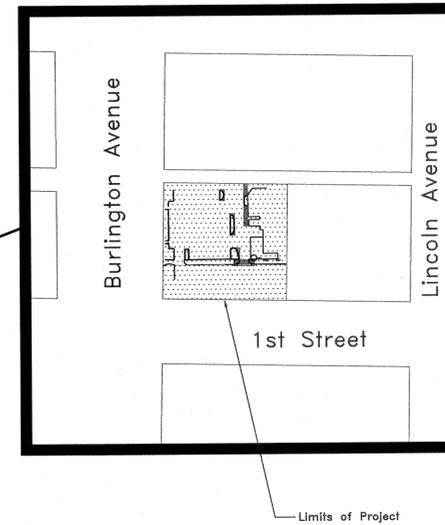
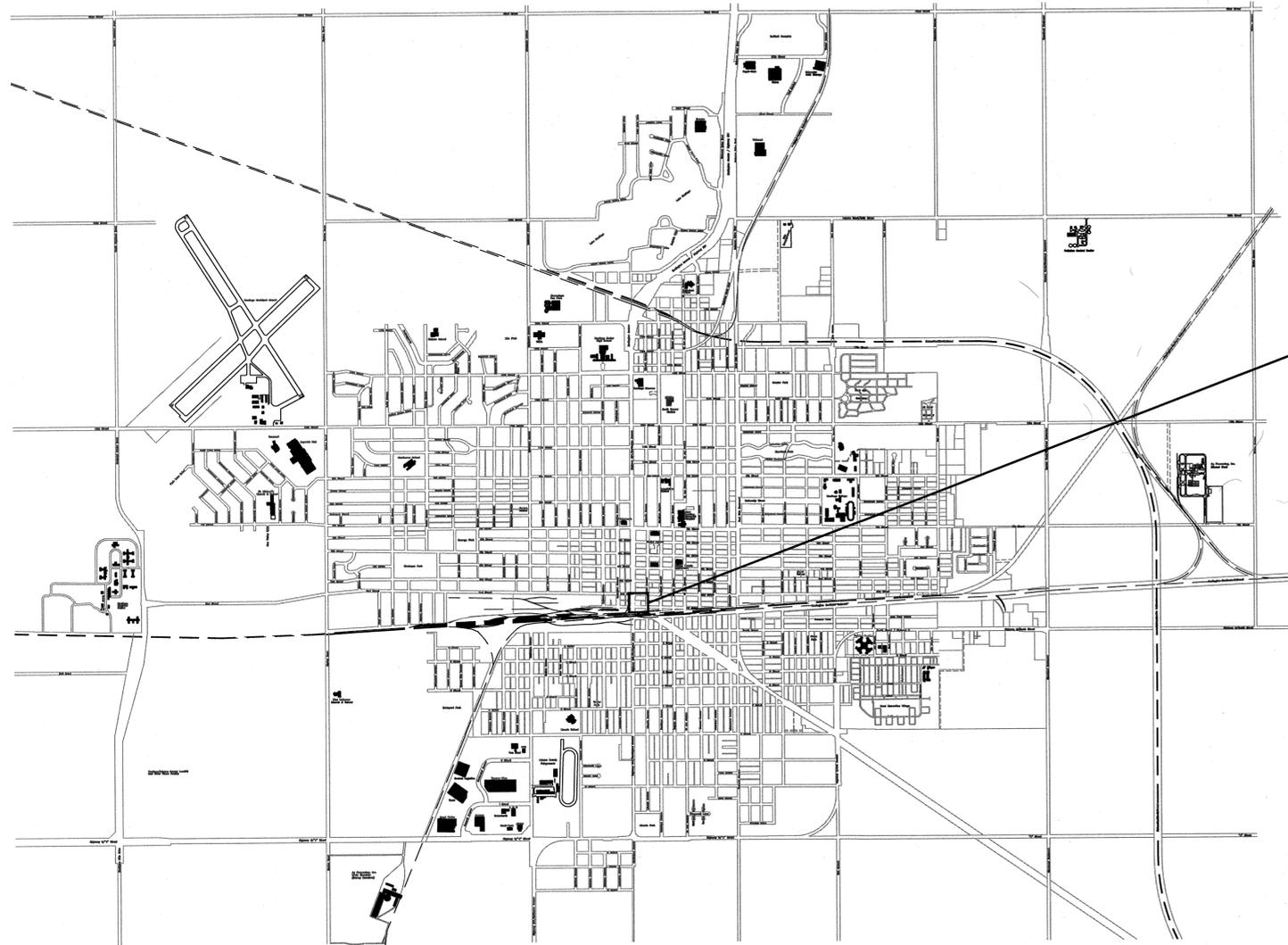
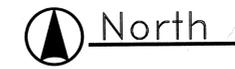


CDBG 12-DTR-107



INDEX OF SHEETS

SHEET NO.

1. TITLE PAGE
2. SUMMARY OF QUANTITIES, GENERAL NOTES DETAILS
3. PLAN DRAWING

STANDARD PLANS

- 301-R11 (3 SHEETS) PAVEMENT DETAILS
 425-R4 (1 SHEET) COLLARS AND ELBOWS FOR CONCRETE PIPE

Hastings City Engineering
 Hastings, NE



David L. Wacker 2/24/2016
 Hastings City Engineer Date

CITY OF HASTINGS B.I.D DOWNTOWN PARKING LOT IMPROVEMENTS WEST 1ST STREET AT BURLINGTON AVE.

No.	Revision/Issue	Date

Firm Name and Address
**CITY OF HASTINGS BUSINESS
 IMPROVEMENT DISTRICT**
**CITY OF HASTINGS COMMUNITY
 REDEVELOPMENT AUTHORITY**
 301 SOUTH BURLINGTON AVENUE
 402 · 461 · 8415

Project # CDBG 12-DTR-107	Sheet 1
Date 1/11/2016	
Scale SCALE	

1ST STREET PARKING LOT LANDSCAPING

CDBG 12-DTR-107

SUMMARY OF QUANTITIES

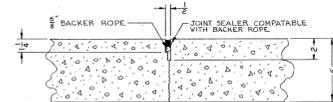
ITEM NO.	DESCRIPTION	ESTIMATED QUANTITIES	UNITS
1.	REMOVE CONCRETE PAVEMENT	212.3	S.Y.
2.	BUILD 6" P.C.C. CONCRETE PAVEMENT	131.6	S.Y.
3.	REMOVE SIDEWALK	67.2	S.Y.
4.	BUILD 5" SIDEWALK	35.6	S.Y.
5.	FULL DEPTH SAW CUT	73.3	L.F.
6.	REMOVE INTEGRAL CURB & GUTTER	50.0	L.F.
7.	BUILD 6" CURB & GUTTER W/ TIE BARS	306.3	L.F.
8.	REMOVE SQUARE CURB	48.9	L.F.
9.	BUILD 8" SQUARE CURB	33.3	L.F.
10.	ADJUST GAS VALVE TO GRADE	2	EACH
11.	BUILD NEW METER PIT	1	EACH
12.	BUILD NEW PVC FENCE	28.0	L.F.
13.	BUILD 4" STEEL BOLLARDS	7	EACH
14.	BUILD 8" ROOF DRAINS SDR 26 PVC WITH FITTINGS	56.0	L.F.
15.	TRAFFIC CONTROL, BARRICADES, AND MAINTENANCE THEREOF	1	LUMP. SUM

GENERAL NOTES

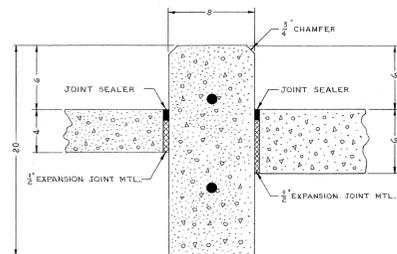
CONTRACTOR'S NOTE

- PAYMENT WILL BE MADE FOR ACTUAL FIELD QUANTITIES UTILIZED AND SHALL SHOW PRECEDENCE OVER CONTRACT ESTIMATED QUANTITIES.
- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF ALL PAVEMENT REMOVAL.
- CONTRACTOR WILL BE REQUIRED TO HAVE ALL UTILITIES LOCATED PRIOR TO START OF WORK.
- EXCAVATION, BACKFILLING, AND SAWING CONTROL JOINTS, KEYWAY, TIE BARS, DOWEL PINS, AND RUBBERIZED JOINT SEALANT SHALL BE CONSIDERED SUBSIDIARY TO THE UNIT PRICE PER SQUARE YARD OF PAVEMENT.
- FLAGGING AND BARRICADES NECESSARY FOR CONSTRUCTION WILL BE PAID FOR DIRECTLY, AS A UNIT BID PRICE AS OUTLINED IN THE CONTRACT PROPOSAL. AREAS UNDER CONSTRUCTION SHALL BE BARRICADED AS WORK PROCESSES AT DIRECTION OF THE ENGINEER.

NOTE: CONTRACTOR WILL TAKE EXTRA CARE TO PROTECT ALL SURVEY MARKERS, LOCATED IN STREET, DURING CONSTRUCTION.



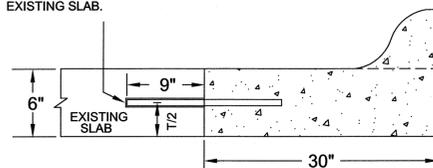
A-A EXISTING CURB INFIELD DETAIL
1 NO SCALE (ALL DIMENSIONS SHOWN IN INCHES)



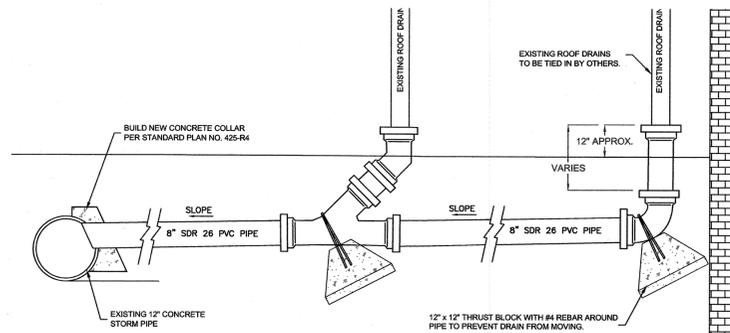
B-B EXISTING CURB INFIELD DETAIL
1 NO SCALE (ALL DIMENSIONS SHOWN IN INCHES)

NOTE: "T" = PAVEMENT THICKNESS

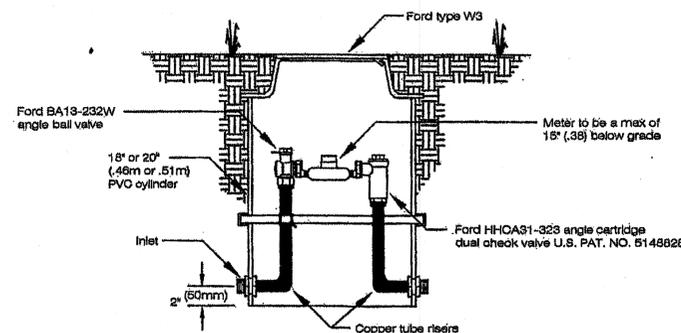
No. 5x18" TIE BARS AT 33" CENTERS TO BE DRILLED AND GROUTED INTO EXISTING SLAB.



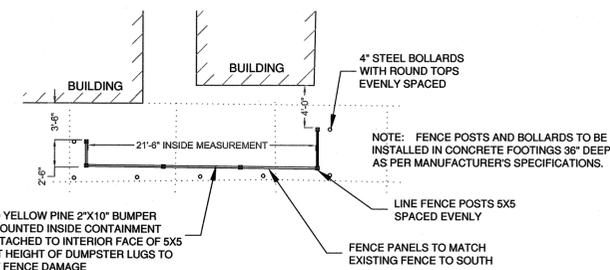
C-C STANDARD INTEGRAL CURB DETAIL
1 NO SCALE



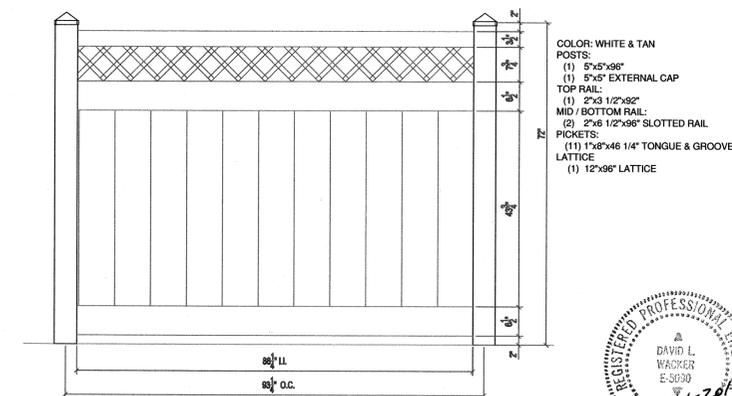
8" ROOF DRAIN CONSTRUCTION DETAIL
NO SCALE



STANDARD METER PIT DETAIL
NO SCALE



STANDARD FENCE PLAN DETAIL
NO SCALE



FENCE ELEVATION DETAIL
NO SCALE
NOTE: FENCE TO MATCH COLOR, SYLE & HEIGHT OF MURPHY'S WAGON WHEEL

REGISTERED PROFESSIONAL ENGINEER
DAVID L. WACKER
E-5030
12-24-2016

**CITY OF HASTINGS B.I.D DOWNTOWN
PARKING LOT IMPROVEMENTS
WEST 1ST STREET AT BURLINGTON AVE.**

No.	Revision/Issue	Date

Firm Name and Address
**CITY OF HASTINGS BUSINESS
IMPROVEMENT DISTRICT**
**CITY OF HASTINGS COMMUNITY
REDEVELOPMENT AUTHORITY**
 301 SOUTH BURLINGTON AVENUE
 402 · 461 · 8415

Project # CDBG 12-DTR-107	Sheet 2
Date 1/11/2016	Scale SCALE

FULL DEPTH SAW CUT	
Location	Sq. Yds.
G5	50.0
G6	11.4
H1	11.9

REMOVE PAVEMENT	
Location	Sq. Yds.
A	20.3
B	72.7
C	39.9
E	20.4
G1	39.7
G3	19.3

BUILD 6" P.C.C. PAVEMENT	
Location	Sq. Yds.
A	11.4
B	59.4
C	20.1
E	8.6
G1	12.8
G3	19.3

REMOVE SIDEWALK	
Location	Sq. Yds.
F	22.6
G2	18.1
G4	8.0
G6	4.4
H1	4.6
H2	9.5

BUILD 5" SIDEWALK	
Location	Sq. Yds.
G2	18.1
G4	8.0
H2	9.5

REMOVE INTEGRAL CURB	
Location	Lin. Ft.
G5	50.0

BUILD 6" INTEGRAL CURB	
Location	Lin. Ft.
A	39.7
B	30.2
C	74.4
E	48.3
G1	63.7
G5	50.0

REMOVE SQUARE CURB	
Location	Sq. Yds.
D	26.8
E	6.5
G1	15.6

BUILD SQUARE CURB	
Location	Sq. Yds.
D	26.8
E	6.5

ADJUST GAS VALVE TO GRADE	
Location	EACH
G3 & G4	2

BUILD NEW METER PIT	
Location	EACH
AS NOTED	1

BUILD NEW FENCE	
Location	Lin. Ft.
B	28.0

BUILD 8" SDR 26 PVC ROOF DRAIN	
Location	Lin. Ft.
B	56.0

NOTES: ITEM BUILD 8" SDR 26 PVC ROOF DRAIN SHALL INCLUDE ALL MATERIALS, FITTINGS, ELBOWS, THROUGH BLOCKING, TAPING OF MAIN STORM SEWER PIPE, ADJUSTMENT TO GRADE AND LABOR NEEDED TO COMPLETE INSTALLATION.



BURLINGTON AVENUE

WEST 1ST STREET

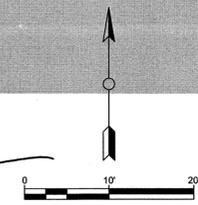
CITY OF HASTINGS B.I.D DOWNTOWN
PARKING LOT IMPROVEMENTS
WEST 1ST STREET AT BURLINGTON AVE.

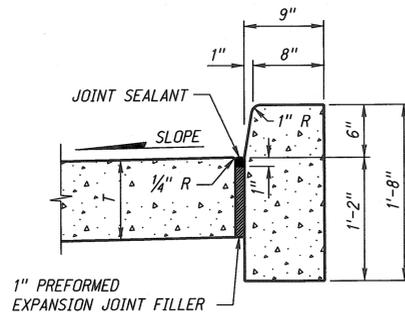
No.	Revision/Issue	Date

Firm Name and Address
CITY OF HASTINGS BUSINESS IMPROVEMENT DISTRICT
CITY OF HASTINGS COMMUNITY REDEVELOPMENT AUTHORITY
 301 SOUTH BURLINGTON AVENUE
 402 · 461 · 8415

Project # CDBG 12-DTR-107	Sheet 3
Date 1/11/2016	
Scale SCALE	

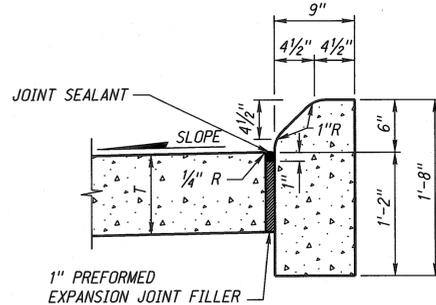
DAVID L. WACKER
E-5090
2-24-2016





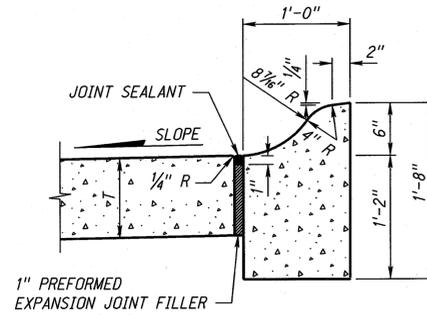
CONCRETE BARRIER CURB *

QUANTITIES
CONCRETE 4.55 CU. YDS./STA.
AREA 1.228 SQ. FT.



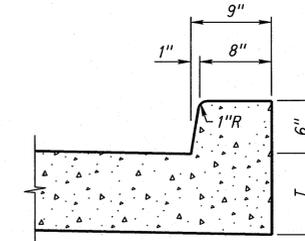
CONCRETE MEDIAN CURB *

QUANTITIES
CONCRETE 4.42 CU. YDS./STA.
AREA 1.192 SQ. FT.



**CONCRETE CURB, *
TYPE I**

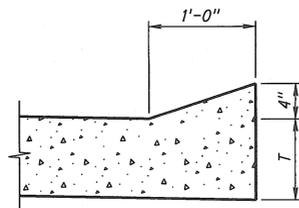
QUANTITIES
CONCRETE 5.22 CU. YDS./STA.
AREA 1.408 SQ. FT.



INTEGRAL CONCRETE BARRIER CURB

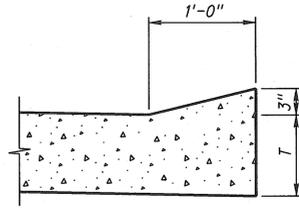
NOTE: MAY BE USED WHEN T IS LESS THAN 12"
QUANTITIES
CONCRETE 1.33 CU. YDS./STA.
AREA 0.359 SQ. FT.

NOTE: *ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 100 FT. THRU CONCRETE BARRIER CURB, CONCRETE MEDIAN CURB, AND CONCRETE CURB, TYPE I.



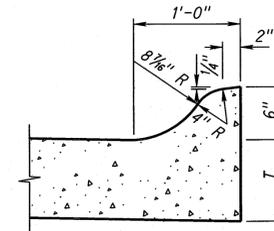
INTEGRAL CONCRETE SLOPING CURB

QUANTITIES
CONCRETE 0.62 CU. YDS./STA.
AREA 0.167 SQ. FT.



INTEGRAL CONCRETE SLOPING CURB

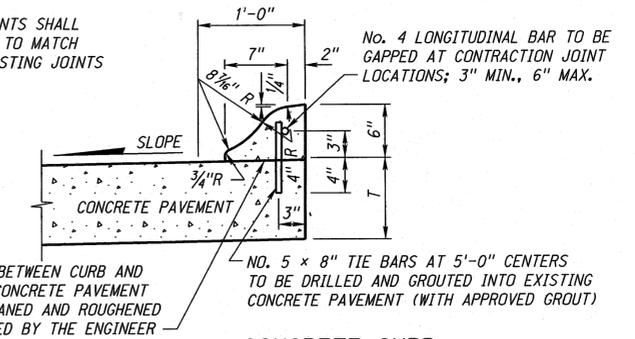
QUANTITIES
CONCRETE 0.46 CU. YDS./STA.
AREA 0.123 SQ. FT.



INTEGRAL CONCRETE CURB

QUANTITIES
CONCRETE 0.89 CU. YDS./STA.
AREA 0.239 SQ. FT.

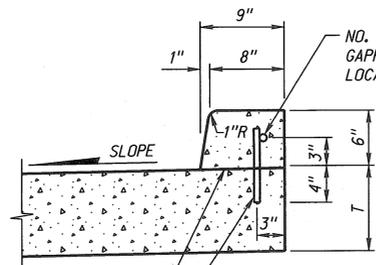
CONTRACTION JOINTS SHALL BE CONSTRUCTED TO MATCH LOCATION OF EXISTING JOINTS



**CONCRETE CURB, *
TYPE II**

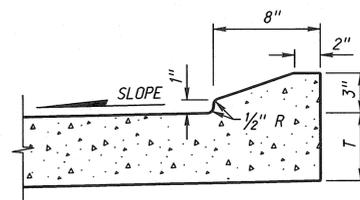
QUANTITIES
CONCRETE 0.87 CU. YDS./STA.
AREA 0.234 SQ. FT.

NOTE: T = PAVEMENT THICKNESS



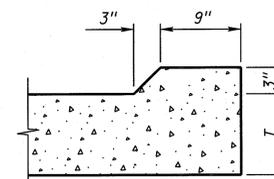
CONCRETE BARRIER CURB ALTERNATE

QUANTITIES
CONCRETE 1.33 CU. YDS./STA.
AREA 0.359 SQ. FT.



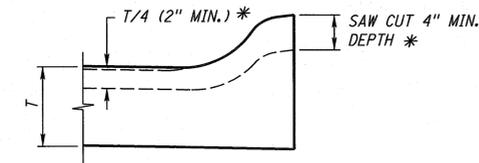
INTEGRAL CONCRETE TRUCK APRON CURB

QUANTITIES
CONCRETE 0.47 CU. YDS./STA.
AREA 0.127 SQ. FT.



EROSION CONTROL CURB

QUANTITIES
CONCRETE 0.81 CU. YDS./STA.
AREA 0.219 SQ. FT.



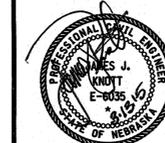
CONTRACTION JOINT THRU CURB

* FOR NON-INTEGRAL CURB THE CONTRACTION JOINTS MAY BE MADE WITH A DOUBLE EDGER WHILE THE CONCRETE IS STILL PLASTIC.

R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS
R9	MAR 05	MULTIPLE REVISIONS
REV. NO.	DATE	DESCRIPTION OF REVISION

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 301-R11
PAVEMENT DETAILS

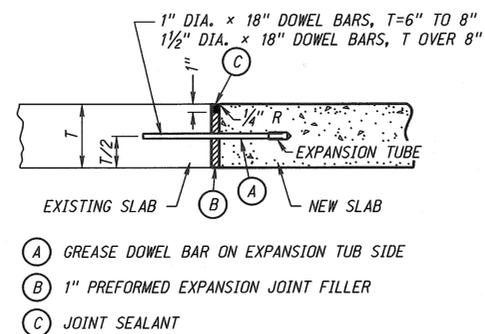
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM



James J. Knott
4/6/15
DATE

ORIGINAL:
JANUARY 31, 1974
DATE

1
3



NOTES:

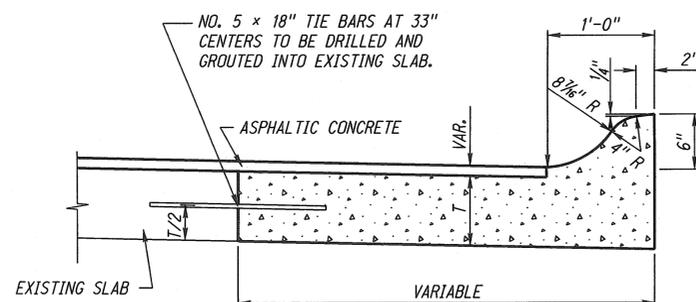
DOWEL BARS SHALL BE DRILLED TO A DEPTH OF 8" INTO EXISTING SLAB AND GROUTED.

DOWEL BARS SHALL BE PLACED AT 1'-0" CENTERS. THE OUTSIDE DOWEL BAR SHALL BE PLACED 6" FROM THE EDGE OF THE SLAB.

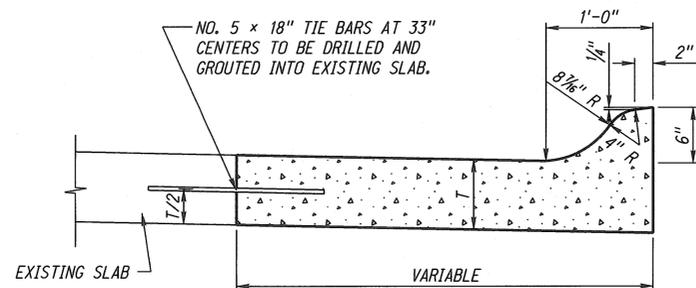
THIS JOINT SHALL BE CONSTRUCTED TRANSVERSE TO THE ROADWAY WHERE THE NEW CONCRETE ABUTS THE EXISTING CONCRETE.

DOWEL BARS SHALL BE PLACED PARALLEL TO THE ROADWAY & AND TO THE ROADBED.

EXPANSION JOINT (SUBSIDIARY)

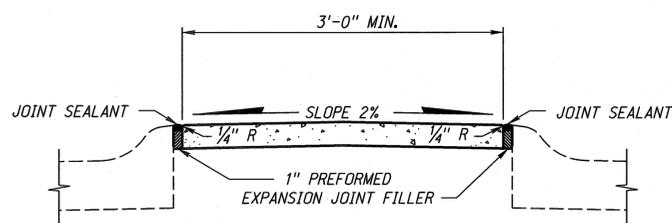


CONCRETE BASE COURSE W/INTEGRAL CURB



THE FOLLOWING NOTE IS TYPICAL FOR CONCRETE BASE COURSE W/INTEGRAL CURB AND CONCRETE PAVEMENT WIDENING: CONTRACTION AND EXPANSION JOINTS SHALL BE CONSTRUCTED TO MATCH LOCATIONS OF EXISTING JOINTS.

CONCRETE PAVEMENT WIDENING



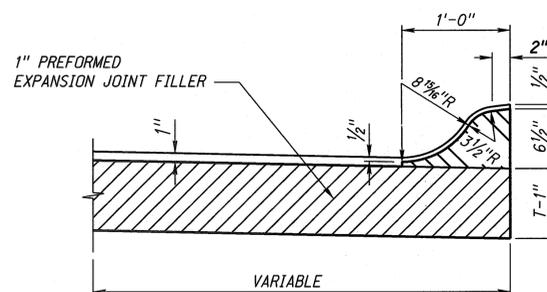
CONCRETE MEDIAN SURFACING

ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED ACROSS THE FULL WIDTH OF THE MEDIAN SURFACING AT INTERVALS OF NOT MORE THAN 49'-0".

LONGITUDINAL JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS WHEN SURFACING WIDTH IS 16'-0" OR GREATER.

TRANSVERSE JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS AT INTERVALS OF NOT MORE THAN 8'-0".

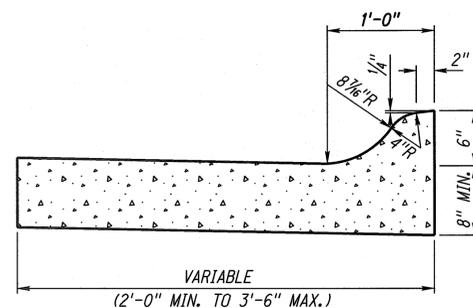
TRANSVERSE AND LONGITUDINAL JOINTS SHALL NOT BE FILLED.



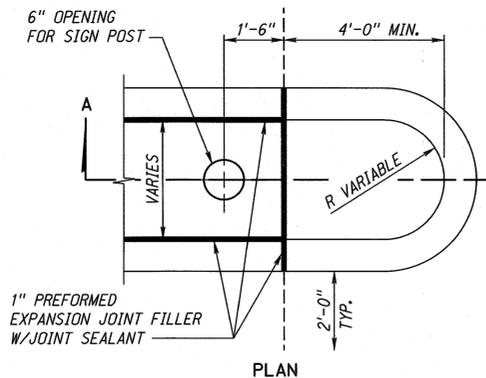
ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED AT INTERSECTION RETURNS AND WHERE SHOWN ON THE PLANS. TRANSVERSE JOINTS SHALL BE PROVIDED EVERY 8'-0" OR WHERE SHOWN ON THE PLANS.

NOTE: RECESS THE EXPANSION JOINT FILLER 1/2" FROM THE TOP SURFACE OF THE CURB TYPE UNDER CONSTRUCTION

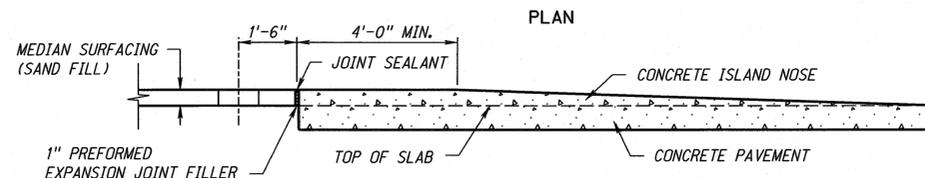
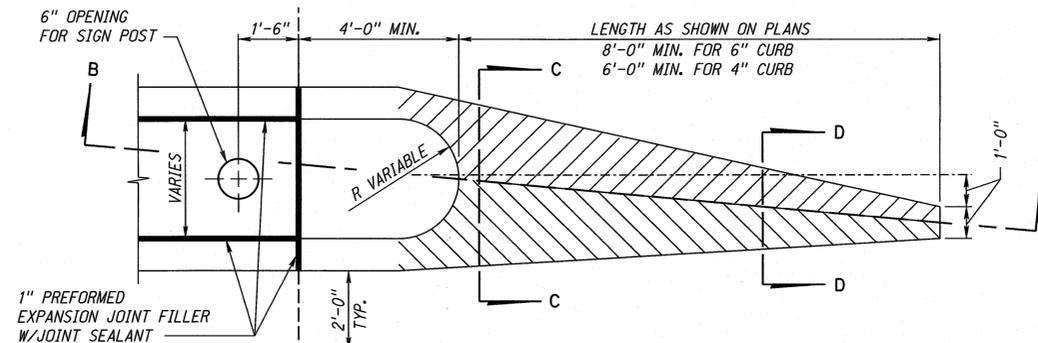
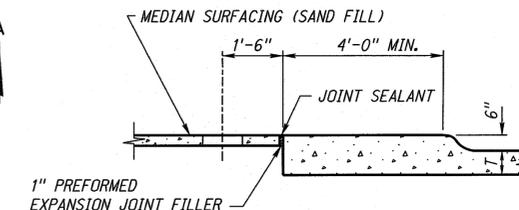
DETAIL FOR CUTTING EXPANSION JOINT FILLER



COMBINATION CONCRETE CURB & GUTTER



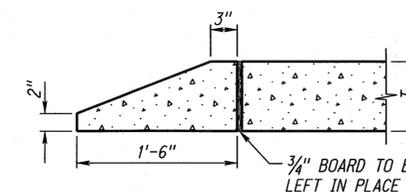
END OF MEDIAN ISLAND



CONCRETE ISLAND NOSE

NOTE: EXISTING CONCRETE PAVEMENT IS TO BE REMOVED TO BUILD CONCRETE ISLAND NOSE.

NOTE: T = PAVEMENT THICKNESS

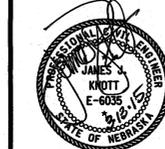


CONCRETE HEADER

R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS
R9	MAR 05	MULTIPLE REVISIONS
REV. NO.	DATE	DESCRIPTION OF REVISION

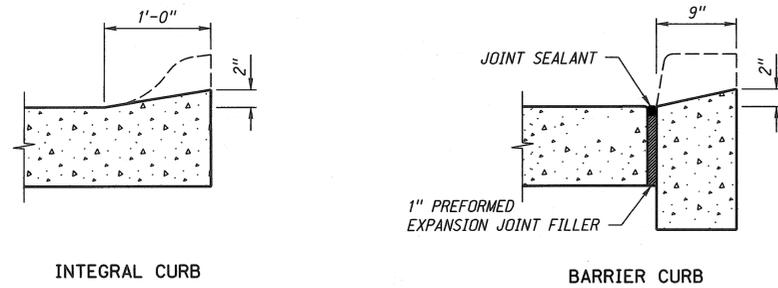
NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 301-R11
PAVEMENT DETAILS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:



4/6/15
DATE

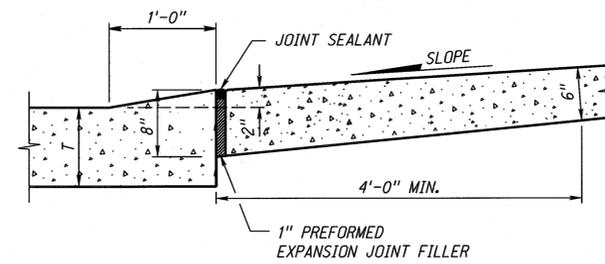
ORIGINAL:
JANUARY 31, 1974
DATE



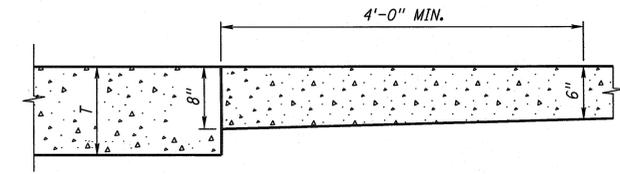
INTEGRAL CURB

BARRIER CURB

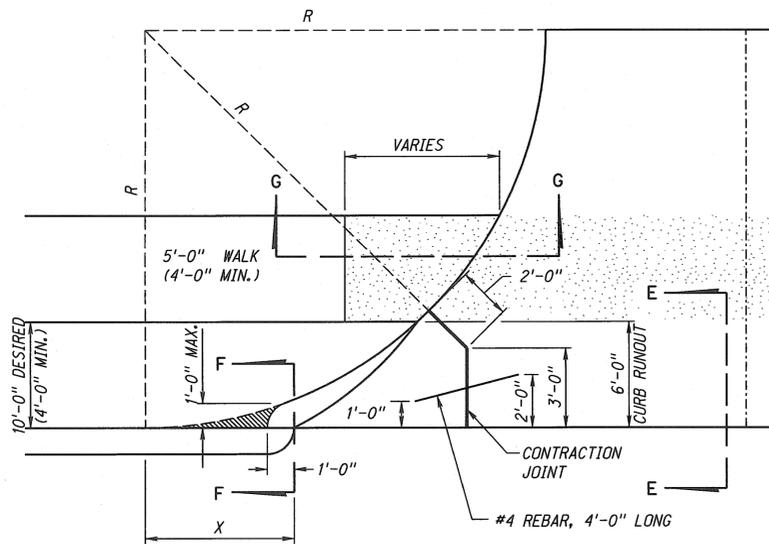
DETAILS OF CURB DROPS



SECTION E-E



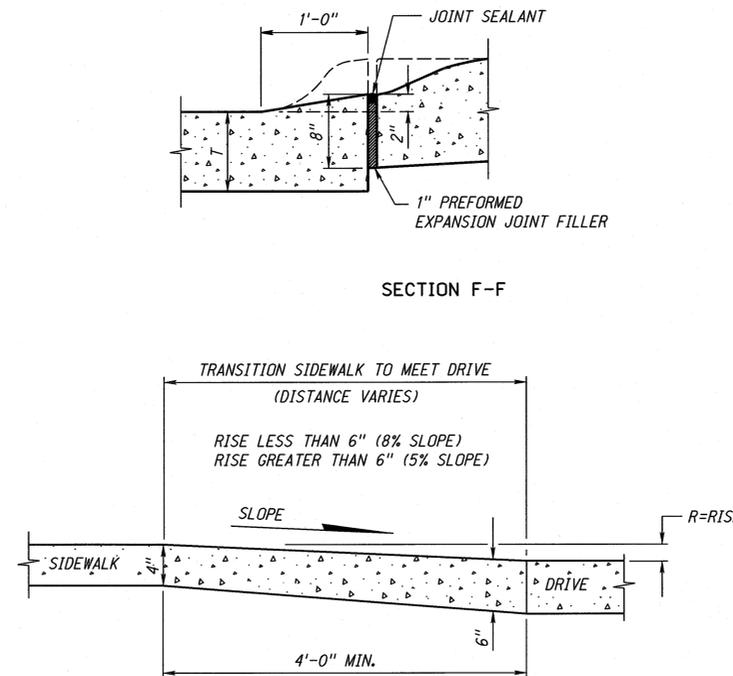
(RURAL DRIVEWAY)



URBAN DRIVEWAY PLAN

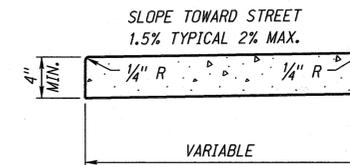
R	X
5'-0"	3.00'
10'-0"	4.36'
15'-0"	5.38'
20'-0"	6.24'
25'-0"	7.00'
30'-0"	7.68'
35'-0"	8.31'
40'-0"	8.89'

R = RADIUS
X = $\sqrt{(2R-1)}$
(X & R IN FEET)

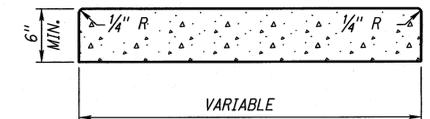


SECTION F-F

SECTION G-G



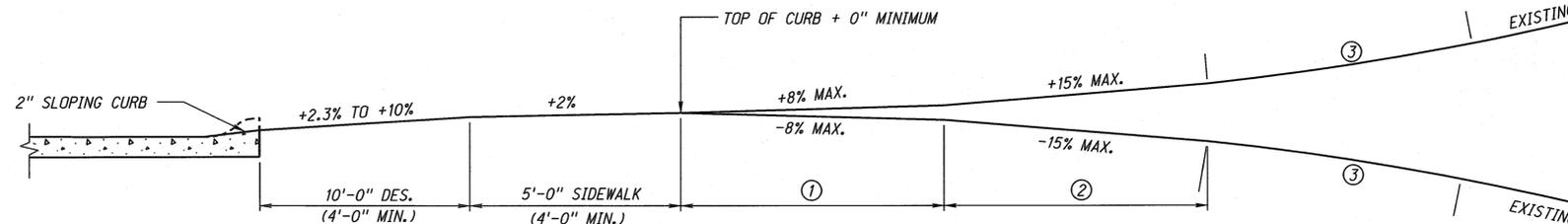
SIDEWALK



SIDEWALK AT DRIVEWAY

NOTE:

1" PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN ALL SIDEWALKS OR CROSSWALKS AT INTERVALS OF NOT MORE THAN 50'-0", AND AT ALL POINTS WHERE SIDEWALKS OR CROSSWALKS ARE ADJACENT TO CURB. IF SIDEWALK OR CROSSWALK TO BE CONSTRUCTED IS LESS THAN 50'-0" IN LENGTH, ONE SUCH EXPANSION JOINT SHALL BE PLACED AS DIRECTED BY THE ENGINEER.



PROFILE URBAN DRIVEWAY WITH SIDEWALK (MAXIMUM PERCENT OF GRADE)

- ① 10'-0" MINIMUM IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±8%
- ② 10'-0" MINIMUM IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±15%
- ③ 10'-0" MINIMUM ROUNDING IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±22%

NOTE: T = PAVEMENT THICKNESS

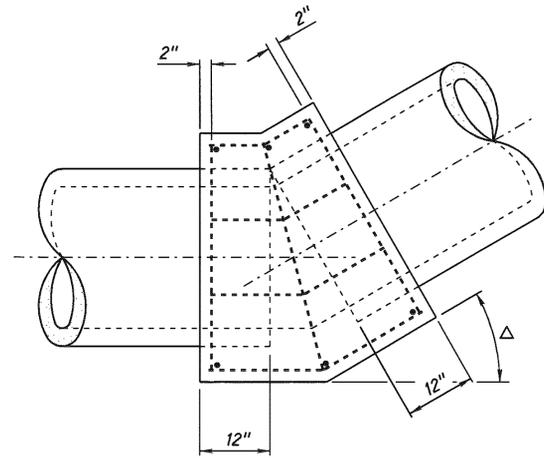
REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS
R9	MAR 05	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 301-R11
PAVEMENT DETAILS

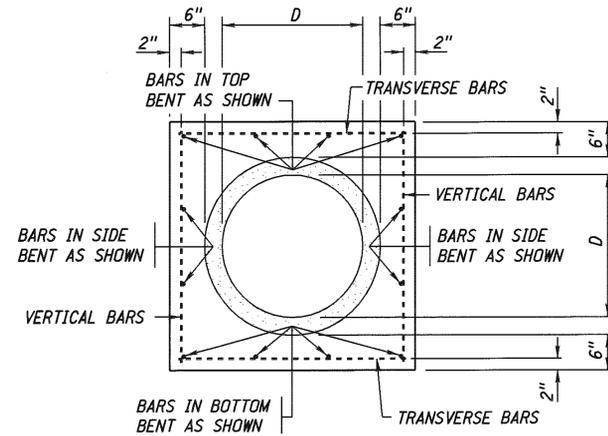
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:



Signature: Howard A. Schwartz
DATE: 4/6/15
ORIGINAL: JANUARY 31, 1974
DATE:

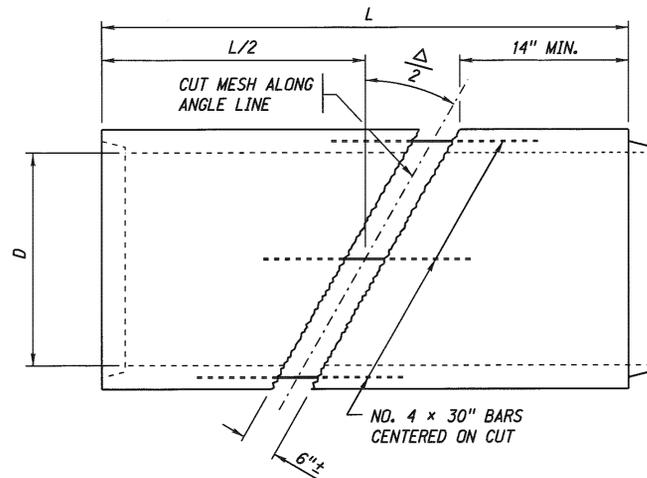


SIDE ELEVATION

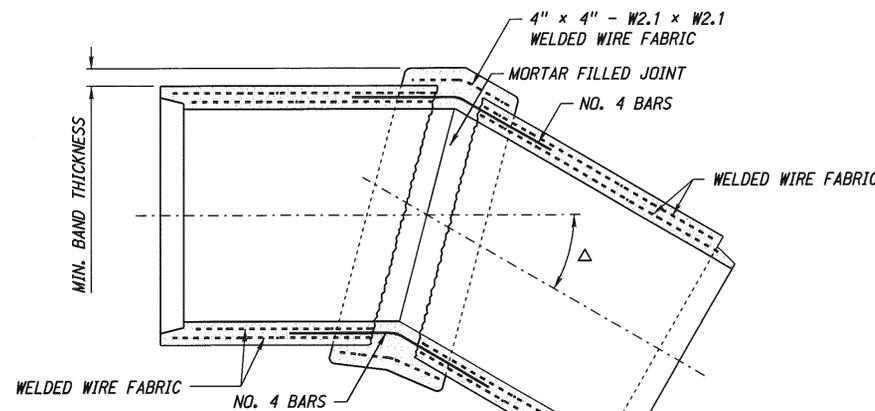


END ELEVATION

DETAILS OF COLLARS

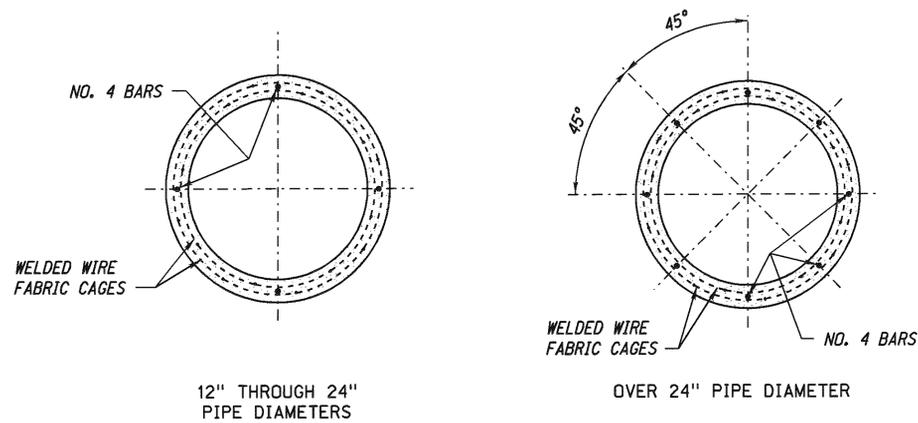


CUTTING DETAIL



BENDING DETAIL

DETAILS OF CONCRETE ELBOWS



BAR LOCATION DETAILS

DATA FOR PRECAST ELBOWS			
SIZE OF PIPE D"	MINIMUM BAND THICKNESS	Δ MAXIMUM	
		L=6'	L=7 1/2'
12"	1"	90°	90°
15"	1"	90°	90°
18"	1"	90°	90°
21"	1"	90°	90°
24"	1 1/8"	90°	90°
27"	1 1/8"	90°	90°
30"	1 1/4"	90°	90°
36"	1 3/8"	81°	90°
42"	1 1/2"	73°	90°
48"	1 3/4"	66°	88°
54"	2"	60°	81°
60"	2"	55°	75°

SCHEDULE OF BARS FOR COLLAR					
SIZE OF PIPE D"	BAR SIZE	NUMBER OF BARS			
		TRANS-VERT	TOP	ONE SIDE	BOTTOM
12"	NO. 4	12	4	2	4
15"	NO. 4	12	4	2	4
18"	NO. 4	12	4	2	4
21"	NO. 4	12	4	2	4
24"	NO. 4	12	4	2	4
27"	NO. 4	12	4	2	5
30"	NO. 4	12	4	2	5
36"	NO. 4	12	4	2	5
42"	NO. 4	12	5	3	6
48"	NO. 4	12	5	3	6
54"	NO. 4	12	5	3	6
60"	NO. 4	12	5	3	6

DATA FOR COLLARS			
SIZE OF PIPE D"	Δ	CONCRETE (CU. YDS.)	REINF. STEEL (LBS.)
12"	0°	0.30	32
	15°	0.33	33
	30°	0.36	36
	45°	0.39	37
15"	0°	0.36	35
	15°	0.40	36
	30°	0.43	38
	45°	0.47	40
18"	0°	0.42	38
	15°	0.49	41
	30°	0.56	44
	45°	0.64	46
21"	0°	0.47	40
	15°	0.55	42
	30°	0.64	46
	45°	0.74	48
24"	0°	0.53	43
	15°	0.63	45
	30°	0.74	49
	45°	0.86	51
27"	0°	0.57	45
	15°	0.70	48
	30°	0.84	52
	45°	0.99	55
30"	0°	0.63	49
	15°	0.79	53
	30°	0.96	57
	45°	1.14	61
36"	0°	0.77	53
	15°	1.01	58
	30°	1.26	63
	45°	1.53	68
42"	0°	0.96	65
	15°	1.32	72
	30°	1.69	80
	45°	2.09	91
48"	0°	1.16	68
	15°	1.66	77
	30°	2.19	86
	45°	2.75	95
54"	0°	1.34	75
	15°	2.01	84
	30°	2.70	95
	45°	3.44	106
60"	0°	1.54	77
	15°	2.39	89
	30°	3.28	100
	45°	4.23	113

NOTES:

THE DIMENSIONS FOR CONCRETE PIPE SHOWN ON THIS PLAN ARE FOR CLASS III REINFORCED CONCRETE PIPE, AASHTO DESIGNATION M170, WALL "B".

ALL QUANTITIES ARE BASED ON DIMENSIONS SHOWN ON THIS PLAN. NO ADJUSTMENTS WILL BE MADE IN THESE QUANTITIES IF OTHER STRENGTH STANDARD PIPE IS FURNISHED IN ACCORDANCE WITH THE SPECIFICATIONS OR IF COLLARS ARE USED ON PIPE OTHER THAN CONCRETE.

WHEN A CONCRETE COLLAR, CONNECTING EXISTING AND NEW CONCRETE PIPE, IS CONSTRUCTED WITH A BEND, IT SHALL BE CONSIDERED AS A COLLAR NOT AN ELBOW.

ALL REINFORCING STEEL USED SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM DESIGNATIONS A615/A615M, GRADE 60. ALL BAR DESIGNATIONS ARE IN CUSTOMARY U.S. UNITS.

ALL CONCRETE USED SHALL BE CLASS 47B-3000.

FOR A SINGLE LINE OF REINFORCING WIRE MESH, TIE REINFORCING BARS ON THE OUTSIDE OF THE CAGE.

FOR A DOUBLE LINE OF REINFORCING WIRE MESH, TIE REINFORCING WIRE MESH ON THE INSIDE OF THE OUTSIDE CAGE.

REINFORCING BARS SHALL BE LAPPED WHERE THE BEND IS MADE.

REINFORCING WIRE MESH SHALL BE LAPPED AND TIED WHERE THE BEND IS MADE.

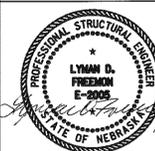
WELDED WIRE FABRIC OR EQUAL SHALL BE LAPPED 12" AT SPLICES.

THE ORIENTATION OF THE PIPE SHALL BE MARKED WHEN CASTING TO ASSURE ADEQUATE REINFORCING BAR EMBEDMENT AND PROPER ALIGNMENT WHEN CUTTING AND ROTATING.

ALL PIPE DIMENSIONS SHOWN ARE NOMINAL.

R4	JAN 07	REMOVED REFERENCE TO CONC. AX-3000
R3	AUG 99	COMPUTER FILE/CHANGES
R2	AUG 82	REVISED ELBOW CONSTRUCTION
REV. NO.	DATE	DESCRIPTION OF REVISION

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 425-R4
**COLLARS AND ELBOWS
FOR CONCRETE PIPE**



APPROVED:
FEBRUARY 22, 1974
DATE

