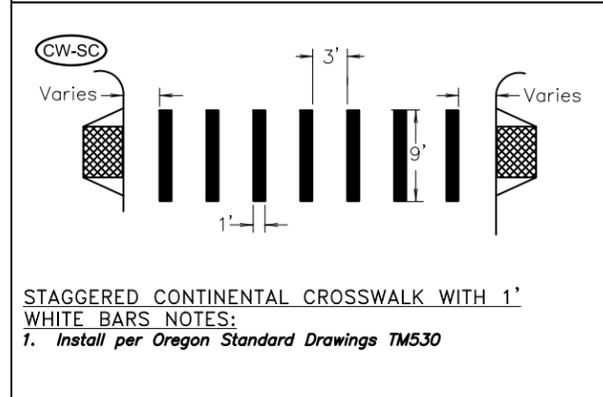
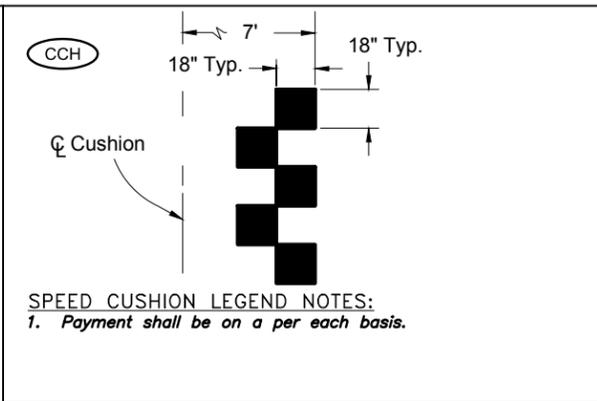
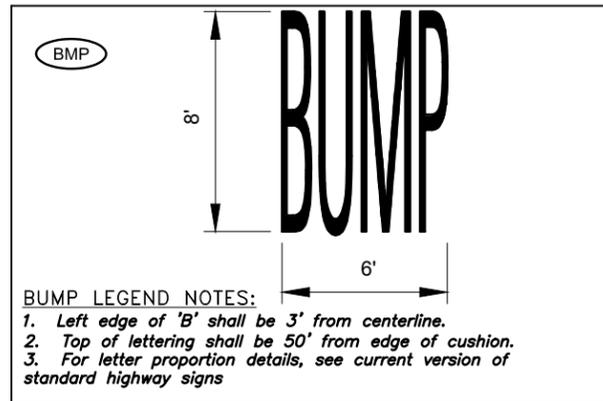


Plotted by: SINGLAIR BURR on Tuesday, April 07, 2015 at 1:00:54 PM from the 39 CS1 layout tab
File Name: Path: G:\PDX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-CS1.DWG



STRIPING NOTES:

1. Lane dimensions shall be measured from center of stripe to center of stripe or from edge of pavement or curb to center of stripe.
2. Where dimensions don't exactly match available pavement widths, adjust lane dimensions proportionally or as directed by the engineer.
3. Measurement for all traffic stripes shall be measured along the entire length of the traffic stripe. Gaps in the stripes, such as those that occur in TWL type stripes shall not be included in the stripe measurement.
4. Contractor shall obtain city approval of striping layout 24 hours before striping.
5. Contractor shall work with engineer on layout of striping. All striping layout must be specifically approved by engineer before striping work starts on each street.
5. Install Mono-Directional Blue Type 1AR Pavement Markers adjacent to all fire hydrants 1' off of striped or street centerline on hydrant side.
6. Contractor shall replace any stop bars or other pavement markings, including those on side streets and driveways, removed or covered by this project as directed by engineer.
7. All legends, arrows and bars shall be pre-formed, fused thermoplastic film type B-HS unless otherwise
8. All longitudinal markings shall be thermoplastic, extruded, surface, non-profiled unless otherwise approved or shown.
9. For additional details, see Oregon Standard Drawings TM500, TM501, TM503, TM521, TM530, TM531, TM539, & TM561.



Revisions and Addendums			
Description	Date	No.	By




ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
 13125 SW HWY 110
 TIGARD, OREGON 97223
 PHONE: 503-689-4477
 FAX: 503-689-0752
 WWW.TIGARD-OR.GOV

Murray, Smith & Associates, Inc.
 Engineers/Planners
 Portland, Oregon

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

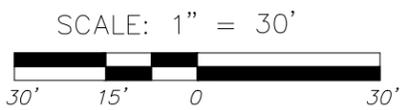
FY 2015-16 PAVEMENT MANAGEMENT PROGRAM
Pavement Rehabilitation
Striping Details

SHEET	CS1
OF	39
FILE NO	56



Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:01:19 PM from the 40 S1 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-NIMBUS.DWG

Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

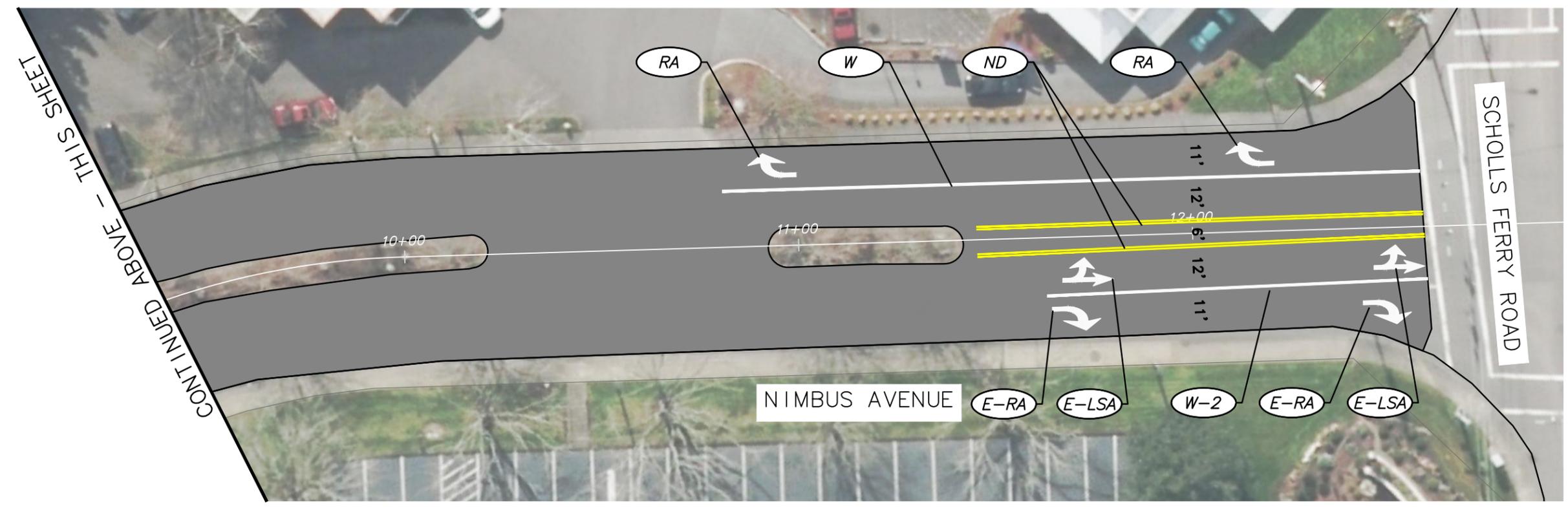
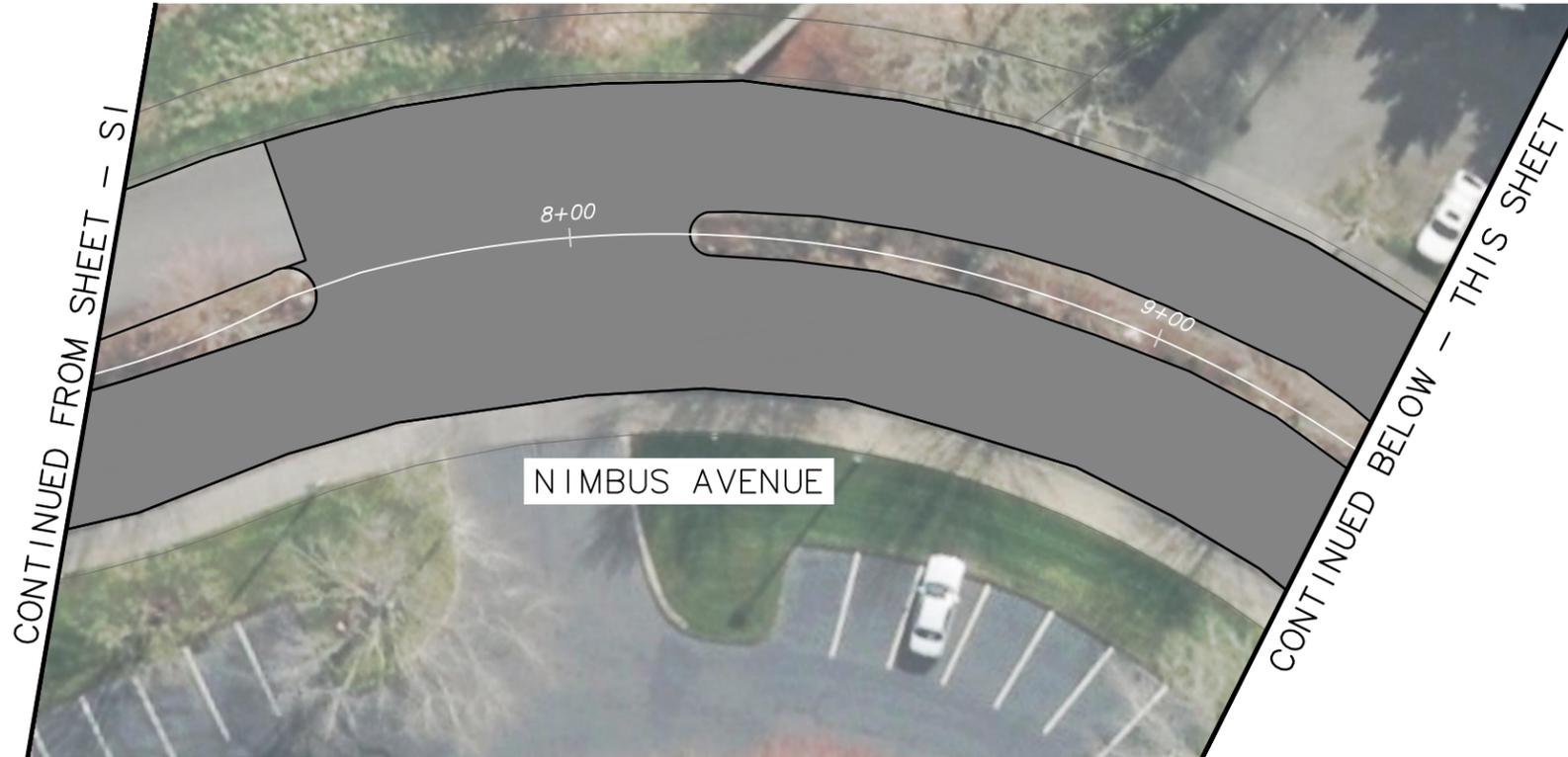
13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

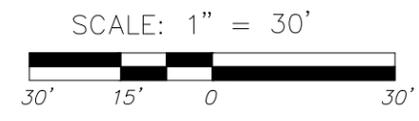
**Pavement Rehabilitation
Striping Layout - Nimbus Avenue**

SHEET	S1
OF	40
	56



Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:01:33 PM from the 41_S2 layout tab
File Name: Path: G:\PDX_PROJECTS\141623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-NIMBUS.DWG

Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

Pavement Rehabilitation

Striping Layout - Nimbus Avenue

SHEET
S2
41
OF
56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL



CONTINUED BELOW - THIS SHEET



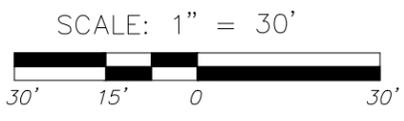
CONTINUED ON SHEET - S4



CONTINUED ABOVE - THIS SHEET

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:01:58 PM from the 42_S3 layout tab
 File Name: Path: G:\POX_PROJECTS\14_1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-SPRINGWOOD.DWG

Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

MSA
Murray, Smith & Associates, Inc.
Engineers/Planners
Portland, Oregon

TIGARD

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

Pavement Rehabilitation

Striping Layout - Springwood Drive

SHEET	S3
OF	42
	56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:02:16 PM from the 43 S4 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-SPRINGWOOD.DWG



CONTINUED ON SHEET - S5



Revisions and Addendums			
Description	Date	No.	By

SCALE: 1" = 30'

TIGARD

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

MSA

Murray, Smith & Associates, Inc.
Engineers/Planners
Portland, Oregon

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

Pavement Rehabilitation

Striping Layout - Springwood Drive

SHEET
S4
43
OF
56

CONTINUED FROM SHEET - S3

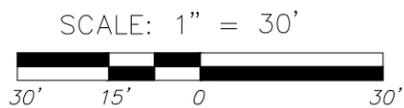
CONTINUED BELOW - THIS SHEET

CONTINUED ABOVE - THIS SHEET

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:02:36 PM from the 44_S5_layout.tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-SPRINGWOOD.DWG



Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

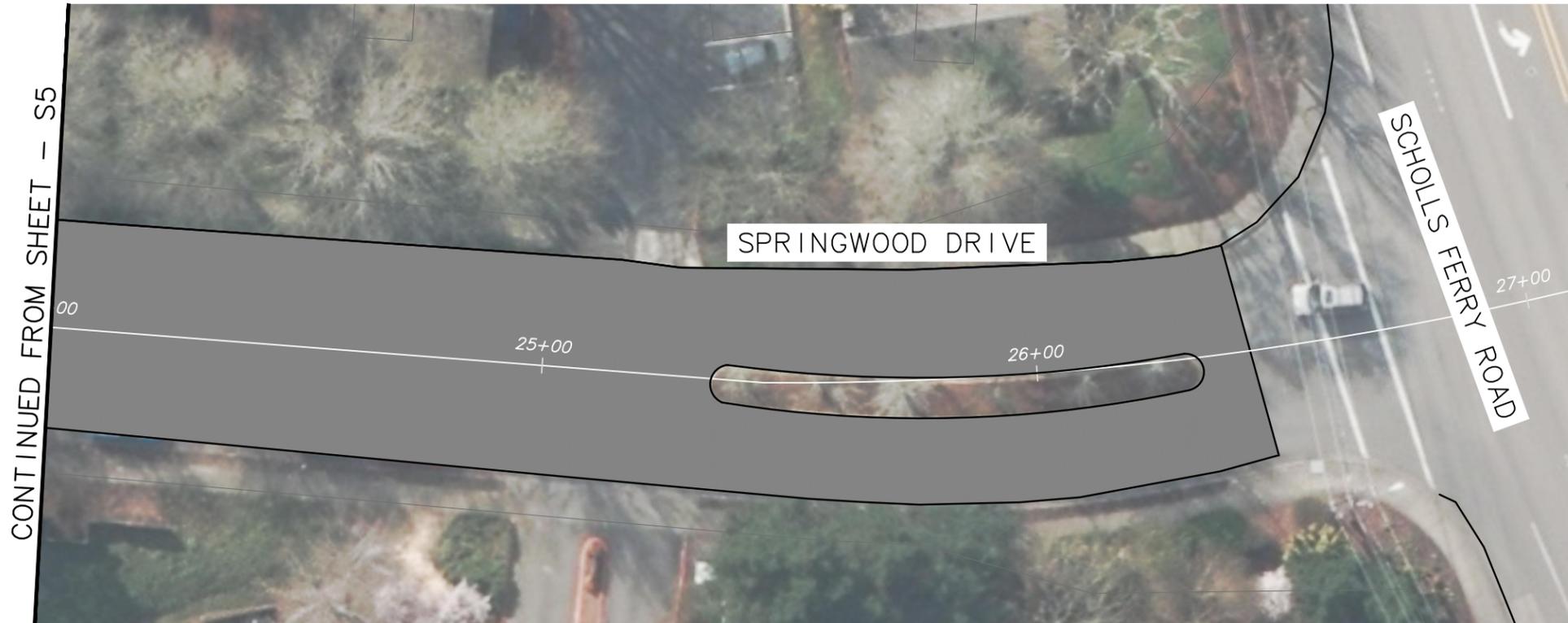
Pavement Rehabilitation

Striping Layout - Springwood Drive

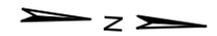
SHEET	S5
OF	56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

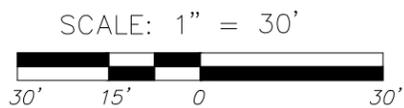
Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:02:48 PM from the 45_S6 layout tab
File Name: Path: G:\PDX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-SPRINGWOOD.DWG



CONTINUED FROM SHEET - S5



Revisions and Addendums			
Description	Date	No.	By



ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

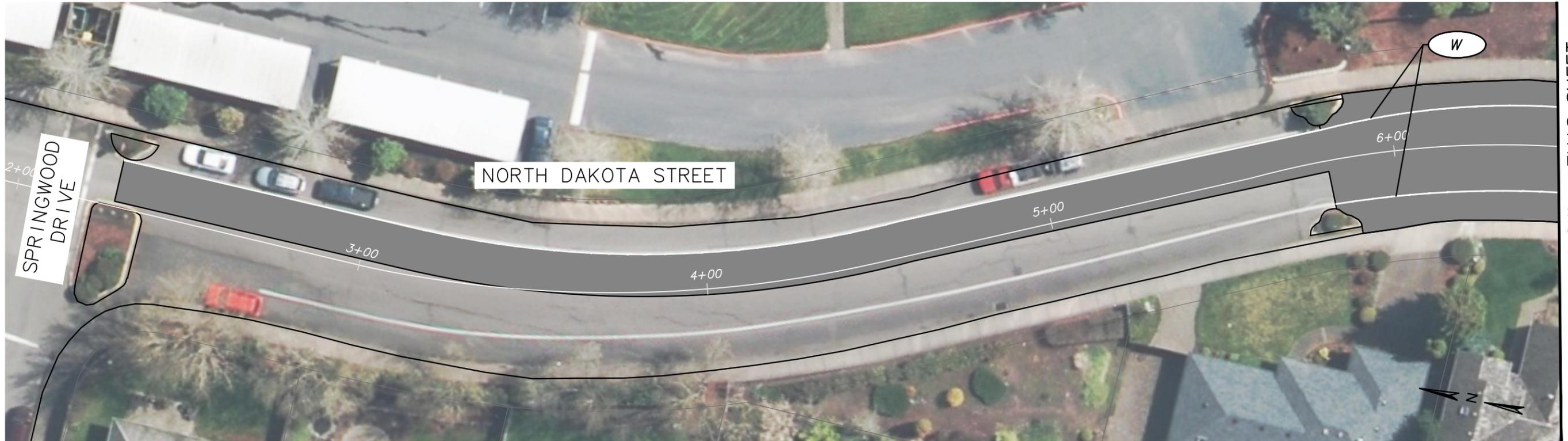


DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

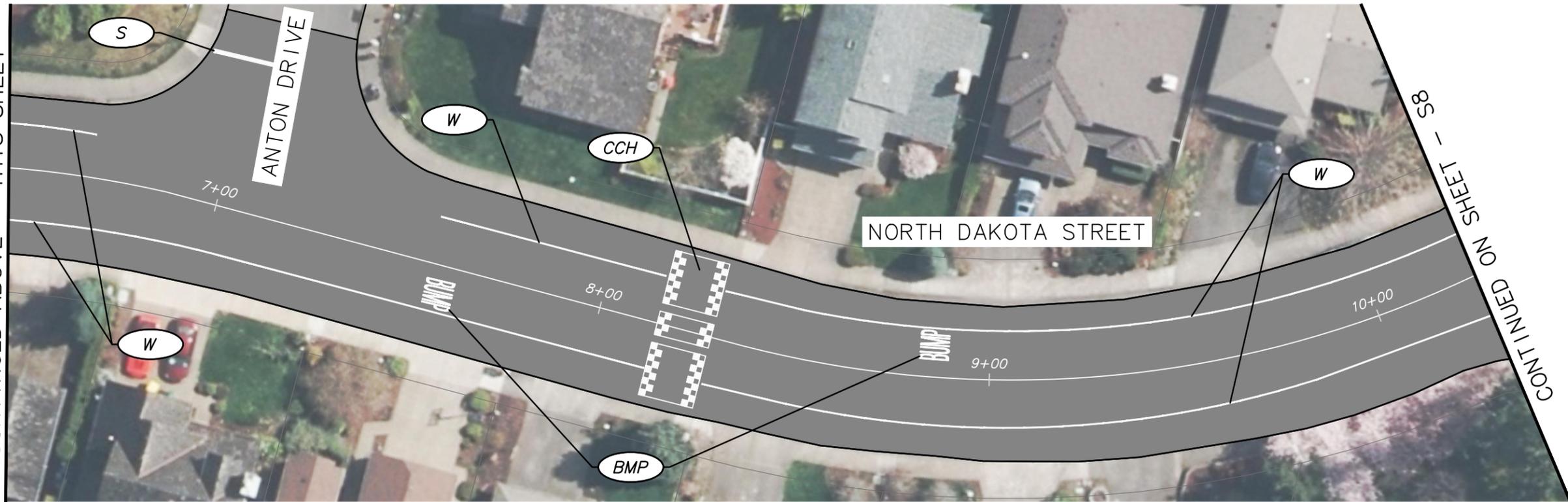
FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

Pavement Rehabilitation Striping Layout - Springwood Drive

SHEET
S6
45
OF
56

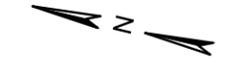


CONTINUED BELOW - THIS SHEET



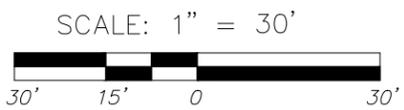
CONTINUED ABOVE - THIS SHEET

CONTINUED ON SHEET 88 - 88



Plotted by: SINGLAIR BJR on Tuesday, April 07, 2015 at 1:03:16 PM from the 46_S7 layout tab
File Name: Path: G:\POX_PROJECTS\141623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-NORTH_DAKOTA.DWG

Revisions and Addendums			
Description	Date	No.	By



ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV



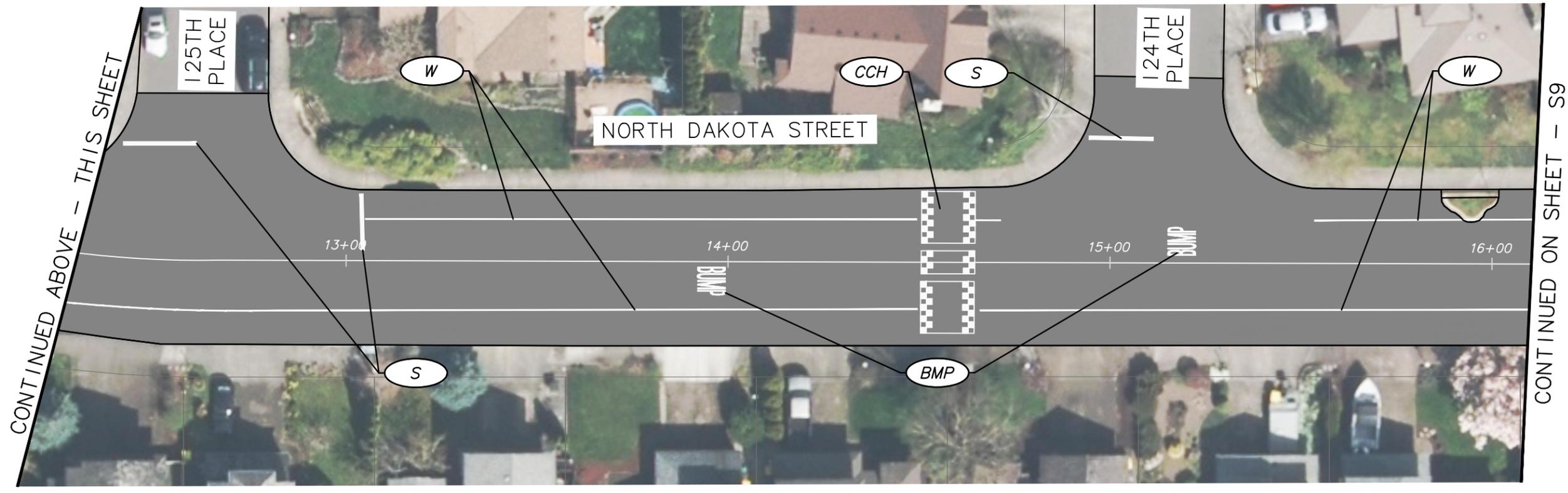
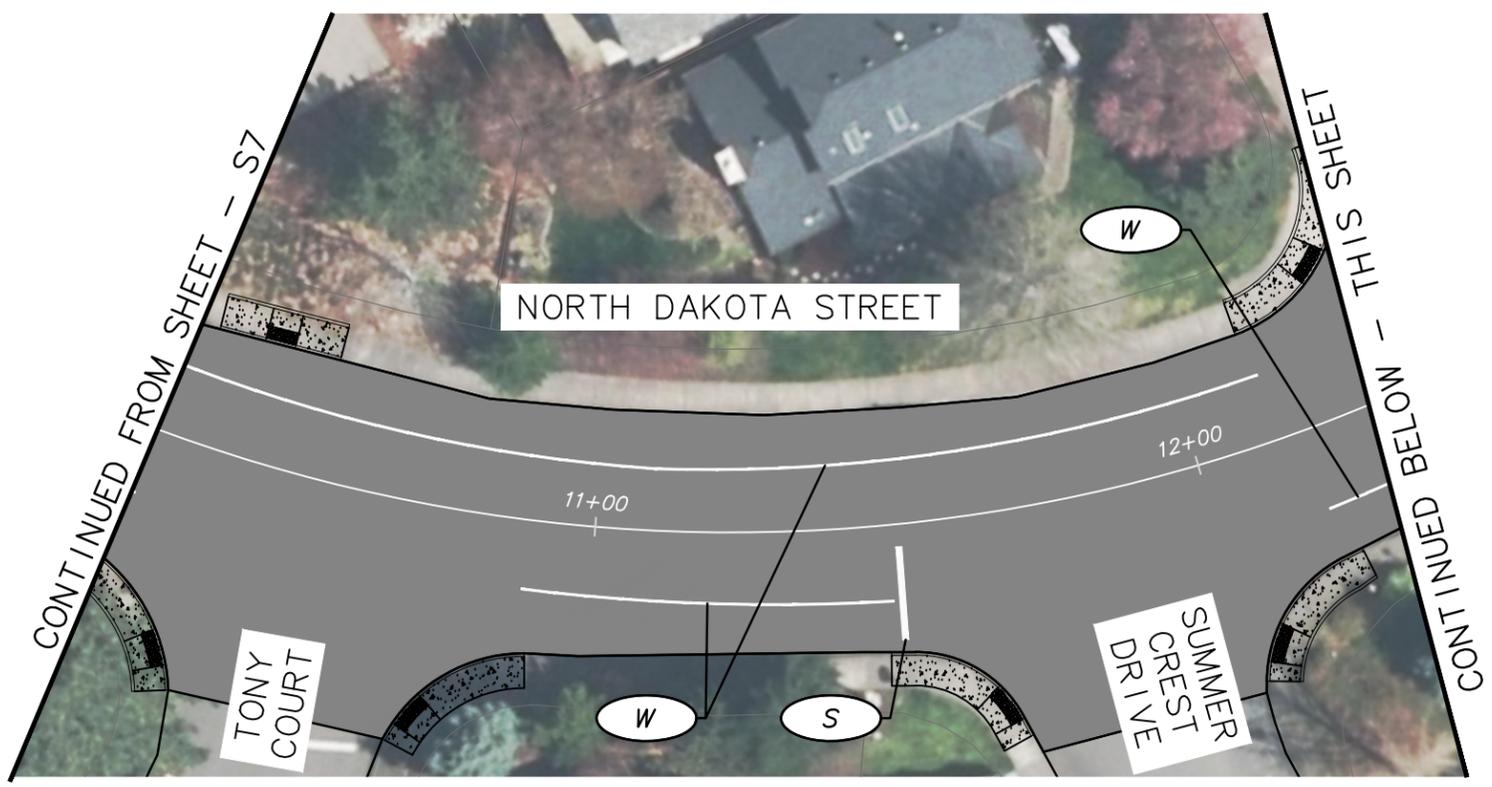
DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

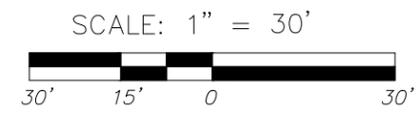
Pavement Rehabilitation Striping Layout - North Dakota Street

SHEET
S7
46
OF
56

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:03:35 PM from the 47_S8_layout.tab
File Name: Path: G:\POX_PROJECTS\14_1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-NORTH_DAKOTA.DWG



Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

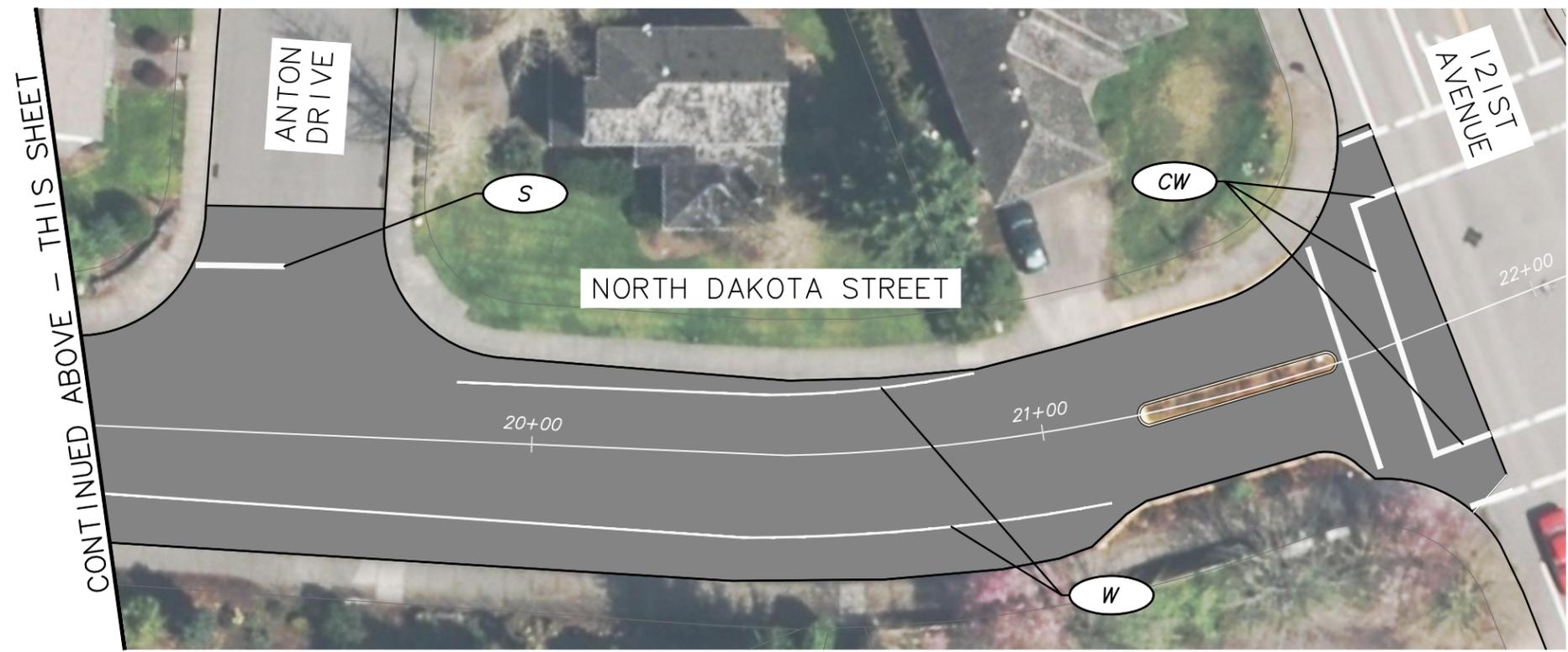
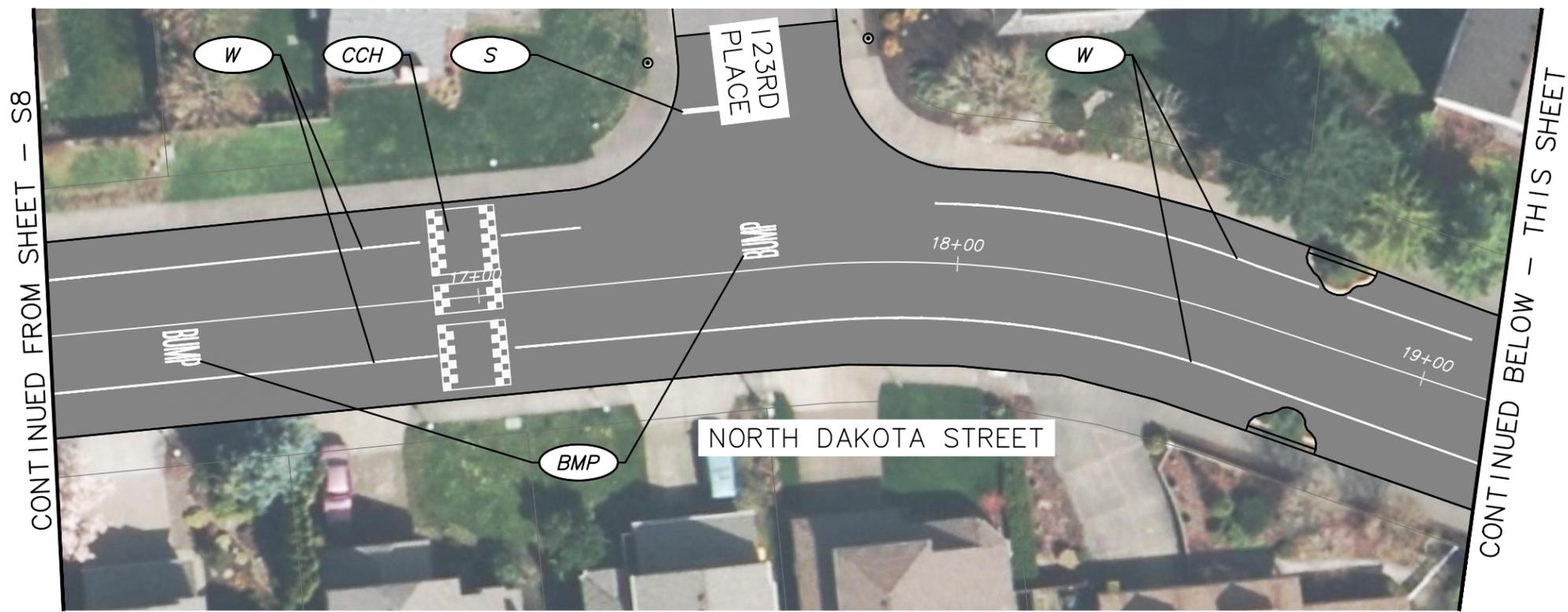
FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

**Pavement Rehabilitation
Striping Layout - North Dakota Street**

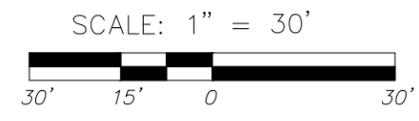
SHEET	S8
OF	56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:03:57 PM from the 48_S9_layout.tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-NORTH_DAKOTA.DWG



Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

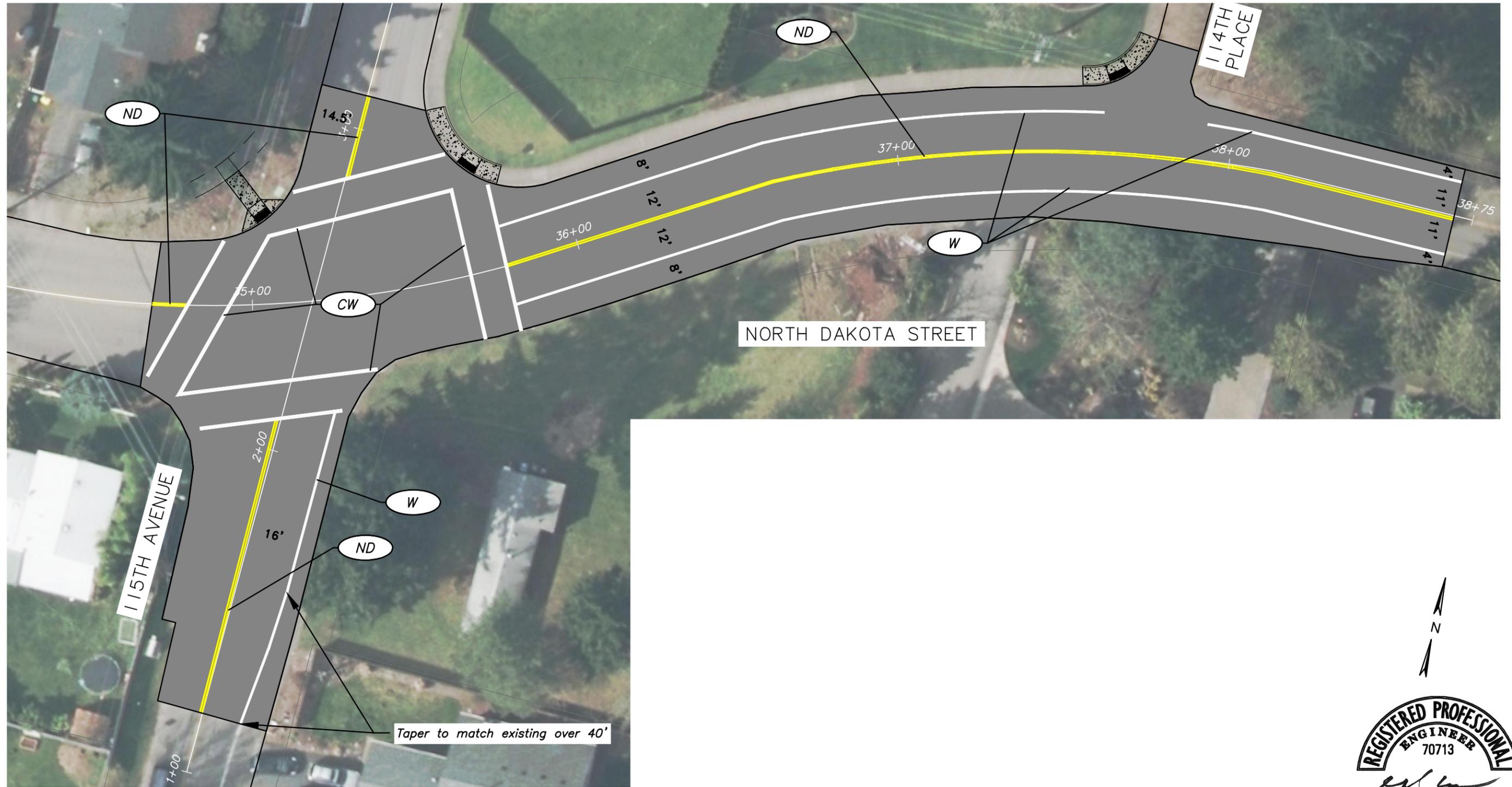
FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

**Pavement Rehabilitation
Striping Layout - North Dakota Street**

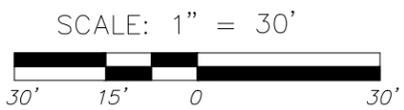
SHEET	S9
OF	48
	56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:04:10 PM from the 49_S10 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-NORTH_DAKOTA.DWG



Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

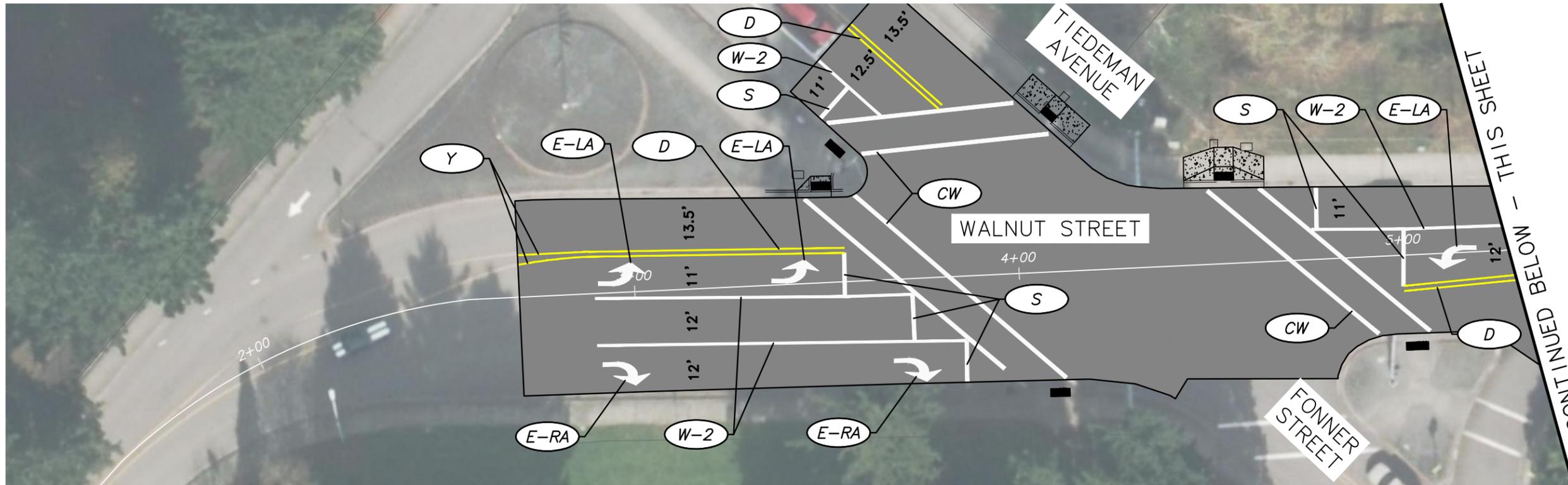
13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

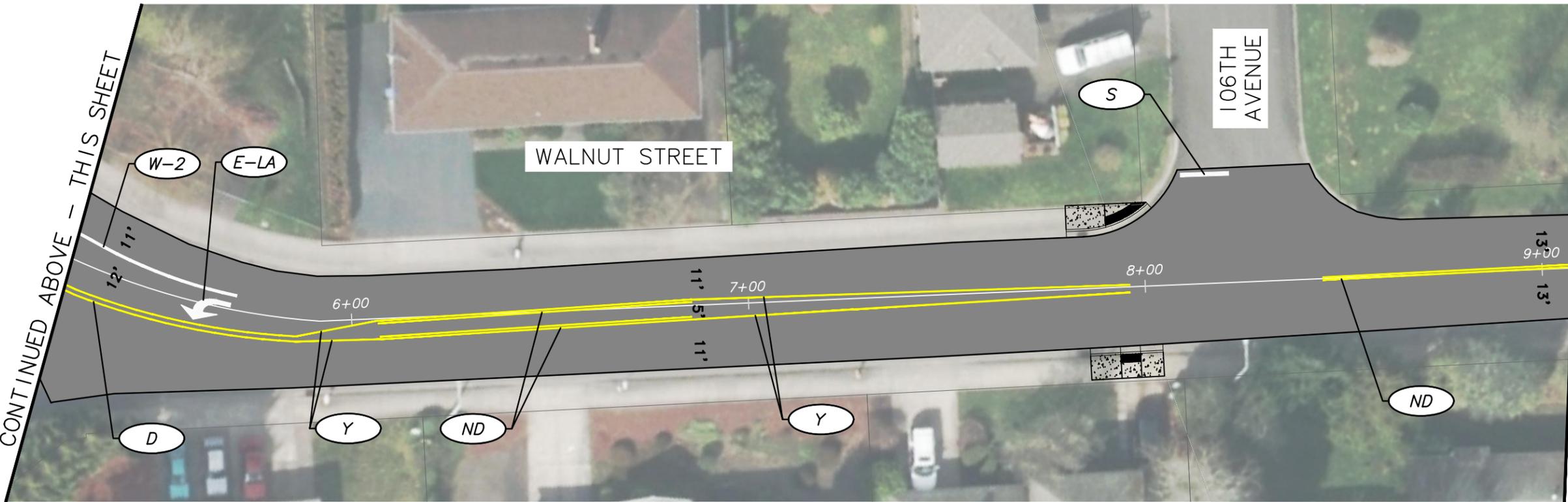
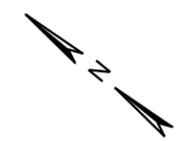
**Pavement Rehabilitation
Striping Layout - North Dakota Street**

SHEET
S10
49
OF
56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL



CONTINUED BELOW - THIS SHEET



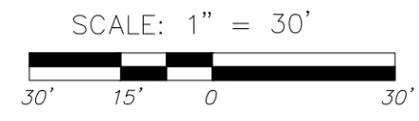
CONTINUED ABOVE - THIS SHEET

CONTINUED ON SHEET - S12



Plotted by: SINGLAI, BJRR on Tuesday, April 07, 2015 at 1:04:47 PM from the 50 S11 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-WALNUT.DWG

Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

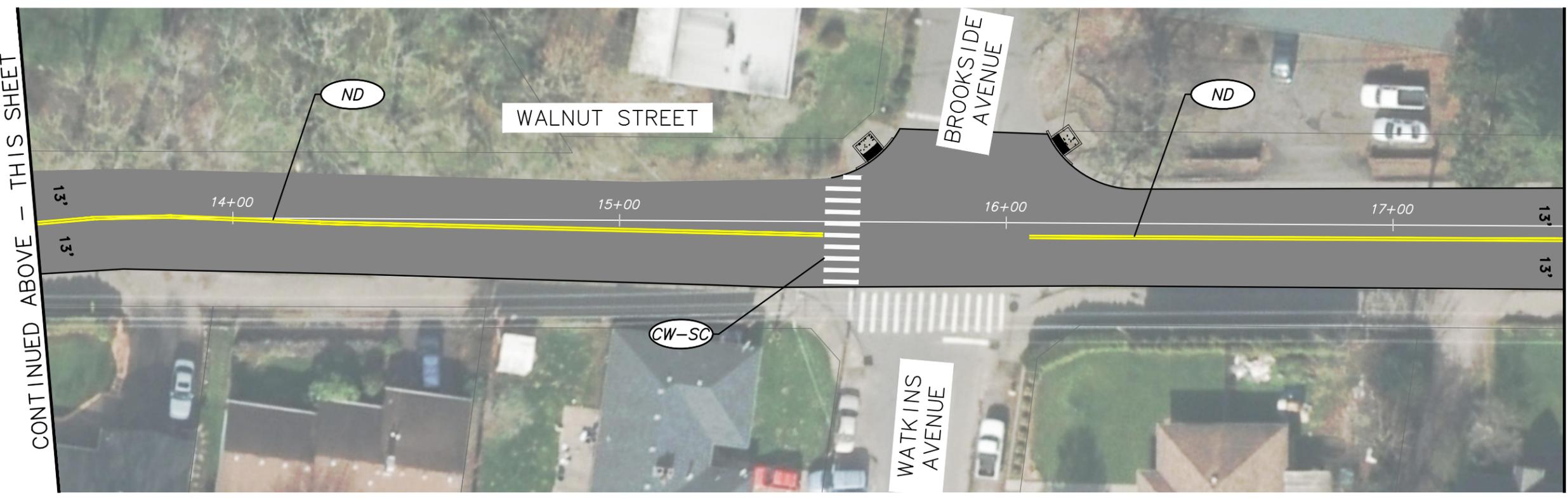
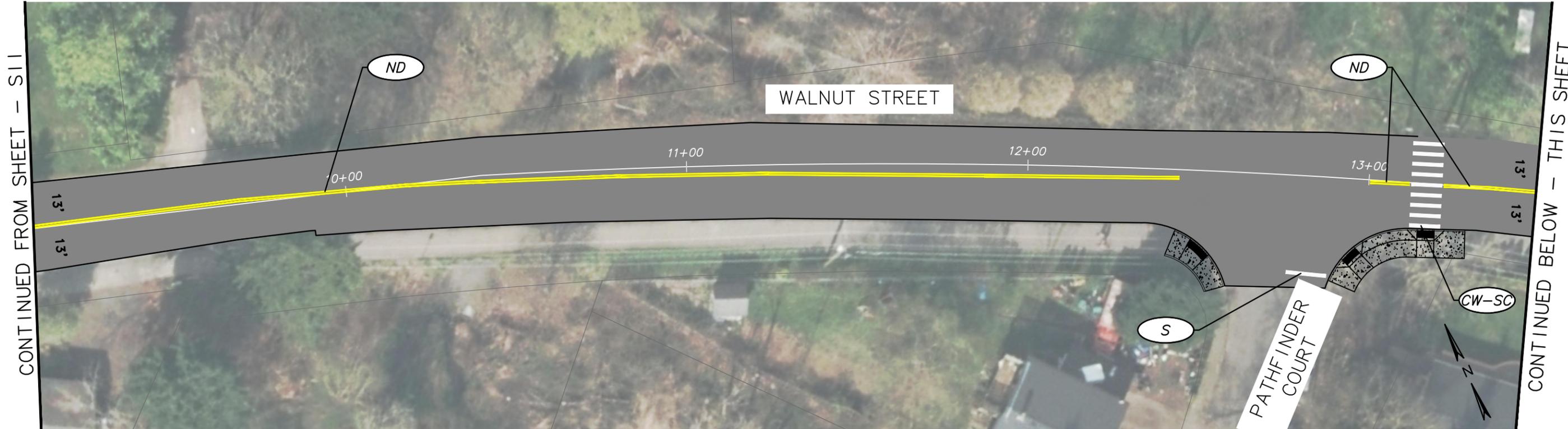
Pavement Rehabilitation

Striping Layout - Walnut Street

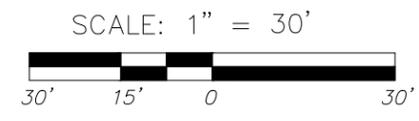
SHEET	S11
OF	56

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:05:07 PM from the 51_S12 layout tab
File Name: Path: G:\POX_PROJECTS\14_1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-WALNUT.DWG



Revisions and Addendums			
Description	Date	No.	By



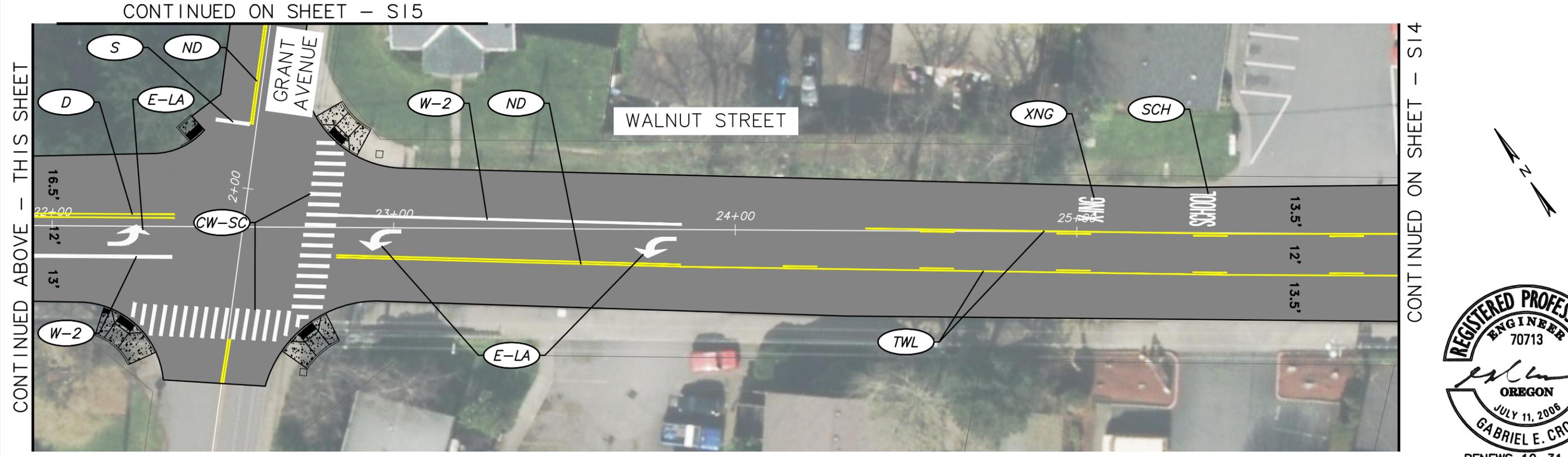
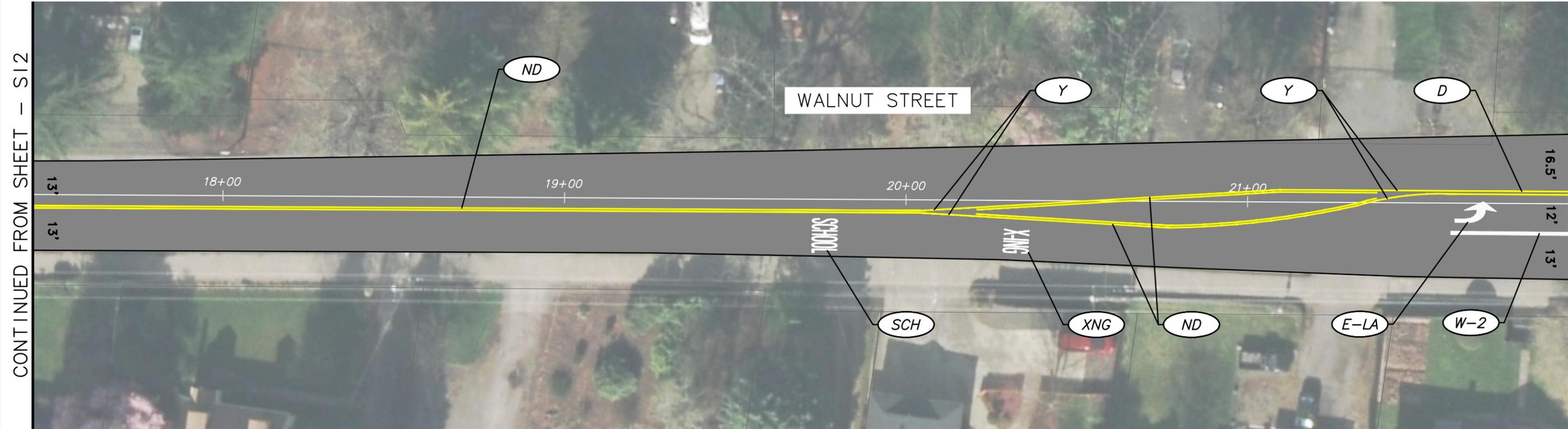
TIGARD
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

MSA
Murray, Smith & Associates, Inc.
Engineers/Planners
Portland, Oregon

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM
Pavement Rehabilitation
Striping Layout - Walnut Street

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:05:27 PM from the 52_S13 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-WALNUT.DWG



Revisions and Addendums			
Description	Date	No.	By

SCALE: 1" = 30'

TIGARD
ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT
13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

MSA
Murray, Smith & Associates, Inc.
Engineers/Planners
Portland, Oregon

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

Pavement Rehabilitation

Striping Layout - Walnut Street

SHEET	S13
OF	56



CONTINUED FROM SHEET - S12

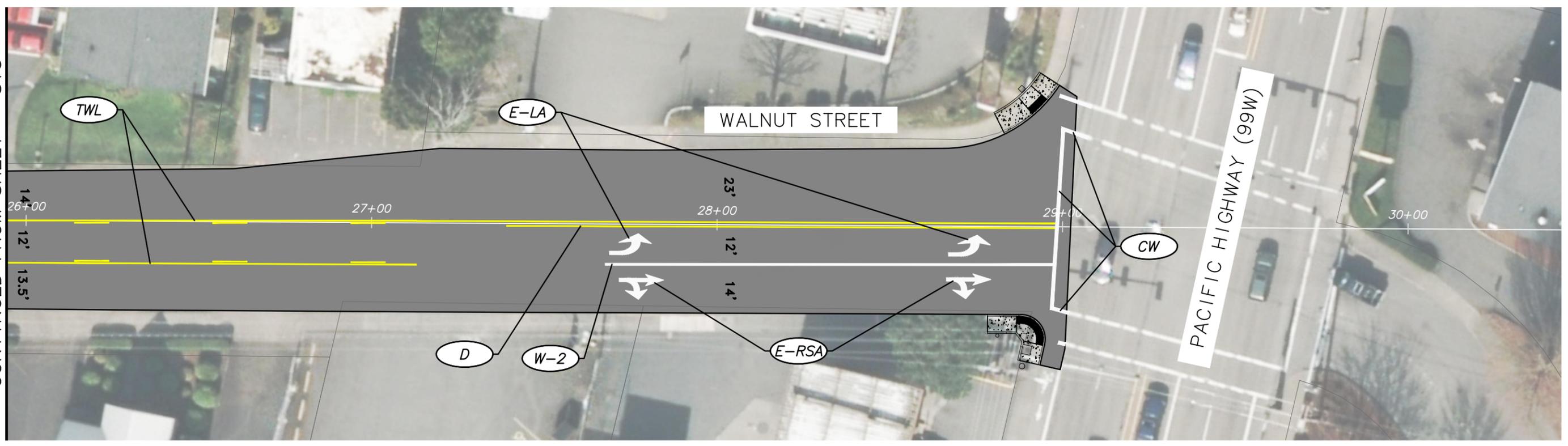
CONTINUED BELOW - THIS SHEET

CONTINUED ON SHEET - S15

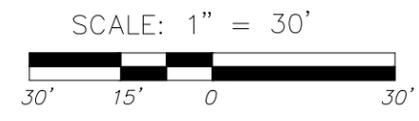
CONTINUED ON SHEET - S14

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:05:39 PM from the 53 S14 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-WALNUT.DWG

CONTINUED FROM SHEET - S13



Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

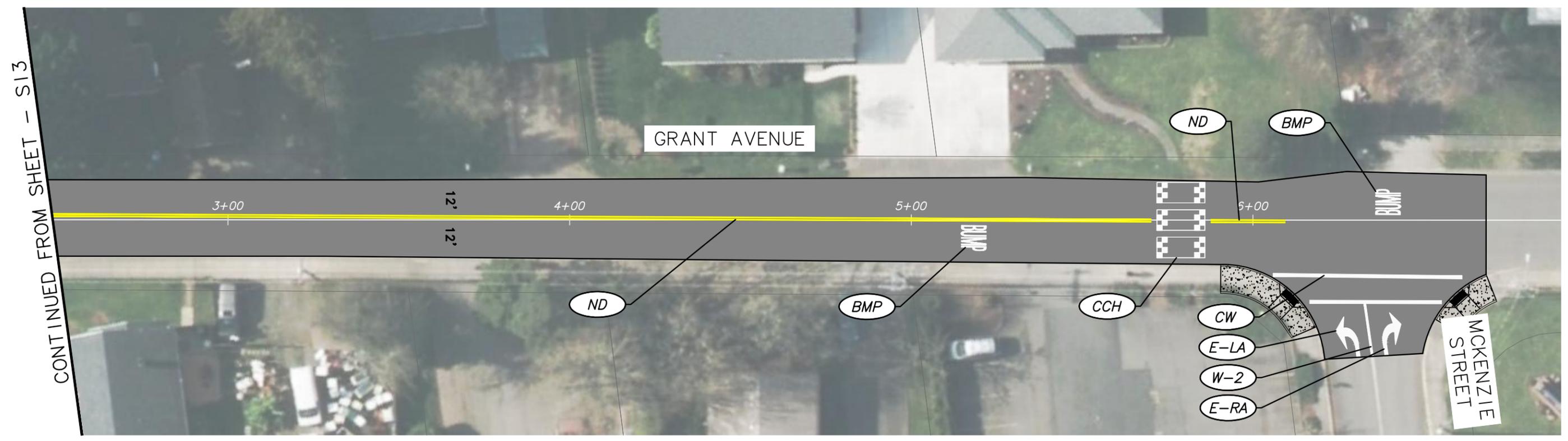
Pavement Rehabilitation

Striping Layout - Walnut Street

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

SHEET S14
53 OF 56

Plotted by: SINGLAIR_BURR on Tuesday, April 07, 2015 at 1:05:58 PM from the 54 S15 layout tab
File Name: Path: G:\PDX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-GRANT.DWG



Revisions and Addendums			
Description	Date	No.	By

SCALE: 1" = 30'

TIGARD

ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

MSA

Murray, Smith & Associates, Inc.
Engineers/Planners
Portland, Oregon

DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

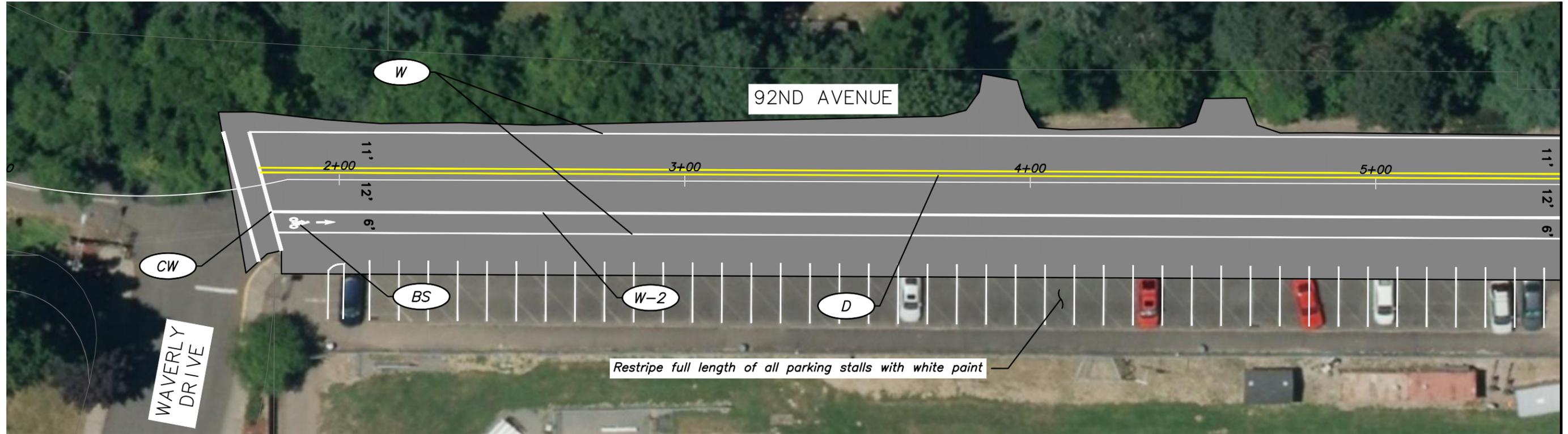
FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

Pavement Rehabilitation

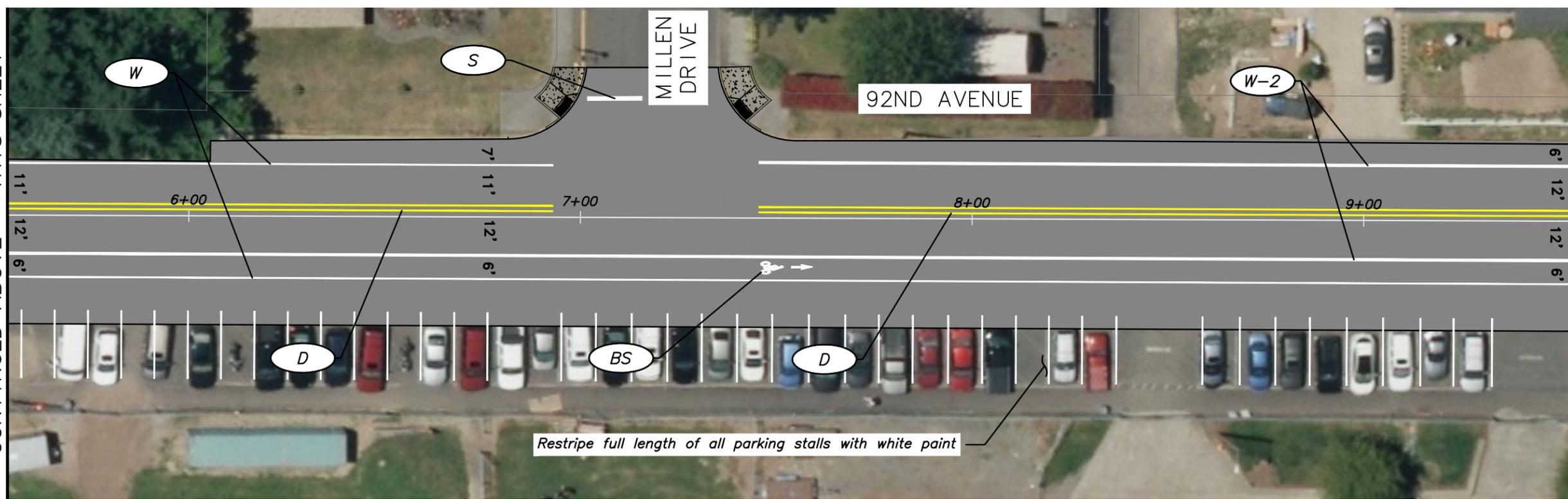
Striping Layout- Grant Avenue

Plotted by: SINGLAR BURR on Tuesday, April 07, 2015 at 1:06:24 PM from the 55 S16 layout tab
File Name: Path: G:\POX_PROJECTS\14\1623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-92ND.DWG

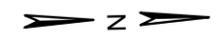
CONTINUED ABOVE - THIS SHEET



CONTINUED BELOW - THIS SHEET



CONTINUED ON SHEET - S17



Revisions and Addendums			
Description	Date	No.	By

SCALE: 1" = 30'

ENGINEERING DIVISION
 PUBLIC WORKS DEPARTMENT
 13125 S.W. HALL BLVD.
 TIGARD, OREGON 97223
 VOICE: 503-639-4171
 FAX: 503-624-0752
 WWW.TIGARD-OR.GOV

Murray, Smith & Associates, Inc.
 Engineers/Planners
 Portland, Oregon

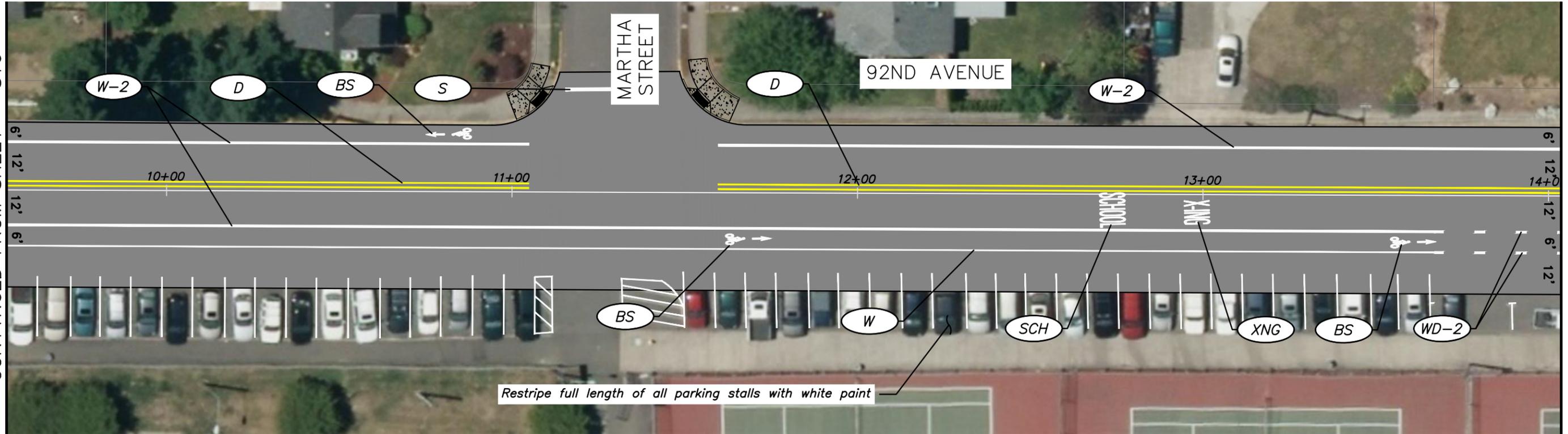
DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM
Pavement Rehabilitation
Striping Layout - North Dakota Street & 115th Avenue

SHEET
 S16
 55
 OF
 56

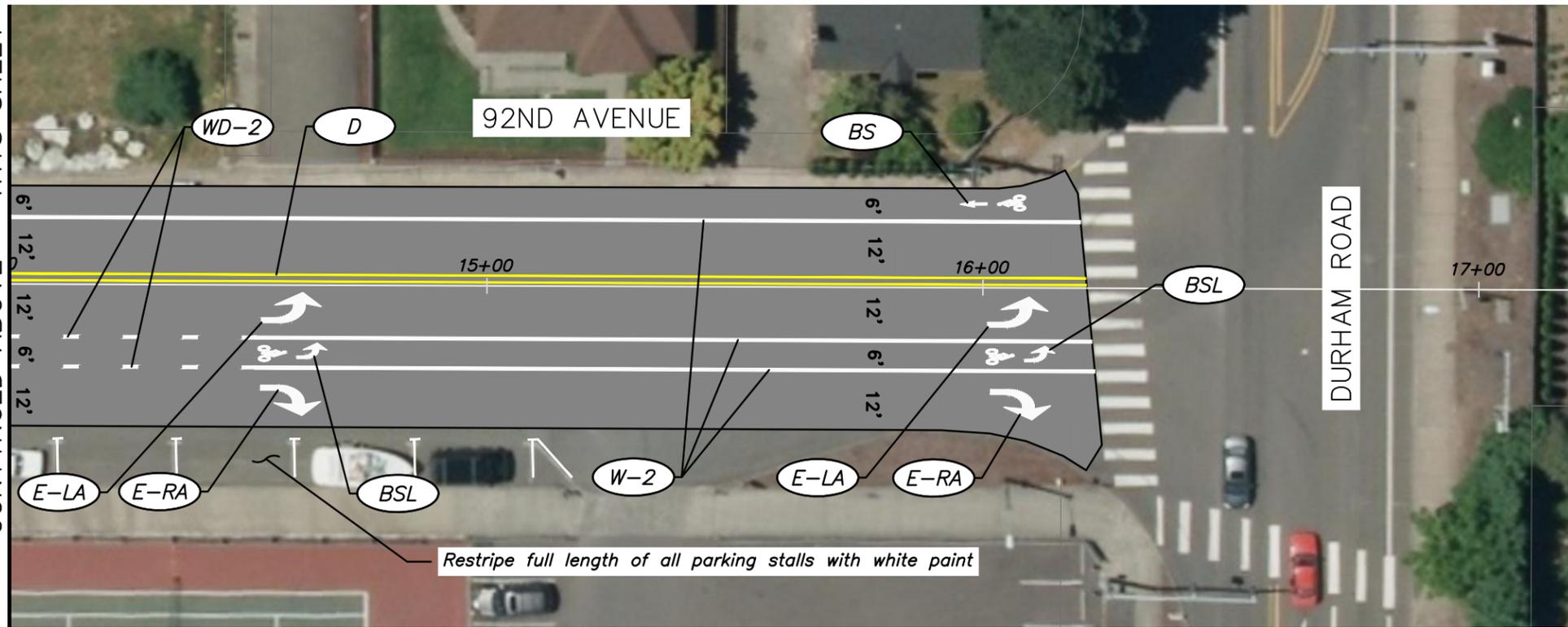
Plotted by: SINGLAIR BURR on Tuesday, April 07, 2015 at 1:06:38 PM from the 56 S17 layout tab
File Name: Path: G:\POX_PROJECTS\141623 - PAVEMENT MANAGEMENT CITY OF TIGARD\CAD\SHEETS\14-1623-OR-92ND.DWG

CONTINUED FROM SHEET - S16

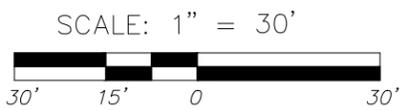


CONTINUED BELOW - THIS SHEET

CONTINUED ABOVE - THIS SHEET



Revisions and Addendums			
Description	Date	No.	By



**ENGINEERING DIVISION
PUBLIC WORKS DEPARTMENT**

13125 S.W. HALL BLVD.
TIGARD, OREGON 97223
VOICE: 503-639-4171
FAX: 503-624-0752
WWW.TIGARD-OR.GOV

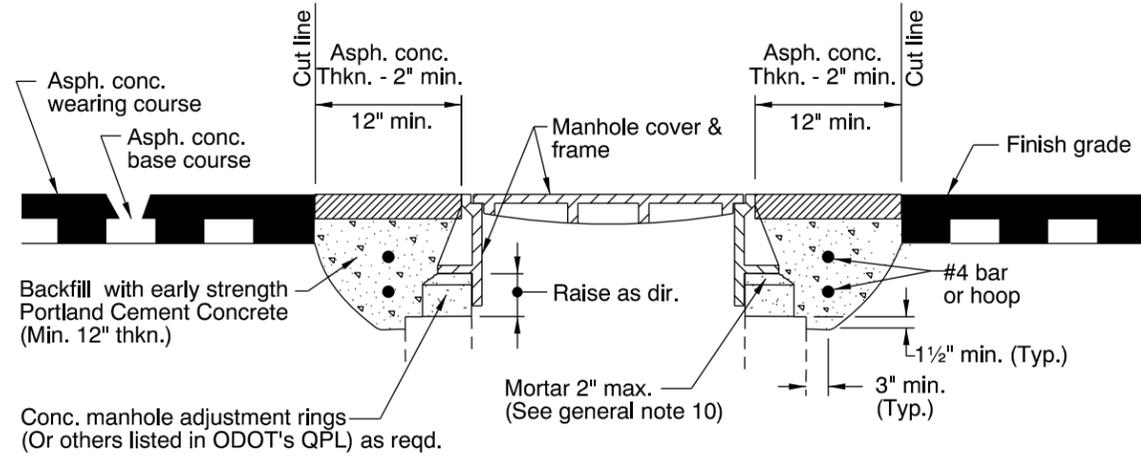
DESIGN: SBB DRAWN: SBB CHECK: GEC PROJECT NO: 2015-95001 OL

FY 2015-16 PAVEMENT MANAGEMENT PROGRAM

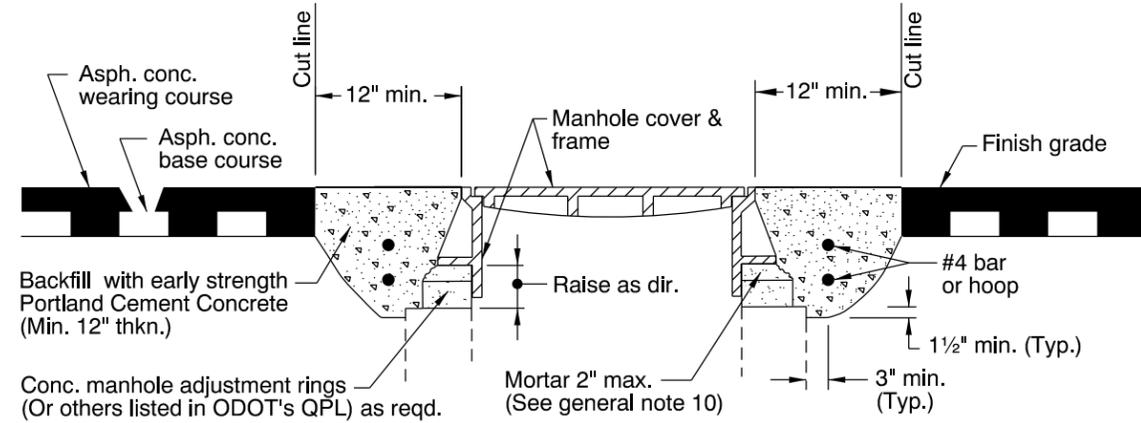
**Pavement Rehabilitation
Striping Layout - 92nd Avenue**

SHEET
S17
56
OF
56

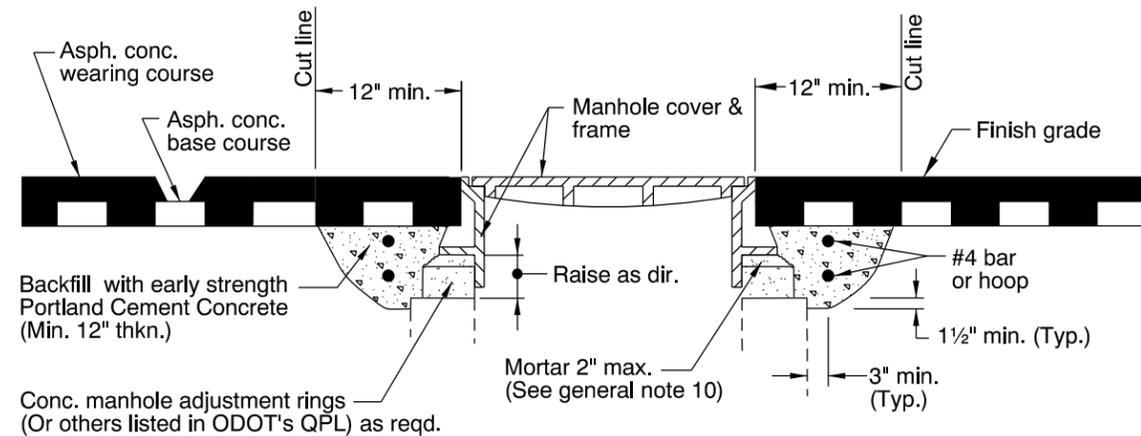
rd360.dgn 14-JUL-2014



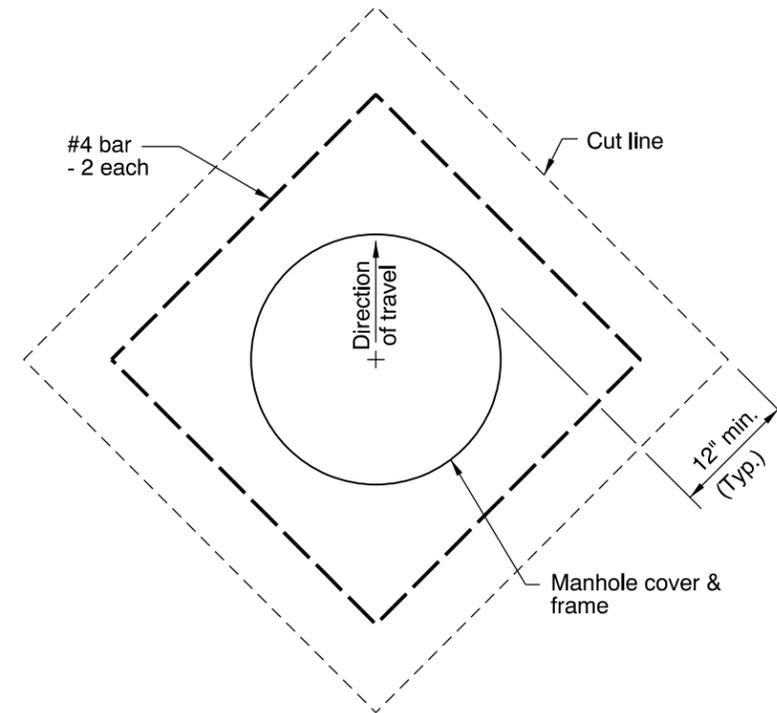
METHOD "A"



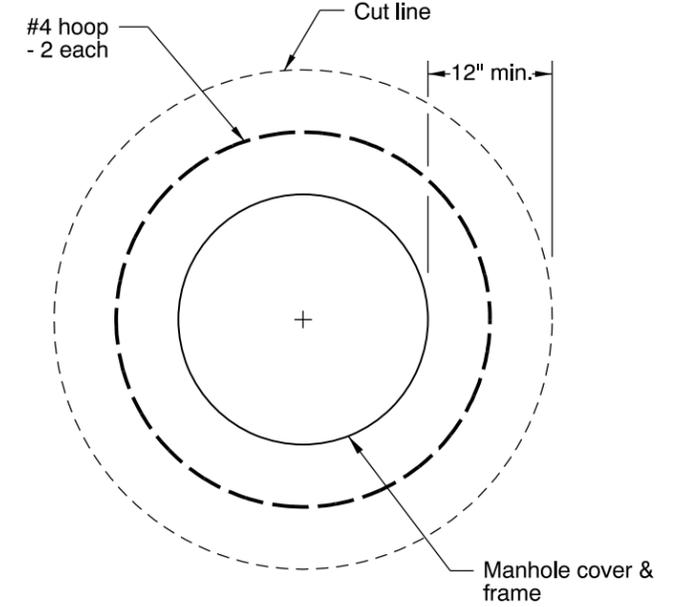
METHOD "B"



METHOD "C"



PLAN SQUARE CUT



PLAN CIRCULAR CUT

GENERAL NOTES FOR ALL DETAILS:

1. Cover manhole with building paper and const. asph. conc. base course and wearing courses.
2. Saw cut square or circular excavation around manhole 12" min. from manhole frame.
3. Raise manhole cover and frame to finish grade by installing conc. manhole adjustment rings and leveling mortar.
4. Backfill with early strength Portland Cement Concrete. All concrete shall be commercial grade concrete.
5. Protect from traffic loading until conc. has cured to 3000 psi.
6. Apply tack coat to edges of existing pavement before installing patch.
7. Finish joint with asphalt seal and sand.
8. See Std. Drg. RD336 for manhole steps details.
9. See appropriate manhole standard drawings for details not shown.
10. Use epoxy for synthetic grade rings.
11. See Std. Drg. RD336 for tracer wire details.
12. See Std. Drg. RD356 for manhole cover and frame.

CALC. BOOK NO. N/A BASELINE REPORT DATE 24-JAN-2011

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

OREGON STANDARD DRAWINGS	
MANHOLE FRAME ADJUSTMENT	
2015	
DATE	REVISION DESCRIPTION

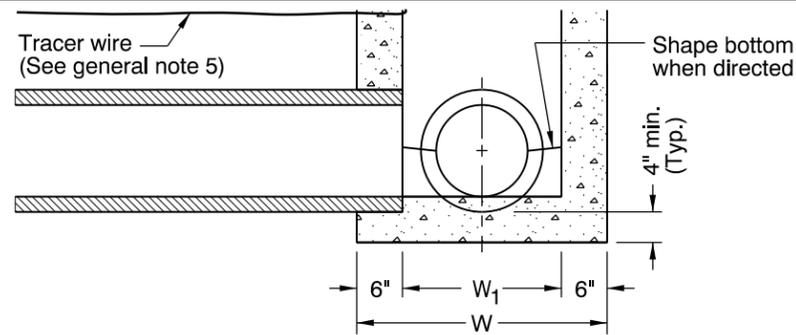
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

RD360

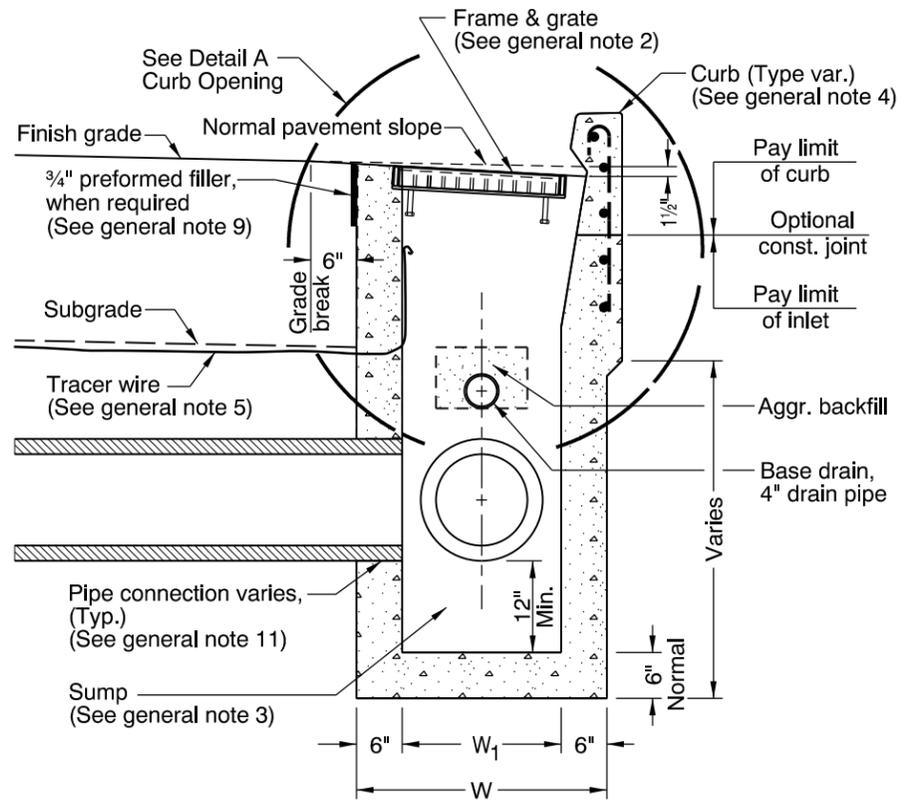
rd366.dgn 14-JUL-2014

GENERAL NOTES FOR ALL DETAILS:

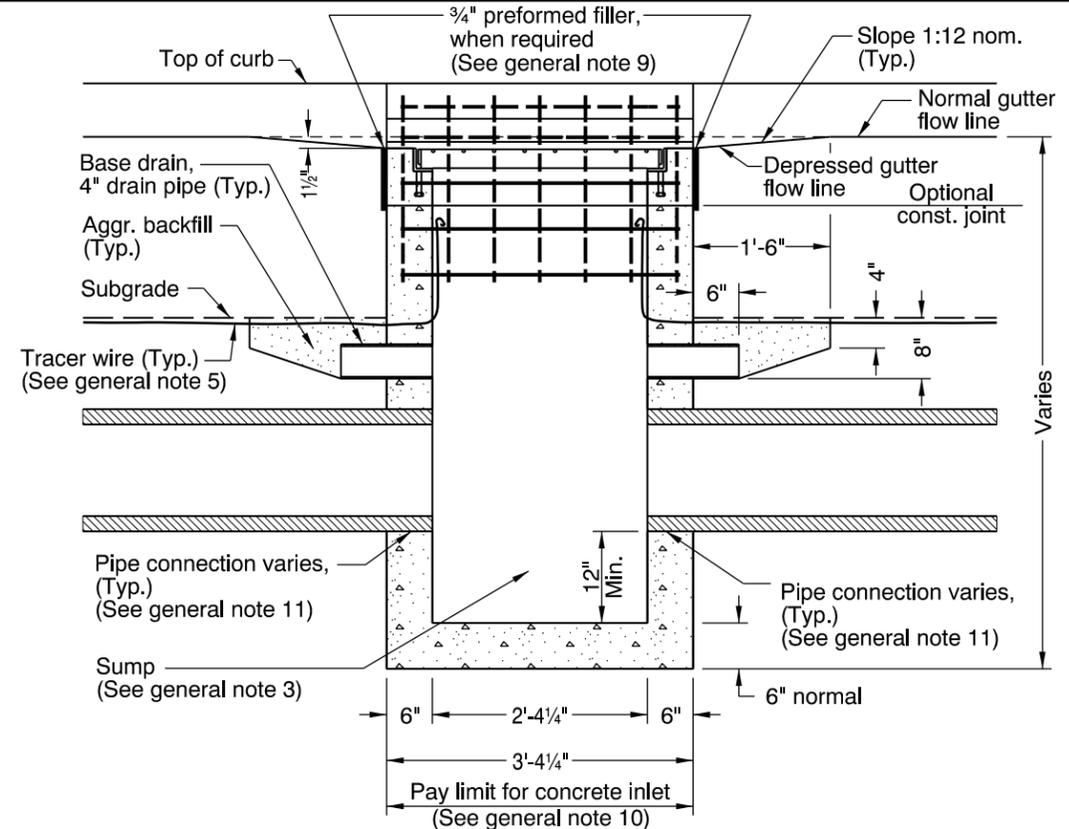
- Where precast inlets are used as an alternate to cast-in-place inlets, a 4" compacted leveling bed of sand or 1/4"-0 crushed aggregate shall be provided. All precast inlets shall conform to requirements of ASTM C913.
- Graphics show CG-1 inlet with Type 2 grate. See Table A for inlet dimensions. Type 1 grate allowed only in locations not subject to bicycle or pedestrian use. For frame and grate details, see Std. Drg. RD365.
- Provide sump only where shown on plans, and allowed by jurisdiction. See Detail B for inlet without sump.
- For curb details, see Std. Drgs. RD700 & RD701.
- See Std. Drg. RD336 for tracer wire details, or approved alternate.
- Max. pipe diameter varies with pipe material.
- Location, elevation, diameter, slope, and number of pipe(s) varies, see project plans.
- All concrete shall be commercial grade concrete.
- 3/4" preformed filler (in concrete pavement or gutter only) to extend through thickness of concrete.
- See Std. Drg. RD363 for gutter transition section, when required. (Pay limit for inlet is expanded when curb and gutter are monolithic)
- See Std. Drg. RD339 for pipe to structure connections.



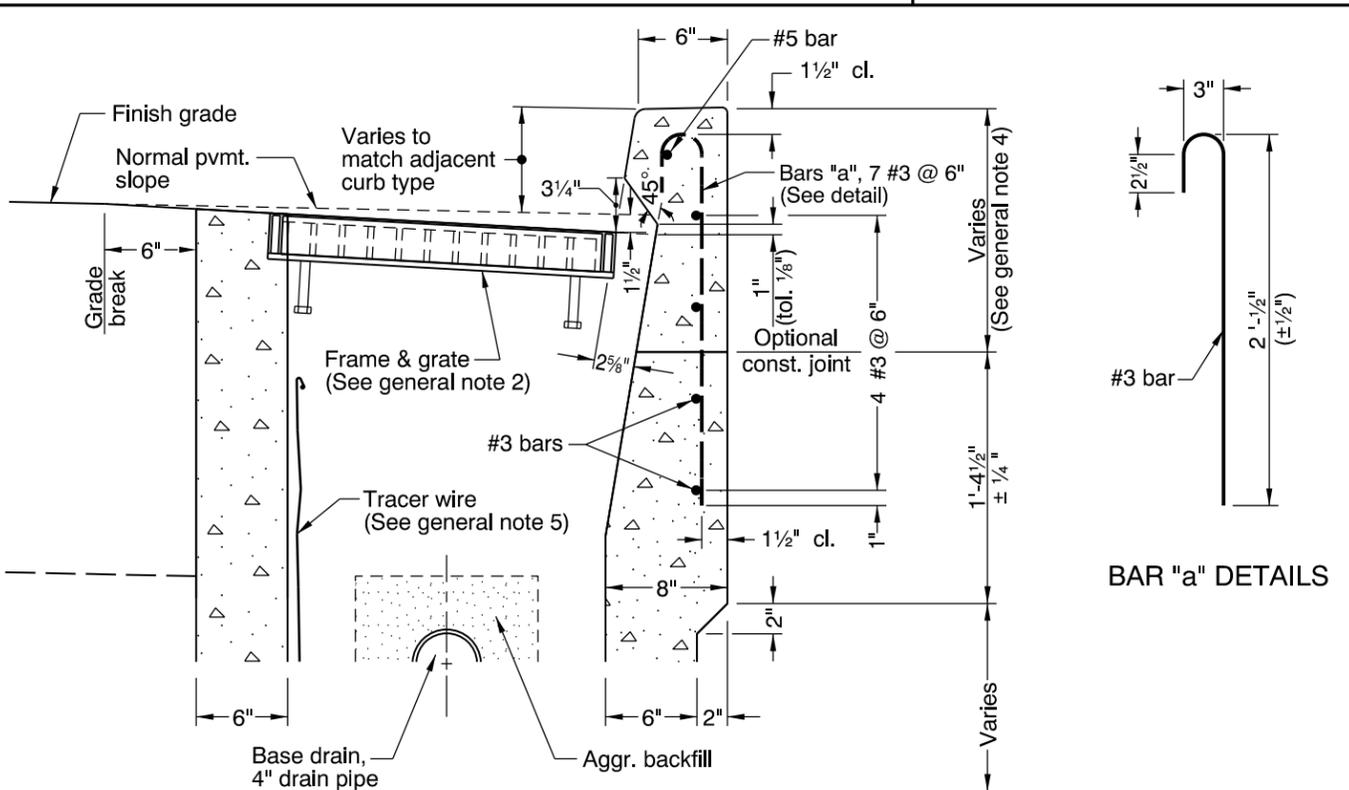
**DETAIL B
WITHOUT SUMP**



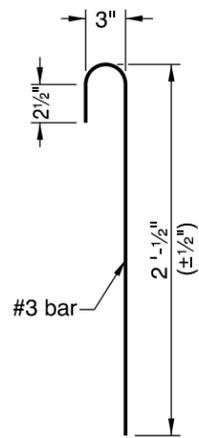
SECTION B - B



SECTION A - A



**DETAIL A
CURB OPENING**

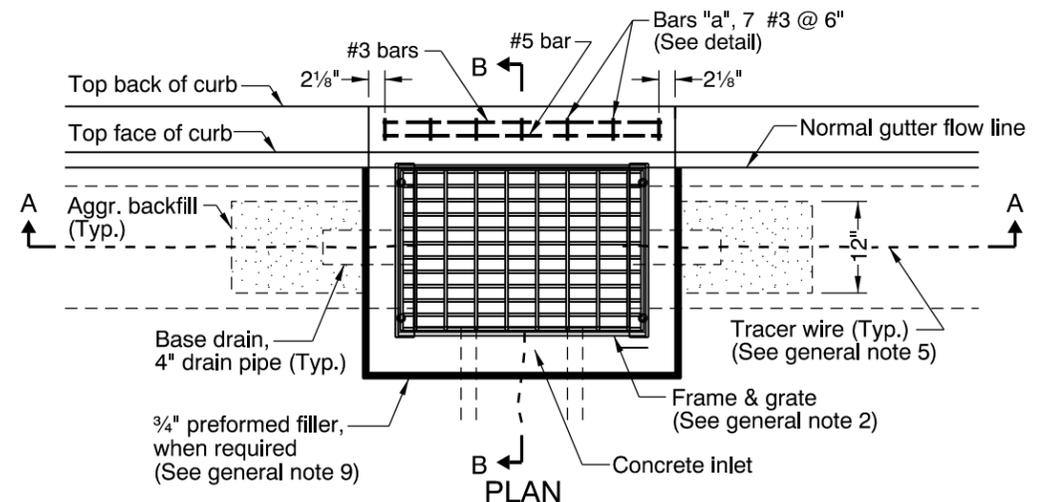


BAR "a" DETAILS

TABLE A		
INLET TYPE	W	W ₁
CG-1	2'-8 7/8"	1'-8 7/8"
CG-2	3'-3 3/8"	2'-3 3/8"

NOTES:

- #3 "a" bars to be placed during curb construction.
- All bars to be placed 1/2" clear of nearest face of concrete unless shown or noted otherwise.
- All bars shall be full length.



PLAN

CALC. BOOK NO. N/A	BASELINE REPORT DATE 14-JUL-2014
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
CONCRETE INLETS TYPE CG-1, CG-2	
2015	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

RD366

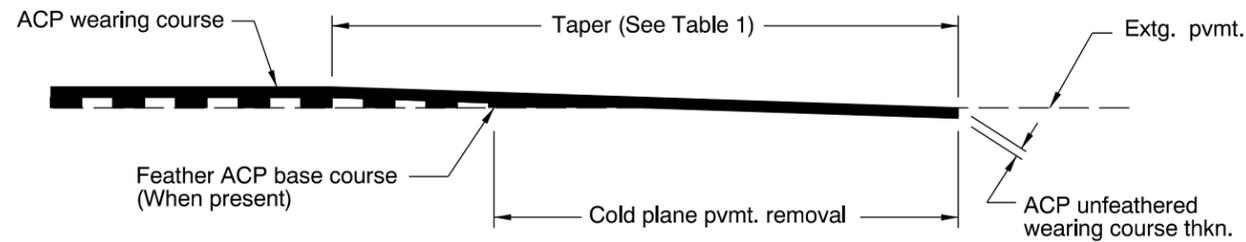
NOTE: Use details shown on Std. Drg. RD367 when curb inlet channels are used.

rd610.dgn 14-JUL-2014

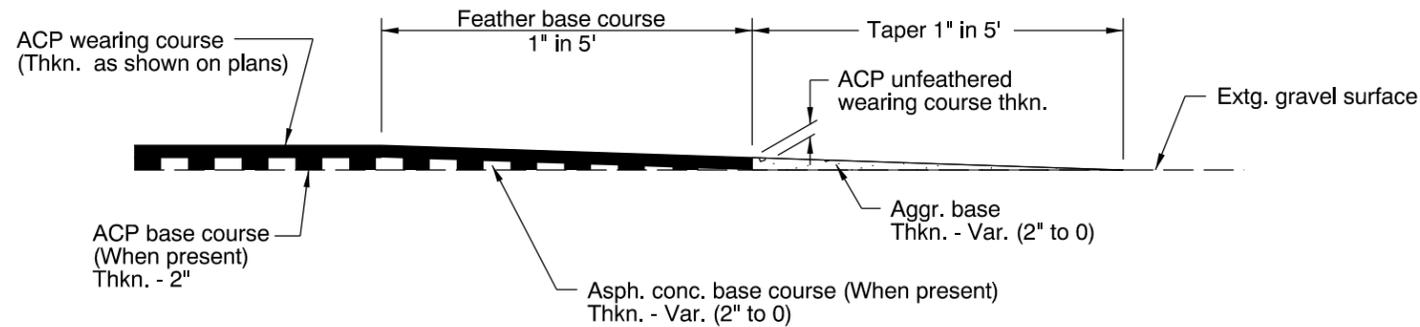
RD610

TABLE 1

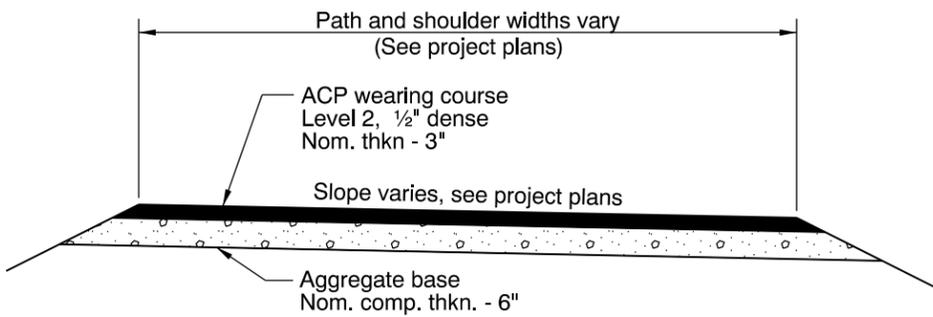
TAPER LENGTHS	
Posted Speed	Taper Length
< 45 mph	1" per 50'
≥ 45 mph	1" per 100'



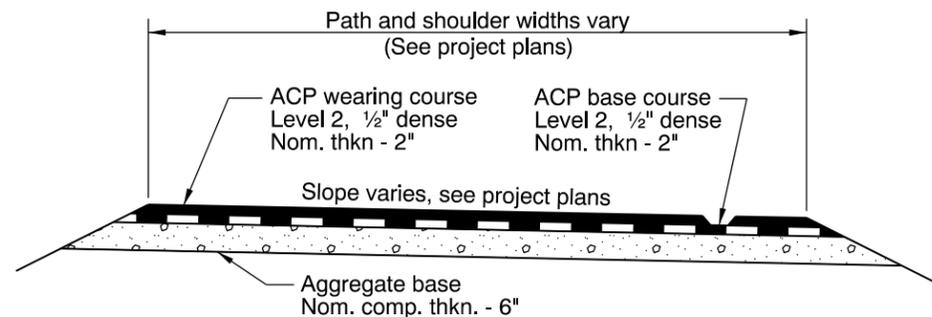
ACP PAVEMENT MATCH AT PROJECT ENDS OR BRIDGE ENDS WHEN NOT OVERLAYING THE BRIDGE



METHOD OF FEATHERING ACP PAVEMENT AT GRAVEL APPROACHES

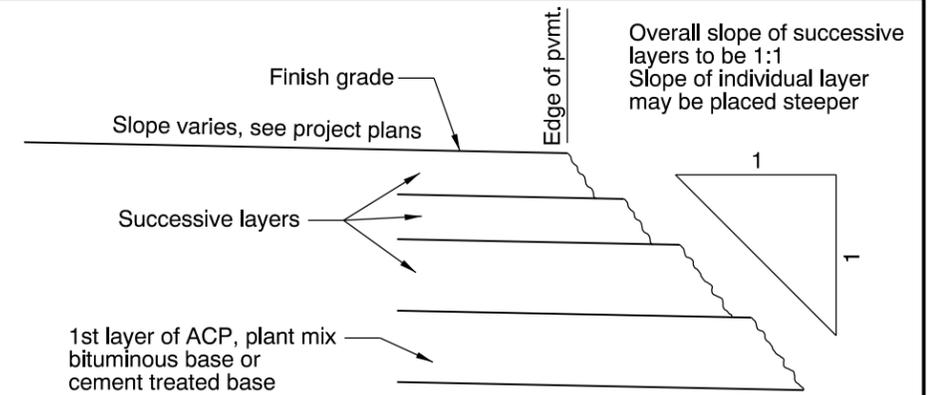


INACCESSIBLE TO MAINTENANCE VEHICLES

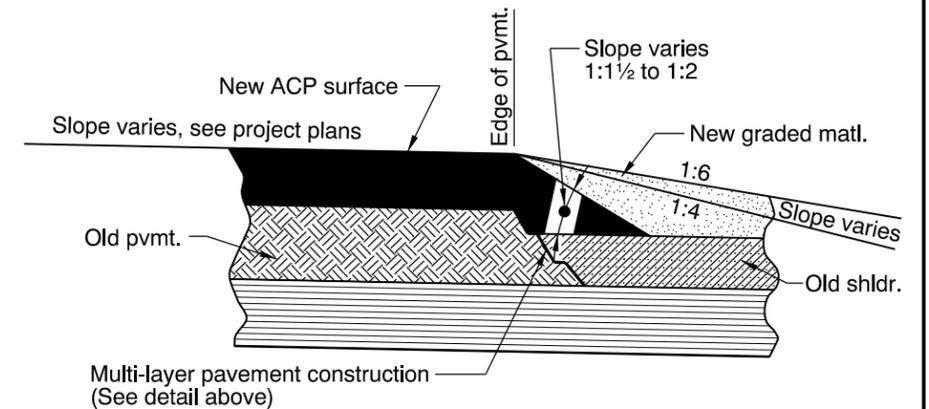


ACCESSIBLE TO MAINTENANCE VEHICLES

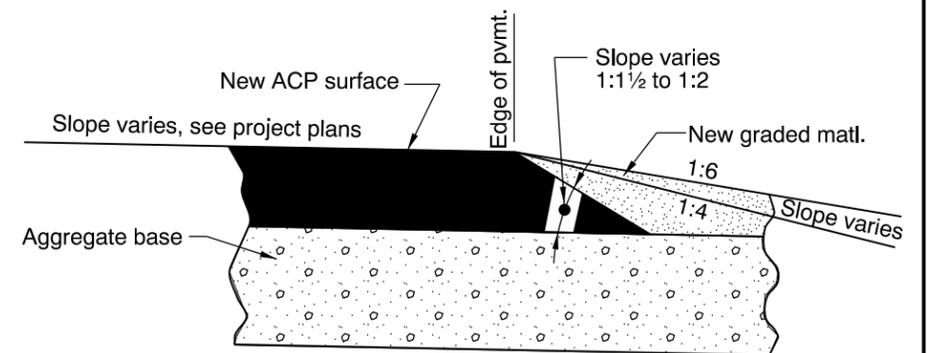
SHARED USE PATH



MULTI-LAYER PAVEMENT CONSTRUCTION



SAFETY EDGE (RECONSTRUCTION INCLUDING MILL & INLAY)



SAFETY EDGE (NEW CONSTRUCTION)

CALC. BOOK NO. N/A BASELINE REPORT DATE 14-JUL-2014

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

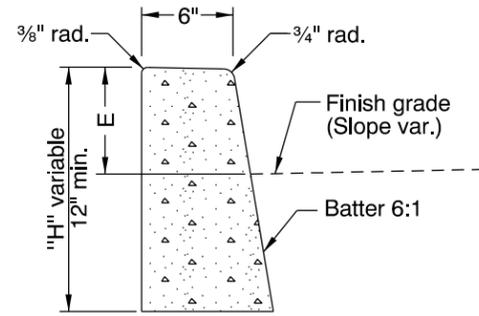
OREGON STANDARD DRAWINGS
ASPHALT CONCRETE PAVEMENT (ACP)
DETAILS

2015

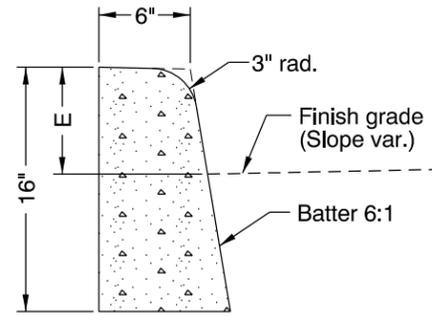
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

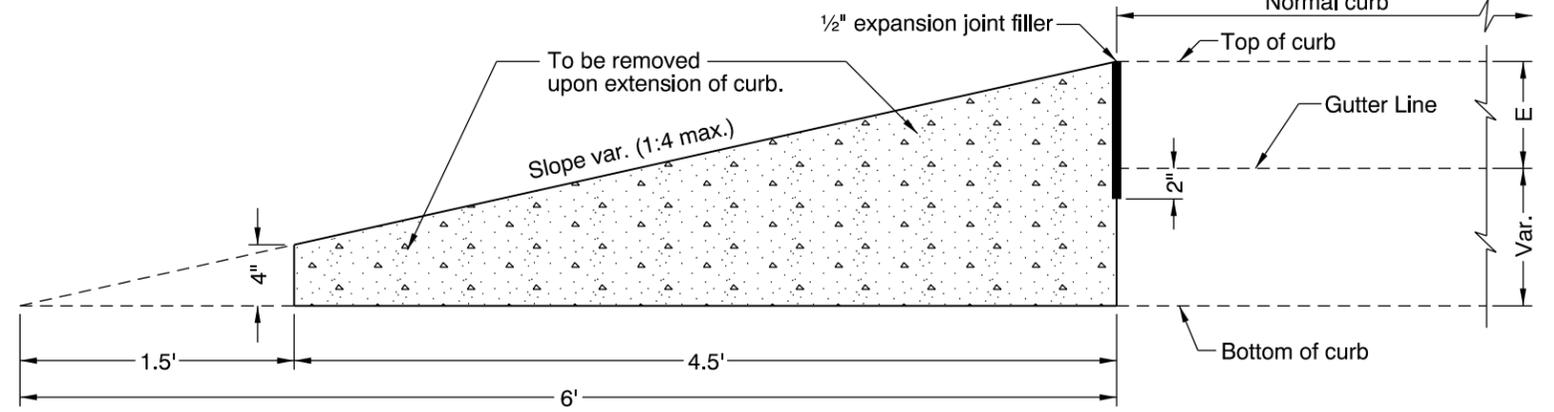
rd700.dgn 12-JAN-2015



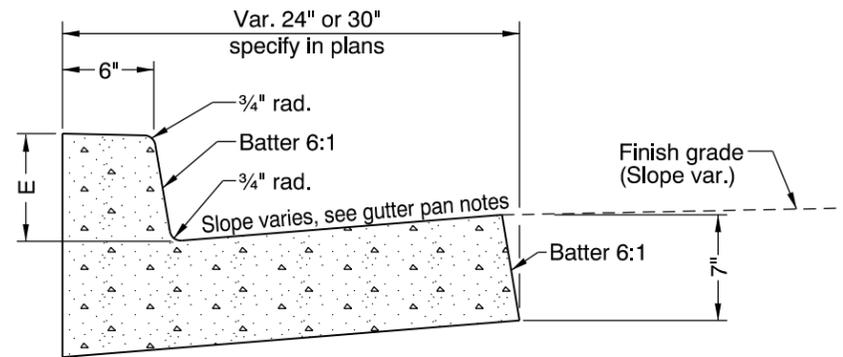
O.D.O.T. & City of Portland Standard "H"=16"
STANDARD CURB



MOUNTABLE CURB

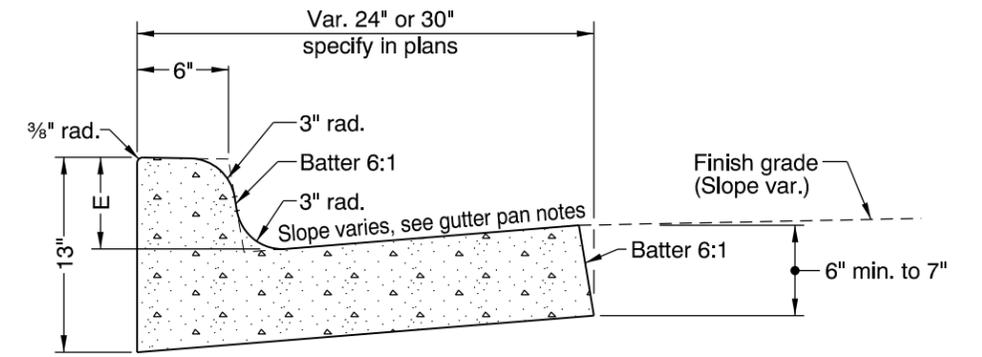


CURB ENDING DETAIL

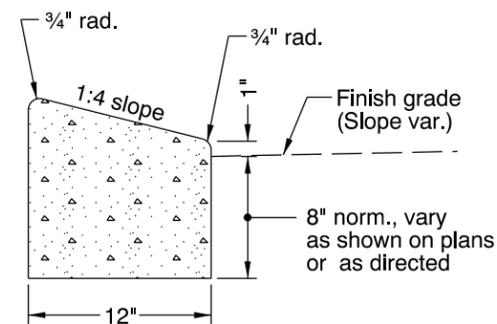


CURB AND GUTTER

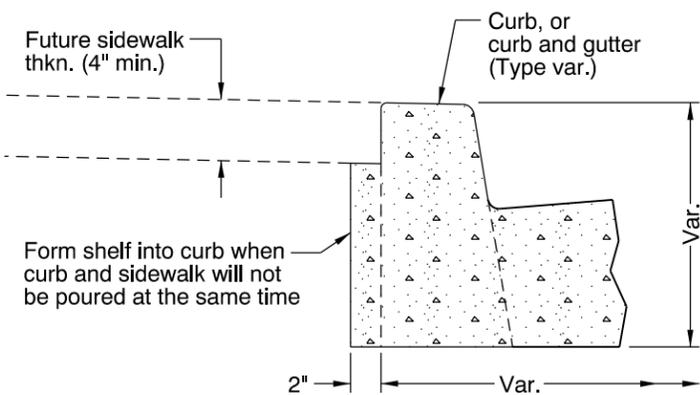
GUTTER PAN NOTES:
Slope 8% normal.
Use 5% slope for gutter width greater than 24".
Slope 4% at ramps. Vary slope as reqd. for drainage.
Vary where shown on plans, and allowed by jurisdiction.



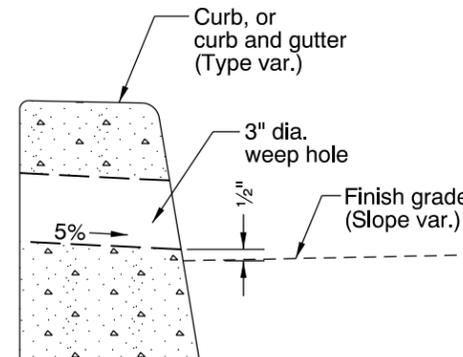
MOUNTABLE CURB AND GUTTER



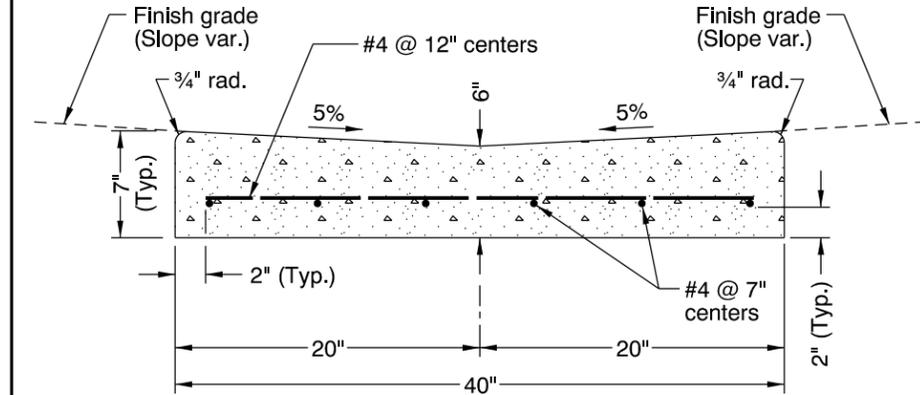
LOW PROFILE
MOUNTABLE CURB



MODIFICATION FOR KEYWAY
(Where shown on plans)



WEEP HOLE DETAIL
(Where shown on plans, and allowed by jurisdiction)



VALLEY GUTTER

CALC. BOOK NO. N/A BASELINE REPORT DATE 12-JAN-2015

GENERAL NOTES FOR ALL DETAILS:

1. Curb exposure "E" = 6" to 9", as measured vertically from flowline to highest point on curb. Vary as shown on plans or as directed. O.D.O.T standard "E"=7".
2. Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveways.
3. Const. contraction joints at 15' maximum spacing, and at ends of each inlet and ramp.
4. Transitions shall be used to connect curbs of different exposures "E". ("E" is the total vertical dimension of those curb surfaces having a slope of 1:1 or steeper). Minimum desirable transition length shall be 20' for each 1" difference in "E".

5. Tops of all curbs shall slope toward the roadway at 2% normal, unless otherwise shown, or as directed.
6. Dimensions are nominal, vary to conform with curb machine approved by the engineer.
7. Dimensions adjacent to radii are measured to the point of intersection of curb surfaces.
8. For sidewalk details, and monolithic curb & sidewalk, see Std. Drg. RD720.
9. For drainage curbs, see Std. Drg. RD701.
10. For sidewalk ramp details, see Std. Drg. RD755.

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

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

OREGON STANDARD DRAWINGS

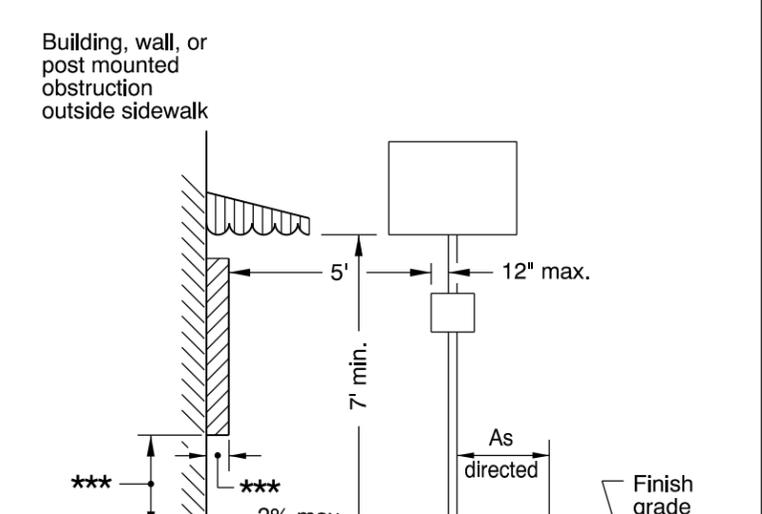
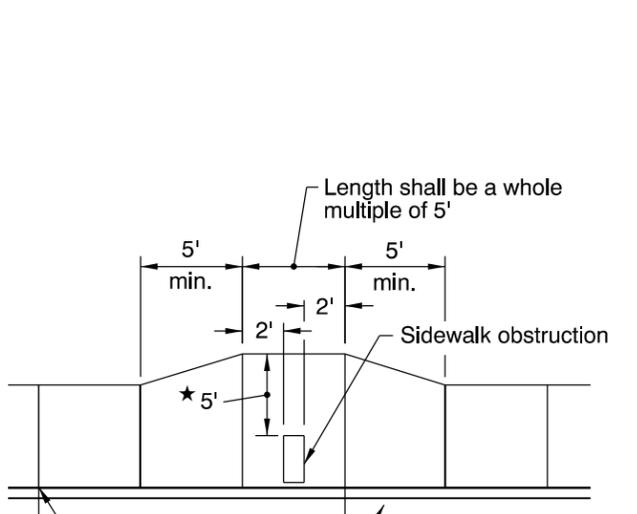
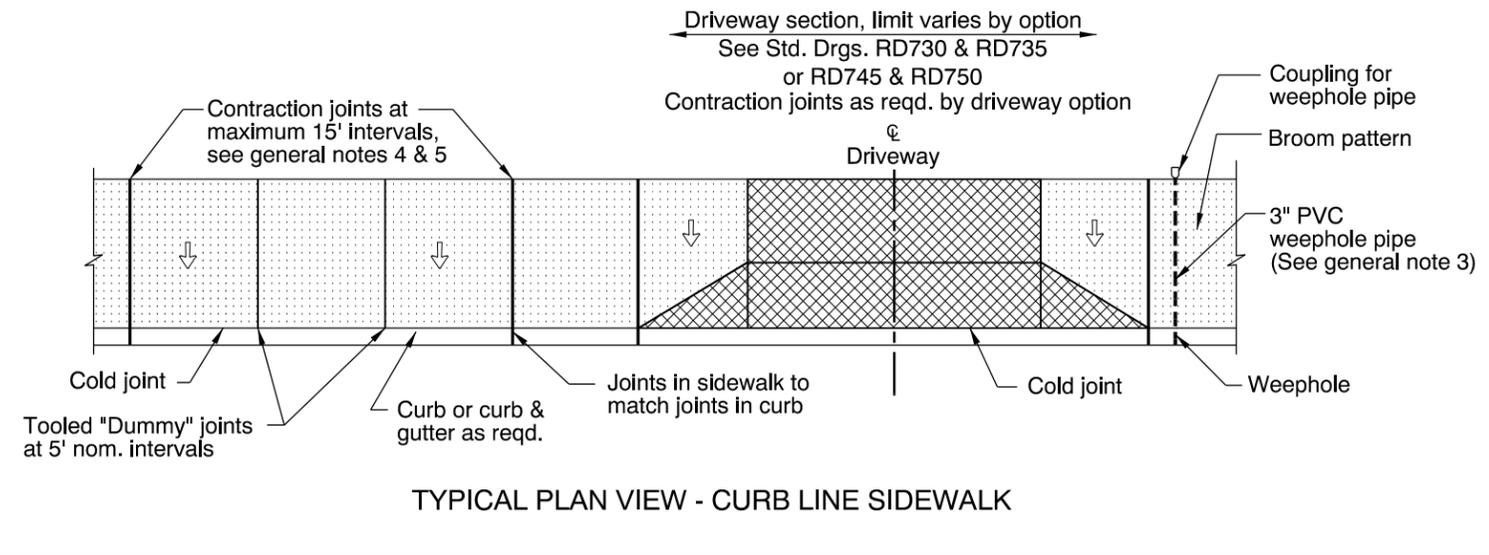
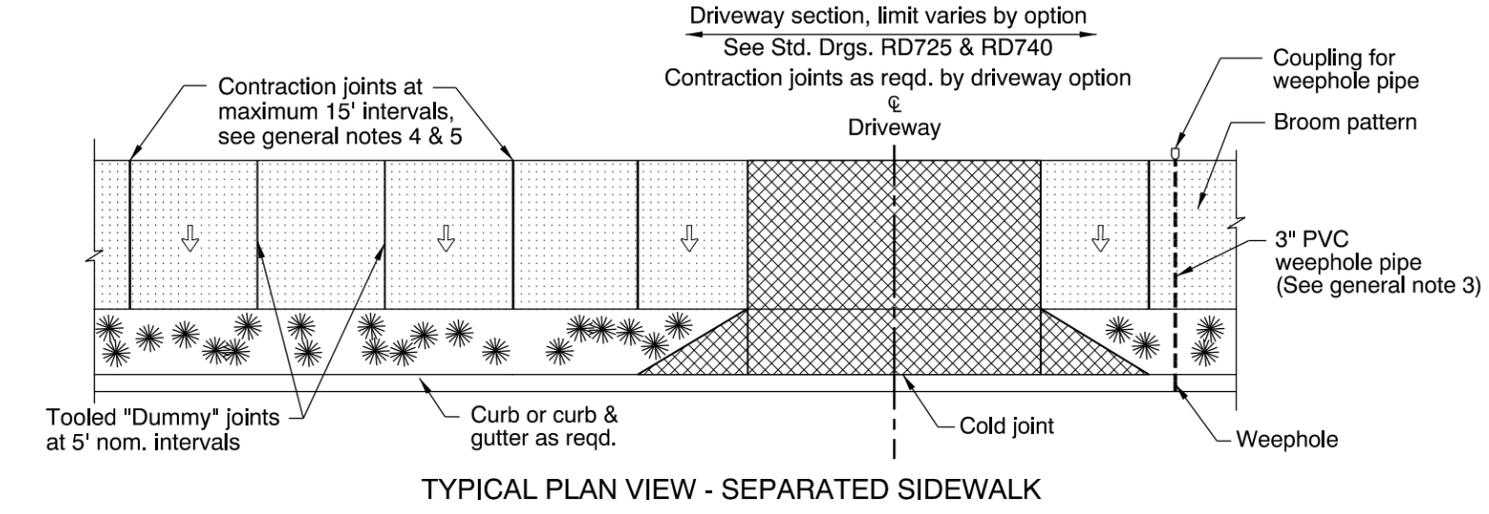
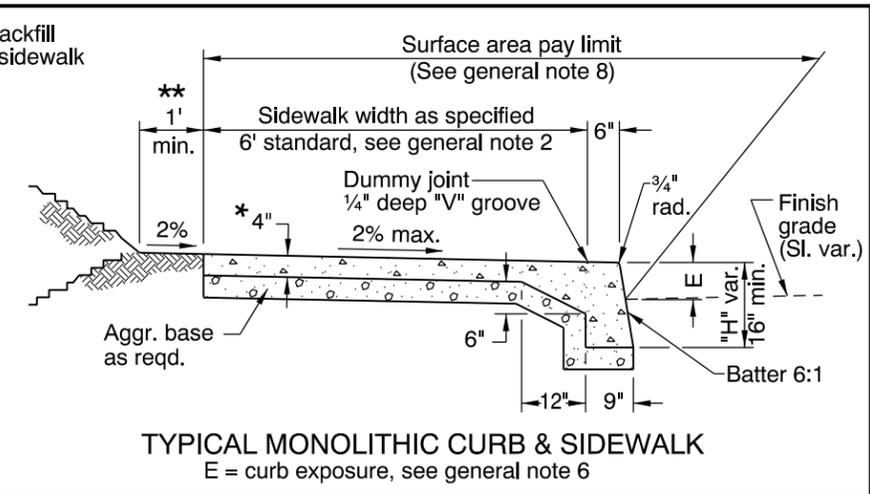
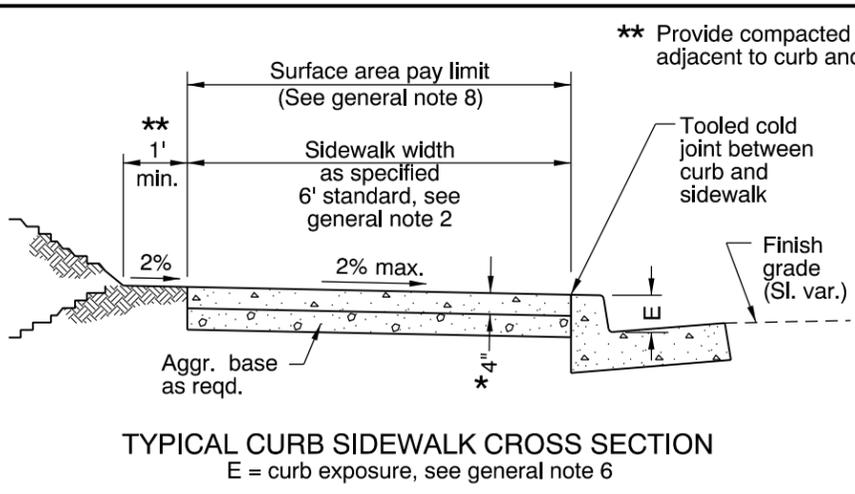
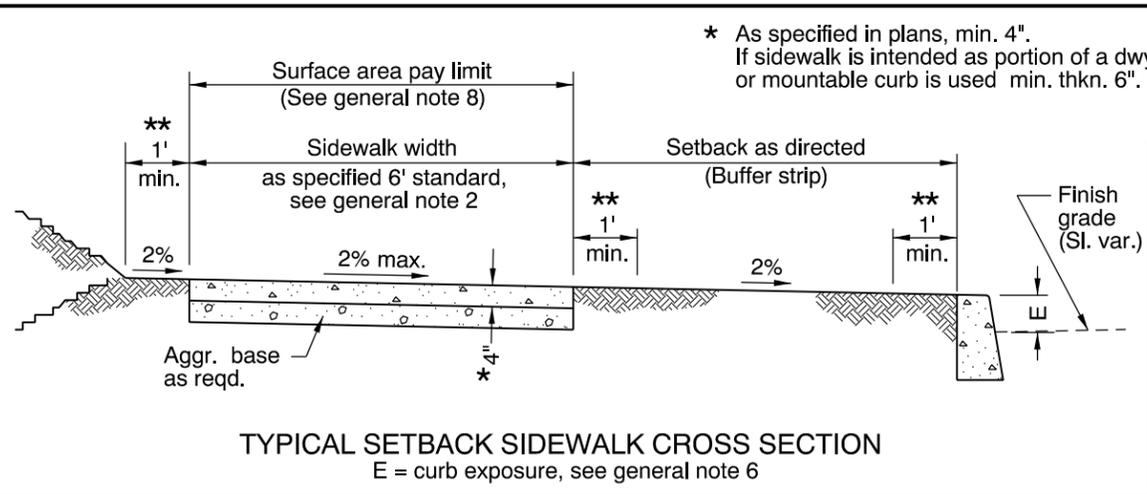
CURBS

2015

DATE	REVISION	DESCRIPTION
01-2015	ADDED	NOTE

RD700

rd720.dgn 12-JAN-2015



★ When site constraints prohibit a 5' passage, the Engineer may direct this to be reduced, but no less than 4'.

*** Objects with base below 2'-4" may protrude any distance as long as the 5' circulation path is maintained. When an object with a base higher than 2'-4" protrudes further than 4" provide a curb below protrusion to delineate edge.

- Sidewalk
- General configuration of driveway pay limit (See general note 8), varies by option.
- Slope 2% max. (Normal sidewalk cross slope)

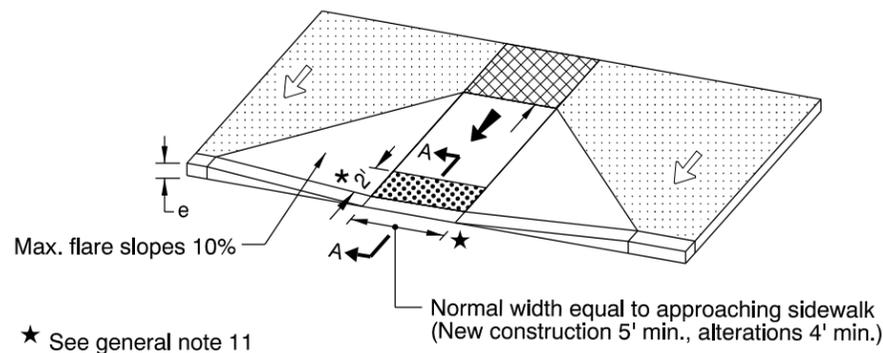
CALC. BOOK NO. N/A

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

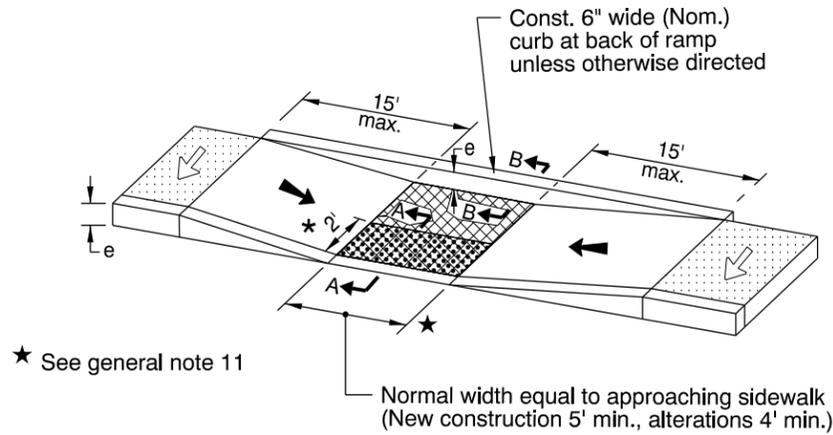
BASELINE REPORT DATE <u>12-JAN-2015</u>	
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
SIDEWALKS	
2015	
DATE	REVISION DESCRIPTION
01-2015	REVISED DETAILS & ADDED NOTES

- GENERAL NOTES FOR ALL DETAILS:**
1. Include additional paved or unpaved 2' clearance to vertical faces higher than 5' such as retaining walls, sound walls, fences and buildings.
 2. Curb type and sidewalk width as shown on plans or as directed. On sidewalks 8' and wider, provide a longitudinal joint at the midpoint.
 3. Install 3" pvc weephole pipes in sidewalks where shown on plans, and allowed by jurisdiction. Place contraction joint over top of pipe.

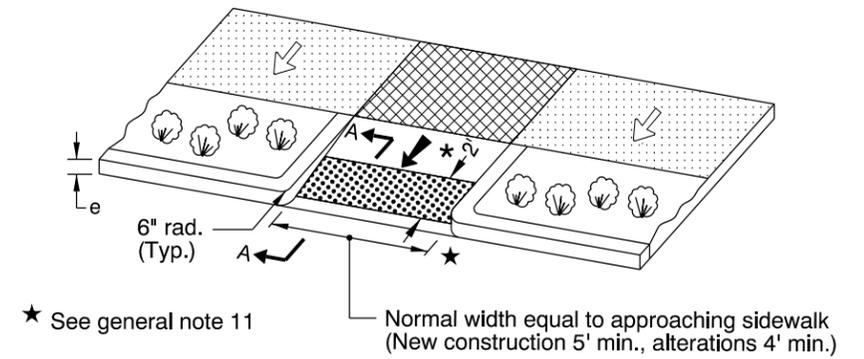
4. Const. expansion joints at 200' maximum spacing, and at points of tangency, and at ends of each driveway. For monolithic curb & sidewalk, const. expansion joints at 45' maximum spacing.
5. Const. contraction joints at 15' maximum spacing, and at ends of each driveway and ramp.
6. For curb details, see Std. Drgs. RD700 & RD701.
7. Sidewalk details are based on United States Access Board Standards.
8. For driveway details not shown, see Std. Drgs. RD725, RD730, RD735, RD740, RD745 & RD750.
9. See project plans for details not shown.



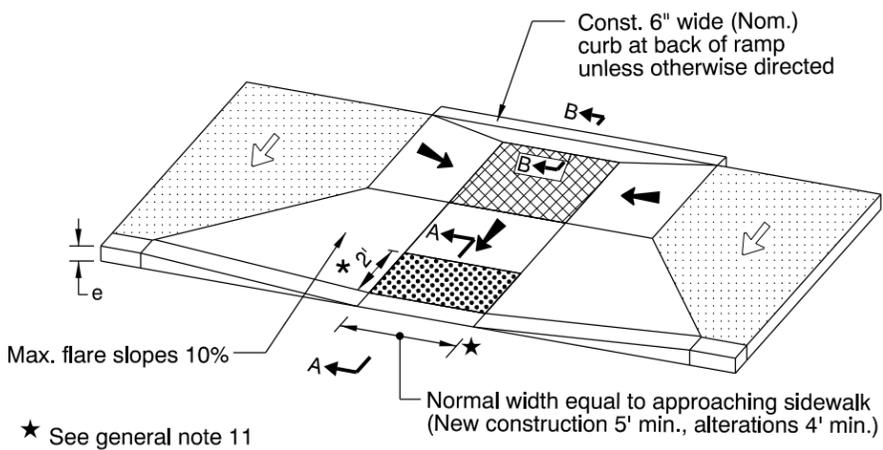
PERPENDICULAR SIDEWALK RAMP DETAIL
(Use "Parallel Sidewalk Ramp Detail" or "Combination Sidewalk Ramp Detail" when reqd. turning space cannot be obtained)



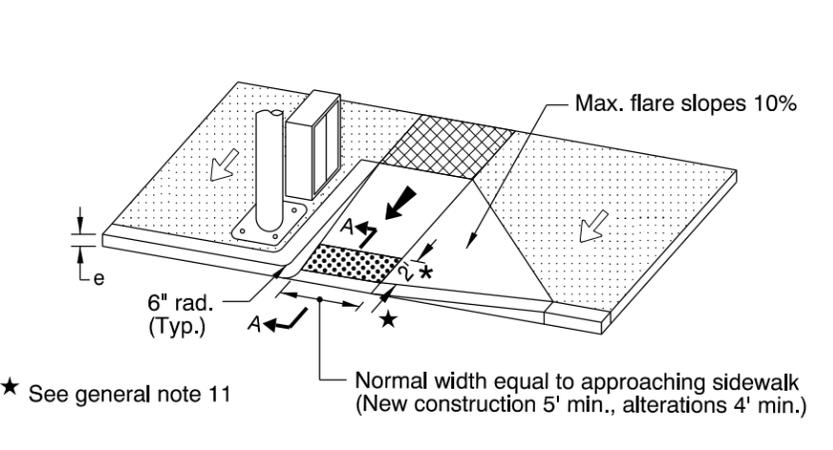
PARALLEL SIDEWALK RAMP DETAIL



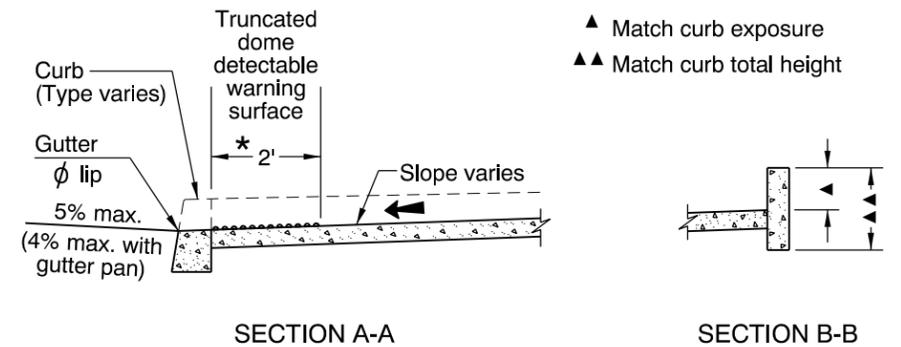
PERPENDICULAR SIDEWALK RAMP DETAIL (THROUGH BUFFER STRIP)



COMBINATION SIDEWALK RAMP DETAIL



PERPENDICULAR SIDEWALK RAMP DETAIL (WITH SINGLE FLARE)
(Use "Parallel Sidewalk Ramp Detail" or "Combination Sidewalk Ramp Detail" when reqd. turning space cannot be obtained)



- Sidewalk
- Turning space (Min. level area 48" x 48"). For the purposes of this application, a 2% maximum slope (For drainage) is considered level
- Truncated dome detectable warning surface
- Slope 2% max. (Normal sidewalk cross slope)
- Slope 8.33% (1":12") max.
- 2' See general note 5

GENERAL NOTES FOR ALL DETAILS:

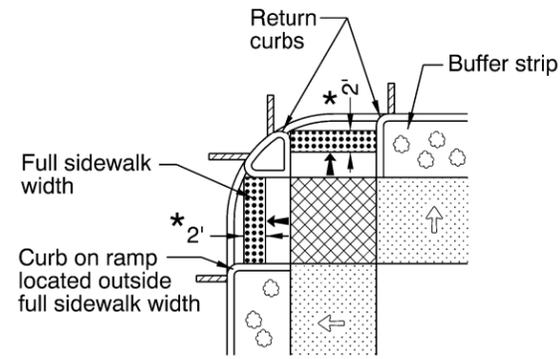
1. Sidewalk ramp details are based on United States Access Board Standards.
2. See Std. Drgs. RD700 & RD701 for curbs. See Std. Drg. RD720 for sidewalks. See Std. Drgs. TM503 & TM530 for crosswalk markings, widths, etc.
3. Tooled joints are required at all sidewalk ramp slope break lines.
4. Sidewalk curb ramp slopes shown are relative to the true level horizon (Zero bubble).
5. Place truncated dome detectable warning surface in the lower 2' adjacent to traffic of throat of ramp only. For details not shown, see Std. Drg. RD759.
6. Side flares that are not part of the path of travel may be any slope.
7. Sidewalk flare is not necessary where the ramp is protected from pedestrian cross-travel.

8. For the purpose of this drawing, a curb ramp is considered "perpendicular" if the angle between the longitudinal axis of the ramp and a line tangent to the curb at the ramp center is 75° or greater.
9. Ramps for paths intersecting a roadway should be full width of path, excluding flares. When a ramp is used to provide bicycle access from a roadway to a sidewalk, the ramp should be 8' wide.
10. For sidewalk ramp placement options, see Std. Drgs. RD756 & RD757.
11. Check the gutter flow depth at ramp locations to assure that the design flood does not overtop the back of sidewalk at ramp. If overtopping occurs place an inlet at upstream side of ramp or perform other approved design mitigation.
12. Only use details allowed by jurisdiction.
13. See project plans for details not shown.

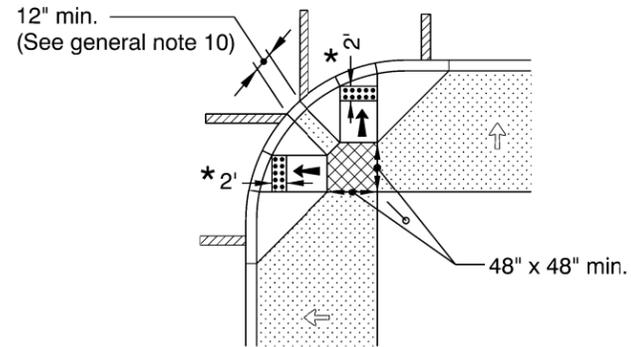
CALC. BOOK NO. <u> N/A </u>	BASELINE REPORT DATE <u> 12-JAN-2015 </u>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS SIDEWALK RAMP DETAILS 2015	
DATE 01-2015	REVISION DESCRIPTION REVISED & ADDED NOTES

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

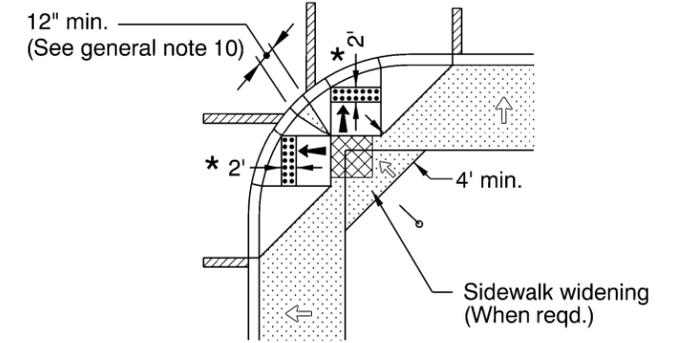
rd756.dgn 12-JAN-2015



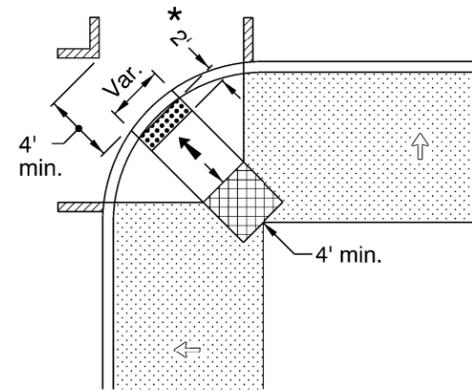
OPTION A
PERPENDICULAR RAMP WITH LANDSCAPED BUFFER STRIP



OPTION B
PERPENDICULAR RAMP (FOR WIDE SIDEWALKS)

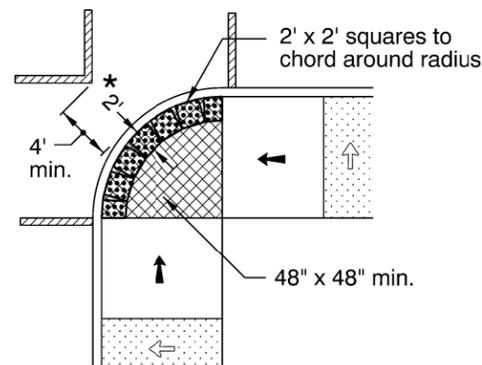


OPTION C
PERPENDICULAR RAMP (FOR NARROW SIDEWALKS)

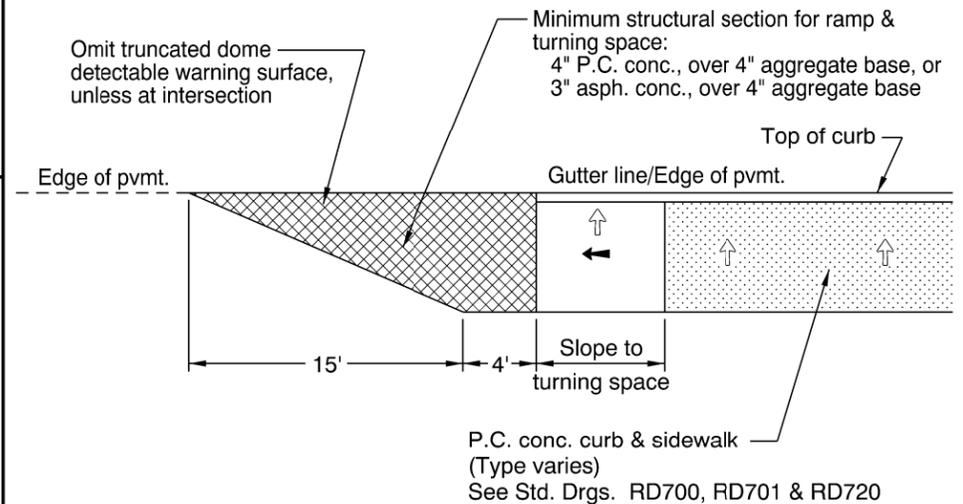


OPTION D
DIAGONAL RAMP (FOR WIDE SIDEWALKS)
Use in alterations only and when site constraints prohibit installing two ramps

- Marked or intended crossing location
- Sidewalk
- Turning space (Minimum level area 48" x 48"). For the purposes of this application, a 2% maximum slope (For drainage) is considered level
- Truncated dome detectable warning surface
- Slope 2% max. (Normal sidewalk cross slope)
- Slope 8.33% (1":12") max. (Ramp length 15' max.)
- 2' See general note 5



OPTION E
DIAGONAL-PARALLEL RAMP (FOR SIDEWALK WIDTHS ≥ RADIUS)
Use in alterations only and when site constraints prohibit installing two ramps



OPTION F
SIDEWALK RAMP AND TURNING SPACE (FOR ENDS OF SIDEWALKS)

GENERAL NOTES FOR ALL DETAILS:

1. Sidewalk ramp details are based on United States Access Board Standards.
2. See Std. Drgs. RD700 & RD701 for curbs. See Std. Drg. RD720 for sidewalks. See Std. Drgs. TM503 & TM530 for crosswalk markings, widths, etc. See Std. Drg. RD755 for sidewalk ramp details.
3. Tooled joints are required at all sidewalk ramp slope break lines.
4. Sidewalk curb ramp slopes shown are relative to the true level horizon (Zero bubble).
5. Place truncated dome detectable warning surface in the lower 2' adjacent to traffic of throat of ramp only. For details not shown, see Std. Drg. RD759.
6. Side flares that are not part of the path of travel may be any slope. Check the gutter flow depth to assure that the design flood does not overtop the back of sidewalk. If overtopping occurs place an inlet at upstream side or perform other approved design mitigation.

7. Sidewalk flare is not necessary where the ramp is protected from pedestrian cross-travel.
8. For the purpose of this drawing, a curb ramp is considered "perpendicular" if the angle between the longitudinal axis of the ramp and a line tangent to the curb at the ramp center is 75° or greater.
9. Ramps for paths intersecting a roadway should be full width of path, excluding flares. When a ramp is used to provide bicycle access from a roadway to a sidewalk, the ramp should be 8' wide.
10. When 2 curb ramps are immediately adjacent as in Options B & C, the curb exposure (e) between the adjacent side flares may range between 3" and full design exposure.
11. Only use options allowed by jurisdiction.
12. See project plans for details not shown.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 12-JAN-2015

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

OREGON STANDARD DRAWINGS
SIDEWALK RAMP PLACEMENT OPTIONS
SMALL RADII

2015

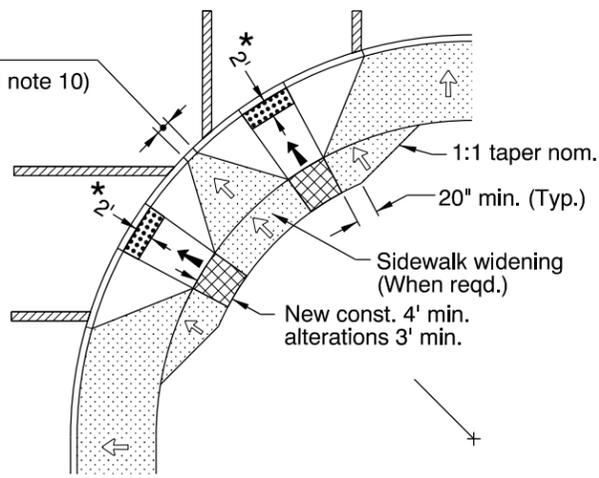
DATE	REVISION DESCRIPTION
01-2015	REVISED DRAWING TITLE, DETAILS & NOTES

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

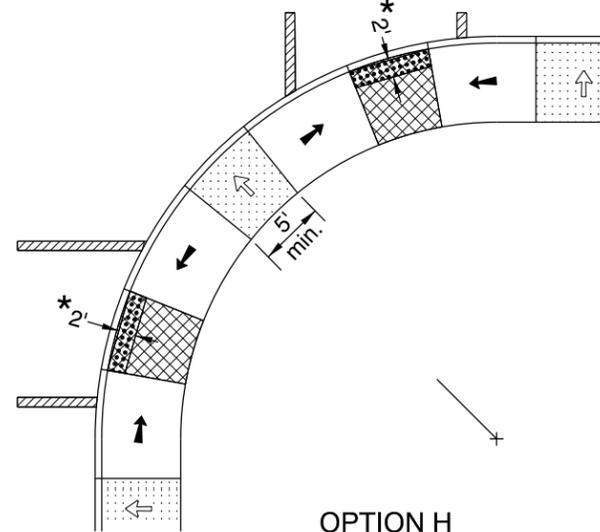
RD756

rd757.dgn 12-JAN-2015

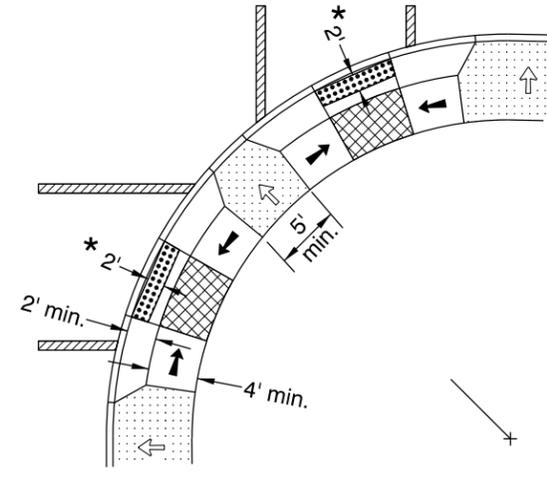
12" min.
(See general note 10)



OPTION G
PERPENDICULAR RAMPS (FOR NARROW SIDEWALKS)

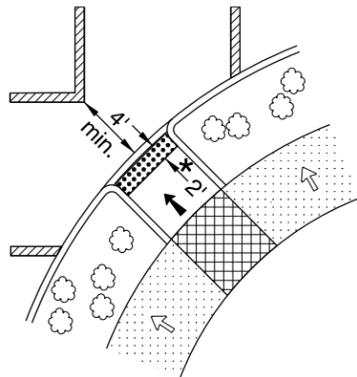


OPTION H
PARALLEL RAMPS (FOR NARROW SIDEWALKS)

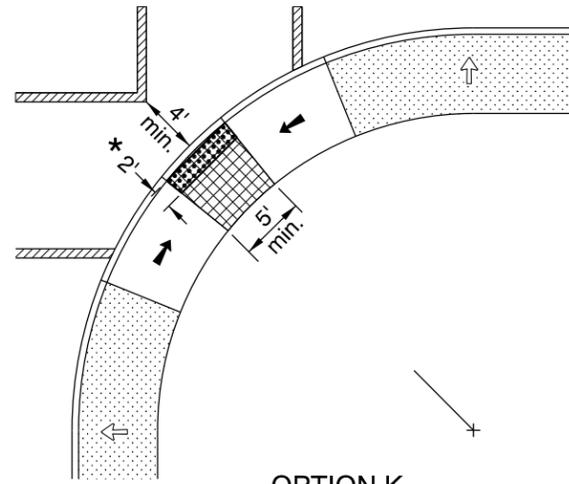


OPTION I
COMBINATION RAMPS (FOR WIDE SIDEWALKS)

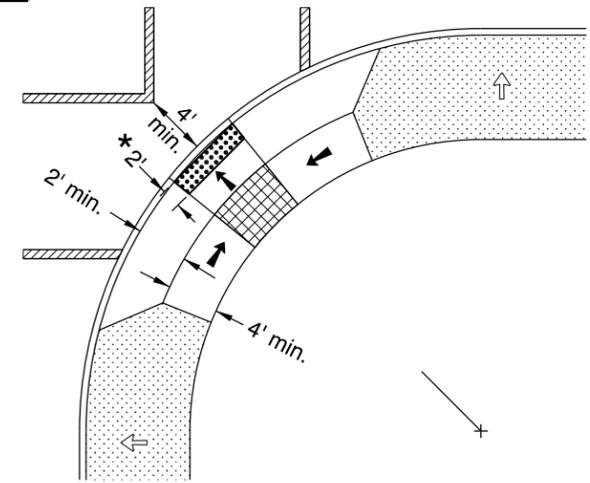
	Marked or intended crossing location		Slope 2% max. (Normal sidewalk cross slope)
	Sidewalk		Slope 8.33% (1":12") max. (Ramp length 15' max.)
	Turning space (Min. level area 48" x 48"). For the purposes of this application, a 2% maximum slope (For drainage) is considered level		2' See general note 5
	Truncated dome detectable warning surface		



OPTION J
DIAGONAL RAMP WITH LANDSCAPED BUFFER STRIP
Use in alterations only and when site constraints prohibit installing two ramps



OPTION K
DIAGONAL-PARALLEL RAMP (FOR NARROW SIDEWALKS)
Use in alterations only and when site constraints prohibit installing two ramps



OPTION L
DIAGONAL-COMBINATION RAMP (FOR WIDE SIDEWALKS)
Use in alterations only and when site constraints prohibit installing two ramps

GENERAL NOTES FOR ALL DETAILS:

- Sidewalk ramp details are based on United States Access Board Standards.
- See Std. Drgs. RD700 & RD701 for curbs. See Std. Drg. RD720 for sidewalks. See Std. Drgs. TM503 & TM530 for crosswalk markings, widths, etc. See Std. Drg. RD755 for sidewalk ramp details.
- Tooled joints are required at all sidewalk ramp slope break lines.
- Sidewalk curb ramp slopes shown are relative to the true level horizon (Zero bubble).
- Place truncated dome detectable warning surface in the lower 2' adjacent to traffic of throat of ramp only. For details not shown, see Std. Drg. RD759.
- Side flares that are not part of the path of travel may be any slope. Check the gutter flow depth to assure that the design flood does not overtop the back of sidewalk. If overtopping occurs place an inlet at upstream side or perform other approved design mitigation.

- Sidewalk flare is not necessary where the ramp is protected from pedestrian cross-travel.
- For the purpose of this drawing, a curb ramp is considered "perpendicular" if the angle between the longitudinal axis of the ramp and a line tangent to the curb at the ramp center is 75° or greater.
- Ramps for paths intersecting a roadway should be full width of path, excluding flares. When a ramp is used to provide bicycle access from a roadway to a sidewalk, the ramp should be 8' wide.
- When 2 curb ramps are immediately adjacent as in Option G, the curb exposure (e) between the adjacent side flares may range between 3" and full design exposure.
- Only use options allowed by jurisdiction.
- See project plans for details not shown.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 12-JAN-2015

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

OREGON STANDARD DRAWINGS
SIDEWALK RAMP PLACEMENT OPTIONS
LARGE RADII

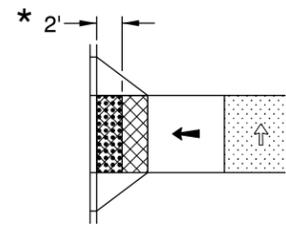
2015

DATE	REVISION	DESCRIPTION
01-2015	REVISED DRAWING TITLE, DETAILS & NOTES	

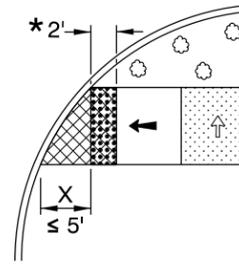
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

RD757

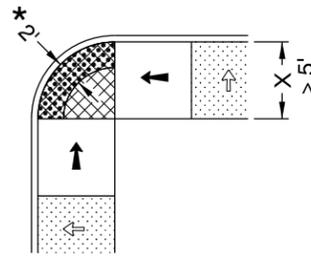
rd759.dgn 12-JAN-2015



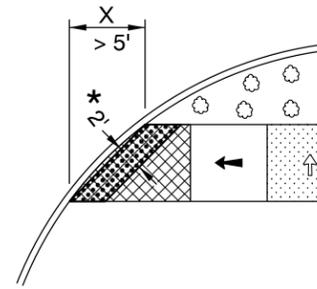
When distance "X" is less than 5', truncated dome detectable warning surface shall be placed perpendicular to the path of travel.



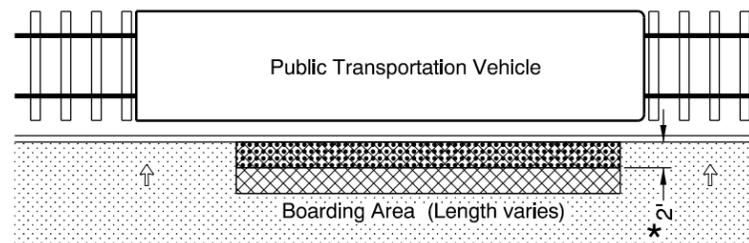
PLACEMENT ON SIDEWALK RAMP



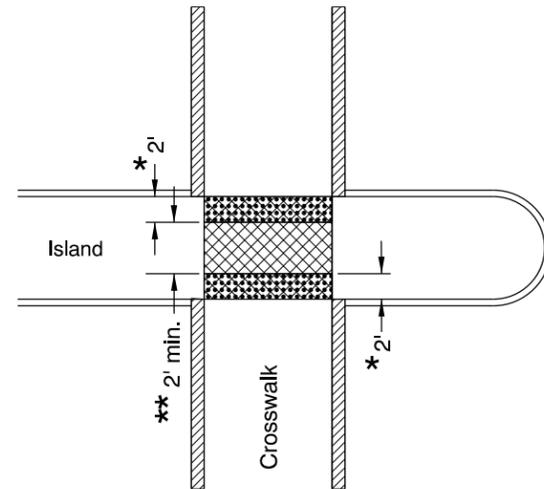
When distance "X" is greater than 5', truncated dome detectable warning surface shall be placed parallel to the bottom of curb ramp.



- Marked or intended crossing location
- Sidewalk
- Turning space (Minimum level area 48" x 48")
For the purposes of this application, a 2% maximum slope (For drainage) is considered level
- Truncated dome detectable warning surface
- Slope 2% max. (Normal sidewalk cross slope)
- Slope 8.33% (1":12") max. (Ramp length 15' max.)
- * 2' See general note 3

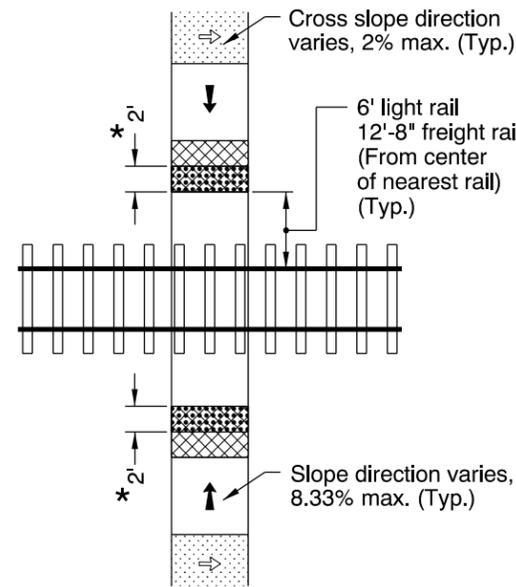


PLACEMENT ON PUBLIC TRANSPORTATION PLATFORM



** Omit truncated dome detectable warning surfaces if less than 2'

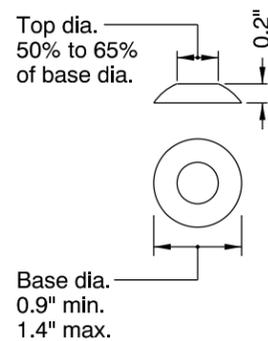
PLACEMENT ON CROSSING ISLAND



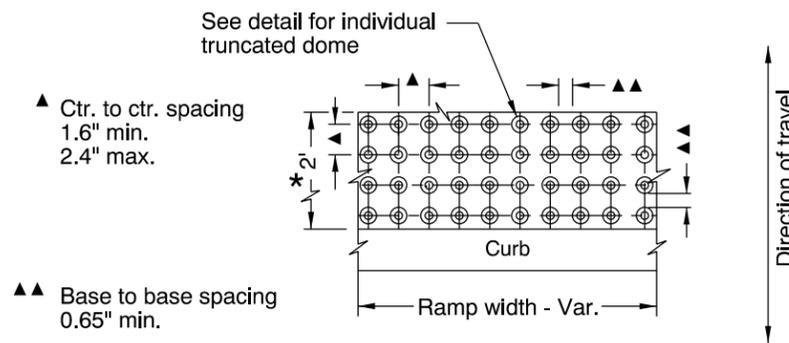
PLACEMENT AT RAIL CROSSING

GENERAL NOTES FOR ALL DETAILS:

1. Truncated dome detectable warning surface details & locations are based on United States Access Board Standards.
2. See Std. Drgs. RD700 & RD701 for curbs. See Std. Drg. RD720 for sidewalks. See Std. Drgs. TM503 & TM530 for crosswalk markings, widths, etc. See Std. Drg. RD705 for islands.
3. Place truncated dome detectable warning surface in the lower 2' adjacent to traffic of throat of ramp only, unless otherwise shown. Arrange domes using square in-line pattern only. Color to be safety yellow if no color specified in construction note. All products on an installation to be identical.
4. Truncated dome detectable warning surface shall be used where the pedestrian access route meets the street, in the following locations:
 - a) Sidewalk ramps (See Std. Drgs. RD755, RD756, & RD757).
 - b) Crossing islands (Accessible Route Islands), (See Std. Drg. RD710).
 - c) Rail crossings (See detail).
5. Where public transportation stations (rail, bus, etc.) use platform boarding, truncated dome detectable warning surface shall be placed along the full edge length of the station, when not protected by platform screens or guards.
6. Truncated dome detectable warning surface shall not be used on the following locations:
 - a) Midblock sidewalk transitions (See Std. Drg. RD756).
 - b) Standard concrete driveways (See Std. Drgs. RD725, RD730, RD735, RD740, RD745, & RD750).
 - c) Parking lots.
7. Only use details allowed by jurisdiction.
8. See project plans for details not shown.



TRUNCATED DOME DETAIL



TRUNCATED DOME PATTERN

TRUNCATED DOME DETECTABLE WARNING SURFACE

CALC. BOOK NO. N/A BASELINE REPORT DATE 12-JAN-2015

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

OREGON STANDARD DRAWINGS
TRUNCATED DOME
DETECTABLE WARNING SURFACE
DETAILS & LOCATIONS

2015

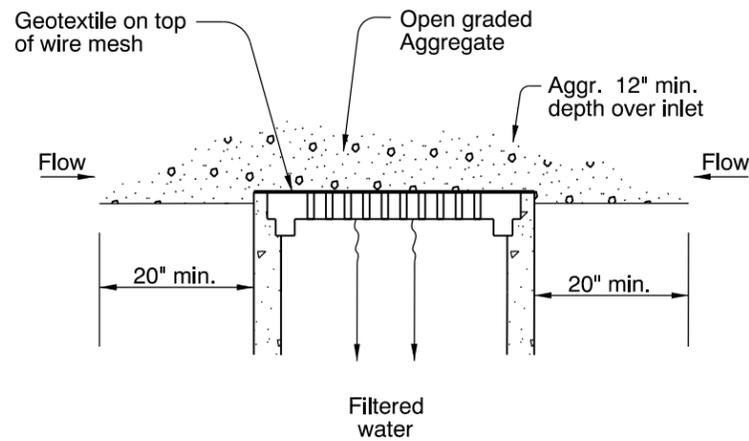
DATE	REVISION DESCRIPTION
01-2015	REVISED DETAILS & NOTES

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

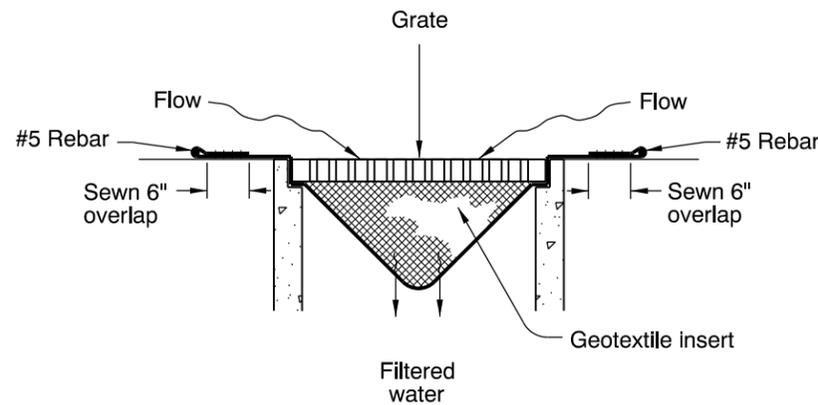
RD759

rd1010.dgn 03-03-2015

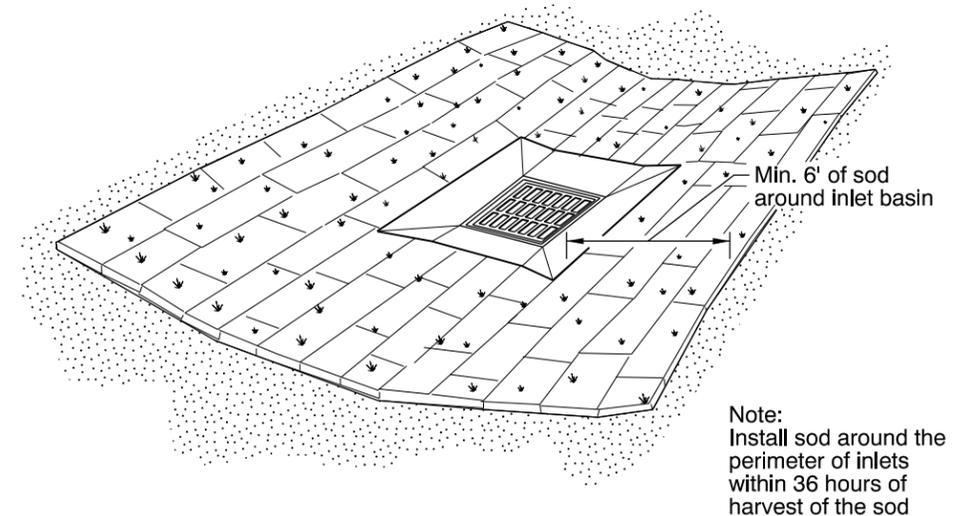
RD1010



GEOTEXTILE/WIRE MESH/AGGREGATE - TYPE 2

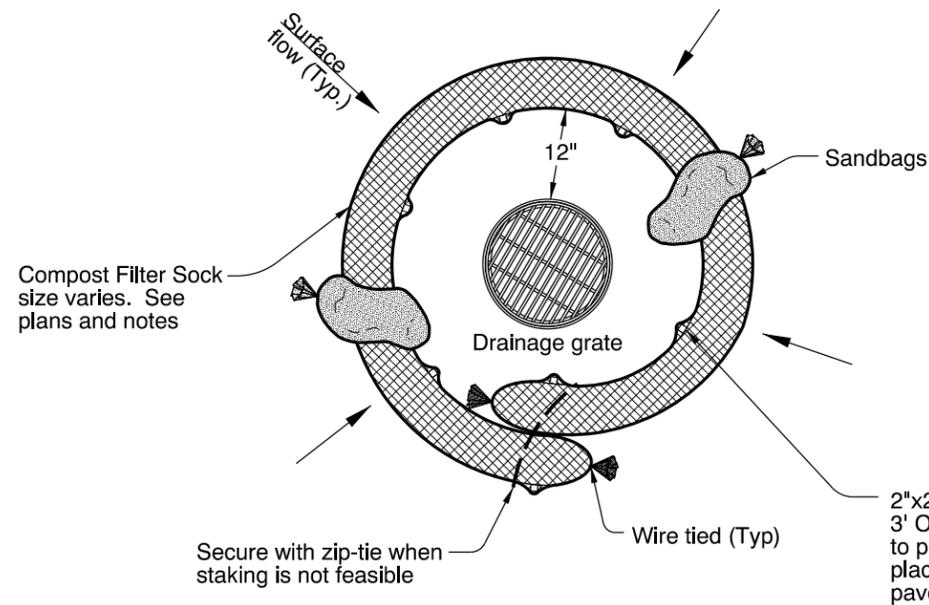


PREFABRICATED FILTER INSERT - TYPE 3

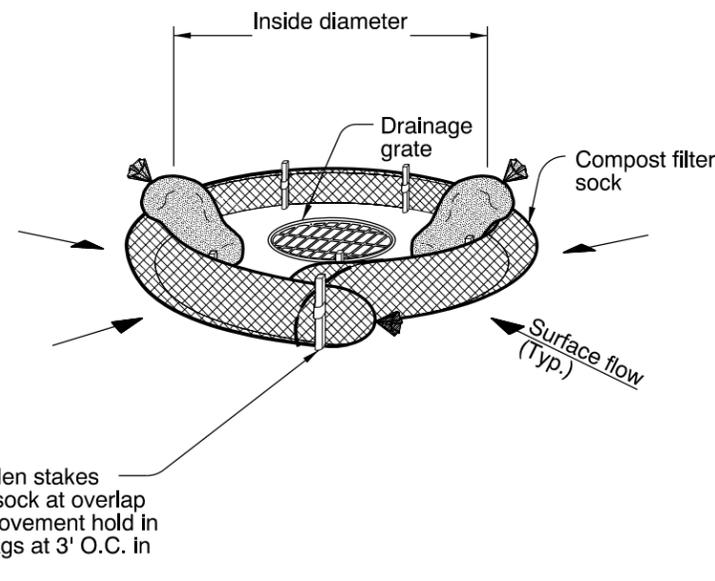


SOD PROTECTION - TYPE 6

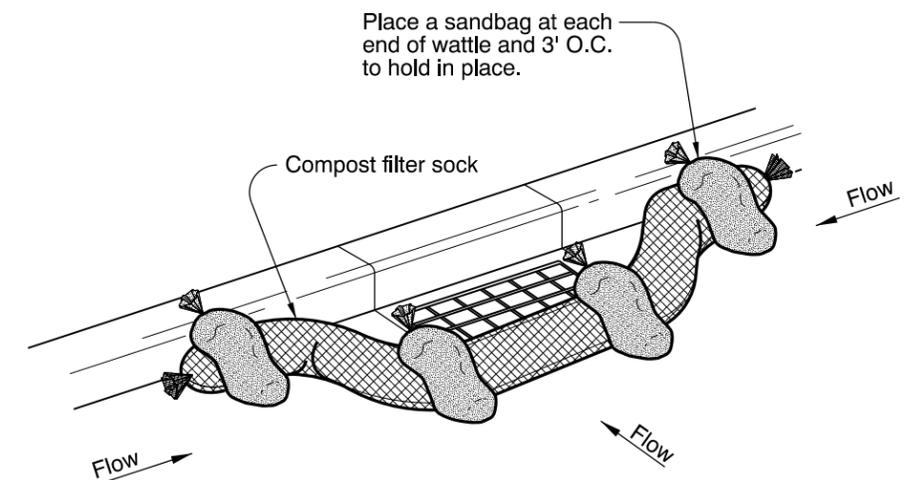
Note:
Install sod around the perimeter of inlets within 36 hours of harvest of the sod



AREA DRAIN PLAN



AREA DRAIN PERSPECTIVE VIEW



CURB INLET PERSPECTIVE VIEW

COMPOST FILTER SOCK OR WATTLE - TYPE 7

* Use sandbags to hold wattles in place. Sandbags are not necessary for compost filter socks

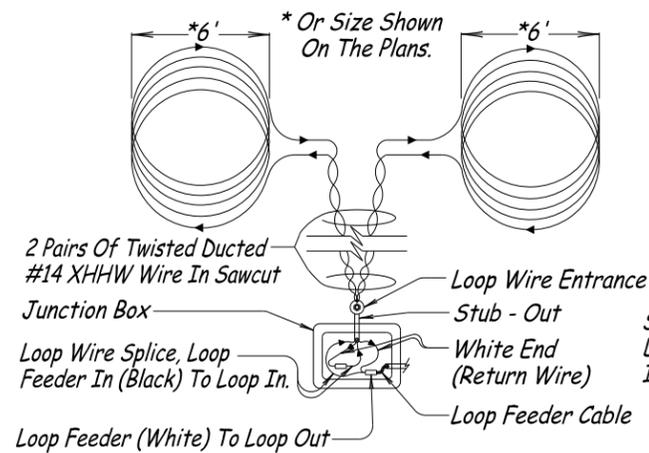
Notes:

Type 2 - Geotextile/wire mesh/aggregate
Place the wire mesh over the grate.
Place sediment fence geotextile over the wire mesh and perimeter area around structure.
Install aggregate over the geotextile fabric.

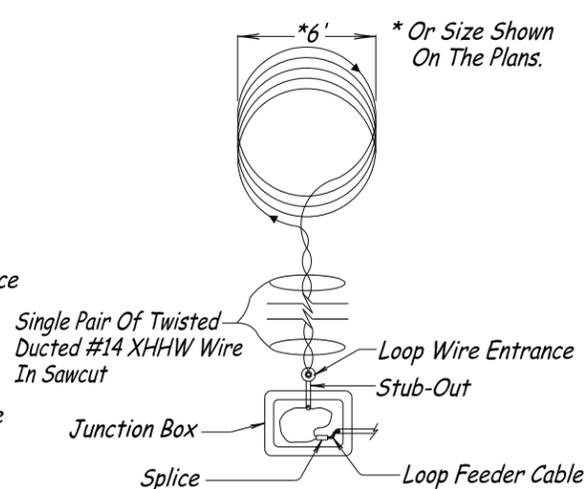
Type 3 - Prefabricated filter inserts
Install prefabricated filter inserts according to the plans.
Special provisions, and manufacturer recommendations.
Prefabricated inserts with provisions for overflow are allowed only when accompanied by additional BMP to prevent the potential of sediments entering project storm systems.
Field fabricated inserts are not allowed.

Type 7 - Compost filter sock
Drive 2"X2" wood stakes a minimum of 6" into ground and flush with the top of the sock.
Overlap ends of sock per manufacturers recommendations (1' min, 3' max).
Use 8" to 12" dia sock on curbside in traffic areas.
Use 12" to 18" dia sock in non-traffic areas or areas where the larger sock can be used safely.

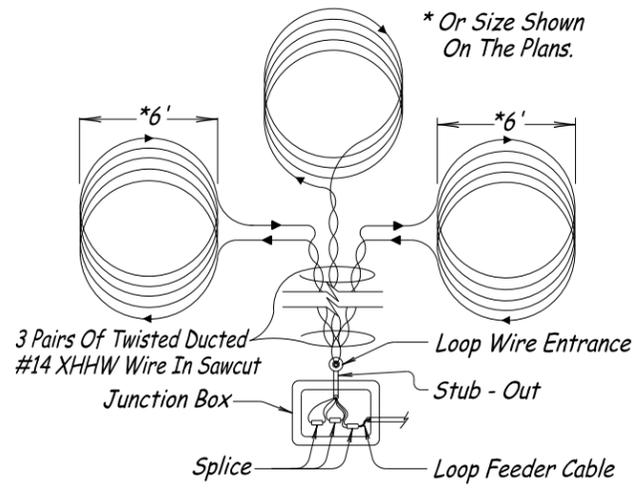
CALC. BOOK NO. <u> N/A </u>	BASELINE REPORT DATE <u> 03-MAR-2015 </u>
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
INLET PROTECTION TYPE 2, 3, 6, and 7	
2015	
DATE	REVISION DESCRIPTION



**TWO LOOPS IN SERIES
(TYPICAL WIRING DIAGRAM)**



SINGLE LOOP

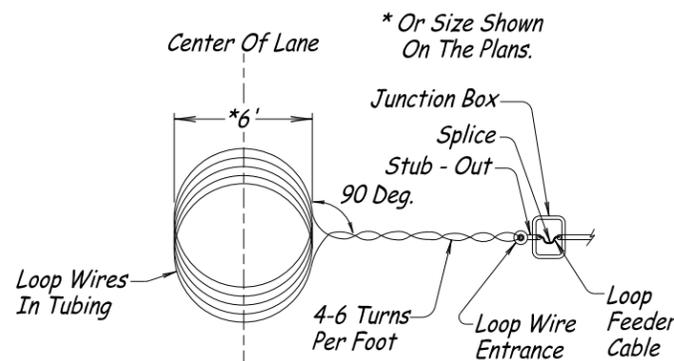


THREE LOOPS IN SERIES

LOOP DETECTOR WINDING PATTERN

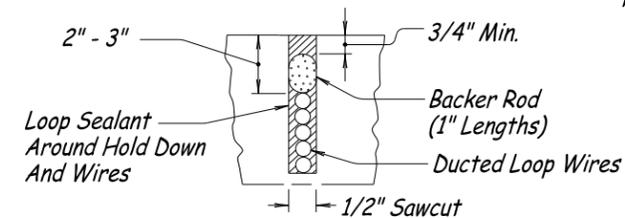
(Arrows Indicate Direction Of Loop Winding)

Loops Shall Be Round Or Square With 5 Turns Of Ducted No. 14 XHHW Stranded Wire Centered In The Traffic Lane Or As Shown On Plans. Loop Wire Shall Be Twisted 4 To 6 Turns Per Foot Between Loop And Junction Box. All Loops Shall Be Individually Wired As Shown.



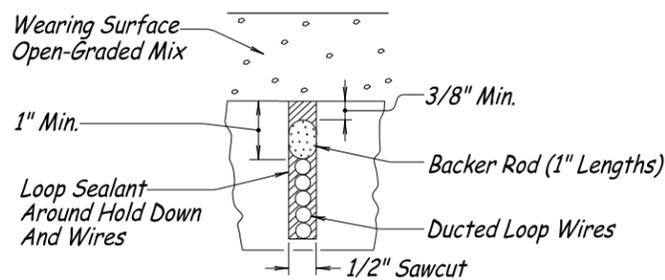
ROUND LOOP LAYOUT

Use Round Loop As Shown On Plans



SAWCUT CROSS SECTION

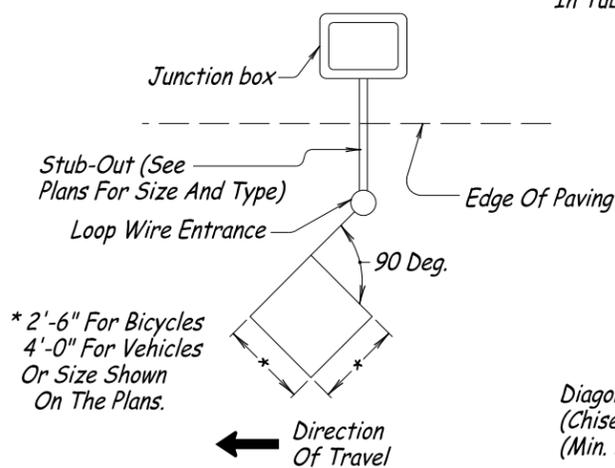
LOOP WIRE INSTALLATION IN EXISTING CONCRETE OR STANDARD ASPHALT MIXES



SAWCUT CROSS SECTION

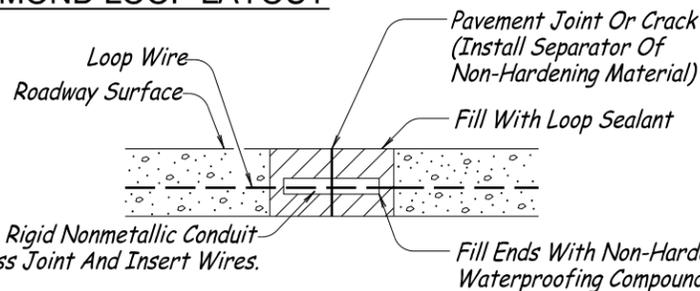
LOOP WIRE INSTALLATION IN BASE LIFT (OR AFTER GRINDING). PRIOR TO PLACEMENT OF OPEN-GRADED MIX FOR WEARING SURFACE.

(If Placed On Open-Graded Mix, Install 5/8" Deeper And Leave Loop Sealant Down 1/2" - 5/8" From AC Surface. **DO NOT** Totally Fill Saw Slot.)



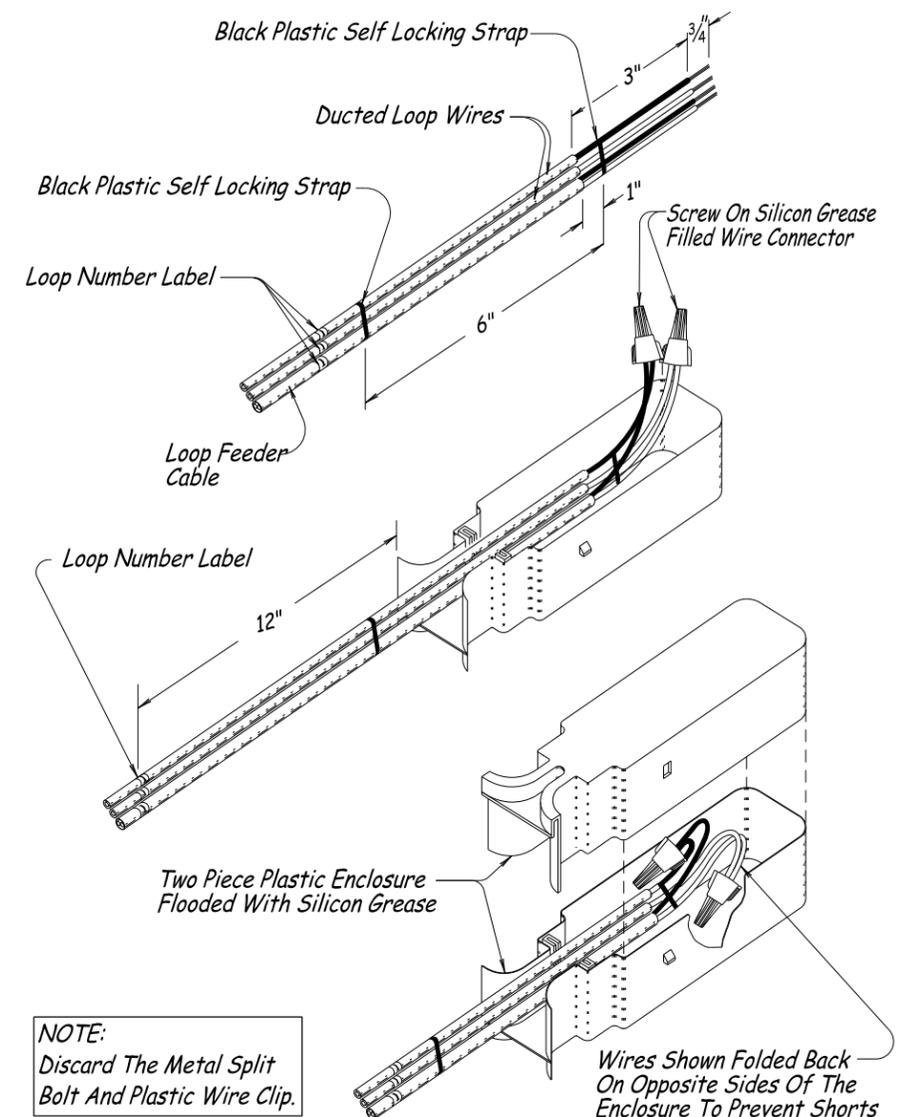
* 2'-6" For Bicycles
4'-0" For Vehicles
Or Size Shown
On The Plans.

DIAMOND LOOP LAYOUT



Place Adequate Size Rigid Nonmetallic Conduit (Min. length 6") Across Joint And Insert Wires.

PAVEMENT JOINT AND CRACK CROSSING DETAIL



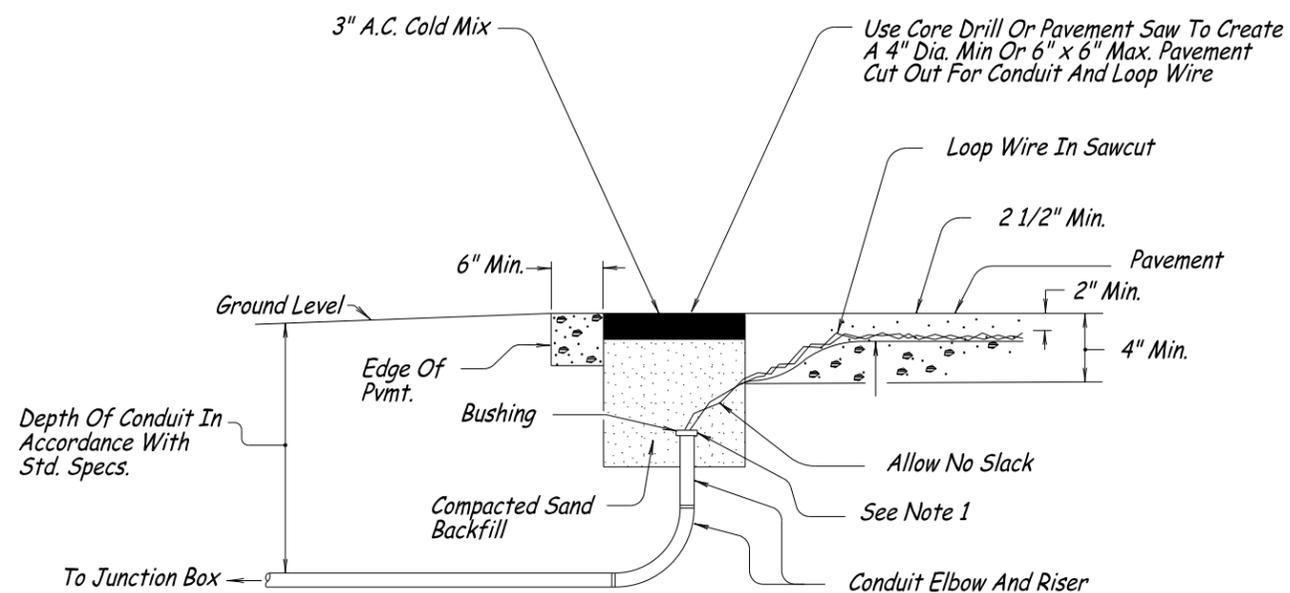
NOTE:
Discard The Metal Split Bolt And Plastic Wire Clip.

LOOP WIRE TO LOOP FEEDER SPLICES

Mark Loop Number On Loop Wire And Loop Feeder With Permanent Tags. Use Hand-held Labeler (Brady IDXPert With XC-1500-580-WT-BK Tags, Or Approved Equal).

At Existing Installations The Contractor Is Responsible For Re-wiring And Re-numbering Of New And Existing Detector Loops And Loop Feeders, In Junction Boxes And Cabinet, To Match Wiring Diagram.

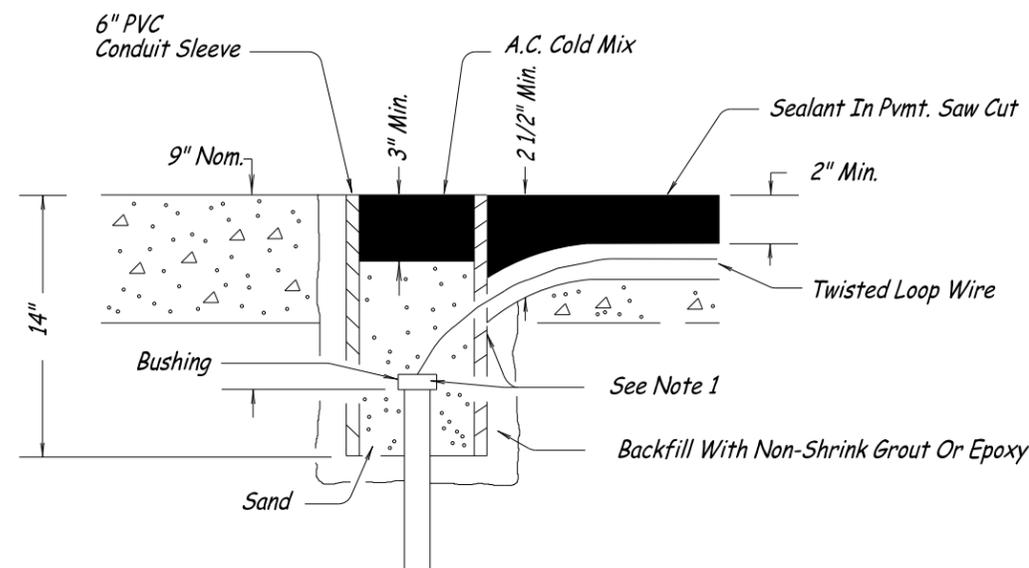
CALC. BOOK NO. <u>N/A</u>	BASLINE REPORT DATE <u>07-01-14</u>
ACCOMPANIED BY BASELINE REPORT	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications
OREGON STANDARD DRAWINGS	
LOOP DETAILS	
2015	
REVISIONS	
DATE	DESCRIPTION



UNCURBED SECTION

On Monolithic Curbs, Locate Loop Entrance In Pavement At The Edge Of Concrete Gutter
(All Other Notes Apply As Above)

SAND POCKET OPTION



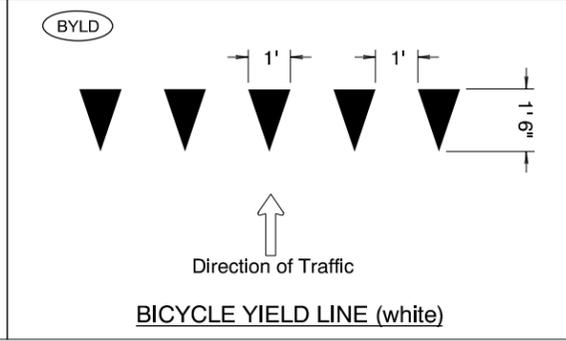
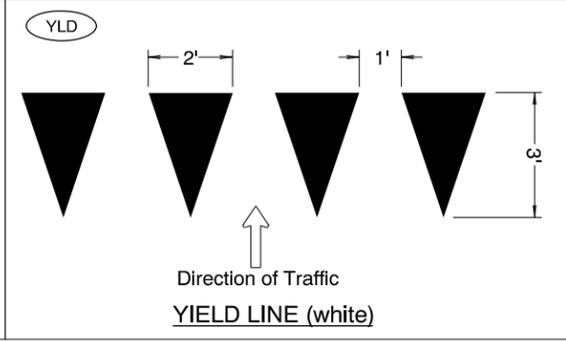
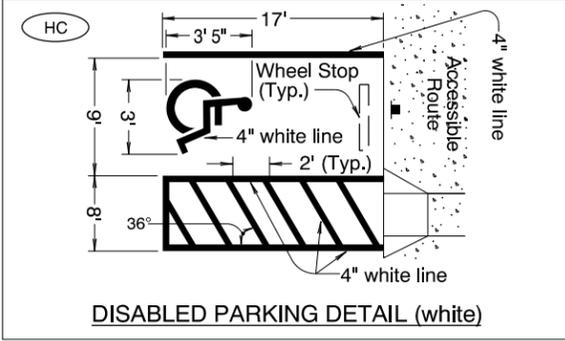
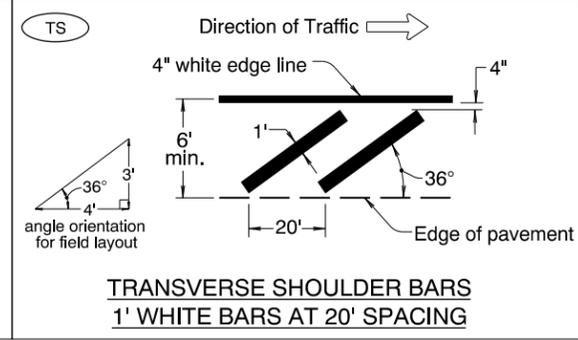
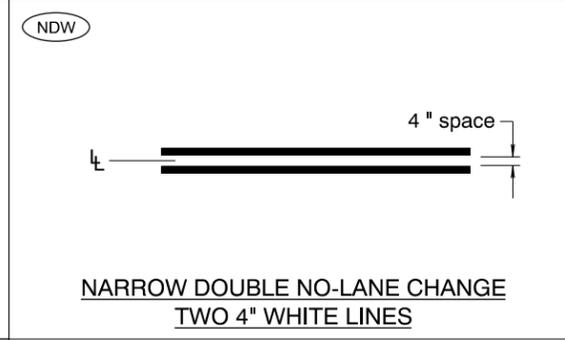
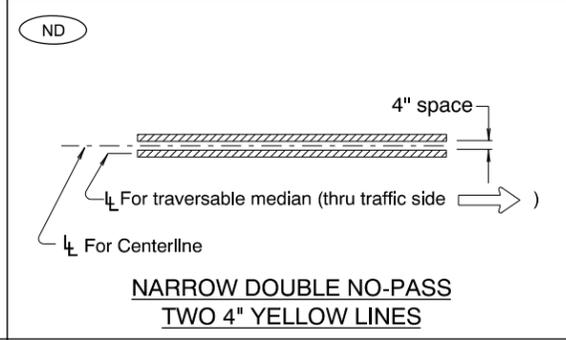
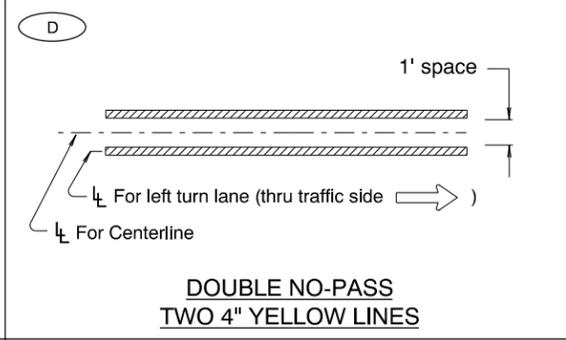
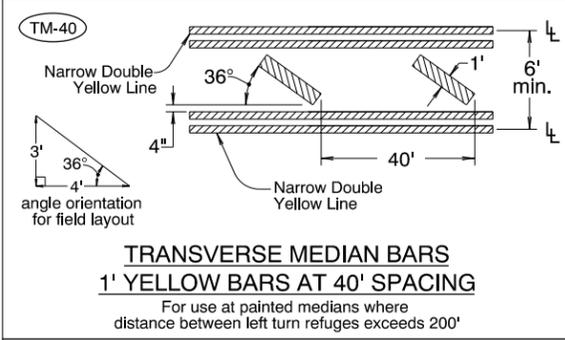
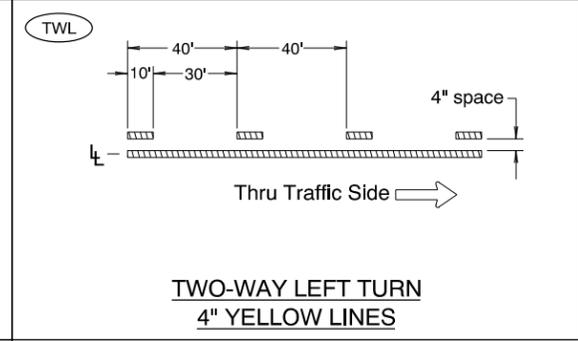
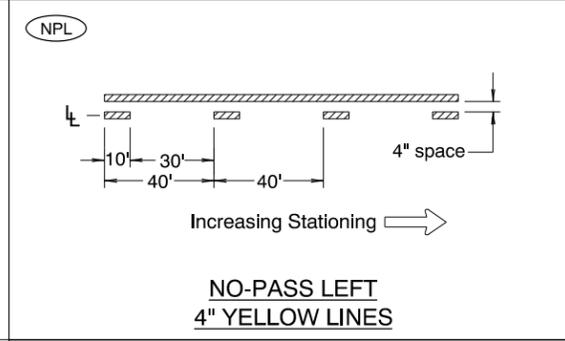
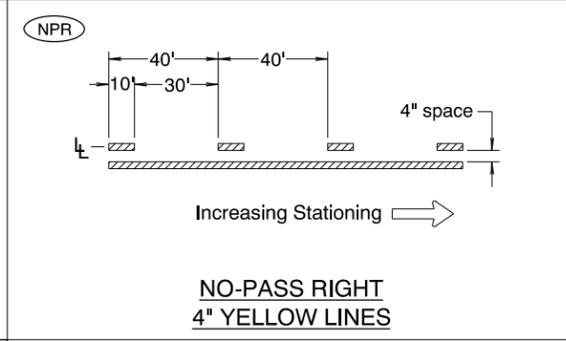
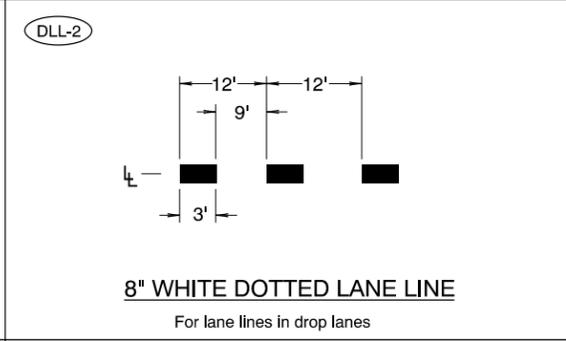
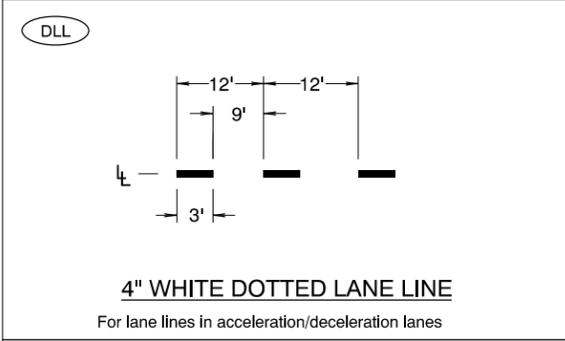
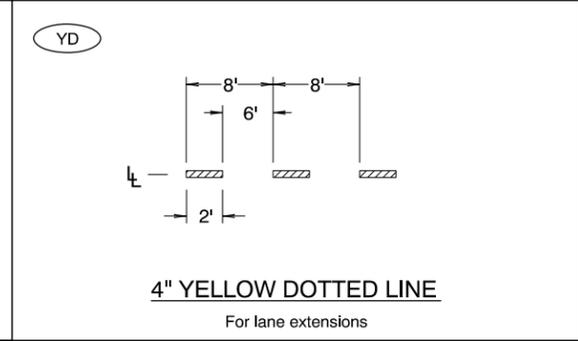
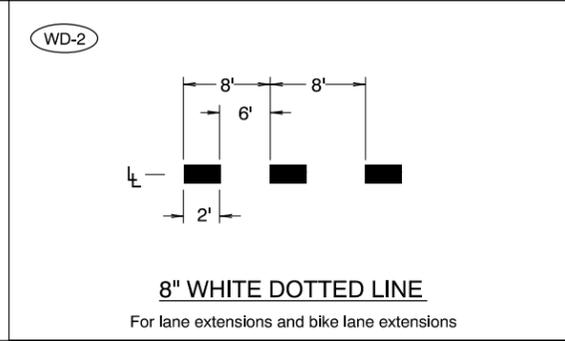
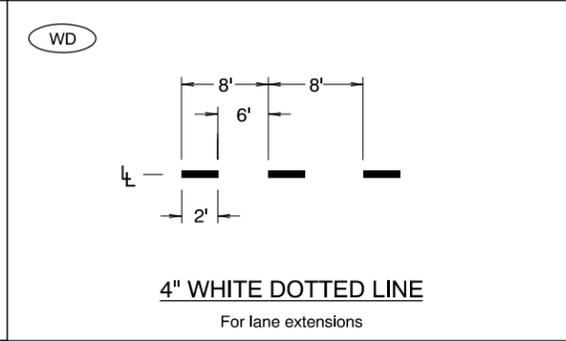
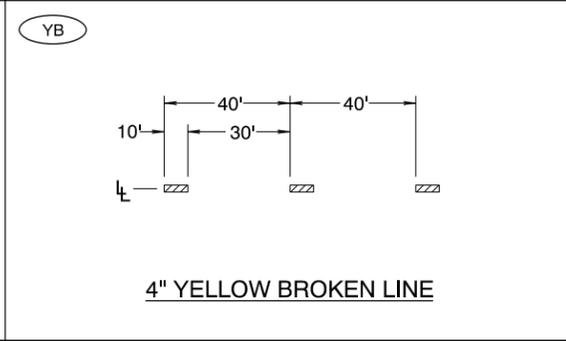
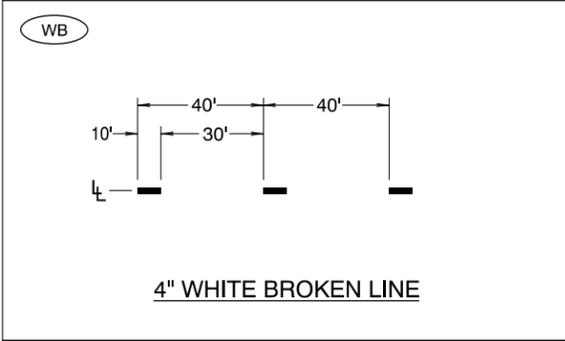
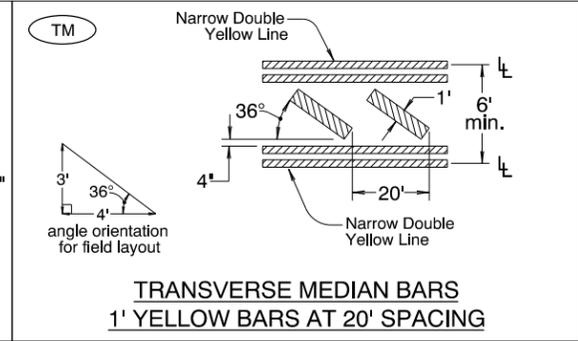
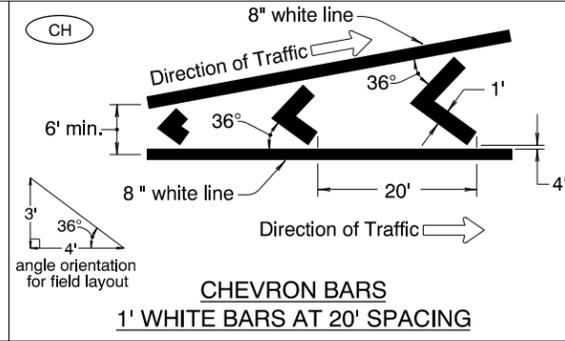
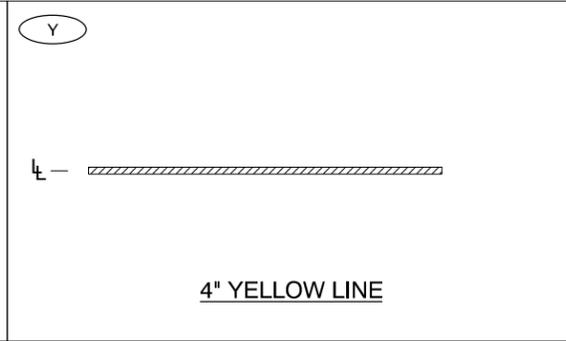
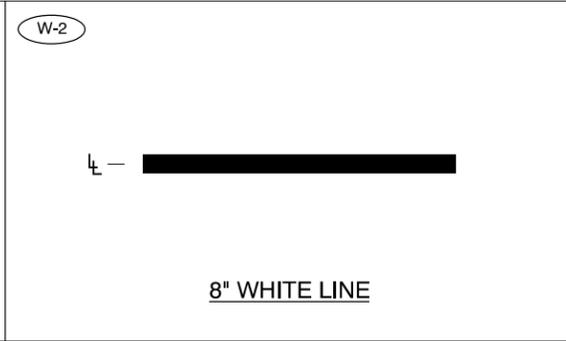
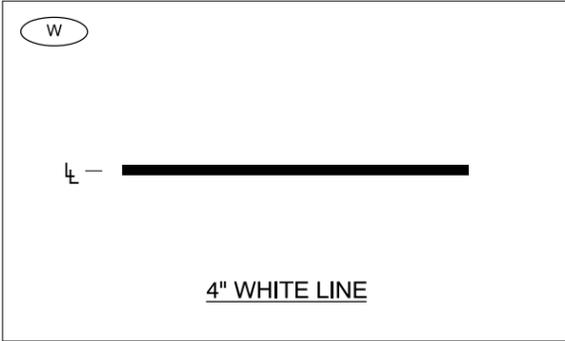
PVC CONDUIT OPTION

LOOP WIRE ENTRANCES

SAND POCKET OPTION OR P.V.C. CONDUIT INTALLATION NOTES:

- 1.) Install Conduit Plug To Each End Of Conduit Before Installing Sand And A.C.
- 2.) Elbows And Risers For Conduit Back Into The First Junction Box May Be Any Rigid Non-Metallic Conduit.

CALC. BOOK NO. <u>N/A</u>	BASELINE REPORT DATE <u>12-31-13</u>
ACCOMPANIED BY BASELINE REPORT	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.	OREGON STANDARD DRAWINGS
	LOOP ENTRANCE DETAILS
	2015
REVISIONS	
DATE	DESCRIPTION



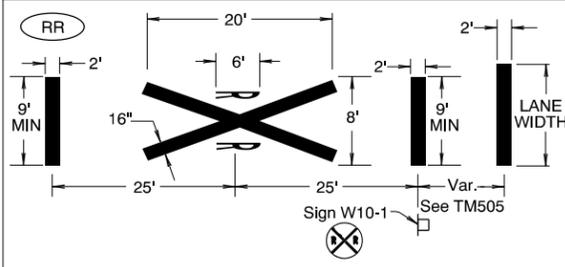
CALC. BOOK NO. N/A		BASELINE REPORT DATE 12/19/2012	
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications			
OREGON STANDARD DRAWINGS			
PAVEMENT MARKING			
STANDARD DETAIL BLOCKS			
2015			
DATE	REVISION DESCRIPTION		
01/2015	Modified Bike Yield Line title to match section 00867 specification		

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

← Direction Of Traffic, Increasing Stationing Or Thru Traffic Side

⊥ Lane line dimensions are shown on the striping plans

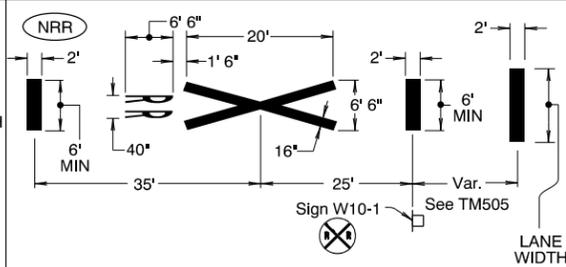
LEGEND



RAILROAD CROSSING (white)

Install per ODOT Rail Crossing Order or as shown.

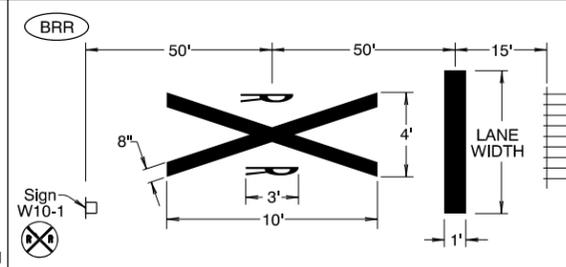
For letter proportion details, see current version of Standard Highway Signs



NARROW RAILROAD CROSSING (white)

Install per ODOT Rail Crossing Order or as shown.

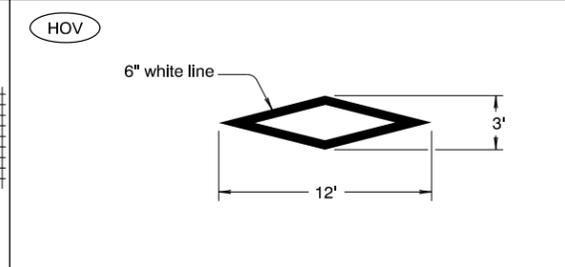
For letter proportion details, see current version of Standard Highway Signs



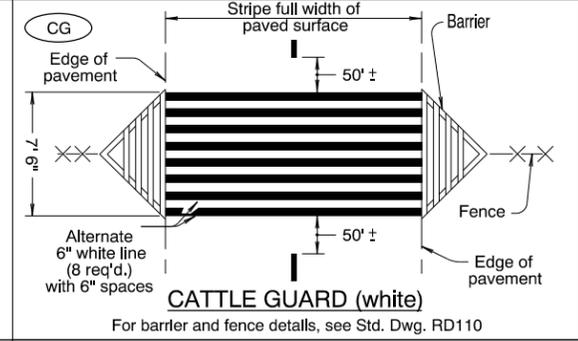
BIKE PATH RAILROAD CROSSING (white)

Install per ODOT Rail Crossing Order or as shown.

For letter proportion details, see current version of Standard Highway Signs

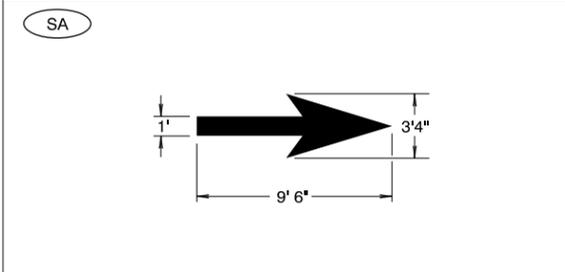


HIGH-OCCUPANCY VEHICLE DIAMOND DETAIL (white)



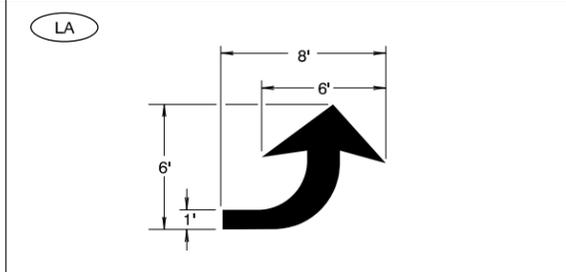
CATTLE GUARD (white)

For barrier and fence details, see Std. Dwg. RD110



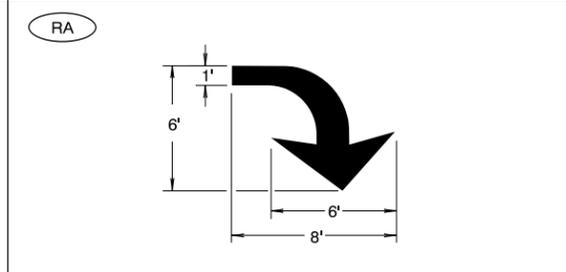
STRAIGHT ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



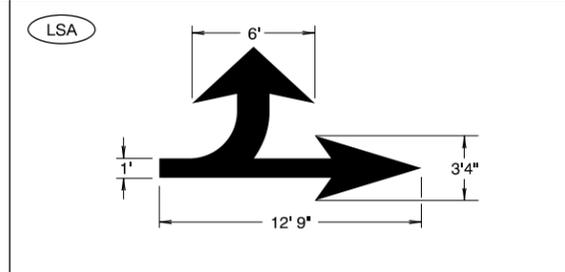
LEFT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



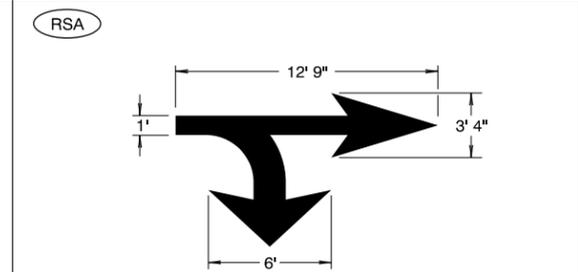
RIGHT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



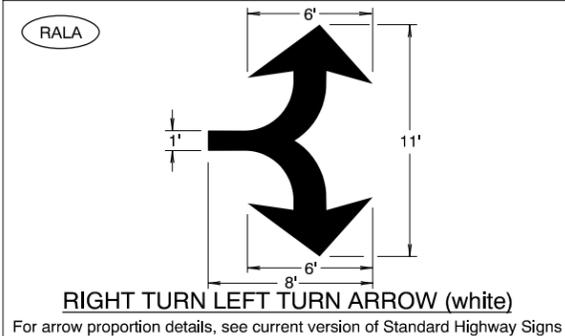
LEFT TURN STRAIGHT ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



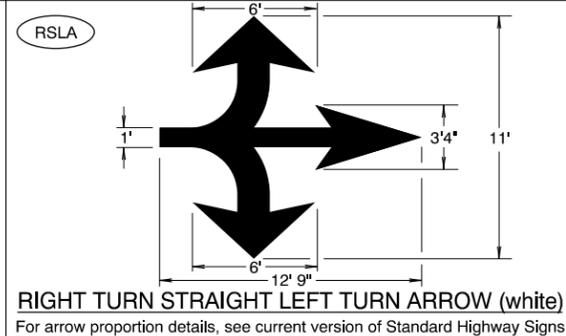
RIGHT TURN STRAIGHT ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



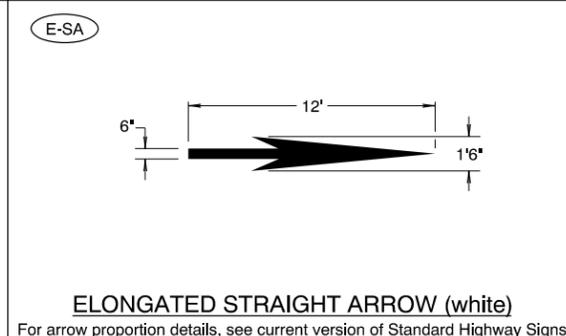
RIGHT TURN LEFT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



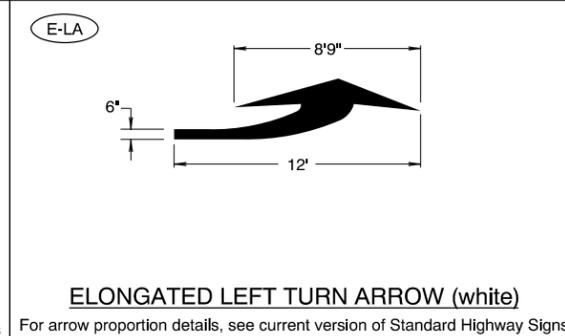
RIGHT TURN STRAIGHT LEFT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



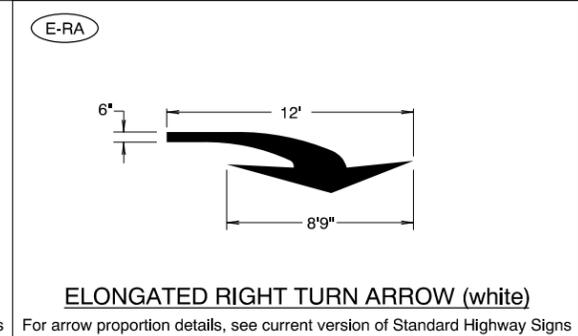
ELONGATED STRAIGHT ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



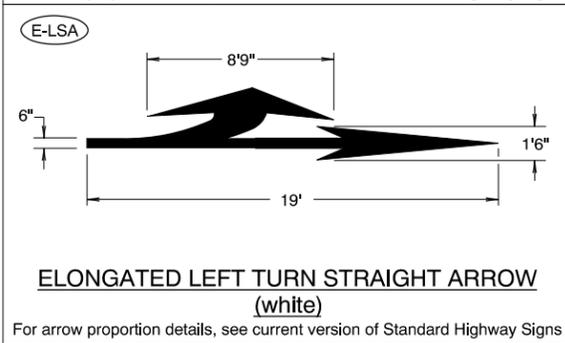
ELONGATED LEFT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



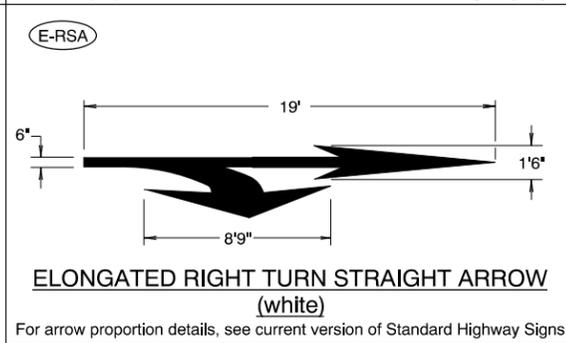
ELONGATED RIGHT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



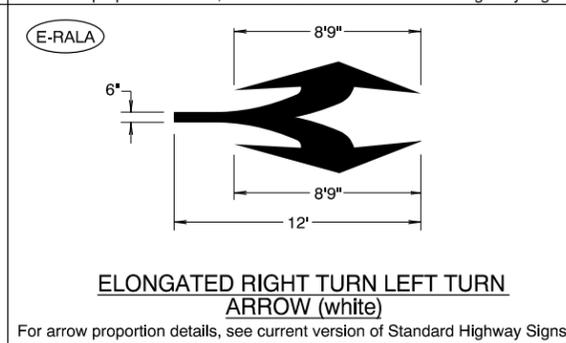
ELONGATED LEFT TURN STRAIGHT ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



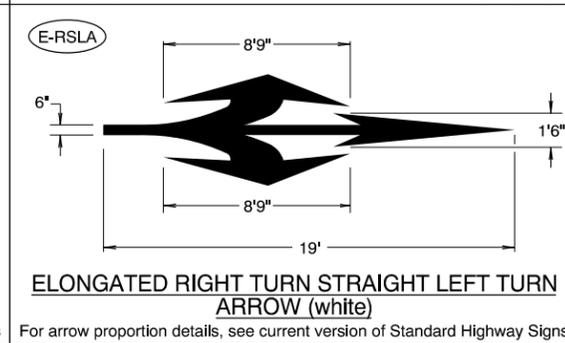
ELONGATED RIGHT TURN STRAIGHT ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



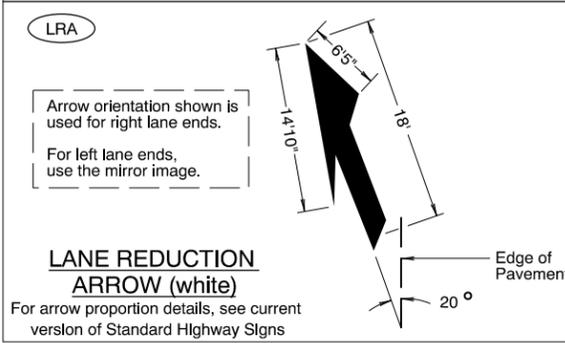
ELONGATED RIGHT TURN LEFT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



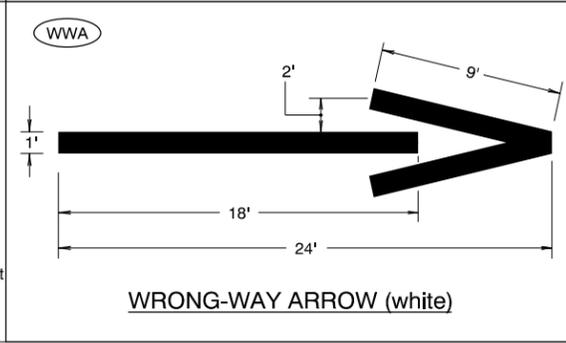
ELONGATED RIGHT TURN STRAIGHT LEFT TURN ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



LANE REDUCTION ARROW (white)

For arrow proportion details, see current version of Standard Highway Signs



WRONG-WAY ARROW (white)

General Note:

1. Center pavement markings within the lane width.
2. Arrow and letter dimensions nominal, excluding WWA.

CALC. BOOK NO. N/A

BASELINE REPORT DATE 12/16/2011

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

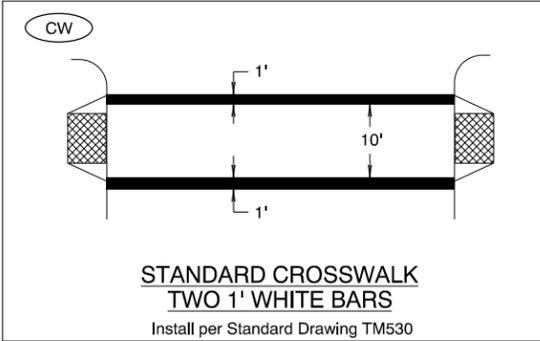
OREGON STANDARD DRAWINGS

PAVEMENT MARKING STANDARD DETAIL BLOCKS

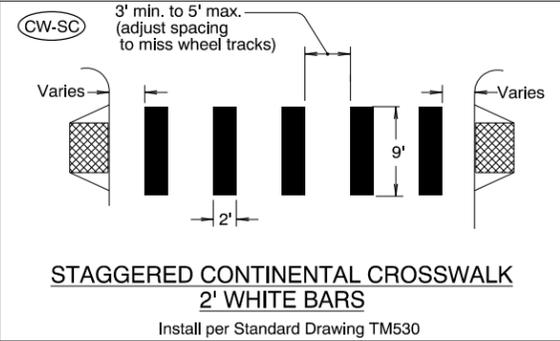
2015

DATE	REVISION DESCRIPTION

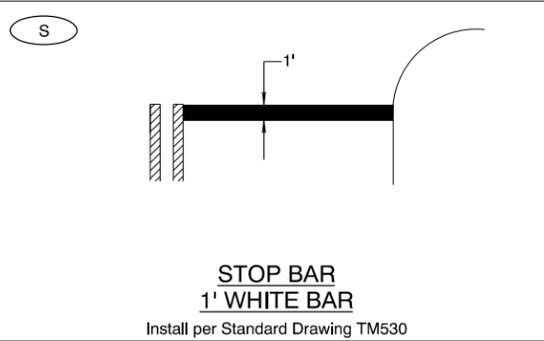
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



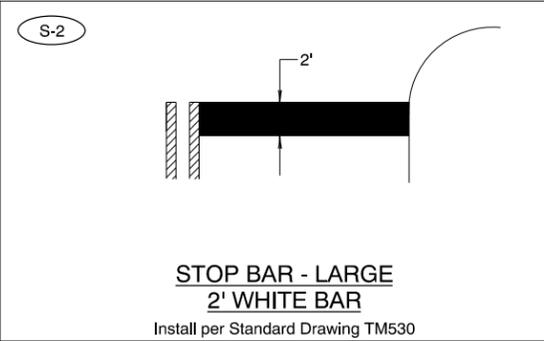
STANDARD CROSSWALK
TWO 1' WHITE BARS
Install per Standard Drawing TM530



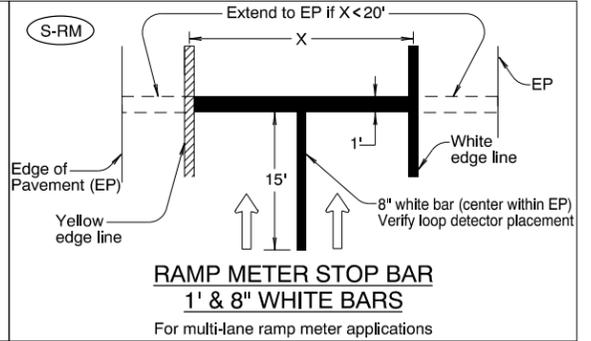
STAGGERED CONTINENTAL CROSSWALK
2' WHITE BARS
Install per Standard Drawing TM530



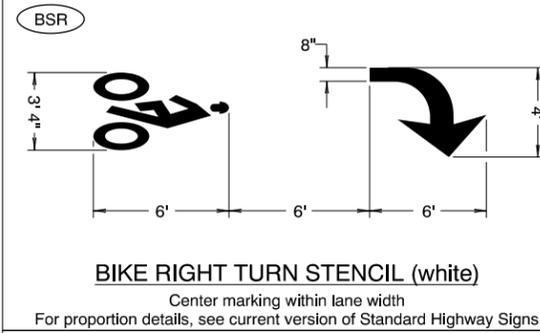
STOP BAR
1' WHITE BAR
Install per Standard Drawing TM530



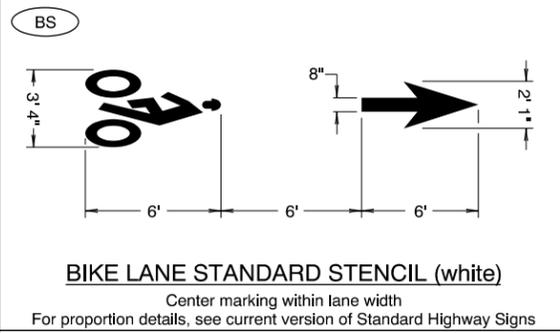
STOP BAR - LARGE
2' WHITE BAR
Install per Standard Drawing TM530



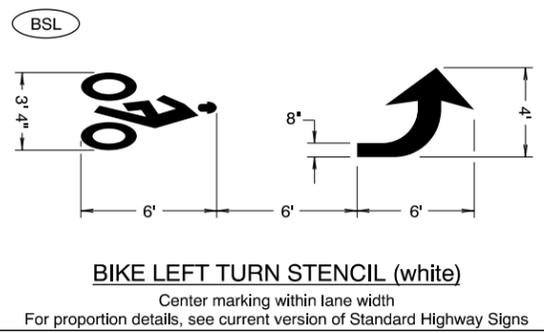
RAMP METER STOP BAR
1' & 8" WHITE BARS
For multi-lane ramp meter applications



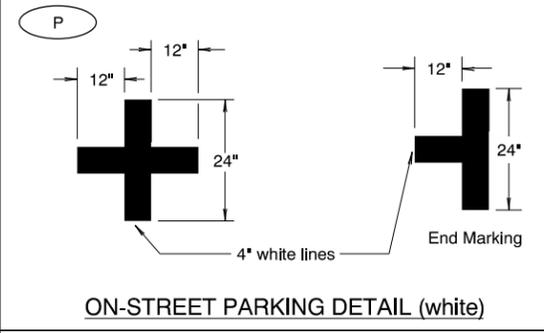
BIKE RIGHT TURN STENCIL (white)
Center marking within lane width
For proportion details, see current version of Standard Highway Signs



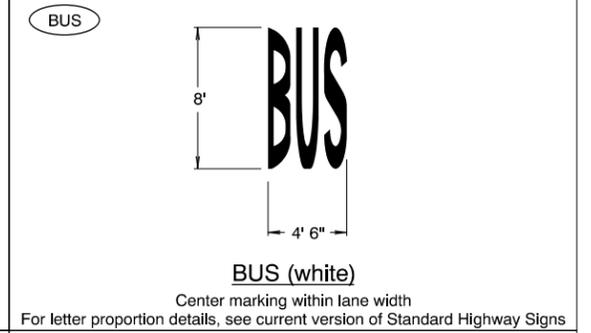
BIKE LANE STANDARD STENCIL (white)
Center marking within lane width
For proportion details, see current version of Standard Highway Signs



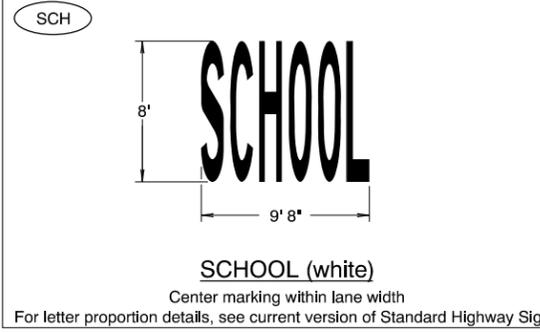
BIKE LEFT TURN STENCIL (white)
Center marking within lane width
For proportion details, see current version of Standard Highway Signs



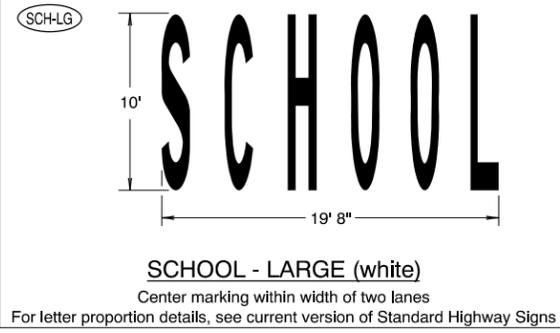
ON-STREET PARKING DETAIL (white)



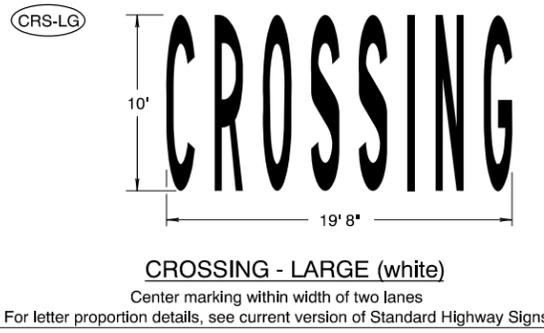
BUS (white)
Center marking within lane width
For letter proportion details, see current version of Standard Highway Signs



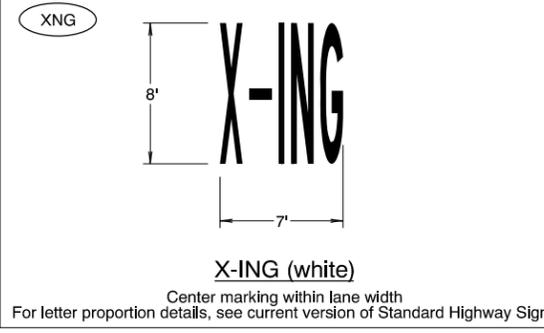
SCHOOL (white)
Center marking within lane width
For letter proportion details, see current version of Standard Highway Signs



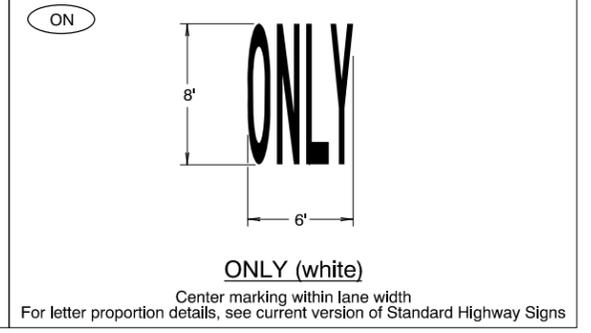
SCHOOL - LARGE (white)
Center marking within width of two lanes
For letter proportion details, see current version of Standard Highway Signs



CROSSING - LARGE (white)
Center marking within width of two lanes
For letter proportion details, see current version of Standard Highway Signs



X-ING (white)
Center marking within lane width
For letter proportion details, see current version of Standard Highway Signs



ONLY (white)
Center marking within lane width
For letter proportion details, see current version of Standard Highway Signs

General Note:
1. Arrow, letter, and bike symbol dimensions nominal.

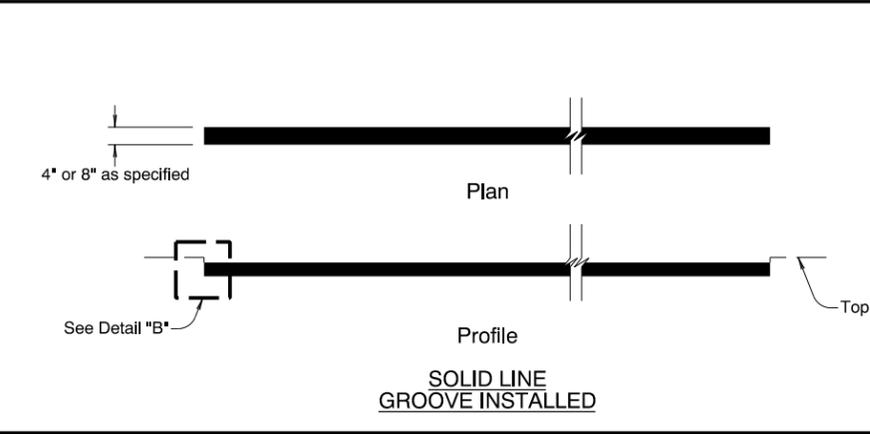
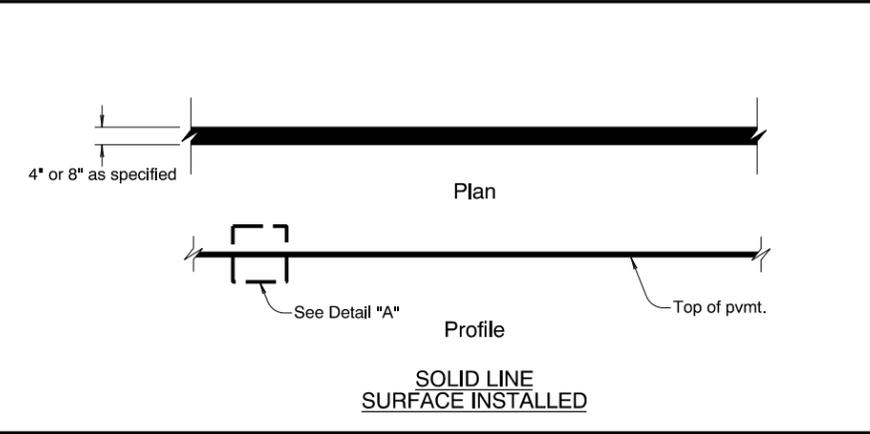
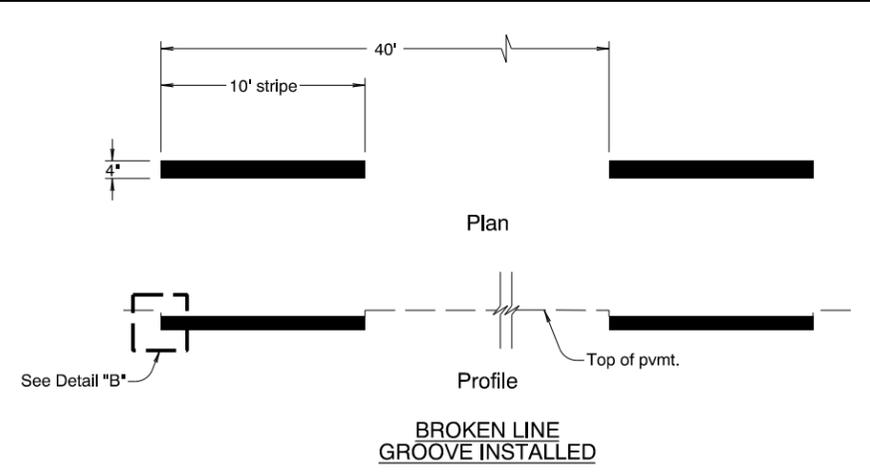
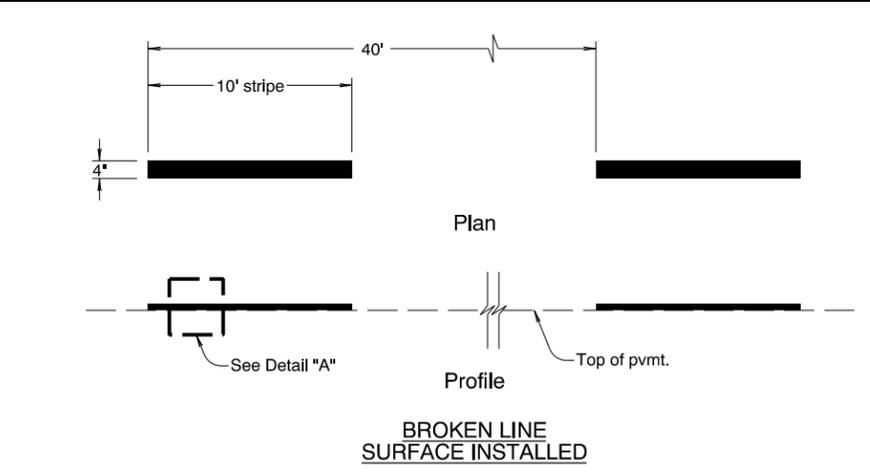
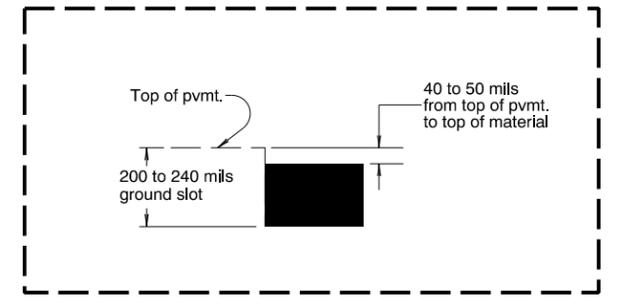
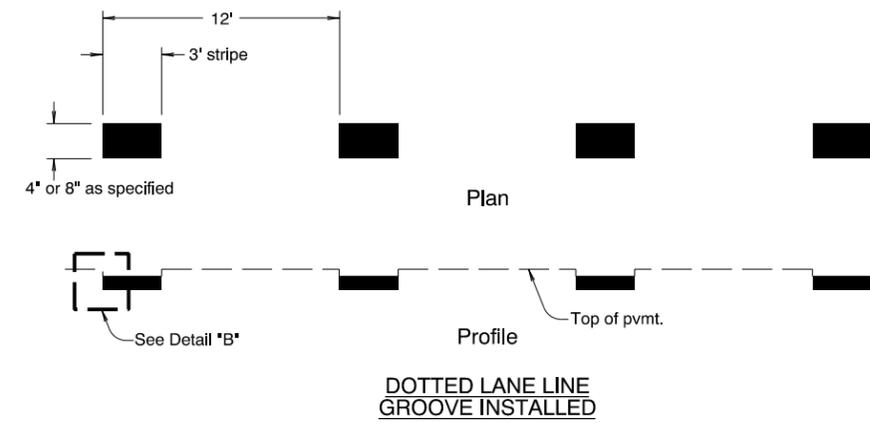
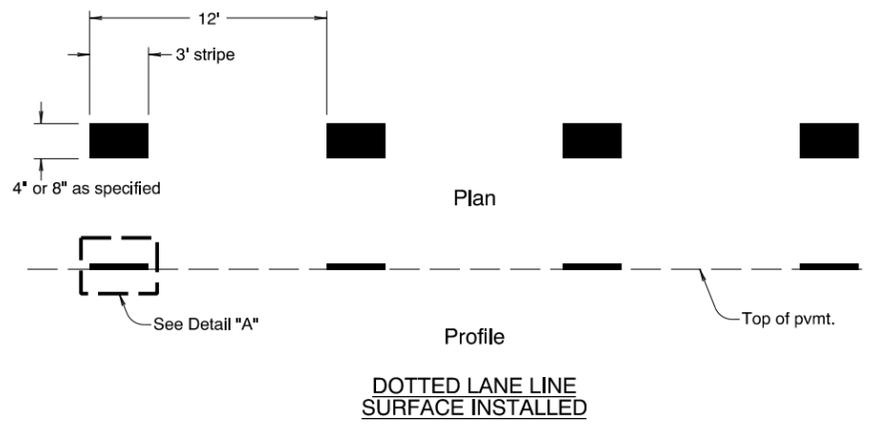
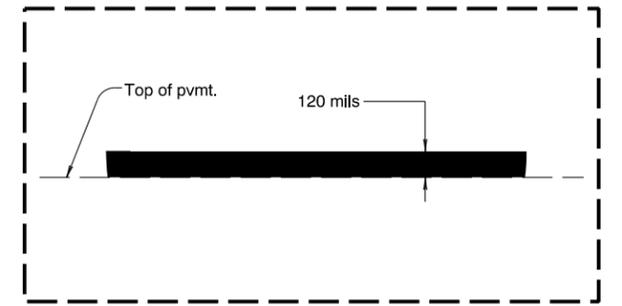
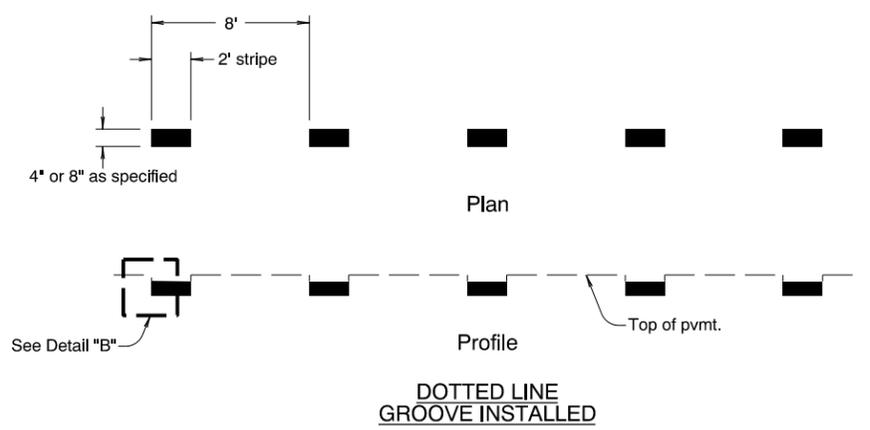
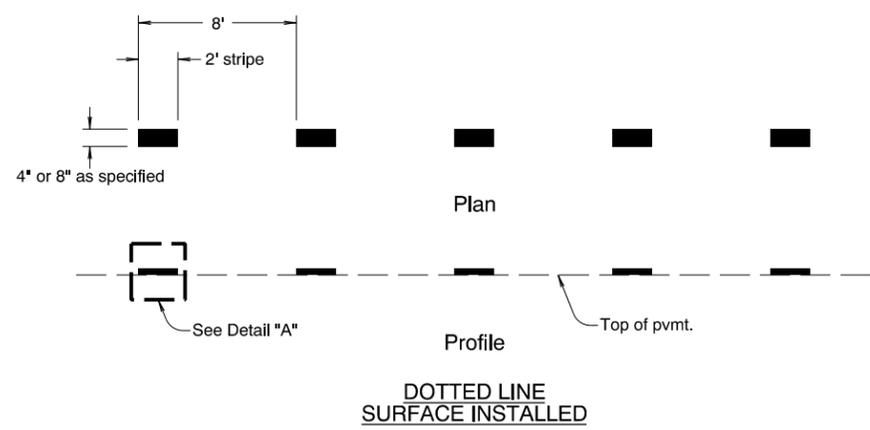
LEGEND
← Direction of Travel

CALC. BOOK NO. N/A	BASELINE REPORT DATE 7/6/2009
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
PAVEMENT MARKING	
STANDARD DETAIL BLOCKS	
2015	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

TM521.dgn 01-08-2015

TM521



CALC. BOOK NO. N/A

BASELINE REPORT DATE 07/05/2013

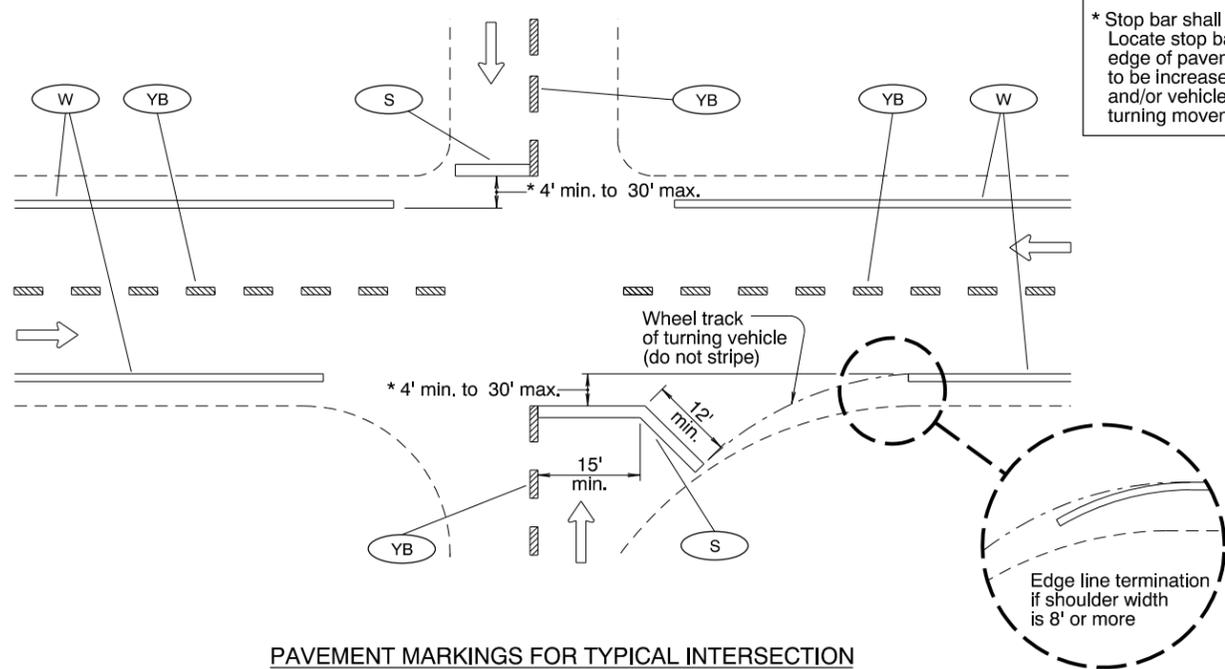
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

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

**OREGON STANDARD DRAWINGS
DURABLE PAVEMENT MARKINGS
METHOD 'A' & METHOD 'B'
SURFACE & GROOVE INSTALLED
NON-PROFLED
2015**

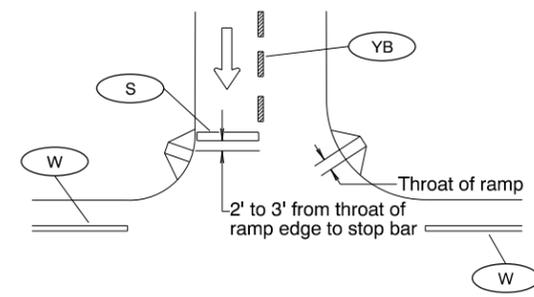
DATE	REVISION DESCRIPTION

TM530.dgn 7-1-2010

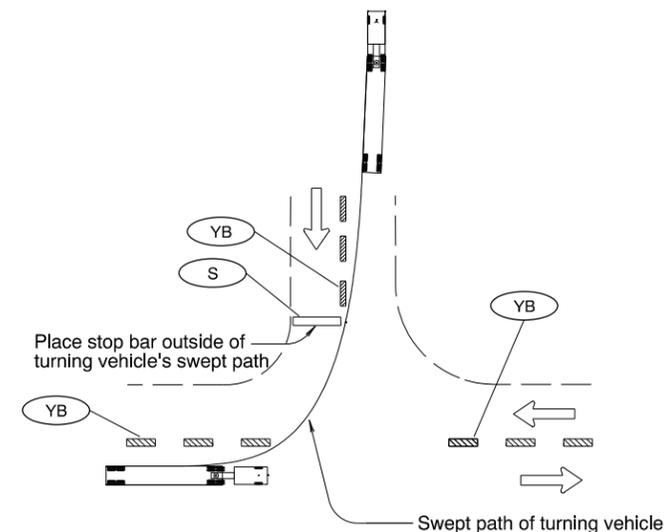


PAVEMENT MARKINGS FOR TYPICAL INTERSECTION

* 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.

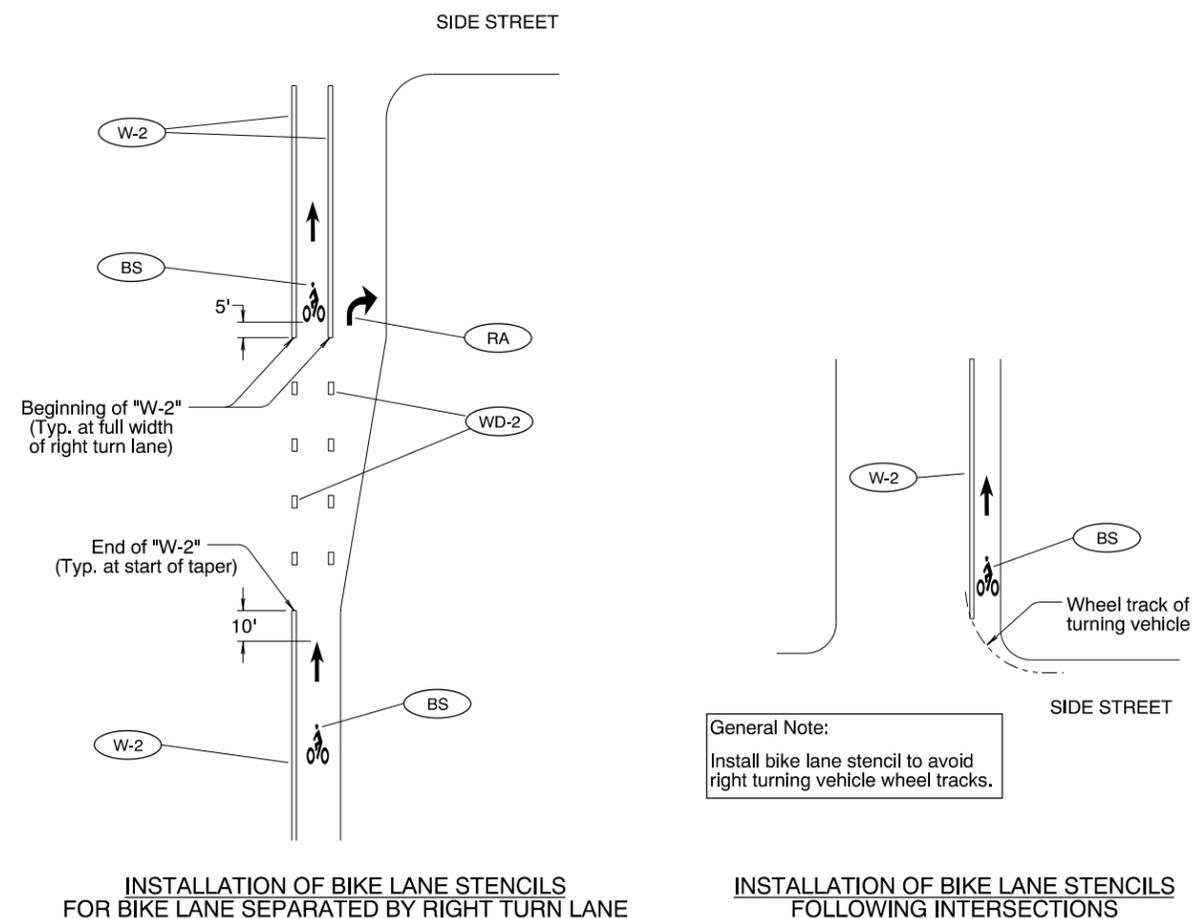


Detail "A"
STOP BAR PLACEMENT WITH RESPECT TO PEDESTRIAN RAMP



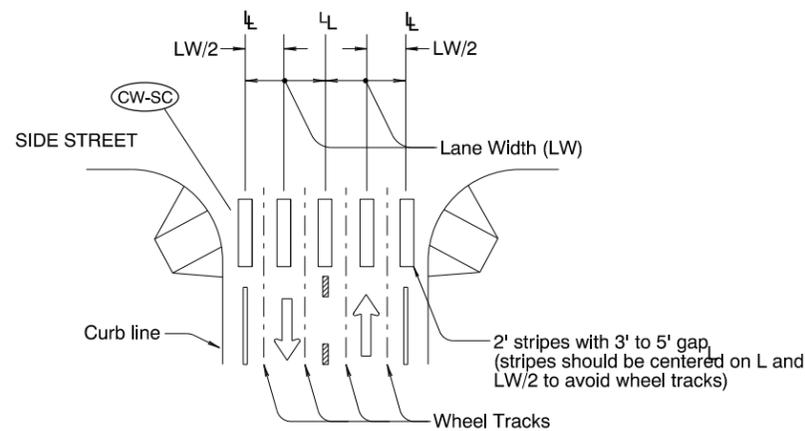
Detail "B"
STOP BAR PLACEMENT WITH RESPECT TO TURN RADII

TM530



INSTALLATION OF BIKE LANE STENCILS FOR BIKE LANE SEPARATED BY RIGHT TURN LANE

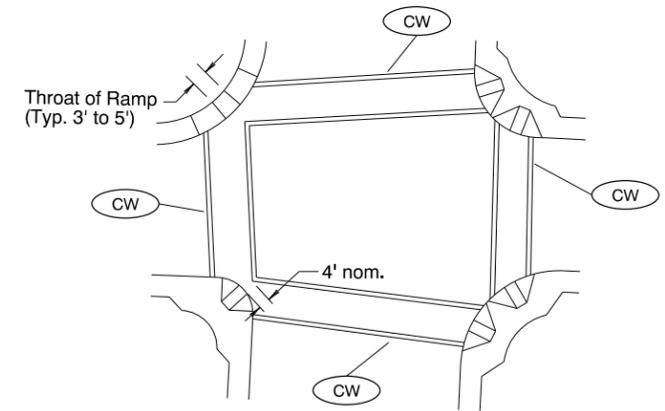
INSTALLATION OF BIKE LANE STENCILS FOLLOWING INTERSECTIONS



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.

LEGEND
← Direction of Travel
L - Lane line dimensions are shown on the striping plans

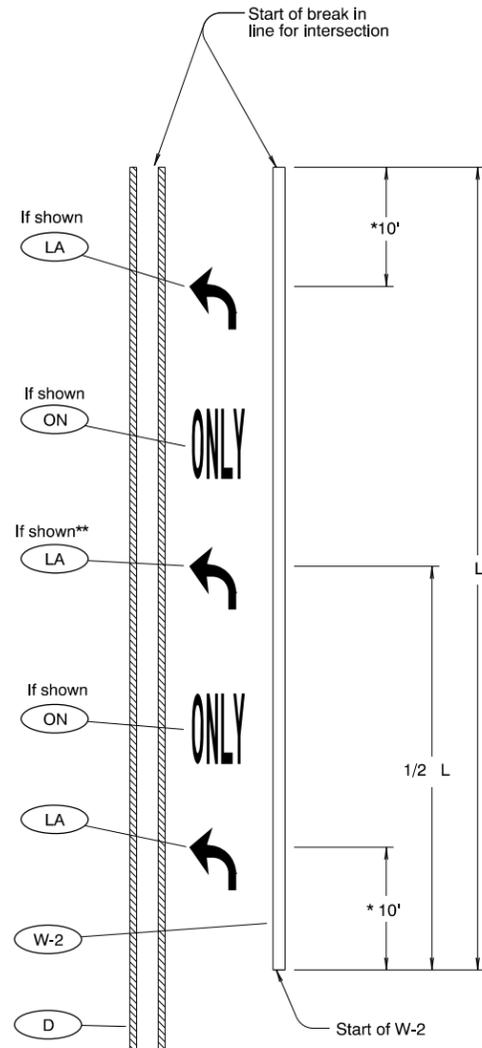


STANDARD CROSSWALK BARS AT INTERSECTION

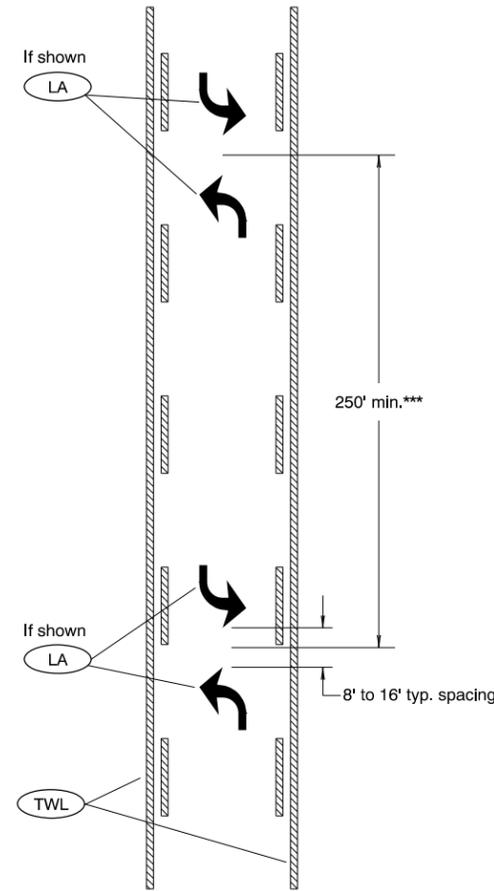
To be accompanied by Standard Dwg. Nos. TM500 thru TM503

CALC. BOOK NO. _____	BASELINE REPORT DATE July 1, 2010
NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications	
OREGON STANDARD DRAWINGS	
INTERSECTION PAVEMENT MARKINGS (CROSSWALK, STOP BAR & BIKE LANE STENCIL)	
2015	
DATE	REVISION DESCRIPTION

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.



LANE USE ARROW PLACEMENT FOR TURN LANE
DETAIL "A"



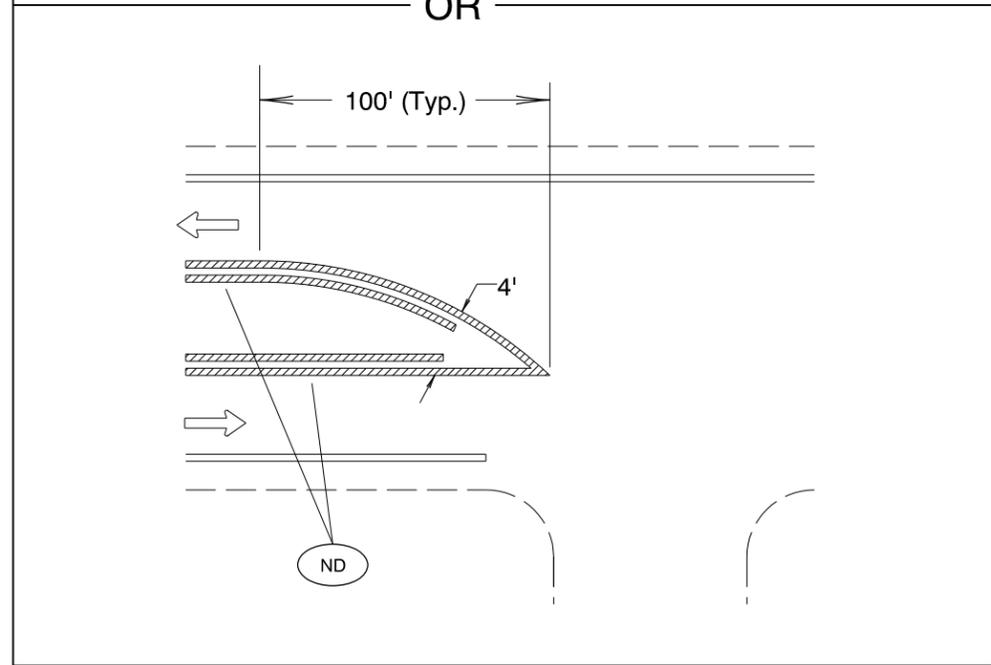
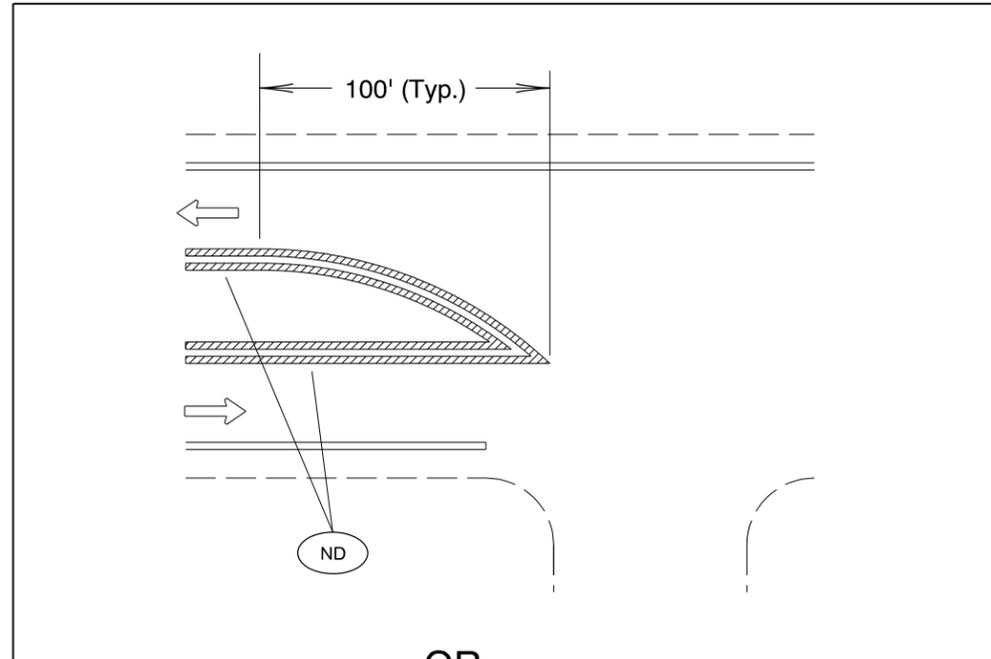
TWO-WAY LEFT TURN LANE ARROW PLACEMENT
DETAIL "B"

General Notes:

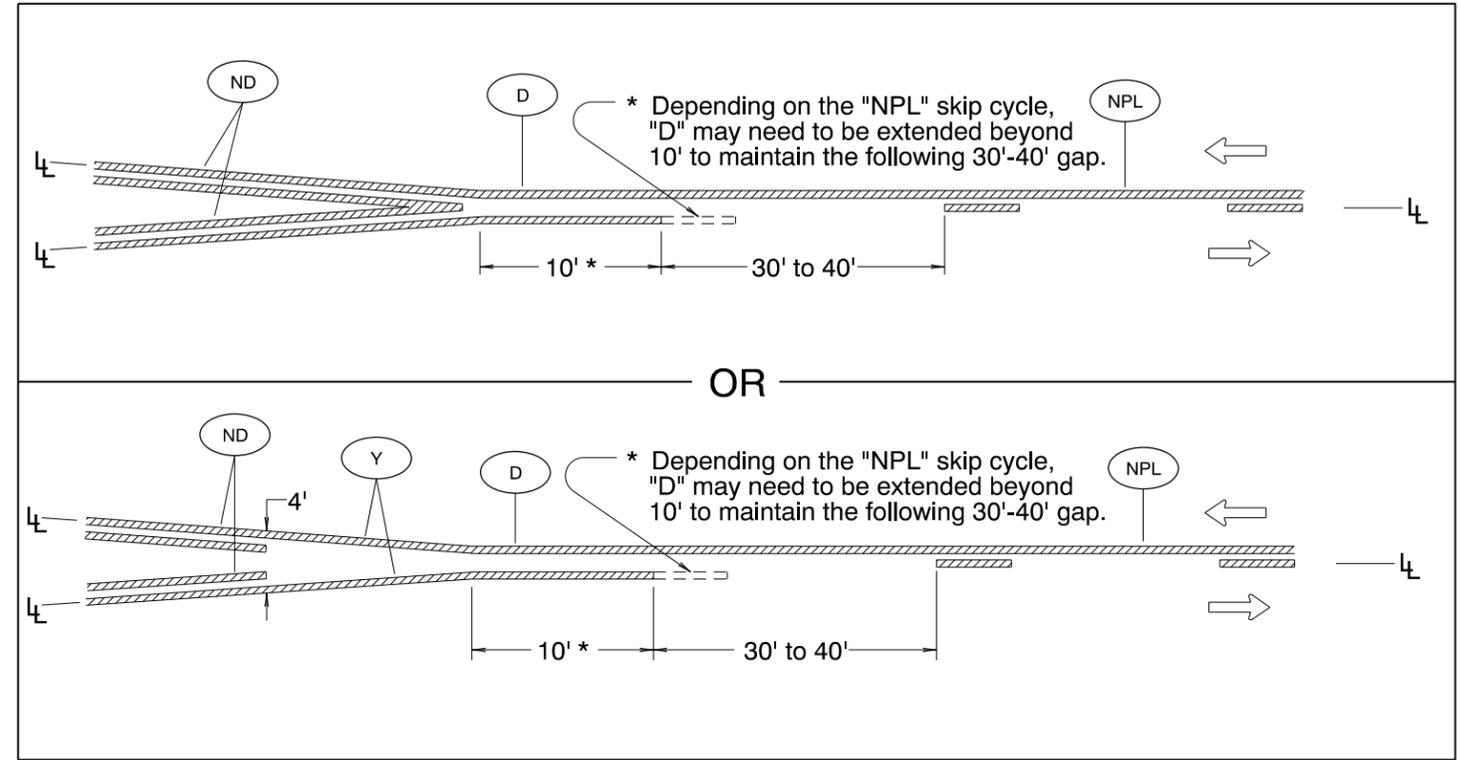
- 1.) Center pavement marking legends within the lane. * 15' when installing elongated arrows.
- 2.) Placement of lane use arrows with respect to the 8" wide white line (W-2) channelization shown in Detail "A" applies to both left and right turn lanes. ** When L is greater than 400', install 3rd lane use arrow at 1/2 L as shown in Detail "A".
- 3.) Center "ONLY" markings between lane use arrows. *** Double arrows to be placed at even intervals, proportioned within block or as shown.

To be accompanied by Standard Dwg. Nos. TM500 thru TM503

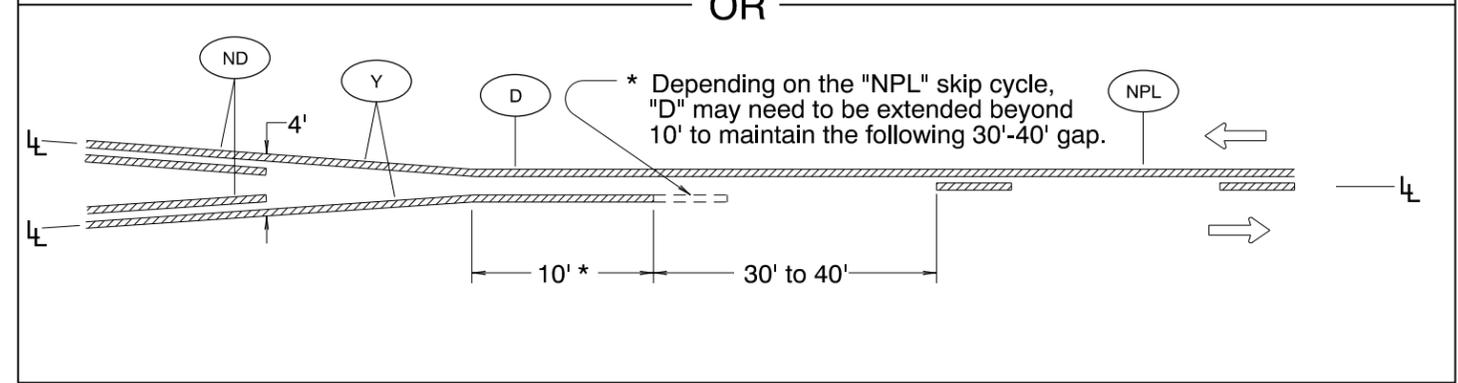
CALC. BOOK NO. <u> N/A </u>	BASELINE REPORT DATE <u> 12/16/2011 </u>
<p><i>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</i></p>	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications
	OREGON STANDARD DRAWINGS
	TURN ARROW MARKING DETAILS
	2015
	DATE _____ REVISION DESCRIPTION _____



MEDIAN BULLNOSE DETAIL



OR



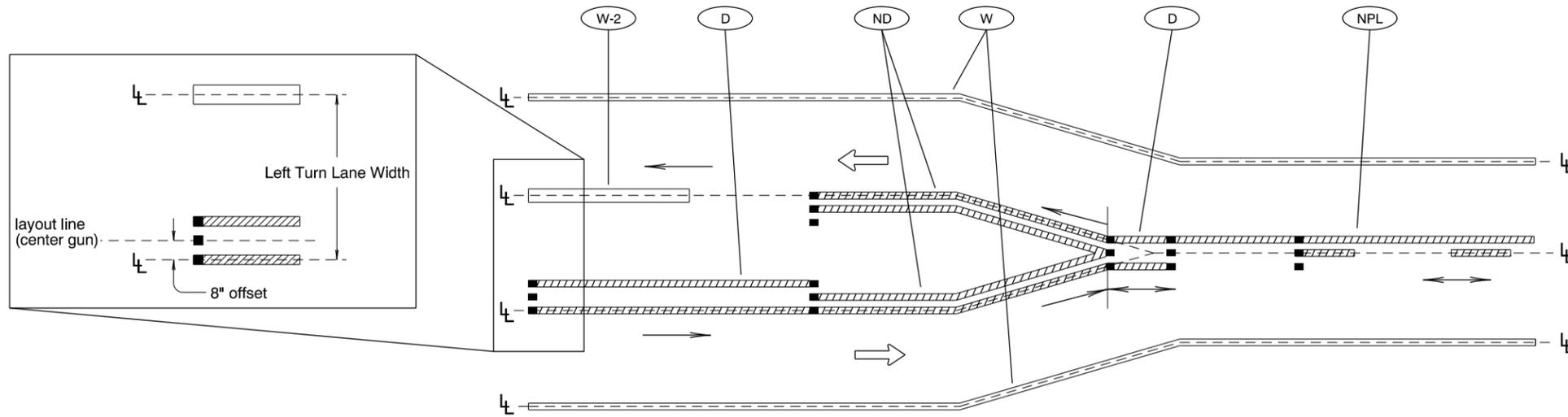
MEDIAN WIDTH TRANSITION
(TWO NARROW DOUBLE YELLOW LINES TO ONE-DIRECTION NO-PASSING LINE)

LEGEND
 Increasing stationing from left to right
 Direction of Travel
 Lane line dimensions are shown on the striping plans

To be accompanied by Standard Dwg. Nos. TM500 thru TM503

CALC. BOOK NO. <u> N/A </u>	BASELINE REPORT DATE <u> 12/16/2011 </u>									
<p>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.</p>	NOTE: All material and workmanship shall be in accordance with the current Oregon Standard Specifications									
	<p>OREGON STANDARD DRAWINGS</p> <p>MEDIAN AND LEFT TURN CHANNELIZATION DETAILS</p> <p>2015</p>									
	<table border="1"> <thead> <tr> <th>DATE</th> <th>REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	DATE	REVISION DESCRIPTION							
DATE	REVISION DESCRIPTION									

TM561.dgn 01-08-2015



LEFT TURN LANE ALIGNMENT LAYOUT

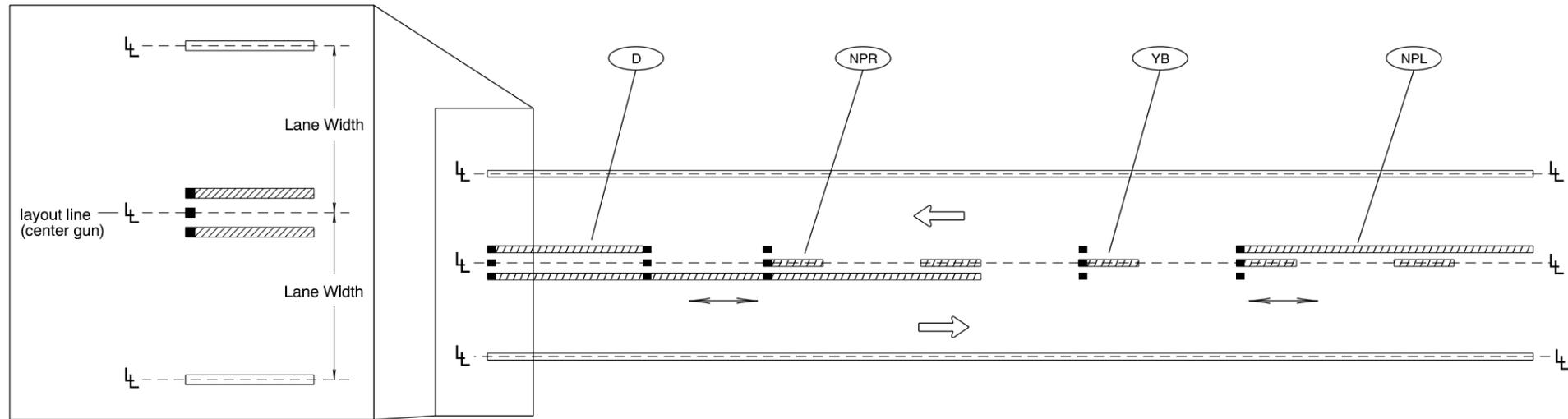
General note:

- 1.) Install control points for pavement marking alignment layout along the center gun location.
- 2.) Increasing stationing from left to right

LEGEND

- ← Direction Of Travel and Thru Traffic Side.
- ⊥ Lane line dimensions are shown on the striping plans.
- ↔ Direction of striping truck (may go either direction)
- Direction of striping truck (may go one direction only)
- Three gun installation system (center dot represents center gun)

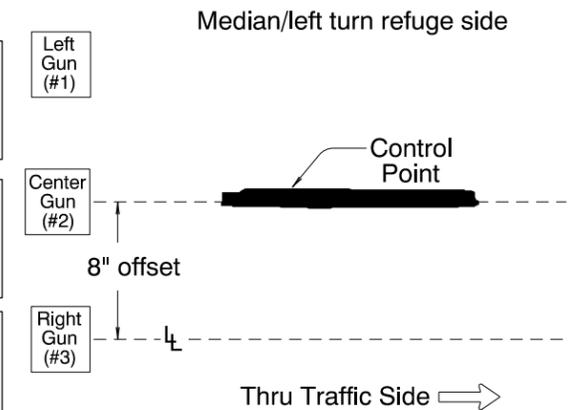
TM561



CENTERLINE ALIGNMENT LAYOUT

Line Types requiring control points to be 8" offset from lane line:

- (TWL) (ND)* For traversable medians only
- (D) For left turn refuges only
- (Y) For non-traversable medians on undivided highways only. Right gun (#3) to be used.



8" Offset of Lane Line and Center Gun

* When ND is used as centerline markings, a control point layout 4" offset from the lane line is required.

To be accompanied by Standard Dwg. Nos. TM500 thru TM503

CALC. BOOK NO. N/A BASELINE REPORT DATE 07/08/2011

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

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without consulting a Registered Professional Engineer.

OREGON STANDARD DRAWINGS
ALIGNMENT LAYOUT:
LEFT TURN LANE, CENTERLINE
& MEDIANS
 2015

DATE	REVISION DESCRIPTION