORS RATED FOR H-20 LOADING.
- ⑩ WELDED FL RESTRAINT OR MEGALUG WALL RING.
- ⑪ 1-GALV STEEL LADDER TO BE ATTACHED TO VAULT.
- ⑫ SENSOR (TO BE MOUNTED IN VAULT ACCESS DOOR).
- ⑬ 1-ADJUSTABLE STANCHION BOLTED TO FLOOR.



| METER SIZE | SERVICE SIZE | MINIMUM CLEARANCES | | | VAULT MODEL | VAULT COVER (WITH SPECIAL OFFSET) |
|------------|--------------|--------------------|----|---------|-------------|-----------------------------------|
| | | A | B | C | | |
| 3" | 3" DIP | 12" | 6" | 2' - 8" | 577 - LA | 57 TL - 2 - 332 P |
| 4" | 4" DIP | 12" | 6" | 2' - 8" | 676 - WA | 676 - TL - 2 - 332 P |
| 6" | 6" DIP | 13" | 6" | 3' - 2" | 4484 - LA | 4484 - TL 2 - 332 P |

FOR NOTES SEE STD-W-14B

DATE: 02/22/08 8:25pm FILENAME: Std-W-14A IMAGES: OrtingLogoBandw1 XREFS:



**CITY OF
ORTING**

**3" TO 6" DOMESTIC
METER INSTALLATION**

| | | |
|----------------------|----------------|-----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-14A |
| FILE NAME: STD-W-14A | | |

NOTES

1. ALL MATERIALS, INCLUDING METER SHALL BE FURNISHED BY THE CONTRACTOR.
2. ALL PIPE AND FITTINGS 3" AND LARGER SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52 MINIMUM.
3. PIPING FROM MAIN TO VAULT SHALL BE 4" ON 3" METER INSTALLATION, TEE WITH VALVE ON EXISTING MAIN REQUIRED.
4. VAULTS SHALL NOT BE INSTALLED IN AREAS WITH VEHICULAR TRAFFIC.
5. IN CENTRAL BUSINESS DISTRICT, 3" THROUGH 6" METERS SHALL CONNECT TO WATER MAIN WITH 8" PIPE (SUBSTITUTE 8" X SERVICE REDUCER FOR ITEM ①).
6. VAULT COVER SHALL INCLUDE TWO LOCKING STEEL DOORS (GALVANIZED DIAMOND PLATE). DOORS SHALL BE CAST IN COVER WITH 8" SPECIAL OFFSET FROM VAULT WALL, AS SHOWN.
7. PROVIDE 24" CLEARANCE BETWEEN VAULT FLOOR AND BOTTOM OF METER. WHERE ELEVATION OF VAULT FLOOR IS TOO LOW TO DRAIN TO DAYLIGHT OR STORM SYSTEM, THIS CLEARANCE CAN BE REDUCED TO A MINIMUM OF 12". IF SUBSTITUTION OF A SHORTER VAULT ALLOWS FLOOR TO DRAIN TO DAYLIGHT OR STORM SYSTEM (APPROVED BY THE UTILITY ON A CASE BY CASE BASIS ONLY).
SUBSTITUTE VAULTS ARE AS FOLLOWS:
 3" 575-LA WITH 57TL-2-332P COVER (W/ SPECIAL OFFSET)
 4" 675-LA WITH 675-TL-2-332P COVER (W/ SPECIAL OFFSET)
8. PROVIDE 2 1/4" DIAMETER OPENING IN STEEL DOOR FOR TR/PL SENSOR.
9. LADDER TO BE BOLTED TO VAULT FLOOR AND TO VAULT WALL AT TWO LOCATIONS. RUNGS SHALL BE SPACED 12" ON CENTER.

IMAGES: Orting_LogoBandw |
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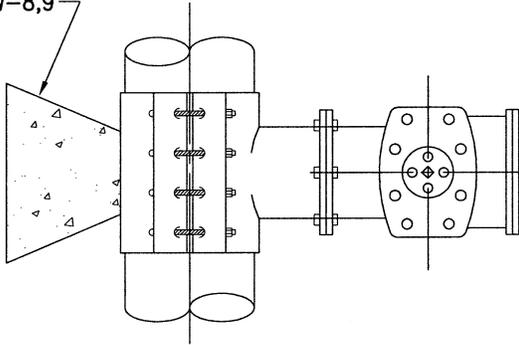


**CITY OF
ORTING**

**3" TO 6" DOMESTIC METER
INSTALLATION NOTES**

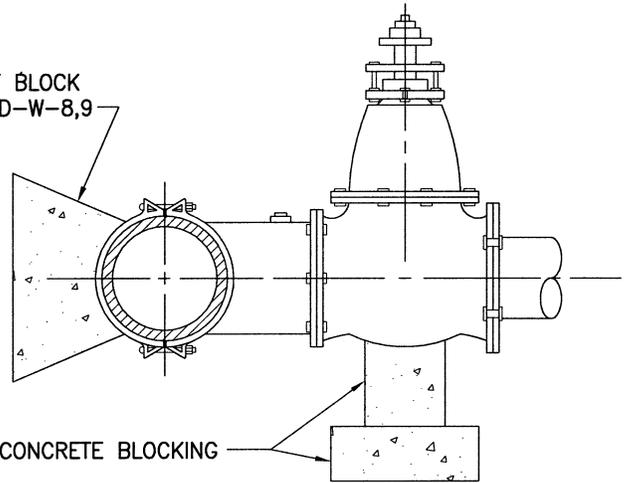
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-14B |
| FILE NAME: STD-W-14B | | |

THRUST BLOCK
SEE STD-W-8,9



PLAN

THRUST BLOCK
SEE STD-W-8,9



CONCRETE BLOCKING

ELEVATION

STAINLESS STEEL TAPPING TEE

NOTES

1. TAPPING SLEEVE & VALVE ASSEMBLY TO BE PRE-APPROVED BY THE CITY ENGINEER. PRESSURE TESTING SHALL BE APPROVED BY THE CITY INSPECTOR PRIOR TO TAPPING FOLLOW AWWA/WSDOT REQUIREMENTS FOR DISINFECTION OF TAPPING SLEEVES AND APPURTENANCES (AWWA STD C651).
2. TAPPING SLEEVE SHALL HAVE 18-8 STAINLESS STEEL BODY, STRAPS, FLANGE, NUTS, AND BOLTS. FULL AND OUTLET GASKETS SHALL CONFORM TO ASTM D2000-80M-4AA607.
3. WET TAPS SHALL NOT BE ALLOWED ON SAME SIZE OR SMALLER MAINS.
4. WRAP ALL PIPE AND FITTINGS WITH PLASTIC THAT COME IN CONTACT WITH THRUST BLOCKS.

IMAGES: OrttingLogobandw | XREF'S:

DATE: 02/22/08 3:33pm FILENAME: Std-w-15



**CITY OF
ORTTING**

**TAPPING SLEEVE &
VALVE ASSEMBLIES**

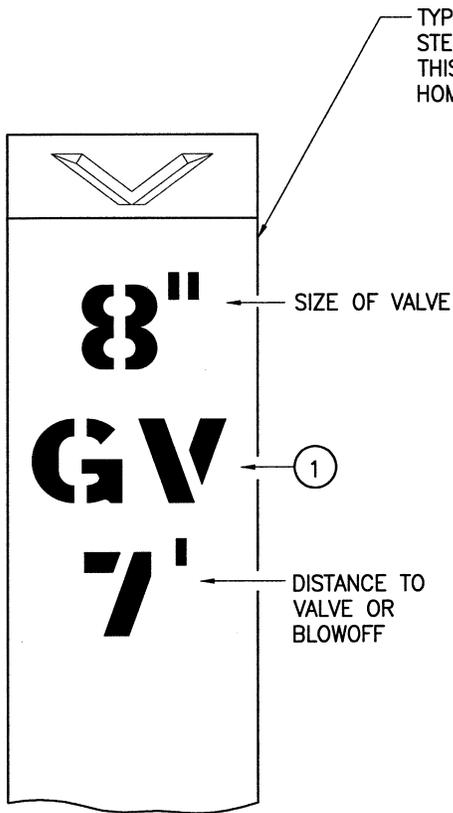
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APPROVAL
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FILE NAME: STD-W-15

W-15

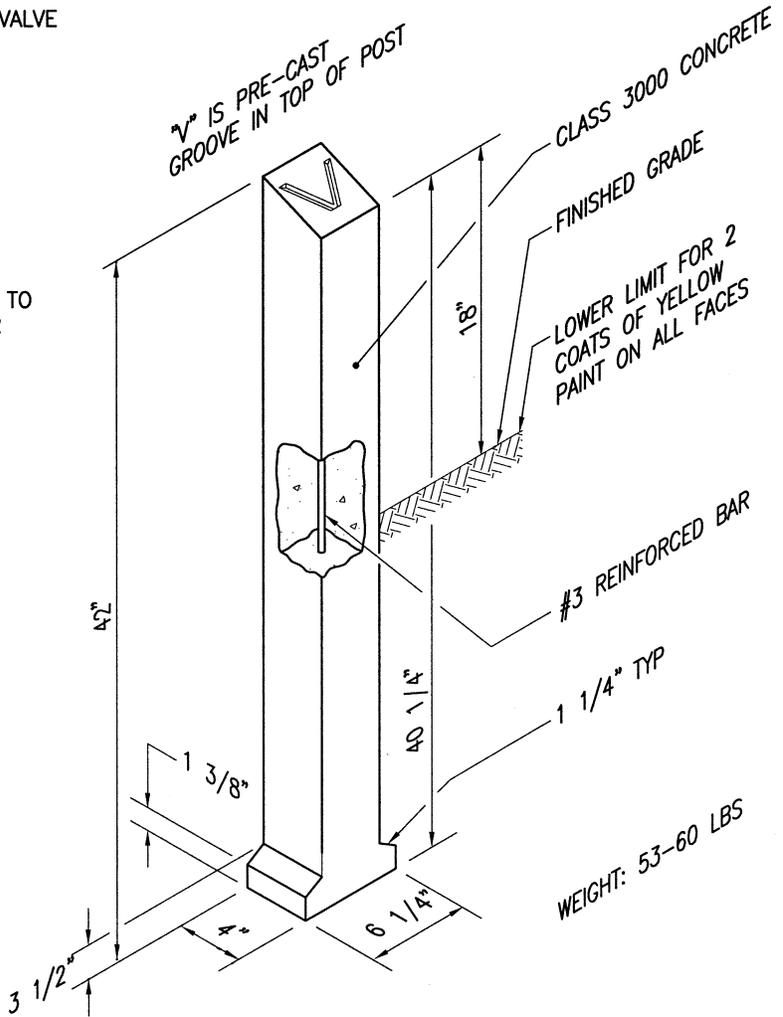


TYPICAL 2" HIGH BLACK STENCIL MARKINGS ON THIS FACE ONLY - USE HOMERIGHT® PAINT

SIZE OF VALVE

DISTANCE TO VALVE OR BLOWOFF

- ① USE
 "GV" FOR GATE VALVE
 OR
 "BV" FOR BUTTERFLY VALVE
 OR
 "BO" FOR BLOWOFF ASSEMBLY



NOTES

1. THE FOG TITE INC VALVE MARKER POST WITH THE "WATER" LEGEND IS THE PRE-APPROVED PRODUCT. ALL OTHERS REQUIRE THE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION.
2. A VALVE MARKER POST SHALL BE REQUIRED WHENEVER A VALVE IS LOCATED OUTSIDE OF PAVED AREAS.

IMAGES: Ortting_Logobandw | XREF: S:

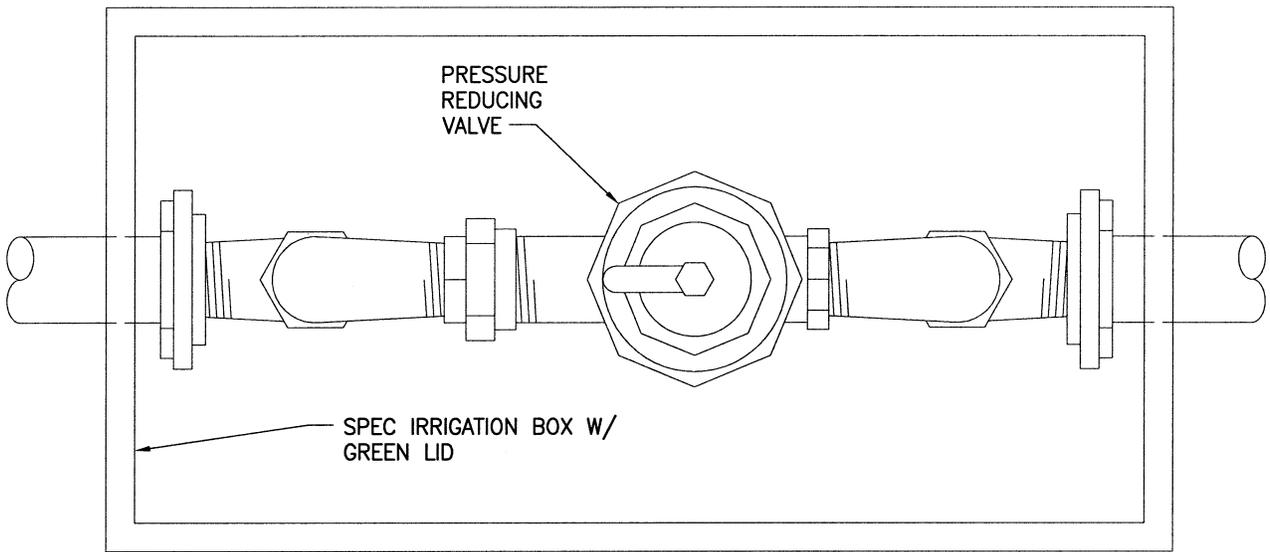
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CITY OF ORTTING

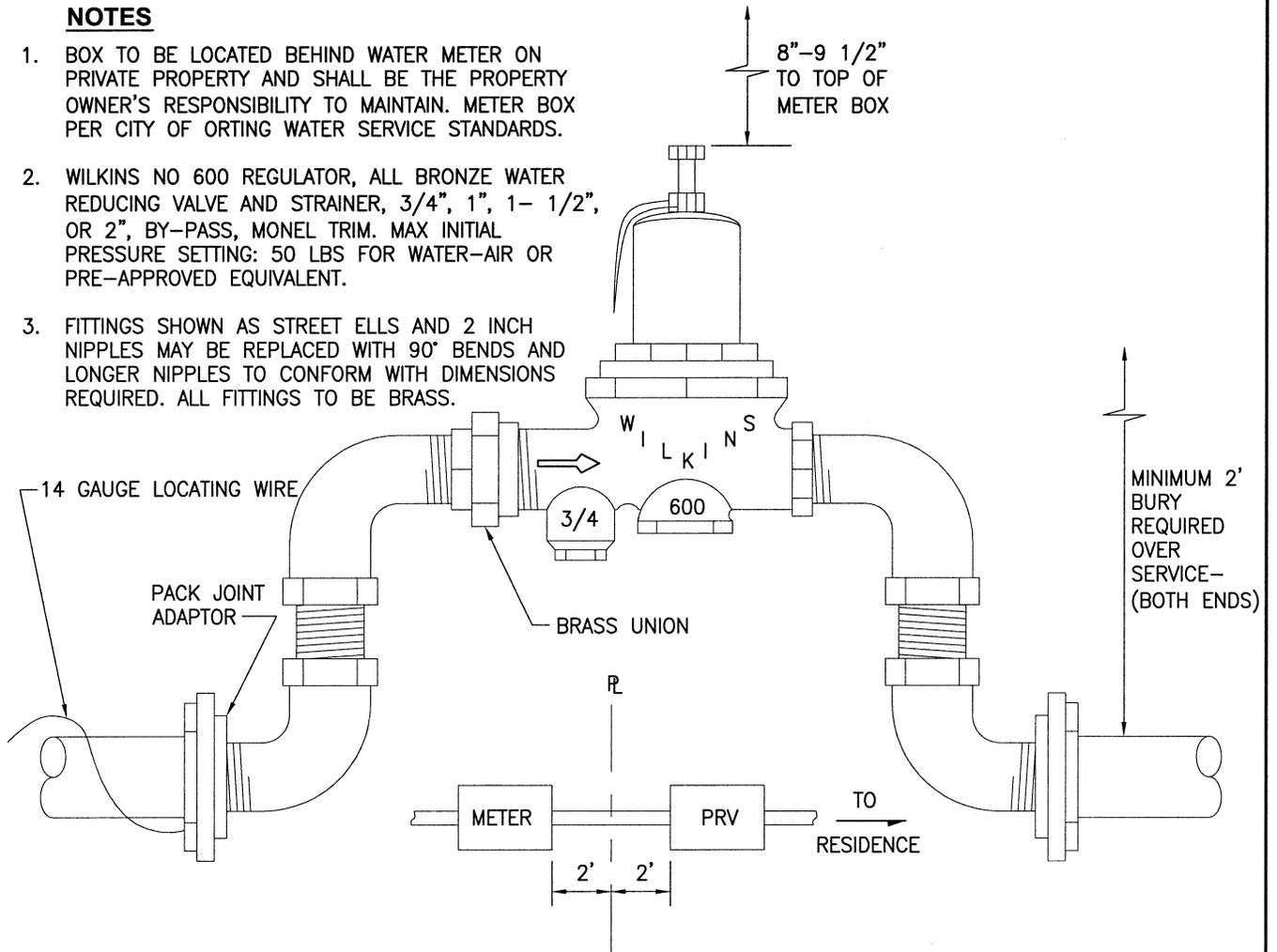
VALVE MARKER POST

| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. W-16 |
| FILE NAME: STD-W-16 | | |



NOTES

1. BOX TO BE LOCATED BEHIND WATER METER ON PRIVATE PROPERTY AND SHALL BE THE PROPERTY OWNER'S RESPONSIBILITY TO MAINTAIN. METER BOX PER CITY OF ORTING WATER SERVICE STANDARDS.
2. WILKINS NO 600 REGULATOR, ALL BRONZE WATER REDUCING VALVE AND STRAINER, 3/4", 1", 1- 1/2", OR 2", BY-PASS, MONEL TRIM. MAX INITIAL PRESSURE SETTING: 50 LBS FOR WATER-AIR OR PRE-APPROVED EQUIVALENT.
3. FITTINGS SHOWN AS STREET ELLS AND 2 INCH NIPPLES MAY BE REPLACED WITH 90° BENDS AND LONGER NIPPLES TO CONFORM WITH DIMENSIONS REQUIRED. ALL FITTINGS TO BE BRASS.



IMAGES: OrtingLogobandw | XREF: S

DATE: 02/22/08 4:09pm FILENAME: Std-W-17



CITY OF ORTING

PRESSURE REDUCING VALVE WITH BOX FOR 3/4", 1", 1-1/2" OR 2" SERVICE LINES

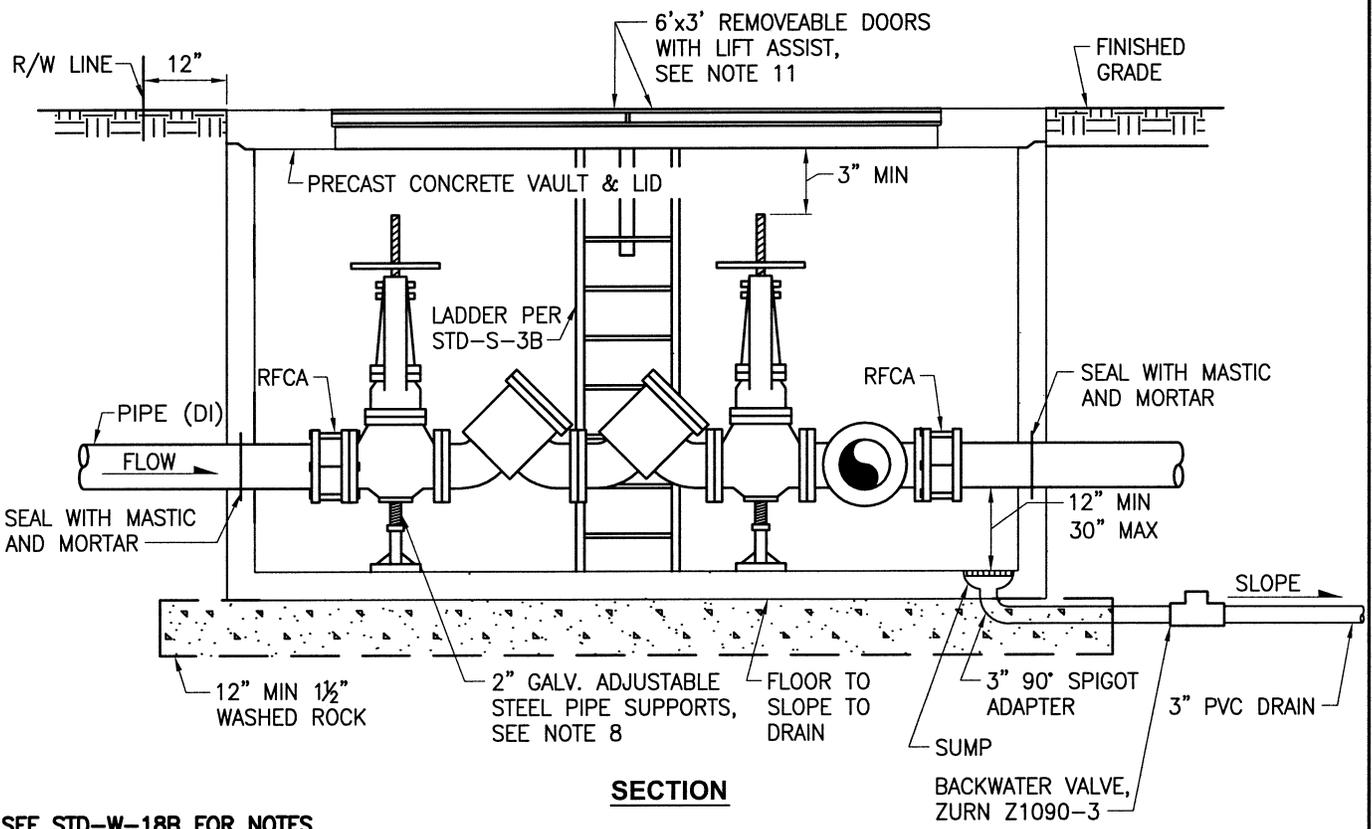
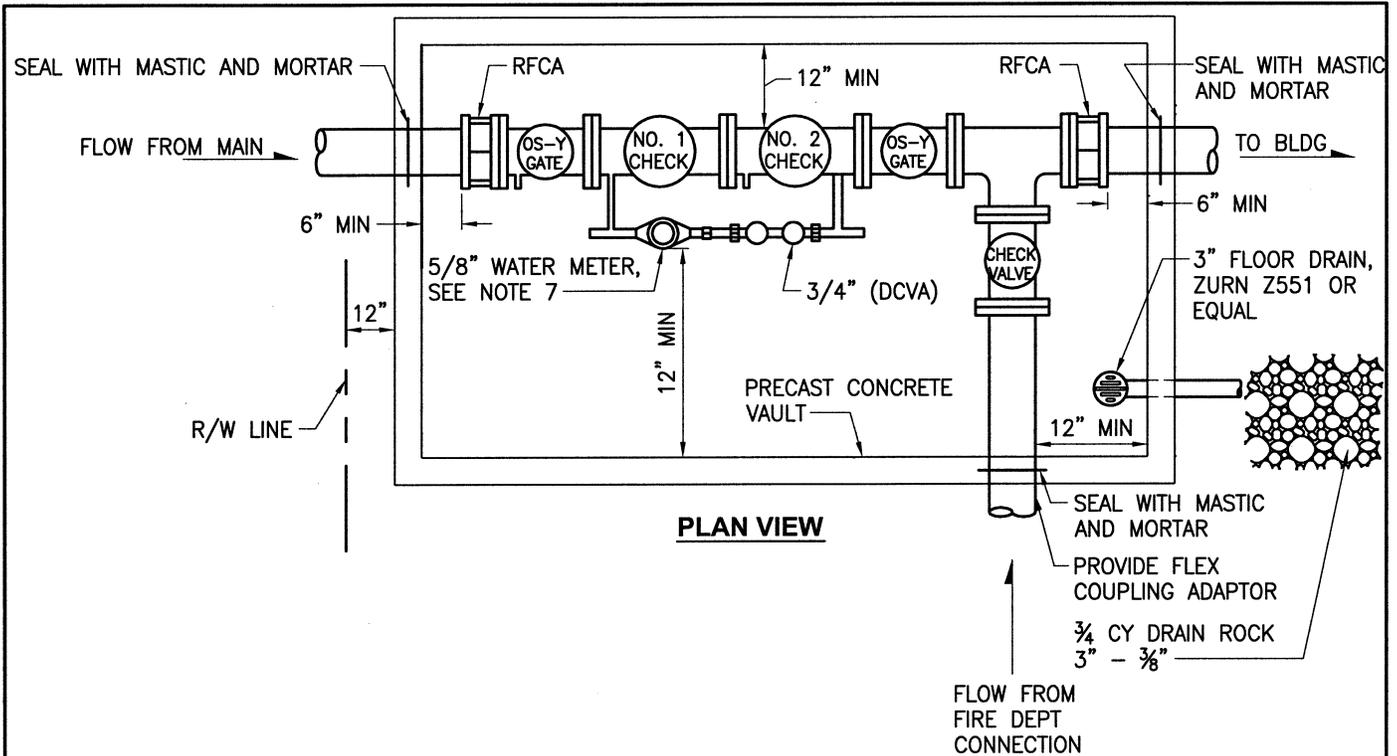
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APPROVAL DATE:

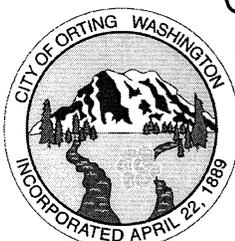
DRAWING NO.

FILE NAME: STD-W-17

W-17



SEE STD-W-18B FOR NOTES



CITY OF ORTING

DOUBLE DETECTOR-CHECK VALVE ASSEMBLY INSTALLATION

| | | |
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-W-18A | | W-18A |

DATE: 02/22/08 4:14pm FILENAME: STD-W-18A IMAGES: XREF S:

NOTES

1. INSTALLATION OF THE APPROVED BACKFLOW ASSEMBLY SHALL BE IN ACCORDANCE WITH THE "ACCEPTED PROCEDURE AND PRACTICE IN CROSS-CONNECTION CONTROL" MANUAL, OF THE CROSS-CONNECTION CONTROL COMMITTEE, PACIFIC N.W. SECTION OF THE A.W.W.A., MAY 1990, 5TH EDITION MANUAL OR CURRENT ADDITION.
2. BACKFLOW ASSEMBLY MUST BE SELECTED FROM WASHINGTON STATE DEPARTMENT OF HEALTH LIST OF BACKFLOW PREVENTION ASSEMBLIES APPROVED FOR INSTALLATION IN WASHINGTON STATE, LATEST EDITION.
3. UPON INSTALLATION OF THE APPROVED BACKFLOW ASSEMBLY, (AND ANNUALLY THEREAFTER). THE ASSEMBLY SHALL BE TESTED BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER, WHO SHALL PROMPTLY FORWARD THE TEST RESULTS TO: THE CITY OF ORTING, 110 TRAIN ST. ORTING, WA 98360, PRIOR TO OCCUPANCY.
4. DOUBLE DETECTOR CHECK VALVE ASSEMBLY OS & Y GATE VALVES SHALL HAVE SUPERVISED TAMPER SWITCHES.
5. DDCVA MUST BE PURCHASED AS A UNIT. NO MODIFICATIONS TO ASSEMBLY ARE ALLOWED.
6. WATER METER SHALL BE A T10 PROREAD NEPTUNE AND 6' OF WIRE WITH RADIO OR AN APPROVED EQUAL.
7. PIPE SUPPORTS SHALL BE RUST-PROTECTED WITH ALUMINUM PAINT.
8. THE FIRE DEPARTMENT CONNECTION SHALL BE LOCATED WITHIN 25 FEET OF A FIRE HYDRANT BUT NOT LESS THAN 10 FEET.
9. WHEN DDCVA IS LOCATED WITHIN A BUILDING, THE BALL DRIP SHALL DRAIN TO THE NEAREST APPROVED CATCH BASIN.
10. DRAIN SHALL DISCHARGE TO STORM SYSTEM OR BY GRAVITY TO CONVEYANCE SWALE. IF FALL IS NOT AVAILABLE, DRAIN SHALL BE FITTED WITH A BACKWATER VALVE AND DISCHARGE TO ¾ CY OF DRAIN ROCK.
11. REMOVABLE DOORS SHALL BE A MINIMUM OF 6'-0" X 3'-0" DIAMOND PLATE HINGED LOCKING DOORS, WITH HINGES LOCATED AT EACH END OF OPENING. DOORS SHALL HAVE AN H-20 LOAD RATING IN AREAS THAT ARE SUBJECT TO VEHICLE TRAFFIC. DOORS SHALL BE SPRING LOADED WITH OPEN POSITION LOCK.

IMAGES:
XREF'S:

DATE: 02/22/08 4:17pm FILENAME: STD-W-18B



**CITY OF
ORTING**

**DOUBLE DETECTOR-CHECK VALVE
ASSEMBLY INSTALLATION NOTES**

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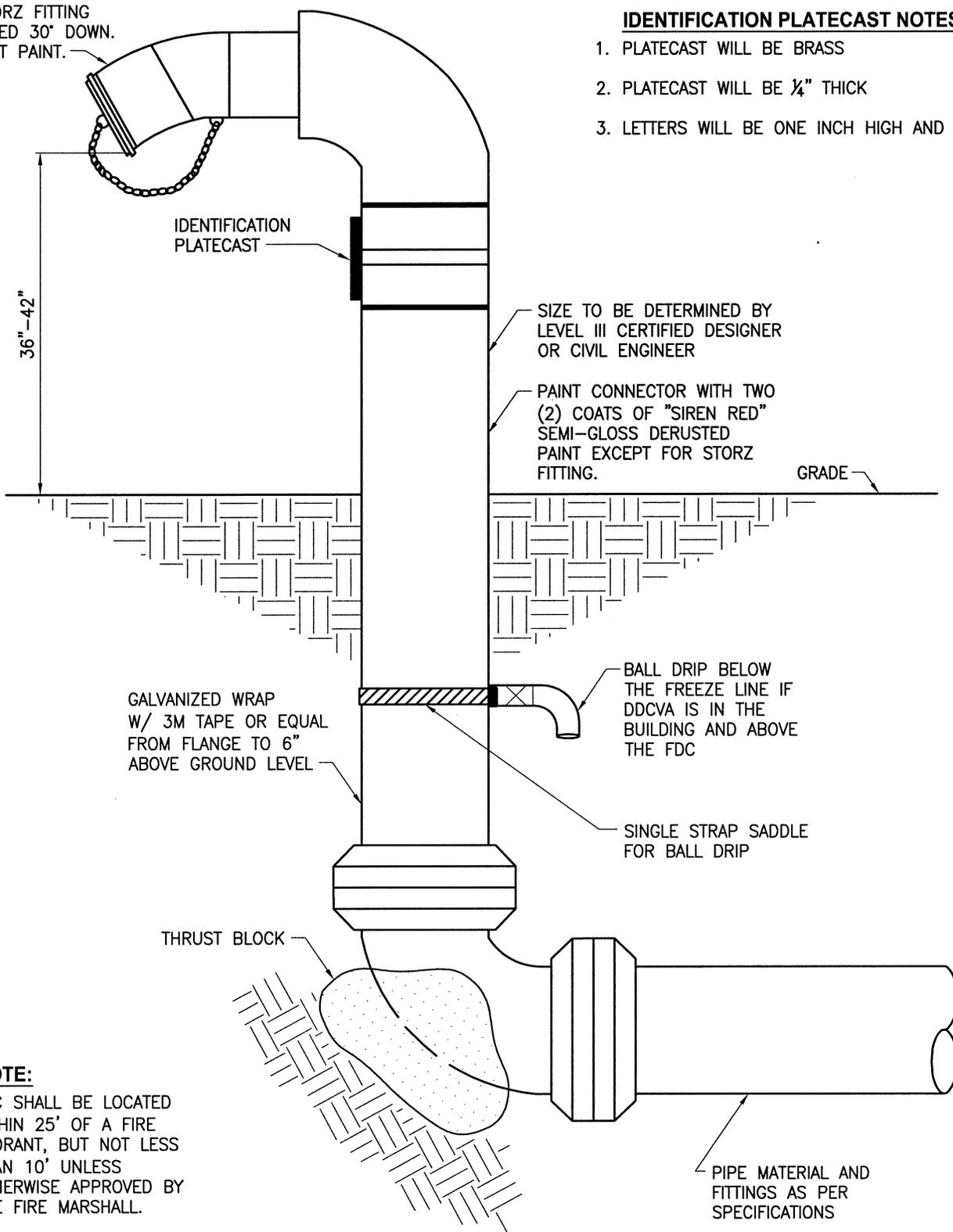
APPROVAL
DATE:

DRAWING
NO.

W-18B

FILE NAME: STD-W-18B

5" STORZ FITTING
DIRECTED 30° DOWN.
DO NOT PAINT.



IDENTIFICATION PLATECAST NOTES:

1. PLATECAST WILL BE BRASS
2. PLATECAST WILL BE 1/4" THICK
3. LETTERS WILL BE ONE INCH HIGH AND RAISED

SIZE TO BE DETERMINED BY
LEVEL III CERTIFIED DESIGNER
OR CIVIL ENGINEER

PAINT CONNECTOR WITH TWO
(2) COATS OF "SIREN RED"
SEMI-GLOSS DERUSTED
PAINT EXCEPT FOR STORZ
FITTING.

GRADE

GALVANIZED WRAP
W/ 3M TAPE OR EQUAL
FROM FLANGE TO 6"
ABOVE GROUND LEVEL

BALL DRIP BELOW
THE FREEZE LINE IF
DDCVA IS IN THE
BUILDING AND ABOVE
THE FDC

SINGLE STRAP SADDLE
FOR BALL DRIP

THRUST BLOCK

PIPE MATERIAL AND
FITTINGS AS PER
SPECIFICATIONS

NOTE:

FDC SHALL BE LOCATED
WITHIN 25' OF A FIRE
HYDRANT, BUT NOT LESS
THAN 10' UNLESS
OTHERWISE APPROVED BY
THE FIRE MARSHALL.

IMAGES:
XREF S.

DATE: 02/22/08 4:41pm FILENAME: STD-W-19



CITY OF
ORTING

FIRE DEPARTMENT CONNECTION

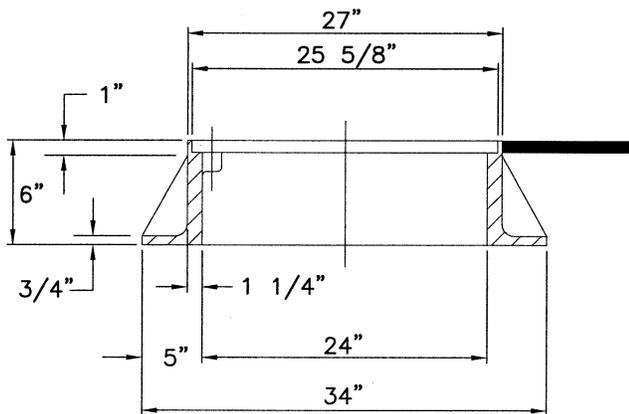
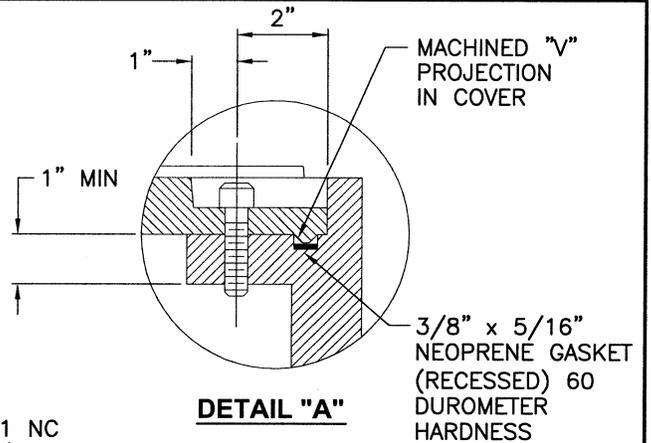
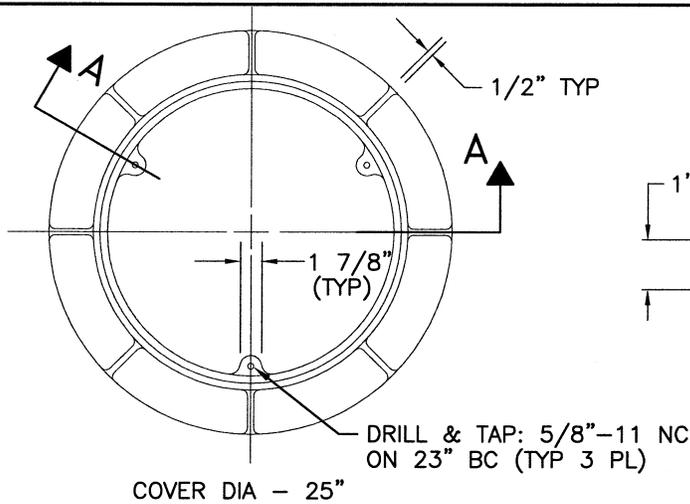
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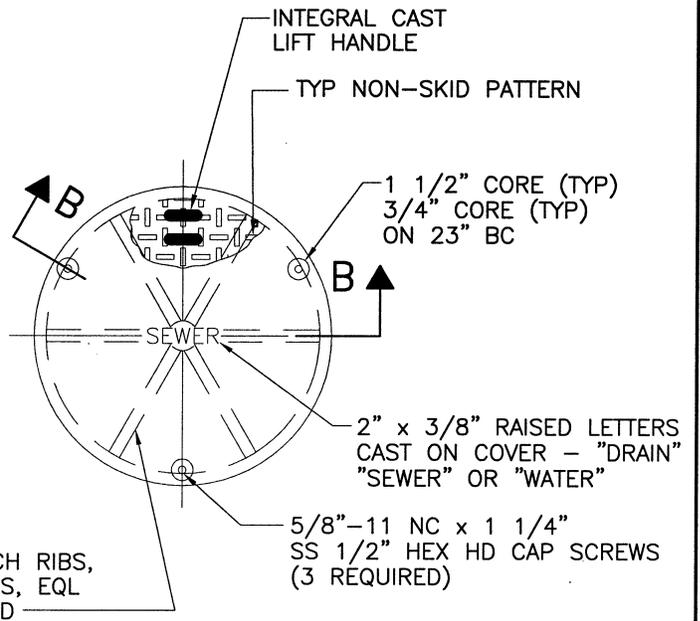
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W-19

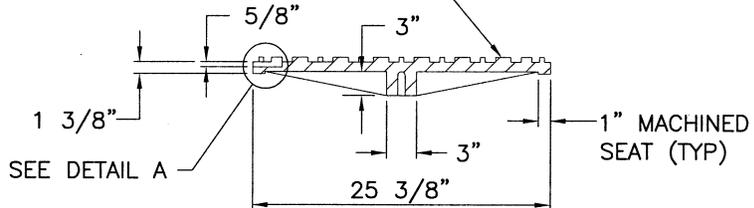


SECTION A-A

*TOP OF FRAME SHALL BE ADJUSTED EVEN WITH ROADWAY SECTION



NON-SKID PATTERN (TYP) (3/8" DEPTH)

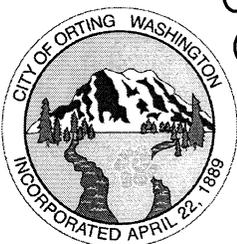


SECTION B-B

NOTES:

- RATING - H-20
APPROX. WEIGHT-
FRAME - 261 LBS
COVER - 170 LBS
- OLYMPIC FOUNDRY PART NO. MH 36W/T IS THE PRE-APPROVED PRODUCT. ALL OTHERS REQUIRE WRITTEN APPROVAL OF THE CITY ENGINEER PRIOR TO INSTALLATION.
- ALL SS MHS SHALL BE WATERTIGHT AND DISPLAY THE CITY LOGO, UNLESS APPROVED BY CITY ENGINEER.

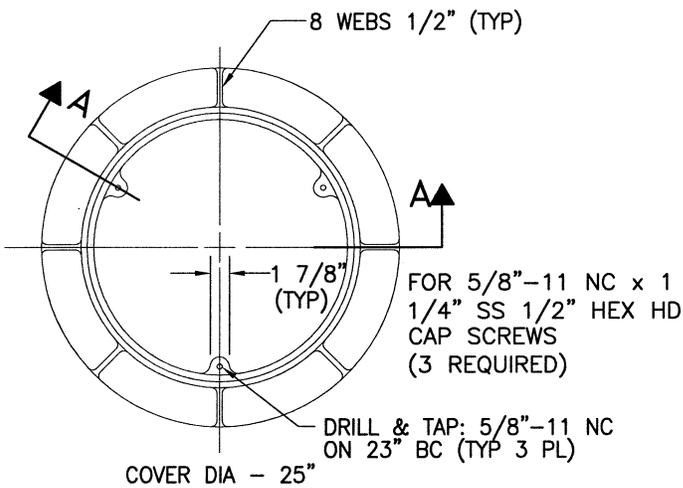
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DATE: Feb 26, 2008 - 11:22am PLOTTED BY: morrideo
IMAGES: OrtlingLogoBandw | XREF'S:



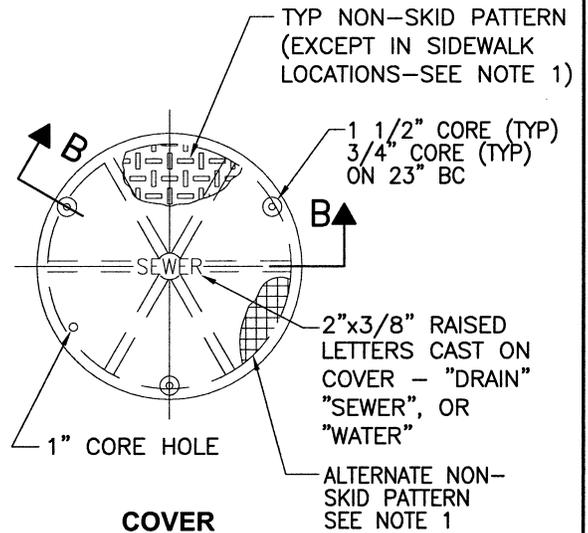
CITY OF ORTING

24" WATERTIGHT MANHOLE FRAME AND COVER

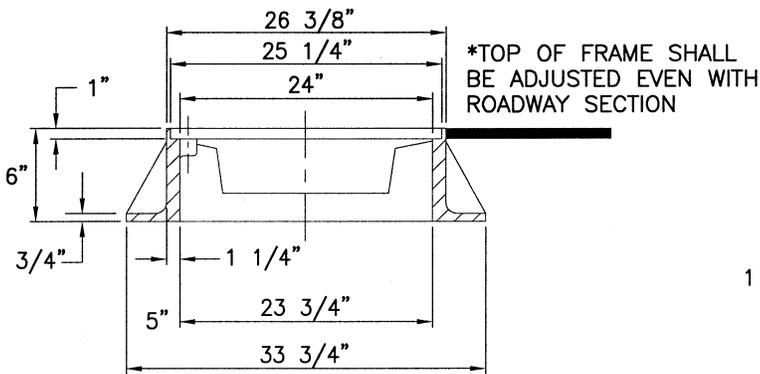
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| FILE NAME: STD-S-1A | | |



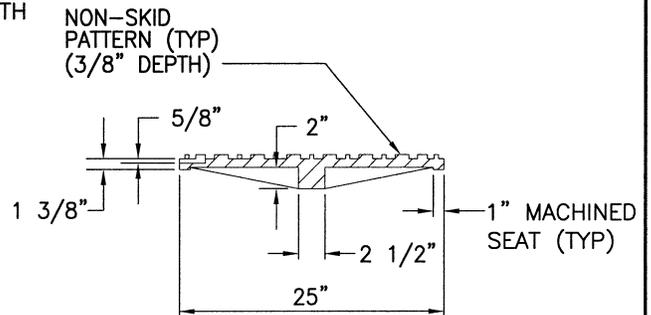
FRAME



COVER



SECTION A-A

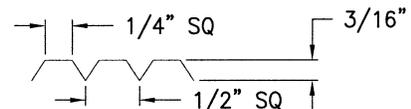


SECTION B-B

NOTES

RATING - H-20
APPROX. WEIGHT-
FRAME - 229 LBS
COVER - 157 LBS

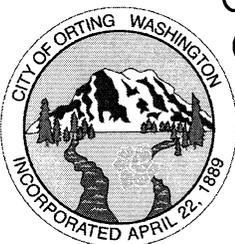
1. THE ALTERNATE NON-SKID PATTERN SHALL BE UTILIZED WHEN THE COVER IS LOCATED IN THE SIDEWALK.
2. OLYMPIC FOUNDRY PART NO. MH 30D/T IS THE PRE-APPROVED PRODUCT. ALL OTHERS REQUIRE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION.



ALTERNATE COVER NON-SKID DESIGN

DETAIL

(SEE NOTE 1)

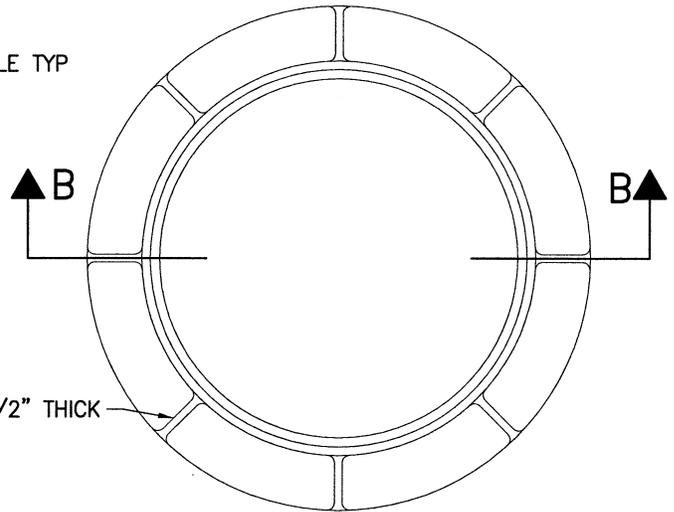
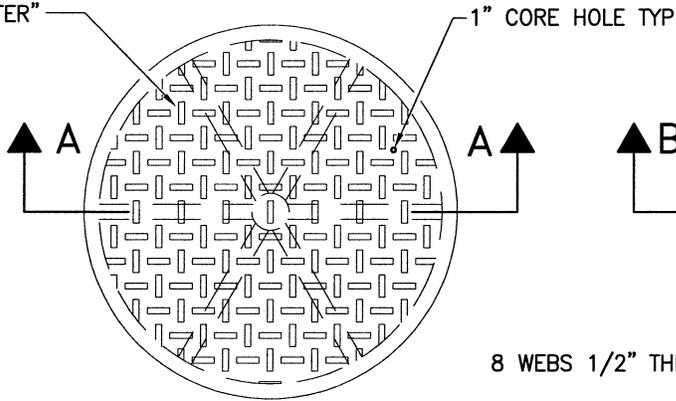


CITY OF ORTING

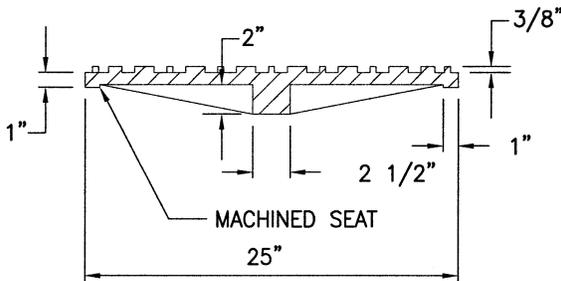
24" LOCKING MANHOLE FRAME AND COVER

| | | |
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-S-1B | | S-1B |

2" x 3/8" RAISED LETTERS CAST ON COVER - "DRAIN" "SEWER" OR "WATER"



LOCKING DEVICES FOR COVER MAY BE USED PROVIDING DETAILS HERE ARE NOT CHANGED

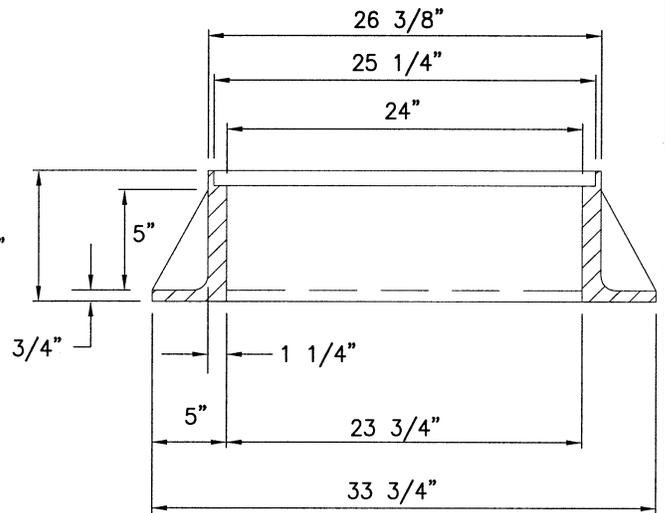


SECTION A-A

DUCTILE IRON NON-LOCKING COVER
MIN WEIGHT - 150 LBS

HEAVY RINGS - (9" DEPTH) USE WHERE PORTLAND CEMENT PAVEMENT IS BEING PLACED TO THICKNESS GREATER THAN 6"

LIGHT RINGS - (6" DEPTH) USE WHERE PAVEMENT THICKNESS IS 6" OR LESS



SECTION B-B

GRAY IRON FRAME MINIMUM WEIGHT - 207 LBS

NOTES

1. RING AND COVER CASTINGS SHALL CONFORM TO WSDOT SPECIFICATION 9-05.15(1).
2. SEAT OF COVER & FRAME MACHINED.
3. NON-ROCKING FIT FOR MANHOLE COVERS.
4. BREAK ALL SHARP CORNERS WHERE POSSIBLE.
5. CASTING TO BE SHOT BLASTED AND FREE FROM SURFACE SAND AND SCALE.
6. CASTING TO BE SMOOTH, TRUE TO PATTERN, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINK HOLES, WARP, OR ANY OTHER DEFECTS WHICH COULD IMPAIR SERVICEABILITY.
7. CASTINGS SHALL BE COATED AS DIRECTED BY THE ENGINEER.
8. OLYMPIC FOUNDRY PART NO. MH 30, MAY SUBSTITUTE OLYMPIC FOUNDRY PART NO. 5920, TYPE "C" LID WITH 1-1" DRILL HOLES OR EQUIVALENT.

HEAVY RINGS=9"
LIGHT RINGS=6"

IMAGES: OrtingLogoBandw | XREFS:

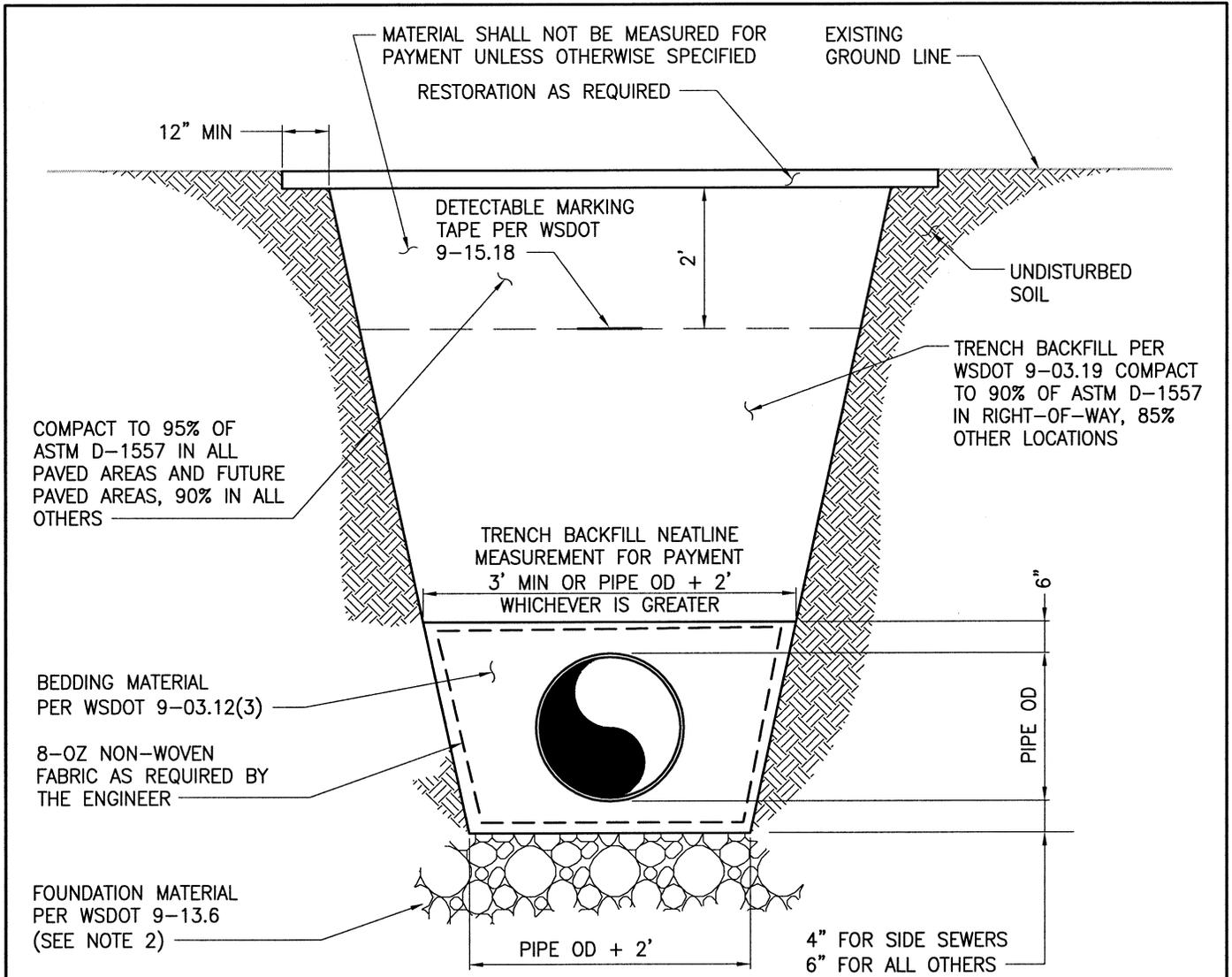
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CITY OF ORTING

STANDARD 24" MANHOLE FRAME AND COVER

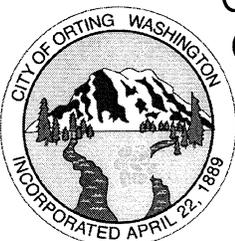
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-1C |
| FILE NAME: STD-S-1C | | |



NOTES

1. FOUNDATION MATERIAL REQUIRED WHERE NECESSARY TO ACHIEVE A FIRM AND UNYIELDING SUB-BASE. DEPTH AS REQUIRED.
2. NO NATIVE MATERIAL SHALL BE USED FOR BACKFILL UNLESS APPROVED BY THE CITY ENGINEER IN WRITING.
3. SEWER MAIN AND LATERAL INSTALLATIONS SHALL BE VIDEO INSPECTED. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.
4. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 18" OF VERTICAL SEPARATION AND 10' OF HORIZONTAL SEPARATION BETWEEN WATER AND SEWER LINES OR ENCASE PER SECTION C1-9 OF DOE CRITERIA FOR SEWAGE WORKS DESIGN.

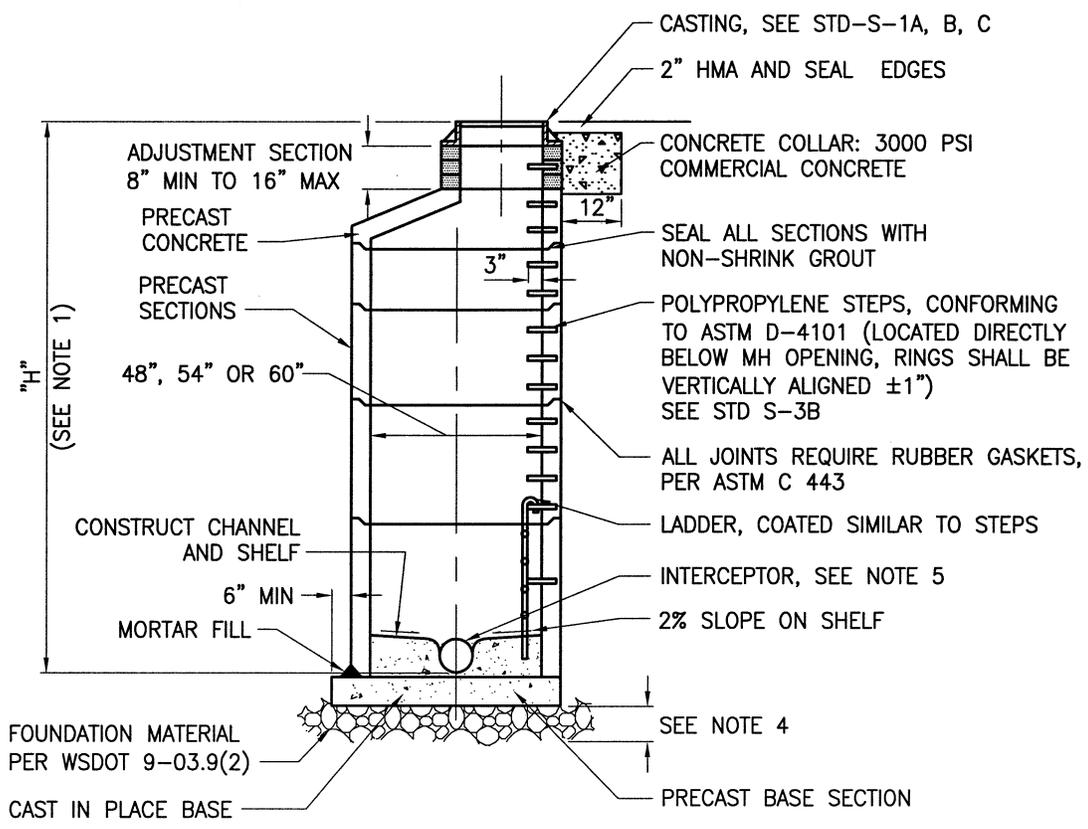
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**CITY OF
ORTING**

**SANITARY SEWER OR
STORM TRENCH**

| | | |
|--------------------|----------------|---------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-2 |
| FILE NAME: STD-S-2 | | |



NOTES

1. WHEN "H" IS LESS THAN 8' USE TYPE III MANHOLE, SEE WSDOT STD PLAN B-23c.
2. WHEN 'H' IS GREATER THAN 20', MANHOLE SHALL BE 60" DIAMETER.
3. WALL OPENING REQUIREMENTS FOR PIPE, SEE WSDOT STD PLAN B-23a & B-23c.
4. FOUNDATION MATERIAL SHALL BE 6" MIN OR AS REQUIRED TO ACHIEVE A FIRM AND UNYIELDING SUB-BASE.
5. USE KOR-N-SEAL BOOT OR OTHER APPROVED WATER TIGHT FLEXIBLE BOOT.
6. MANHOLES SHALL BE SEALED WITH TAMOSEAL CEMENT BASED WATERPROOF FINISH OR APPROVED EQUAL.

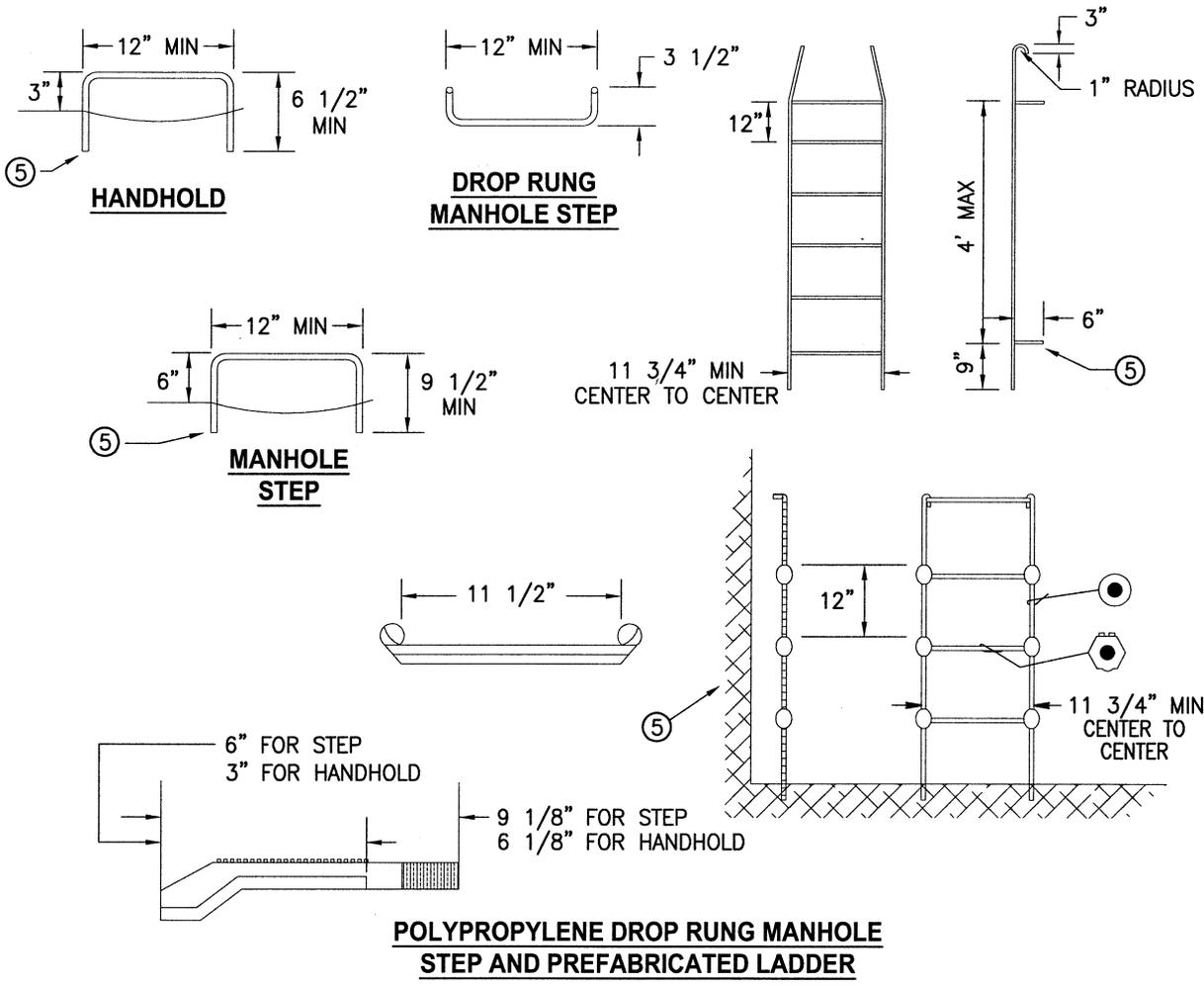
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CITY OF ORTING

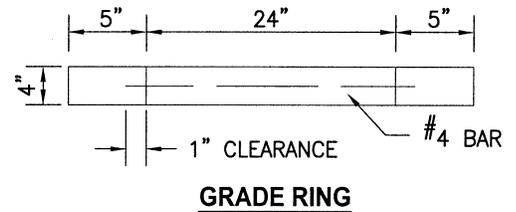
TYPE 1 MANHOLE

| | | |
|---------------------|----------------|-------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-S-3A | | S-3A |



NOTES

- ① MANHOLE STEPS CONFORMING TO SECTION R, ASTM C-478. AASHTO M-199 REQUIREMENTS AND REQUIREMENTS OF ASTM D-4101 FOR POLYPROPYLENE AND ASTM A-615 FOR 1/2" GRADE 60 DEFORMED REINFORCING BAR FOR POLYPROPYLENE STEPS, AND ALL WISHA AND OSHA SPECIFICATIONS, ARE ACCEPTABLE PROVIDED THEY ARE PRE-APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
- ② DROP RUNG STEPS ARE TO BE #8 GALVANIZED DEFORMED REBAR.
- ③ PREFABRICATED LADDERS ARE TO BE #7 GALVANIZED SMOOTH STEEL.
- ④ MANHOLE PREFABRICATED LADDER STEPS SHALL BE PARALLEL OR APPROXIMATELY RADIAL AT THE OPTION OF THE MANUFACTURER, EXCEPT THAT ALL STEPS IN ANY MANHOLE SHALL BE THE SAME.
- ⑤ PENETRATION OF OUTER WALL BY A STEP LADDER OR LADDER LEG IS PROHIBITED.



FILE: STD-S-3B
 DATE: Feb 15, 2008 - 1:47pm PLOTTED BY: morrison
 IMAGES: OringLogoBandw | XREF: S



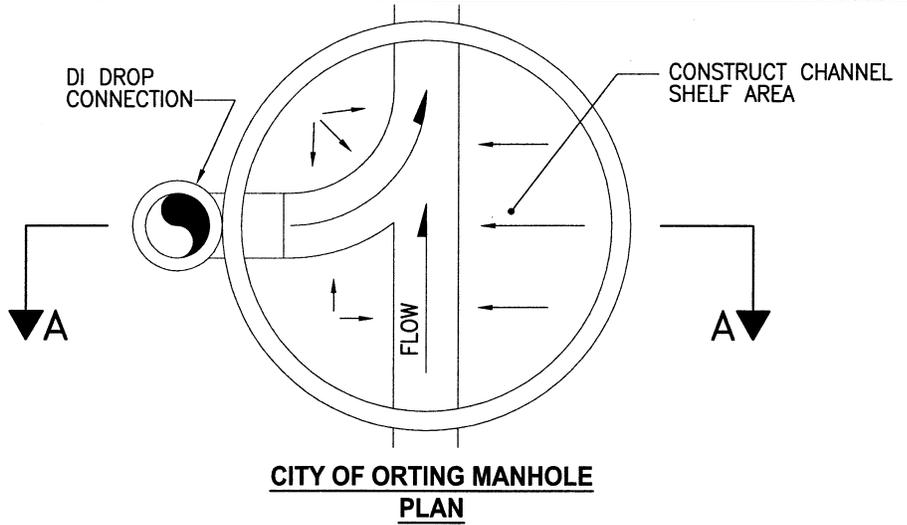
CITY OF ORTING

MANHOLE RING AND SAFETY STEPS

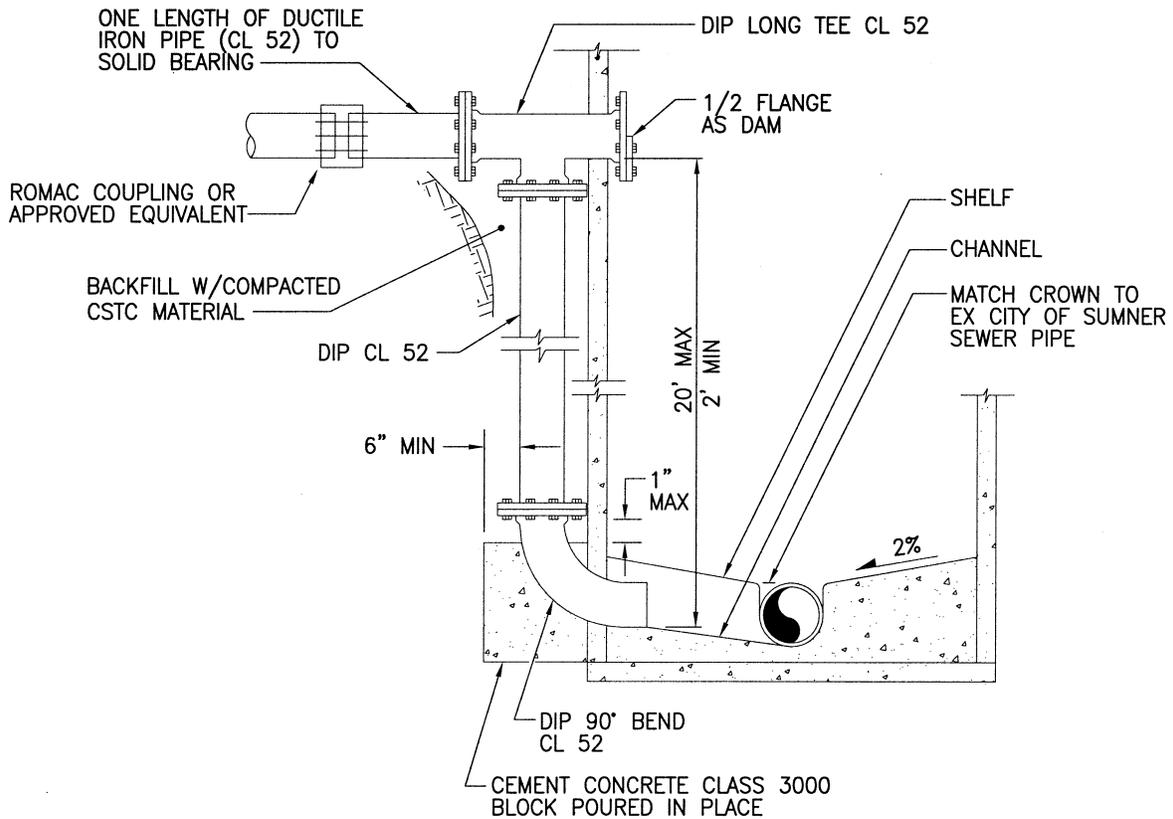
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|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-3B |
| FILE NAME: STD-S-3B | | |

NOTES

1. OUTSIDE DROPS MUST BE CONSTRUCTED WITH DUCTILE IRON AS SHOWN; CONC ENCASED PVC IS NOT ACCEPTABLE.
2. USE RIGID RESTRAINED FITTINGS AT ALL CONNECTIONS.
3. DIP SHALL HAVE CEMENT-MORTAR LINING MEETING THE REQUIREMENTS OF AWWA C104.
- * 4. SHALL OBTAIN APPROVAL FROM CITY ENGINEER PRIOR TO IMPLEMENTING.

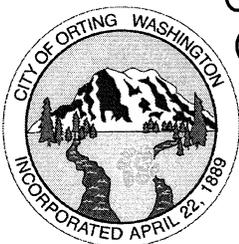


CITY OF ORTING MANHOLE PLAN



CHANNEL SECTION "A-A"

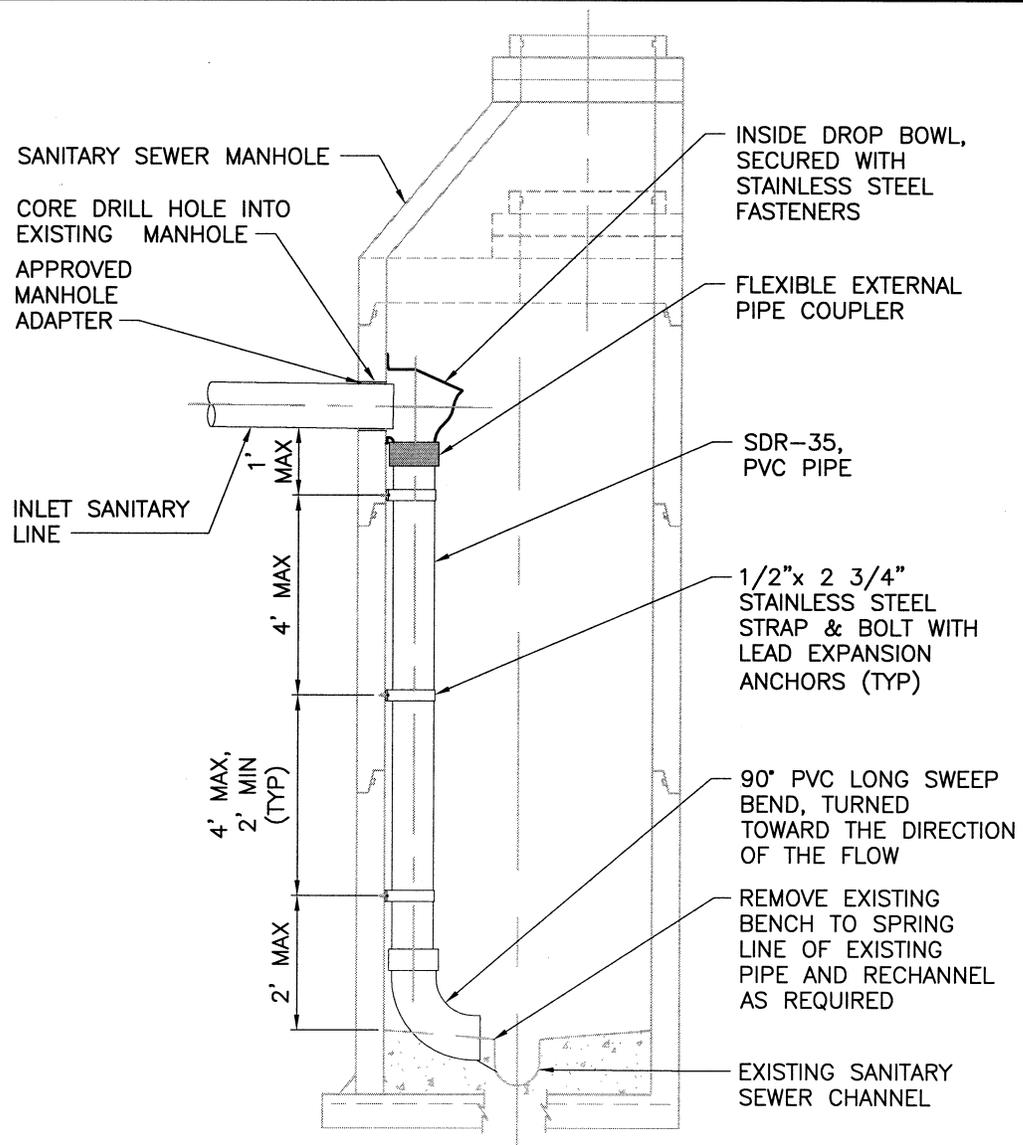
FILE: STD-S-3C
DATE: Feb. 26, 2008 - 12:00pm
PLOTTED BY: morrideo
IMAGES: OrtingLogo.mxd
XREF'S:



CITY OF ORTING

DUCTILE IRON DROP CONNECTION

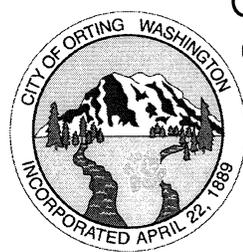
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|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-3C |
| FILE NAME: STD-S-3C | | |



NOTES

1. INSIDE DROP INSTALLATION SHALL BE APPROVED BY THE CITY ENGINEER.
2. DROP BOWL SHALL BE "RELINER-DURAN, INC." BRAND OR APPROVED EQUAL. SELECT A SIZE APPROPRIATE TO FLOW RATE AND PIPE DIAMETER. CENTER BOWL DIRECTLY UNDER INLET PIPE, ALLOW APPROXIMATELY 1" CLEARANCE BETWEEN PIPE AND BOWL. ATTACH BOWL TO MANHOLE WALL WITH 3/8"φ STAINLESS STEEL BOLTS INTO LEAD EXPANSION ANCHORS.
3. TRIM INLET PIPE SO THAT 2" PROTRUDES INTO MANHOLE. FOR IMPROVED FLOW CONTROL, CUT A 1" LONG 'V' SHAPED NOTCH AT BOTTOM EDGE OF INLET PIPE.
4. PIPE STRAP AND APPURTENANCES SHALL BE STAINLESS STEEL. ALL MATERIALS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO INSTALLATION.
5. MANHOLE SIZE SHALL INCREASE 1 DIAMETER FOR INSIDE DROP (48"φ—54") (54"φ—60"ETC)

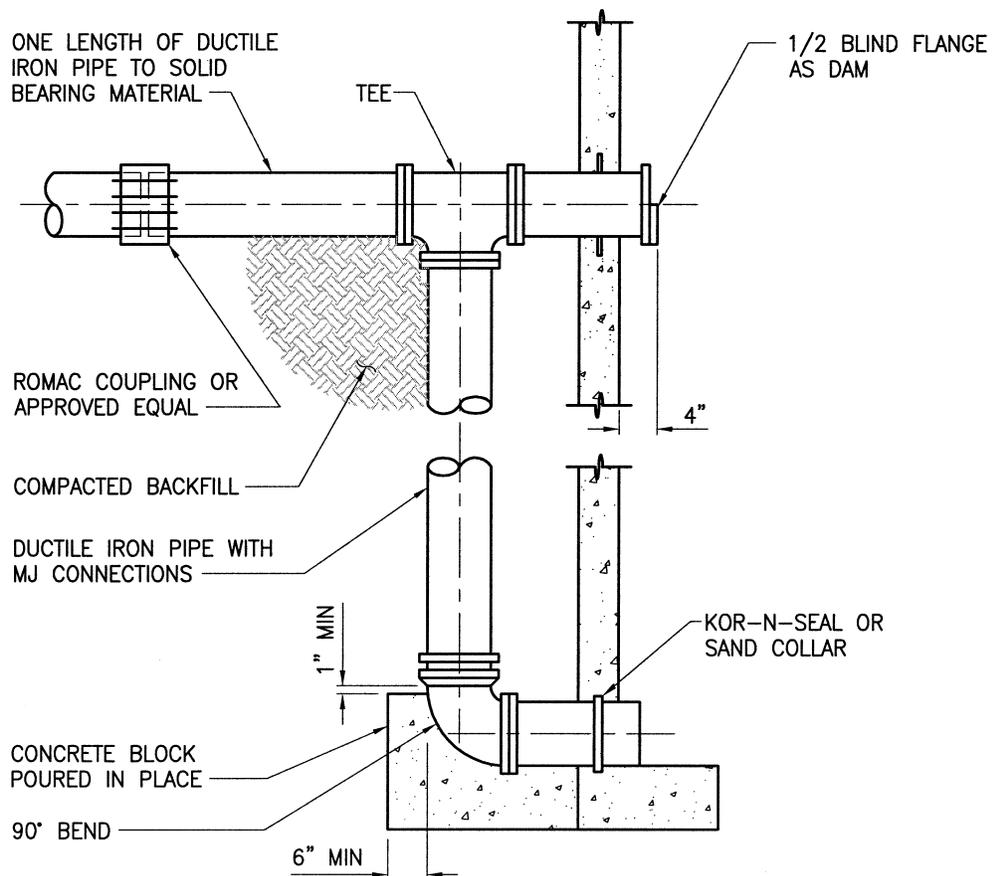
FILE: STD-S-4A
 DATE: Feb 27, 2008 - 9:10am PLOTTED BY: morrison
 IMAGES: OrtingLogbandw | XREF: S:



**CITY OF
ORTING**

**MANHOLE INSIDE
DROP DETAIL**

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-4A |
| FILE NAME: STD-S-4A | | |



IMAGES: OrtingLogoBandw | XREF'S:

DATE: 01/03/08 3:52pm FILENAME: STD-S-4B



CITY OF ORTING

OUTSIDE MANHOLE DROP CONNECTION

| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-4B |
| FILE NAME: STD-S-4B | | |



**CITY OF
ORTTING**

SIDE/BUILDING SEWER

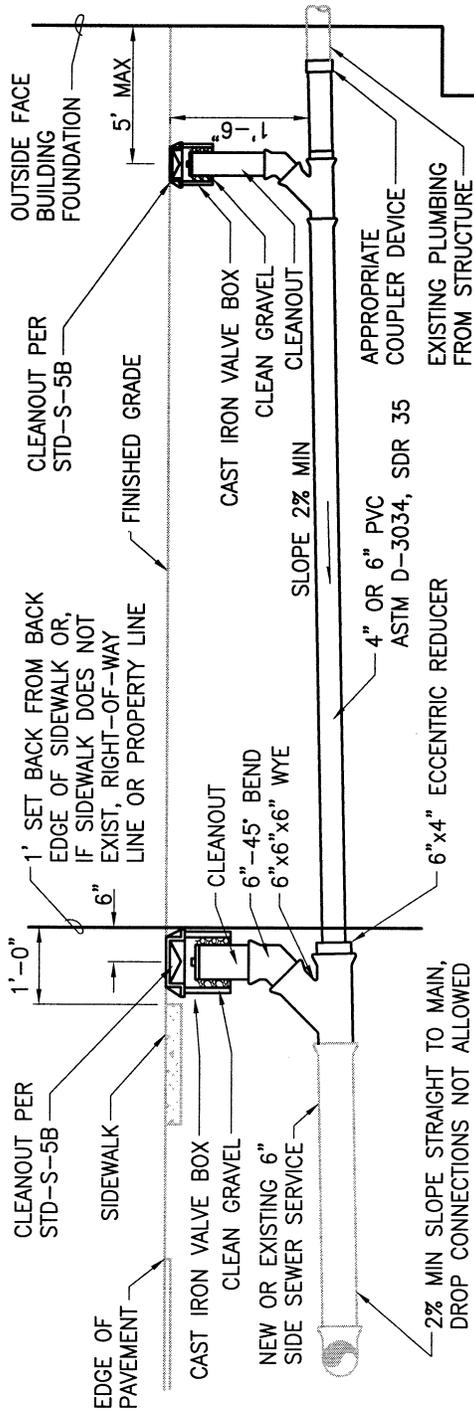
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APPROVAL
DATE:

DRAWING
NO.

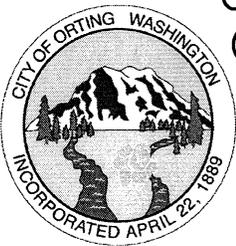
FILE NAME: STD-S-5A

S-5A



NOTES

1. DO NOT REMOVE PLUG FROM SIDE SEWER UNTIL A INSPECTOR IS PRESENT. WATER TEST FOR 1 HOUR.
2. CLEANOUTS SHALL BE PROVIDED W/"EXISTING" SIDE SEWER STUB. SEWER CLEANOUTS ARE REQUIRED FOR NEW CONSTRUCTION, REPAIRS, AND REHABILITATION OF EXISTING SIDE SEWERS.
3. ALL FITTINGS SHALL INCLUDE RUBBER GASKETS. GLUE CLEANOUT ADAPTERS TO RISERS.
4. ADDITIONAL BUILDING SEWER CLEANOUTS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED ONE HUNDRED (100) FEET (30.4 m) IN STRAIGHT RUNS AND FOR EACH AGGREGATE CHANGE IN DIRECTION EXCEEDING ONE HUNDRED AND THIRTY FIVE (135) DEGREES.
5. PROVIDE CAST IRON H20 LOAD RATED CLEANOUT COVER.
6. DISCHARGE OF SURFACE OR GROUNDWATER TO A SEWER IS A VIOLATION OF CITY CODE AND A FINABLE OFFENSE, PER OMC 9-2A-9, \$5,000 PER DAY FINE.
7. THE CONTRACTOR SHALL EXPOSE MAIN AND LATERAL TO VERIFY 2% SLOPE CAN BE ACHIEVED PRIOR TO INSTALLATION OF CLEANOUTS OR SIDE SEWER.
8. ALL CLEANOUTS AND JOINTS SHALL BE VISIBLE AND INSPECTED BY THE CITY PRIOR TO BACKFILL.
9. ALL EXCAVATIONS SHALL BE INSPECTED BY THE CITY AND COMPLETELY BACKFILLED WITHIN 48 HOURS. TRENCHES SHALL BE BACKFILLED AND COMPACTED IN 18 INCH LIFTS. BEDDING MATERIAL FOR THERMOPLASTIC PIPE (9-03.16) SHALL BE INSTALLED AND COMPACTED TO 90% TO PROTECT CLEANOUTS, REMAINING BACKFILL SHALL CONFORM TO 9-03.19, GRAVEL FOR TRENCH BACKFILL SEWER.
10. BUILDING SEWER PIPING SHALL BE LAID ON A FIRM AND UNYIELDING SUBGRADE THROUGHOUT ITS ENTIRE LENGTH.
11. VIDEO INSPECTION PER 7-17.3(2)H FROM R-O-W CLEANOUTS TO MAIN IS REQUIRED BY INSTALLING CONTRACTOR PRIOR TO FINAL ACCEPTANCE. CONTRACTOR SHALL ADD MINIMUM OF 5 GALLONS OF WATER TO CLEANOUTS IMMEDIATELY PRIOR TO VIDEO INSPECTION.



CITY OF
 ORTING

SIDE SEWER
 CLEANOUT

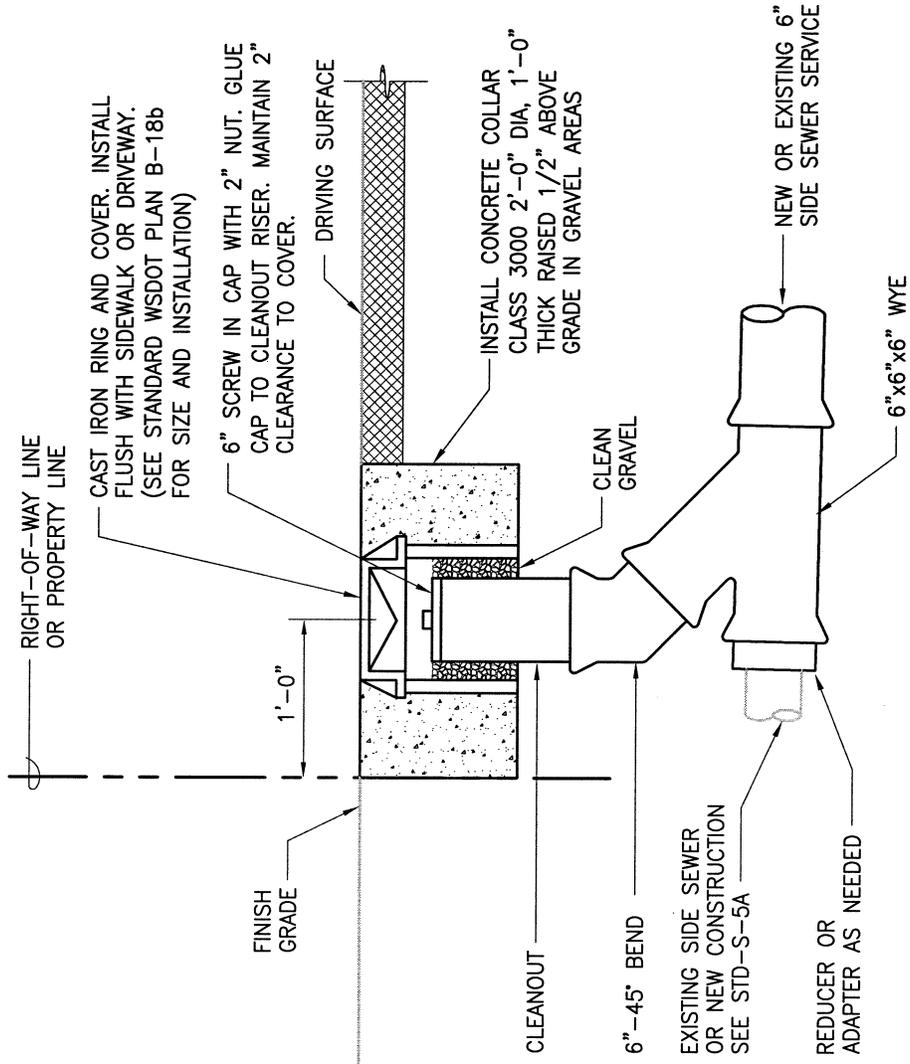
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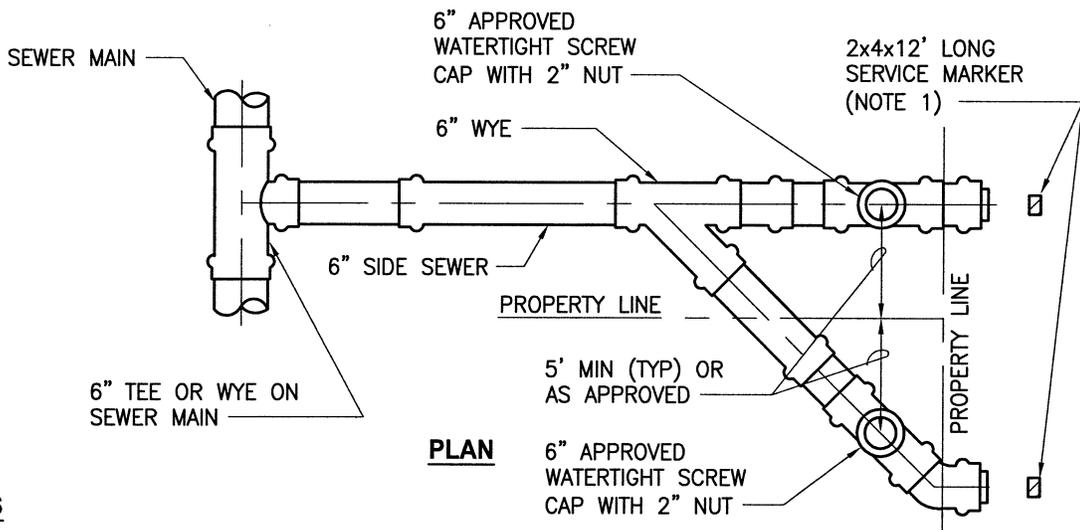
APPROVAL
 DATE:

DRAWING
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FILE NAME: STD-S5B

S-5B

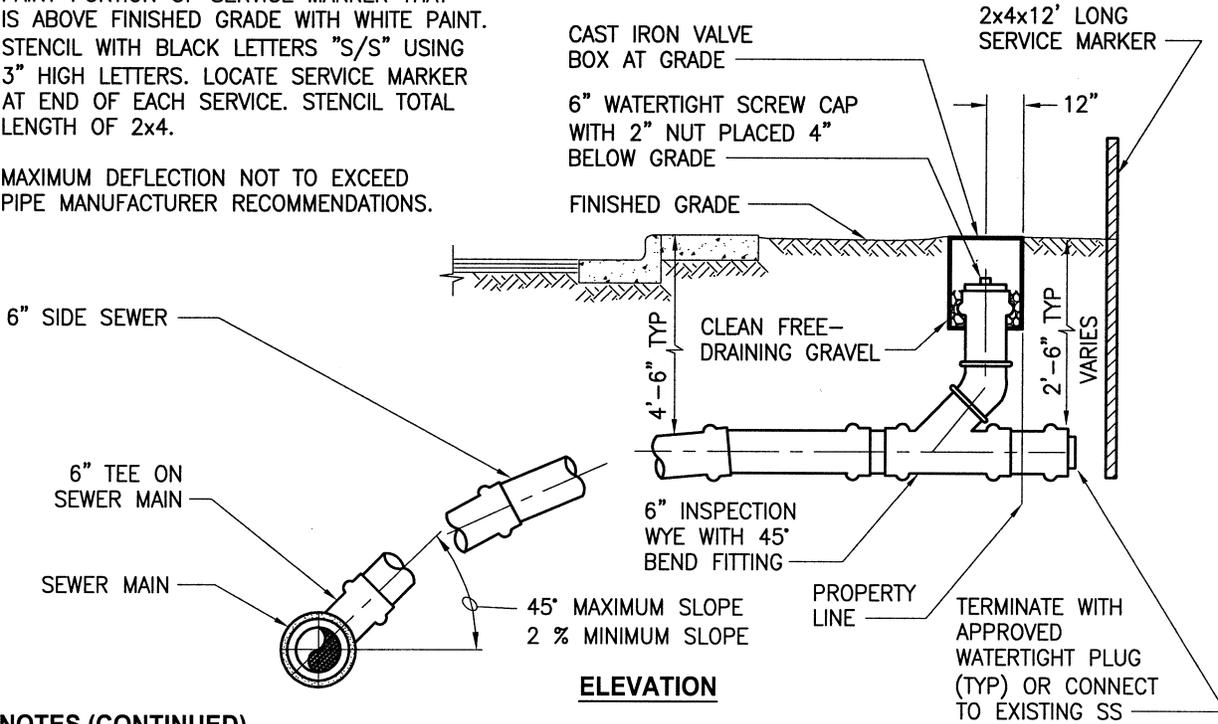




PLAN

NOTES

1. PAINT PORTION OF SERVICE MARKER THAT IS ABOVE FINISHED GRADE WITH WHITE PAINT. STENCIL WITH BLACK LETTERS "S/S" USING 3" HIGH LETTERS. LOCATE SERVICE MARKER AT END OF EACH SERVICE. STENCIL TOTAL LENGTH OF 2x4.
2. MAXIMUM DEFLECTION NOT TO EXCEED PIPE MANUFACTURER RECOMMENDATIONS.



ELEVATION

NOTES (CONTINUED)

3. SIDE SEWER LATERAL SHALL BE THE SAME MATERIAL AS THE MAIN LINE SEWER AND BEDDED THE SAME.
4. PIPE BEDDING PER WSDOT 9-03.9(3)
5. A LOAD-BEARING CASTING & COVER SHALL BE USED ON ALL CLEANOUTS.
6. MINIMUM SIDE SEWER DIAMETER WITHIN THE RIGHT-OF-WAY SHALL BE 6". THE CITY RESERVES THE RIGHT TO REQUIRE INCREASED SIDE SEWER DIAMETER AS NEEDED TO ACCOMMODATE INCREASED FLOWS.

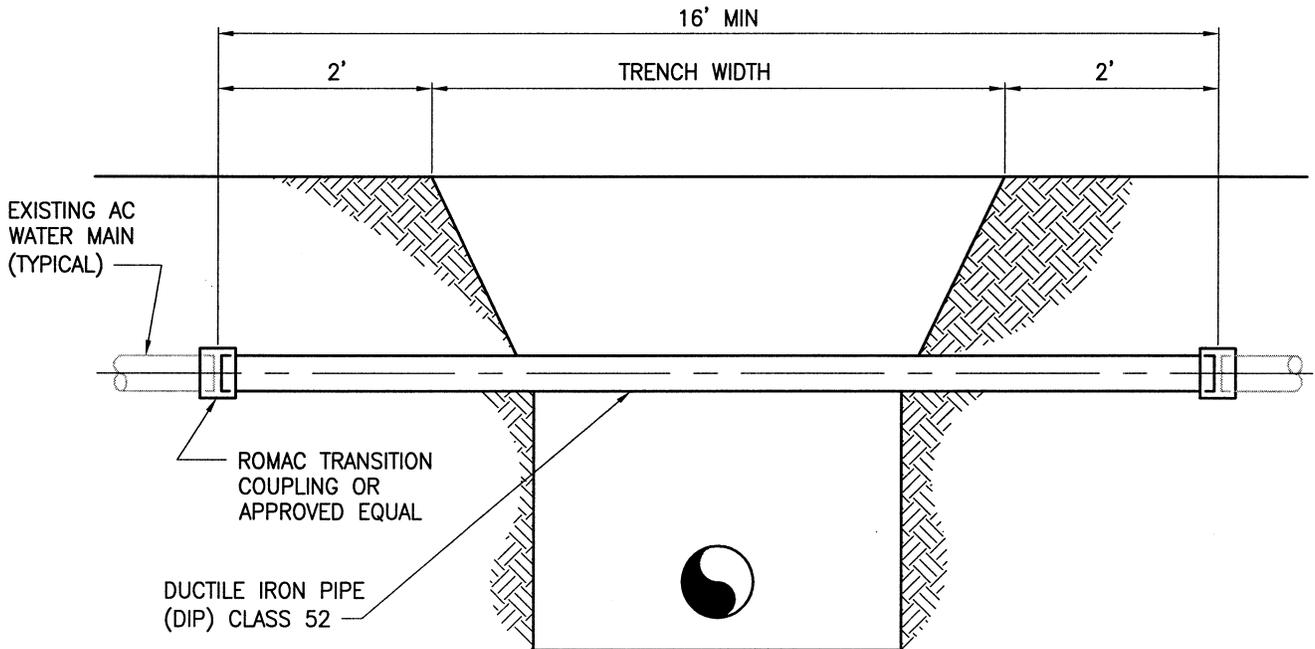
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CITY OF ORTING

TYPICAL SPLIT SIDE SEWER DETAIL

| | | |
|--------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-5C |
| FILE NAME: STD-S5C | | |



NOTES

1. WRAP DIP AND TRANSITION COUPLINGS WITH 8 MIL POLYETHYLENE CONFORMING TO AWWA C-105.
2. THE CONTRACTOR SHALL PROVIDE PROTECTIVE CLOTHING AND EQUIPMENT (COVERALLS, GLOVES, BOOTS, HEAD COVERINGS, GOGGLES, RESPIRATOR) TO CREWS WORKING WITH ASBESTOS CEMENT PIPE IN ORDER TO ASSURE THE WORKERS' EXPOSURE TO ASBESTOS MATERIAL BE AT OR BELOW THE LIMIT PRESCRIBED IN WAC 296-62-07705.
3. ASBESTOS CEMENT PIPE SHALL BE CUT WITH A REED WHEEL CUTTER WITH CONTROLLED FLOWING WATER.
4. CONTAMINATED CLOTHING SHALL BE TRANSPORTED IN SEALED IMPERMEABLE BAGS AND LABELED IN ACCORDANCE WITH WAC 296-62-07721. ASBESTOS CEMENT GREATER THAN 12" IN LENGTH MAY BE LEFT AND BURIED IN THE TRENCH.

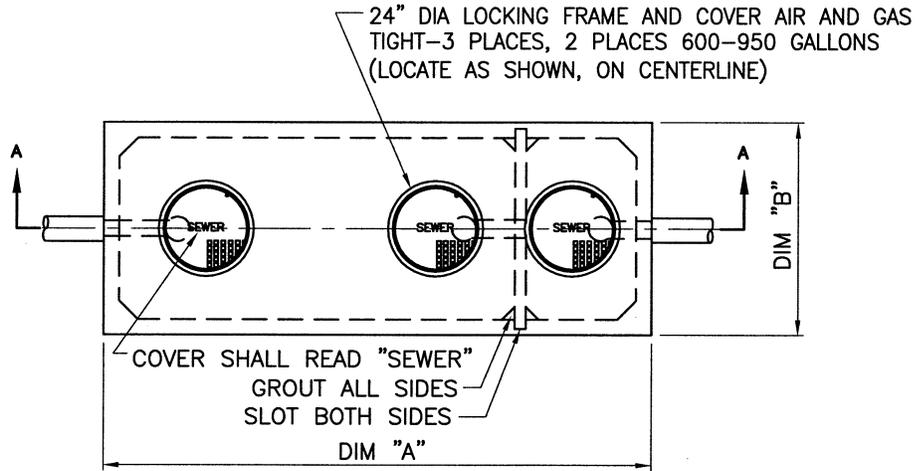
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 DATE: Feb 27, 2008 - 9:54am PLOTTED BY: morrison
 IMAGES: OrtingLogoBandw |
 XREF'S:



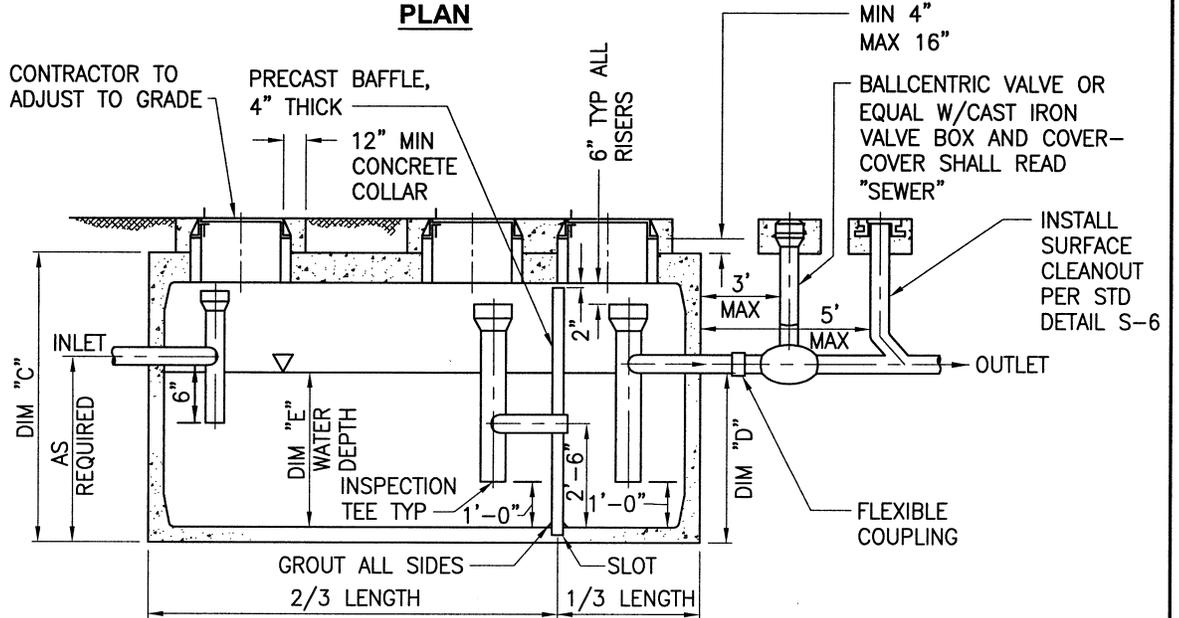
**CITY OF
ORTING**

**TYPICAL A/C WATERMAIN
CROSSING REPLACEMENT**

| | | |
|--------------------|-------------------|------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-6 |
| FILE NAME: STD-S-6 | | |



PLAN



SECTION A-A

(INTERIOR PIPING SHOWN FULL SECTION FOR CLARITY)

| GALLON CAPACITY | 600 | 750 | 950 | 1000 | 1250 | 1500 | 1750 | 2000 | 2500 | 2750 | 3000 | 4000 | 5000 | 6000 |
|-----------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| DIM "A" | 7'-0" | 7'-0" | 7'-0" | 9'-0" | 9'-0" | 11'-2" | 11'-2" | 12'-8" | 12'-8" | 12'-8" | 15'-7" | 15'-7" | 19'-11" | 19'-11" |
| DIM "B" | 4'-8" | 4'-8" | 4'-8" | 5'-0" | 5'-0" | 5'-8" | 5'-8" | 6'-8" | 6'-8" | 6'-8" | 9'-7" | 9'-7" | 9'-11" | 9'-11" |
| DIM "C" | 7'-0" | 7'-0" | 7'-0" | 7'-2" | 7'-2" | 7'-2" | 7'-2" | 8'-0" | 8'-0" | 8'-0" | 8'-6.5" | 8'-6.5" | 8'-11" | 8'-11" |
| DIM "D" | 3'-6" | 4'-3" | 5'-3" | 4'-2" | 5'-2" | 4'-4" | 4'-11" | 4'-7" | 5'-6" | 6'-0" | 5'-0" | 6'-3" | 6'-2" | 7'-2" |
| DIM "E"* | 3'-2" | 3'-11" | 4'-11" | 3'-10" | 4'-10" | 4'-0" | 4'-7" | 3'-10" | 4'-9" | 5'-3" | 3'-9" | 5'-0" | 4'-9" | 5'-9" |

* WATER DEPTH

FOR NOTES SEE STD-S-7B



**CITY OF
ORTING**

**EXTERIOR GREASE
INTERCEPTOR DETAIL**

| | | |
|-------------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-7A |
| FILE NAME: STD-S-7A.DWG | | |

NOTES

1. LOCATE STRUCTURE ADJACENT TO DRIVE FOR ACCESS BY MAINTENANCE VEHICLE.
2. FILL WITH CLEAN WATER PRIOR TO START UP OF SYSTEM.
3. INTERCEPTOR AND APPURTENANCES TO CLEANOUT SHALL BE MAINTAINED BY PRIVATE OWNER AND
4. ANNUAL MAINTENANCE REPORT SHALL BE SUBMITTED TO THE CITY OF ORTING.
5. CONNECTIONS TO CONCRETE WALLS WITH PVC PIPE SHALL BE MADE USING KOR-N-SEAL BOOT OR EQUAL. SEAL ALL PIPE CONNECTIONS WITH NON-SHRINK GROUT.
6. 6" PVC SHALL BE USED THROUGHOUT. TYPE OF PIPE PER CITY OF ORTING STANDARDS. TOP OF "TEES" TO BE KEPT OPEN.
7. A BALLCENTRIC VALVE SHALL BE LOCATED IN THE DISCHARGE PIPING, A MAXIMUM OF 3 FEET FROM THE GREASE INTERCEPTOR UPSTREAM OF THE CLEANOUT. THIS VALVE SHALL BE CLOSED WHEN CLEANING OR SERVICING THE DEVICE.
8. GRAY WATER ONLY. BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER.
9. A CLEANOUT SHALL BE INSTALLED DOWNSTREAM OF BALLCENTRIC VALVE PER ORTING STANDARD STD-S-5.
10. THE PLANS SHALL ILLUSTRATE PROPERTY BOUNDARIES, PIPING/DRAINAGE DETAILS AND CONNECTIONS TO THE SANITARY SEWER. DETAIL AND ELEVATION DRAWINGS OF THE GREASE INTERCEPTOR SHALL INCLUDE UPC APPENDIX 'H' DESIGN CALCULATIONS TO SHOW CAPACITY, DETENTION TIME AND REMOVAL EFFICIENCIES.
11. NO. OF MEALS/PEAK HOUR X WASTE FLOW RATE X RETENTION TIME X STORAGE FACTOR = CAPACITY IN GALLONS. EFFLUENT FROM GREASE INTERCEPTORS SHALL NOT EXCEED 100 mg/l FAT, OIL, AND GREASE DISCHARGED TO THE SANITARY SEWER.
12. GREASE INTERCEPTORS INSTALLED IN PAVED AREAS SHALL COMPLY WITH H-20 LOADING.
13. PLUMBING/PIPING SHALL BE CONSTRUCTED TO ESTABLISH "PARALLEL FLOW" (90 DEGREES TO THE TANK BAFFLE) THROUGH THE GREASE INTERCEPTOR. NO RADIUS, BEND OR ELBOW SHALL BE ALLOWED IN THE INLET PIPE, FOR A MINIMUM OF 10 FEET OR 20 PIPE DIAMETERS, WHICHEVER IS GREATER, UPSTREAM OF THE INTERCEPTOR.
14. OPTIONAL VENTING OF THE INTERCEPTOR SHALL BE IN ACCORDANCE WITH CHAPTER 9 OF THE UNIFORM PLUMBING CODE-2006.
15. FINAL INSPECTION IS REQUIRED BY THE CITY ENGINEER OR HIS REPRESENTATIVE PRIOR TO CONNECTION TO THE SANITARY SEWER.
16. CONCRETE: 28 DAY COMPRESSIVE STRENGTH $f_c = 4500$ psi
17. REBAR: ASTM A-615 GRADE 60
18. MESH: ASTM A-185 GRADE 65
19. DESIGN: ACI-318-83 BUILDING CODE ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"

FILE: S16-s-7B
 DATE: Feb 27, 2008 - 9:59am PLOTTED BY: morrideo
 IMAGES: OrtingLogoBandw |
 XREF: S:



**CITY OF
 ORTING**

**EXTERIOR GREASE
 INTERCEPTOR NOTES**

| | | |
|-------------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. S-7B |
| FILE NAME: STD-S-7B.DWG | | |

NOTES

1. INTERIOR GREASE INTERCEPTORS MAY BE ALLOWED AT THE DISCRETION OF THE CITY OF ORTING BUILDING DEPARTMENT FOR RETROFIT/REMODEL APPLICATIONS BY PERMIT ONLY. ALL NEW CONSTRUCTION THAT MAY CONTRIBUTE FATS, OILS, OR GREASES (FOG) TO THE CITY COLLECTION SYSTEM SHALL INSTALL AN EXTERNAL GREASE INTERCEPTOR IN ACCORDANCE WITH CITY OF ORTING STANDARD DETAILS S-7A AND S-7B.
2. SIZING OF THE INTERIOR GREASE INTERCEPTOR SHALL BE IN ACCORDANCE WITH APPENDIX H OF THE UNIFORM PLUMBING CODE. CALCULATIONS SHALL BE REVIEWED BY THE CITY ENGINEER OR HIS REPRESENTATIVE PRIOR TO INSTALLATION.
3. THE INTERIOR GREASE INTERCEPTOR SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE SOURCE OF FOG AND SHALL BE MADE READILY ACCESSIBLE FOR INSPECTION BY CITY PERSONNEL UPON REQUEST.
4. PLUMBING/PIPING SHALL BE CONSTRUCTED TO ESTABLISH "PARALLEL FLOW" (90 DEGREES TO THE TANK BAFFLES) THROUGH THE GREASE INTERCEPTOR.
5. GRAY WATER ONLY. BLACK WATER SHALL BE CARRIED BY SEPARATE SIDE SEWER.
6. A SOLIDS INTERCEPTOR SHALL BE INSTALLED UPSTREAM OF THE GREASE INTERCEPTOR IF A FOOD GRINDER OR FOOD PREPARATION/PRE-RINSE STATION IS PLUMBED TO THE GREASE INTERCEPTOR.
7. FILL WITH CLEAN WATER PRIOR TO START UP OF THE SYSTEM.
8. THE GREASE INTERCEPTOR SHALL BE CERTIFIED BY THE PLUMBING AND DRAINAGE INSTITUTE (WATTS, ZURN, THERMACO, OR EQUAL).
9. INSTALLATION AND MAINTENANCE PRACTICES SHALL CONFORM TO PLUMBING AND DRAINAGE INSTITUTE GUIDELINES.
10. PER OMC SECTION 9-2D-2, EFFLUENT FROM GREASE INTERCEPTORS SHALL NOT EXCEED 100 MG/L FAT, OIL, AND GREASE (COMBINED). THE BUSINESS OWNER IS RESPONSIBLE FOR PROPER OPERATION, MAINTENANCE, SAMPLING AND MONTHLY COMPLIANCE REPORT GENERATION.
11. THE OWNER SHALL SUBMIT A MONTHLY MAINTENANCE REPORT TO THE CITY TO DEMONSTRATE COMPLIANCE WITH FOG DISCHARGE LIMITATIONS. IF THE OWNER IS UNABLE TO MEET THE DISCHARGE LIMITATIONS OR FAILS TO SUBMIT THE MONTHLY MONITORING REPORT, THE OWNER MAY BE SUBJECT TO A FINE PER OMC SECTION 9-2A-9 AND/OR BE REQUIRED TO INSTALL AN EXTERNAL GREASE INTERCEPTOR IN ACCORDANCE WITH CITY OF ORTING STANDARD DETAILS S-7A AND S-7B.
12. FINAL INSPECTION IS REQUIRED BY THE CITY ENGINEER OR HIS REPRESENTATIVE PRIOR TO CONNECTION TO THE SANITARY SEWER.

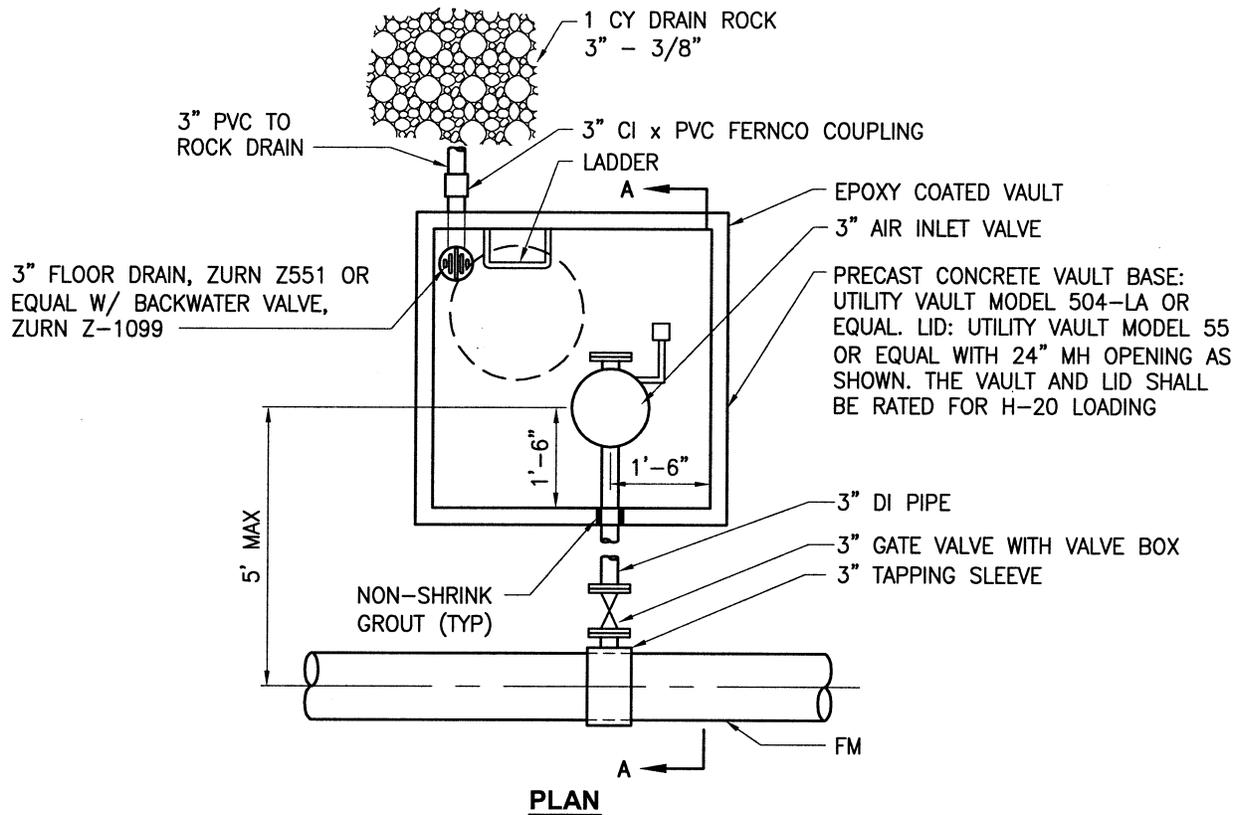
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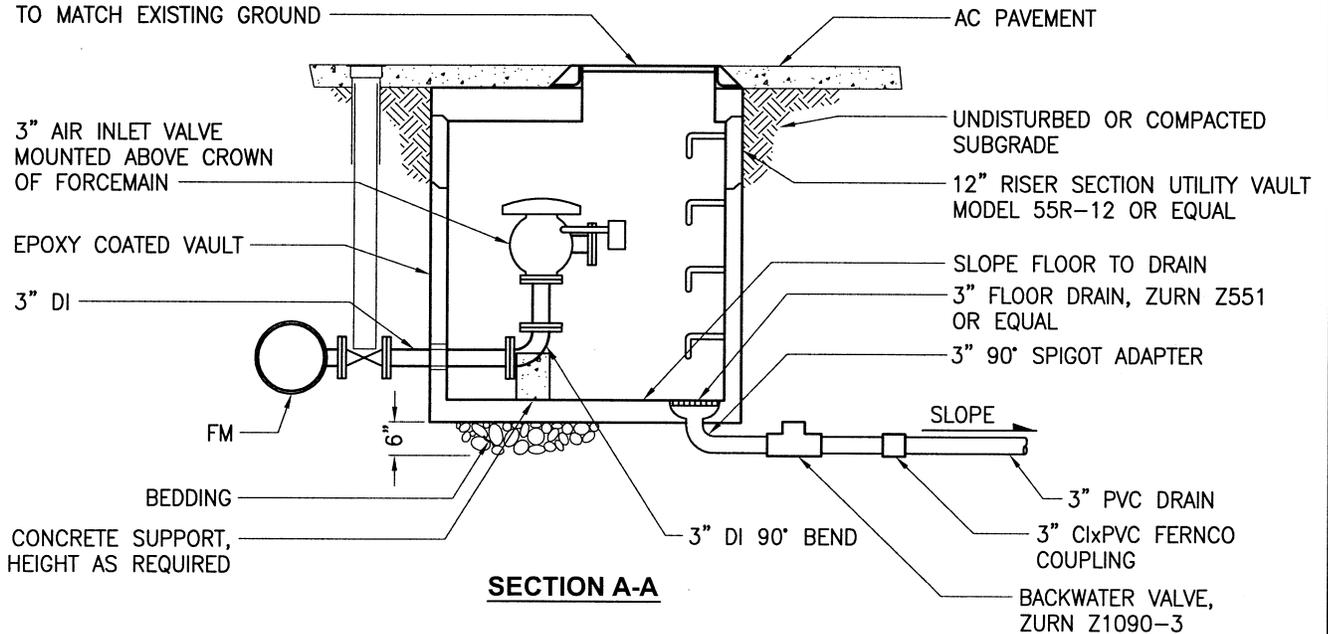
CITY OF
 ORTING

INTERIOR GREASE
 INTERCEPTOR NOTES

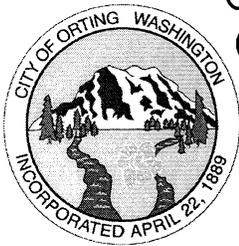
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-S-7C.DWG | | S-7C |



24" VENTED MH COVER AND FRAME. MH COVER SHALL HAVE 50% FREE AREA. RIM ELEVATION TO MATCH EXISTING GROUND



FILE: STD-S-8
 DATE: Feb 21, 2008 - 11:33am PLOTTED BY: morrison
 IMAGES: OrtlingLogobandw | XREFS:



CITY OF ORTLING

SANITARY SEWER FORCEMAIN AIR INLET VALVE CHAMBER (FM)

| | | |
|--------------------|----------------|-------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-S-8 | | S-8 |

PRECAST CONCRETE VAULT BASE: UTILITY VAULT MODEL 504-L, ORIGINAL LID: UTILITY VAULT MODEL NO 55 ORIGINAL W/ 24 INCH MH OPENING AS SHOWN. VAULT SHALL BE RATED FOR H-20 AND LID LOADING

2" PIPE SADDLE W/SS BAND FORD MODEL FS 202 OR EQUAL

12" RCL W OR 16" W

2" GOOSENECK AND SUPPORT

NON-SHRINK GROUT (TYP)

2" GATE VALVE

2" UNION

PLAN

2" COMBINATION AIR VALVE APCO MODEL 145C OR EQUAL

24" MH OPENING IN LID

LADDER

WHERE VAULT IS INSTALLED IN THE ROADWAY OR SIDEWALK INSTALL A VERTICAL 90° BEND WITH 1/8" MESH OVER THE END IN PLACE OF THE GOOSENECK

3" FLOOR DRAIN ZURN Z551 OR EQUAL

2" GALV STEEL VENT

3" PVC TO DRAIN

3" CI x PVC FERNCO COUPLING

CONCRETE SIDEWALK OR AC PAVEMENT TO MATCH EXISTING

2" GATE VALVE WITH VALVE BOX - SEE STD-W-6 COVER SHALL READ "SEWER"

2" SCH 80 PVC PIPE (TH)

2" SCH 80 PVC 90° EL

12" RCL W OR 16" W

SLOPE

6"

SECTION A-A

2" VENT TO GOOSENECK

24" MH FRAME LID. LID SHALL BE VENTED WHERE VAULT IS INSTALLED IN THE TOP ROADWAY OR SIDEWALK

2" COMBINATION AIR VALVE

2" GI 90° STREET EL

1-1/2" ADJUSTABLE PIPE STANCHION GRINNELL FIG 62 TYPE B, OR EQUAL

SLOPE FLOOR TO DRAIN

3" PVC DRAIN

SLOPE

2" UNION

2" GATE VALVE

3" CIxPVC FERNCO COUPLING

BACKWATER VALVE, ZURN Z1090-3

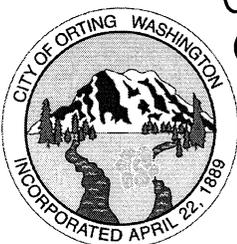
3" FLOOR DRAIN, ZURN Z551

NOTE:

ODOR CONTROL MAY BE REQUIRED BY CITY ENGINEER.

IMAGES: XREF'S

DATE: 02/06/08 3:38pm FILENAME: Std-S-9



CITY OF ORTING

COMBINATION AIR VALVE & CHAMBER (W & RCL)

SCALE: NO SCALE

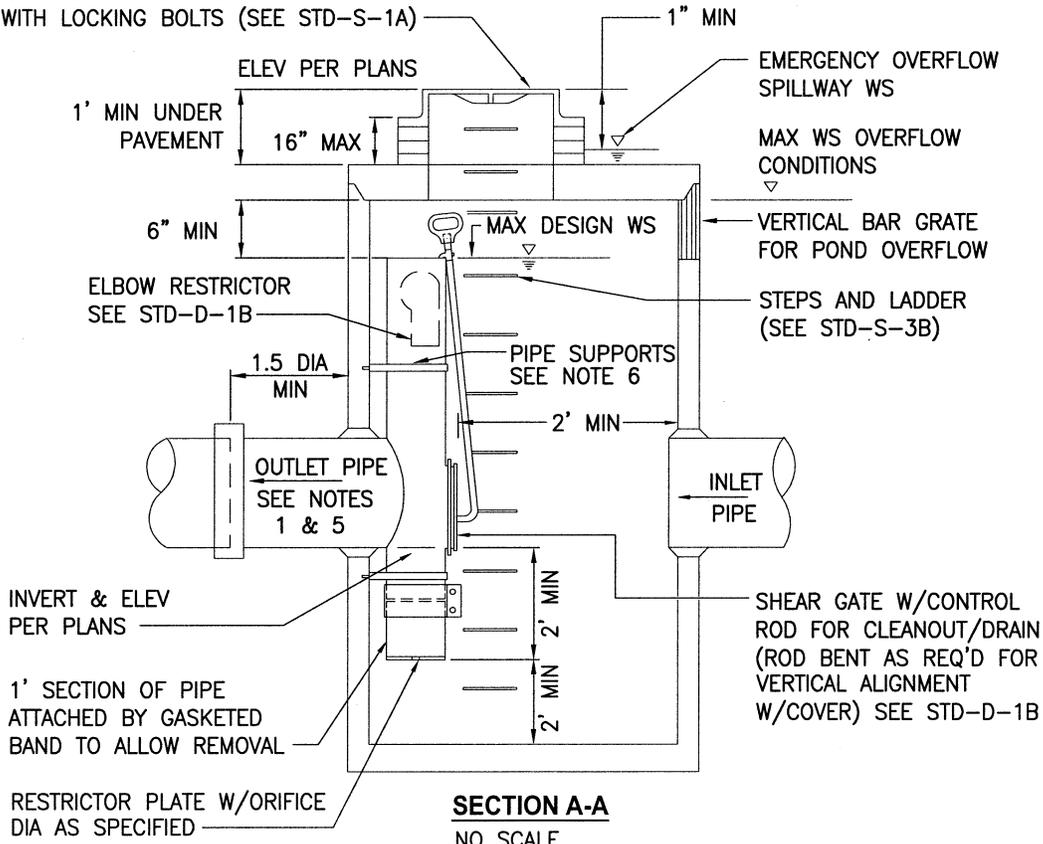
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DRAWING NO.

FILE NAME: STD-S-9

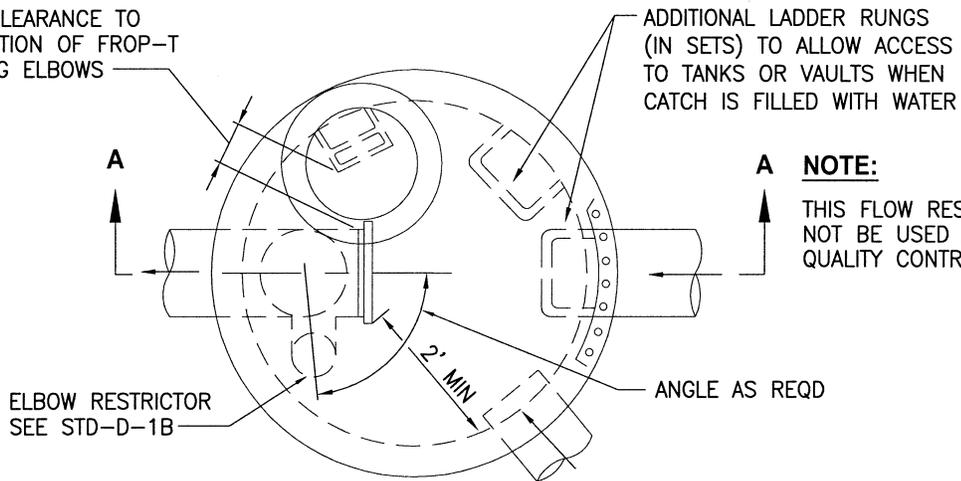
S-9

FRAME, GRATE & ROUND SOLID COVER MARKED
"DRAIN" WITH LOCKING BOLTS (SEE STD-S-1A)



SECTION A-A
NO SCALE

2' MIN CLEARANCE TO
ANY PORTION OF FROP-T
INCLUDING ELBOWS



PLAN VIEW
NO SCALE

FOR NOTES SEE STD-D-1B

CITY OF
ORTING

CONTROL STRUCTURE



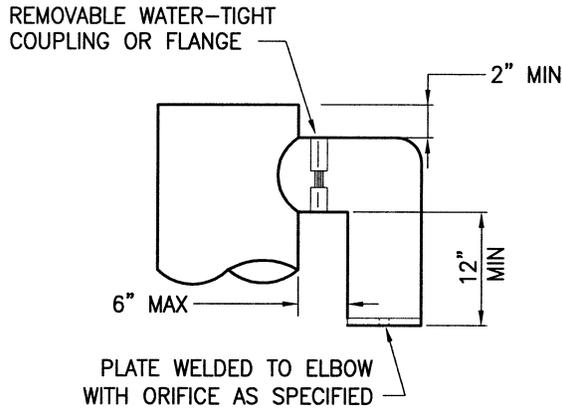
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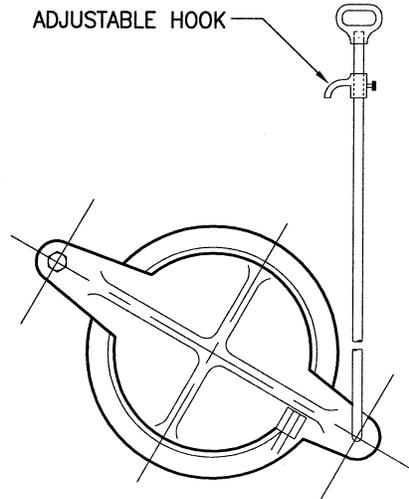
DRAWING
NO.

FILE NAME: STD-D-1A

D-1A



ELBOW RESTRICTOR
NO SCALE



SHEAR GATE
NO SCALE

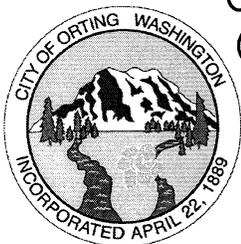
NOTES

1. USE MIN 48" DIA CATCH BASIN TYPE 2. SEE STD-D-3A & STD-D-3B.
2. OUTLET CAPACITY: DEVELOPED DESIGN FLOW.
3. METAL PARTS: CORROSION RESISTANT. ALUMINUM PIPE
4. FRAME & LADDER OR STEPS OFFSET SO:
 - A: CLEANOUT GATE IS VISIBLE FROM TOP.
 - B: CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
 - C: FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE: OUTLET PIPE TO HAVE SMOOTH ID EQUAL TO CONCRETE PIPE ID LESS 1/4".
6. PROVIDE AT LEAST TWO 3" X .090 GAGE SUPPORT BRACKET ANCHORED CONCRETE WALL (MAX 3'-0" VERTICAL SPACING).
7. LOCATE ELBOW RESTRICTOR(S) AS NECESSARY TO PROVIDE MIN CLEARANCE AS SHOWN.
8. LOCATE ADDITIONAL LADDER RUNGS IN STRUCTURES USED AS ACCESS TO TANKS OR VAULTS TO ALLOW ACCESS WHEN CATCH BASIN IS FILLED WITH WATER.
9. ALL METAL PARTS AND SURFACE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR GALVANIZED.
10. FILL CATCH BASIN (WITH WATER) TO INVERT LEVEL OF OUTFLOW PIPE TO PREVENT ANY OIL ESCAPING.

SHEAR GATE NOTES

1. SHEAR GATE SHALL BE ALUMINUM.
2. GATE SHALL BE 8" DIAMETER UNLESS OTHERWISE SPECIFIED.
3. GATE SHALL BE JOINED TO TEE SECTION BY BOLTING (THROUGH FLANGE), WELDING, OR OTHER SECURE MEANS.
4. LIFT ROD: AS SPECIFIED BY MANUFACTURER WITH HANDLE EXTENDING TO WITHIN ONE FOOT OF COVER AND ADJUSTABLE HOOK LOCK FASTENED TO FRAME OR UPPER HANDHOLD.

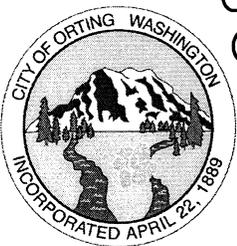
FILE: STD-D-1B
 DATE: Feb 27, 2008 - 10:24am PLOTTED BY: morrised
 IMAGES: OrtingLogoband.r |
 XREF'S:



**CITY OF
ORTING**

**FLOW RESTRICTOR
(FROP-T) (TEE) DETAILS**

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. D-1B |
| FILE NAME: STD-D-1B | | |



CITY OF
 ORTING

CATCH BASIN
 TYPE 1

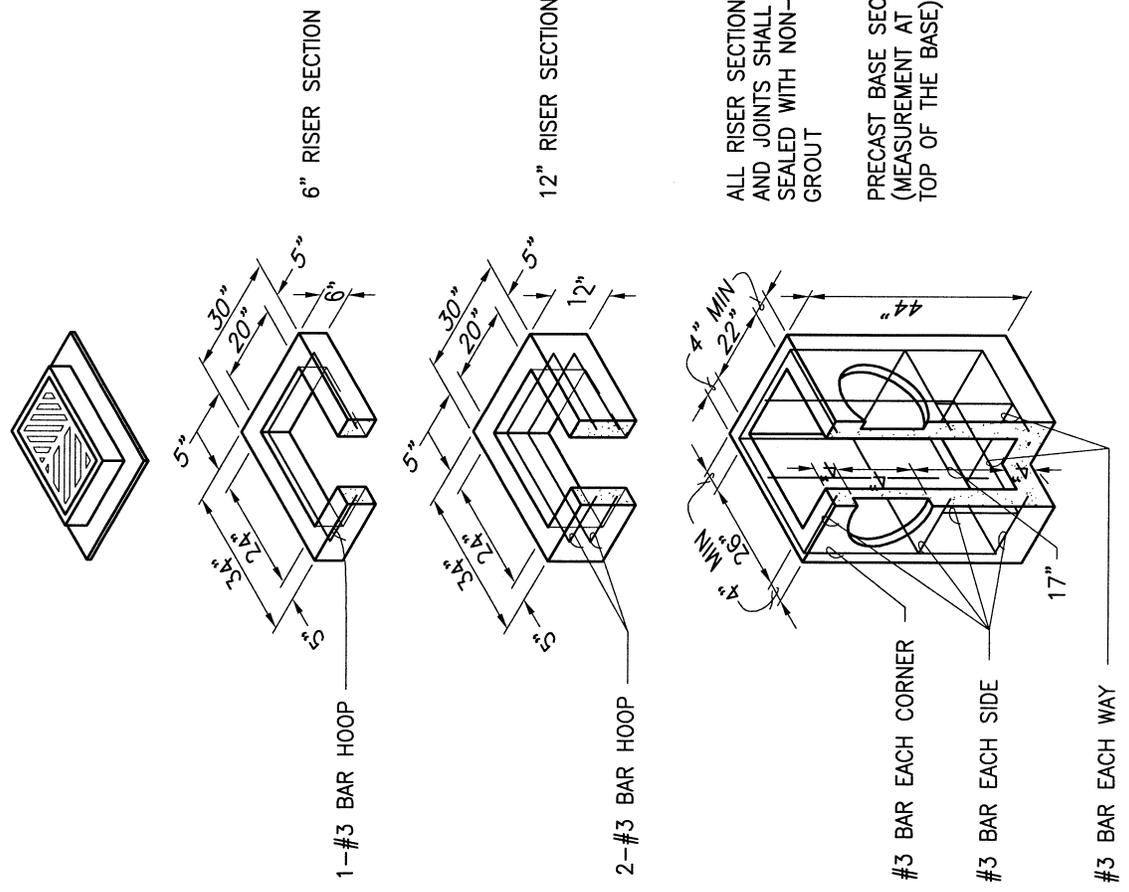
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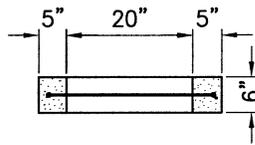
APPROVAL
 DATE:

DRAWING
 NO.
 D-2A

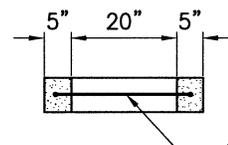
NOTES

1. CATCH BASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. AS AN ACCEPTABLE ALTERNATE TO REBAR, WELDED WIRE FABRIC HAVING A MINIMUM AREA OF 0.12 SQUARE INCHES PER FOOT MAY BE USED. WELDED WIRE FABRIC SHALL COMPLY TO ASTM A 497 (AASHTO M 221). WIRE FABRIC SHALL NOT BE PLACED IN THE KNOCKOUTS. THE BOTTOM OF THE PRECAST BASE SECTION MAY BE ROUNDED.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
4. KNOCKOUTS MAY BE ON ALL 4 SIDES WITH MAXIMUM DIAMETER OF 20". KNOCKOUTS MAY BE EITHER ROUND OR "D" SHAPE. PIPE TO BE INSTALLED IN FACTORY SUPPLIED KNOCKOUTS.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. THE MAXIMUM DEPTH FROM THE FINISHED GRADE TO THE PIPE INVERT IS 5'-0".
6. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION AND RISER SECTION SHALL NOT EXCEED 1/2"/FT.
7. CATCH BASIN FRAME AND GRATE SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT.
8. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.

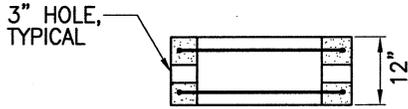




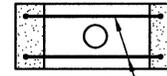
6" UNIT "S"
(RISER SECTION)



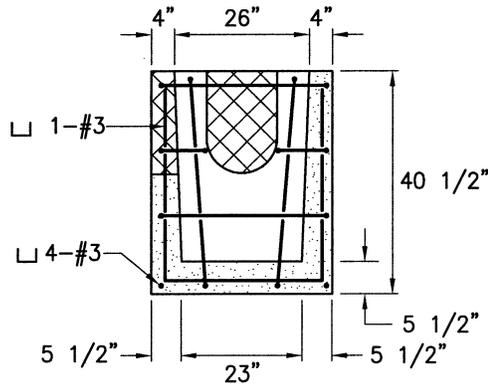
1-#3 HOOP



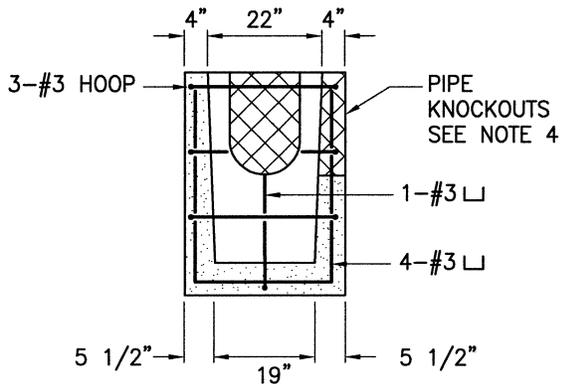
12" UNIT "S"
(RISER SECTION)



2-#3 HOOP



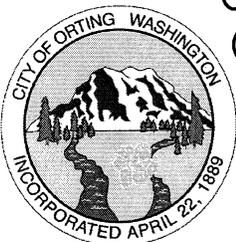
BASE SECTION



NOTES

1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
2. MAXIMUM GUTTER LINE FLOW LENGTH SHALL BE 300'.
3. TYPE I CATCH BASIN IS USED FOR DEPTHS LESS THAN 5'-0" FROM TOP OF GRATE TO IE (PIPE INVERT).
4. PRECAST BASE SECTION SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM KNOCKOUTS SHALL BE ON 4 SIDES WITH A MAXIMUM DIAMETER OF 20" TO PROVIDE FOR A MINIMUM SUMP DEPTH OF 18".
5. REINFORCING BARS SHALL BE CUT OR BENT AS REQUIRED TO CLEAR CUTOUTS.
6. THE TAPER ON THE SIDES OF THE PRECAST BASE SECTION SHALL NOT EXCEED 1/2" PER FOOT.
7. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE NOTED.
8. ALL SECTIONS AND JOINTS SHALL BE SEALED WITH NON-SHRINK GROUT.
9. STENCIL REQUIRED "DUMP NO WASTE - DRAINS TO WETLANDS OR STREAMS".

FILE: STD-D-2C
 DATE: Feb 21, 2008 - 2:52pm
 PLOTTED BY: marclideo
 IMAGES: OrtingLogoBandw / XREF'S:



**CITY OF
ORTING**

**CATCH BASIN
TYPE 1 PLACEMENT**

| | | |
|---------------------|-------------------|----------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-D-2C | | D-2C |



CITY OF ORTTING

CATCH BASIN TYPE 2

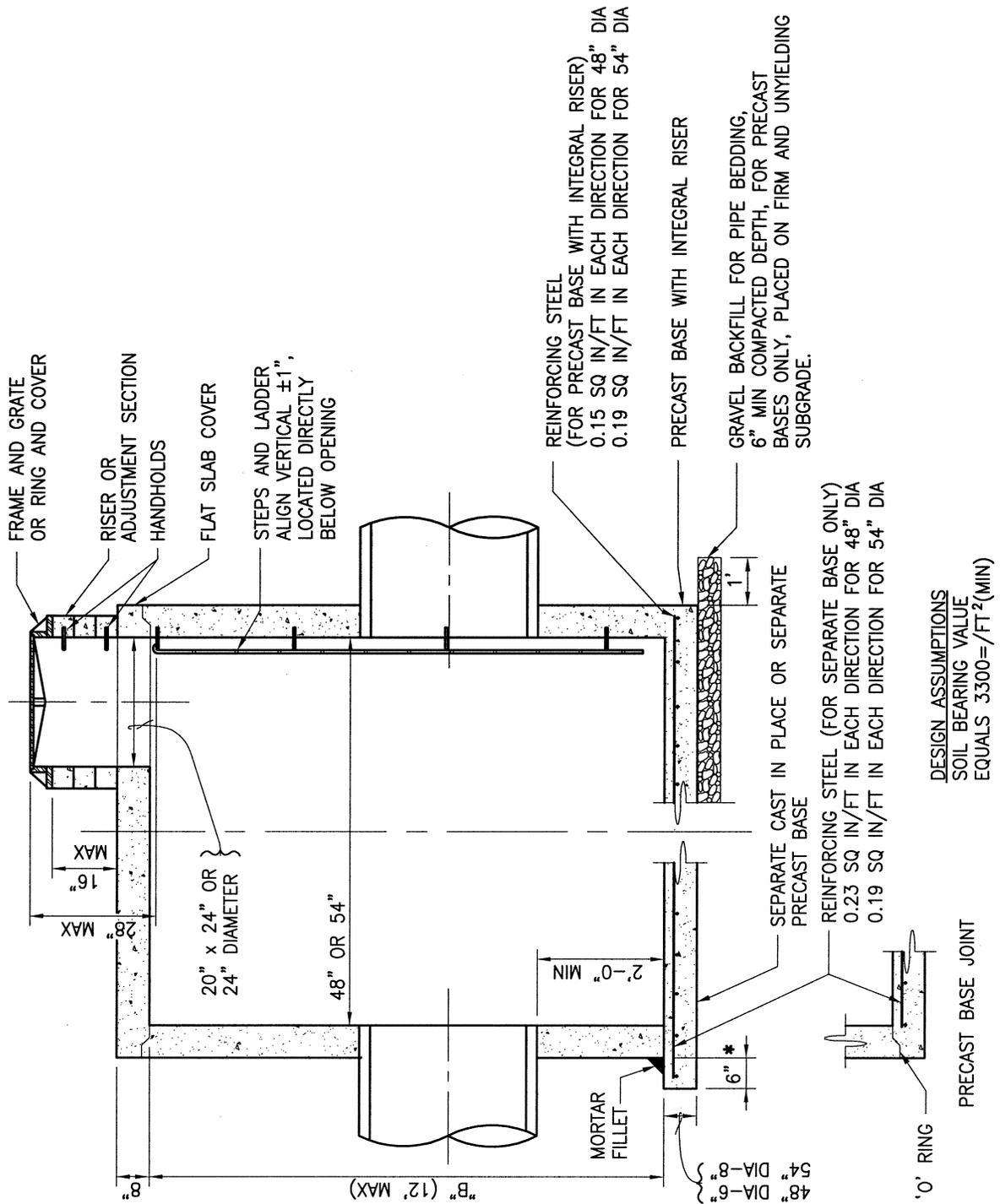
SCALE: NO SCALE

APPROVAL DATE:

DRAWING NO.

FILE NAME: STD-D-3A

D-3A



FOR NOTES SEE STD-D-3B

* FOR SEPARATE CAST IN PLACE ONLY

NOTES

1. CATCH BASINS TO BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199) AND ASTM C 890 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
2. HANDHOLDS IN RISER OR ADJUSTMENT SECTION SHALL HAVE 3" MINIMUM CLEARANCE. STEPS IN CATCH BASIN SHALL HAVE 6" MINIMUM CLEARANCE. NO STEPS ARE REQUIRED WHEN 'B' IS 4' OR LESS.
3. ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS A. ALL PRECAST CONCRETE SHALL OBTAIN 4000 PSI AT 28 DAYS.
4. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
5. KNOCKOUT OR CUTOUT HOLE SIZE IS EQUAL TO PIPE OUTER DIAMETER PLUS CATCH BASIN WALL THICKNESS. MAXIMUM HOLE SIZE IS 36" FOR 48" CATCH BASIN, 42" FOR 54" CATCH BASIN. MINIMUM DISTANCE BETWEEN HOLES IS 8".
6. FRAME AND GRATE OR RING AND COVER SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND MEET THE STRENGTH REQUIREMENTS OF FEDERAL SPECIFICATION RR-F-621D. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT.
7. ALL BASE REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MINIMUM CLEARANCE.
8. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE ROUNDED. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO RISER.
9. TYPE 3 SIMILAR EXCEPT WITH WALL PERFORATIONS FOR STORMWATER EXFILTRATION.

FILE: STD-D-3B
 DATE: Feb 27, 2008 - 10:44am PLOTTED BY: morrison
 IMAGES: OrttingLogoBandw |
 XREF S:



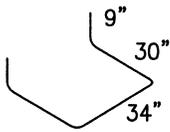
CITY OF
ORTTING

CATCH BASIN
TYPE 2 NOTES

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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. D-3B |
| FILE NAME: STD-D-3B | | |

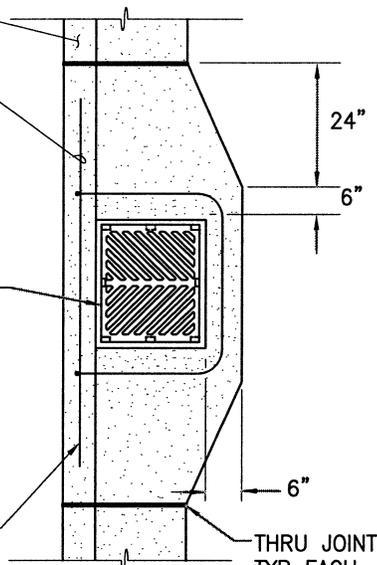
CURB AND GUTTER
SEE STD-T-1A

#4 BAR WRAPPED AROUND
CATCH BASIN FRAME



CAST IRON FRAME & GRATE

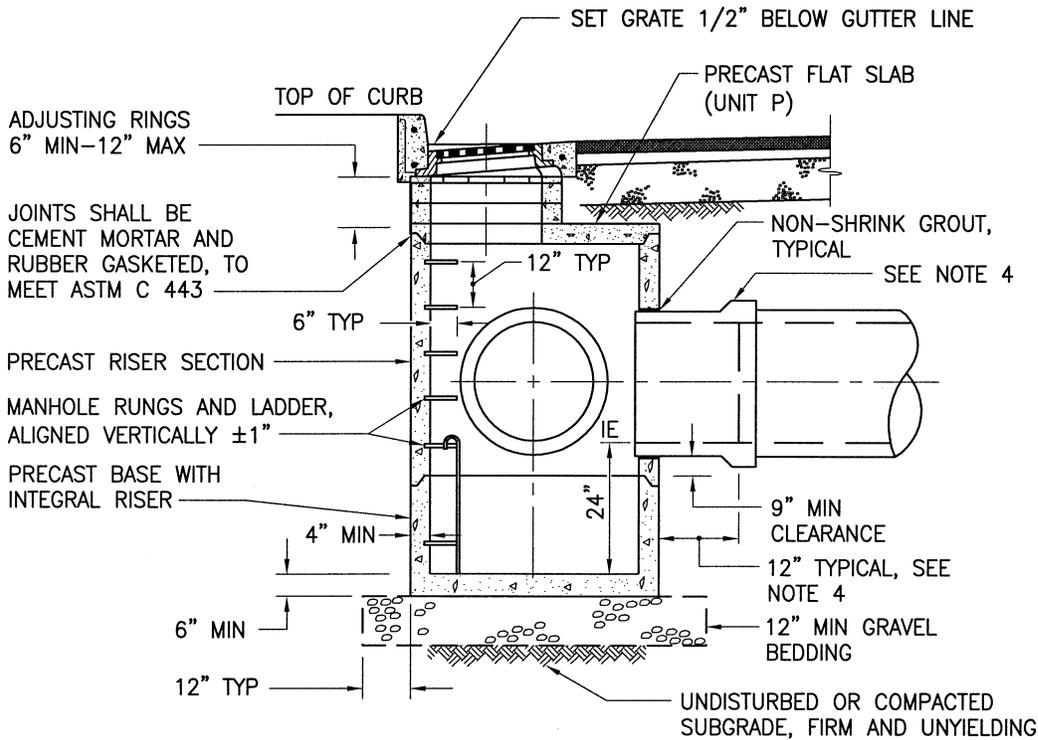
(2) #4 x 6' TOP AND BOTTOM,
PLACE TOP BAR 3" FROM TOP OF
THE CURB, PLACE BOTTOM BAR 3"
FROM BOTTOM OF THE CURB



PLAN VIEW

NOTES:

1. MAXIMUM LENGTH OF PIPE BETWEEN CATCH BASINS SHALL BE 400'.
2. MAXIMUM GUTTER LINE FLOW LENGTH SHALL BE 300'.
3. TYPE II CATCH BASIN IS USED FOR DEPTHS GREATER THAN 5'-0" FROM TOP OF GRATE TO IE (PIPE INVERT).
4. PRECAST BASE SECTION SHALL BE FURNISHED WITH CUTOUPS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MIN KNOCKOUT OR CUTOUP HOLE SIZE SHALL EQUAL THE PIPE OUTER DIAMETER PLUS THE MANHOLE WALL THICKNESS.
5. CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C 478 (AASHTO M 199 AND ASTM C 890 UNLESS OTHERWISE NOTED).



SECTION VIEW

FILE: STD-D-3C
DATE: Feb 27, 2008 - 10:48am
IMAGES: OrttingLogo.bdw | PLOTTED BY: meridea
REF: S



**CITY OF
ORTTING**

**CATCH BASIN
TYPE 2 PLACEMENT**

| | | |
|---------------------|-------------------|-------------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. D-3C |
| FILE NAME: STD-D-3C | | |

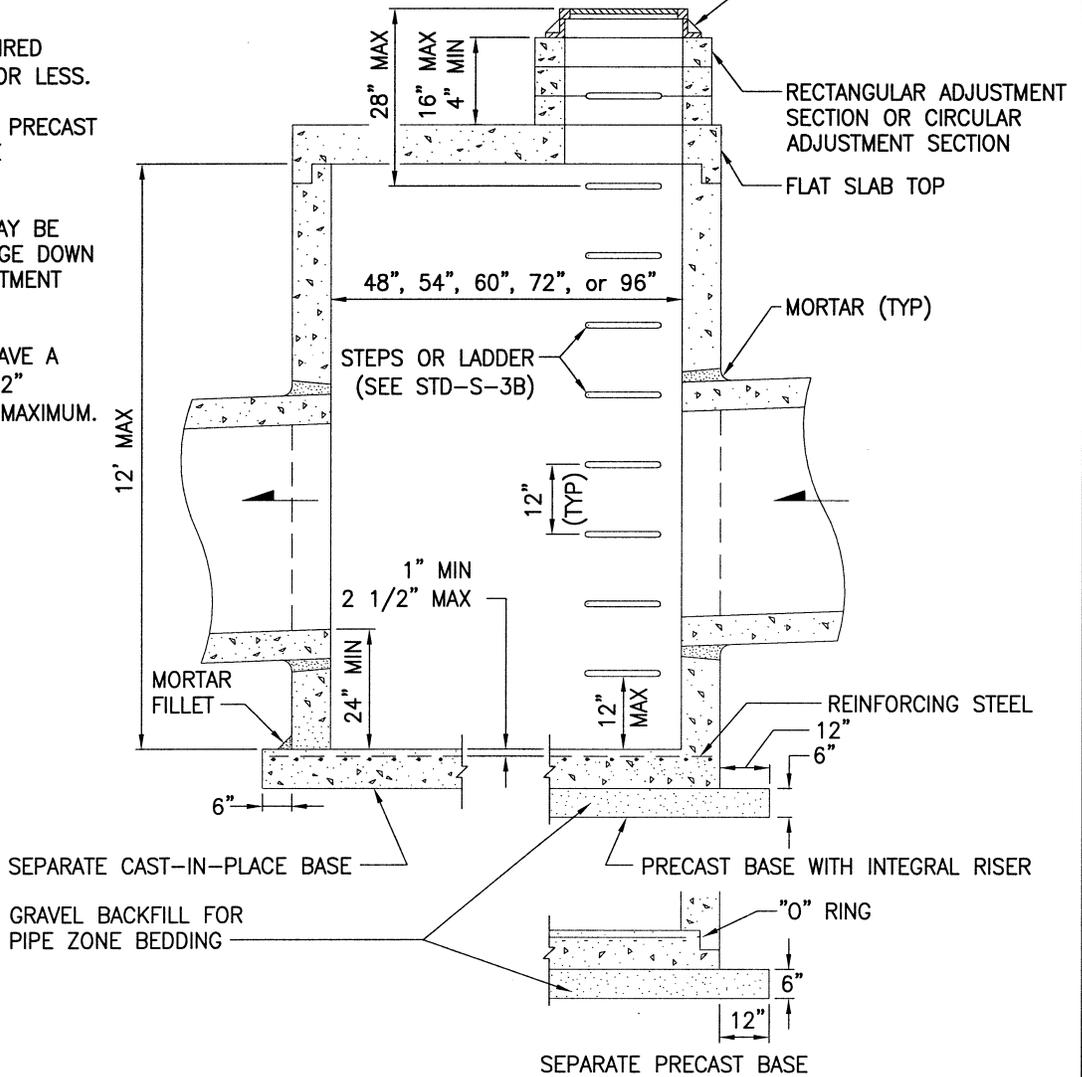
CATCH BASIN DIMENSION TABLE

| DIA | WALL THICKNESS | BASE THICKNESS | MAXIMUM KNOCKOUT SIZE | MINIMUM DISTANCE BETWEEN KNOCKOUTS | BASE REINFORCING STEEL in 2/ft IN EACH DIRECTION | |
|-----|----------------|----------------|-----------------------|------------------------------------|--|---------------|
| | | | | | INTEGRAL BASE | SEPARATE BASE |
| 48" | 4" | 6" | 36" | 8" | 0.15 | 0.23 |
| 54" | 4 1/2" | 8" | 42" | 8" | 0.19 | 0.19 |
| 60" | 5" | 8" | 48" | 8" | 0.25 | 0.25 |
| 72" | 6" | 8" | 60" | 12" | 0.24 | 0.35 |
| 96" | 8" | 12" | 84" | 12" | 0.29 | 0.39 |

CATCH BASIN FRAME AND GRATE [SEE STD-D-2A]
OR MANHOLE RING AND COVER [SEE STD-S-1]

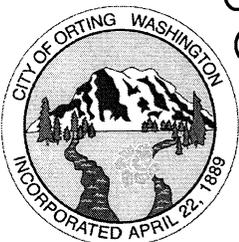
NOTES:

1. NO STEPS ARE REQUIRED WHEN HEIGHT IS 4' OR LESS.
2. THE BOTTOM OF THE PRECAST CATCH BASIN MAY BE ROUNDED.
3. FRAME AND GRATE MAY BE INSTALLED WITH FLANGE DOWN OR CAST INTO ADJUSTMENT SECTION.
4. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM TO 2 1/2" MAXIMUM.



IMAGES:
XREFS:

DATE: 02/15/08 2:47pm FILENAME: STD-D-3D



**CITY OF
ORTING**

**CATCH BASIN
TYPE 2**

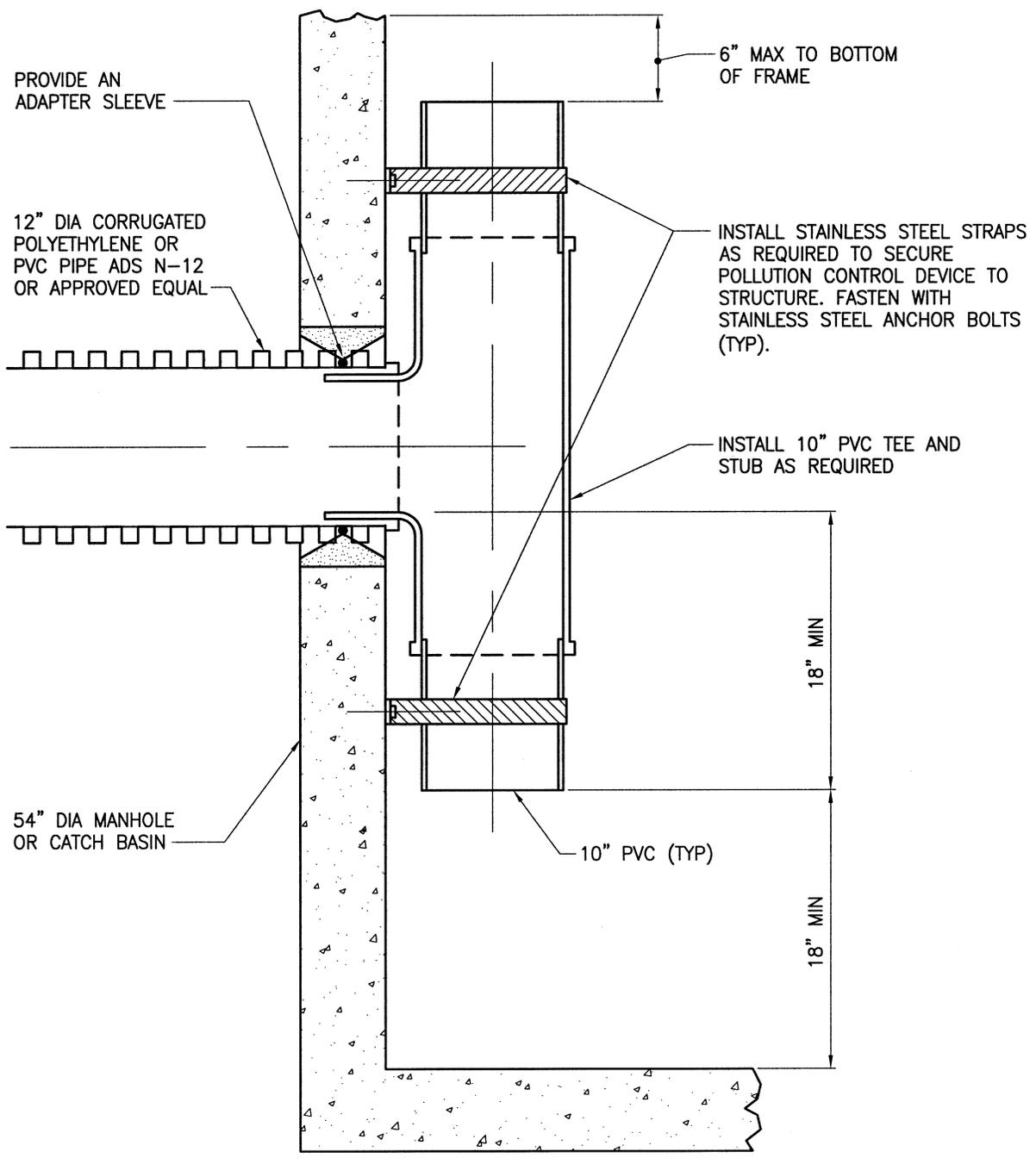
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APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-D-3D

D-3D



IMAGES: OrtingLogobandw | XREF: S:

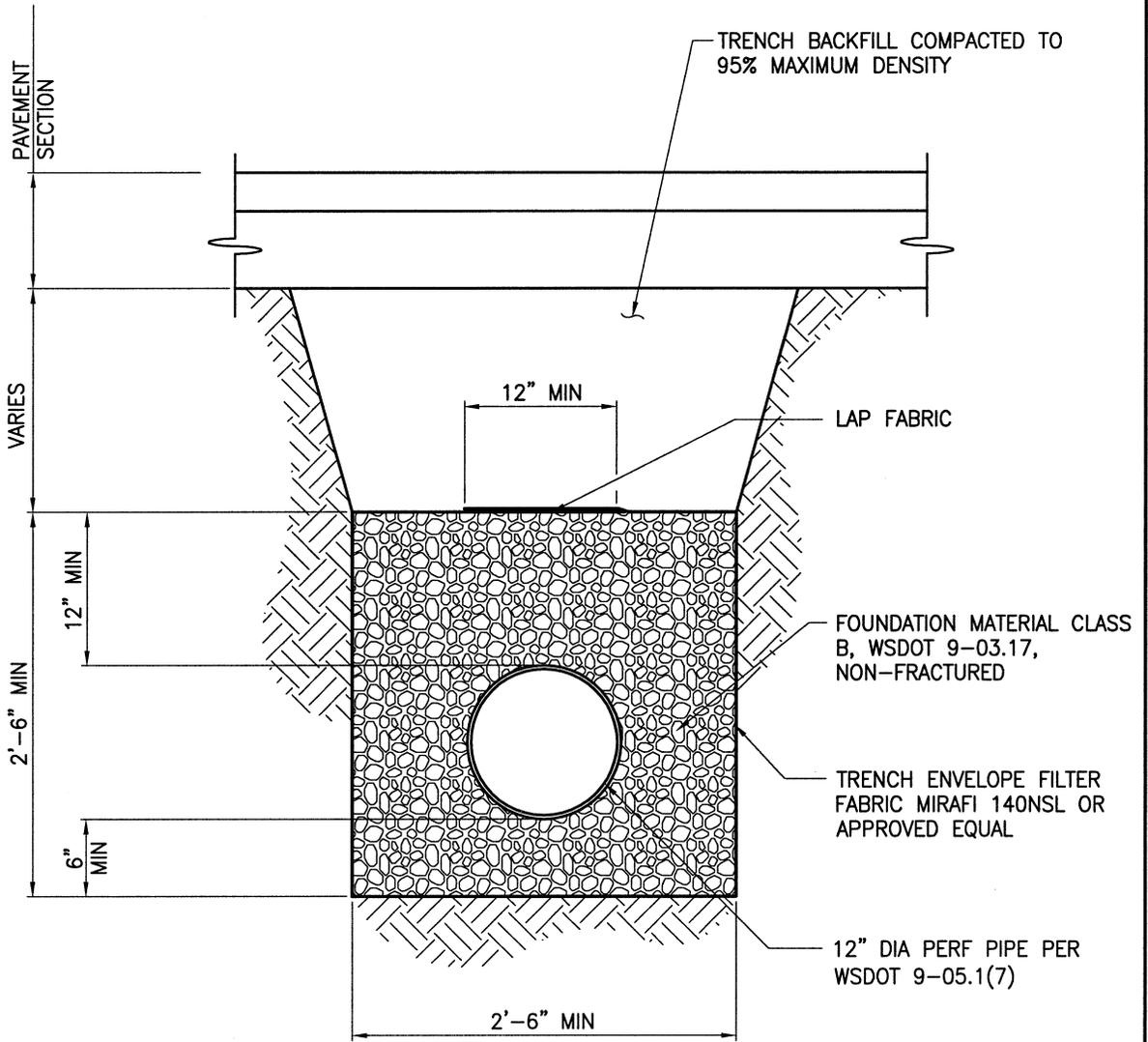
DATE: 02/21/08 3:42pm FILENAME: std-D-4



CITY OF ORTING

OIL SPILL CONTROL DEVICE (NOT FOR OIL TREATMENT)

| | | |
|--------------------|----------------|---------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. D-4 |
| FILE NAME: STD-D-4 | | |



NOTES

1. SEE STD-D-4 FOR REQUIRED OIL SPILL CONTROL DEVICE.
2. SEE STD-S-5B FOR REQUIRED CLEANOUT ASSEMBLY.
3. LENGTH OF TRENCH TO BE DETERMINED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF WASHINGTON.
4. PERCOLATION TRENCH MAY ONLY BE USED WHEN APPROVED BY CITY ENGINEER.

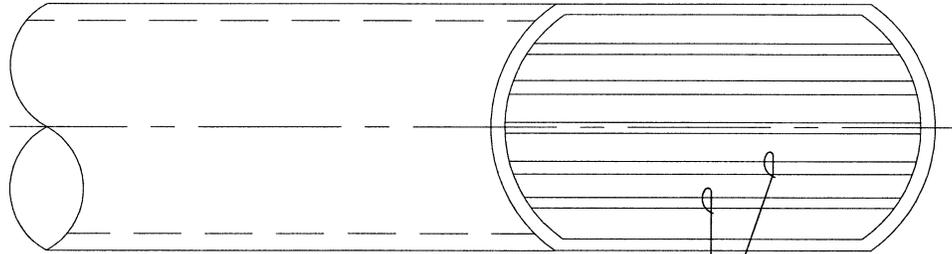
FILE: Std-D-5
 DATE: Feb 21, 2008 - 3:51pm PLOTTED BY: morrideo
 IMAGES: OrtlingLogbender
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**CITY OF
 ORTING**

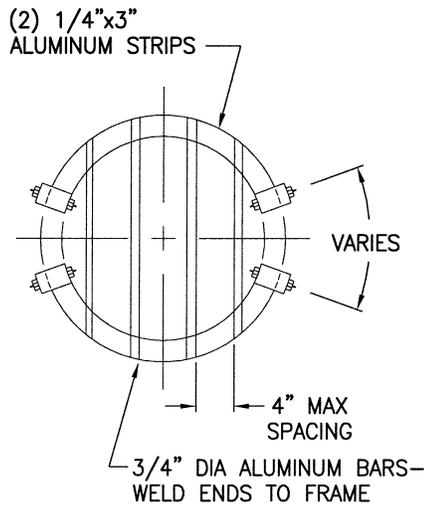
INFILTRATION TRENCH

| | | |
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. D-5 |
| FILE NAME: STD-D-5 | | |

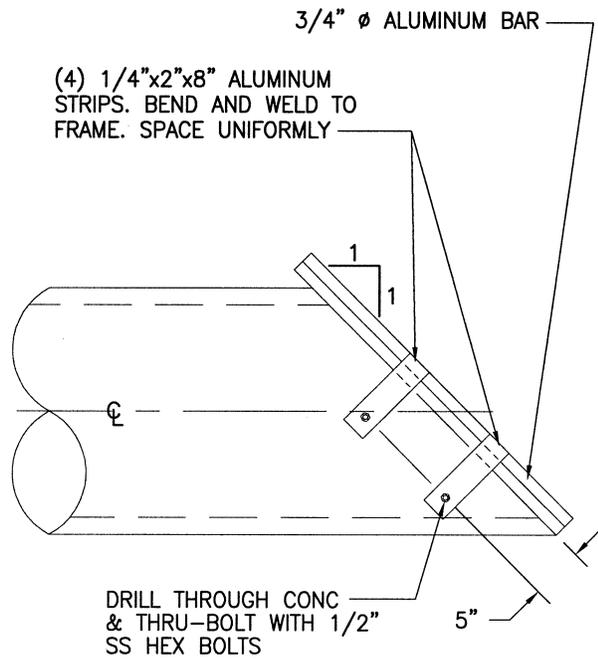


3/4" DIA SMOOTH BARS
W/ENDS WELDED TO BAR FRAME

PLAN VIEW



END VIEW



SIDE VIEW

NOTES

1. WELD AT ALL JOINTS.
2. SHOP DRAWINGS REQUIRED.

FILE: STD-D-6
 DATE: Feb 21, 2008 - 3:53pm PLOTTED BY: merriidea
 IMAGES: OrtIngl.cpgbender | XREF'S:



**CITY OF
ORTING**

TRASH RACK

SCALE: NO SCALE

APPROVAL
DATE:

DRAWING
NO.

FILE NAME: STD-D-6

D-6



CITY OF
ORTING

SINGLE FAMILY LOT
EROSION & SEDIMENT CONTROL

SCALE: NO SCALE

APPROVAL
DATE:

DRAWING
NO.

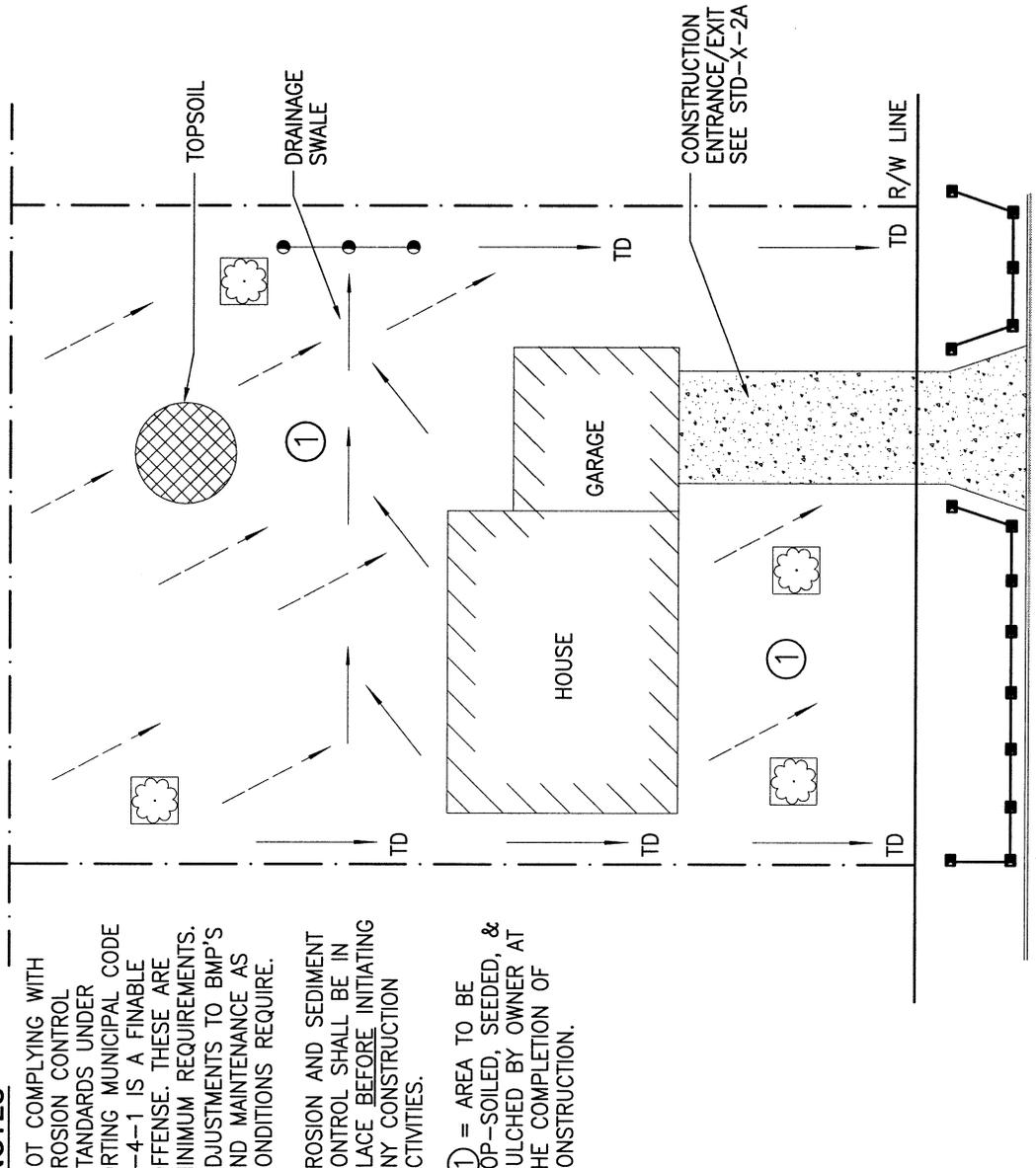
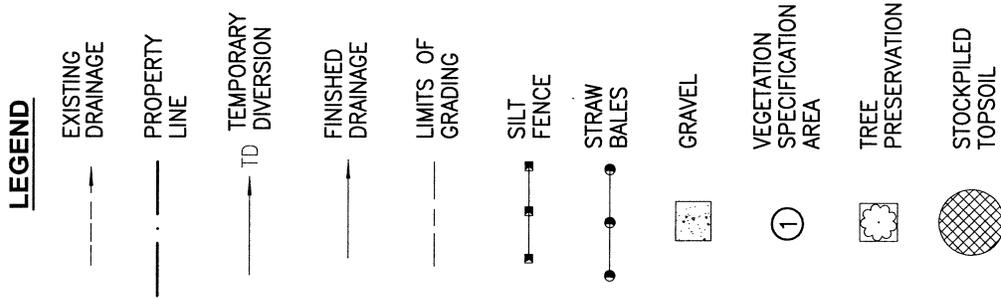
FILE NAME: STD-X-1

X-1

SAMPLE EROSION CONTROL PLAN
(FOR SITES OF ONE ACRE OR LESS)

NOTES

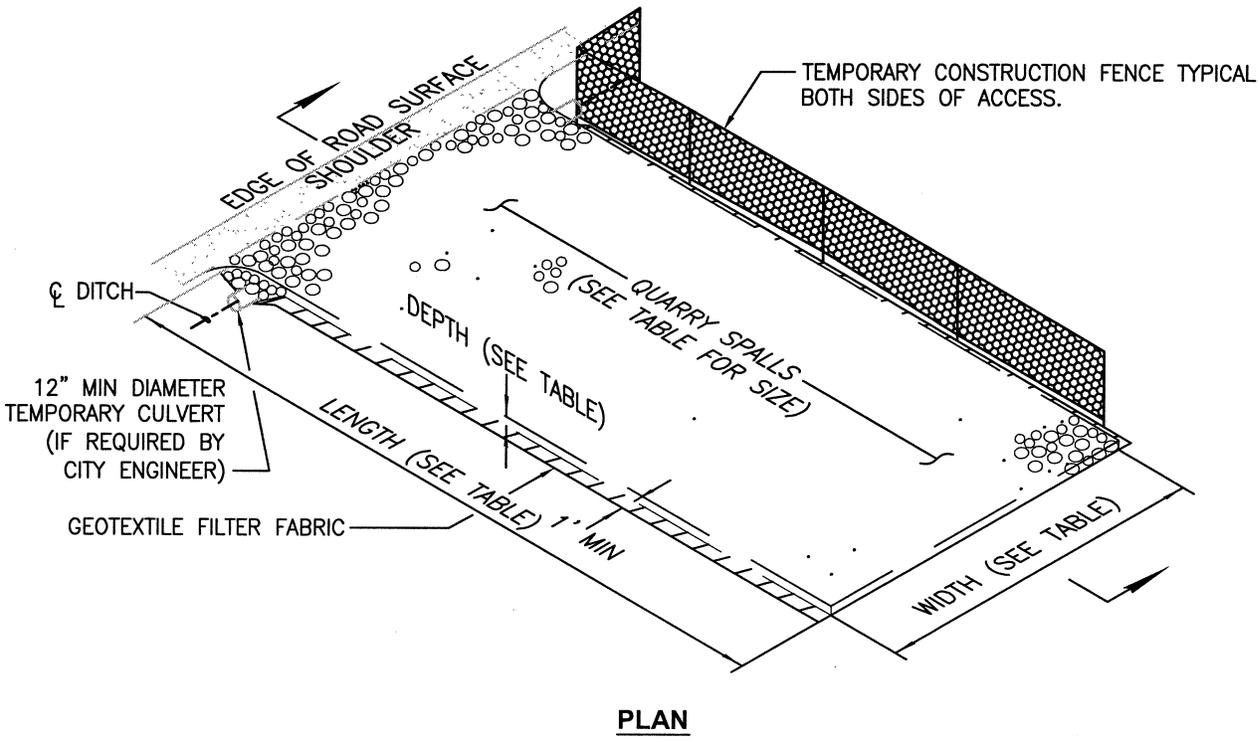
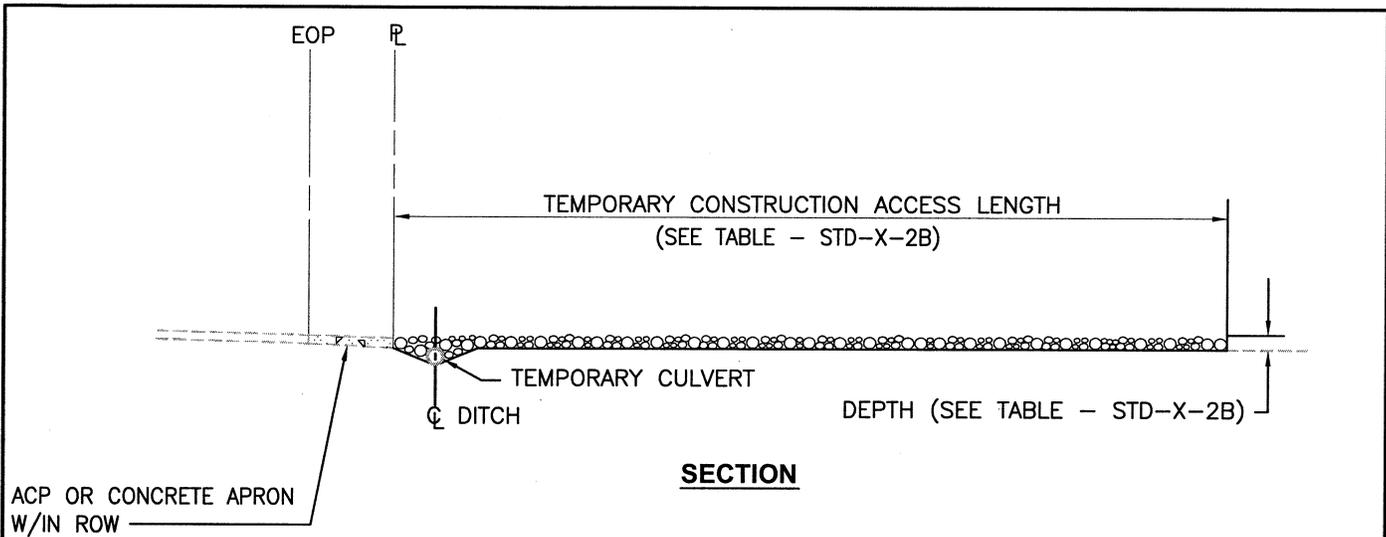
1. NOT COMPLYING WITH EROSION CONTROL STANDARDS UNDER ORTING MUNICIPAL CODE 1-4-1 IS A FINABLE OFFENSE. THESE ARE MINIMUM REQUIREMENTS. ADJUSTMENTS TO BMP'S AND MAINTENANCE AS CONDITIONS REQUIRE.
2. EROSION AND SEDIMENT CONTROL SHALL BE IN PLACE BEFORE INITIATING ANY CONSTRUCTION ACTIVITIES.
3. ① = AREA TO BE TOP-SOILED, SEEDED, & MULCHED BY OWNER AT THE COMPLETION OF CONSTRUCTION.



SINGLE FAMILY LOT
EROSION & SEDIMENT CONTROL

STREET NAME

| |
|-------------------|
| PROJECT LOCATION: |
| PROPERTY OWNER: |
| CONTRACTOR: |
| PREPARED BY: |
| DATE: |



NOTE:

THE 'TEMPORARY CONSTRUCTION ACCESS' WILL BE THE ONLY ALLOWED POINT OF ACCESS IN AND OUT OF THE CONSTRUCTION AREA.

SEE STD-X-2B FOR ADDITIONAL NOTES AND DIMENSION TABLE

IMAGES: XREFS:
 DATE: 02/15/08 11:22am FILENAME: STD-X-2A



CITY OF ORTING

TEMPORARY CONSTRUCTION ACCESS

| | | |
|---------------------|----------------|----------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. X-2A |
| FILE NAME: STD-X-2A | | |

| TEMPORARY CONSTRUCTION ENTRANCE CRITERIA FOR TESC, GRADE & FILL, SITE WORK & BUILDING CONSTRUCTION | | | | | CATEGORY |
|---|--------------|--------------|--------------|--------------|--|
| DESCRIPTION | TYPE 1 | TYPE 2 | TYPE 3 | TYPE 4 | |
| SITE SIZE IN ACRES | <1.0 | 1.0 to 3.0 | 3.0 to 6.0 | >6.0 | SITE SIZE CRITERIA |
| VOLUME OF CUT & FILL (CY) | <2,500 | <20,000 | <100,000 | >100,000 | |
| MINIMUM WIDTH IN FEET | 15 | 24 | 24 | 30 | GEOMETRY & DIMENSIONS OF ENTRANCE |
| MIN DEPTH OF SPALLS (INCHES) | 8 | 12 | 12 | 18 | |
| MIN LENGTH OF SPALL ENTRANCE | 50 | 75 | 100 | 150 | |
| MIN RETURN RAD OFF ST (FT) | 0 | 30 | 35 | 40 | |
| DEPTH OF ACP APPROACH IN ROW | 3 | 4 | 6 | 6 | MATERIAL SPECIFICATIONS FOR ENTRANCE IN RIGHT-OF-WAY |
| TYPE OF ACP FOR APPROACHES | CLASS "B" | CLASS "B" | CLASS "B" | CLASS "B" | |
| CONCRETE APPROACH THICKNESS | 6 | 6 | 7 | 7 | |
| TYPE OF CONCRETE CEMENT | 6 SACK-1 1/2 | 6 SACK-1 1/2 | 6 SACK-1 1/2 | 6 SACK-1 1/2 | |
| 28 DAY OF STRENGTH OF CONC | 4,000 lb | 4,000 lb | 4,000 lb | 4,000 lb | |
| CONC CEMENT REINFORCEMENT | FIBER MESH | #4@12"EW | #5@12"EW | #5@12"EW | |
| GEOTEXTILE REQUIRED | YES | YES | YES | YES | |
| SIZE OF QUARRY SPALLS | 2" - 4" | 4" - 6" | 4" - 6" | 4" - 6" | |

PURPOSE:

THE PURPOSE OF CONSTRUCTION ENTRANCES IS TO REDUCE THE AMOUNT OF SEDIMENT TRACKED OFF-SITE BY CONSTRUCTION VEHICLES, PROTECTION OF THE CITY'S STORM DRAINAGE SYSTEM FROM UN-DUE AMOUNTS OF SEDIMENT AND PROTECTION OF THE CITY'S STREETS AND ROADS. AN ACP OR CONCRETE APPROACH WITHIN THE LIMITS OF THE RIGHT-OF-WAY PROTECTS THE CITY STREET AND REDUCES THE POTENTIAL OF ROCKS GETTING ONTO THE STREETS.

NOTES:

1. ACP WILL BE USED WITHIN THE RIGHT-OF-WAY WHERE THE STREET IS WITHOUT CURB & GUTTER.
2. FOR ACCESS OFF IMPROVED STREETS, PROVIDE CONCRETE DRIVEWAY IN ROW AS SPECIFIED IN THE TABLE.
3. CURB CUTS SHALL MEET THE SAME MATERIAL REQUIREMENTS AS CONCRETE DRIVEWAY APPROACHES.
4. FOR ACP APPROACHES, EDGE OF ROAD SHALL BE SAW CUT, EDGE TACKED AND JOINT SEALED WITH AR4000.

DESIGN AND INSTALLATION SPECIFICATIONS:

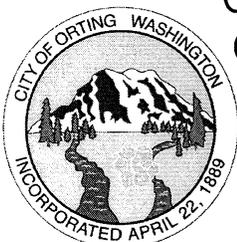
1. SEE PAGE 1 OF THIS CITY STANDARD (DETAIL _____) FOR LAYOUT OF ENTRANCE.
2. GEOTEXTILE SHALL BE PLACED UNDER THE SPALLS TO PREVENT FINE SEDIMENTS FROM PUMPING UP INTO THE ROCK PAD. THE FABRIC SHALL CONFORM TO WSDOT STANDARD SPECIFICATION 9-33, TABLE 3 FOR SOIL STABILIZATION FABRIC.
3. FENCING SHALL BE INSTALLED AS NECESSARY TO RESTRICT TRAFFIC TO THE CONSTRUCTION ENTRANCE.
4. LOCATION OF CONSTRUCTION ENTRANCE SHALL BE APPROVED BY THE CITY ENGINEER. TYPE 1 AND 2 SITES WILL GENERALLY BE ALLOWED ONLY ONE ENTRANCE.
5. TRUCK ROUTES FOR TYPE 2, 3, AND 4 SITES SHALL BE SUBMITTED WITH THE PERMIT APPLICATION FOR REVIEW AND APPROVAL BY THE CITY ENGINEER.
6. PERMITEE SHALL POST PERFORMANCE BOND FOR TYPE 2, 3, AND 4 SITES.

MAINTENANCE STANDARDS:

1. QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, ALTERNATIVE/ADDITIONAL MEASURES SHALL BE REQUIRED WHICH MAY INCLUDE STREET SWEEPING, INCREASING DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH.
3. ANY ROCK SPALLS THAT ARE LOOSENED FROM THE PAD AND END UP IN THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
4. DIRT TRACKED ONTO THE STREETS SHALL BE REMOVED BY SWEEPERS. WATER TRUCKS MAY BE USED AS A SECONDARY MEASURE TO COMPLETE THE CLEANING IF NECESSARY.

IMAGES:
XREFS:

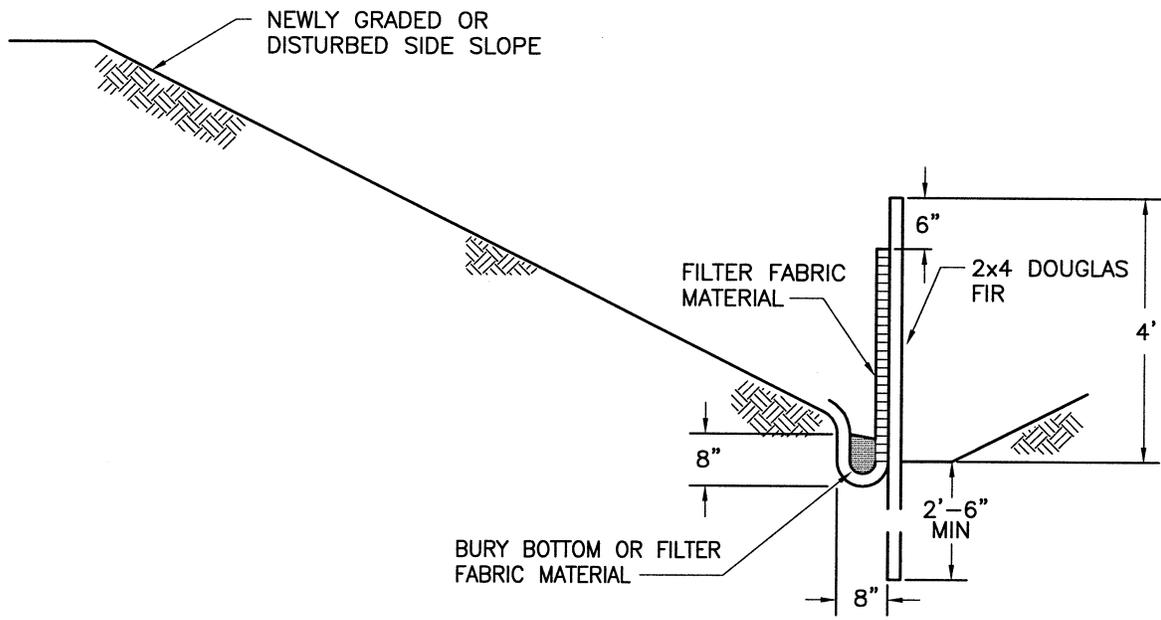
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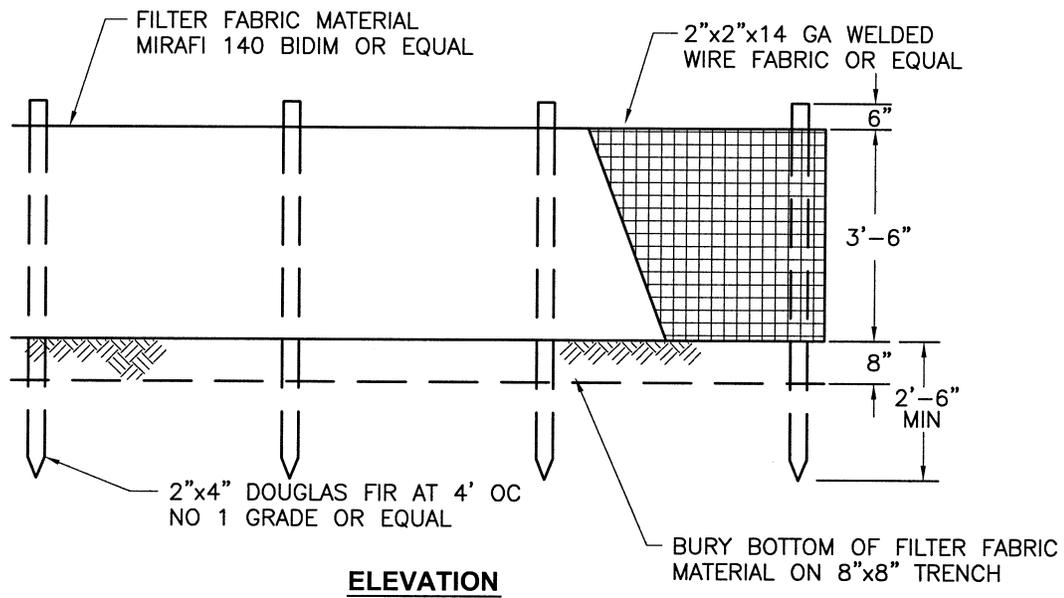
CITY OF
ORTTING

TEMPORARY CONSTRUCTION
ACCESS NOTES

| | | |
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| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. |
| FILE NAME: STD-X-2B | | X-2B |



TYPICAL CROSS SECTION



ELEVATION

DATE: 01/04/08 12:13pm FILENAME: STD-X-3



**CITY OF
ORTING**

SILT FENCE

| | | |
|--------------------|----------------|---------------------------|
| SCALE: NO SCALE | APPROVAL DATE: | DRAWING NO. X-3 |
| FILE NAME: STD-X-3 | | |