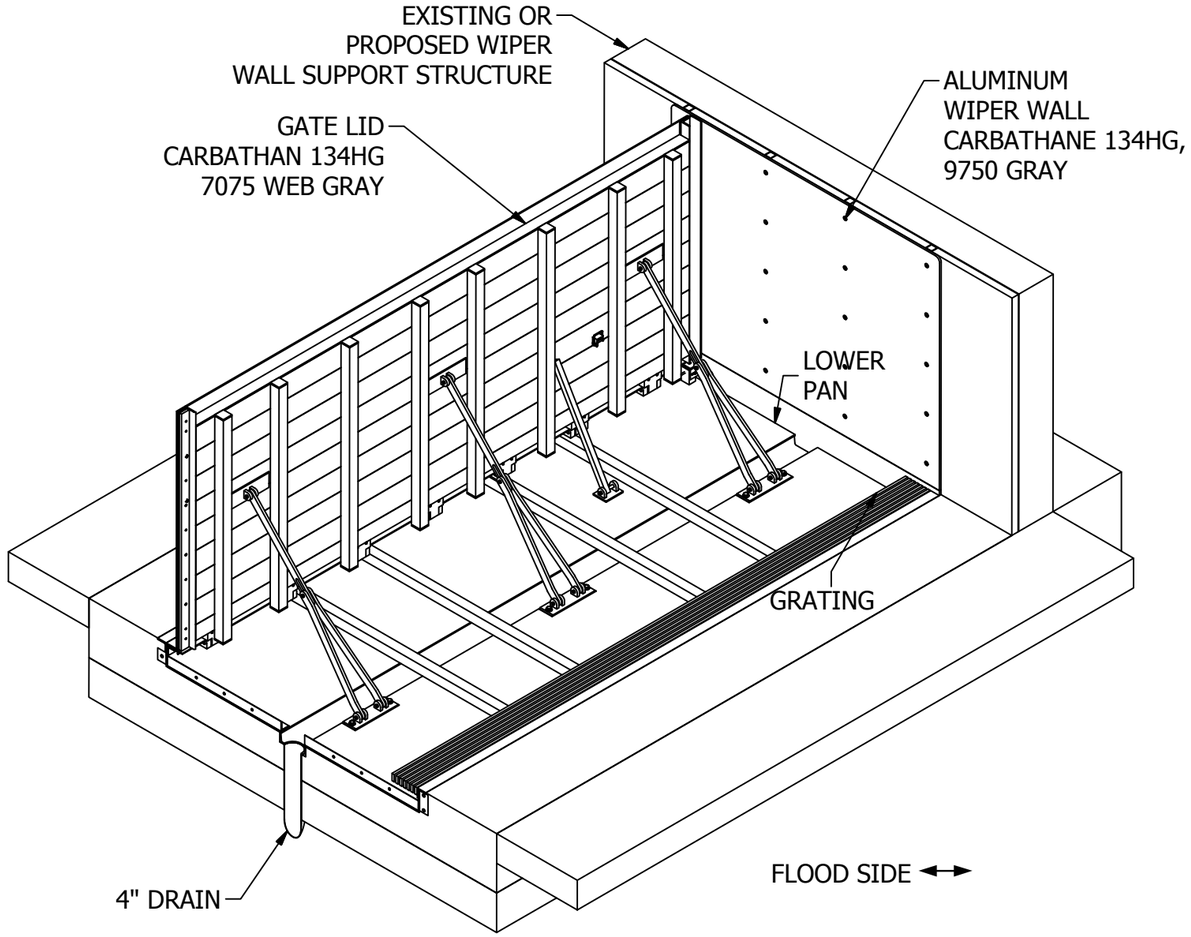


STRUCTURAL SPECIFICATIONS:

1. FLOODGATE MATERIAL TO BE ALUMINUM AS FOLLOWS:
   LID - 5" x 2 1/2" x 1/8" ALUM EXTRUSIONS - GRADE 6005-T5 MIN. F_Y=35 KSI
   LID AND PAN - 2" x 2" x 1/4" ALUM TUBING - GRADE 6061 MIN. F_Y=40 KSI
   PAN - 1/4" SMOOTH ALUM PLATE - GRADE 5052 MIN. F_Y=30 KSI
   ALUM FLAT BARS, STRUCTURAL ANGLES, HINGES GRADE 6061-T6 MIN. F_Y=40 KSI
   ALUM CHANNELS - 4" x 2" x 1/4" VERTICAL & 6" x 2" x 1/4" HORIZONTAL.
2. HINGE BOLTS, PINS, AND MACHINE SCREWS TO BE STAINLESS STEEL - GRADE 304, MIN. F_Y=90 KSI.
3. RETENTION ARM ANCHOR BOLTS SHALL BE STAINLESS STEEL STANDARD THREAD BOLTS SET IN VINYLESTER BASED ADHESIVE CONTAINED IN A GLASS CAPSULE, INSTALLED PER SIMPSON STRONG TIE SPECIFICATIONS.
4. ALUMINUM TO BE WELDED WITH ALUMINUM WIRE - PER 4043 AWS A5.10 3/64.
5. GROUT TO BE COMMERCIAL GRADE NON-SHRINKING GROUT.
6. ALL WELDS REQUIRED FOR STRUCTURAL STRENGTH OF THE LID OR PAN ARE CALLED OUT ON THESE DRAWINGS. ALL OTHER WELDING, NOT SHOWN OR CALLED OUT ON THESE DRAWINGS, ARE ESSENTIALLY NON-STRUCTURAL WELDS OR WELDS WITH NEGLIGIBLE LOADS AND RESULTING STRESSES. EXAMPLES OF SUCH WELDS ARE AT SEAMS, SIDES, PAN TROUGH, AND LID TRIM ANGLES. THESE WELDS ARE TO BE SIZED BY THE FABRICATOR, TAKING INTO CONSIDERATION ASSEMBLY, TRANSPORT LIFT AND CONTINUITY REQUIREMENTS. THEY MUST BE APPROVED BY FLOODBREAK.
7. ALL CONCRETE FOUNDATION POURS AND THEIR TIE-DOWNS TO EXISTING FOUNDATIONS SHOWN IN THESE DRAWINGS ARE FOR ILLUSTRATIVE PURPOSES ONLY. DESIGN OF THE CONCRETE FOUNDATION SLABS IS BY OTHERS. DESIGN AND SUPERVISION OF INSTALLATION OF RETENTION ARMS, ANCHOR BOLTS, AND GATE ANCHORS ARE BY FLOODBREAK. ALL CONCRETE TO BE 4000 PSI MINIMUM 28 DAY STRENGTH. REINFORCED IN EACH DIRECTION WITH ASTM - A615 MIN. F_Y=60 KSI. SPECIAL ATTENTION SHALL BE PAID TO PROPER SUPPORT OF RETENTION ARM ANCHOR BOLTS INTO THE SUPPORTING CONCRETE.
8. ALL GASKET MATERIAL TO BE EPDM RUBBER.
9. ALL DIMENSIONS ARE IN FEET AND INCHES.

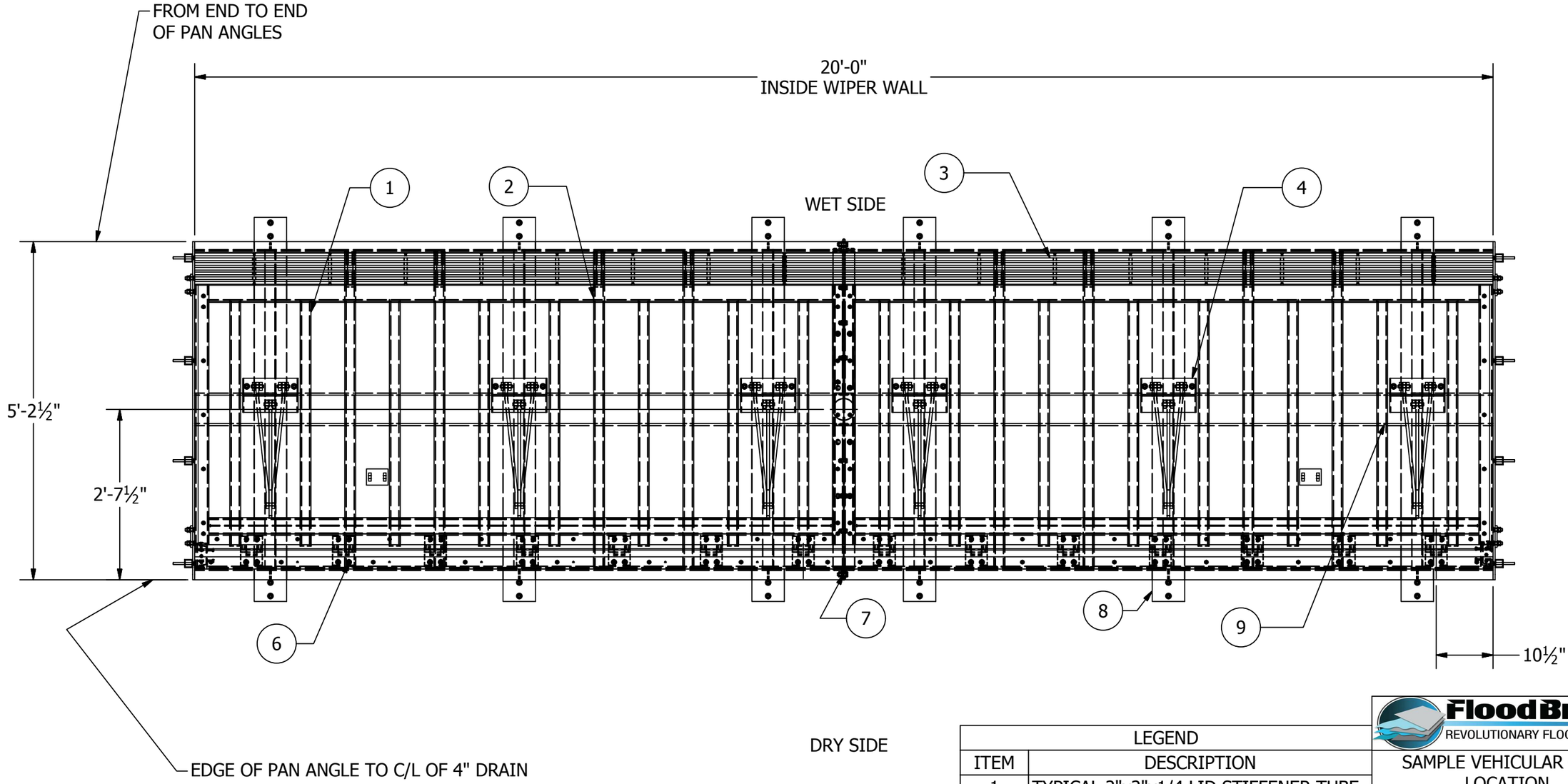
TYPICAL VEHICULAR GATE

NOTE: LAYOUT, SIZES AND DETAIL ARE GATE-SPECIFIC. THIS VIEW SHOWN IS SECTIONED IN HALF. (SCALE 1:25)

GENERAL ISOMETRIC LAYOUT

FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE LOCATION VEHICULAR GATE 20"-0" x 4'-0"	
VG #SAMPLE	
PASS 1	
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 1 OF 9	



TYP LID AND PAN LAYOUT
SCALE 1:20

LEGEND	
ITEM	DESCRIPTION
1	TYPICAL 2"x2"x1/4 LID STIFFENER TUBE
2	TYPICAL 2"x2"x1/4 PAN STIFFENER TUBE
3	TYPICAL GRATING
4	TYPICAL PAN ANCHOR PLATE
5	TYPICAL LID ANCHOR PLATE AND RETENTION ARMS
6	TYPICAL HINGE DETAIL
7	TYPICAL PAN SPLICE DETAIL
8	TYPICAL 4" VERTICAL AND 6" HORIZONTAL INSTALL BRACKETS
9	6"x2" CONTINUOUS DRAIN TROUGH

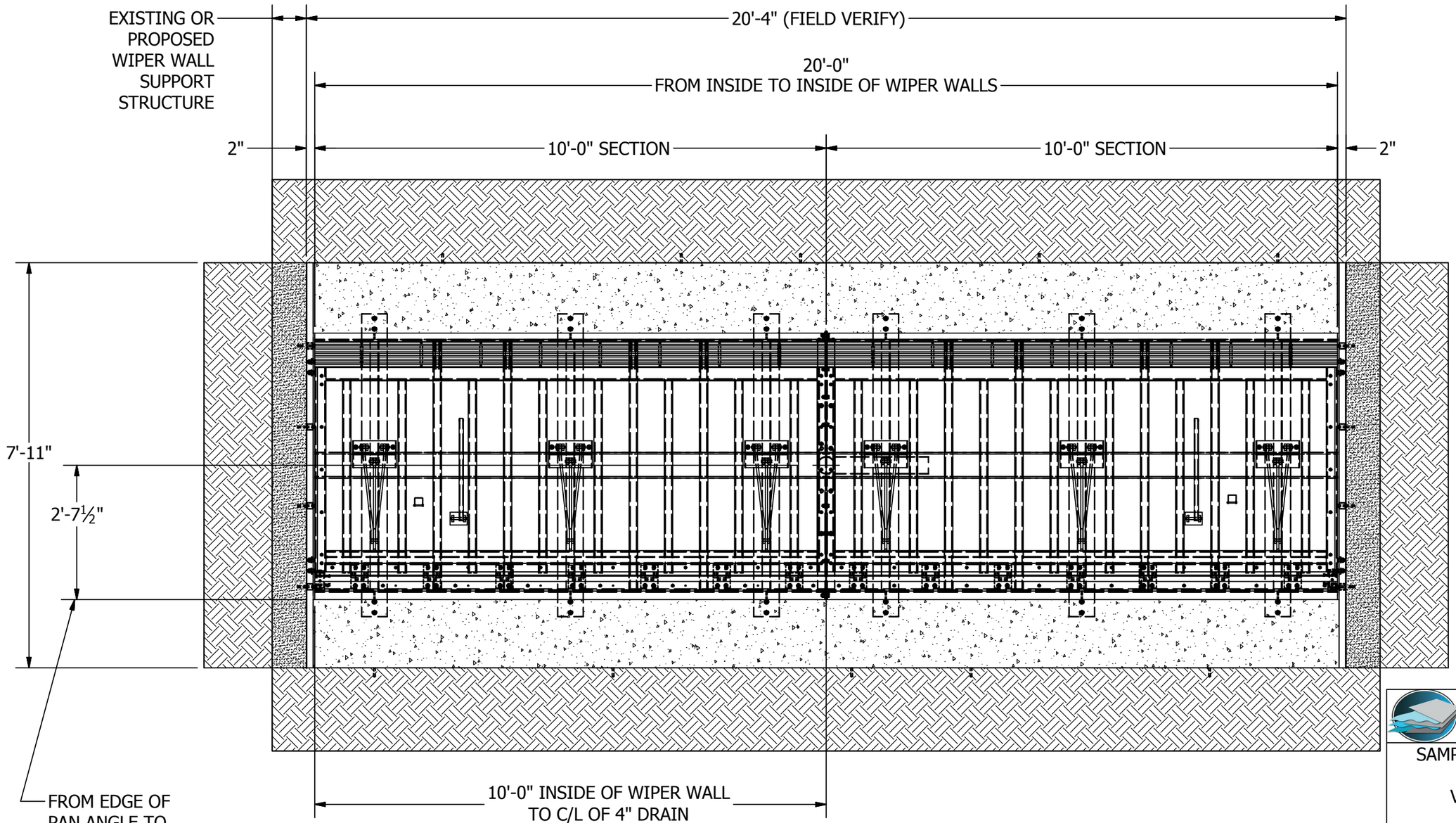
FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

VG #SAMPLE

PASS 1

SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 2 OF 9	



GENERAL FORMULA FOR SET-DOWN:

GATE HEIGHT + 47"± 1" = WIDTH

GATE LENGTH + 4" = LENGTH

12" TOPPING SLAB = DEPTH

LID AND PAN INSTALLATION VIEW

(WITH CONCRETE SET-DOWN)

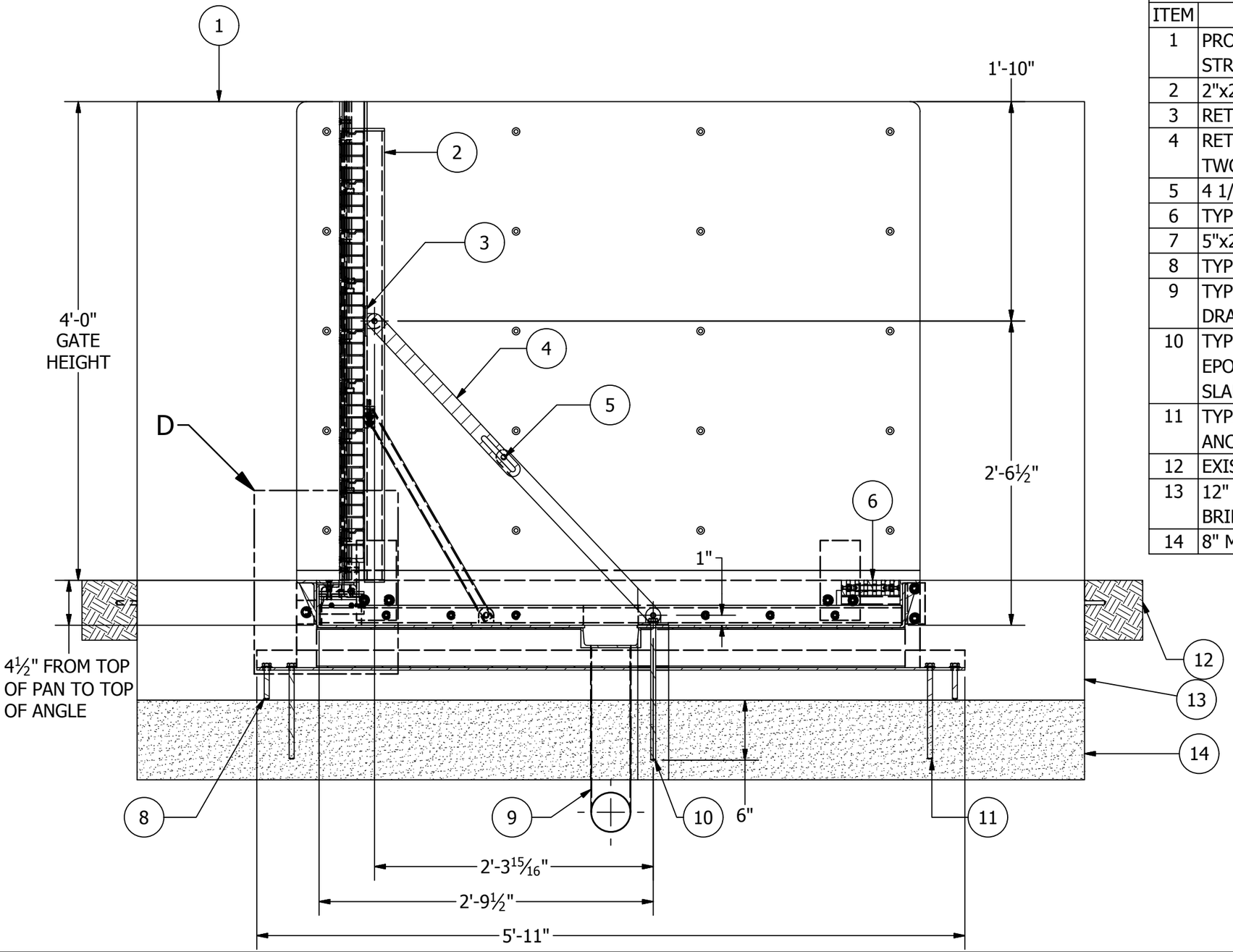
SCALE 1:25

FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

VG #SAMPLE	
PASS 1	
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 3 OF 9	

TYPICAL CROSS-SECTION OF GATE ASSEMBLY

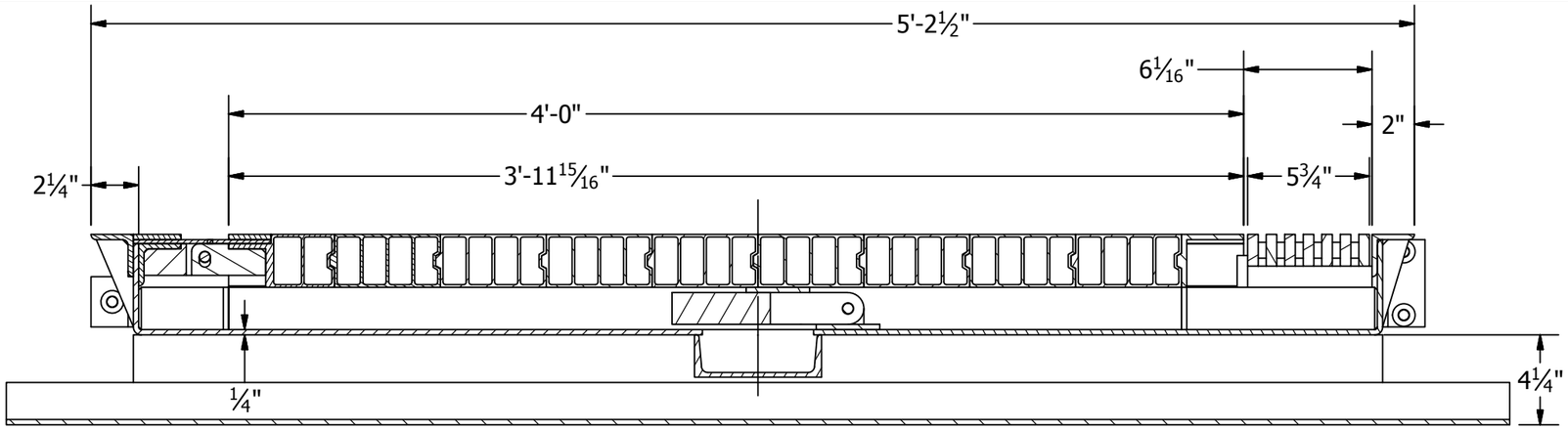


LEGEND	
ITEM	DESCRIPTION
1	PROPOSED OR EXISTING WIPER WALL SUPPORT STRUCTURE (BY OTHERS)
2	2"x2"x1/4" LID STIFFENER TUBE
3	RETENTION ARM ANCHOR PLATE
4	RETENTION ARMS: 1 1/2"x1/2" FLAT STOCK, ONE UPPER, TWO LOWER.
5	4 1/2"x1/2" SLOT W/ 1/2" STAINLESS STEEL PIN
6	TYPICAL GRATING
7	5"x2 1/2"x1/8" EXTRUDED RIBBED PANELS
8	TYPICAL 1/2" LEVELING BOLTS
9	TYPICAL 4" DRAIN INSTALLED IN 6"x2" CONTINUOUS DRAIN TROUGH
10	TYPICAL 1/2" STAINLESS STEEL ANCHOR BOLTS SET IN EPOXY AND ANCHORED INTO CONCRETE STRUCTURAL SLAB AS SHOWN
11	TYPICAL 1/2" STAINLESS STEEL INSTALLATION BOLTS ANCHORED INTO CONCRETE STRUCTURAL SLAB
12	EXISTING SURFACE
13	12" MINIMUM TOPPING SLAB ENVELOPES PAN AND BRINGS IT UP TO GRADE (FIELD VERIFY SET-DOWN)
14	8" MINIMUM CONCRETE STRUCTURAL SLAB (BY OTHERS)

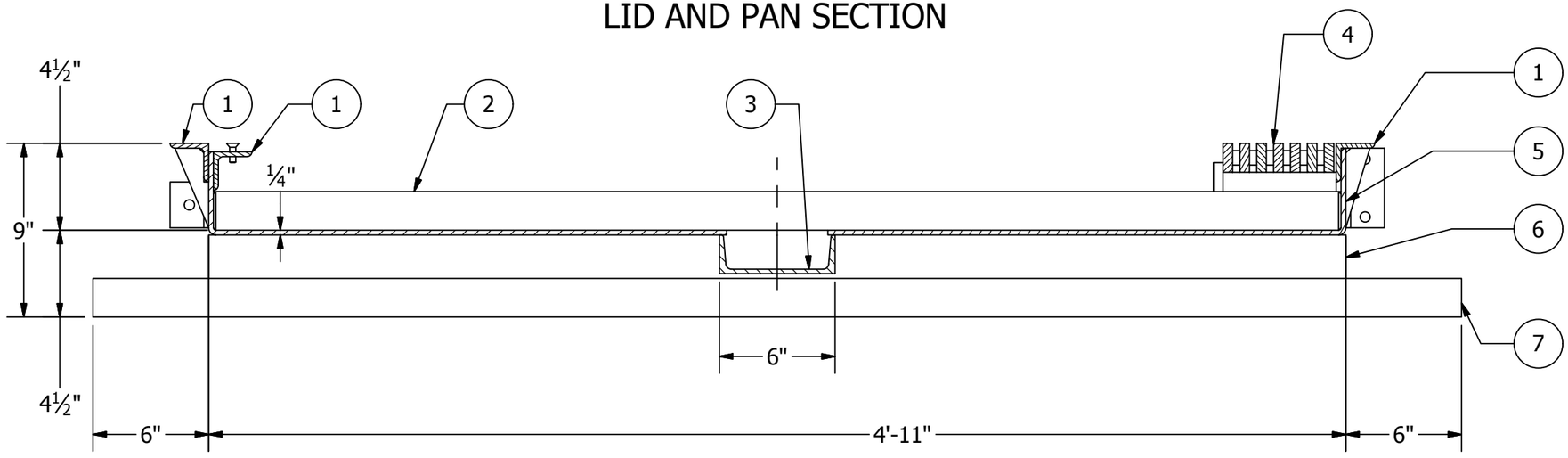
FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

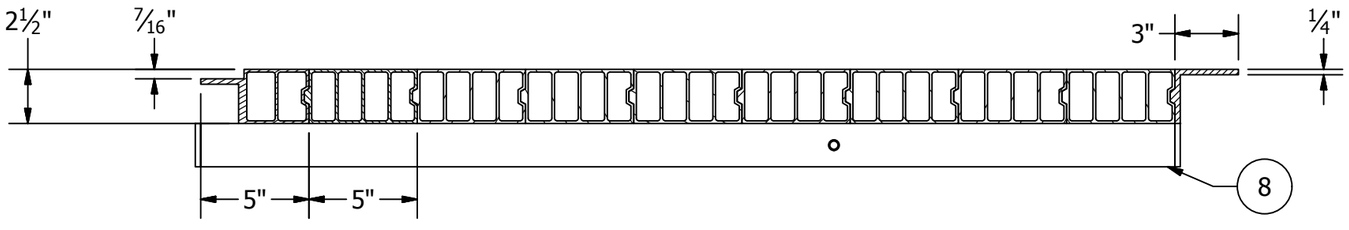
VG #SAMPLE	
PASS 1	
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 4 OF 9	



LID AND PAN SECTION



PAN SECTION



LID SECTION

LEGEND	
ITEM	DESCRIPTION
1	TYPICAL 2"x2"x1/4" ANGLE
2	TYPICAL 2"x2"x1/4 PAN STIFFENER TUBE
3	6"x2" CONTINUOUS DRAIN TROUGH
4	TYPICAL GRATING
5	PAN
6	4"x2"x1/4" VERTICAL CHANNEL INSTALL BRACKET
7	6"x2"x1/4" HORIZONTAL CHANNEL INSTALL BRACKET
8	TYPICAL 2"x2"x1/4 LID STIFFENER TUBE

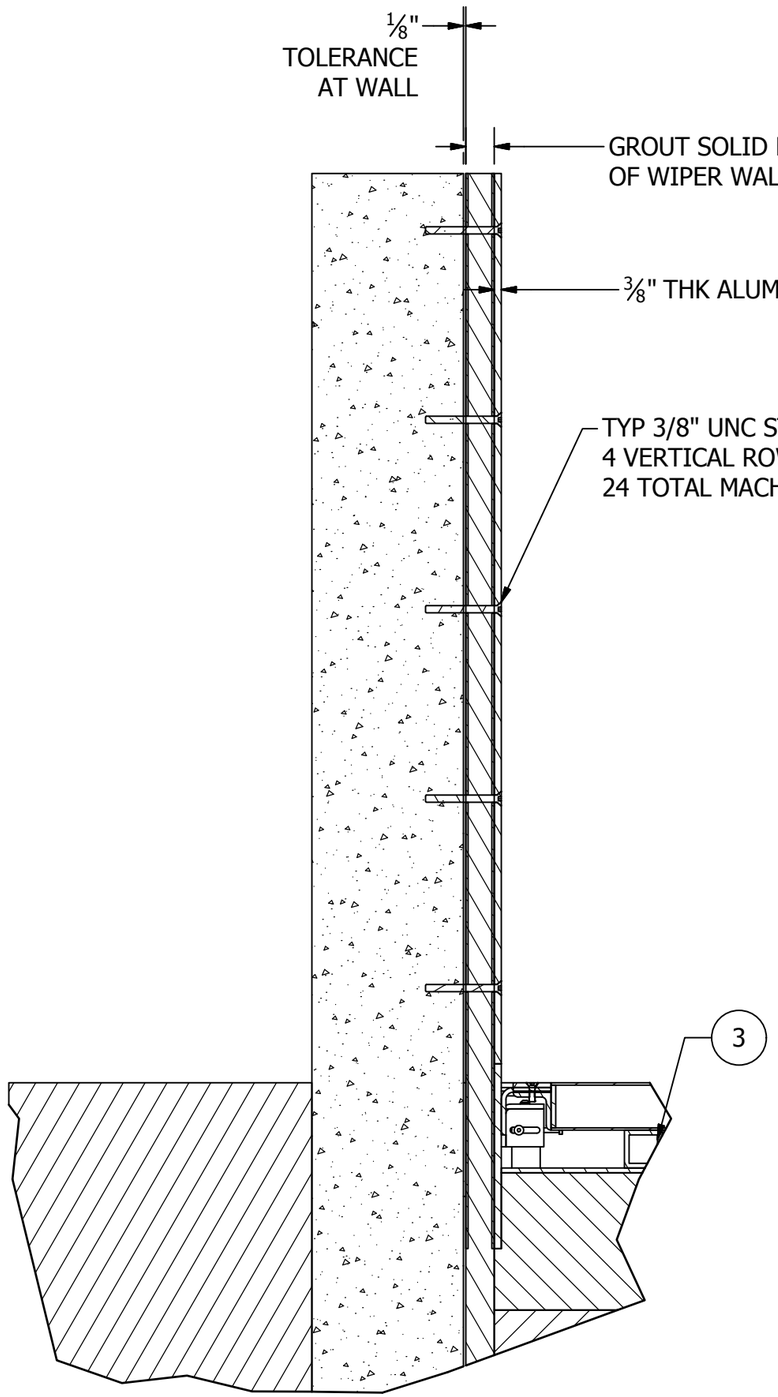
FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

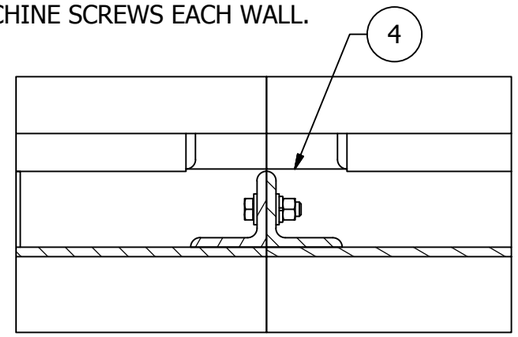
VG #SAMPLE

PASS 1

SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 5 OF 9	

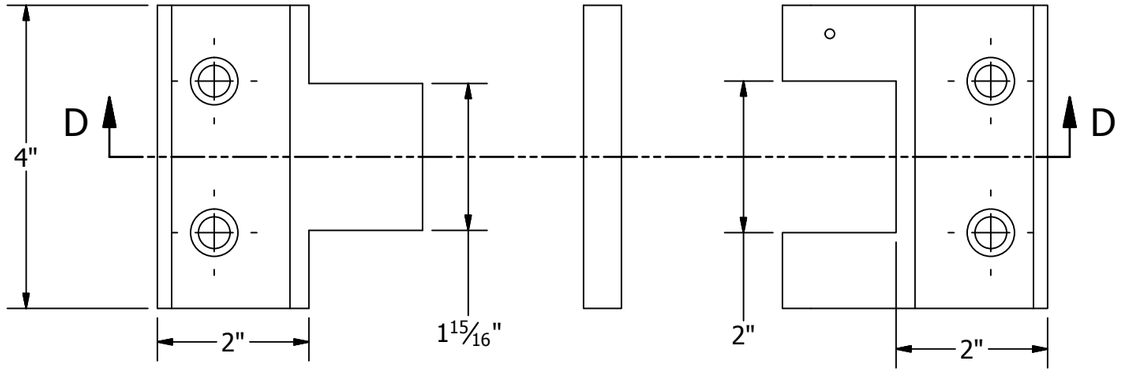


TYP WIPER WALL FRONT SECTION

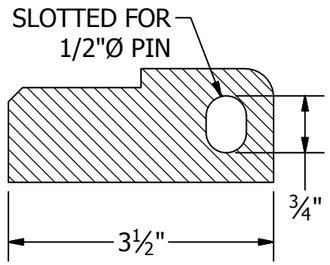


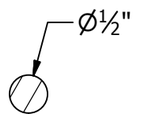
TYP PAN SPLICE
JOINT DETAIL

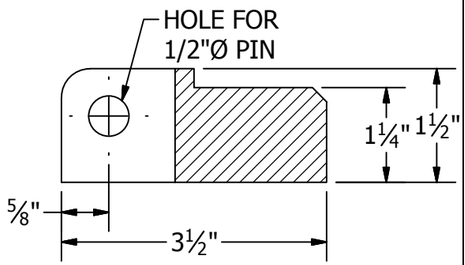
NOTE: 2"x2"x1/4" ALUMINUM
ANGLE BACK-TO-BACK BOLTED
AT 6" 0.C. & WELDED TO PAN FLOOR

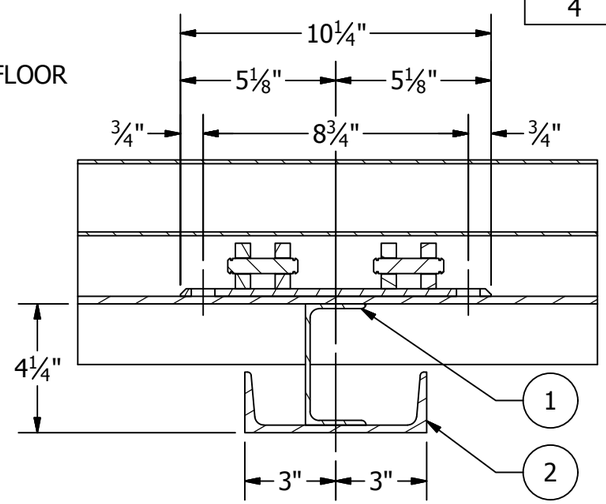


HINGE SECTION D-D
SCALE 1:2









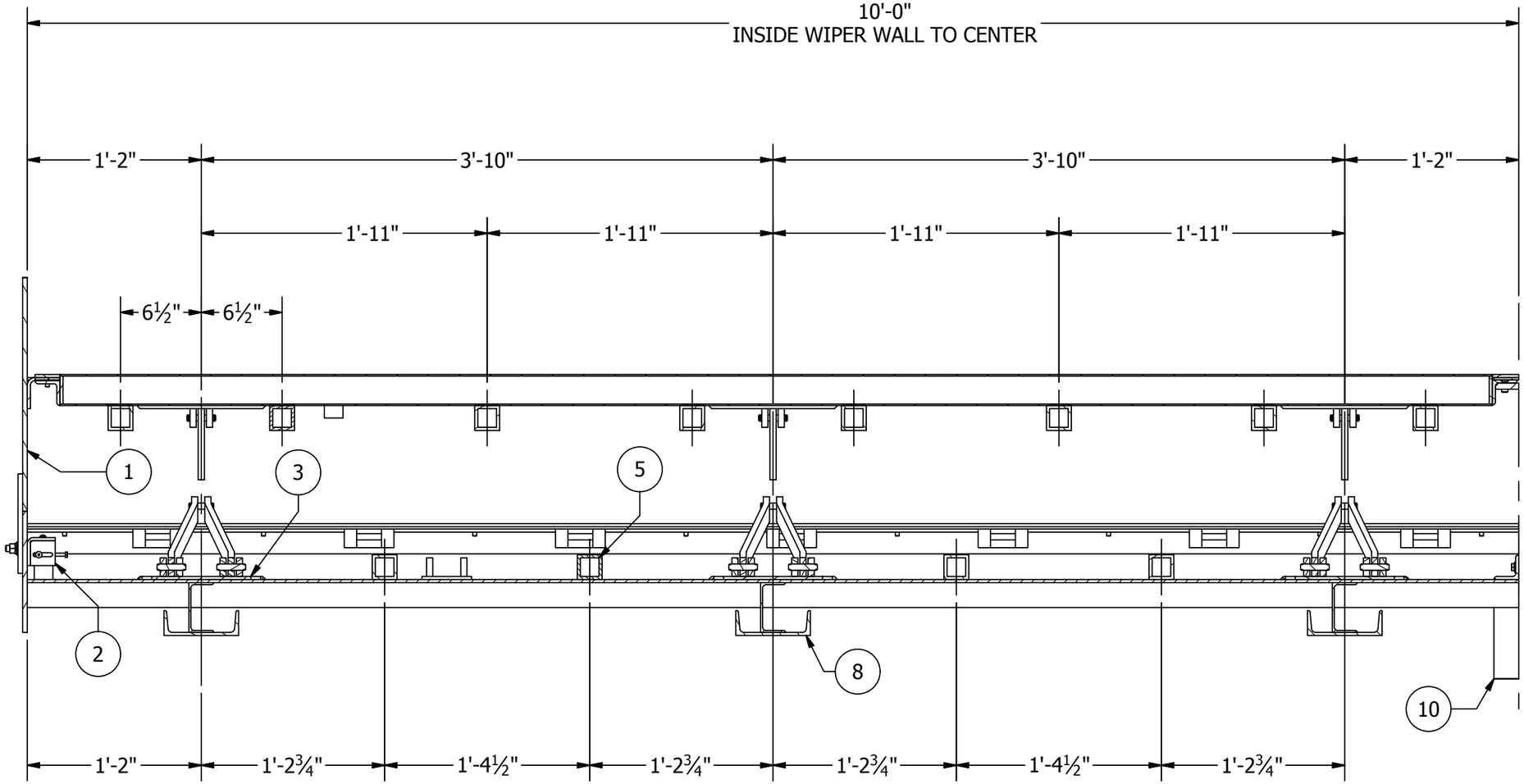
TYP PAN COMPONENT ASSY

LEGEND	
ITEM	DESCRIPTION
1	4"x2"x1/4" VERTICAL INSTALL CHANNEL
2	6"x2"x1/4" HORIZONTAL INSTALL CHANNEL
3	TYPICAL 2"x2"x1/4" PAN STIFFENER TUBE
4	TYPICAL 2"x2"x1/4" ANGLE

FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

VG #SAMPLE	
PASS 1	
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 6 OF 9	



LID AND PAN COMPONENT LAYOUT

(NOTE: THIS VIEW IS SECTIONED IN HALF. ALL DIMS SYMMETRICAL FROM EDGE OF WIPER WALLS)

LEGEND	
ITEM	DESCRIPTION
1	WIPER WALL
2	PRESSURE PLATE
3	PAN ANCHOR PLATE
4	LID W/ TYP 5"x2 1/2"x1/8" EXTRUDED PANELS
5	TYP 2"x2"x1/4" PAN STIFFENER
6	LID ANCHOR PLATE
7	TYP 2"x2"x1/4" LID STIFFENER
8	TYP 4" VERTICAL AND 6" HORIZONTAL INSTALL BRACKETS
9	TYP RETENTION ARMS
10	4" DRAIN INSTALLED TO 6"x2" DRAIN TROUGH

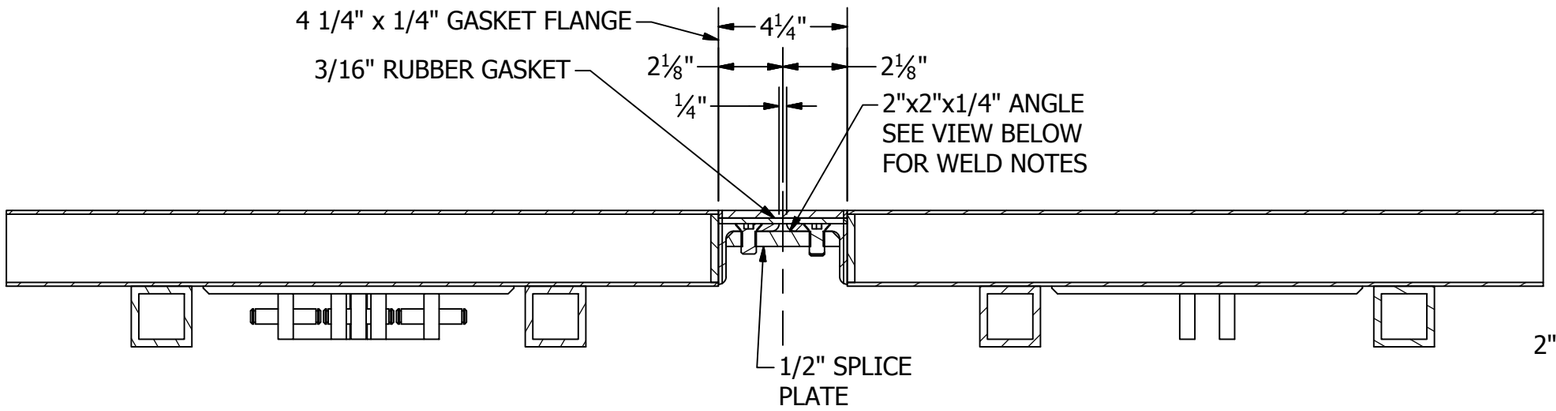
FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

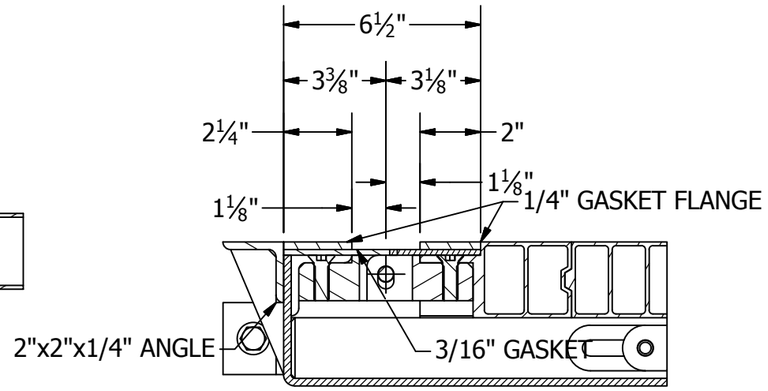
VG #SAMPLE

PASS 1

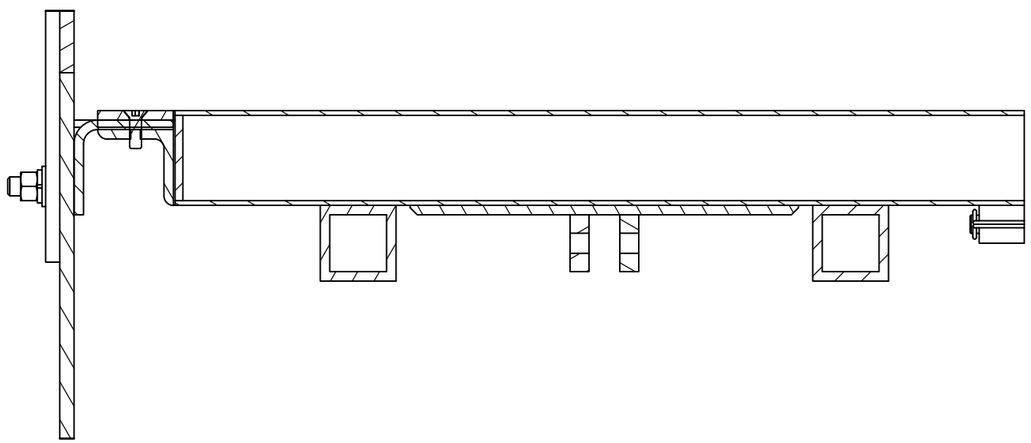
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 7 OF 9	



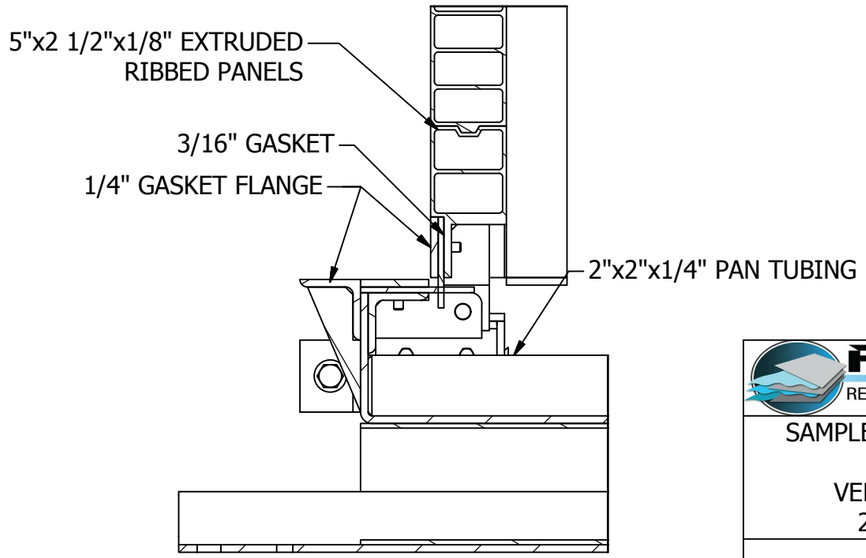
TYPICAL LID AT SPLICE



HINGE DETAIL CLOSED



TYPICAL LID AT WIPER WALL

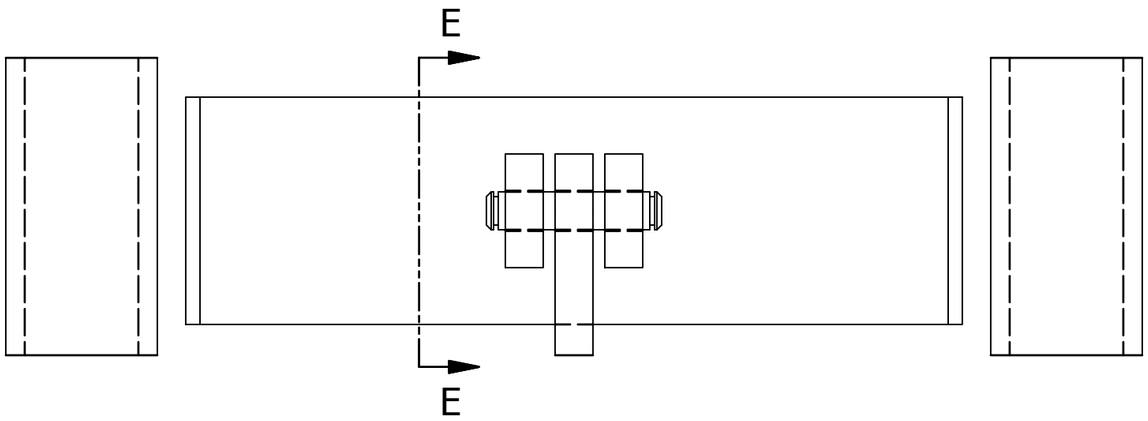


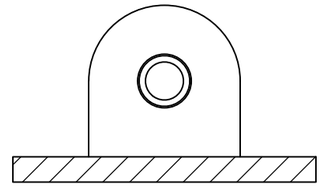
DETAIL D
HINGE OPEN

FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

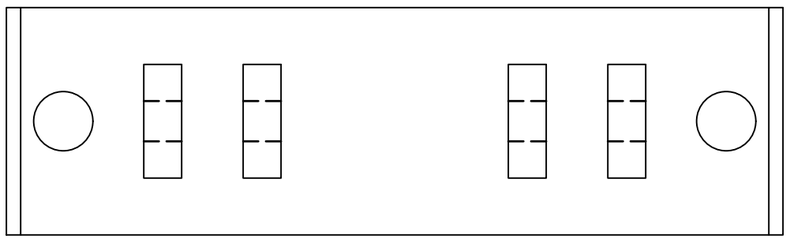
VG #SAMPLE	
PASS 1	
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 8 OF 9	





SECTION E-E
SCALE 2:3

TYPICAL LID ANCHOR YOKE PLATE DETAIL



TYPICAL PAN ANCHOR PLATE DETAIL

FloodBreak
REVOLUTIONARY FLOOD CONTROL

SAMPLE VEHICULAR GATE
LOCATION
VEHICULAR GATE
20"-0" x 4'-0"

VG #SAMPLE	
PASS 1	
SCALE	VARIES
DRAWN	A. JOLLY
CHECKED	N. EASTMAN
APPROVED	J. KALLABY
DATE	6/8/2015
SHEET 9 OF 9	