



Molalla Avenue Streetscape Standards

R4-Revised August 21, 2009

City of Oregon City • 320 Warner Milne Road
Oregon City • Oregon • 97045
503.657.0891

City of Oregon City Molalla Avenue Typical Streetscape Notes and Special Provisions

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

MOLALLA AVENUE TYPICAL STREET LIGHTING NOTES:

Decorative Street Lights

1. The decorative street light assemblies include pole, base, banner arms, and luminaires.
2. The Light Pole and Base are VISCO VI-A18/CI/12'10". The two-piece ornamental cast iron pole shall be suitable for supporting one (1) H.I.D. luminaire and shall be complete in all respects.
3. The decorative base is constructed of ASTM A48-83, Class 30 gray iron and shall be an exact match to the VISCO "A18" base. The base diameter will be 18" and the height will be 29". There shall be a removable access door located 10 ½" up from the bottom of base. The top of the base shall have a threaded top inside diameter that is capable of accepting the mating threads of the upper column. The base shall have four (4) slots at 90 degrees to each other, of sufficient width to accept ¾" diameter anchor bolts, with a 12" diameter bolt circle. The base casting shall be free of voids, porosity, fins, and generally have a smooth sand cast finish.
4. The decorative column is to be constructed of ASTM A48-83, Class 30 gray iron and shall be an exact match to the VISCO 10'-5" "A" series column. The top of the column shall have an integral 3" diameter x 3" long tenon, and the bottom of the column will have a male threaded section to screw into the threaded top portion of the mating base assembly. This 3" diameter x 3" long tenon will accept the decorative luminaire assembly. The column casting shall be free of voids, porosity, fins, and generally have a smooth sand cast finish. Four (4) galvanized steel anchor bolts, ¾" diameter x 24" long x 6" hook, conforming to ASTM A307 complete with two (2) galvanized washer and two (2) galvanized hex nuts shall be supplied with each pole.
5. The banner arm assembly shall consist of a two-piece clamp that will tighten around the pole at 11'-10". Each banner arm will be made of 1 ½" Sch. 40 steel pipe x 24" long. Banner arms will be welded to each clamp assembly piece, and shall be 180 degrees apart and perpendicular to the light pole when assembled. At the end of each banner arm there shall be 3" diameter brass ball mounted. Refer to standard drawing MA01.
6. All cast iron and steel light pole parts are to be sandblasted to a SSPC-SP10 near white sandblast. Apply 3-4 mils of an epoxy powder primer. Apply 3-4 mils of a High Grade Polyester powder "Black" topcoat, to meet the material requirements of AAMA 2604. Perform mil thickness tests in accordance with SSPC-PA2. Perform chemical cure tests in accordance with PCI #8.
7. Luminaire Base and Ballast Housing are Holophane GranVille Classic GV100HPMTLB7NSG "Prismatic Glass Acorn Luminaire" with finial "spike" or "standard" type. Luminaire Base is Cast Aluminum "Leaf Pattern Style" (mounted on 3"OD x 3" tenon). Lamp is 100 Watt High Pressure Sodium (HPS). Ballast is 100 watt HPS – Multi-tap. Refer to standard drawing MA01.
8. The Contractor shall be responsible for all assemblies and if damage and/or other defects to the assemblies occur, then the Contractor shall repair or replace the assembly parts at no additional expense to the City.

9. **Submittal** shall be made for light pole foundation design stamped by an engineer registered in the State of Oregon if the foundation is different from the City's Standard Dwg No MA03.
Submittal shall be made for electrical design stamped by an engineer registered in the State of Oregon.
10. **IMPORTANT Foundations:** For light pole foundations to be located in the sidewalk, for cast-in-place foundations, stop the foundation pour five to six inches below finish sidewalk grade, while maintaining final anchor bolt height and for precast foundations, set the top of foundation five to six inches below finish sidewalk grade, while maintaining final anchor bolt height. Pour sidewalk in continuous pour over foundation and around anchor bolts. Provide score lines through sidewalk as close to anchor bolts as possible to maintain consistent look of sidewalk scoring. Protect anchor bolts. The pre-cast foundation must be custom ordered with additional bolt length to accommodate the top of foundation being placed five to six inches below finish sidewalk grade for the continuous sidewalk pour while maintaining final anchor bolt height. Refer to standard drawing MA03.
11. **Erecting Ornamental Poles** – No welding will be allowed at the site at the time of erection. Poles shall be erected plumb and true, securely tightened down on the anchor bolts. Provide concrete grout under ornamental base casting of the assembly, provide with a 1/2 inch diameter drain hole at low point to prevent water accumulations in the base. Grout shall fill all voids under the base and shall be neatly finished where exposed. Grout to be cleaned from the base casting and none shall show on painted surfaces.
7. Street Lights shall be spaced at 100 feet maximum spacing unless otherwise approved by the City. Spacing shall be determined in reference to existing decorative street light spacing.
8. 2" Electrical Conduit for Main Line. When applicable, extend conduit to end of improvements with a junction box for future connection of street light system.
9. **Junction Box** installed at each street light; JB1, 11" X 17.5" X 12" (min. dimensions), pre-cast concrete or polymer concrete with heavy duty steel cover, label cover "STREET LIGHTING".
10. 1" Electrical Conduit from Junction Box to Street Light foundation.
11. The circuitry shall be designed such that the lights on one side of the street can be de-energized without affecting the operation of the lights on the opposite side of the street. A photoelectronic control shall be installed on the street light that is closest to the metered power service for the street light system, install if applicable.
12. A new metered power service may be required if the new street lights are located in areas where currently there is not a power source from an existing street light system. New metered service when required for street light system shall meet the City's standards.
13. Contact Dave McNeel, City's Electrical Operations and Maintenance Consultant, at cell # 503-519-0839 to determine the power source for the new decorative street lights and to receive information for the integration of the new decorative street lights into the City's existing decorative street light system.
14. To avoid illumination obstruction by street trees, a minimum of twenty feet (20') spacing shall be maintained between street lights and new or existing trees unless otherwise approved by the City.
15. **Protection against Damage:** The Contractor shall be responsible for the handling, surface damage, and coating repair and shall comply with the following requirements. **Handling, Shipping or Surface Damage** - Handle with care the powder coated luminaire poles, arms, bases, and associated hardware and provide adequate protection during the handling, shipping, delivery, and erection of the powder coated assemblies. All repair or replacement of the assemblies shall be repaired or replaced by the Contractor, at no additional expense to the City. During pick-up and delivery, each wrapped assembly shall be separated from other

wrapped assemblies by expanded polystyrene spacers and other spacing materials as approved by the City prior to transporting the assemblies to the project site. After erection, all coating damage due to the Contractor's handling and delivery to the project, and erection operations shall be repaired by the Contractor, at no additional expense to the City and in accordance with the following requirements as approved by the City. Repair marred or damaged coated surfaces at no cost to the City, with materials approved by the City. At the completion of all work, the coating shall be complete and the surfaces shall be undamaged and clean. Completed work to repair the coating system must be approved by the City.

Repair of Damaged and Unacceptable Coatings - Repair damaged surfaces and surfaces as follows: **(a) Surface Preparation** - Prepare the surface in accordance with SSPC-SP 1, SP 2, and/or SP 3, as approved by the City. Use a solvent that is acceptable to the paint manufacturer or as approved by the City. The prepared area shall extend at least 2 inches into adjacent tightly adhering, intact coating. **(b) Feathering of Repair Areas** - Feather the existing coating system surrounding each repair location. Feather the repair area for a distance of 1 inch to 2 inches to provide a smooth, tapered transition into the existing intact coating. **(c) Coating Application in Repair Areas** - Use the procedure in this subsection for all repairs. When steel substrate is exposed in the repair area, apply a coat of zinc rich primer before applying the topcoat. When the damage does not extend to the bare substrate, apply only the affected coats.

MOLALLA AVENUE TYPICAL TRAFFIC SIGNAL NOTES:

1. When corner street improvements are being constructed at existing or future signalized intersections, then signal pole foundations, signal poles, arms, and/or associated equipment may be additional street improvements required by the City.
2. Signal poles, arms, and associated equipment shall be powder coated, black color, per the City's Powder Coating Specification, Section 00593 – Powder Coating of Metal Structures.
3. All signal pole foundations, poles, arms, conduit, wiring, and/or associated equipment shall meet the standards and requirements of Clackamas County for Traffic Signal systems.

MOLALLA AVENUE TYPICAL STREET TREE NOTES:

1. Street trees shall be spaced at 35 feet maximum unless otherwise approved by the City.
2. Street trees shall have tree grates with frames and tree supporting systems meeting the City's standards. **Provide Tree grates and frames** meeting the following requirements:
 - Two-piece cast iron grate with natural finish with fitted frame manufactured by FairWeather SF or City approved equal. Frame shall include rebar studs on three sides for sidewalk mounting and one side shall include steel tabs to accept expansion bolts for curb mounting.
 - Where 10 feet wide sidewalks are being constructed, tree grate with frame shall be the FairWeather SF style CNK 4872, size 48"x72" (overall dimensions 4 feet x 6 feet). Where 8 feet wide sidewalks are being constructed, tree grate with frame shall be the FairWeather SF style IVY 3660, size 36"x60" (overall dimensions 3 feet x 5 feet).
 - Provide submittal to City for approval.

Provide Tree Stakes and Ties meeting the following requirements:

- Where trees are to be located in tree grates, trees shall be anchored with PLATI-MAT tree anchoring systems as manufactured by Platipus Anchoring Systems (see www.platipus-anchors.com) or City approved equal.
3. **Root barriers** shall be on all four sides meeting the City's standards. Provide **Root Barrier** meeting the following requirements:
- Install root barrier consisting of continuous rigid polyethylene material twenty-four inches in depth with a minimum wall thickness of 0.80 inches. Root Barrier shall be continuous to prevent root intrusion. Install root barrier as shown on detail.
 - With each street tree install root barrier to completely enclose tree well. Root barrier material shall be installed parallel to curb or sidewalk edge.

MOLALLA AVENUE TYPICAL SIDEWALK NOTES:

1. Sidewalk shall be 4" thick concrete walk and 4" aggregate base, 3/4" – 0", and meet City's standards and drawings.
2. **Sidewalk Ramp Treatment** - Supply precast cementitious concrete truncated dome detectable warning surfaces for sidewalk ramps and accessible route islands. Precast panels made with high strength concrete and reinforced with stainless steel pre-stress strand. All truncated dome panels placed shall be black color. Provide submittal to the City for approval. Place according to the manufacturer's recommendation. Sidewalk ramp treatment shall meet the City's standards and drawings.

Concrete Unit Paving Material - Furnish concrete unit pavers and related material according to the following:

- **Paving Unit Type** - Supplied by Mutual Materials, Clackamas Oregon, or Willamette Graystone, or approved equal. Provide Old Dominion type Interior pavers and Half Holland type border pavers.
- **Unit Color** - Provide Rustic Blend color for interior pavers. Provide Charcoal color for border pavers. Provide sample color for approval.
- **Unit Sizes** - Provide square and rectangular interior pavers, placed parallel to Molalla Avenue. Provide 4" x4" border pavers placed in a double staggered row at the perimeter.
- **Unit Strength** - 8,000 psi with a maximum of 5% absorption (ASTM C 936)
- **Joint Sand** - Fine PCC aggregate conforming to 02690.30(h)
- **Leveling Bed** - 1-1/2 inch thickness, fine PCC aggregate conforming to 02690.30(h)
- **Aggregate Base** - 3/4" – 0 base aggregate conforming to 02630.10
- **Weed Control** - Granular pre-emergent herbicide from the QPL
Submit proposed equivalent products to the City for consideration.

Construction shall comply with the following provisions:

- **General** – Install pavers according to the manufacturer's instructions.

- **Aggregate Base** - Place and compact aggregate to 95% density for unit pavers.
 - **Sand Base** - Place a minimum depth 1-1/2 inch leveling bed. Screed to grade so that vibratory compactor will settle pavers flush with surrounding concrete and saturate with water to ensure a firm and smooth grade.
 - **Weed Control** - Apply granular pre-emergent herbicide over the prepared leveling bed according to the manufacturer's instructions.
 - **Unit Pavers** – Lay out rows so they are straight and parallel to the surrounding lines. Cut pavers with a masonry saw where necessary to fit pattern to edges.
 - **Joint Sand and Compaction** - After placing pavers, sweep joint sand into the joints. Use a vibrating mechanical tamper to compact.
 - **Surface Tolerance** - Do not deviate the longitudinal and transverse surface grades by more than 1/4 inch in 12 feet.
 - **Clean Up** - Remove excess sand and broken paving material from the site when complete. Masonry unit pavers shall be used as shown on the typical details where applicable.
3. **Sidewalk Scoring** shall be per the City's detail for "Typical Sidewalk Scoring Detail MA09".

MOLALLA AVENUE TYPICAL STREET SECTION NOTES:

1. Structural section of Molalla Avenue shall be a minimum of 3" Level 3, 1/2" HMAC Surface Course, 6" Level 3, 1/2" HMAC Base Course, 14" Aggregate Base 3/4" – 0" , compact subgrade to 95% max dry density.
2. Typical street section shall be per the City's detail for "Typical Street Section – Molalla Avenue MA10".

APPLICABLE SPECIFICATIONS

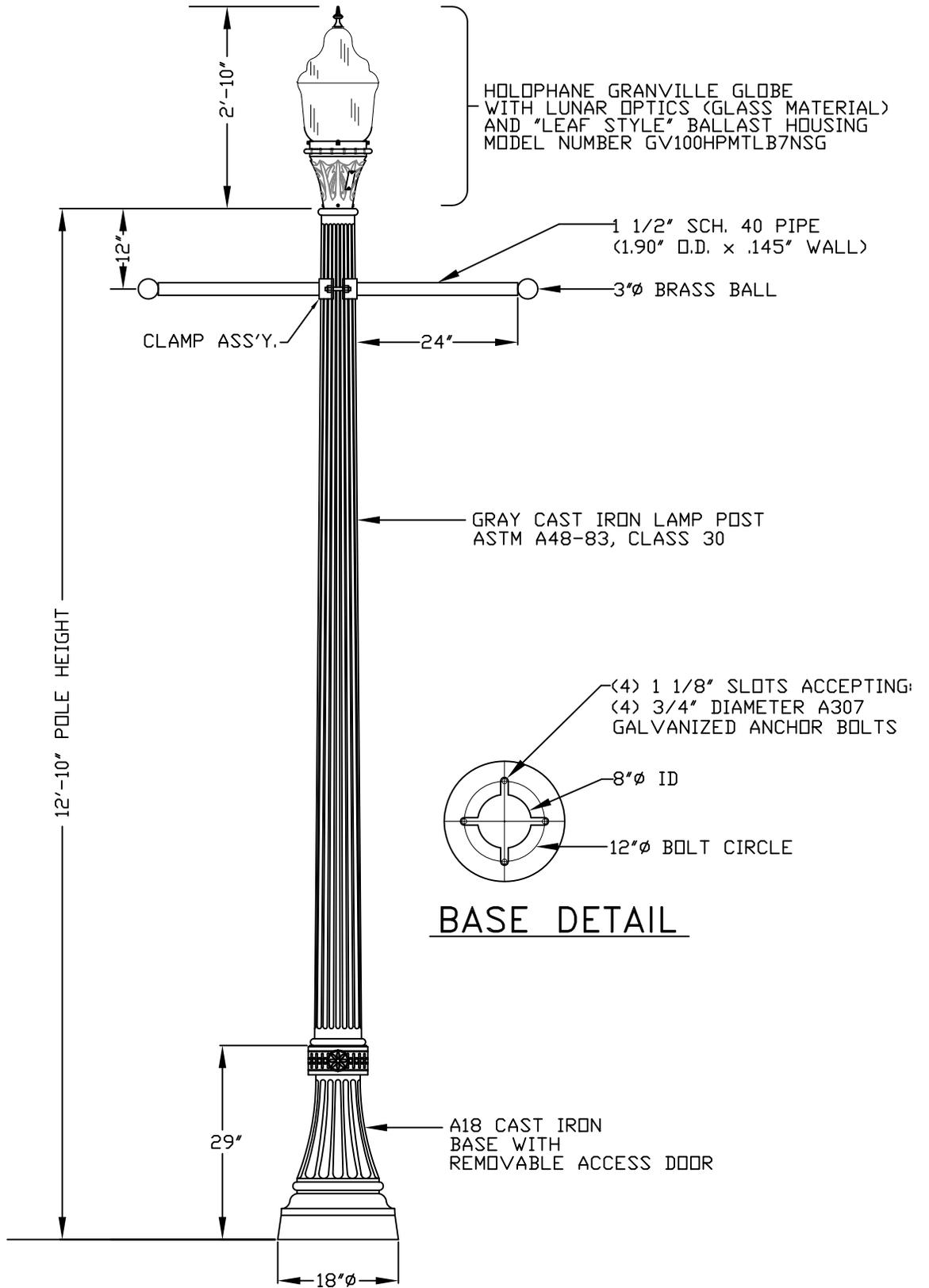
The Specification that is applicable to the Work on the Molalla Avenue Typical Streetscape is the current edition of the "Oregon Standard Specifications for Construction" and the current edition of the "Supplemental Oregon Standard Specifications for Construction".

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications and Supplemental Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

DRAWING INDEX

- MA01 - TYPICAL ACORN STYLE DECORATIVE STREET LIGHT DETAIL
- MA02 - TYPICAL LIGHT POLE WIRING TO JUNCTION BOX
- MA03 - 24" CAST-IN-PLACE DECORATIVE LUMINAIRE POLE FOUNDATION
- MA04 - TYPICAL UTILITY TRENCH PLACEMENT
- MA05 - TYPICAL TREE GRATE INSTALLATION
- MA06 - MOLALLA AVENUE TYPICAL CURB RAMP DETAIL
- MA07 - CONCRETE UNIT PAVER DETAIL
- MA08 - CURB RAMP - TYPE 2
- MA09 - TYPICAL SIDEWALK SCORING DETAIL
- MA10 - MOLALLA AVENUE TYPICAL STREET SECTION
- MA11 - TYPICAL MOLALLA AVENUE DRIVEWAY DETAIL

DRAWN JRF			City of Oregon City Public Works Standard Drawings 320 Warner Milne Rd. Oregon City, Oregon 97045	SCALE N.T.S.
ENGR. NJK				DATE APRIL 2008
REV.	DATE	APPR.	MOLALLA AVENUE STANDARD DETAILS INDEX	APPR.
				DWG. NO. MA00

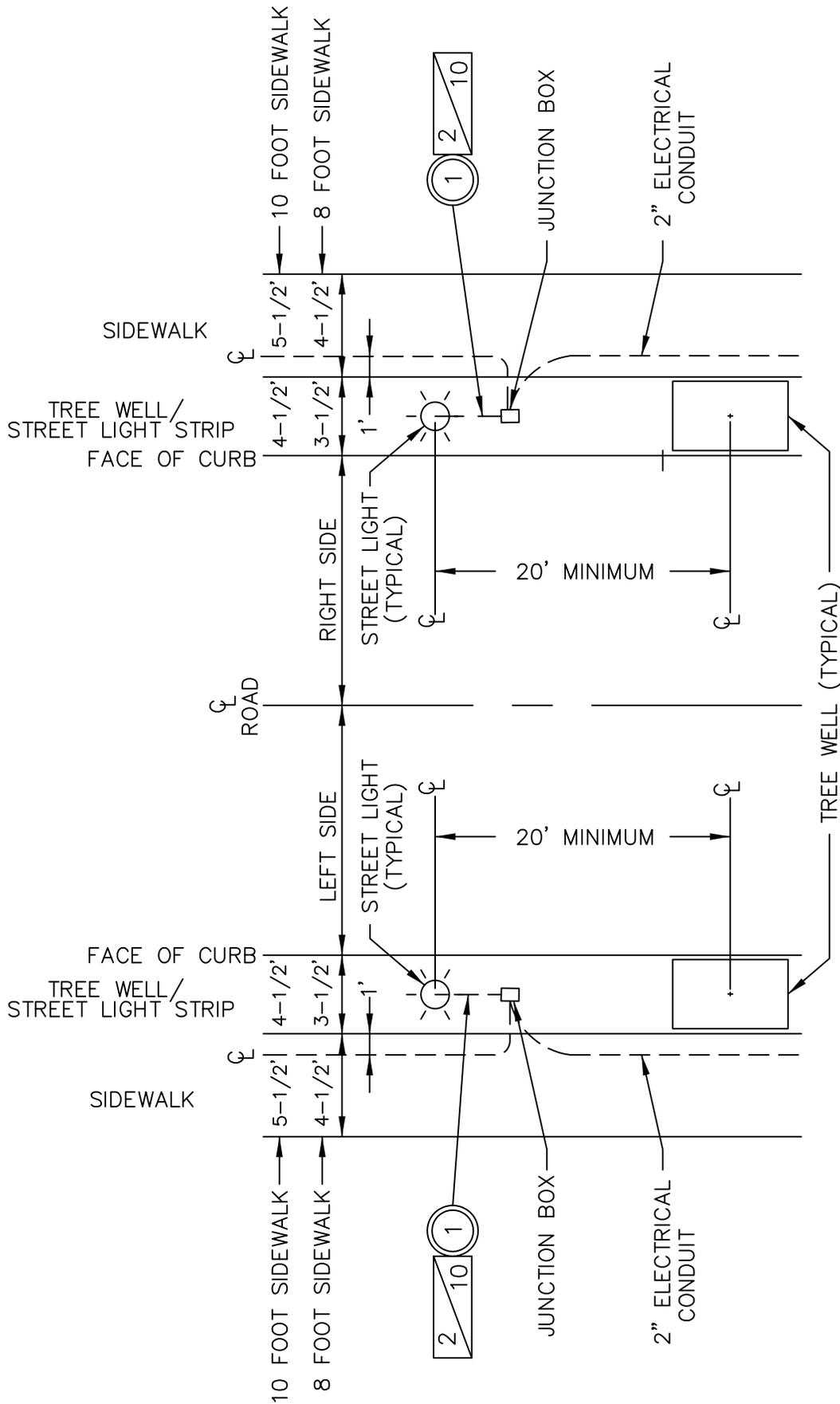


VI-A18-CI-12'10"

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REV.	DATE	APPR.
1	10/08	AFG

City of Oregon City
Public Works Standard Drawings
320 Warner Milne Rd. Oregon City, Oregon 97045
TYPICAL ACORN STYLE DECORATIVE
STREET LIGHT DETAIL

SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA01



TYPICAL LIGHT POLE WIRING TO JUNCTION BOX

NOT TO SCALE

NOTES

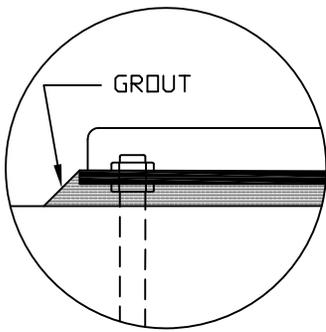
1. CONTRACTOR TO INSTALL 2-1/C #10 CONDUCTORS FROM LUMINAIRE TO JUNCTION BOX IN TREE WELL/STREET LIGHT STRIP.
2. A WATER PROOF FUSEHOLDER IS REQUIRED AT EACH LUMINAIRE.

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REV.	DATE	APPR.

City of Oregon City
 Public Works Standard Drawings
 320 Warner Milne Rd. Oregon City, Oregon 97045

TYPICAL LIGHT POLE WIRING TO JUNCTION BOX

SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA02



DOUBLE NUT EACH ANCHOR BOLT (LEVEL PLATE AND FILL SPACE WITH GROUT. PROVIDE 1/2-INCH DIAMETER DRAIN HOLE.)

ANCHOR BOLTS :

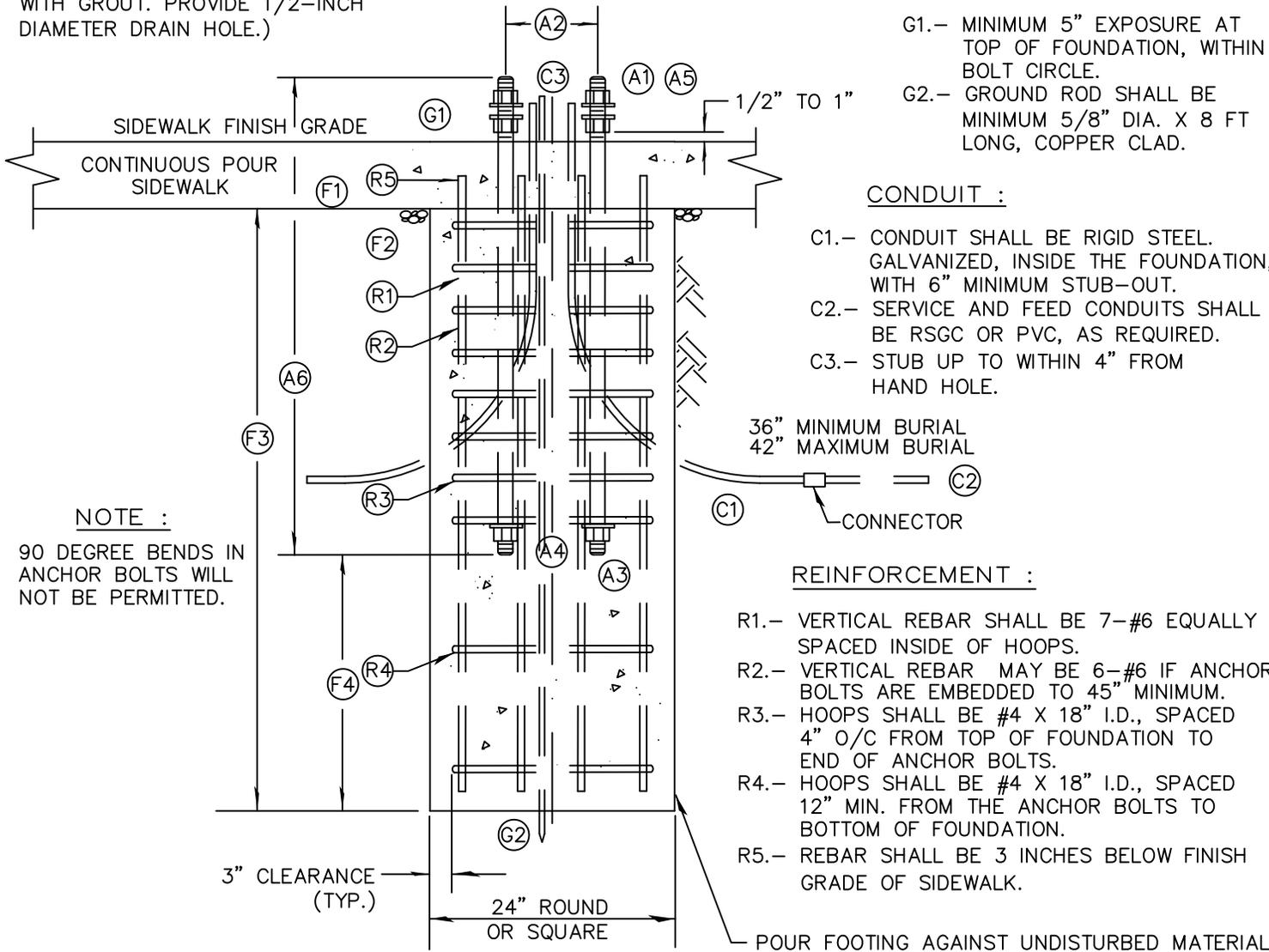
- A1.- ANCHOR BOLTS SHALL BE 4 - DIAMETER AS GIVEN BY POLE MANUFACTURER.
- A2.- BOLT CIRCLE DIAMETER TO MATCH POLE BASE PLATE.
- A3.- ANCHOR BOLTS SHALL HAVE HEADS, OR NUTS WITH THE THREADS STAKED AT TWO PLACES BELOW THE NUT, EMBEDDED IN FOUNDATION.
- A4.- ANCHOR BOLTS SHALL BE EMBEDDED 33" MINIMUM, IN CONCRETE. (SEE NOTE R2).
- A5.- BOLT PROJECTION SHALL BE 5" ABOVE SIDEWALK FINISH GRADE OR LANDSCAPED AREAS WHERE THERE IS NO SIDEWALK PRESENT.
- A6.- ANCHOR BOLT TOTAL LENGTH SHALL EQUAL A4 PLUS DISTANCE FROM TOP OF FOUNDATION TO TOP OF SIDEWALK PLUS A5.

GROUND ROD :

- G1.- MINIMUM 5" EXPOSURE AT TOP OF FOUNDATION, WITHIN BOLT CIRCLE.
- G2.- GROUND ROD SHALL BE MINIMUM 5/8" DIA. X 8 FT LONG, COPPER CLAD.

CONDUIT :

- C1.- CONDUIT SHALL BE RIGID STEEL. GALVANIZED, INSIDE THE FOUNDATION, WITH 6" MINIMUM STUB-OUT.
- C2.- SERVICE AND FEED CONDUITS SHALL BE RSGC OR PVC, AS REQUIRED.
- C3.- STUB UP TO WITHIN 4" FROM HAND HOLE.



NOTE :

90 DEGREE BENDS IN ANCHOR BOLTS WILL NOT BE PERMITTED.

REINFORCEMENT :

- R1.- VERTICAL REBAR SHALL BE 7-#6 EQUALLY SPACED INSIDE OF HOOPS.
- R2.- VERTICAL REBAR MAY BE 6-#6 IF ANCHOR BOLTS ARE EMBEDDED TO 45" MINIMUM.
- R3.- HOOPS SHALL BE #4 X 18" I.D., SPACED 4" O/C FROM TOP OF FOUNDATION TO END OF ANCHOR BOLTS.
- R4.- HOOPS SHALL BE #4 X 18" I.D., SPACED 12" MIN. FROM THE ANCHOR BOLTS TO BOTTOM OF FOUNDATION.
- R5.- REBAR SHALL BE 3 INCHES BELOW FINISH GRADE OF SIDEWALK.

FOUNDATION :

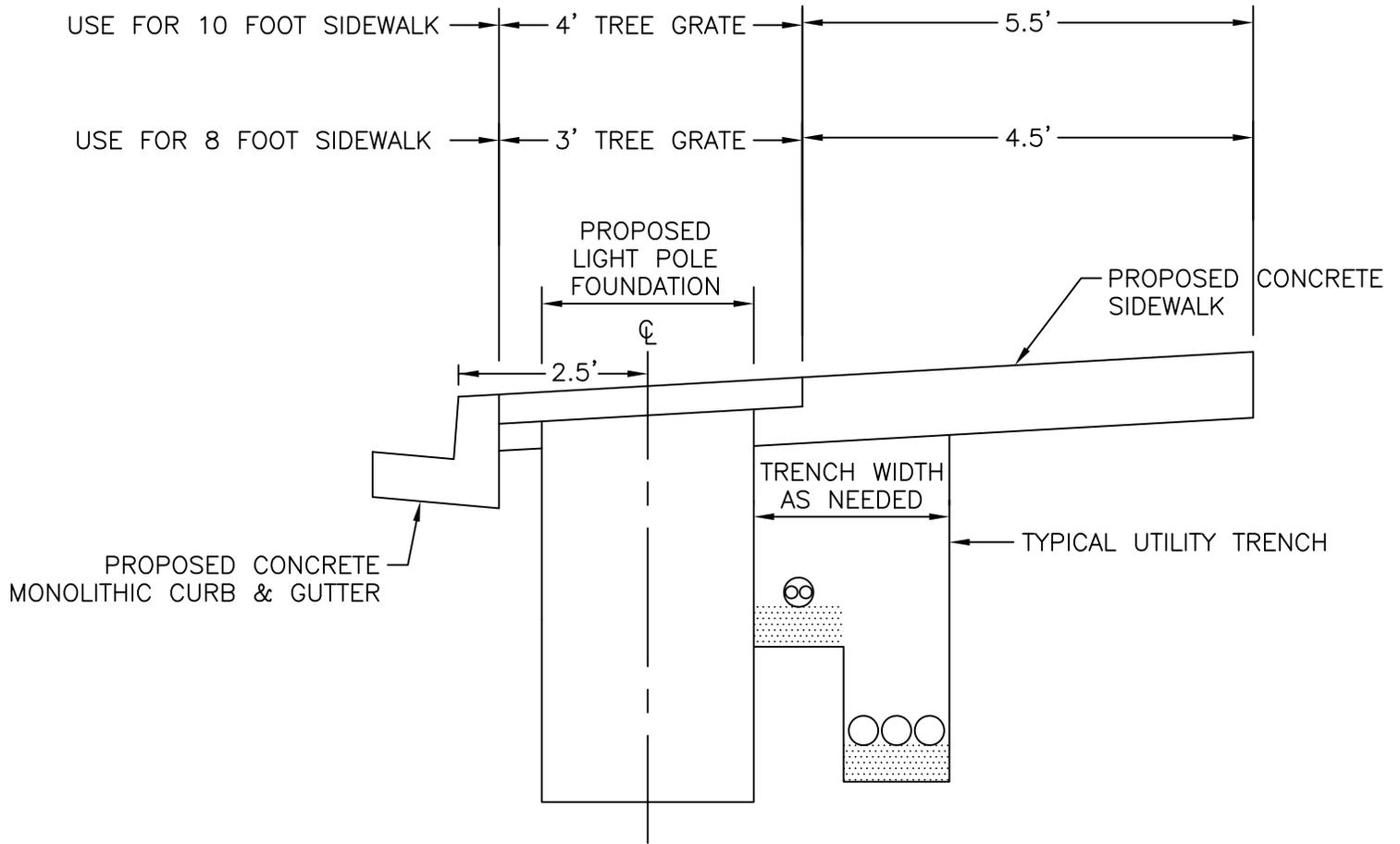
- F1.- WHEN CASTING THE LUMINAIRE POLE BASE, STOP THE FOUNDATION POUR 5.5 INCHES TO 6 INCHES BELOW SIDEWALK FINISH GRADE WHILE MAINTAINING THE CORRECT ANCHOR BOLT LOCATIONS AND ELEVATIONS.
- F2.- THE FOUNDATION SHALL CURE A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO POLE INSTALLATION OR TORQUING OF THE ANCHOR BOLTS.
- F3.- FOUNDATION DEPTH: 50 INCHES (MINIMUM)
- F4.- THERE SHALL BE A MINIMUM OF 17" FOUNDATION BELOW THE ANCHOR BOLT HEADS.

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REV.	DATE	APPR.
1	10/08	AFG
2	08/09	AFG

City of Oregon City
Public Works Standard Drawings
 625 Center Street Oregon City, Oregon 97045

24" CAST-IN-PLACE DECORATIVE LUMINAIRE POLE FOUNDATION

SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA03



NOTES:

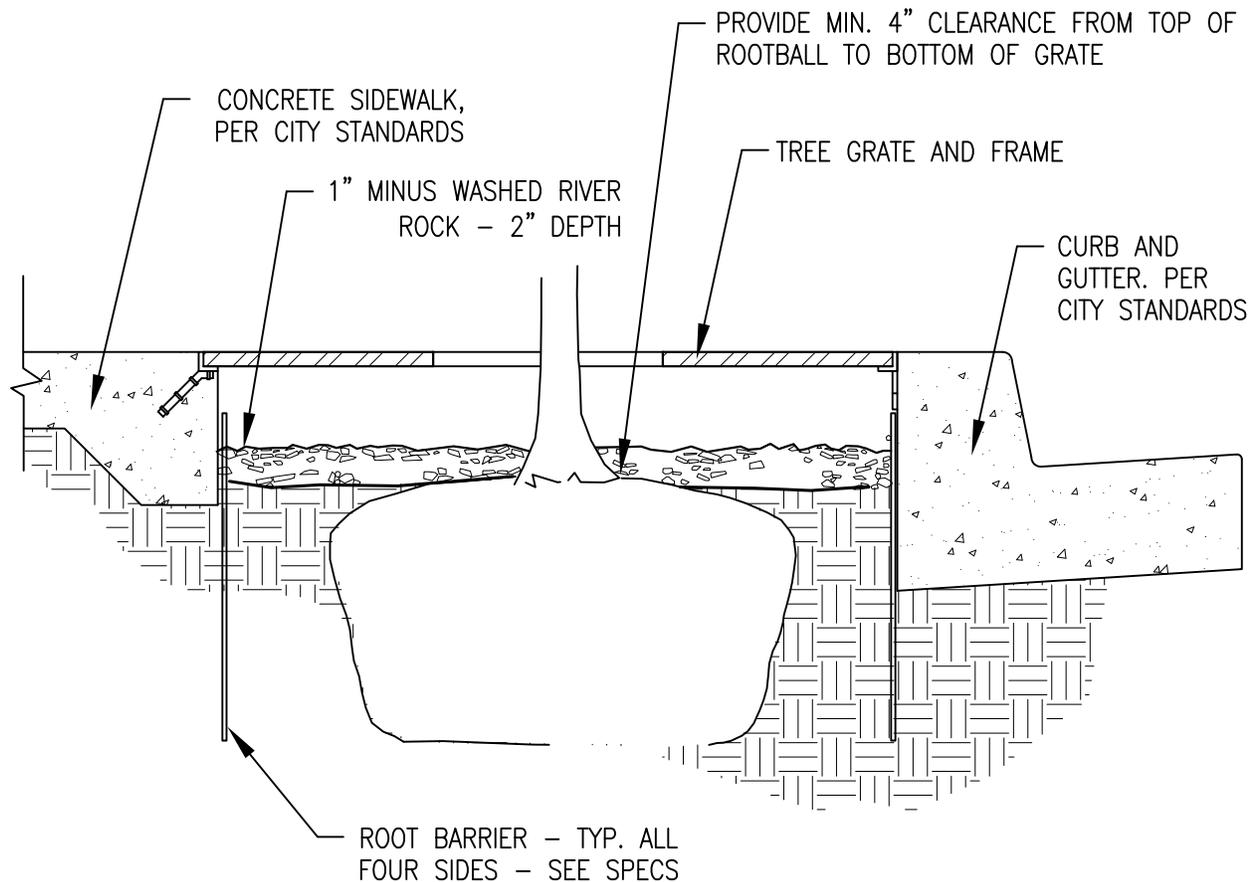
1. FOR ELECTRICAL AND OTHER CONDUIT DEPTH, BEDDING AND BACKFILL REQUIREMENTS, REFER TO SECTION 960 OF THE ODOT STANDARD SPECIFICATIONS.
2. ADJUST TYPICAL UTILITY TRENCH ACCORDINGLY WITHIN THE ROADWAY. SEE ODOT STANDARD SPECIFICATIONS FOR REQUIREMENTS.

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REV.	DATE	APPR.

City of Oregon City
 Public Works Standard Drawings
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SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA04

TYPICAL UTILITY
 TRENCH PLACEMENT



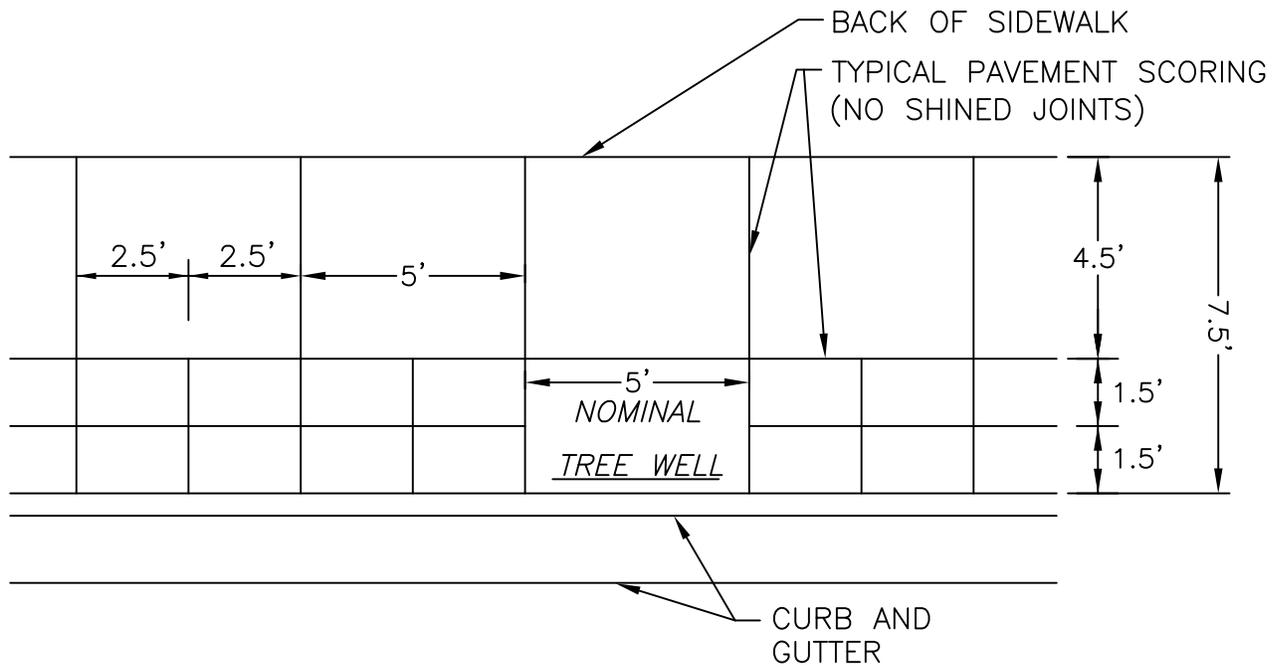
NOTES:

1. SEE MOLALLA AVENUE STREETScape STANDARD NOTES FOR STREET TREE NOTES.

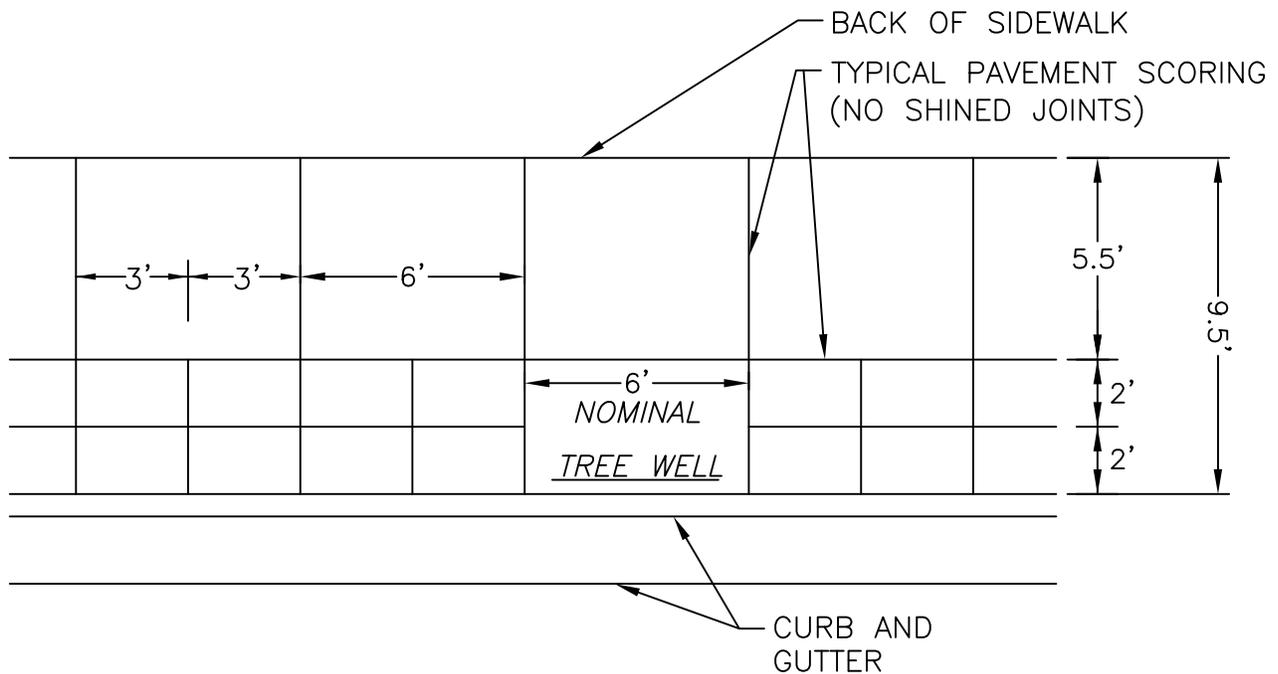
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REV.	DATE	APPR.

City of Oregon City
 Public Works Standard Drawings
 320 Warner Milne Rd. Oregon City, Oregon 97045
 TYPICAL TREE GRATE
 INSTALLATION

SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA05



TYPICAL SIDEWALK SCORING DETAIL FOR 8 FOOT SIDEWALK



TYPICAL SIDEWALK SCORING DETAIL FOR 10 FOOT SIDEWALK

NOTES:

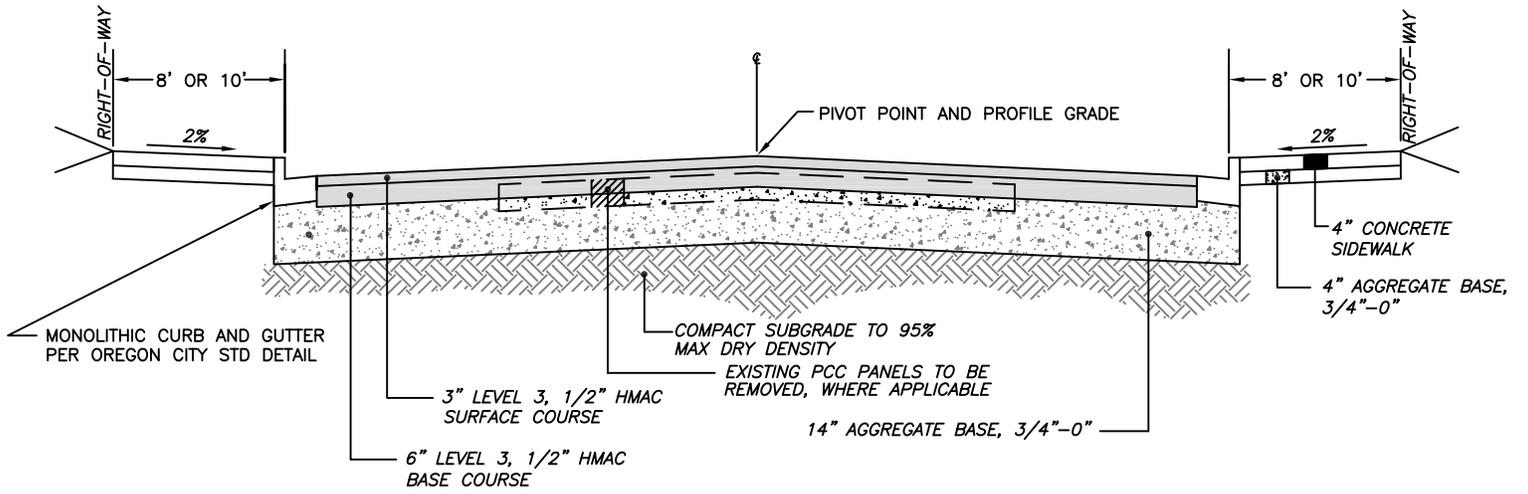
1. METAL TREE GRATE AND FRAME MUST BE ASSEMBLED PRIOR TO PLACING CONCRETE SIDEWALK.
2. ALL SCORING DIMENSIONS ARE NOMINAL. SCORING SHALL BE ADJUSTED TO MATCH OUTSIDE OF TREEWELL FRAME.

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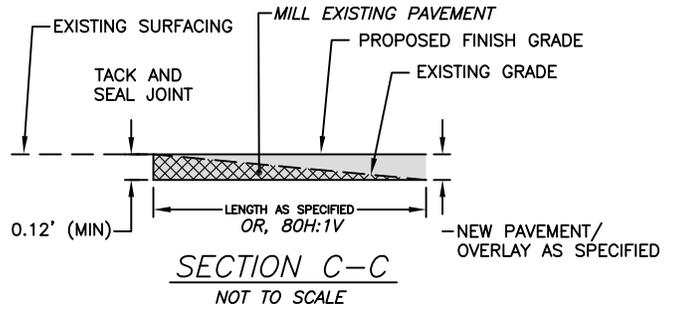
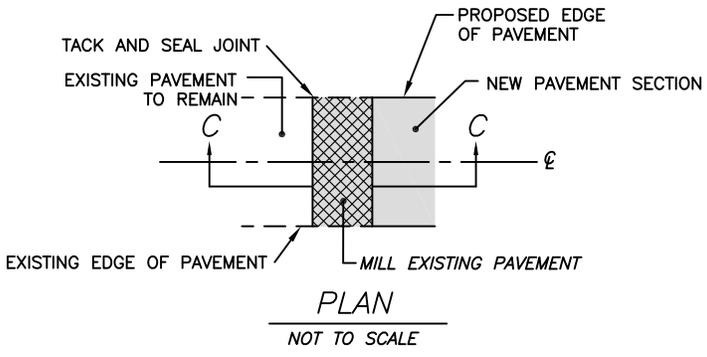
City of Oregon City
 Public Works Standard Drawings
 320 Warner Milne Rd. Oregon City, Oregon 97045

SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA09

TYPICAL SIDEWALK
 SCORING DETAIL



TYPICAL STREET SECTION - MOLALLA AVENUE

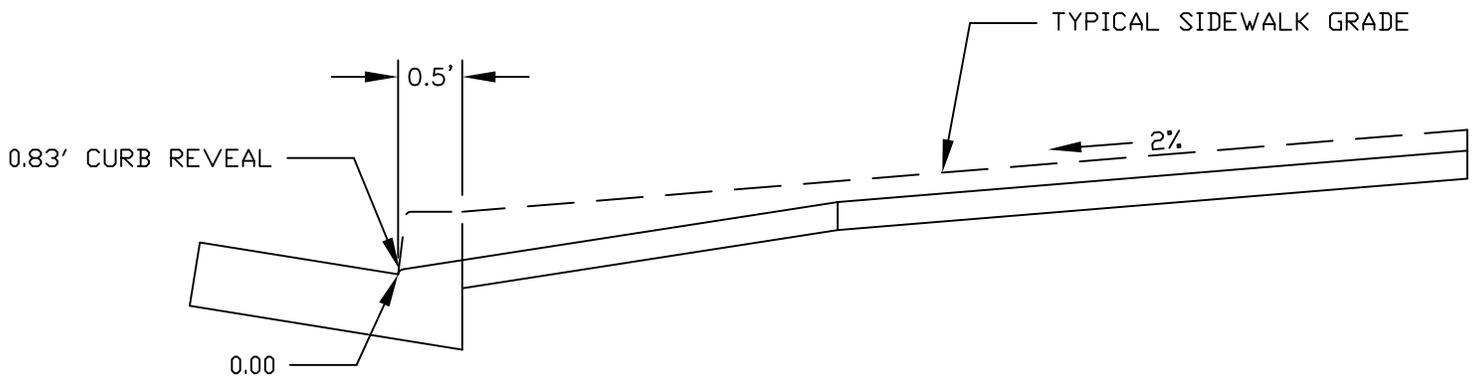
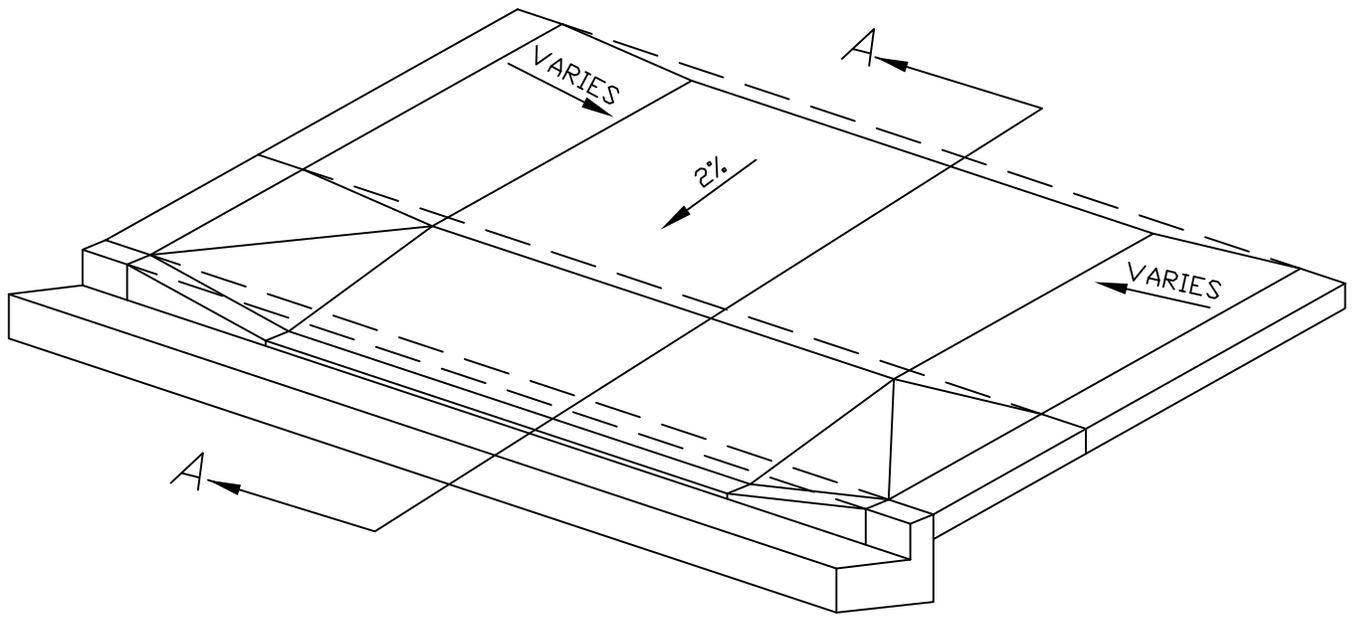


PAVEMENT MATCH DETAIL

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 Public Works Standard Drawings
 320 Warner Milne Rd. Oregon City, Oregon 97045
MOLALLA AVENUE
TYPICAL STREET SECTION

SCALE	N.T.S.
DATE	APRIL 2008
APPR.	
DWG. NO.	MA10



SECTION A-A
NOT TO SCALE

NOTES:

1. DO NOT SHINE JOINTS
2. COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED PER THE CITY'S STANDARDS.

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TYPICAL MOLALLA AVENUE
DRIVEWAY DETAIL

SCALE	N.T.S.
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APPR.	
DWG. NO.	MA11