

SUMMARY OF REVISIONS TO THE 2019 ROADWAY STANDARDS

The 2019 Standard Specifications for Highway Construction is the current specification for Oklahoma highway construction and Roadway Design is submitting the following summary of changes for the revised 2019 Roadway Standard Drawing, for your information and review.

Revised Standards Effective March 03, 2025			
Sheet Number	Standard	Revision	Status
R-50	PRM-1-	3	Revised
R-51	PSM-1-	3	Revised
R-57	CCI-1-	0	New Sheet
R-58	CCI-2-	0	New Sheet
R-59	MCI-1-	0	New Sheet
R-60	MCI-2-	0	New Sheet
R-61	MCI-3-	0	New Sheet
R-62	TCI-1-	0	New Sheet
R-63	PBB-1-	3	Revised
R-70	PDT-2-	3	Revised

Sheet Number: R-50

Precast Round Manhole

Old Designation: PRM-1-2

New Designation: PRM-1-3

- Description:
- Removed the "SP" designation from all pay items
 - Replaced inch symbol (") with word "inch" in all general notes.

Sheet Number: R-51

Precast Square Manhole

Old Designation: PSM-1-2

New Designation: PSM-1-3

- Description:
- Removed the "SP" designation from all pay items
 - Replaced inch symbol (") with the word "inch" in all general notes.

Sheet Number: R-57

Concrete Culvert Installation (1 of 2 sheets)

Old Designation: CCI-1-

New Designation: CCI-1-0

- Description:
- This new standard sheet shows: an embankment installation (where installation of pipe is on existing ground) and trench installation drawings, a legend showing what the hatched areas are in the drawings, a multiple pipe installation table, three tables of various dimensions and quantities for round concrete, arch concrete, and elliptical concrete pipes, and a note in a box that reads "All General Notes pertaining to concrete pipe installation are found on roadway standard CCI-2."
-

Sheet Number: R-58**Concrete Culvert Installation (2 of 2 sheets)**

Old Designation: CCI-2-

New Designation: CCI-2-0

Description: • THIS NEW STANDARD SHEET SHOWS: MINIMUM AND MAXIMUM COVER FOR VARIOUS DIAMETERS OF ARCH, HORIZONTAL ELLIPTICAL AND ROUND CONCRETE PIPES, OPTIONAL SLOPING OF TRENCH SIDES WHEN DEPTH IS GREATER THAN 5 FEET, PIPE FABRICATION SPECIFICATIONS AND DESCRIPTIONS FOR ROUND, ARCH AND HORIZONTAL ELLIPTICAL CONCRETE PIPES, 15 GENERAL NOTES (INCLUDING A NOTE RELATING TO BORING AND JACKING OF CONCRETE PIPES, AND BASIS OF PAYMENT TABLE (INCLUDING BORING AND JACKING PAY ITEMS).

Sheet Number: R-59**Metal Culvert Installation (1 of 3 sheets)**

Old Designation: MCI-1-

New Designation: MCI-1-0

Description: • THIS NEW STANDARD SHEET SHOWS: AN EMBANKMENT INSTALLATION (WHERE INSTALLATION OF PIPE IS ON EXISTING GROUND) AND TRENCH INSTALLATION DRAWINGS, A LEGEND SHOWING WHAT THE HATCHED AREAS ARE IN THE DRAWINGS, MULTIPLE PIPE INSTALLATION TABLES, TABLE SHOWING THE PITCH AND DEPTH DIMENSIONS FOR EACH TYPE OF METAL PIPE, OPTIONAL SLOPING OF TRENCH SIDES WHEN DEPTH IS GREATER THAN 5 FEET, PIPE FABRICATION SPECIFICATIONS AND DESCRIPTIONS FOR THE METAL PIPES WITH THEIR VARIOUS COATING TYPES, 13 GENERAL NOTES, AND BASIS OF PAYMENT TABLE.

Sheet Number: R-60**Metal Culvert Installation (2 of 3 sheets)**

Old Designation: MCI-2-

New Designation: MCI-2-0

Description: • THIS NEW STANDARD SHEET SHOWS: MINIMUM COVER AND MAXIMUM FILL HEIGHT OVER VARIOUS DIAMETERS OF ROUND STEEL, ROUND ALUMINUM ALLOY, AND ARCH ALUMINUM ALLOY PIPES, ONE NOTE IN A BOX THAT READS "ALL NOTES, PAY ITEMS, AND DRAWINGS RELEVANT TO METAL CULVERTS AND THEIR INSTALLATIONS ARE SHOWN IN ROADWAY STANDARD MCI-1, A SECOND NOTE IN A BOX THAT READS "TABLE OF STANDARD BEDDING MATERIAL QUANTITIES SHOWN ON ROADWAY STANDARD MCI-3."

Sheet Number: R-61**Metal Culvert Installation (3 of 3 sheets)**

Old Designation: MCI-3-

New Designation: MCI-3-0

Description: • THIS NEW STANDARD SHEET SHOWS: A TABLE SHOWING MINIMUM COVER FOR CONSTRUCTION LOADS OF VARIOUS DIAMETERS OF METAL PIPE, TWO TABLES OF VARIOUS DIMENSIONS AND QUANTITIES FOR ROUND METAL PIPE AND ARCH METAL PIPES, AND A NOTE IN A BOX THAT READS "ALL NOTES, PAY ITEMS AND DRAWINGS RELEVANT TO METAL CULVERTS AND THEIR INSTALLATIONS ARE SHOWN ON ROADWAY STANDARD MCI-1."

Sheet Number: R-62**Thermoplastic Culvert Installation**

Old Designation: TCI-1-

New Designation: TCI-1-0

Description: • THIS NEW STANDARD SHEET SHOWS: A TABLE SHOWING MINIMUM AND MAXIMUM COVER HEIGHTS FOR POLYETHYLENE AND POLYPROPYLENE PIPES, TWO TABLES OF ALLOWABLE PIPE SIZES IN DIAMETERS OF POLYETHYLENE AND POLYPROPYLENE PIPES, ALONG WITH THEIR RESPECTIVE ASTM AND AASHTO SPECIFICATIONS, STANDARD BEDDING MATERIAL DIMENSIONS AND QUANTITIES FOR POLYETHYLENE AND POLYPROPYLENE PIPES, A DRAWING SHOWING THE DUAL WALL "TYPE S" CONFIGURATION, MULTIPLE PIPE INSTALLATION TABLE, 11 GENERAL NOTES, AND A BASIS OF PAYMENT TABLE.

Sheet Number: R-63**Pipe Bedding and Backfill**

Old Designation: PBB-1-2

New Designation: PBB-1-3

Description: • Changed R number from 61.

- Added Star Symbol next to the 'H' dimension in both Class B and Class C Bedding drawings.
- Change to General Note #2: Remove MCI-3 in the second sentence and place the word 'and' in front of MCI-1.
- Change to General Note #6: Replace the first word 'date' with 'design' and the phrase of 'pipe materials are' with 'the type of pipe is'.
- Change to General Note #8: Replace the phrase '...pipe bedding table will...' with '....design table will...'
- Change to General Note #10: Replace 'Bedding Material Type B, C, ...' with 'Bedding Material Classes B, C, ...' and remove part of the sentence from '...and compacted...' to 'equipment only'. Place a period after '...6 layers'. Add the following after the first sentence: 'Classes C & D bedding shall be compacted to 95% standard density and Class B shall be compacted to 98% standard density. All compaction of bedding material shall be done using hand-operated equipment only.'
- Change to General Note #11: Replace the phrase 'all the way to top of trench, except for concrete pipes' with the following '...all the way to the pavement for all pipes except for reinforced concrete pipe. The standard bedding height for reinforced concrete pipe shall go to the springline of the pipe, no matter if the pipe is installed under pavement or not. See Roadway Standard CCI-1 for additional details.'
- Change to General Note #13: ASTM looked like it was split apart. All four letters were brought together.

Sheet Number: R-70**Pavement Drop-Off Treatments**

Old Designation: PDT-2-2

New Designation: PDT-2-3

- Description:
- In Figure 1, above the line, changed wording to "Definitive Use of Positive Barrier, with Signing, Marking and Delineation". Below the line, changed wording to state "Use Signing, Marking, Delineation, and/or Positive Barrier based on site specific considerations".
 - Revised first bullet point in General Note #2 to read: "Warning Devices (i.e. Signs, Channelizing Devices), and" and second bullet point in General Note #2 to read: "Positive Barriers (i.e. Portable Longitudinal Barriers - See Note 7).
 - Removed phrase "high speed conditions or" from first sentence, in General Note #3.
 - Removed phrase "or protective" between positive and barriers.
 - Added General Note #6: "Positive Barriers as defined by FHWA as devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in NCHRP Report 350. See Title 23 of CFR (Code of Federal Regulations), Subpart K, Part 630 "Temporary Traffic Control Devices."
 - Added General Note #7: "Several types of positive barriers are available to enhance worker and motorist safety. They include, but not limited to, portable concrete longitudinal barriers, ballast-filled barriers, and moveable barriers as well as shadow vehicles with truck-mounted attenuators."
 - Revised Edge Conditions from being "I, II, and III" to "A, B, and C".
 - Removed numbers 1,2 and 3 from notes under Figure 1.
 - In Treatment Type Guideline for Zone 4, replaced "is not indicated" to "may or may not be used".
 - In the drawing near the center of the standard, revised the vertical line of "D" to show it being a slope, with H and V marked on slope.

Revised Standards Effective February 10, 2023

Sheet Number	Standard	Revision	Status
R-70	PDT-2-	2	Revised

Sheet Number: R-70**Pavement Drop-Off Treatments**

Old Designation: PDT-2-1

New Designation: PDT-2-2

- Description:
- Completely revised standard.

Revised Standards Effective November 01, 2022			
Sheet Number	Standard	Revision	Status
R-1	BMPR-	0	New Sheet
R-2	TESCA-	0	New Sheet
R-3	ECTRM1-	0	New Sheet
R-4	ECTRM2-	0	New Sheet
R-5	IPD-	0	New Sheet
R-6	RSF-	0	New Sheet
R-7	TSD-	0	New Sheet
R-8	TFL-	0	New Sheet
R-9	TRFD-	0	New Sheet
R-10	TSB-	0	New Sheet
R-11	SCE-	0	New Sheet
R-12	SD-	0	New Sheet
R-13	CWA-	0	New Sheet
R-14	SSS-2-	1	Revised
R-15	ASCD-6-	1	Revised
R-16	CSCD-6-	2	Revised
R-17	LECS-5-	2	Revised
R-18	LTU-5-	1	Revised
R-19	CRCP1-4-	1	Revised
R-20	CRCP2-4-	1	Revised
R-21	PR-4-	1	Revised
R-22	PCPR-4-	2	Revised
R-23	PED-4-	1	Revised
R-24	PSE-2-	1	Revised
R-25	WCR-4-	2	Revised
R-26	TWD-2-	2	Revised
R-28	PSMD-2-	2	Revised
R-29	SMD-4-	2	Revised
R-30	CET4S-4-	2	Revised
R-31	CET6S-4-	2	Revised
R-32	CET4D-4-	2	Revised
R-33	CET6D-4-	2	Revised
R-34	PCES-5-	1	Revised
R-35	SCES-4-	1	Revised
R-36	CDIB-2-	2	Revised
R-37	CDIB30-2-	2	Revised
R-38	CDIP-2-	2	Revised
R-39	CDIP30-2-	2	Revised
R-40	GPI-5-	2	Revised
R-41	SSCD-4-	1	Revised
R-42	PCI-2-	1	Revised
R-45	CI-2-	2	Revised
R-46	SSIF-5-	1	Revised

R-47	CIG-4-	1	Revised
R-48	MFC-5-	1	Revised
R-49	MJB-4-	2	Revised
R-50	PRM-1-	2	Revised
R-51	PSM-1-	2	Revised
R-52	PMD-1-	1	Revised
R-63	PBB-1-	2	Revised
R-64	SBI-5-	2	Revised
R-65	PUD-4-	1	Revised
R-66	CLB-2-	2	Revised
R-67	MI-4-	2	Revised
R-68	RDI-4-	1	Revised
R-69	DC-4-	1	Revised
R-70	PDT-2-	1	Revised
R-71	RWF1-3-	1	Revised
R-72	RWF2-3-	1	Revised
R-73	RWF3-3-	2	Revised
R-74	SUEL1-4-	1	Revised
R-75	SUEL2-4-	1	Revised
R-76	SUEL3-4-	1	Revised
R-77	SUEL4-4-	1	Revised

Sheet Number: R-1
Best Management Practice Reference Matrix

Old Designation: BMPR-

New Designation: BMPR-0

Description: • New Sheet

Sheet Number: R-2
Typical Temporary Erosion Sediment Control Applications

Old Designation: TESCA-

New Designation: TESCA-0

Description: New Sheet

Sheet Number: R-3
Erosion Control / Turf Reinforcement Mat Installation Details (1 of 2)

Old Designation: ECTRM1-

New Designation: ECTRM1-0

Description: New Sheet

Sheet Number: R-4
Erosion Control / Turf Reinforcement Mat Installation Details (2 of 2)

Old Designation: ECTRM2-

New Designation: ECTRM2-0

Description: New Sheet

Sheet Number: R-5**Inlet Protection (Aggregate and Reinforced Silt Fence Applications)**

Old Designation: IPD-

New Designation: IPD-0

Description: New Sheet

Sheet Number: R-6**Reinforced Silt Fence Installation and Applications**

Old Designation: RSF-

New Designation: RSF-0

Description: New Sheet

Sheet Number: R-7**Temporary Silt Dike Applications**

Old Designation: TSD-

New Designation: TSD-0

Description: New Sheet

Sheet Number: R-8**Temporary Fiber Log Applications**

Old Designation: TFL-

New Designation: TFL-0

Description: New Sheet

Sheet Number: R-9**Temporary Rock Filter Dam Applications**

Old Designation: TRFD-

New Designation: TRFD-0

Description: New Sheet

Sheet Number: R-10**Temporary Sediment Basin**

Old Designation: TSB-

New Designation: TSB-0

Description: New Sheet

Sheet Number: R-11**Stabilized Construction Exit**

Old Designation: SCE-

New Designation: SCE-0

Description: New Sheet

Sheet Number: R-12**Temporary Slope Drain**

Old Designation: SD-

New Designation: SD-0

Description: New Sheet

Sheet Number: R-13**Concrete Washout Applications**

Old Designation: CWA-

New Designation: CWA-0

Description: New Sheet

Sheet Number: R-14**Solid Slab Sodding**

Old Designation: SSS-2-0

New Designation: SSS-2-1

Description: • Used to be R-3.

- title under drawing in upper left of sheet will be revised to state the following "Typical Placement of solid slab sodding or approved stabilizing mat on fill slopes, approaches to overpasses and bridges."
 - General Note #4 is revised to state the following: "...loosely compacted to at least 1 inch above..."
 - General Note #5 shall be replaced by the following: "Water the sod immediately after installation, to an appropriate depth so as to encourage healthy growth. Sod shall be established before being mowed."
 - Added General Note #6.
-

Sheet Number: R-15**Asphalt Surfacing Construction Details**

Old Designation: ASCD-6-0

New Designation: ASCD-6-1

Description: • Used to be R-11. All other information remains the same.

Sheet Number: R-16**Concrete Surfacing Construction Details**

Old Designation: CSCD-6-1

New Designation: CSCD-6-2

Description: • Used to be R-12. All other information remains the same.

Sheet Number: R-17**Joints and Sealers - Longitudinal, Expansion /Isolation and Contract**

Old Designation: LECS-5-1

New Designation: LECS-5-2

Description: • Used to be R-14. All other information remains the same.

Sheet Number: R-18**Load Transfer Units for Concrete Pavement Joints**

Old Designation: LTU-5-0

New Designation: LTU-5-1

Description: • Used to be R-15. All other information remains the same.

Sheet Number: R-19**Continuously Reinforced Concrete Pavement Details**

Old Designation: CRCP1-4-0

New Designation: CRCP1-4-1

Description: • Used to be R-16. All other information remains the same.

Sheet Number: R-20**Continuously Reinforced Concrete Pavement Terminal Joints**

Old Designation: CRCP2-4-0

New Designation: CRCP2-4-1

Description: • Used to be R-17. All other information remains the same.

Sheet Number: R-21**Pavement Reconstruction Details**

Old Designation: PR-4-0

New Designation: PR-4-1

Description: • Used to be R-18. All other information remains the same.

Sheet Number: R-22**Portland Cement Concrete Pavement Repair**

Old Designation: PCPR-4-1

New Designation: PCPR-4-2

Description: • Used to be R-19. All other information remains the same.

Sheet Number: R-23**Pavement Edge Drain**

Old Designation: PED-4-0

New Designation: PED-4-1

Description: • Used to be R-20. All other information remains the same.

Sheet Number: R-24**Pavement Safety Edge**

Old Designation: PSE-2-0

New Designation: PSE-2-1

Description: • Used to be R-21. All other information remains the same.

Sheet Number: R-25**Wheelchair Ramps**

Old Designation: WCR-4-1

New Designation: WCR-4-2

Description: • Used to be R-22. All other information remains the same.

Sheet Number: R-26**Tactile Warning Devices**

Old Designation: TWD-2-1

New Designation: TWD-2-2

Description: • Used to be R-23. All other information remains the same.

Sheet Number: R-28**Precast Standard Median Drain**

Old Designation: PSMD-2-1

New Designation: PSMD-2-2

Description: • Used to be R-24. All other information remains the same.

Sheet Number: R-29**Cast-In-Place Standard Median Drains (18" To 36" Pipes)**

Old Designation: SMD-4-1

New Designation: SMD-4-2

Description: • Used to be R-36.

• Revised all Class C Concrete Quantities in the Apron table of Reinforcing Steel and Concrete.

Sheet Number: R-30**Culvert End Treatment Single Pipe Installation 1 to 4 Safety Slope**

Old Designation: CET4S-4-1

New Designation: CET4S-4-2

Description: • Used to be R-26. All other information remains the same.

Sheet Number: R-31**Culvert End Treatment Single Pipe Installation 1 to 6 Safety Slope**

Old Designation: CET6S-4-1

New Designation: CET6S-4-2

Description: • Used to be R-27. All other information remains the same.

Sheet Number: R-32**Culvert End Treatment Double Pipe Installation 1 to 4 Safety Slope**

Old Designation: CET4D-4-1

New Designation: CET4D-4-2

Description: • Used to be R-28. All other information remains the same.

Sheet Number: R-33**Culvert End Treatment Double Pipe Installation 1 to 6 Safety Slope**

Old Designation: CET6D-4-1

New Designation: CET6D-4-2

Description: • Used to be R-29. All other information remains the same.

Sheet Number: R-34**Prefabricated Culvert End Sections**

Old Designation: PCES-5-0

New Designation: PCES-5-1

Description: • Used to be R-30. All other information remains the same.

Sheet Number: R-35**Sloped Concrete End Sections**

Old Designation: SCES-4-0

New Designation: SCES-4-1

Description: • Used to be R-31. All other information remains the same.

Sheet Number: R-36**Cast-In-Place Concrete Drop Inlets For R. C. Boxes (3' x 2' to 6' x 6')**

Old Designation: CDIB-2-1

New Designation: CDIB-2-2

Description: • Used to be R-32. All other information remains the same.

Sheet Number: R-37**Cast-In-Place Concrete Drop Inlets for 30 Deg. Skew R. C. Boxes (3'**

Old Designation: CDIB30-2-1

New Designation: CDIB30-2-2

Description: • Used to be R-33. All other information remains the same.

Sheet Number: R-38**Cast-In-Place Concrete Drop Inlet For 18" To 72" R. C. Pipes**

Old Designation: CDIP-2-1

New Designation: CDIP-2-2

Description: • Used to be R-34. All other information remains the same.

Sheet Number: R-39**Cast-In-Place Concrete Drop Inlet For 30 Deg. Skew 18" To 72" R.**

Old Designation: CDIP30-2-1

New Designation: CDIP30-2-2

Description: • Used to be R-35. All other information remains the same.

Sheet Number: R-40**Cast-In-Place Grated Pipe Drop Inlet (18" To 42" Pipes)**

Old Designation: GPI-5-1

New Designation: GPI-5-2

Description: • Used to be R-37. All other information remains the same.

Sheet Number: R-41**Storm Sewer Construction Details**

Old Designation: SSCD-4-0

New Designation: SSCD-4-1

Description: • Used to be R-38. All other information remains the same.

Sheet Number: R-42**Precast Curb Inlet (Designs 1,2 and 3)**

Old Designation: PCI-2-0

New Designation: PCI-2-1

Description: • Used to be R-25. All other information remains the same.

Sheet Number: R-45**Cast-In-Place Curb Inlets**

Old Designation: CI-2-1

New Designation: CI-2-2

Description: • Used to be R-39. All other information remains the same.

Sheet Number: R-46**Storm Sewer Inlet Frames (Curb Inlets)**

Old Designation: SSIF-5-0

New Designation: SSIF-5-1

Description: • Used to be R-40. All other information remains the same.

Sheet Number: R-47**Cast Iron Grates (Curb Inlets)**

Old Designation: CIG-4-0

New Designation: CIG-4-1

Description: • Used to be R-41. All other information remains the same.

Sheet Number: R-48**Manhole Frame And Cover**

Old Designation: MFC-5-0

New Designation: MFC-5-1

Description: • Used to be R-42. All other information remains the same.

Sheet Number: R-49**Cast-In-Place Manholes And Junction Boxes**

Old Designation: MJB-4-1

New Designation: MJB-4-2

Description: • Used to be R-43. All other information remains the same.

Sheet Number: R-50**Precast Round Manhole**

Old Designation: PRM-1-1

New Designation: PRM-1-2

Description: • Used to be R-44. All other information remains the same.

Sheet Number: R-51**Precast Square Manhole**

Old Designation: PSM-1-1

New Designation: PSM-1-2

Description: • Used to be R-45. All other information remains the same.

Sheet Number: R-52**Precast Manhole Details**

Old Designation: PMD-1-0

New Designation: PMD-1-1

Description: • Used to be R-46. All other information remains the same.

Sheet Number: R-63**Pipe Bedding and Backfill**

Old Designation: PBB-1-1

New Designation: PBB-1-2

Description: • Was R-61 at this time.

- Changed "NA" to "B" under columns "Cross Drains (NHS or ADT>6000 VPD)" and "Storm Sewer (NHS or ADT > 6000 VPD)" for row of "Corrugated Polypropylene Pipe".
 - Changed title from "Standard Pipe Bedding" to "Pipe Bedding and Backfill"
 - Used to be R-49.
-

Sheet Number: R-64**Standard Box Installation**

Old Designation: SBI-5-1

New Designation: SBI-5-2

Description: • Used to be R-52. All other information remains the same.

Sheet Number: R-65**Pipe Underdrain Installation**

Old Designation: PUD-4-0

New Designation: PUD-4-1

Description: • Used to be R-53. All other information remains the same.

Sheet Number: R-66**Concrete Longitudinal Barrier (MASH F-Shape)**

Old Designation: CLB-2-1

New Designation: CLB-2-2

Description: • Used to be R-59. All other information remains the same.

Sheet Number: R-67**Mailbox Installation**

Old Designation: MI-4-1

New Designation: MI-4-2

Description: • Used to be R-62. All other information remains the same.

Sheet Number: R-68**Rural Driveway Installation**

Old Designation: RDI-4-0

New Designation: RDI-4-1

Description: • Used to be R-63. All other information remains the same.

Sheet Number: R-69**Paved Ditches and Flumes**

Old Designation: DC-4-0

New Designation: DC-4-1

Description: Used to be R-64. All other information remains the same.

Sheet Number: R-70**Pavement Drop-Off Treatments**

Old Designation: PDT-2-0

New Designation: PDT-2-1

Description: • Used to be R-65. All other information remains the same.

Sheet Number: R-71**Right-of-Way Fence Style WWF (Woven Wire Fence)**

Old Designation: RWF1-3-0

New Designation: RWF1-3-1

Description: • Used to be R-66. All other information remains the same.

Sheet Number: R-72**Right-of-Way Fence Style SWF (Strand Wire Fence)**

Old Designation: RWF2-3-0

New Designation: RWF2-3-1

Description: • Used to be R-67. All other information remains the same.

Sheet Number: R-73**Right-of-Way Fence Style CLF (Chain Link Fence)**

Old Designation: RWF3-3-1

New Designation: RWF3-3-2

Description: • Used to be R-68. All other information remains the same.

Sheet Number: R-74**Superelevation**

Old Designation: SUEL1-4-0

New Designation: SUEL1-4-1

Description: • Used to be R-70. All other information remains the same.

Sheet Number: R-75**Superelevation Tables (Low speed urban streets)**

Old Designation: SUEL2-4-0

New Designation: SUEL2-4-1

Description: • Used to be R-71. All other information remains the same.

Sheet Number: R-76**Superelevation Tables (emax = 6%)**

Old Designation: SUEL3-4-0

New Designation: SUEL3-4-1

Description: • Used to be R-72. All other information remains the same.

Sheet Number: R-77**Superelevation Tables (emax = 8%)**

Old Designation: SUEL4-4-0

New Designation: SUEL4-4-1

Description: • Used to be R-73. All other information remains the same.

Revised Standards Effective March 01, 2022			
Sheet Number	Standard	Revision	Status
R-16	CSCD-6-	1	Revised
R-17	LECS-5-	1	Revised
R-22	PCPR-4-	1	Revised
R-25	WCR-4-	1	Revised
R-26	TWD-2-	1	Revised
R-28	PSMD-2-	1	Revised
R-29	SMD-4-	1	Revised
R-30	CET4S-4-	1	Revised
R-31	CET6S-4-	1	Revised
R-32	CET4D-4-	1	Revised
R-33	CET6D-4-	1	Revised
R-36	CDIB-2-	1	Revised
R-37	CDIB30-2-	1	Revised
R-38	CDIP-2-	1	Revised
R-39	CDIP30-2-	1	Revised
R-40	GPI-5-	1	Revised
R-45	CI-2-	1	Revised
R-49	MJB-4-	1	Revised
R-50	PRM-1-	1	Revised
R-51	PSM-1-	1	Revised
R-63	PBB-1-	1	Revised
R-64	SBI-5-	1	Revised
R-66	CLB-2-	1	Revised
R-67	MI-4-	1	Revised
R-73	RWF3-3-	1	Revised

Sheet Number: R-16

Concrete Surfacing Construction Details

Old Designation: CSCD-6-0

New Designation: CSCD-6-1

- Description:
- In Integral Curb Typical Sections, made the dashed line heavier or more pronounced.
 - Made a new note and put it in a box near these drawings that said: "P.C. Concrete for Pavement shall be paid for up to the dark dashed line as indicated. Area above the dashed line shall be paid for as Concrete Integral Curb."
 - Made a new dimension in both Type 1 and Type 2 Driveways Drawings labeled "Limits of Integral Curb. To be paid for as Integral Curb." and showed arrows to the outer limits of the radiuses on both sides of each driveway drawing.

Sheet Number: R-17**Joints and Sealers - Longitudinal, Expansion /Isolation and Contract**

Old Designation: LECS-5-0

New Designation: LECS-5-1

- Description:
- Added General Note #9 to read as follows: "Concrete Pavements (such as detours and crossovers) that are intended to be removed by the end of the project shall not be sealed." This was requested by the Concrete Pavement Task Force.
 - Revised General Note #8 to read as follows: "Longitudinally tie the pavement unless otherwise specified, or as directed by the engineer. Construct longitudinal grooving to the following dimensions: 1/8" to 3/16" wide, 1/8" to 3/16" deep, and equally spaced at 1/2" to 1" apart. Ensure grooves are neat in appearance and of uniform depth. Alternatively, if transverse grooving is approved by the resident engineer, construct transverse grooving to the following dimensions: 1/8" to 3/16" wide, 1/8" to 3/16" deep, and equally spaced at 1/2" to 1" apart."

Sheet Number: R-22**Portland Cement Concrete Pavement Repair**

Old Designation: PCPR-4-0

New Designation: PCPR-4-1

- Description:
- Revised upper left drawing so that it shows three bars, not four bars, in each wheel path, where it's described as dowel bar set.

Sheet Number: R-25**Wheelchair Ramps**

Old Designation: WCR-4-0

New Designation: WCR-4-1

- Description:
- In Types A,B, and C Elevation and Plan drawings, revised ramp width from 4' to 5' on landing and on ramp.
 - In Wheelchair Ramp Profile (Type A and B) drawing, added "typical to 15'-0" Max." after 6'-0". Revised title of this detail from Type A or B to Type A and B and enlarged text of this phrase.
 - In Type C Plan Drawing, brought tactile devices out to face of curb. Also, in this drawing, show length of median width as 6'-0" minimum, while the length in between the tactile devices is shown to be 2'-0" minimum.
 - Added note and arrow going to tactile warning devices in Type C Plan Drawing, that says "Tactile Warning Devices shall not be installed on Type C Ramps when Median is less than 6'-0" in length."
 - Removed all dimensions of 1:50 Slope (Max.) and replaced with a symbol of a filled-in triangle. Added General Note #13 with filled-in triangle by the number 13, to read as follows: "All cross slopes and running slopes for landings and cross slopes for sidewalks shall be 1.5% preferred to 2% maximum."
 - In note by Type C at the top of the standard, revised the length of 15'-9" to 16'-9" and added 5' landing to the two Type B Ramps. (6' for each of the two ramps, plus the 5' landing, equals roughly 17').

Sheet Number: R-26**Tactile Warning Devices**

Old Designation: TWD-2-0

New Designation: TWD-2-1

- Description:
- Types A, B, C and D Section X-X drawings are revised to show the 1:12 slope to the face of curb. Also in these drawings, the thickness of the pavement is shown to the face of the curb.
 - In 90 degree Grid Dome Pattern drawing, the minimum distance between the centers of the top of the dome was revised from 1.4" to 1.6".
-

Sheet Number: R-28**Precast Standard Median Drain**

Old Designation: PSMD-2-0

New Designation: PSMD-2-1

- Description:
- Added another column to the table at the bottom of the standard. Column heading is: "Type of Inlet", with "Type 1 or 2" in the middle cell and "Type 2B" in the bottom cell.
 - Added title of "Precast Standard Median Drain" in the title block.
-

Sheet Number: R-29**Cast-In-Place Standard Median Drains (18" To 36" Pipes)**

Old Designation: SMD-4-0

New Designation: SMD-4-1

- Description:
- Added "Cast-in-Place" to the title.
 - Added detail drawing of Types 1A and 1B grates, added table of components in Types 1, 1A, and 1B grates, added "(Type 2 Grate can also be used on the Type 1 SMD Inlet)" and "(Types 1, 1A, and 1B grates can also be used on Type 2, 2A and 2B SMD Inlets)" under drawings of Sec A-A through Sec D-D at the bottom of the standard.
 - Specified Type 2, 2A or 2B with some of the dimensions for the Type 2 SMD Inlet Sec C-C and Sec D-D drawings.
 - Rearranged other drawings to make room for the additional drawings and table.
-

Sheet Number: R-30**Culvert End Treatment Single Pipe Installation 1 to 4 Safety Slope**

Old Designation: CET4S-4-0

New Designation: CET4S-4-1

- Description:
- Change the number of side drain grates from 2 to 3 for the 24" pipe size.
 - Change the Side Drain Grate Lengths for Pipe Sizes 34"x53", 42", 65"x40", 48", 43"x68", 48"x76" to 73", 61", 86", 68", 90" and 99", respectively.
 - Revised General Note #4.
-

Sheet Number: R-31**Culvert End Treatment Single Pipe Installation 1 to 6 Safety Slope**

Old Designation: CET6S-4-0

New Designation: CET6S-4-1

- Description:
- Revise sloped length above pipe in Section C-C detail for Cross Drain from 2'-6" to 4'-6". The length of 4'-6" was used from its beginning in the 1988 standards; somewhere since early 2009 standards, this was changed and should not have been.
 - Revised number of grates in Table A, for side drain application for pipe sizes 22"x13", 28"x20", 30", 43"x26", and 65"x40" to 3, 4, 6, 5, and 8, respectively.
 - Revised length of side drain grates, in Table A, for pipe sizes 34"x53", 42", 65"x40", 48", 43"x68", and 48"x76", to 73", 61", 86", 68", 90", and 99", respectively.
 - Revised cubic yard amount of concrete for Round pipes in Table B.
 - Revised cubic yard amount of concrete for Arch and Elliptical pipes in Table B.
 - Revised lengths of S-bar reinforcing steel.
 - Revised General Note #4.
-

Sheet Number: R-32**Culvert End Treatment Double Pipe Installation 1 to 4 Safety Slope**

Old Designation: CET4D-4-0

New Designation: CET4D-4-1

- Description:
- Revised slope length above pipe in Section C-C detail for cross drain, from 4'-6" to 2'-6". The length of 2'-6" has been used since this standard's beginning in 1988 Standards and was inadvertently changed in early 2009 Standards.
 - Revised General Note #4.
-

Sheet Number: R-33**Culvert End Treatment Double Pipe Installation 1 to 6 Safety Slope**

Old Designation: CET6D-4-0

New Designation: CET6D-4-1

- Description:
- In Table A, the 73"x45" RCPA size is moved down one row, to the third row in CET Type EE6.
 - Also in Table A, the side drain number of grates has been revised for: 28"x20" (BB6), 30" (CC6), 43"x26" (CC6), and 65" x 40" (DD6), to 4, 6, 5 and 8, respectively.
 - In Table B, the cubic yard amount of concrete for the round and arch/elliptical pipes was revised.
 - Also in Table B, the length of S-Bars was revised.
 - Revised General Note #4.
-

Sheet Number: R-36**Cast-In-Place Concrete Drop Inlets For R. C. Boxes (3' x 2' to 6' x 6')**

Old Designation: CDIB-2-0

New Designation: CDIB-2-1

- Description:
- Added "Cast-in-Place" to the title.
-

Sheet Number: R-37**Cast-In-Place Concrete Drop Inlets for 30 Deg. Skew R. C. Boxes (3'**

Old Designation: CDIB30-2-0

New Designation: CDIB30-2-1

- Description:
- Added "Cast-in-Place" to the title.
-

Sheet Number: R-38**Cast-In-Place Concrete Drop Inlet For 18" To 72" R. C. Pipes**

Old Designation: CDIP-2-0

New Designation: CDIP-2-1

- Description:
- Added "Cast-in-Place" to the title.
 - Added additional column in table called "Standard Depth" and entered dimensions of each design.
-

Sheet Number: R-39**Cast-In-Place Concrete Drop Inlet For 30 Deg. Skew 18" To 72" R.**

Old Designation: CDIP30-2-0

New Designation: CDIP30-2-1

- Description:
- Added "Cast-in-Place" to the title.
 - Added additional row of Standard Depth and entered dimensions of depth to each design.
 - Revised General Note #2 from "per meter column" to "per foot row".
 - Added additional row at bottom of table and labeled "Number of Grates" and entered number of grates per design.
-

Sheet Number: R-40**Cast-In-Place Grated Pipe Drop Inlet (18" To 42" Pipes)**

Old Designation: GPI-5-0

New Designation: GPI-5-1

- Description:
- Added "Cast-in-Place" to the title.
-

Sheet Number: R-45**Cast-In-Place Curb Inlets**

Old Designation: CI-2-0

New Designation: CI-2-1

- Description:
- Added "Cast-in-Place" to the title.
 - In Minimum Inlet Depth box (above table), replaced the word "detailing" with "drawing purposes only".
 - In table, in column under Inlet, revised "Base Am't" to read "Base (CF)".
 - In note immediately under table, revised to read as follows: "Depth of 2'-8" shall be used as standard depth for all pipe sizes and/or pipe types. For inlet depths greater than standard depth, a pay item for additional depth in inlet, paid as vertical feet, shall be used..." and add to the inlet base, in Cu. Ft."
-

Sheet Number: R-49**Cast-In-Place Manholes And Junction Boxes**

Old Designation: MJB-4-0

New Designation: MJB-4-1

- Description:
- Added "Cast-in-Place" to the title.
-

Sheet Number: R-50**Precast Round Manhole**

Old Designation: PRM-1-0

New Designation: PRM-1-1

- Description:
- The designation "(SP)" is added in front of all shown pay items.
-

Sheet Number: R-51**Precast Square Manhole**

Old Designation: PSM-1-0

New Designation: PSM-1-1

Description: • The designation "(SP)" is added in front of all shown pay items.

Sheet Number: R-63**Pipe Bedding and Backfill**

Old Designation: PBB-1-0

New Designation: PBB-1-1

Description: • Revised two types of pipe in table: Mill Precoated CGSP to Mill (Polymer) Precoated CGSP and Aluminized Type II CSP to Aluminized (Aluminum Coated) Type II CSP.

Sheet Number: R-64**Standard Box Installation**

Old Designation: SBI-5-0

New Designation: SBI-5-1

Description: • Added "Optional Trenches for Depths greater than 5 feet" drawing and notes per OSHA regulations.

Sheet Number: R-66**Concrete Longitudinal Barrier (MASH F-Shape)**

Old Designation: CLB-2-0

New Designation: CLB-2-1

Description: • Added "Shown is Type II, Design 2" under the detail of Plan of Double Sided Inlet (Type II) in Longitudinal Barrier, for clarity purposes.
• Added "Shown is Type I, Design 2" under the detail of Plan of Single Sided Inlet (Type I) Longitudinal Barrier, for clarity purposes.

Sheet Number: R-67**Mailbox Installation**

Old Designation: MI-4-0

New Designation: MI-4-1

Description: • Revised General Note #7 to read as follows "If a mailbox is installed behind curb, it shall not horizontally protrude more than 4 inches into or overhang a pedestrian circulation path or sidewalk, thereby reducing the 4'-0" minimum clear width. The pedestrian circulation path shall have a minimum clear width of 4'-0". See protruding object detail."

Sheet Number: R-73**Right-of-Way Fence Style CLF (Chain Link Fence)**

Old Designation: RWF3-3-0

New Designation: RWF3-3-1

Description: • Added Section A-A detail to be placed near "Extension Arm Detail" drawing on left side of standard. This Sec A-A detail was inadvertently omitted in the past specification change or two.