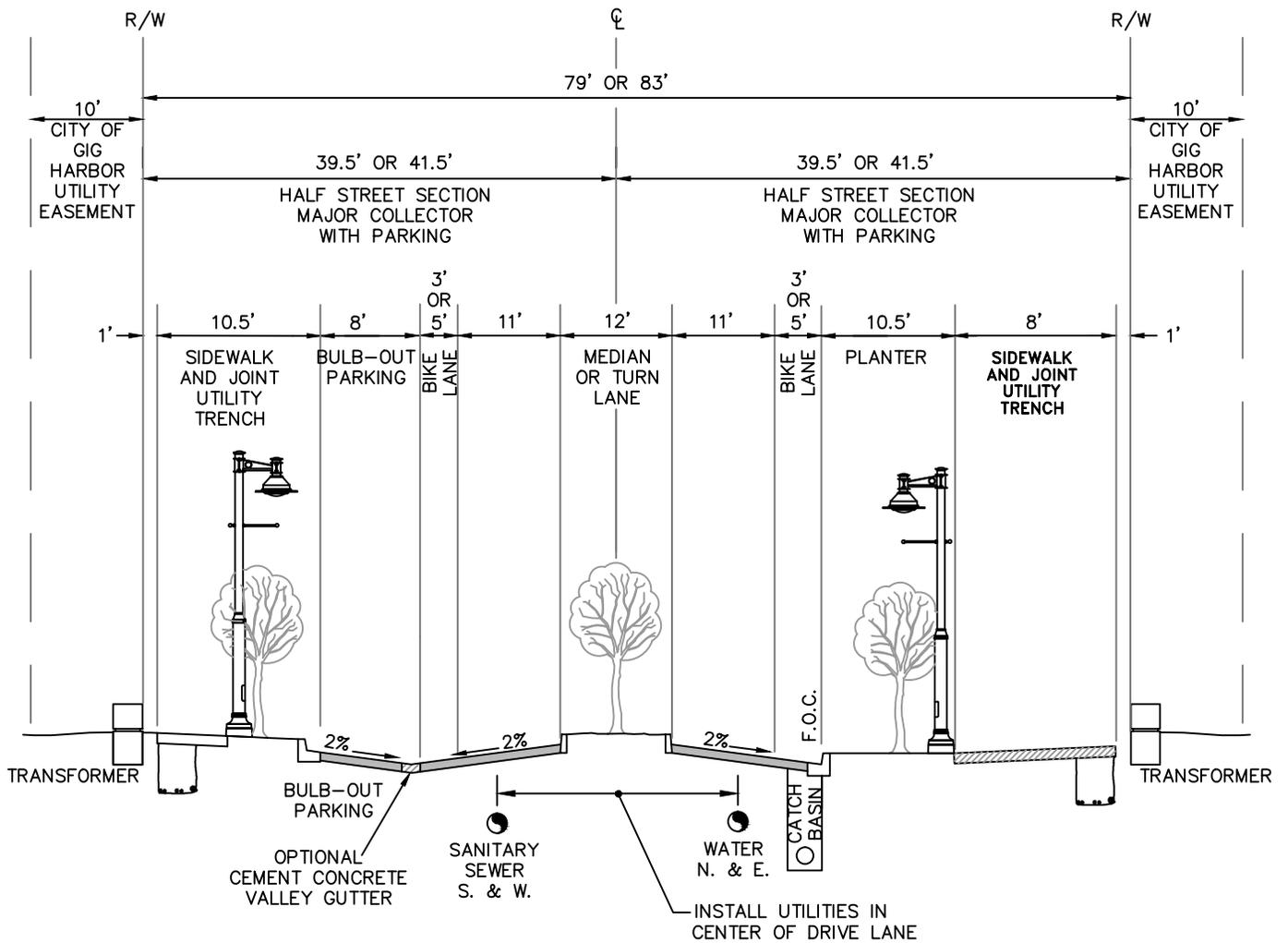


NOTES:

1. MOVE STREET LIGHTS TO BACK OF WALK WHERE PLANTER STRIP IS LESS THAN 8'.
2. ON-STREET PARKING PROHIBITED.
3. SEE DETAIL 2-13 FOR PAVEMENT STRUCTURE.
4. MANHOLE LIDS AND WATER VALVE BOXES SHALL BE LOCATED IN THE MIDDLE OF THE OUTSIDE VEHICLE TRAVEL LANES.
5. STREET TREES IN MEDIAN SHALL BE CENTERED. STREET TREES IN PLANTERS SHALL BE 2.5' FROM EDGE OF SIDEWALK TO CENTERLINE OF TREE.
6. STREET LIGHTS MAY BE REQUIRED IN MEDIAN.

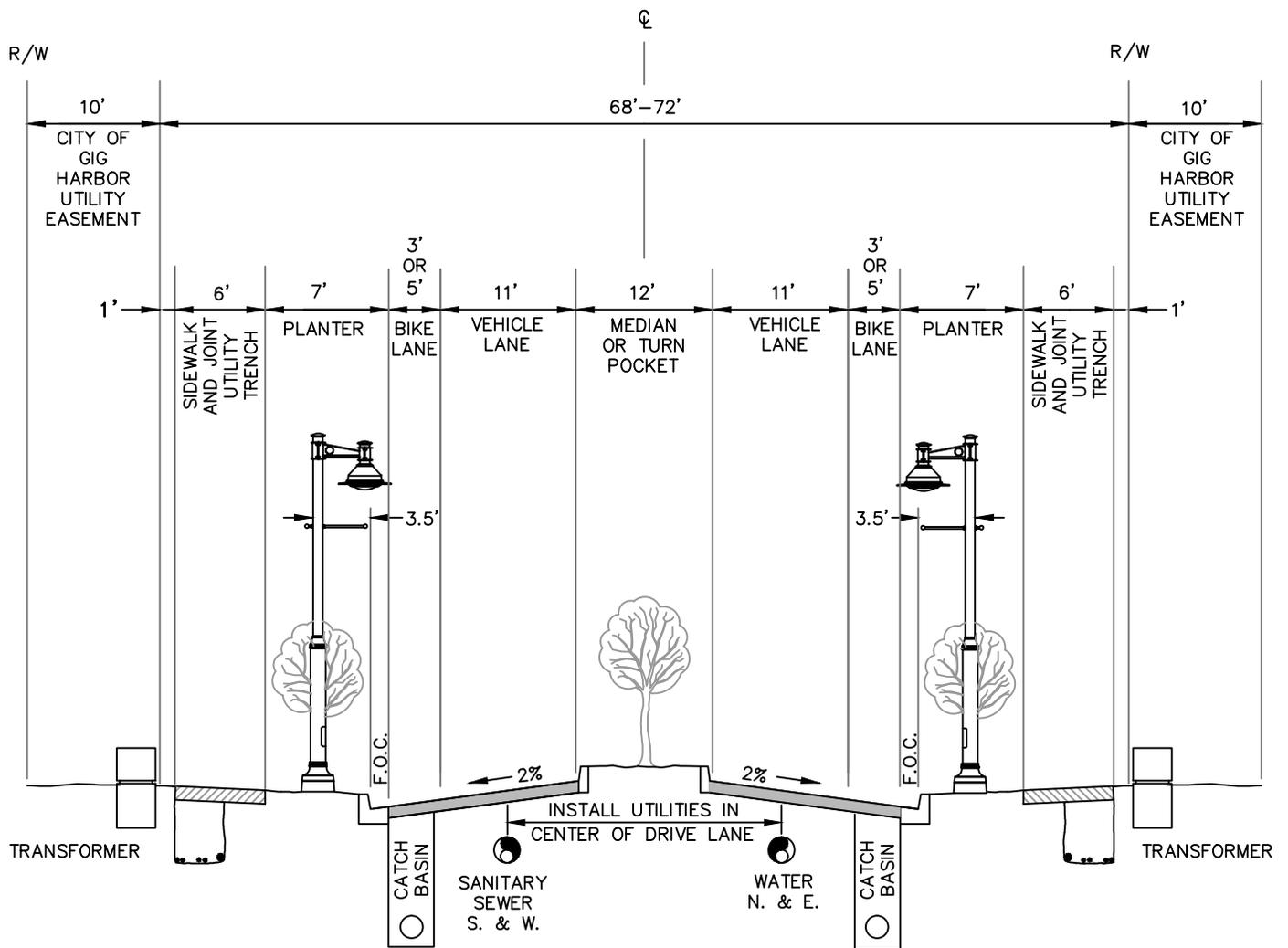
 CITY OF GIG HARBOR ENGINEERING DIVISION	
ROADWAY SECTION BOULEVARD/ARTERIAL	DETAIL NO. 2-01
APPROVED BY CITY ENGINEER <i>h.d. [Signature]</i>	DATE 1/1/2014



NOTES:

1. BIKE LANE WIDTH TO BE DETERMINED BY THE CITY.
2. SEE DETAIL 2-13 FOR PAVEMENT DESIGN CONSTANTS.
3. MANHOLE LIDS AND WATER VALVE BOXES SHALL BE LOCATED IN THE MIDDLE OF THE OUTSIDE VEHICLE TRAVEL LANE.
4. CATCH BASINS NOT PERMITTED WITHIN VALLEY GUTTERS.
5. THE OPTIONAL VALLEY GUTTERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
6. STREET TREES IN MEDIAN SHALL BE CENTERED. STREET TREES IN 10.5' PLANTER SHALL BE CENTERED 4' FROM SIDEWALK. STREET TREES IN 10.5' WALK SHALL BE CENTERED IN TREE WELL.

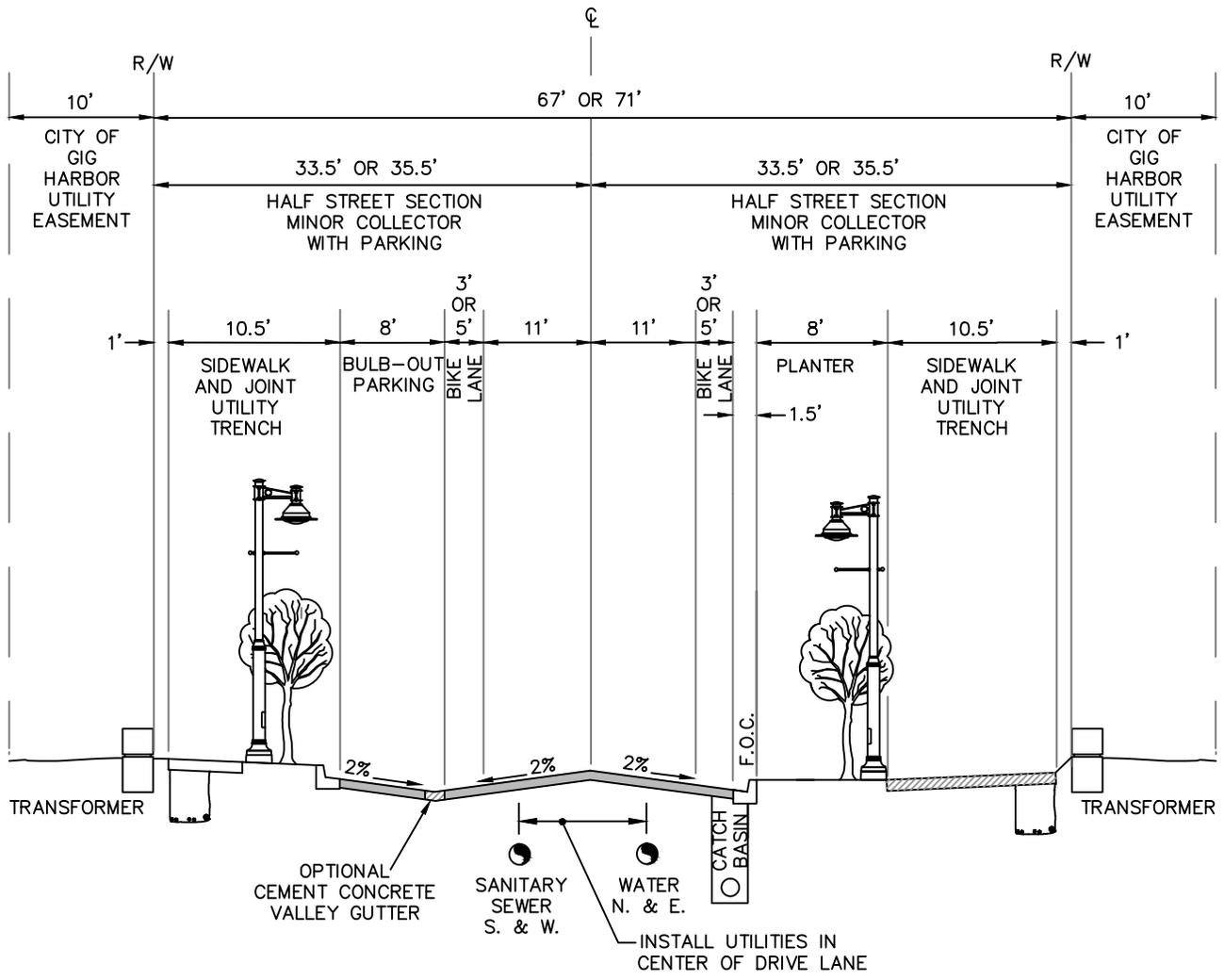
 <small>GIG HARBOR THE MOUNTAIN CITY</small>	CITY OF GIG HARBOR ENGINEERING DIVISION		
ROADWAY SECTION MAJOR COLLECTOR TYPE I			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">DETAIL NO.</td> </tr> <tr> <td style="text-align: center; padding: 5px;">2-02</td> </tr> </table>	DETAIL NO.	2-02
DETAIL NO.			
2-02			
APPROVED BY <i>haldmann</i> DATE 1/1/2014 CITY ENGINEER _____			



NOTES:

1. ON-STREET PARKING PROHIBITED.
2. SEE DETAIL 2-13 FOR PAVEMENT DESIGN CONSTANTS.
3. MANHOLE LIDS AND WATER VALVE BOXES SHALL BE LOCATED IN THE MIDDLE OF THE OUTSIDE VEHICLE TRAVEL LANES.
4. STREET TREES IN MEDIAN SHALL BE CENTERED. STREET TREES IN PLANTERS SHALL BE 2.5' FROM EDGE OF SIDEWALK TO CENTERLINE OF TREE.
5. FOR USE IN LIMITED PEDESTRIAN TRAFFIC AREA.

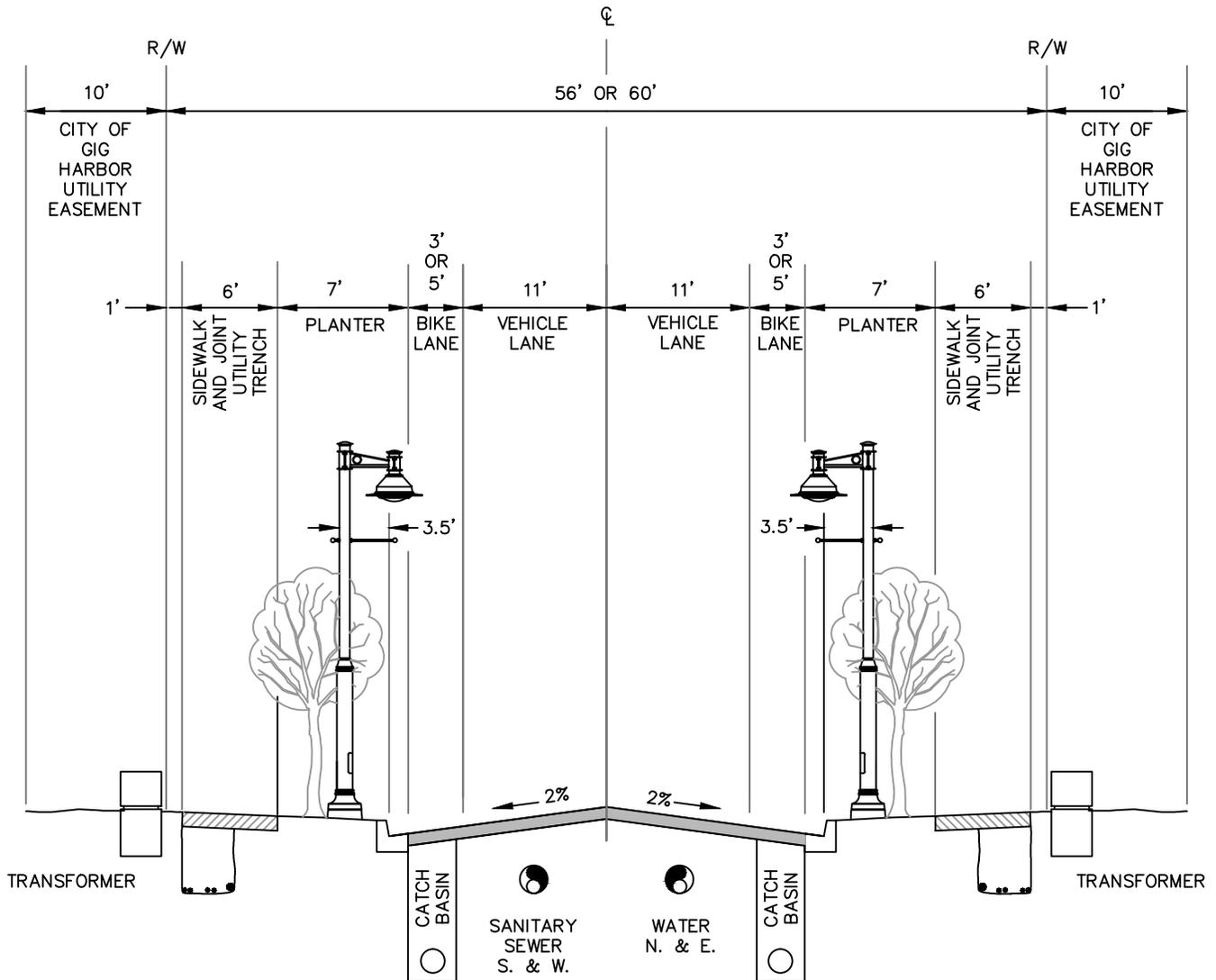
	<p>CITY OF GIG HARBOR ENGINEERING DIVISION</p>
<p>ROADWAY SECTION MAJOR COLLECTOR TYPE II</p>	
	<p>DETAIL NO. 2-03</p>
<p>APPROVED BY <i>[Signature]</i> DATE 1/1/2014</p>	



NOTES:

1. BIKE LANE WIDTH TO BE DETERMINED BY THE CITY.
2. SEE DETAIL 2-13 FOR PAVEMENT DESIGN CONSTANTS.
3. MANHOLE LIDS AND WATER VALVE BOXES SHALL BE LOCATED IN THE MIDDLE OF THE OUTSIDE VEHICLE TRAVEL LANE.
4. CATCH BASINS NOT PERMITTED WITHIN VALLEY GUTTERS,
5. THE OPTIONAL VALLEY GUTTERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
6. STREET TREES IN 10.5' PLANTER SHALL BE 4' FROM SIDEWALK TO CENTERLINE OF TREE. STREET TREES IN 10.5' SIDEWALK SHALL BE CENTERED IN TREE WELL.

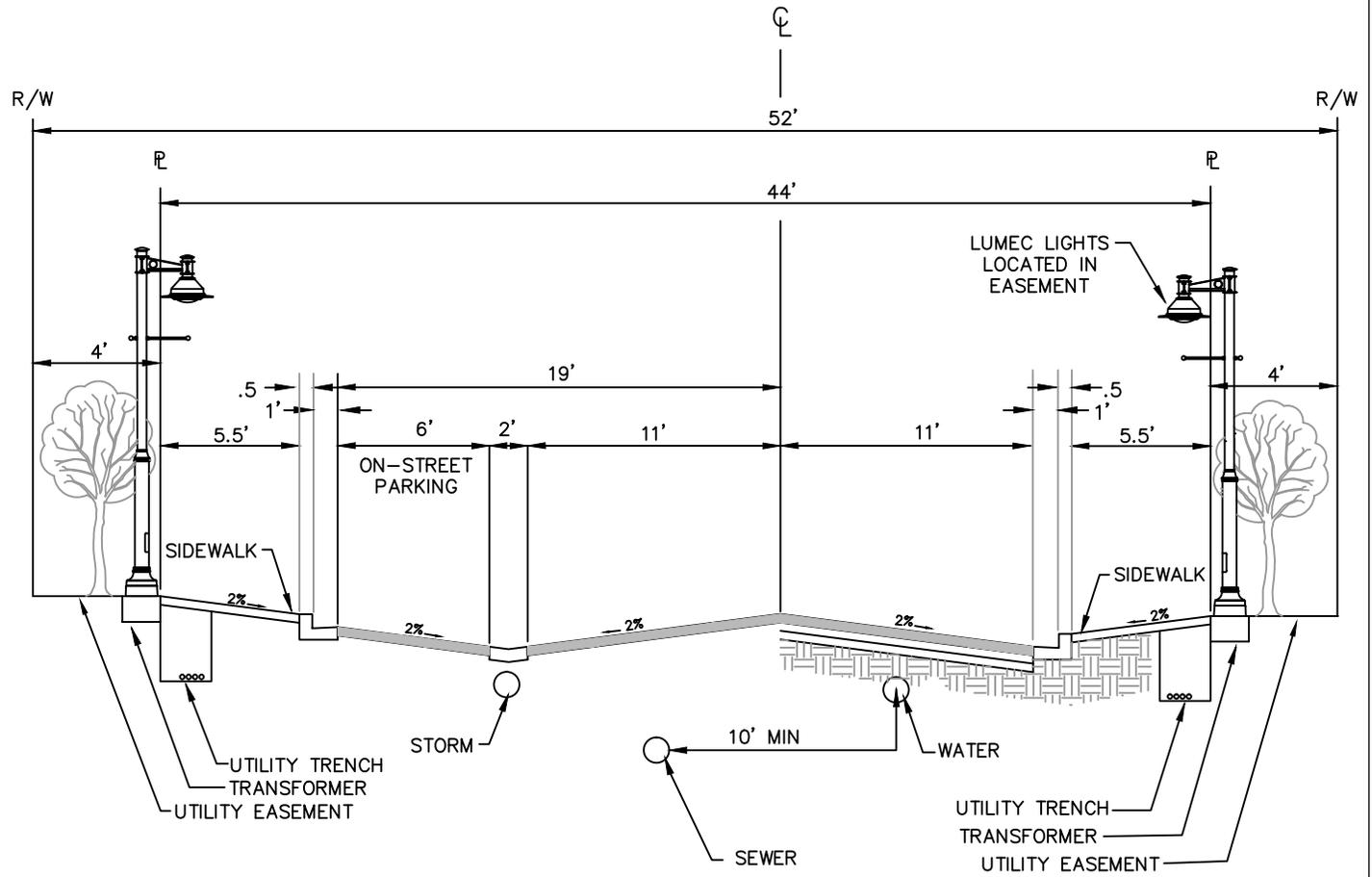
	<p>CITY OF GIG HARBOR ENGINEERING DIVISION</p>
<p>ROADWAY SECTION MINOR COLLECTOR TYPE I</p>	
	<p>DETAIL NO. 2-04</p>
<p>APPROVED BY  DATE 1/1/2014</p>	



NOTES:

1. ON-STREET PARKING PROHIBITED.
2. BIKE LANE WIDTH TO BE DETERMINED BY THE CITY ENGINEER.
3. SEE DETAIL 2-13 FOR PAVEMENT DESIGN CONSTANTS.
4. MANHOLE LIDS AND WATER VALVE BOXES SHALL BE LOCATED IN THE MIDDLE OF THE OUTSIDE VEHICLE TRAVEL LANES.
5. STREET TREES IN PLANTERS SHALL BE 2.5' FROM EDGE OF SIDEWALK TO CENTERLINE OF TREE.

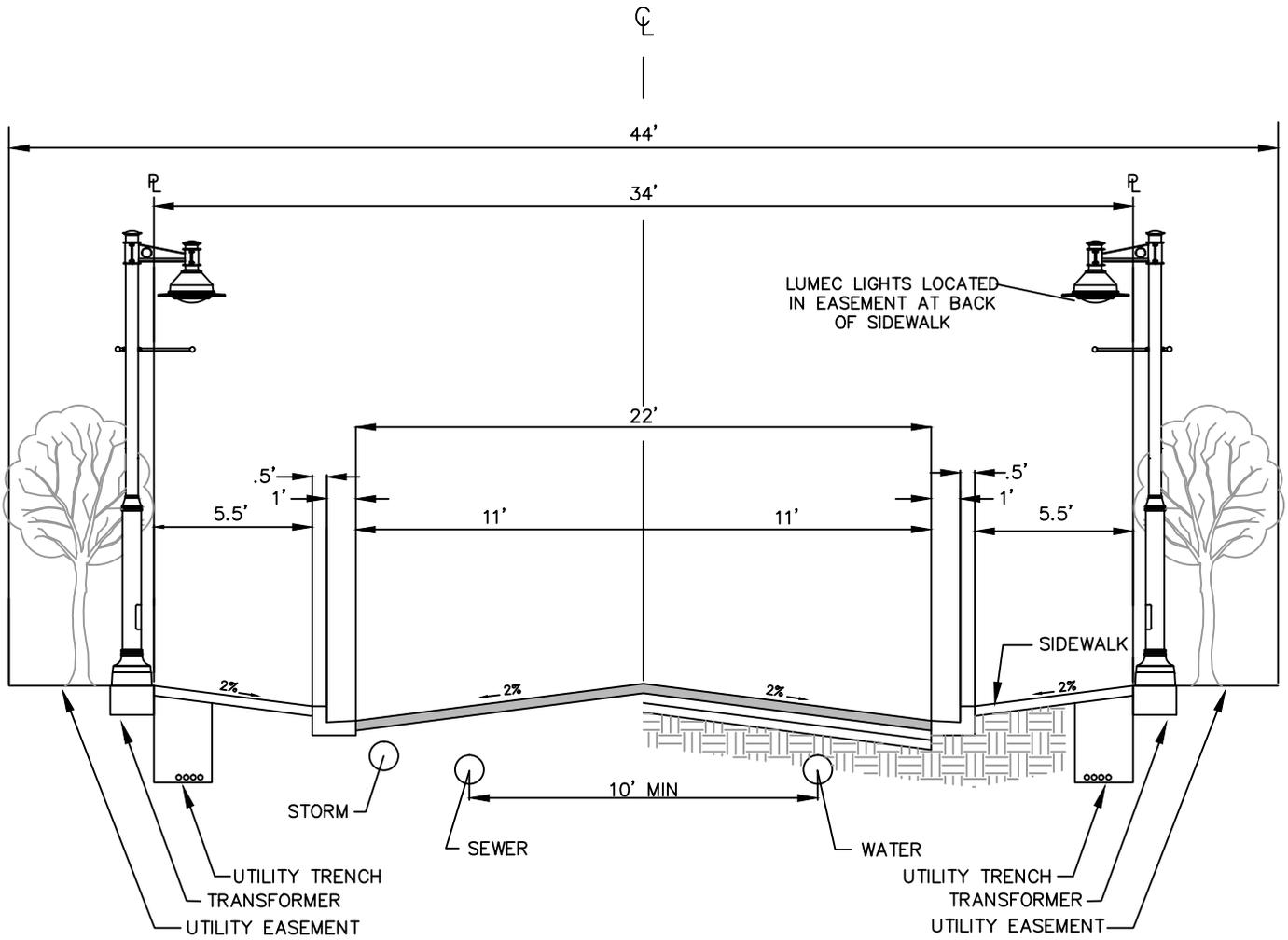
	CITY OF GIG HARBOR ENGINEERING DIVISION
ROADWAY SECTION MINOR COLLECTOR TYPE II	
	DETAIL NO. 2-05
APPROVED BY <i>[Signature]</i> DATE 1/1/2014	



NOTES:

1. ON-STREET PARKING MAY BE DELETED IF SEPARATE TRACTS ARE DEDICATED TO PARKING WITHIN THE PLAT.
2. TRAFFIC CALMING FEATURES MAY BE REQUIRED ON RESIDENTIAL ROADS CONNECTING PUBLIC ARTERIALS.
3. DELETION OF SIDEWALK ON ONE SIDE OF STREET ALLOWED IF UNITS ARE "SIDE- LOADED" OR AS PERMITTED BY THE CITY ENGINEER.
4. VERTICAL CURB AND GUTTER MEETING FIG. 2-20 REQUIRED BOTH SIDES OF STREET.
5. DECORATIVE LUMEC PED. LIGHTING APPROVED BY THE CITY REQUIRED ON BOTH SIDES OF THE STREETS PAVED AT 150' INTERVALS.

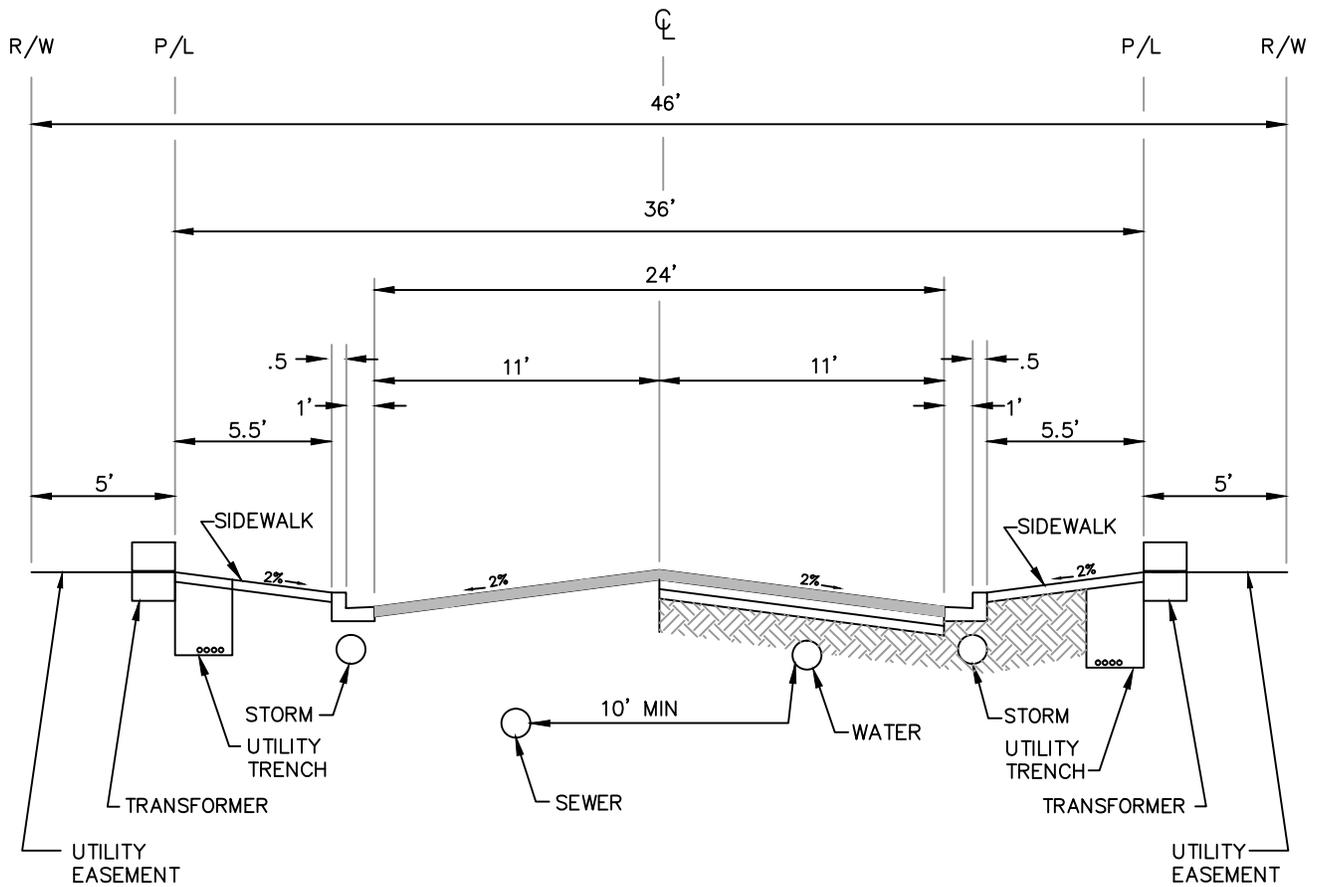
	CITY OF GIG HARBOR ENGINEERING DIVISION
ROADWAY SECTION MAJOR LOCAL RESIDENTIAL	
	DETAIL NO. 2-06
APPROVED BY <i>[Signature]</i> DATE 1/1/2014	



NOTES:

1. ON-STREET PARKING PROHIBITED.
2. LUMEC DECORATIVE STREET LIGHTS APPROVED BY THE CITY REQUIRED ON BOTH SIDES OF THE STREET AT 150' INTERVALS.
3. DELETION OF SIDEWALK ON ONE SIDE OF STREET ALLOWED IF RESIDENTIAL UNITS ARE "SIDE-LOADED" OR AS PERMITTED BY THE CITY ENGINEER.
4. VERTICAL CURB AND GUTTER MEETING FIG. 2-36 REQUIRED ON BOTH SIDES OF STREET.

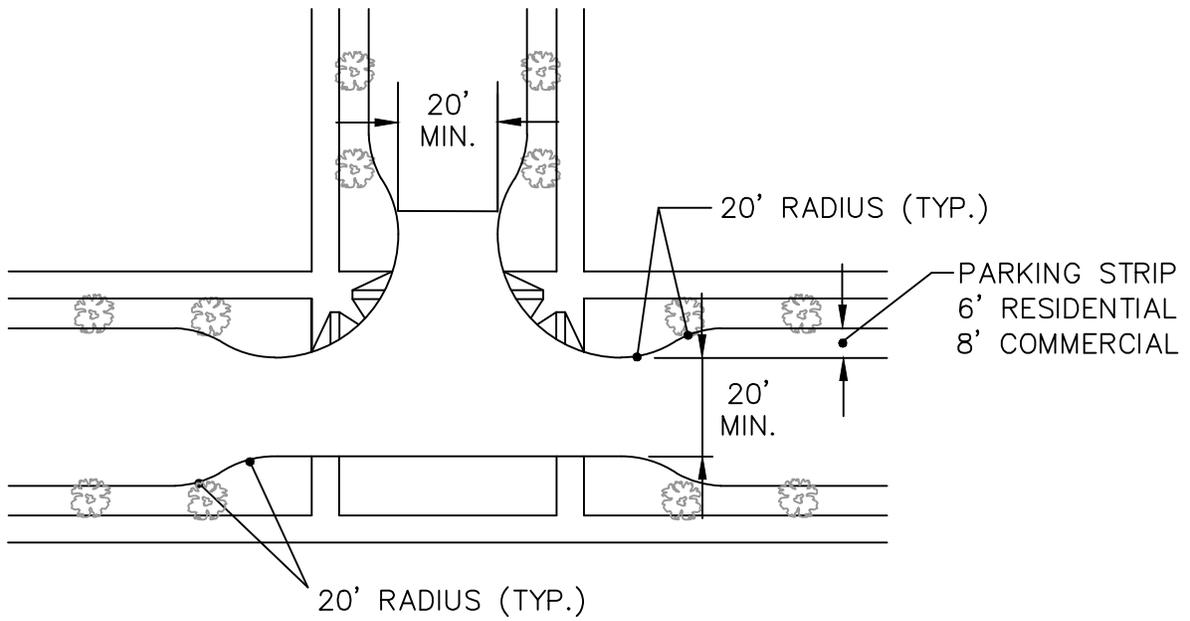
	CITY OF GIG HARBOR ENGINEERING DIVISION
ROADWAY SECTION MINOR LOCAL RESIDENTIAL	
DETAIL NO. 2-07	
APPROVED BY CITY ENGINEER <i>hshomuel</i>	DATE 1/1/2014



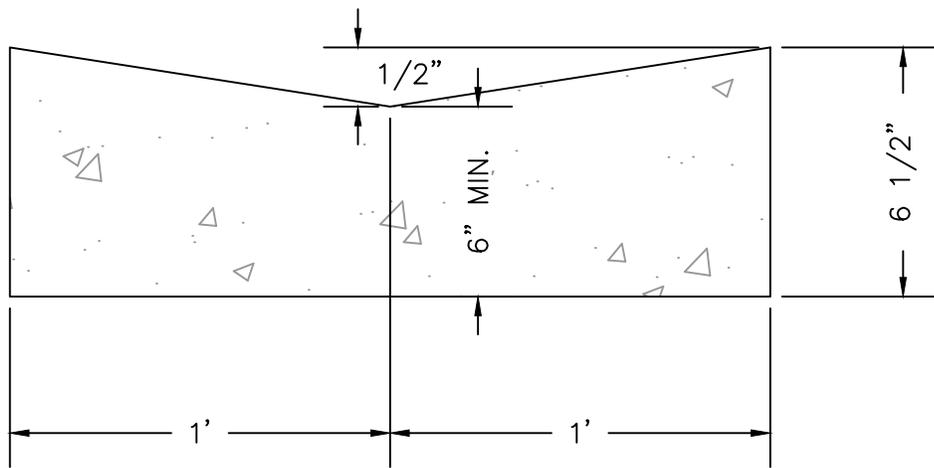
NOTES:

1. ON-STREET PARKING MAY BE DELETED IF SEPARATE TRACTS ARE DEDICATED TO PARKING WITHIN THE PLAT.
2. TRAFFIC CALMING FEATURES MAY BE REQUIRED ON RESIDENTIAL ROADS CONNECTING PUBLIC ARTERIALS.
3. DELETION OF SIDEWALK ON ONE SIDE OF STREET ALLOWED IF UNITS ARE "SIDE- LOADED" OR AS PERMITTED BY THE CITY ENGINEER.
4. VERTICAL CURB AND GUTTER MEETING FIG. 2-20 REQUIRED BOTH SIDES OF STREET.

 <small>GIG HARBOR ENGINEERING, INC.</small>	CITY OF GIG HARBOR ENGINEERING DIVISION	
	ROADWAY SECTION PRIVATE	
		DETAIL NO. 2-08
APPROVED BY <i>h.d. [signature]</i>		DATE 1/1/2014



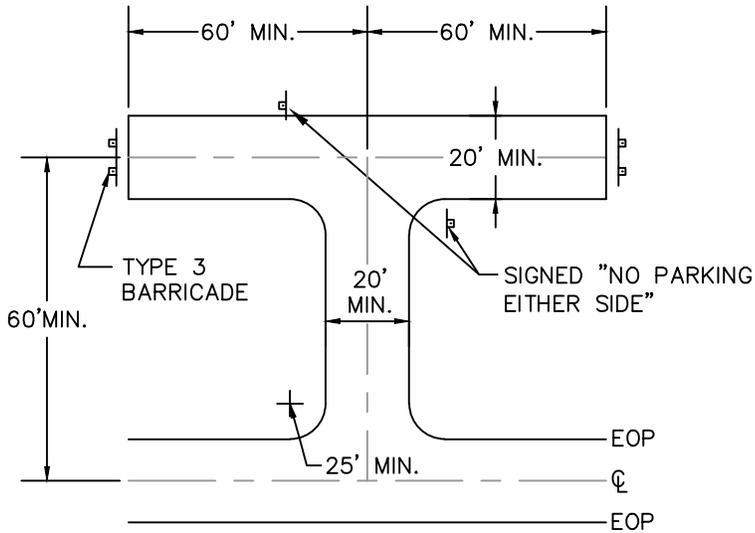
 CITY OF GIG HARBOR ENGINEERING DIVISION	
BULB-OUT PARKING	DETAIL NO. 2-09
APPROVED BY CITY ENGINEER <i>hsk</i>	DATE 1/1/2014



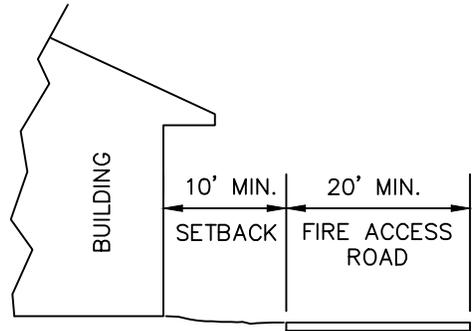
NOTES:

1. 4000 PSI WITH FIBER MESH ADDED
2. EXPANSION JOINT $\frac{3}{8}$ " THICK, FULL DEPTH, SPACED 15' AND SCORE EVERY 5'.

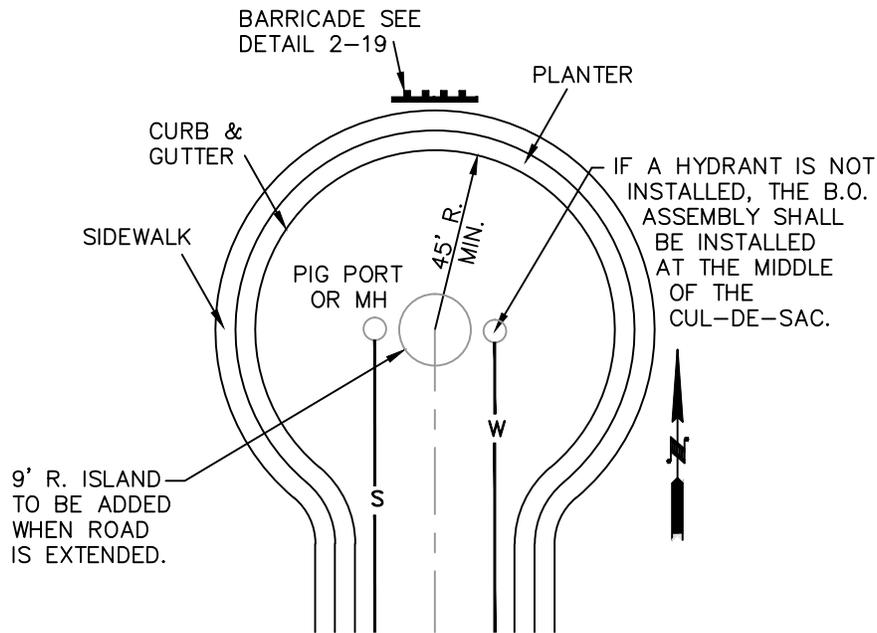
 CITY OF GIG HARBOR ENGINEERING DIVISION	
CEMENT CONCRETE VALLEY GUTTER	DETAIL NO. 2-10
APPROVED BY CITY ENGINEER <i>Bob Marshall</i>	DATE 1/1/2014



HAMMERHEAD



FIRE ACCESS ROAD

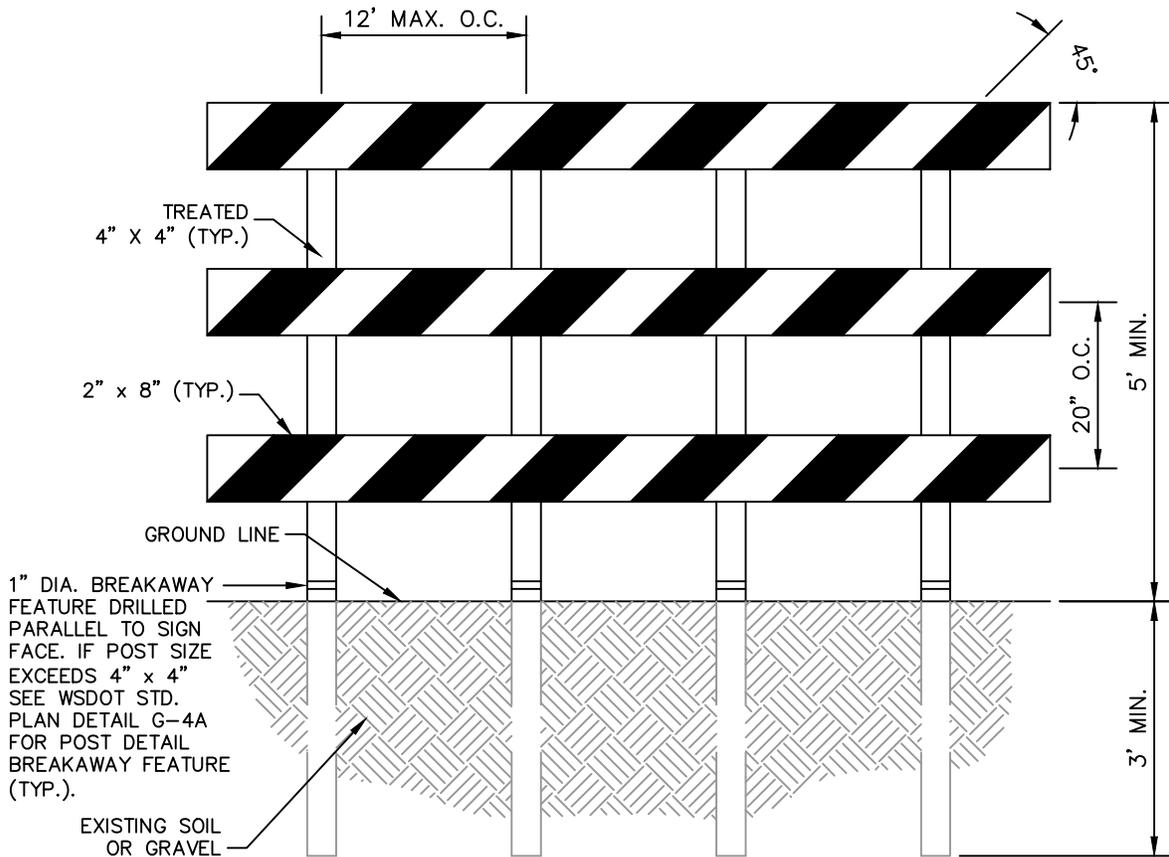


DEAD END CUL-DE-SAC
AND FUTURE ROUND-ABOUT

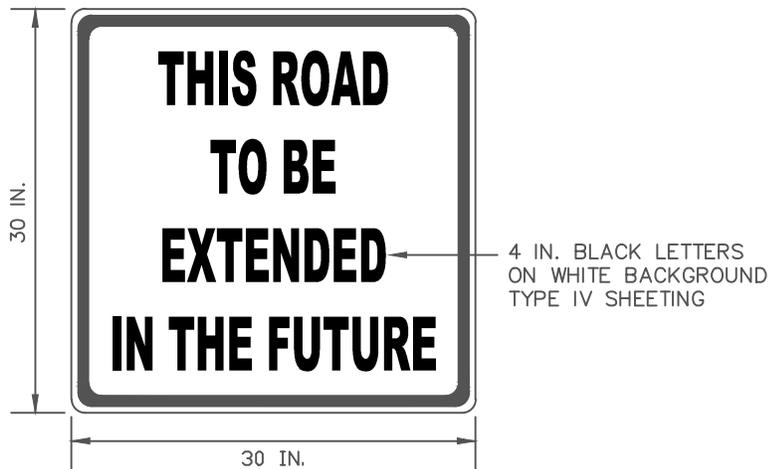
NOTES:

1. IF OVERHANG IS GREATER THAN 30", THE 10' SETBACK SHALL BE FROM EDGE OF THE OVERHANG.
2. THE 10' SETBACK MAY BE ENCROACHED UPON BY THE ACCESS ROAD AT THE CURVE RADII.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
DEAD END AND FIRE ACCESS	DETAIL NO. 2-11
APPROVED BY CITY ENGINEER <i>[Signature]</i>	DATE 1/1/2014



TEMPORARY BARRICADE
NOT TO SCALE



NOTICE SIGN
NOT TO SCALE

NOTES:

1. MARKINGS FOR BARRICADE SHALL BE ALTERNATE RED AND WHITE STRIPES (SLOPING DOWNWARD, PER MUTCD, AT AN ANGLE OF 45° TO CURB).
2. THE ENTIRE AREA OF RED AND WHITE STRIPES SHALL BE REFLECTORIZED SO AS TO BE VISIBLE UNDER NORMAL ATMOSPHERIC CONDITIONS FROM A MINIMUM DISTANCE OF 1,000 FEET WHEN ILLUMINATED BY THE LOW BEAMS OF STANDARD AUTOMOBILE HEADLIGHTS, THE PREDOMINANT COLORS FOR OTHER BARRICADE COMPONENTS SHALL BE WHITE.
3. BARRICADE SECTION SHALL EXTEND TO LIMITS OF THE PAVED SURFACE.
4. CONSTRUCT BARRICADE PER MUTCD TYPE 3, SECTION 6C-8.

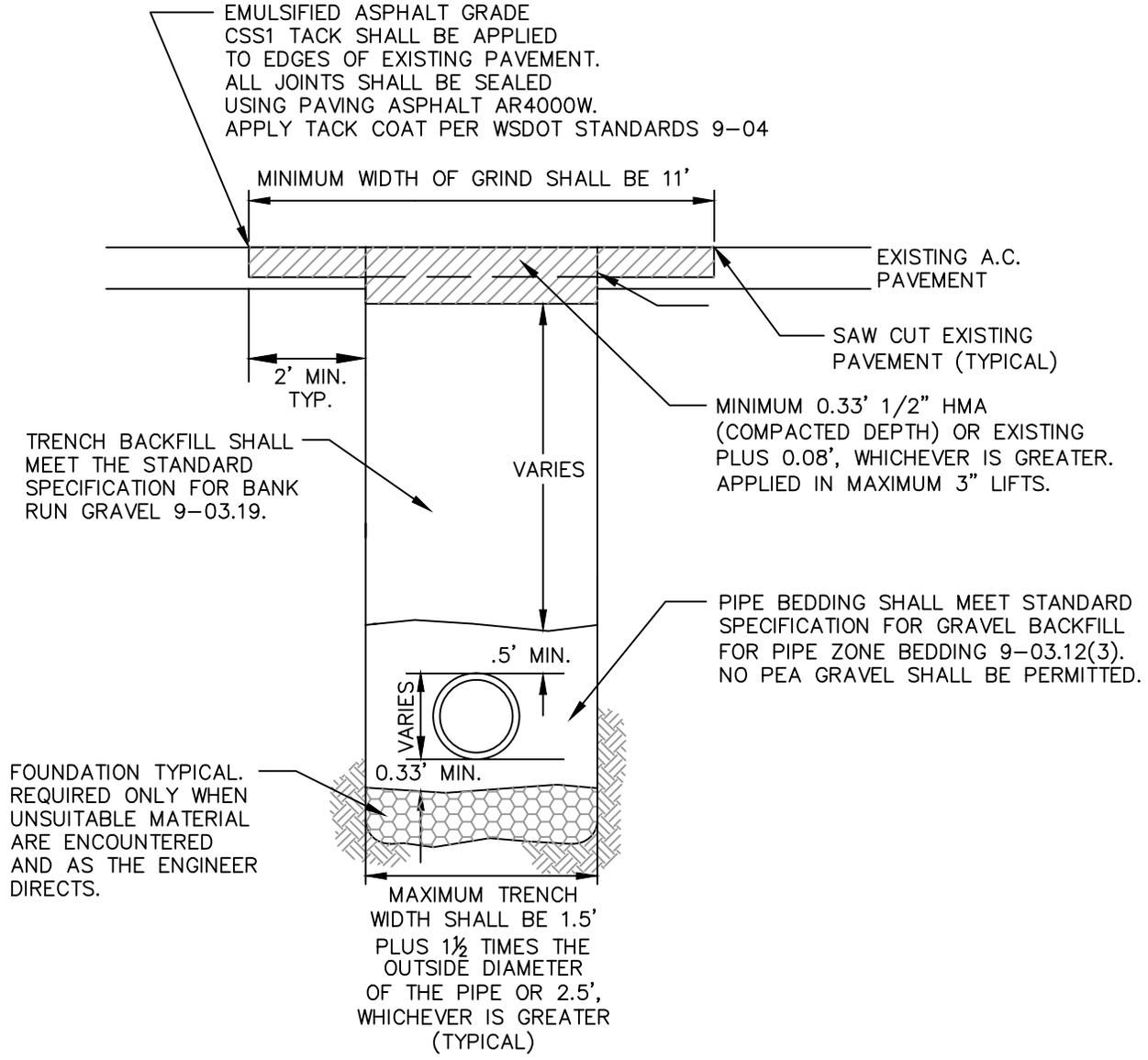
 CITY OF GIG HARBOR ENGINEERING DIVISION	
TEMPORARY BARRICADE AND NOTICE SIGN	DETAIL NO. 2-12
APPROVED BY CITY ENGINEER <i>John Manuel</i>	DATE 1/1/2014

TYPE		Boulevards / Arterial	Major Collector Type 1 / Type 2	Minor Collector Type 1 / Type 2	Non-classified Arterials and Commercial Alleys	Major / Minor Local Residential Private	Residential Alleys	Shared use Paths and Trails
AASHTO Flexible Pavement Design Standards	Initial ADT	30,000	20,000	15,000	10,000	2,000	500	1
	% ADTT	8	8	5	5	5	5	100
	% ADT, Bus	1	1	1	1	0	0	0
	GROWTH RATE (compound)	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Assumed CBR	4.5	4.5	4.5	4.5	4.5	4.5	4.5
	Assumed Mr	6,690	6,690	6,690	6,690	6,690	6,690	6,690
	Lanes in Design Direction	2	1	1	1	1	1	1
	Percent Trucks, Design Direction	50	50	50	50	100	100	100
	Percent Trucks, Design Lane	80	100	100	100	100	100	100
	DESIGN EAL	5,878,017	4,898,348	2,445,675	1,364,540	994,831	49,365	4,087
	Reliability, R%	95%	90%	90%	85%	85%	80%	80%
	Deviation, S ₀	0.45	0.45	0.45	0.45	0.45	0.45	0.45
	Initial Serviceability, P _i	4.20	4.20	4.20	4.20	4.20	4.20	4.20
	Terminal Serviceability, P _f	3	2.7	2.5	2.4	2.3	2.2	2.2
	Δ PSI	1.20	1.50	1.70	1.80	1.90	2.00	2.00
Design SN	5.6	4.81	4.18	3.58	3.41	2.03	1.3	
Standard Asphalt Pavement Section	HMA	8	6	6	5	4	2	2
	CSTC	2	2	2	2	2	2	2
	CSBC	14	14	9	8	10	6	2
Minimum Asphalt Pavement Section with Approved Design	HMA	6	6	4	4	3	2	2
	CSTC	2	2	2	2	2	2	2
	CSBC	8	6	6	6	5	4	
Minimum Concrete Pavement Section with Approved Design	<i>Concrete Streets are allowed with approved supporting design</i>							
	PCC	10	10	8	8	8	8	4
	CSBC	2	2	2	2	2	2	2

NOTES:

- Standard Asphalt Pavement Section shall be used when no custom design is provided.
- Minimum Pavement Sections are the minimum acceptable pavement sections for custom designs.
- Pavement sections for other facilities, such as low-impact designs and parking lots, shall be substantiated by geotechnical analyses and design documentation.

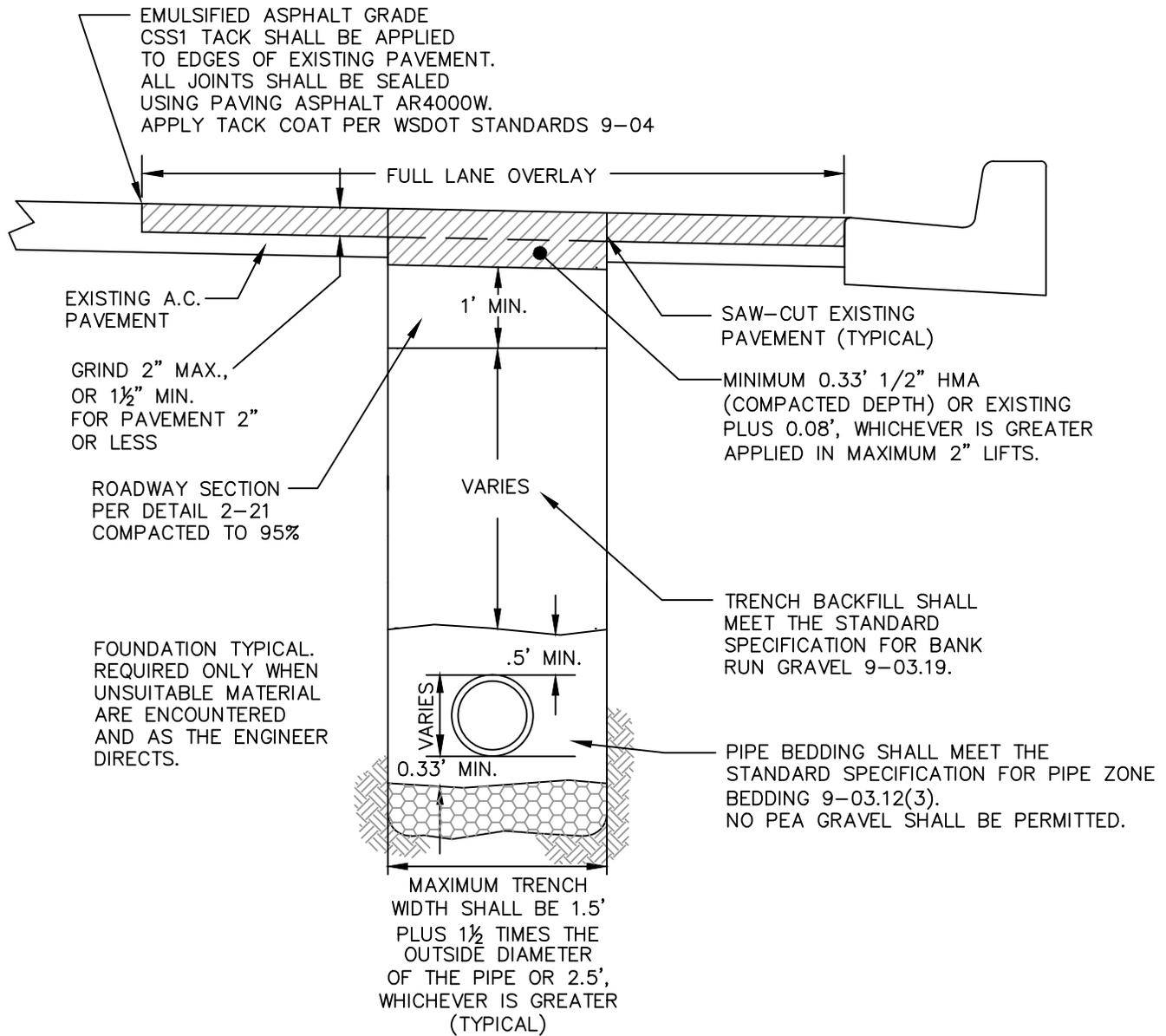
 CITY OF GIG HARBOR ENGINEERING DIVISION	
PAVEMENT DESIGN STANDARDS	DETAIL NO. 2-13
APPROVED BY CITY ENGINEER 	DATE 1/1/2014



NOTES:

1. ALL MATERIALS EXCEPT HMA AND BEDDING MATERIAL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY AS DETERMINED BY ASTM D1557.
2. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF GIG HARBOR STANDARDS.
3. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
4. SAW CUT PAVEMENT TO MAX. TRENCH WIDTH. BACKFILL AND PAVE TO TOP OF EXISTING PAVEMENT FOR TRENCH WIDTH. ALLOW 24 HOURS MINIMUM FOR TRENCH PATCH TO CURE. GRIND AND PAVE FINAL PATCH AS SHOWN.
5. CDF BACKFILL WILL BE REQUIRED AROUND DUCT BANKS THAT ARE STACKED VERTICALLY.

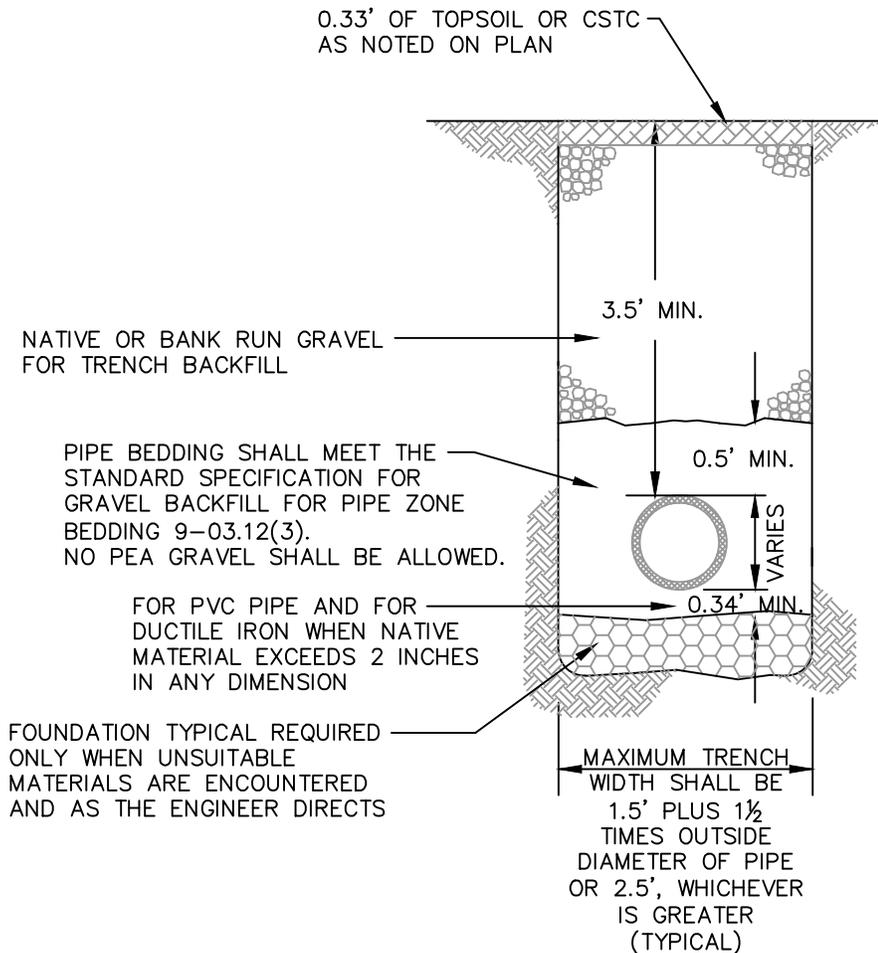
	CITY OF GIG HARBOR ENGINEERING DIVISION
PERPENDICULAR TRENCH RESTORATION ARTERIALS, BLVDS., AND COLLECTORS	
DETAIL NO.	
2-14	
APPROVED BY <i>[Signature]</i>	
CITY ENGINEER	DATE 1/1/2014



NOTES:

1. ALL MATERIALS EXCEPT A.C.P. AND BEDDING MATERIAL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY AS DETERMINED BY ASTM D1557.
2. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF GIG HARBOR STANDARDS.
3. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
4. SAW-CUT PAVEMENT TO MAX. TRENCH WIDTH. BACKFILL AND PAVE TO TOP OF EXISTING PAVEMENT FOR TRENCH WIDTH.
5. CDF BACKFILL WILL BE REQUIRED AROUND DUCT BANKS THAT ARE STACKED VERTICALLY.

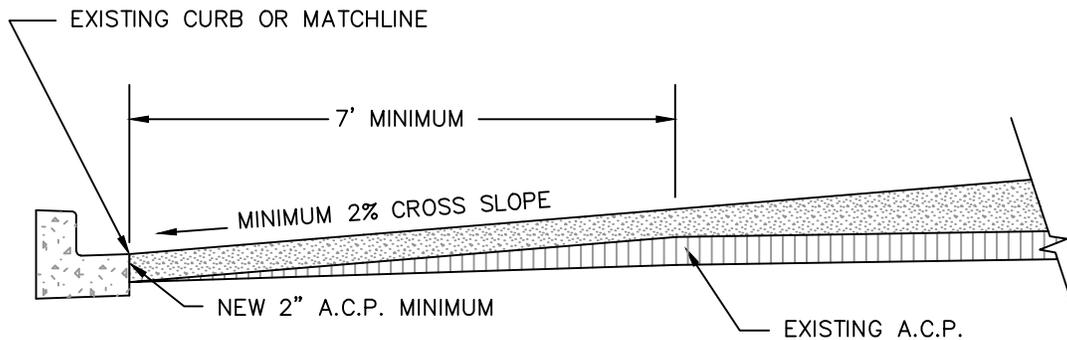
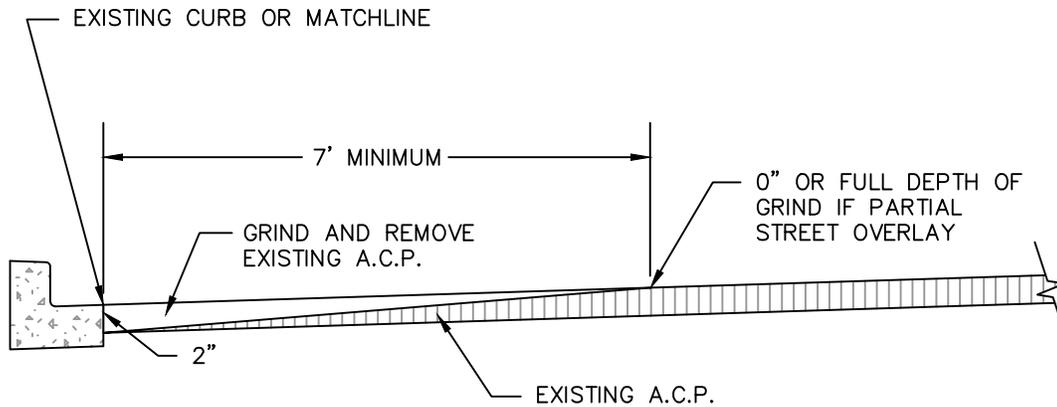
	CITY OF GIG HARBOR ENGINEERING DIVISION		
<h2 style="margin: 0;">PARALLEL TRENCH RESTORATION</h2> <h2 style="margin: 0;">ARTERIALS, BLVDS., AND COLLECTORS</h2>			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">DETAIL NO.</td> </tr> <tr> <td style="text-align: center; padding: 5px;">2-15</td> </tr> </table>	DETAIL NO.	2-15
DETAIL NO.			
2-15			
APPROVED BY <i>John Munnell</i> DATE 1/1/2014 CITY ENGINEER _____			



NOTES:

1. BEDDING SHALL CONFORM TO SECTION 9-03.12(3) OF STANDARD SPECIFICATIONS.
2. COMPACTION: BEDDING SHALL BE COMPACTED TO 95% MIN. AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE COMPACTED TO 85% MIN. IN UNPAVED AREA, AND 95% MIN. IN PAVED OR SHOULDER AREAS AS DETERMINED BY ASTM D1557.
3. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE MOST CURRENT WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY OF GIG HARBOR STANDARDS.
4. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. A BELL JOINT SHALL BE REQUIRED AT EACH JOINT FOR PROPER SUPPORT. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.

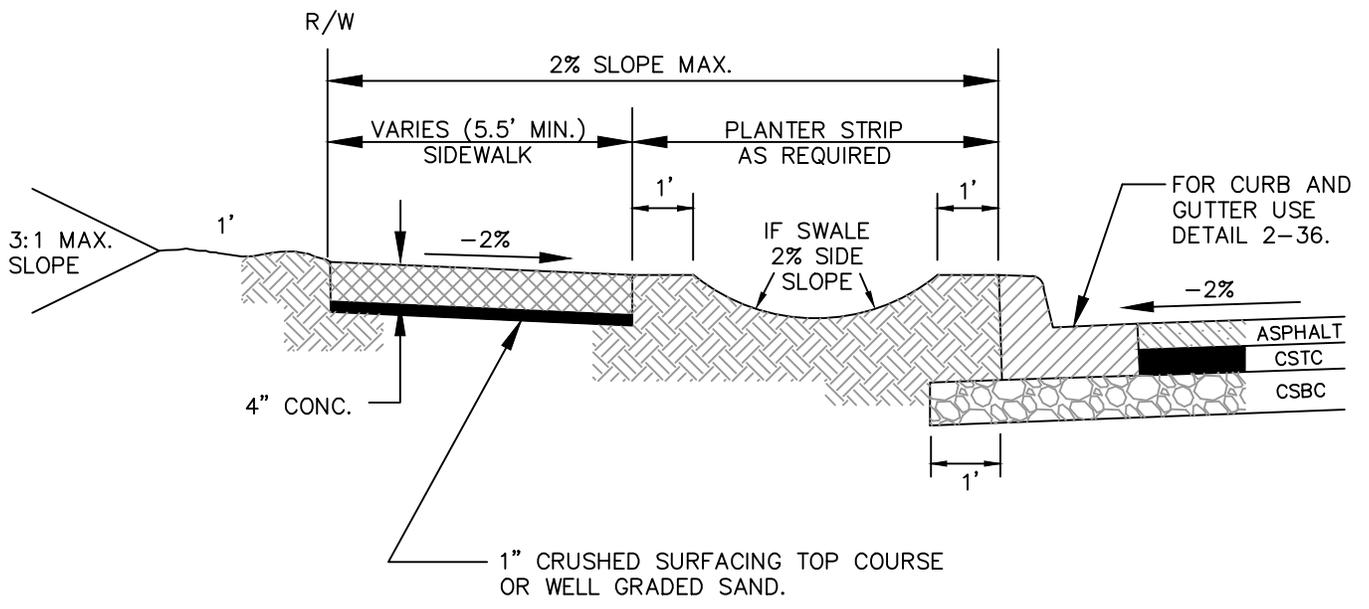
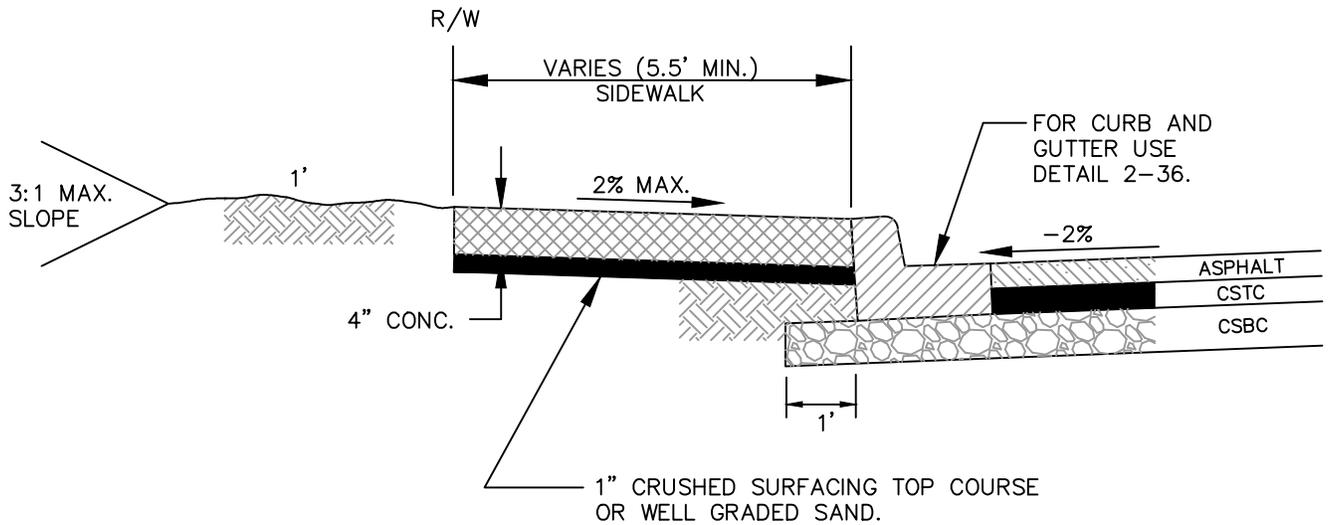
 CITY OF GIG HARBOR ENGINEERING DIVISION	
TRENCH RESTORATION FOR UNPAVED AREAS	DETAIL NO. 2-16
APPROVED BY CITY ENGINEER <i>handwritten signature</i>	DATE 1/1/2014



NOTES:

1. GRINDING SHALL BE DONE PER WSDOT 5-04.3(14) SPECIFICATIONS.
2. IDENTIFY AND PROTECT ALL LOOP AND LOOP LEAD-INS DURING GRINDING.
3. ALL PAVEMENT MARKINGS SHALL BE REMOVED PRIOR TO PAVING.
4. ALL INDUCTION LOOPS SHALL BE INSTALLED PRIOR TO FINAL OVERLAY.
5. EXISTING A.C.P. SHALL BE TACKED WITH EMULSIFIED ASPHALT TYPE CSS-1 PER WSDOT 5-04.3(5)A.
6. THE TRANSITION JOINT SHALL BE SEALED WITH A SAND SLURRY PER WSDOT 5-04.3(5)C.

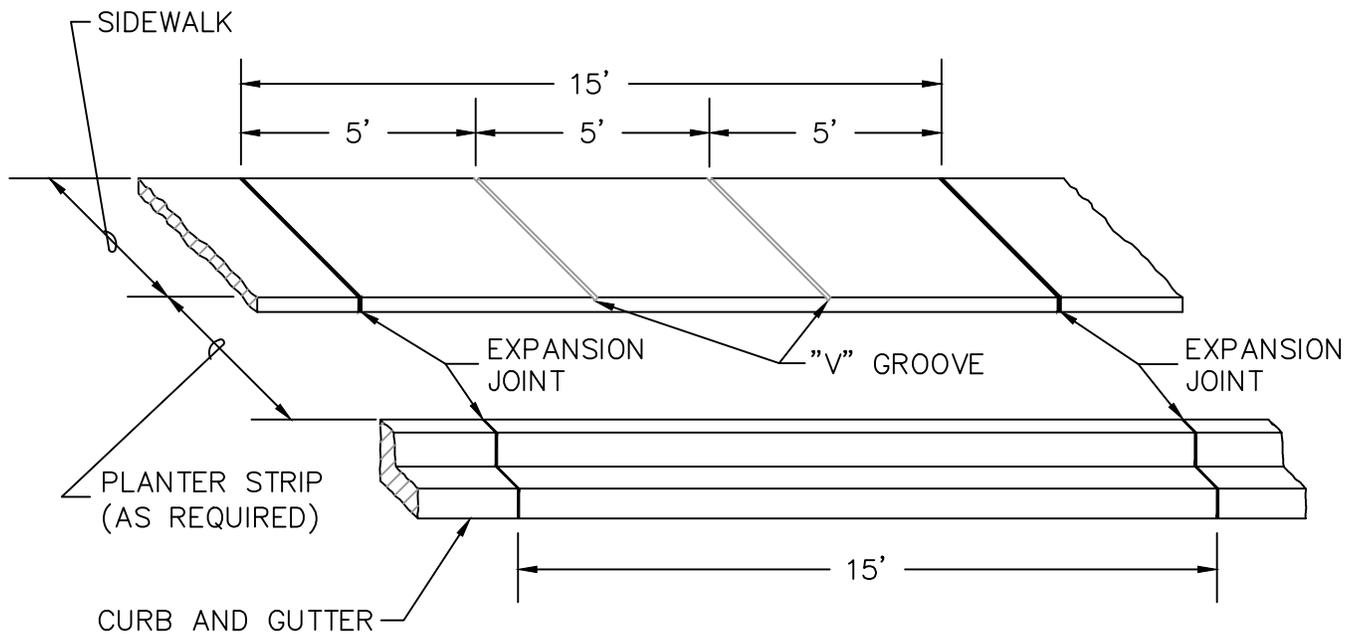
 CITY OF GIG HARBOR ENGINEERING DIVISION	
PAVEMENT EDGE GRINDING	DETAIL NO. 2-17
APPROVED BY CITY ENGINEER <i>John Munnell</i>	DATE 1/1/2014



NOTES:

1. FOR JOINTS AND SCORINGS SEE DETAIL 2-30.
2. CONCRETE DRIVEWAYS REQUIRE A MINIMUM DEPTH OF 6" AT 4000 PSI 3 DAY.
3. SIDE SLOPES ON SWALES WITHIN PLANTERS SHALL START A MINIMUM OF 1' BACK FROM SIDEWALK AND CURB.
4. SEE ROADWAY SECTIONS FOR STREET TREE LOCATIONS.

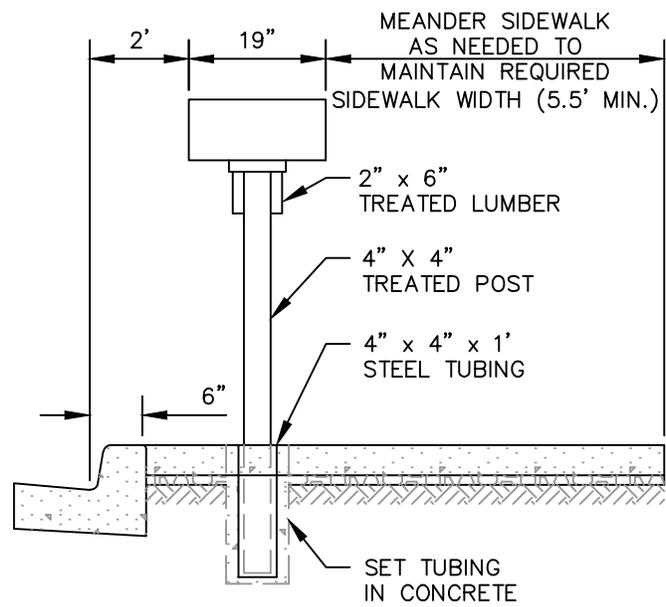
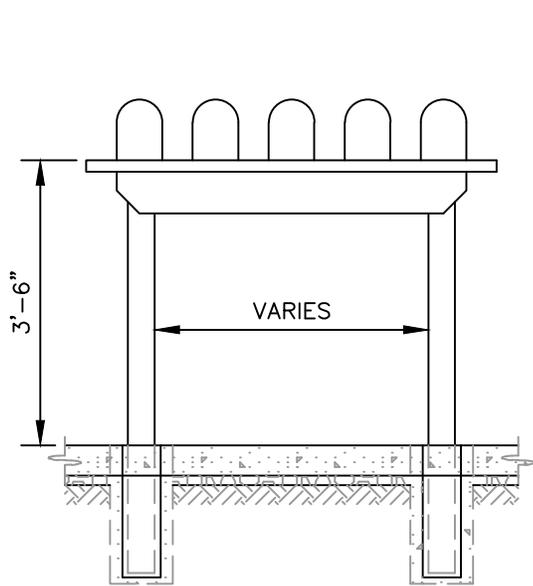
 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIDEWALK	DETAIL NO. 2-18
APPROVED BY <i>[Signature]</i> DATE 1/1/2014	



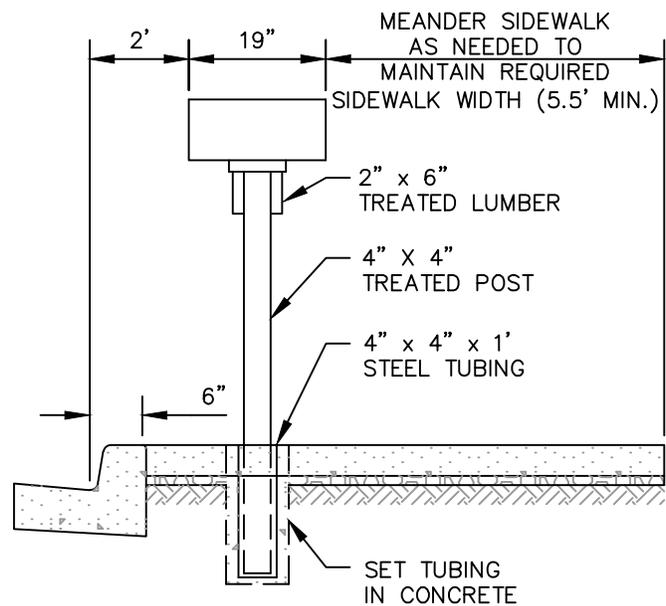
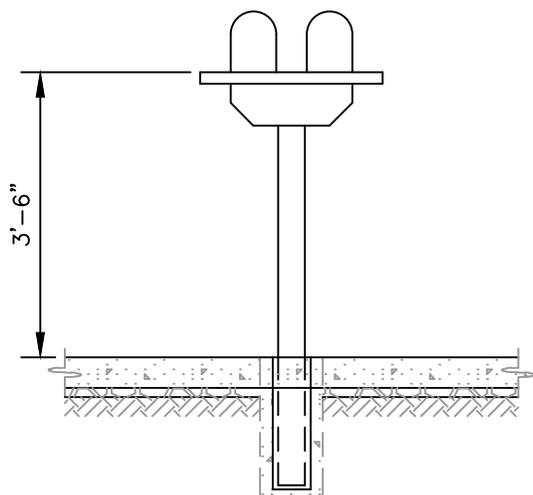
NOTES:

1. EXPANSION JOINT MATERIAL TO BE 3/8" THICK PRE-MOLDED JOINT FILLER TO FULL THICKNESS OF CONCRETE.
2. FORM AND SUBGRADE INSPECTION REQUIRED BEFORE POURING CONCRETE.
3. EXPANSION JOINTS SHALL BE INSTALLED IN CURB AND GUTTER AND IN SIDEWALK AT PC AND PT OF ALL CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED IN SIDEWALK AT SAME LOCATIONS AS THOSE IN CURB AND GUTTER WHEN SIDEWALK IS ADJACENT TO CURB AND GUTTER. UNLESS OTHERWISE DIRECTED BY ENGINEER.
4. ALL CONCRETE EDGES AND JOINTS SHALL HAVE A 4" SHINED FINISH APPLIED TO THEM FOLLOWING BROOM FINISH.

 <small>GIG HARBOR</small> <small>THE MARSHALL CITY</small>	CITY OF GIG HARBOR ENGINEERING DIVISION	
	SIDEWALK SPACING	DETAIL NO. 2-19
APPROVED BY CITY ENGINEER <i>David Samuel</i>		DATE 1/1/2014

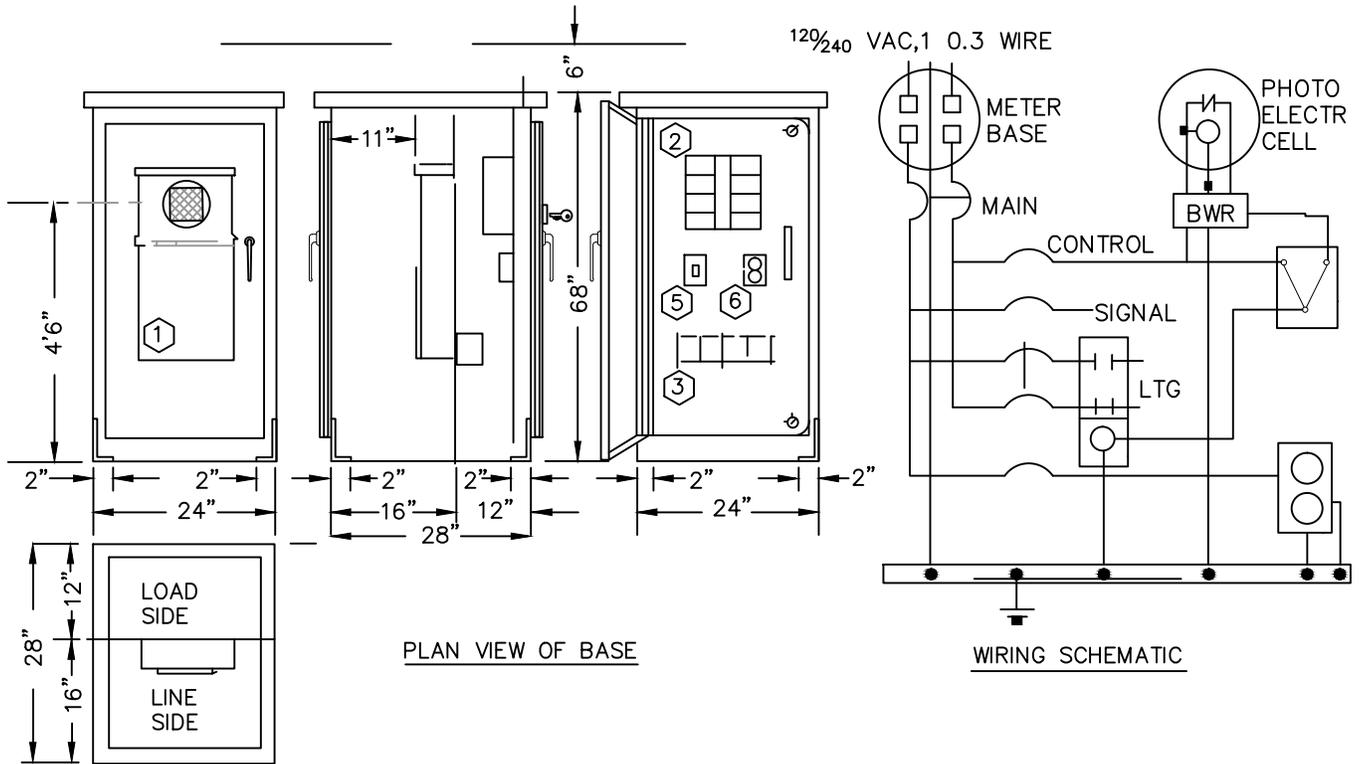


DOUBLE STAND
NOT TO SCALE



SINGLE STAND
NOT TO SCALE

	CITY OF GIG HARBOR ENGINEERING DIVISION	
	MAILBOX STAND	DETAIL NO. 2-22
APPROVED BY CITY ENGINEER <i>h.d. [signature]</i>	DATE 1/1/2014	



SERVICE CABINET FOR STREET LIGHTING CONTROL AND TRAFFIC SIGNAL
NOT TO SCALE

COMPONENT SCHEDULE

- ① METER BASE: 100 AMP, 4 JAW, AW #114TB, SAFETY SOCKET (CONTRACTOR TO VERIFY WITH SERVING UTILITY).
- ② PANELBOARD: 120/240 VAC, 100 AMP. 1 PHASE, 3 WIRE, COPPER BUS, 12 POLE WESTINGHOUSE BAB BOLT-ON BREAKERS:
 - 1 - 100% MAIN
 - 20% ILLUMINATION BRANCH
 - 5% SIGNAL BRANCH
 - 1 - 20% GROUND FAULT RECEPTACLE BRANCH
 - 1 - 15% CONTROL CKT BRANCH
- ③ CONTACTOR: LIGHTING RATED, 30 AMP, 120 VAC COIL - REQUIRED 4 POLE
- ④ PHOTO ELECTRIC CELL: 1800 VA, 120 VAC, ALR #SST-IES (PER WSDOT SPEC) TO BE PLACED AT TOP OF NEAREST STREET LIGHT POLE
- ⑤ PHOTO-CELL BYPASS SWITCH, SPST, 15 AMP, 277 VAC
- ⑥ GROUND FAULT RECEPTACLE, 120 VAC, DUPLEX, 20 A

UL LISTED PER STANDARD #508
SUITABLE FOR USE AS SERVICE ENTRANCE
EQUIPMENT

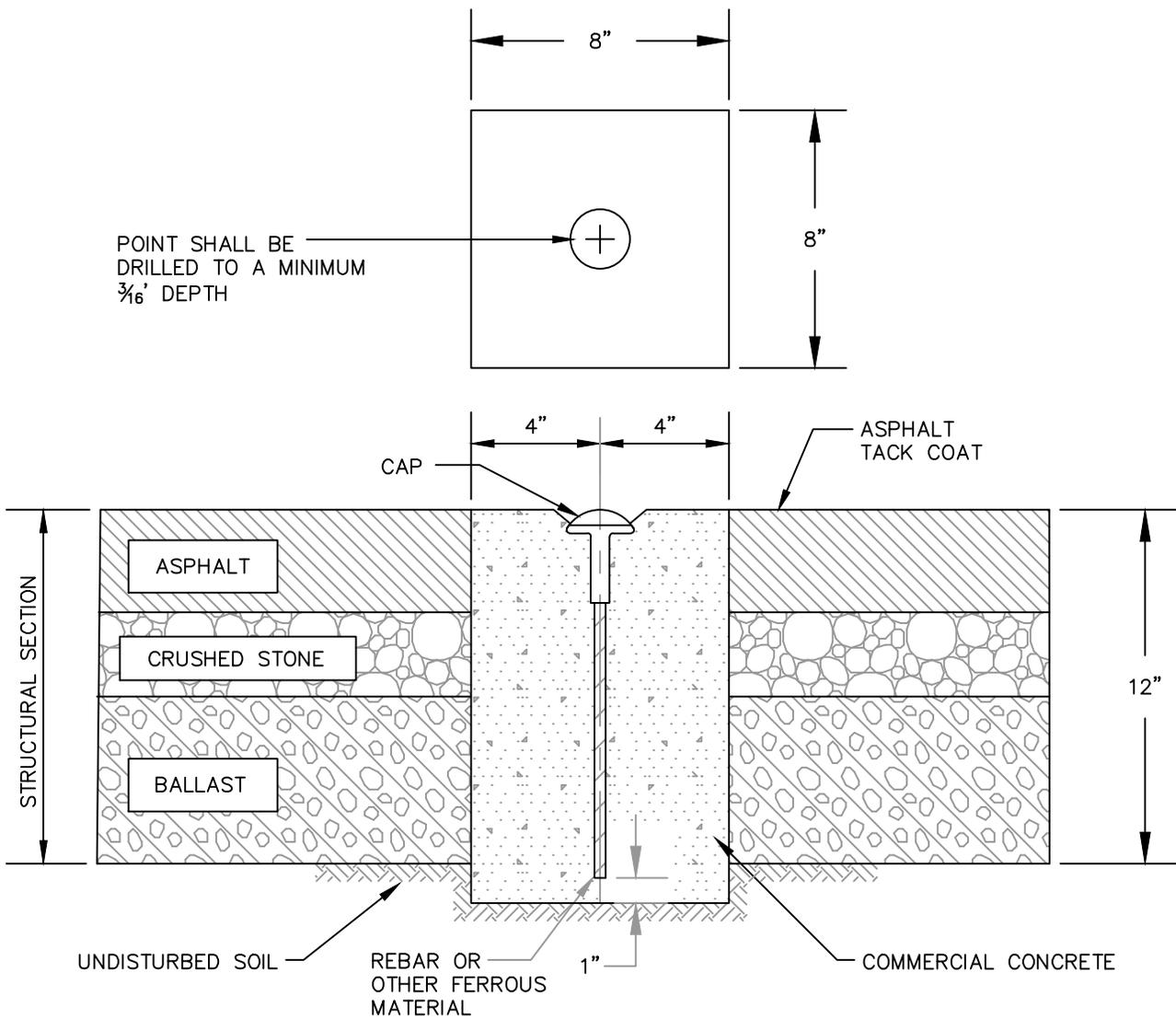
SERVICE CABINET SERIES 58309-GH R3
M.E. BELL S.O.#
SKYLINE ELECTRIC AND MFG COMPANY

CONCRETE BASE PER MANUFACTURERS
RECOMMENDATION OR WSDOT STANDARD PLAN

CABINET: NEMA 3R, PADMOUNT, 1/8" TYPE 50502-H32 ALUMINUM

CONSTRUCTION
2 SCREENED AND GASKETED VENTS
DOORS: HEAVY DUTY CONCEALED HINGES (LIFT-OFF TYPE) STAINLESS STEEL VAULT HANDLES, PAD-LOCKABLE METER DOOR, BEST CX LOCK ON DISTRIBUTION DOOR, POLISHED WIRE GLASS WINDOW IN METER DOOR, CLOSED CELL NEO-PRENE GASKET, CARD HOLDER
FINISH INSIDE: WHITE
FINISH OUTSIDE: HUNTER GREEN

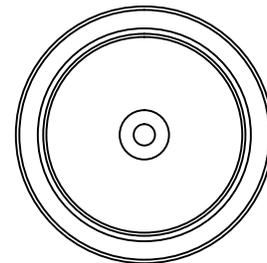
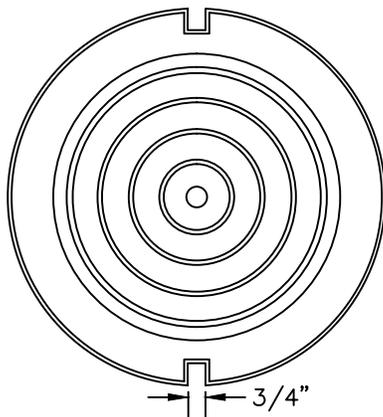
	CITY OF GIG HARBOR ENGINEERING DIVISION
METERED SERVICE DISCONNECT FOR STREET LIGHTING AND TRAFFIC SIGNALS	
DETAIL NO. 2-23	
APPROVED BY  DATE 1/1/2014 CITY ENGINEER	



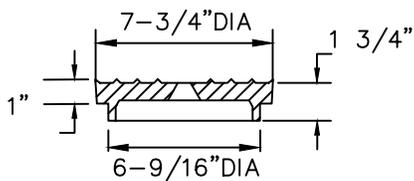
NOTES:

1. THIS MONUMENT TO BE USED PRIMARILY ON BITUMINOUS OR ASPHALT CONCRETE PAVEMENT FOR USE PRIMARILY IN SUBDIVISIONS AND MINOR ARTERIALS.
2. CONCRETE BASE DIMENSIONS SHOWN ARE MINIMUM. CONCRETE BASE NEED NOT BE FORMED.
3. CAP SHALL BE "BERNTSEN RB SERIES" OR BRASS PLUG MARKER.
4. CONCRETE TO BE PLACED ON A FIRM AND UNYIELDING FOUNDATION.
5. MONUMENT POSITION SHALL BE SET BY A PROFESSIONAL LAND SURVEYOR LICENSED BY THE STATE OF WASHINGTON WHOSE CERTIFICATE NUMBER SHALL BE STAMPED ON THE CAP.
6. SUFFICIENT FERROUS METAL SHALL BE PLACED IN CONCRETE TO ALLOW DETECTION BY A METAL DETECTOR.

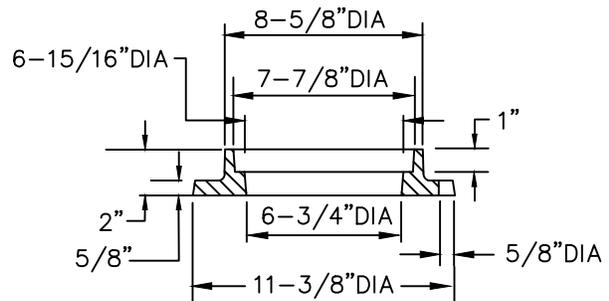
 CITY OF GIG HARBOR ENGINEERING DIVISION	
CAST IN PLACE MONUMENT	DETAIL NO. 2-24
APPROVED BY <i>[Signature]</i> DATE 1/1/2014 CITY ENGINEER	



BOTTOM VIEW



COVER SECTION



FRAME SECTION

NOTES:

1. ESTIMATED WEIGHT:
 COVER = 17 LBS (8 KG)
 FRAME = 16 LBS (7 KG)
 UNIT = 33 LBS (15 KG)
2. MATERIAL SPECIFICATIONS:
 COVER - GRAY IRON, ASTM A48 CL35B
 FRAME - GRAY IRON, ASTM A48 CL35B
3. LOAD RATING: HEAVY DUTY
4. OPEN AREA: N/A



CITY OF GIG HARBOR
ENGINEERING DIVISION

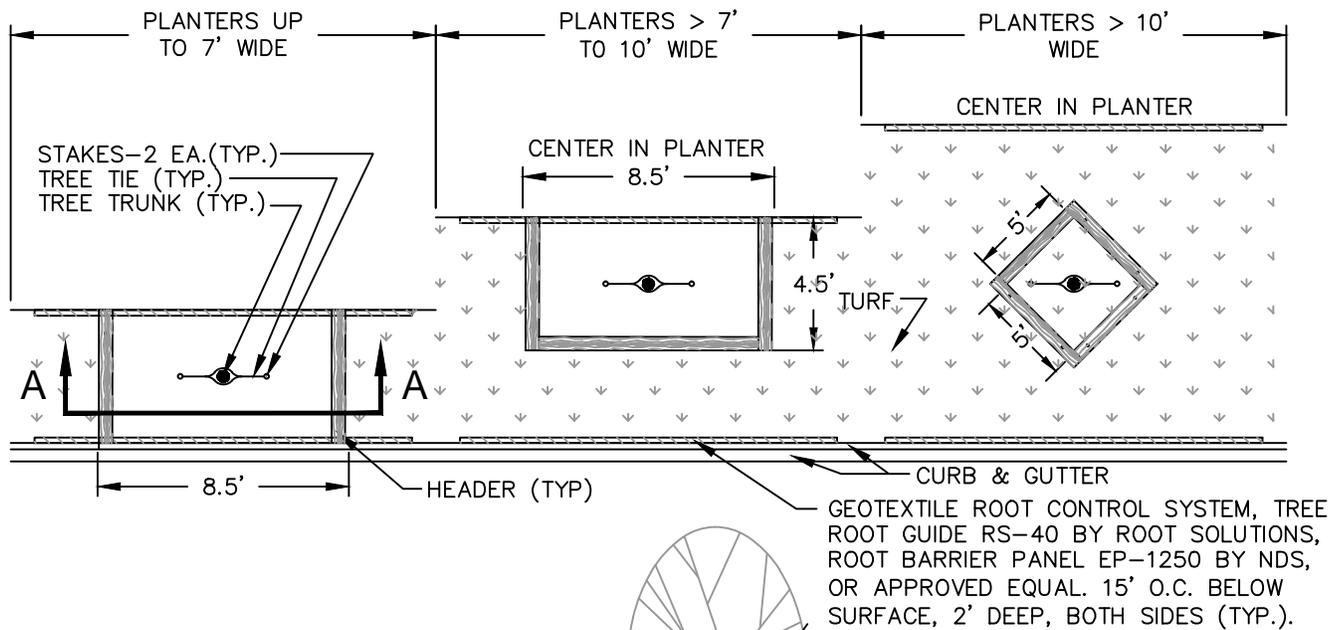
**MONUMENT CASE AND
COVER WITH RISER**

DETAIL NO.

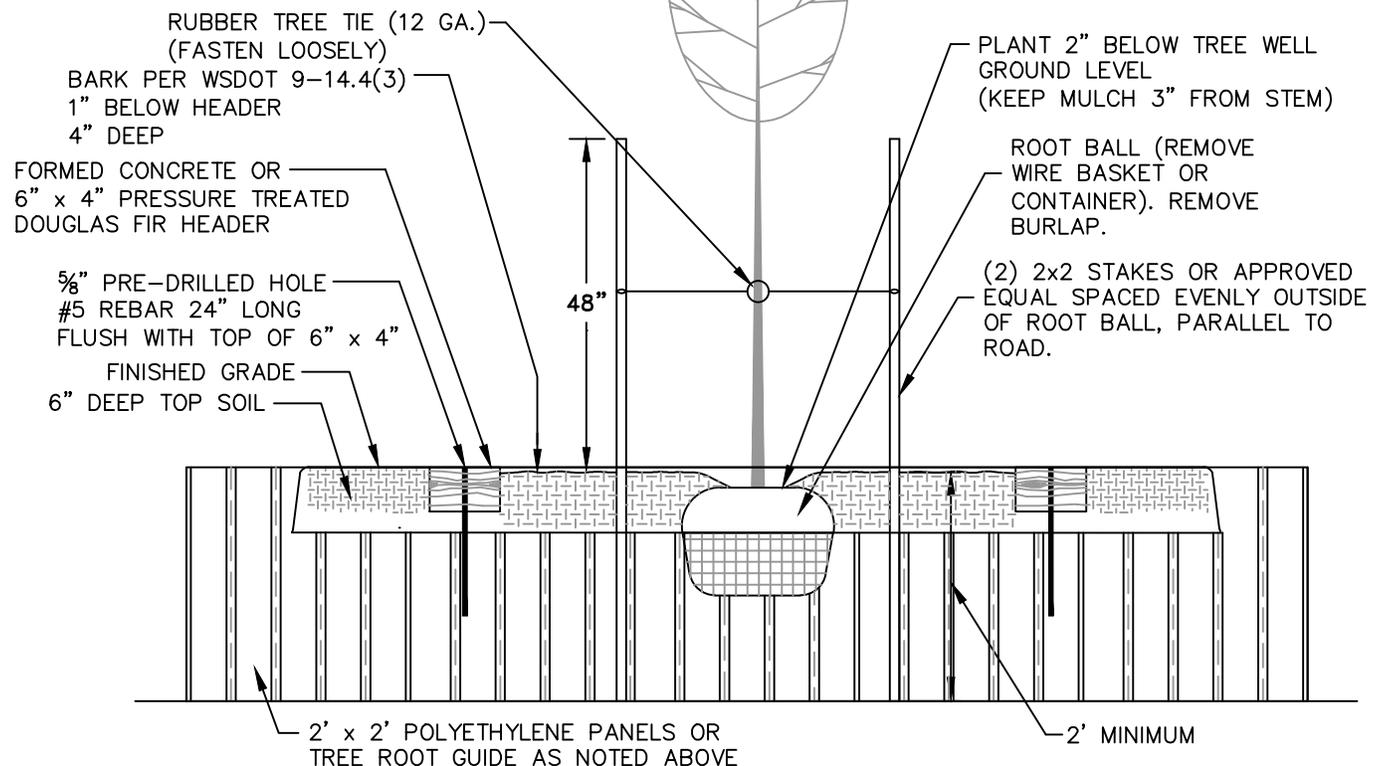
2-25

APPROVED BY
CITY ENGINEER

DATE 1/1/2014



GEOTEXTILE ROOT CONTROL SYSTEM, TREE ROOT GUIDE RS-40 BY ROOT SOLUTIONS, ROOT BARRIER PANEL EP-1250 BY NDS, OR APPROVED EQUAL. 15' O.C. BELOW SURFACE, 2' DEEP, BOTH SIDES (TYP.).

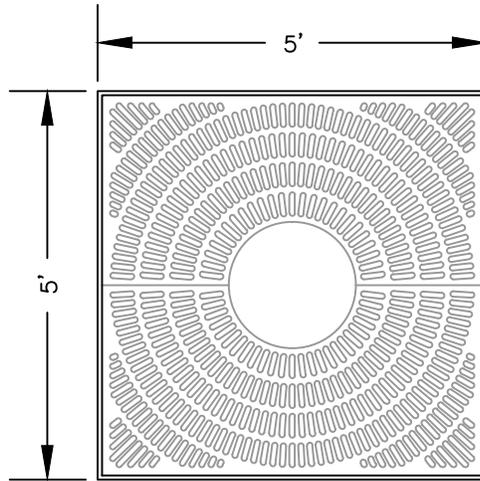


SECTION A-A

NOTES:

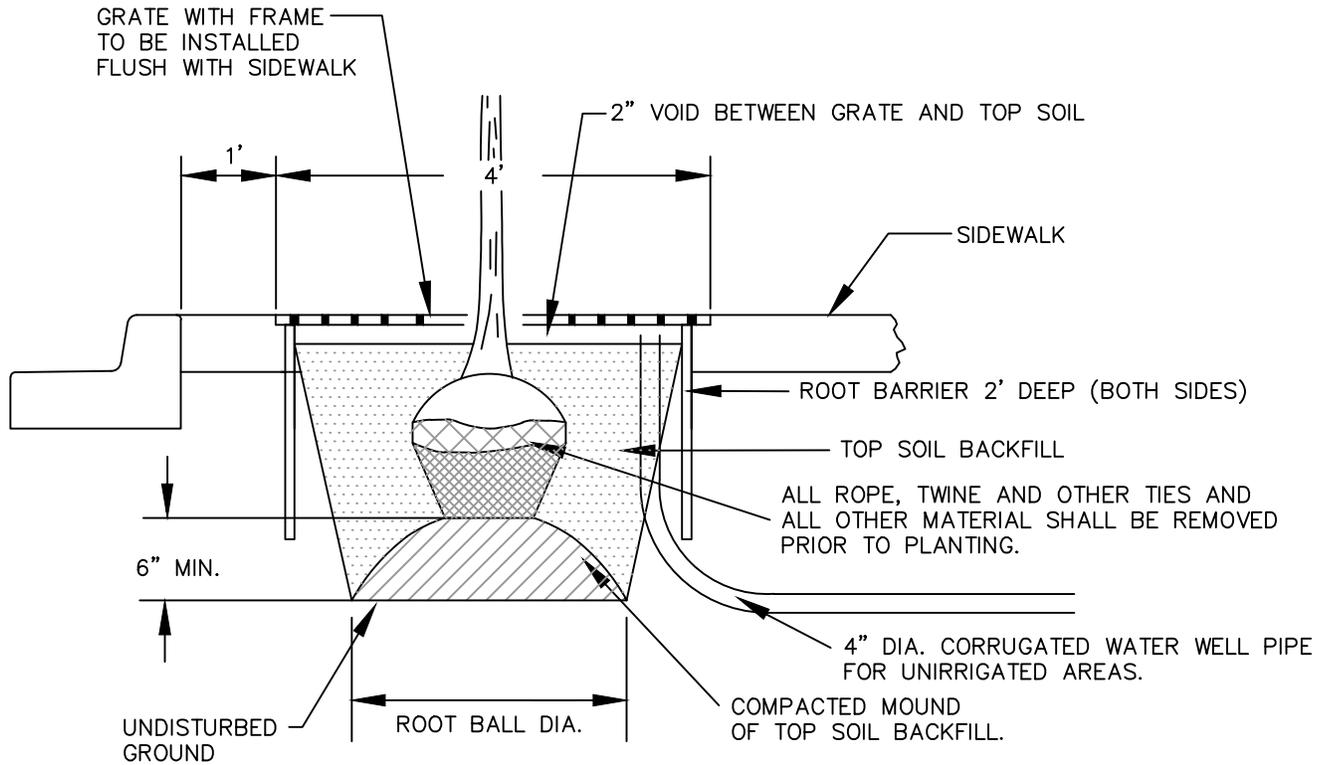
1. THE GEOTEXTILE ROOT CONTROL SYSTEM SHALL BE 2' x 2' BIOBARRIER PANELS, OR 2' x 15' TREE ROOTGUIDE RS-40 BY ROOT SOLUTIONS, OR CITY APPROVED EQUAL.
2. EACH HEADER SHALL BE SECURED WITH TWO #5 REBAR.

 <small>GIG HARBOR THE MARINE CITY</small>	CITY OF GIG HARBOR ENGINEERING DIVISION
TREE PLANTER AND BARRIER IN PLANTER STRIP	<small>DETAIL NO.</small> 2-26
<small>APPROVED BY</small> <small>CITY ENGINEER</small>	<small>DATE</small> 1/1/2014

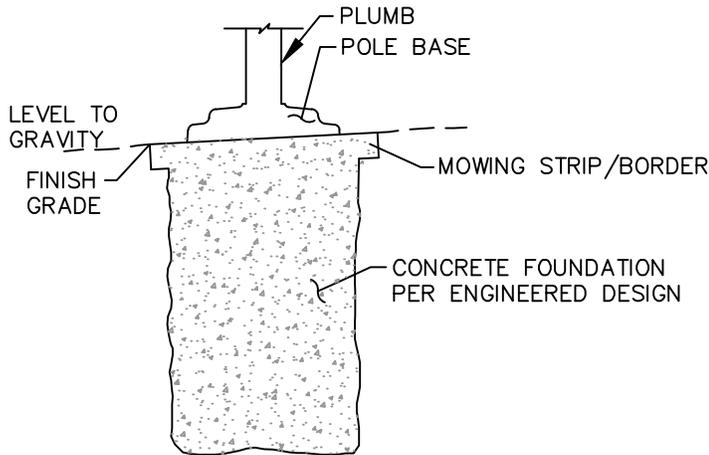


GRATE NOTES:

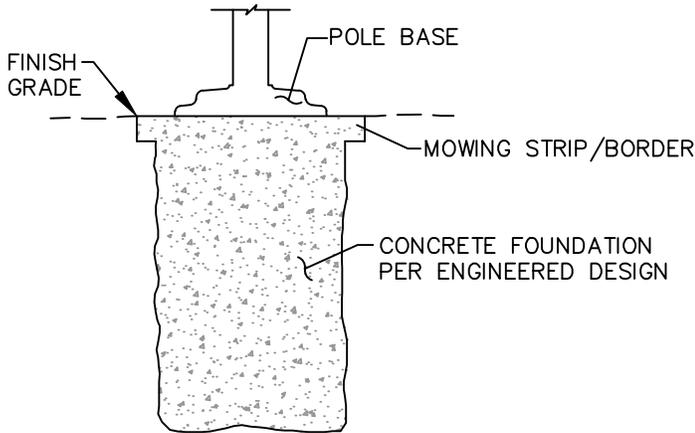
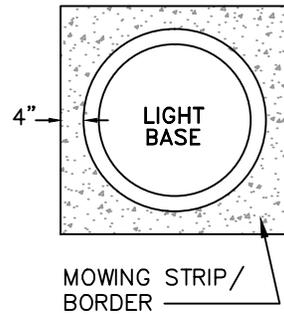
1. INITIAL OPENING FOR TREE SHALL BE 16".
2. GRATES SHALL BE CAST IN TWO PIECES.
3. NO OPENING IN GRATE DESIGN SHALL BE GREATER THAN 1/2".
4. GRATE SHALL BE CAST IRON PER ASTM A48 CLASS 35b OR BETTER.
5. GRATE SHALL BE 5' SQUARE "FAN" BY URBAN ACCESSORIES OR APPROVED EQUAL. GRATES SHALL BE INSTALLED WITH BRACKETS AND/OR FRAMES PER THE MANUFACTURER'S RECOMMENDATION. ALL GRATES SHALL MEET ADA STANDARDS.



 CITY OF GIG HARBOR ENGINEERING DIVISION	
TREE WELL AND GRATE	DETAIL NO. 2-27
APPROVED BY CITY ENGINEER <i>h.d. [signature]</i> DATE 1/1/2014	



SLOPED GRADE APPLICATION



LEVEL GRADE APPLICATION

NOTE:

1. SIZE OF OCTAGON BASE AND MOWING STRIP/BORDER, ARE DETERMINED BY SIZE OF STREET LIGHT BASE.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
DECORATIVE LUMINAIRE BASE	DETAIL NO. 2-28
APPROVED BY CITY ENGINEER <i>David Samuel</i> DATE <u>1/1/2014</u>	

*** LUMEC DESCRIPTION OF COMPONENTS:**

* OR APPROVED EQUAL

BRACKET: TN12-1A-GN6TX-LMS19650A

ARM: MADE OF CAST 365 ALUMINUM, WELDED.

ADAPTOR: CLAMPS MADE OF CAST ALUMINUM, WELDED TO THE ARM AND MECHANICALLY FASTENED TO THE POLE BY FOUR BOLTS AND NUTS.

POLE: AM8U-15-GN6TX

POLE SHAFT: MADE FROM A ONE-PIECE, SEAMLESS 4" ROUND (102mm) TUBE OF EXTRUDED ALUMINUM WELDED OVER AND IN A 8⁵/₈" ROUND (219mm) EXTRUDED ALUMINUM POLE BASE. THE ASSEMBLY IS WELDED TO BOTH THE TOP AND BOTTOM OF A CAST ALUMINUM ANCHOR PLATE.

JOINT COVER: MADE FROM TWO PIECES OF CAST ALUMINUM MECHANICALLY FASTENED TO THE JUNCTION WITH STAINLESS STEEL HARDWARE.

POLE BASE: SHALL BE MADE FROM A 219mm HIGH TENSILE STEEL RUBBING BASE HAVING A 0.180" WALL THICKNESS, WELDED TO BOTH THE BOTTOM AND TOP OF THE ANCHOR PLATE.

MAINTENANCE OPENING: THE POLE SHALL HAVE A 4¹/₂"x10" (114x254mm) MAINTENANCE OPENING CENTERED 25 1/4" FROM THE BOTTOM OF THE ANCHOR PLATE, COMPLETE WITH A WEATHERPROOF CAST 365 ALUMINUM COVER AND A FACTOR ASSEMBLED COPPER GROUND LUG.

BASE COVER: DECORATIVE BASE COVER MADE FROM CAST ALUMINUM PIECES MECHANICALLY ASSEMBLED TOGETHER WITH STAINLESS STEEL HARDWARE AROUND THE BASE OF THE POLE.

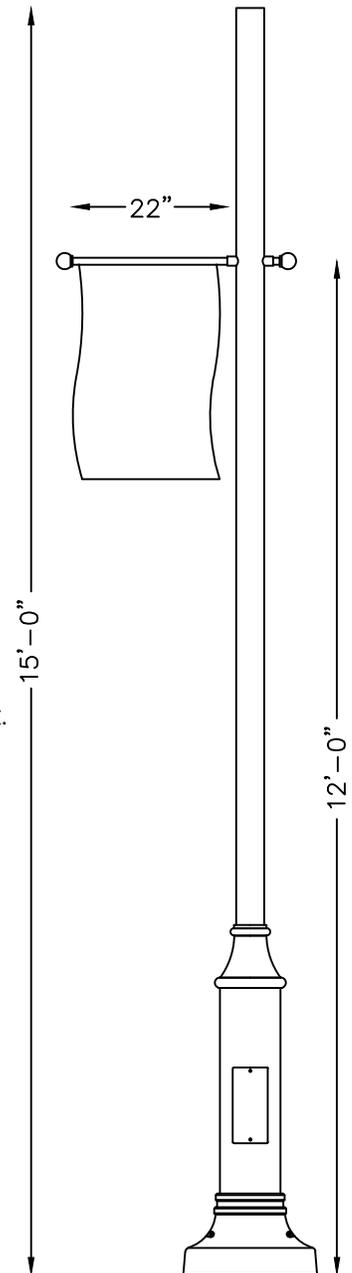
POLE OPTIONS: BANNER ARM MADE OF ALUMINUM TUBING 1¹/₈" OUTSIDE DIAMETER, MECHANICALLY ASSEMBLED TO THE POLE. BANNER ARM PLACEMENT TO BE AT 12' 0" FROM BASE OF POLE.

MISCELLANEOUS:

WIRING: TYPE TIEW 14 GA. 12" MIN. EXCEEDING TOP OF POLE. ALL ELECTRICAL CONNECTIONS SHALL BE MADE WITH QUICK-DISCONNECT CONNECTORS.

HARDWARE: ALL EXPOSED SCREWS WILL BE STAINLESS STEEL. NEOPRENE AND/OR SILICONE GASKETING IS APPLIED.

COLOR: FOREST GREEN. FINISH: TEXTURED. APPLICATION OF A POLYESTER POWDER COATED PAINT. (5mils/127 microns). THE CHEMICAL COMPOSITION PROVIDED A HIGHLY DURABLE UV AND SALT SPRAY RESISTANT FINISH IN ACCORDANCE TO THE ASTM-B117-73 STANDARD AND HUMIDITY PROOF IN ACCORDANCE TO THE ASTM-D2247-68 STANDARD.



 CITY OF GIG HARBOR ENGINEERING DIVISION	
STANDARD 15 FOOT LIGHT POLE	
DETAIL NO. 2-29	
APPROVED BY CITY ENGINEER <i>haldemann</i>	DATE 1/1/2014

*** LUMEC DESCRIPTION OF COMPONENTS:**

* OR APPROVED EQUAL

BRACKET: TN12-1A-GN6TX-LMS19650A

ARM: MADE OF CAST 365 ALUMINUM, WELDED.

ADAPTOR: CLAMPS MADE OF CAST ALUMINUM, WELDED TO THE ARM AND MECHANICALLY FASTENED TO THE POLE BY FOUR BOLTS AND NUTS.

POLE: SSM8V-20 MADE FROM A ONE-PIECE, SEAMLESS 5 9/15" ROUND (141mm) HIGH TENSILE CARBON STEEL SHAFT SEALED BY A ROLLED AND FLATTENED VERTICAL WELD SEAM AND WELDED OVER AND IN A 8 5/8" ROUND (219mm) HIGH-TENSILE CARBON-STEEL POLE BASE. THE ASSEMBLY IS WELDED TO BOTH THE TOP AND THE BOTTOM OF A STEEL ANCHOR PLATE. A 4 1/2"x10" (114x254mm) MAINTENANCE OPENING IS COMPLETE WITH COVER AND COPPER GROUND LUG.

JOINT COVER: MADE FROM TWO PIECES OF CAST ALUMINUM MECHANICALLY FASTENED TO THE JUNCTION WITH STAINLESS STEEL HARDWARE.

BASE COVER: DECORATIVE BASE COVER MADE FROM CAST-ALUMINUM PIECES MECHANICALLY ASSEMBLED TOGETHER WITH STAINLESS STEEL HARDWARE AROUND THE BASE OF THE POLE.

MAINTENANCE OPENING: THE POLE SHALL HAVE A 4 1/2"x10" (114x254mm) MAINTENANCE OPENING CENTERED 25 1/4" FROM THE BOTTOM OF THE ANCHOR PLATE, COMPLETE WITH A WEATHERPROOF CAST 365 ALUMINUM COVER AND A FACTOR ASSEMBLED COPPER GROUND LUG.

BASE COVER: DECORATIVE BASE COVER MADE FROM CAST ALUMINUM PIECES MECHANICALLY ASSEMBLED TOGETHER WITH STAINLESS STEEL HARDWARE AROUND THE BASE OF THE POLE.

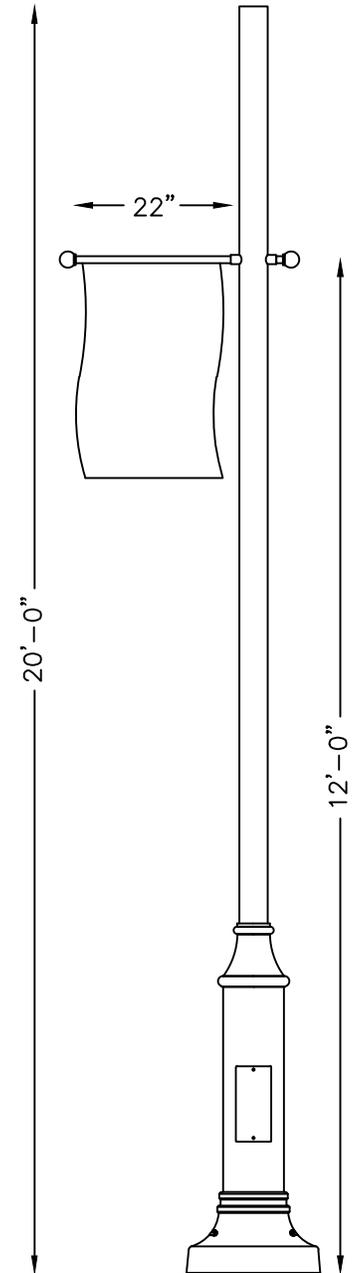
POLE OPTIONS: BANNER ARM MADE OF ALUMINUM TUBING 1 1/16" OUTSIDE DIAMETER, MECHANICALLY ASSEMBLED TO THE POLE. BANNER ARM PLACEMENT TO BE AT 12' 0" FROM BASE OF POLE.

MISCELLANEOUS:

WIRING: TYPE TIEW 14 GA. 12" MIN. EXCEEDING TOP OF POLE. ALL ELECTRICAL CONNECTIONS SHALL BE MADE WITH QUICK-DISCONNECT CONNECTORS.

HARDWARE: ALL EXPOSED SCREWS WILL BE STAINLESS STEEL. NEOPRENE AND/OR SILICONE GASKETING IS APPLIED.

COLOR: FOREST GREEN. FINISH: TEXTURED. APPLICATION OF A POLYESTER POWDER COATED PAINT. (5mils/127 microns). THE CHEMICAL COMPOSITION PROVIDED A HIGHLY DURABLE UV AND SALT SPRAY RESISTANT FINISH IN ACCORDANCE TO THE ASTM-B117-73 STANDARD AND HUMIDITY PROOF IN ACCORDANCE TO THE ASTM-D2247-68 STANDARD.



 CITY OF GIG HARBOR ENGINEERING DIVISION	
STANDARD 20 FOOT LIGHT POLE	
DETAIL NO. 2-30	
APPROVED BY CITY ENGINEER <i>h.d. [signature]</i>	DATE 1/1/2014

LUMEC DESCRIPTION OF COMPONENTS:

* OR APPROVED EQUAL

BRACKET: TN12-1A-GN6TX-LMS19650A

ARM: MADE OF CAST 365 ALUMINUM, WELDED.

ADAPTOR: CLAMPS MADE OF CAST ALUMINUM, WELDED TO THE ARM AND MECHANICALLY FASTENED TO THE POLE BY FOUR BOLTS AND NUTS.

POLE: SSM8V-30-BAS22-GN6-TX-LMS19650A. MADE FROM 141mm ROUND HIGH TENSILE CARBON STEEL TUBING, HAVING A 0.250" WALL THICKNESS, WELDED TO THE POLE BASE.

JOINT COVER: TWO-PIECE, ROUND JOINT COVER MADE FROM CAST 365 ALUMINUM, MECHANICALLY FASTENED WITH STAINLESS STEEL SCREWS.

POLE BASE: SHALL BE MADE FROM A 219mm HIGH TENSILE STEEL TUBING BASE HAVING A 0.180" WALL THICKNESS, WELDED TO BOTH THE BOTTOM AND TOP OF THE ANCHOR PLATE.

MAINTENANCE OPENING: THE POLE SHALL HAVE A 4½"x10" (114x254mm) MAINTENANCE OPENING CENTERED 25 1/4" FROM THE BOTTOM OF THE ANCHOR PLATE, COMPLETE WITH A WEATHERPROOF CAST 365 ALUMINUM COVER AND A FACTOR ASSEMBLED COPPER GROUND LUG.

BASE COVER: TWO-PIECE, ROUND BASE COVER MADE FROM SPUN 1100-0 ALUMINUM, MECHANICALLY FASTENED WITH STAINLESS STEEL SCREWS.

BREAK-AWAY COVER: ONE PIECE ROUND BASE MADE FROM SPUN 1100-0 ALUMINUM, MECHANICALLY FASTENED. ONLY ALLOWED ON ROADWAYS WITH POSTED 35 MILE PER HOUR SPEED LIMIT OR GREATER.

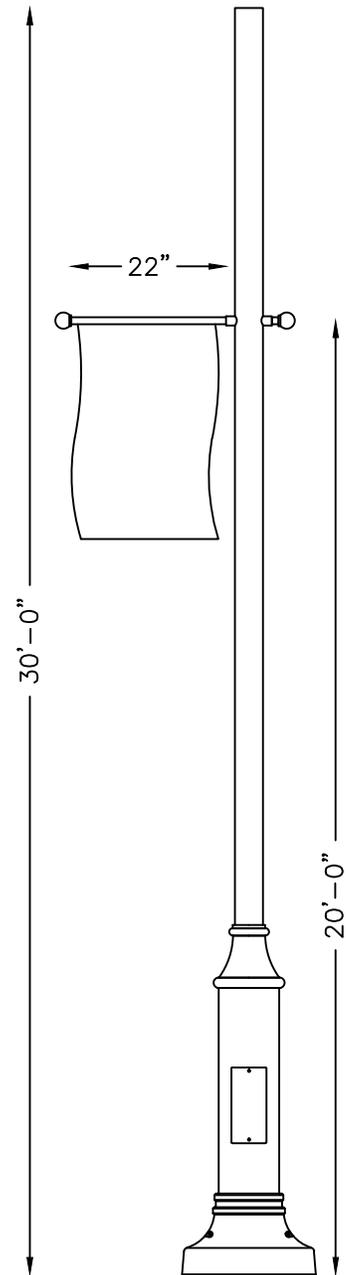
POLE OPTIONS: BANNER ARM MADE OF ALUMINUM TUBING 1 1/16" OUTSIDE DIAMETER, MECHANICALLY ASSEMBLED TO THE POLE. BANNER ARM PLACEMENT TO BE AT 20' 0" FROM BASE OF POLE.

MISCELLANEOUS:

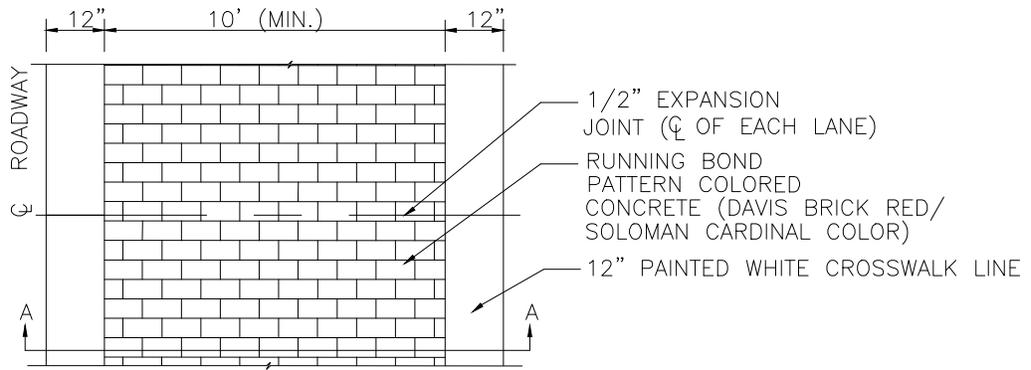
WIRING: TYPE TIEW 14 GA. 12" MIN. EXCEEDING TOP OF POLE. ALL ELECTRICAL CONNECTIONS SHALL BE MADE WITH QUICK-DISCONNECT CONNECTORS.

HARDWARE: ALL EXPOSED SCREWS WILL BE STAINLESS STEEL. NEOPRENE AND/OR SILICONE GASKETING IS APPLIED.

COLOR: FOREST GREEN. FINISH: TEXTURED. APPLICATION OF A POLYESTER POWDER COATED PAINT. (5mils/127 microns). THE CHEMICAL COMPOSITION PROVIDED A HIGHLY DURABLE UV AND SALT SPRAY RESISTANT FINISH IN ACCORDANCE TO THE ASTM-B117-73 STANDARD AND HUMIDITY PROOF IN ACCORDANCE TO THE ASTM-D2247-68 STANDARD.

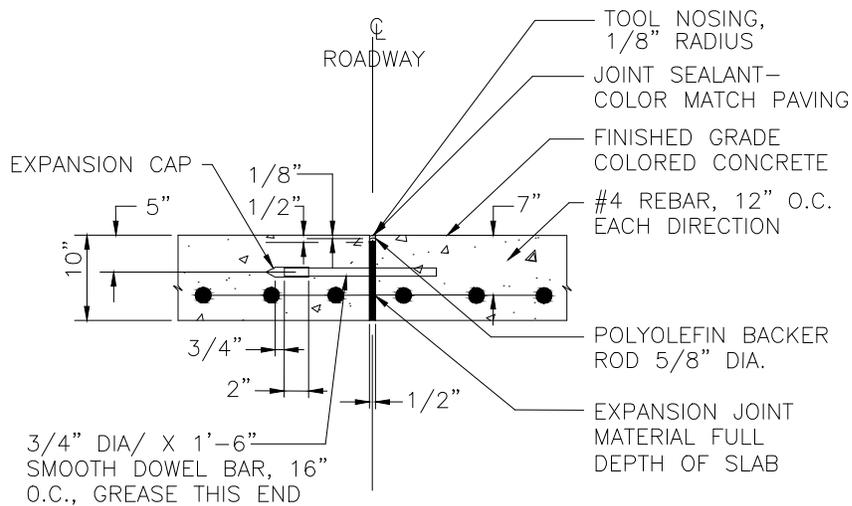


	CITY OF GIG HARBOR ENGINEERING DIVISION	
	STANDARD 30 FOOT LIGHT POLE	
	DETAIL NO.	2-31
APPROVED BY CITY ENGINEER <i>John Munnell</i>	DATE	1/1/2014



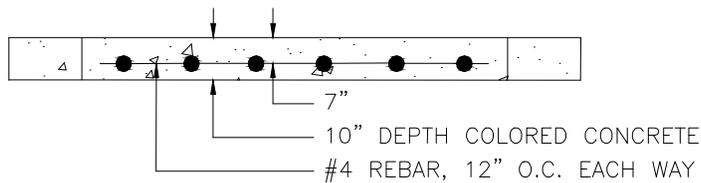
PLAN VIEW

NOT TO SCALE



ELEVATION

NOT TO SCALE



SECTION A-A

NOT TO SCALE

NOTES:

NO HORIZONTAL GAPS GREATER THAN 1/2".

NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".

CONCRETE: 3 DAY CURE/4000 PSI

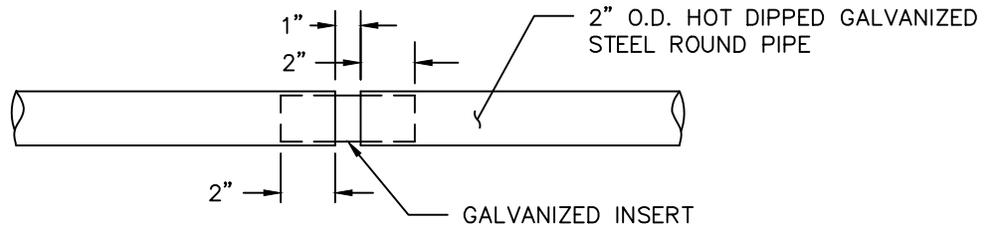
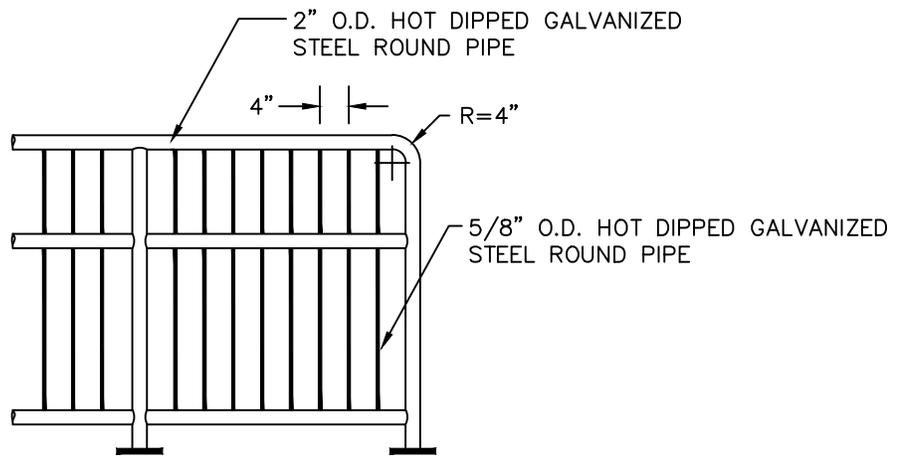
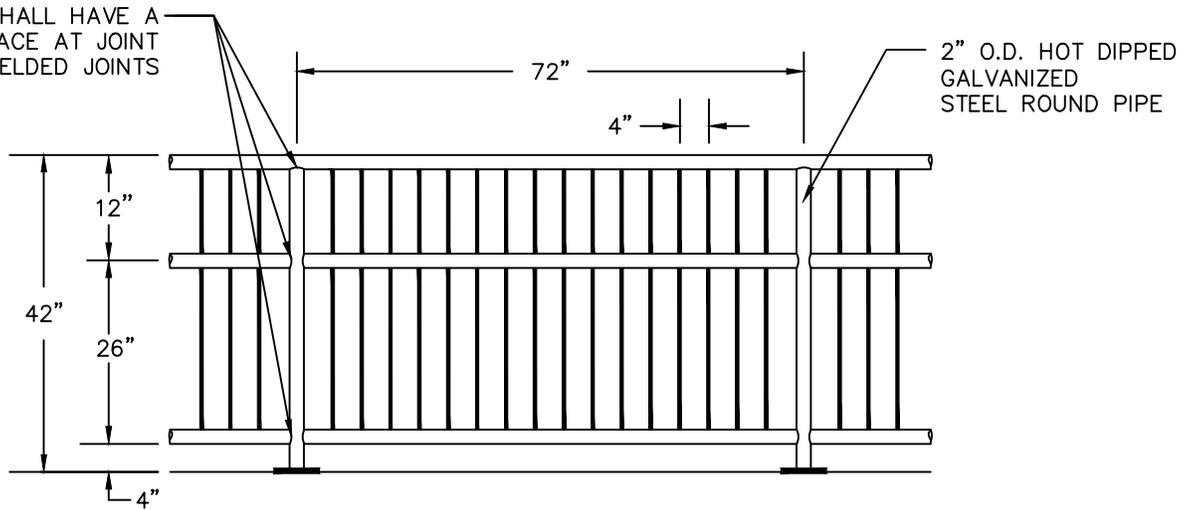
PATTERN: PERMACOLOR
PERMA BUILDING PRODUCTS
RUNNING BOND PT-515
SLATED 12" X 12" PT-330

COLOR: DAVIS BRICK RED OR SOLOMAN
CARDINAL CONCRETE FROM
PLANT

COMPRESSIVE STRENGTH CYLINDER TEST RESULTS WILL
BE REQUIRED BEFORE OPENING TO VEHICULAR TRAFFIC.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
PATTERNED CEMENT CONCRETE CROSSWALK	DETAIL NO. 2-32
APPROVED BY CITY ENGINEER <i>John Marshall</i>	DATE 1/1/2014

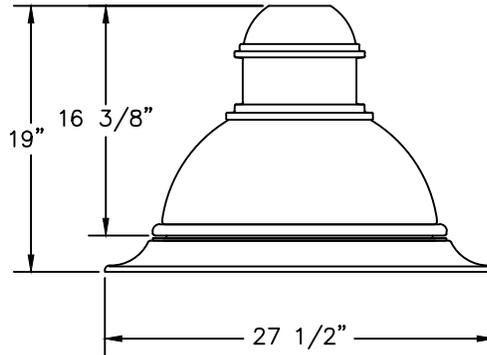
WELDS SHALL HAVE A SMOOTH SURFACE AT JOINT TYP ALL WELDED JOINTS



PEDESTRIAN GUARD
COUPLED SECTION
CONNECTION DETAIL

NOT TO SCALE

 <p>CITY OF GIG HARBOR ENGINEERING DIVISION</p>	
<p>PEDESTRIAN GUARD</p>	<p>DETAIL NO. 2-33</p>
<p>APPROVED BY CITY ENGINEER <i>h.d. [signature]</i></p>	<p>DATE 1/1/2014</p>



* LUMINAIRE: DMS50-65W49LED4K-ES-LE3F-240-GN6TX
 * OR APPROVED EQUAL

DESCRIPTION OF COMPONENTS:

HOOD: A DIE CAST A360.1 ALUMINUM DOME COMPLETE WITH CAST-IN TECHNICAL RING WITH LATCH AND HINGE. THE MECHANISM SHALL OFFER TOOLFREE ACCESS TO THE INSIDE OF THE LUMINAIRE. AN EMBEDDED MEMORY-RETENTIVE GASKET SHALL ENSURE WATER-PROOFING.

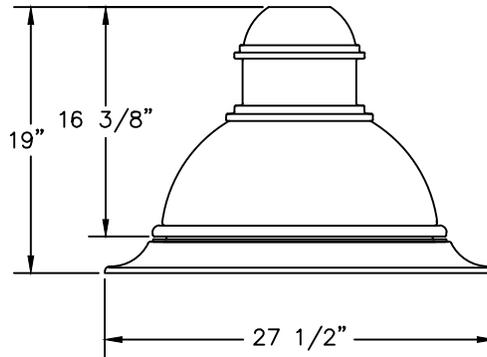
SKIRT: A DIE CAST A360 ALUMINUM SKIRT COMPLETE WITH A CAST-IN TECHNICAL RING.

HOUSING: IN A ROUND SHAPE, THIS HOUSING IS MADE OF CAST 356 ALUMINUM, C/W A WATERTIGHT GROMMET, MECHANICALLY ASSEMBLED TO THE BRACKET WITH FOUR BOLTS 3/-16 UNC. THIS SUSPENSION SYSTEM PERMITS FOR A FULL ROTATION OF THE LUMINAIRE IN 90 DEGREE INCREMENTS.

LIGHT ENGINE: LIFELED COMPOSED OF 5 MAIN COMPONENTS. ELECTRICAL COMPONENTS ARE ROSH COMPLIANT.

1. LENS: MADE OF SODA-LIME CLEAR TEMPERED GLASS, MECHANICALLY ASSEMBLED AND SEALED ONTO THE LOWER PART OF THE HEAT SINK.
2. LAMP: PHILIPS LUMILEDS REBEL ES. COMPOSED OF 49 HIGH-PERFORMANCE WHITE LEDS, 65W LAMP WATTAGE. COLOR TEMPERATURE OF 4000 KELVAN NOMINAL, 70 CRI. OPERATING LIFESPAN AFTER WHICH THE SYSTEM EMITS 70% OF ITS ORIGINAL LUMEN OUTPUT, ALL OF THOSE PARAMETERS ARE TESTED FOR 100% OF LIGHT ENGINES. USE OF A METAL CORE BOARD ENSURES GREATER HEAT TRANSFER AND LONGER LIFESPAN OF THE LIGHT ENGINE.
3. OPTICAL SYSTEM: (LE3F), I.E.S. TYPE III (ASYMMETRICAL). COMPOSED OF HIGH- PERFORMANCE COLLIMATORS, OPTIMIZED WITH VARYING BEAN ANGLES TO ACHIEVE DESIRED DISTRIBUTION. SYSTEM IS RATED IP66. PERFORMANCE SHALL BE TESTED PER LM63 AND LM 79 (IENSA) CERTIFYING ITS PHOTOMETRIC PERFORMANCE. STREET-SIDE INDICATED.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
LUMEC 65 WATT LED LUMINAIRE	DETAIL NO. 2-34
APPROVED BY <i>h.d. [signature]</i> DATE 1/1/2014	



* LUMINAIRE: DMS50-90W49LED4K-ES-LE3F-240-GN6TX
 * OR APPROVED EQUAL

DESCRIPTION OF COMPONENTS:

HOOD: A DIE CAST A360.1 ALUMINUM DOME COMPLETE WITH A CAST-IN TECHNICAL RING WITH LATCH AND HINGE. THE MECHANISM SHALL OFFER TOOLFREE ACCESS TO THE INSIDE OF THE LUMINAIRE. AN EMBEDDED MEMORY-RETENTIVE GASKET SHALL ENSURE WEATHERPROOFING.

SKIRT: A DIE CAST A 360 ALUMINUM SKIRT COMPLETE WITH A CAST-IN TECHNICAL RING.

HOUSING: IN A ROUND SHAPE, THIS HOUSING IS MADE OF CAST 356 ALUMINUM, C/W A WATERTIGHT GROMMET, MECHANICALLY ASSEMBLED TO THE BRACKET WITH FOUR BOLTS 3/8-16 UNC. THIS SUSPENSION SYSTEM PERMITS FOR A FULL ROTATION OF THE LUMINAIRE IN 90 DEGREE INCREMENTS.

LIGHT ENGINE: LIFELED COMPOSED OF 5 MAIN COMPONENTS. ELECTRICAL COMPONENTS ARE ROHS COMPLIANT.

LENS: MADE OF SODA-LIME CLEAR TEMPERED GLASS LENS, MECHANICALLY ASSEMBLED AND SEALED ONTO THE LOWER PART OF THE HEAT SINK.

LAMP: LAMP TYPE PHILIPS LUMILEDS REBEL ES. COMPOSED OF 49 HIGH-PERFORMANCE WHITE LEDS, 90W LAMP WATTAGE. COLOR TEMPERATURE OF 4000 KELVAN NOMINAL, 70 CRI. OPERATING LIFESPAN AFTER WHICH THE SYSTEM EMITS OVER 70% (L70) OF ITS ORIGINAL LUMEN OUTPUT ALL OF THOSE PARAMETERS ARE TESTED FOR 100% OF LIGHT ENGINES. USE OF A METAL CORE BOARD INSURES GREATER HEAT TRANSFER AND LONGER LIFESPAN OF THE LIGHT ENGINE.

OPTICAL SYSTEM: (LE3F), I.E.S. TYPE III (ASYMMETRICAL). COMPOSED OF HIGH-PERFORMANCE ACRYLIC COLLIMATORS, OPTIMIZED WITH VARYING BEAM ANGLES TO ACHIEVE DESIRED DISTRIBUTION. SYSTEM IS RATED IP66. PERFORMANCE SHALL BE TESTED PER LM63 AND LM79 (IESNA) CERTIFYING ITS PHOTOMETRIC PERFORMANCE. STREET-SIDE INDICATED.

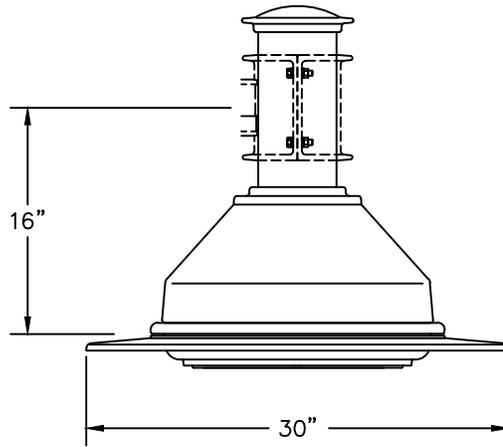
HEAT SINK: MADE OF CAST ALUMINUM OPTIMIZING THE LEDS EFFICIENCY AND LIFE. PRODUCT DOES NOT USE ANY COOLING DEVICE WITH MOVING PARTS (ONLY PASSIVE COOLING DEVICE).

DRIVER: HIGH POWER FACTOR OF 90%. ELECTRONIC DRIVER, OPERATING RANGE 50-60 HZ. AUTO-ADJUSTING TO A VOLTAGE BETWEEN 120 AND 277 VOLT AC RATED FOR BOTH APPLICATION LINE TO LINE OR LINE TO NEUTRAL, CLASS II, THD OF 20% MAX. MAXIMUM AMBIENT OPERATING TEMPERATURE FROM -40°F (-40°C) TO 130°F (55°C). CERTIFIED IN COMPLIANCE TO CULUS REQUIREMENT. DRY AND DAMP LOCATION. ASSEMBLED ON A UNITIZED REMOVABLE TRAY WITH TYCO QUICK DISCONNECT PLUG RESISTING TO 221F (105C) DEGREES.

THE CURRENT SUPPLYING THE LEDS WILL BE REDUCED BY THE DRIVER IF THE INTERNAL TEMPERATURE EXCEEDS 185F (85C), AS A PROTECTION TO THE LEDS AND THE ELECTRICAL COMPONENTS. OUTPUT IS PROTECTED FROM SHORT CIRCUITS, VOLTAGE OVERLOAD AND CURRENT OVERLOAD. AUTOMATIC RECOVERY AFTER CORRECTION.

SURGE PROTECTOR: LED DRIVER 3 POLES 10KV SURGE PROTECTORS THAT PROTECT LINE-GROUND, LINE NEUTRAL, AND NEUTRAL-GROUND IN ACCORDANCE WITH IEEE/ANSI C62.41.2 GUIDELINES.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
LUMEC 90 WATT LED LUMINAIRE	DETAIL NO. 2-35
APPROVED BY  DATE 1/1/2014	



* LUMINAIRE: TR20-009-135W80LED4K-001-LE3S-240-GN6TX
 * OR APPROVED EQUAL

DESCRIPTION OF COMPONENTS:

HOOD: CAST 356 ALUMINUM DOME, MECHANICALLY ASSEMBLED ON THE LUMINAIRE.

ACCESS-MECHANISM: A DIE CAST A360 ALUMINUM TECHNICAL RING WITH LATCH AND HINGE. THE MECHANISM SHALL OFFER TOOLFREE ACCESS TO THE INSIDE OF THE LUMINAIRE. AN EMBEDDED MEMORY-RETENTIVE GASKET SHALL ENSURE WEATHERPROOFING.

LENS: MADE OF SODA-LIME CLEAR TEMPERED GLASS LENS, MECHANICALLY ASSEMBLED AND SEALED ONTO THE LOWER PART OF THE HEAT SINK.

LAMP: COMPOSED OF 80 HIGH-PERFORMANCE WHITE LEDS, 135W LAMP WATTAGE. COLOR TEMPERATURE OF 4000 KELVAN NOMINAL, 70 CRI. OPERATING LIFESPAN BASED ON LM80 RESULTS AFTER WHICH 50% STILL EMITS OVER 70% (L70) OF ITS ORIGINAL LUMEN OUTPUT. USE OF A METAL CORE BOARD ENSURES GREATER HEAT TRANSFER AND LONGER LIFESPAN OF THE LIGHT ENGINE. THE LED CIRCUIT BOARD IS INCLUDED WITH A CONNECTOR, (NO CONNECTION WIRE REQUIRED FOR EASE OF REPLACEMENT).

OPTICAL SYSTEM: (LE3S), I.E.S. TYPE III (ASYMMETRICAL). COMPOSED OF HIGH-PERFORMANCE ACRYLIC REFRACTORS LENSES TO ACHIEVE DESIRED DISTRIBUTION OPTIMIZED TO GET MAXIMUM SPACING, TARGET LUMEN'S AND A PERFECT LIGHTING UNIFORMITY. SYSTEM IS RATED IP66. PERFORMANCE SHALL BE TESTED PER LM63 AND LM 79 AND TM15 (IENSA) CERTIFYING ITS PHOTOMETRIC PERFORMANCE.

HEAT SINK: MADE OF CAST ALUMINUM OPTIMIZING THE LEDS EFFICIENCY AND LIFE. PRODUCT DOES NOT USE ANY COOLING DEVICE WITH MOVING PARTS (ONLY PASSIVE COOLING DEVICE).

DRIVER: HIGH POWER FACTOR OF 95%. ELECTRONIC DRIVER, OPERATING RANGE 50-60 HZ. AUTO-ADJUSTING TO A VOLTAGE BETWEEN 120 AND 277 VOLT AC RATED FOR BOTH APPLICATION LINE TO LINE OR LINE TO NEUTRAL, CLASSI, THD OF 20% MAX. MAXIMUM AMBIENT OPERATING TEMPERATURE FROM -40°F (-40°C) TO 130°F (55°C). CERTIFIED IN COMPLIANCE TO CULUS REQUIREMENT. WEATHER TIGHTNESS RATING IP66. ASSEMBLED ON A UNITIZED REMOVABLE TRAY WITH TYCO QUICK DISCONNECT PLUG RESISTING TO 221°F (105°C).

 CITY OF GIG HARBOR ENGINEERING DIVISION	
LUMEC 135 WATT LED LUMINAIRE	DETAIL NO. 2-36
APPROVED BY CITY ENGINEER <i>Richard Murrell</i>	DATE 1/1/2014



AT LOCAL ROAD INTERSECTIONS ONLY

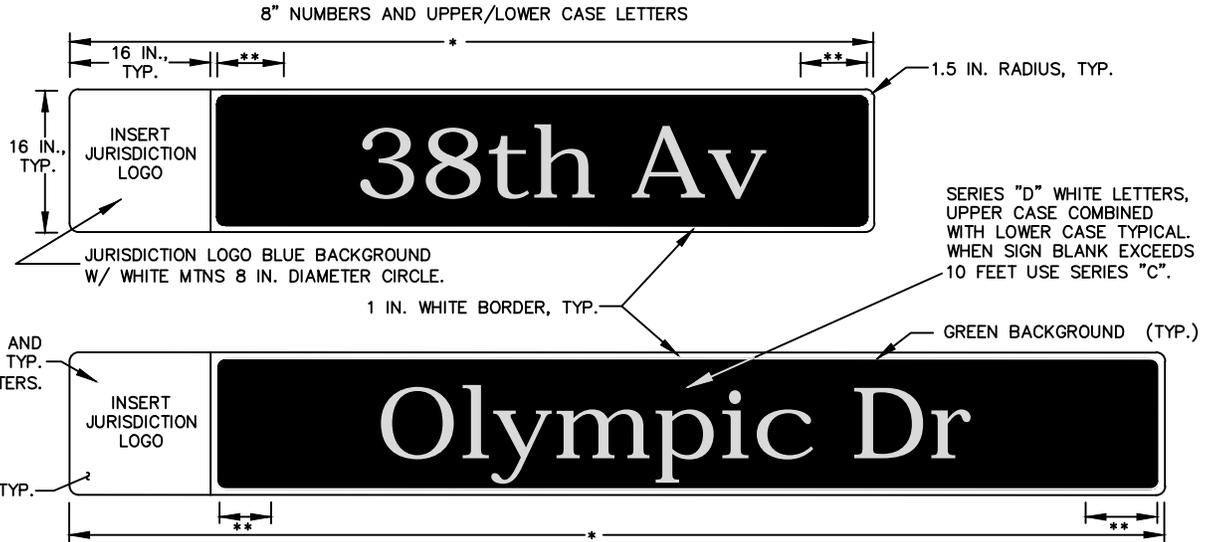
NOT TO SCALE



AT OR ALONG ARTERIALS AND COLLECTORS

NOT TO SCALE

 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN - PUBLIC ROAD STREET NAME	DETAIL NO. 2-37
APPROVED BY CITY ENGINEER <i>h. J. [Signature]</i>	DATE 1/1/2014



OVERHEAD MOUNT D3-301(mod) SIGN DETAIL

NOT TO SCALE

NOTES:

16 IN. SIGN HEIGHT WITH 8 IN. LETTER/NUMBER UPPER CASE.

NAME OF JURISDICTION LOGO FONT SHALL BE "TIMES NEW ROMAN".

STREET NAME FONT SHALL BE UNITED STATES FEDERAL HIGHWAY ADMINISTRATION "HIGHWAY GOTHIC".

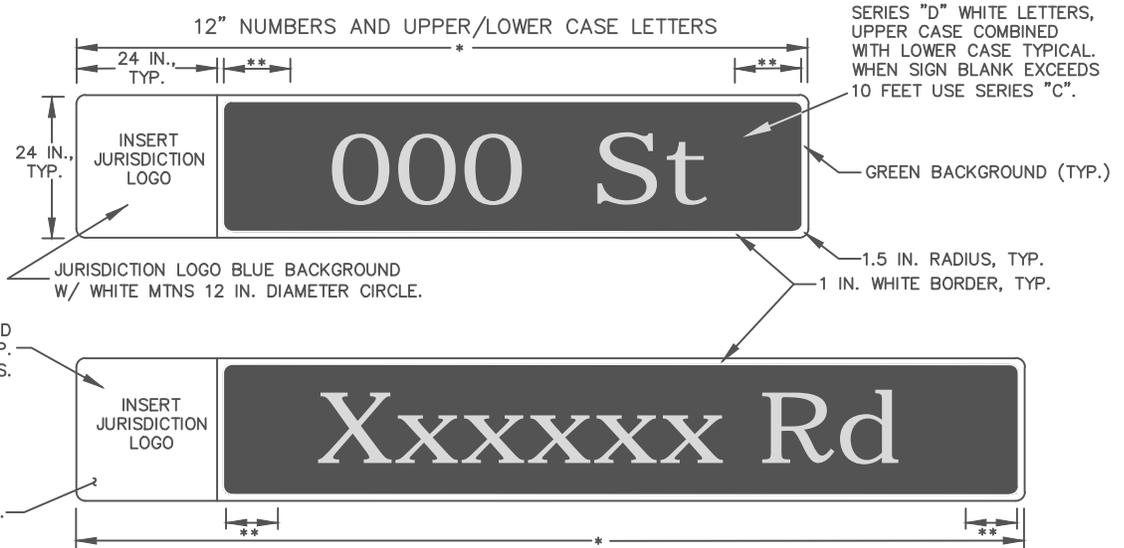
FOR MASTARM SIGNAL LOCATIONS – SIGNS ARE SINGLE SIDED. MOUNT SIGNS PER CURRENT WSDOT STANDARD PLAN G-30.10-XX.

FOR SPANWIRE SIGNAL LOCATIONS – SIGNS ARE DOUBLE SIDED.

* SIGN LENGTH AS REQUIRED FOR LETTER SPACING.

** 8 IN. DESIRED WITH 5.25 IN. MINIMUM UNLESS OTHERWISE APPROVED BY ENGINEER.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN - 16" OVERHEAD STREET NAME	DETAIL NO. 2-38
APPROVED BY CITY ENGINEER <i>[Signature]</i>	DATE 1/1/2014



OVERHEAD MOUNT SIGN DETAIL

NOT TO SCALE

NOTES:

24 IN. SIGN HEIGHT WITH 12 IN. LETTER/NUMBER UPPER CASE SHALL BE USED AT INTERSECTIONS ON ARTERIALS WITH FIVE LANES OR MORE.

JURISDICTION LOGO FONT SHALL BE "TIMES NEW ROMAN".

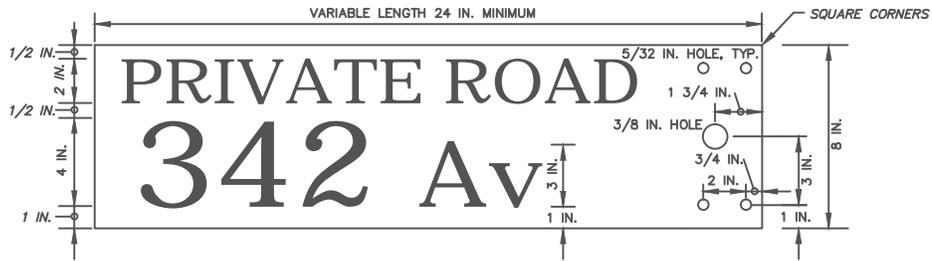
STREET NAME FONT SHALL BE UNITED STATES FEDERAL HIGHWAY ADMINISTRATION "HIGHWAY GOTHIC".

FOR MASTARM SIGNAL LOCATIONS – SIGNS ARE SINGLE SIDED. MOUNT SIGNS PER CURRENT WSDOT STANDARD PLAN G-30.10-XX.

* SIGN LENGTH AS REQUIRED FOR LETTER SPACING.

** 12 IN. DESIRED WITH 8 IN. MINIMUM UNLESS OTHERWISE APPROVED BY ENGINEER.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN - 24" OVERHEAD STREET NAME	DETAIL NO. 2-39
APPROVED BY CITY ENGINEER <i>John Samuel</i>	DATE 1/1/2014

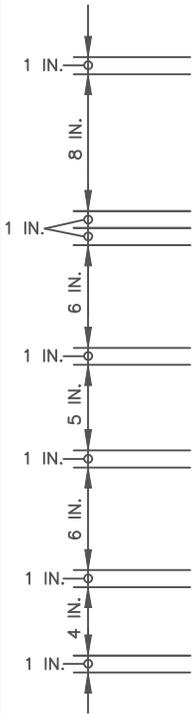


AT NON-ARTERIAL INTERSECTIONS ONLY
NOT TO SCALE



AT OR ALONG ARTERIALS
NOT TO SCALE

 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN - PRIVATE ROAD STREET NAME	DETAIL NO. 2-40
APPROVED BY <i>Richard Marshall</i> CITY ENGINEER	DATE 1/1/2014



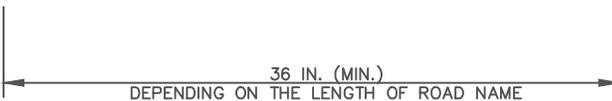
NOTICE

ROAD CLOSURE
MAIN ST
DEC 25 - 31
8:00 AM - 5:00 PM

WHITE LETTERS ON RED BACKGROUND

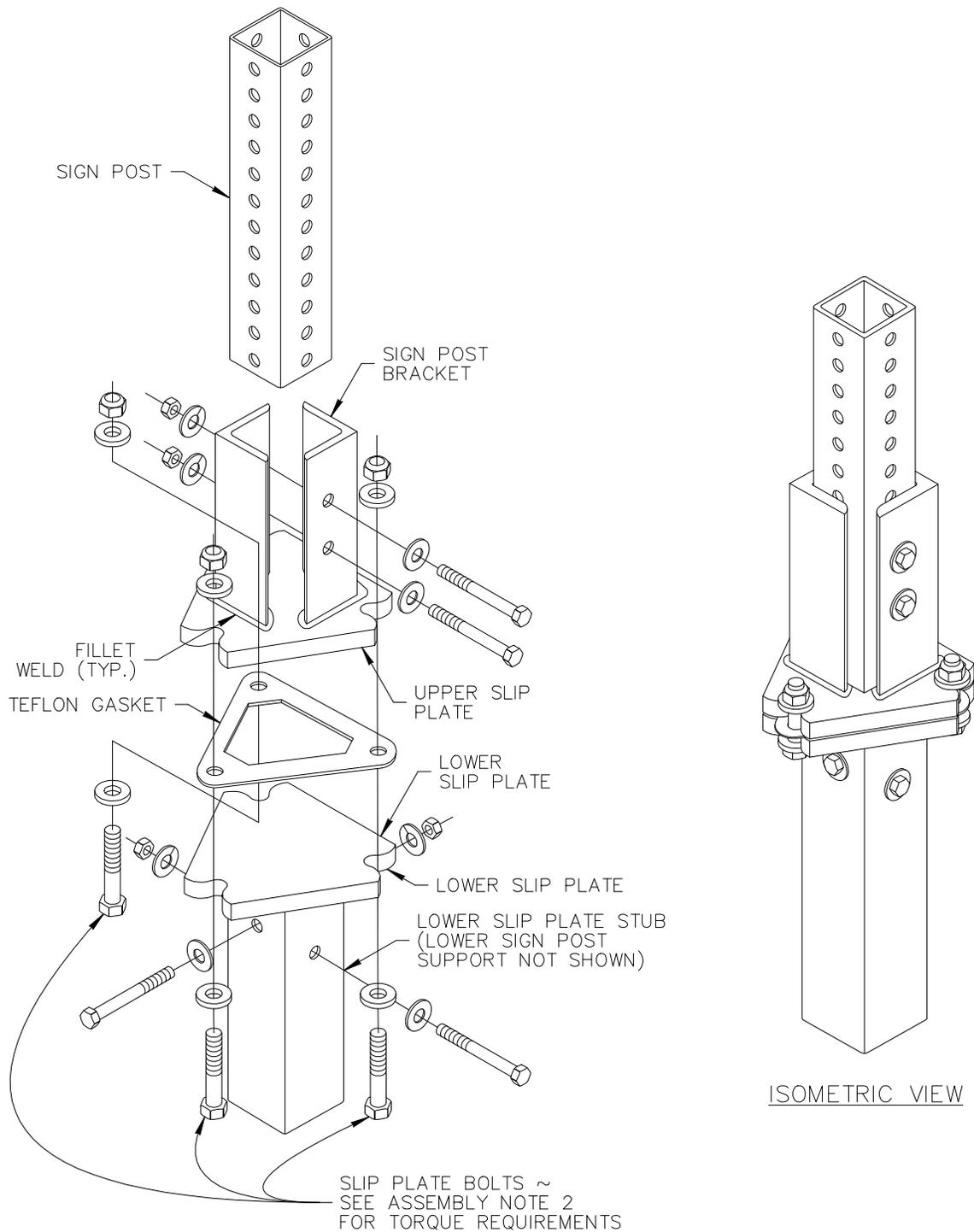
BLACK LETTERS ON WHITE BACKGROUND
 INSERT APPROPRIATE ROAD NAME, DATES AND TIMES
 (OMIT TIMES IF 24 HR/DAY CLOSURE)

NOTE:
 ALL SHEETING SHALL BE TYPE III OR IV



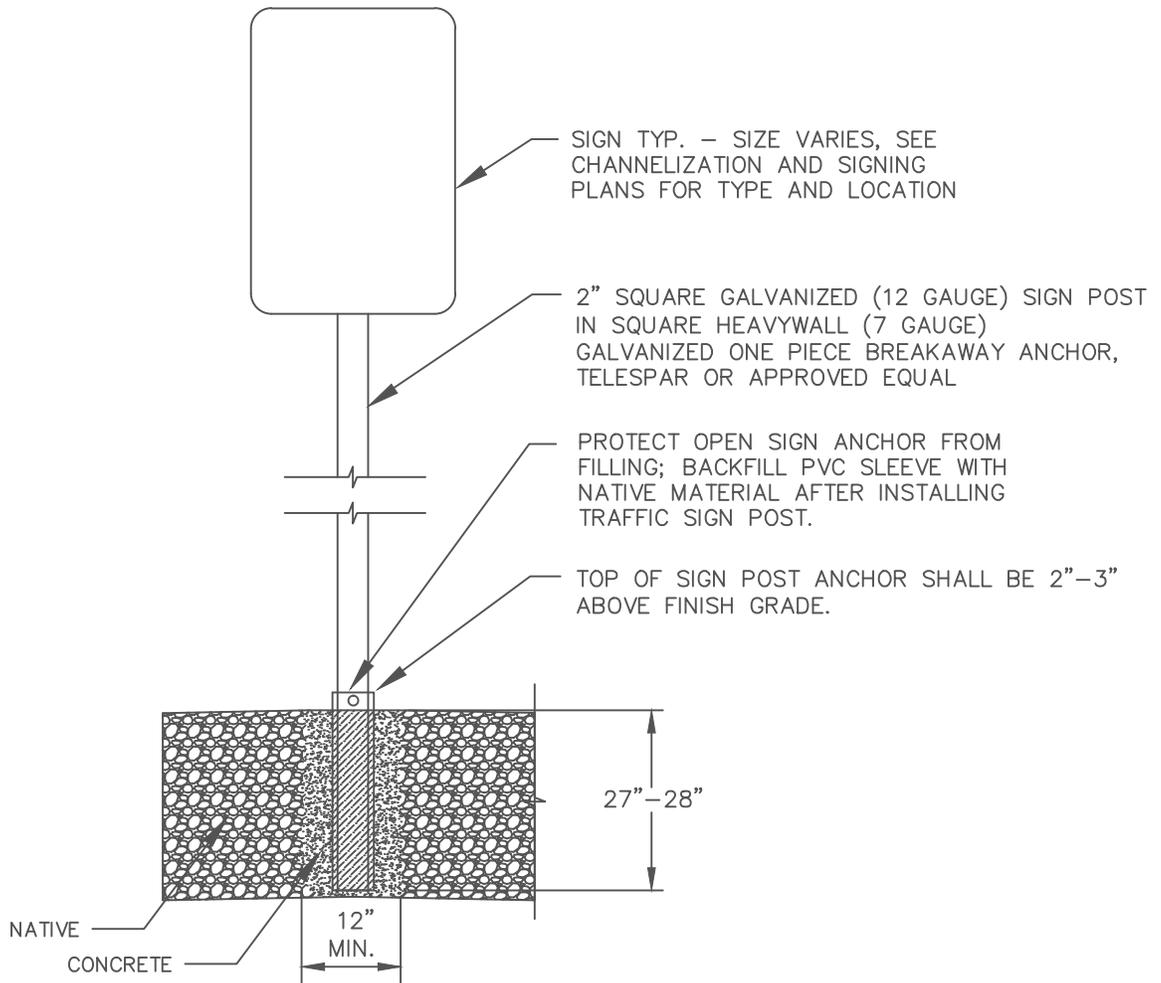
NOTICE SIGN FOR TEMPORARY ROAD CLOSURE
 NOT TO SCALE

 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN - TEMPORARY ROAD CLOSURE	DETAIL NO. 2-41
APPROVED BY CITY ENGINEER <i>Bob Marshall</i>	DATE 1/1/2014



EXPLODED VIEW
 TYPE SB-1
 SLIP BASE ASSEMBLY
 NOT TO SCALE

 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN POST - SLIP BASE FOR CLASSIFIED ROADWAYS	DETAIL NO. 2-42
APPROVED BY CITY ENGINEER <i>herdman</i>	DATE 1/1/2014



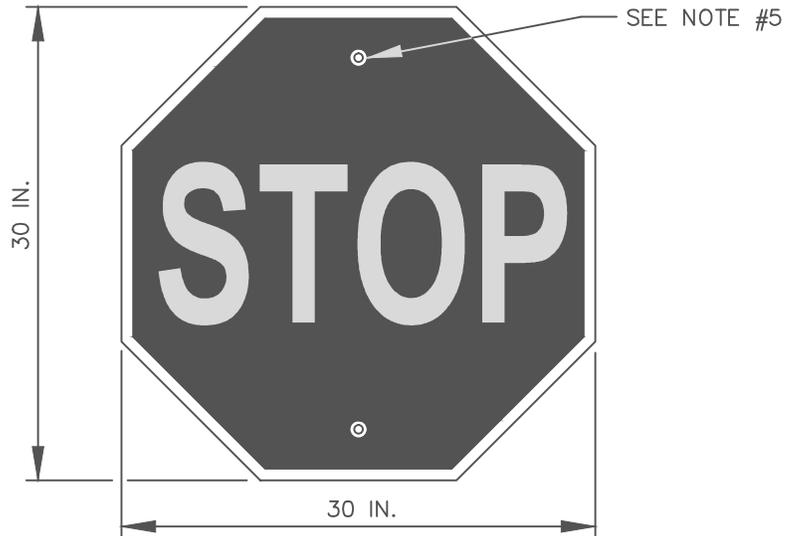
GALVANIZED SIGN POST DETAIL

NOT TO SCALE

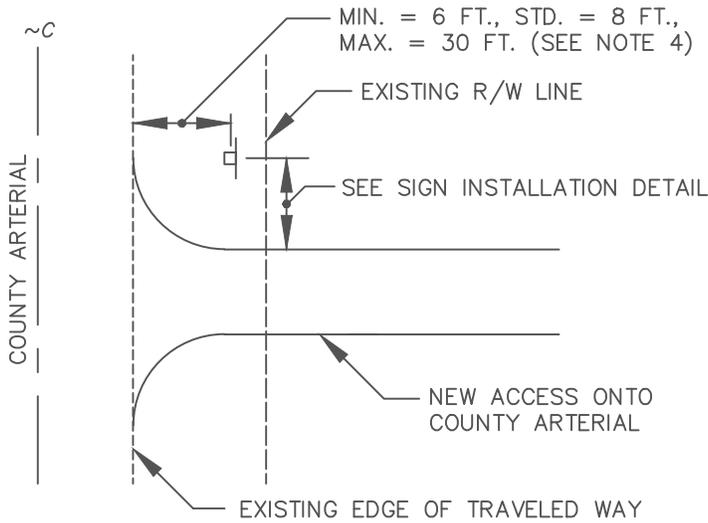
NOTE

VERIFY AND STAKE LOCATIONS OF TRAFFIC SIGNS FOR ENGINEER APPROVAL AND ADJUSTMENT PRIOR TO INSTALLING.

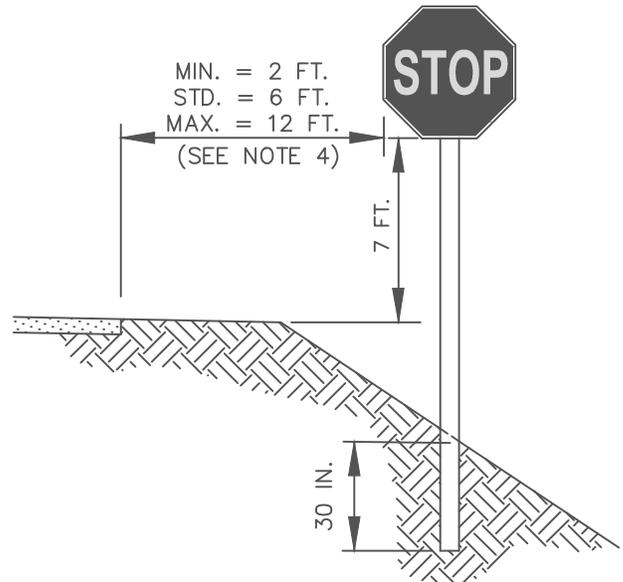
 CITY OF GIG HARBOR ENGINEERING DIVISION	
SIGN POST - NON SLIP BASE FOR NON CLASSIFIED ROADWAYS	DETAIL NO. 2-43
APPROVED BY CITY ENGINEER <i>Josh Ormrod</i>	DATE 1/1/2014



STOP SIGN R1-1
NOT TO SCALE



SIGN PLACEMENT
NOT TO SCALE



SIGN INSTALLATION DETAIL
NOT TO SCALE

NOTES:

- 1) SIGN FACE MATERIAL SHALL BE TYPE IV SHEETING. SIGN POST SHALL BE 4 IN. X 4 IN. UNTREATED WESTERN RED CEDAR OR 2 IN. GALVANIZED METAL AS DIRECTED BY THE COUNTY ENGINEER.
- 2) THE STOP SIGN SHALL BE VISIBLE FROM A DISTANCE OF AT LEAST 240 FT. BACK ON THE APPROACHING ROADWAY, WHEN THE LEGAL SPEED LIMIT IS 25 M.P.H.
- 3) ALL CLEARING WITHIN COUNTY RIGHT OF WAY TO MAKE THE SIGN VISIBLE IS THE RESPONSIBILITY OF THE APPLICANT. APPROVED ROAD CONSTRUCTION PLANS OR A PERMIT FROM THE COUNTY IS NECESSARY BEFORE WORK COMMENCES.
- 4) VARIATION FROM THIS LOCATION BY WRITTEN APPROVAL OF THE COUNTY ENGINEER.
- 5) MOUNT WITH TWO 3/8 IN. X 3 IN. GALVANIZED LAG SCREW AGAINST 1 IN. DIA. GALVANIZED FLAT WASHER AGAINST 1 IN. DIA. NYLON WASHER.
- 6) LEGEND, BACKGROUND AND BORDER SHALL MEET WSDOT SIGN FABRICATION MANUAL.

 CITY OF GIG HARBOR ENGINEERING DIVISION	
STOP SIGN INSTALLATION	DETAIL NO. 2-44
APPROVED BY CITY ENGINEER <i>h.d. manual</i>	DATE 1/1/2014

