

[illegible]

GRATE 4351-D
APPROX. 285 POUNDS
OPEN AREA

GRATE 4410-D
APPROX. 177 POUNDS
OPEN AREA

GRATE 4351-D
APPROX. 285 POUNDS
OPEN AREA

GRATE 4410-D
APPROX. 177 POUNDS
OPEN AREA

GRATE SECTION A-A

GRATE SECTION A-A

FRAME SECTION A-A

FRAME SECTION A-A

NOTES:

1. ASTM A82 CLASS 300
2. ALL BEARING SURFACES TO BE MACHINED

NOTES:

1. ASTM A82 CLASS 300
2. ALL BEARING SURFACES TO BE MACHINED

NOTES:

1. ASTM A82 CLASS 300
2. ALL BEARING SURFACES TO BE MACHINED

NOTES:

1. ASTM A82 CLASS 300
2. ALL BEARING SURFACES TO BE MACHINED

NOTES:

1. ALL CONCRETE TO BE A MINIMUM OF 4500 PSI B 26 285.
2. MANUFACTURED IN ACCORDANCE WITH ASTM C-478 AND INDOT SPEC. 507.04.
3. MANHOLE JOINTS TO BE TONGUE AND GROOVE WITH RUBBY RUBBER SEALANT OR ORING PER ASTM C-443.
4. LETTING HOLES REQUIRE PLUGGING BEFORE TESTING.
5. PIPE CONNECTIONS AVAILABLE ARE FSK BOOTS, A-LOCK OR NON-SHRINK GROUT BY CONTRACTOR.
6. PRE-POURED INVERTS ARE AVAILABLE ON REQUEST.
7. ALL REINFORCING STEEL MEETS OR EXCEEDS ASTM C-478.
8. BASE SECTION COMES STANDARD WITH 6" MINIMUM BASE, SLOPED BASE AND FLAT TOP IS AVAILABLE ON REQUEST. BASE SECTION IS TO BE SET PER JOINT SPECIFICATIONS.
9. CONTRACTOR SHALL POUR SLOPED CONCRETE BOTTOM TO ALLOW ADEQUATE GRADAGE IN INLET.
10. THE CASTING TO BE USED WITH THIS INLET SHALL BE A 2'X2' CURB AND GUTTER OR A 2'X2' ALLEY OR OTHER PRE-APPROVED CASTING AS NOTED ON THE PROJECT DETAIL SHEETS.)

SECTION A-A

SECTION B-B

4" DENSE GRADED AGGREGATE BASE #53
115# PER S.Y. PER INCH OF DEPTH

SUBGRADE COMPACTED TO 95%
ASHSTO T-99, MAX. DRY DENSITY

CONCRETE WALK & BIKE RACK DETAIL

not to scale

6" CONCRETE SLAB
W#6 @ #8 WELDED WIRE FABRIC
4500 PSI CONCRETE 1% AIR-ENTRAINMENT AND 4" MAX. SLUMP

6" DENSE GRADED AGGREGATE BASE #53
115# PER S.Y. PER INCH OF DEPTH

SUBGRADE COMPACTED TO 95%
ASHSTO T-99, MAX. DRY DENSITY

CONCRETE PAVING DETAIL

not to scale

1" 8.5 mm SURFACE TYPE A or B

12.5" 12.5 mm INTERMEDIATE TYPE A or B

3" COMPACTED #53 STONE

6" COMPACTED #1 or #2 STONE
CHOKED w/#53

SUBGRADE COMPACTED TO 95%
ASHSTO T-99 DRY DENSITY

**STANDARD ASPHALT
PAVING DETAIL**

not to scale

Technical drawings of a pipe-to-plate connection. The top left shows a cross-section of a pipe with a reinforced edge and a toe plate anchor. The top right shows a plan view of the connection. The bottom left shows a side view of the connection with a skirt lip. The bottom right is a table of dimensions for different pipe sizes and end section thicknesses.

PIPE DIA. | **END SECTION THICK. (IN.)** | **DIMENSIONS** | **APPROX. SLOPE** | **BODY**

PIPE DIA.	END SECTION THICK. (IN.)	DIMENSIONS					APPROX. SLOPE	BODY
		A ($\frac{1}{4}$ ")	B (MAX.)	H ($\frac{1}{4}$ ")	L ($\frac{1}{2}$ ")	V ($\frac{1}{2}$ ")		
12	0.064	6	6	6	21	24	2 1/2 : 1	1 Pc.
15	0.064	7	8	8	26	30	2 1/2 : 1	1 Pc.
18	0.064	8	10	6	31	36	2 1/2 : 1	1 Pc.
21	0.064	9	12	6	36	42	2 1/2 : 1	1 Pc.
24	0.064	10	13	6	41	48	2 1/2 : 1	1 Pc.
30	0.079	12	16	8	51	60	2 1/2 : 1	1 Pc.
36	0.079	14	19	9	60	72	2 1/2 : 1	2 Pc.

NOTES:

- TOE PLATE ANCHOR = 0.38 INCH THICK.
- CONNECTION BOLT 3/8 INCH DIAMETER GALVANIZED.
- SPACE TOE PLATE AND SKIRT LIP CONNECTION BOLT 1/2 INCH CENTER TO CENTER MAX.

NOTE: ALL FABRIC TO BE NON-WOVEN AND TO ALLOW WATER FLOW RATE OF 220 GAL/MIN/SF

6" PERFORATED TILE W/ SOCK

18"

4"

6"

4"

6"

2"

FILTER FABRIC

PEA GRAVEL

INFILTRATION TRENCH DETAIL

NOT TO SCALE

30" OUTFALL STRUCTURE
SEE DETAIL
RIM=872.10

TOP OF BANK
ELEV=874.00

3

1

DRY DETENTION BASIN

INFILTRATION TRENCH

31 LF OF 18" RCP
@ 0.48% slope

INV=868.85

INV=866.75

STORM POND OUTLET DETAIL

NOT TO SCALE

TYPE B
RECESSED
POCKET TYPE

2" HIGH
RAISED FLUSH
TOP LETTERS

10" DIA. ANCHOR
HOLES ON 20" DIA.
WOLT CIRCLE

(2) CONCEALED
POCKETS ON
PER NIP-RODA A

(2) 1" DIA. HOLES ON
30" DIA. BOLT CIRCLE

1" SEAL GROOVE IN UD SEAT
FOR CLIP RESISTANT T-GASKET
NITRILE (60 DU) JORD. 02787

POCKET & DETAIL

ANCHOR HOLE DETAIL

NOTES:

- ASTM A48-83 CLASS NO. 35
- ALL BEARING SURFACES TO BE MACHINED

FRAME AND SLOID
NIPEN R-1772 W/SANITARY LETTERED
UD SLOID (SANITARY APPLICATION ONLY)

12" I.D. UD
PLANS 302" CASSET

22 3/4"

1" SEAL
UD SECTION A-A

1" 5/8"

24 1/4"

23"

21"

34"

FRAME SECTION A-A

TYPE A
ANCHOR
HOLE TYPE

(2) CLOSED
POCKETS

1" 1/2" LETTERING
(RECESSED 1/8")

1" MACH GROOVE IN UD SEAT
FOR 1 1/4" DIA. NEOPRENE
CONTINUOUS GASKET

POCKET & DETAIL

NOTES:

- ASTM A48-83 CLASS NO. 35
- ALL BEARING SURFACES TO BE MACHINED

FRAME AND SLOID
EAST JORDAN 102221 W/102240HDS
SANITARY SEWER LETTERED, SLOID UD
(SANITARY APPLICATION ONLY)

22 3/4"

1" 5/8"

24 1/4"

23"

54"

FRAME SECTION A-A

ALTERNATE SLAB TOP

CASTING TOLERANCE
± 1/4"

6" MIN.

48" DIA.

4" MIN.

TWO ROWS OF NOMINAL 10Z BUTYL RUBBER BASE EXTRUDABLE PREFORMED GASKET MATERIAL (SEE NOTE #4)

TROWELABLE BUTYL RUBBER BACKLASTER MATERIAL 1/4" THICK SET NOTE #6

RUBBER SEAL SET NOTE #6

RUBBER O-RING PER ASTM C-443

MANHOLE JOINT INSET

ECCENTRIC COUL SECTION

24" ± 22" TO 30" DEEP

24" ± 2" THRU LAB.

24" ± 2" THRU LAB.

6" MIN.

48" DIA.

4" MIN.

6" MONOLITHIC PRECAST BASE

ALTERNATE SEPARATE BASE

SEE SANITARY CASTING ALUMINUM DETAIL FOR REQUIREMENTS

MANHOLE JOINT (SEE INSET)

LIFT HOLES SHALL NOT PENETRATE COMPLETELY THROUGH STRUCTURE WALL PLUS LIFT HOLES AFTER SETTING

4" THICK WALL MINIMUM

SECT CONNECTION DETAILS FOR REQUIREMENTS

USE PRECAST OR POURED CHANNEL SHAPES AND PRECAST OR POURED CHANNEL CURVES IF FOR CHANNEL REQUIREMENTS

REINFORCING STEEL PER ASTM SPECIFICATION #75 LATEST VERSION

NOTES:

- 1) FOR ALTERNATE CAST-IN PLACE BASE: SEE CAST-IN PLACE BASE 54-96 DETAIL
- 2) THE BASE SHALL BE PLACED ON COMPACTED FRACTURED FACE STONE, IF MINIMUM THE INSIDE WALL DISTANCE BETWEEN OPENINGS SHALL BE A MINIMUM OF 6"
- 3) THE INSIDE RADIUS OF AS MANUFACTURED SHALL BE 1/8" AND 2" AS MANUFACTURED BY HAMILTON CORP OR EZ-STOK BUTYL RUBBER BASED PREFORMED FLEXIBLE SEAL AS MANUFACTURED BY PRESS-SEALED
- 4) APPLY TROWELABLE BUTYL RUBBER BACK PLASTER MATERIAL 1/4" THICK (WHEN DRY) FROM ABOVE TO 6" BELOW JOINTS; USE TROWELABLE EZ-STOK® AS MANUFACTURED BY PRESS-SEALED GASKET CORP. EXTERNAL MANHOLE BUTYL SEAL CONSIST OF TWO ROWS OF BUTYL RUBBER GASKETS

The image contains three technical drawings of a fence system:

- FENCE SECTION VIEW:** A cross-section of the fence showing a 17x4" treated or vinyl post at the top, a 4" x 1600 lb concrete U-bolt with chain, and a 7 1/2" treated or vinyl rail. The bottom is a concrete filled (typical) base. Dimensions include 2'-0" for the post height, 2'-0" for the rail height, and 2'-0" for the base height.
- FENCE ELEVATION:** A side view of the fence showing a 17x4" treated or vinyl post at the top, a 4" x 1600 lb concrete U-bolt with chain, and a 7 1/2" treated or vinyl rail. The bottom is a concrete filled (typical) base. Dimensions include 2'-0" for the post height, 2'-0" for the rail height, and 2'-0" for the base height.
- PLAN VIEW:** A top-down view of the fence showing the layout of the rails and posts. It includes dimensions for the rails (17' x 4" treated or vinyl rail) and the posts (17x4" treated or vinyl post). It also shows the 4" x 1600 lb concrete U-bolt with chain and the 7 1/2" treated or vinyl rail. The plan view includes a note: "SEE PLAN SHEETS FOR DIMENSIONS".

Technical drawing of a continuous pour pin-on concrete curb. The drawing shows a cross-section of the curb with various layers: a 6" thick surface course, a binder course, an aggregate course, and a compacted subgrade. A 7" MIN. thickness is indicated for the curb itself. The curb is reinforced with #4 rebar. A detail view on the left shows the curb's profile with dimensions 10, 50, and 20, and a note "SEE PLAN SHEETS FOR DIMENSIONS". A signature "Aaron J. Cal..." is written across the bottom. A circular professional seal for Aaron J. Cal... is also present, showing "REGISTERED No. 11400759 STATE OF INDIANA".

Date:	No.	Remarks	By:
05/17/22	1	Revisions per City/Banning Comments	JMS
05/23/22	2	Revised Sanitary & Water	JMS
06/03/22	3	Revised Signs & Spot Grades per INDOT	JMS
07/07/22	4	Revised per Starbucks Comments	JMS
07/26/22	5	Revised Trail & Sidewalk Grading	JMS
08/12/22	6	Revised Sanitary Plan & Details	JMS
12/12/22	7	Site Layout Revision	JMS