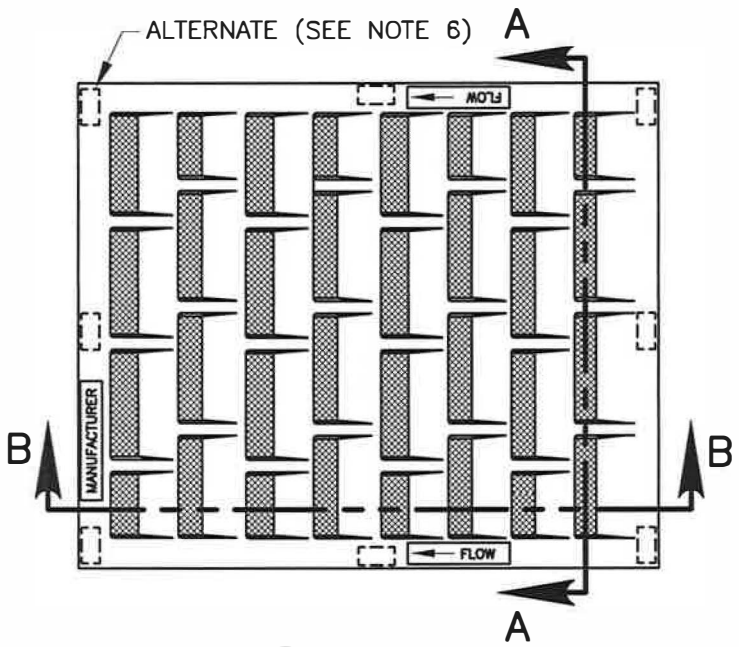
TABLE OF CONTENTS

CITY OF SPOKANE STANDARD PLANS – SECTION B

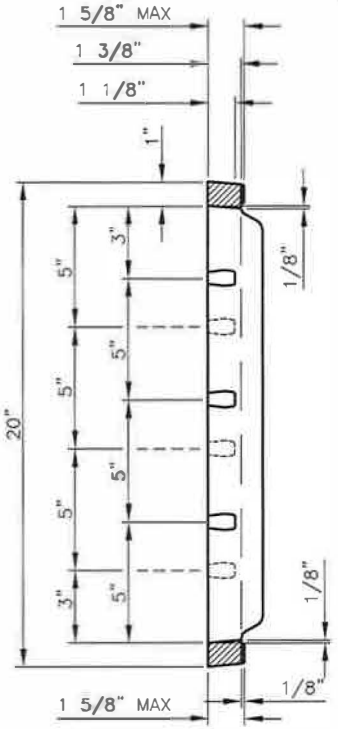
X-### = Revised Standard Plan
***X-### = New Standard Plan

Back to Main TOC

Back to Section B - TOC



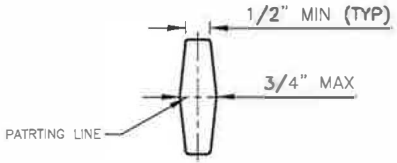
TOP VIEW



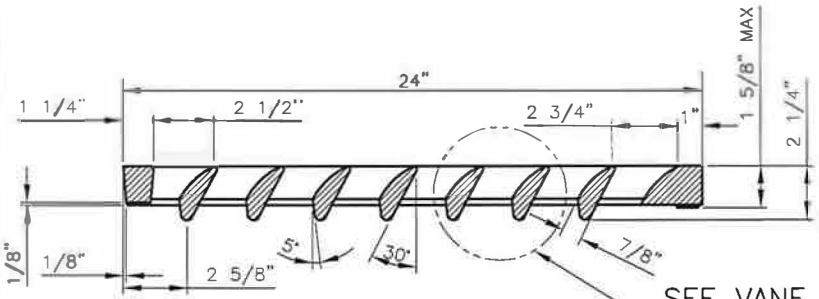
SECTION A–A

NOTES:

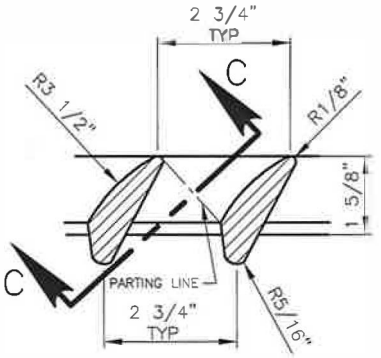
1. THE NAME OF THE MANUFACTURER SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
2. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48–90, GRADE 30. THE GRATE SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536–84 GRADE 80–55–06.
3. DIMENSIONS SHALL HAVE ±1/16" TOLERANCE, EXCEPT AS NOTED.
4. EDGES SHALL HAVE 1/8" RADIUS, 1/8" CHAMFER OR COMPLETE DEBURRING.
5. WELDING IS NOT PERMITTED.
6. AS AN ALTERNATE, EIGHT PADS 1 1/2" x 3/4" x 1/8", INTEGRALLY CAST WITH THE GRATE MAY BE USED.
7. WHEREVER PRACTICAL & FEASIBLE, USE GRATE SHOWN ON THIS SHEET IN CONTINUOUS GRADE CONDITIONS.



SECTION C–C



SECTION B–B



VANE DETAIL

APPROVED BY

Elden Brown For SCOTT D. EGGER, P.E.
ACTING DIRECTOR, ENGINEERING SERVICES

PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.

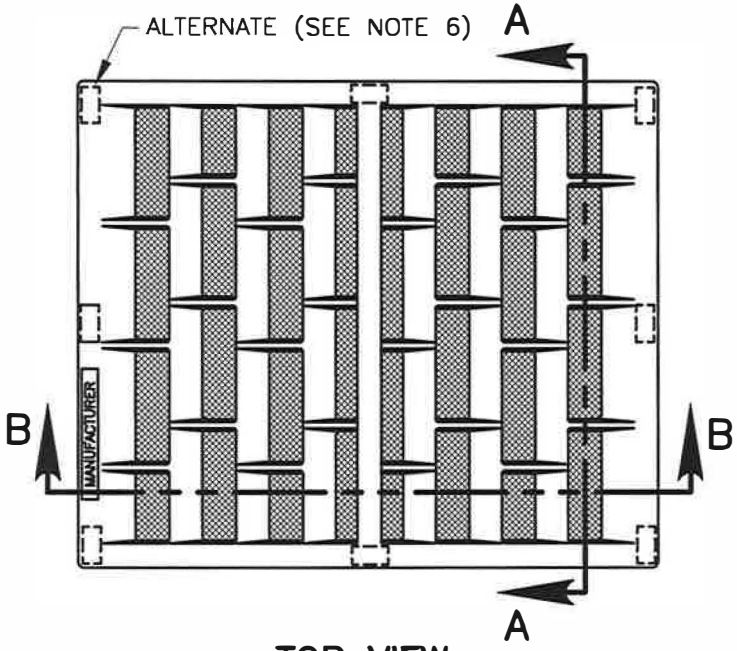
ADOPTED: 05/2007
REVISED:
SUPERSEDES:
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: PCF

DIRECTIONAL VANED GRATE

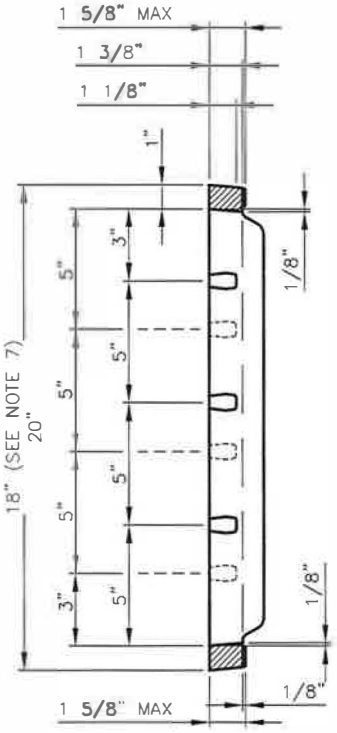
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B–2A

Back to Section B - TOC



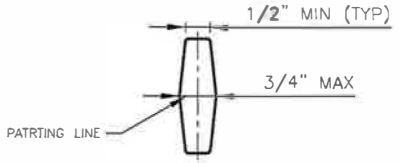
TOP VIEW



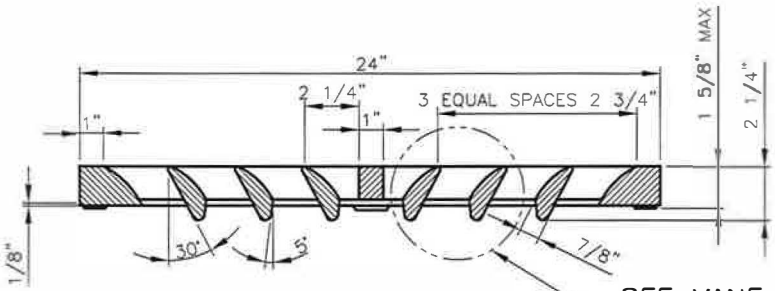
SECTION A–A

NOTES:

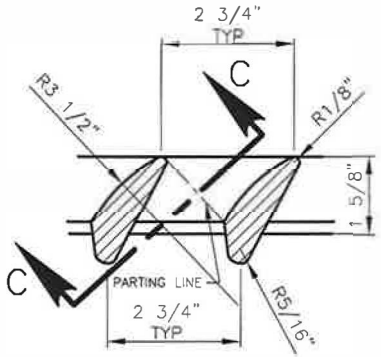
1. THE NAME OF THE MANUFACTURER SHALL BE EMBOSSED ON THE TOP SURFACE OF EACH GRATE. LETTERING TO BE RECESSED 1/16".
2. FRAME SHALL BE GRAY IRON CONFORMING TO A.S.T.M. A48–90, GRADE 30. THE GRATE SHALL BE DUCTILE IRON CONFORMING TO A.S.T.M. A536–84 GRADE 80–55–06.
3. DIMENSIONS SHALL HAVE ±1/16" TOLERANCE, EXCEPT AS NOTED.
4. EDGES SHALL HAVE 1/8" RADIUS, 1/8" CHAMFER OR COMPLETE DEBURRING.
5. WELDING IS NOT PERMITTED.
6. AS AN ALTERNATE, EIGHT PADS 1 1/2" x 3/4" x 1/8", INTEGRALLY CAST WITH THE GRATE MAY BE USED.
7. DIMENSION FOR THE GRATE ASSOCIATED WITH CATCH BASIN TYPE 3. OTHER DIMENSIONS, THE NUMBER & POSITION OF THE VANES WILL ALSO VARY.
8. WHEREVER PRACTICAL & FEASIBLE, USE GRATE SHOWN ON THIS SHEET IN SUMP CONDITIONS.



SECTION C–C



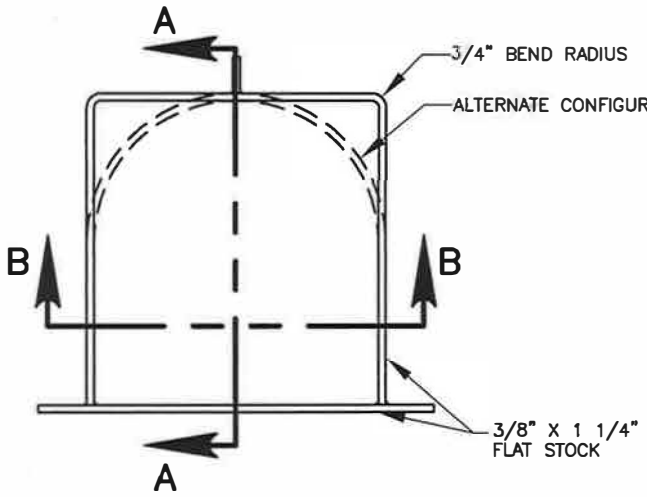
SECTION B–B

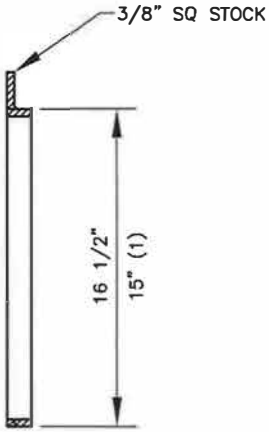


VANE DETAIL

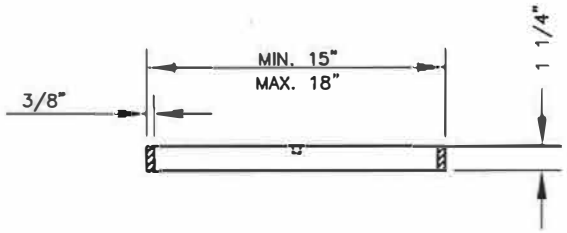
APPROVED BY		BI–DIRECTIONAL VANED GRATE	
Elden Brown for SCOTT D. EGGER, P.E. ACTING DIRECTOR, ENGINEERING SERVICES	ADOPTED: 05/2007 REVISED: SUPERSEDES: CHECKED BY: JAG SCALE: NTS DWG/REV. BY: PCF	ENGINEERING SERVICES CITY OF SPOKANE, WASHINGTON	STANDARD PLAN No. B–2B
PRINCIPAL ENGINEER, DESIGN GARY S. NELSON, P.E.			

Back to Section B - TOC

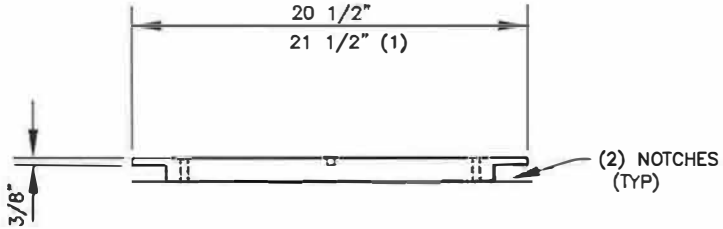




SECTION A–A



SECTION B–B



END VIEW

(1) DIMENSION FOR FRAME ASSOCIATED WITH CATCH BASIN TYPE 3

APPROVED BY

DIRECTOR, ENGINEERING SERVICES — TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN — GARY S. NELSON, P.E.

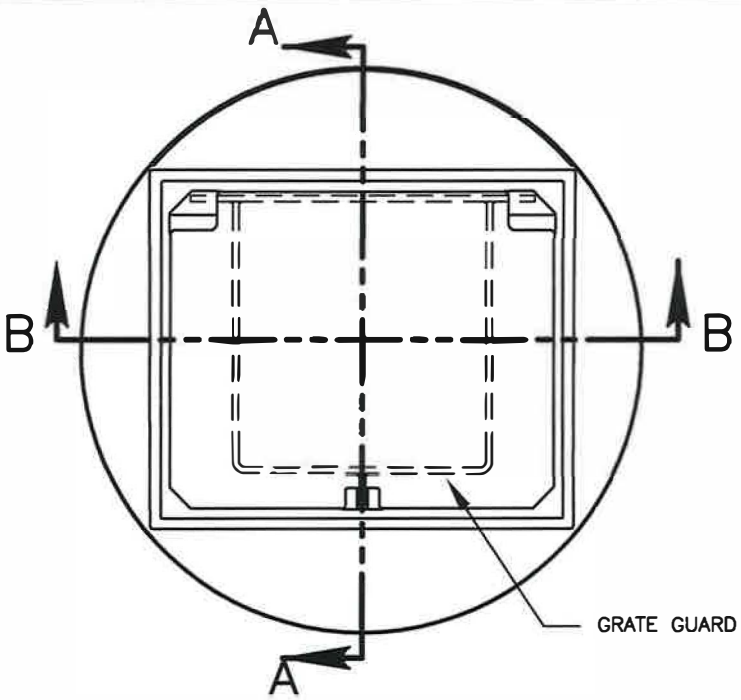
ADOPTED: 05/2007
REVISED:
SUPERSEDES:
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: PCF/RDC

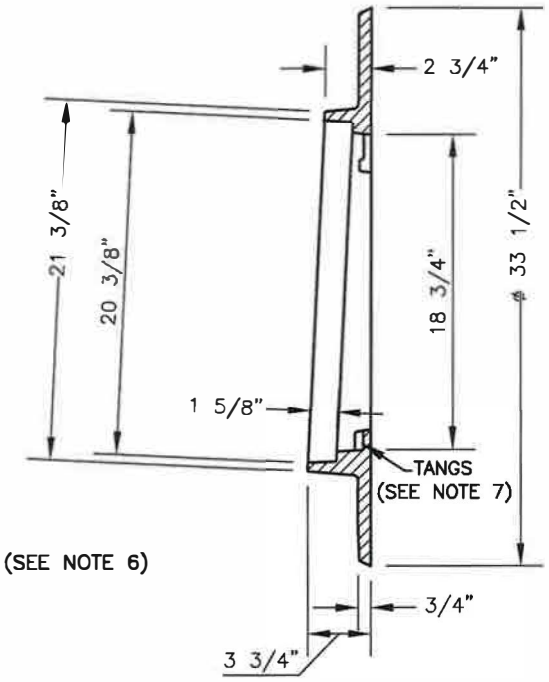
GRATE GUARD

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

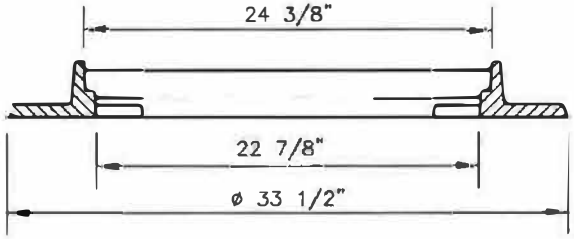
STANDARD PLAN No. B–2C

Back to Section B - TOC





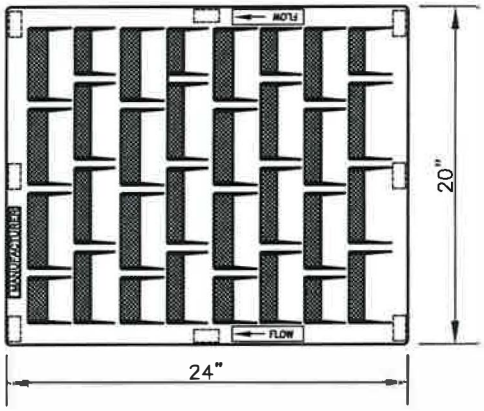
SECTION A–A



SECTION B–B

NOTES:

1. SEE SECTIONS 9–05.15(1) AND 9–05.15(2)
2. FRAME: GRAY IRON CASTING, SEE SECTION 9–06.9.
3. GRATE: DUCTILE IRON CASTING, SEE SECTION 9–06.14.
4. FOUNDRY NAME, DATE, HEAT NUMBER AND MATERIAL IN RAISED LETTERS ON INTERIOR OF EACH CASTING.
5. TOLERANCES ± 0.0625".
6. GRATE GUARD REQ'D. SEE CITY STD PLAN B–2C.
7. CONTINUOUS LIP ON BOTTOM OF TANGS TO REST GRATE GUARD TAB ON.
8. WHEREVER PRACTICAL & FEASIBLE, USE FRAME & GRATE W/HOOD SHOWN ON THIS SHEET IN SUMP CONDITIONS.



DIRECTIONAL VANED GRATE
SEE CITY STANDARD PLAN B–2A

APPROVED BY:

DIRECTOR, ENGINEERING SERVICES PERRY M. TAYLOR, P.E.

PRINCIPAL ENGINEER, CONST. KENNETH M. BROWN, P.E.

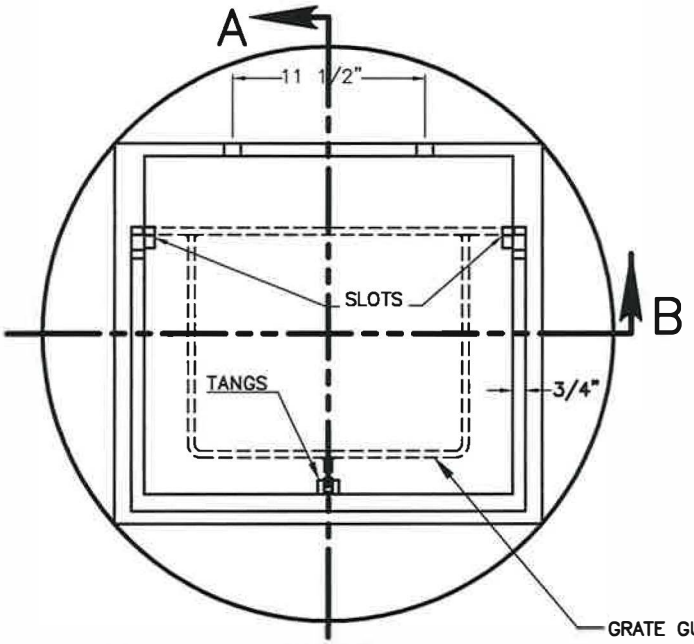
ADOPTED: 05/2007
REVISED: 04/2013
SUPERSEDES: 05/2007
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: PCF/RDC

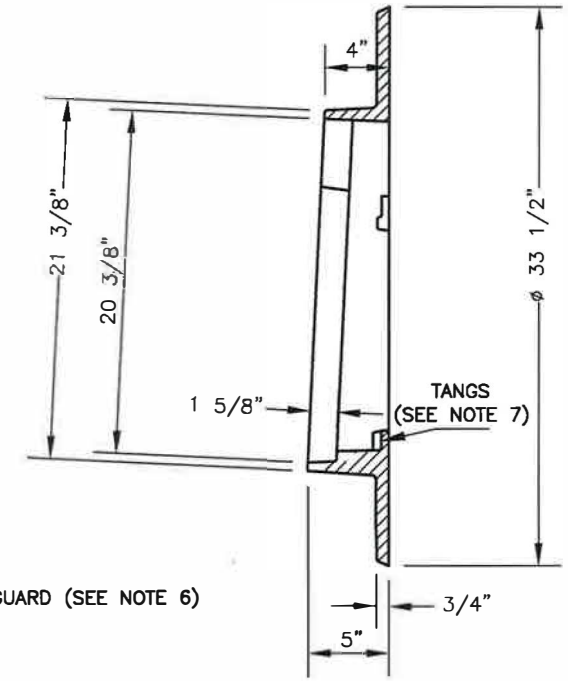
FRAME AND GRATE
FOR CATCH BASIN TYPE 1

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

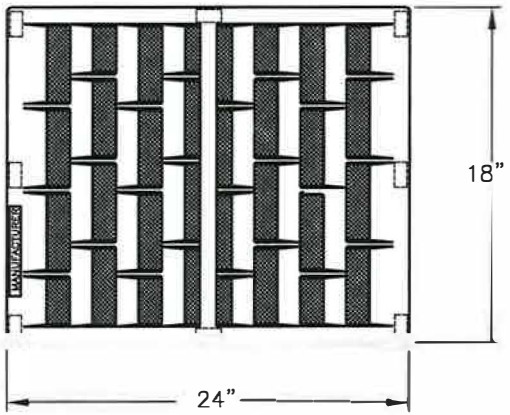
STANDARD PLAN No. B–3A

Back to Section B - TOC



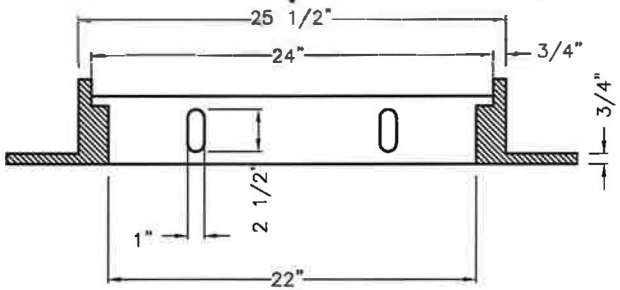


SECTION A–A

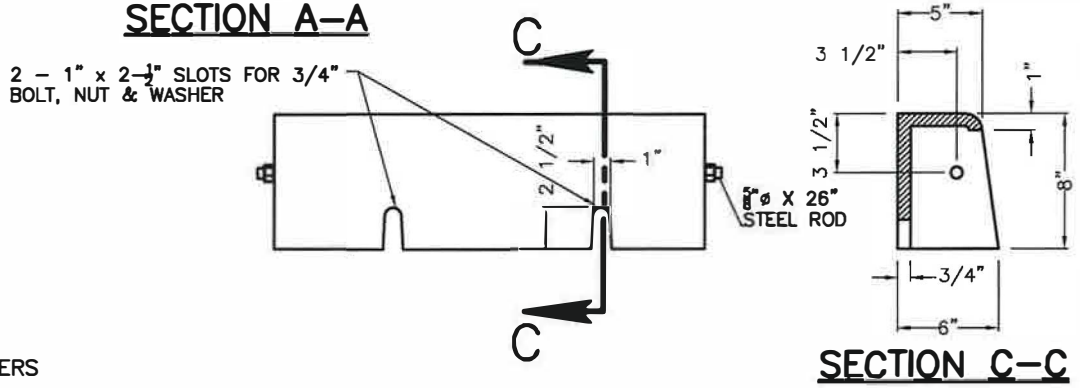


BI–DIRECTIONAL VANED GRATE

SEE CITY STANDARD PLAN B–2B



SECTION B–B



SECTION C–C

CATCH BASIN HOOD

NOTES:

1. SEE SECTIONS 9–05.15(1) AND 9–05.15(2)
2. FRAME: GRAY IRON CASTING, SEE SECTION 9–06.9.
3. GRATE: DUCTILE IRON CASTING, SEE SECTION 9–06.14.
4. FOUNDRY NAME, DATE, HEAT NUMBER AND MATERIAL IN RAISED LETTERS ON INTERIOR OF EACH CASTING.
5. TOLERANCES ± 0.0625".
6. GRATE GUARD REQ'D. SEE CITY STD PLAN B–2C.
7. CONTINUOUS LIP ON BOTTOM OF TANGS TO REST GRATE GUARD TAB ON.
8. WHEREVER PRACTICAL & FEASIBLE, USE FRAME & GRATE W/HOOD SHOWN ON THIS SHEET IN SUMP CONDITIONS.

APPROVED BY

DIRECTOR, ENGINEERING SERVICES — PERRY M. TAYLOR, P.E.

PRINCIPAL ENGINEER, CONST. — KENNETH M. BROWN, P.E.

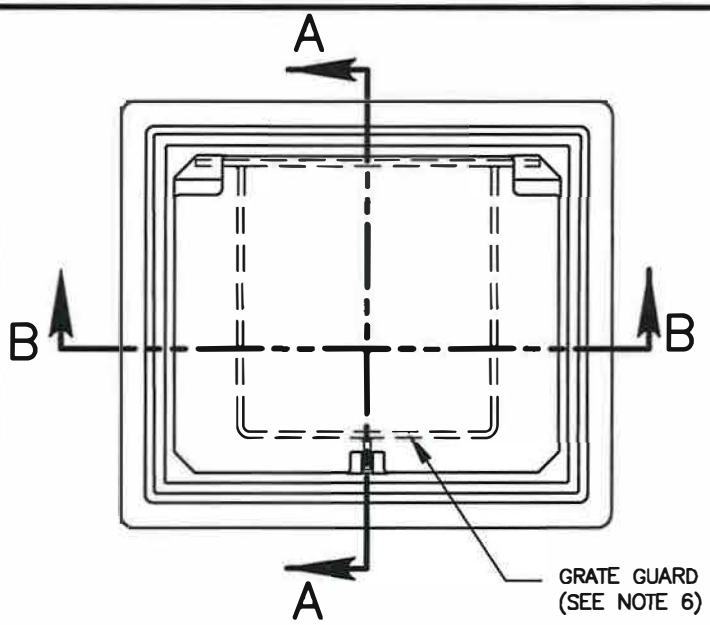
ADOPTED:	05/2007
REVISED:	04/2013
SUPERSEDES:	05/2007
CHECKED BY:	JAG
SCALE:	NTS
DWG/REV. BY:	PCF/RDC

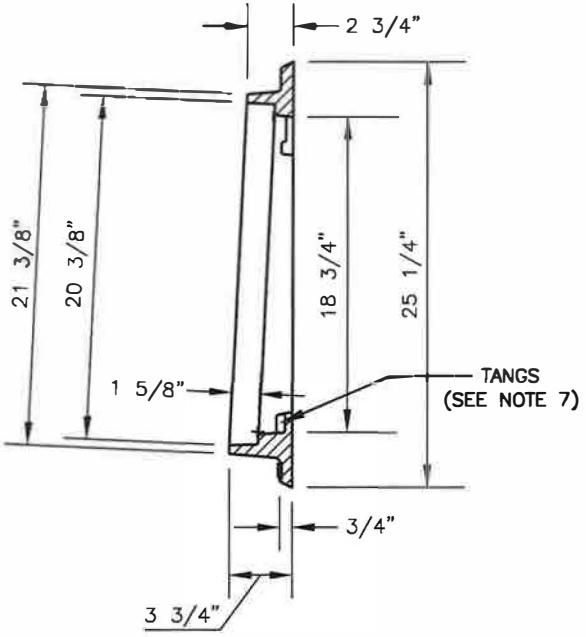
FRAME AND GRATE
FOR CATCH BASIN TYPE 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

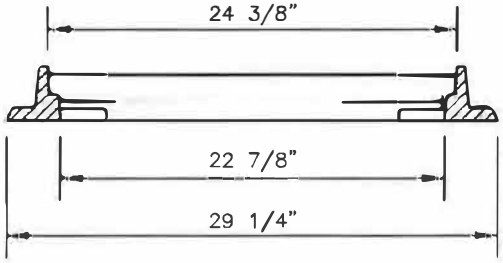
STANDARD PLAN No. B–3B

Back to Section B - TOC

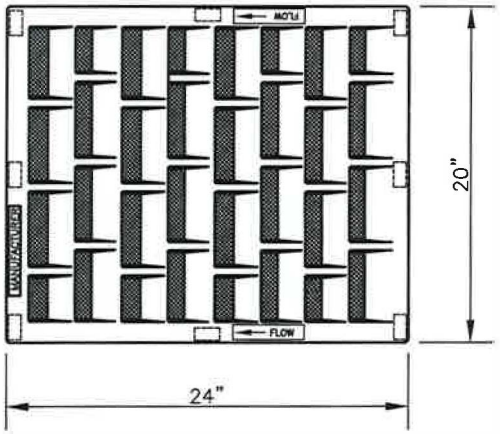




SECTION A–A

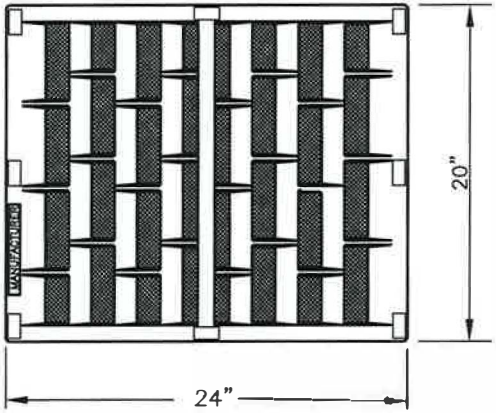


SECTION B–B



DIRECTIONAL VANED GRATE

SEE CITY STANDARD PLAN B–2A



BI–DIRECTIONAL VANED GRATE

SEE CITY STANDARD PLAN B–2B

NOTES:

1. SEE SECTIONS 9–05.15(1) AND 9–05.15(2)
2. FRAME: GRAY IRON CASTING, SEE SECTION 9–06.9.
3. GRATE: DUCTILE IRON CASTING, SEE SECTION 9–06.14.
4. FOUNDRY NAME, DATE, HEAT NUMBER AND MATERIAL IN RAISED LETTERS ON INTERIOR OF EACH CASTING.
5. TOLERANCES ± 0.0625".
6. GRATE GUARD REQ'D. SEE CITY STD PLAN B–2C.
7. CONTIUOUS LIP ON BOTTOM OF TANGS TO REST GRATE GUARD TAB ON.
8. USE DIRECTIONAL VANED GRATE (B–2A) IN CONTINUOUS GRADE CONDITIONS & BI–DIRECTIONAL VANED GRATE (B–2B) IN SUMP CONDITIONS

APPROVED BY

DIRECTOR, ENGINEERING SERVICES PERRY M. TAYLOR, P.E.

PRINCIPAL ENGINEER, CONST. KENNETH M. BROWN, P.E.

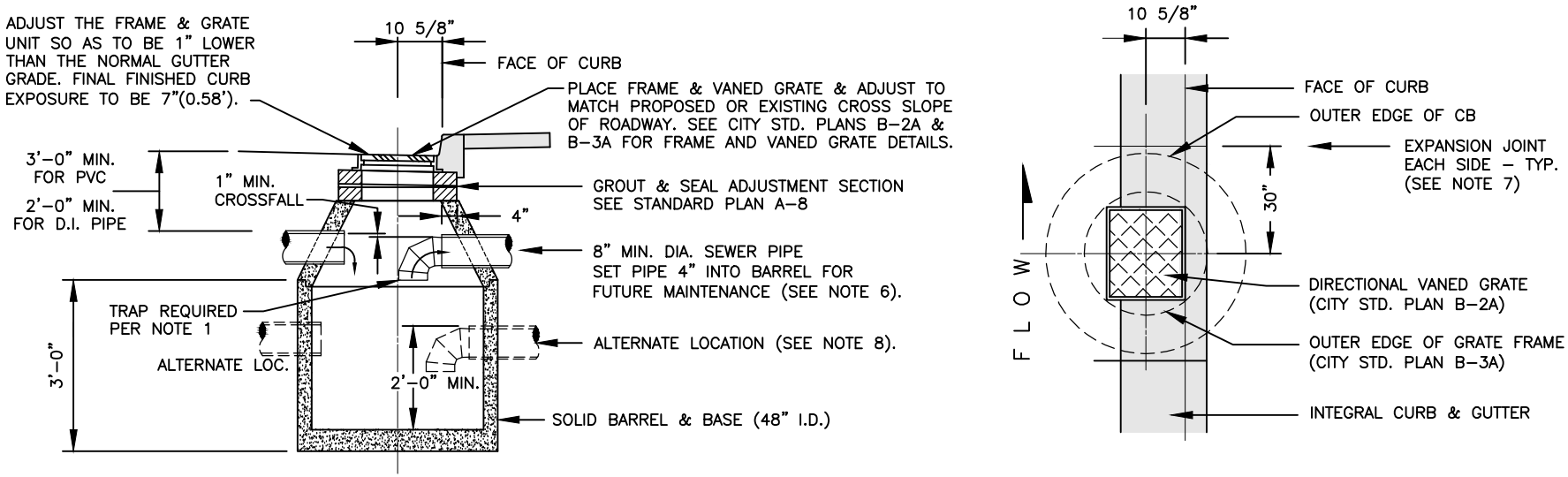
ADOPTED: 02/1986
REVISED: 04/2013
SUPERSEDES: 05/2007
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: DGB/RLB

FRAME AND GRATE
FOR INLET, TYPE 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B–3C

Back to Section B - TOC



FRAME & VANED GRATE: NORMAL INSTALLATION

FOR USE IN CONTINUOUS GRADE SITUATIONS

NOTES:

1. SEE STD. PLAN B-120 FOR OUTLET TRAP. TRAP REQUIRED WHEN CATCH BASIN CONNECTED TO CITY STORM SYSTEM, DRYWELL, ABSORPTION TRENCH, OR OTHER U/G INJECTION STRUCTURE/FACILITY. TRAP TO REMAIN REMOVABLE FOR MAINTENANCE THEREFORE NO MECHANICAL CONNECTION BETWEEN TRAP & OUTLET ALLOWED. VERTICAL PROJECTION OF TRAP NOT TO EXTEND BEYOND C/L OF ACCESS OPENING.
2. IF AN INLET PIPE IS PRESENT, THE INVERT SHALL BE HIGHER IN ELEVATION THAN THE OUTLET PIPE INVERT. A C.B. WITH AN INLET PIPE IS UTILIZED ONLY WHEN CONNECTING ADDITIONAL C.B.'s AT AN INTERSECTION OR WHEN ADDING GRATE INLET TYPE 3. A C.B. WITH INLET PIPE(S) IS NOT ALLOWED AS A SUBSTITUTE FOR A M.H.
3. SEE SEC. 9-12 FOR PRECAST CONCRETE CATCH BASINS.
4. SEE STD. PLAN Z-118 FOR BASE SLAB & FOUNDATION DETAILS.
5. CONE & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
6. ADJUSTMENT SECTION, CONE, BARREL, & PIPE OPENINGS TO BE SEALED PER SECTION 7-05.
7. CONCRETE CURB & GUTTER SHALL BE BLOCKED OUT FOR A 5-FT LENGTH CENTERED @ THE C.B. TO ALLOW FOR LOCATING CB ADJACENT TO CURB.
8. USE ALTERNATE LOCATION FOR INLET/OUTLET PIPES ONLY IF INLET PIPE REQUIRES ADDITIONAL DEPTH FOR SLOPING.
9. SEE STANDARD PLAN A-8 FOR ADJUSTMENT SECTION REQUIREMENTS.
10. A DESIGN VARIANCE IS REQUIRED BEFORE A CATCH BASIN - TYPE 0 IS INSTALLED.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

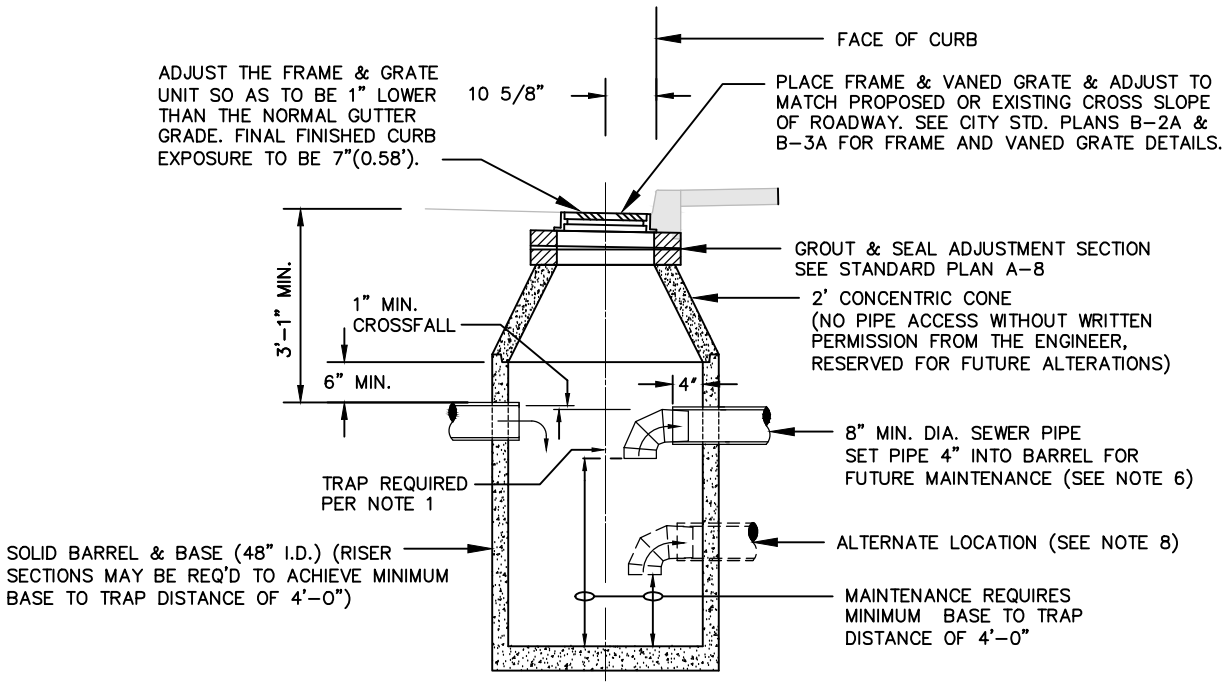
ADOPTED: _____
REVISED: 10/2019
SUPERSEDES: 01/2017
CHECKED BY: GSN
SCALE: NTS
DWG./REV BY: SRM/MLD

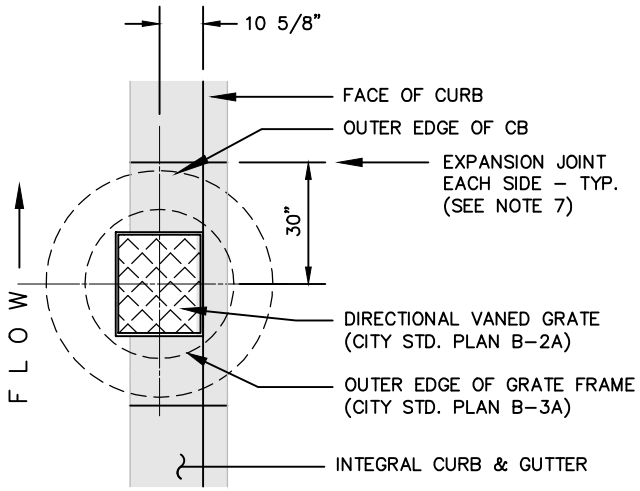
CATCH BASIN-TYPE 0

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B-101B

Back to Section B - TOC





FRAME & VANED GRATE: NORMAL INSTALLATION

FOR USE IN CONTINUOUS GRADE SITUATIONS

NOTES:

1. SEE STD. PLAN B-120 FOR OUTLET TRAP. A TRAP IS REQUIRED ON ANY OUTLET PIPE. TRAP TO REMAIN REMOVABLE FOR MAINTENANCE THEREFORE NO MECHANICAL CONNECTION BETWEEN TRAP & OUTLET ALLOWED. VERTICAL PROJECTION OF TRAP NOT TO EXTEND BEYOND C/L OF ACCESS OPENING.
2. IF AN INLET PIPE IS PRESENT, THE INVERT SHALL BE HIGHER IN ELEVATION THAN THE OUTLET PIPE INVERT. A C.B. WITH AN INLET PIPE IS UTILIZED ONLY WHEN CONNECTING ADDITIONAL C.B.'s AT AN INTERSECTION OR WHEN ADDING GRATE INLET TYPE 3. A C.B. WITH INLET PIPE(S) IS NOT ALLOWED AS A SUBSTITUTE FOR A M.H.
3. SEE SEC. 9-12 FOR PRECAST CONCRETE CATCH BASINS.
4. SEE STD. PLAN Z118 FOR BASE SLAB & FOUNDATION DETAILS.
5. CONE & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
6. ADJUSTMENT SECTION, CONE, BARREL, RISER SECTIONS (IF USED), & PIPE OPENINGS TO BE SEALED PER SECTION 7-05.
7. CONCRETE CURB & GUTTER SHALL BE BLOCKED OUT FOR A 5-FT LENGTH CENTERED @ THE C.B. TO ALLOW FOR LOCATING CB ADJACENT TO CURB.
8. USE ALTERNATE LOCATION FOR INLET/OUTLET PIPES ONLY IF INLET PIPE REQUIRES ADDITIONAL DEPTH FOR SLOPING. PROVIDE 4-FT DEPTH UNDER TRAP.
9. SEE STANDARD PLAN A-8 FOR ADJUSTMENT SECTION REQUIREMENTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

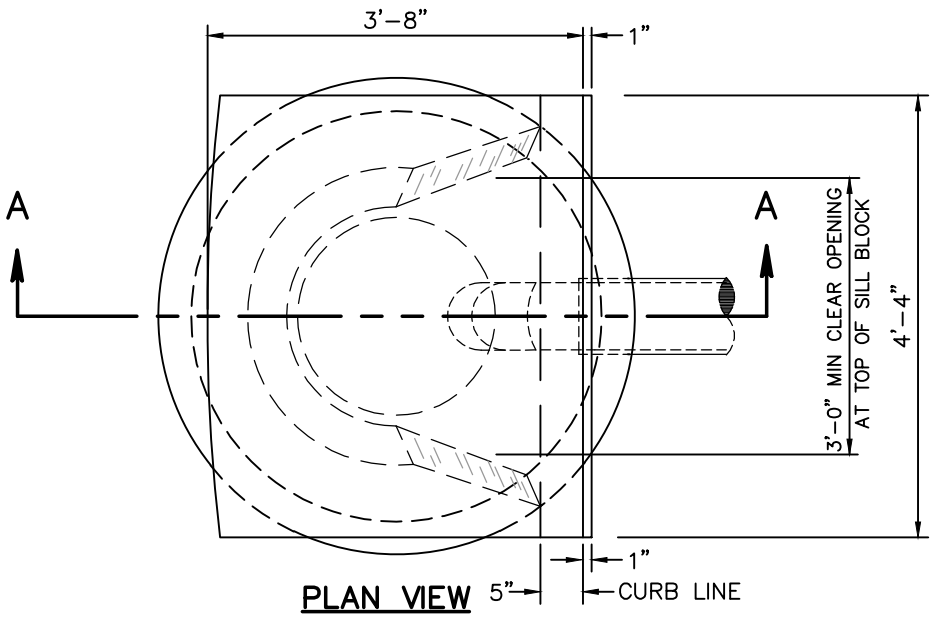
ADOPTED: _____
REVISED: 10/2019
SUPERSEDES: 04/2018
CHECKED BY: JAG/GSN
SCALE: NTS
DWG/REV. BY: RJS/MLD

CATCH BASIN - TYPE 1

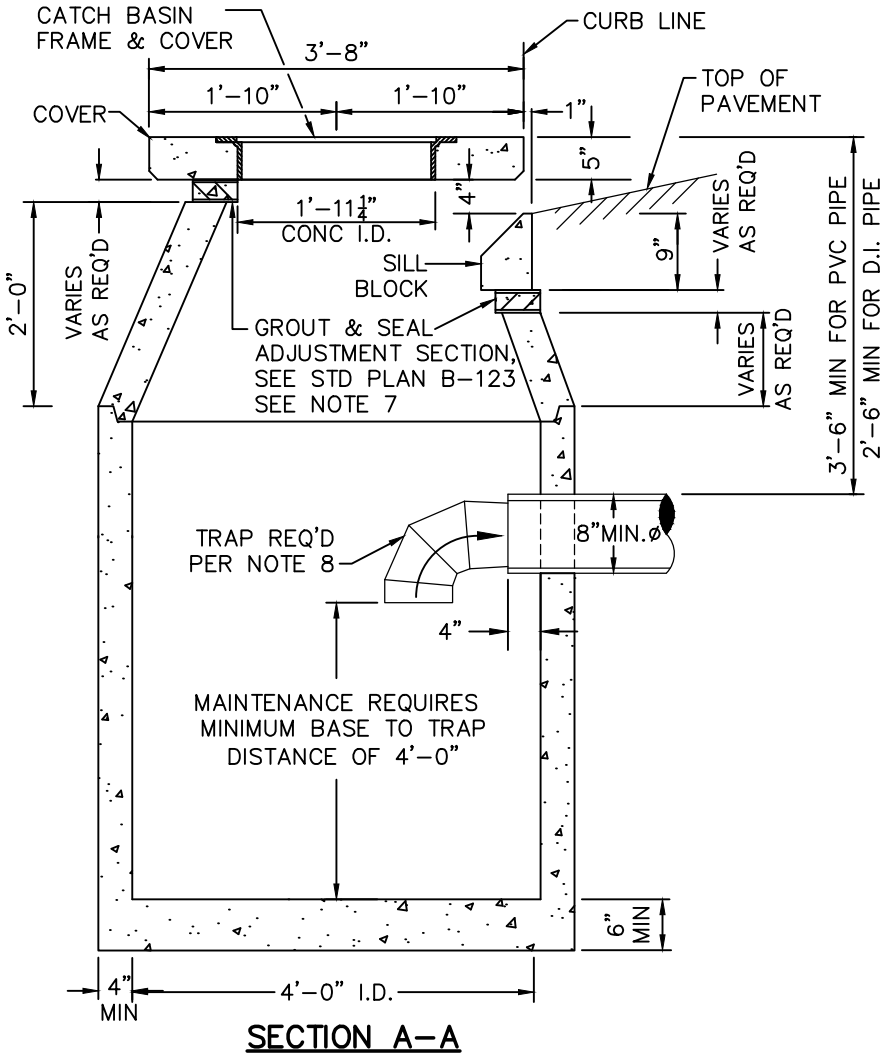
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **B-101C**

Back to Section B - TOC



PLAN VIEW



SECTION A-A

NOTES:

1. SEE SEC 9-12 FOR PRECAST CONCRETE CATCH BASINS.
2. SEE STD PLAN B-114 FOR CATCH BASIN, TYPE 2, FRAME & COVER.
3. SEE STD PLAN B-105 FOR COVER & SILL BLOCK.
4. SEE STD PLAN W-106 FOR GUTTER DETAILS.
5. SEE STD PLAN Z-118 FOR BASE SLAB & FOUNDATION DETAILS.
6. CONE & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
7. ADJUSTMENT SECTION, CONE, BARREL JOINTS, RISER SECTIONS (IF USED), & PIPE OPENINGS TO BE SEALED PER SEC 7-05.
8. SEE STD PLAN B-120 FOR OUTLET TRAP. A TRAP IS REQ'D ON ANY OUTLET PIPE. TRAP TO REMAIN REMOVABLE FOR MAINTENANCE THEREFORE, NO MECHANICAL CONNECTION BETWEEN TRAP & OUTLET PIPE IS ALLOWED. VERTICAL PROJECTION OF TRAP NOT TO EXTEND BEYOND C/L OF ACCESS OPENING.
9. SEE STANDARD PLAN A-8 FOR ADJUSTMENT SECTION REQUIREMENTS.
10. C.B.TYPE 2 SHALL BE UTILIZED WHERE GUTTER GRADES ARE ≤ ±0.75% (.0075).

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 10/2019
SUPERSEDES: 01/2017
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: TSS/MLD

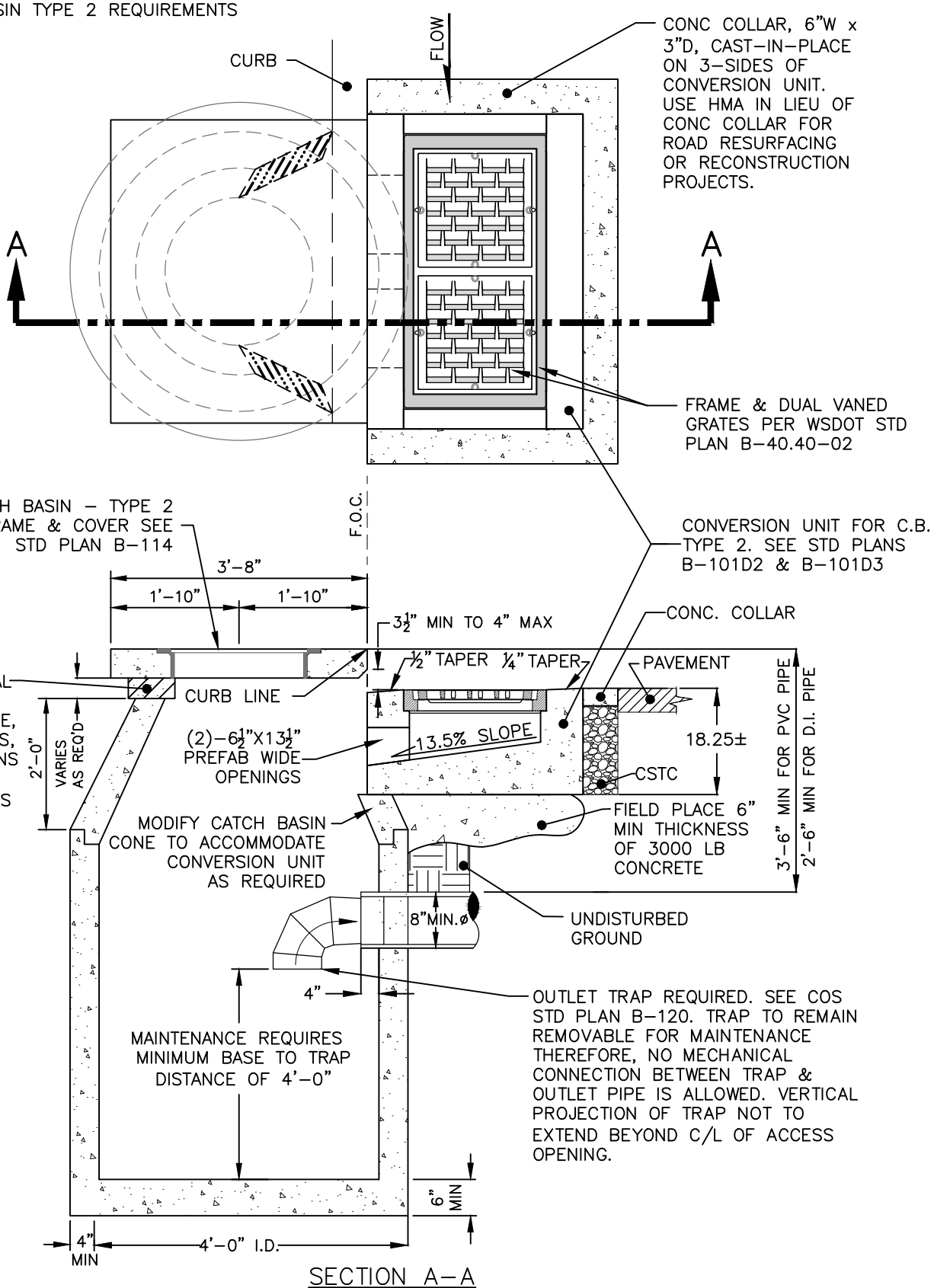
CATCH BASIN – TYPE 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **B-101D**

Back to Section B - TOC

* SEE STANDARD PLAN B–101D FOR CATCH BASIN TYPE 2 REQUIREMENTS



SECTION A–A

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 05/2021
SUPERSEDES: 01/2017
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: TCB/MLD

CATCH BASIN – TYPE 2

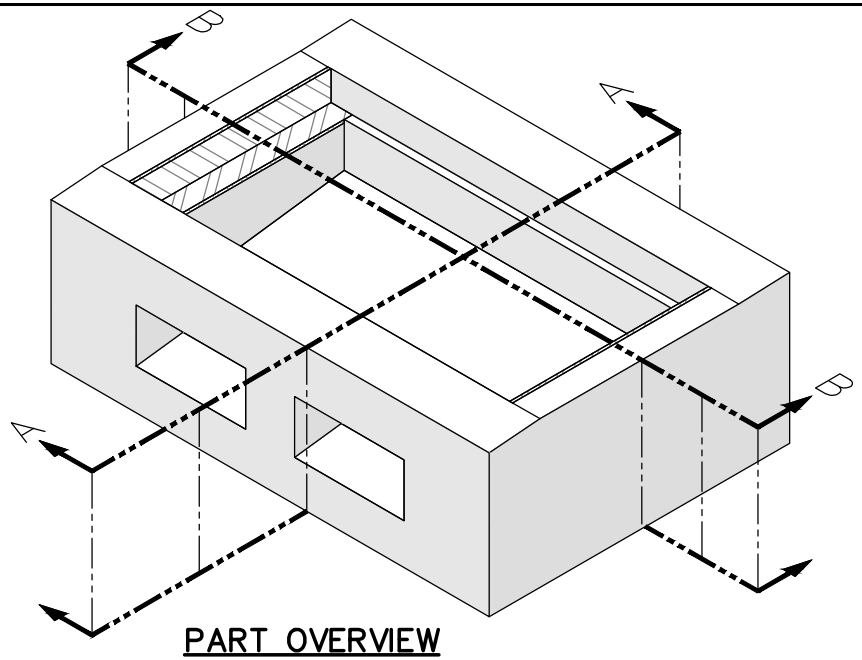
W/ CONVERSION UNIT FOR WSDOT VANED GRATES

SPOKANE

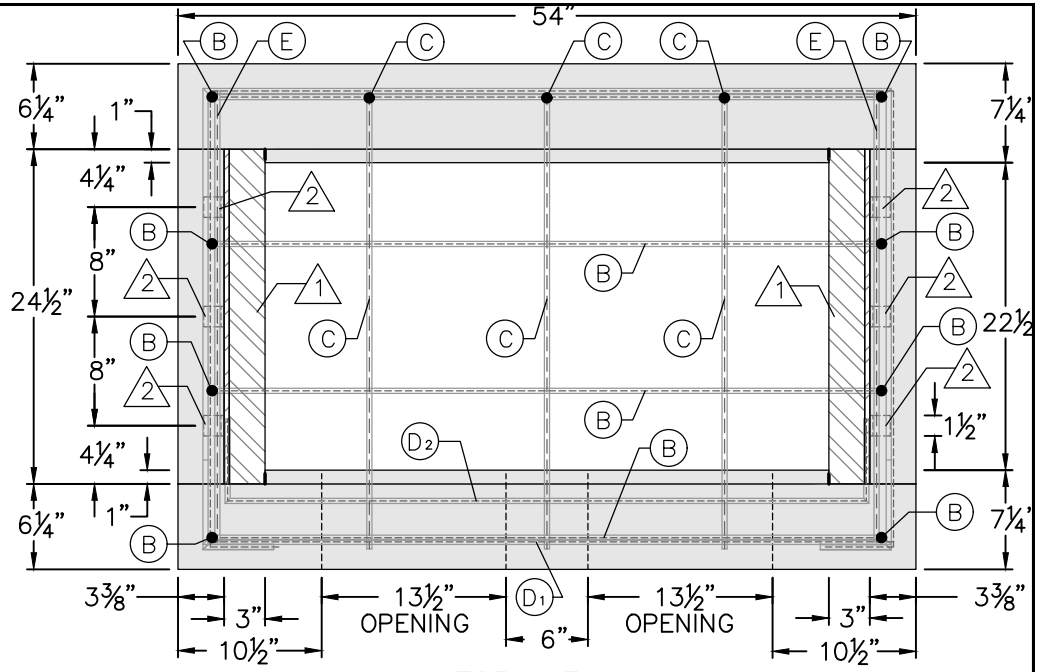
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
B–101D1

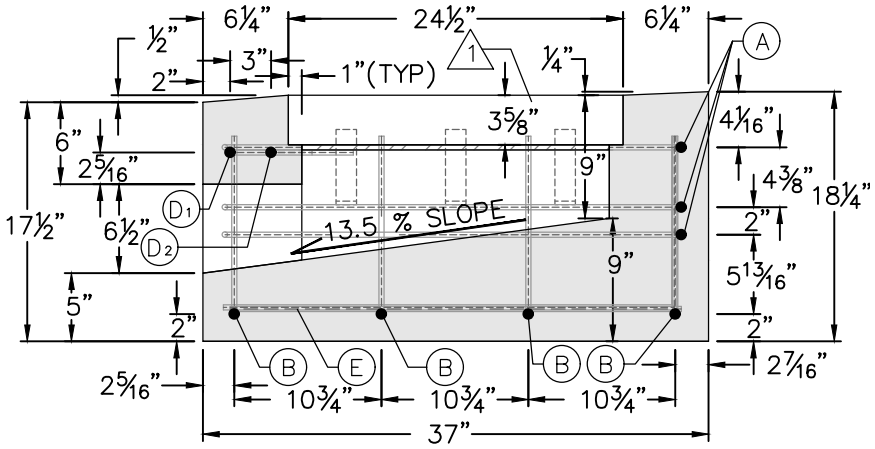
Back to Section B - TOC



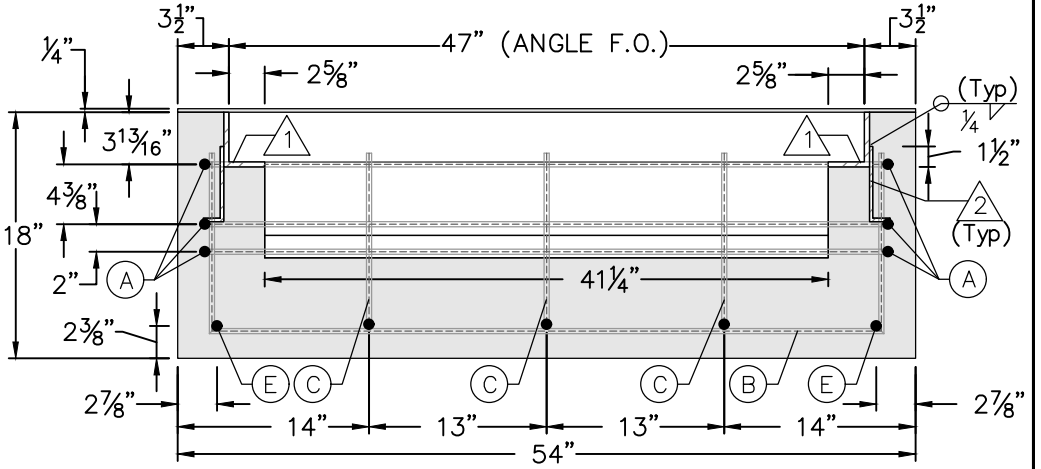
PART OVERVIEW



TOP VIEW



SECTION A–A



SECTION B–B

DETAIL NOTES:

1. 4"X3"X⅜" L=24½" STEEL ANGLE (ONE BOTH ENDS)
2. 5½"X1½"X¼" L=1½" STEEL ANGLES (3 BOTH ENDS)
3. SEE PLAN B–101D3 FOR REBAR IDENTIFICATION & BENDING

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 04/2025
SUPERSEDES: 09/2010
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: MBM

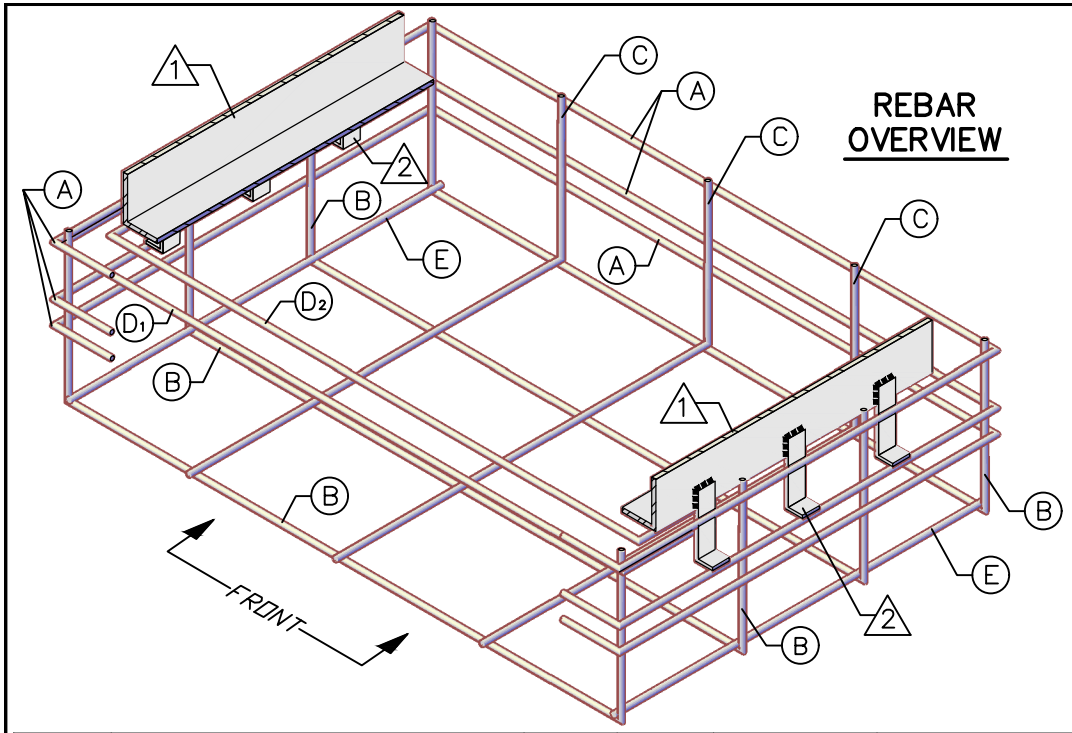
CONVERSION UNIT
RETRO–FIT FOR CATCH BASIN TYPE 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
B–101D2

Back to Section B - TOC

REBAR OVERVIEW

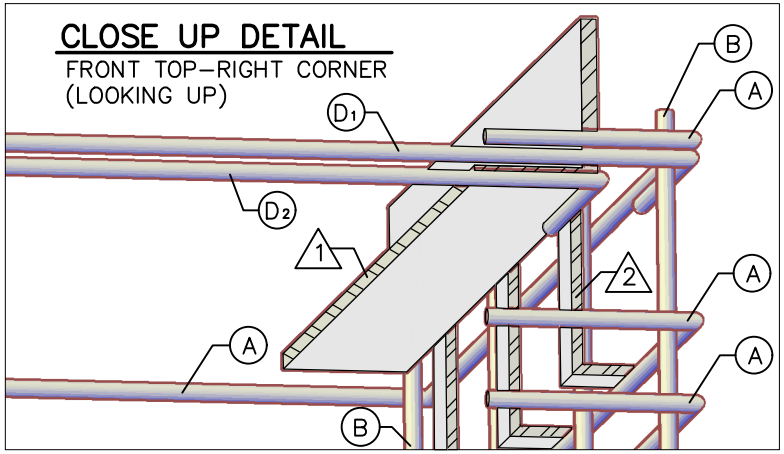


NOTES:

1. ANGLE (1) SHALL BE SET SO THAT THE PREFABRICATED FRAME SHALL HAVE FULL BEARING ON BOTH ENDS. THE FINISHED TOP OF CONCRETE SHALL BE EVEN WITH THE TOP OF STEEL ANGLE.
2. THE CONVERSION UNIT WITH FRAME & GRATE SHALL BE PLACED TO MATCH THE GUTTER SLOPE TO PROVIDE AN UNOBSTRUCTED FLOW LINE.
3. ALL EXPOSED CONCRETE EDGES SHALL BE FINISHED WITH A ½" RADIUS EDGER TOOL.
4. CONSTRUCT CONCRETE LEDGE FOR GRATE FRAME AROUND ALL FOUR SIDES. THE LONG CONCRETE LEDGES ARE RAISED ⅜" ABOVE THE SHORT LEDGES SINCE THEY RECEIVE NO ⅜" ANGLE.
5. ALL PICKUP HOLES SHALL BE GROUTED FULL AFTER THE BASIN HAS BEEN PLACED.
6. SEE CONTRACT FOR TYPE OF GRATE SPECIFIED. SEE WSDOT STANDARD PLAN B–40.40 FOR FRAME & GRATE DETAILS.
7. ALL REBAR SHALL HAVE A MINIMUM OF 2" COVERAGE ON ALL SIDES.

CLOSE UP DETAIL

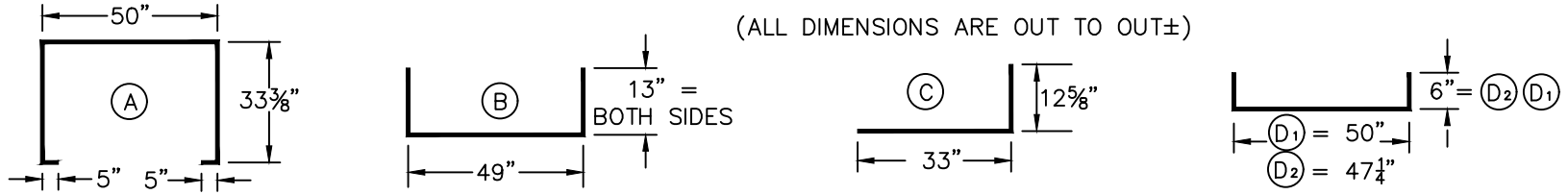
FRONT TOP–RIGHT CORNER
(LOOKING UP)



MARK	REBAR LOCATION	QTY.	SIZE	LENGTH	DESCRIPTION
A	SIDEWALL	3	3	10'–6 3/4"±	HORIZ.
B	BOTTOM SLAB AND SIDEWALL	4		6'–3"±	VERTICAL ON SIDEWALLS
C	BOTTOM SLAB AND SIDEWALL	3		3'–10"±	
D1	SIDE WALL OVER OPENING	1		5'–2"±	HORIZ.
D2		1		4'–11 1/4"±	
E	BOTTOM SLAB @ EACH END	2		2'–9"±	STRAIGHT

BENDING DIAGRAM

(ALL DIMENSIONS ARE OUT TO OUT±)



DETAIL NOTES:

(1) 4"x3"x⅜" L=24½" STEEL ANGLE (ONE BOTH ENDS)

(2) 5½"X1½"X¼" L=1½" STEEL ANGLES (3 BOTH ENDS)

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES — DAN BULLER, P.E.

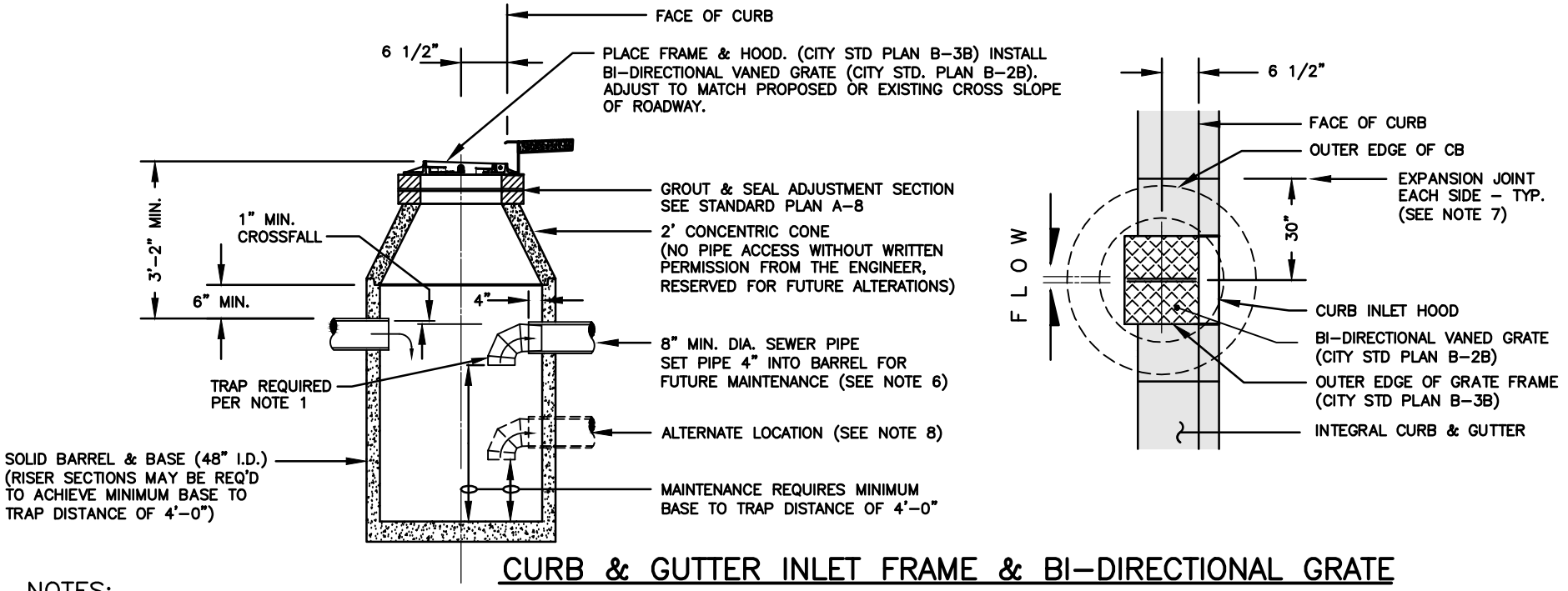
ADOPTED: _____
REVISED: 04/2025
SUPERSEDES: 09/2010
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: MBM

CONVERSION UNIT NOTES INCLUDING BAR LIST & BENDING DIAGRAM

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B–101D3

Back to Section B - TOC



CURB & GUTTER INLET FRAME & BI-DIRECTIONAL GRATE

FOR USE IN SUMP SITUATIONS

NOTES:

1. SEE STD. PLAN B-120 FOR OUTLET TRAP. A TRAP IS REQUIRED ON ANY OUTLET PIPE. TRAP TO REMAIN REMOVABLE FOR MAINTENANCE THEREFORE NO MECHANICAL CONNECTION BETWEEN TRAP & OUTLET ALLOWED. VERTICAL PROJECTION OF TRAP NOT TO EXTEND BEYOND C/L OF ACCESS OPENING.
2. IF AN INLET PIPE IS PRESENT, THE INVERT SHALL BE HIGHER IN ELEVATION THAN THE OUTLET PIPE INVERT. A C.B. WITH AN INLET PIPE IS UTILIZED ONLY WHEN CONNECTING ADDITIONAL C.B.'S AT AN INTERSECTION OR WHEN ADDING GRATE INLET TYPE 3. A C.B. WITH INLET PIPE(S) IS NOT ALLOWED AS A SUBSTITUTE FOR A M.H.
3. SEE SEC. 9-12 FOR PRECAST CONCRETE CATCH BASINS.
4. SEE STD. PLAN Z-118 FOR BASE SLAB & FOUNDATION DETAILS.
5. CONE & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
6. ADJUSTMENT SECTION, CONE, BARREL, RISER SECTIONS (IF USED), & PIPE OPENINGS TO BE SEALED PER SECTION 7-05.
7. CONCRETE CURB & GUTTER SHALL BE BLOCKED OUT FOR A 5-FT LENGTH CENTERED @ THE C.B. TO ALLOW FOR LOCATING C.B. ADJACENT TO CURB.
8. USE ALTERNATE LOCATION FOR INLET/OUTLET PIPES ONLY IF INLET PIPE REQUIRES ADDITIONAL DEPTH FOR SLOPING. PROVIDE 4-FT DEPTH UNDER TRAP.
9. SEE STANDARD PLAN A-8 FOR ADJUSTMENT SECTION REQUIREMENTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

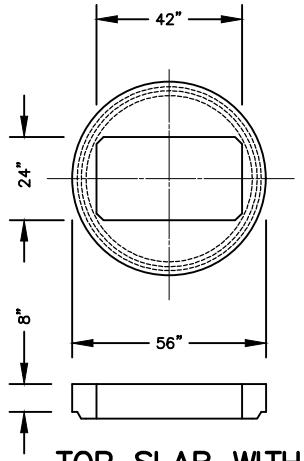
ADOPTED: _____
REVISED: 10/2019
SUPERSEDES: 04/2018
CHECKED BY: JAG, GSN
SCALE: NTS
DWG./REV BY: RJS/MLD

CATCH BASIN-TYPE 3

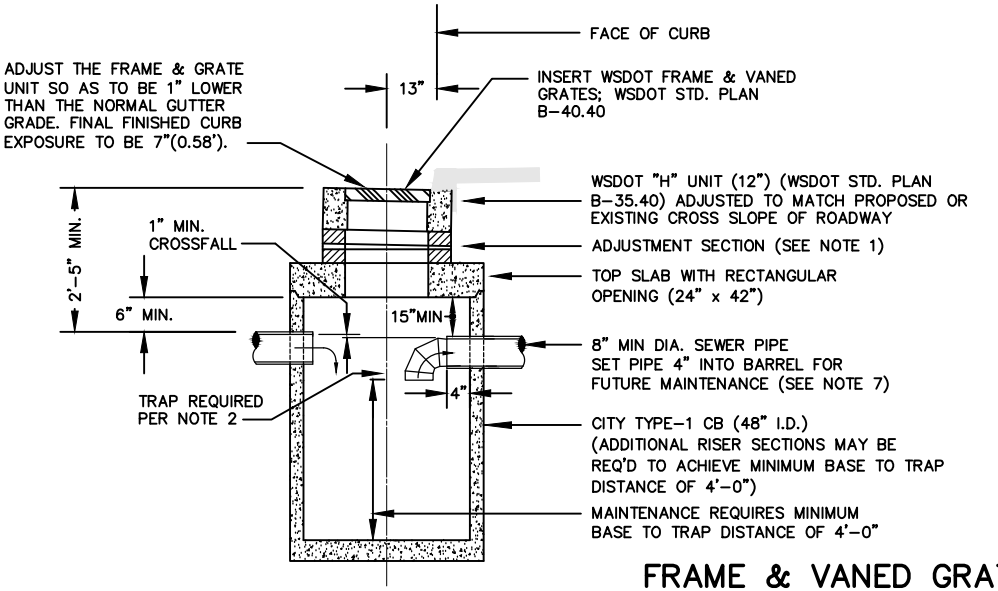
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

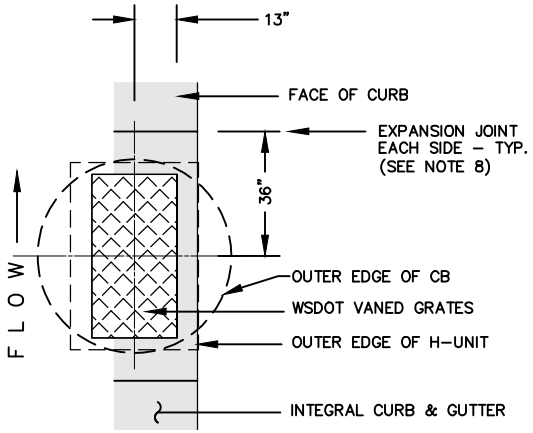
STANDARD PLAN No. **B-101E**

Back to Section B - TOC



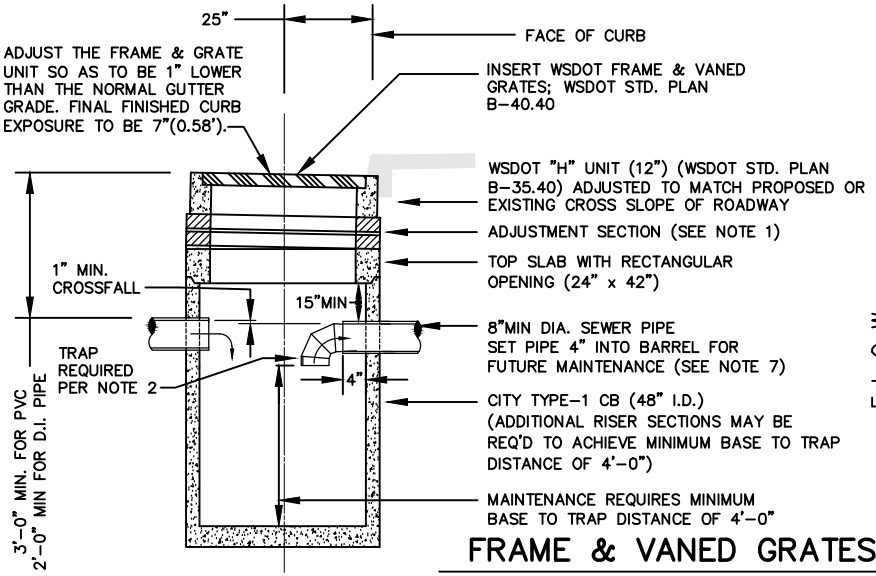
TOP SLAB WITH RECTANGULAR OPENING

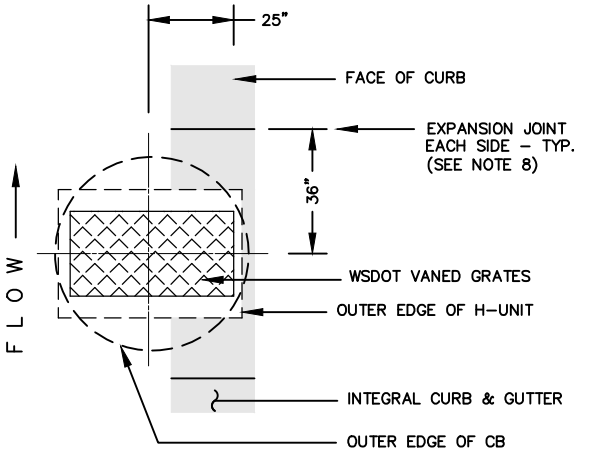




FRAME & VANED GRATES: NORMAL INSTALLATION

FOR USE IN CONTINUOUS GRADE SITUATIONS





FRAME & VANED GRATES: ROTATED INSTALLATION

FOR USE IN CONTINUOUS GRADE SITUATIONS

NOTES:

1. GROUT & SEAL ADJUSTMENT SECTION. ADJUSTMENT SECTION FOR EXISTING STRUCTURES TO MATCH FIELD CONDITIONS AS REQUIRED (3" MIN-12" MAX). SEE STANDARD PLAN A-8 FOR ADJUSTMENT SECTION REQUIREMENTS.
2. SEE STD. PLAN B-120 FOR OUTLET TRAP. A TRAP IS REQUIRED ON ANY OUTLET PIPE. TRAP TO REMAIN REMOVABLE FOR MAINTENANCE THEREFORE NO MECHANICAL CONNECTION BETWEEN TRAP & OUTLET ALLOWED. VERTICAL PROJECTION OF TRAP NOT TO EXTEND BEYOND C/L OF ACCESS OPENING.
3. IF AN INLET PIPE IS PRESENT, THE INVERT SHALL BE HIGHER IN ELEVATION THAN THE OUTLET PIPE INVERT. A C.B. WITH AN INLET PIPE IS UTILIZED ONLY WHEN CONNECTING ADDITIONAL C.B.'s AT AN INTERSECTION OR WHEN ADDING GRATE INLET TYPE 3. A C.B. WITH INLET PIPE(S) IS NOT ALLOWED AS A SUBSTITUTE FOR A M.H.
4. SEE SEC. 9-12 FOR PRECAST CONCRETE CATCH BASINS.
5. SEE STD. PLAN Z-118 FOR BASE SLAB & FOUNDATION DETAILS.
6. TOP SLAB & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
7. ADJUSTMENT SECTION, TOP SLAB, BARREL, RISER SECTIONS (IF USED), & PIPE OPENINGS TO BE SEALED PER SECTION 7-05.
8. CONCRETE CURB & GUTTER SHALL BE BLOCKED OUT FOR A 6-FT LENGTH CENTERED @ THE C.B. TO ALLOW FOR LOCATING CB ADJACENT TO CURB.

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES — DAN BULLER, P.E.

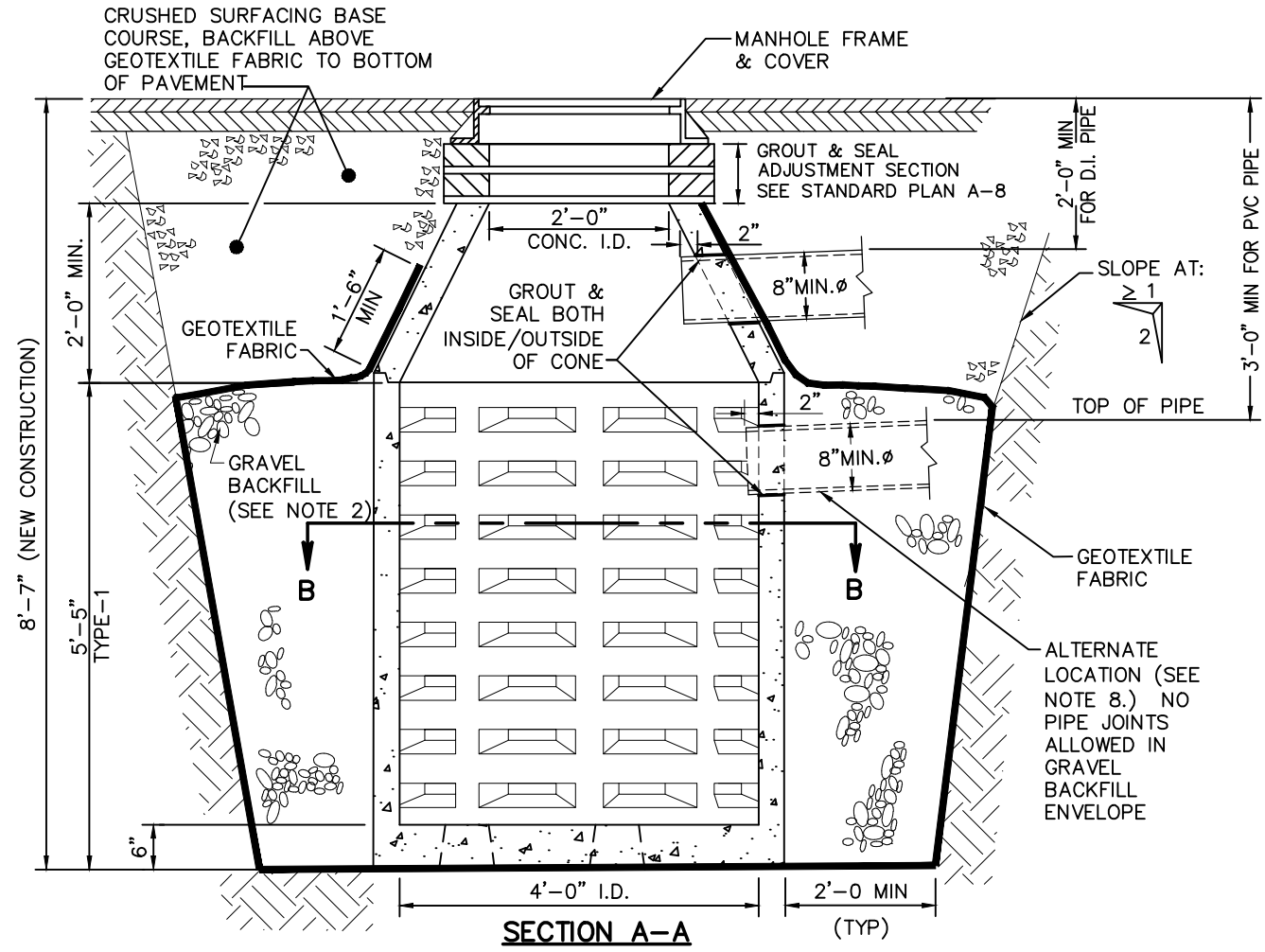
ADOPTED: _____
REVISED: 04/2025
SUPERSEDES: 10/2019
CHECKED BY: JAG, GSN
SCALE: NTS
DWG./REV BY: RJS/MLD

CATCH BASIN TYPE 4

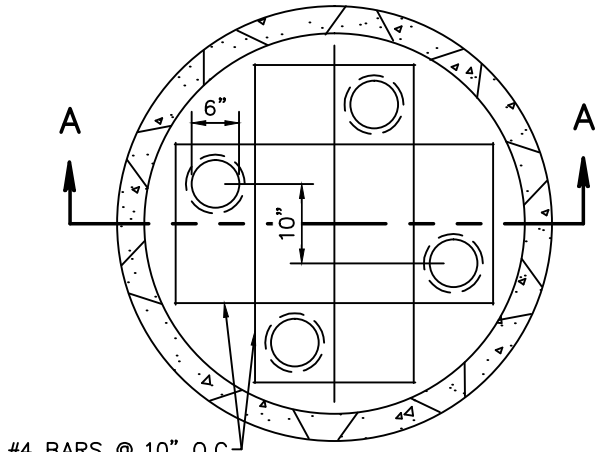
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **B-101F**

Back to Section B - TOC



SECTION A–A



#4 BARS @ 10" O.C. EA WAY. (TYP) FOR STD PLANS B–102D & B–102F

SECTION B–B

NOTES:

1. SEE SEC 9–12 FOR PRECAST CONCRETE DRYWELLS.
2. SEE SEC 9–03.12(5) FOR GRAVEL BACKFILL FOR DRYWELLS.
3. SEE SEC 9–33 FOR WOVEN GEOTEXTILE FABRIC (MODERATE SURVIVABILITY CLASS A). OVERLAP ALL FABRIC JOINTS 1'–6" MIN. WRAP & SECURE FABRIC AROUND PIPE TO PREVENT MIGRATION OF FINES INTO GRAVEL ENVELOPE.
4. SEE STD PLANS A–12 & A–13 FOR MANHOLE FRAME & COVER.
5. SEE STD PLAN Z–118 FOR BASE & FOUNDATION DETAILS.
6. CONE & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
7. ADJUSTMENT SECTION, CONE & BARREL JOINTS TO BE SEALED PER SEC 7–05.
8. USE ALTERNATE PIPE LOCATION ONLY IF PIPE REQUIRES ADDITIONAL DEPTH FOR SLOPING, DEPTH OF COVER, OR OTHER RESTRICTIVE FIELD CONDITION.
9. SEE STANDARD PLAN A–8 FOR ADJUSTMENT SECTION REQUIREMENTS.
10. SEE STANDARD PLAN W–103 FOR CRUSHED ROCK REQUIREMENTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

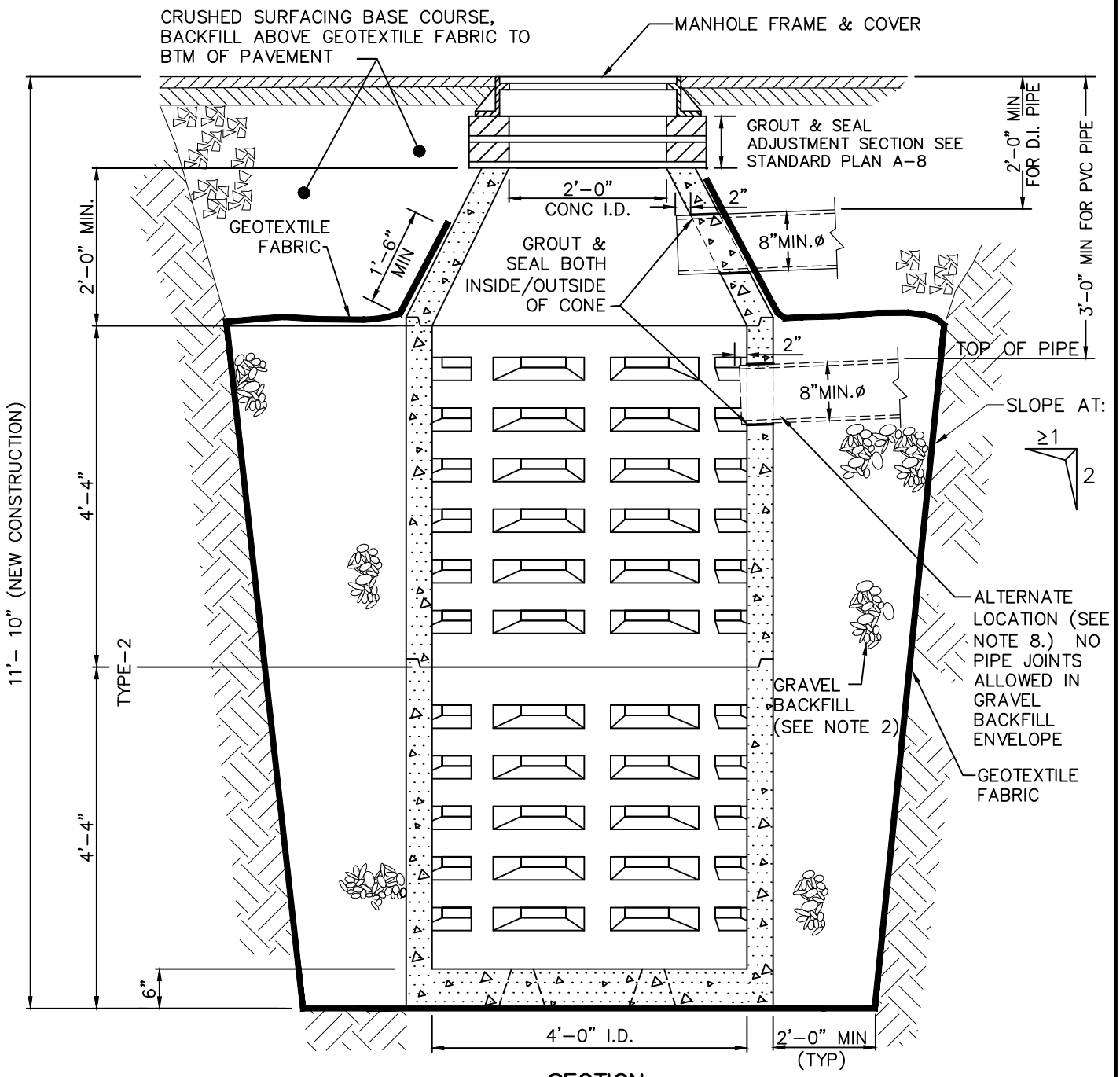
ADOPTED: _____
REVISED: 10/2019
SUPERSEDES: 01/2017
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: SRM/MLD

DRYWELL – TYPE I

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **B–102C**

Back to Section B - TOC



SECTION

NOTES:

1. SEE SEC 9-12 FOR PRECAST CONCRETE DRYWELLS.
2. SEE SEC 9-03.12(5) FOR GRAVEL BACKFILL FOR DRYWELLS.
3. SEE SEC 9-33 FOR WOVEN GEOTEXTILE FABRIC (MODERATE SURVIVABILITY, CLASS A). OVERLAP ALL FABRIC JOINTS 1'-6" MIN. WRAP & SECURE FABRIC AROUND PIPE TO PREVENT MIGRATION OF FINES INTO GRAVEL ENVELOPE..
4. SEE STD PLANS A-12 & A-13 FOR MANHOLE FRAME & COVER.
5. SEE STD PLANS B-102C & Z-118 FOR BASE & FOUNDATION DETAILS.
6. CONE & BARREL JOINTS MAY BE EITHER TONGUE & GROOVE OR REVERSE TONGUE & GROOVE.
7. ADJUSTMENT SECTION, CONE & BARREL JOINTS TO BE SEALED PER SEC 7-05.
8. USE ALTERNATE PIPE LOCATION ONLY IF PIPE REQUIRES ADDITIONAL DEPTH FOR SLOPING, DEPTH OF COVER, OR OTHER RESTRICTIVE FIELD CONDITION.
9. SEE STANDARD PLAN A-8 FOR ADJUSTMENT SECTION REQUIREMENTS.
10. SEE STANDARD PLAN W-102 FOR CRUSHED ROCK REQUIREMENTS.

APPROVED BY

ENGINEERING SERVICES DIRECTOR — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

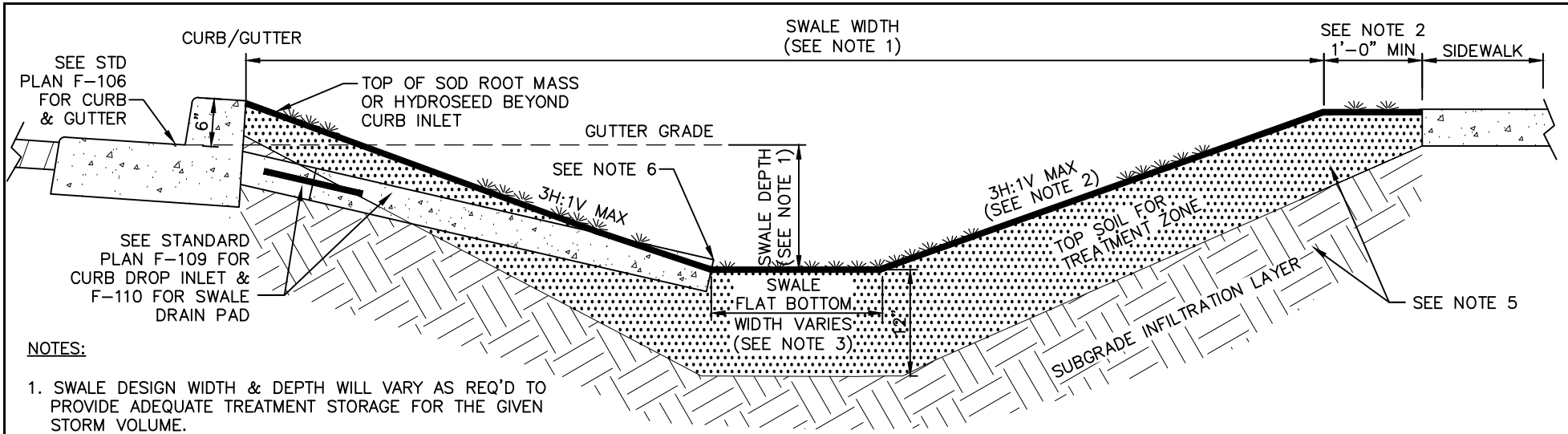
ADOPTED: _____
REVISED: 10/2019
SUPERSEDES: 01/2017
CHECKED BY: JAG
SCALE: NTS
DWG/REV. BY: SRM/RDC

DRYWELL – TYPE 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **B-102D**

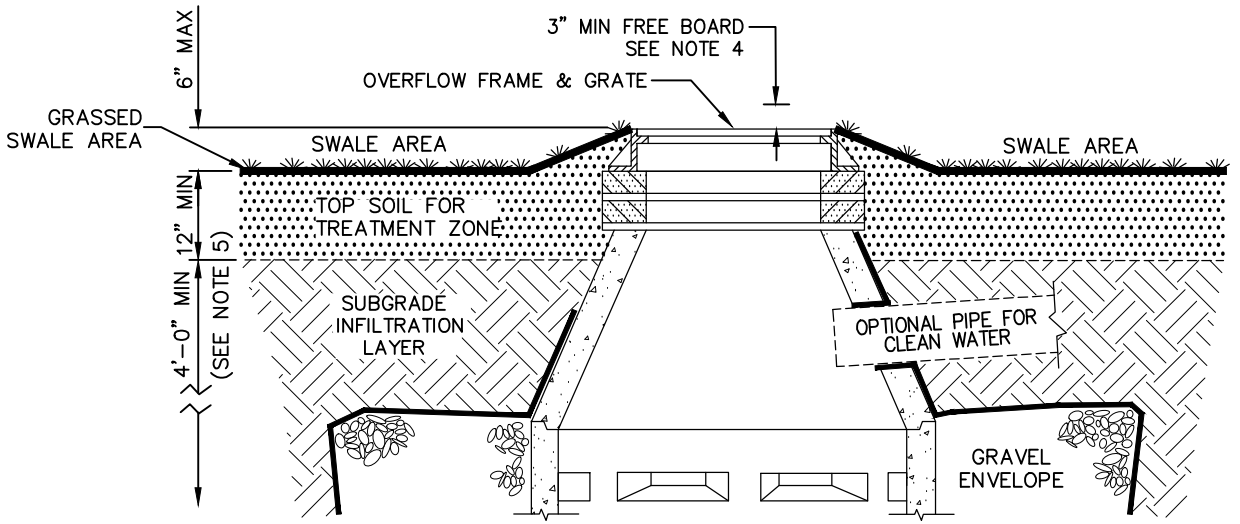
Back to Section B - TOC



TYPICAL SECTION

NOTES:

1. SWALE DESIGN WIDTH & DEPTH WILL VARY AS REQ'D TO PROVIDE ADEQUATE TREATMENT STORAGE FOR THE GIVEN STORM VOLUME.
2. PROVIDE A 1'-0" MIN. FLAT & FLUSH AREA ADJACENT TO SIDEWALK WHEN USING A SIDE-SLOPE NO STEEPER THAN 3:1. IF FLAT AREA IS NOT PROVIDED ADJACENT TO SIDEWALK, THEN USE A SIDE-SLOPE NO STEEPER THAN 4:1. SEE DES. STD. 6.4-2.
3. WHEN SWALE WIDTH IS ADEQUATE, PROVIDE A PRACTICAL FLAT BOTTOM. OTHERWISE, A "V" BOTTOM IS ACCEPTABLE.
4. DRYWELL SHALL BE INSTALLED AT A 10 FT MIN DISTANCE FROM LOWEST INLET TO PREVENT DIRECT INFLOW INTO THE OVERFLOW GRATE. DRYWELL MUST BE LOCATED WITHIN 8' OF ROADWAY FOR ACCESS & MAINTENANCE. PROVIDE A 3" MIN FREEBOARD BETWEEN LOWEST SWALE INLET & TOP OF DRYWELL GRATE OR OVERFLOW BERM.
5. SEE THE SPOKANE REGIONAL STORMWATER MANUAL (SRSM) INCLUDING TABLE 6-1 FOR INFILTRATION & OTHER DESIGN CRITERIA FOR TREATMENT ZONE & SUBGRADE INFILTRATION LAYER.
6. 2" EXPOSURE BETWEEN TOP OF CURB INLET & SWALE DRAIN PAD TO TOP OF SOD ROOT MASS OR HYDROSEED WITH A DRYLAND GRASS MIX.
7. SWALE OVERFLOW GRASS BERMS SHALL HAVE A 2-FT MIN FLAT TOP WIDTH (IN THE DIRECTION OF FLOW) & A SIDE-SLOPE NO STEEPER THAN 3:1.



DRYWELL IN SWALE

SEE STD PLANS B-102C &
B-102D FOR DRYWELL REQUIREMENTS

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES — KYLE TWOHIG

CITY ENGINEER — DAN BULLER, P.E.

ADOPTED: _____
REVISED: 04/2022
SUPERSEDES: 04/2018
CHECKED BY: JAG/GSN
SCALE: NTS
DWG/REV. BY: RJS/MLD

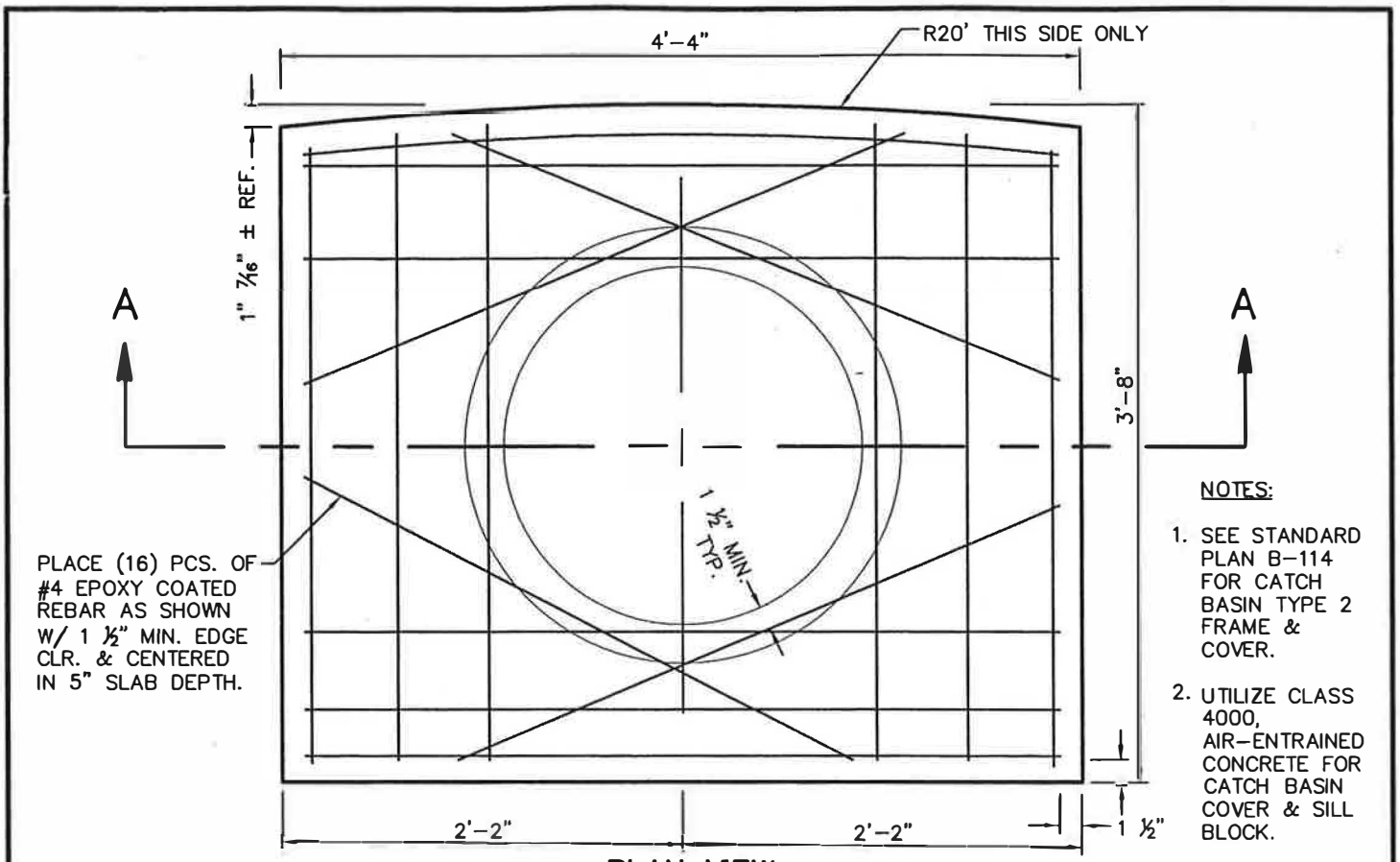
BIO-INFILTRATION SWALE W/ OVERFLOW STRUCTURE

SPOKANE

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
B-102F

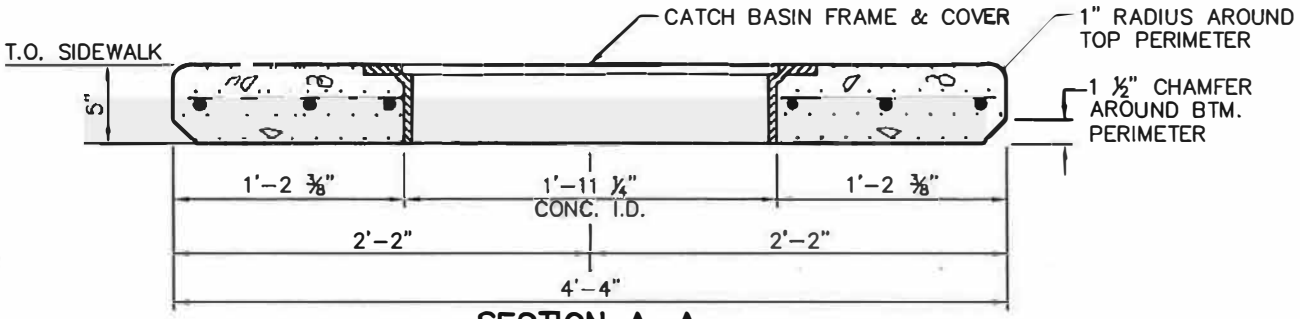
Back to Section B - TOC



NOTES:

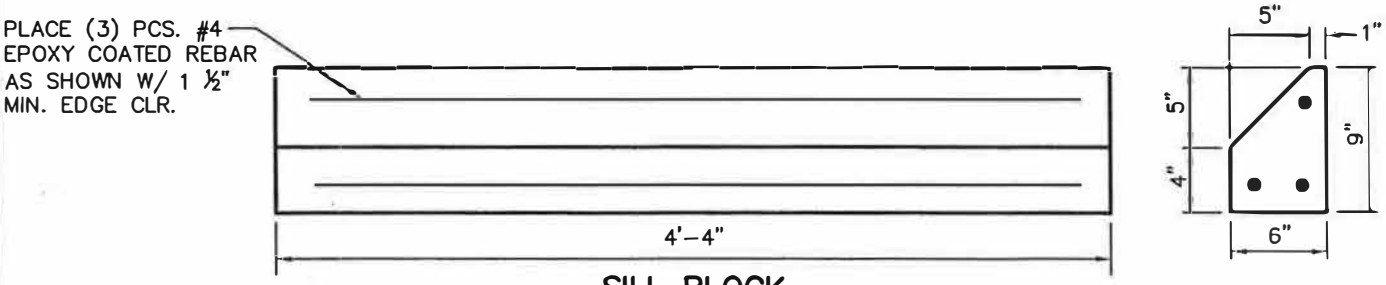
1. SEE STANDARD PLAN B-114 FOR CATCH BASIN TYPE 2 FRAME & COVER.
2. UTILIZE CLASS 4000, AIR-ENTRAINED CONCRETE FOR CATCH BASIN COVER & SILL BLOCK.

PLAN VIEW



SECTION A-A

CATCH BASIN COVER



SILL BLOCK

APPROVED BY

DIRECTOR, ENGINEERING SERVICES DAVE NAKAGAWARA, P.E.

PRINCIPAL ENGINEER, DESIGN KEN BROWN, P.E.

ADOPTED: 2/86
REVISED: 7/02
SUPERSEDES: 2/90
SCALE: 1"=1'-0"
DWG. BY: DGB/MDH

CATCH BASIN COVER TYPE 2

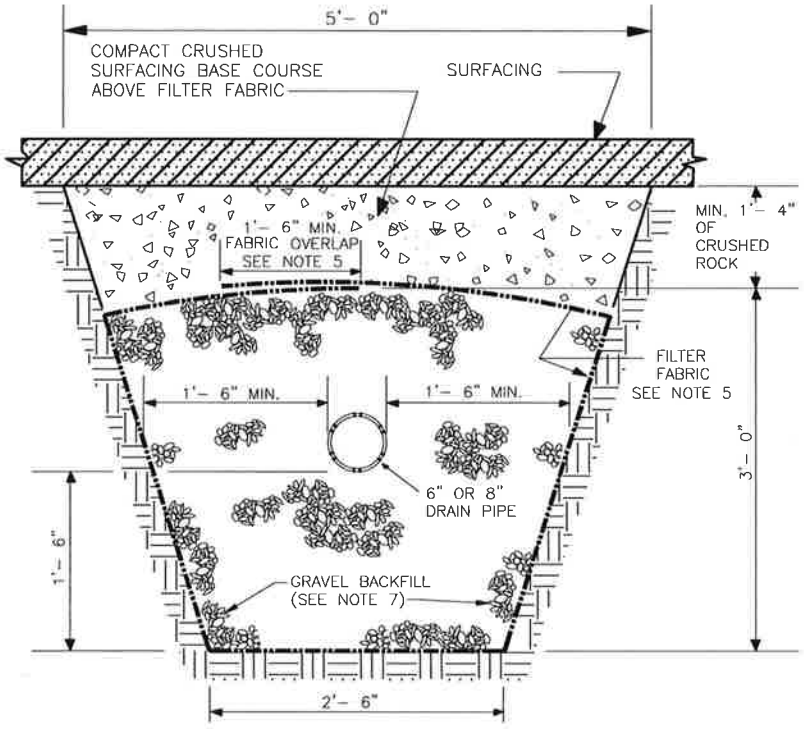
WITH SILL BLOCK

CITY OF SPOKANE

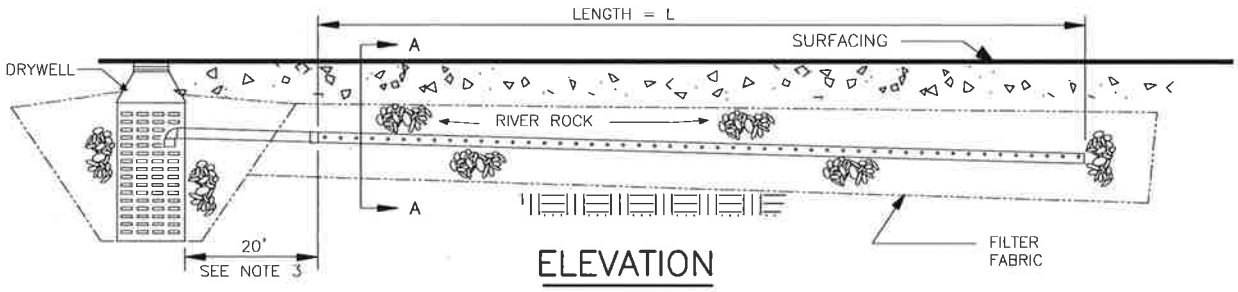
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B-105

Back to Section B - TOC



SECTION A–A



ELEVATION

NOTES:

1. USE ABSORPTION TRENCH WHERE CALLED FOR IN THE PLANS OR AS DIRECTED BY THE ENGINEER & IN ACCORDANCE W/ SECTION 7–05.3(101).
2. DRAIN PIPE TO BE LAID ON A –0.5% TO –1.0% GRADE AWAY FROM THE DRYWELL.
3. DRAIN PIPE TO BE SOLID WALL FOR 1ST 20–FT FROM DRYWELL. REMAINDER OF DRAIN PIPE TO BE PERFORATED PER SECTION 9–05.
4. OUTLET TRAP PER STANDARD PLAN B–120 TO BE INSTALLED ON DRYWELL EXIT PIPE. SEAL PIPE COLLAR TO DRYWELL.
5. OVERLAP FABRIC A MINIMUM OF 1'–6". SEE SECTION 9–33 FOR WOVEN GEOTEXTILE FABRIC (MODERATE SURVIVABILITY CLASS A).
6. SEE STANDARD PLANS B–102C, & D FOR DRYWELL DETAILS.
7. SEE SECTION 9–03.12(5) FOR GRAVEL BACKFILL FOR DRYWELLS.

APPROVED BY

ENGINEERING OPERATIONS MANAGER KYLE TWOHIG

CITY ENGINEER DANIEL ALBERT BULLER, P.E.

ADOPTED:	6/1994
REVISED:	01/2017
SUPERSEDES:	05/2007
CHECKED BY:	JAG
SCALE:	NTS
DWG/REV. BY:	REP/RLB

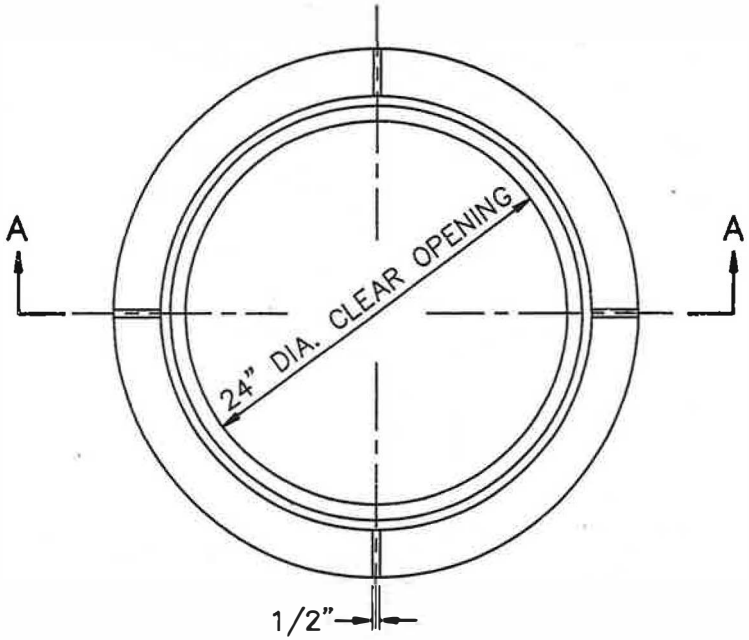
ABSORPTION TRENCH DETAILS
FOR STORM DRAINAGE

SPOKANE

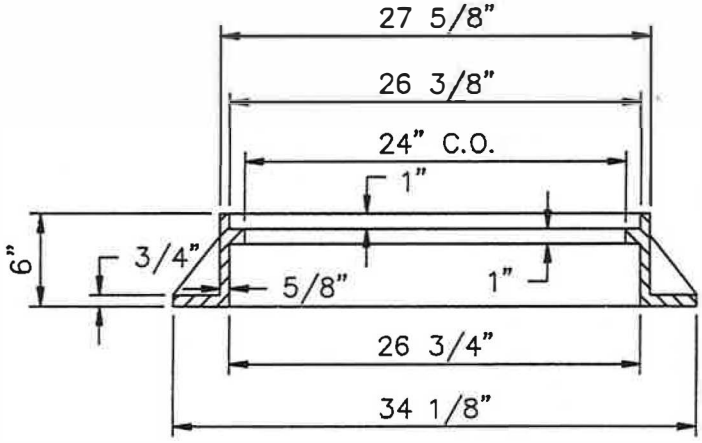
ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B–111

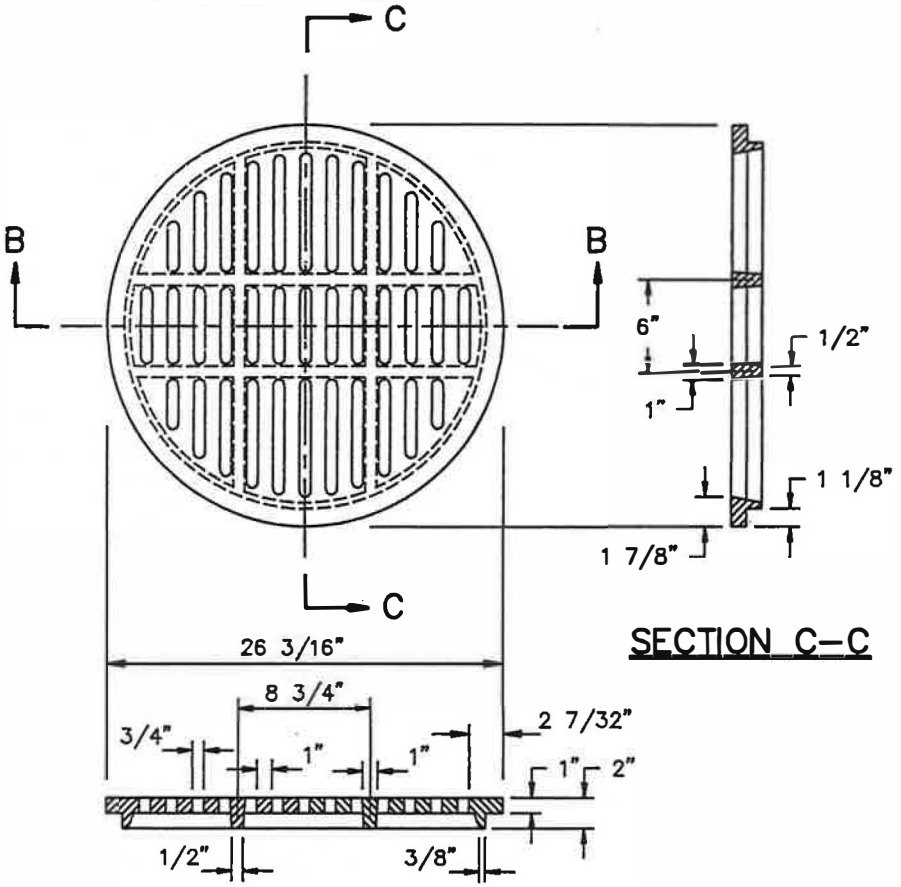
Back to Section B - TOC



CAST IRON FRAME MIN. WEIGHT 168 LBS.



SECTION A–A



SECTION C–C

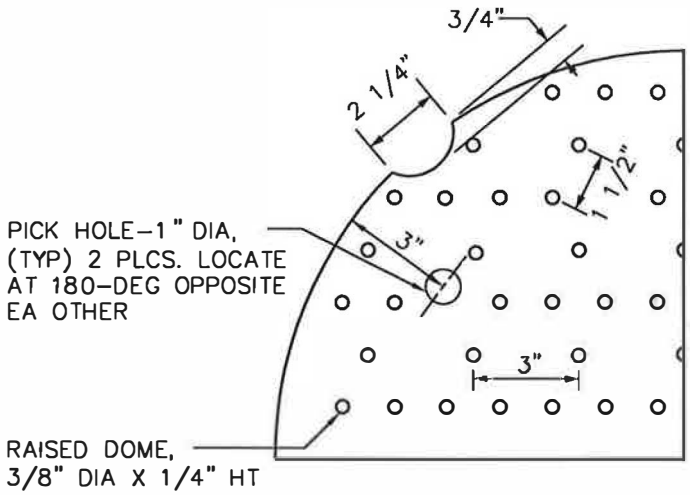
SECTION B–B

DRAWING NOTES:

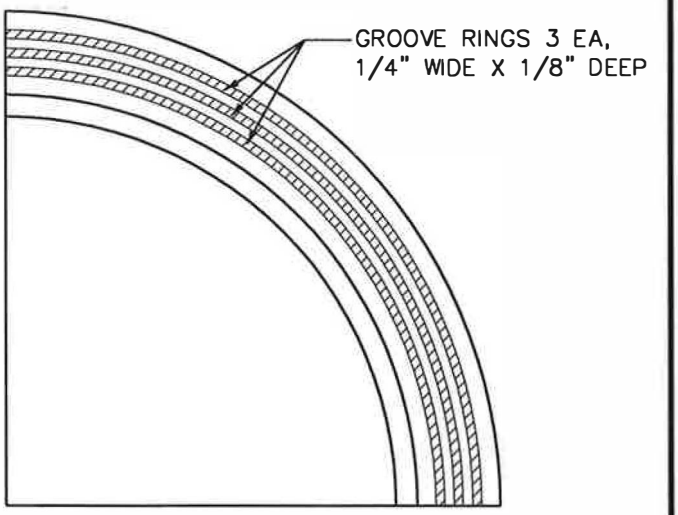
1. See Section 9–05.15 (2).
2. Frame: ASTM A48 Class 30 Gray Iron.
3. Grate: ASTM A536 Class 80–55–06 Ductile Iron.
4. Foundry Name, Date, Material and Heat Number In Raised Letters on Interior Face of Each Casting.
5. Fit Tolerance 1/8"(+/–).

APPROVED BY	SCALE NTS	CATCH BASIN FRAME & GRATE	
CITY ENGR.	ADOPTED 2/90		
CH. DESIGN ENGR.	REVISED	DEPT. OF PUBLIC WORKS ENGR. DIVISION SPOKANE, WA	STANDARD PLAN No. B–113
	SUPERSEDES		

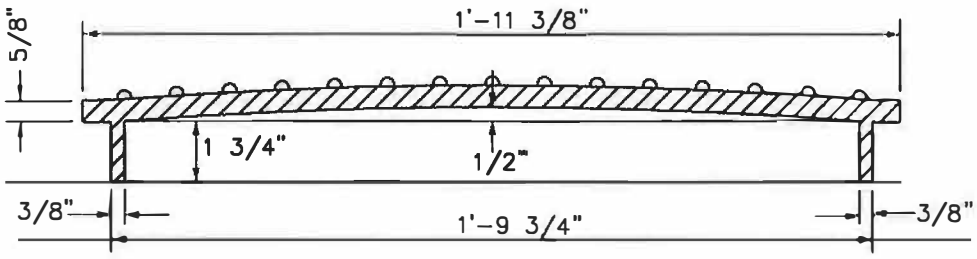
Back to Section B - TOC



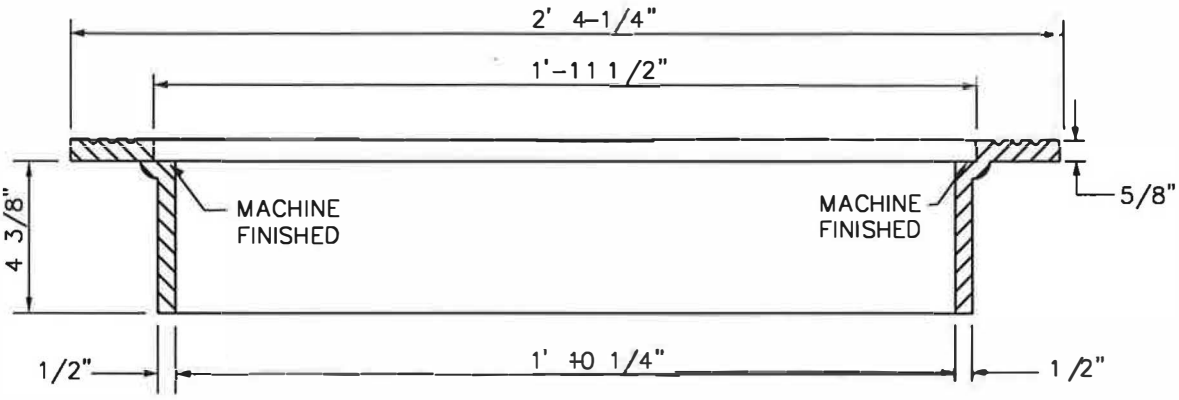
1/4 PLAN OF COVER



1/4 PLAN OF FRAME



SECTION – COVER



SECTION – FRAME

NOTES:

1. SEE SEC 9–05.15 FOR METAL CASTINGS.
2. ALL MATING SURFACES SHALL BE MACHINE FINISHED TO ENSURE A NON–ROCKING FIT.

APPROVED BY

DIRECTOR, ENGINEERING SERVICES — TOM L. ARNOLD, P.E.

PRINCIPAL ENGINEER, DESIGN — KEN M. BROWN, P.E.

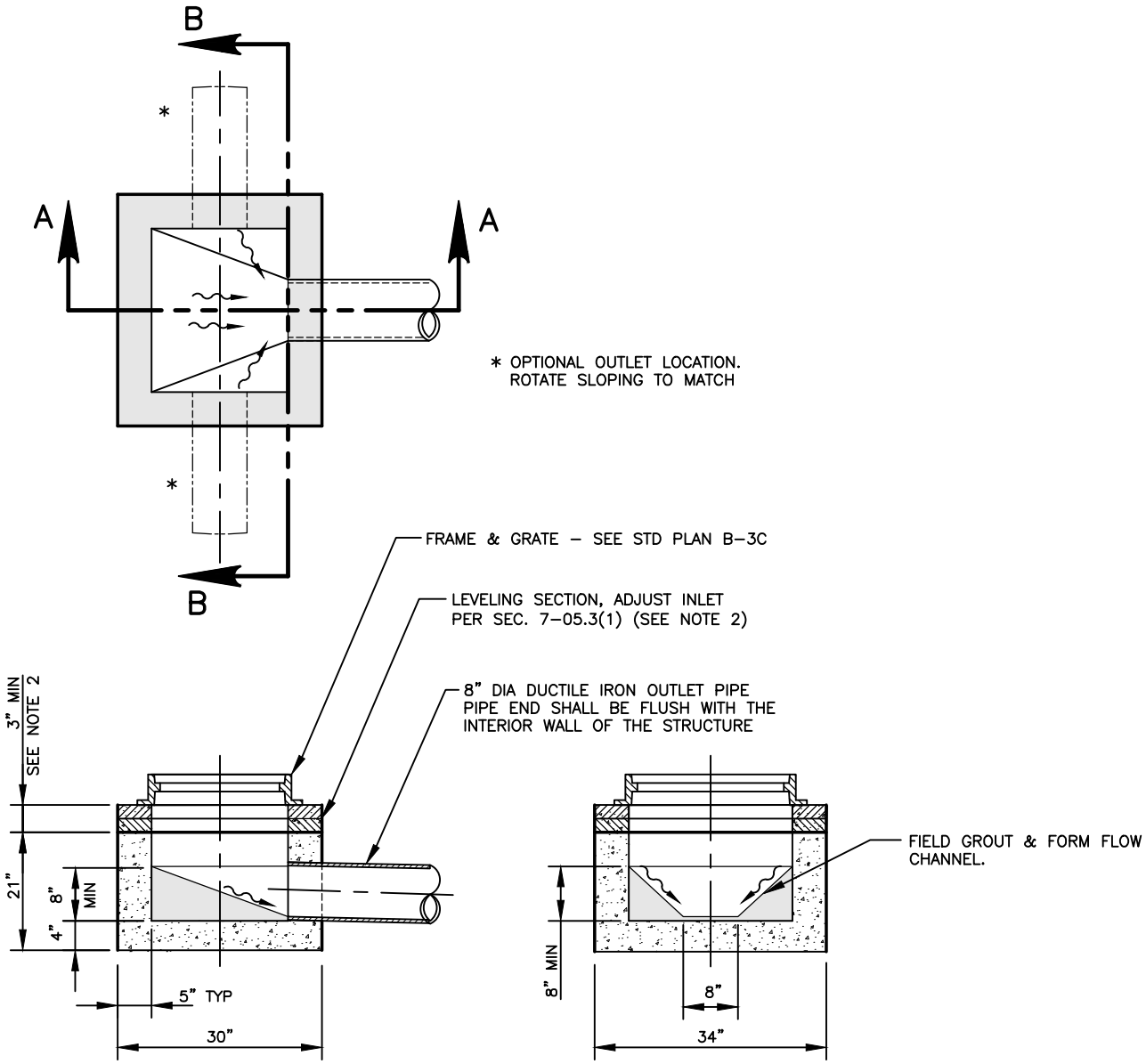
ADOPTED:	2/86
REVISED:	4/2004
SUPERSEDES:	7/02
SCALE:	NTS
DWG/REV. BY:	TSS

CATCH BASIN FRAME & COVER
TYPE 2

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. B–114

Back to Section B - TOC



SECTION A–A

SECTION B–B

NOTES:

1. CONCRETE USED IN CONSTRUCTION OF THIS BOX SHALL BE CLASS 4000 AS SPECIFIED IN SECTION 6–02 OF STANDARD SPECIFICATIONS.
2. GROUT & SEAL ADJUSTMENT SECTION. SEE STANDARD PLAN A–8.
3. GRATE INLETS SHOULD ONLY BE USED AS A SECONDARY OPTION WHEN CATCH BASINS TYPE 1, 2, 3, OR 4 ARE NOT POSSIBLE.

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES DAN BULLER, P.E.

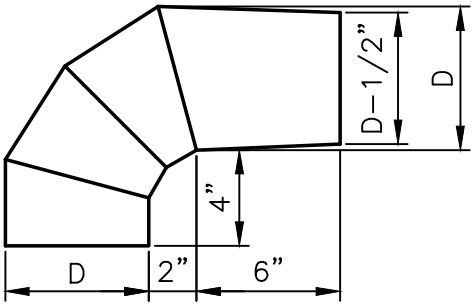
ADOPTED: _____
REVISED: 04/2025
SUPERSEDES: 10/2019
CHECKED BY: JAG
SCALE: NTS
REVISED BY: DGB/MLD

GRATE INLET STRUCTURE
TYPE 3

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No.
B–119

Back to Section B - TOC

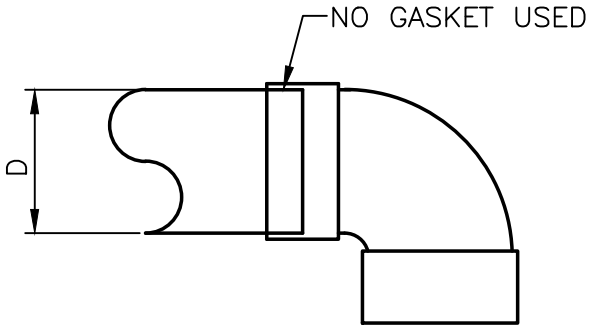


TYPE 60A TRAP

1. TRAP TO BE MADE OF GALVANIZED SHEET METAL. MINIMUM THICKNESS 18 GA.

2. ALL JOINTS TO BE SEAMED, SPOT WELDED, AND SOLDERED OR CONTINUOUSLY BUTT–WELDED.

3. EXTERIOR WELDS SHALL BE GROUND SMOOTH.



PVC BELL ELBOW TRAP

1. 6" OR 8" WITH GASKETS REMOVED.

NOTES:

1. DIMENSION "D" IS NOMINAL DIAMETER OF OUTLET PIPE.

APPROVED BY

DIRECTOR OF ENGINEERING SERVICES DAN BULLER, P.E.

ADOPTED: _____
REVISED: 04/2025
SUPERSEDES: 01/2017
CHECKED BY: XXX
SCALE: NTS
REVISED BY: XXX

OUTLET TRAP

ENGINEERING SERVICES
CITY OF SPOKANE, WASHINGTON

STANDARD PLAN No. **B–120**