

NOTES:

1. CONCRETE SHALL HAVE A BREAKING STRENGTH OF 3300 PSI AFTER 28 DAYS.
2. NO EXPANSION MATERIAL SHALL BE USED.
3. TRANSVERSE CONTRACTION JOINTS REQUIRED  
 -AT EACH POINT OF TANGENCY  
 -THE DEPTH OF JOINT SHALL BE MIN. OF 1/3 OF CONCRETE THICKNESS
4. DRAINAGE BLOCK - 3" DIA. ABS PIPE. TROWEL JOINT OVER PIPE AREA
5. BASE ROCK - 3/4" MINUS OR 1" MINUS COMPACTED TO 95%. MIN. DEPTH OF 4" OR TO STREET SUBGRADE, WHICHEVER IS GREATER.

ATTENTION: ALL CONCRETE WORK IN THE CITY RIGHT-OF-WAY REQUIRES FORM AND SUB-GRADE INSPECTION AND APPROVAL BY CITY INSPECTOR PRIOR TO POURING CONCRETE. CALL 503-786-7575 FOR INSPECTION



CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Standard Curb and Gutter

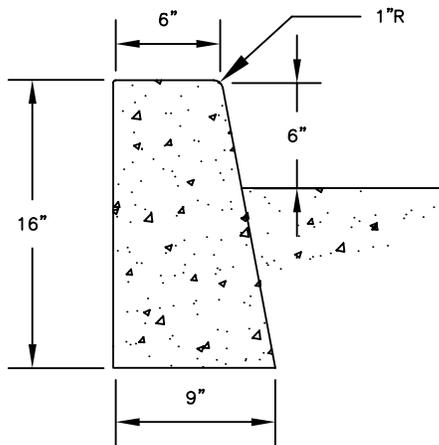
DRAWING NO.

500

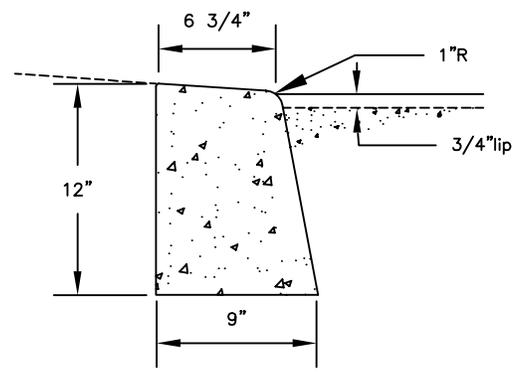
APPROVED *Gary Parki* 5/10  
 CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	Clarification	10/09	BR

MAY 2010



TYPE C CURB



CURB AT DRIVEWAY

NOTES

1. CONCRETE SHALL HAVE A BREAKING STRENGTH OF 3300 PSI AFTER 28 DAYS
2. NO EXPANSION MATERIAL SHALL BE USED
3. TRANSVERSE CONTRACTION JOINTS REQUIRED
  - AT EACH POINT OF TANGENCY
  - EVERY 15 FEET
  - THE DEPTH OF JOINT SHALL BE MIN. OF 1/3 OF CONCRETE THICKNESS
4. DRAINAGE BLOCK – 3” DIA. ABS PIPE. TROWEL JOINT OVER PIPE AREA IN DIRECTION OF PIPE
5. BASE ROCK – 3/4” MINUS OR 1” MINUS COMPACTED TO 95%. MIN DEPTH OF 4” OR TO STREET SUBGRADE, WHICHEVER IS GREATER.
6. COMMERCIAL AND HEAVY RESIDENTIAL DRIVEWAY CURB MAY REQUIRE 2- #4 BARS.

ATTENTION: ALL CONCRETE WORK IN THE CITY RIGHT-OF-WAY REQUIRES FORM AND SUB-GRADE INSPECTION AND APPROVAL BY CITY INSPECTOR PRIOR TO POURING CONCRETE. CALL 503-786-7575 FOR INSPECTION



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Standard Type C Curb

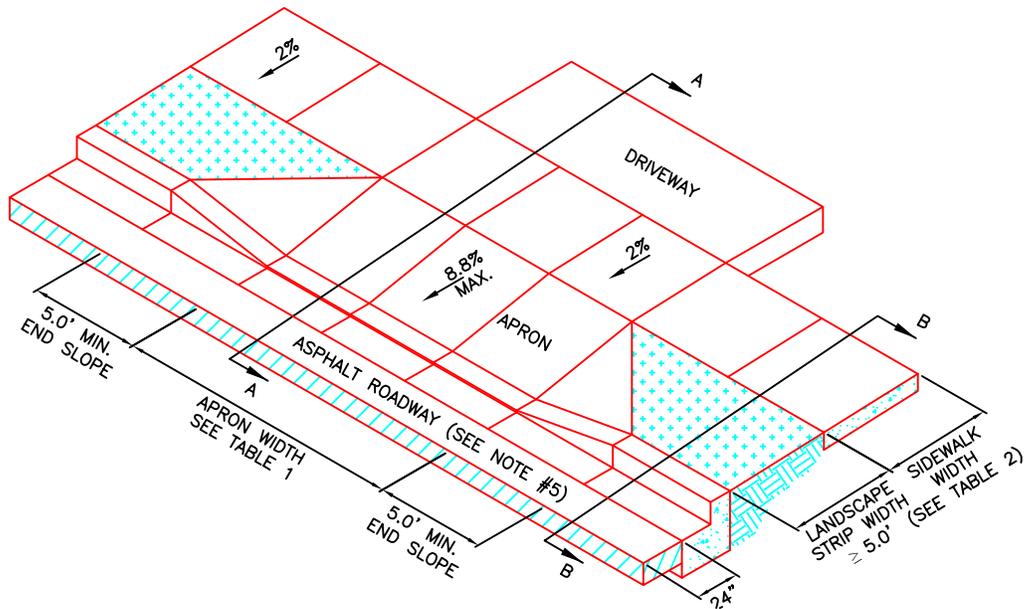
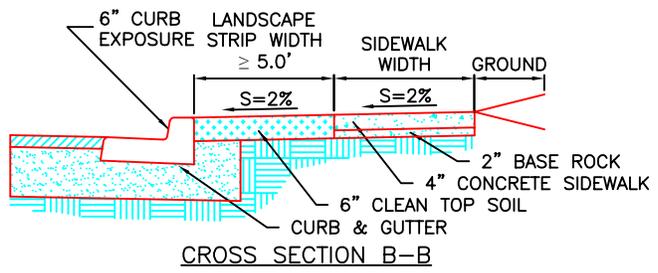
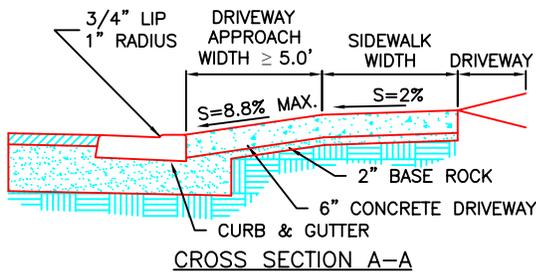
DRAWING NO.

501

APPROVED *Gary Parki* 5/10  
 CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	Clarification dimensions & font	10/09	BR

MAY 2010



**TABLE 1 – DRIVEWAY APPROACH WIDTH**

CLASSIFICATION	MIN. WIDTH	MAX. WIDTH
1-2 RESIDENTIAL DWELLING UNITS	9.0'	20.0'
3 RESIDENTIAL DWELLING UNITS	16.0'	20.0'
4-7 RESIDENTIAL DWELLING UNITS	20.0'	24.0'
8 OR MORE RESIDENTIAL DWELLING UNITS	24.0'	36.0'

**TABLE 2 – SIDEWALK WIDTH**

CLASSIFICATION	SETBACK	CURB TIGHT
LOCAL STREET	5.0'	6.0'
NEIGHBORHOOD ROUTE	5.0'	6.0'
COLLECTOR ROAD	6.0'	8.0'
ARTERIAL ROUTE	6.0'	10.0'

- CONTRACTION JOINTS SHALL BE 1/8" TO 1/4" WIDE. DEPTH OF THE JOINT SHALL BE A MINIMUM OF 1/3 THE THICKNESS OF THE CONCRETE.
- ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
- SAW CUT EXISTING CURBS THAT ARE TO BE REMOVED TO THE NEAREST JOINT.
- EXISTING ASPHALT CONCRETE IN FRONT OF THE APPROACH SHALL BE SAW CUT ALONG A LINE PARALLEL TO THE CURB AT A MINIMUM DISTANCE OF 24" AWAY FROM THE FACE OF THE CURB AND REPLACED WITH HOT MIX ASPHALT CONCRETE WITH MINIMUM THICKNESS OF 4" OR MATCH EXISTING, WHICHEVER IS GREATER.
- CONCRETE SHALL BE 3300 PSI AT 28 DAYS WITH A SLUMP RANGE OF 2" TO 4".
- CURB JOINT SHALL BE A TROWLED JOINT WITH A MINIMUM 1/2" RADIUS ALONG THE BACK OF CURB.
- CONCRETE PANELS SHOULD BE SQUARE (4'X4', 5'X5', ETC.). IN NO CASE SHALL THE LENGTH OF A CONCRETE PANEL BE GREATER THAN 1.5 TIMES THE WIDTH AND VICE VERSA.
- COMMERCIAL DRIVEWAY APRONS AND ADJACENT SIDEWALK REQUIRE #4 REBAR, 12" ON-CENTER IN EACH DIRECTION. THE APRON REBAR SHALL BE ADEQUATELY TIED TO THE CURB REBAR.

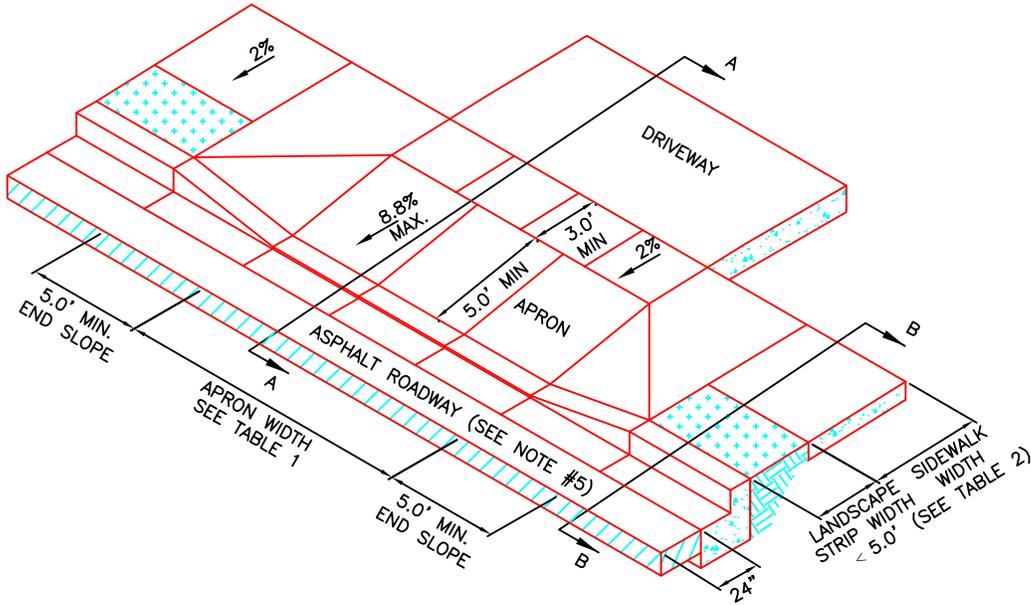
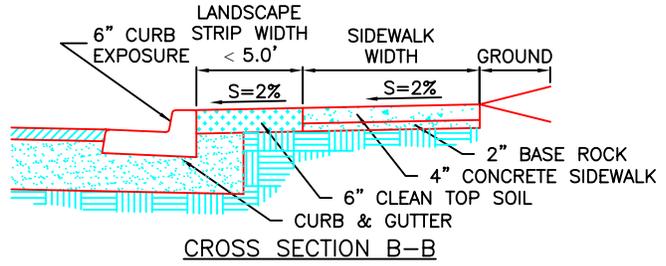
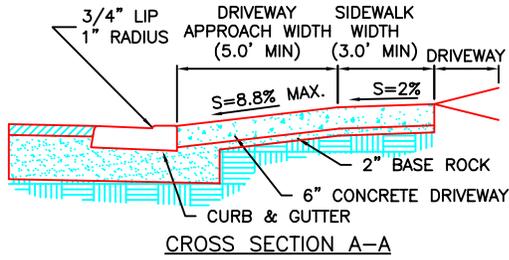


**CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.**  
**Set Back Driveway Approach**  
**Landscape Strip ≥ 5.0'**

DRAWING NO.  
**502A**

APPROVED <i>Gary Parki</i> CITY ENGINEER	DATE 5/10	NO.	REVISIONS	DATE	BY
		1	UPDATED FOR CODE CHANGES	10/30/09	ZJW

MAY 2010



**TABLE 1 – DRIVEWAY APPROACH WIDTH**

CLASSIFICATION	MIN. WIDTH	MAX. WIDTH
1-2 RESIDENTIAL DWELLING UNITS	9.0'	20.0'
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**TABLE 2 – SIDEWALK WIDTH**

CLASSIFICATION	SETBACK	CURB TIGHT
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2. ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
3. SAW CUT EXISTING CURBS THAT ARE TO BE REMOVED TO THE NEAREST JOINT.
4. EXISTING ASPHALT CONCRETE IN FRONT OF THE APPROACH SHALL BE SAW CUT ALONG A LINE PARALLEL TO THE CURB AT A MINIMUM DISTANCE OF 24" AWAY FROM THE FACE OF THE CURB AND REPLACED WITH HOT MIX ASPHALT CONCRETE WITH MINIMUM THICKNESS OF 4" OR MATCH EXISTING, WHICHEVER IS GREATER.
5. CONCRETE SHALL BE 3300 PSI AT 28 DAYS WITH A SLUMP RANGE OF 2" TO 4".
6. CURB JOINT SHALL BE A TROWLED JOINT WITH A MINIMUM 1/2" RADIUS ALONG THE BACK OF CURB.
7. CONCRETE PANELS SHOULD BE SQUARE (4'X4', 5'X5', ETC.). IN NO CASE SHALL THE LENGTH OF A CONCRETE PANEL BE GREATER THAN 1.5 TIMES THE WIDTH AND VICE VERSA.
8. COMMERCIAL DRIVEWAY APRONS AND ADJACENT SIDEWALK REQUIRE #4 REBAR, 12" ON-CENTER IN EACH DIRECTION. THE APRON REBAR SHALL BE ADEQUATELY TIED TO THE CURB REBAR.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Set Back Driveway Approach  
Landscape Strip < 5.0'

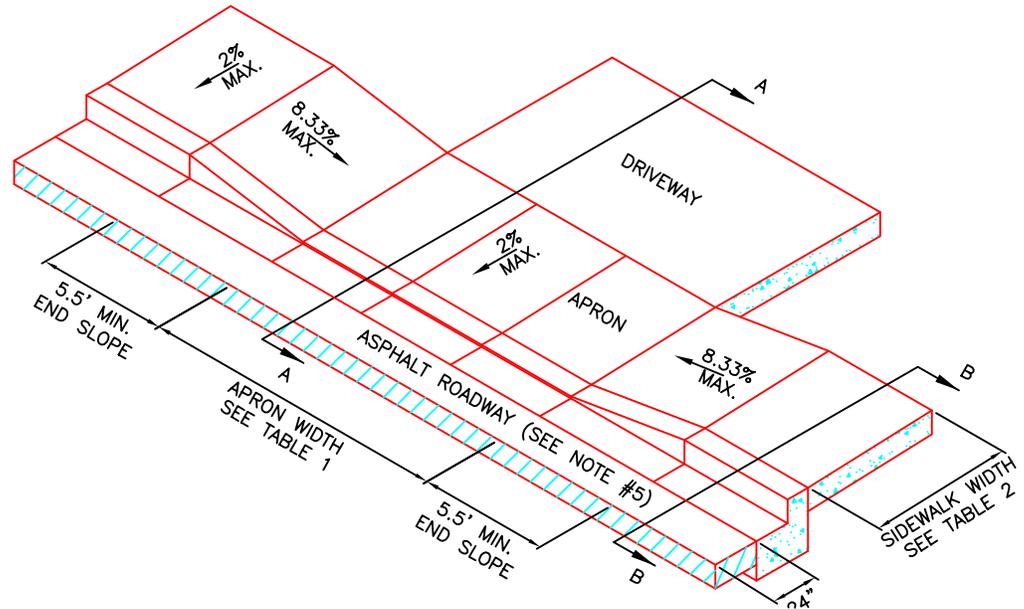
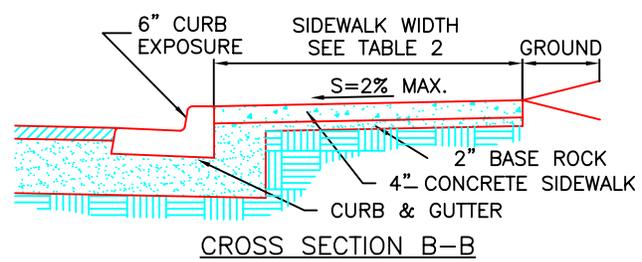
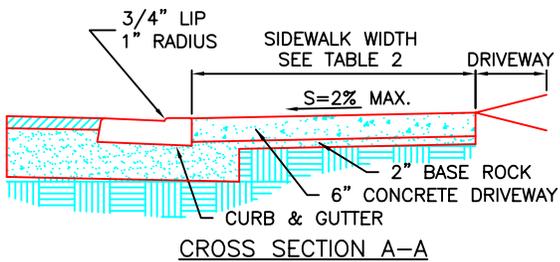
DRAWING NO.

502B

APPROVED *Gary Park* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	UPDATED FOR CODE CHANGES	10/30/09	ZJW

MAY 2010



CLASSIFICATION	MIN. WIDTH	MAX. WIDTH
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- COMMERCIAL DRIVEWAY APRONS AND ADJACENT SIDEWALK REQUIRE #4 REBAR, 12" ON-CENTER IN EACH DIRECTION. THE APRON REBAR SHALL BE ADEQUATELY TIED TO THE CURB REBAR.



CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Curb Tight Driveway Approach  
Driveway Width ≤ Apron Width

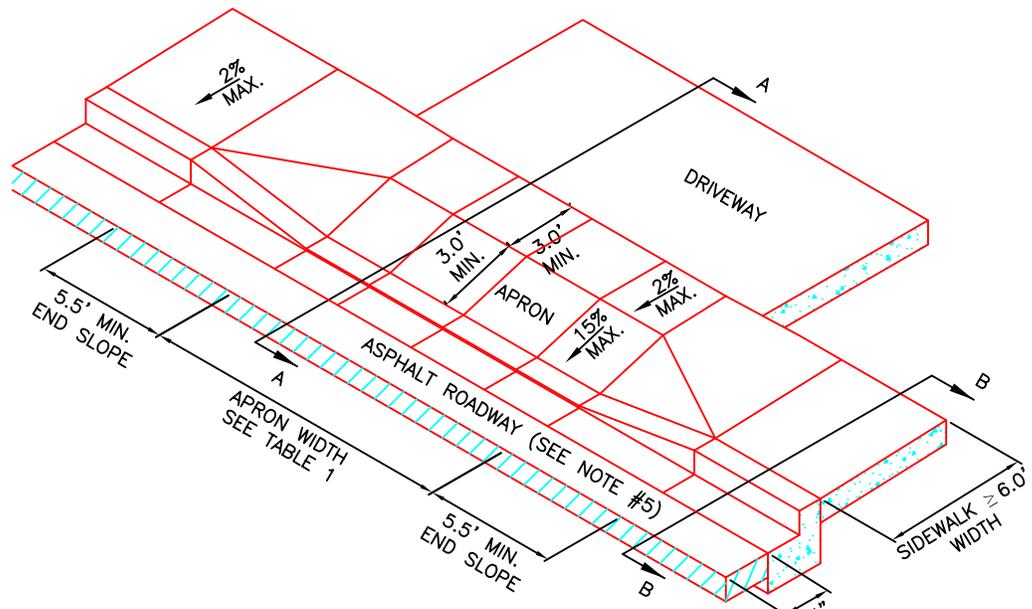
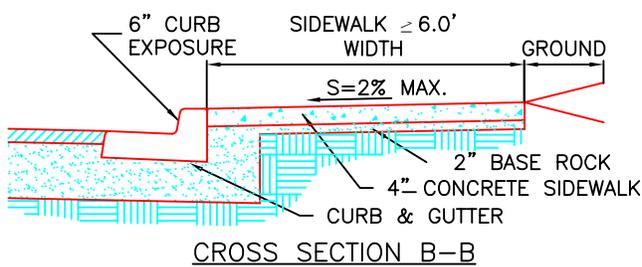
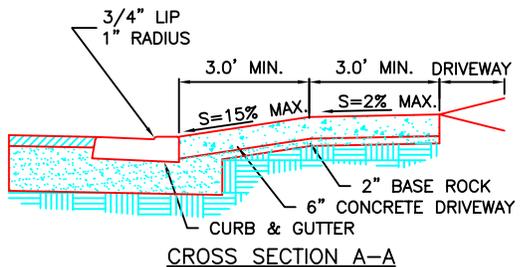
DRAWING NO.

502C

APPROVED *Gary Park* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	UPDATED FOR CODE CHANGES	10/30/09	ZJW

MAY 2010



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**CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.**

**Curb Tight Driveway Approach**  
**Driveway Width > Apron Width & Sidewalk ≥ 6.0'**

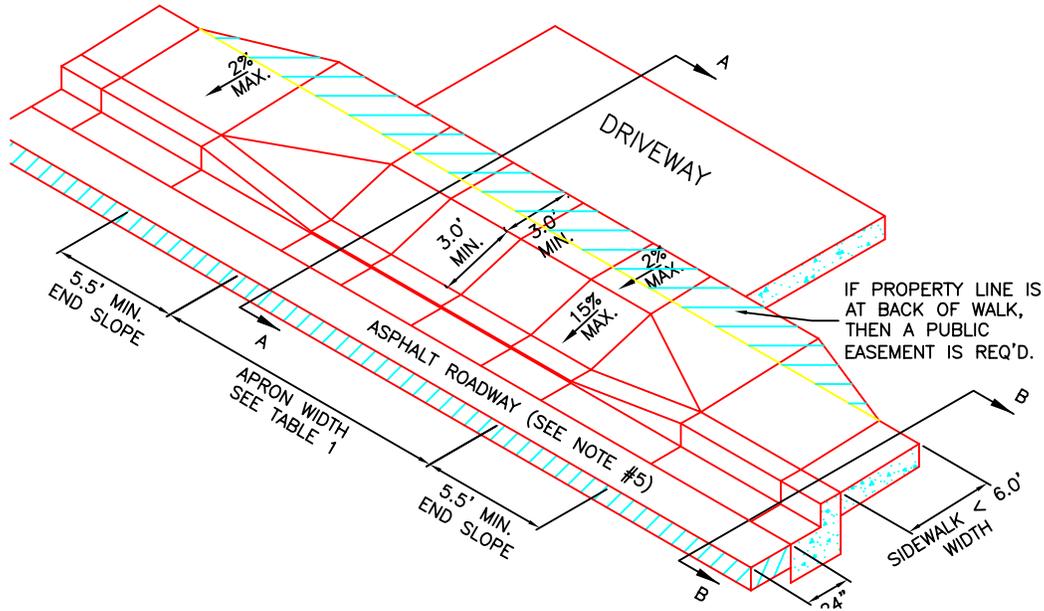
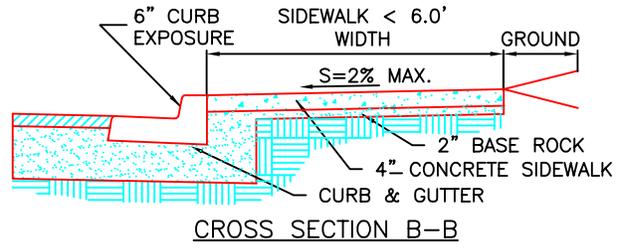
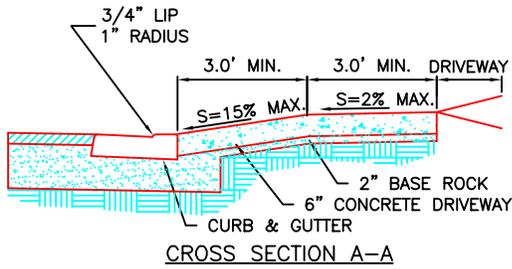
DRAWING NO.  
**502D**

APPROVED *Gary Park* 5/10

NO.	REVISIONS	DATE	BY
1	UPDATED FOR CODE CHANGES	10/30/09	ZJW

CITY ENGINEER DATE

MAY 2010



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- COMMERCIAL DRIVEWAY APRONS AND ADJACENT SIDEWALK REQUIRE #4 REBAR, 12" ON-CENTER IN EACH DIRECTION. THE APRON REBAR SHALL BE ADEQUATELY TIED TO THE CURB REBAR.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

**Curb Tight Driveway Approach**  
 Driveway Width > Apron Width & Sidewalk < 6.0'

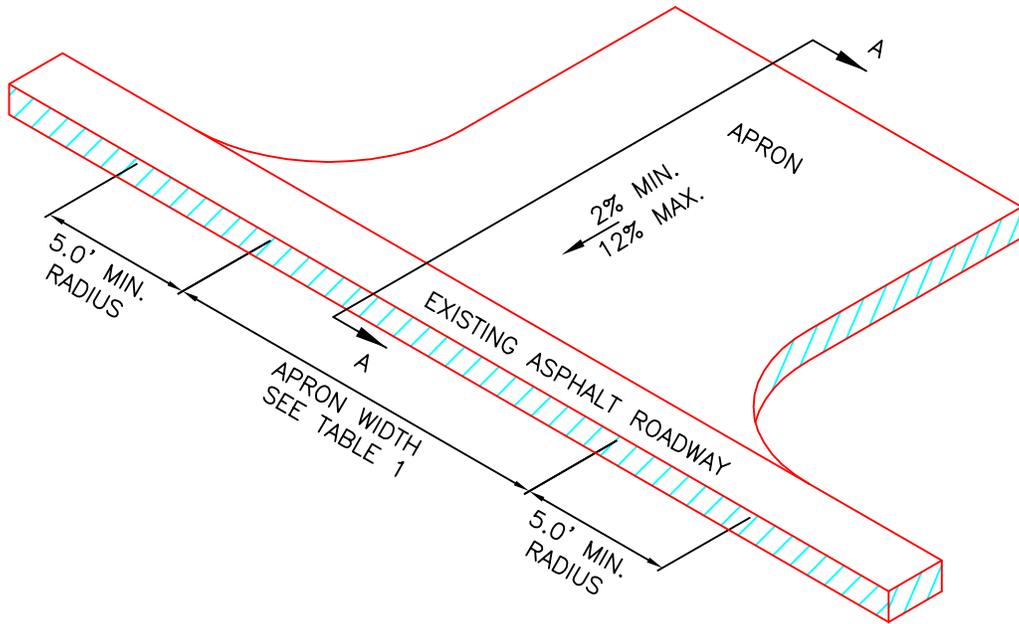
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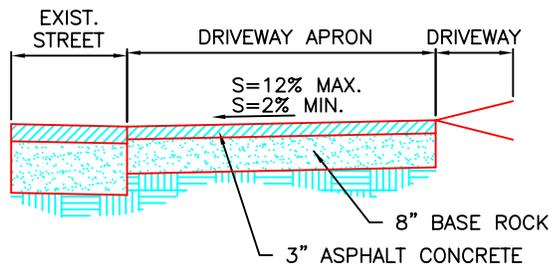
APPROVED *Gary Park* 5/10  
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CROSS SECTION A-A

1. ALL PAVEMENT INSTALLATION SHALL BE HOT CLASS "C" MIX ASPHALT CONCRETE.
2. EXISTING ASPHALT CONCRETE IN FRONT OF THE DRIVEWAY APRON SHALL BE SAW CUT ALONG A LINE PARALLEL TO THE FRONTING PROPERTY LINE TO PROVIDE A CLEAN SURFACE FOR THE DRIVEWAY APPROACH TO TIE INTO.
3. SAND SEAL ALL JOINTS BETWEEN THE NEW ASPHALT DRIVEWAY APPROACH AND THE EXISTING STREET.



CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Asphalt Driveway Approach

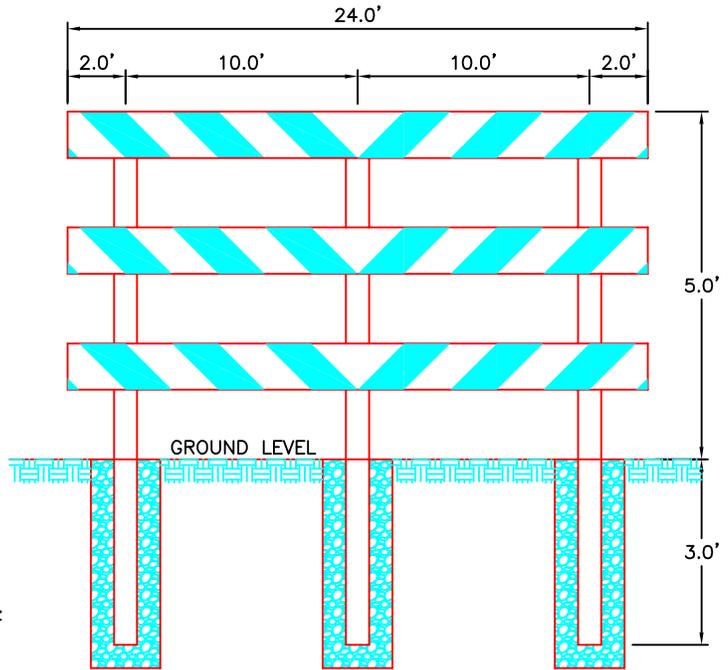
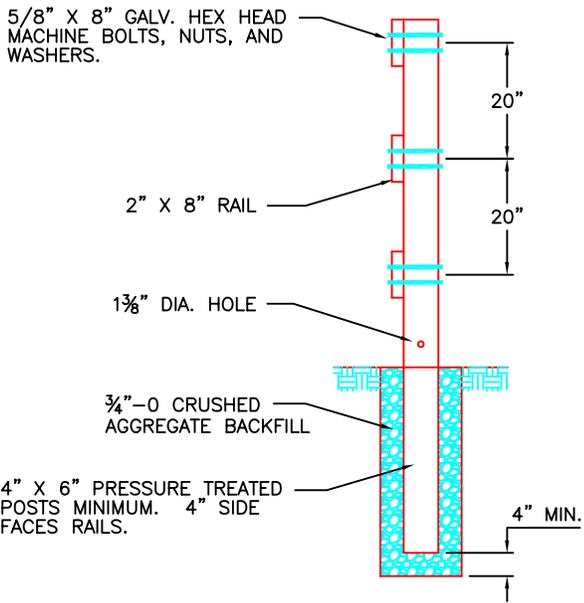
DRAWING NO.

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APPROVED *Gary Parker* 5/10  
 CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	UPDATED FOR CODE CHANGES	10/30/09	ZJW

MAY 2010



NOTES:

1. ALTERNATE 6" WIDE RED AND WHITE STRIPES (REFLECTORIZED SHEETING) AT 45 DEGREES.

PERMANENT STREET CLOSURE BARRICADE  
NOT TO SCALE



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Barricade

DRAWING NO.

503

APPROVED *Gary Parki* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY

MAY 2010

DRAWING REMOVED

SEE DRAWING # 516



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Trench Backfill

DRAWING NO.

504

MAY 2010

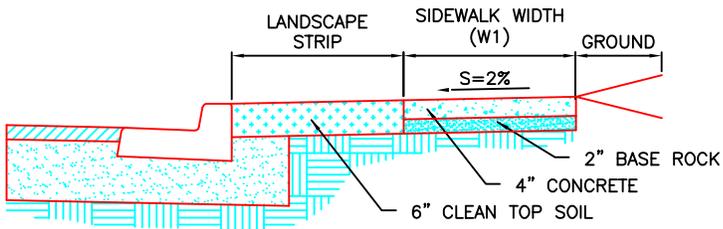
APPROVED

*Gary Parki* 5/10

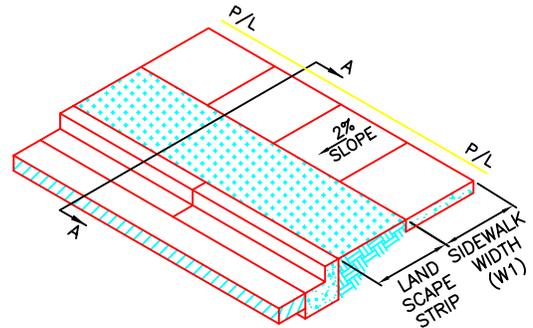
CITY ENGINEER

DATE

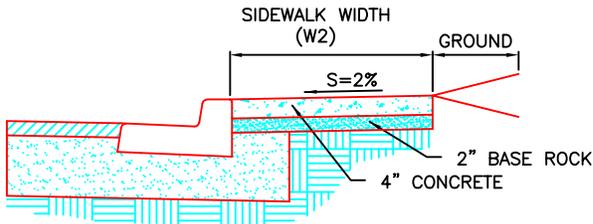
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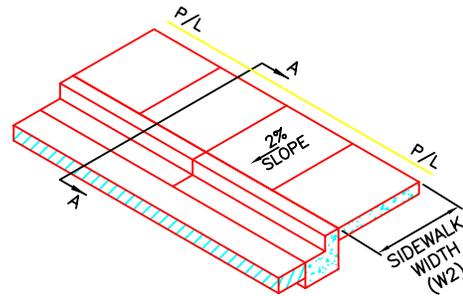
SECTION A-A



SET BACK SIDEWALK



SECTION A-A



CURB TIGHT SIDEWALK

1. CONTRACTION JOINTS SHALL BE 1/8" TO 1/4" WIDE WITH A MAXIMUM SPACING OF EVERY 15 FEET. DEPTH OF THE JOINT SHALL BE A MINIMUM OF 1/3 THE THICKNESS OF THE CONCRETE.
2. ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
3. SAW CUT EXISTING SIDEWALK THAT IS TO BE REMOVED TO THE NEAREST JOINT.
4. CONCRETE SHALL BE 3300 PSI AT 28 DAYS WITH A SLUMP RANGE OF 2" TO 4".
5. SIDEWALK PANELS SHOULD BE SQUARE (4'X4', 5'X5', ETC.). IN NO CASE SHALL THE LENGTH OF A SIDEWALK PANEL BE GREATER THAN 1.5 TIMES THE WIDTH AND VICE VERSA.
6. BASE ROCK SHALL BE 3/4"-0 OR 1"-0 CRUSHED AGGREGATE ROCK COMPACTED TO 95% MAXIMUM DENSITY OF AASHTO T-180.
7. CURB JOINT FOR CURB TIGHT SIDEWALK SHALL BE A TROWLED JOINT WITH A 1/2" RADIUS ALONG THE BACK OF CURB.

CLASSIFICATION	W1	W2
LOCAL STREET	5.0'	6.0'
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CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Sidewalk

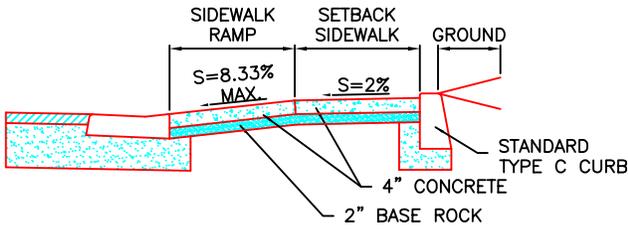
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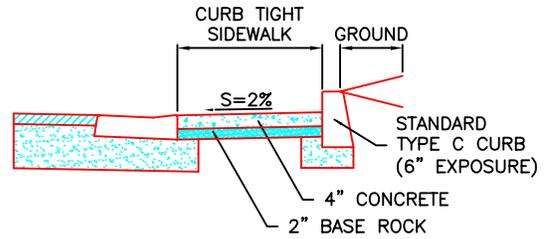
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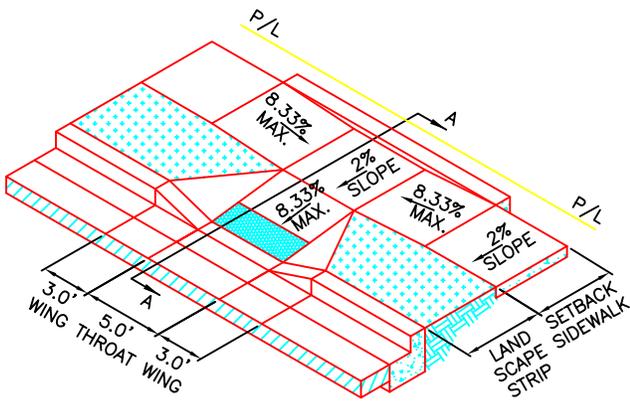
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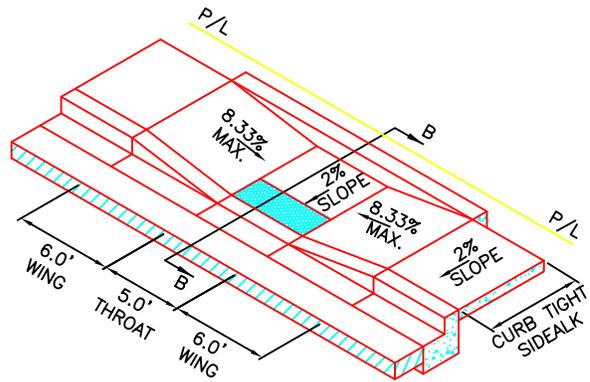
SECTION A-A



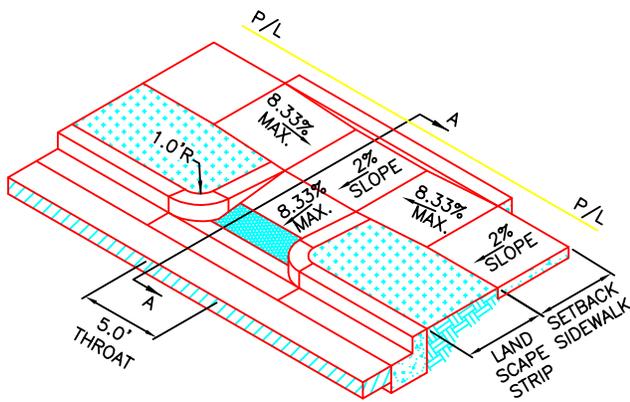
SECTION B-B



SETBACK SIDEWALK RAMP W/WINGS



CURB TIGHT SIDEWALK RAMP



SETBACK SIDEWALK RAMP W/O WINGS

1. SIDEWALK RAMPS SHALL MEET ADA STANDARDS.
2. ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
3. SAW CUT EXISTING RAMP, CURB, AND SIDEWALK THAT ARE TO BE REMOVED TO THE NEAREST JOINT.
4. CONCRETE SHALL BE 3300 PSI AT 28 DAYS WITH A SLUMP RANGE OF 2" TO 4".
5. SIDEWALK PANELS SHOULD BE SQUARE (4'X4', 5'X5', ETC.). IN NO CASE SHALL THE LENGTH OF A SIDEWALK PANEL BE GREATER THAN 1.5 TIMES THE WIDTH AND VICE VERSA.
6. BASE ROCK SHALL BE 3/4"-0 OR 1"-0 CRUSHED AGGREGATE ROCK COMPACTED TO 95% MAXIMUM DENSITY OF AASHTO T-180.
7. CURB JOINT FOR CURB TIGHT SIDEWALK SHALL BE A TROTTLED JOINT WITH A 1/2" RADIUS ALONG THE BACK OF CURB.
8. LANDINGS SHALL BE PLACED AT THE TOP OF EACH RAMP. LANDING SLOPES SHALL NOT EXCEED 20:1 IN ANY DIRECTION AND HAVE MINIMUM DIMENSIONS OF 5' X 5'.
9. DETECTABLE WARNING PAD SHALL BE 24" LONG IN THE DIRECTION OF TRAVEL AND INSTALLED ALONG THE FULL WIDTH OF THE BOTTOM OF THE SIDEWALK RAMP. MASCO CAST-IN-TACT (YELLOW) OR APPROVED EQUAL.
10. SETBACK SIDEWALK RAMPS: THE MAXIMUM SLOPE SHALL FIRST BE PROVIDED IN THE RAMP ADJACENT TO THE STREET. ANY ADDITIONAL ELEVATION GAIN SHALL BE PROVIDED IN THE SIDEWALK RAMP SLOPES.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Mid-Block Sidewalk Ramps

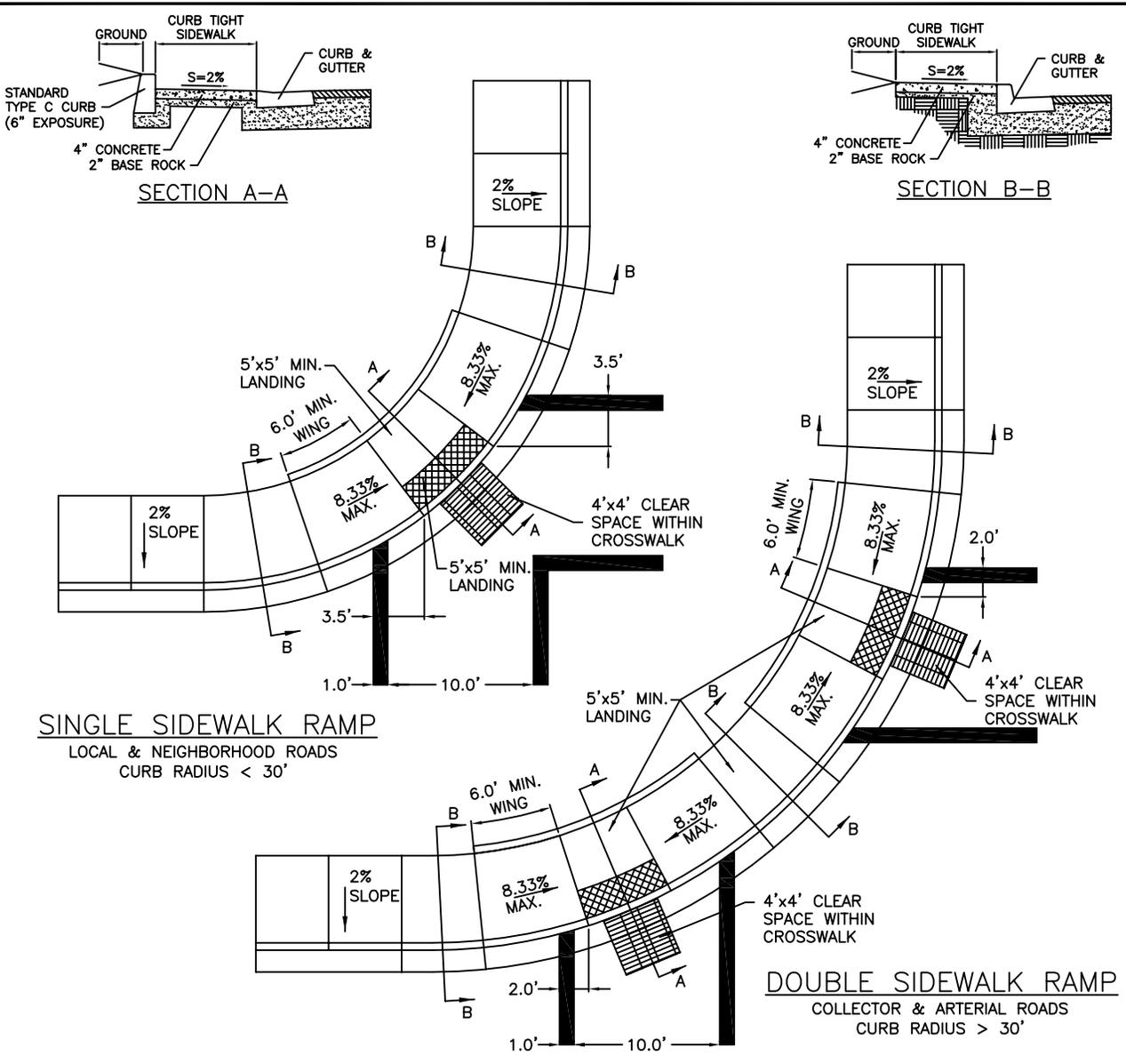
DRAWING NO.

506

APPROVED *Gary Park* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	NEW DRAWING	10/30/09	ZJW

MAY 2010



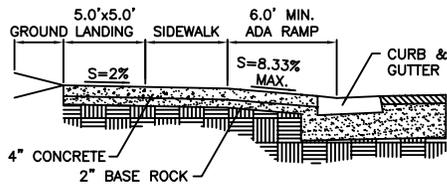
**SINGLE SIDEWALK RAMP**  
 LOCAL & NEIGHBORHOOD ROADS  
 CURB RADIUS < 30'

**DOUBLE SIDEWALK RAMP**  
 COLLECTOR & ARTERIAL ROADS  
 CURB RADIUS > 30'

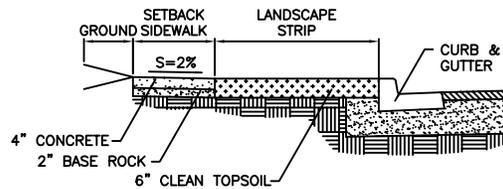
- SIDEWALK RAMPS SHALL MEET ADA STANDARDS.
- ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
- SAW CUT EXISTING RAMP, CURB, AND SIDEWALK THAT ARE TO BE REMOVED TO THE NEAREST JOINT.
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- DETECTABLE WARNING PAD SHALL BE 24" LONG IN THE DIRECTION OF TRAVEL AND INSTALLED ALONG THE FULL WIDTH OF THE BOTTOM OF THE SIDEWALK RAMP. MASCO CAST-IN-TACT (YELLOW) OR APPROVED EQUAL.

	<b>CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.</b>				DRAWING NO.	
	<b>Curb Tight Intersection Sidewalk Ramps</b>				<b>507</b>	
	APPROVED	<i>Gary Park</i>	5/10	NO.	REVISIONS	DATE
CITY ENGINEER	DATE	1	NEW DRAWING	10/30/09	ZJW	MAY 2010

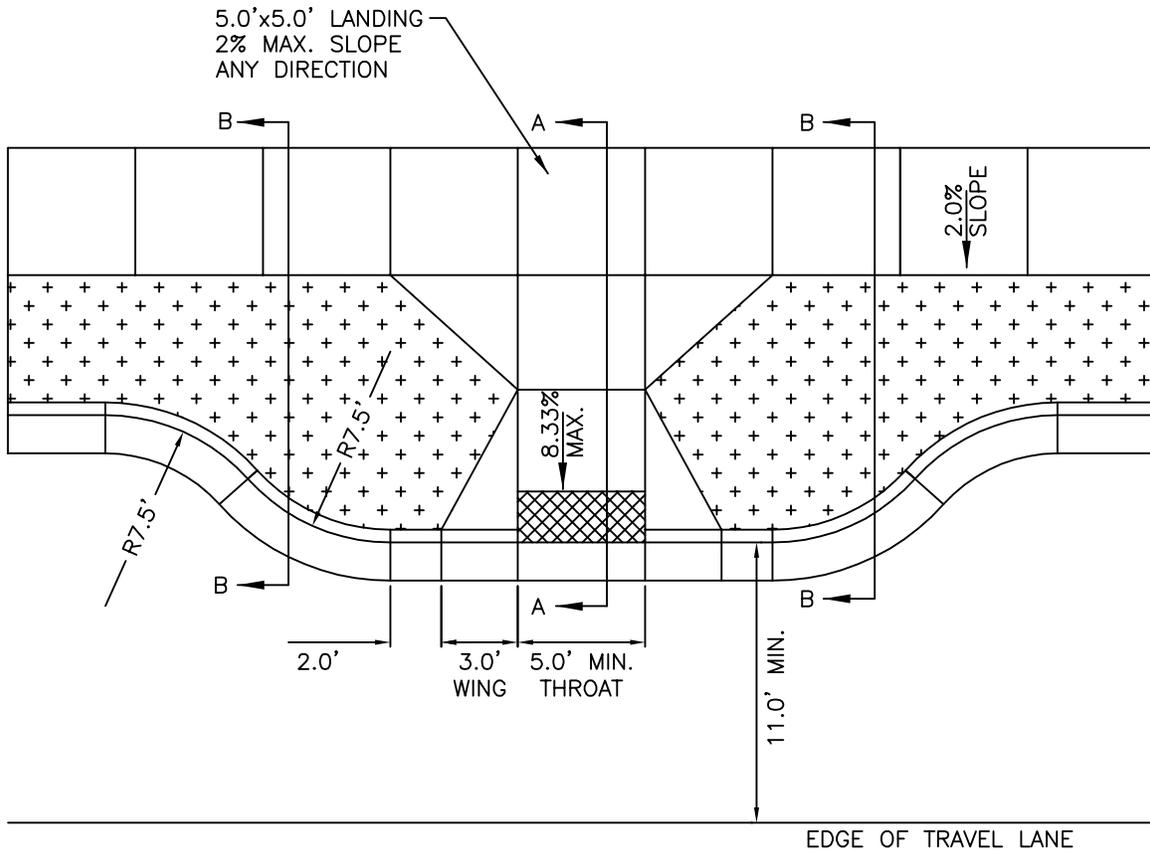




SECTION A-A



SECTION B-B



EDGE OF TRAVEL LANE

- SIDEWALK RAMPS SHALL MEET ADA STANDARDS.
- ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
- SAW CUT EXISTING RAMP, CURB, AND SIDEWALK THAT ARE TO BE REMOVED TO THE NEAREST JOINT.
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- SETBACK SIDEWALK RAMPS: THE MAXIMUM SLOPE SHALL FIRST BE PROVIDED IN THE RAMP ADJACENT TO THE STREET. ANY ADDITIONAL ELEVATION GAIN SHALL BE PROVIDED IN THE SIDEWALK RAMP SLOPES.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Mid-Block Curb Extension

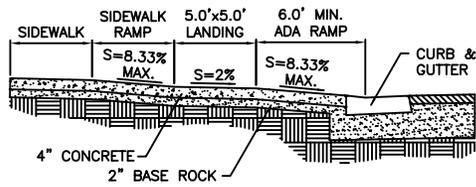
DRAWING NO.

509

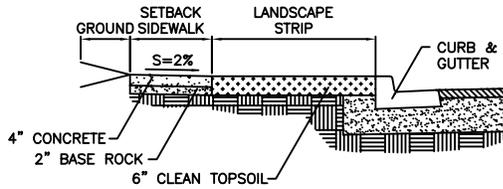
APPROVED *Gary Parki* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	NEW DRAWING	10/30/09	ZJW

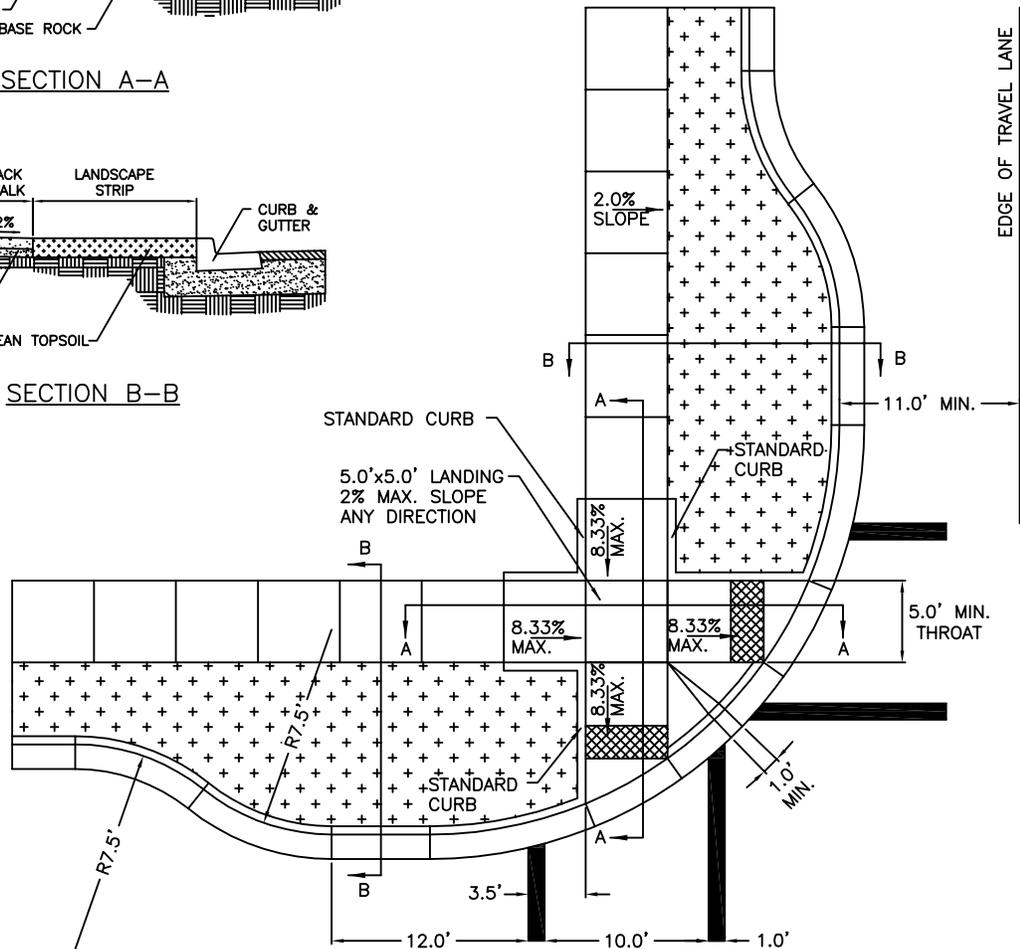
MAY 2010



SECTION A-A



SECTION B-B



1. SIDEWALK RAMPS SHALL MEET ADA STANDARDS.
2. ALL SURFACES SHALL BE LIGHTLY BROOMED. ALL EDGES SHALL BE TOOL ROUNDED AND SHINED 3" AFTER BROOMING.
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CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Intersection Curb Extension

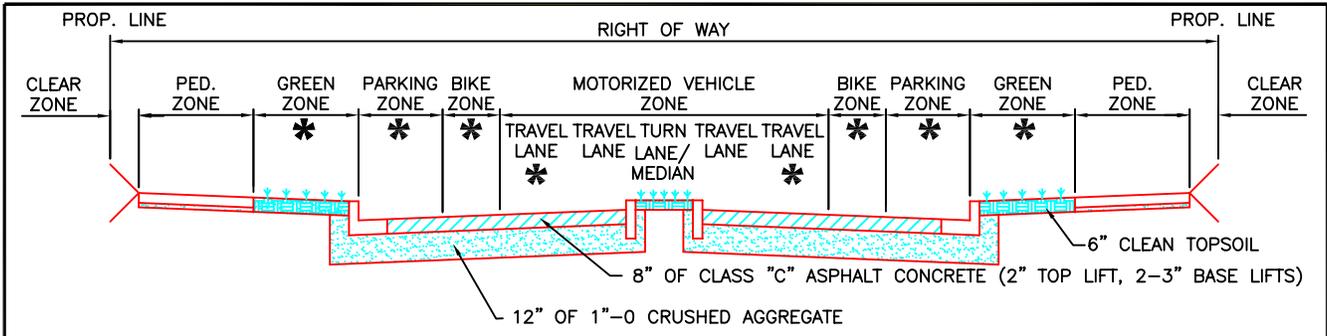
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510

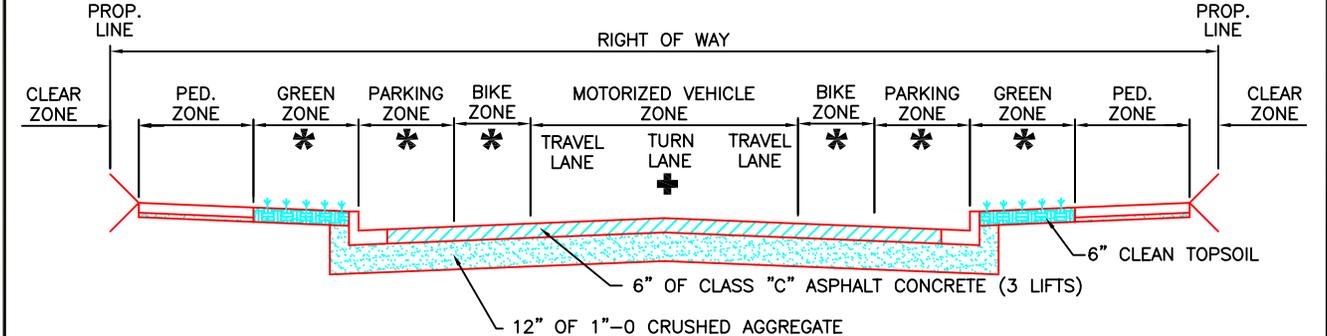
APPROVED *Gary Park* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	NEW DRAWING	10/30/09	ZJW

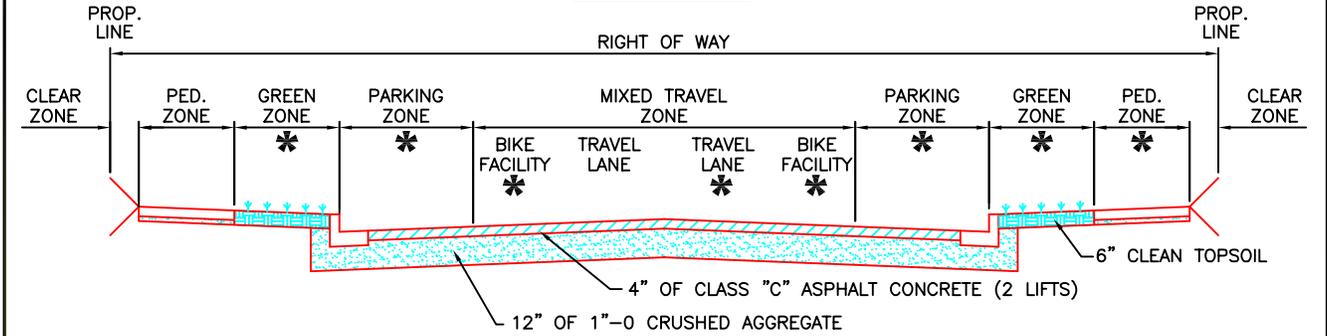
MAY 2010



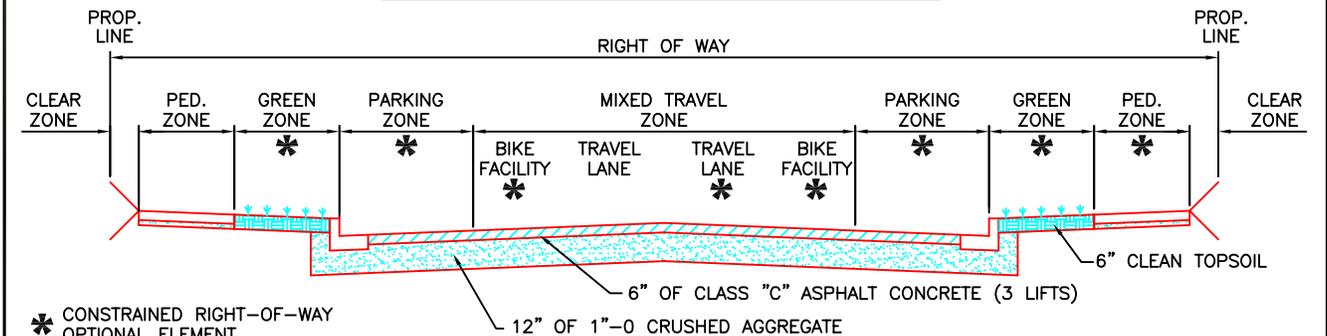
**ARTERIAL**



**COLLECTOR**



**LOCAL & NEIGHBORHOOD STREETS**



**LOCAL COMMERCIAL/INDUSTRIAL**

\* CONSTRAINED RIGHT-OF-WAY  
OPTIONAL ELEMENT  
+ WHERE WARRANTED



**CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.**

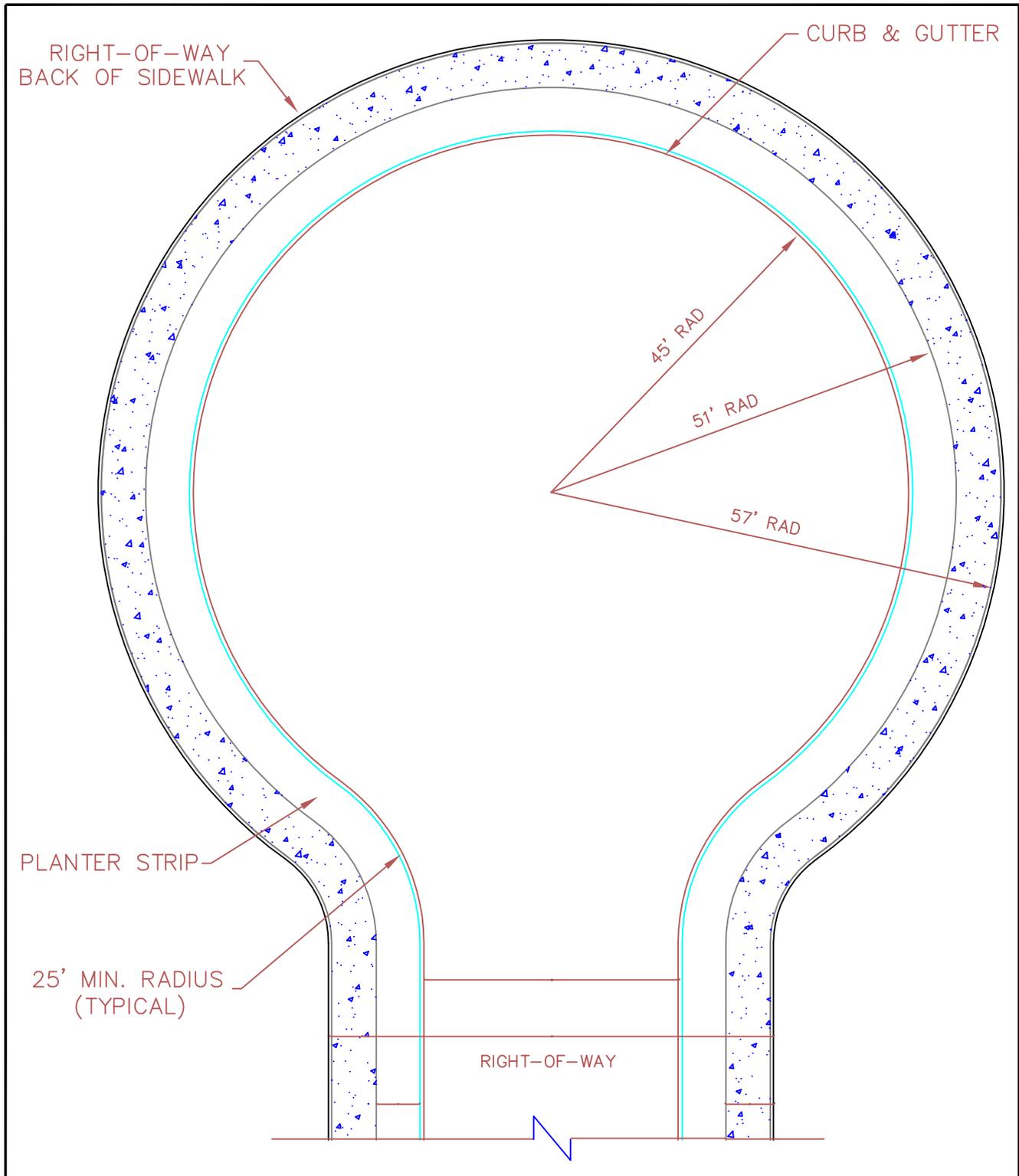
**Street Cross Sections**

DRAWING NO.

**511**

APPROVED	<i>Gary Parki</i> 5/10	NO.	REVISIONS	DATE	BY
		1	UPDATED FOR CODE CHANGES	10/30/09	ZJW
CITY ENGINEER	DATE				

MAY 2010



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Cul De Sac

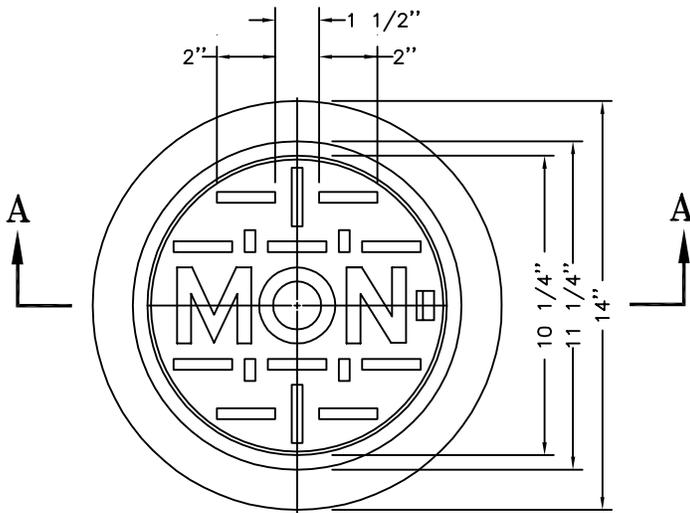
DRAWING NO.

512

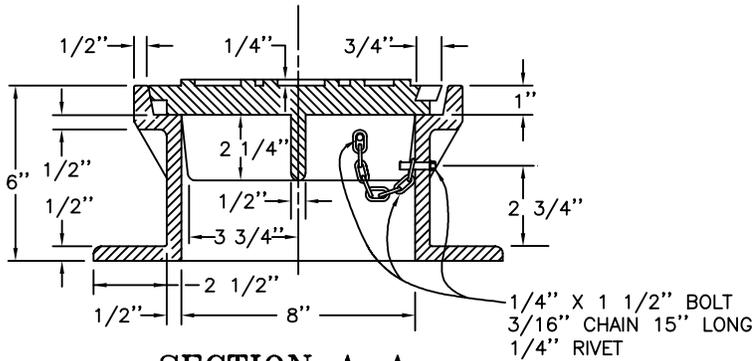
APPROVED *Gary Parki* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY

MAY 2010



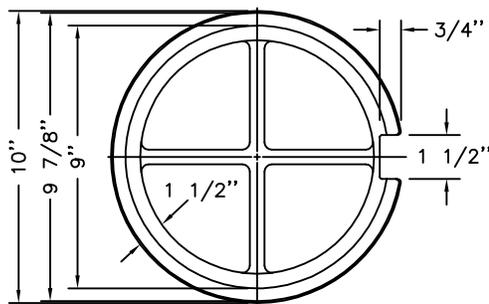
TOP VIEW - FRAME & COVER



SECTION A-A  
FRAME & COVER

NOTES:

1. MACHINE BEARING FACES OF COVER & CASE TO INSURE POSITIVE FITS
2. CASTINGS SHALL BE GRAY IRON A.S.T.M. DESIGNATION A-48 CLASS 40, AND SHALL CONFORM FURTHER TO APPLICABLE SECTION OF THESE SPECIFICATIONS.



BOTTOM VIEW OF COVER



CITY OF MILWAUKIE, OREGON - PUBLIC WORKS DEPT.

Street Monument

DRAWING NO.

513

APPROVED

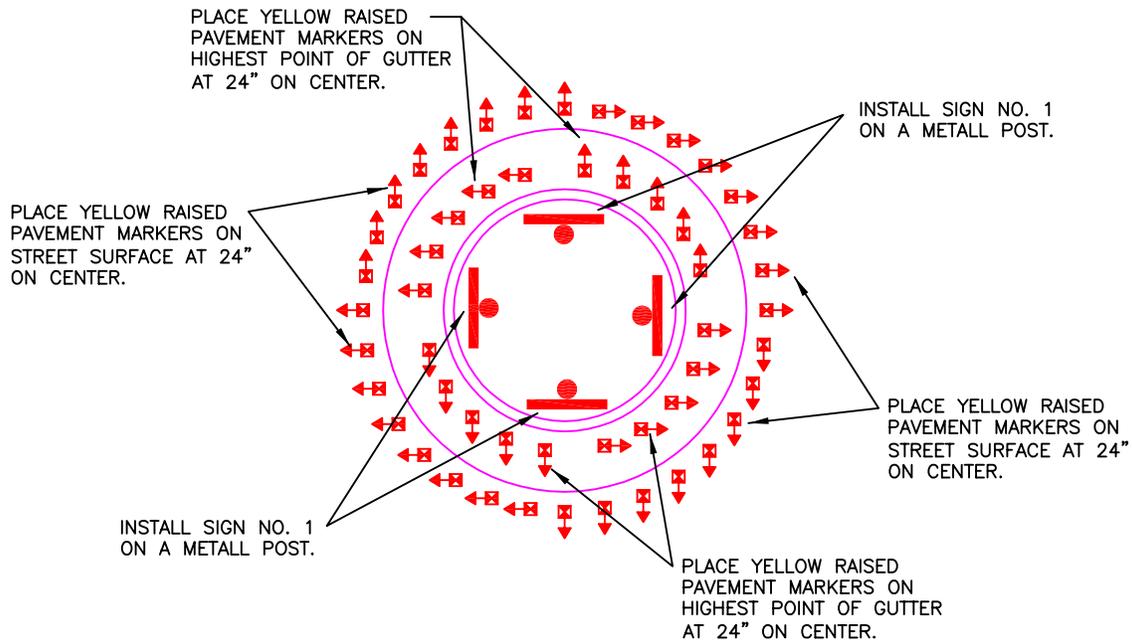
*Gary Parki* 5/10

CITY ENGINEER

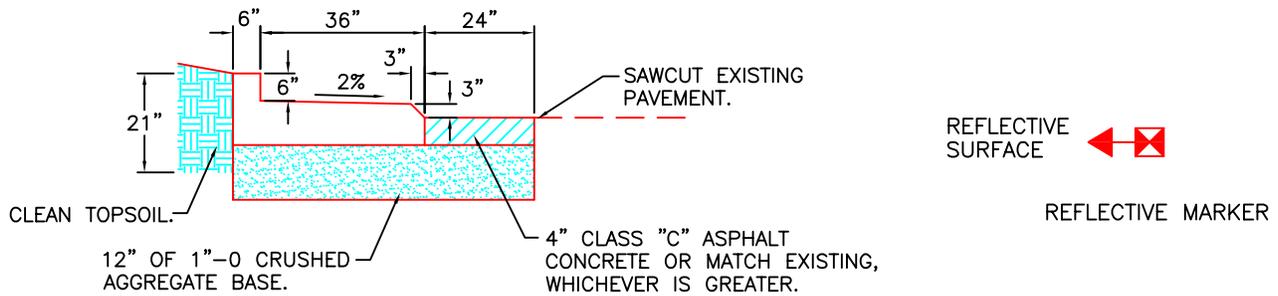
DATE

NO.	REVISIONS	DATE	BY

MAY 2010



**TRAFFIC ISLAND DETAIL**  
NTS



**TRAFFIC ISLAND CURB DETAIL**  
NTS



SIGN #1  
CITY OF PORTLAND  
R5500



SIGN # 2  
CITY OF PORTLAND  
W1700



SIGN # 3  
CITY OF PORTLAND  
W4040

NOTES:

1. PLACE SIGN NO. 2 AND 3 ON A METAL POST 175 FEET FROM THE TRAFFIC ISLAND ON EACH THROUGH LEG OF THE INTERSECTION.
2. NO PARKING IS ALLOWED WITHIN 40 FEET OF A TRAFFIC ISLAND INTERSECTION CURB RETURN.
3. YELLOW 4" GORE STRIPE WITH YELLOW RAISED PAVEMENT MARKERS, 5 FEET ON CENTER, IS REQUIRED WITHIN 50 FEET OF A TRAFFIC ISLAND INTERSECTION CURB RETURN ON EACH THROUGH LEG OF THE INTERSECTION TO DIRECT TRAFFIC AROUND THE ISLAND.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

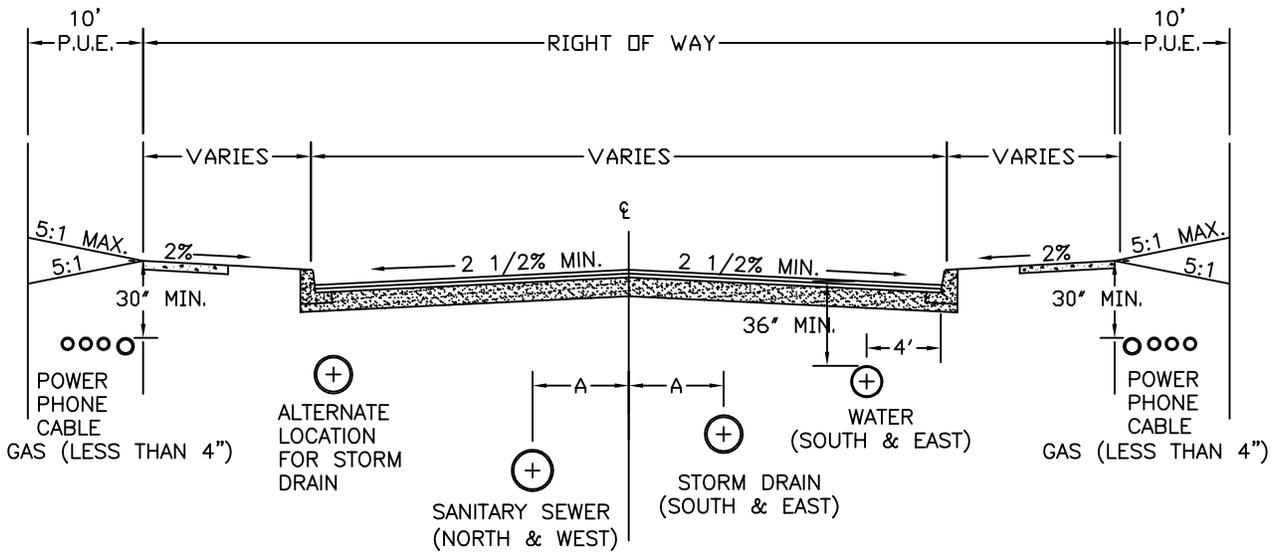
**Traffic Island**

DRAWING NO.

**514**

APPROVED	<i>Gary Park</i>	5/10	NO.	REVISIONS	DATE	BY
CITY ENGINEER		DATE				

MAY 2010



NOTE: STREET TREES, LIGHT POLES, AND FIRE HYDRANTS SHALL BE LOCATED BETWEEN THE SIDEWALK AND THE CURB.

## TYPICAL UTILITY PLACEMENT DETAIL

Street Type	Right of Way (ft.)	NO. of Lanes	Distance from Center
			"A"
Local Streets	40 ft.	2	6 FT.
Local Streets	50 ft.	2	6 FT.
Collector Streets	60 ft.	2	6 FT.
Collector Streets	70 ft.	3	13 FT.
Arterial Streets	80 ft.	3	13 FT.
Commercial & Industrial Streets	60 ft.	2	6 FT.
Commercial & Industrial Streets	60 ft.	3	13 FT.
Commercial & Industrial Streets	70 ft.	3	13 FT.
Commercial & Industrial Streets	70 ft.	4	7 & 19 FT.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

### Utility Placement

DRAWING NO.

515

APPROVED

*Gary Parki* 5/10

CITY ENGINEER

DATE

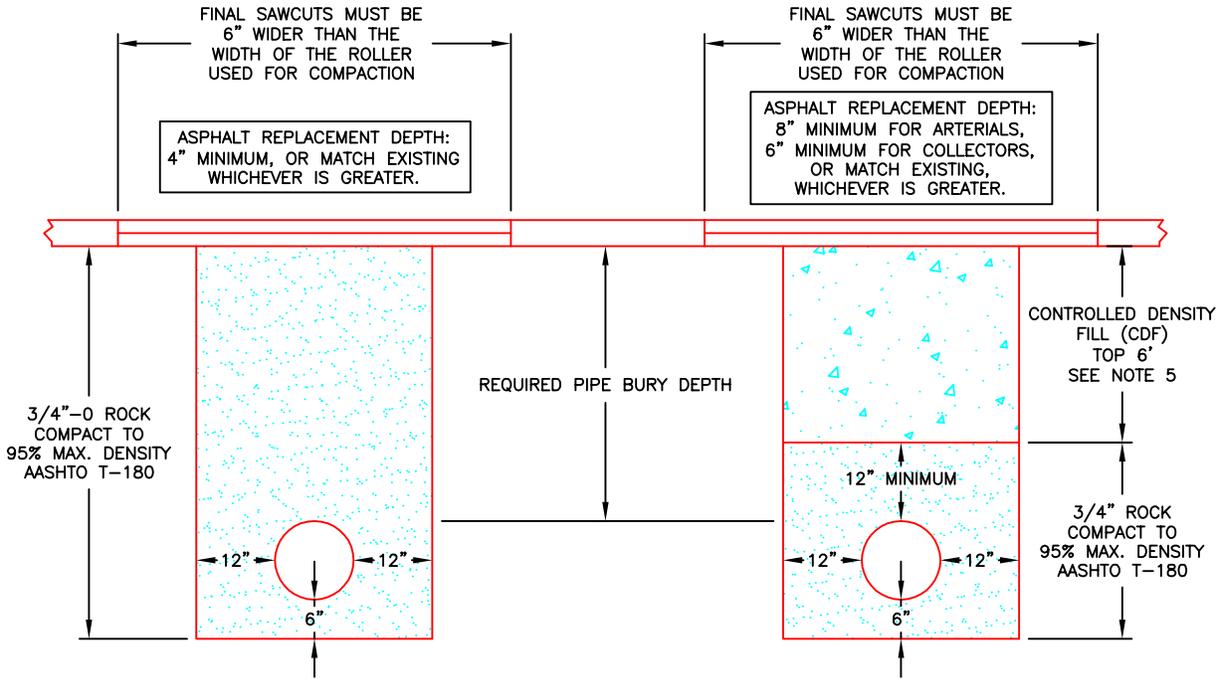
NO.

REVISIONS

DATE

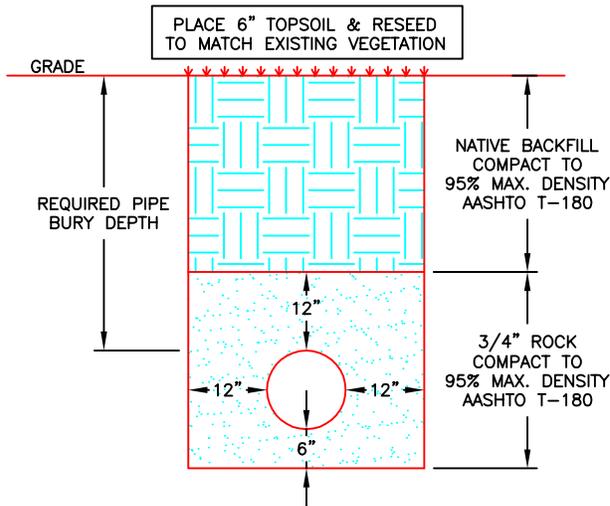
BY

MAY 2010



TRENCHES WITHIN PAVED AREAS  
LOCAL & NEIGHBORHOOD STREETS

TRENCHES WITHIN PAVED AREAS  
COLLECTOR & ARTERIAL STREETS



TRENCHES OUTSIDE OF PAVED AREAS

NOTES:

1. ADDITIONAL REPAIR IS REQUIRED FOR STREETS PAVED WITHIN THE LAST 5 YEARS. SEE STANDARD DETAIL NO. 517.
2. PAVING SHALL CONSIST OF CLASS "C" MODIFIED ASPHALT CONCRETE AND BE PLACED IN LIFTS. EACH LIFT OF PAVEMENT SHALL HAVE A MAXIMUM DEPTH OF 3" & MINIMUM DEPTH OF 2".
3. INFRARED ASPHALT REPAIRS MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEERING DIRECTOR.
4. UNDERMINED, BROKEN OR CRACKED PAVEMENT EDGES SHALL BE SAWCUT AND REMOVED AT THE DISCRETION OF THE ENGINEERING DIRECTOR.
5. CDF IS NOT REQUIRED IF DEPTH AVAILABLE IS LESS THAN 2 FEET AFTER COMPACTING ROCK.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

Trench Patch

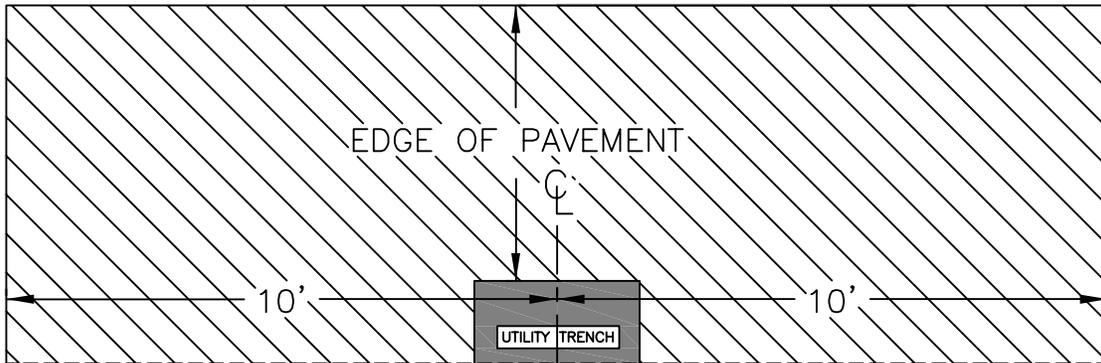
DRAWING NO.

516

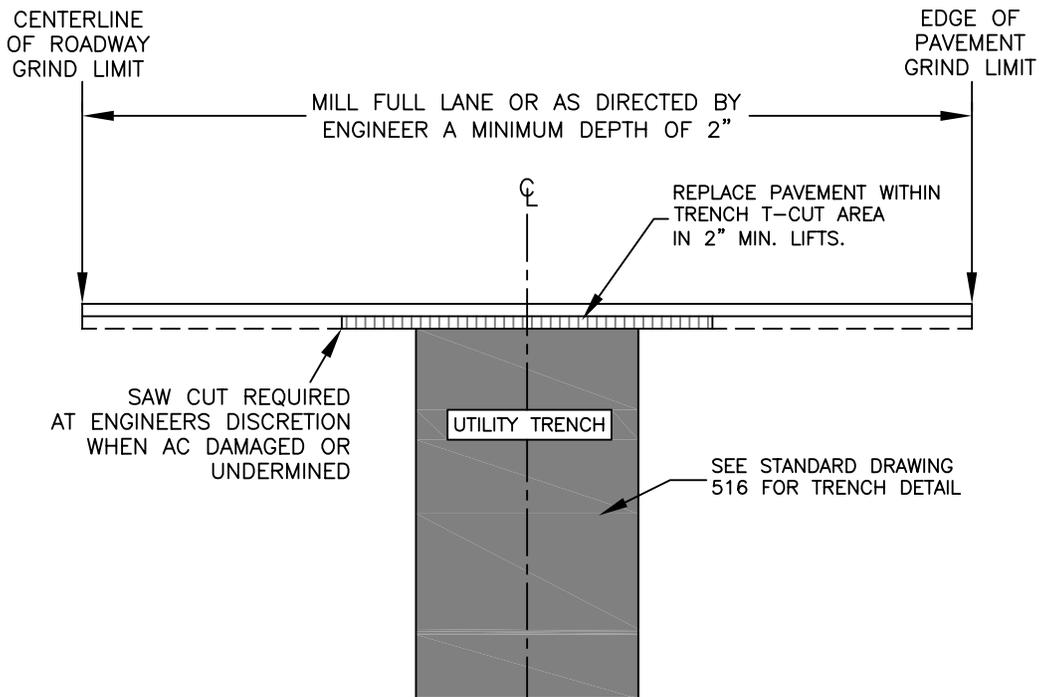
APPROVED *Gary Park* 5/10  
CITY ENGINEER DATE

NO.	REVISIONS	DATE	BY
1	CLARIFICATION	10/30/09	ZJW

MAY 2010



GRIND LIMITS FOR TRANSVERSE UTILITY CUTS. INCLUDES CROSS TRAFFIC AT INTERSECTIONS.



NOTES:

1. CALL FOR INSPECTION PRIOR TO PAVING TRENCH TO DISCUSS PREP-WORK WITH INSPECTOR.
2. ASPHALT WITHIN TRENCH AREA IS TO BE REPLACED IN 2" LIFTS BACK TO PREVIOUS GRADE.
3. LIMITS OF GRIND DESCRIBED ABOVE MUST AT LEAST 2" DEEP FOR ENTIRE AREA. ONCE THIS IS COMPLETE, THE FINAL LIFT MAY BE APPLIED AFTER INSPECTION.



CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.

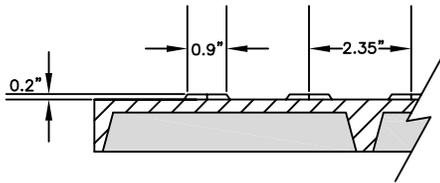
Transverse or Newly Paved Road Street Cuts

DRAWING NO.

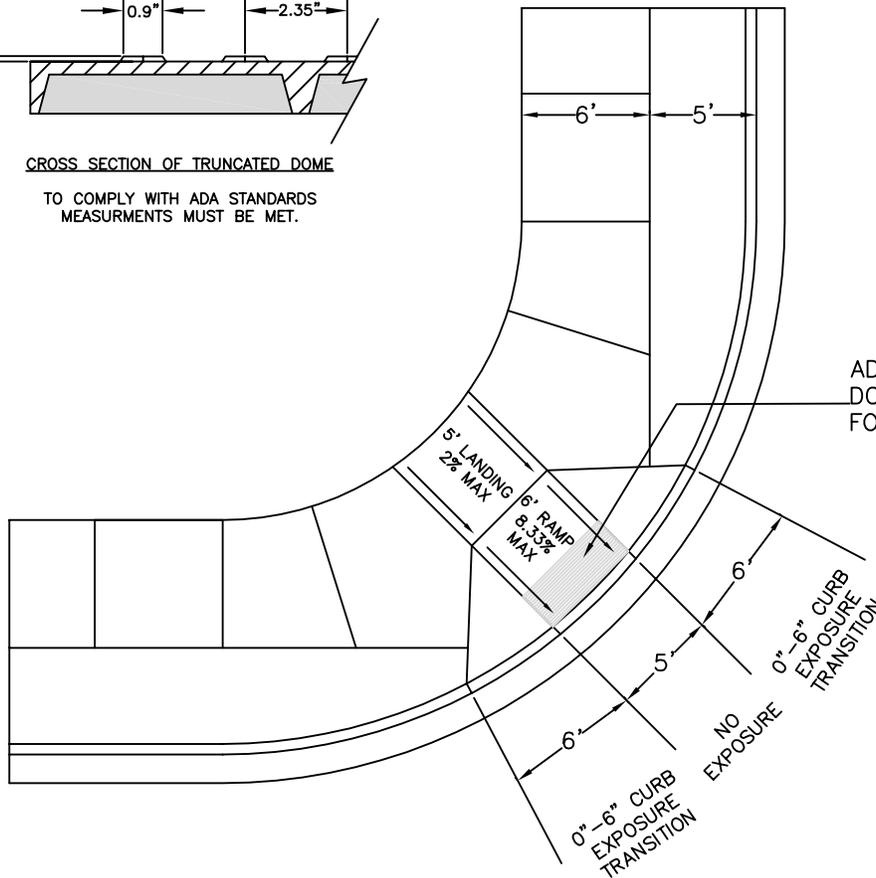
517

APPROVED	<i>Gary Parki</i>	5/10	NO.	REVISIONS	DATE	BY
CITY ENGINEER		DATE				

MAY 2010



**CROSS SECTION OF TRUNCATED DOME**  
 TO COMPLY WITH ADA STANDARDS  
 MEASUREMENTS MUST BE MET.



ADA TRUNCATED  
 DOME SEE DETAIL  
 FOR MEASUREMENTS

**NOTES:**

1. THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIRES THAT ACCESS RAMPS TO SIDEWALKS MUST CONFORM TO ALL FEDERAL GUIDE LINES. EXCEPTIONS TO THE REQUIREMENTS IN THIS DRAWING MUST BE APPROVED BY THE CITY ENGINEER. INSTALL TRUNCATED DOMES ON RAMPS (SEE DETAIL)
2. NO ABOVE GROUND UTILITIES ARE PERMITTED WITHIN RAMP AREA
3. CONCRETE SHALL BE 3300 PSI
4. PLACE CONTRACTION JOINTS AT ALL GRADE CHANGES AS SHOWN ABOVE.

**ATTENTION:**

ALL CONCRETE WORK IN THE CITY RIGHT-OF-WAY REQUIRES FORM AND SUB-GRADE INSPECTION AND APPROVAL BY CITY INSPECTOR PRIOR TO POURING CONCRETE. CALL 503-786-7575 FOR INSPECTION.



**CITY OF MILWAUKIE, OREGON – PUBLIC WORKS DEPT.**

**Single Curb Ramp**

DRAWING NO.

**518**

APPROVED	<i>Gary Parki</i>	5/10	NO.	REVISIONS	DATE	BY
CITY ENGINEER			DATE			

MAY 2010