CITY OF BEND STANDARD DRAWINGS

Roadway (R)

GENERAL NOTES FOR STD DWGS R-1A THROUGH R-1H:

1. CENTER STREETS IN THE RIGHT-OF-WAY UNLESS OTHERWISE APPROVED BY CITY ENGINEER FOR UNIQUE TRANSITIONS OR SITE CONSTRAINTS.
2. THE LEVEL OF TRAFFIC STRESS PER THE ODOT APM CH. 14 IS SHOWN ON EACH STANDARD CROSS-SECTION. MODIFICATION OF THE CROSS-SECTIONS MUST PROVIDE THE APPROPRIATE LTS.
3. INSTALL SIDEWALKS/SHARED-USE PATHS PROPERTY TIGHT. SIDEWALKS/SHARE-USE PATHS MAY MEANDER AROUND UTILITIES, TREES, AND OTHER NON-MOVEABLE OBJECTS. EASEMENTS ARE REQUIRED WHERE SIDEWALK/SHARED-USE PATH MEANDERS OUT OF THE RIGHT-OF-WAY.
4. PAVEMENT SECTIONS FOR STREETS AND SIDEWALKS PER THE THICKNESSES NOTED IN TABLE BELOW OR AS SPECIFIED IN A STAMPED GEOTECHNICAL REPORT APPROVED BY THE CITY ENGINEER.
5. RETAINING WALLS AND STAIRS ARE NOT PERMITTED WITHIN THE RIGHT-OF-WAY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
6. STREET CROSS-SECTION/IMPROVEMENT STANDARDS ARE BASED ON STREET CLASSIFICATION. REFERENCE THE BEND DEVELOPMENT CODE SECTION 3.4 PUBLIC IMPROVEMENTS STANDARDS AND STANDARD CROSS-SECTIONS FOR ADDITIONAL DETAIL.
7. THE CROSS-SLOPE OF THE PLANTER STRIP BETWEEN THE CURB AND RIGHT-OF-WAY SHALL NOT BE STEEPER THAN 4H:1V TO PROVIDE A RECOVERABLE ROADSIDE SLOPE. 50H:1V (2%) IS TYPICAL/PREFERRED.
8. MAX 1.5H:1V CUT SLOPES PERMITTED IN ROCK CUTS WHEN APPROVED BY A GEOTECHNICAL ENGINEER.
9. MASTER PLAN DEVELOPMENTS PER BEND DEVELOPMENT CODE 4.5.100(E)(2)(C) MAY PROPOSE MODIFIED STREET SECTIONS THAT INCLUDE ADDITIONS TO OR ENHANCEMENTS OF THE BASIC MINIMUM STANDARD SECTIONS SHOWN HERE.
10. OFF STREET SHARED-USE PATHS (PATHS MEETING THE GENERAL ALIGNMENT OF THE TSP LOW STRESS NETWORK AND ARE MORE THAN 30 FT OUTSIDE OF THE RIGHT-OF-WAY) ARE ENCOURAGED, PARTICULARLY ALONG ARTERIAL STREET CORRIDORS. SIDEWALKS MAY BE REDUCED TO A MINIMUM 6 FT OR ELIMINATED WHEN THE SAME SIDE OF THE ROAD CORRIDOR IS SERVED BY A SHARED-USE PATH DEPENDING ON ADJACENT LAND USE AND PEDESTRIAN/BIKE ACCESS AND WITH CITY ENGINEER APPROVAL.
11. TWELVE-FOOT CENTER MEDIAN ON ARTERIAL AND COLLECTOR CROSS-SECTIONS INCLUDES EITHER A STRIPED MEDIAN (TWO-WAY LEFT TURN LANE, DOUBLE YELLOW, AND/OR TURN BAY) OR A NINE-FOOT RAISED REFUGE ISLAND WITH A ONE AND A HALF FOOT SHY LINE STRIPE EACH SIDE AS REQUIRED PER STANDARDS.
12. RAISED MEDIANS ARE AT THE CITY ENGINEER'S DISCRETION ON ARTERIALS & COLLECTORS. MEDIAN REFUGE ISLANDS FOR STREET CROSSINGS ON A LOW STRESS ROUTE OR AN ENHANCED CROSSING ON A CONNECTOR ROUTE DO NOT REQUIRE CITY ENGINEER APPROVAL.
13. ON-STREET PARKING SPACES ARE NOT STRIPED. IN HIGH PARKING DEMAND AREAS, A PARKING LINE MAY BE USED WITH CITY ENGINEER APPROVAL.
14. SEE BEND DEVELOPMENT CODE 3.4.200(F)(3) FOR STREETS AND INTERSECTIONS NOT IDENTIFIED FOR TRAVEL LANE EXPANSION WHERE ADDITIONAL RIGHT-OF-WAY IS NOT REQUIRED FOR VEHICLE TRAVEL LANES.
15. PLTS = PEDESTRIAN LEVEL OF TRAFFIC STRESS / BLTS = BICYCLISTS LEVEL OF TRAFFIC STRESS.
16. DEVIATIONS FROM THE PAVEMENT SECTIONS PROVIDED IN THE TABLE BELOW REQUIRE A STAMPED GEOTECHNICAL REPORT. PCC ROADWAYS REQUIRE A STAMPED GEOTECHNICAL REPORT.
17. SEE CITY SPEC 00744/00745 FOR MAXIMUM AC PAVEMENT LIFT THICKNESS.
18. WHERE EXISTING GROUND CROSS SLOPE EXCEEDS 12%, CURB-TIGHT SIDEWALK IS ALLOWED PER DESIGN STANDARD 3.4.7 - HILLSIDE.

STREET TYPE	"A" ROW	"B" STREET	"C" SIDEWALK	"D" CURB	"E" ACP DEPTH/LEVEL	"F" BASE	"G" CUT/FILL
ARTERIAL	PER R-1A			7"/16"	8" - LEVEL IV	10"	4H:1V
COLLECTOR	PER R-1B & R-1C			6"/14"	6" - LEVEL III	8"	4H:1V
LOCAL	PER R-1D & R-1E			6"/12"	4" - LEVEL III	6"	2H:1V
INDUSTRIAL LOCAL	PER R-1F			6"/12"	4" - LEVEL III	8"	2H:1V
ALLEY	PER R-1G			--	4" - LEVEL III	6"	2H:1V
ROUNDABOUT - ACP	VARIES	VARIES	VARIES	**	8" - LEVEL IV	10"	4H:1V
ROUDABOUT - PCC ***	VARIES	VARIES	VARIES	**	*	*	4H:1V

* THE STANDARD PAVEMENT SECTION FOR ARTERIAL STREETS IS ASPHALT. FOR RECONSTRUCTION, NEW STREETS MORE THAN 1/4 MILE LONG, AND FOR ROUNDABOUTS, A LIFE CYCLE COST ANALYSIS EVALUATING ASPHALT, PERPETUAL PAVEMENT, CONCRETE, AND OTHER SECTIONS SHALL BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER.

* CURBS AT ROUNDABOUTS AND ON SPLITTER ISLANDS SHALL BE HIGH-STRENGTH PER CITY SPEC 00759.13.

*** DOWELING REQUIRED AT ROUNDABOUT JOINTS

DRAWN	AJD
DIV	ROADWAY
REV	DATE

CITY OF BEND

CITY OF BEND

STANDARD DRAWING

710 NW WALL ST., BEND, OREGON 97701

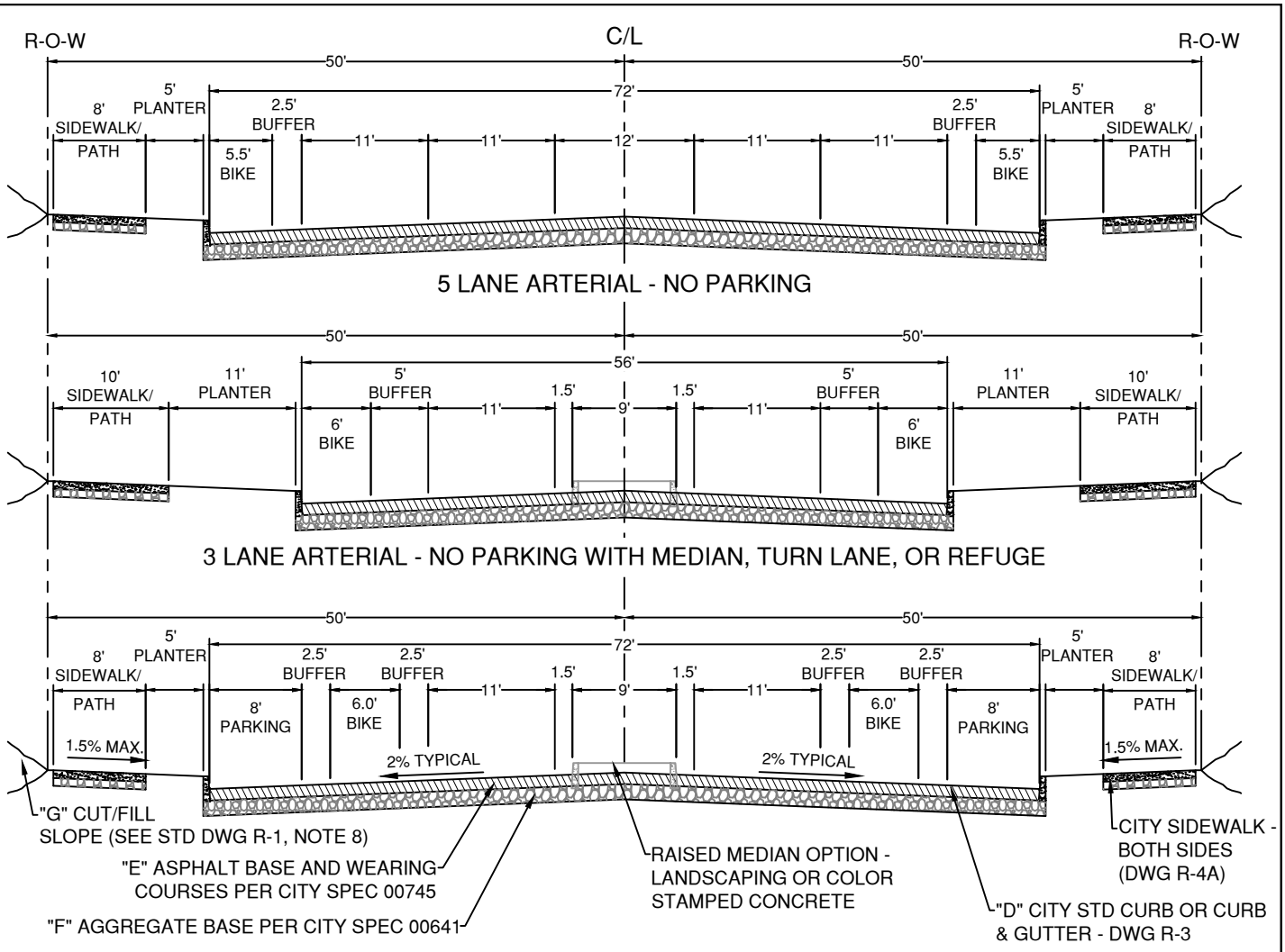
TYPICAL STREET CROSS-SECTIONS - GENERAL NOTES

SCALE NTS

DATE 01/31/2022

APPR

STD DWG R-1

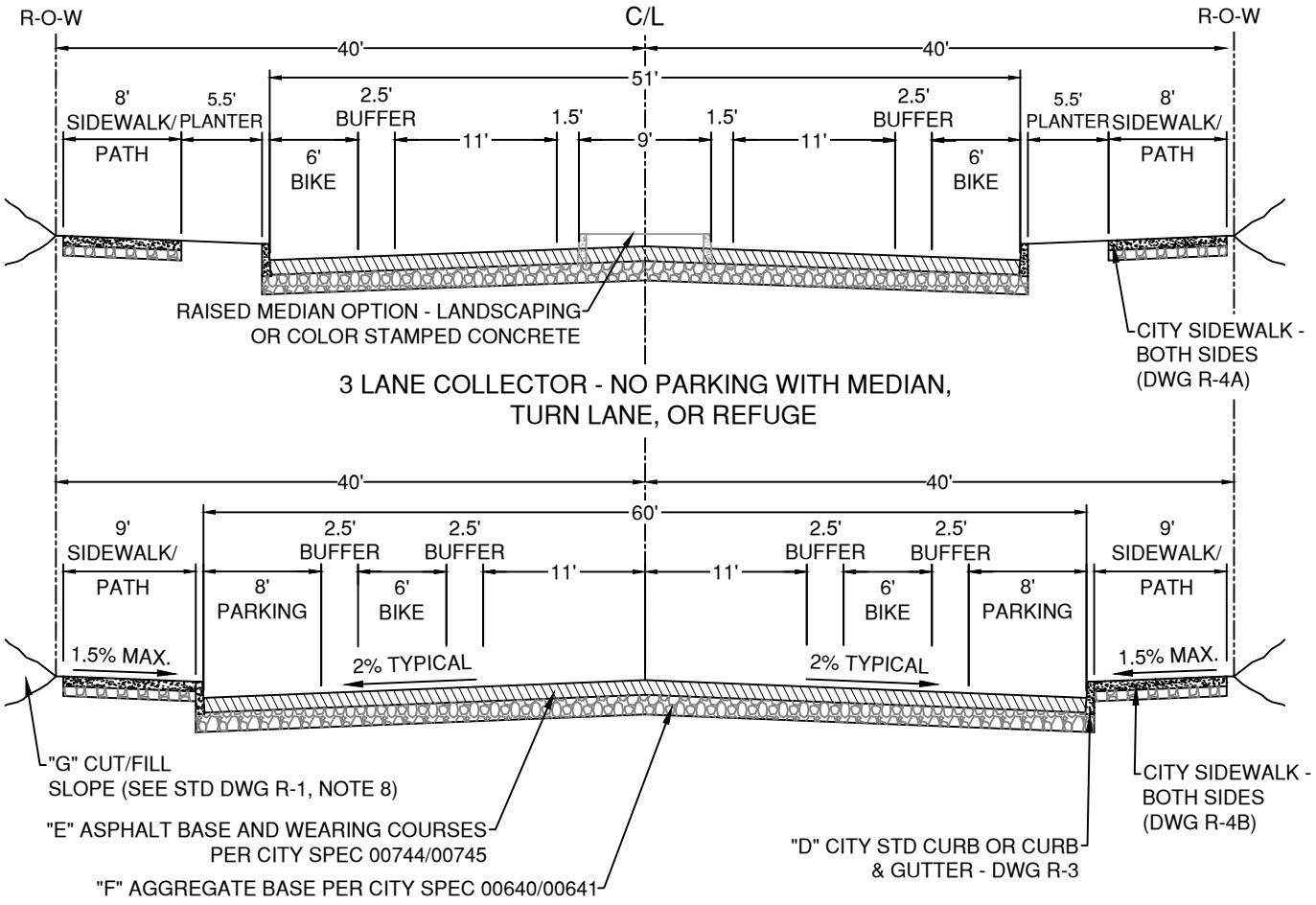


PLTS: 1 ≤ 35 MPH 2 ≥ 40 MPH	BLTS: 1 (SUP)	BLTS: 1 ≤ 30 MPH (BIKE LANE) 2 = 35 MPH 3 ≥ 40 MPH

ARTERIAL GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES.
2. WHERE PERMITTED BY THE BEND DEVELOPMENT CODE, ON-STREET PARKING MAY BE PROVIDED ON ARTERIAL STREETS WITH SPEEDS 35 MPH OR LESS. ON-STREET PARKING DESIGN PER ENGINEERING STANDARDS.
3. PROTECTED BIKE LANES, OTHER THAN PARKING PROTECTED, REQUIRE CITY ENGINEER APPROVAL. PARKING PROTECTED BIKE LANES ALLOWED ON A CASE-BY-CASE BASIS.
4. SIDEWALK MAY MEANDER WITH A MINIMUM 5 FT PLANTER STRIP. DESIGN MEANDERING CURVES FOR 10 MPH.
5. FOR EXISTING ARTERIAL SECTIONS IN 100 FT RIGHT-OF-WAY WITH 52 FT PAVEMENT WIDTHS, THE CITY ENGINEER MAY APPROVE REDUCING THE BIKE LANE TO 6/2.5 FT TO MATCH THE 52 FT CURB-TO-CURB EXISTING CONSTRUCTED SECTIONS; EXCEPTION DOES NOT APPLY TO SECTIONS (NEW OR RECONSTRUCTED) AT THE OUTER EXTENTS OF THE NETWORK WHERE UNDEVELOPED LAND AND FUTURE EXPANSIONS/RECONSTRUCTIONS CAN ACCOMMODATE THE 56/72 FT PAVEMENT SECTION.
6. THE FIVE-LANE ARTERIAL SECTION IS TO BE USED ON 3RD STREET, 27TH STREET SOUTH OF NEFF ROAD, REED MARKET ROAD EAST OF US 97, AND OTHER MAJOR ARTERIAL STREETS AS IDENTIFIED BY A TRAFFIC ANALYSIS WITH CITY ENGINEER APPROVAL (SEE STANDARDS FOR LANE ADDITIONS).
7. PARKING IS NOT PERMITTED ON A FIVE LANE ARTERIAL.
8. FOR PARKING ON ONE SIDE OF A THREE LANE ARTERIAL, COMBINE THE APPLICABLE HALF STREET SECTIONS FROM THE NO PARKING AND PARKING ON BOTH SIDES TYPICAL SECTIONS. THE ROAD CENTERLINE SHALL REMAIN IN THE CENTER OF ROW TO ALLOW FOR FUTURE EXPANSION.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 TYPICAL STREET CROSS-SECTIONS - ARTERIAL	SCALE NTS DATE 01/31/2022 APPR STD DWG R-1A



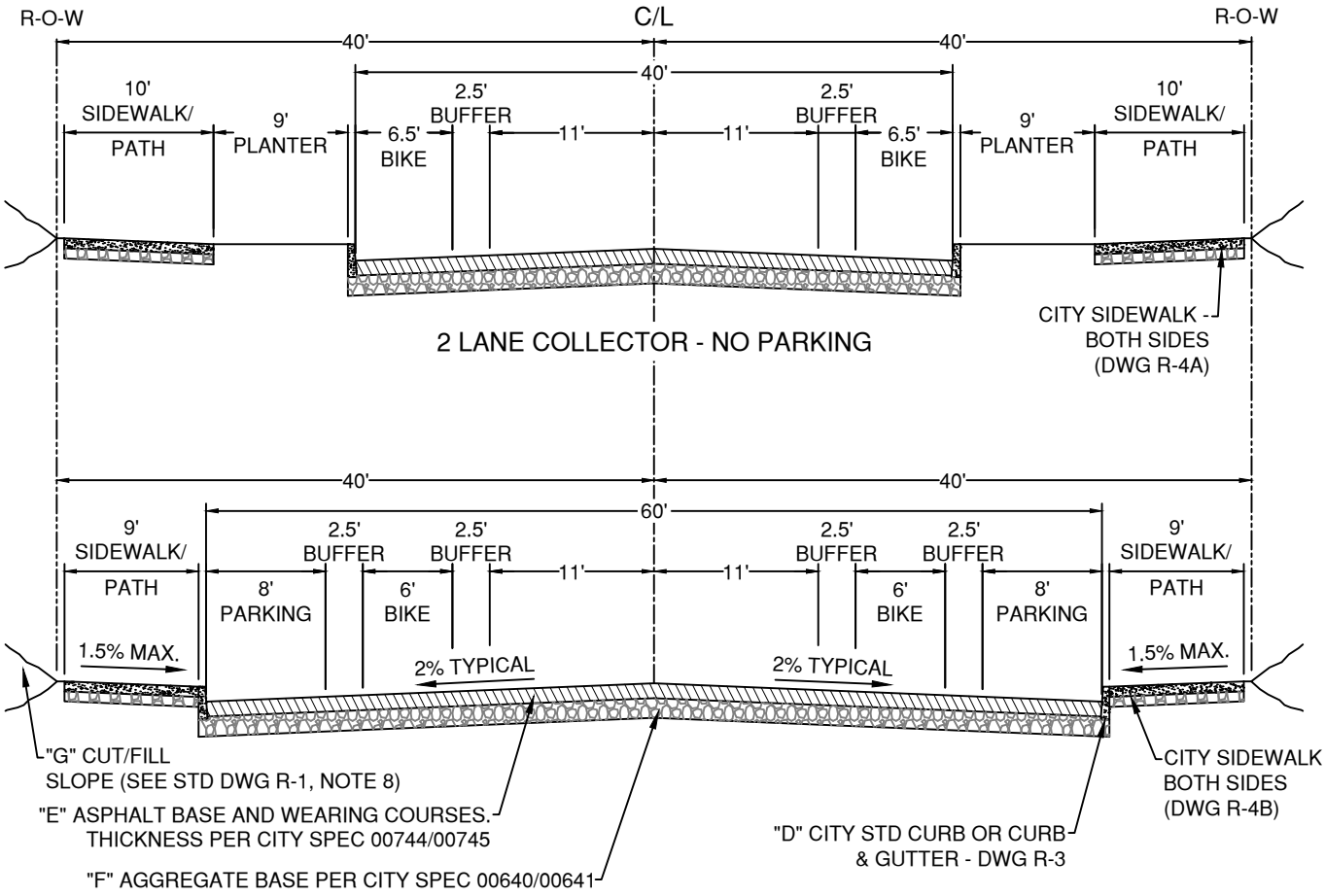
2 LANE COLLECTOR - PARKING BOTH SIDES

PLTS: 1 ≤ 35 MPH 2 ≥ 40 MPH	BLTS: 1 (SUP)	BLTS: 1 ≤ 30 MPH (BIKE LANE) 2 = 35 MPH 3 ≥ 40 MPH

MAJOR COLLECTOR GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES.
2. WHERE PERMITTED BY THE BEND DEVELOPMENT CODE, ON-STREET PARKING MAY BE PROVIDED ON COLLECTOR STREETS WITH SPEEDS 35 MPH OR LESS. ON-STREET PARKING DESIGN PER ENGINEERING STANDARDS.
3. WHERE THE CROSS-SECTION DOES NOT PROVIDE FOR TREES IN A PLANTER STRIP, DEVELOPMENT MUST STILL MEET BEND DEVELOPMENT CODE TREE REQUIREMENTS IN AN ALTERNATE LOCATION ON-SITE OR PROVIDE MITIGATION AND RECEIVE APPROVAL OF A VARIANCE AS REQUIRED BY CODE.
4. PROTECTED BIKE LANES, OTHER THAN PARKING PROTECTED, REQUIRE CITY ENGINEER APPROVAL. PARKING PROTECTED BIKE LANES ALLOWED ON A CASE-BY-CASE BASIS.
5. SIDEWALK MAY MEANDER WITH A MINIMUM 5 FT PLANTER STRIP. DESIGN MEANDERING CURVES FOR 10 MPH.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS DATE 01/31/2022 APPR
		TYPICAL STREET CROSS-SECTIONS - MAJOR COLLECTOR	STD DWG R-1B



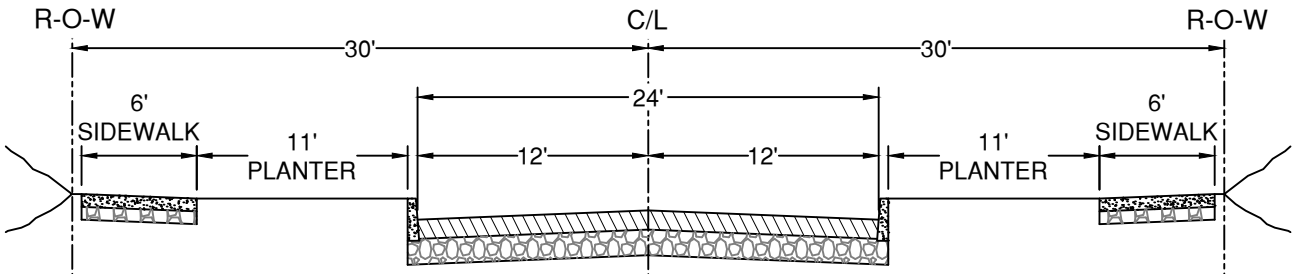
2 LANE COLLECTOR - PARKING BOTH SIDES

PLTS: 1 ≤ 35 MPH 2 ≥ 40 MPH	BLTS: 1 (SUP)	BLTS: 1 ≤ 30 MPH (BIKE LANE) 2 = 35 MPH 3 ≥ 40 MPH

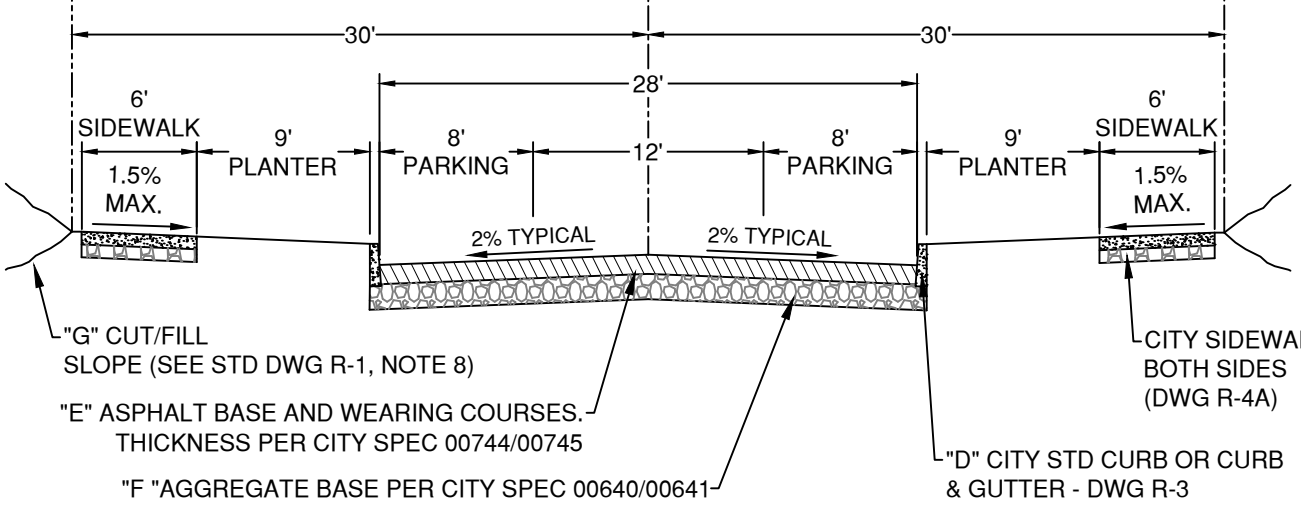
MINOR COLLECTOR GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES.
2. WHERE PERMITTED BY THE BEND DEVELOPMENT CODE, ON-STREET PARKING MAY BE PROVIDED ON COLLECTOR STREETS WITH SPEEDS 35 MPH OR LESS. ON-STREET PARKING DESIGN PER ENGINEERING STANDARDS.
3. WHERE THE CROSS-SECTION DOES NOT PROVIDE FOR TREES IN A PLANTER STRIP, DEVELOPMENT MUST STILL MEET BEND DEVELOPMENT CODE TREE REQUIREMENTS IN AN ALTERNATE LOCATION ON-SITE OR PROVIDE MITIGATION AND RECEIVE APPROVAL OF A VARIANCE AS REQUIRED BY CODE.
4. PROTECTED BIKE LANES, OTHER THAN PARKING PROTECTED, REQUIRE CITY ENGINEER APPROVAL. PARKING PROTECTED BIKE LANES ALLOWED ON A CASE-BY-CASE BASIS.
5. SIDEWALK MAY MEANDER WITH A MINIMUM 5 FT PLANTER STRIP. DESIGN MEANDERING CURVES FOR 10 MPH.
6. FOR PARKING ON ONE SIDE, COMBINE THE APPLICABLE HALF STREET SECTIONS FROM THE NO PARKING AND PARKING ON BOTH SIDES TYPICAL SECTIONS. THE ROAD CENTERLINE SHALL REMAIN IN THE CENTER OF ROW TO ALLOW FOR FUTURE EXPANSION.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS DATE 01/31/2022 APPR
		TYPICAL STREET CROSS-SECTIONS - MINOR COLLECTOR	STD DWG R-1C



LOCAL ROAD - NO PARKING



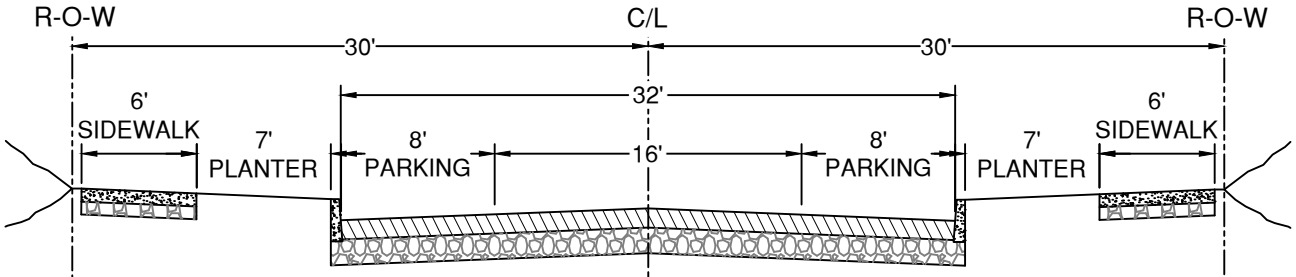
28' LOCAL ROAD - PARKING BOTH SIDES (SEE NOTE 3)

PLTS: 1	BLTS: 1
	2 (STRIPED CENTERLINE)

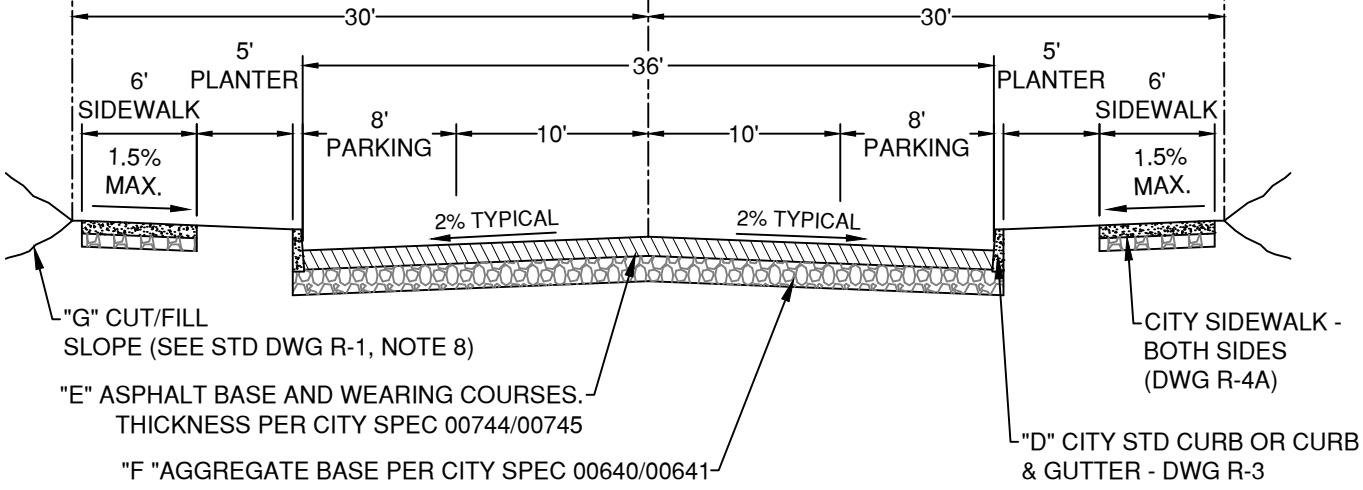
LOCAL ROAD GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES
2. UTILITY EASEMENTS MAY BE REQUIRED FOR PEDESTALS, TRANSFORMERS, ETC.
3. LOCAL ROADS WITH TRAVEL LANES LESS THAN 10' IN EACH DIRECTION ARE CONSIDERED QUEUING STREETS. SEE DESIGN STANDARDS SECTION 3.4.2.2 FOR APPROPRIATE QUEUING STREET APPLICATIONS.

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TYPICAL STREET CROSS-SECTION - LOCAL	STD DWG R-1D



32' LOCAL ROAD - PARKING BOTH SIDES (SEE NOTE 3)



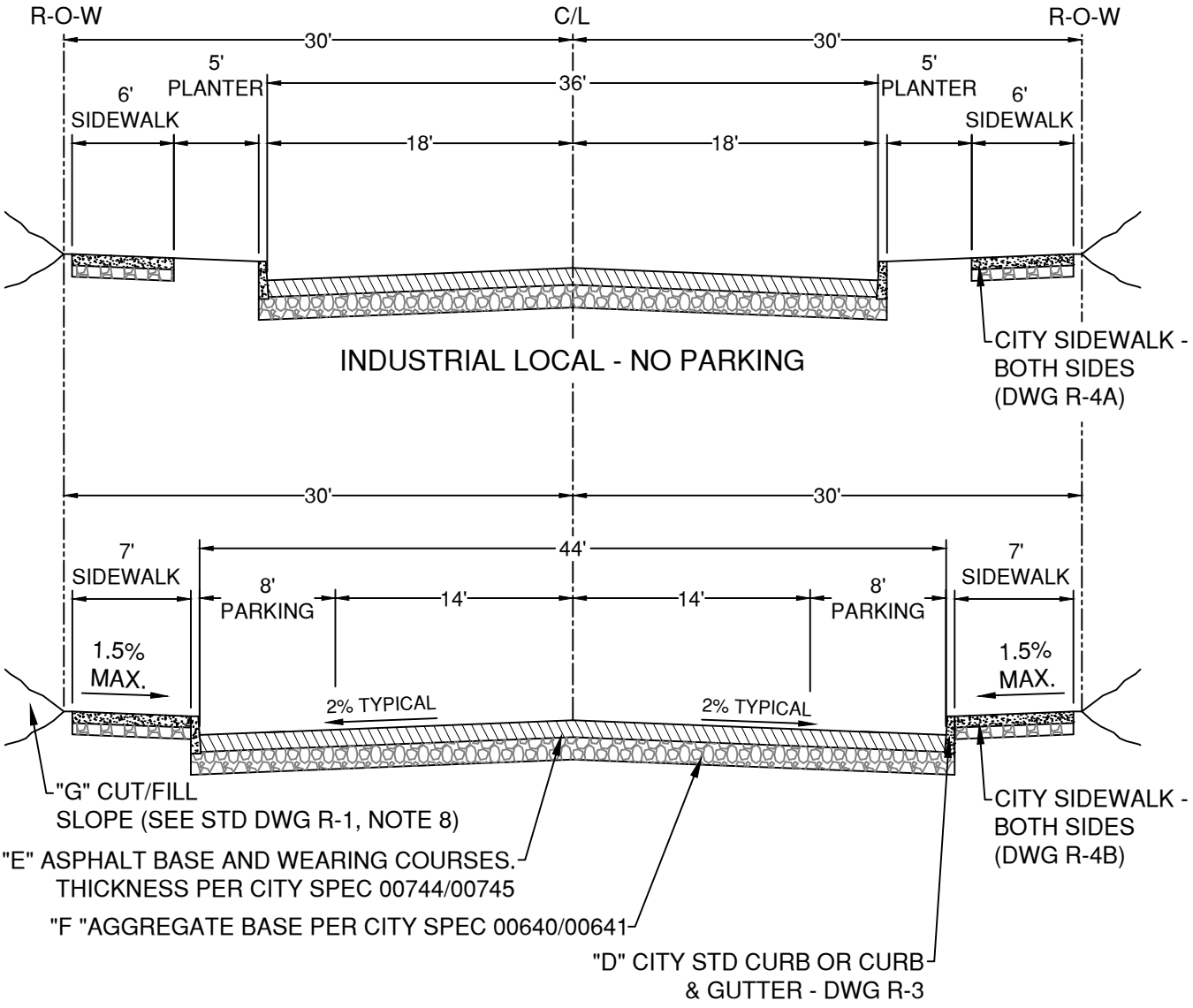
36' LOCAL ROAD - PARKING BOTH SIDES

PLTS: 1	BLTS: 1
	2 (STRIPED CENTERLINE)

LOCAL ROAD GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES
2. UTILITY EASEMENTS MAY BE REQUIRED FOR PEDESTALS, TRANSFORMERS, ETC.
3. LOCAL ROADS WITH TRAVEL LANES LESS THAN 10' IN EACH DIRECTION ARE CONSIDERED QUEUING STREETS. SEE DESIGN STANDARDS SECTION 3.4.2.2 FOR APPROPRIATE QUEUING STREET APPLICATIONS.

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TYPICAL STREET CROSS-SECTION - LOCAL	STD DWG R-1E



INDUSTRIAL LOCAL - NO PARKING

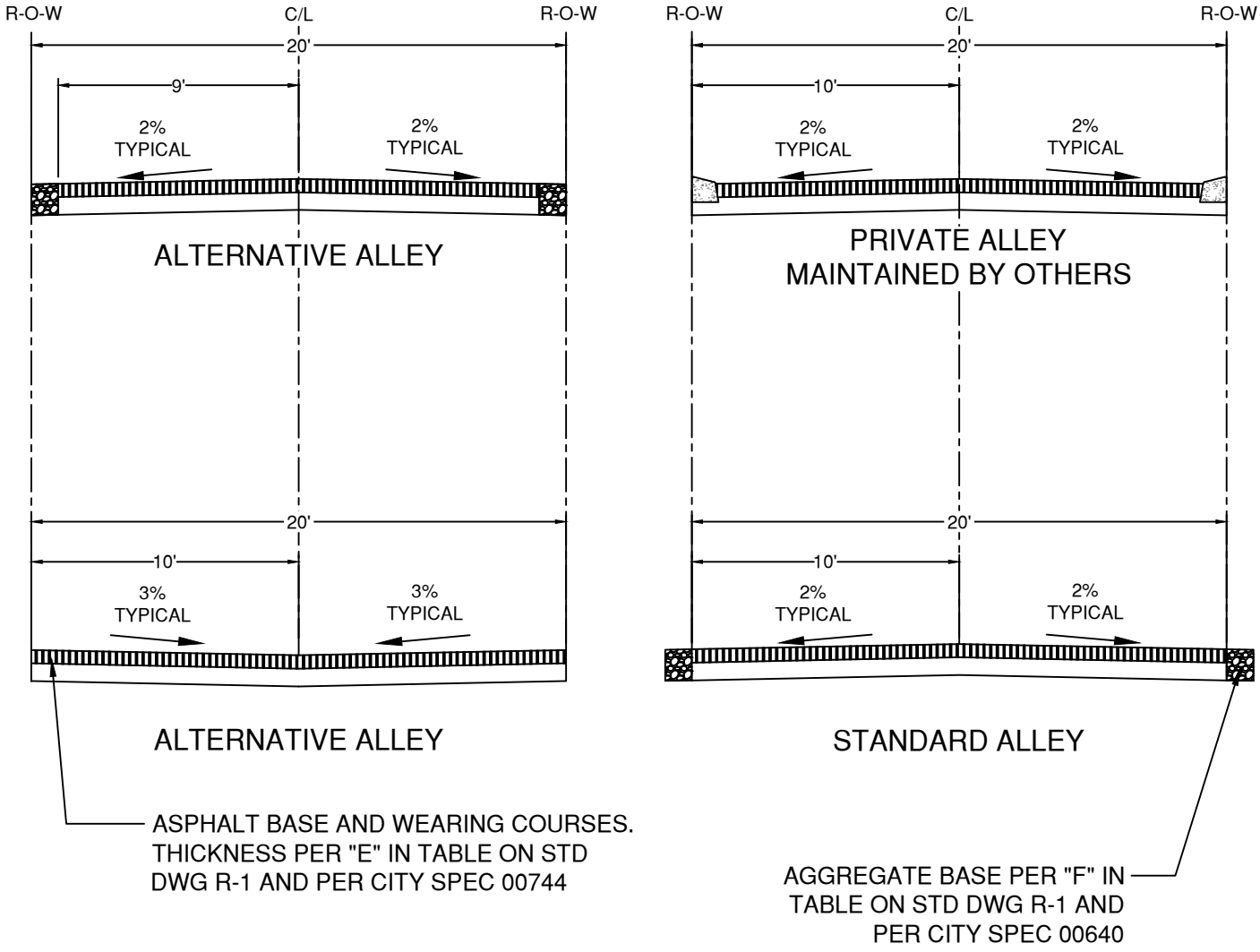
INDUSTRIAL LOCAL - PARKING BOTH SIDES

PLTS: 1	BLTS: 1
	2 (STRIPED CENTERLINE)

LOCAL ROAD GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES
2. THE SIDE PARKING IS ON MAY ALTERNATE BY BLOCK. PROVIDE PARKING NEXT TO PARKS, SCHOOLS, AND OTHER ACTIVITY GENERATING LAND USES.
3. UTILITY EASEMENTS MAY BE REQUIRED FOR PEDESTALS, TRANSFORMERS, ETC.
4. FOR PARKING ON ONE SIDE, COMBINE THE APPLICABLE HALF STREET SECTIONS FROM THE NO PARKING AND PARKING ON BOTH SIDES TYPICAL SECTIONS. THE ROAD CENTERLINE SHALL REMAIN IN THE CENTER OF ROW TO ALLOW FOR FUTURE EXPANSION.

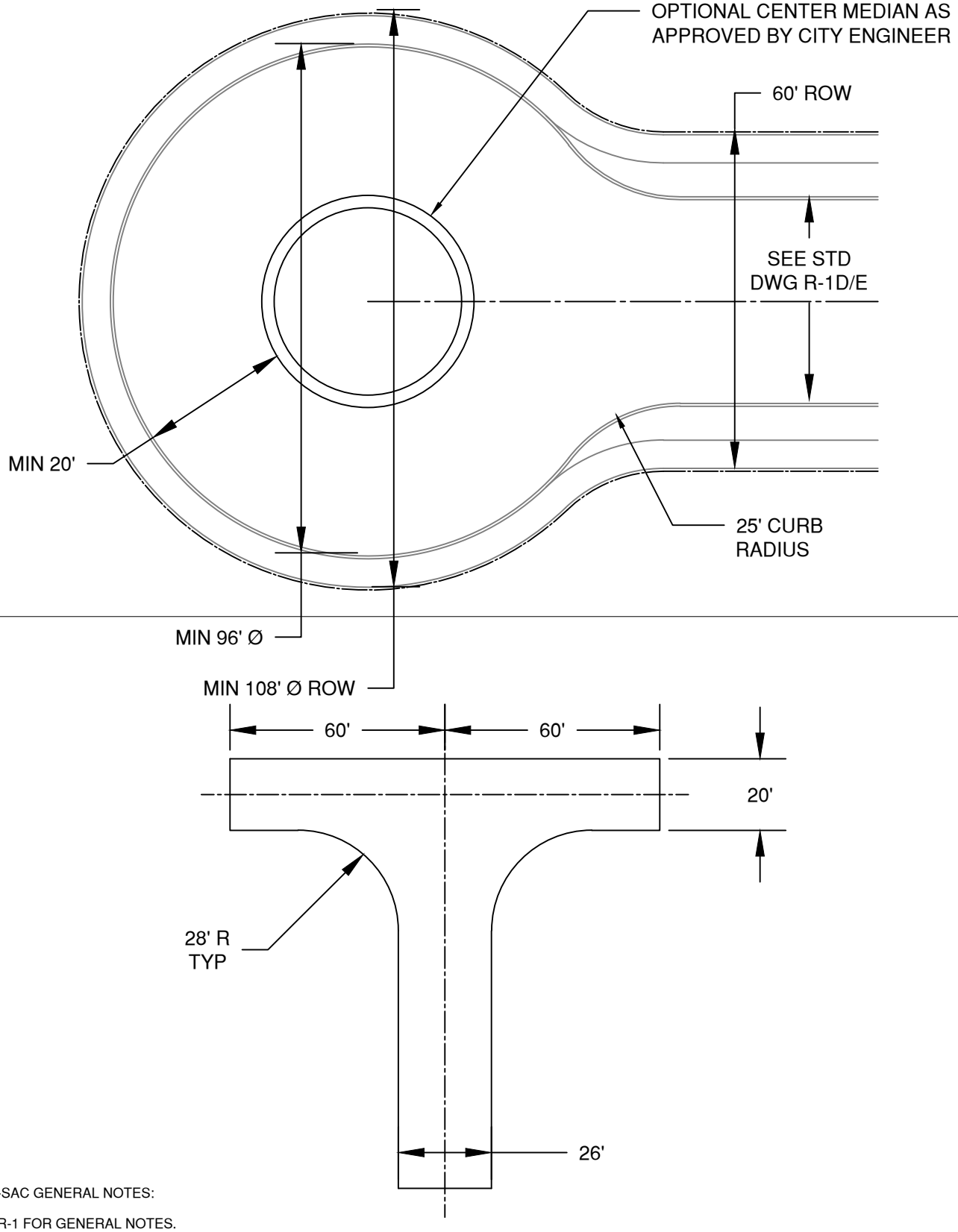
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TYPICAL STREET CROSS-SECTION - INDUSTRIAL LOCAL	STD DWG R-1F



ALLEY GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES.
2. NEW ALLEY RIGHT-OF-WAY AND PAVED WIDTH WILL BE 20' WIDE. WHERE ALLEYS ARE INSTALLED IN EXISTING RIGHT-OF-WAY, THE PAVED WIDTH MAY BE UP TO 2 FEET LESS THAN THE RIGHT-OF-WAY WIDTH. 1-FOOT WIDE BUFFERS ON EACH SIDE OF THE ALLEY MAY BE LEFT UNPAVED WHEN ALLEYS ARE INSTALLED IN EXISTING RIGHT-OF-WAY.
3. SURFACE RESTORATION OF TRANSVERSE TRENCHING WILL NOT REQUIRE ASPHALT IF THE EXISTING ALLEY IS UNPAVED. RESTORE SURFACE TO MATCH EXISTING.

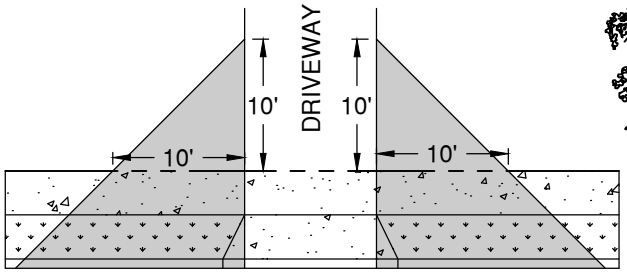
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TYPICAL STREET SECTION - ALLEY	STD DWG R-1G



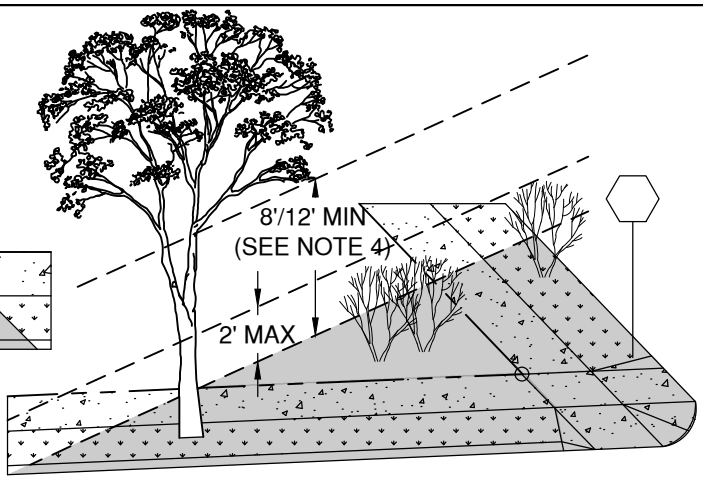
CUL-DE-SAC GENERAL NOTES:

1. SEE R-1 FOR GENERAL NOTES.
2. SEE STD DWG R-1 AND R-1D/E FOR PAVEMENT AND BASE AGGREGATE DEPTHS ON LOCAL ROADS

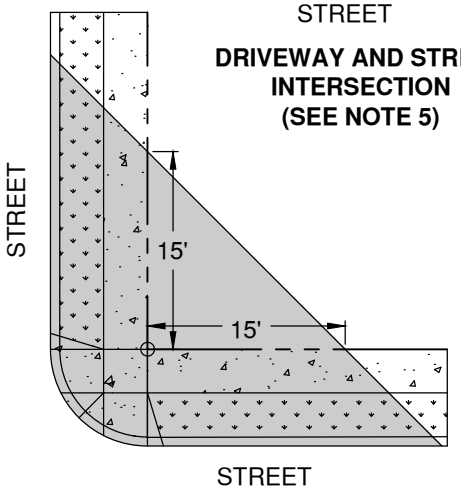
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TYPICAL STREET DEAD-END TURNAROUND	STD DWG R-1H



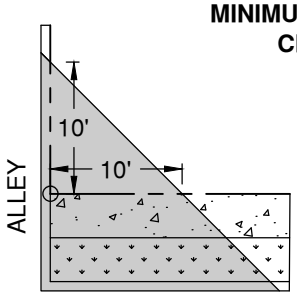
DRIVEWAY AND STREET INTERSECTION (SEE NOTE 5)



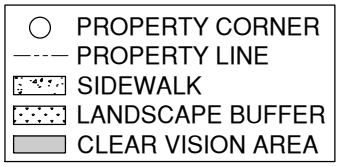
MAX HEIGHT OF SHRUBS AND MINIMUM LIMBING REQUIRED IN CLEAR VISION AREA



STREET/STREET INTERSECTION



STREET/ALLEY INTERSECTION

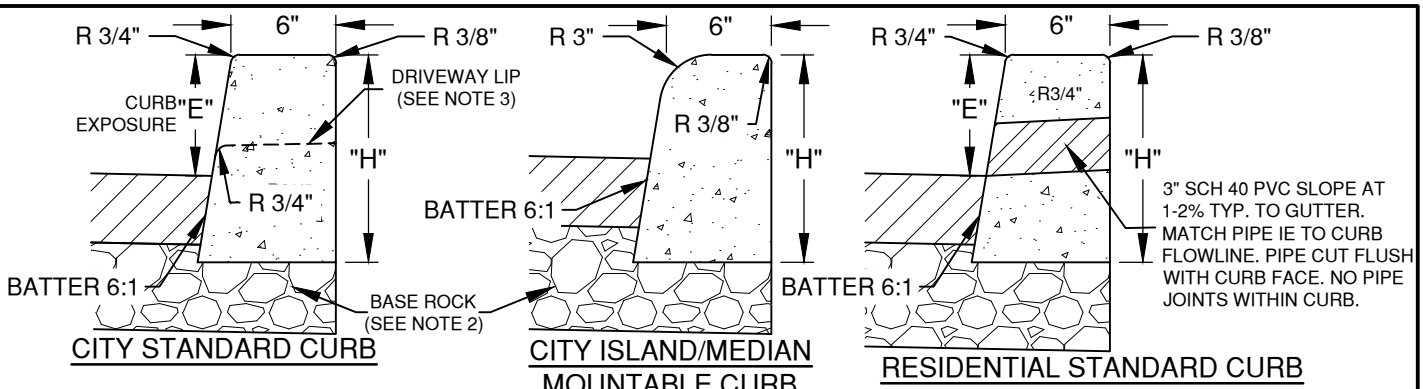


CLEAR VISION AREAS ARE ESTABLISHED AS FOLLOWS:

1) CLEAR VISION TRIANGLES SHALL BE ESTABLISHED AT THE CORNER OF ANY PROPERTY ADJACENT TO INTERSECTIONS OF PUBLIC OR PRIVATE STREETS, ALLEYS, MID-BLOCK LANES, AND/OR RAILROAD RIGHTS-OF-WAY.
2) THE TWO LEGS OF THE CLEAR VISION TRIANGLE ARE EACH MEASURED FROM THE POINT OF INTERSECTION OF THE TWO CORNER LOT LINES, SPECIAL SETBACK LINES, OR ACCESS EASEMENT LINES. WHERE LOT LINES HAVE ROUNDED CORNERS, THE LOT LINES ARE EXTENDED IN A STRAIGHT LINE TO A POINT OF INTERSECTION. THE CLEAR VISION AREA EXTENDS TO THE FACE OF CURB AT THE STREET OR ALLEY
3) THE LENGTH OF BOTH LEGS OF THE CLEAR VISION AREA TRIANGLE IS AS FOLLOWS:
   - TYPICAL, ALL ZONES: 15 FEET
   - RAILROADS: 15 FEET
   - ALLEY INTERSECTION: 10 FEET
   - DRIVEWAYS: 10 FEET
4) WITHIN THE CLEAR VISION AREA, OBSTRUCTIONS TO VISION OTHER THAN A STREET SIGN, POST, OR POLE LESS THAN 8 INCHES IN DIAMETER SHALL BE CLEARED FROM PROPERTY UNDER THE CONTROL OF THE CITY, HOMEOWNER, OR DEVELOPER. SHRUBS OR FOLIAGE MUST NOT EXCEED 2'-0" IN HEIGHT. PLANTING NEW TREES OR INSTALLATION OF COMMUNICATION TOWERS AND TRANSFORMERS, ARE NOT PERMITTED WITHIN THE CLEAR VISION AREA. EXISTING TREES MUST BE MAINTAINED/LIMBED TO A MINIMUM OF 8'-0" ABOVE THE TOP OF CURB OR 12'-0" ABOVE ADJACENT BIKE LANES.
5) DRIVEWAY APPROACHES AND DRIVEWAYS ARE NOT PERMITTED WITHIN THE CLEAR VISION AREA. ON-STREET PARKING DESIGN DOES NOT INCLUDE SPACES WITHIN 20 FEET OF AN ACCESSIBLE RAMP OR WITHIN 10 FEET OF A DRIVEWAY APPROACH.

NOTE: INTERSECTION SIGHT TRIANGLES ARE DISTINCT FROM, AND IN ADDITION TO, CLEAR VISION AREAS. INTERSECTION SIGHT TRIANGLE DIMENSIONS VARY WITH STREET WIDTH, GEOMETRY, TOPOGRAPHY, AND POSTED SPEED; ADDITIONAL CLEARING AS NECESSARY TO PROVIDE CLEAR INTERSECTION SIGHT DISTANCE IS ALSO REQUIRED; SEE CHAPTER 3.3 OF THE CITY OF BEND DESIGN STANDARDS.

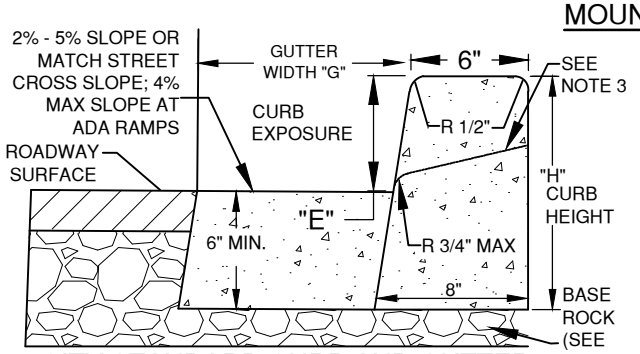
DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 CLEAR VISION AREAS AT INTERSECTIONS	SCALE NTS DATE 01/31/2022 APPR STD DWG R-2



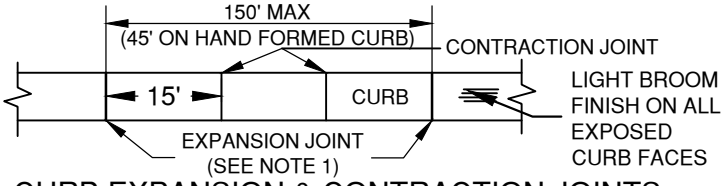
CITY STANDARD CURB

CITY ISLAND/MEDIAN MOUNTABLE CURB

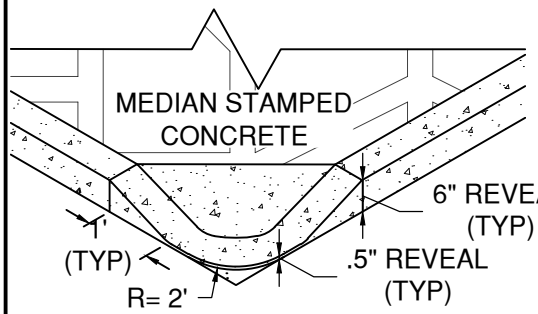
RESIDENTIAL STANDARD CURB W/ WEEP HOLE

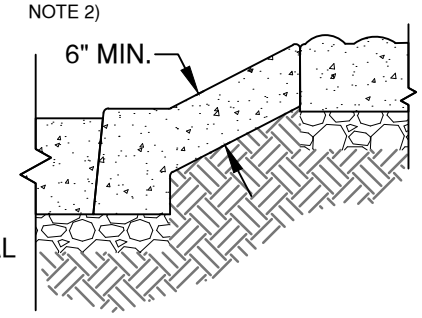


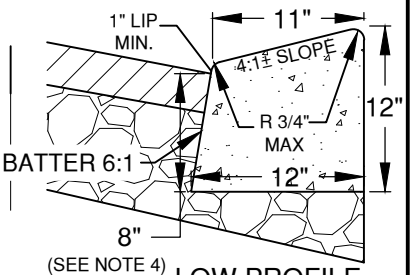
CITY STANDARD CURB AND GUTTER



CURB EXPANSION & CONTRACTION JOINTS

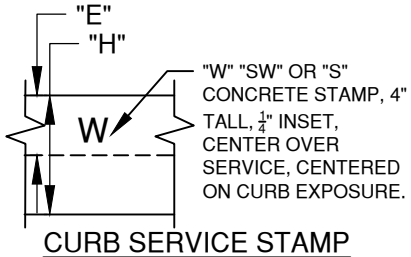






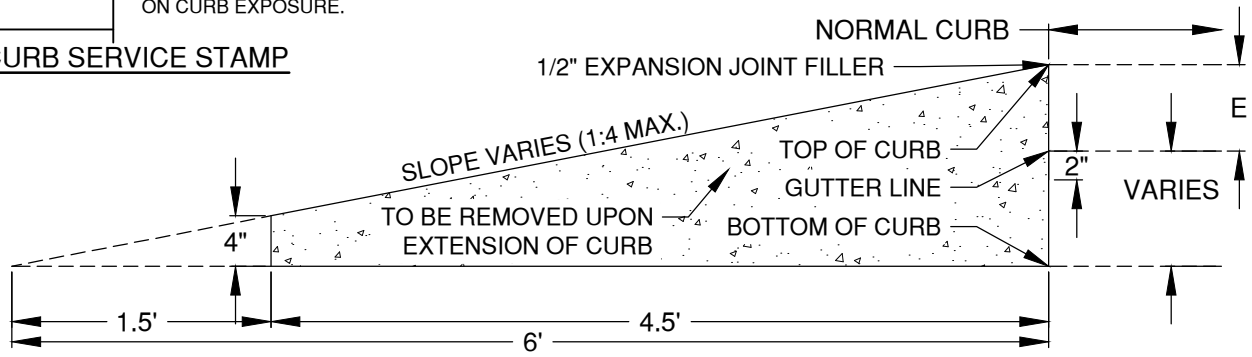
LOW PROFILE MOUNTABLE CURB

TAPERED CURB



CURB SERVICE STAMP

ROAD CLASS	CURB HEIGHT - H	CURB EXPOSURE - E	GUTTER WIDTH - G
ARTERIAL	16"	7"	12"
COLLECTOR	14"	6"	18"
LOCAL	12"	6"	18"



CURB ENDING DETAIL

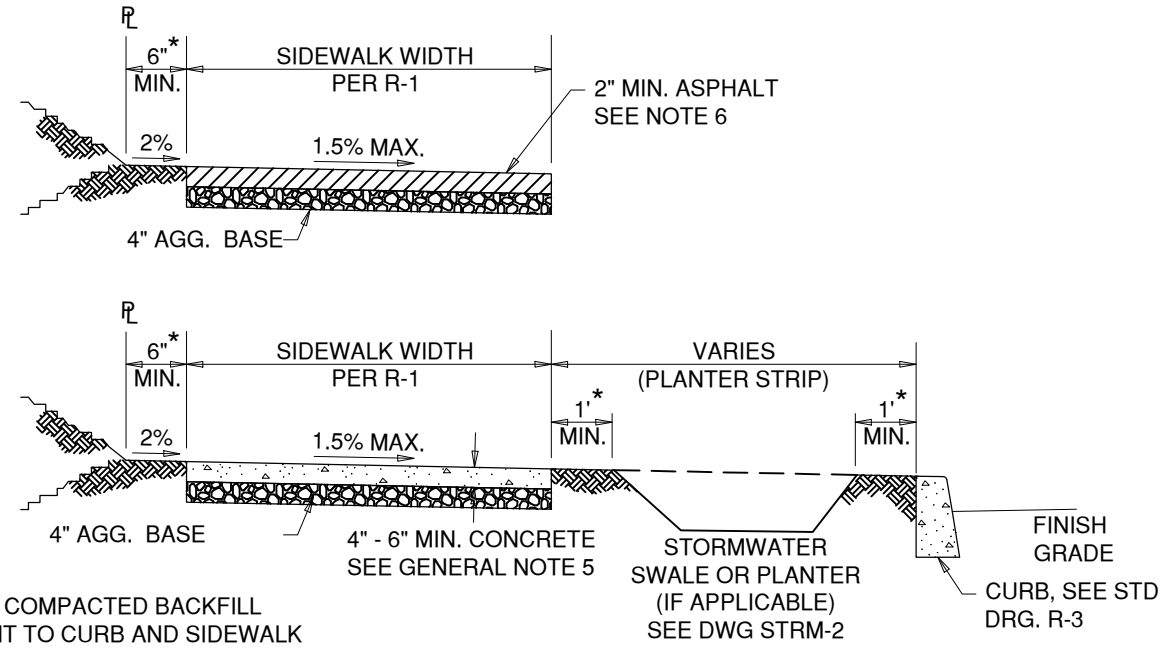
SEE NOTES ON STD DWG R-3A

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV DATE			APPR
		CONCRETE CURB	STD DWG R-3

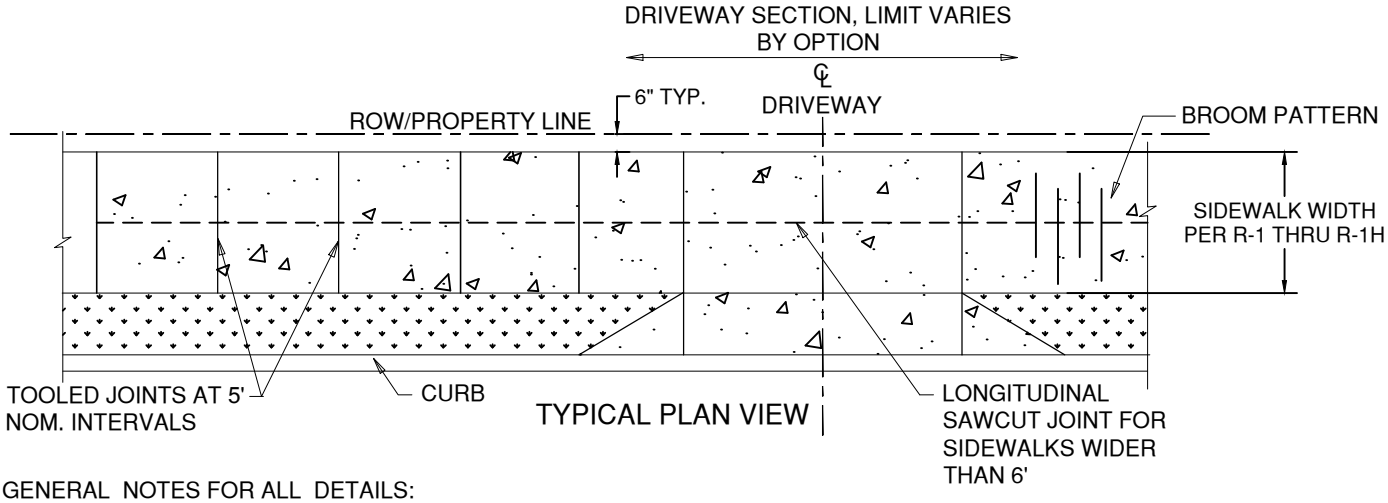
NOTES FOR STD DWG R-3:

1. EXPANSION JOINTS REQUIRED AT END OF RADII, DRIVEWAY APRONS, POINTS OF CURVATURE, AND NO GREATER THAN 150' MAXIMUM.
2. AGGREGATE BASE SHALL CONFORM TO SPECIFICATION SECTION 00640/00641. DEPTH AS REQUIRED TO MATCH BOTTOM OF STREET SECTION, 4" MIN.
3. SLOPE DRIVEWAY TOWARD STREET. 3/4" MAXIMUM LIP AT GUTTER, 1" ON COLLECTORS AND ARTERIALS.
4. MOUNTABLE CURB PERMITTED ON LOCAL STREET CUL-DE-SACS, ALLEYS, AND WHERE PERMITTED BY THE CITY ENGINEER. WHERE SIDEWALK ABUTS CURB, SIDEWALK SHALL BE MIN. 6" THICK
5. CURB AND GUTTER MAY BE REQUIRED WHEN GUTTER SLOPE IS BETWEEN 0.5% - 0.75%.
6. WEEP HOLE CURBS ON RESIDENTIAL STREETS ONLY WHERE APPROVED. SIDEWALK CANNOT BE PLACED CURB TIGHT WITH WEEP HOLES. SEE R-4A AND STRM-18.
7. CONCRETE MATERIAL AND PLACEMENT SHALL CONFORM TO SPECIFICATION SECTION 00759.
8. LOCATE TAPERED CURB ON DOWNSTREAM SIDE OF PEDESTRIAN REFUGE IN CENTER MEDIAN CURB RAMPS TO PROTECT FROM SNOW PLOW DAMAGE.

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		CONCRETE CURB NOTES	STD DWG R-3A



TYPICAL CROSS SECTION



TYPICAL PLAN VIEW

GENERAL NOTES FOR ALL DETAILS:

1. SIDEWALKS SET BACK ADJACENT TO PROPERTY LINE ARE STANDARD. USE CURB-TIGHT SIDEWALKS ONLY WHERE PERMITTED. SIDEWALK SHALL BE PROPERTY-TIGHT EXCEPT TO MEANDER AROUND TREES OR BARRIERS (UTILITIES, SIGNS, ETC.) OR PER DESIGN STANDARD SECTION 3.4.7 - HILLSIDE.

2. CONST. EXPANSION JOINTS AT 25' MAXIMUM SPACING, AND AT POINTS OF TANGENCY, AND ON EACH SIDE OF DRIVEWAY APRONS. EXPANSION JOINTS MUST BE FULL DEPTH OF PAVING SECTION.

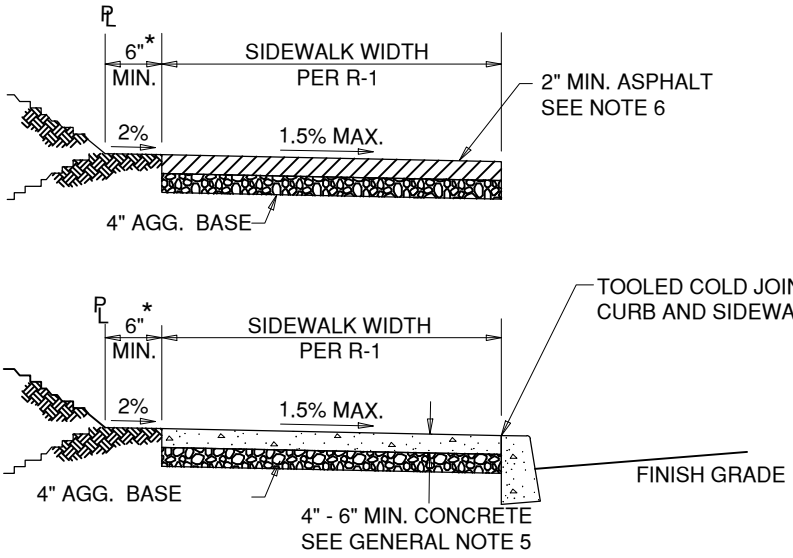
3. CONST. CONTRACTION JOINTS AT 5' MAXIMUM SPACING, AND AT ENDS OF EACH RAMP.

4. FOR DRIVEWAY DETAILS, SEE STD. DRGS. R-5A THROUGH R-5E.

5. SIDEWALK THICKNESS MINIMUM 4" THICK , TYPICAL. MINIMUM 6" THICK IF SIDEWALK IS INTENDED AS PORTION OF DRIVEWAY, CURB RAMP, OR ADJACENT TO MOUNTABLE CURB.

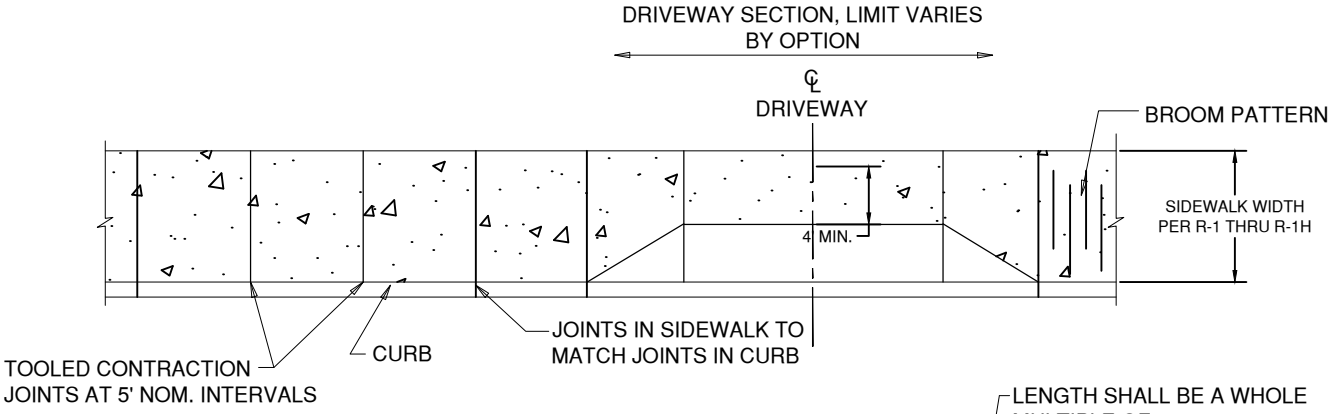
6. ASPHALT SHARED-USE PATH WHERE APPROVED BY THE ENGINEER.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 SHARED-USE PATH/SIDEWALK, SETBACK	SCALE NTS DATE 01/31/2022 APPR STD DWG R-4A

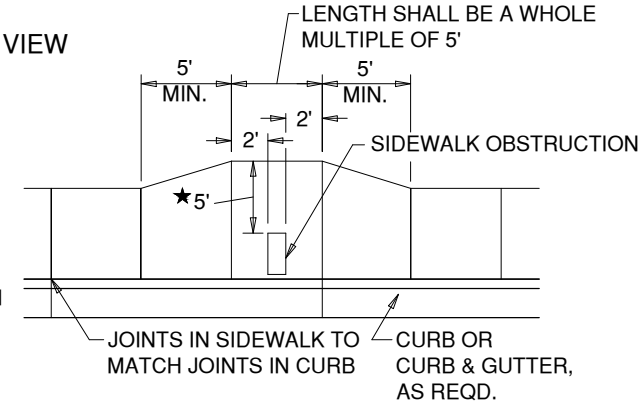


* PROVIDE COMPACTED BACKFILL
ADJACENT TO CURB AND SIDEWALK

TYPICAL CROSS SECTION



TYPICAL PLAN VIEW



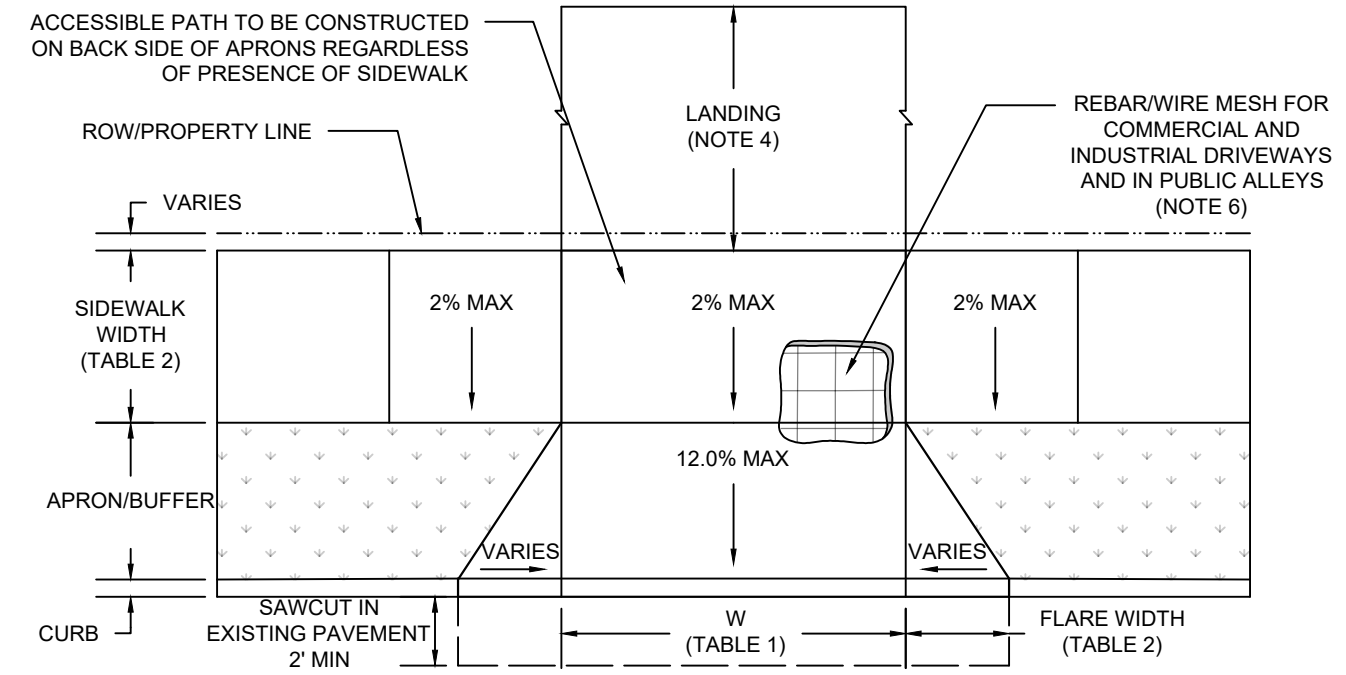
★ WHEN SITE CONSTRAINTS PROHIBIT A 5' PASSAGE, THE ENGINEER MAY DIRECT THIS TO BE REDUCED, BUT NO LESS THAN 4'.

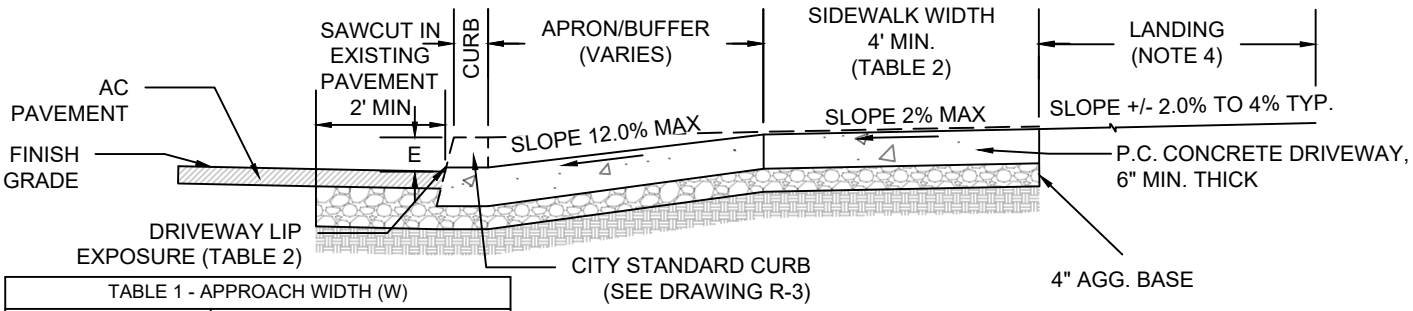
REQUIRED SIDEWALK WIDENING
AROUND OBSTRUCTIONS

GENERAL NOTES FOR ALL DETAILS:

1. SIDEWALKS SET BACK ADJACENT TO PROPERTY LINE ARE STANDARD. USE CURB-TIGHT SIDEWALKS ONLY WHERE PERMITTED.
2. CONST. EXPANSION JOINTS AT 25' MAXIMUM SPACING, AND AT POINTS OF TANGENCY, AND ON EACH SIDE OF DRIVEWAY APRONS. EXPANSION JOINTS MUST BE FULL DEPTH OF PAVING SECTION.
3. CONST. CONTRACTION JOINTS AT 5' MAXIMUM SPACING, AND AT ENDS OF EACH RAMP.
4. FOR DRIVEWAY DETAILS, SEE STD. DRGS. R-5A THROUGH R-5E.
5. SIDEWALK THICKNESS MINIMUM 4" THICK, TYPICAL. MINIMUM 6" THICK IF SIDEWALK IS PORTION OF DRIVEWAY, CURB RAMP, OR ADJACENT TO MOUNTABLE CURB.
6. ASPHALT SHARED-USE PATH WHERE APPROVED BY THE ENGINEER.

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		SHARED-USED PATH/SIDEWALK, CURB-TIGHT	STD DWG R-4B





TYPICAL PLAN AND PROFILE VIEW
DRIVEWAY APPROACH, SETBACK SIDEWALK (STANDARD)

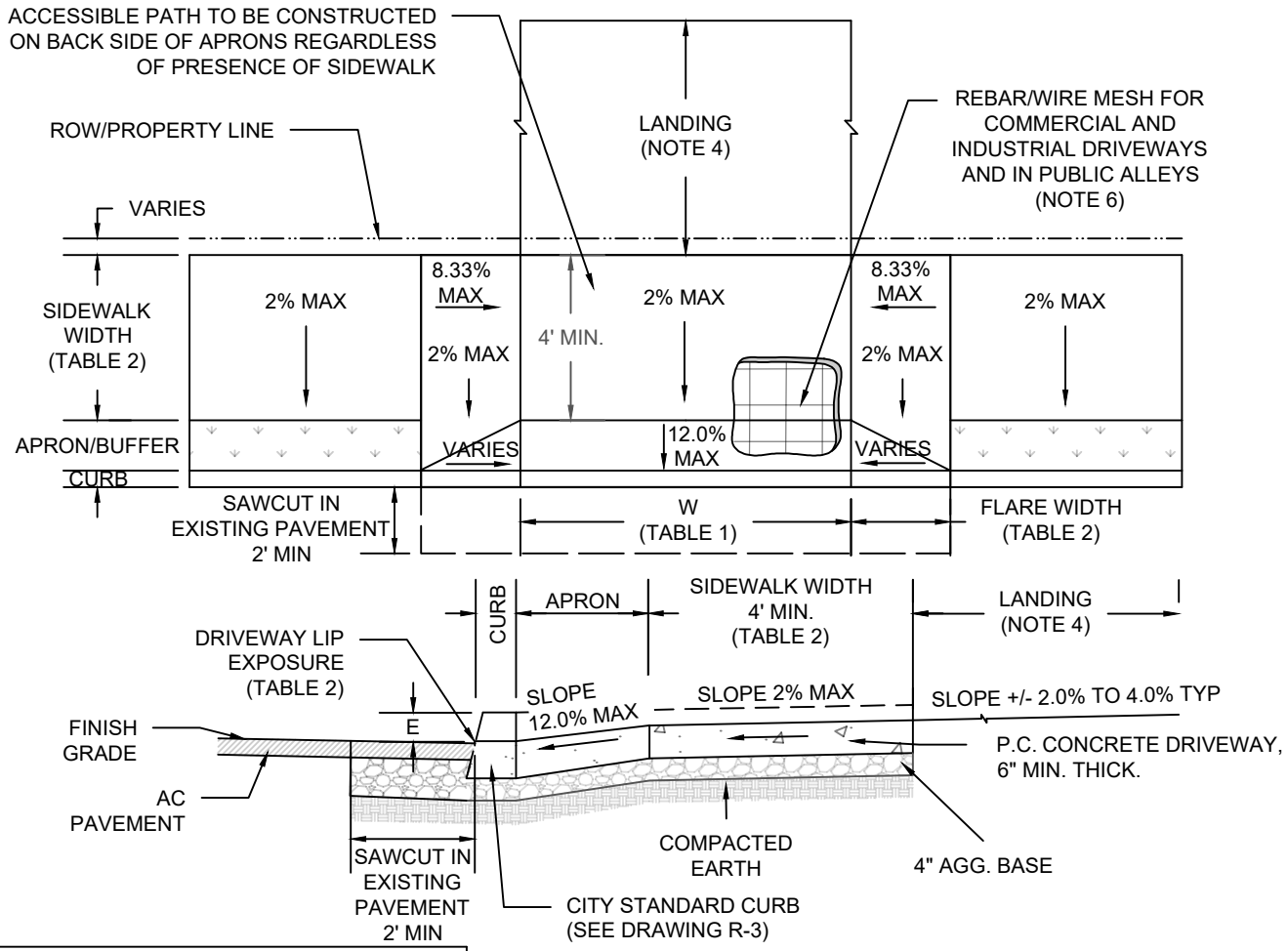
TABLE 1 - APPROACH WIDTH (W)	
TYPE	WIDTH
RESIDENTIAL	10' - 24'
SINGLE FAMILY	10'-24'
TOWNHOME	32' MAX SHARED; 16' MAX LOCAL STREETS
DUPLEX	SUM 32' MAX (2 APRON MAX)
TRIPLEX	SUM 32' MAX (3 APRON MAX)
QUADPLEX	SUM 32' MAX (4 APRON MAX)
MULTIFAMILY	20' - 30'
COMMERCIAL	10' - 35'

TABLE 2 - DRIVEWAY APPROACH WITH SETBACK SIDEWALK SPECIFICATIONS

TYPE OF STREET	SIDEWALK WIDTH	LIP EXPOSURE	APRON GRADE, POSITIVE GRADE TO ROW	FLARE WIDTH
LOCAL	PER R-1D THRU R-1F	$\frac{3}{4}$"	12.0% MAX	3'
COLLECTOR	PER R-1B & R1-C	1"	12.0% MAX	6'
ARTERIAL	PER R-1A	1"	12.0% MAX	6'

GENERAL NOTES:
1. SIDEWALKS SHALL MEET ALL STANDARDS OF CURRENT PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
2. CURB AND SIDEWALK TYPES VARY, SEE PLANS. SEE STD. DRG. R-3 FOR CURB DETAILS. SEE STD. DRGS. R-4A & R-4B FOR SIDEWALK DETAILS.
3. TOOLED JOINTS ARE REQUIRED AT ALL DRIVEWAY SLOPE BREAK LINES.
4. THE LANDING SHALL BE PAVED WITH CONCRETE OR ASPHALT SURFACE FOR A MINIMUM OF 20 FEET. PAVING BEYOND THE LANDING SHALL BE IN ACCORDANCE WITH THE BEND DEVELOPMENT CODE. CONSTRUCT AS DIRECTED OR AS SHOWN ON PLANS. DO NOT ENTER PRIVATE PROPERTY WITHOUT APPROPRIATE PERMIT OR EASEMENT. MATERIAL WITHIN THE ROW SHALL BE CONCRETE.
5. CHECK THE GUTTER FLOW DEPTH AT DRIVEWAY LOCATIONS TO ASSURE THAT THE DESIGN FLOOD DOES NOT OVERTOP THE BACK OF SIDEWALK AT DRIVEWAY. IF OVERTOPPING OCCURS PLACE AN INLET AT UPSTREAM SIDE OF DRIVEWAY OR PERFORM OTHER APPROVED DESIGN MITIGATION.
6. #4 REBAR (2'0" ON CENTER, TO BE SUSPENDED TO CENTER OF CONCRETE DEPTH) REQUIRED IN COMMERCIAL AND INDUSTRIAL DRIVEWAYS AND IN PUBLIC ALLEYS. 6"X6" 10 GAUGE MINIMUM WELDED WIRE MAY BE USED IN LIEU OF REBAR.
7. CONCRETE DRIVEWAY APRON REQUIRED WHERE SIDEWALK AND/OR CURB IS EXISTING/PROPOSED, OTHERWISE AN ASPHALT APPROACH CAN BE INSTALLED TO EDGE OF PAVEMENT TO SIMILAR WIDTHS OF THE DRIVEWAY APRON AS APPROVED BY THE CITY ENGINEER.
8. REFER TO THE BEND DEVELOPMENT CODE 3.1.400 AND 3.6.200 FOR NUMBER AND WIDTH OF APRONS PERMITTED PER LOT.
9. THIS SAME STANDARD APPLIES TO ALLEYS

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV / DATE			APPR
		DRIVEWAY APPROACH, SETBACK (STANDARD)	STD DWG R-5A



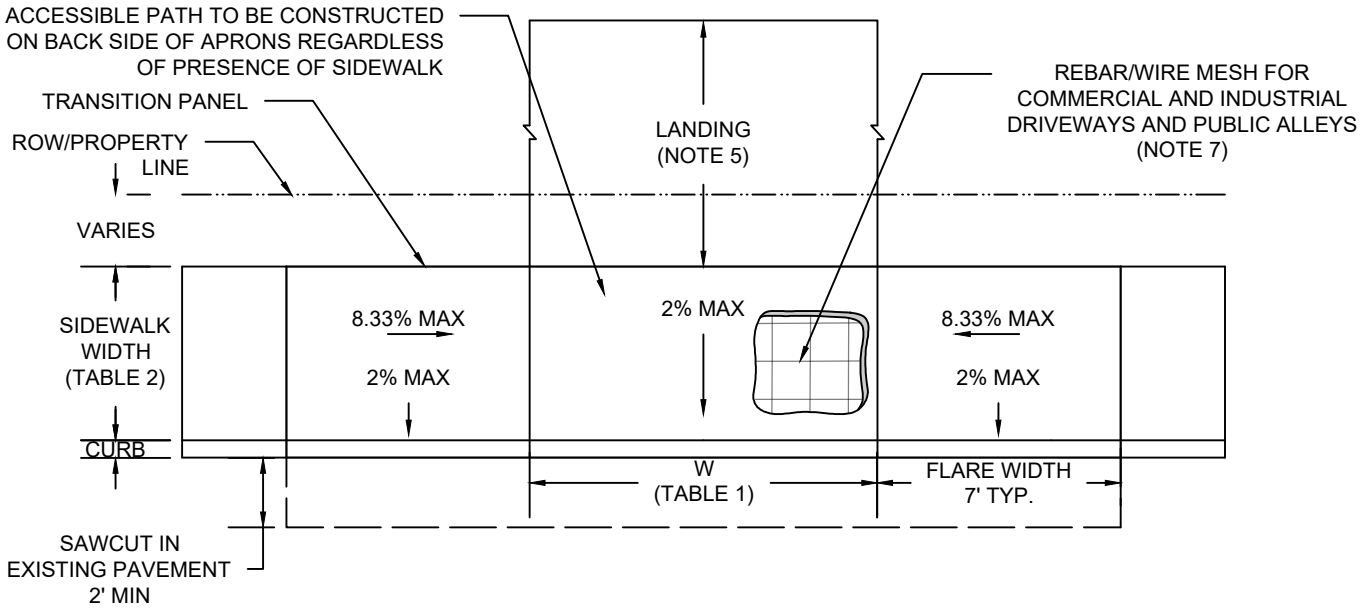
TYPICAL PLAN AND PROFILE VIEW
DRIVEWAY APPROACH, SETBACK, PARTIALLY LOWERED
(ALTERNATE B)

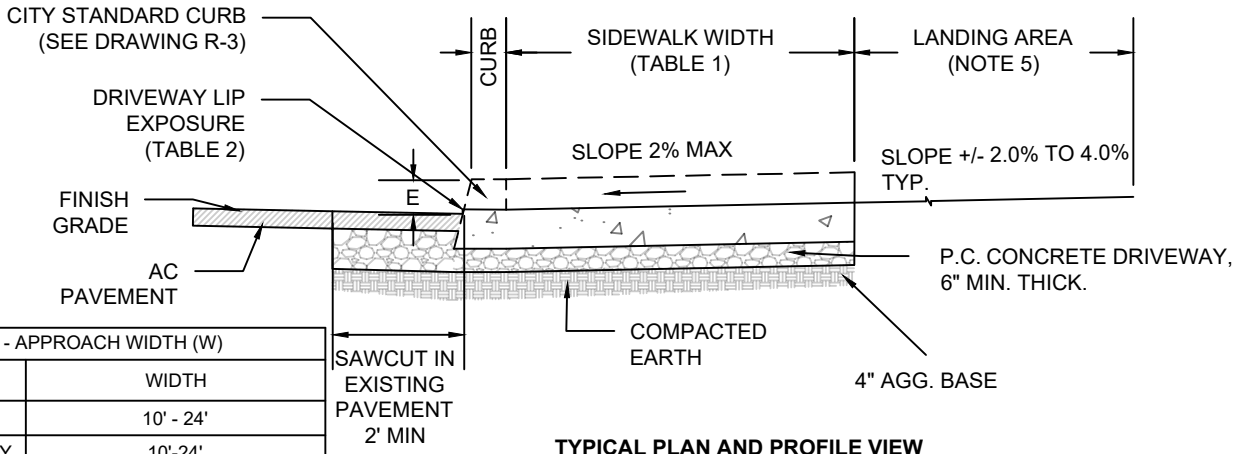
TABLE 1 - APPROACH WIDTH (W)	
TYPE	WIDTH
RESIDENTIAL	10' - 24'
SINGLE FAMILY	10'-24'
TOWNHOME	32' MAX SHARED; 16' MAX LOCAL STREETS
DUPLEX	SUM 32' MAX (2 APRON MAX)
TRIPLEX	SUM 32' MAX (3 APRON MAX)
QUADPLEX	SUM 32' MAX (4 APRON MAX)
MULTIFAMILY	20' - 30'
COMMERCIAL	10' - 35'

TABLE 2 - DRIVEWAY APPROACH WITH SETBACK SIDEWALK SPECIFICATIONS				
TYPE OF STREET	SIDEWALK WIDTH	LIP EXPOSURE	APRON GRADE, POSITIVE GRADE TO ROW	FLARE WIDTH
LOCAL	PER R-1D THRU R-1F	$\frac{3}{4}$"	12.0% MAX	3'
COLLECTOR	PER R-1B & R1-C	1"	12.0% MAX	6'
ARTERIAL	PER R-1A	1"	12.0% MAX	6'

GENERAL NOTES:
1. SIDEWALKS SHALL MEET ALL STANDARDS OF CURRENT PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
2. CURB AND SIDEWALK TYPES VARY, SEE PLANS. SEE STD. DRG. R-3 FOR CURB DETAILS. SEE STD. DRGS. R-4A & R-4B FOR SIDEWALK DETAILS.
3. TOOLED JOINTS ARE REQUIRED AT ALL DRIVEWAY SLOPE BREAK LINES.
4. THE LANDING SHALL BE PAVED WITH CONCRETE OR ASPHALT SURFACE FOR A MINIMUM OF 20 FEET. PAVING BEYOND THE LANDING SHALL BE IN ACCORDANCE WITH THE BEND DEVELOPMENT CODE. CONSTRUCT AS DIRECTED OR AS SHOWN ON PLANS. DO NOT ENTER PRIVATE PROPERTY WITHOUT APPROPRIATE PERMIT OR EASEMENT. MATERIAL WITHIN THE ROW SHALL BE CONCRETE.
5. CHECK THE GUTTER FLOW DEPTH AT DRIVEWAY LOCATIONS TO ASSURE THAT THE DESIGN FLOOD DOES NOT OVERTOP THE BACK OF SIDEWALK AT DRIVEWAY. IF OVERTOPPING OCCURS PLACE AN INLET AT UPSTREAM SIDE OF DRIVEWAY OR PERFORM OTHER APPROVED DESIGN MITIGATION.
6. #4 REBAR (2'0" ON CENTER, TO BE SUSPENDED TO CENTER OF CONCRETE DEPTH) REQUIRED IN COMMERCIAL AND INDUSTRIAL DRIVEWAYS AND IN PUBLIC ALLEYS. 6"X6" 10 GAUGE MINIMUM WELDED WIRE MAY BE USED IN LIEU OF REBAR.
7. CONCRETE DRIVEWAY APRON REQUIRED WHERE SIDEWALK AND/OR CURB IS EXISTING/PROPOSED, OTHERWISE AN ASPHALT APPROACH CAN BE INSTALLED TO EDGE OF PAVEMENT TO SIMILAR WIDTHS OF THE DRIVEWAY APRON AS APPROVED BY THE CITY ENGINEER.
8. REFER TO THE BEND DEVELOPMENT CODE 3.1.400 AND 3.6.200 FOR NUMBER AND WIDTH OF APRONS PERMITTED PER LOT.
9. THIS SAME STANDARD APPLIES TO ALLEYS

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV / DATE			APPR
		DRIVEWAY APPROACH, SETBACK, PARTIALLY LOWERED (ALTERNATE B)	STD DWG R-5B





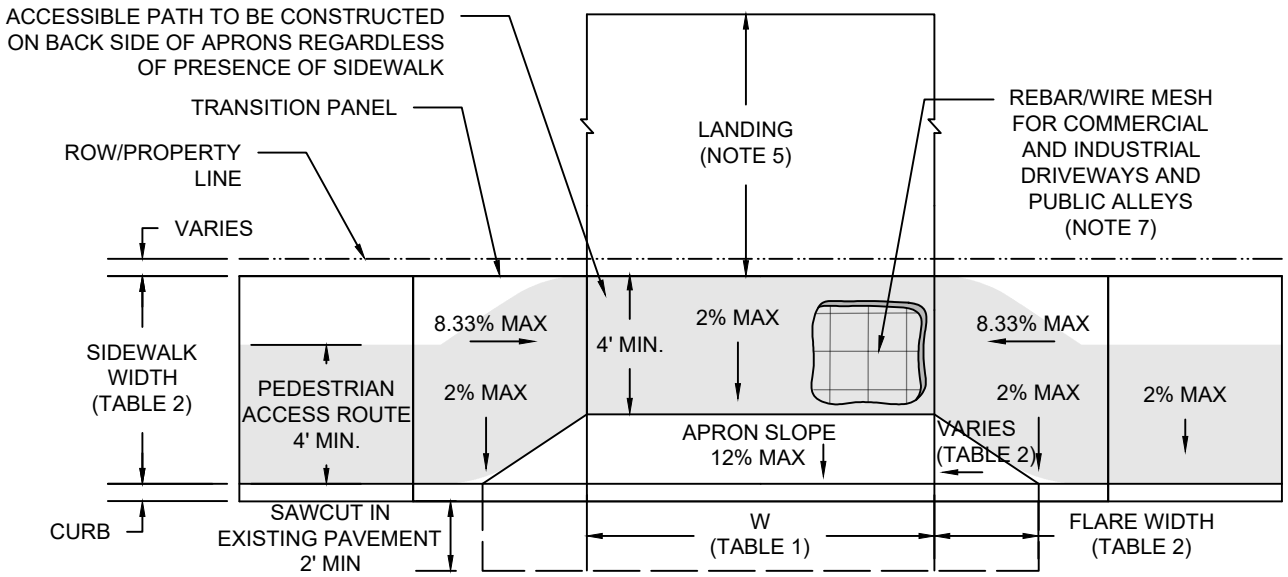
TYPICAL PLAN AND PROFILE VIEW
DRIVEWAY APPROACH, CURB-TIGHT, FULLY LOWERED (ALTERNATE C)

TABLE 1 - APPROACH WIDTH (W)	
TYPE	WIDTH
RESIDENTIAL	10' - 24'
SINGLE FAMILY	10'-24'
TOWNHOME	32' MAX SHARED; 16' MAX LOCAL STREETS
DUPLEX	SUM 32' MAX (2 APRON MAX)
TRIPLEX	SUM 32' MAX (3 APRON MAX)
QUADPLEX	SUM 32' MAX (4 APRON MAX)
MULTIFAMILY	20' - 30'
COMMERCIAL	10' - 35'

TABLE 2 - DRIVEWAY APPROACH WITH SETBACK SIDEWALK SPECIFICATIONS				
TYPE OF STREET	SIDEWALK WIDTH	LIP EXPOSURE	APRON GRADE, POSITIVE GRADE TO ROW	FLARE WIDTH
LOCAL	PER R-1D THRU R-1F	$\frac{3}{4}$"	12.0% MAX	3'
COLLECTOR	PER R-1B & R1-C	1"	12.0% MAX	6'
ARTERIAL	PER R-1A	1"	12.0% MAX	6'

GENERAL NOTES:
1. SIDEWALKS SHALL MEET ALL STANDARDS OF CURRENT PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
2. CURB AND SIDEWALK TYPES VARY, SEE PLANS. SEE STD. DRG. R-3 FOR CURB DETAILS. SEE STD. DRGS. R-4A & R-4B FOR SIDEWALK DETAILS.
3. TOOLED JOINTS ARE REQUIRED AT ALL DRIVEWAY SLOPE BREAK LINES.
4. THE LANDING SHALL BE PAVED WITH CONCRETE OR ASPHALT SURFACE FOR A MINIMUM OF 20 FEET. PAVING BEYOND THE LANDING SHALL BE IN ACCORDANCE WITH THE BEND DEVELOPMENT CODE. CONSTRUCT AS DIRECTED OR AS SHOWN ON PLANS. DO NOT ENTER PRIVATE PROPERTY WITHOUT APPROPRIATE PERMIT OR EASEMENT. MATERIAL WITHIN THE ROW SHALL BE CONCRETE.
5. CHECK THE GUTTER FLOW DEPTH AT DRIVEWAY LOCATIONS TO ASSURE THAT THE DESIGN FLOOD DOES NOT OVERTOP THE BACK OF SIDEWALK AT DRIVEWAY. IF OVERTOPPING OCCURS PLACE AN INLET AT UPSTREAM SIDE OF DRIVEWAY OR PERFORM OTHER APPROVED DESIGN MITIGATION.
6. #4 REBAR (2'0" ON CENTER, TO BE SUSPENDED TO CENTER OF CONCRETE DEPTH) REQUIRED IN COMMERCIAL AND INDUSTRIAL DRIVEWAYS AND IN PUBLIC ALLEYS. 6"X6" 10 GAUGE MINIMUM WELDED WIRE MAY BE USED IN LIEU OF REBAR.
7. CONCRETE DRIVEWAY APRON REQUIRED WHERE SIDEWALK AND/OR CURB IS EXISTING/PROPOSED, OTHERWISE AN ASPHALT APPROACH CAN BE INSTALLED TO EDGE OF PAVEMENT TO SIMILAR WIDTHS OF THE DRIVEWAY APRON AS APPROVED BY THE CITY ENGINEER.
8. REFER TO THE BEND DEVELOPMENT CODE 3.1.400 AND 3.6.200 FOR NUMBER AND WIDTH OF APRONS PERMITTED PER LOT.
9. THIS SAME STANDARD APPLIES TO ALLEYS

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV / DATE			APPR
		DRIVEWAY APPROACH, CURB-TIGHT, FULLY LOWERED (ALTERNATE C)	STD DWG R-5C



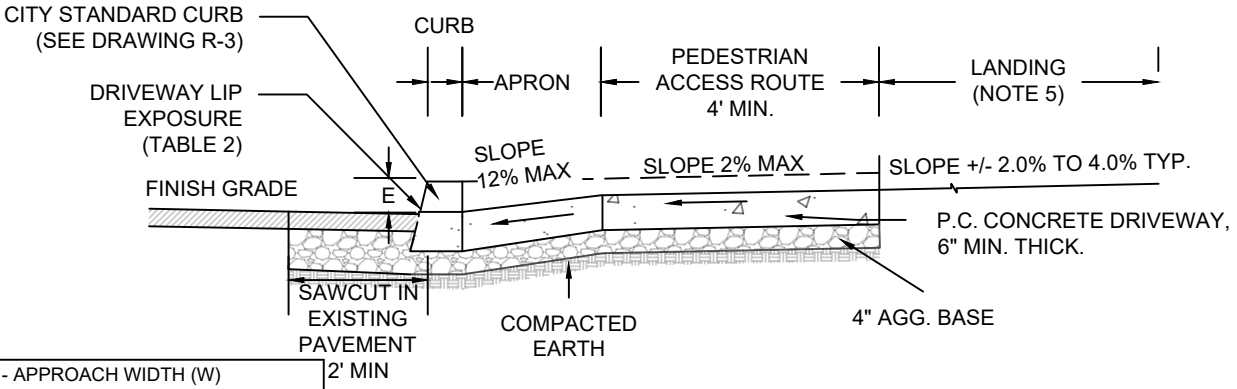


TABLE 1 - APPROACH WIDTH (W)	
TYPE	WIDTH
RESIDENTIAL	10' - 24'
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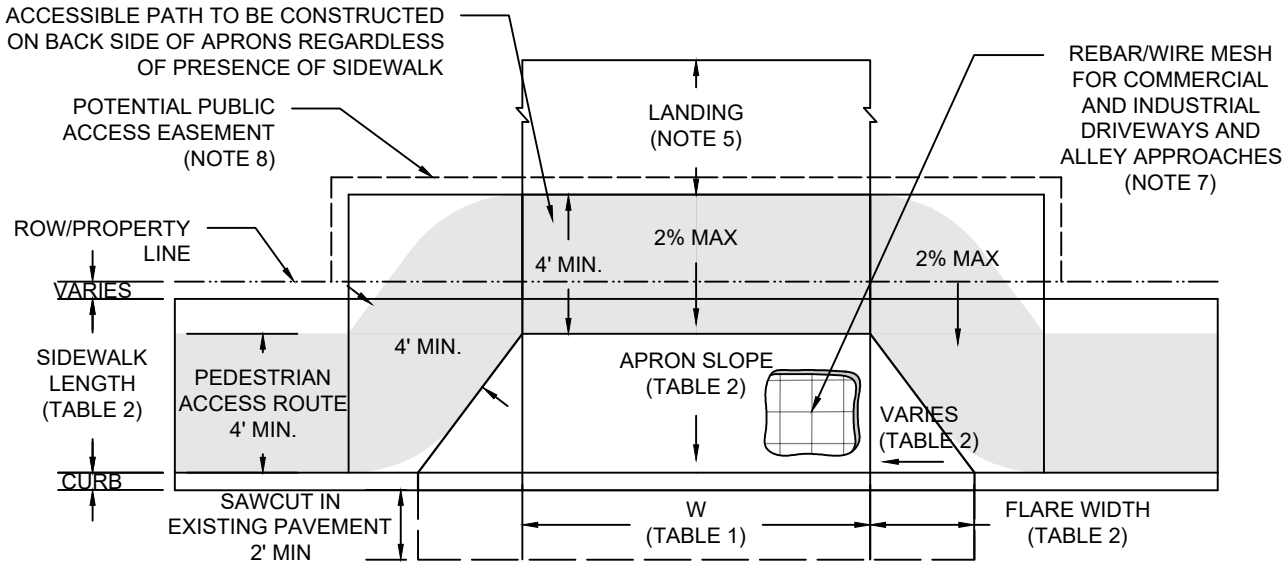
TOWNHOME	32' MAX SHARED; 16' MAX LOCAL STREETS
DUPLEX	SUM 32' MAX (2 APRON MAX)
TRIPLEX	SUM 32' MAX (3 APRON MAX)
QUADPLEX	SUM 32' MAX (4 APRON MAX)
MULTIFAMILY	20' - 30'
COMMERCIAL	10' - 35'

TYPICAL PLAN AND PROFILE VIEW
DRIVEWAY APPROACH, CURB-TIGHT, PARTIALLY LOWERED (ALTERNATE D)

TABLE 2 - DRIVEWAY APPROACH WITH SETBACK SIDEWALK SPECIFICATIONS				
TYPE OF STREET	SIDEWALK WIDTH	LIP EXPOSURE	APRON GRADE, POSITIVE GRADE TO ROW	FLARE WIDTH
LOCAL	PER R-1D THRU R-1F	$\frac{3}{4}$"	12.0% MAX	3'
COLLECTOR	PER R-1B & R1-C	1"	12.0% MAX	6'
ARTERIAL	PER R-1A	1"	12.0% MAX	6'

GENERAL NOTES:
1. SIDEWALKS SHALL MEET ALL STANDARDS OF CURRENT PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
2. CURB AND SIDEWALK TYPES VARY, SEE PLANS. SEE STD. DRG. R-3 FOR CURB DETAILS. SEE STD. DRGS. R-4A & R-4B FOR SIDEWALK DETAILS.
3. TOOLED JOINTS ARE REQUIRED AT ALL DRIVEWAY SLOPE BREAK LINES.
4. THE LANDING SHALL BE PAVED WITH CONCRETE OR ASPHALT SURFACE FOR A MINIMUM OF 20 FEET. PAVING BEYOND THE LANDING SHALL BE IN ACCORDANCE WITH THE BEND DEVELOPMENT CODE. CONSTRUCT AS DIRECTED OR AS SHOWN ON PLANS. DO NOT ENTER PRIVATE PROPERTY WITHOUT APPROPRIATE PERMIT OR EASEMENT. MATERIAL WITHIN THE ROW SHALL BE CONCRETE.
5. CHECK THE GUTTER FLOW DEPTH AT DRIVEWAY LOCATIONS TO ASSURE THAT THE DESIGN FLOOD DOES NOT OVERTOP THE BACK OF SIDEWALK AT DRIVEWAY. IF OVERTOPPING OCCURS PLACE AN INLET AT UPSTREAM SIDE OF DRIVEWAY OR PERFORM OTHER APPROVED DESIGN MITIGATION.
6. #4 REBAR (2'0" ON CENTER, TO BE SUSPENDED TO CENTER OF CONCRETE DEPTH) REQUIRED IN COMMERCIAL AND INDUSTRIAL DRIVEWAYS AND IN PUBLIC ALLEYS. 6"X6" 10 GAUGE MINIMUM WELDED WIRE MAY BE USED IN LIEU OF REBAR.
7. CONCRETE DRIVEWAY APRON REQUIRED WHERE SIDEWALK AND/OR CURB IS EXISTING/PROPOSED, OTHERWISE AN ASPHALT APPROACH CAN BE INSTALLED TO EDGE OF PAVEMENT TO SIMILAR WIDTHS OF THE DRIVEWAY APRON AS APPROVED BY THE CITY ENGINEER.
8. REFER TO THE BEND DEVELOPMENT CODE 3.1.400 AND 3.6.200 FOR NUMBER AND WIDTH OF APRONS PERMITTED PER LOT.
9. THIS SAME STANDARD APPLIES TO ALLEYS

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV / DATE			APPR
		DRIVEWAY APPROACH, CURB-TIGHT, PARTIALLY LOWERED (ALTERNATE D)	STD DWG R-5D



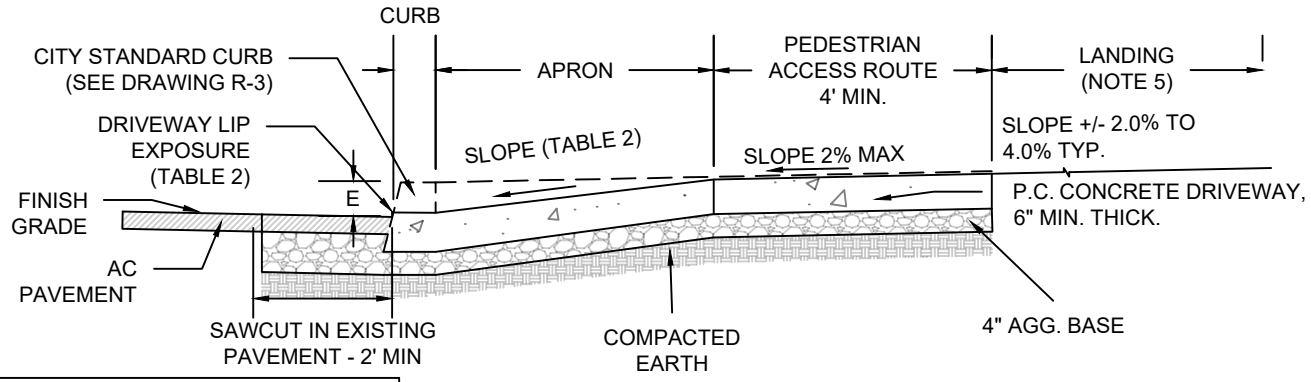


TABLE 1 - APPROACH WIDTH (W)	
TYPE	WIDTH
RESIDENTIAL	10' - 24'
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QUADPLEX	SUM 32' MAX (4 APRON MAX)
MULTIFAMILY	20' - 30'
COMMERCIAL	10' - 35'

TYPICAL PLAN VIEW
DRIVEWAY APPROACH, CURB-TIGHT, WRAPPING SIDEWALK
(ALTERNATE E)

TABLE 2 - DRIVEWAY APPROACH SPECIFICATIONS WITH CURB-TIGHT WRAPPING SIDEWALK				
TYPE OF STREET	MINIMUM SIDEWALK WIDTH	LIP EXPOSURE	APRON GRADE, POSITIVE GRADE TO ROW	FLARE WIDTH
LOCAL	PER R-1D THRU R-1F	$\frac{3}{4}$"	12.0% MAX	3'
COLLECTOR	PER R-1B & R1-C	1"	12.5% MAX	6'
ARTERIAL	PER R-1A	1"	12.5% MAX	6'

GENERAL NOTES:
1. SIDEWALKS SHALL MEET ALL STANDARDS OF CURRENT PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
2. CURB AND SIDEWALK TYPES VARY, SEE PLANS. SEE STD. DRG. R-3 FOR CURB DETAILS. SEE STD. DRGS. R-4A & R-4B FOR SIDEWALK DETAILS.
3. TOOLED JOINTS ARE REQUIRED AT ALL DRIVEWAY SLOPE BREAK LINES.
4. THE LANDING SHALL BE PAVED WITH CONCRETE OR ASPHALT SURFACE FOR A MINIMUM OF 20 FEET. PAVING BEYOND THE LANDING SHALL BE IN ACCORDANCE WITH THE BEND DEVELOPMENT CODE. CONSTRUCT AS DIRECTED OR AS SHOWN ON PLANS. DO NOT ENTER PRIVATE PROPERTY WITHOUT APPROPRIATE PERMIT OR EASEMENT. MATERIAL WITHIN THE ROW SHALL BE CONCRETE.
5. CHECK THE GUTTER FLOW DEPTH AT DRIVEWAY LOCATIONS TO ASSURE THAT THE DESIGN FLOOD DOES NOT OVERTOP THE BACK OF SIDEWALK AT DRIVEWAY. IF OVERTOPPING OCCURS PLACE AN INLET AT UPSTREAM SIDE OF DRIVEWAY OR PERFORM OTHER APPROVED DESIGN MITIGATION.
6. #4 REBAR (2'0" ON CENTER, TO BE SUSPENDED TO CENTER OF CONCRETE DEPTH) REQUIRED IN COMMERCIAL AND INDUSTRIAL DRIVEWAYS AND IN PUBLIC ALLEYS. 6"X6" 10 GAUGE MINIMUM WELDED WIRE MAY BE USED IN LIEU OF REBAR.
7. CONCRETE DRIVEWAY APRON REQUIRED WHERE SIDEWALK AND/OR CURB IS EXISTING/PROPOSED, OTHERWISE AN ASPHALT APPROACH CAN BE INSTALLED TO EDGE OF PAVEMENT TO SIMILAR WIDTHS OF THE DRIVEWAY APRON AS APPROVED BY THE CITY ENGINEER.
8. REFER TO THE BEND DEVELOPMENT CODE 3.1.400 AND 3.6.200 FOR NUMBER AND WIDTH OF APRONS PERMITTED PER LOT.
9. THIS SAME STANDARD APPLIES TO ALLEYS

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CITY OF BEND	DRIVEWAY APPROACH, CURB-TIGHT, WRAPPING SIDEWALK (ALTERNATE E)	STD DWG R-5E	

GENERAL NOTES :

1. CITY OF BEND STD DWGS R-6, R-6A, R-6B, AND R-6C ARE INTENDED AS A SUMMARY OF PROWAG REQUIREMENTS. SEE CURRENT PROWAG GUIDELINES FOR COMPLETE REQUIREMENTS.
2. SLOPES USED FOR DESIGN ARE TYPICALLY LESS THAN THE MAXIMUMS TO ALLOW FOR CONSTRUCTION TOLERANCES. RECOMMENDED DESIGN SLOPES ARE AS FOLLOWS:

PROWAG MAX. SLOPE	DESIGN MAX. SLOPE
1:10 (10%)	9.5%
1:12 (8.33%)	7.5%
1:20 (5.0%)	4.5%
1:50 (2%)	1.5%

3. GRADE BREAKS ARE NOT PERMITTED ON THE SURFACE OF CURB RAMPS, BLENDED TRANSITIONS, LANDINGS, AND GUTTER AREAS WITHIN THE PEDESTRIAN ACCESS ROUTE.
4. THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, LANDING, OR BLENDED TRANSITION SHALL BE 5% MAXIMUM.
5. SURFACES OF CURB RAMPS, BLENDED TRANSITIONS, AND LANDINGS SHALL COMPLY WITH R302.7. GRATINGS, ACCESS COVERS, AND OTHER APPURTENANCES SHALL NOT BE LOCATED ON CURB RAMPS, LANDINGS, BLENDED TRANSITIONS AND GUTTERS WITHIN THE PEDESTRIAN ACCESS ROUTE.
6. SURFACE DISCONTINUITIES SHALL NOT EXCEED 0.5 in. MAXIMUM. VERTICAL DISCONTINUITIES BETWEEN 0.25 in. AND 0.5 in. MAXIMUM SHALL BE BEVELED AT 1:2 MINIMUM. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE LEVEL CHANGE. SEE PROWAG R302.7.2.
7. WHERE SIDEWALKS ARE CONSTRUCTED OUTSIDE THE RIGHT OF WAY, A PUBLIC ACCESS EASEMENT MUST BE RECORDED OVER THE PRIVATE PROPERTY ENCROACHMENT.
8. 6 INCHES OF COMMERCIAL GRADE CONCRETE PER CITY SPEC 00440 AND 4 INCHES OF STATE SPEC AGGREGATE PER CITY SPEC 00640/00641 IS REQUIRED FOR CONSTRUCTION OF CURB RAMPS, FLARES, AND LANDINGS.
9. DETECTABLE WARNING SURFACES COMPLYING WITH PROWAG R305 SHALL BE PROVIDED, WHERE A CURB RAMP, LANDING, OR BLENDED TRANSITION CONNECTS TO A STREET.
10. DETECTABLE WARNING SURFACES SHALL EXTEND 24 in. MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES), THE LANDING, OR THE BLENDED TRANSITION.
11. THE ROWS OF TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE GRADE BREAK BETWEEN THE RAMP, LANDING, OR BLENDED TRANSITION AND THE STREET.
12. THE CLEAR WIDTH OF LANDINGS BLENDED TRANSITIONS, AND CURB RAMPS, EXCLUDING FLARES, SHALL BE 4.0 FT. MINIMUM.

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		CURB RAMP GENERAL NOTES	STD DWG R-6

CURB EXPOSURE TO BE MINIMUM 3-INCHES (6-INCH PREFERRED) BETWEEN RAMPS UNLESS OTHERWISE APPROVED.

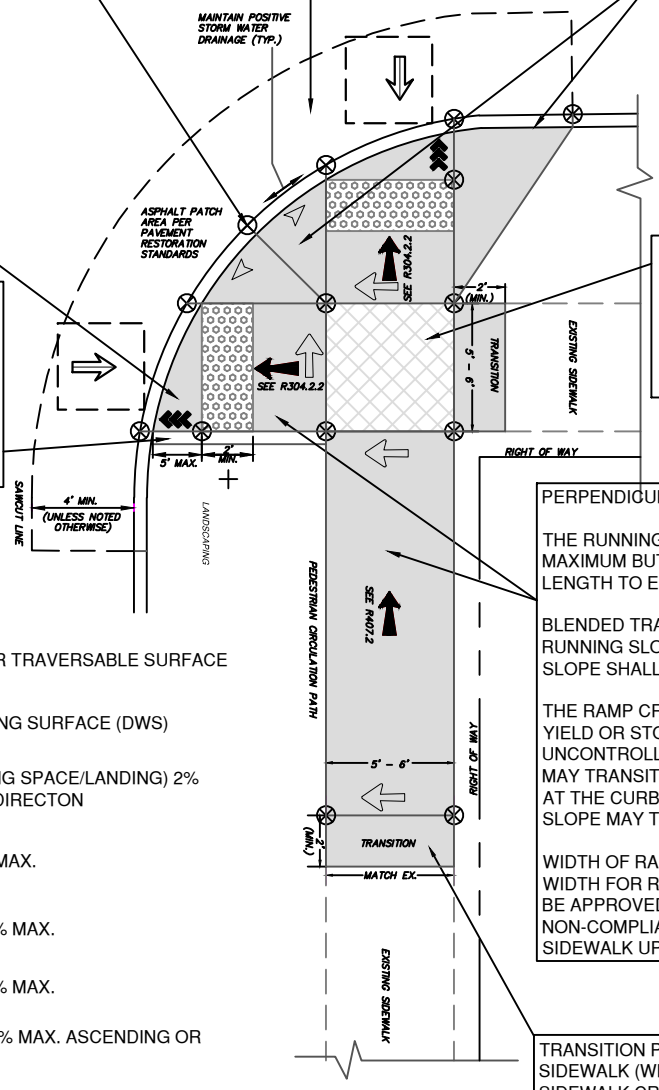
ONE CORNER OF THE DETECTABLE WARNING MUST BE WITHIN 2 in. OF THE GRADE BREAK; NO OTHER POINT ON THE LEADING EDGE OF THE DETECTABLE WARNING MAY BE MORE THAN 5 ft. FROM THE BACK OF CURB.

WHERE BOTH ENDS OF THE BOTTOM GRADE BREAK, COMPLYING WITH PROWAG R305.2.1, ARE 5.0 ft. OR LESS FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED ON THE RAMP SURFACE AT THE BOTTOM GRADE BREAK. WHERE EITHER END OF THE BOTTOM GRADE BREAK IS MORE THAN 5.0 ft. FROM THE BACK OF CURB, THE DETECTABLE WARNING SHALL BE LOCATED ON THE LOWER LANDING.

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED PARALLEL TO THE CURB LINE, SHALL BE PROVIDED WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP OR WHEN THE FLARE ABUTS A HARD SURFACE.

FLARES REQUIRED UNLESS BARRIERS EXIST OR WHERE APPROVED BY THE CITY ENGINEER. FLARE SLOPE CAN EXCEED 10% WHERE ABUTTING MIN 2' LANDSCAPING AREA.

GRADE BREAKS AT THE TOP AND BOTTOM OF PERPENDICULAR CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN. AT LEAST ONE END OF THE BOTTOM GRADE BREAK SHALL BE AT THE BACK OF CURB. THE GRADE FROM THE BOTTOM OF THE DETECTABLE WARNING TO THE LANDING SHALL BE A CONTINUOUS GRADE (5% MAXIMUM). SURFACE SLOPES THAT MEET THE GRADE BREAKS SHALL BE FLUSH.



FLARED SIDES ARE PREFERRED, PARTICULARLY WHERE SUBJECT TO DAMAGE FROM ONCOMING TRAFFIC AND SNOWPLOWS. IF ADJACENT CONSTRAINTS PREVENT FLARE CONSTRUCTION, SIDE OF RAMPS MAY BE RETURNED IF PROTECTED FROM CROSS TRAVEL BY LANDSCAPING, STREET FURNITURE, POLES, OR EQUIPMENT.

A LANDING 5.0 ft. MINIMUM BY 5.0 ft. MINIMUM SHALL BE PROVIDED AT THE TOP OF THE CURB RAMP AND SHALL BE PERMITTED TO OVERLAP OTHER LANDINGS AND CLEAR SPACE. RUNNING AND CROSS SLOPES AT INTERSECTIONS SHALL BE 2% MAXIMUM.

PERPENDICULAR CURB RAMPS

THE RUNNING SLOPE SHALL BE 5% MINIMUM AND 8.3% MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT.

BLENDED TRANSITIONS SHALL COMPLY WITH R303.3. RUNNING SLOPE SHALL BE 5% MAXIMUM AND CROSS SLOPE SHALL BE 2% MAXIMUM.

THE RAMP CROSS SLOPE SHALL NOT EXCEED 2% AT YIELD OR STOP CONTROLLED INTERSECTIONS. AT UNCONTROLLED INTERSECTIONS, THE CROSS SLOPE MAY TRANSITION FROM 2% AT THE LANDING UP TO 5% AT THE CURB. AT MIDBLOCK CROSSINGS, THE CROSS SLOPE MAY TRANSITION TO MATCH THE ROAD GRADE.

WIDTH OF RAMP TO MATCH SUP/SIDEWALK STANDARD WIDTH FOR ROAD CROSS-SECTION; ALTERNATE MAY BE APPROVED BY CITY ENGINEER IN EXISTING NON-COMPLIANT AREAS WITH NO PLANS FOR SIDEWALK UPGRADES.

TRANSITION PANEL FROM RAMP TO EXISTING SIDEWALK (WHERE REQUIRED TO MATCH EX. SIDEWALK CROSS SLOPE). MAX. GRADES ARE NOT SPECIFIED BY PROWAG. ADJUST LENGTH AS NEEDED TO PROVIDE 0.5% CHANGE PER FT. IF PROPOSED MATCH LINE LOCATION FALLS WITHIN 2 FEET FROM AN EXISTING JOINT IN THE SECTION OF SIDEWALK TO REMAIN, THE EXISTING WALK SHALL BE REMOVED BACK TO THE NEXT JOINT.

SIDEWALK OR OTHER TRAVERSABLE SURFACE

DETECTABLE WARNING SURFACE (DWS)

LEVEL AREA (TURNING SPACE/LANDING) 2% MAX. SLOPE IN ANY DIRECTON

CROSS SLOPE 2.0% MAX.

RUNNING SLOPE 5.0% MAX.

RUNNING SLOPE 8.3% MAX.

COUNTER SLOPE 5.0% MAX. ASCENDING OR DESCENDING

FLARE SLOPE 10% MAX.

4'X4' CLEAR SPACE

REQUIRED DESIGN ELEVATIONS
SLOPES TO BE SHOWN WITH DESIGN

TYPICAL PERPENDICULAR CURB RAMP
ACCORDING TO PROWAG REQUIREMENTS

NOT TO SCALE – ROTATED TO FIT

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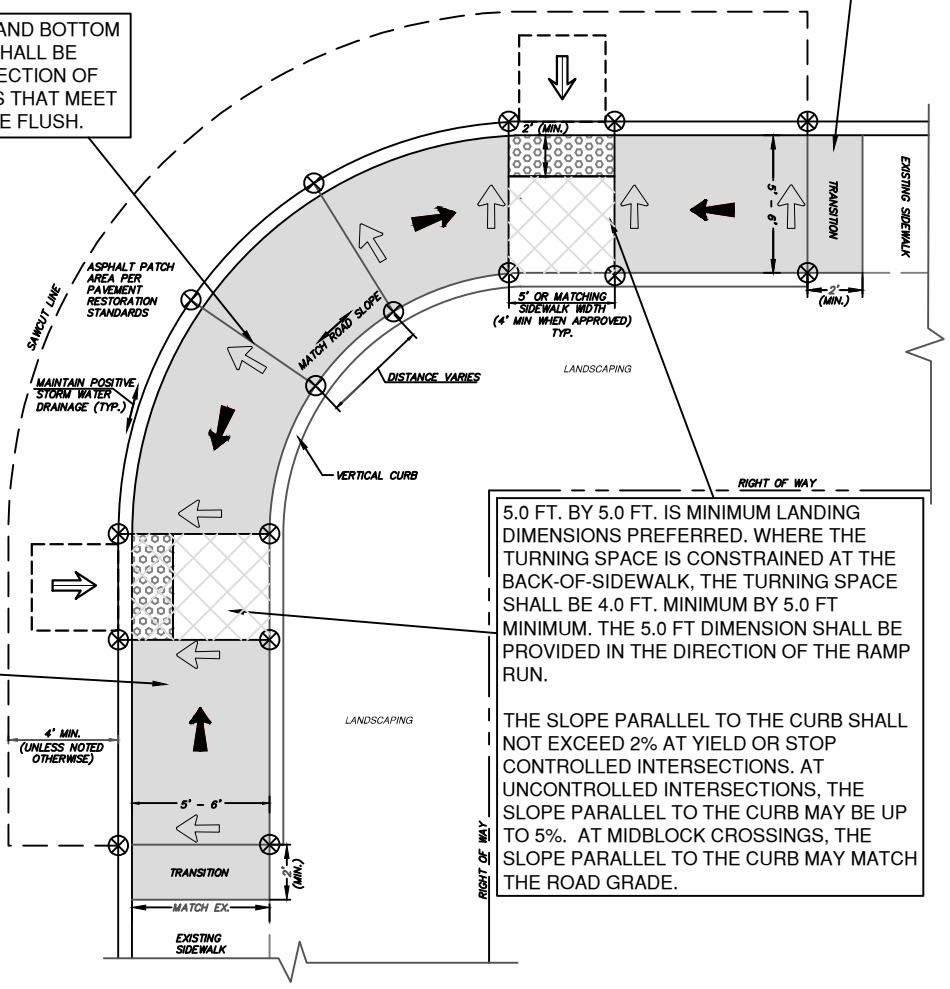
		TYPICAL PERPENDICULAR CURB RAMP	STD DWG R-6A

TRANSITION PANEL FROM RAMP TO EXISTING SIDEWALK (WHERE REQUIRED TO MATCH EX. SIDEWALK CROSS SLOPE). MAX. GRADES ARE NOT SPECIFIED BY PROWAG. ADJUST LENGTH AS NEEDED TO PROVIDE SMOOTH TRANSITION. IF PROPOSED MATCH LINE LOCATION FALLS WITHIN 2 FEET FROM AN EXISTING JOINT IN THE SECTION OF SIDEWALK TO REMAIN, THE EXISTING WALK SHALL BE REMOVED BACK TO THE NEXT JOINT.

GRADE BREAKS AT THE TOP AND BOTTOM OF PARALLEL CURB RAMPS SHALL BE PERPENDICULAR TO THE DIRECTION OF RAMP RUN. SURFACE SLOPES THAT MEET THE GRADE BREAKS SHALL BE FLUSH.



PARALLEL CURB RAMPS

THE RUNNING SLOPE SHALL BE 8.33% MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15.0 FT.

THE CROSS SLOPE SHALL BE 2% MAXIMUM.

THE CLEAR WIDTH OF LANDINGS BLENDED TRANSITIONS, AND CURB RAMPS, EXCLUDING FLARES, SHALL BE 4.0 ft. MINIMUM.

LANDING WIDTH SHALL MATCH THE ADJACENT SIDEWALK WIDTH, 5.0 FT MIN., UNLESS OTHERWISE APPROVED.

5.0 FT. BY 5.0 FT. IS MINIMUM LANDING DIMENSIONS PREFERRED. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK-OF-SIDEWALK, THE TURNING SPACE SHALL BE 4.0 FT. MINIMUM BY 5.0 FT MINIMUM. THE 5.0 FT DIMENSION SHALL BE PROVIDED IN THE DIRECTION OF THE RAMP RUN.

THE SLOPE PARALLEL TO THE CURB SHALL NOT EXCEED 2% AT YIELD OR STOP CONTROLLED INTERSECTIONS. AT UNCONTROLLED INTERSECTIONS, THE SLOPE PARALLEL TO THE CURB MAY BE UP TO 5%. AT MIDBLOCK CROSSINGS, THE SLOPE PARALLEL TO THE CURB MAY MATCH THE ROAD GRADE.

TYPICAL PARALLEL CURB RAMP
ACCORDING TO PROWAG REQUIREMENTS
NOT TO SCALE – ROTATED TO FIT

SIDEWALK OR OTHER TRAVERSABLE SURFACE

DETECTABLE WARNING SURFACE (DWS)

LEVEL AREA (TURNING SPACE/LANDING) 2% MAX. SLOPE IN ANY DIRECTON

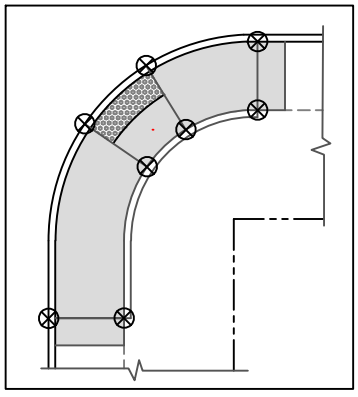
CROSS SLOPE 2.0% MAX.

RUNNING SLOPE 8.3% MAX.

COUNTER SLOPE 5.0% MAX. ASCENDING OR DESCENDING

4'X4' CLEAR SPACE

REQUIRED DESIGN ELEVATIONS SLOPES TO BE SHOWN WITH DESIGN



TYPICAL DIAGONAL CURB RAMP
REQUIRES CITY APPROVAL FOR CONSTRUCTION
ACCORDING TO PROWAG REQUIREMENTS
NOT TO SCALE – ROTATED TO FIT

NOTE: DIAGONAL CURB RAMP ALTERNATE IS ONLY ALLOWED WHEN DIRECTIONAL RAMPS ARE NOT POSSIBLE AND MUST BE APPROVED BY THE CITY ENGINEER.

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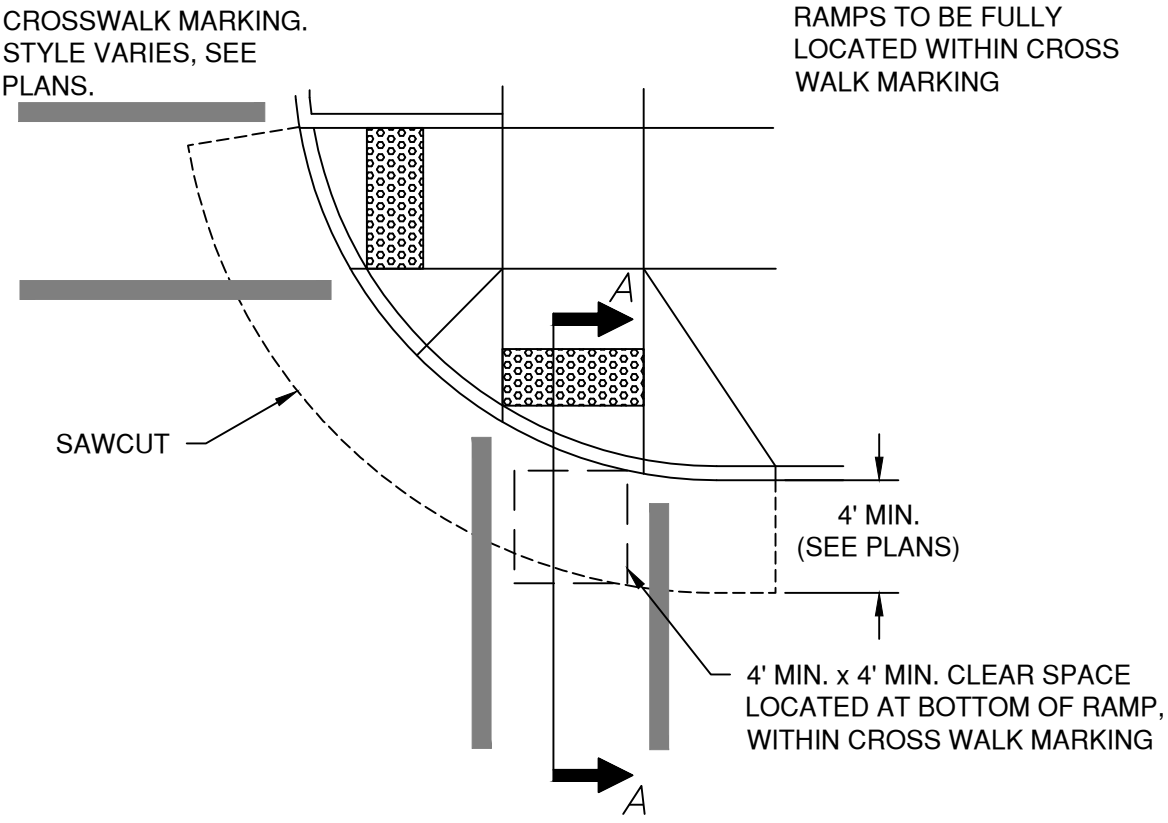
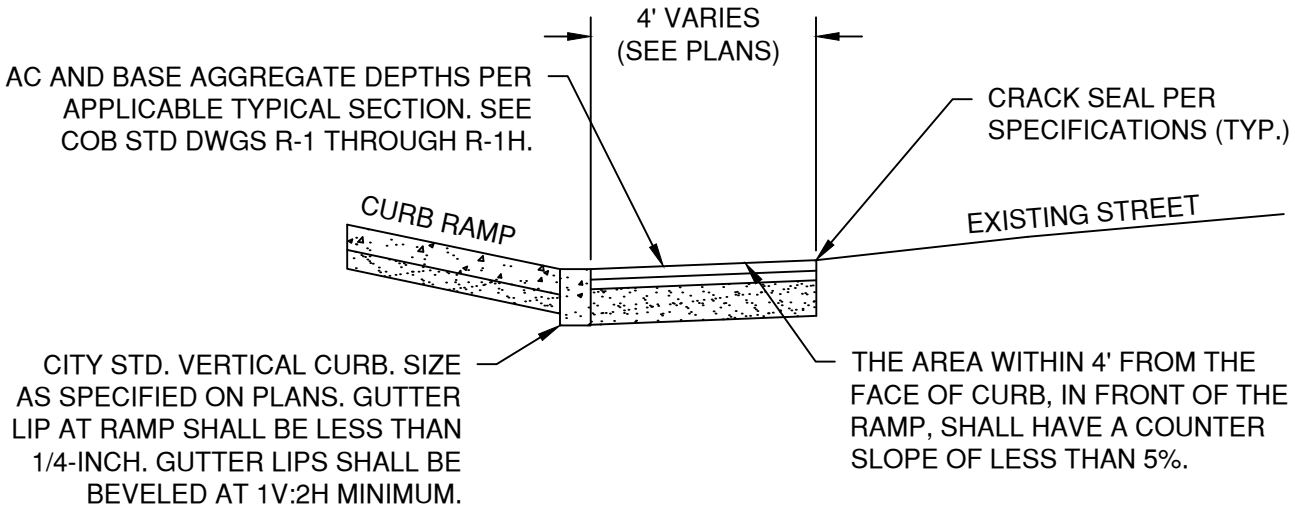
		TYPICAL PARALLEL CURB RAMP	STD DWG R-6B



CROSS WALK - CURB RAMP ORIENTATION

NOT TO SCALE



NOTE: IN AREAS WITH UNIT PAVER CROSS WALKS, REMOVE EXISTING PAVERS, AND RE-INSTALL AT GRADES TO ACHIEVE THESE REQUIREMENTS.

TYPICAL RAMP / ASPHALT PATCH SECTION

NOT TO SCALE

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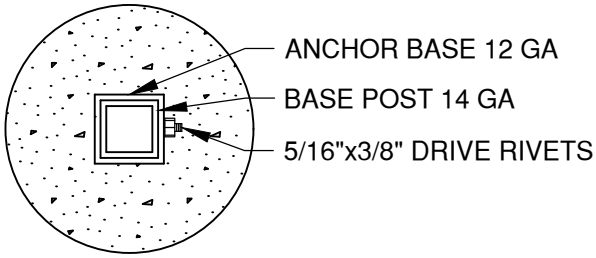
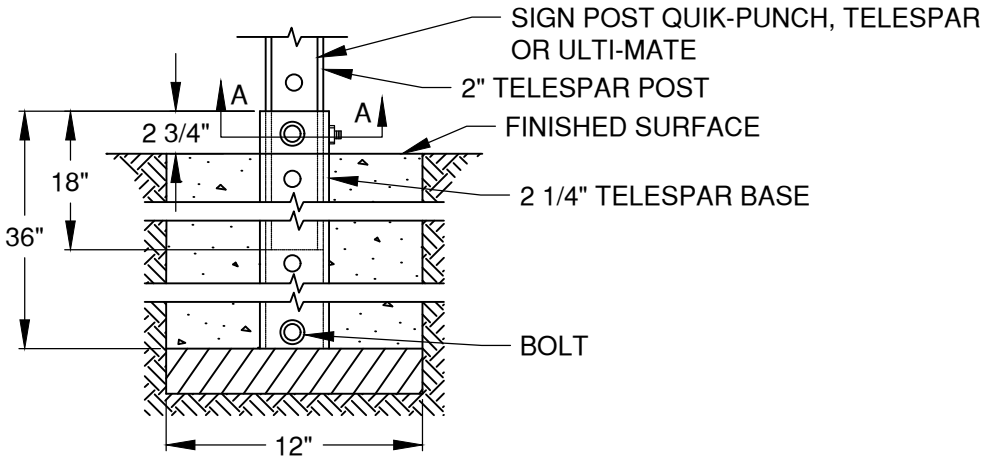
		CURB RAMP DETAILS	STD DWG R-6C

INSTALLATION IN NEW CONSTRUCTION



SECTION A-A

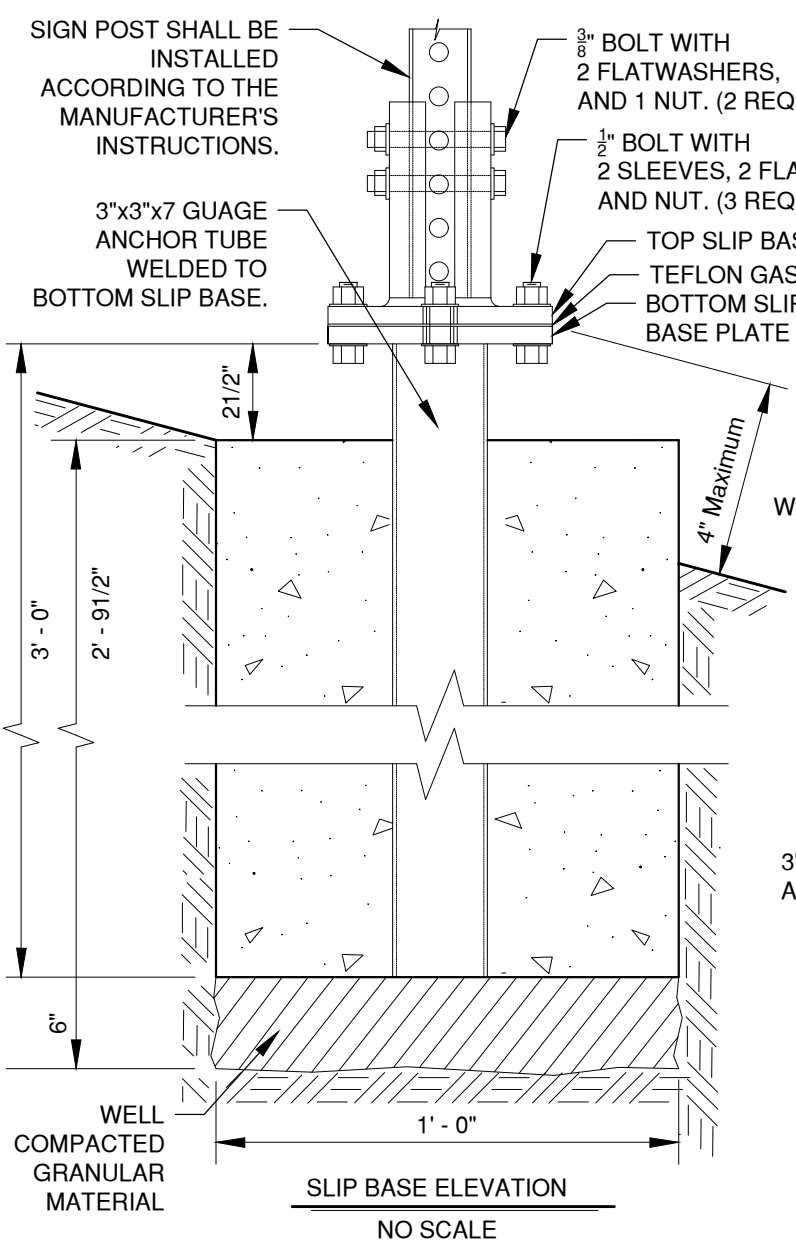


ANCHOR BASE DETAIL

NOTES:

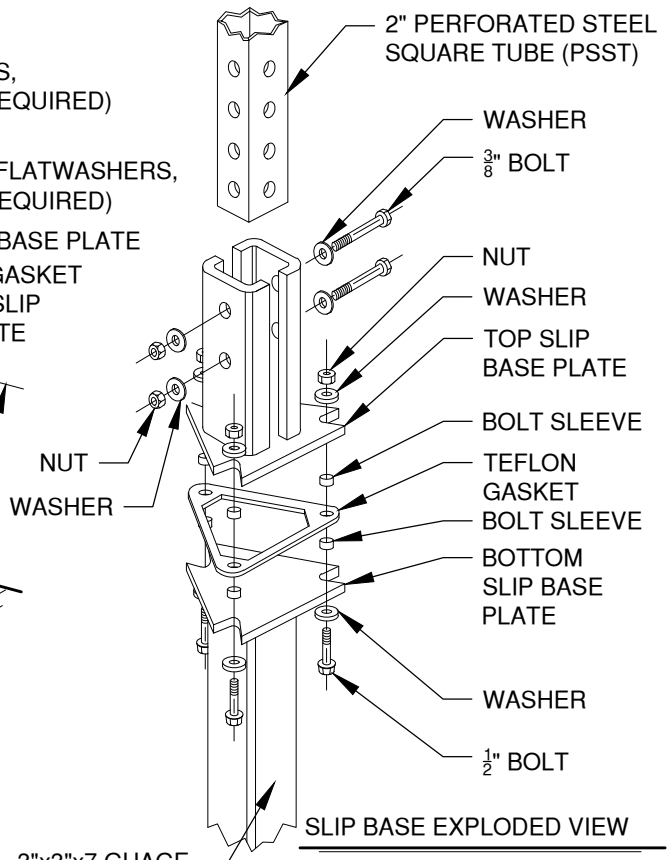
1. USE PSST ANCHOR BASE FOUNDATION FOR ALL SIGN LOCATIONS OTHER THAN IN MEDIANS AND ROUNDABOUT SPLITTER ISLANDS PER STD DWG R-7A.
2. ANCHOR BASE HOLES AND BOTTOM OF ANCHOR BASE SHALL BE COVERED SO THAT CONCRETE DOES NOT SEEP INTO ANCHOR BASE DURING SETTING
3. BASE SHOULD BE SET SEPARATELY FROM POST WITH ANCHOR BOLT IN BASE BOTTOM ONLY
4. POST SHOULD BE ABLE TO SLIDE FREELY WHEN RIVET IS REMOVED
5. FOR LARGE SIGNS THAT EXCEED WINDLOADS 2 1/2" POSTS MAY BE APPROVED BY CITY ENGINEER

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 PSST ANCHOR BASE FOUNDATION	SCALE NTS DATE 01/31/2022 APPR STD DWG R-7



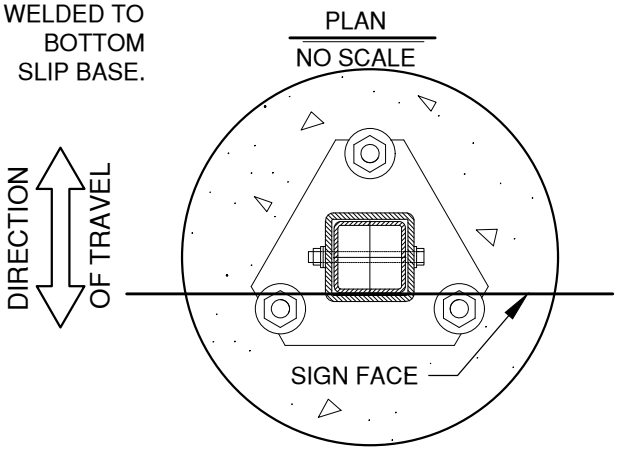
SLIP BASE ELEVATION

NO SCALE



SLIP BASE EXPLODED VIEW

NO SCALE



NOTES:

1. USE PSST SLIP BASE FOUNDATION FOR SIGNS INSTALLED IN MEDIANS AND ROUNDABOUT SPLITTER ISLANDS.
2. MATERIAL GRADE FOR BASE HARDWARE CONNECTION SHALL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND BASED ON CRASH TESTING.
3. SLIP BASE STEEL SHALL BE HOT DIPPED GALVANIZED OR APPROVAL EQUAL.
4. FOOTING CONCRETE SHALL BE COMMERCIAL GRADE CONCRETE (FC=3000PSI) PER SPECIFICATION 00440. THE CGC MIXTURE MAY BE ACCEPTED AT THE SITE OF PLACEMENT ACCORDING TO 00440.14.
5. ALL SLIP BASES SHALL BE PRE-ASSEMBLED BY THE MANUFACTURER AND SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
6. SLIP BASE DETAILS SHOWN ARE NOT FOR A SPECIFIC MANUFACTURER AND ARE ONLY SHOWN TO CONVEY GENERAL PIECES OF A SLIP BASE SYSTEM. SPECIFIC SLIP BASE MATERIAL WILL BE ACCORDING TO THE MANUFACTURER'S DOCUMENTATION.
7. FOR LARGE SIGNS THAT EXCEED WINDLOADS, 2 1/2" PSST MAY BE APPROVED BY CITY ENGINEER

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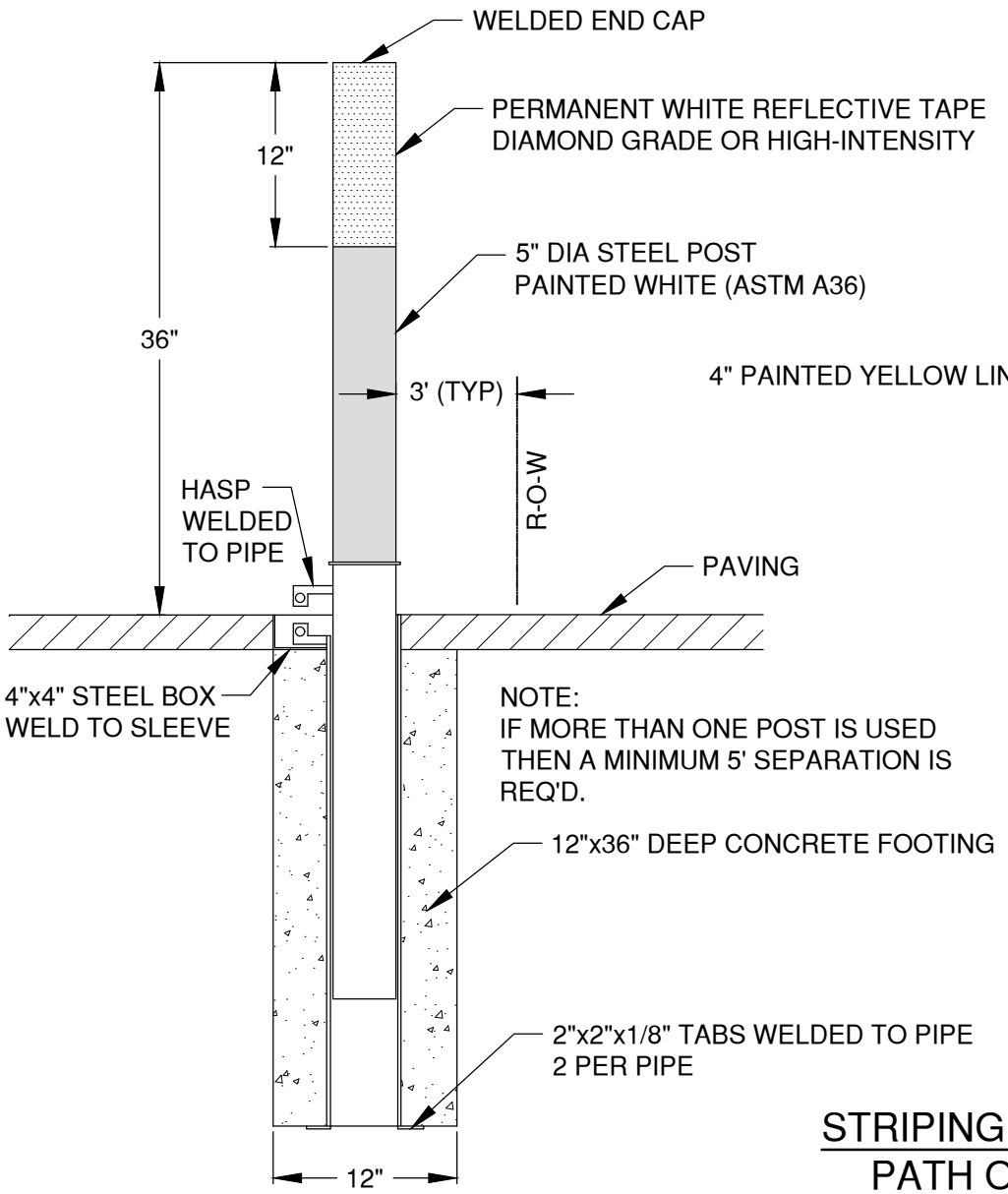
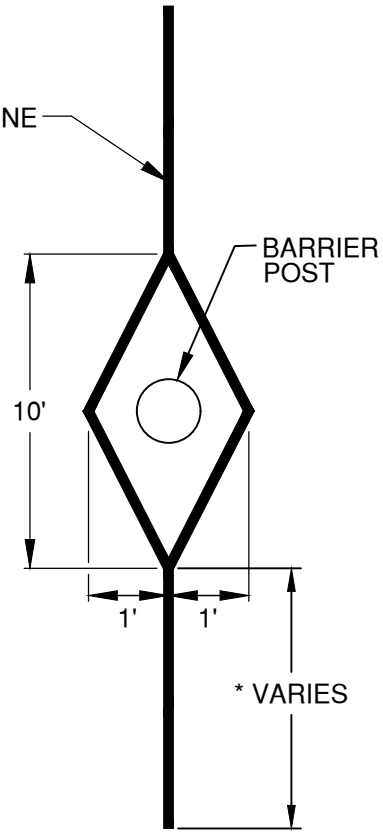
		PSST SLIP BASE FOUNDATION	STD DWG R-7A





STRIPING DETAIL FOR PAVED PATH OR ACCESS ROAD

* Length of approach line varies by location, where possible, 25' min.

NOTES:

1. POSTS OR BOLLARDS SHALL BE SET BACK BEYOND THE CLEAR ZONE OF THE ADJACENT STREET OR BE OF A BREAKAWAY DESIGN. THE POST SHALL BE PERMANENTLY REFLECTORIZED FOR NIGHTTIME VISIBILITY AND PAINTED WHITE FOR IMPROVED DAYTIME AND NIGHT TIME VISIBILITY.
2. ON PAVED PATHS OR ACCESS ROADS, APPLY PAVEMENT MARKINGS PER STRIPING DETAIL.

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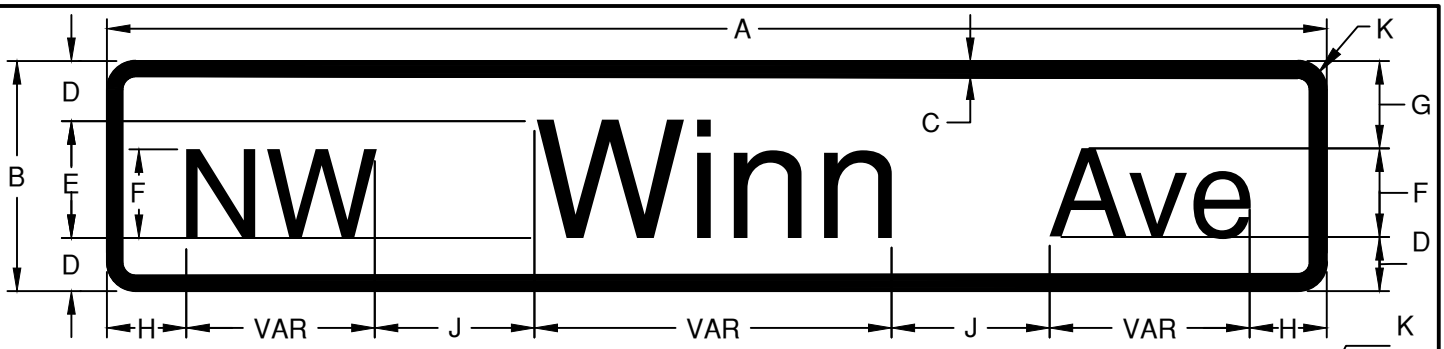
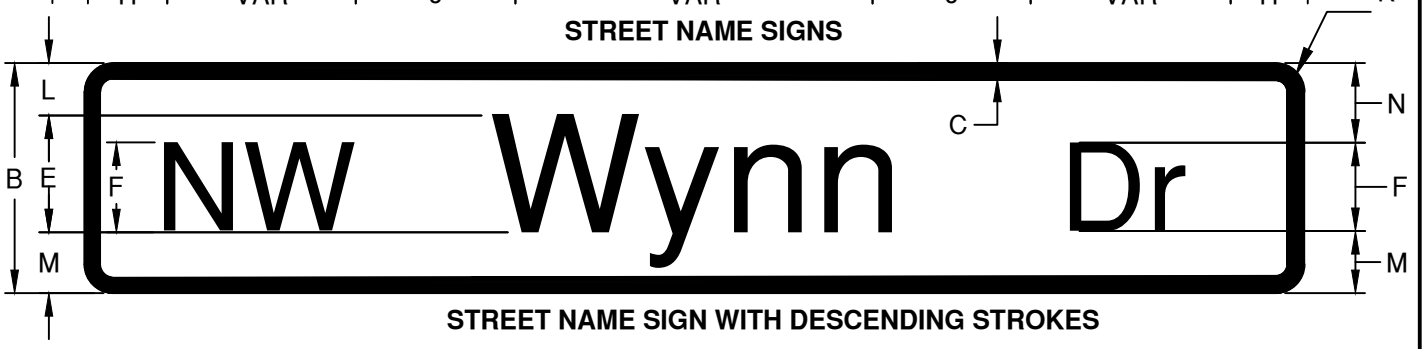
		REMOVABLE POST AND MARKINGS	STD DWG R-7B



STREET NAME SIGNS



STREET NAME SIGN WITH DESCENDING STROKES

SIGN LOCATION	DIMENSIONS												
	A	B	C	D	E	F	G	H	J	K	L	M	N
LOCAL	VAR	8	0.375	2	4C	3C	3	3 MIN	3	1	1.75	2.25	2.75
COLLECTOR/ ARTERIAL ≤ 40MPH	VAR	12	0.5	3	6C	4.5C	5	4.5 MIN	4.5	1.5	2.75	3.25	4.75
COLLECTOR/ ARTERIAL > 40 MPH	VAR	18	0.75	5	8C	6C	7.67	5.33 MIN	6	1.875	5	5	7.67
OVERHEAD	VAR	24	1	6	12C	9C	10	9 MIN	9	2.25	5	6	9.50

NOTES:

1. SIGNS INSTALLED ALONG PUBLIC STREETS SHALL BE FABRICATED AND INSTALLED TO CONFORM TO THE MUTCD AND CITY OF BEND SPECIFICATIONS.
2. UNLESS OTHERWISE SPECIFIED, STREET NAME SIGNS SHALL BE FABRICATED AS FOLLOWS:
   a. SIGN SUBSTRATE: SHEET ALUMINUM (GAUGE 0.80 FOR GROUND-MOUNT) WITH ROUNDED CORNERS
   b. RETRO-REFLECTIVE SHEETING: GREEN BACKGROUND WITH WHITE LEGEND, USING HIP/TYPE G FOR GROUND-MOUNTED SIGNS, AND DIAMOND GRADE/TYPE G2 FOR SIGNS MOUNTED OVERHEAD;
   c. LETTERING SHALL BE LOWER-CASE WITH INITIAL UPPER-CASE LETTERS;
   d. SERIES C2000 FONT, WITH LETTERING AND LETTER SPACING PER THE FEDERAL HIGHWAY ADMINISTRATION'S STANDARD ALPHABETS AS SHOWN IN THE CURRENT EDITION OF THE STANDARD HIGHWAY SIGNS AND PAVEMENT MARKINGS MANUAL. (* EXCEPT FOR OVERHEAD SIGNS, WHERE SIGNS EXCEED 36" LONG, SERIES B2000 FONT SHALL BE USED);
   e. BOTTOM STREET SIGNS (CLOSEST TO THE REGULATORY/STOP SIGN) SHALL BE TWO SINGLE-SIDED WITH PREDRILLED HOLES. SIGNS SHALL BE RIVETED BACK TO BACK ON THE SQUARE TUBE POST , CENTERED ON THE POST.
   f. BOTTOM STREET SIGNS SHALL BE USED FOR SIDE STREET.
   g. TOP STREET SIGN SHALL BE DOUBLE SIDED. TOP SIGN USED FOR MAINLINE STREET.
3. ALL SIGNS SHALL BE REVIEWED AND APPROVED BY THE CITY OF BEND ENGINEERING DEPARTMENT PRIOR TO FABRICATIONS AND INSTALLATION.
4. TYPICAL INSTALLATION INCLUDES 2-INCH SQUARE TUBE CAPS WITH 90-DEGREE ANGLE BRACKETS ON 2-INCH PERFORATED SQUARE TUBE STEEL POSTS. USE 5- OR 6-INCH BLADE MOUNTS FOR SIGNS LESS THAN 36” WIDE; 12-INCH MOUNTS FOR SIGNS 36-INCHES OR WIDER OR OVER 6-INCHES HIGH. SEE STANDARD DRAWINGS R-7 AND R-9.
5. SIGN WIDTHS VARY WITH LEGEND. WHERE SITE CONSTRAINTS LIMIT AVAILABLE SPACE, REDUCED LETTER HEIGHT, FONT STYLE, LINE SPACING, OR EDGE SPACING WILL BE CONSIDERED. REDUCTIONS IN SPACING BETWEEN LETTERS OR WORDS IS NOT PERMITTED.
6. WHERE PRIVATE STREETS INTERSECT WITH PUBLIC STREETS, INSTALL A BLACK ON YELLOW PRIVATE DR SIGN WITH 4-INCH CAPITAL LETTERS (ODOT SIGN POLICY SIGN #OW14-3) DIRECTLY BELOW THE PRIVATE STREET NAME SIGN (OR ON A SEPARATE POST, IF NOT AT AN INTERSECTION).
7. FOR ADDITIONAL INFORMATION, REFER TO MUTCD SECTION 2A AND 2D, AND CITY OF BEND TECHNICAL SPECIFICATION SECTION 00940.
8. CONFIRM SIGN SIZE WITH CITY ENGINEER FOR SIGNS ON EXISTING TRAFFIC SIGNAL POLES OR MAST ARMS.

DRAWN	AJD
DIV	ROADWAY

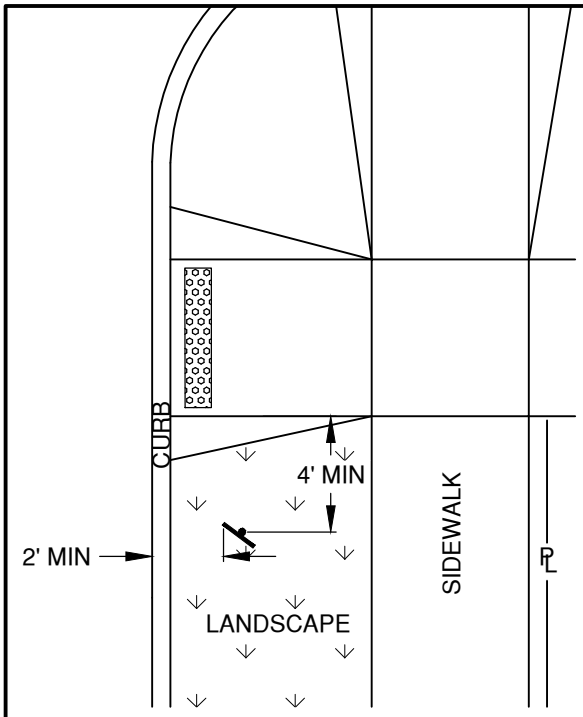
REV	DATE	APPR

CITY OF BEND

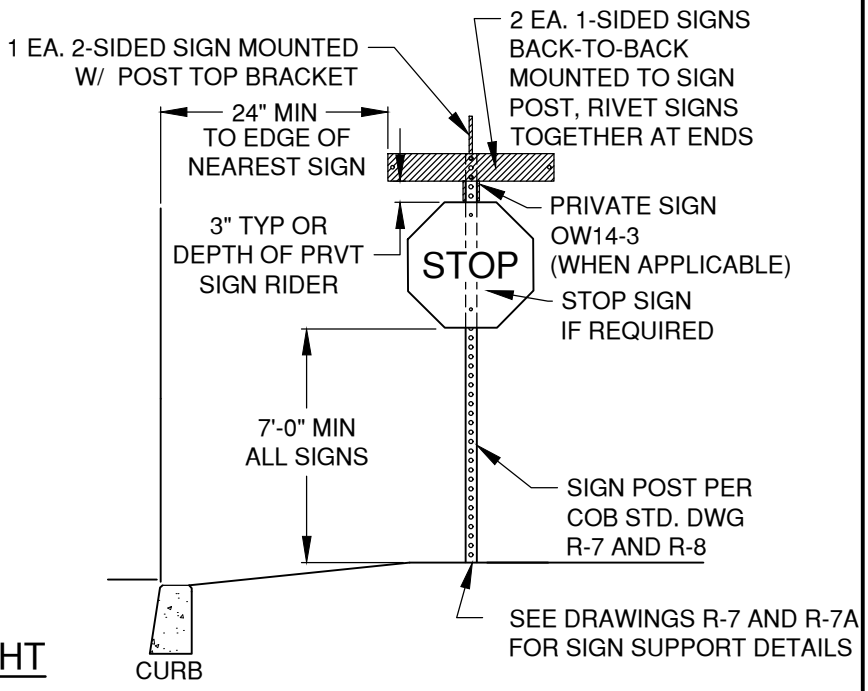
CITY OF BEND
STANDARD DRAWING
710 NW WALL ST., BEND, OREGON 97701

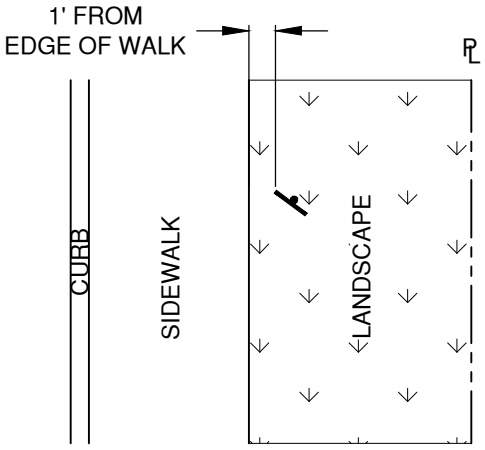
STANDARD STREET NAME SIGNS

SCALE	NTS
DATE	01/31/2022
APPR	
STD DWG	R-8

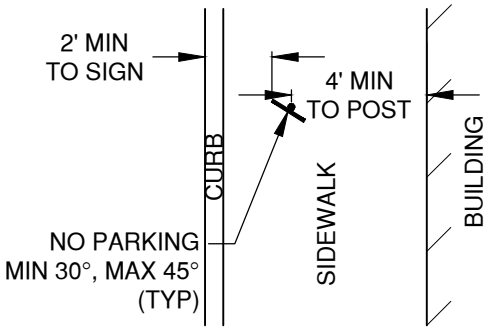


SIDEWALK PROPERTY TIGHT





SIDEWALK CURB TIGHT



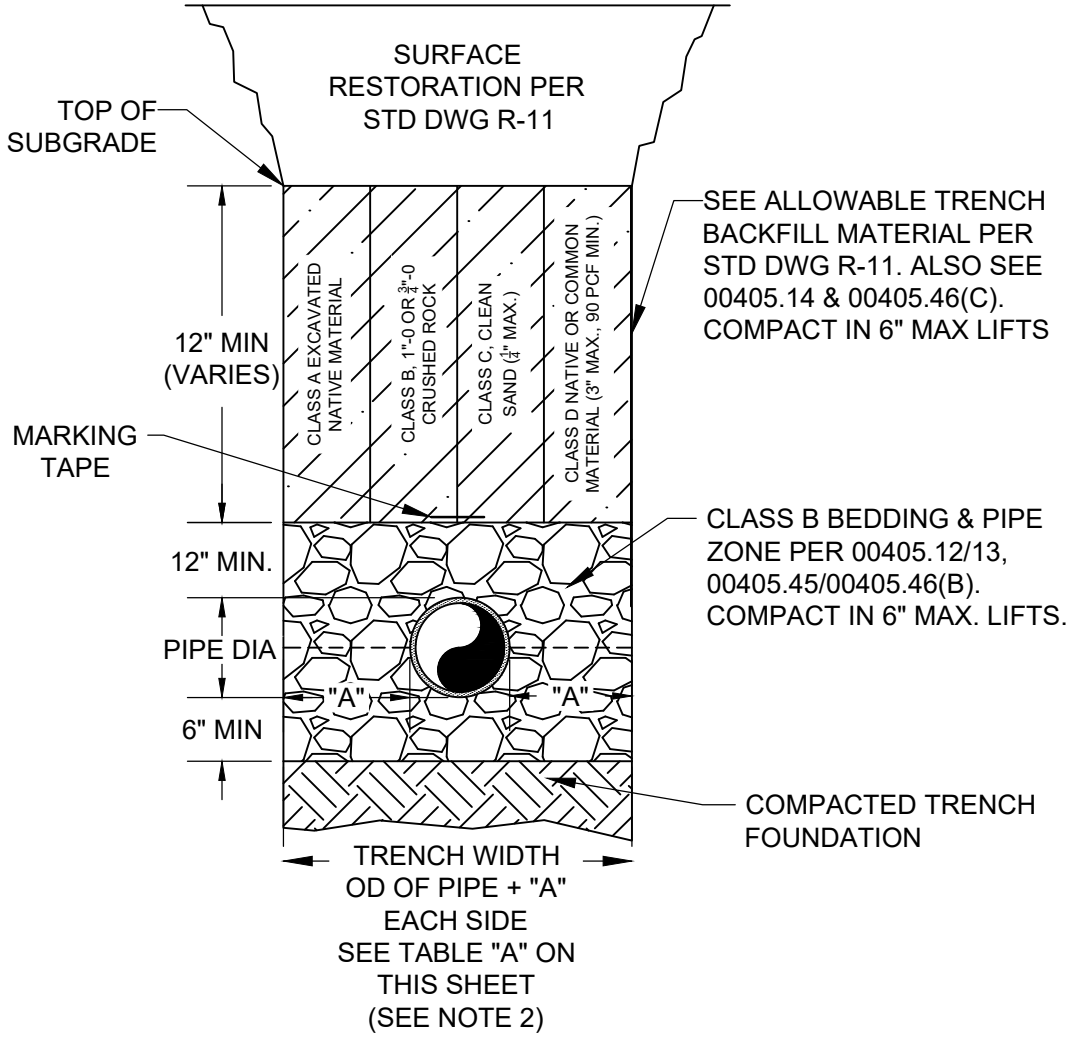
SIDEWALK FROM CURB TO NEAR BUILD

NOTES:

1. SET TO MUTCD SPECS
2. SEE R-8 FOR COB STREET NAME SIGN REQUIREMENTS.
3. CHECK THAT SIGN IS NOT OBSCURED BY VEGETATION, TRIM IF NEEDED.
4. INSTALL ALL SIGNS WITH 5/16"X3/8" DRIVE RIVETS

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 STANDARD STREET SIGN PLACEMENT	SCALE NTS DATE 01/31/2022 APPR STD DWG R-9

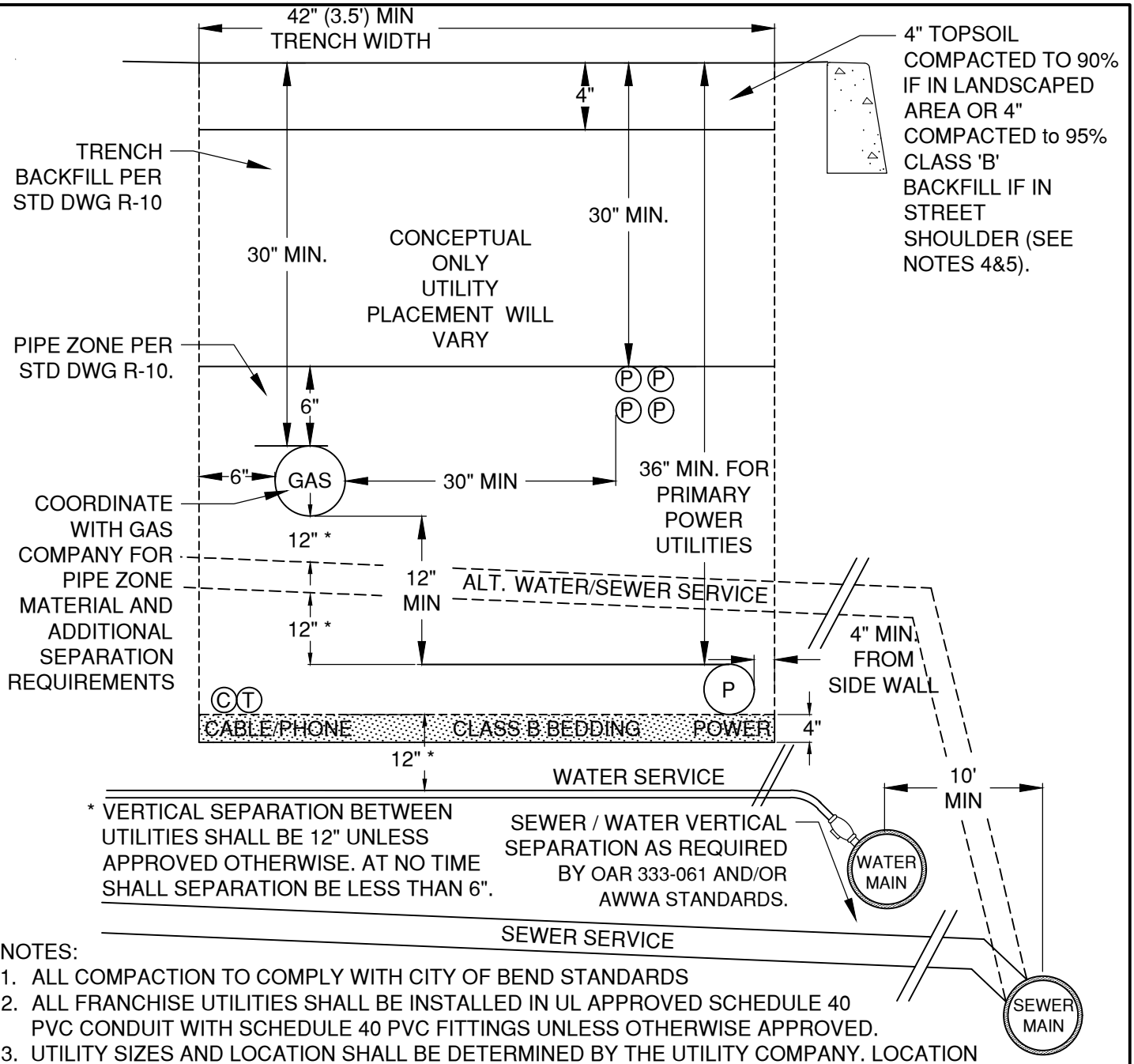
TABLE A	
PIPE DIA (IN)	"A" (IN)
4	10
6	10
8	10
10	10
12	12
15	12
18	16
21	16
24	18
30	18
36	24
42	24
48	24
54	24
60	24
66	24
72	24



NOTES:

1. ALL COMPACTION TO COMPLY WITH SPECIFICATION SECTION 00330.43 AND 00405.46(c).
2. A FRANCHISE UTILITY THAT IS A SINGLE CONDUIT AND IS 4 INCHES IN DIAMETER OR LESS MAY BE CENTERED IN A 12-INCH WIDE TRENCH PROVIDED THAT THE TRENCH CAN ACCOMMODATE THE COMPACTION EQUIPMENT. TRENCH PATCH SHALL BE IN ACCORDANCE WITH STD DWG R-11 WHERE THE TEE PATCH SHALL NOT BE LESS THAN 12 INCHES ON BOTH SIDES OF THE TRENCH. OVERALL WIDTH MAY BE REDUCED FROM 4 FEET, BUT IN NO CIRCUMSTANCES RESULT IN TEE PATCHES LESS THAN 12 INCHES AND AN OVERALL MINIMUM WIDTH OF 3 FEET.
3. CLASS E - CLSM, MAY BE ALLOWED FOR TRENCH BACKFILL WHERE COMPACTION CANNOT BE MET DUE TO THE PRESENCE OF EXISTING UTILITIES

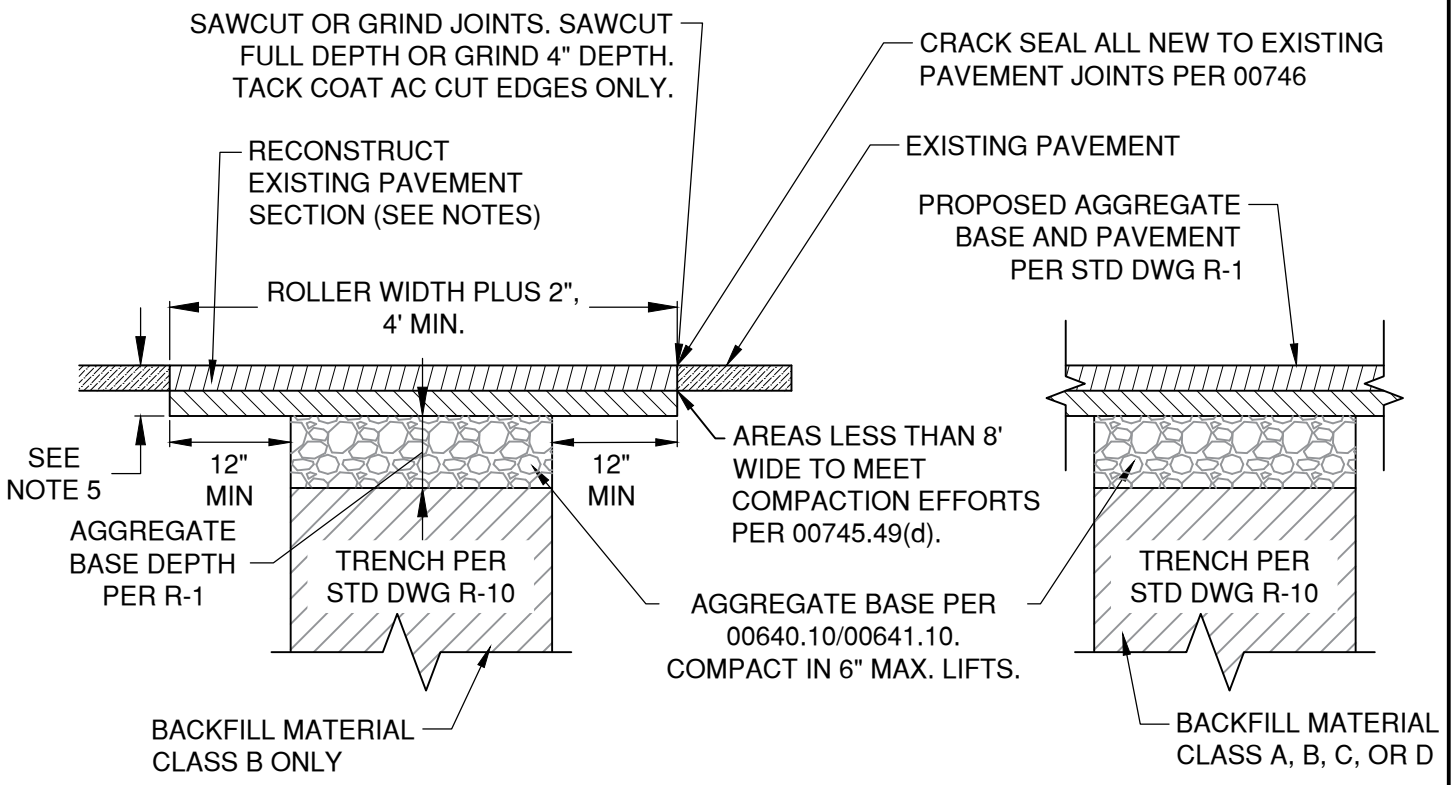
DRAWN AJD		CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE	CITY OF BEND	710 NW WALL ST., BEND, OREGON 97701	APPR
		TYPICAL TRENCH SECTION	STD DWG R-10



NOTES:

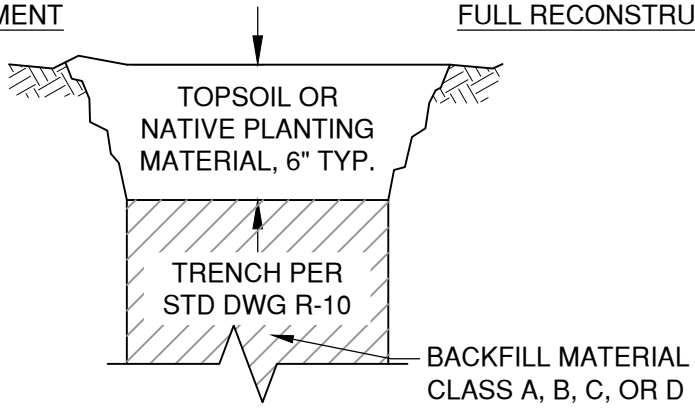
1. ALL COMPACTION TO COMPLY WITH CITY OF BEND STANDARDS
2. ALL FRANCHISE UTILITIES SHALL BE INSTALLED IN UL APPROVED SCHEDULE 40 PVC CONDUIT WITH SCHEDULE 40 PVC FITTINGS UNLESS OTHERWISE APPROVED.
3. UTILITY SIZES AND LOCATION SHALL BE DETERMINED BY THE UTILITY COMPANY. LOCATION TO BE SHOWN AND APPROVED BY CITY WITH A RIGHT OF WAY (ROW) PERMIT.
4. WHERE STORM SWALES ARE PROPOSED WITHIN THE LANDSCAPE STRIP, FRANCHISE UTILITIES SHALL BE INSTALLED OUTSIDE OF THE SWALE AREA.
5. TOP SOIL LAYER TO BE COMPACTED TO 90% MAX DENSITY. WHERE SIDEWALK IS PLACED OVER FRANCHISE UTILITY TRENCH, NO TOP SOIL SHALL BE PLACED AND SIDEWALK TO BE CONSTRUCTED TO COMPLY WITH CITY STANDARDS R-4A AND R-4B
6. STANDARD SHOWN FOR NEW CONSTRUCTION. MODIFICATIONS SHALL BE MADE WHEN WITHIN EXISTING DEVELOPMENTS WHERE APPROVED BY THE CITY ENGINEER.
7. UTILITIES OUTSIDE THE RIGHT OF WAY SHALL BE WITHIN A PUBLIC UTILITIES EASEMENT (PUE). BACKFILL AND INSTALLATION REQUIREMENTS STILL COMPLY WITH THE PUE.
8. NO SWALES OR SURFACE STORMWATER DRAINAGE FACILITIES ARE PERMITTED OVER FRANCHISE UTILITIES.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 FRANCHISE UTILITY JOINT TRENCH	SCALE NTS DATE 01/31/2022 APPR STD DWG R-10A



TYPICAL SURFACE RESTORATION IN EXISTING PAVEMENT

TYPICAL SURFACE RESTORATION IN FULL RECONSTRUCT OR NEW ROAD

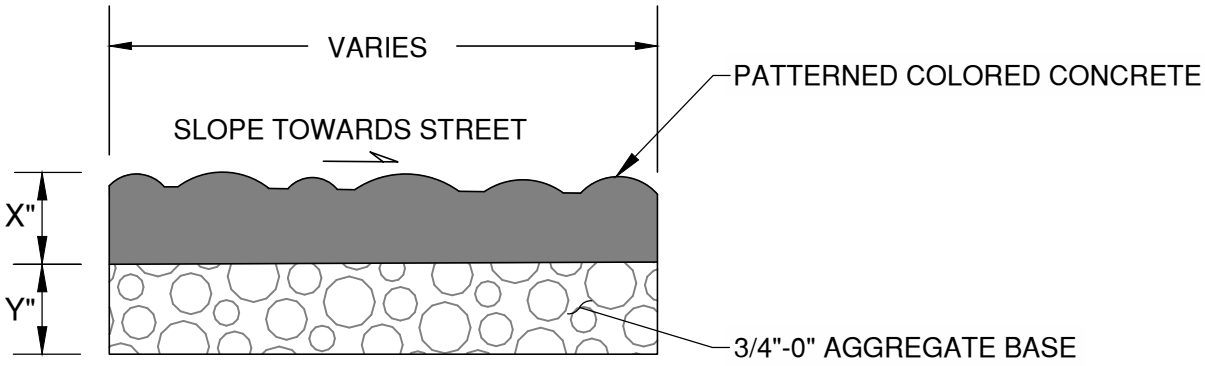


TYPICAL SURFACE RESTORATION IN UNIMPROVED AREAS

NOTES:

1. SURFACE RESTORATION IN EXISTING PAVEMENT TO COMPLY WITH SPECIFICATION 00495.
2. UNIMPROVED AREA CONSISTS OF ANY PORTION OF THE ROW THAT HAS NOT BEEN IMPROVED TO A CITY STANDARD AND CONSISTS MOSTLY OF NATIVE VEGETATED AREAS. UNIMPROVED AREAS ALSO INCLUDE AREAS WITHIN THE LANDSCAPE STRIP AND PUEs.
3. ALL EXISTING AC OR PCC PAVEMENT SHALL BE SAWCUT PRIOR TO REPAVING. CONCRETE SHALL BE CUT AND REPLACED TO THE NEAREST JOINT(S).
4. CONCRETE PAVEMENT SHALL BE REPLACED WITH CONCRETE TO A MINIMUM THICKNESS OF 6" OR TO THE THICKNESS OF REMOVED PAVEMENT, WHICHEVER IS GREATER
5. PLACE ACP A MINIMUM THICKNESS PER R-1 OR TO THE THICKNESS OF REMOVED PAVEMENT, WHICHEVER IS GREATER. PLACE ACP IN 2" MAX LIFTS.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS DATE 01/31/2022 APPR
		TRENCH SURFACE RESTORATION	STD DWG R-11

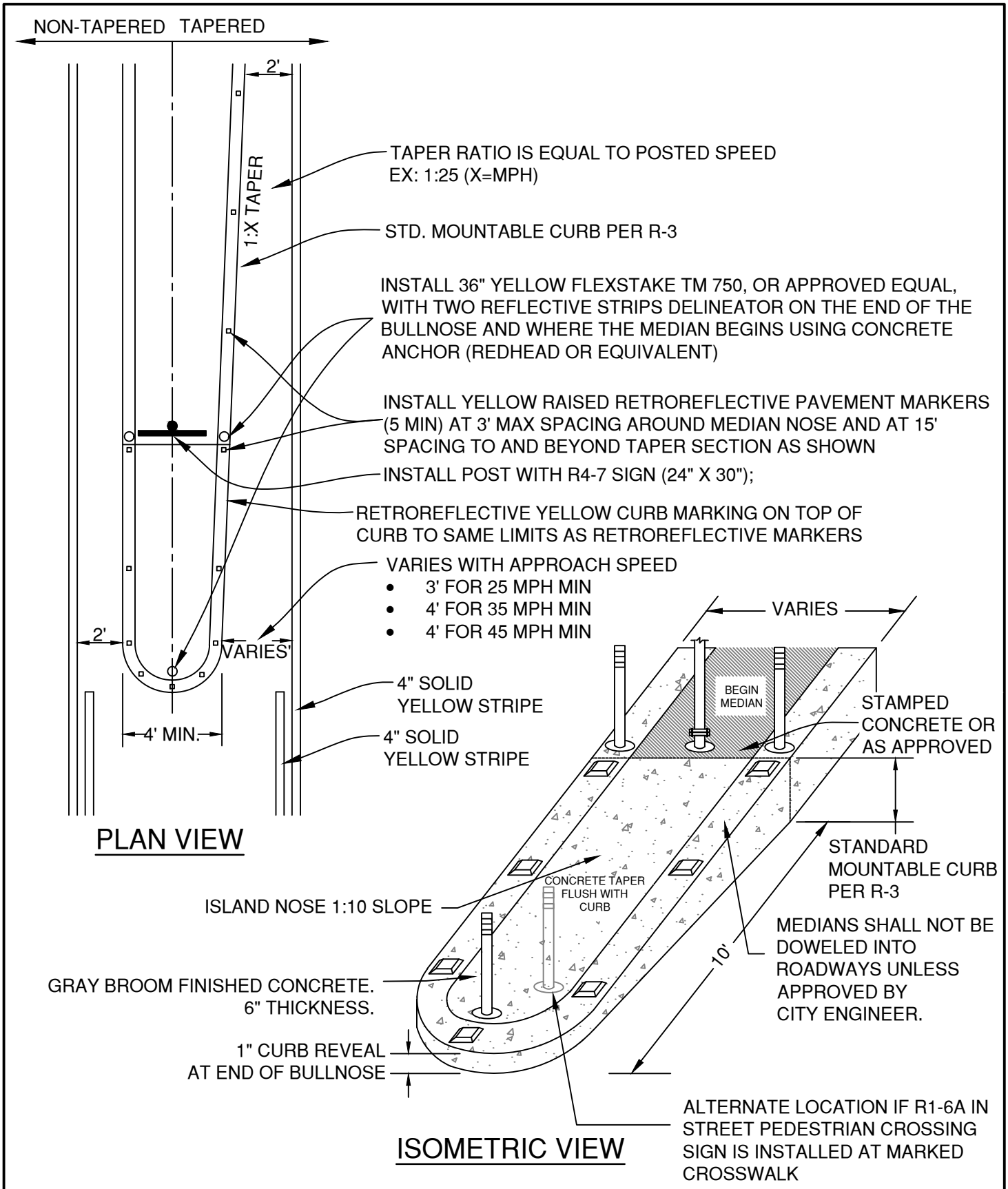


X DIMENSION:
- MEDIAN/ALL ADJACENT TO TRAVEL LANE = 6"
- ONLY BACK SIDE OF SIDEWALK OR SEPARATE FROM TRAVEL LANE = 4"
- TRUCK APRON = 9"

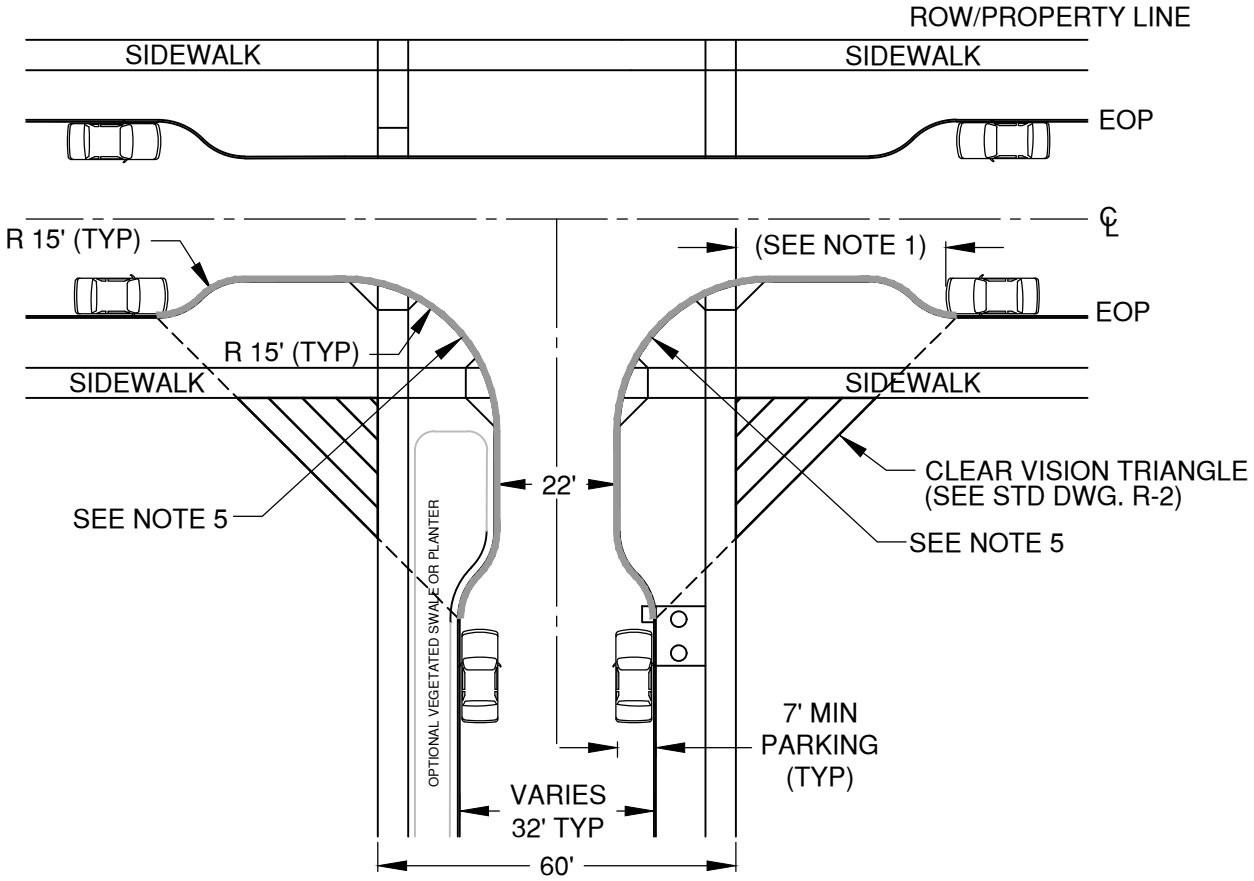
Y DIMENSION:
- MEDIAN/ALL ADJACENT TO TRAVEL LANE = 6"
- ONLY BACK SIDE OF SIDEWALK OR SEPARATE FROM TRAVEL LANE = 4"
- TRUCK APRON = 6"

NOTE:
1. STAMPED CONCRETE SURFACE TEXTURE PATTERN SHALL BE BRICKFORM "FLAGSTONE" TM-700) WITH SAWCUT GROOVE JOINTS 1/3 CONCRETE DEPTH.
2. GLAZE AND SEAL PER MANUFACTURERS SPECS.
3. INTEGRAL COLOR: DAVIS SPANISH GOLD (3 LBS. #5084)
4. RELEASE COLOR: DAVIS DARK GREY (#860)

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		PATTERNED COLORED CONCRETE DETAIL	STD DWG R-24



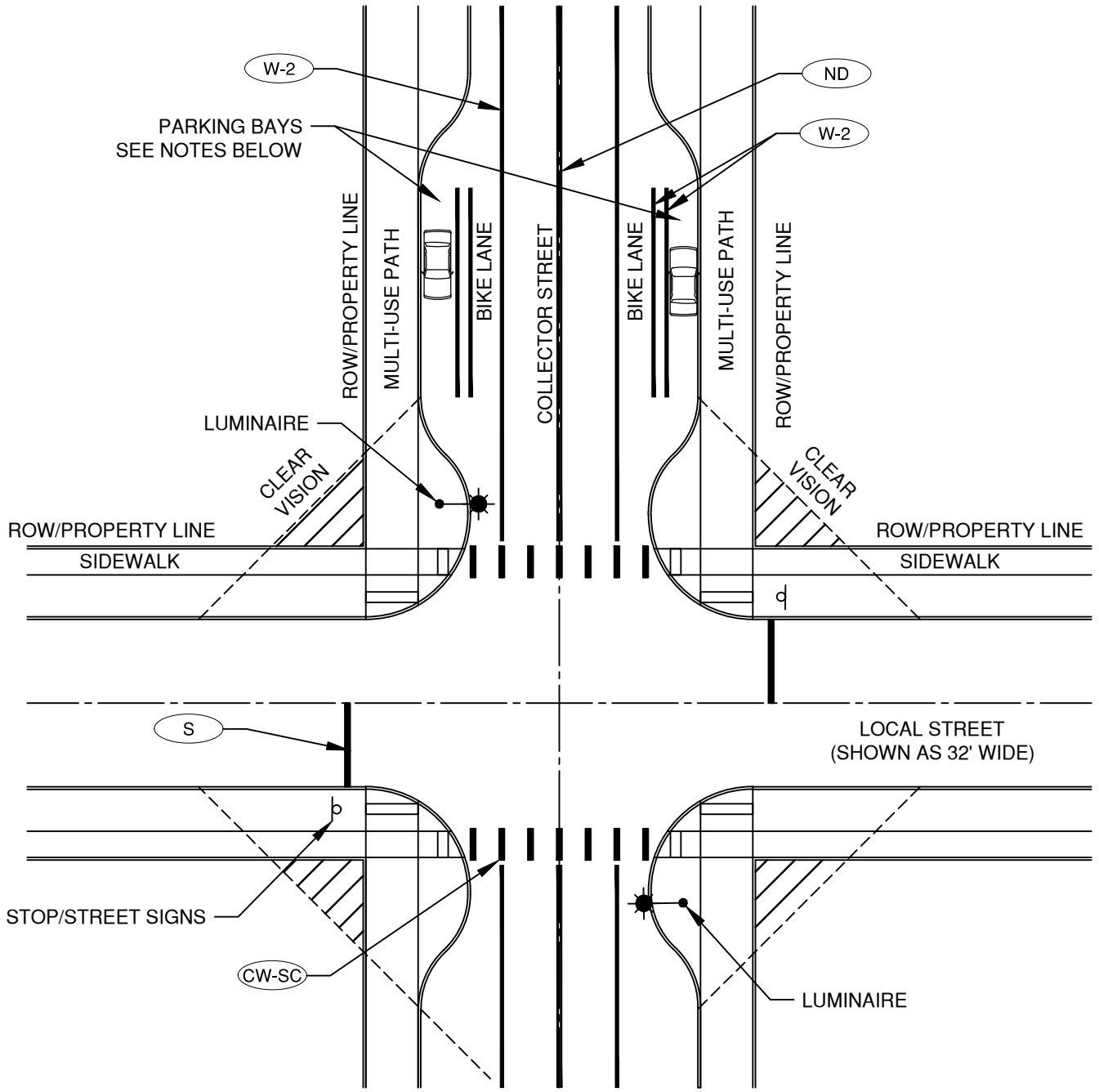
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY	STANDARD DRAWING		DATE 01/31/2022
REV DATE	710 NW WALL ST., BEND, OREGON 97701		APPR
	MEDIAN END DETAIL		STD DWG R-25



NOTES:

1. NO PARKING WITHIN THE CLEAR VISION OR 20 FEET OF THE INTERSECTION, WHICHEVER IS GREATER.
2. AS REQUIRED BY THE CITY ENGINEER, INSTALL YELLOW 36" TALL YELLOW SURFACE MOUNTED TUBULAR MARKERS, PER SPECIFICATION SECTION 00856 FOR PLOW SIGNAGE AT CURB EXTENSIONS.
3. USE LOW GROWING VEGETATION FOR BIORETENTION SWALES/ PLANTERS LOCATED IN CURB EXTENSIONS.
4. CURB RETURNS TO BE CONSTRUCTED PER DESIGN STANDARD.
5. YELLOW CURB PAINT ON RETURNS IS REQUIRED IN COMMERCIAL AND HIGH DENSITY RESIDENTIAL AREAS

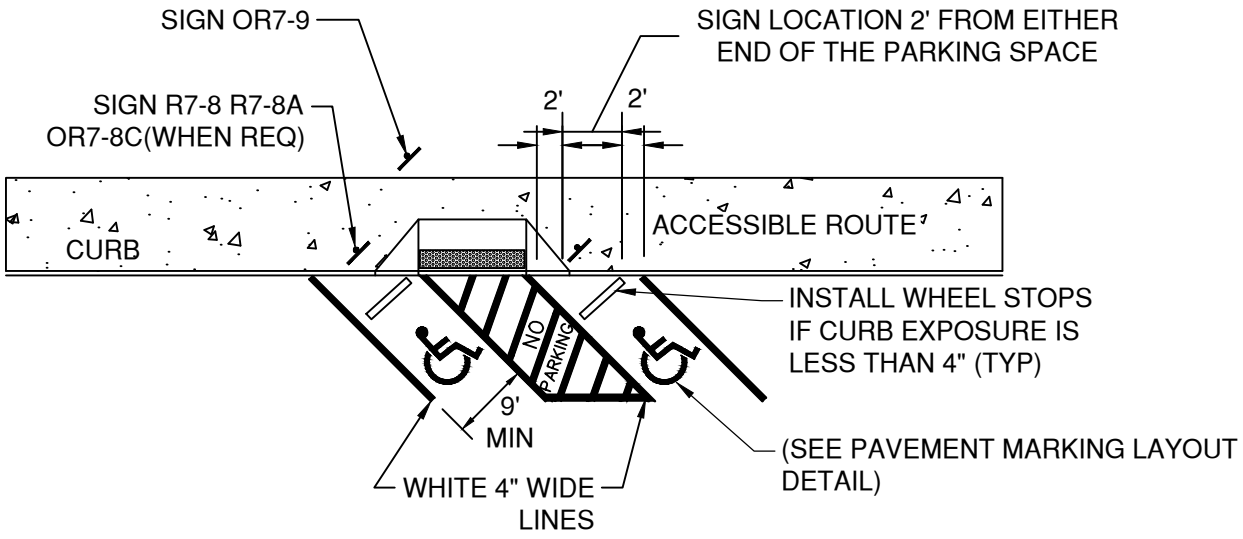
DRAWN AJD DIV ROADWAY REV / DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS DATE 01/31/2022 APPR
		LOCAL STREET CURB EXTENSIONS	STD DWG R-26



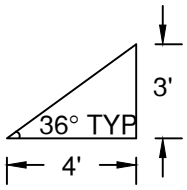
NOTES:

1. PARKING BAYS SHALL BE DESIGNED OUTSIDE THE CLEAR VISION OF THE INTERSECTION. PARKING WILL BE PERMITTED IF CLEAR VISION AND SIGHT DISTANCE AS ANALYZED AS SAFE BY A PROFESSIONAL ENGINEER.
2. PARKING BAYS ON COLLECTORS ARE PERMITTED AS DIRECTED BY THE DEVELOPMENT CODE.
3. NO MORE THAN 10 PARKING BAYS WILL BE PERMITTED TOGETHER. TERMINATION OF BAYS WILL BE FOR VEGETATION PLANTING, UTILITY INSTALLATION (FRANCHISE UTILITY VAULTS, STORM FACILITIES, ETC).
4. PARKING IS NOT PERMITTED WITHIN THE INTERSECTION'S CLEAR VISION AND SIGHT DISTANCE AS DETERMINED BY AASHTO REQUIREMENTS AND ENGINEER REVIEW.

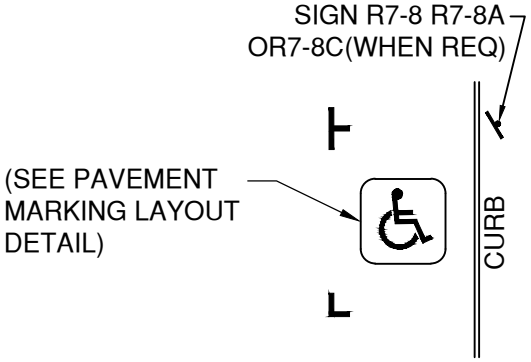
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		COLLECTOR / LOCAL INTERSECTION	STD DWG R-27



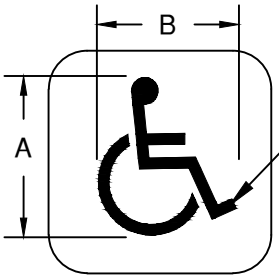
ANGLED PARKING PLAN



ACCESS AISLE ANGLE LAYOUT

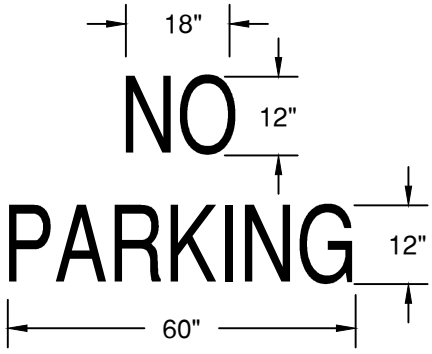


PARALLEL PARKING PLAN



LEGEND	DIMENSIONS (INCHES)		
	A	B	C
MINIMUM	28	24	3
STANDARD	41	36	4

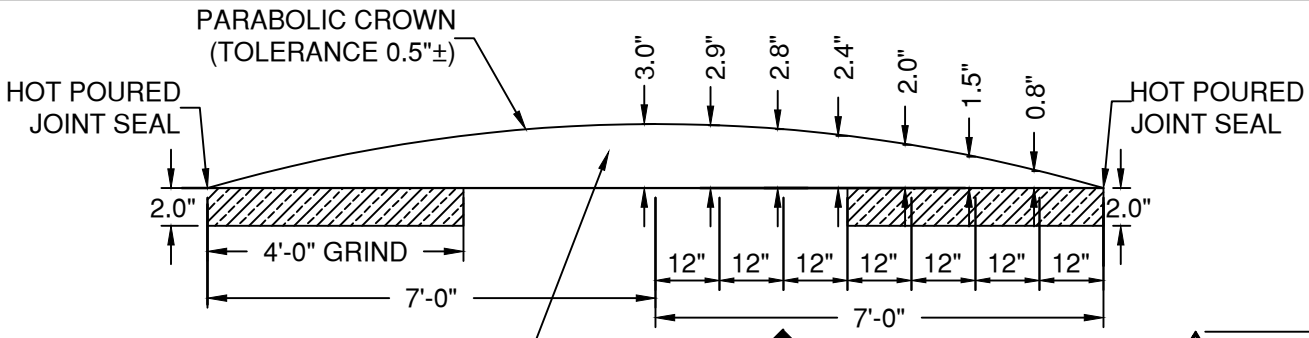
PAVEMENT MARKING LAYOUT

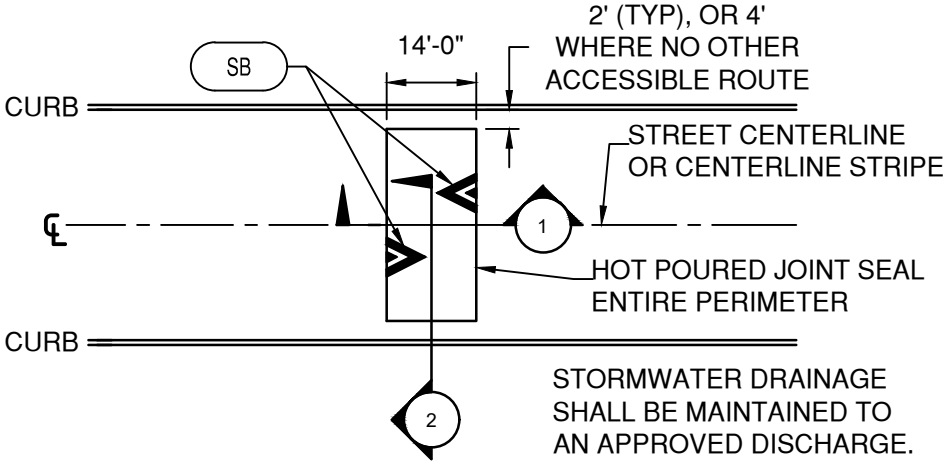


NOTE:

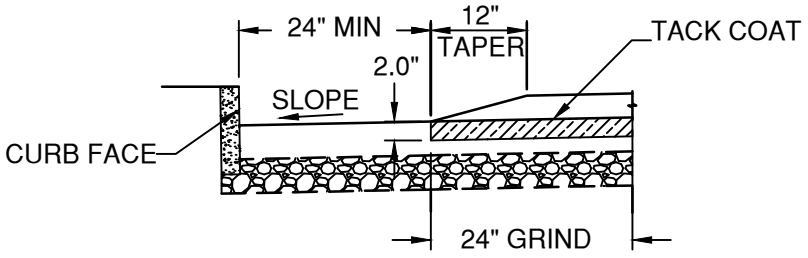
1. THIS IS ONE EXAMPLE OF AN ACCESSIBLE PARKING CONFIGURATION. REFER TO ODOT ACCESSIBLE PARKING STANDARDS FOR ADDITIONAL DETAILS AND OTHER CONFIGURATIONS.
2. ALL SIGNS AND PLACEMENT SHALL CONFORM TO ODOT STANDARDS.

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY	STANDARD DRAWING		DATE 01/31/2022
REV DATE	710 NW WALL ST., BEND, OREGON 97701		APPR
	ACCESSIBLE PARKING - ANGLE		STD DWG R-29

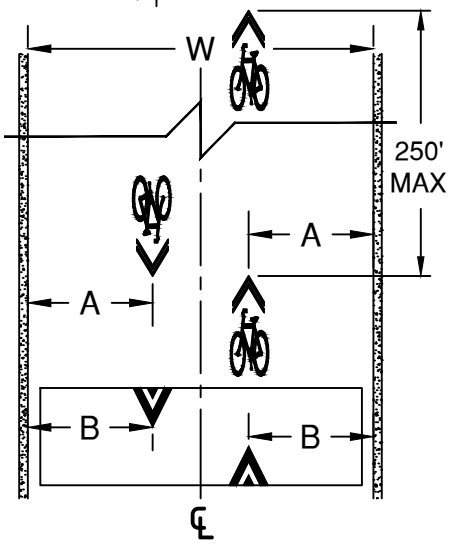




PLAN VIEW



CROSS
SECTION AT
CURB
2

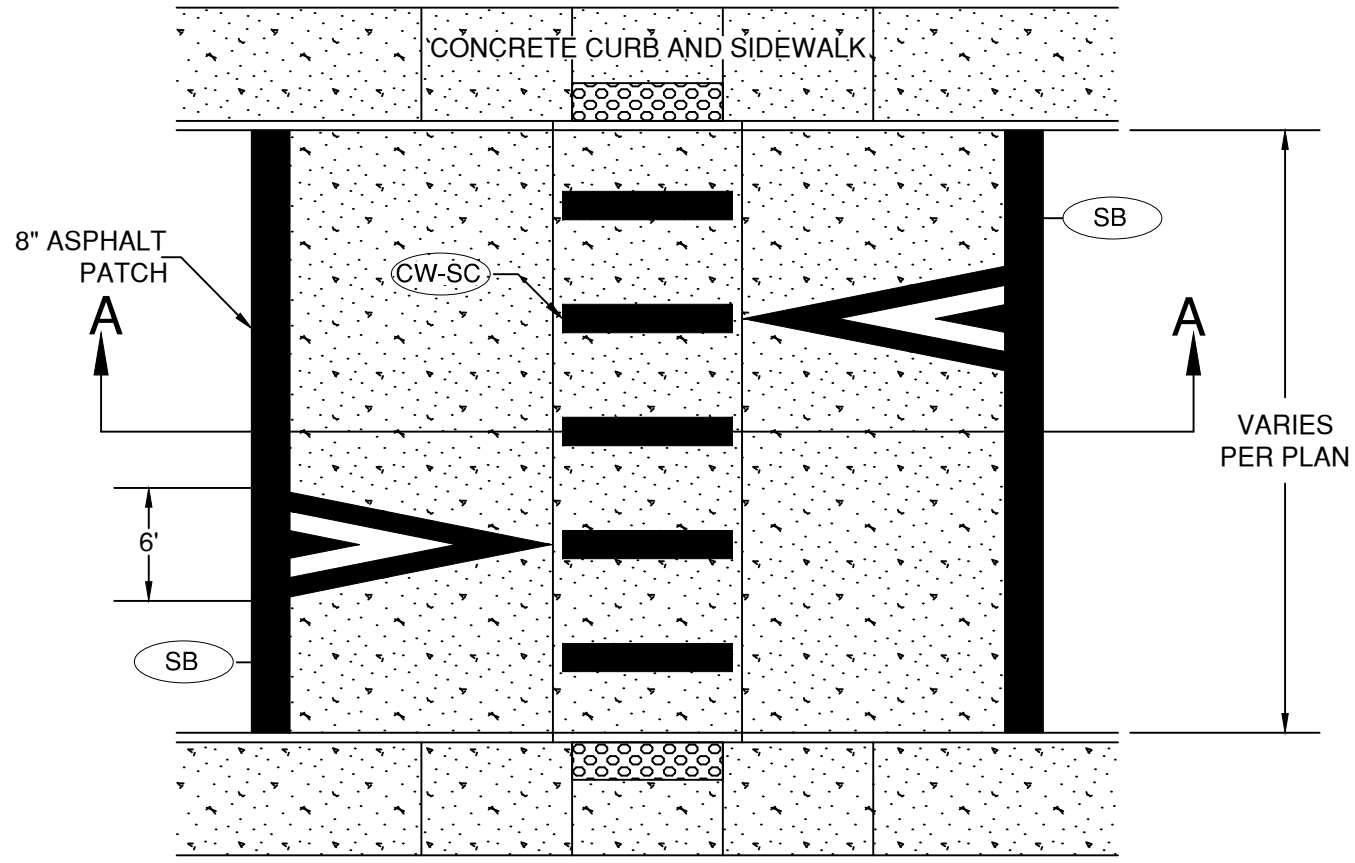


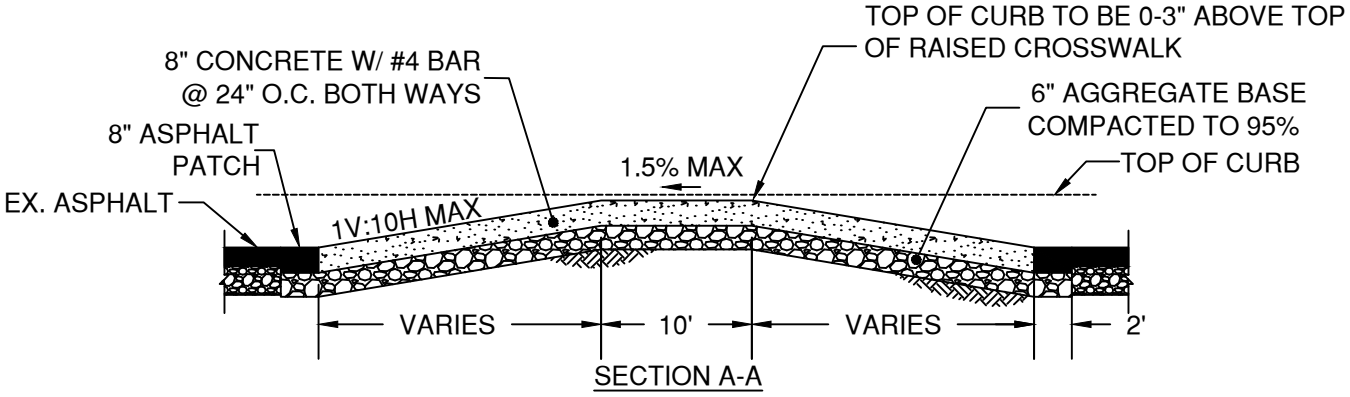
W	A	B	A	B
28'	12'	11'	7'	12'
30'	12'	11.5'	7'	12.5'
32'	13'	12'	7'	13'
34'	13'	12.5'	7'	14'
36'	13'	13'	7'	15'
	PARKING BOTH SIDES		PARKING ONE SIDE	

NOTES:

1. SPEED HUMPS ARE ONLY PERMITTED IN SELECT LOCATIONS. REFER TO CITY DESIGN STANDARDS.
2. WHERE SPEED HUMP IS A RETRO-FIT TO AN EXISTING ROAD:
   2.1. GRIND / KEY-IN PERIMETER TO THE DIMENSIONS SHOWN OR AS DIRECTED BY THE ENGINEER.
   2.2. APPLY TACK COAT TO ALL EXISTING SURFACES WHERE SPEED HUMP WILL BE IN CONTACT.
3. HOT POURED JOINT SEAL THE ENTIRE PERIMETER AFTER INSTALLATION.
4. ALL VERTICAL DIMENSIONS HAVE A REQUIRED MAXIMUM TOLERANCE OF +/- 1/4".
5. THE DISTANCE BETWEEN CURB AND EDGE OF THE SPEED HUMP VARIES. SEE ENGINEERED PLANS.
6. PAVEMENT MARKINGS ON SPEED BUMP SHALL BE INSTALLED CONCURRENTLY WITH THE ASPHALT STRUCTURES. PAVEMENT MARKINGS SHALL BE THERMO-PLASTIC.
7. PAVEMENT MARKINGS SHALL BE INSTALLED BEFORE OPENING ANY LANE TO TRAFFIC THAT IS OCCUPIED BY A NEW SPEED BUMP.
8. SPEED HUMPS ARE NOT PERMITTED IN ACCESSIBLE ROUTES OR WHERE IN CONFLICT WITH DRIVEWAYS.

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS DATE 01/31/2022 APPR
		SPEED HUMPS AND SHARROW PLACEMENT	STD DWG R-32

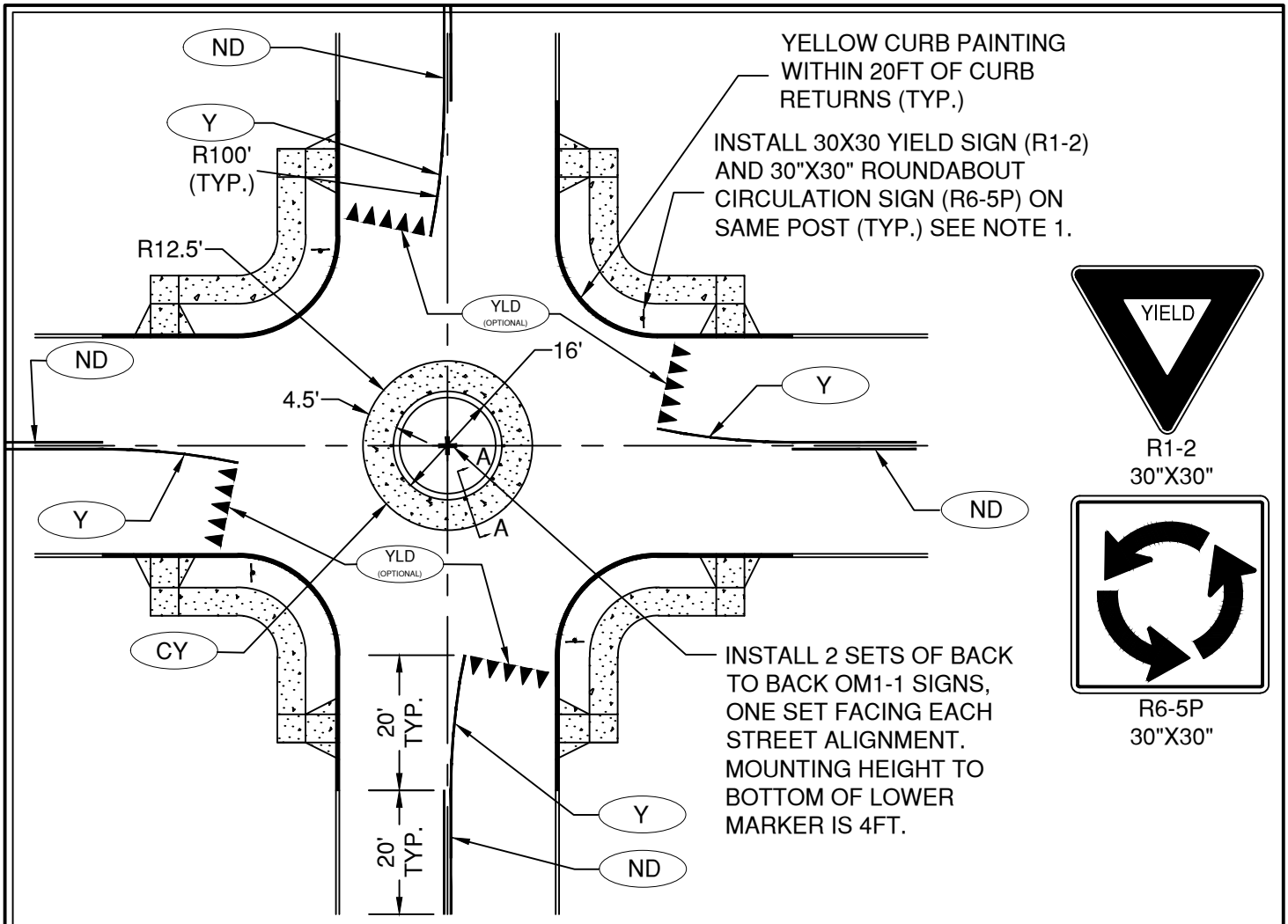


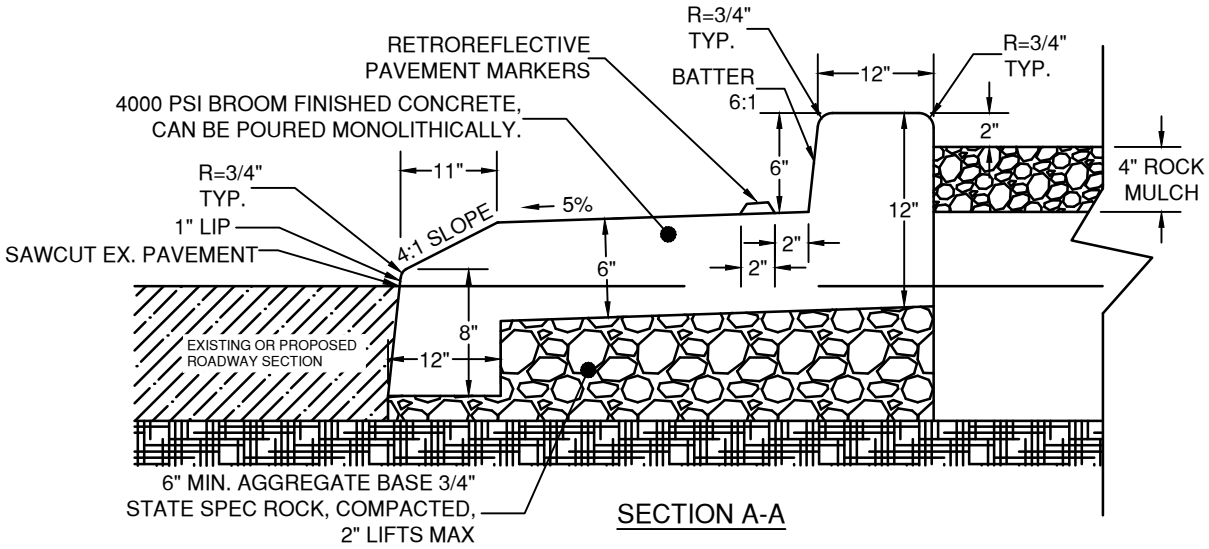


NOTES:

1. RAISED CROSSWALKS ARE ONLY PERMITTED IN SELECT LOCATIONS. REFER TO CITY DESIGN STANDARDS.
2. HOT POURED JOINT SEAL THE ENTIRE PERIMETER AFTER INSTALLATION.
3. PAVEMENT MARKINGS ON RAISED CROSSWALKS SHALL BE THERMO-PLASTIC.
4. PAVEMENT MARKINGS SHALL BE INSTALLED BEFORE OPENING ANY LANE TO TRAFFIC THAT IS OCCUPIED BY A NEW SPEED BUMP.

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		RAISED CROSSWALK	STD DWG R-33



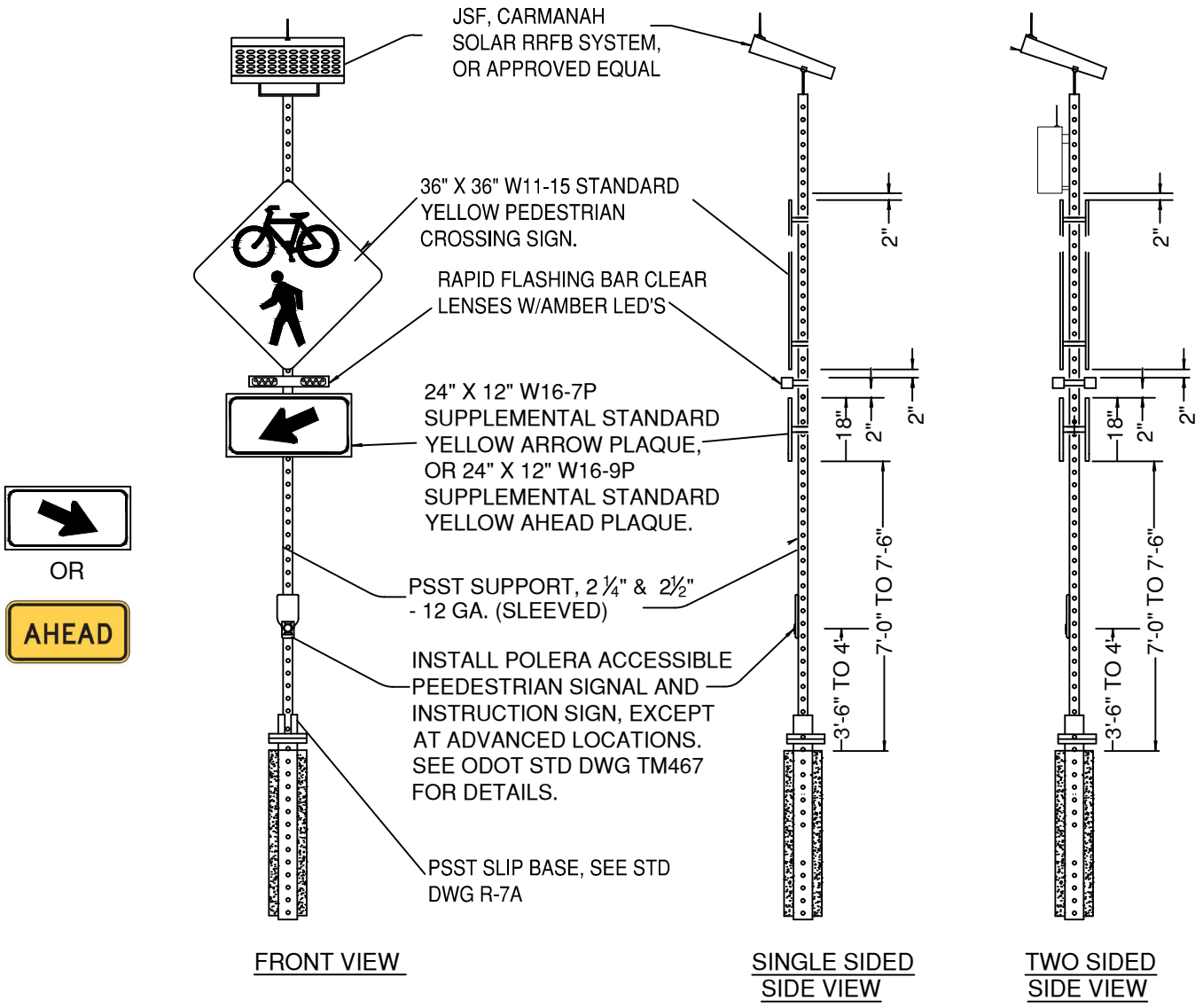


SECTION A-A

NOTES:

1. STANDARD IS YIELD CONTROL. TWO-WAY STOP MAY BE CONSIDERED FOR CIRCLES WITH INSUFFICIENT CIRCULATING DIAMETER FOR CROSSWALK OR SIGHT DISTANCE OBSTRUCTION THAT CANNOT BE MITIGATED

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TRAFFIC CIRCLE	STD DWG R-34



RECTANGULAR RAPID FLASHING BEACON SYSTEM
PSST INSTALLATION

NOTES:

1. REMOVE SOLAR EQUIPMENT IF USING COMMERCIAL POWER
2. ADD RADIO NETWORK CONTROLLER FOR WIRELESS EQUIPMENT IF NEEDED
3. USE SCHOOL CROSSING (S1-1) FOR DESIGNATED SCHOOL CROSSING

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		RECTANGULAR RAPID FLASHING BEACON	STD DWG R-35

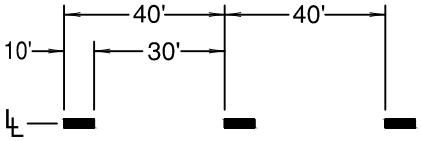
W

4" WHITE LINE

W-2

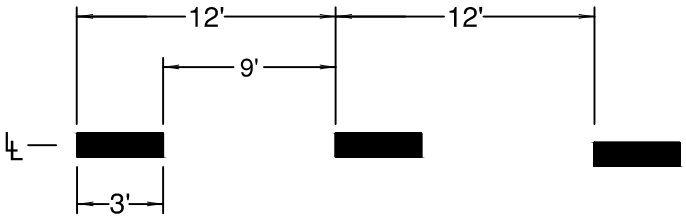
8" WHITE LINE

WB



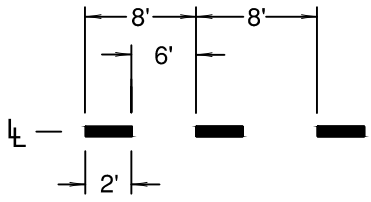
4" WHITE BROKEN LINE

DLL-2



8" WHITE DOTTED LANE LINE

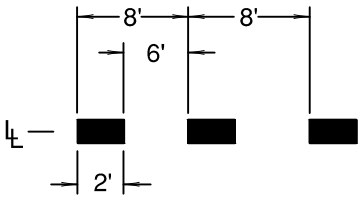
WD



4" WHITE DOTTED LINE

For lane extensions

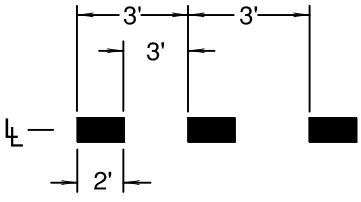
WD-2



8" WHITE DOTTED LINE

For lane extensions

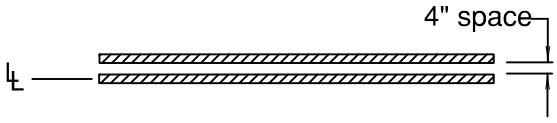
WRAB



8" WHITE DOTTED ROUNDABOUT CIRCULATING LINE

INSTALL AS TYPE B-HS PREFORMED THERMOPLASTIC

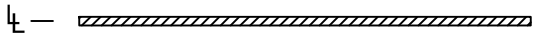
NDW



NARROW DOUBLE NO-LANE CHANGE TWO 4" WHITE LINES

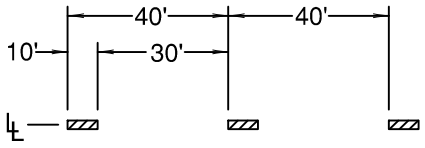
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		PAVEMENT MARKINGS - WHITE	STD DWG R-40

Y



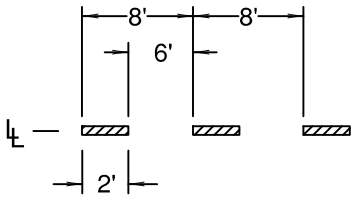
4" YELLOW LINE

YB



4" YELLOW BROKEN LINE

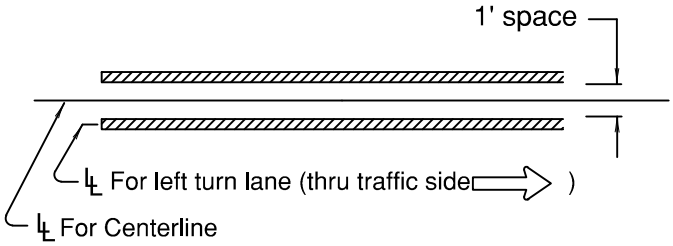
YD



4" YELLOW DOTTED LINE

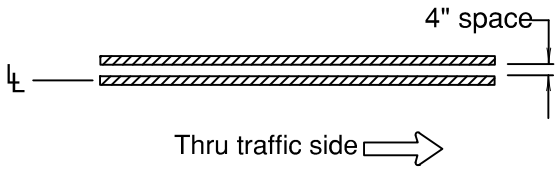
For lane extensions

D



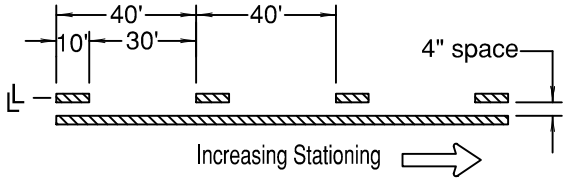
DOUBLE NO-PASS
TWO 4" YELLOW LINES

ND



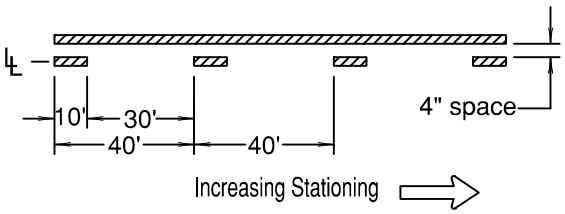
NARROW DOUBLE NO-PASS
TWO 4" YELLOW LINES

NPR



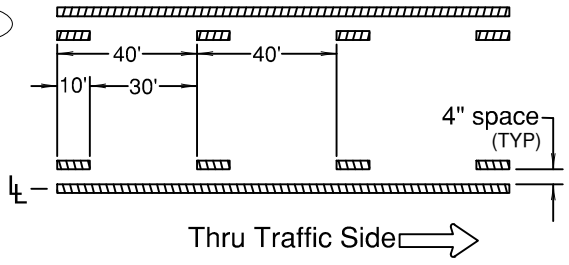
NO-PASS RIGHT
4" YELLOW LINES

NPL



NO-PASS LEFT
4" YELLOW LINES

TWL

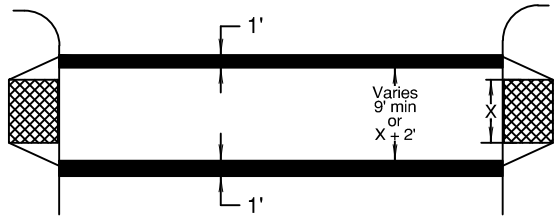


TWO-WAY LEFT TURN
4" YELLOW LINES

SEE R-44 FOR ARROW PLACEMENT

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 PAVEMENT MARKINGS - YELLOW	SCALE NTS DATE 01/31/2022 APPR STD DWG R-41

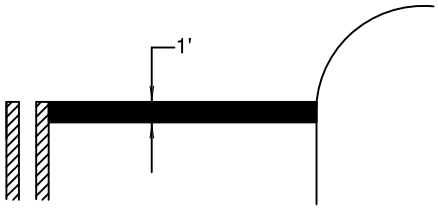
CW



STANDARD CROSSWALK
TWO 1' WHITE BARS

Install per Standard Drawing R-47

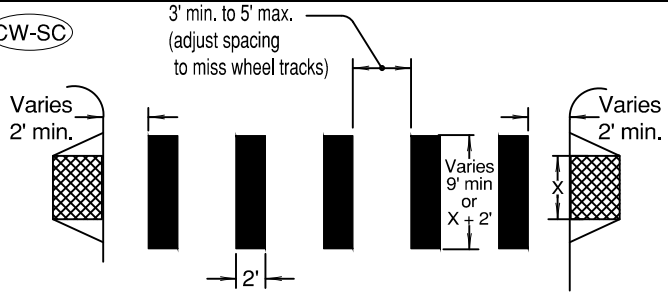
S



STOP BAR
1' WHITE BAR

Install stop bar in Thermoplastic. Install per Standard Drawing R-45

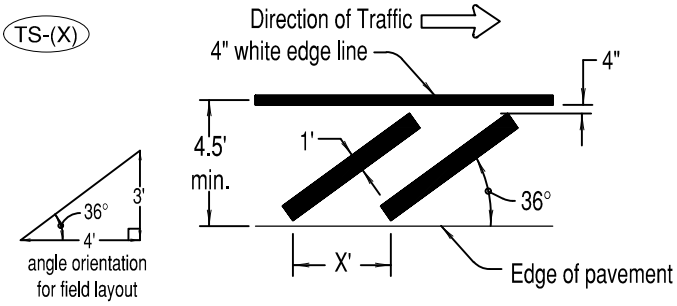
CW-SC



STAGGERED CONTINENTAL CROSSWALK
2' WHITE BARS

Install per standard drawing R-47; Install as Type B-HS preformed thermoplastic;
Install at uncontrolled approach

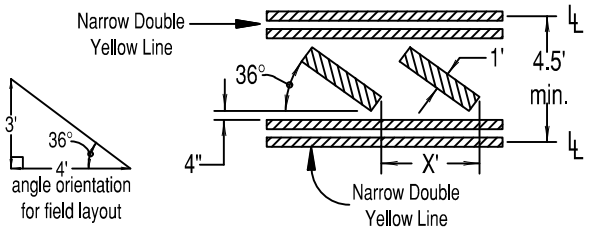
TS-(X)



TRANSVERSE SHOUDER BARS
1' WHITE BARS AT 20' SPACING

X = 20', Typical
(40' spacing may be used where median length exceeds 200')

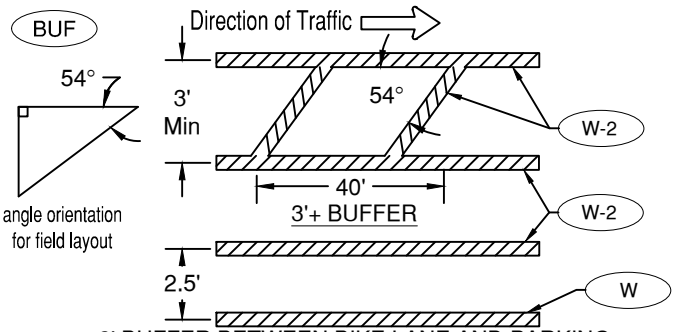
TM-(X)



TRANSVERSE MEDIAN BARS
1' YELLOW BARS AT 20' SPACING

X = 20', Typical
(40' spacing may be used where median length exceeds 200')

BUF

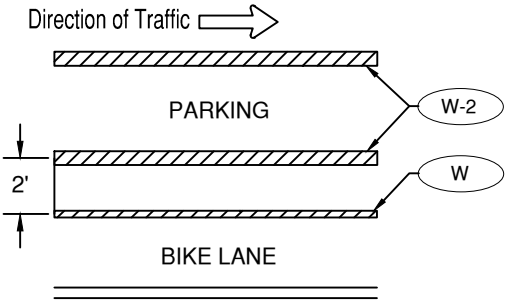


2' BUFFER BETWEEN BIKE LANE AND PARKING

BUFFER STRIPE

Install buffer stripes in thermoplastic / horizontal stripes parallel with traffic in paint

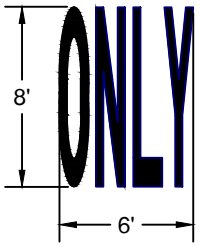
BUFP



PARKING PROTECTED BIKE LANE

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV / DATE			APPR
	CITY OF BEND	PAVEMENT MARKINGS	STD DWG R-42A

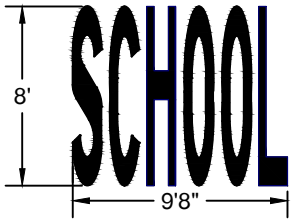
ON



ONLY (white)

Center marking within lane width
Install in Type B - HS Preformed Thermoplastic
For letter proportion details, see current version of FHWA Standard Highway Signs

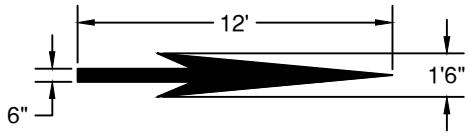
SCH



SCHOOL (white)

Center marking within lane width
Install in Type B - HS Preformed Thermoplastic
For letter proportion details, see current version of FHWA Standard Highway Signs
Install at school speed zone sign on arterial and collector roads

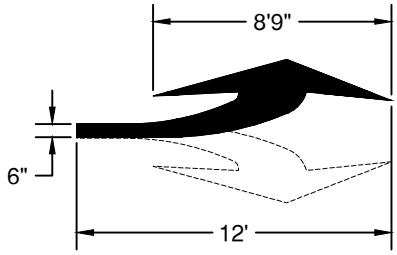
E-SA



ELONGATED STRAIGHT ARROW (white)

For arrow proportion details, see current version of FHWA Standard Highway Signs
Install in Type B - HS Preformed Thermoplastic
Center marking within lane width

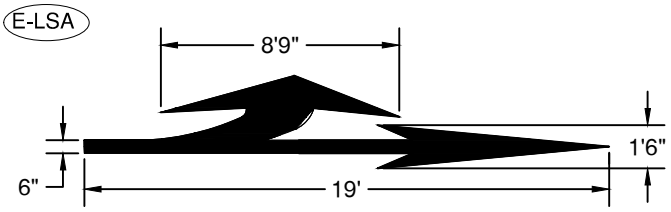
E-LA
E-RA



ELONGATED TURN ARROW (white)

For arrow proportion details, see current version of FHWA Standard Highway Signs
Install in Type B - HS Preformed Thermoplastic
Center marking within lane width
Use E-LA for Left Turn and E-RA for right turn.

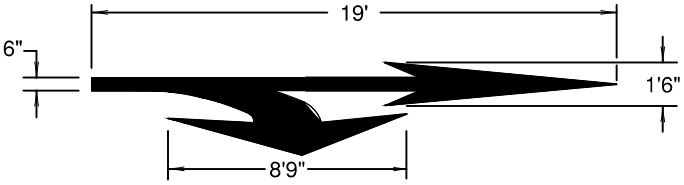
E-LSA



ELONGATED LEFT TURN STRAIGHT ARROW (white)

For arrow proportion details, see current version of FHWA Standard Highway Signs
Install in Type B - HS Preformed Thermoplastic
Center marking within lane width

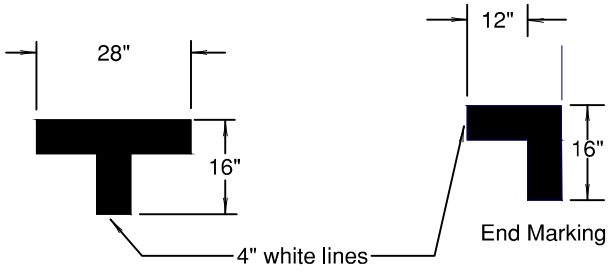
E-RSA



ELONGATED RIGHT TURN STRAIGHT ARROW (white)

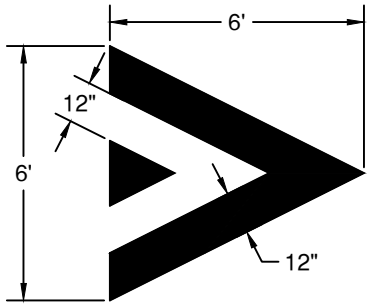
For arrow proportion details, see current version of FHWA Standard Highway Signs
Install in Type B - HS Preformed Thermoplastic
Center marking within lane width

P



ON-STREET PARKING DETAIL (white)

SB

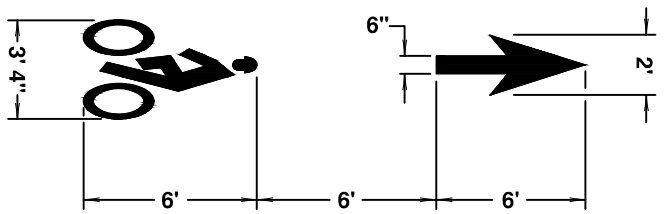


SPEED BUMP MARKING (WHITE)

Install in Type B - HS Preformed Thermoplastic
Center marking within lane width

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		PAVEMENT MARKINGS	STD DWG R-42B

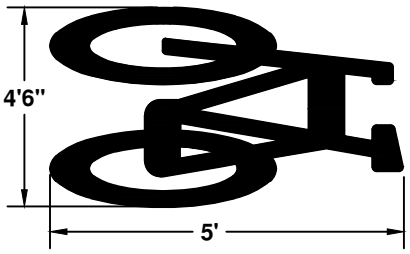
BS



BIKE LANE STANDARD STENCIL (white)

Center marking within lane width
For proportion details, see current version of FHWA Standard Highway Signs

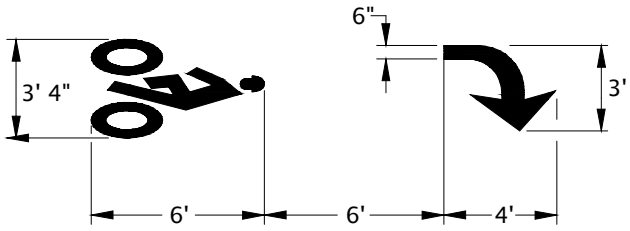
B



BIKE SYMBOL (WHITE)

Install in Type B - HS Preformed Thermoplastic
Center marking within lane width

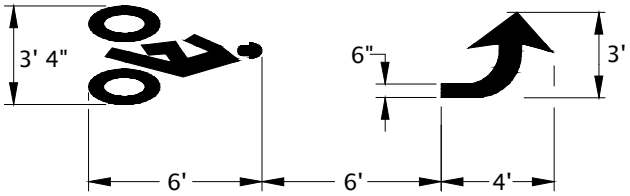
BR



BIKE RIGHT TURN STENCIL (white)

Center marking within lane width
For proportion details, see current version of Standard Highway Signs

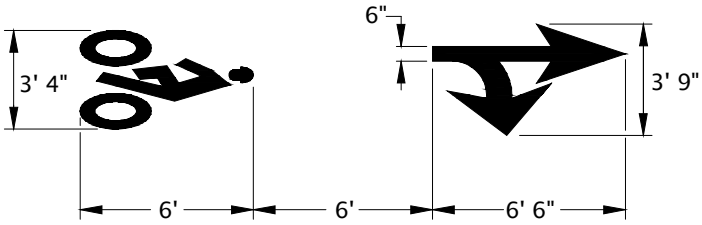
BL



BIKE LEFT TURN STENCIL (white)

Center marking within lane width
For proportion details, see current version of Standard Highway Signs

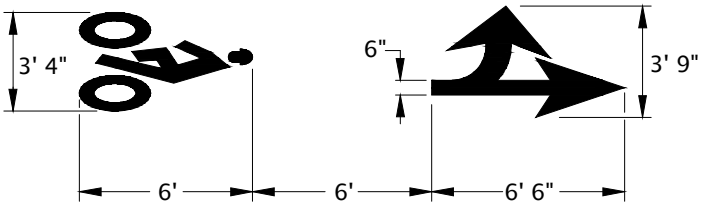
BRS



BIKE RIGHT TURN STRAIGHT STENCIL (white)

Center marking within lane width
For proportion details, see current version of Standard Highway Signs

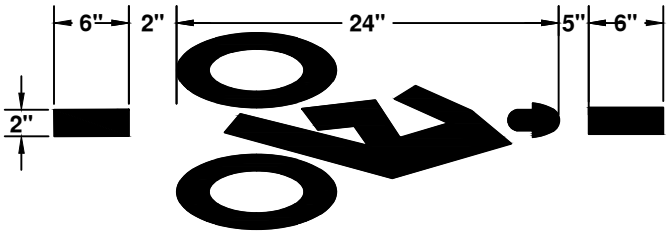
BLS



BIKE LEFT TURN STRAIGHT STENCIL (white)

Center marking within lane width
For proportion details, see current version of Standard Highway Signs

BD



BIKE DETECTOR (WHITE)

Install in Type B - HS Preformed Thermoplastic
Place marking in optimal location for bicycle to actuate the traffic signal.

DRAWN	AJD
DIV	ROADWAY
REV	DATE

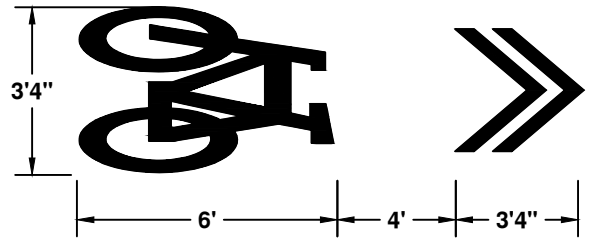
CITY OF BEND

CITY OF BEND
STANDARD DRAWING
710 NW WALL ST., BEND, OREGON 97701

PAVEMENT MARKINGS - BIKE

SCALE	NTS
DATE	01/31/2022
APPR	
STD DWG	R-43

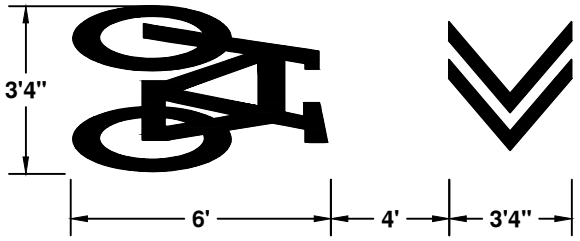
SLM



SHARROWS (WHITE)

Install in Type B - HS Preformed Thermoplastic
Locate marking per R-32
Arrow may be turned in direction of travel.

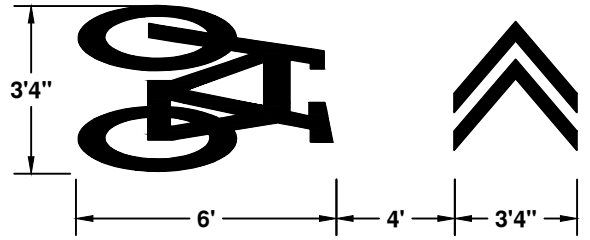
SLM-R



RIGHT TURN SHARROWS (WHITE)

Install in Type B - HS Preformed Thermoplastic
Locate marking per R-32

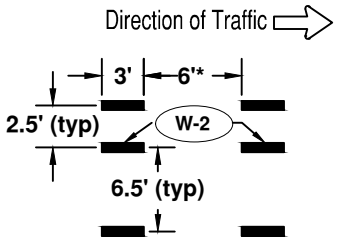
SLM-L



LEFT TURN SHARROWS (WHITE)

Install in Type B - HS Preformed Thermoplastic
Locate marking per R-32

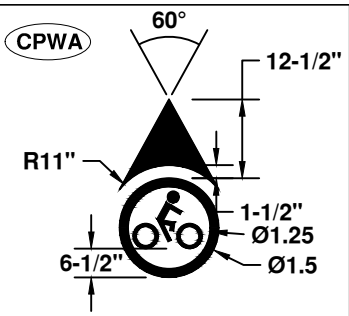
BLE



BIKE MARKING EXTENSION THROUGH INTERSECTION

*** 6' or bike lane width**
Install buffer stripes in Methyl Methacrylate (MMA)

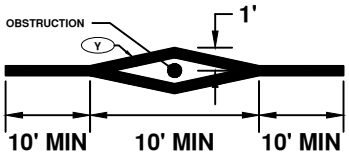
CPWA



COMMON PATH WAYFINDING ARROW

Black inner circle / Green ring / White arrow/bike symbol
Arrow may be turned in direction of travel.

Y-OM



YELLOW MARKING OBSTRUCTION IN PATH

DRAWN	AJD
DIV	ROADWAY
REV	DATE

CITY OF BEND

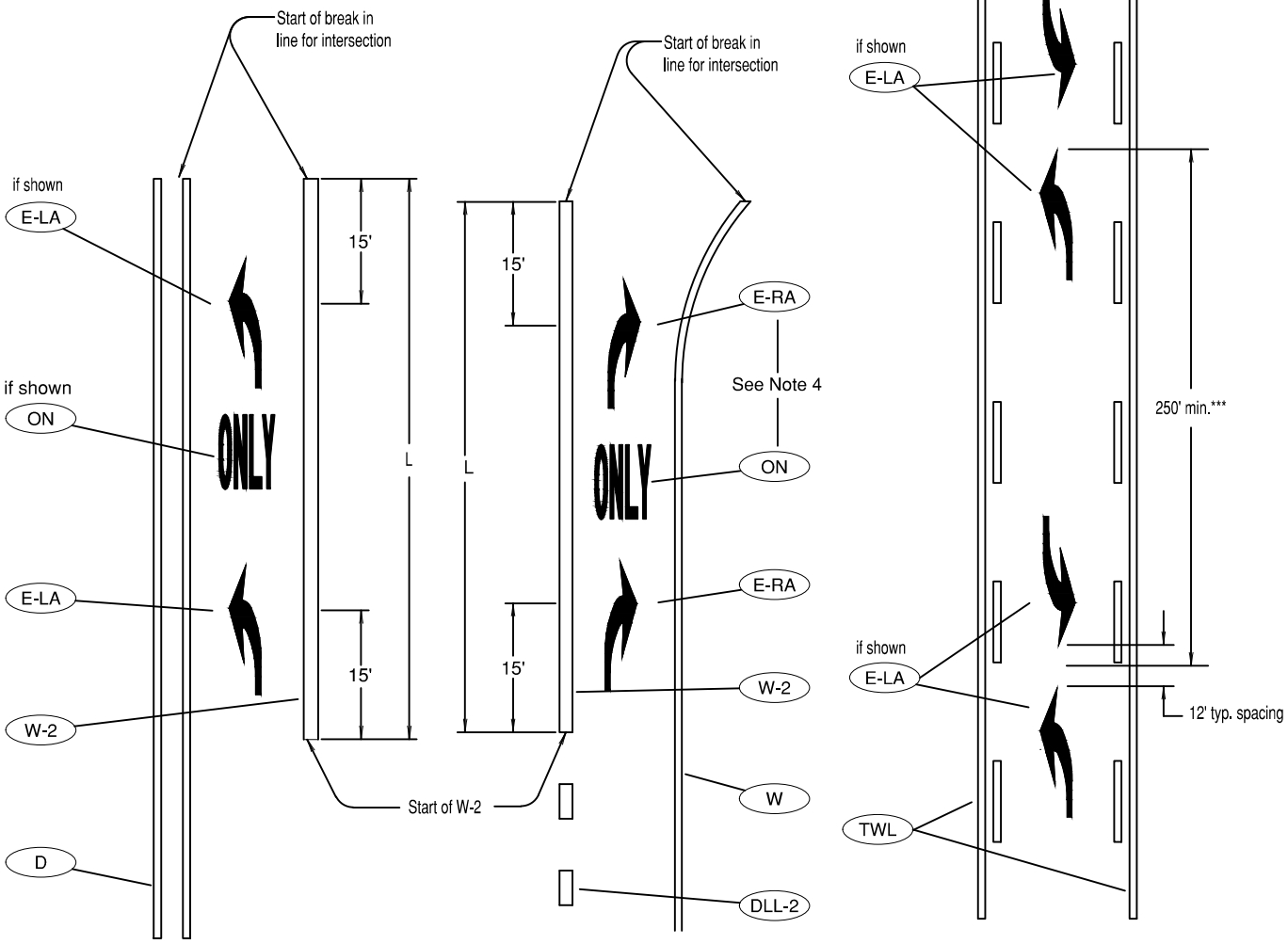
CITY OF BEND

STANDARD DRAWING

710 NW WALL ST., BEND, OREGON 97701

PAVEMENT MARKINGS - BIKE

SCALE	NTS
DATE	01/31/2022
APPR	
STD DWG	R-43A



LANE USE ARROW PLACEMENT (L≤ 400')

DETAIL "A"

LANE USE ARROW PLACEMENT - TRAP LANE

DETAIL "B"

TWO-WAY LEFT TURN LANE ARROW MARKING PLACEMENT

DETAIL "C"

General Notes:

1.) Center pavement marking legends within the lane.

2.) Placement of lane use arrows with respect to the 8" wide white line (W-2) channelization shown in details "A", "B" and "C" apply to both left and right turn lanes.

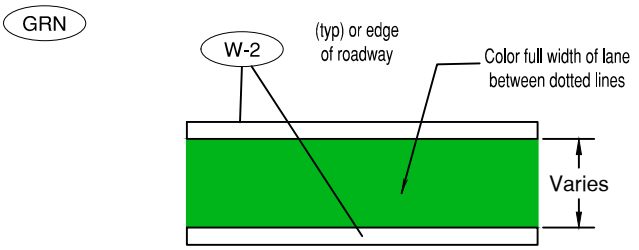
3.) When used for a short turn lane (<40'), the 2nd (downstream) arrow may be omitted.

4.) An ONLY symbol is only required where a through lane approaching an intersection becomes a mandatory turn lane.

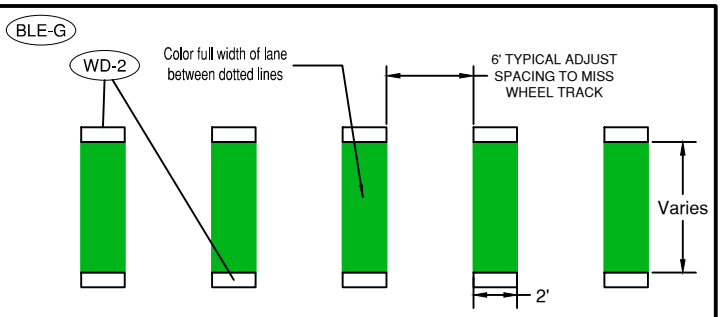
** When L is greater than 200', install 3rd lane use arrow at the midpoint of the turn lane.

To be accompanied by Standard Dwg. Nos. R-40 thru R-43

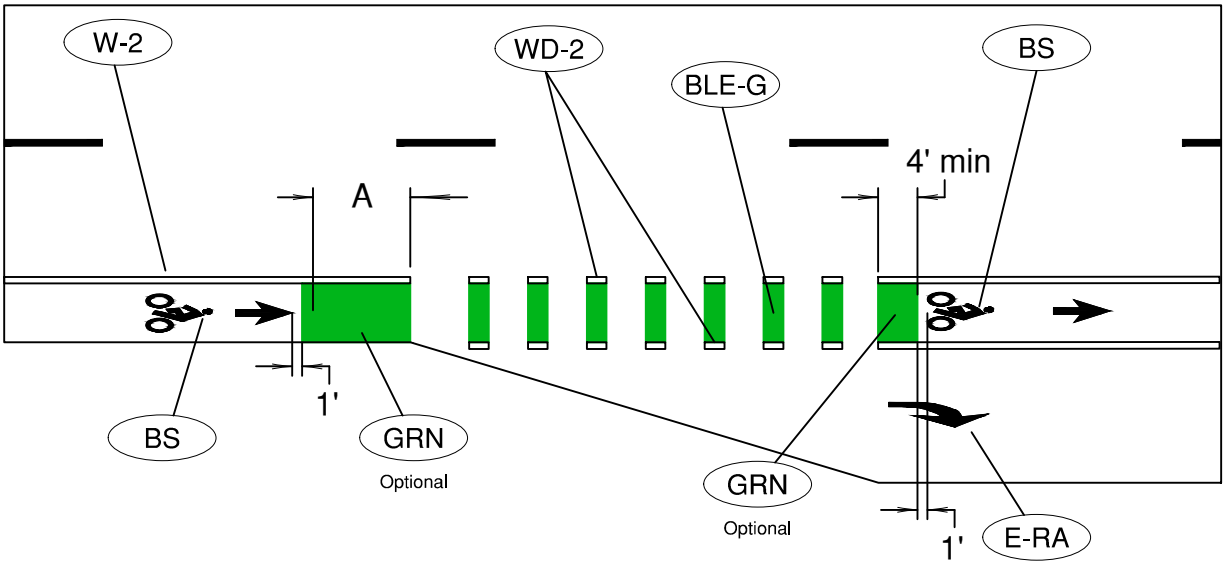
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		TURN LANE MARKING LAYOUT	STD DWG R-44



GREEN SUPPLEMENTED BICYCLE LANE
SOLID LANE



GREEN SUPPLEMENTED BICYCLE LANE
DOTTED LINE EXTENSION

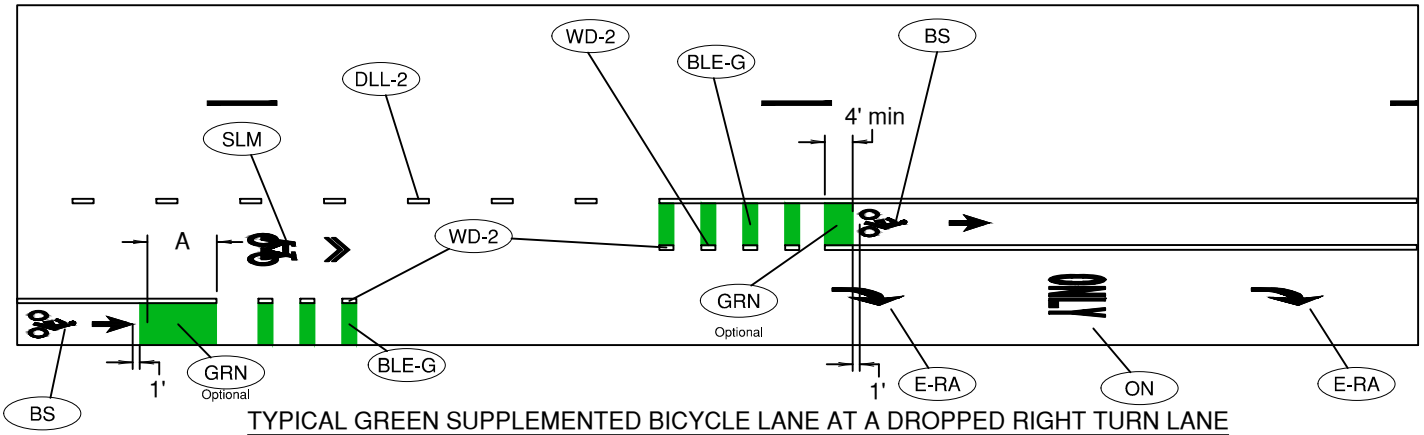


TYPICAL GREEN SUPPLEMENTED BICYCLE LANE ACROSS AN ADDED RIGHT TURN LANE TAPER

NOTES:
1. GREEN PAVEMENT MARKING USE PER DESIGN STANDARDS WITH CITY ENGINEER APPROVAL

POSTED SPEED (MPH)	A* (FT.) (MIN)
35 AND LESS	9
40	30
45	50

Add 20 ft if BS does not precede GRN



TYPICAL GREEN SUPPLEMENTED BICYCLE LANE AT A DROPPED RIGHT TURN LANE

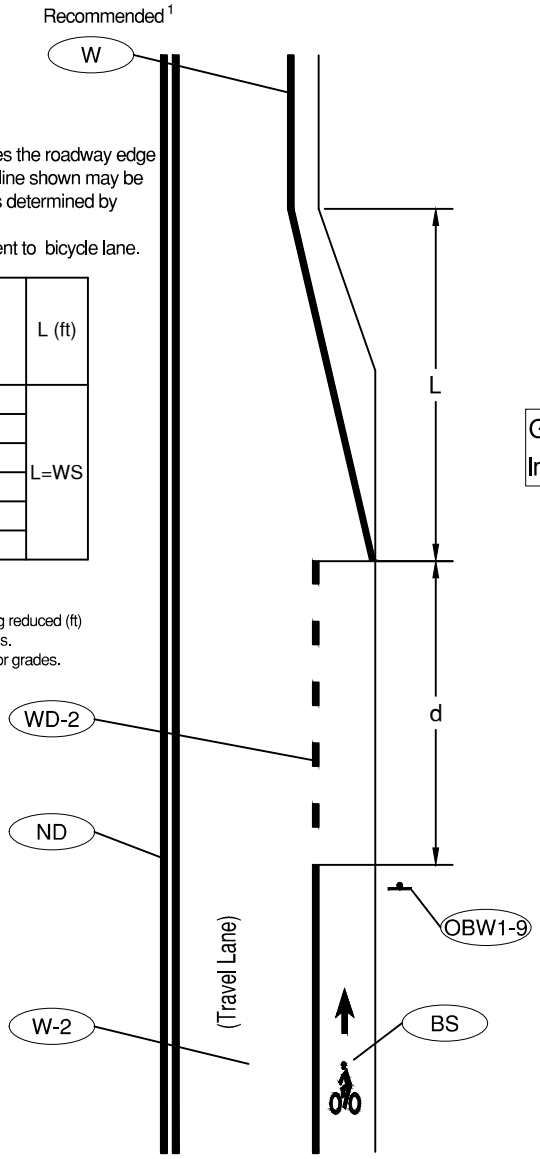
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		INTERSECTION BIKE SAFETY	STD DWG R-44A

General Notes:

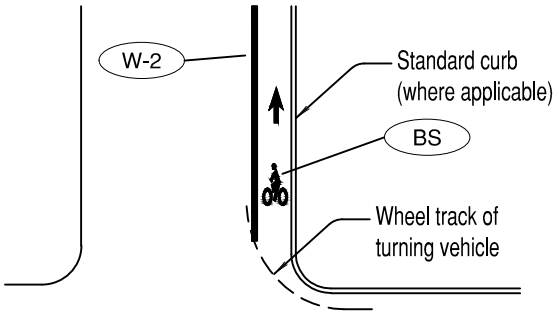
1. Where a curb clearly defines the roadway edge in the taper area, the edge line shown may be omitted in the taper area as determined by engineer judgement.
2. Motor vehicle speed adjacent to bicycle lane.

POSTED OR 85TH PERCENTILE SPEED (MPH) [2]	d (FT)	L (ft)
20	128	L=WS
25	152	
30	176	
35	184	
40	192	
45+	200	

WHERE:
L = taper length
W = width of bicycle lane being reduced (ft)
"d" distances are for level roads.
Corrections should be made for grades.



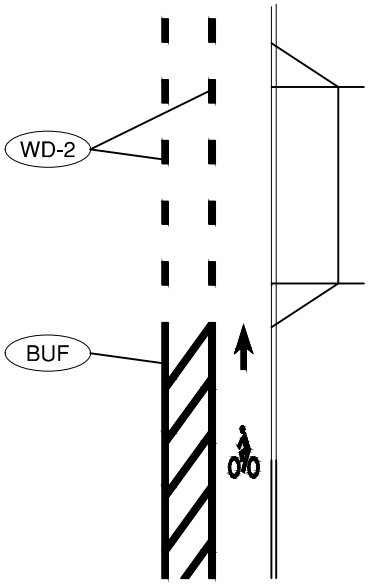
END OF BIKE LANE



SIDE STREET

General Note:
Install bike lane stencil to avoid right turning vehicle wheel tracks.

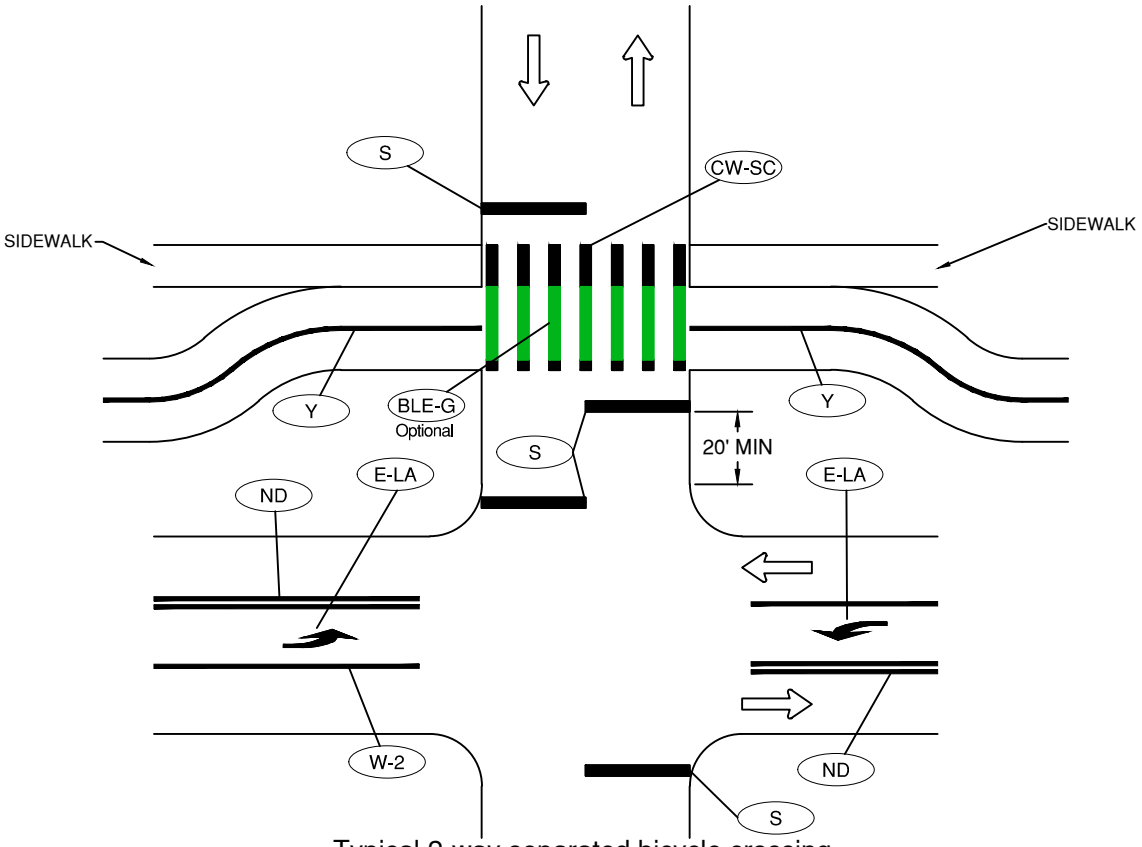
INSTALLATION OF BIKE LANE STENCILS FOLLOWING INTERSECTIONS



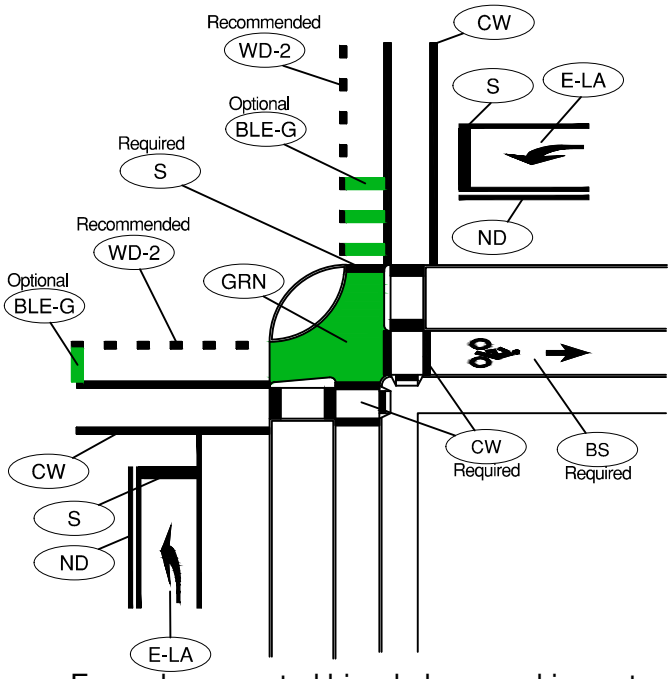
BUFFER BIKE LANE IN CONFLICT AREA
(FOR HIGH VOLUME COMMERCIAL DRIVEWAYS)

To be accompanied by Standard Dwg. Nos. R-40 thru R-43 and R-44A

DRAWN AJD	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS
DIV ROADWAY			DATE 01/31/2022
REV DATE			APPR
	CITY OF BEND	BIKE LANE MARKINGS	STD DWG R-44B



Typical 2-way separated bicycle crossing
Bicycle lanes yield controlled

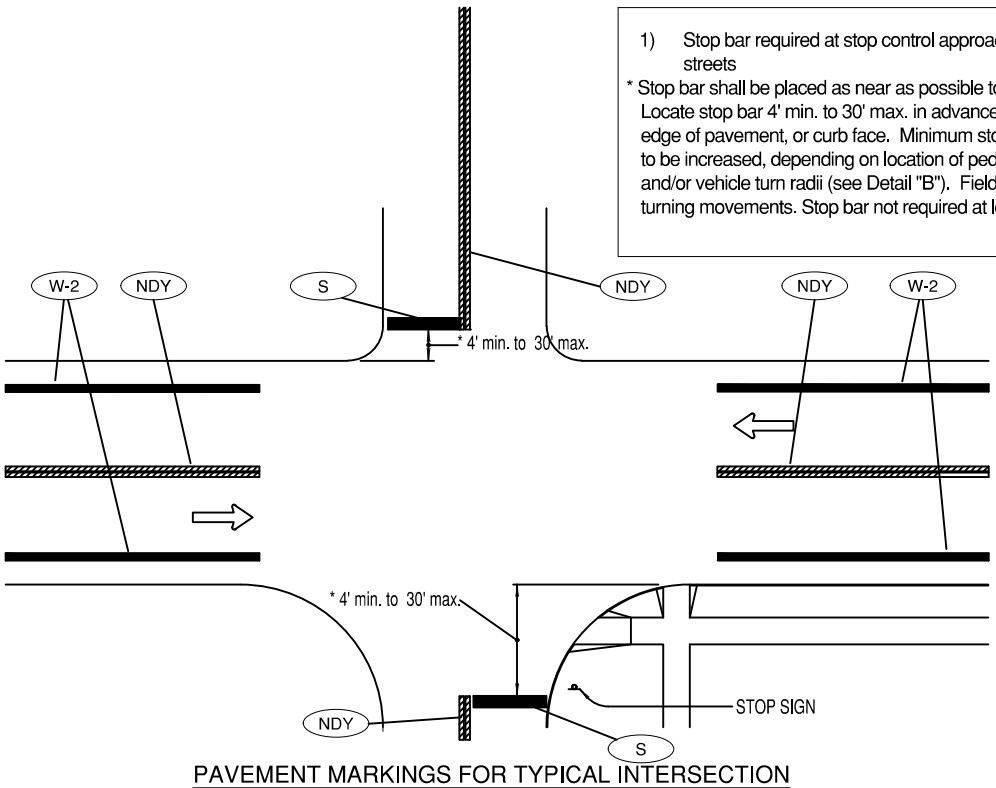


Example separated bicycle lane markings at a signalized intersection

DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701 BIKE LANE MARKINGS	SCALE NTS DATE 01/31/2022 APPR STD DWG R-44C

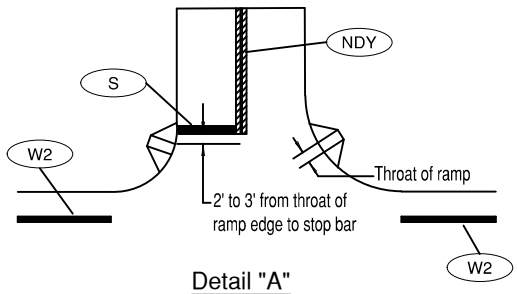
1) Stop bar required at stop control approaches on arterials and collector streets

* Stop bar shall be placed as near as possible to the intersecting traveled way. Locate stop bar 4' min. to 30' max. in advance of the extended fog line, edge of pavement, or curb face. Minimum stop bar distance may need to be increased, depending on location of pedestrian ramps (see Detail "A") and/or vehicle turn radii (see Detail "B"). Field verify sight distance and truck turning movements. Stop bar not required at local/local intersections.

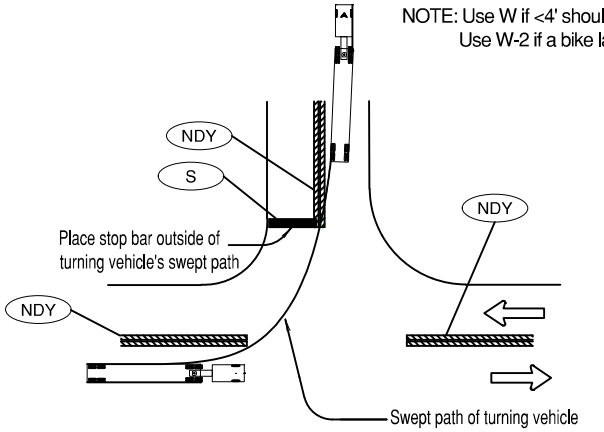


PAVEMENT MARKINGS FOR TYPICAL INTERSECTION

NOTE: Use W if <4' shoulder (no bike lane). Use W-2 if a bike lane exists.



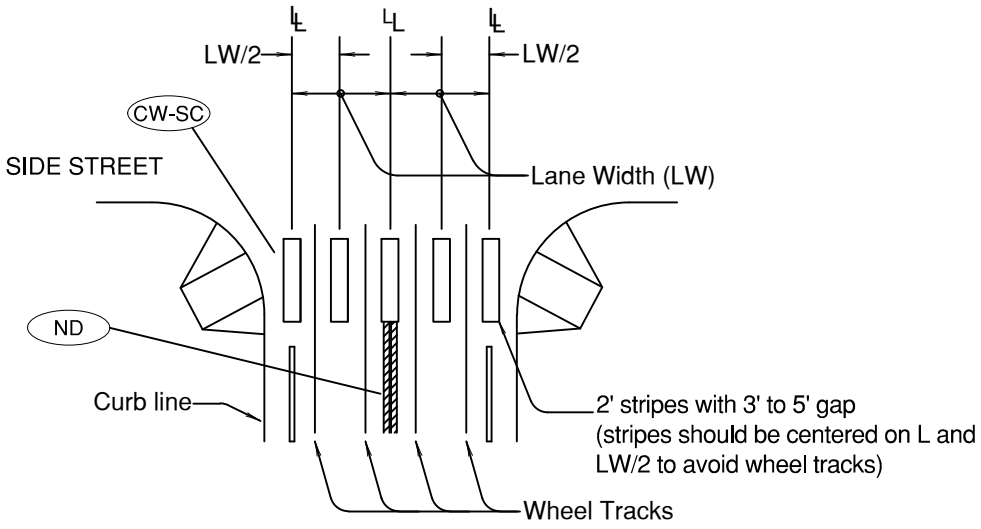
Detail "A"
STOP BAR PLACEMENT WITH RESPECT TO PEDESTRIAN RAMPS



Detail "B"
STOP BAR PLACEMENT WITH RESPECT TO TURN RADII WHERE NO RAMPS

To be accompanied by Standard Dwg. Nos. R-40 thru R-43

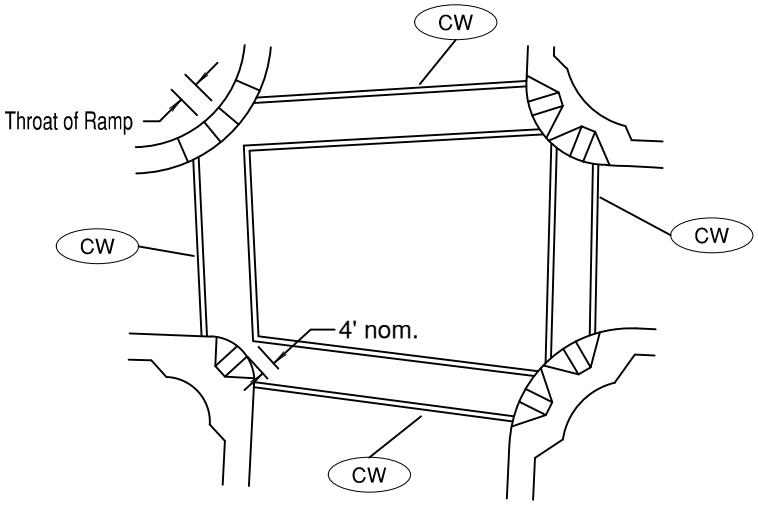
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		INTERSECTION PAVEMENT MARKING LAYOUT	STD DWG R-45



STAGGERED CONTINENTAL LAYOUT

General Note:

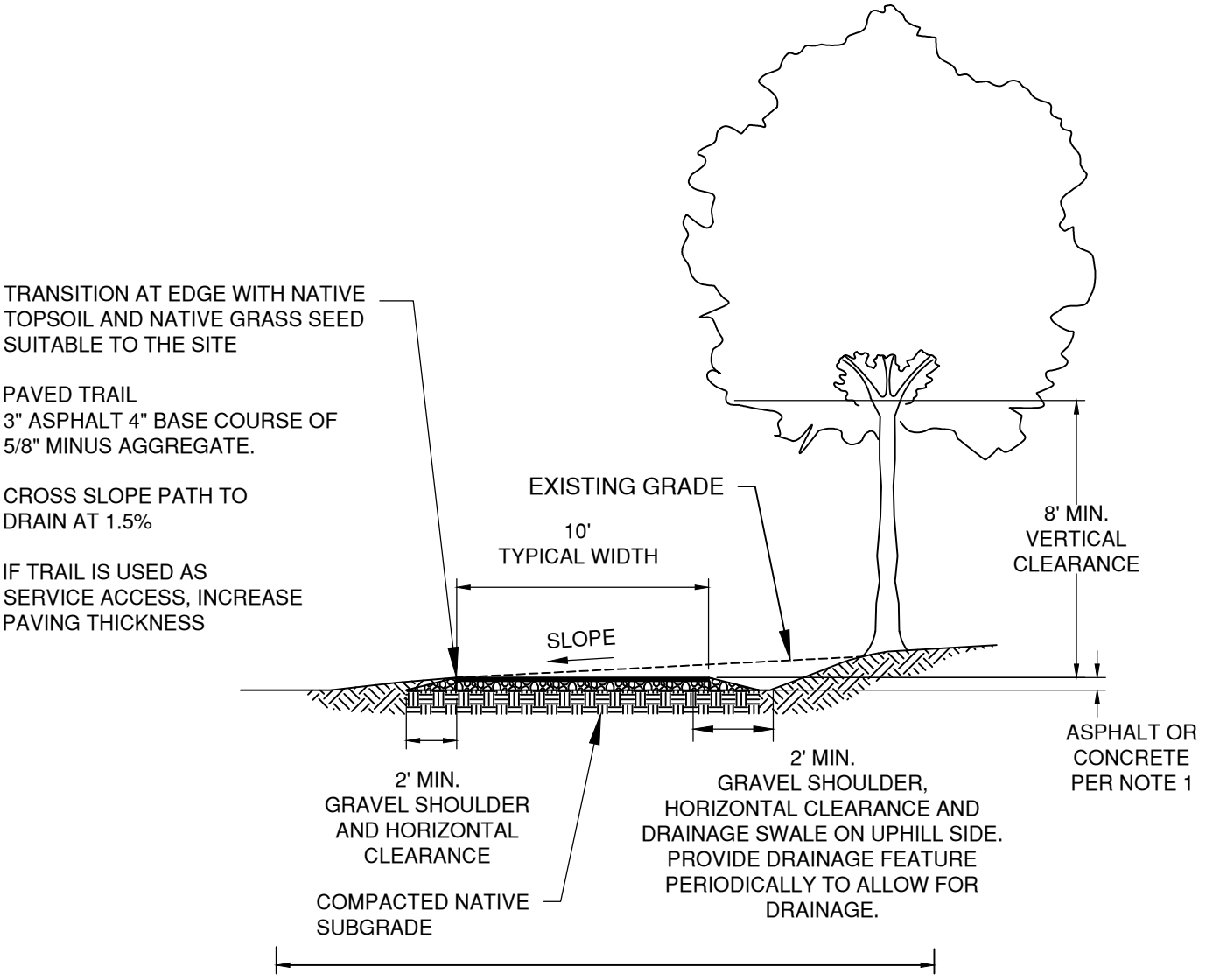
1. Install crosswalk bars such that the throat of the ADA ramp is entirely within crosswalk markings, or 5' back of extended fog line, edge of pavement, or curb face.



STANDARD CROSSWALK BARS AT 4-WAY CONTROLLED INTERSECTION

To be accompanied by Standard Dwg. Nos. R-40 thru R-43

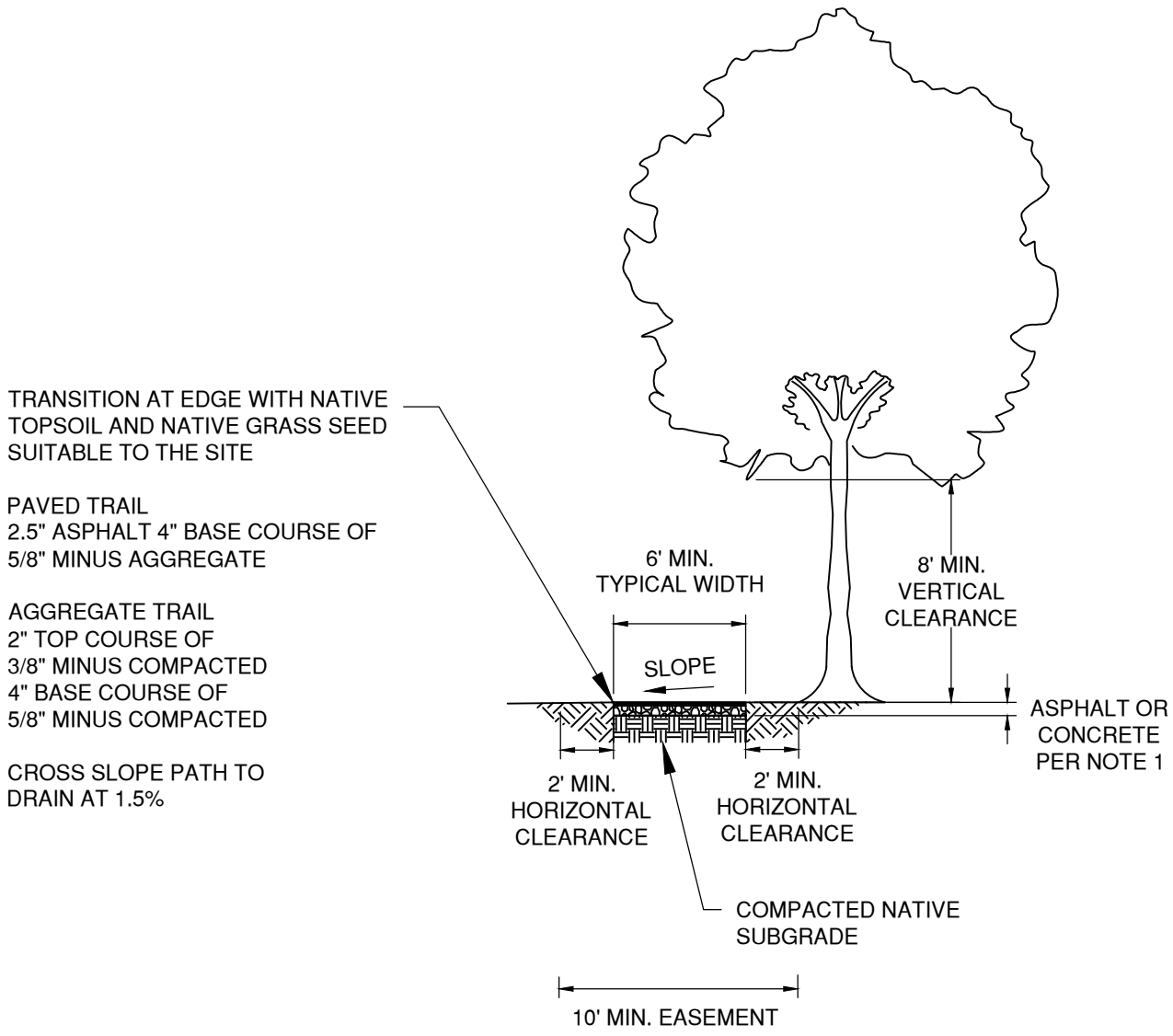
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		CROSSWALK MARKINGS	STD DWG R-47



NOTES:

1. PRIMARY TRAIL SHALL BE PAVED WITH ASPHALT OR CONCRETE IN THE RIGHT-OF-WAY OR ADJACENT TO STREETS. OUTSIDE OF THE RIGHT-OF-WAY TRAIL MAY BE AGGREGATE AS APPROVED.
2. PRIMARY TRAILS ARE TYPICALLY FACILITIES OUTSIDE OF THE PUBLIC RIGHT-OF-WAY THAT ARE OWNED AND MAINTAINED BY THE BEND PARKS AND RECREATION DISTRICT OR PRIVATELY. (SEE STANDARD CROSS-SECTIONS FOR CITY SHARED USE PATHS IN THE RIGHT-OF-WAY.)
3. WHERE OUTSIDE OF RIGHT-OF-WAY, TRAIL EASEMENT DEDICATION IS REQUIRED INCLUDING A PUBLIC ACCESS EASEMENT AND UTILITY EASEMENT WHERE APPLICABLE.
4. TRAIL ALIGNMENTS ARE ENCOURAGED TO MEANDER AND NOT BE DESIGNED AS FENCED CANYONS.
5. TRAILS WITHIN RIGHT-OF-WAY SHALL MEET PROWAG REQUIREMENTS. TRAILS OUT OF RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS OF THE UNITED STATES ACCESS BOARD ACCESSIBILITY STANDARDS FOR FEDERAL OUTDOOR DEVELOPED AREAS.

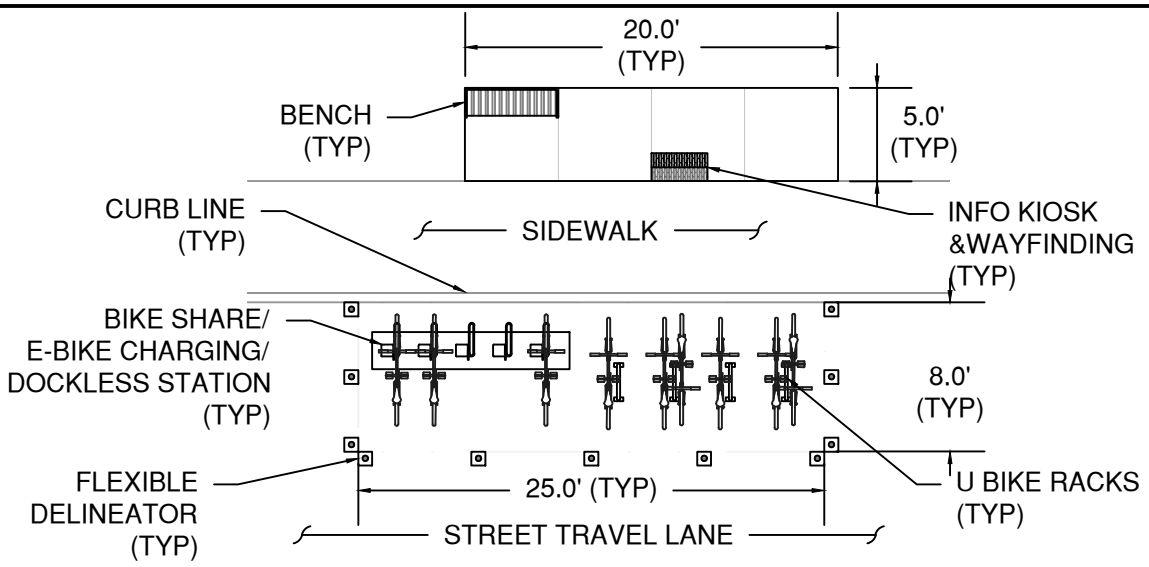
DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		PRIMARY TRAIL	STD DWG R-48



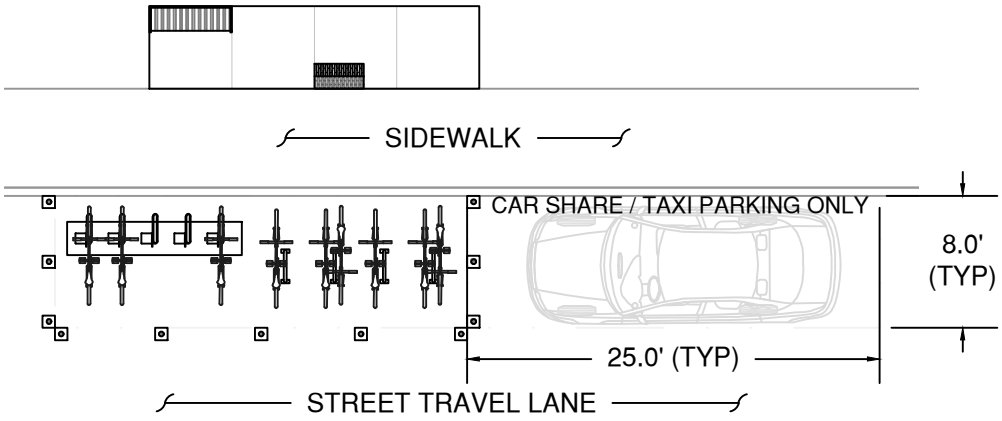
NOTES:

1. CONNECTOR TRAIL SHALL BE PAVED WITH ASPHALT OR CONCRETE IN THE RIGHT-OF-WAY OR ADJACENT TO STREETS. OUTSIDE OF THE RIGHT-OF-WAY TRAIL MAY BE AGGREGATE AS APPROVED.
2. CONNECTOR TRAILS ARE TYPICALLY FACILITIES OUTSIDE OF THE PUBLIC RIGHT-OF-WAY THAT ARE OWNED AND MAINTAINED BY THE BEND PARKS AND RECREATION DISTRICT OR PRIVATELY. (SEE STANDARD CROSS-SECTIONS FOR CITY SHARED USE PATHS IN THE RIGHT-OF-WAY.)
3. WHERE OUTSIDE OF RIGHT-OF-WAY, TRAIL EASEMENT DEDICATION IS REQUIRED INCLUDING A PUBLIC ACCESS EASEMENT AND UTILITY EASEMENT WHERE APPLICABLE.
4. TRAIL ALIGNMENTS ARE ENCOURAGED TO MEANDER AND NOT BE DESIGNED AS FENCED CANYONS.
5. NATIVE SURFACE TRAILS MAY BE USED WITHIN PARKS OR PRIVATE DEVELOPMENTS TO PROVIDE CONNECTIONS TO PRIMARY AND OTHER CONNECTOR TRAILS.
6. TRAILS WITHIN RIGHT-OF-WAY SHALL MEET PROWAG REQUIREMENTS. TRAILS OUT OF RIGHT-OF-WAY SHALL MEET THE REQUIREMENTS OF THE UNITED STATES ACCESS BOARD ACCESSIBILITY STANDARDS FOR FEDERAL OUTDOOR DEVELOPED AREAS AT A MINIMUM.

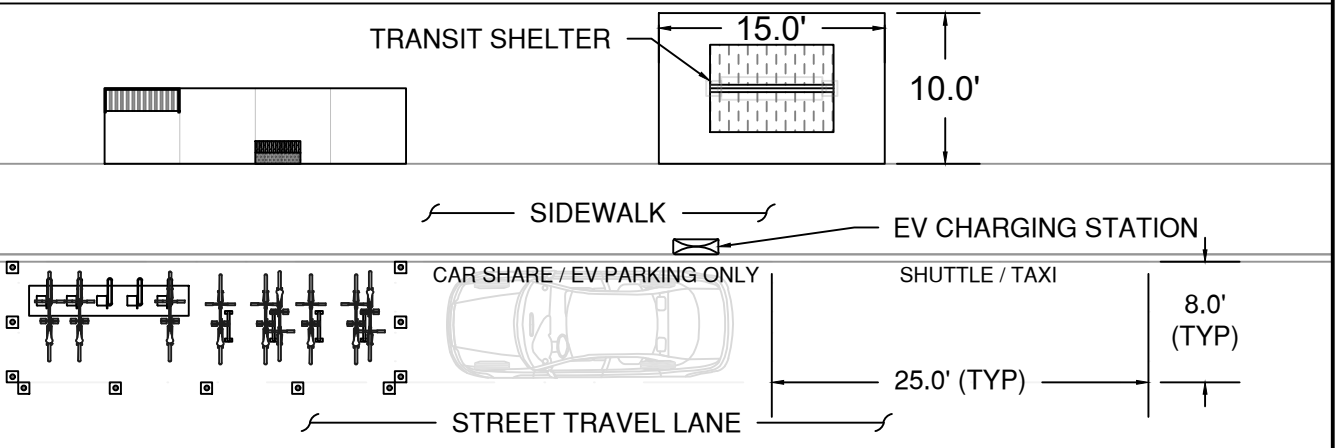
DRAWN AJD DIV ROADWAY REV DATE	CITY OF BEND	CITY OF BEND STANDARD DRAWING 710 NW WALL ST., BEND, OREGON 97701	SCALE NTS DATE 01/31/2022 APPR
		CONNECTOR TRAIL	STD DWG R-49



SMALL MOBILITY POINT



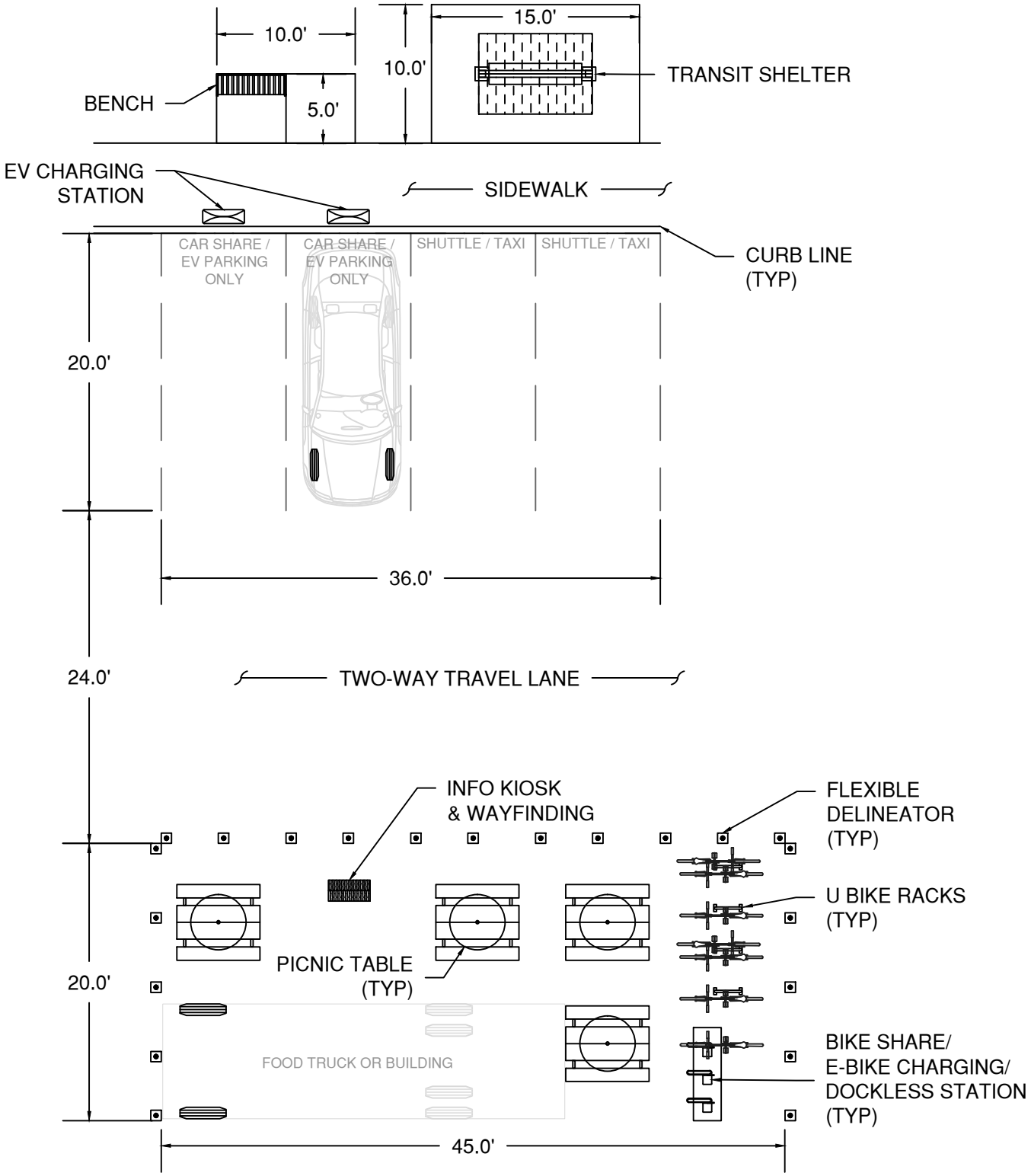
MEDIUM MOBILITY POINT



MEDIUM (+) MOBILITY POINT

NOTES:
1. LOCATION & EXISTING CONDITIONS WILL DETERMINE LAYOUT
2. FINAL LAYOUT MUST MEET MINIMUM ADA STANDARDS FOR ACCESSIBLE DESIGN
3. ALL CONCEPTS SHOWN ARE FOR SPATIAL REPRESENTATION ONLY
4. BICYCLE PARKING STATIONS MAY BE PLACED WITH IN ON-STREET PARKING SPACES OR ON PRIVATE PROPERTY

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV / DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		MOBILITY POINTS - SMALL/MEDIUM	STD DWG R-50A



NOTES:
1. LOCATION & EXISTING CONDITIONS WILL DETERMINE LAYOUT
2. FINAL LAYOUT MUST MEET MINIMUM ADA STANDARDS FOR ACCESSIBLE DESIGN
3. ALL CONCEPTS SHOWN ARE FOR SPATIAL REPRESENTATION ONLY

DRAWN AJD	CITY OF BEND	CITY OF BEND	SCALE NTS
DIV ROADWAY		STANDARD DRAWING	DATE 01/31/2022
REV DATE		710 NW WALL ST., BEND, OREGON 97701	APPR
		MOBILITY POINTS - LARGE	STD DWG R-50B