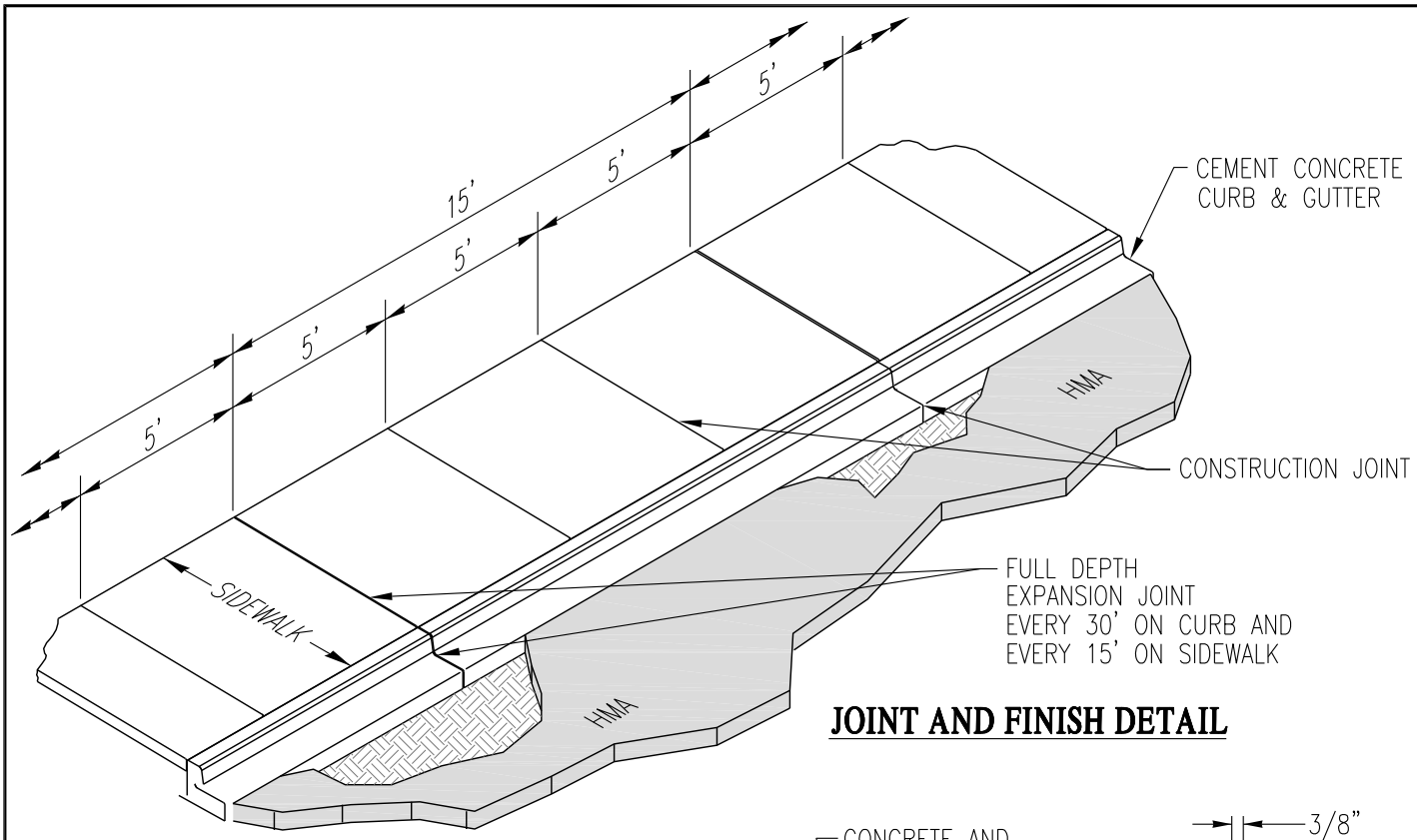
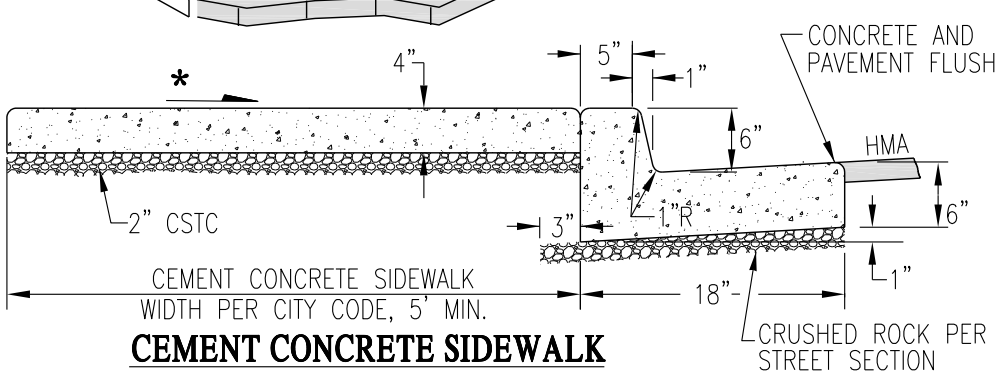
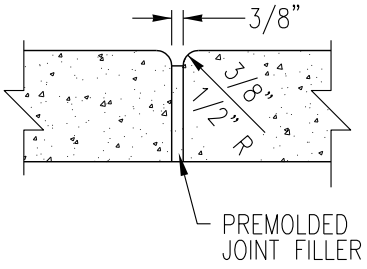


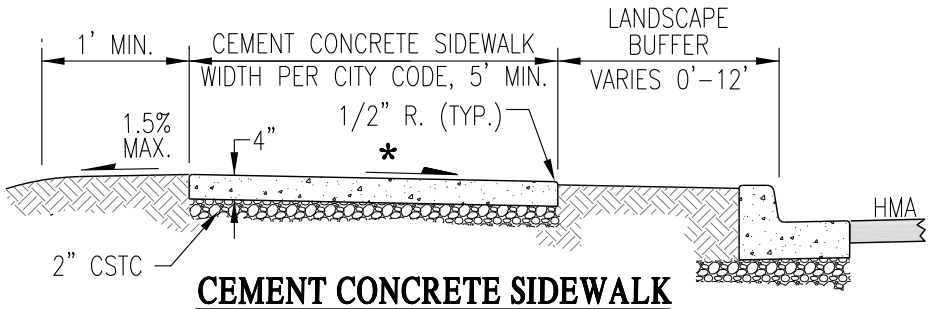
JOINT AND FINISH DETAIL



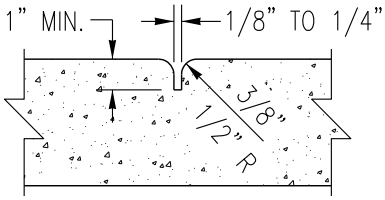
CEMENT CONCRETE SIDEWALK



EXPANSION JOINT



CEMENT CONCRETE SIDEWALK



CONSTRUCTION JOINT

LEGEND:

SLOPE IN EITHER DIRECTION

* 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX)

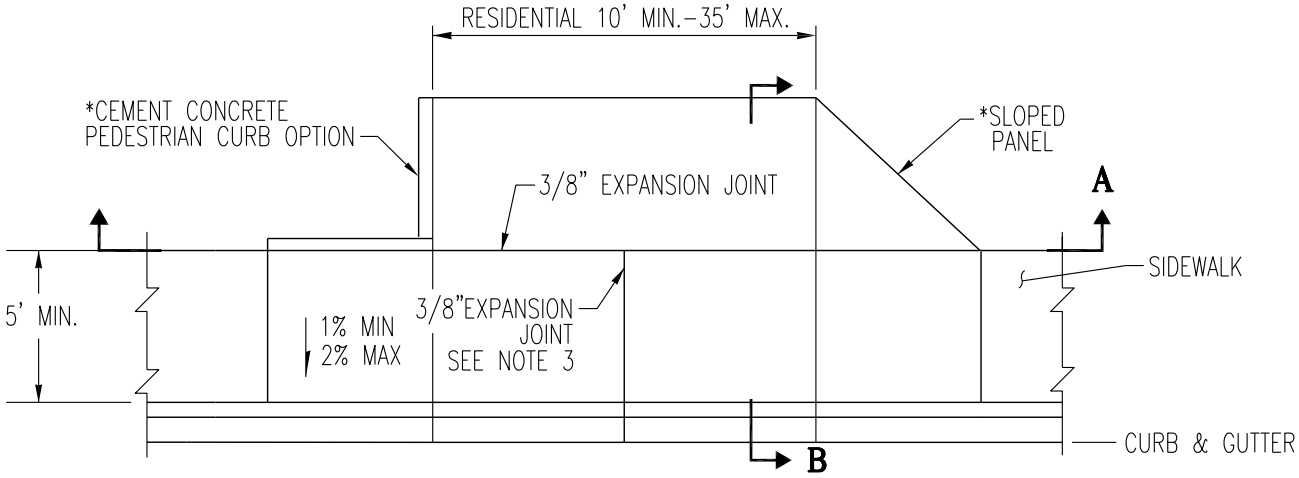
NOTES:

1. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
2. INSTALL 3/8" FULL EXPANSION JOINTS IN CURB AT ALL PC'S, PT'S AND CURB RETURNS.
3. ALL FILETS 1/2" UNLESS OTHERWISE NOTED.
4. FINISHED GRADE ADJACENT TO SIDEWALK OR CURB SHALL BE 1" BELOW TOP OF CONCRETE SURFACE.

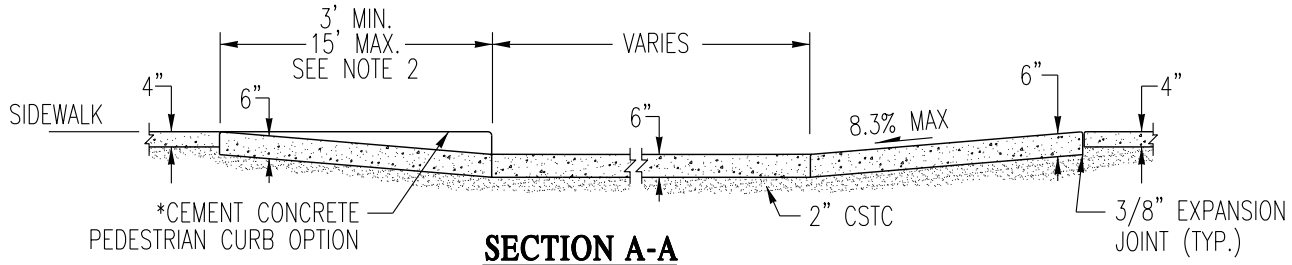
Richland Washington

CURB, GUTTER & SIDEWALK

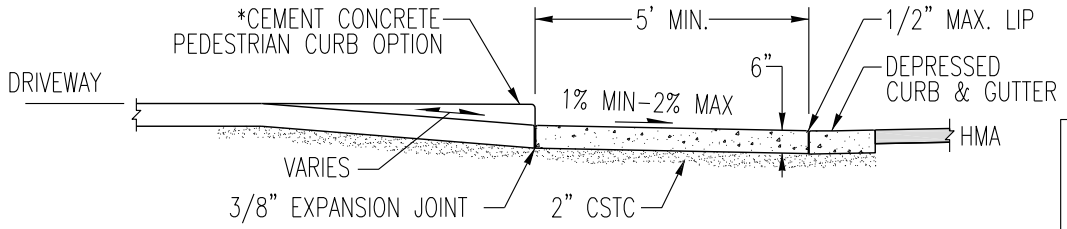
PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 05.18
DRAWN BY: EY	DWG: ST1
CAD FILE: 2013_ST1_05_2018	



CEMENT CONCRETE DRIVEWAY



SECTION A-A



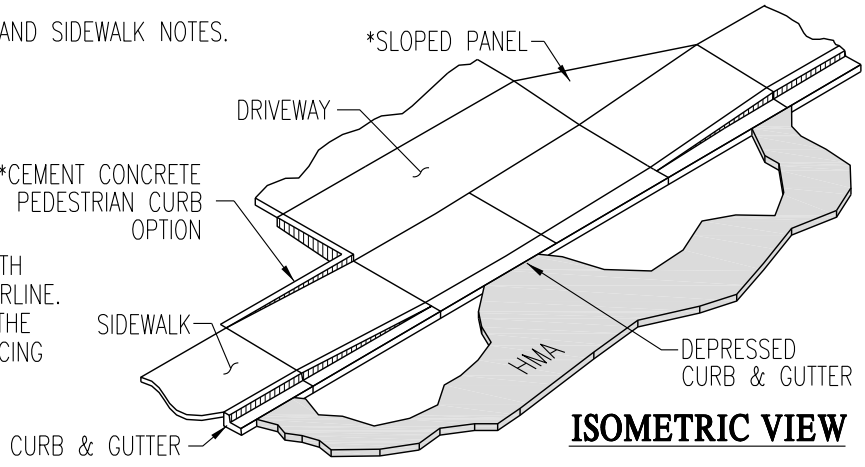
SECTION B-B

*NOTE:
OPTION USED WILL BE DETERMINED BY CITY ENGINEER; DEPENDENT UPON FIELD CONDITIONS.

LEGEND: SLOPE IN EITHER DIRECTION

NOTES:

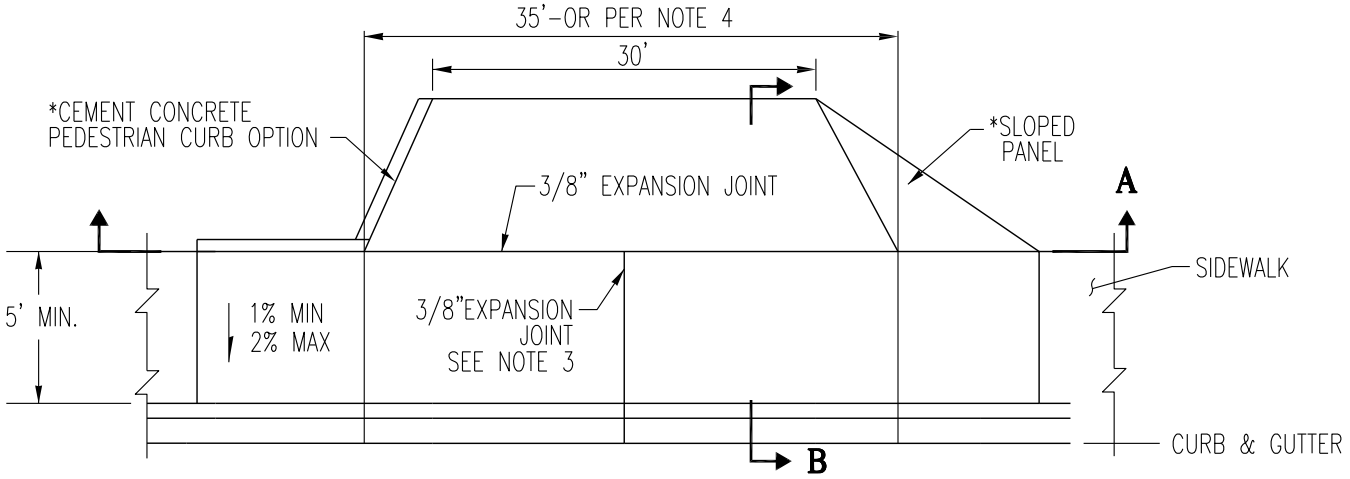
1. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
2. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15' TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES.
3. WHEN THE DRIVEWAY WIDTH EXCEEDS 15', CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. CONSTRUCT EXPANSION JOINTS PARALLEL WITH THE CENTERLINE AS REQUIRED AT 15' MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30'.
4. SEE RMC 12.04.090 AND 12.04.120 FOR ADDITIONAL DETAILS



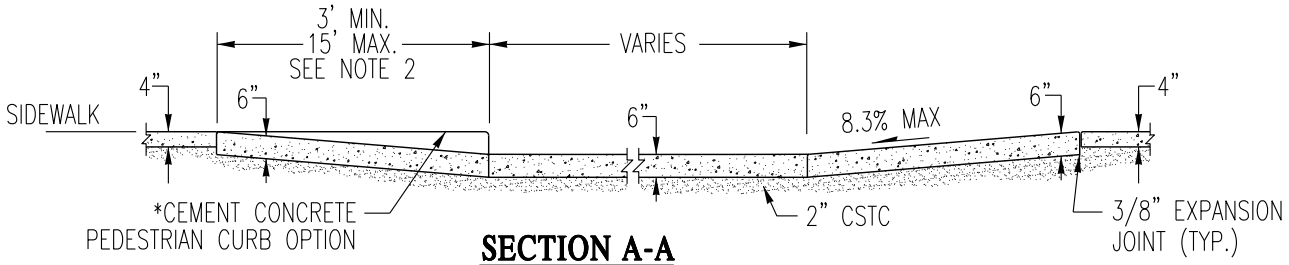
ISOMETRIC VIEW

STANDARD RESIDENTIAL DRIVEWAY (TYPE 1)

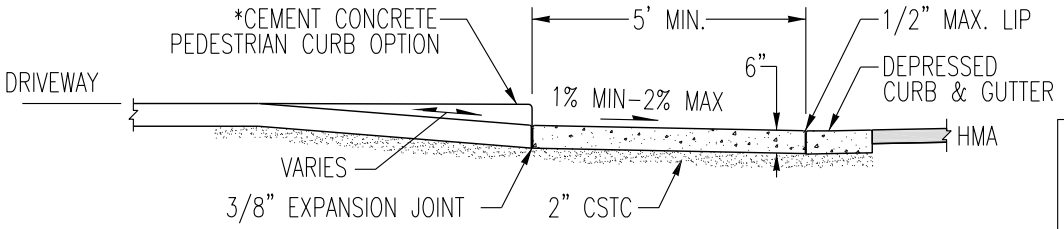
PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST2
CAD FILE: 2013_ST2_06_2019	



CEMENT CONCRETE DRIVEWAY



SECTION A-A



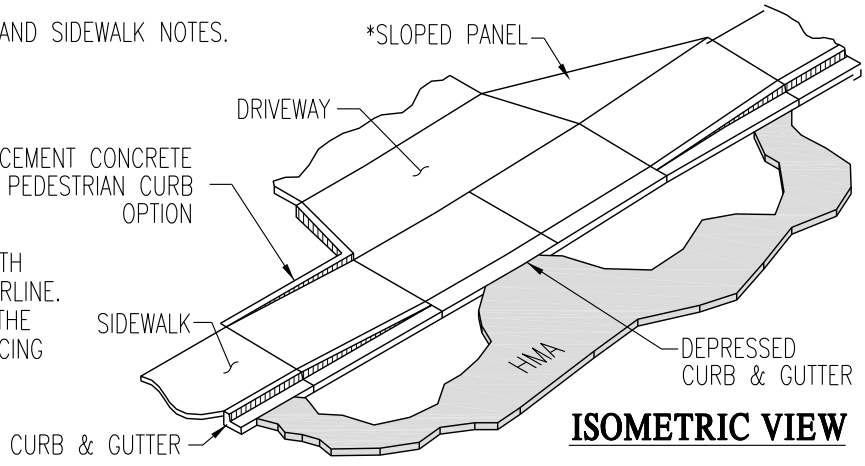
SECTION B-B

*NOTE:
OPTION USED WILL BE DETERMINED BY CITY ENGINEER; DEPENDENT UPON FIELD CONDITIONS.

LEGEND: SLOPE IN EITHER DIRECTION

NOTES:

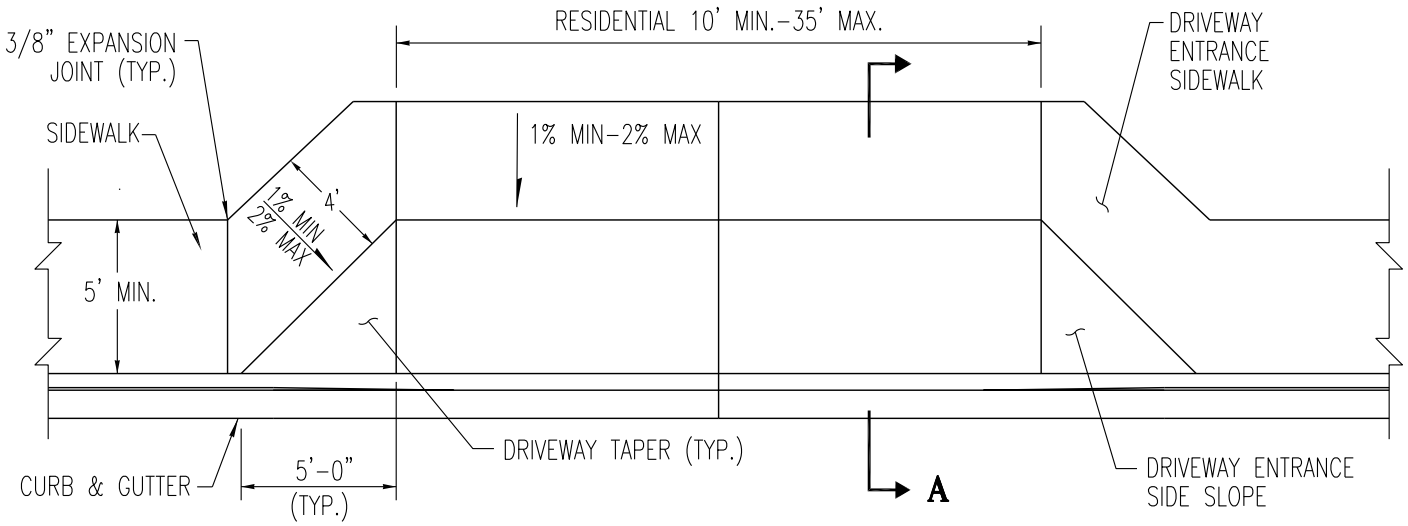
1. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
2. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15' TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES.
3. WHEN THE DRIVEWAY WIDTH EXCEEDS 15', CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. CONSTRUCT EXPANSION JOINTS PARALLEL WITH THE CENTERLINE AS REQUIRED AT 15' MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30'.
4. SEE RMC 12.04.095 THRU 12.04.120 FOR ADDITIONAL DETAILS



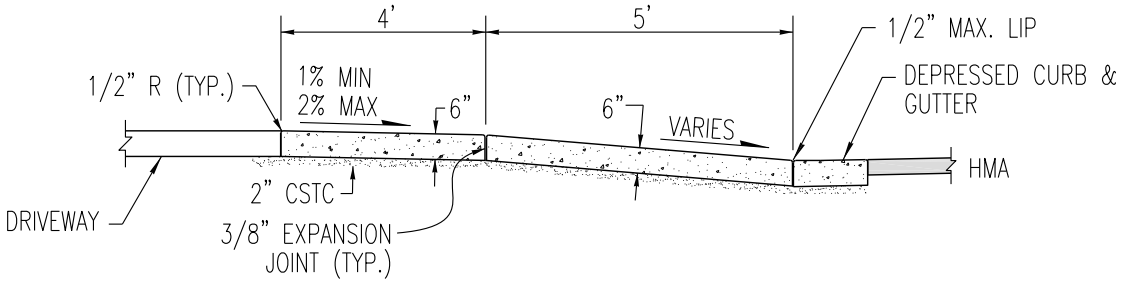
ISOMETRIC VIEW

STANDARD NON-RESIDENTIAL DRIVEWAY (TYPE 1)

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST2A
CAD FILE: 2013_ST2A_06_2019	



CEMENT CONCRETE DRIVEWAY

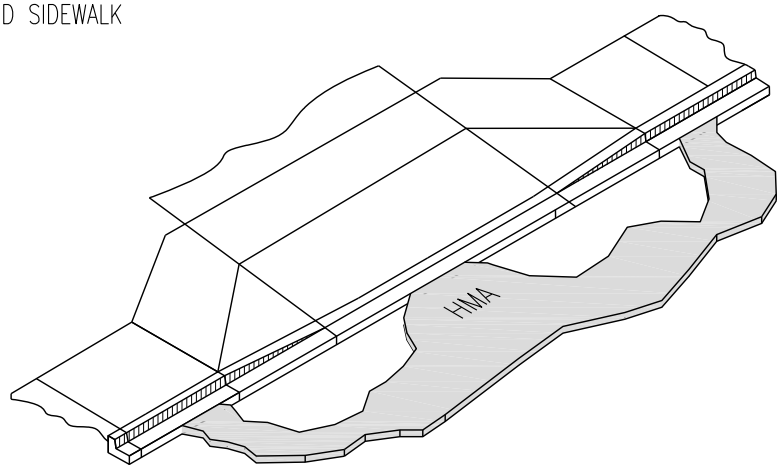


SECTION A-A

LEGEND: SLOPE

NOTES:

1. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
2. WHEN THE DRIVEWAY WIDTH EXCEEDS 15', CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. CONSTRUCT EXPANSION JOINTS PARALLELWITH THE CENTERLINE AS REQUIRED AT 15' MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30'.
3. SEE RMC 12.04.090 AND 12.04.120 FOR ADDITIONAL DETAILS

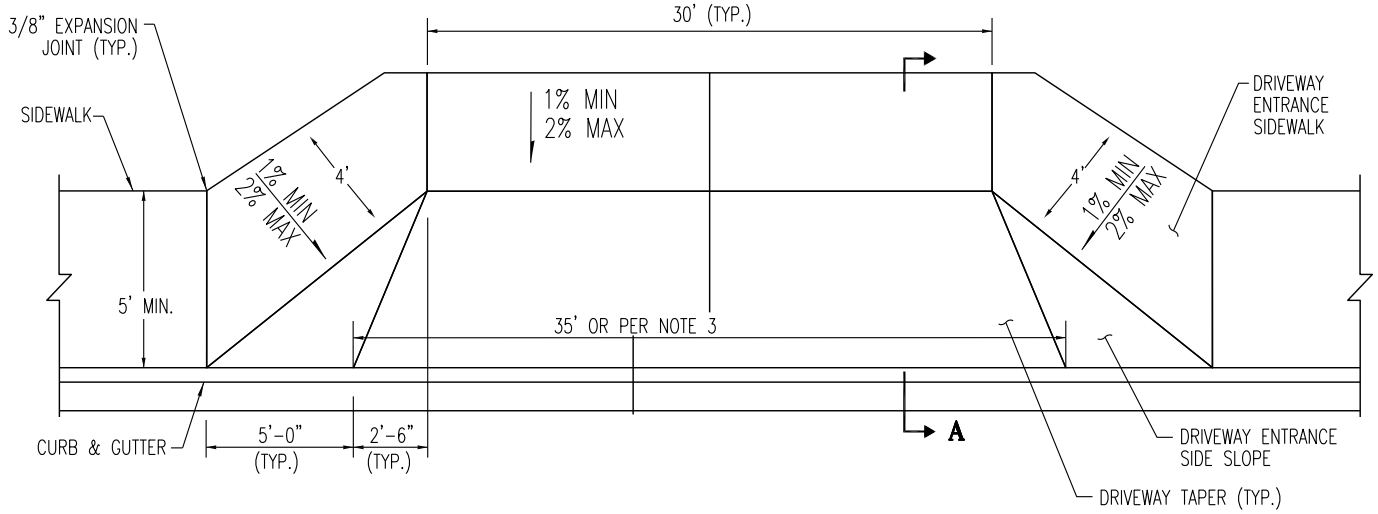


ISOMETRIC VIEW

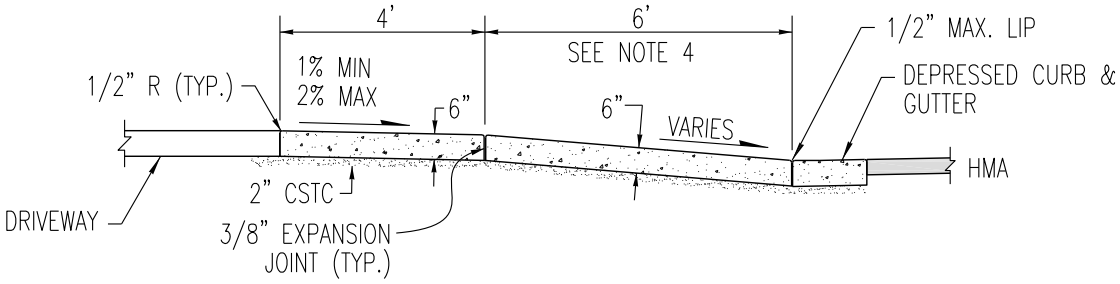
Richland Washington

STANDARD RESIDENTIAL DRIVEWAY (TYPE 2)

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST3
CAD FILE: 2013_ST3_06_2019	



CEMENT CONCRETE DRIVEWAY

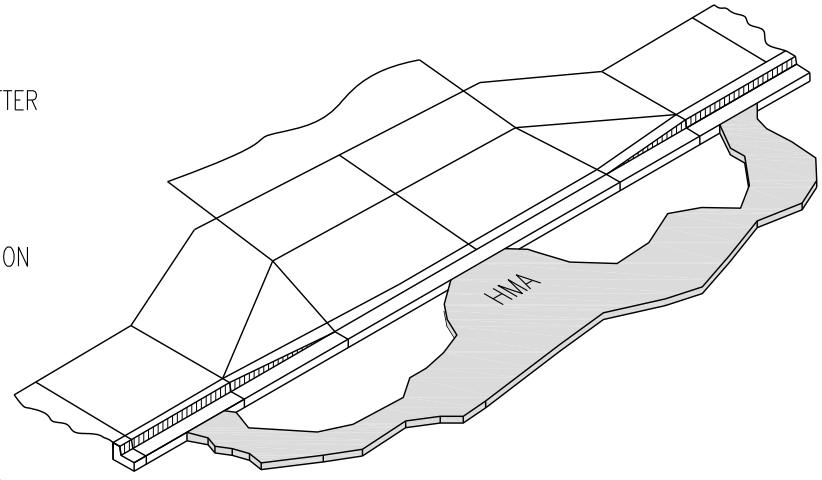


SECTION A-A

LEGEND: SLOPE

NOTES:

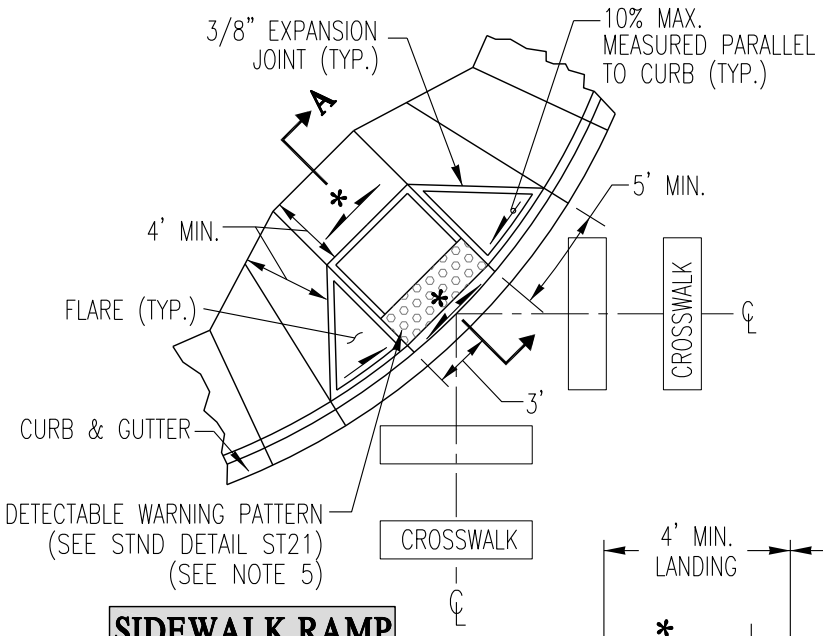
1. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
2. WHEN THE DRIVEWAY WIDTH EXCEEDS 15', CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. CONSTRUCT EXPANSION JOINTS PARALLELWITH THE CENTERLINE AS REQUIRED AT 15' MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30'.
3. SEE RMC 12.04.095 THRU 12.04.120 FOR ADDITIONAL DETAILS
4. THIS DIMENSION MAY BE REDUCED TO AS LOW AS 4'. REDUCTION REQUIRES VARIANCE REQUEST APPROVED BY CITY ENGINEER.



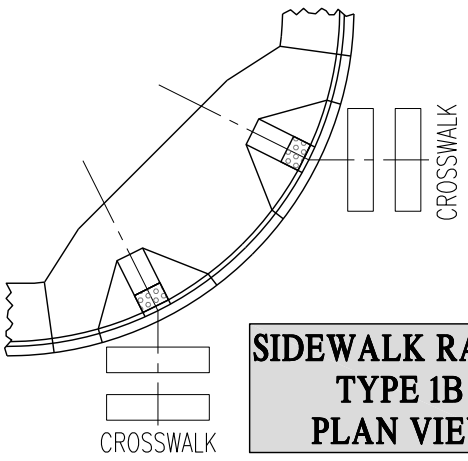
ISOMETRIC VIEW

STANDARD NON-RESIDENTIAL DRIVEWAY (TYPE 2)

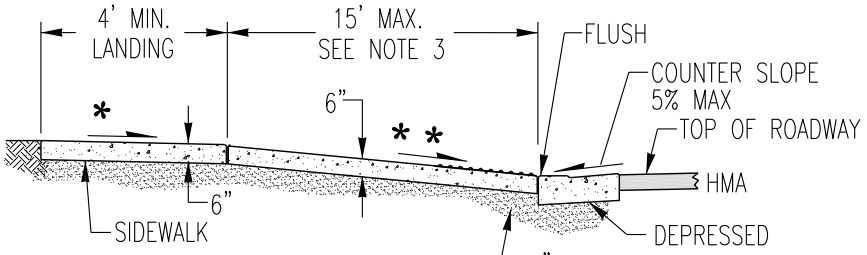
PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST3A
CAD FILE: 2013_ST3A_06_2019	



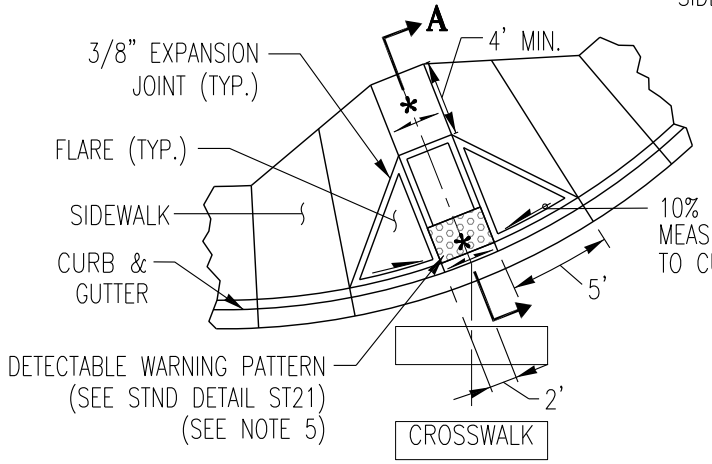
SIDEWALK RAMP TYPE 1A



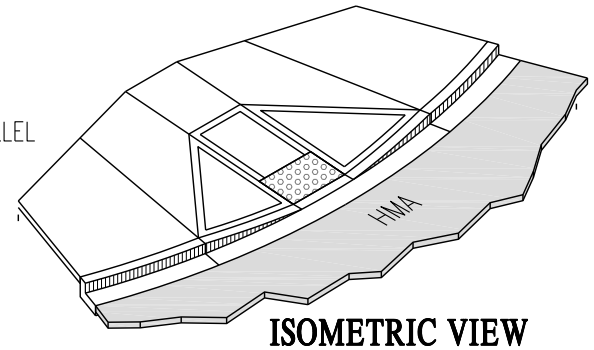
SIDEWALK RAMP TYPE 1B PLAN VIEW



SECTION A-A



SIDEWALK RAMP TYPE 1B
SEE NOTE 4



ISOMETRIC VIEW

LEGEND:

SLOPE IN EITHER DIRECTION
* 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX)
** 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX)

NOTES:

1. THE TYPE 1B RAMPS ARE THE PREFERRED RAMPS. WHEN IT IS INFEASIBLE TO PROVIDE A RAMP FOR EACH OF THE TWO CROSSWALKS, A SINGLE TYPE 1A RAMP FOR BOTH CROSSWALKS CAN BE USED WITH THE APPROVAL OF THE ENGINEER.
2. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
3. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15' TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15' MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
4. DETAILED DESIGN INFORMATION SHALL BE PROVIDED BY THE ENGINEER WITH THE ELEVATIONS PROVIDED FOR ALL FOUR CORNERS OF THE LANDING.
5. CURB SHALL BE FORMED TO PROVIDE A STRAIGHT LINE ALONG THE BACK OF CURB ADJACENT TO THE WARNING SURFACE.

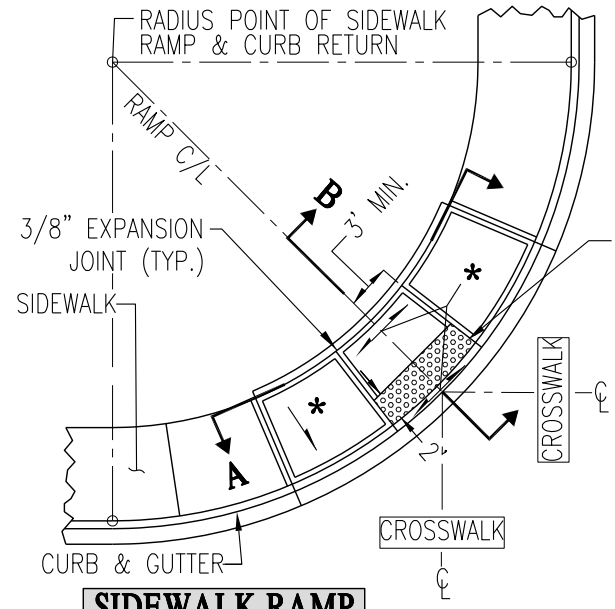
Richland Washington

SIDEWALK RAMP TYPE 1A AND 1B

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 05.18
DRAWN BY: EY	DWG: ST4
CAD FILE: 2014_ST4_05_2018	

NOTES:

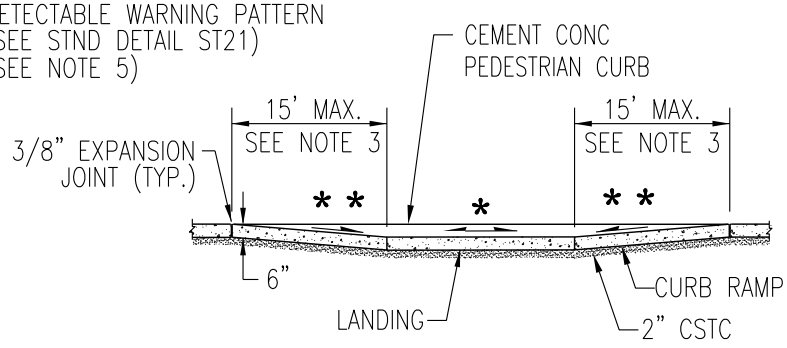
1. THE TYPE 2B RAMPS ARE THE PREFERRED RAMPS. WHEN IT IS INFEASIBLE TO PROVIDE A RAMP FOR EACH OF THE TWO CROSSWALKS, A SINGLE TYPE 2A RAMP FOR BOTH CROSSWALKS CAN BE USED WITH THE APPROVAL OF THE ENGINEER.
2. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
3. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15' TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15' MAXIMUM LENGTH, THE RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
4. DETAILED DESIGN INFORMATION SHALL BE PROVIDED BY ENGINEER ON THE CONSTRUCTION PLANS, INCLUDING DIMENSIONS AND ELEVATIONS AT TOP AND BOTTOM OF LANDING AT BOTH FRONT AND BACK OF SIDEWALK, AS WELL AS CURB RAMP TRANSITION LENGTHS. MINIMUM CURB LENGTH TRANSITION IS 5'.
5. CURB SHALL BE FORMED TO PROVIDE A STRAIGHT LINE ALONG THE BACK OF CURB ADJACENT TO THE WARNING PATTERN.



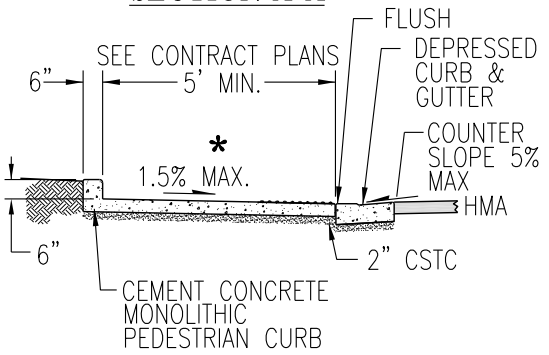
SIDEWALK RAMP TYPE 2A

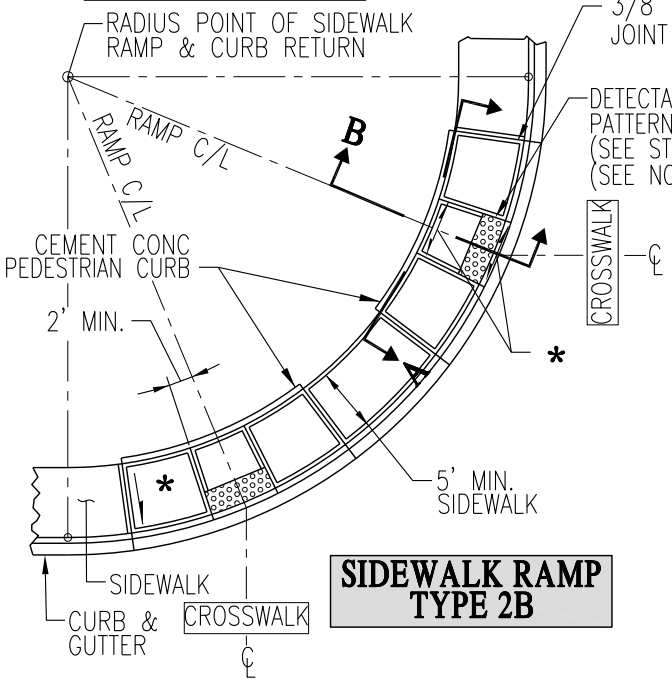
LEGEND:

- SLOPE IN EITHER DIRECTION
- * 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX)
- ** 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX)



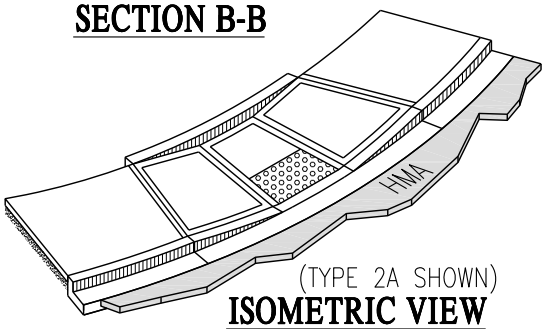
SECTION A-A





SIDEWALK RAMP TYPE 2B

SECTION B-B



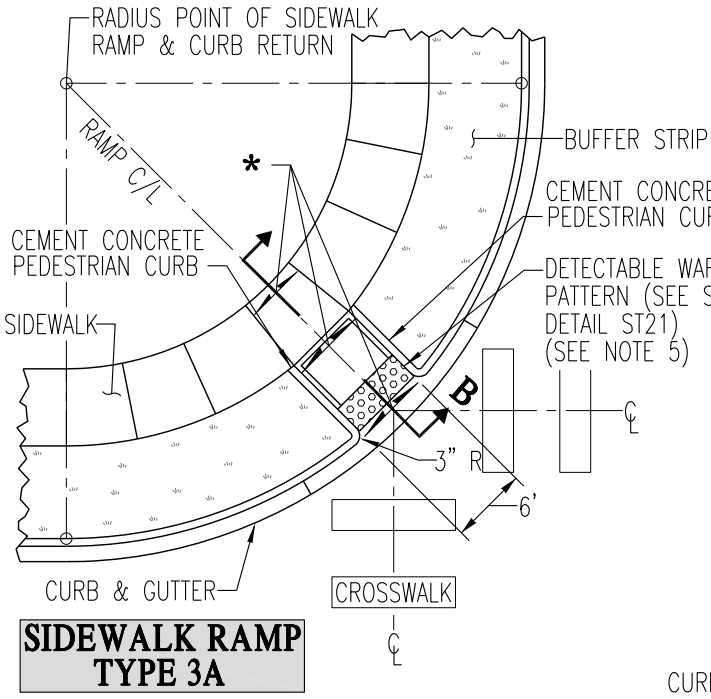
(TYPE 2A SHOWN)

ISOMETRIC VIEW

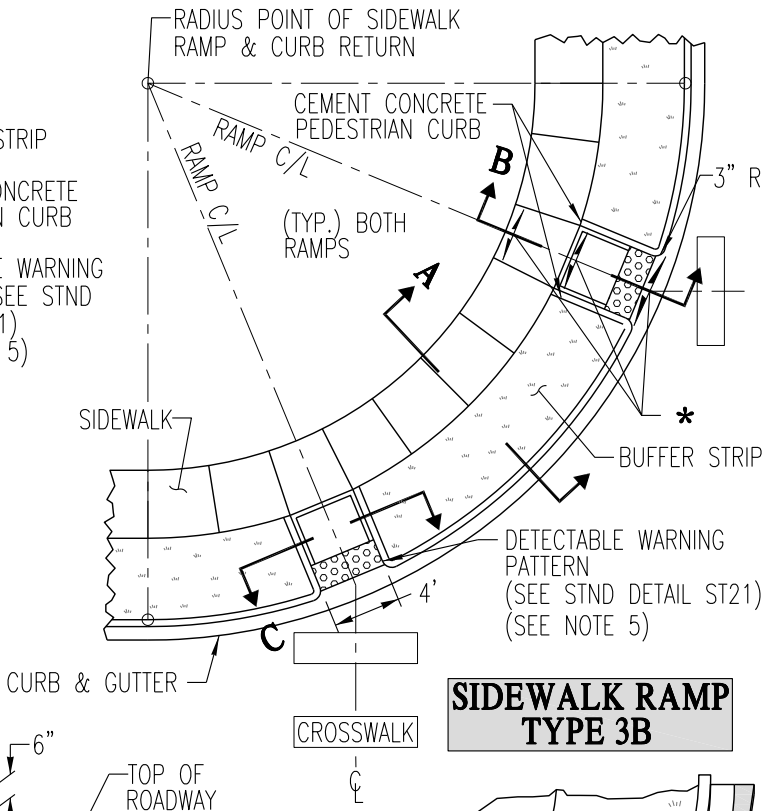
Richland Washington

SIDEWALK RAMP TYPE 2A AND 2B

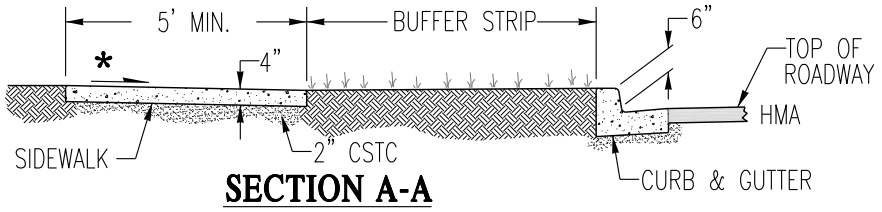
PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 05.18
DRAWN BY: EY	DWG: ST5
CAD FILE: 2013_ST5_05_2018	



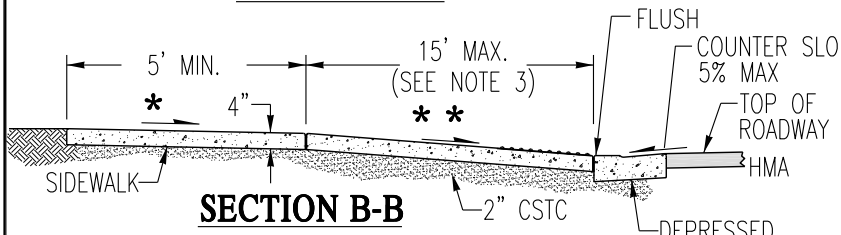
SIDEWALK RAMP TYPE 3A



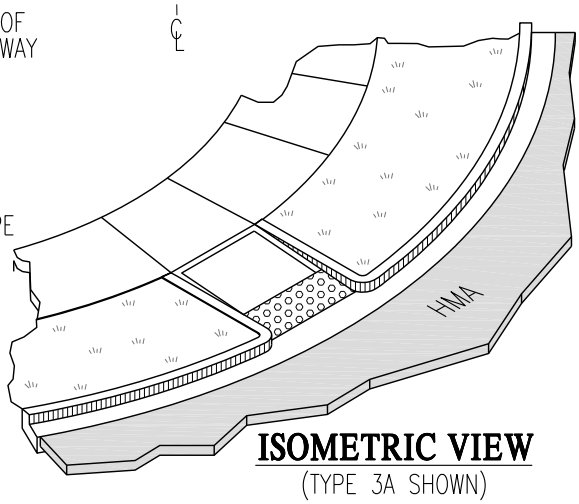
SIDEWALK RAMP TYPE 3B



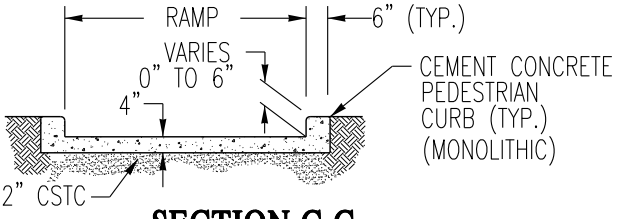
SECTION A-A



SECTION B-B



ISOMETRIC VIEW
(TYPE 3A SHOWN)



SECTION C-C

LEGEND:

- SLOPE IN EITHER DIRECTION
- * 1.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (2% MAX)
- * * 7.5% OR FLATTER RECOMMENDED FOR DESIGN/FORMWORK (8.3% MAX)

NOTES:

1. THE TYPE 3B RAMP ARE THE PREFERRED RAMPS. WHEN IT IS INFEASIBLE TO PROVIDE A RAMP FOR EACH OF THE TWO CROSSWALKS, A SINGLE TYPE 3A RAMP FOR BOTH CROSSWALKS CAN BE USED WITH THE APPROVAL OF THE ENGINEER.
2. SEE STANDARD DETAIL ST7 FOR CURB, GUTTER AND SIDEWALK NOTES.
3. THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15' TO AVOID CHASING THE CURB RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15' TO AVOID CHASING RUNNING SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS FEASIBLE.
4. DETAILED DESIGN INFORMATION SHALL BE PROVIDED BY THE ENGINEER WITH THE ELEVATIONS PROVIDED FOR ALL FOUR CORNERS OF THE LANDING AND RAMP LENGTH.
5. CURB SHALL BE FORMED TO PROVIDE A STRAIGHT LINE ALONG THE BACK OF CURB ADJACENT TO THE WARNING PATTERN.

Richland Washington

SIDEWALK RAMP TYPE 3A AND 3B

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 05.18
DRAWN BY: EY	DWG: ST6
CAD FILE: 2013_ST6_05_2018	

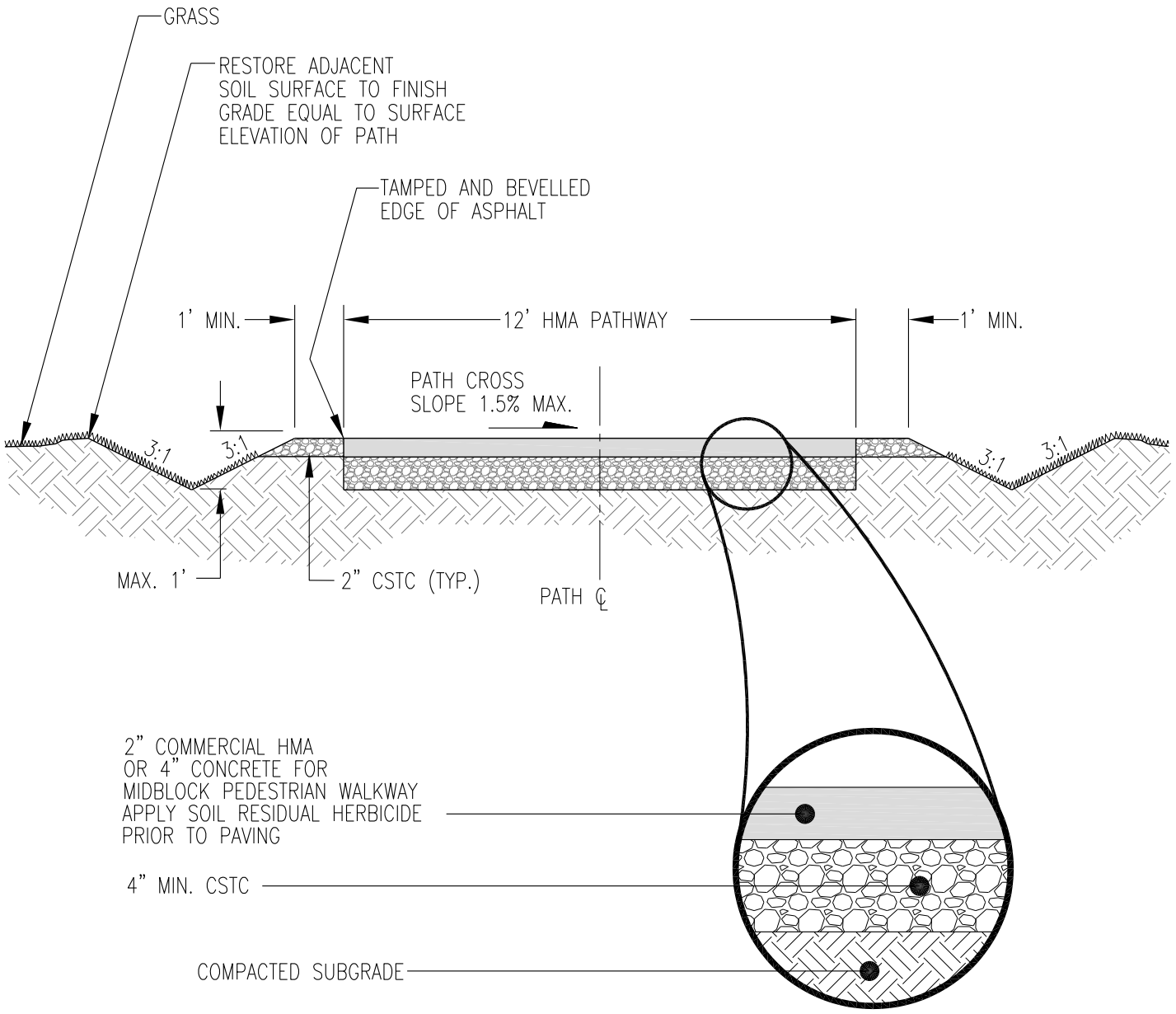
CONSTRUCTION NOTES FOR PEDESTRIAN FACILITIES

1. ASPHALT PATCHING – SAWCUT A MINIMUM OF 24" OF ASPHALT BEYOND THE FACE OF NEW GUTTER, REMOVE ALL DEBRIS AND ADD CRUSHED SURFACE TOP COURSE (CSTC) AS NEEDED. COMPACT AREA, PLACE HMA AND COMPACT AS REQUIRED.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI FOR SIDEWALKS. CONCRETE FOR CURB, GUTTER AND DRIVEWAYS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
3. CONTRACTOR SHALL CALL FOR CITY INSPECTION PRIOR TO CUTTING AND/OR REMOVING CURB, GUTTER, AND SIDEWALK. THE INSPECTOR WILL MARK AREA TO BE CUT OR REMOVED. CONTRACTOR'S PRESENCE IS ADVISABLE.
4. CONTRACTOR SHALL CALL FOR INSPECTION OF ALL FORMS PRIOR TO POURING CONCRETE FOR CURB, GUTTER, SIDEWALK AND DRIVEWAYS. ALL EXPANSION JOINTS SHALL BE IN PLACE AT TIME OF INSPECTION. ("WET SET" MASTIC IS NOT ALLOWED)
5. THE INSPECTOR SHALL CHECK ALL JOINT LOCATIONS. ALL EXPANSION JOINTS SHALL BE MARKED WITH AN "M".
6. CONTRACTOR SHALL NOT POUR ANY CONCRETE UNTIL ALL JOINTS HAVE BEEN CHECKED AND GIVEN VERBAL OR WRITTEN APPROVAL BY INSPECTOR.
7. THE FACE OF CURB SHALL BE STAMPED AT ALL UTILITY CROSSINGS, MAIN LINES AND SERVICE LINES AS FOLLOWS: "S"–SANITARY SEWER, "W"–WATER, "I"–IRRIGATION, "C"–CONDUITS
8. CURB, GUTTER, AND SIDEWALK SURFACES SHALL HAVE A LIGHT BROOM FINISH. SIDEWALK SHALL BE BROOMED PERPENDICULAR TO CURB LINE IN A UNIFORM AND CONSISTENT MANNER.
9. A MINIMUM OF 2" OF CSTC SHALL BE PLACED AND COMPACTED UNDER ALL CURB, GUTTER AND SIDEWALK.
10. JOINT SPACING SHALL BE NO LESS THAN 2.5' AND NO GREATER THAN 5'.
11. SIDEWALKS SHALL BE A MINIMUM OF 5 FEET WIDE. IN COMMERCIAL ZONED C–2, C–3, AND CBD AREAS THE SIDEWALKS SHALL BE 8 FEET WIDE.
12. WHEN UTILITY METERS, VAULTS, TRANSFORMERS, ETC. EXIST IN THE AREA BETWEEN THE LOT LINE AND THE DRIVEWAY, THE DRIVEWAY MUST BE CONSTRUCTED AT LEAST 10' FROM THE LOT LINE.
13. IF A CONCRETE DRIVEWAY IS TO BE EXTENDED PAST THE R/W LINE A 3/8" MASTIC EXPANSION JOINT SHALL BE INSTALLED FULL LENGTH OF DRIVEWAY AND FULL DEPTH OF DRIVEWAY AT THE BACK OF SIDEWALK. DRIVEWAY SHALL LINE UP WITH THE BOTTOM OF THE DRIVEWAY TRANSITIONS IN THE CURB AND GUTTER.
14. MAINTAIN 4' MINIMUM CLEARANCE FROM ANY OBSTRUCTION ON SIDEWALK AND SIDEWALK RAMP.
15. AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES, OR OTHER OBSTRUCTIONS IN FRONT OF DRIVEWAY ENTRANCES.
16. AT NO TIME SHALL ANY SLOPES EXCEED CURRENT ADA STANDARDS.

Richland Washington

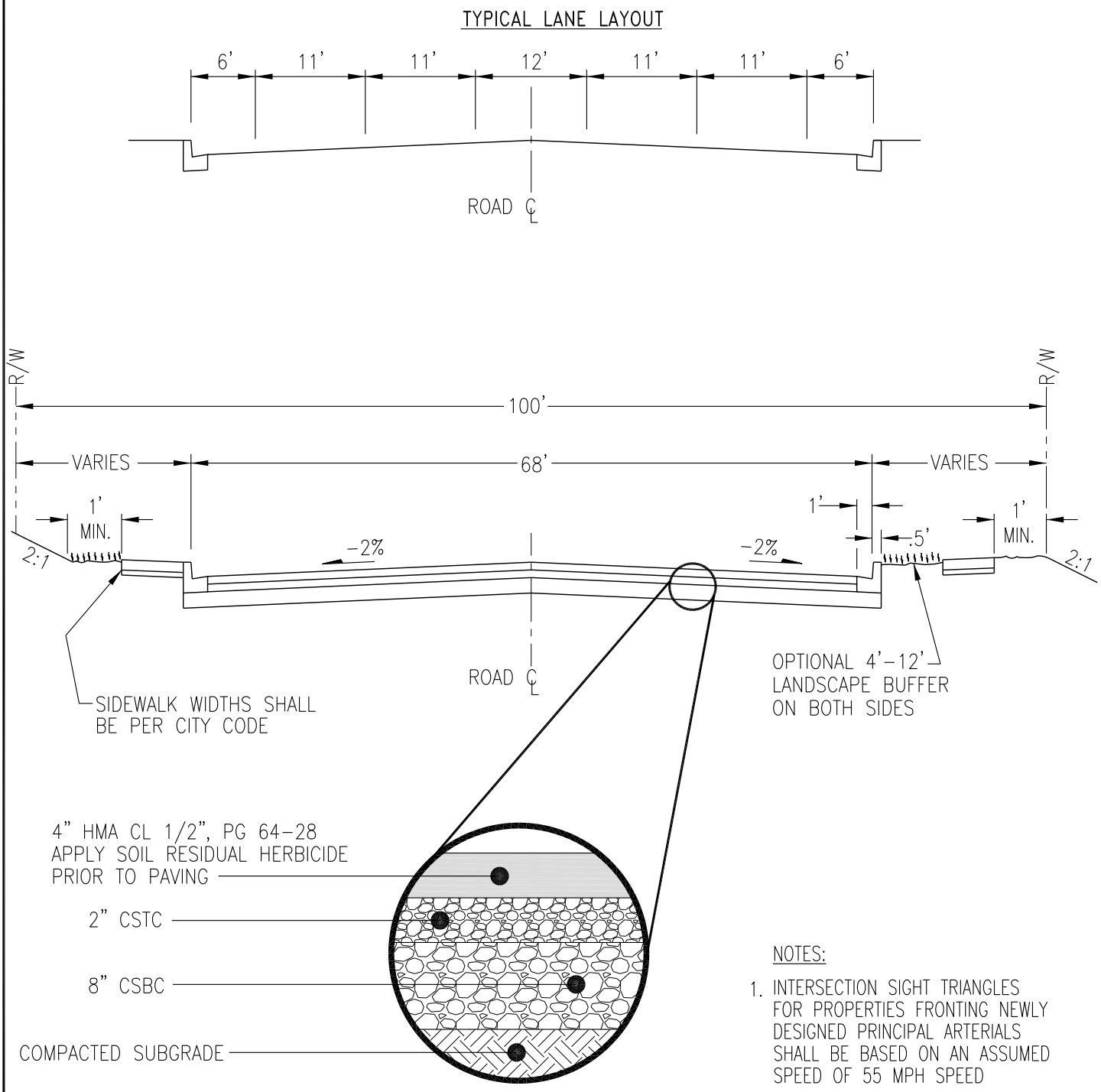
CURB, GUTTER & SIDEWALK NOTES

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 09.13
DRAWN BY: LD	DWG: ST7
CAD FILE: 2013_ST7_09_2013	



BIKE/PED PATH

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 09.13
DRAWN BY: LD	DWG: ST8
CAD FILE: 2013_ST8_09_2013	



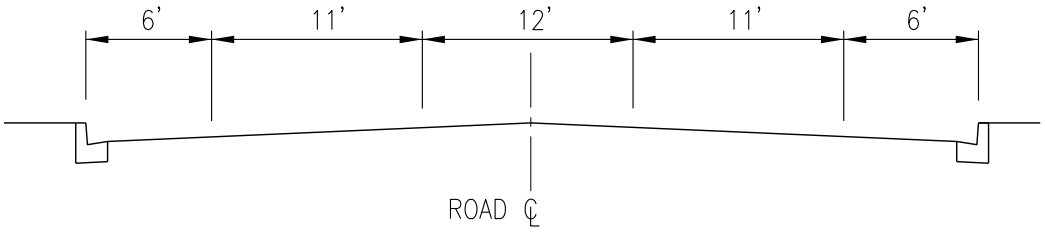
NOTES:

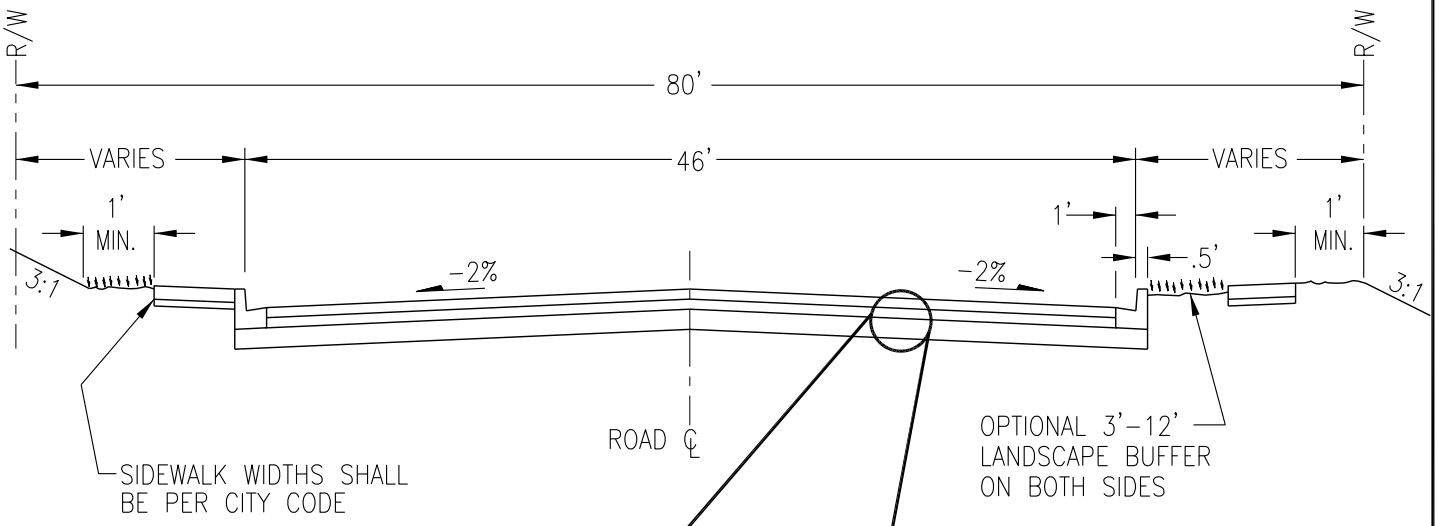
1. INTERSECTION SIGHT TRIANGLES FOR PROPERTIES FRONTING NEWLY DESIGNED PRINCIPAL ARTERIALS SHALL BE BASED ON AN ASSUMED SPEED OF 55 MPH SPEED

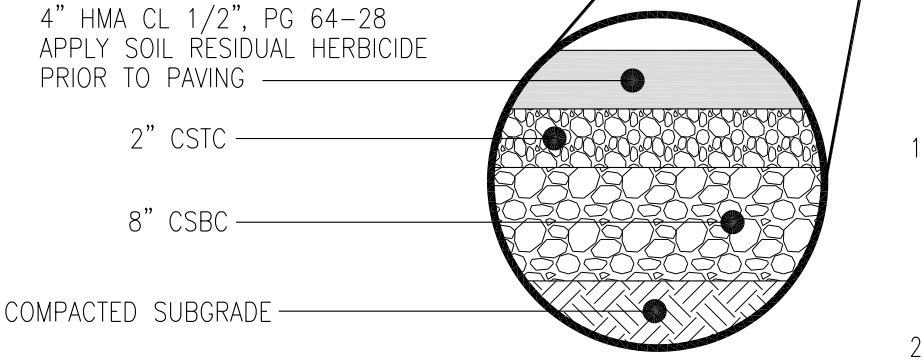
PRINCIPAL ARTERIAL

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST9
CAD FILE: 2013_ST9_06_2019	

TYPICAL LANE LAYOUT







NOTES:

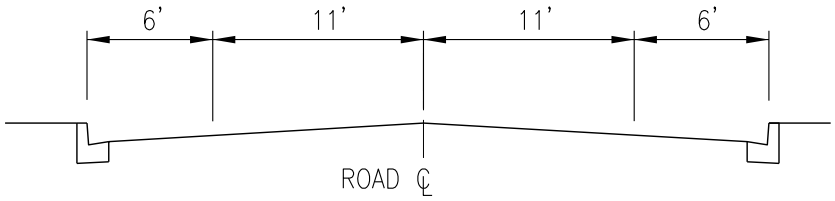
1. INTERSECTION SIGHT TRIANGLES FOR PROPERTIES FRONTING NEWLY DESIGNED MINOR ARTERIALS SHALL BE BASED ON AN ASSUMED SPEED OF 45 MPH SPEED, UNLESS THE CITY ENGINEER DIRECTS THAT A DIFFERENT SPEED BE USED.
2. WHEN A MINOR ARTERIAL REQUIRES A 5-LANE CROSS SECTION AS DETERMINED BY THE PUBLIC WORKS DIRECTOR, THE CROSS SECTION DRAWING FOR PRINCIPAL ARTERIAL (ST9) SHALL BE USED.

Richland Washington

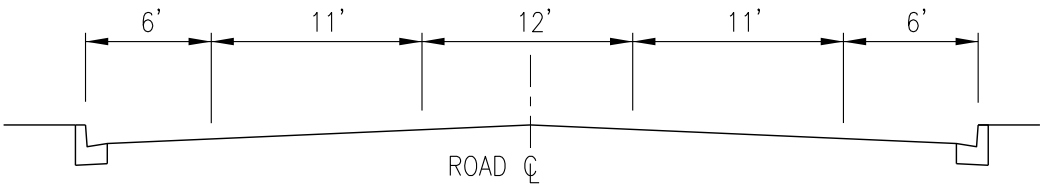
MINOR ARTERIAL

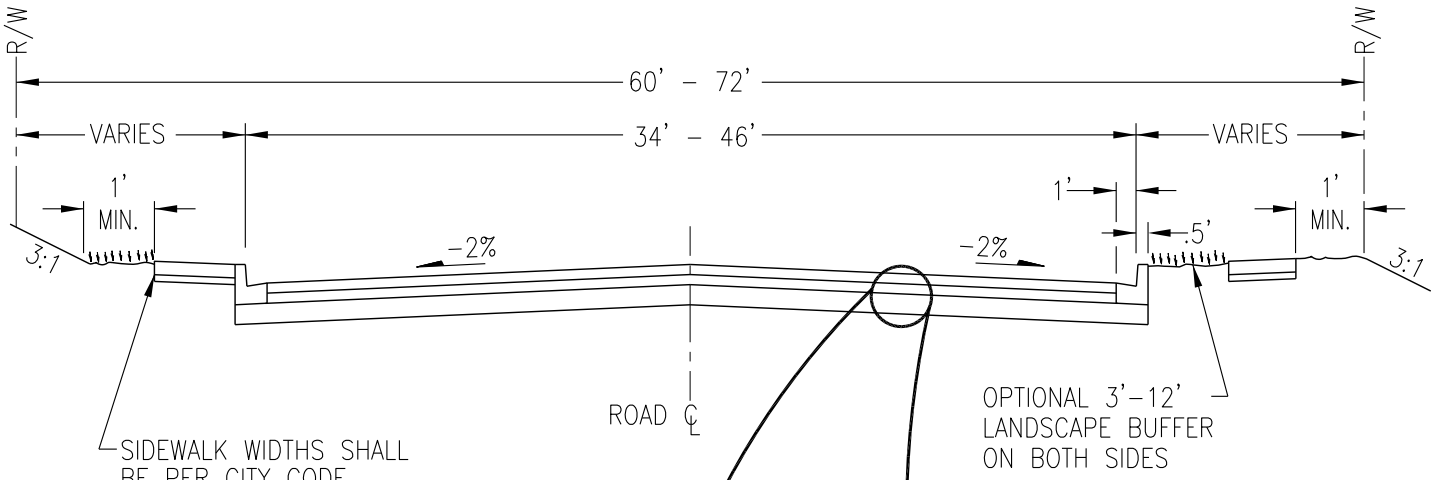
PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST10
CAD FILE: 2013_ST10_06_2019	

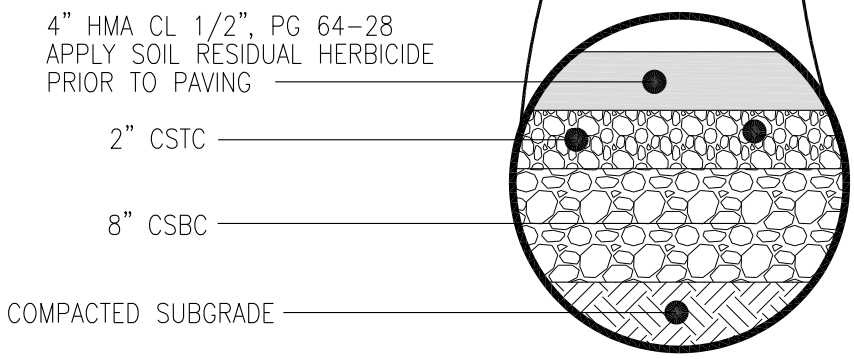
LANE OPTION 1



LANE OPTION 2







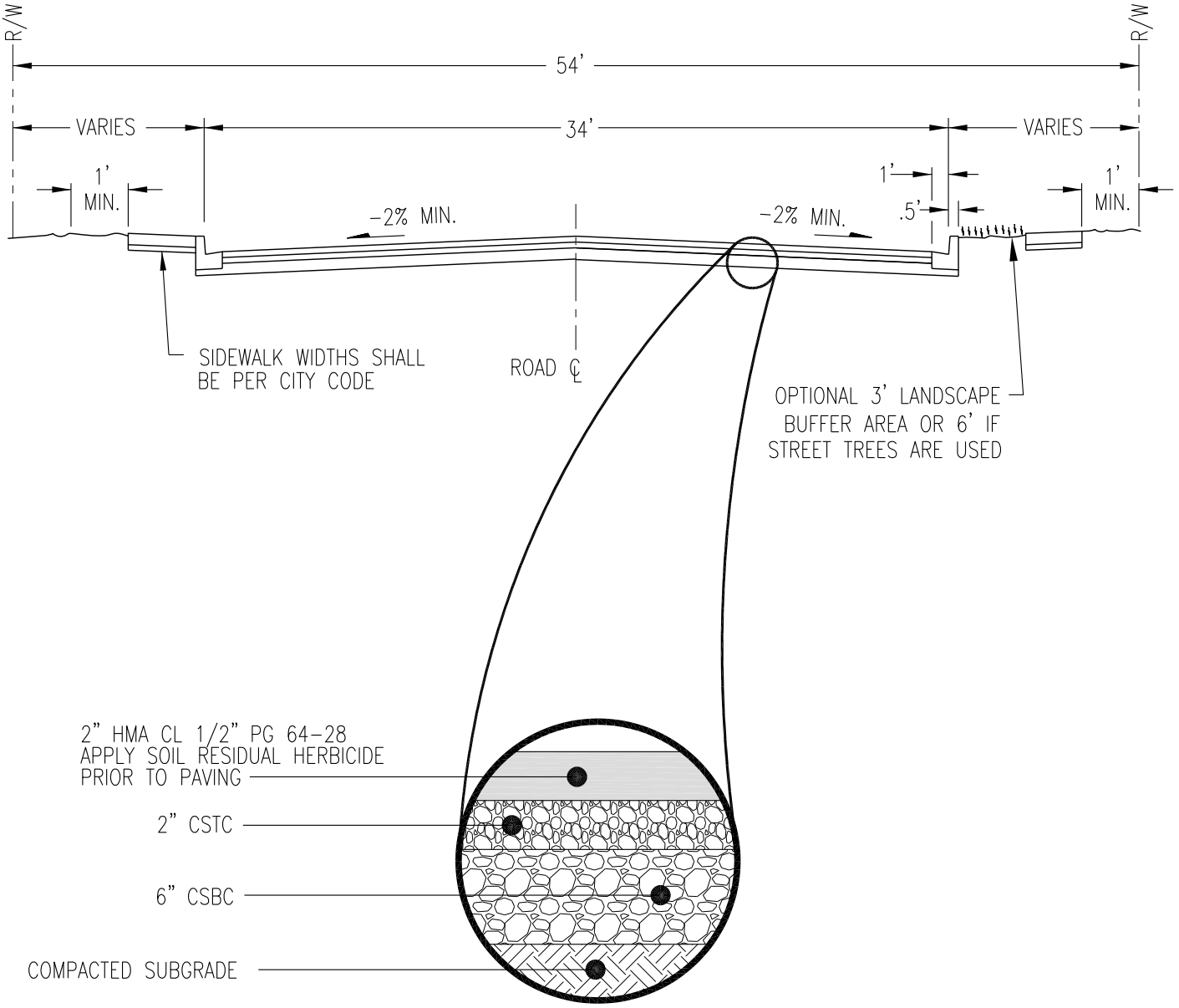
NOTES:

1. OPTION USED WILL BE DETERMINED BY CITY ENGINEER; DEPENDENT UPON FIELD CONDITIONS.
2. A PARKING OPTION MAY BE ALLOWED ON ONE OR BOTH SIDES BY ADDING 8' OUTSIDE OF THE BIKE LANE.
3. INTERSECTION SIGHT TRIANGLES FOR PROPERTIES FRONTING NEWLY DESIGNED MAJOR COLLECTORS SHALL BE BASED ON AN ASSUMED SPEED OF 35 MPH SPEED UNLESS THE CITY ENGINEER DIRECTS THAT A DIFFERENT SPEED BE USED

Richland Washington

MAJOR COLLECTOR (Arterial Collector)

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: LD	DWG: ST11
CAD FILE: 2013_ST11_06_2019	

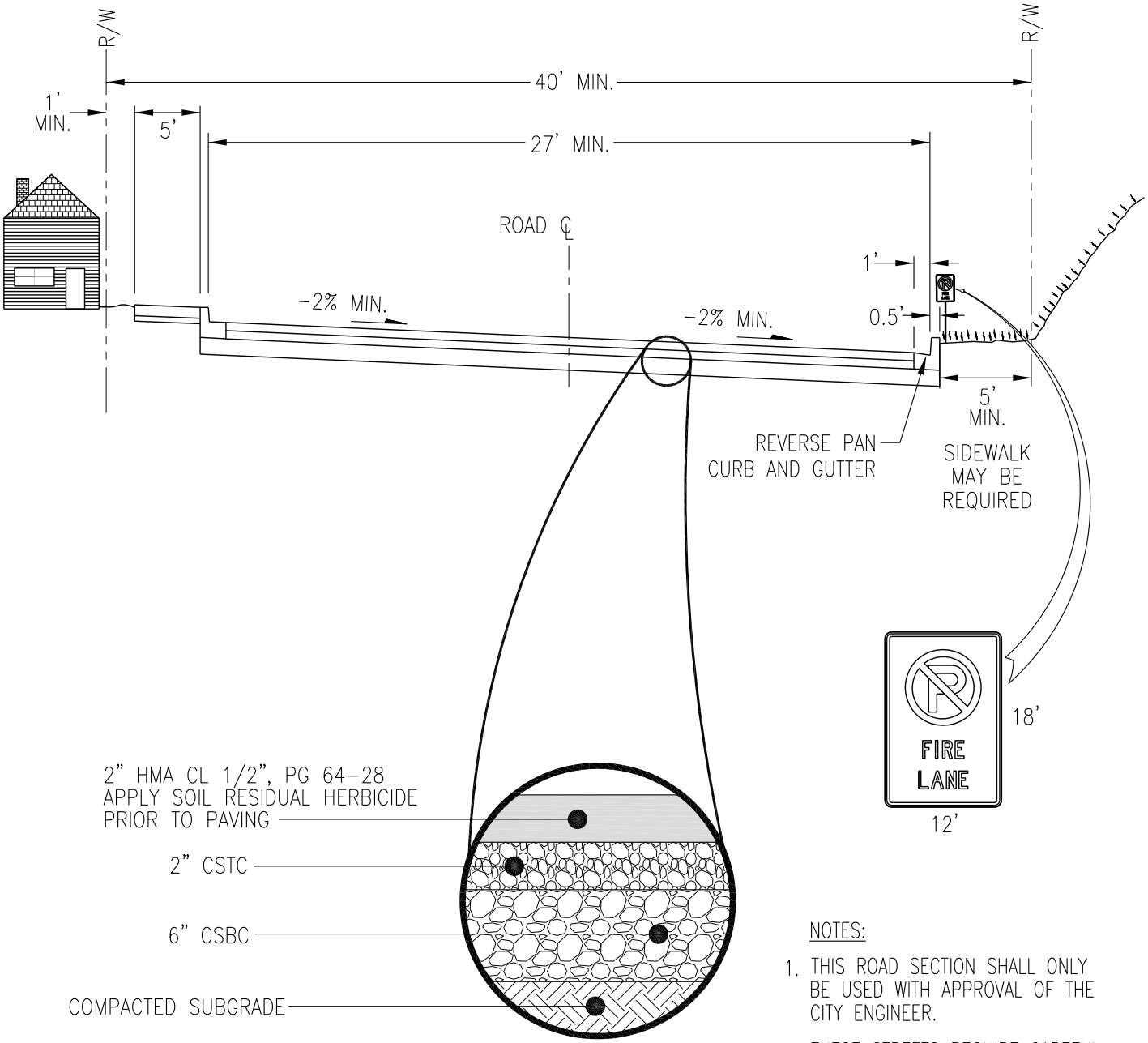


NOTES:

1. INTERSECTION SIGHT TRIANGLES FOR PROPERTIES FRONTING NEWLY DESIGNED STREETS SHALL BE BASED ON AN ASSUMED SPEED OF 30 MPH SPEED FOR MINOR COLLECTORS AND 25 MPH FOR LOCAL STREETS.

MINOR (NEIGHBORHOOD) COLLECTOR and LOCAL STREET

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: LD	DWG: ST13
CAD FILE: 2013_ST13_06_2019	



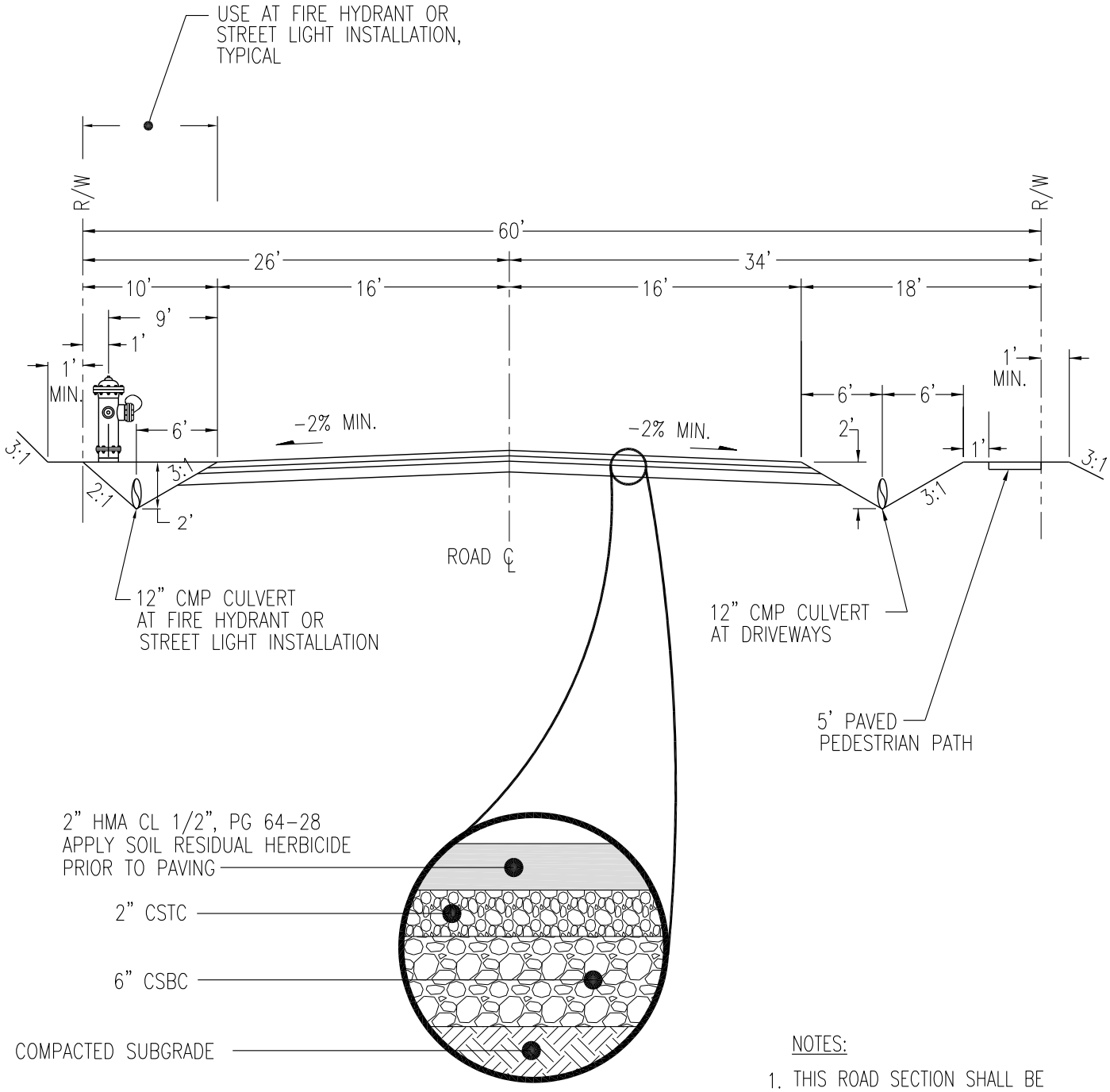
NOTES:

1. THIS ROAD SECTION SHALL ONLY BE USED WITH APPROVAL OF THE CITY ENGINEER.
2. THESE STREETS REQUIRE CAREFUL CONSIDERATION OF SIGHT TRIANGLES BY THE DESIGNER.
3. REQUIRES VARIANCE REQUEST APPROVED BY CITY ENGINEER.

Richland Washington

LOCAL STREET (SINGLE FRONTAGE)

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 09.19
DRAWN BY: LD	DWG: ST14
CAD FILE: 2013_ST14_09_2019	



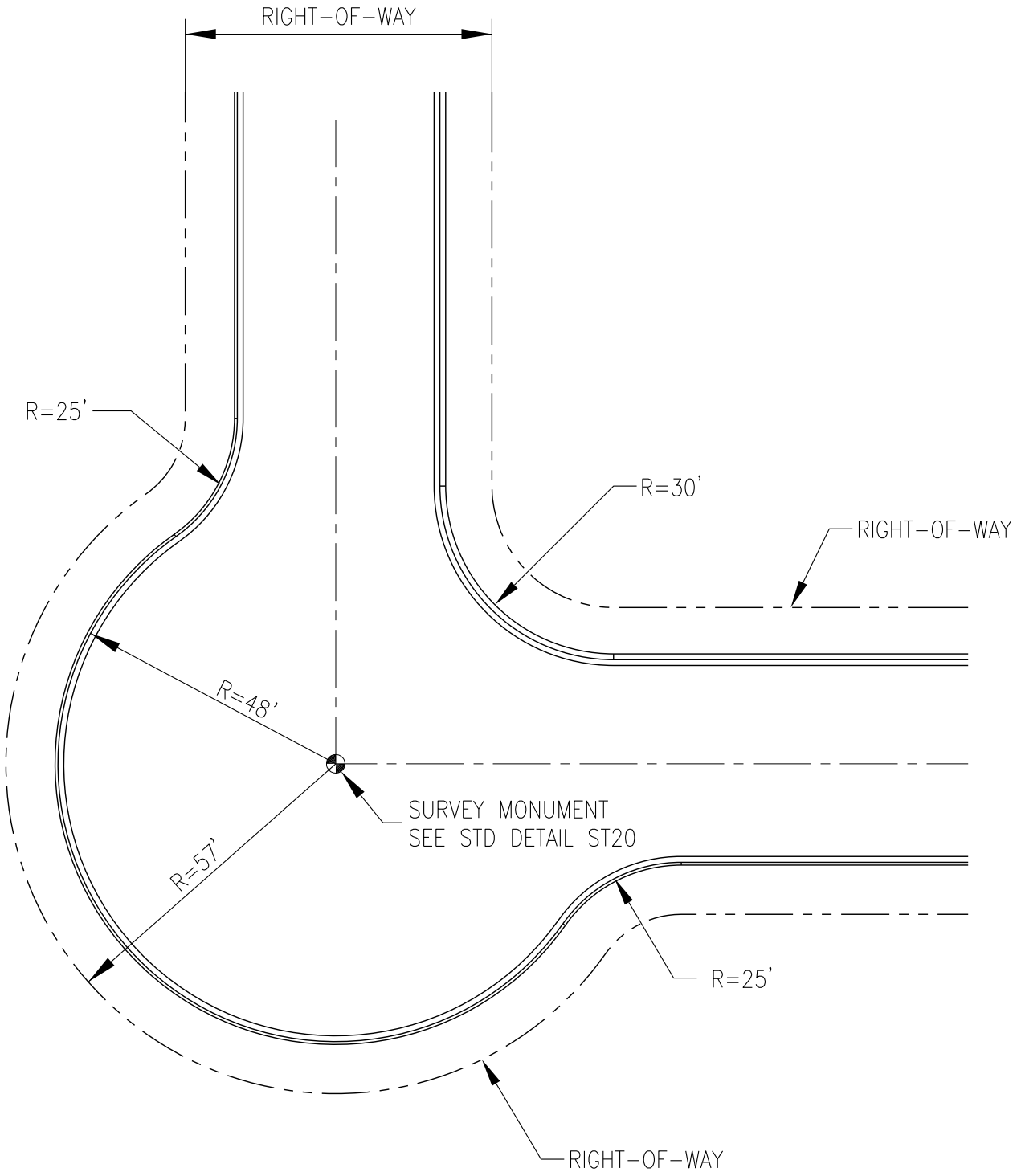
NOTES:

1. THIS ROAD SECTION SHALL BE USED WITH APPROVAL OF THE CITY ENGINEER
2. IN SOME INSTANCES A CENTER TURN LINE MAY BE REQUIRED, ADDING AN ADDITIONAL 12' OF WIDTH.
3. REQUIRES VARIANCE REQUEST APPROVED BY CITY ENGINEER

Richland Washington

RURAL STREET

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: LD	DWG: ST15
CAD FILE: 2013_ST15_06_2019	

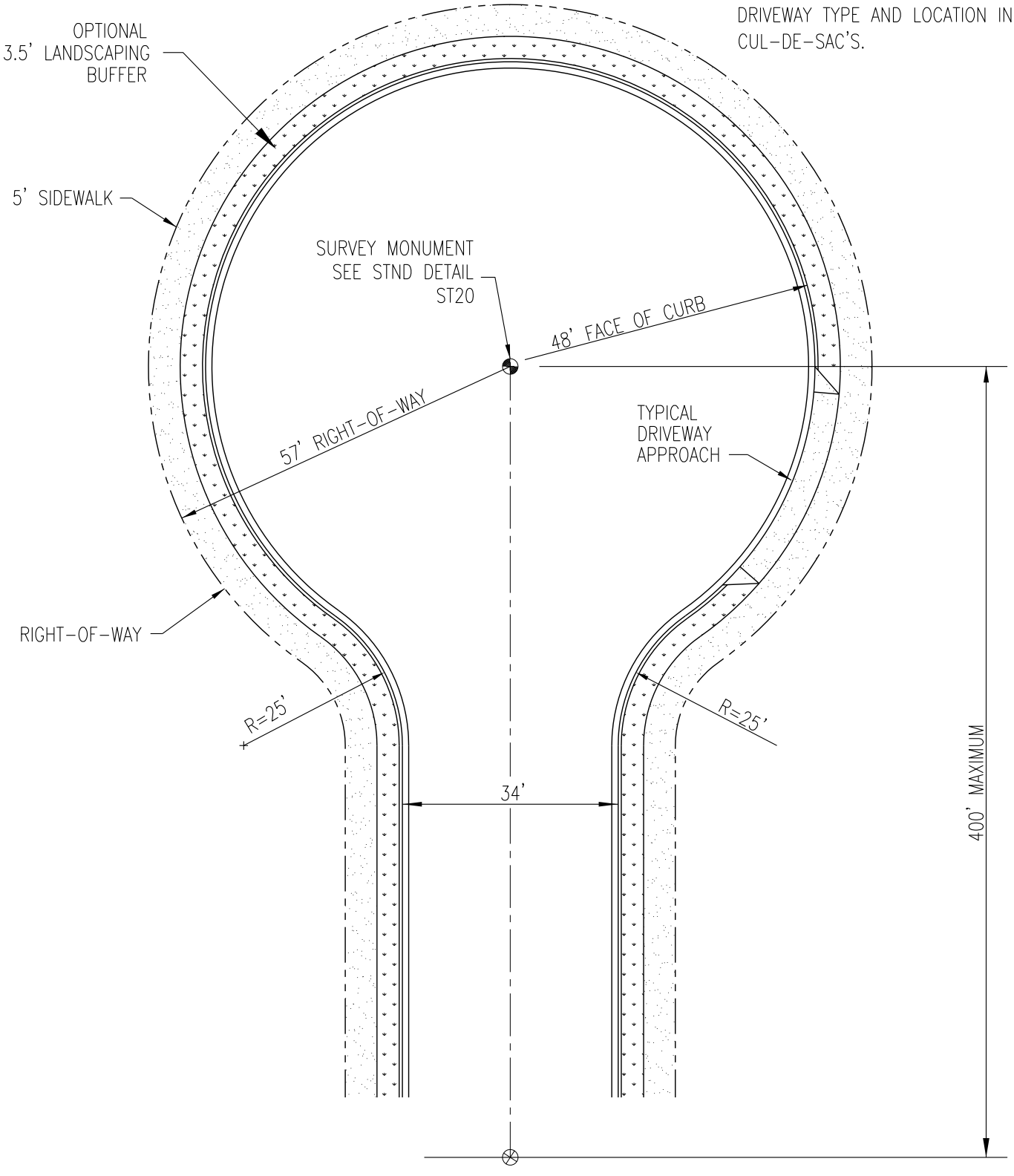


LOCAL STREET RIGHT ANGLE INTERSECTION

CIVIL & UTILITY ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: LD	DWG: ST16
CAD FILE: 2012_ST16_06_2019	

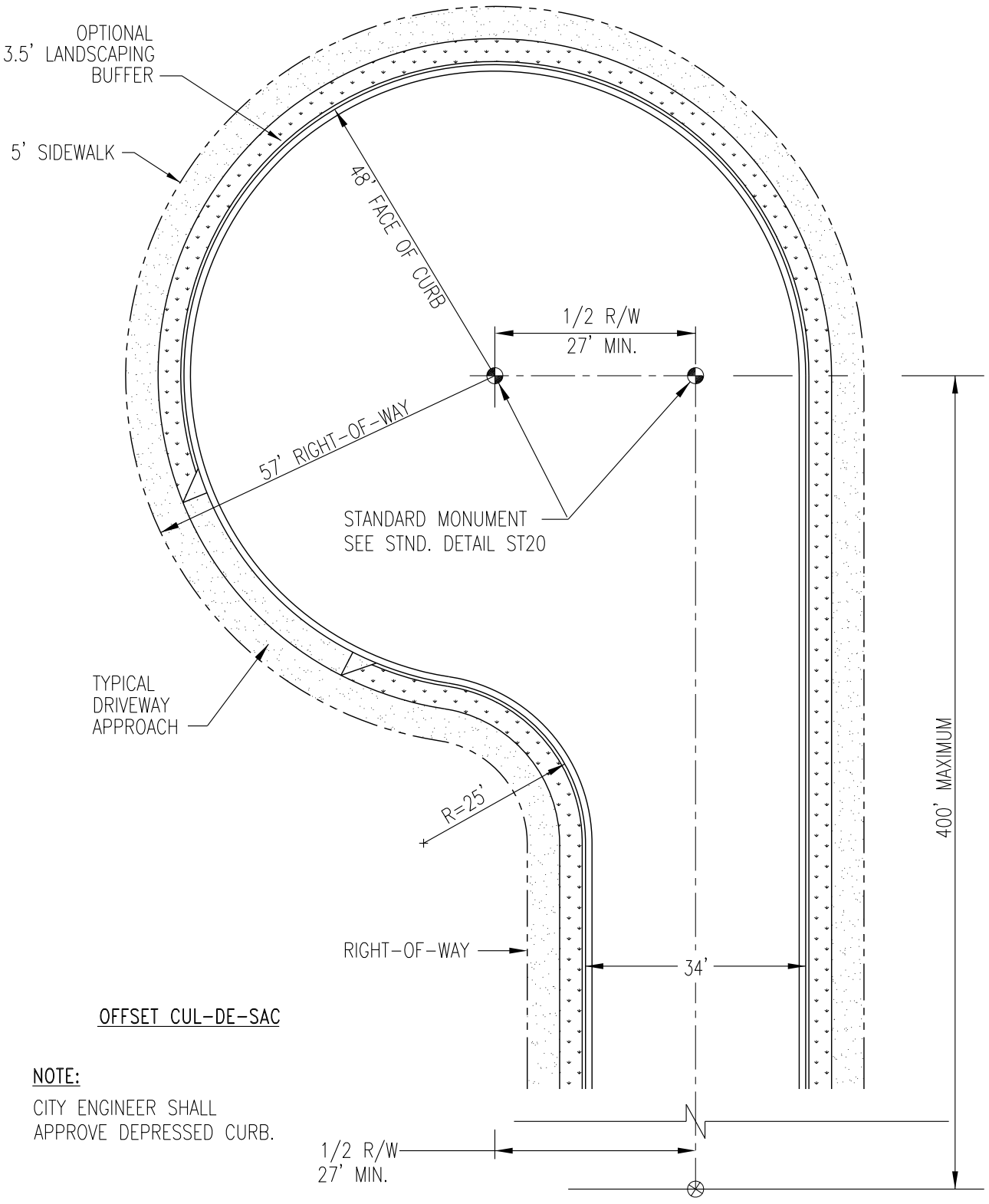
NOTE:

CITY ENGINEER SHALL APPROVE DRIVEWAY TYPE AND LOCATION IN CUL-DE-SAC'S.



STANDARD CUL-DE-SAC BULB

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST17
CAD FILE: 2012_ST17_06_2019	



OFFSET CUL-DE-SAC

NOTE:

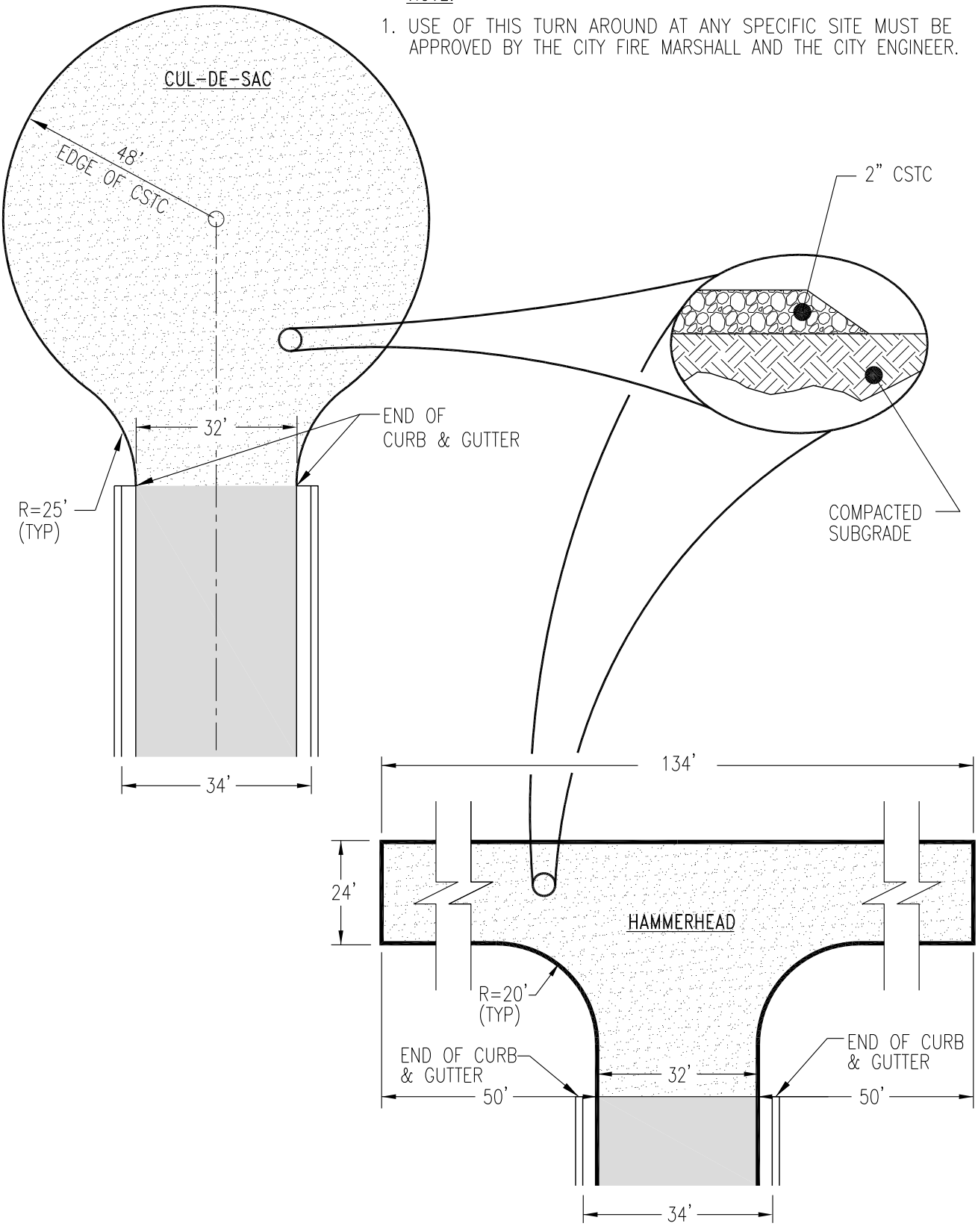
CITY ENGINEER SHALL
APPROVE DEPRESSED CURB.

STANDARD OFFSET CUL-DE-SAC

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: EY	DWG: ST18
CAD FILE: 2012_ST18_06_2019	

NOTE:

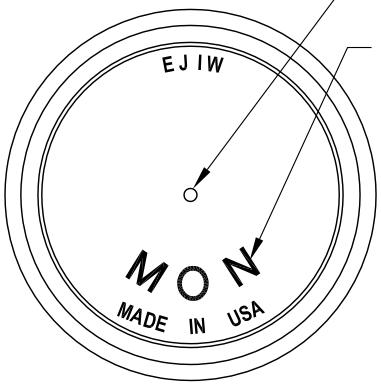
1. USE OF THIS TURN AROUND AT ANY SPECIFIC SITE MUST BE APPROVED BY THE CITY FIRE MARSHALL AND THE CITY ENGINEER.

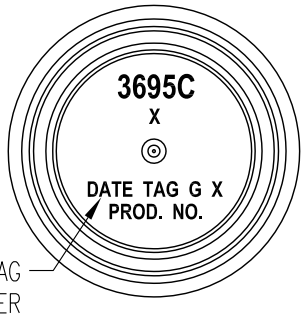


TEMPORARY TURN AROUND

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.19
DRAWN BY: LD	DWG: ST19
CAD FILE: 2012_ST19_06_2019	

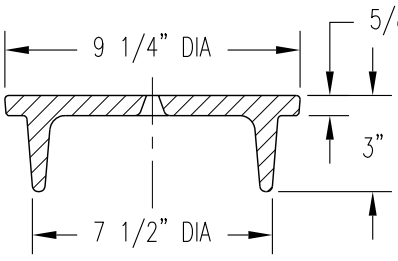
COVER-PLAN VIEW

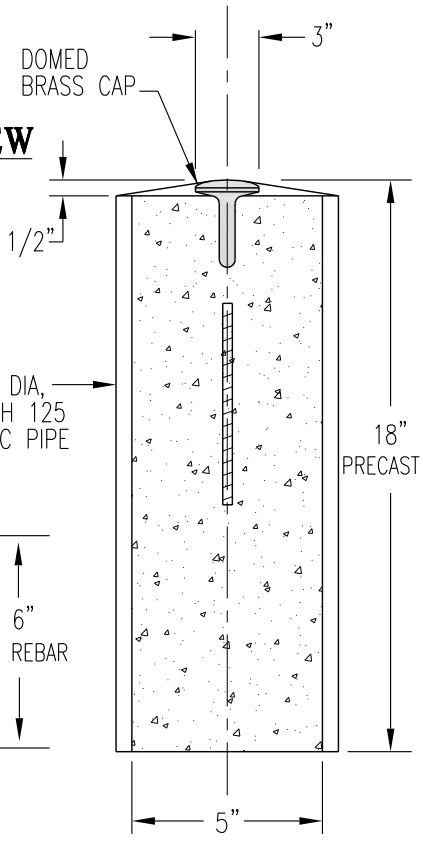




COVER BOTTOM VIEW

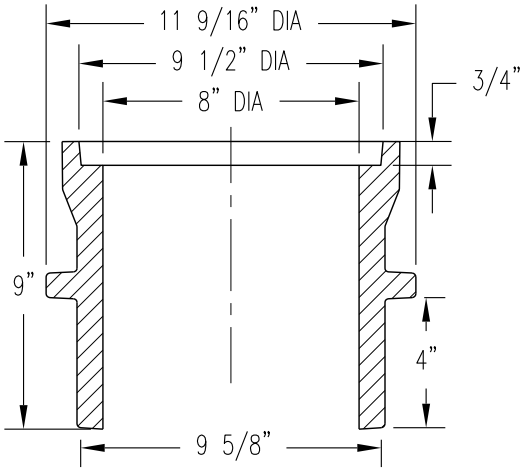
SECTION-COVER

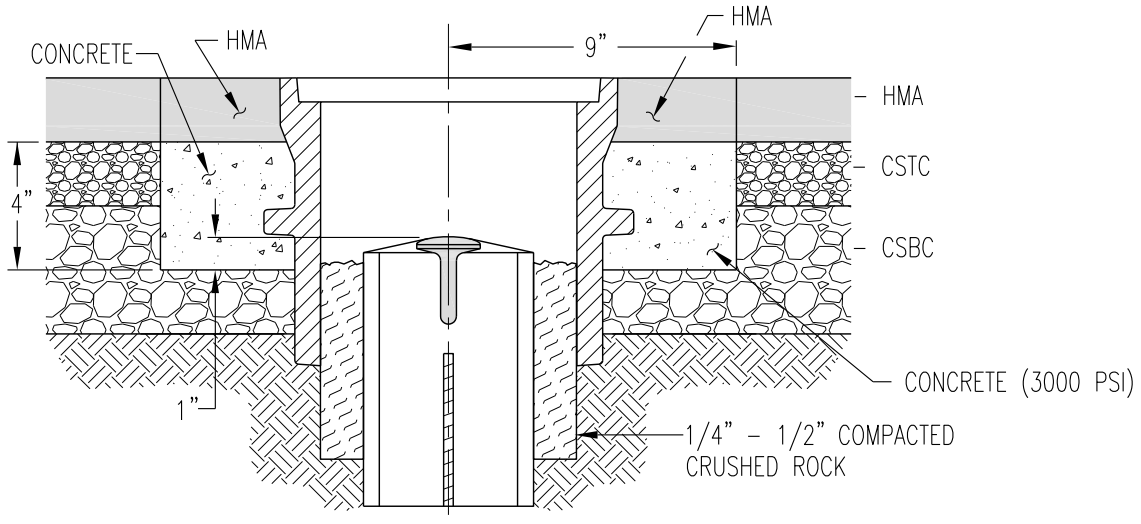




CONCRETE MONUMENT

SECTION-FRAME

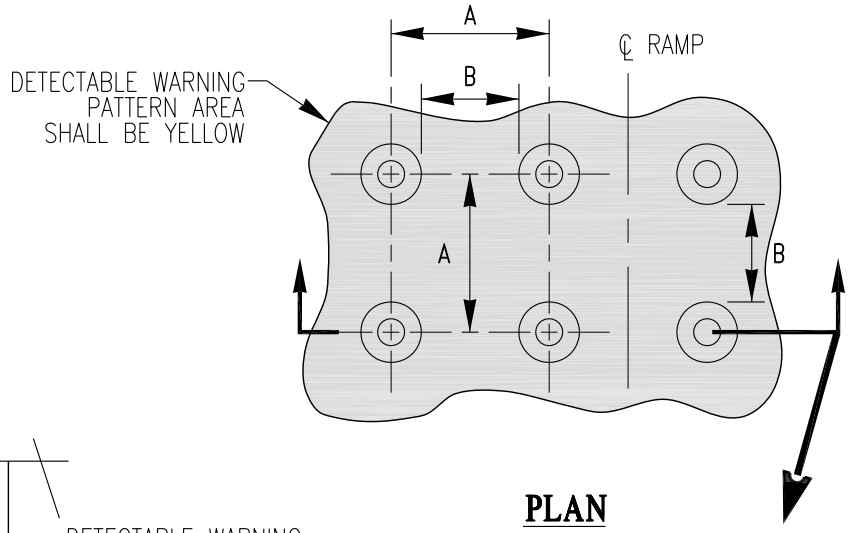




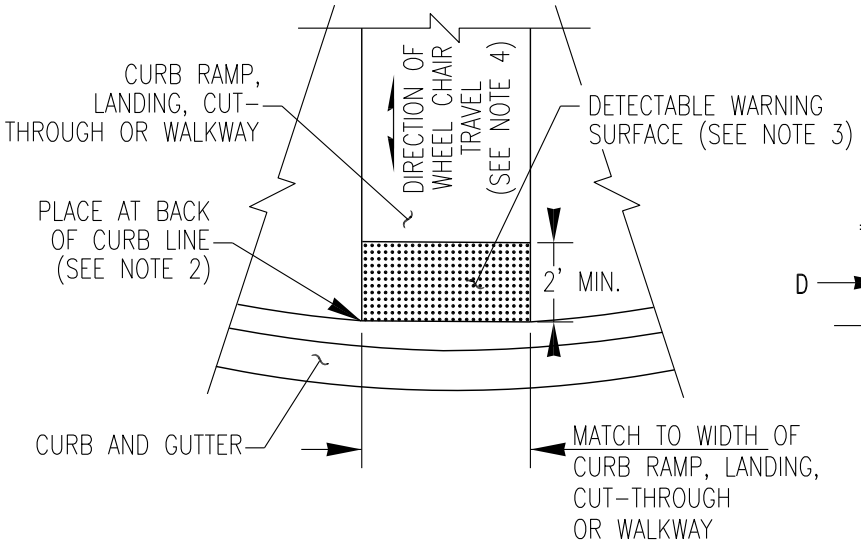
SURVEY MONUMENT

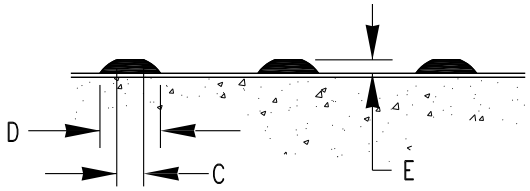
PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 07.17
DRAWN BY: LD	DWG: ST20
CAD FILE: 2013_ST20_07_2017	

	MIN.	MAX.
A	1.60"	2.40"
B	0.65"	–
C	0.45"	0.90"
D	0.9"	1.40"
E	0.2"	0.2"



PLAN





SECTION VIEW

NOTES:

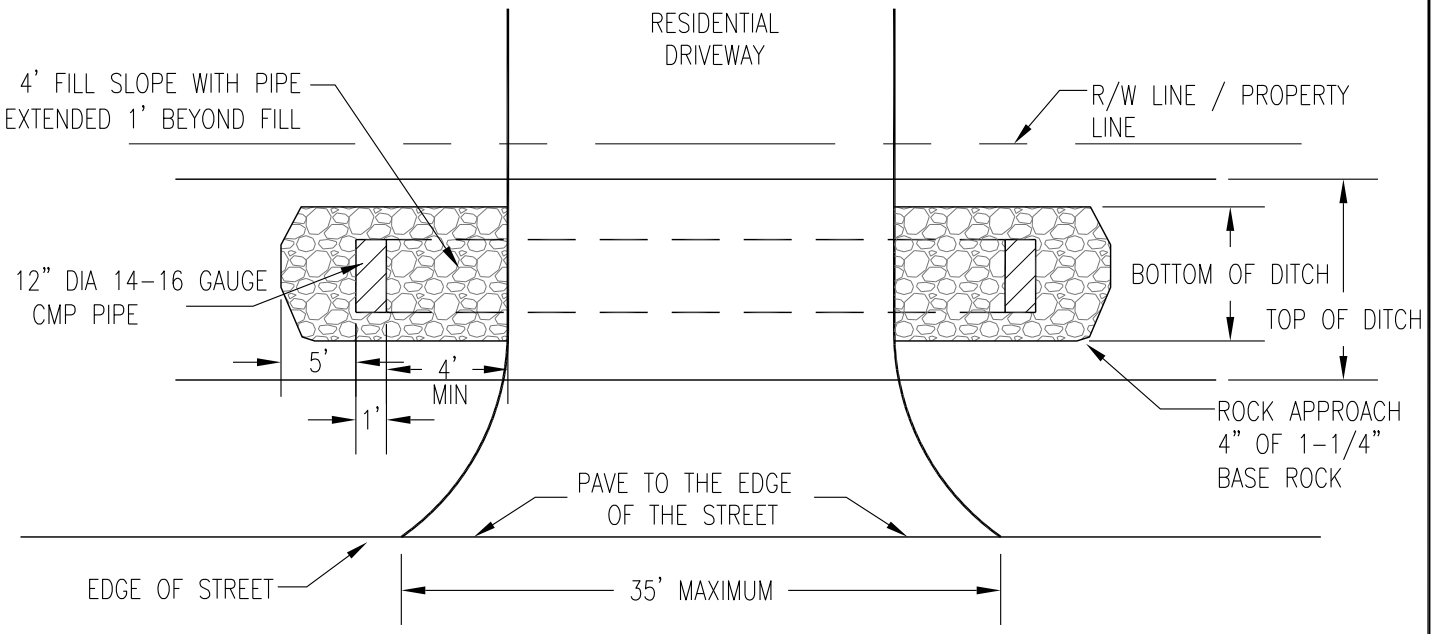
1. THE DETECTABLE WARNING SURFACE SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES) OR THE LANDING.
2. THE EDGE OF THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE BACK OF THE CURB. CURB SHALL BE FORMED TO PROVIDE A STRAIGHT LINE ALONG THE BACK OF CURB ADJACENT TO THE WARNING PATTERN.
3. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PERPENDICULAR TO THE GRADE BREAK AT THE BACK OF CURB.
4. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED TO BE PARALLEL TO THE DIRECTION OF TRAVEL.
5. SEE STANDARD PLANS FOR SIDEWALK AND CURB RAMP DETAILS.
6. IF CURB AND GUTTER ARE NOT PRESENT, SUCH AS A SHARED–USE PATH CONNECTION, THE DETECTABLE WARNING SURFACE SHALL BE PLACED AT THE PAVEMENT EDGE.

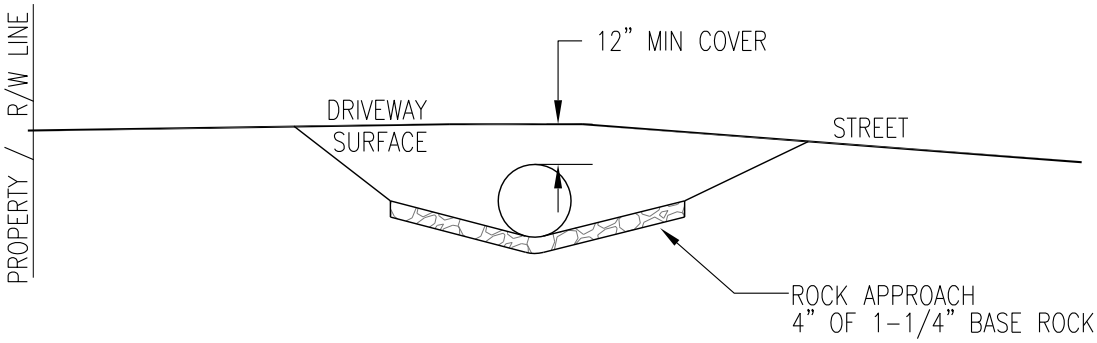
Richland Washington

DETECTABLE WARNING SURFACE

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 01.16
DRAWN BY: LD	DWG: ST21
CAD FILE: 2013_ST21_01_2016	

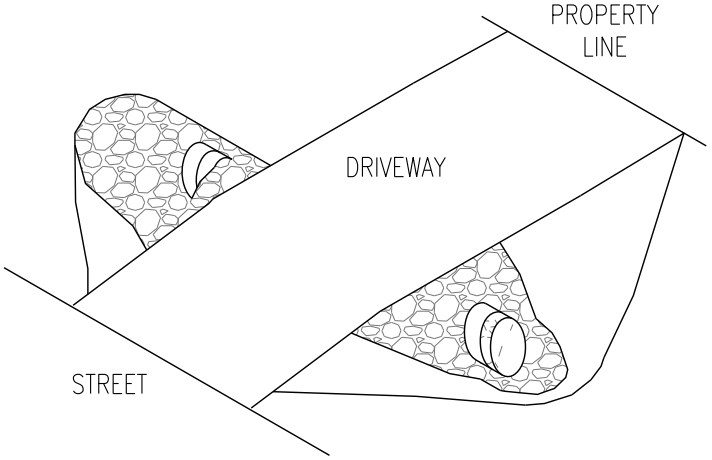
CULVERT INSTALLATION ALONG
CITY OF RICHLAND STREETS WHERE NO CURB AND GUTTER EXIST





NOTES:

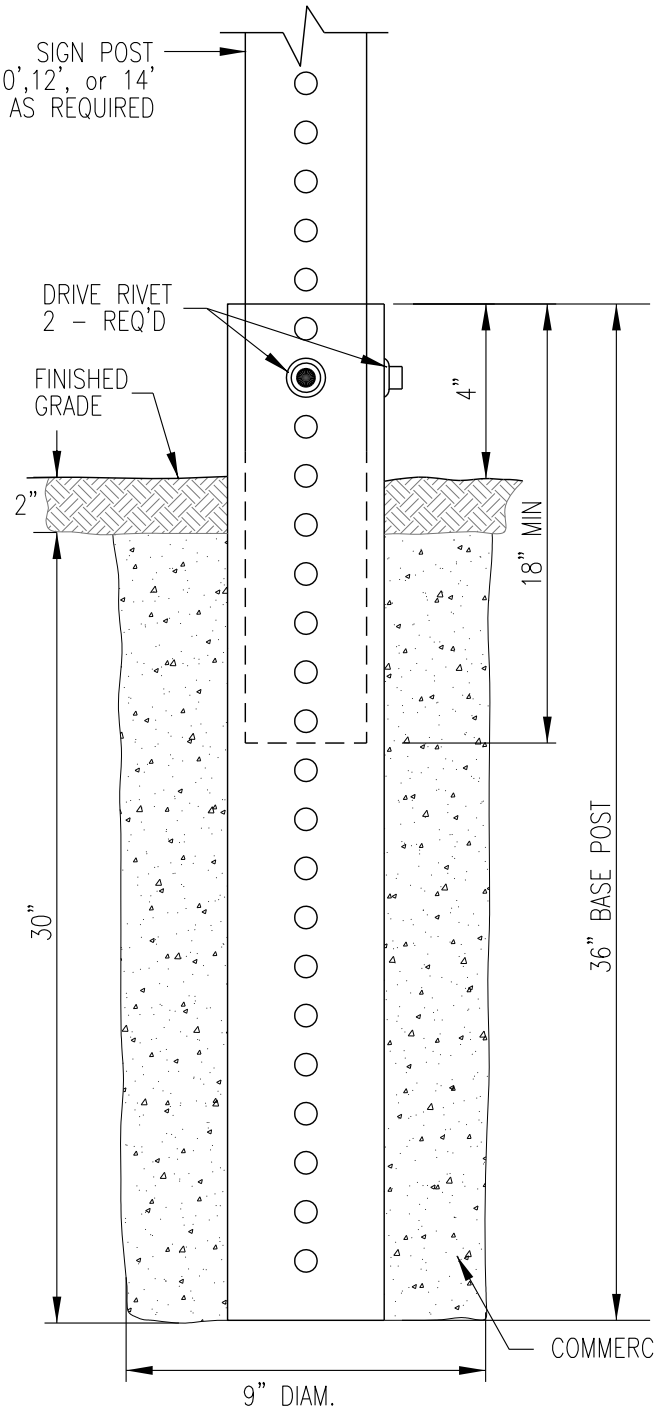
1. CULVERT PIPE SHALL BE 12" EXTRA STRENGTH CMP.
2. SIDE SLOPES OF DITCH SHALL BE 3:1 MAXIMUM.
3. CULVERT INSTALLATION SHALL PASS A CITY PUBLIC WORKS INSPECTION PRIOR TO FINAL ACCEPTANCE.
4. DITCH SHALL BE RE-ESTABLISHED ACROSS THE ENTIRE FRONTAGE PRIOR TO FINAL ACCEPTANCE.

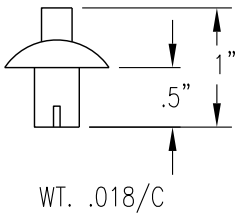


Richland Washington

RURAL DRIVEWAY / CULVERT DETAIL

PUBLIC WORKS ENGINEERING	
APPR. BY: JR	DATE: 02.12
DRAWN BY: JG	DWG: ST22
CAD FILE: 2012_ST22_02_2012	





DRIVE RIVET

NOTES:

1. POSTS SHALL BE TELESPAR BRAND SQUARE TUBING OR APPROVED EQUAL. SIGN POST MUST BE BREAK AWAY AND ACCEPTABLE PER NCHRP 350.
2. POSTS SHALL BE COLD ROLLED STEEL WITH PERFORATION OF .4375 INCH DIAMETER ON ONE INCH CENTERS ON ALL FOUR SIDES.
3. POST SHALL EMPLOY A YIELDING BREAKAWAY SYSTEM CONSISTING OF A BASE POST AND SIGN POST.
4. ALL FASTENINGS OF TUBING JOINTS AND CONNECTIONS SHALL UTILIZE A MINIMUM OF TWO DRIVE RIVETS UNLESS OTHERWISE SPECIFIED. RIVETS SHALL BE ON ADJOINING FACES OF POST NOT OPPOSITE SIDES AND SHALL NOT USE WASHERS.
5. GALVANIZED COATING SHALL CONFORM TO A.S.T.M. SPECIFICATION A-525, DES. G-90.
6. IF BASE THAT IS USED HAS CONTINUOUS HOLES, THE HOLES MUST BE COVERED PRIOR TO INSTALLATION TO PREVENT THE BASE FROM BEING FILLED WITH CONCRETE OR OTHER MATERIAL.
7. CONCRETE POURED BASES SHALL BE USED UNLESS OTHERWISE APPROVED BY THE TRAFFIC ENGINEER (e.g. MECHANICALLY DRIVEN).

PART	TUBE SIZE	MIN. WALL THICKNESS	LENGTH
BASE POST	2.25" x 2.25"	12 GAGE	36 INCH
SIGN POST	2" x 2"	12 GAGE	10',12', or 14' AS REQ'D.

Richland Washington

TYPICAL SIGN POST

PUBLIC WORKS ENGINEERING	
APPR. BY: PKR	DATE: 06.18
DRAWN BY: EY	DWG: ST23
CAD FILE: 2018_ST23_06_2018	