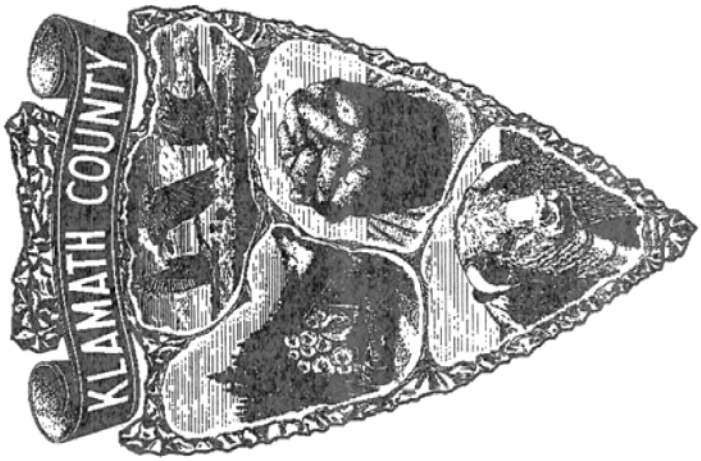


KLAMATH COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS

APPENDIX "A"
TO THE LAND DEVELOPMENT CODE

REVISED February 3, 2009

ORD 45.0 Adopt February 16, 1984
ORD. 45.31 Adopted 2/15/95
ORD. 45.36 Adopted 11/10/98

GENERAL PROVISIONS

APPLICABLE STANDARD SPECIFICATIONS

2008 edition of the " Oregon Standard Specification for Construction" published by the Oregon Department of Transporation.

GENERAL NOTE

These Standard Drawings illustrate the minimum specifications allowable for roads constructed in Klamath County's jurisdiction. These minimum specifications will not be adequate for all site conditions. The design engineer is responsible for investigating the existing site conditions and confirming that these minimum specifications will perform adequately for the design life of the facility. The minimum allowable design life is 20 years.

CONCRETE

The minimum specifications for concrete are; Commercial Grade Concrete conforming to Section 00440 of the Standard Specifications and meeting the following additional requirements.

1. Minimum compressive strength of 4000 psi at 28 days.
2. Maximum slump of 4". (If higher slump is required, Type A or Type F water reducing agents meeting the requirements of ASTM C 494 may be approved.)
3. Minimum Cement Content of 570 lbs.
4. Maximum Water / Cement Ratio of 0.48.
5. Design the mix for severe exposure within the parameters shown in the ACI 211.1-91 manual.

ASPHALT CONCRETE PAVEMENT

Asphalt Concrete Pavement must conform to Section 00744 of the Standard Specifications. The class of mix, grade of oil and mix design shall be submitted to the Klamath County Public Works Department for approval prior to construction.

CORRUGATED CULVERT PIPE

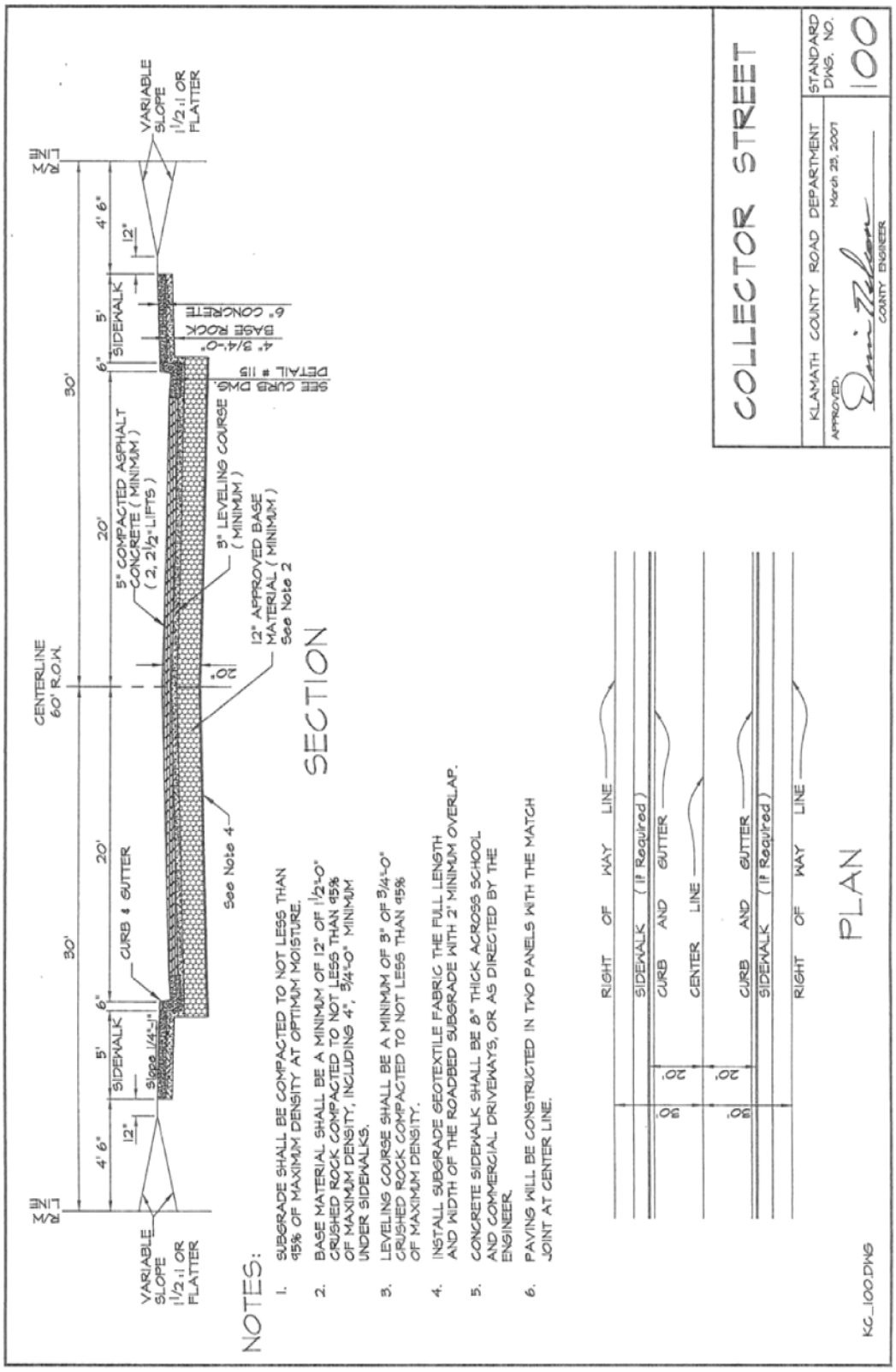
All Metal Pipe shall be galvanized steel conforming to the requirements of AASHTO M36 and Section 00445 of the Standard Specifications with a minimum of 12" diameter and 16 guage thigkness. All Polyethylene Pipe shall conform to the requirements of AASHTO M294 Type-S with a maximum diamater of 24" and a minimum diameter of 12". Metal Pipe is required when pipe is open to the elements.

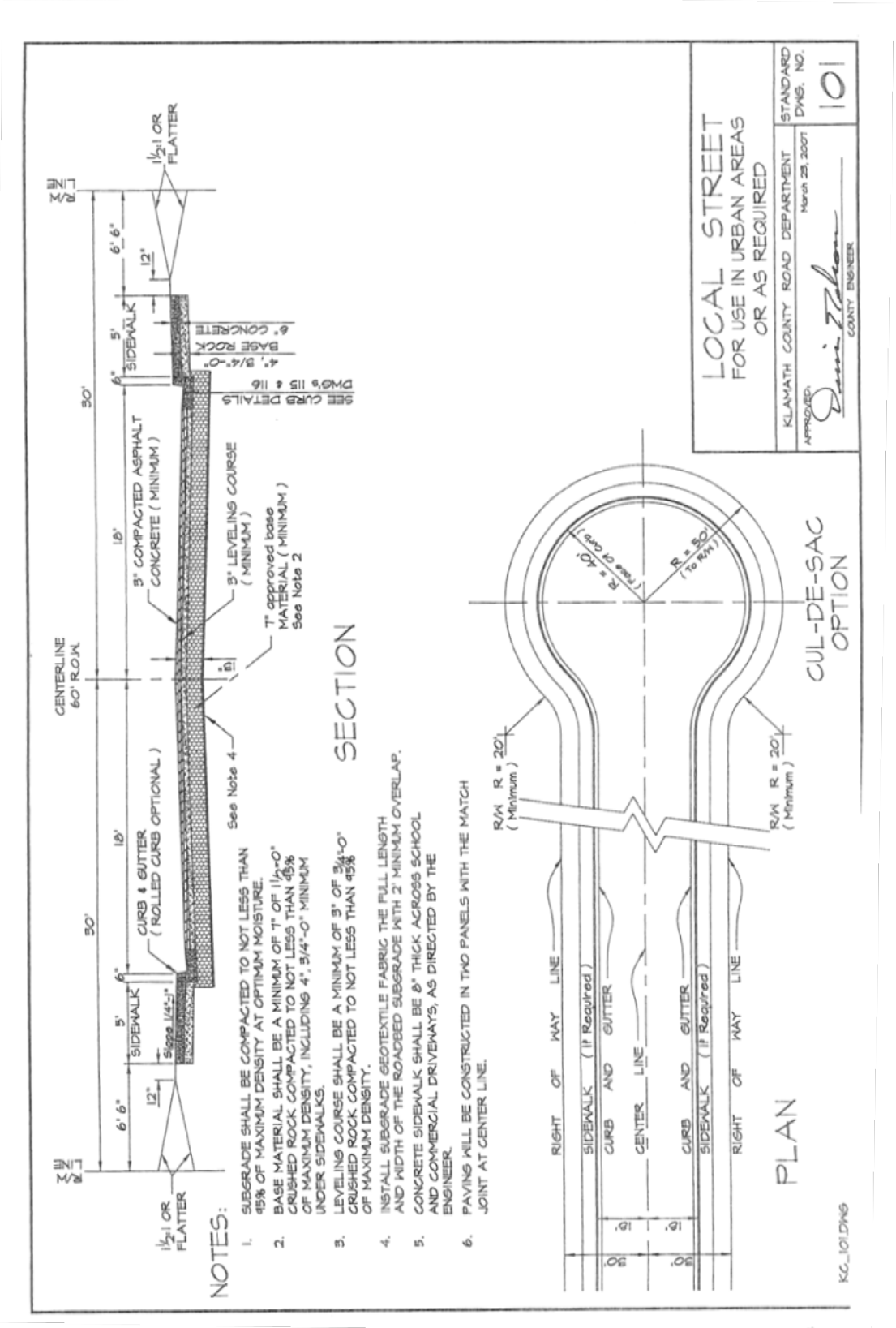
STORMWATER CONVEYANCE AND RETENTION FACILITIES MAINTENANCE

Facilities within a County Road Right-of-Way will be maintained by Klamath County. On commercial and industrial sites, facilities shall be maintained by the property owner. For residential subdivisions, a homeowners association, or other legal entity approved by the County shall provide ongoing maintenance.

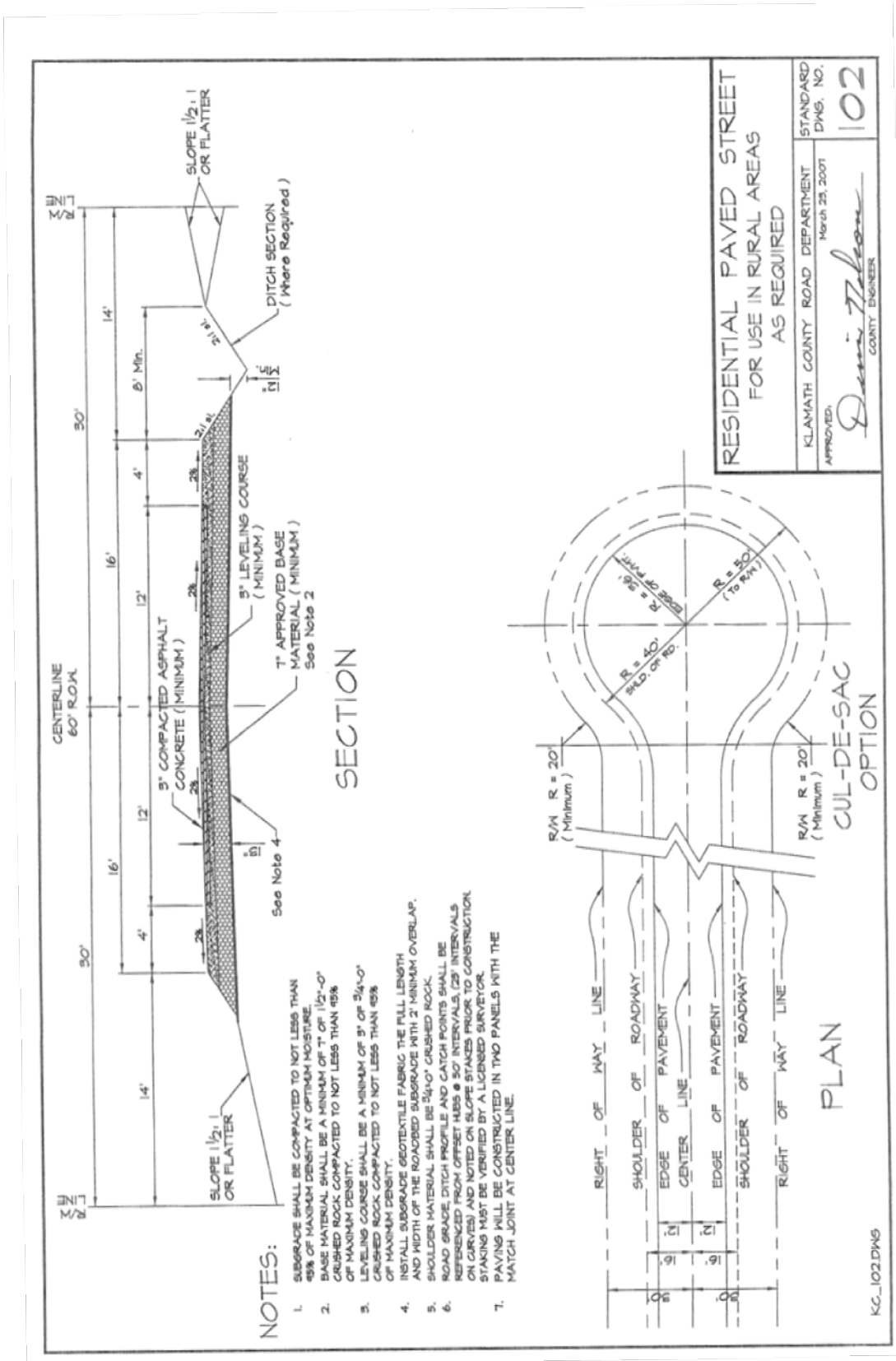
REVISED February 3, 2009

Klamath County Land Development Code
Appendix A

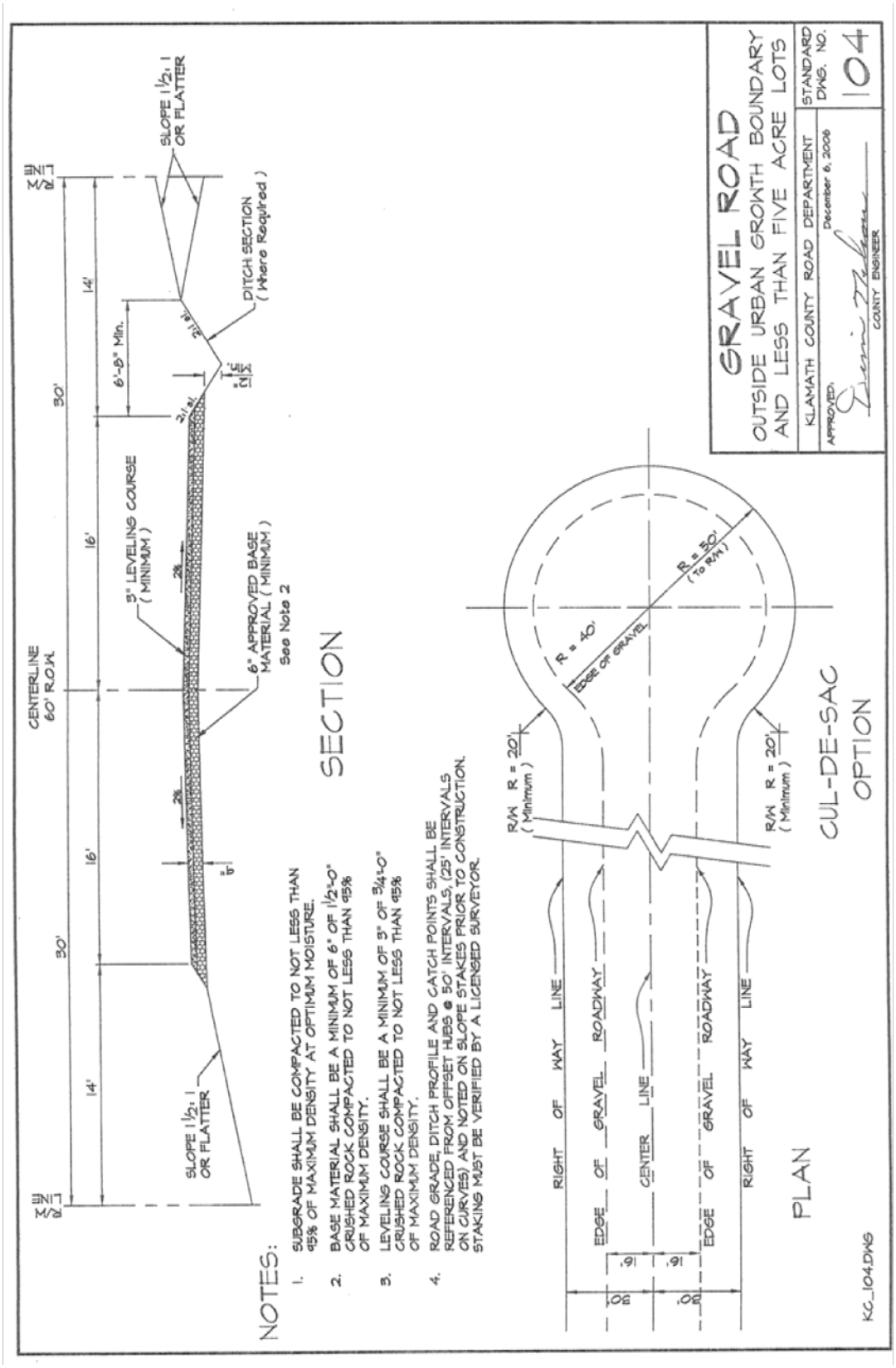



LOCAL STREET
FOR USE IN URBAN AREAS
OR AS REQUIRED
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED: March 29, 2001
COUNTY ENGINEER
STANDARD DWG. NO. 101
SECTION
PLAN
CUL-DE-SAC OPTION
NOTES:
1. SUBGRADE SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE.
2. BASE MATERIAL SHALL BE A MINIMUM OF 7" OF 1 1/2"-0" CRUSHED ROCK COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY, INCLUDING 4", 3/4"-0" MINIMUM UNDER SIDEWALKS.
3. LEVELING COURSE SHALL BE A MINIMUM OF 3" OF 3/4"-0" CRUSHED ROCK COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DENSITY.
4. INSTALL SUBGRADE GEOTEXTILE FABRIC THE FULL LENGTH AND WIDTH OF THE ROADBED SUBGRADE WITH 2' MINIMUM OVERLAP.
5. CONCRETE SIDEWALK SHALL BE 6" THICK ACROSS SCHOOL AND COMMERCIAL DRIVEWAYS, AS DIRECTED BY THE ENGINEER.
6. PAVING WILL BE CONSTRUCTED IN TWO PANELS WITH THE MATCH JOINT AT CENTER LINE.
CENTERLINE 60' R.O.W.
30'
18'
6" CONCRETE
BASE ROCK
4", 3/4"-0"
SEE CURB DETAILS
DWG'S 115 & 116
3" COMPACTED ASPHALT CONCRETE (MINIMUM)
3" LEVELING COURSE (MINIMUM)
7" approved base MATERIAL (MINIMUM) See Note 2
See Note 4
CURB & GUTTER (ROLLED CURB OPTIONAL)
SIDEWALK
5' 6"
12"
1½:1 OR FLATTER
R/W LINE
RIGHT OF WAY LINE
SIDEWALK (If Required)
CURB AND GUTTER
CENTER LINE
R/W R = 20' (Minimum)
R = 40' (face of curb)
R = 50' (to R/W)
KC_101.DWG

Klamath County Land Development Code
Appendix A

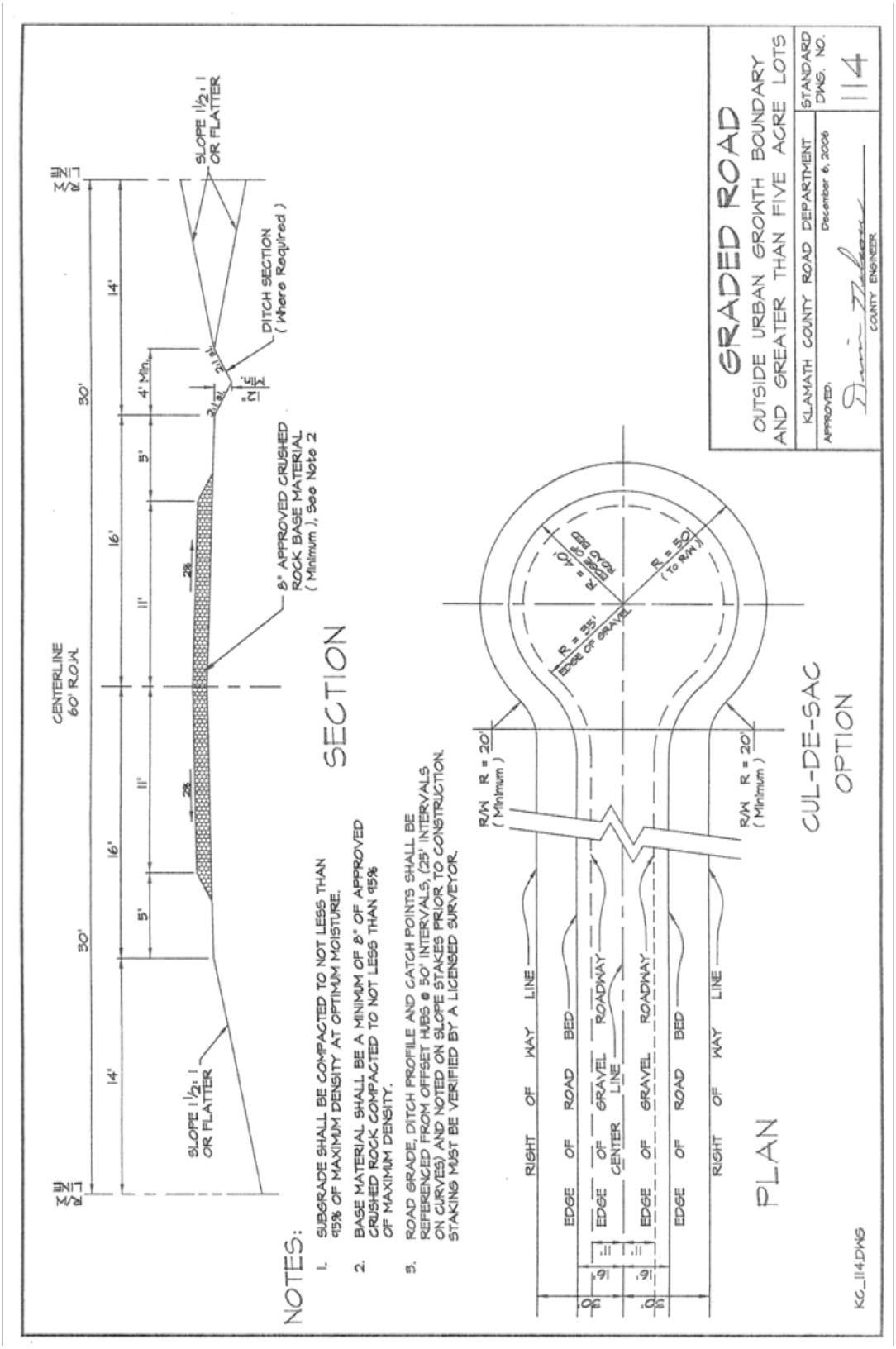


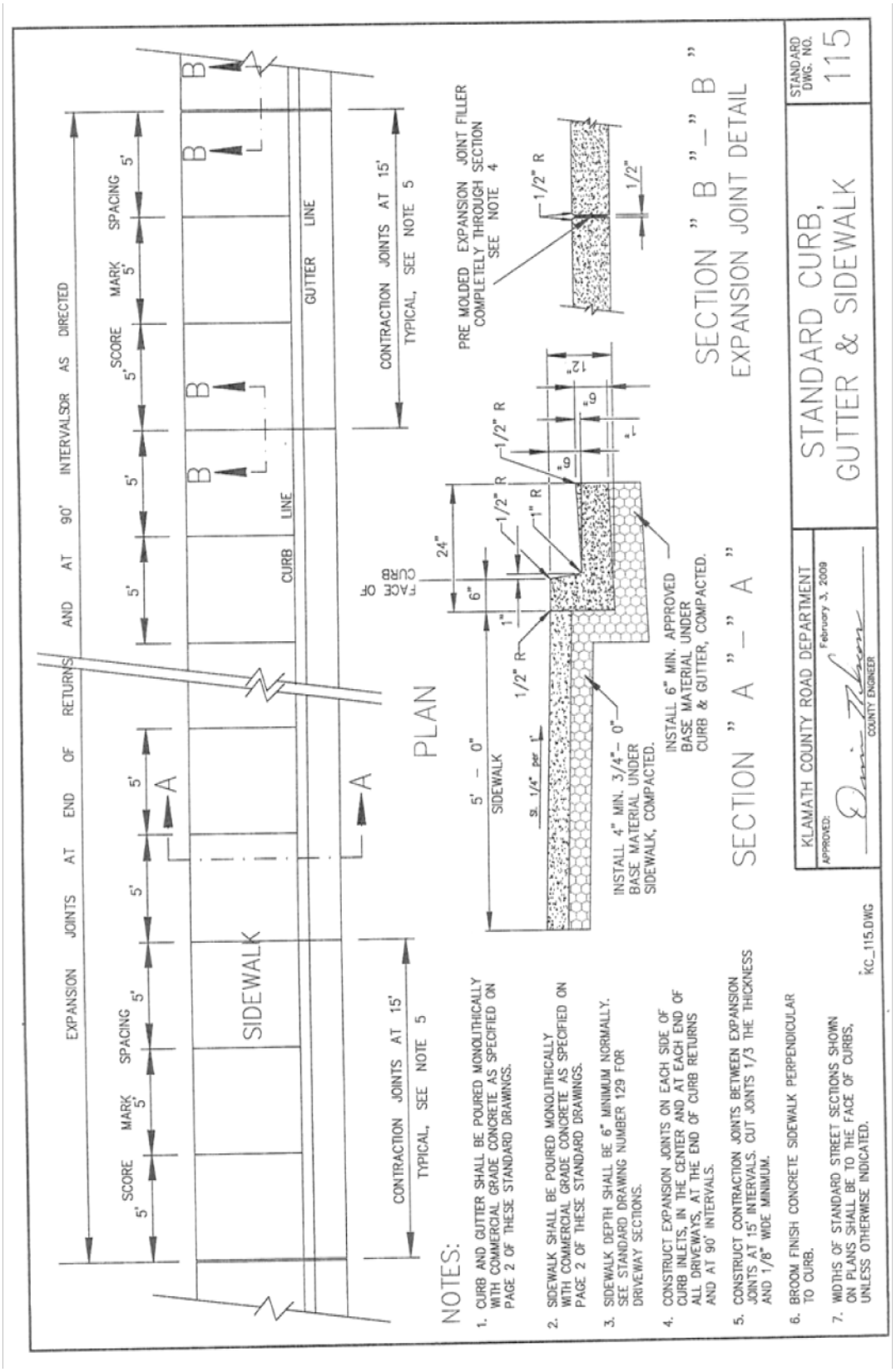
Klamath County Land Development Code
Appendix A

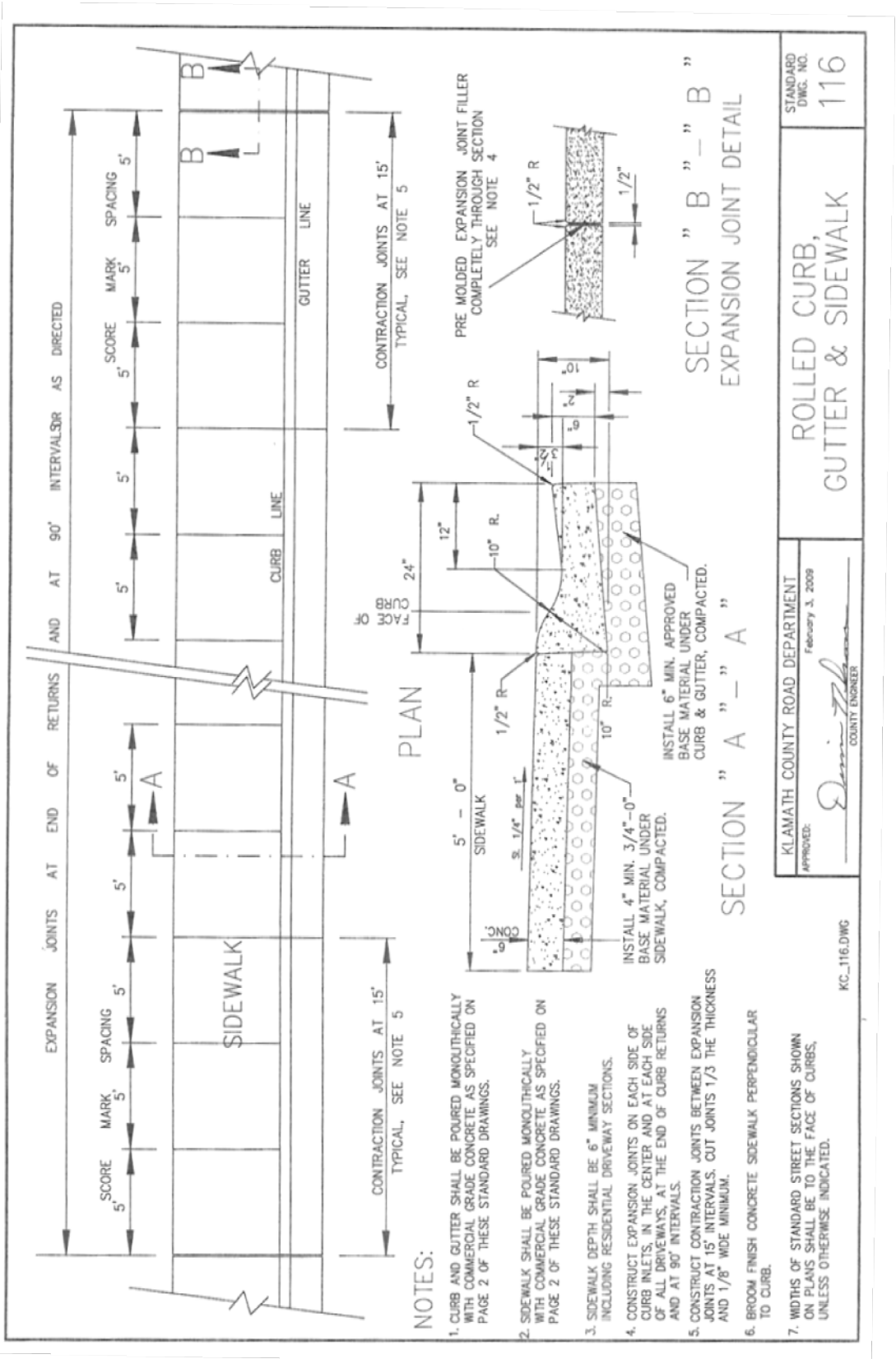


ORD 45.0 Adopt February 16, 1984
ORD. 45.31 Adopted 2/15/95
ORD. 45.36 Adopted 11/10/98

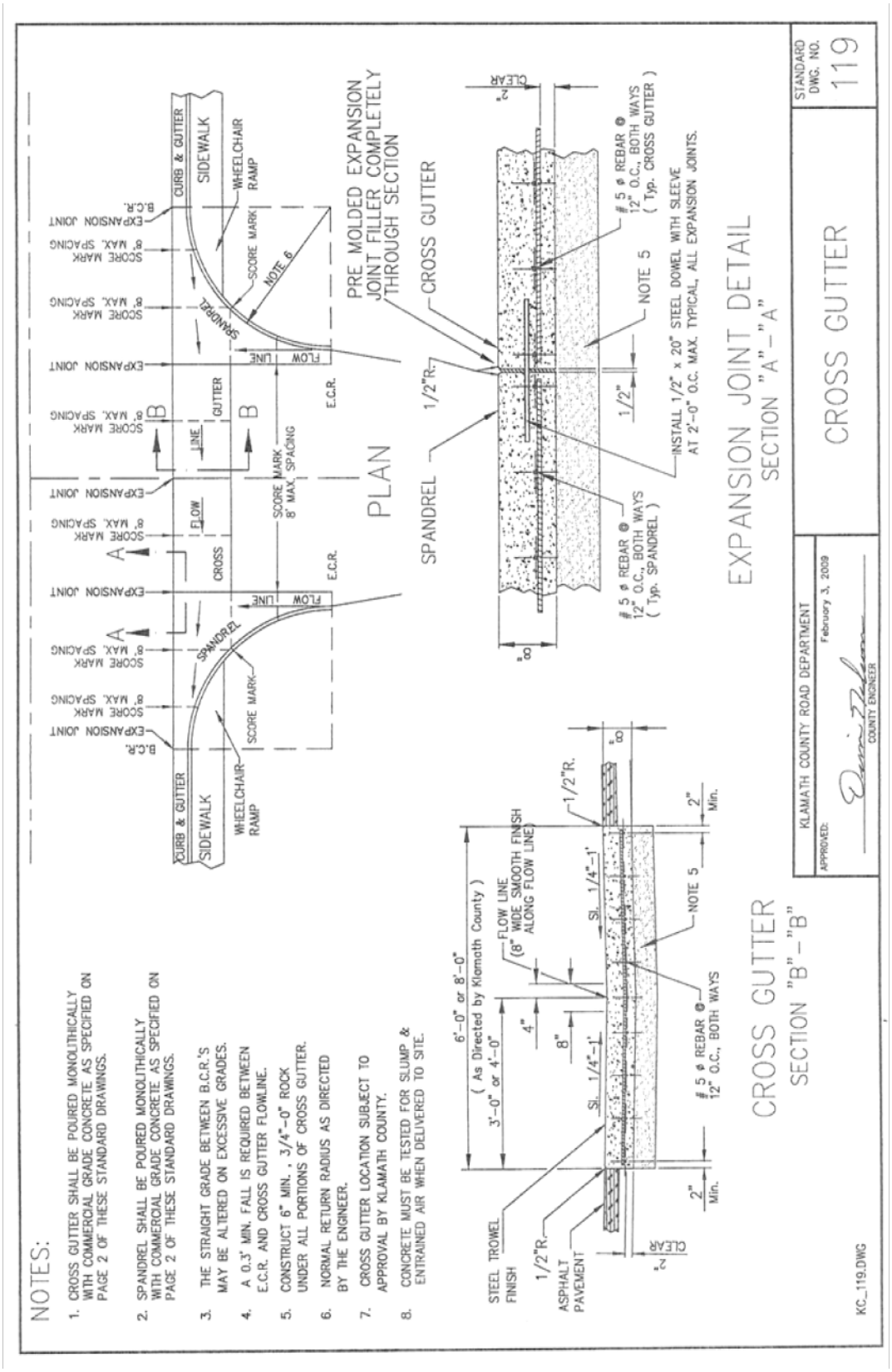
Klamath County Land Development Code
Appendix A

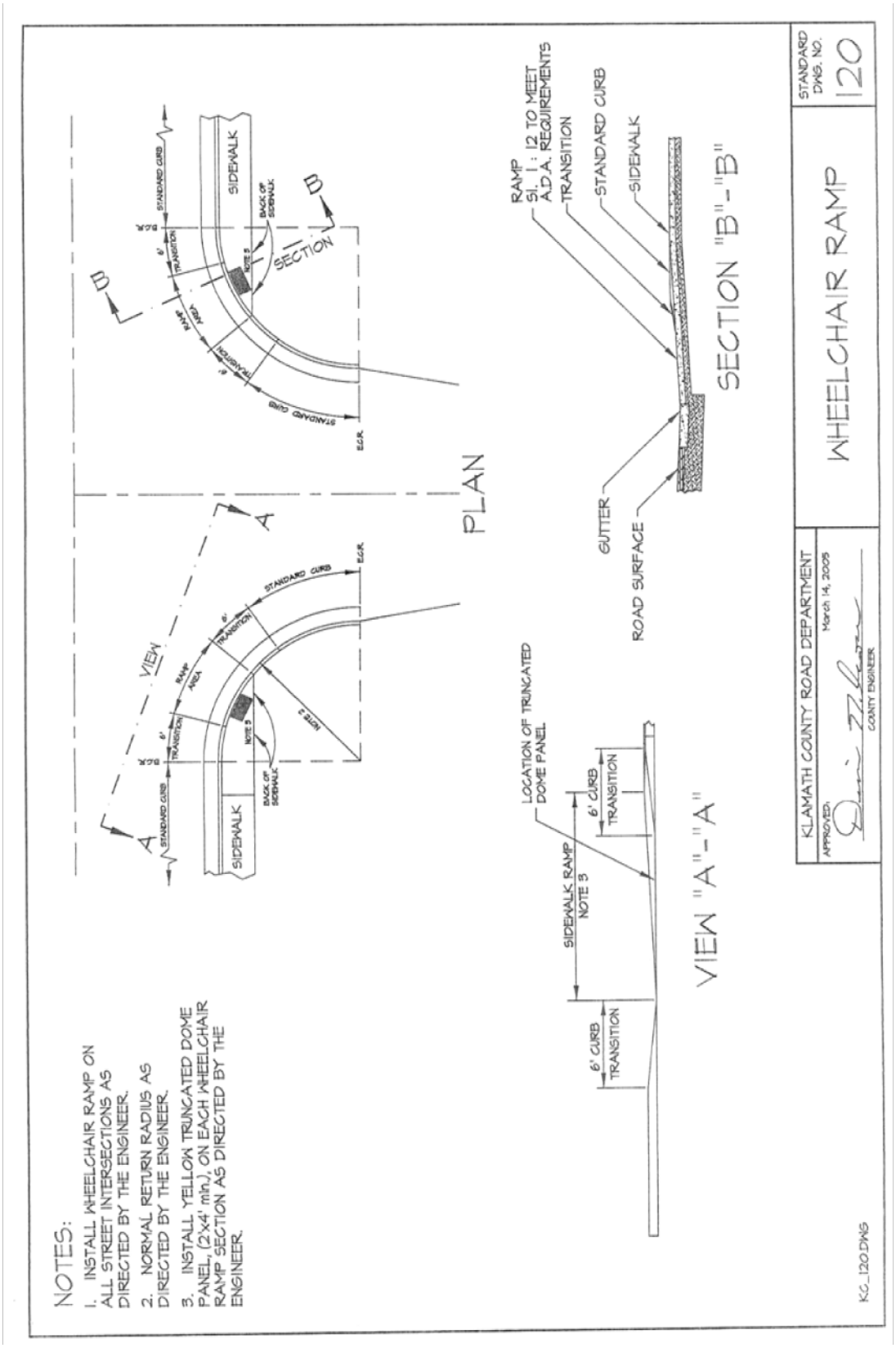



EXPANSION JOINTS AT END OF RETURNS AND AT 90' INTERVALS OR AS DIRECTED
SCORE MARK SPACING
5' 5' 5' 5' 5' 5' 5' 5'
SIDEWALK
CURB LINE
GUTTER LINE
CONTRACTION JOINTS AT 15'
TYPICAL, SEE NOTE 5
A
B
PLAN
NOTES:
1. CURB AND GUTTER SHALL BE POURED MONOLITHICALLY WITH COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
2. SIDEWALK SHALL BE POURED MONOLITHICALLY WITH COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. SIDEWALK DEPTH SHALL BE 6" MINIMUM NORMALLY. SEE STANDARD DRAWING NUMBER 129 FOR DRIVEWAY SECTIONS.
4. CONSTRUCT EXPANSION JOINTS ON EACH SIDE OF CURB INLETS, IN THE CENTER AND AT EACH END OF ALL DRIVEWAYS, AT THE END OF CURB RETURNS AND AT 90' INTERVALS.
5. CONSTRUCT CONTRACTION JOINTS BETWEEN EXPANSION JOINTS AT 15' INTERVALS. CUT JOINTS 1/3 THE THICKNESS AND 1/8" WIDE MINIMUM.
6. BROOM FINISH CONCRETE SIDEWALK PERPENDICULAR TO CURB.
7. WIDTHS OF STANDARD STREET SECTIONS SHOWN ON PLANS SHALL BE TO THE FACE OF CURBS, UNLESS OTHERWISE INDICATED.
KC_115.DWG
SECTION " A _ " A "
5' - 0"
SIDEWALK
1/2" R
1"
6"
24"
CURB OR FACE OF CURB
INSTALL 4" MIN. 3/4"- 0" BASE MATERIAL UNDER SIDEWALK, COMPACTED.
INSTALL 6" MIN. APPROVED BASE MATERIAL UNDER CURB & GUTTER, COMPACTED.
SECTION " B _ " B "
EXPANSION JOINT DETAIL
PRE MOLDED EXPANSION JOINT FILLER COMPLETELY THROUGH SECTION SEE NOTE 4
1/2" R
1/2"
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
February 3, 2009
COUNTY ENGINEER
STANDARD CURB, GUTTER & SIDEWALK
STANDARD DWG. NO. 115


PLAN
SECTION " A _ " A "
SECTION " B _ " B "
EXPANSION JOINT DETAIL
ROLLED CURB, GUTTER & SIDEWALK
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
February 3, 2009
COUNTY ENGINEER
STANDARD DWG. NO. 116
KC_116.DWG
NOTES:
1. CURB AND GUTTER SHALL BE POURED MONOLITHICALLY WITH COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
2. SIDEWALK SHALL BE POURED MONOLITHICALLY WITH COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. SIDEWALK DEPTH SHALL BE 6" MINIMUM INCLUDING RESIDENTIAL DRIVEWAY SECTIONS.
4. CONSTRUCT EXPANSION JOINTS ON EACH SIDE OF CURB INLETS, IN THE CENTER AND AT EACH SIDE OF ALL DRIVEWAYS, AT THE END OF CURB RETURNS AND AT 90' INTERVALS.
5. CONSTRUCT CONTRACTION JOINTS BETWEEN EXPANSION JOINTS AT 15' INTERVALS. CUT JOINTS 1/3 THE THICKNESS AND 1/8" WIDE MINIMUM.
6. BROOM FINISH CONCRETE SIDEWALK PERPENDICULAR TO CURB.
7. WIDTHS OF STANDARD STREET SECTIONS SHOWN ON PLANS SHALL BE TO THE FACE OF CURBS, UNLESS OTHERWISE INDICATED.
EXPANSION JOINTS AT END OF RETURNS AND AT 90' INTERVALS OR AS DIRECTED
SCORE MARK SPACING 5'
CONTRACTION JOINTS AT 15' TYPICAL, SEE NOTE 5
SIDEWALK
CURB LINE
GUTTER LINE
5' - 0" SIDEWALK
CONC.
INSTALL 4" MIN. 3/4"-0" BASE MATERIAL UNDER SIDEWALK, COMPACTED.
INSTALL 6" MIN. APPROVED BASE MATERIAL UNDER CURB & GUTTER, COMPACTED.
PRE MOLDED EXPANSION JOINT FILLER COMPLETELY THROUGH SECTION SEE NOTE 4
1/2" R
1/2"
12"
10" R.
24"

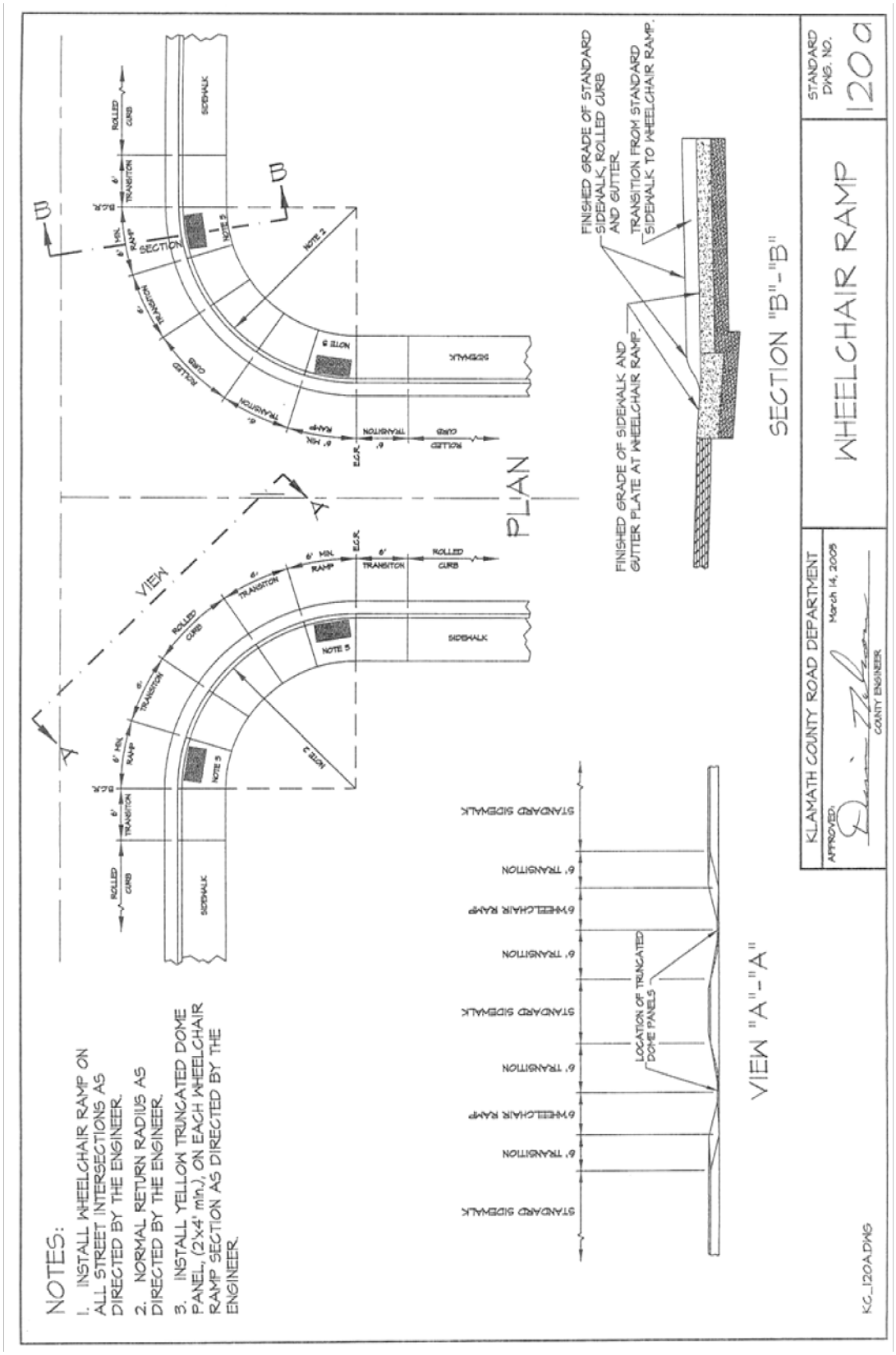
Klamath County Land Development Code
Appendix A





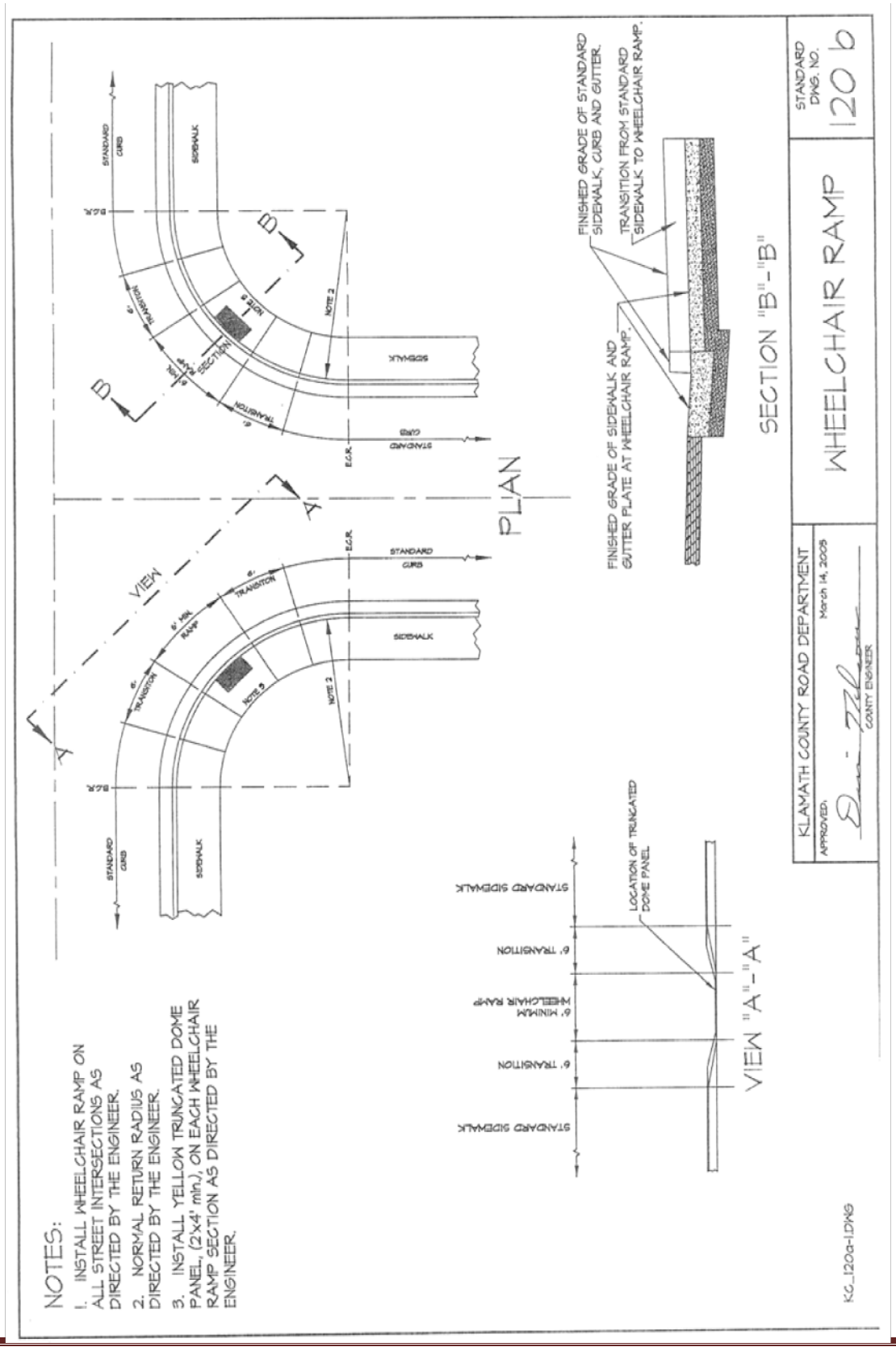
NOTES:
1. INSTALL WHEELCHAIR RAMP ON ALL STREET INTERSECTIONS AS DIRECTED BY THE ENGINEER.
2. NORMAL RETURN RADIUS AS DIRECTED BY THE ENGINEER.
3. INSTALL YELLOW TRUNCATED DOME PANEL, (2'x4' min.), ON EACH WHEELCHAIR RAMP SECTION AS DIRECTED BY THE ENGINEER.
PLAN
VIEW
SIDEWALK
SECTION
SECTION "B"-"B"
RAMP
SI. 1 : 12 TO MEET A.D.A. REQUIREMENTS
TRANSITION
STANDARD CURB
GUTTER
ROAD SURFACE
VIEW "A"-"A"
LOCATION OF TRUNCATED DOME PANEL
SIDEWALK RAMP NOTE 3
6' CURB TRANSITION
WHEELCHAIR RAMP
STANDARD DWG. NO. 120
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
March 14, 2005
COUNTY ENGINEER
KC_120.DWG

Klamath County Land Development Code
Appendix A



ORD 45.0	Adopt February 16, 1984
ORD. 45.31	Adopted 2/15/95
ORD. 45.36	Adopted 11/10/98

Klamath County Land Development Code
Appendix A



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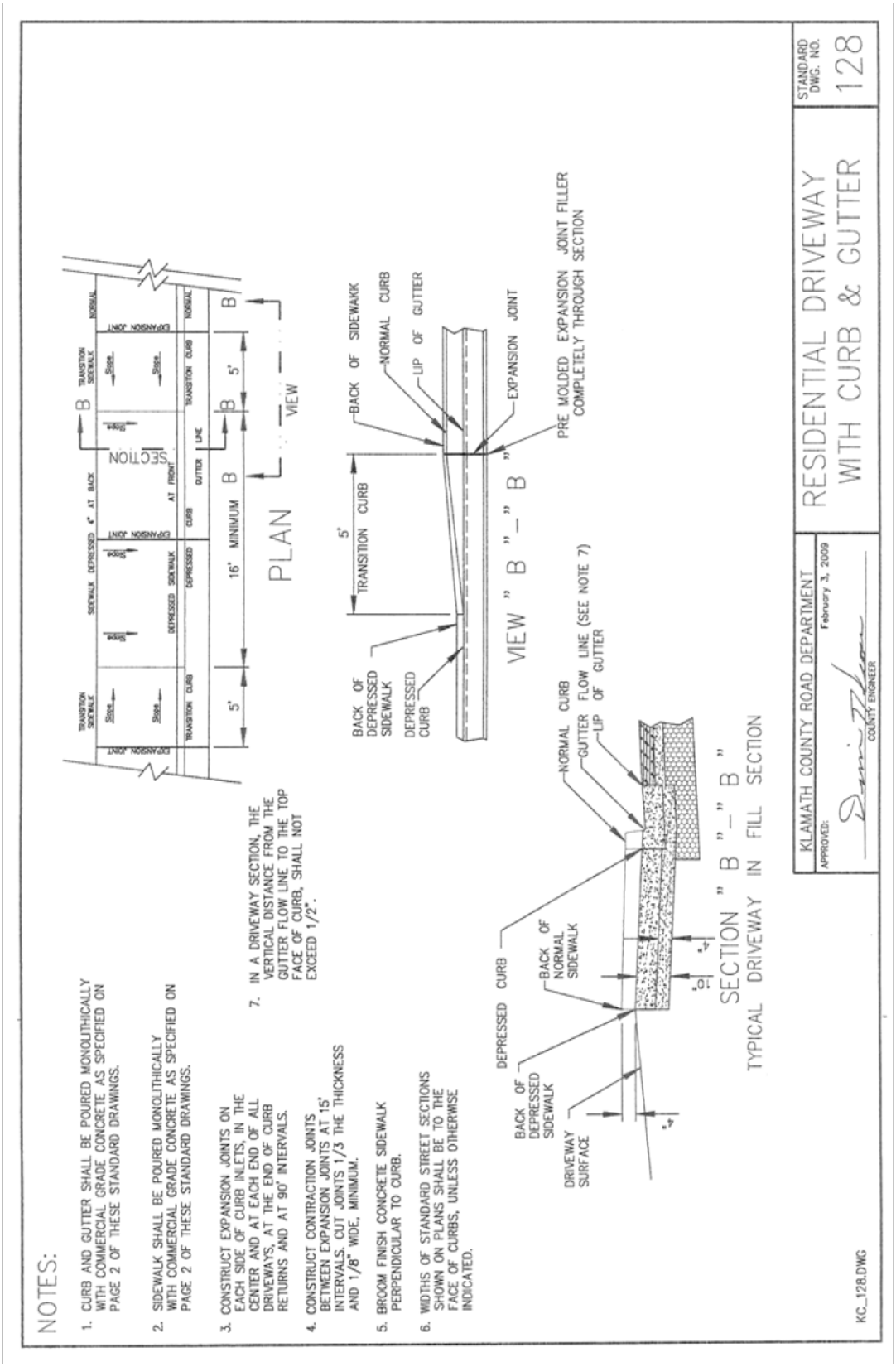
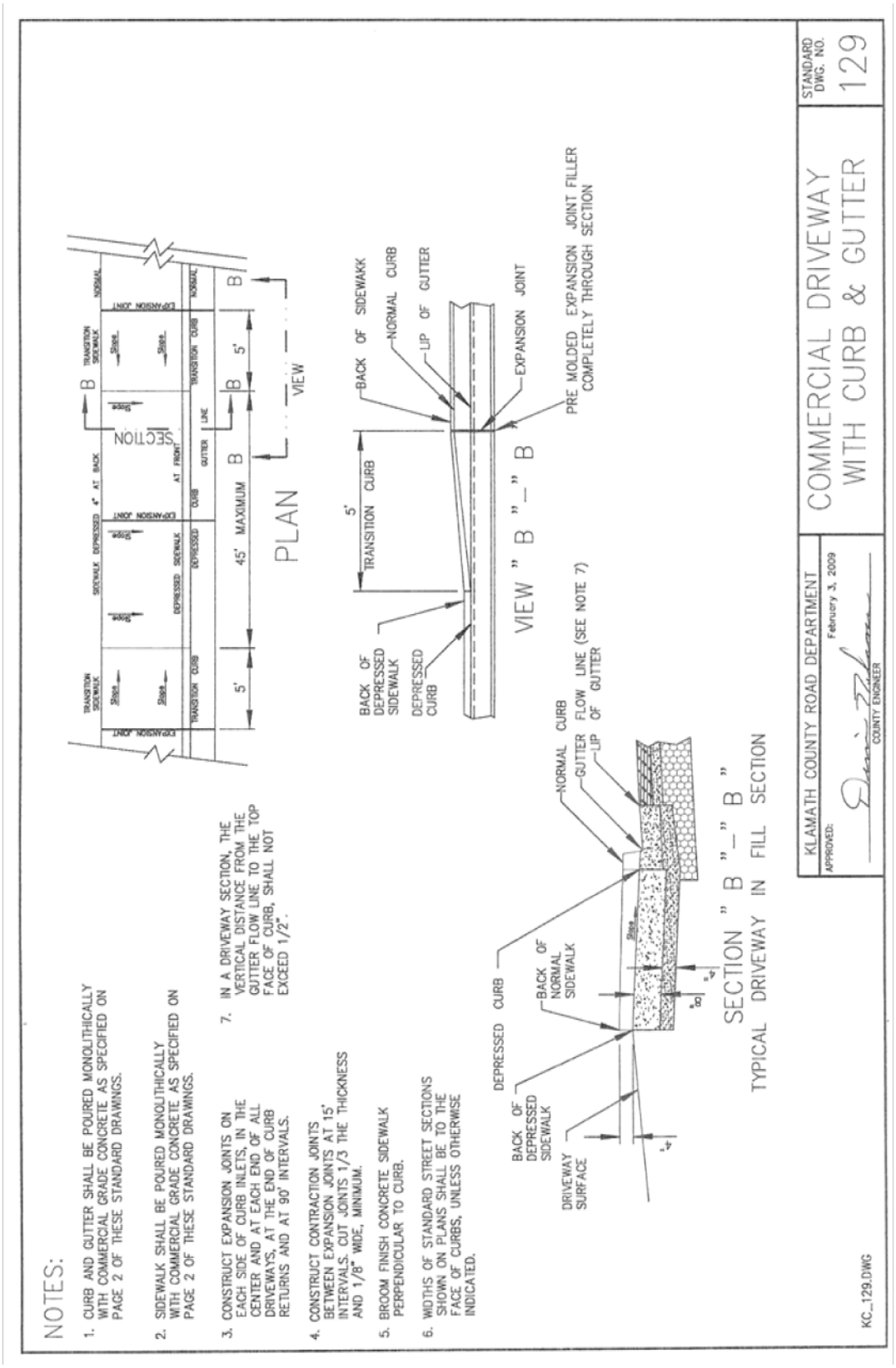
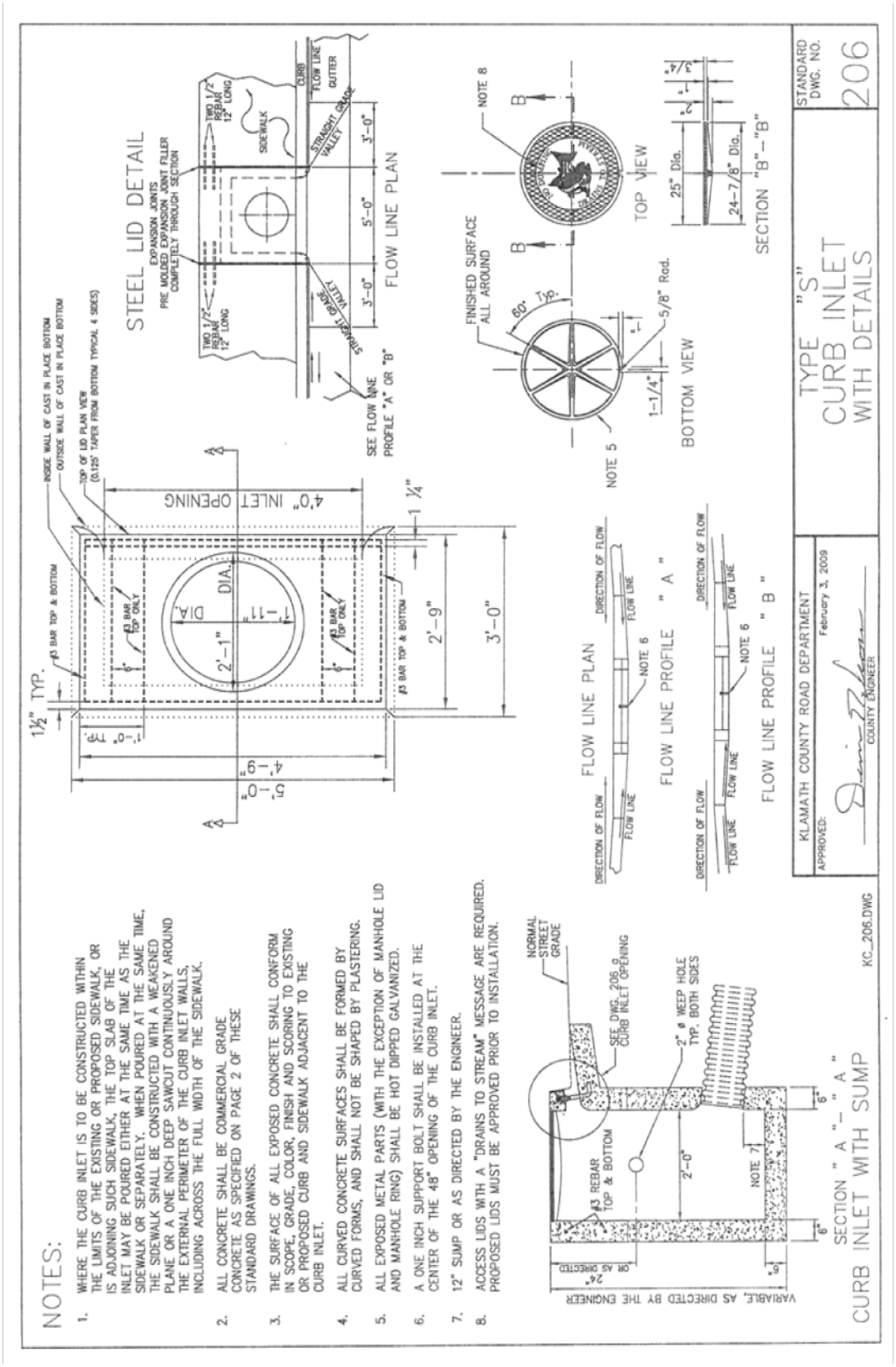
ORD. 45.36 Adopted 11/10/98

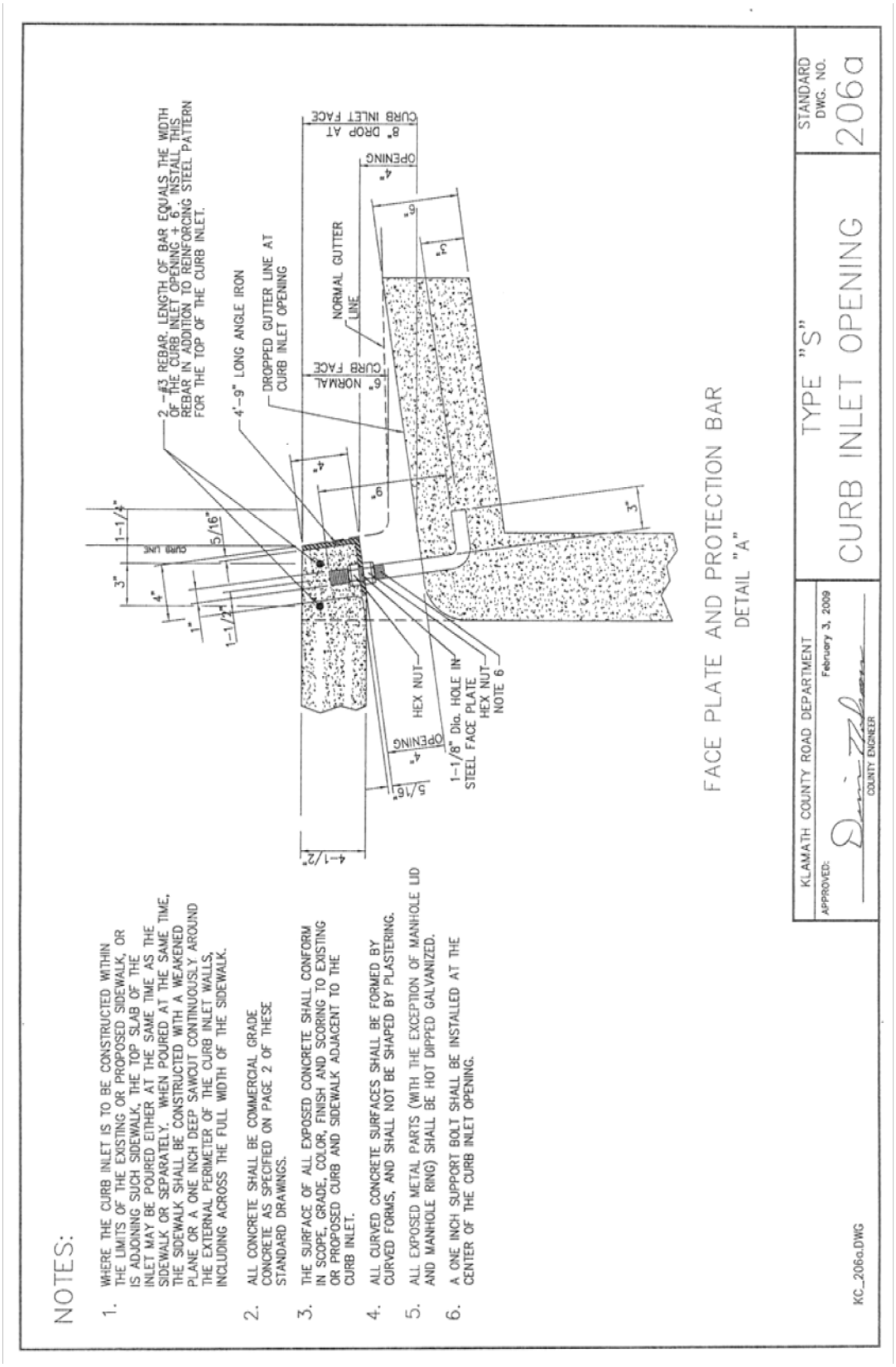
Klamath County Land Development Code
Appendix A

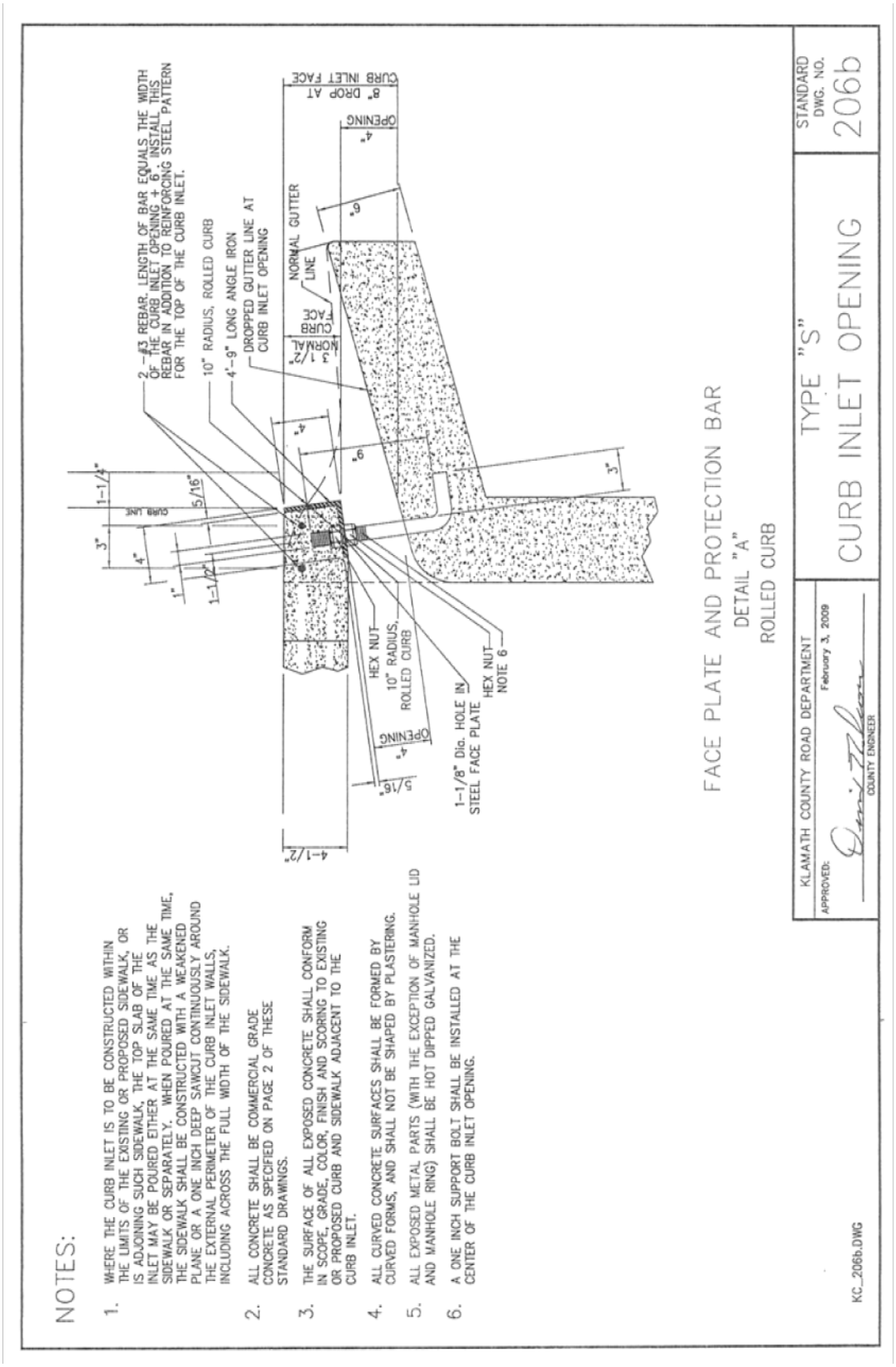




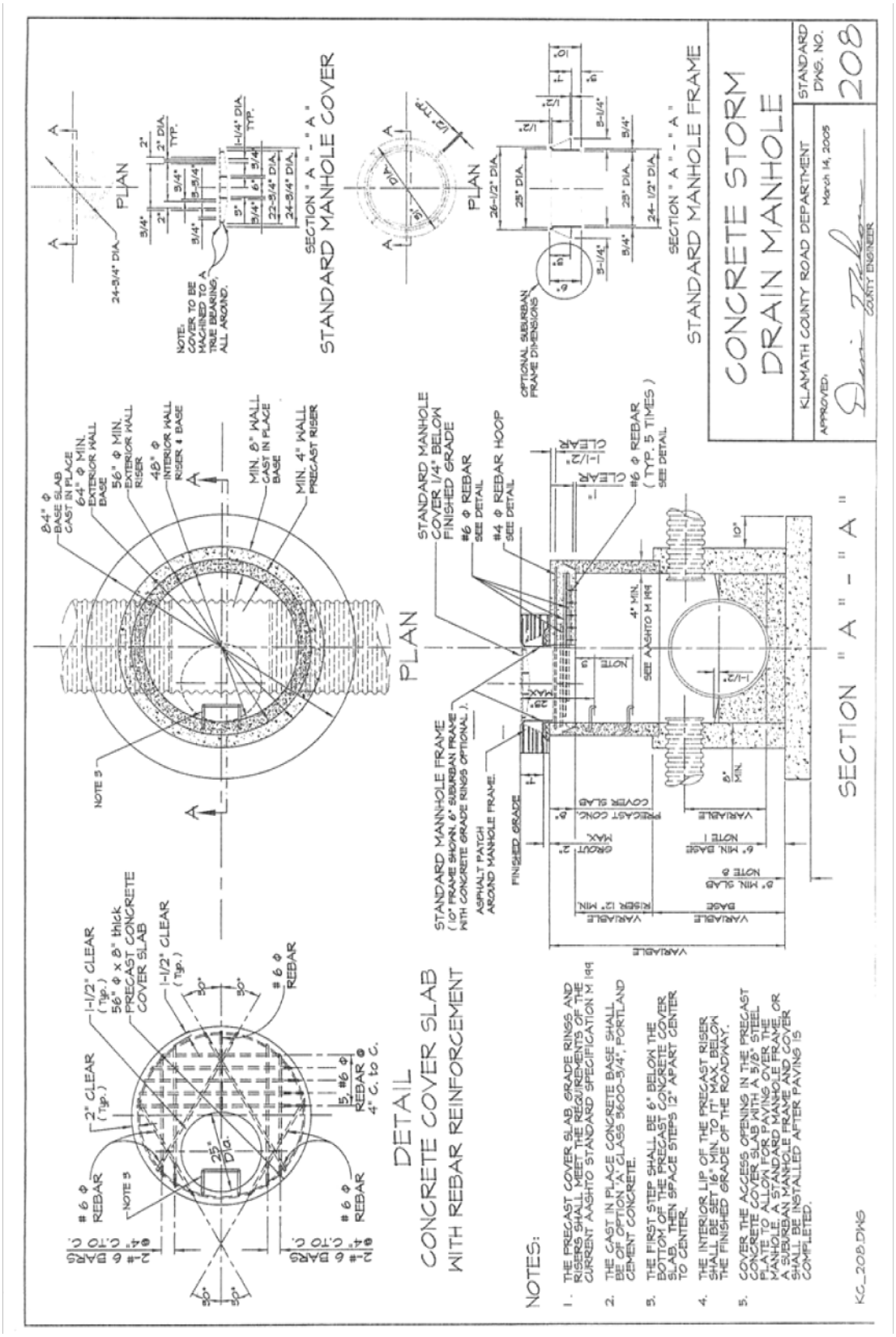
NOTES:
1. CURB AND GUTTER SHALL BE POURED MONOLITHICALLY WITH COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
2. SIDEWALK SHALL BE POURED MONOLITHICALLY WITH COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. CONSTRUCT EXPANSION JOINTS ON EACH SIDE OF CURB INLETS, IN THE CENTER AND AT EACH END OF ALL DRIVEWAYS, AT THE END OF CURB RETURNS AND AT 90' INTERVALS.
4. CONSTRUCT CONTRACTION JOINTS BETWEEN EXPANSION JOINTS AT 15' INTERVALS. CUT JOINTS 1/3 THE THICKNESS AND 1/8" WIDE, MINIMUM.
5. BROOM FINISH CONCRETE SIDEWALK PERPENDICULAR TO CURB.
6. WIDTHS OF STANDARD STREET SECTIONS SHOWN ON PLANS SHALL BE TO THE FACE OF CURBS, UNLESS OTHERWISE INDICATED.
7. IN A DRIVEWAY SECTION, THE VERTICAL DISTANCE FROM THE GUTTER FLOW LINE TO THE TOP FACE OF CURB, SHALL NOT EXCEED 1/2".
PLAN
VIEW
SECTION
45' MAXIMUM
5'
VIEW "B" – "B"
BACK OF SIDEWAKK
NORMAL CURB
LIP OF GUTTER
EXPANSION JOINT
PRE MOLDED EXPANSION JOINT FILLER COMPLETELY THROUGH SECTION
TRANSITION CURB
BACK OF DEPRESSED SIDEWALK
DEPRESSED CURB
SECTION "B" – "B"
TYPICAL DRIVEWAY IN FILL SECTION
NORMAL CURB
GUTTER FLOW LINE (SEE NOTE 7)
LIP OF GUTTER
DEPRESSED CURB
BACK OF NORMAL SIDEWALK
BACK OF DEPRESSED SIDEWALK
DRIVEWAY SURFACE
KC_129.DWG
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
February 3, 2009
COUNTY ENGINEER
COMMERCIAL DRIVEWAY WITH CURB & GUTTER
STANDARD DWG. NO.
129


NOTES:
1. WHERE THE CURB INLET IS TO BE CONSTRUCTED WITHIN THE LIMITS OF THE EXISTING OR PROPOSED SIDEWALK, OR IS ADJOINING SUCH SIDEWALK, THE TOP SLAB OF THE INLET MAY BE POURED EITHER AT THE SAME TIME AS THE SIDEWALK OR SEPARATELY. WHEN POURED AT THE SAME TIME, THE SIDEWALK SHALL BE CONSTRUCTED WITH A WEAKENED PLANE OR A ONE INCH DEEP SAWCUT CONTINUOUSLY AROUND THE EXTERNAL PERIMETER OF THE CURB INLET WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK.
2. ALL CONCRETE SHALL BE COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. THE SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SCOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND SIDEWALK ADJACENT TO THE CURB INLET.
4. ALL CURVED CONCRETE SURFACES SHALL BE FORMED BY CURVED FORMS, AND SHALL NOT BE SHAPED BY PLASTERING.
5. ALL EXPOSED METAL PARTS (WITH THE EXCEPTION OF MANHOLE LID AND MANHOLE RING) SHALL BE HOT DIPPED GALVANIZED.
6. A ONE INCH SUPPORT BOLT SHALL BE INSTALLED AT THE CENTER OF THE 48" OPENING OF THE CURB INLET.
7. 12" SUMP OR AS DIRECTED BY THE ENGINEER.
8. ACCESS LIDS WITH A "DRAINS TO STREAM" MESSAGE ARE REQUIRED. PROPOSED LIDS MUST BE APPROVED PRIOR TO INSTALLATION.
SECTION " A "- " A "
CURB INLET WITH SUMP
KC_206.DWG
STEEL LID DETAIL
EXPANSION JOINTS
PRE MOLDED EXPANSION JOINT FILLER
COMPLETELY THROUGH SECTION
TWO 1/2" REBAR 12" LONG
SIDEWALK
CURB
FLOW LINE
GUTTER
STRAIGHT VALLEY GRADE
3'-0"
5'-0"
FLOW LINE PLAN
SEE FLOW LINE PROFILE "A" OR "B"
INSIDE WALL OF CAST IN PLACE BOTTOM
OUTSIDE WALL OF CAST IN PLACE BOTTOM
TOP OF LID PLAN VIEW
(0.125" TAPER FROM BOTTOM TYPICAL 4 SIDES)
#3 BAR TOP & BOTTOM
#3 BAR TOP ONLY
4'0" INLET OPENING
DIA.
2'-1"
1 1/4"
2'-9"
3'-0"
1 1/2" TYP.
4'-9"
5'-0"
FINISHED SURFACE ALL AROUND
NOTE 8
60° Typ.
NOTE 5
5/8" Rod.
1-1/4"
TOP VIEW
BOTTOM VIEW
25" Dia.
24-7/8" Dia.
SECTION "B" - "B"
FLOW LINE PLAN
DIRECTION OF FLOW
FLOW LINE
NOTE 6
FLOW LINE PROFILE " A "
FLOW LINE PROFILE " B "
NORMAL STREET GRADE
SEE DWG. 206.0 CURB INLET OPENING
2" ø WEEP HOLE TYP. BOTH SIDES
#3 REBAR TOP & BOTTOM
2'-0"
NOTE 7
6"
24" OR AS DIRECTED
VARIABLE, AS DIRECTED BY THE ENGINEER
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
February 3, 2009
COUNTY ENGINEER
TYPE "S"
CURB INLET
WITH DETAILS
STANDARD DWG. NO.
206

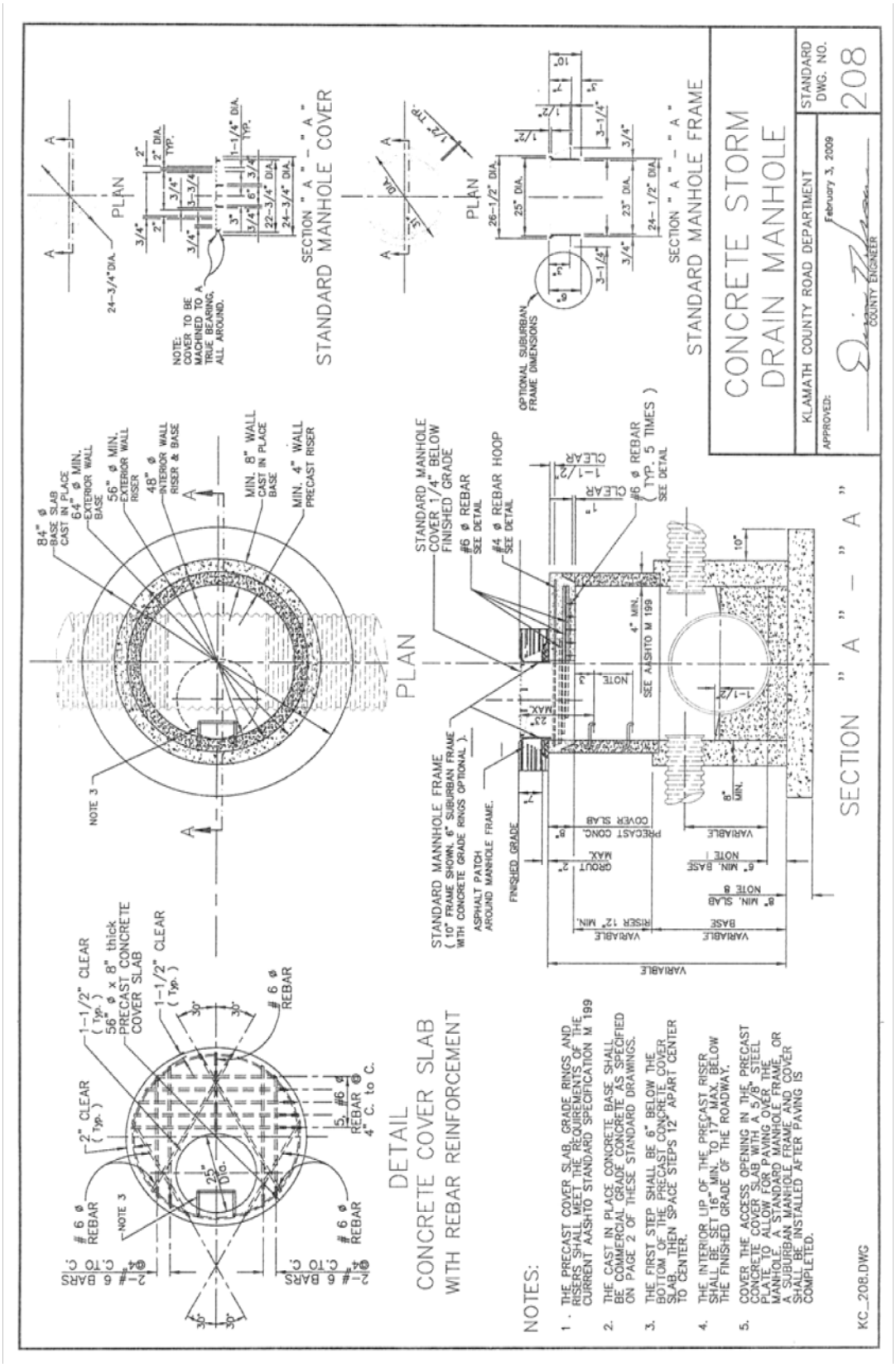

NOTES:
1. WHERE THE CURB INLET IS TO BE CONSTRUCTED WITHIN THE LIMITS OF THE EXISTING OR PROPOSED SIDEWALK, OR IS ADJOINING SUCH SIDEWALK, THE TOP SLAB OF THE INLET MAY BE POURED EITHER AT THE SAME TIME AS THE SIDEWALK OR SEPARATELY. WHEN POURED AT THE SAME TIME, THE SIDEWALK SHALL BE CONSTRUCTED WITH A WEAKENED PLANE OR A ONE INCH DEEP SAWCUT CONTINUOUSLY AROUND THE EXTERNAL PERIMETER OF THE CURB INLET WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK.
2. ALL CONCRETE SHALL BE COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. THE SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SCOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND SIDEWALK ADJACENT TO THE CURB INLET.
4. ALL CURVED CONCRETE SURFACES SHALL BE FORMED BY CURVED FORMS, AND SHALL NOT BE SHAPED BY PLASTERING.
5. ALL EXPOSED METAL PARTS (WITH THE EXCEPTION OF MANHOLE LID AND MANHOLE RING) SHALL BE HOT DIPPED GALVANIZED.
6. A ONE INCH SUPPORT BOLT SHALL BE INSTALLED AT THE CENTER OF THE CURB INLET OPENING.
KC_206a.DWG
2 - #3 REBAR. LENGTH OF BAR EQUALS THE WIDTH OF THE CURB INLET OPENING + 6". INSTALL THIS REBAR IN ADDITION TO REINFORCING STEEL PATTERN FOR THE TOP OF THE CURB INLET.
4'-9" LONG ANGLE IRON
DROPPED GUTTER LINE AT CURB INLET OPENING
NORMAL GUTTER LINE
8" DROP AT CURB INLET FACE
6" NORMAL CURB FACE
OPENING
HEX NUT
1-1/8" Dia. HOLE IN STEEL FACE PLATE
HEX NUT NOTE 6
FACE PLATE AND PROTECTION BAR
DETAIL "A"
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
February 3, 2009
COUNTY ENGINEER
TYPE "S"
CURB INLET OPENING
STANDARD DWG. NO.
206a

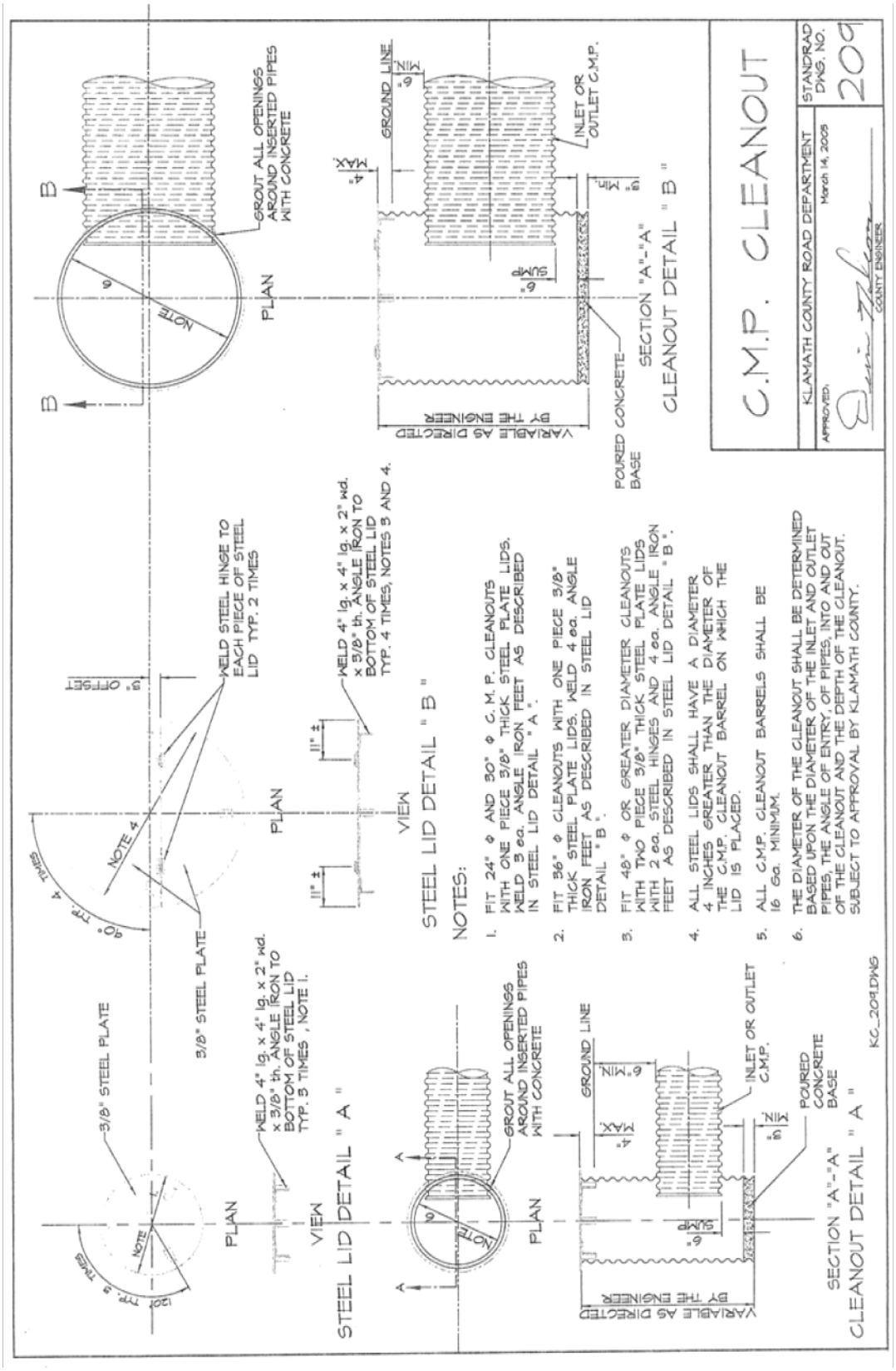

NOTES:
1. WHERE THE CURB INLET IS TO BE CONSTRUCTED WITHIN THE LIMITS OF THE EXISTING OR PROPOSED SIDEWALK, OR IS ADJOINING SUCH SIDEWALK, THE TOP SLAB OF THE INLET MAY BE POURED EITHER AT THE SAME TIME AS THE SIDEWALK OR SEPARATELY. WHEN POURED AT THE SAME TIME, THE SIDEWALK SHALL BE CONSTRUCTED WITH A WEAKENED PLANE OR A ONE INCH DEEP SAWCUT CONTINUOUSLY AROUND THE EXTERNAL PERIMETER OF THE CURB INLET WALLS, INCLUDING ACROSS THE FULL WIDTH OF THE SIDEWALK.
2. ALL CONCRETE SHALL BE COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. THE SURFACE OF ALL EXPOSED CONCRETE SHALL CONFORM IN SCOPE, GRADE, COLOR, FINISH AND SCORING TO EXISTING OR PROPOSED CURB AND SIDEWALK ADJACENT TO THE CURB INLET.
4. ALL CURVED CONCRETE SURFACES SHALL BE FORMED BY CURVED FORMS, AND SHALL NOT BE SHAPED BY PLASTERING.
5. ALL EXPOSED METAL PARTS (WITH THE EXCEPTION OF MANHOLE LID AND MANHOLE RING) SHALL BE HOT DIPPED GALVANIZED.
6. A ONE INCH SUPPORT BOLT SHALL BE INSTALLED AT THE CENTER OF THE CURB INLET OPENING.
2-#3 REBAR. LENGTH OF BAR EQUALS THE WIDTH OF THE CURB INLET OPENING + 6". INSTALL THIS REBAR IN ADDITION TO REINFORCING STEEL PATTERN FOR THE TOP OF THE CURB INLET.
10" RADIUS, ROLLED CURB
4'-9" LONG ANGLE IRON
DROPPED GUTTER LINE AT CURB INLET OPENING
NORMAL GUTTER LINE
CURB FACE
NORMAL
8" DROP AT CURB INLET FACE
OPENING
HEX NUT
10" RADIUS, ROLLED CURB
1-1/8" Dia. HOLE IN STEEL FACE PLATE
HEX NUT NOTE 6
FACE PLATE AND PROTECTION BAR
DETAIL "A"
ROLLED CURB
TYPE "S"
CURB INLET OPENING
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
February 3, 2009
COUNTY ENGINEER
STANDARD DWG. NO.
206b
KC_206b.DWG

Klamath County Land Development Code
Appendix A



ORD 45.0	Adopt February 16, 1984
ORD. 45.31	Adopted 2/15/95
ORD. 45.36	Adopted 11/10/98


CONCRETE STORM DRAIN MANHOLE
KLAMATH COUNTY ROAD DEPARTMENT
STANDARD DWG. NO. 208
APPROVED:
February 3, 2009
COUNTY ENGINEER
STANDARD MANHOLE FRAME
SECTION " A " - " A "
OPTIONAL SUBURBAN FRAME DIMENSIONS
STANDARD MANHOLE COVER
SECTION " A " - " A "
NOTE: COVER TO BE MACHINED TO A TRUE BEARING ALL AROUND.
PLAN
PLAN
DETAIL
CONCRETE COVER SLAB
WITH REBAR REINFORCEMENT
PLAN
SECTION " A " - " A "
STANDARD MANHOLE FRAME (10" FRAME SHOWN, 6" SUBURBAN FRAME WITH CONCRETE GRADE RINGS OPTIONAL).
STANDARD MANHOLE COVER 1/4" BELOW FINISHED GRADE
ASPHALT PATCH AROUND MANHOLE FRAME.
FINISHED GRADE
#6 ø REBAR SEE DETAIL
#4 ø REBAR HOOP SEE DETAIL
#6 ø REBAR (TYP. 5 TIMES) SEE DETAIL
SEE AASHTO M 199
NOTE 3
NOTES:
1. THE PRECAST COVER SLAB, GRADE RINGS AND RISERS SHALL MEET THE REQUIREMENTS OF THE CURRENT AASHTO STANDARD SPECIFICATION M 199
2. THE CAST IN PLACE CONCRETE BASE SHALL BE COMMERCIAL GRADE CONCRETE AS SPECIFIED ON PAGE 2 OF THESE STANDARD DRAWINGS.
3. THE FIRST STEP SHALL BE 6" BELOW THE BOTTOM OF THE PRECAST CONCRETE COVER SLAB. THEN SPACE STEPS 12" APART CENTER TO CENTER.
4. THE INTERIOR LIP OF THE PRECAST RISER SHALL BE SET 16" MIN. TO 17" MAX. BELOW THE FINISHED GRADE OF THE ROADWAY.
5. COVER THE ACCESS OPENING IN THE PRECAST CONCRETE COVER SLAB WITH A 5/8" STEEL PLATE TO ALLOW FOR PAVING OVER THE MANHOLE. A STANDARD MANHOLE FRAME, OR A SUBURBAN MANHOLE FRAME AND COVER SHALL BE INSTALLED AFTER PAVING IS COMPLETED.
KC_208.DWG


C.M.P. CLEANOUT
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
March 14, 2005
COUNTY ENGINEER
STANDRAD DWG. NO.
209
CLEANOUT DETAIL " B "
SECTION "A"-"A"
INLET OR OUTLET C.M.P.
GROUND LINE
POURED CONCRETE BASE
VARIABLE AS DIRECTED BY THE ENGINEER
GROUT ALL OPENINGS AROUND INSERTED PIPES WITH CONCRETE
NOTE
PLAN
B
CLEANOUT DETAIL " A "
SECTION "A"-"A"
INLET OR OUTLET C.M.P.
GROUND LINE
POURED CONCRETE BASE
VARIABLE AS DIRECTED BY THE ENGINEER
GROUT ALL OPENINGS AROUND INSERTED PIPES WITH CONCRETE
NOTE
PLAN
A
STEEL LID DETAIL " B "
VIEW
PLAN
WELD STEEL HINGE TO EACH PIECE OF STEEL LID TYP. 2 TIMES
WELD 4" lg. x 4" lg. x 2" wd. x 3/8" th. ANGLE IRON TO BOTTOM OF STEEL LID TYP. 4 TIMES, NOTES 3 AND 4.
3/8" STEEL PLATE
OFFSET
11" ±
11" ±
NOTE 4
90° TYP. 4 TIMES
STEEL LID DETAIL " A "
VIEW
PLAN
WELD 4" lg. x 4" lg. x 2" wd. x 3/8" th. ANGLE IRON TO BOTTOM OF STEEL LID TYP. 3 TIMES , NOTE 1.
3/8" STEEL PLATE
NOTE
120° TYP. 3 TIMES
NOTES:
1. FIT 24" ϕ AND 30" ϕ C. M. P. CLEANOUTS WITH ONE PIECE 3/8" THICK STEEL PLATE LIDS. WELD 3 ea. ANGLE IRON FEET AS DESCRIBED IN STEEL LID DETAIL " A ".
2. FIT 36" ϕ CLEANOUTS WITH ONE PIECE 3/8" THICK STEEL PLATE LIDS. WELD 4 ea. ANGLE IRON FEET AS DESCRIBED IN STEEL LID DETAIL " B ".
3. FIT 48" ϕ OR GREATER DIAMETER CLEANOUTS WITH TWO PIECE 3/8" THICK STEEL PLATE LIDS WITH 2 ea. STEEL HINGES AND 4 ea. ANGLE IRON FEET AS DESCRIBED IN STEEL LID DETAIL " B ".
4. ALL STEEL LIDS SHALL HAVE A DIAMETER 4 INCHES GREATER THAN THE DIAMETER OF THE C.M.P. CLEANOUT BARREL ON WHICH THE LID IS PLACED.
5. ALL C.M.P. CLEANOUT BARRELS SHALL BE 16 Ga. MINIMUM.
6. THE DIAMETER OF THE CLEANOUT SHALL BE DETERMINED BASED UPON THE DIAMETER OF THE INLET AND OUTLET PIPES, THE ANGLE OF ENTRY, OF PIPES, INTO AND OUT OF THE CLEANOUT AND THE DEPTH OF THE CLEANOUT. SUBJECT TO APPROVAL BY KLAMATH COUNTY.
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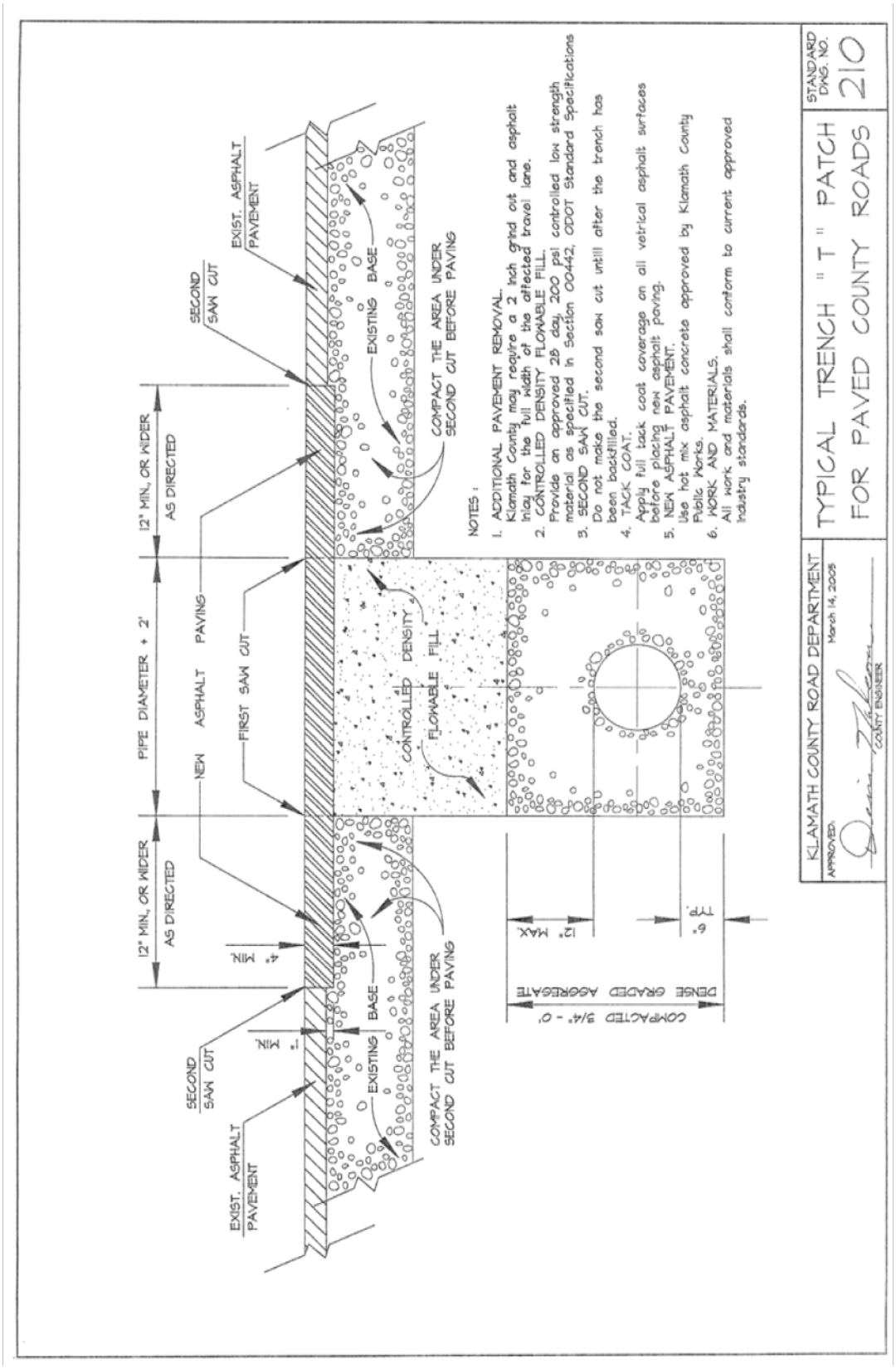
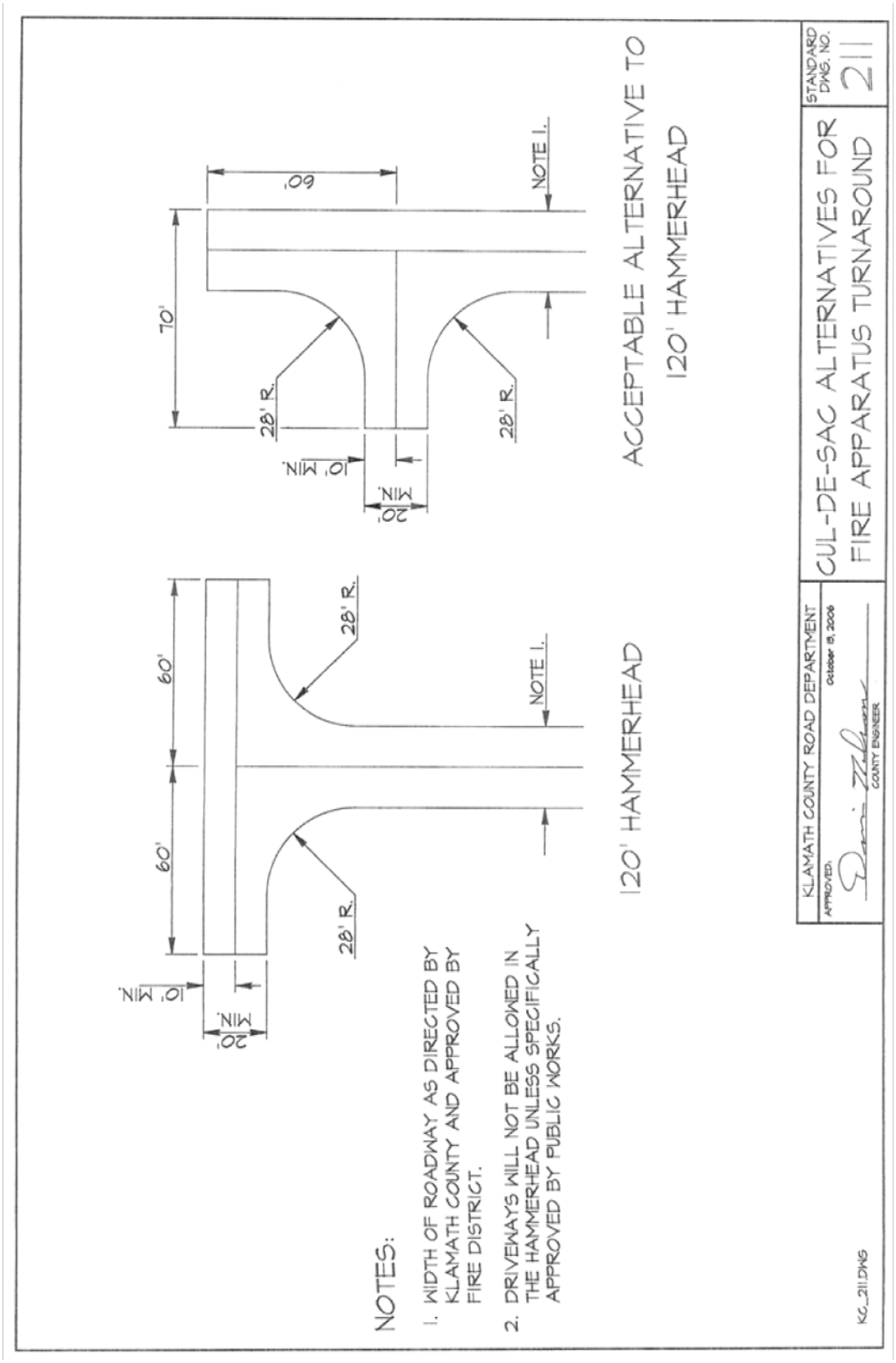

STANDARD DWG. NO. 210
TYPICAL TRENCH "T" PATCH FOR PAVED COUNTY ROADS
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
March 14, 2005
COUNTY ENGINEER
NOTES:
1. ADDITIONAL PAVEMENT REMOVAL. Klamath County may require a 2 inch grind out and asphalt inlay for the full width of the affected travel lane.
2. CONTROLLED DENSITY FLOWABLE FILL. Provide an approved 28 day, 200 psi controlled low strength material as specified in Section 00442, ODOT Standard Specifications
3. SECOND SAW CUT. Do not make the second saw cut until after the trench has been backfilled.
4. TACK COAT. Apply full tack coat coverage on all vetrical asphalt surfaces before placing new asphalt paving.
5. NEW ASPHALT PAVEMENT. Use hot mix asphalt concrete approved by Klamath County Public Works.
6. WORK AND MATERIALS. All work and materials shall conform to current approved industry standards.
EXIST. ASPHALT PAVEMENT
SECOND SAW CUT
EXISTING BASE
COMPACT THE AREA UNDER SECOND CUT BEFORE PAVING
12" MIN. OR WIDER AS DIRECTED
PIPE DIAMETER + 2'
NEW ASPHALT PAVING
FIRST SAW CUT
CONTROLLED DENSITY FLOWABLE FILL
4" MIN.
1" MIN.
COMPACTED 3/4" - 0" DENSE GRADED AGGREGATE
12" MAX.
6" TYP.


NOTES:
1. WIDTH OF ROADWAY AS DIRECTED BY KLAMATH COUNTY AND APPROVED BY FIRE DISTRICT.
2. DRIVEWAYS WILL NOT BE ALLOWED IN THE HAMMERHEAD UNLESS SPECIFICALLY APPROVED BY PUBLIC WORKS.
120' HAMMERHEAD
60'
60'
28' R.
NOTE 1.
20' MIN.
10' MIN.
ACCEPTABLE ALTERNATIVE TO 120' HAMMERHEAD
70'
60'
28' R.
28' R.
NOTE 1.
20' MIN.
10' MIN.
KLAMATH COUNTY ROAD DEPARTMENT
APPROVED:
October 19, 2006
COUNTY ENGINEER
CUL-DE-SAC ALTERNATIVES FOR FIRE APPARATUS TURNAROUND
STANDARD DWG. NO. 211
KC_211.DWG