

**STRUCTURAL NOTES**

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f'_c = 4000$  psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-05 BUILDING CODE
5. LOADS: STANDARD DUTY LOADING, 22,500 lbs  
ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"  
30% IMPACT FOR LESS THAN 2'-0" SOIL COVER  
SOIL DENSITY 120 pcf  
40 pcf E.F.P. LATERAL SOIL PRESSURE ABOVE WATERTABLE  
80 pcf E.F.P. LATERAL SOIL PRESSURE BELOW WATERTABLE  
230 psf LIVE LOAD SURCHARGE  
NO LIVE LOAD SURCHARGE FOR SOIL COVER > 8'-0"  
TOP OF VAULT AT FINISHED GRADE  
WATERTABLE 5'-0" BELOW FINISHED GRADE (ASSUMED)

**NOTE:**  
PENTA HEAD BOLT IS RECESSED  
MINIMUM  $\frac{1}{8}$ " BELOW PLATE SURFACE.  
  
PENTA HEAD BOLT TO BE LIBERALLY  
COATED WITH ANTI-SEIZE COMPOUND.

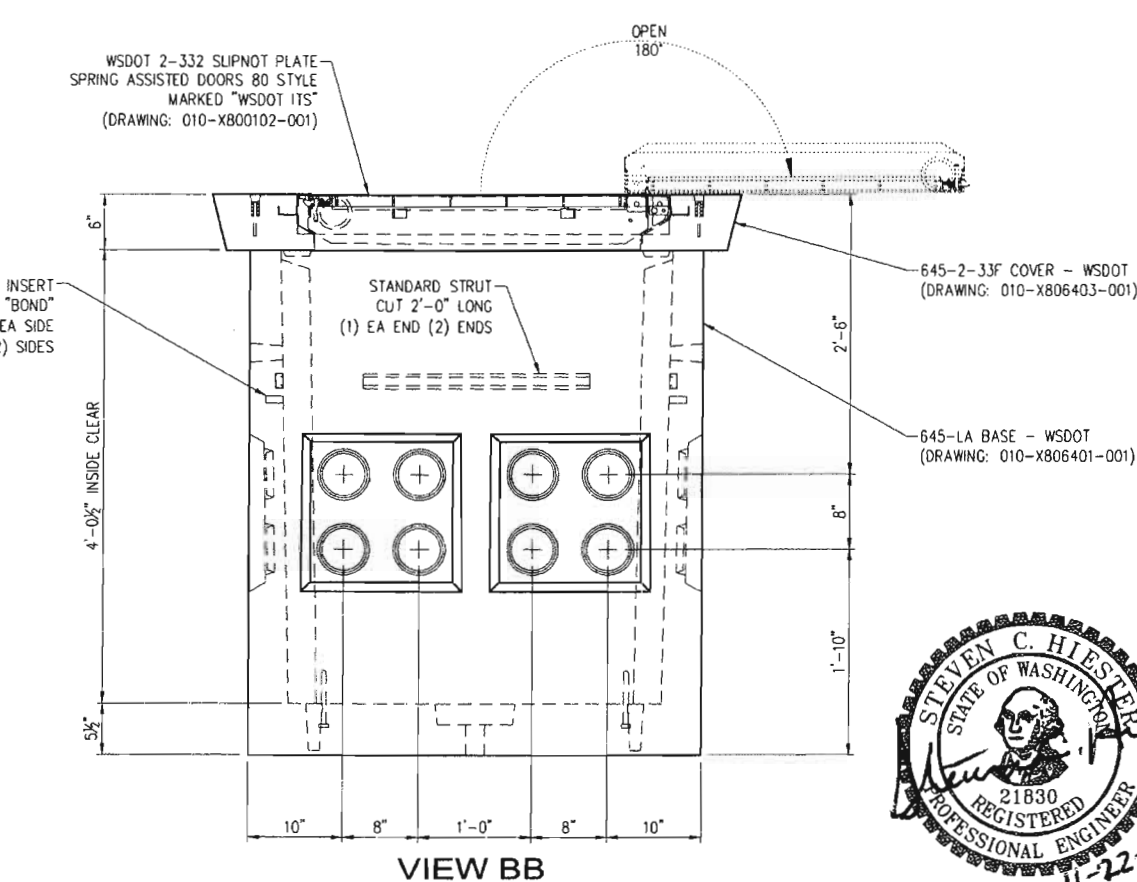
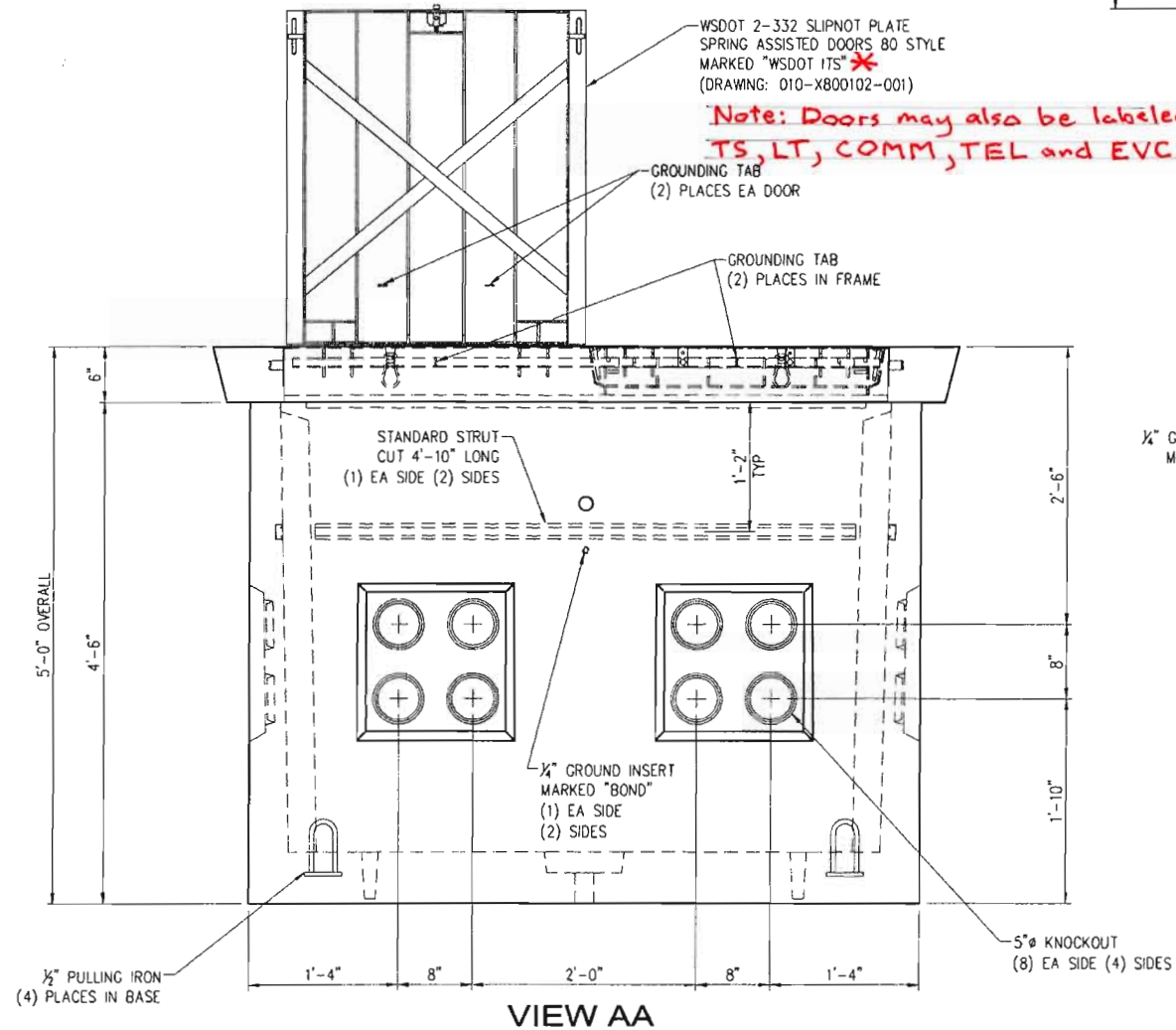
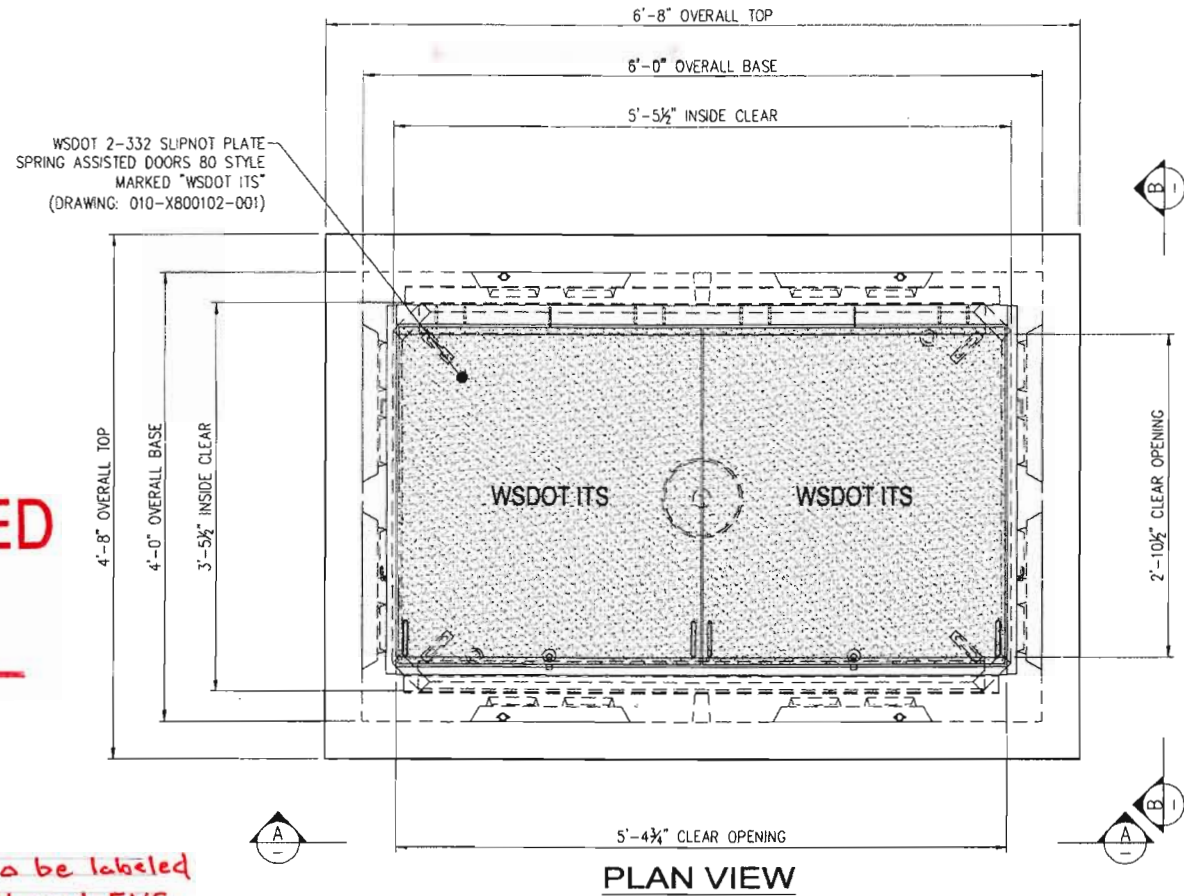
**GENERAL NOTES**

1. CUSTOMER TO:  
VERIFY ALL VAULT FEATURES  
DO ALL GROUTING & EPOXY OF VAULTS, HOLES & SEAMS  
(USING NON-SHRINK GROUT)  
SUPPLY & INSTALL ALL PIPING & ELECTRICAL  
INSTALL ALL LADDERS  
DO ALL PAINTING

**SHIPPING WEIGHT**

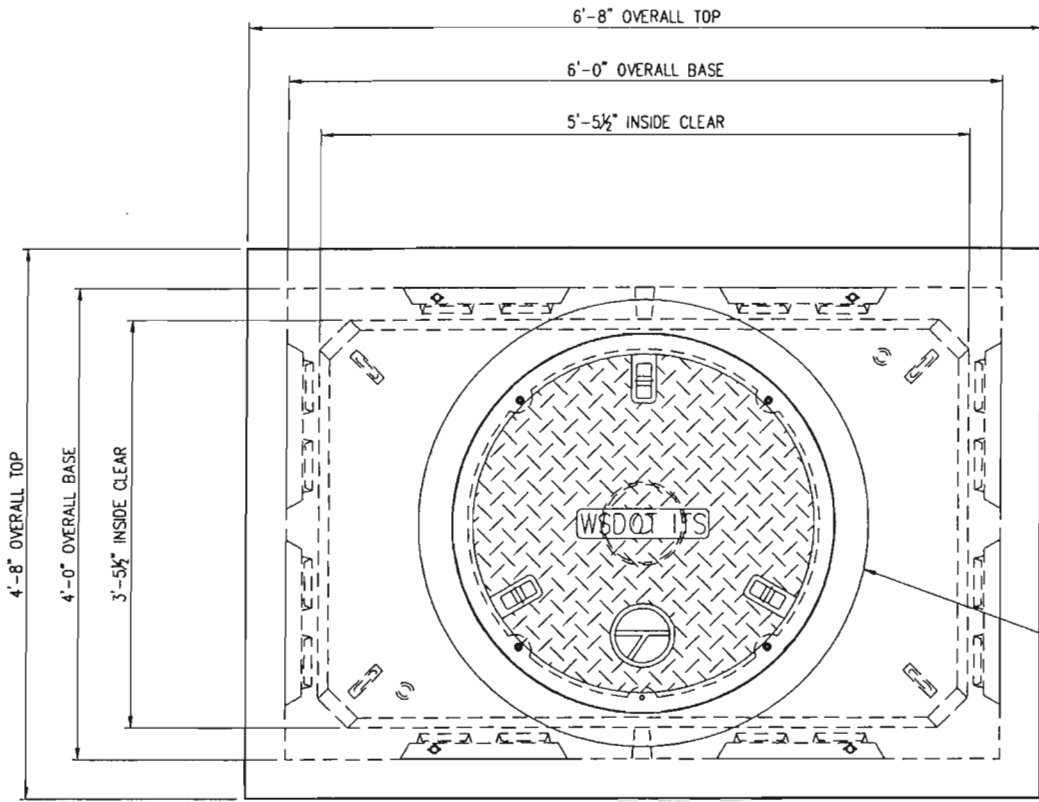
645-2-33 80F COVER:	1,375 lbs
645 CABLE VAULT BASE:	4,770 lbs
<b>TOTAL:</b>	<b>6,145 lbs</b>

**APPROVED AS NOTED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE December 2, 2010 TAT



D	VIEW AA: REVISED DOOR TO REFLECT NEW REDESIGN	11/22/10	JG	THIS DOCUMENT IS THE PROPERTY OF Oldcastle PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved.	SALES	DATE	4/6/10	645 STANDARD DUTY CABLE VAULT CUSTOMER LAYOUT CUSTOMER STANDARD PRODUCT	CUSTOMER WASHINGTON STATE DOT DRAWING NUMBER 010-X806410-001	SHEET 1 OF 1 REVISION D
C	CHANGED DOOR TO SHOW SOLID PLATE	8/16/10	JG		DESIGNER	WEIGHT	6,345 lbs			
LTR.	REVISION	DATE	BY	CHECKED	CALC NO					





PLAN VIEW

**NOTE:**  
 PENTA HEAD BOLT IS RECESSED  
 MINIMUM 1/8" BELOW PLATE SURFACE.  
 PENTA HEAD BOLT TO BE LIBERALLY  
 COATED WITH ANTI-SEIZE COMPOUND.

EAST JORDAN IRON WORKS CAST IRON  
 TOP FLANGE 36" FRAME AND COVER  
 #2688Z2PT & 2688 APT DI

**APPROVED AS NOTED**  
 Washington State  
 Department of Transportation  
 HQ Traffic Operations Office  
 DATE September 27, 2010 TAT

**STRUCTURAL NOTES**

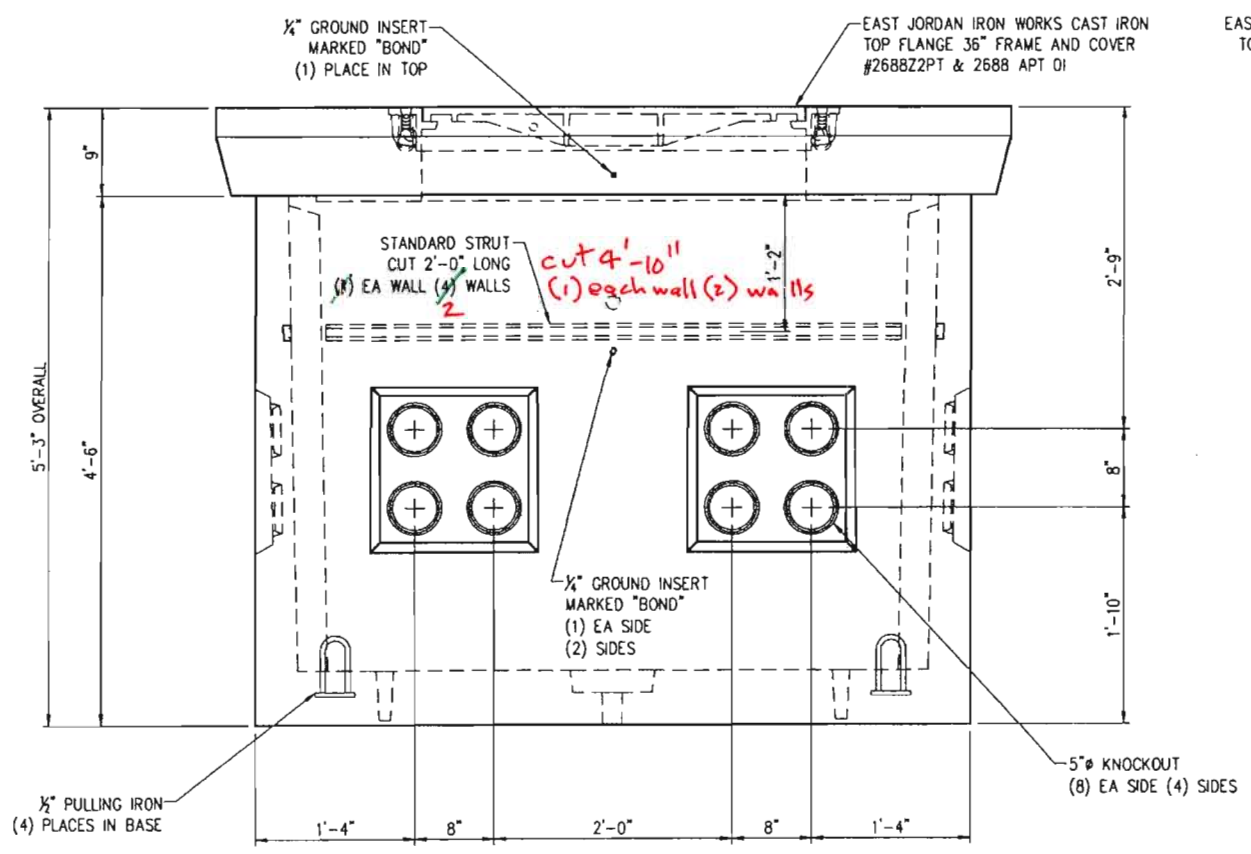
1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f_c = 4000$  psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-05 BUILDING CODE
5. LOADS: HEAVY DUTY LOADING, 46,000 lbs  
 ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"  
 30% IMPACT FOR LESS THAN 2'-0" SOIL COVER  
 SOIL DENSITY 120 pcf  
 40 pcf E.F.P. LATERAL SOIL PRESSURE ABOVE WATERTABLE  
 80 pcf E.F.P. LATERAL SOIL PRESSURE BELOW WATERTABLE  
 230 psf LIVE LOAD SURCHARGE  
 NO LIVE LOAD SURCHARGE FOR SOIL COVER > 8'-0"  
 TOP OF VAULT AT FINISHED GRADE  
 WATERTABLE 5'-0" BELOW FINISHED GRADE (ASSUMED)

**GENERAL NOTES**

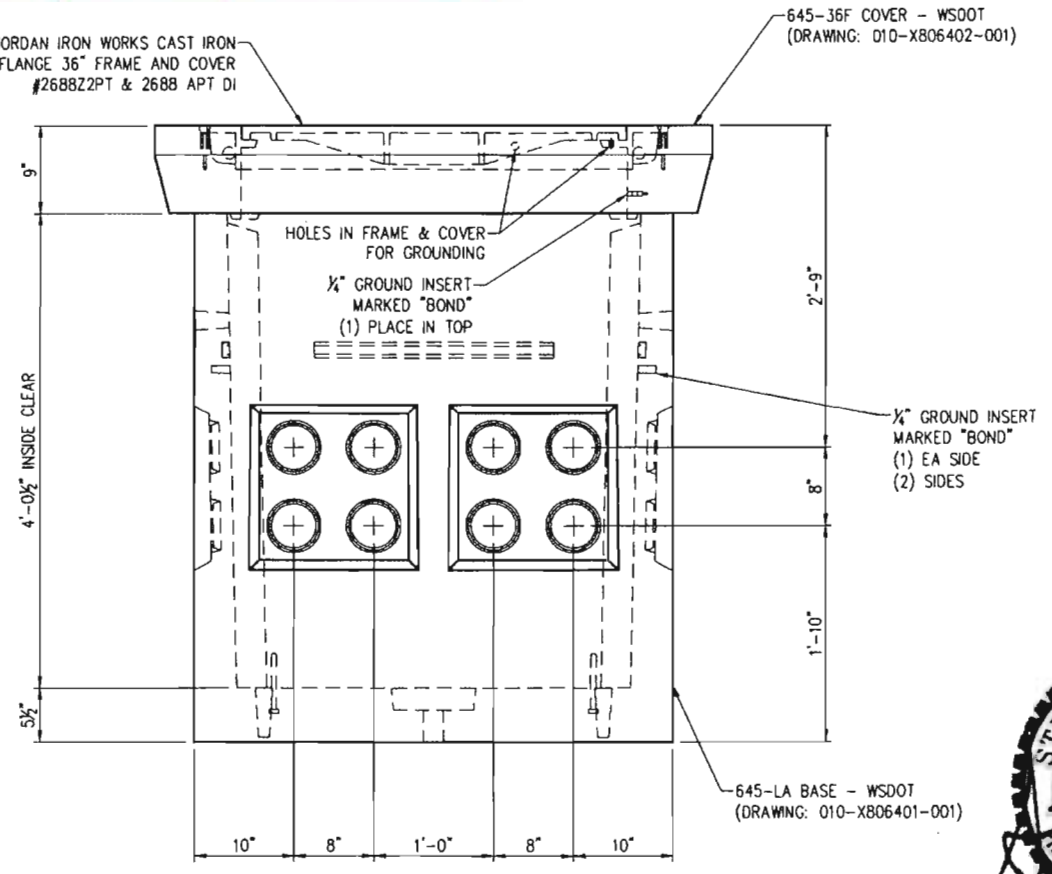
1. CUSTOMER TO:  
 VERIFY ALL VAULT FEATURES  
 DO ALL GROUTING & EPOXY OF VAULTS, HOLES & SEAMS  
 (USING NON-SHRINK GROUT)  
 SUPPLY & INSTALL ALL PIPING & ELECTRICAL  
 INSTALL ALL LADDERS  
 DO ALL PAINTING

**SHIPPING WEIGHT**

645-36F COVER:	3,170 lbs
645 CABLE VAULT BASE:	4,770 lbs
<b>TOTAL:</b>	<b>7,940 lbs</b>



VIEW AA



VIEW BB



B	CHANGED FRAME & COVER CALL OUT	8/5/10	JG	THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved.	SALES	DATE	4/6/10	645 HEAVY DUTY CABLE VAULT CUSTOMER LAYOUT  CUSTOMER STANDARD PRODUCT	CUSTOMER WASHINGTON STATE DOT DRAWING NUMBER 010-X0806410-002	SHEET 1 of 1 REVISION B	
A	ADD GROUND INSERT	7/6/10	JG		DESIGNER	JG	WEIGHT				7,940 lbs
LTR.	REVISION	DATE	BY		CHECKED		CALC NO				



**STRUCTURAL NOTES**

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f'c = 4000$  psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-05 BUILDING CODE
5. LOADS: STANDARD DUTY LOADING, 22,500 lbs  
ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"  
30% IMPACT FOR LESS THAN 2'-0" SOIL COVER  
SOIL DENSITY 120 pcf  
40 pcf E.F.P. LATERAL SOIL PRESSURE ABOVE WATERTABLE  
80 pcf E.F.P. LATERAL SOIL PRESSURE BELOW WATERTABLE  
230 psf LIVE LOAD SURCHARGE  
NO LIVE LOAD SURCHARGE FOR SOIL COVER > 8'-0"  
TOP OF VAULT AT FINISHED GRADE  
WATERTABLE 5'-0" BELOW FINISHED GRADE (ASSUMED)

**NOTE:**  
PENTA HEAD BOLT IS RECESSED  
MINIMUM  $\frac{1}{8}$ " BELOW PLATE SURFACE.  
  
PENTA HEAD BOLT TO BE LIBERALLY  
COATED WITH ANTI-SEIZE COMPOUND.

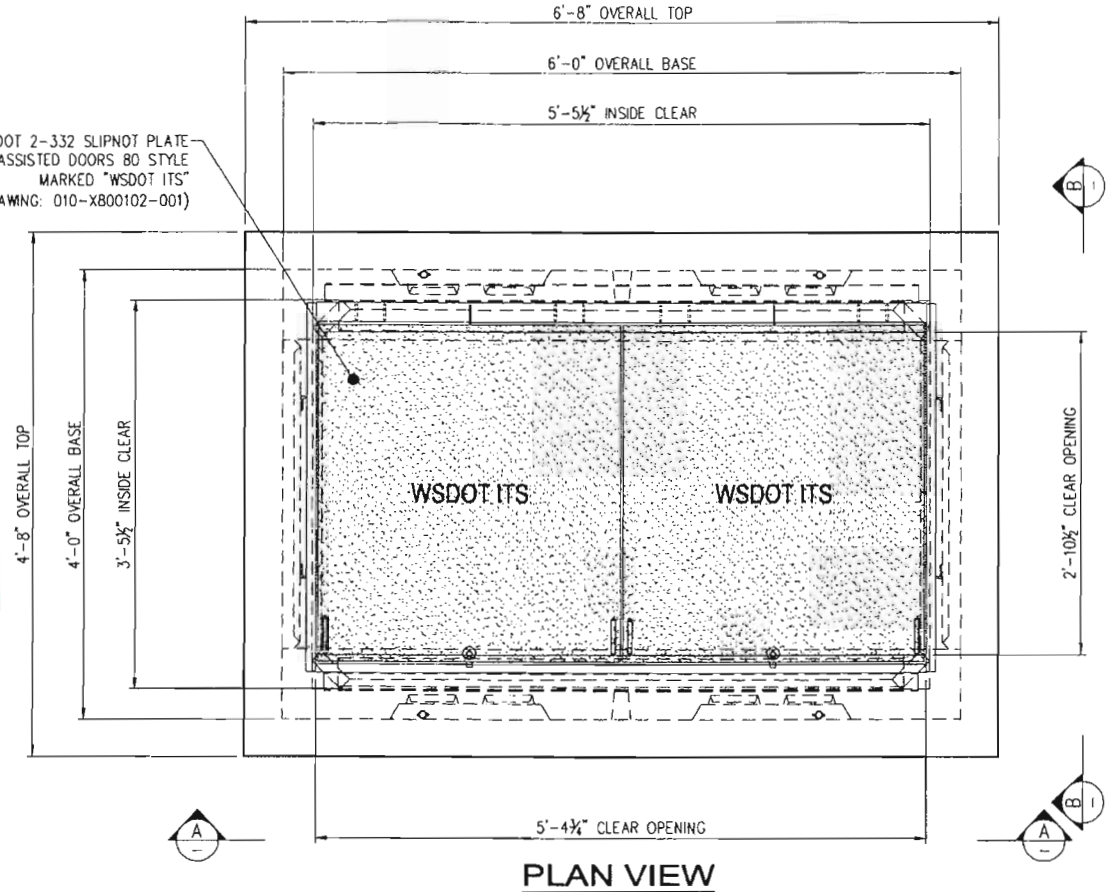
**GENERAL NOTES**

1. CUSTOMER TO:  
VERIFY ALL VAULT FEATURES  
DO ALL GROUTING & EPOXY OF VAULTS, HOLES & SEAMS  
(USING NON-SHRINK GROUT)  
SUPPLY & INSTALL ALL PIPING & ELECTRICAL  
INSTALL ALL LADDERS  
DO ALL PAINTING

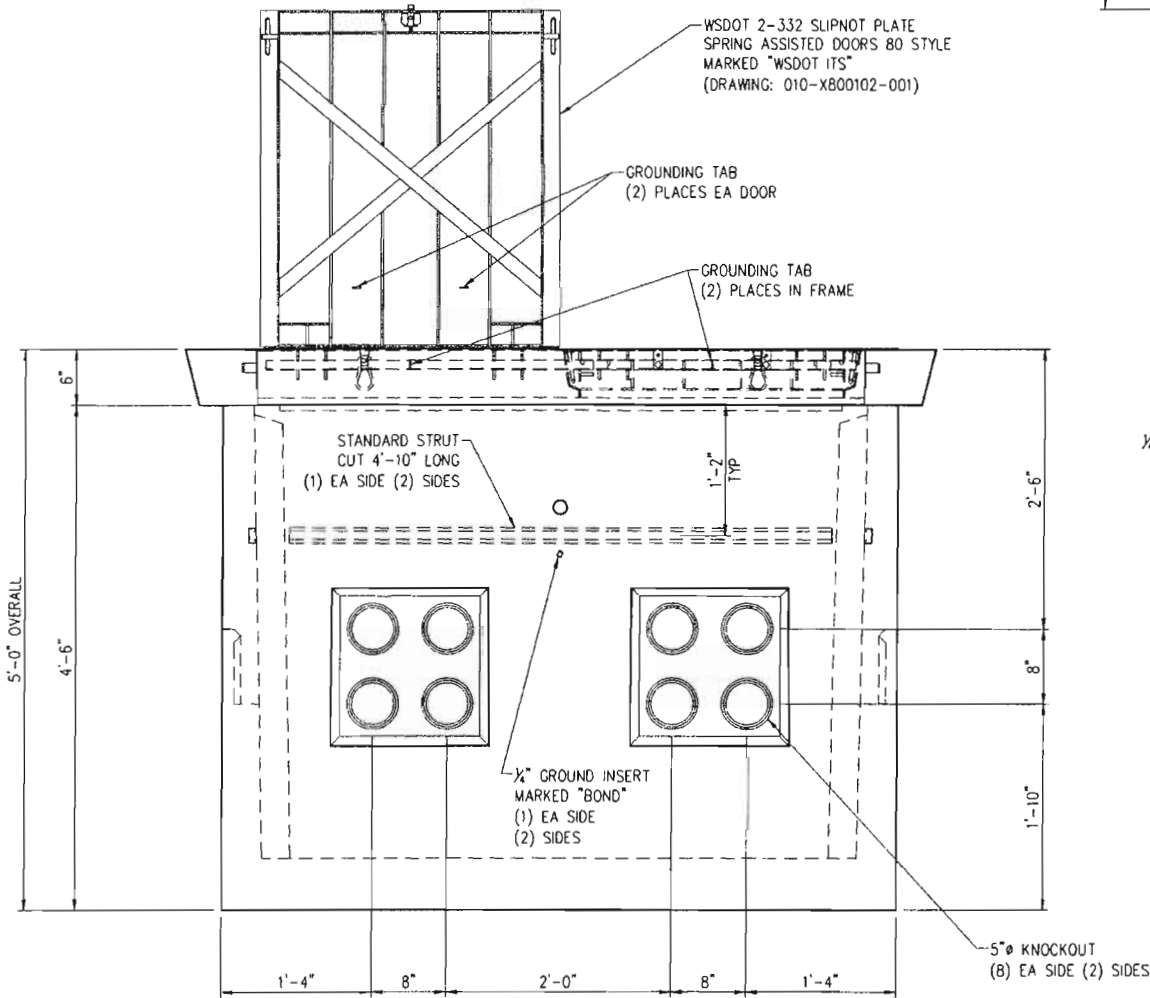
**SHIPPING WEIGHT**

645-2-33F COVER:	1,375 lbs
645 SPLIT CABLE VAULT BASE:	3,210 lbs
<b>TOTAL:</b>	<b>4,585 lbs</b>

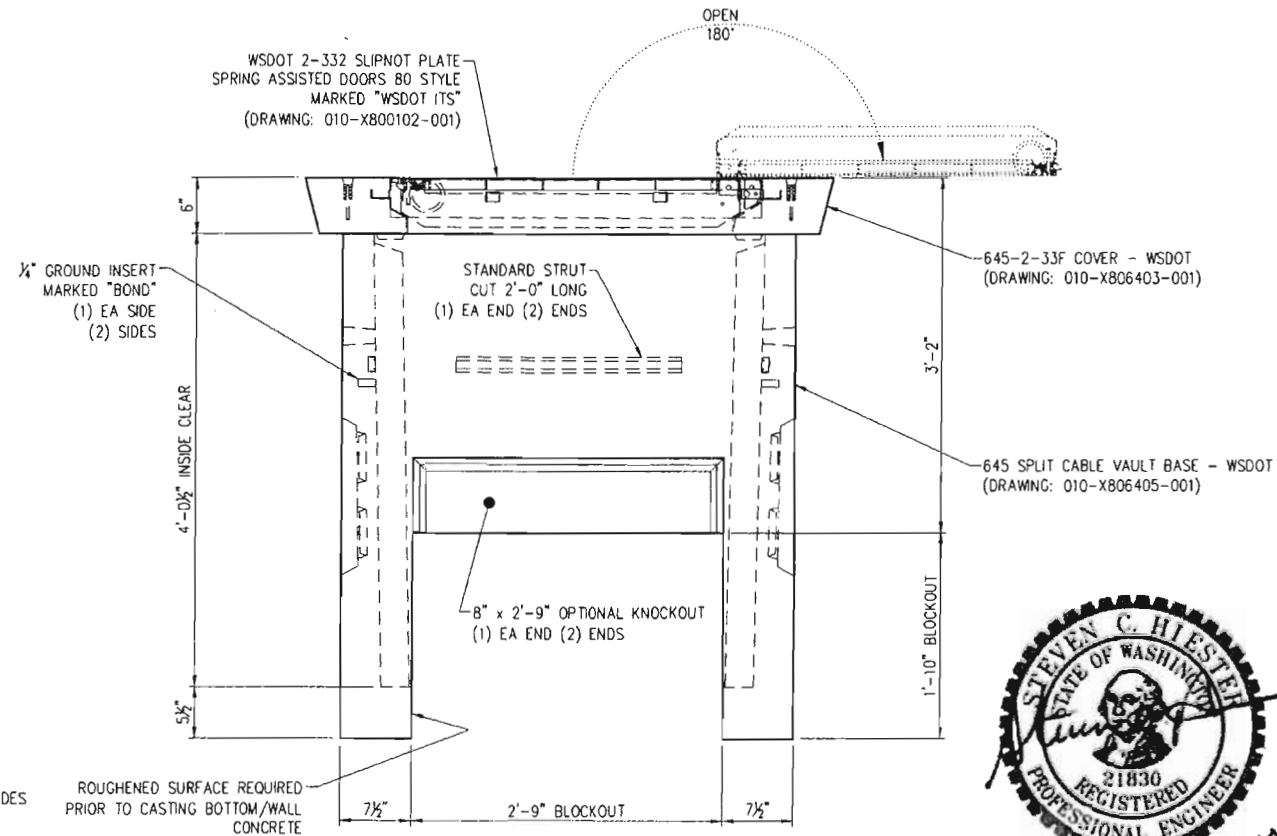
**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE December 2, 2010 TAT



**PLAN VIEW**



**VIEW AA**



**VIEW BB**



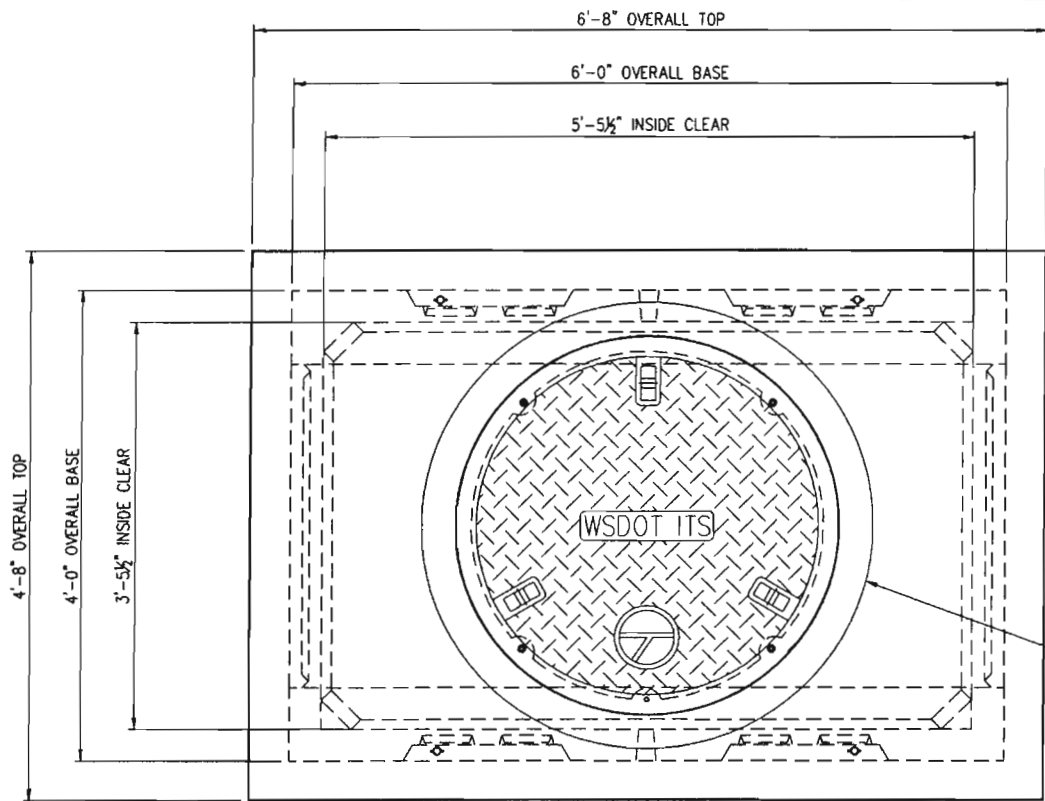
D	VIEW AA: REVISED DOOR TO REFLECT NEW REDESIGN	11/22/10	JG
C	CHANGED DOOR TO SHOW SOLID PLATE	8/16/10	JG
LTR	REVISION	DATE	BY

SALES	DATE	4/6/10
DESIGNER	JG	WEIGHT
CHECKED		CALC NO



645 STANDARD DUTY SPLIT CABLE VAULT  
CUSTOMER LAYOUT  
CUSTOMER STANDARD PRODUCT

CUSTOMER	WASHINGTON STATE DOT	SHEET	1 OF 1
DRAWING NUMBER	010-X806410-003	REVISION	D



**NOTE:**  
 PENTA HEAD BOLT IS RECESSED  
 MINIMUM 1/8" BELOW PLATE SURFACE.  
 PENTA HEAD BOLT TO BE LIBERALLY  
 COATED WITH ANTI-SEIZE COMPOUND.

**APPROVED**  
 Washington State  
 Department of Transportation  
 HQ Traffic Operations Office  
 DATE September 28, 2010 TAT

- STRUCTURAL NOTES**
1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f_c = 4000$  psi
  2. REBAR: ASTM A-615 GRADE 60
  3. MESH: ASTM A-185 GRADE 65
  4. DESIGN: ACI-318-05 BUILDING CODE
  5. LOADS: HEAVY DUTY LOADING, 46,000 lbs  
 ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"  
 30% IMPACT FOR LESS THAN 2'-0" SOIL COVER  
 SOIL DENSITY 120 pcf.  
 40 pcf E.F.P. LATERAL SOIL PRESSURE ABOVE WATERTABLE  
 80 pcf E.F.P. LATERAL SOIL PRESSURE BELOW WATERTABLE  
 230 psf LIVE LOAD SURCHARGE  
 NO LIVE LOAD SURCHARGE FOR SOIL COVER > 8'-0"  
 TOP OF VAULT AT FINISHED GRADE  
 WATERTABLE 5'-0" BELOW FINISHED GRADE (ASSUMED)

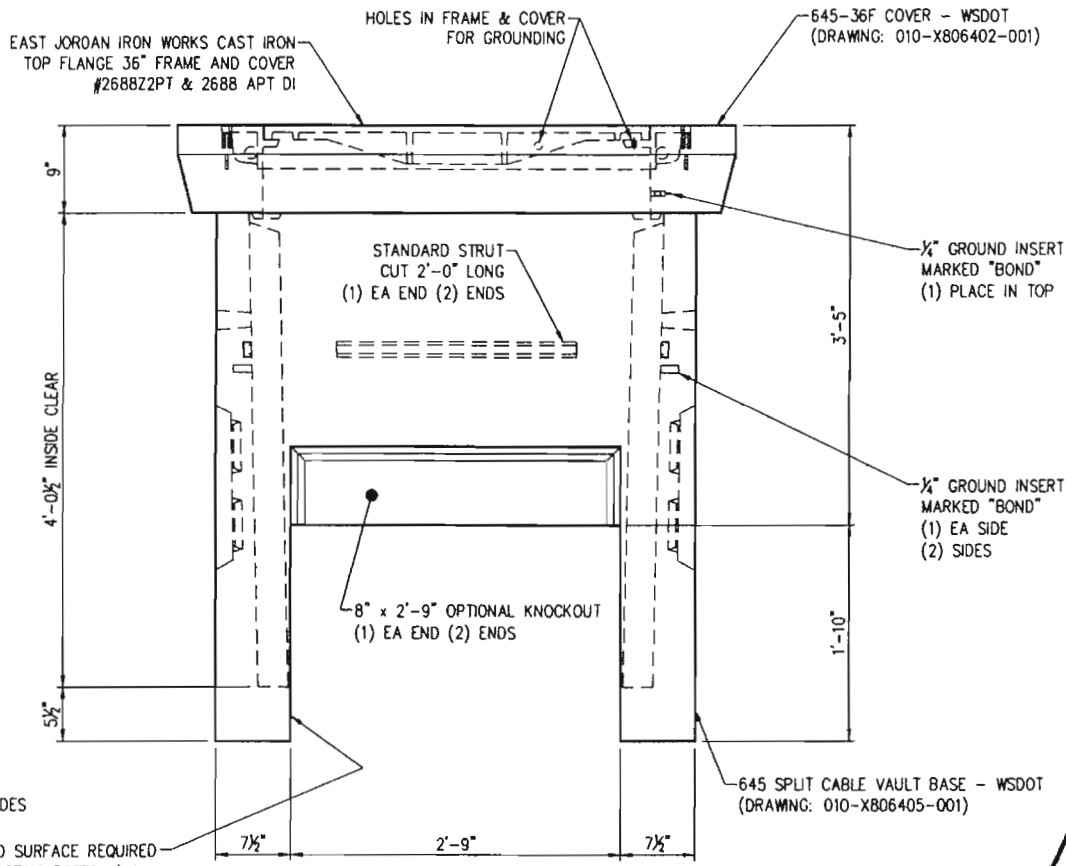
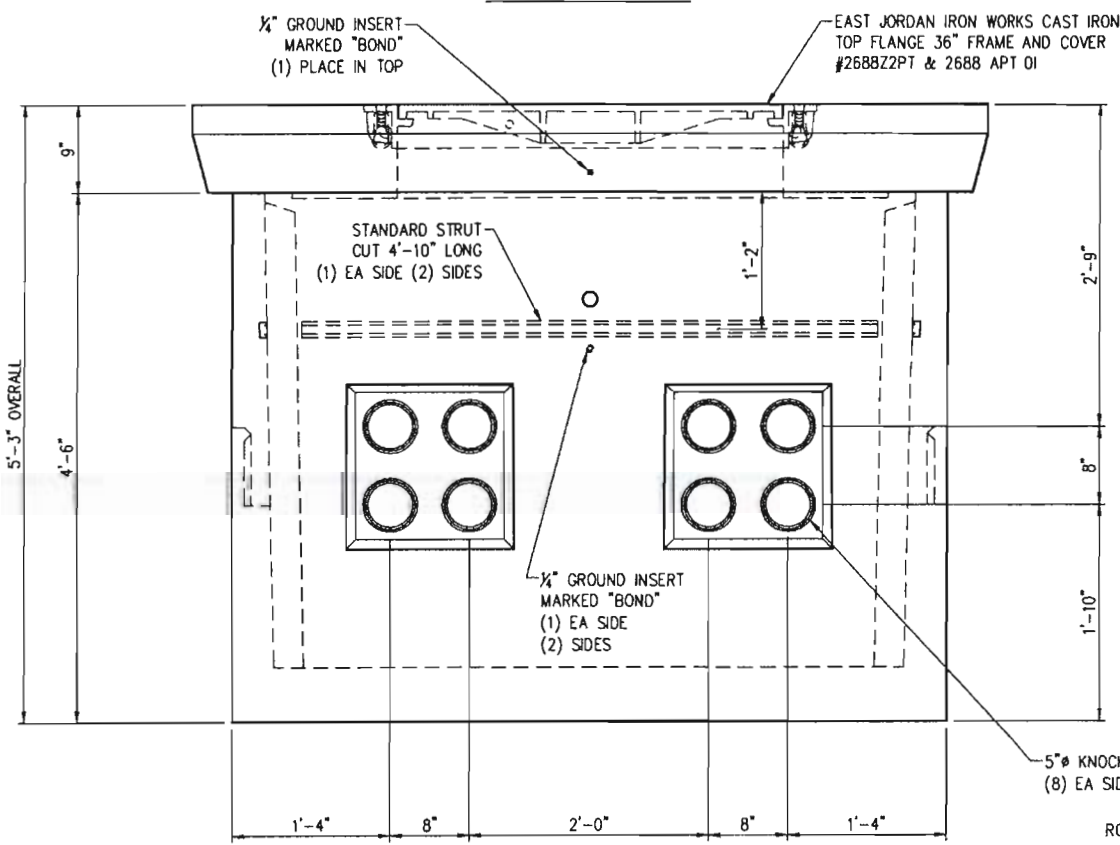
- GENERAL NOTES**
1. CUSTOMER TO:  
 VERIFY ALL VAULT FEATURES  
 DO ALL GROUTING & EPOXY OF VAULTS, HOLES & SEAMS  
 (USING NON-SHRINK GROUT)  
 SUPPLY & INSTALL ALL PIPING & ELECTRICAL  
 INSTALL ALL LADDERS  
 DO ALL PAINTING

**SHIPPING WEIGHT**

645-36F COVER:	3,170 lbs
645 SPLIT CABLE VAULT BASE:	3,210 lbs
<b>TOTAL:</b>	<b>6,380 lbs</b>

EAST JORDAN IRON WORKS CAST IRON  
 TOP FLANGE 36" FRAME AND COVER  
 #2688Z2PT & 2688 APT DI

**PLAN VIEW**



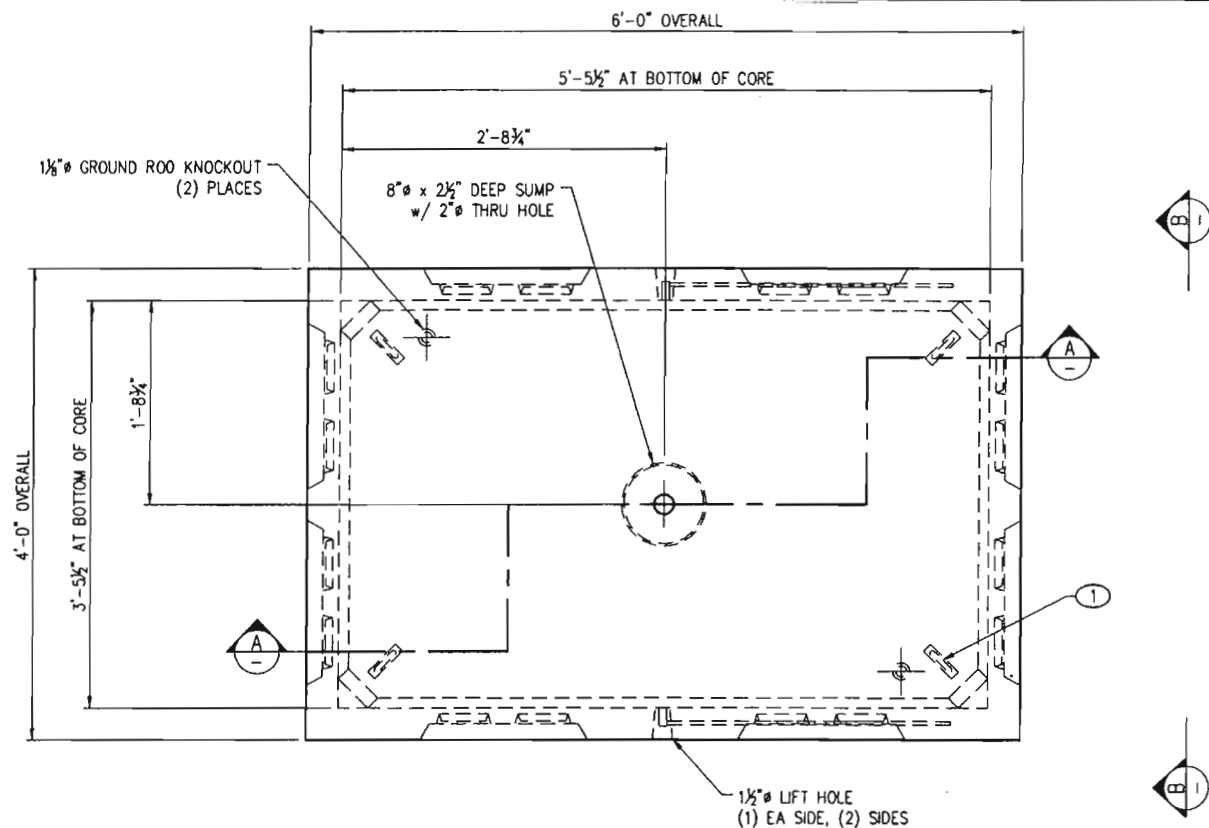
**VIEW AA**

**VIEW BB**

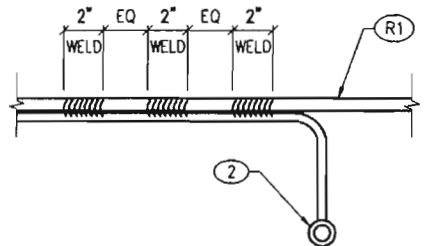
ROUGHENED SURFACE REQUIRED  
 PRIOR TO CASTING BOTTOM/WALL  
 CONCRETE



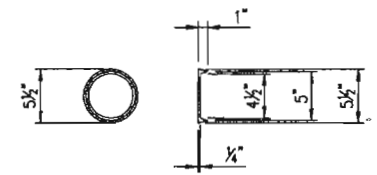
B	CHNGD FRAME/COVER CALL OUT, AD ROUGHEN NOTE	8/5/10	JG	THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved	SALES	DATE	4/6/10	<p>Oldcastle Precast®          P.O. BOX 508 AUBURN, WA 98071-0508          PHONE: 800-882-1139 FAX: 253-736-4201</p>	645 HEAVY DUTY SPLIT CABLE VAULT CUSTOMER LAYOUT	CUSTOMER WASHINGTON STATE DOT	SHEET 1 of 1
A	ADD GROUND INSERT	7/6/10	JG		DESIGNER	WEIGHT	6,380 lbs		645 SPLIT CABLE VAULT BASE - WSDOT (DRAWING: 010-X806405-001)	DRAWING NUMBER 010-X0806410-004	REVISION B
LTR.	REVISION	DATE	BY		CHECKED	CALC NO		CUSTOMER STANDARD PRODUCT			



**PLAN VIEW**  
LAYOUT (SHOWN AS POURED)



**WELD DETAIL**



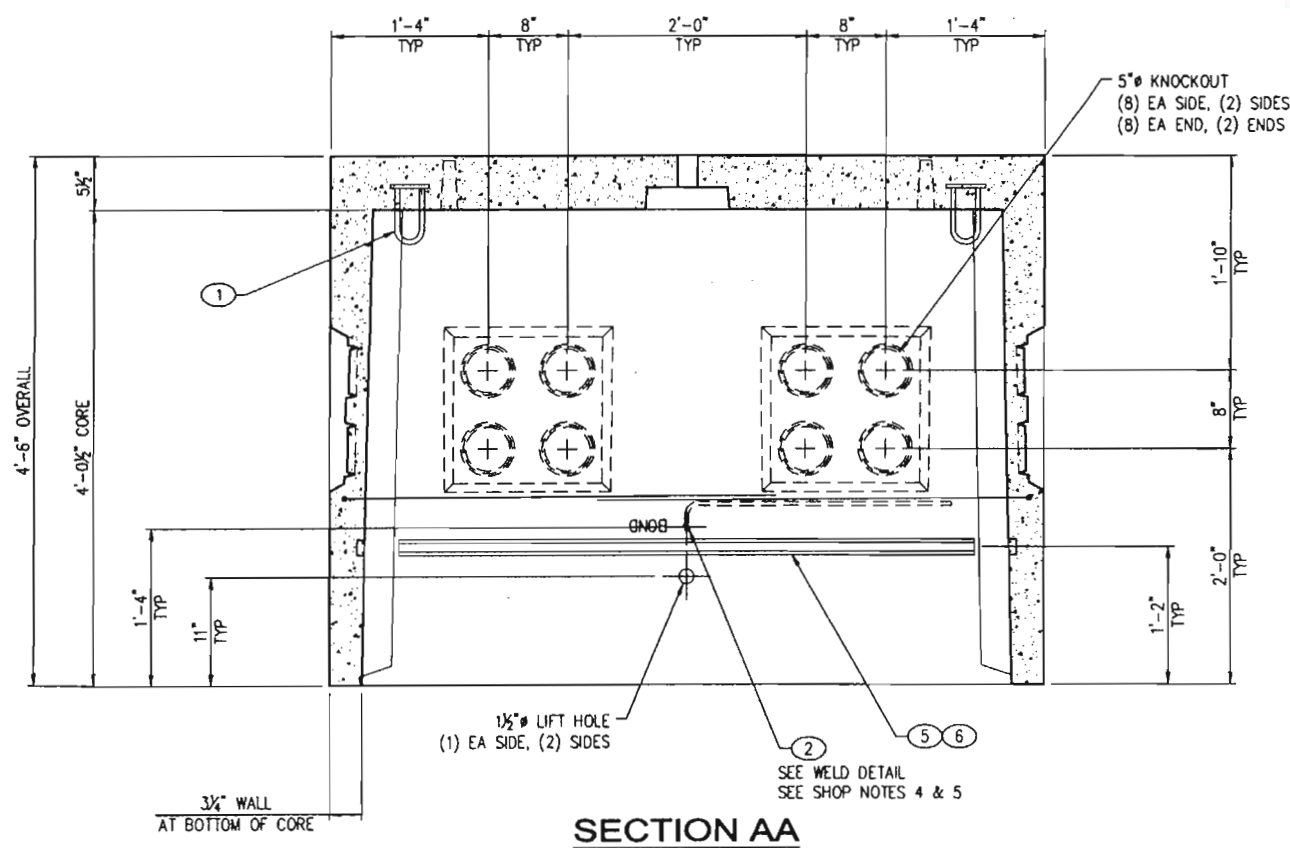
**5"Ø KNOCKOUT**

- SHOP NOTES**
1. USE "660 LA BASE w/645 PALLET" STEEL FORM
  2. CONCRETE FINISH: FLAT FLOAT FINISH WITH MACHINED EDGES
  3. FUP MEATHOD: TRUNNION
  4. FILL GROUND INSERT WITH GREASE & INSTALL CAP PROTECTOR
  5. MARK GROUND INSERTS "BOND" IN 2" LETTERS WITH GREEN PAINT

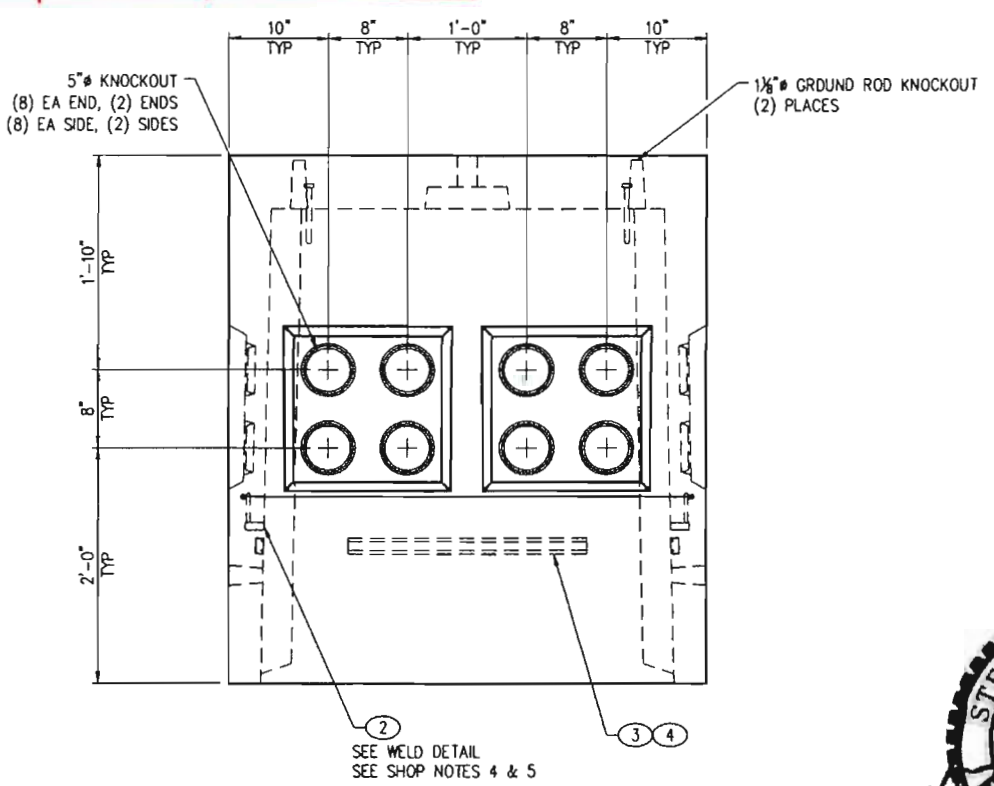
BILL OF MATERIAL				
PART	QTY	U/M	DESCRIPTION	ITEM #
1	4	ea	1/2" Pulling Iron - Galv	010-5180140-001
2	2	ea	1/4" Ground w/ 3/16"x16" Rod- Brass	010-5100393-000
	13.67	ft	B54-240 304 SS Std Strut	010-5110060-000
	13.67	ft	Unistrut-Plastic Closure	010-5120020-000
	1.21	cu-yd	Concrete Mix - SCC	010-5010000-000
	2.81	bar	Rebar #4 X 40' GR60	010-5510030-000
	0.53	bar	Rebar #5 X 40' GR60	010-5510050-000
	85.00	sq-ft	Mesh - (Square Feet)	010-5500000-000

LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
3	2	B54-240 304 SS Std Strut	2'-0"
4	2	Unistrut-Plastic Closure	2'-0"
5	2	B54-240 304 SS Std Strut	4'-10"
6	2	Unistrut-Plastic Closure	4'-10"

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE September 27, 2010 TAT



**SECTION AA**



**VIEW BB**



REVISION	DATE	BY
B	8/5/10	JG
A	7/1/10	JG
-	-	-

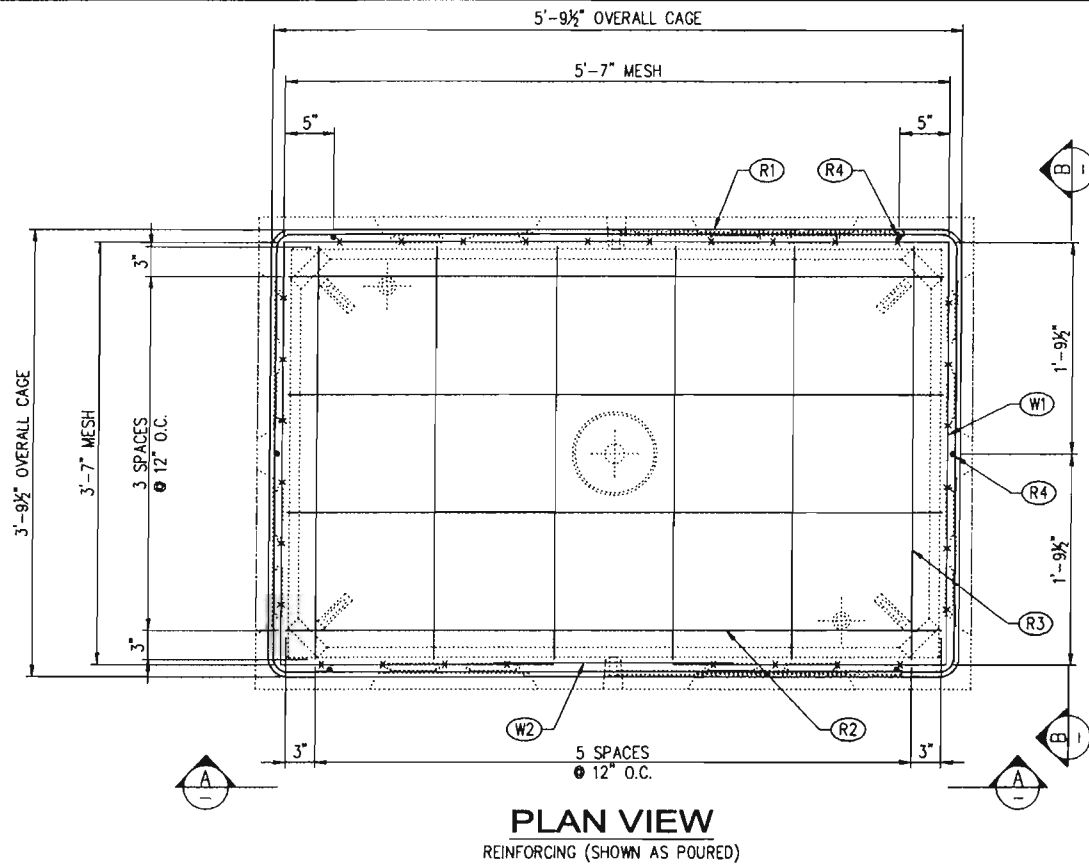
THIS DOCUMENT IS THE PROPERTY OF Oldcastle PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved

SALES	DATE
WS	1/16/08
DESIGNER	WEIGHT
WS	4,770
CHECKED	CALC NO

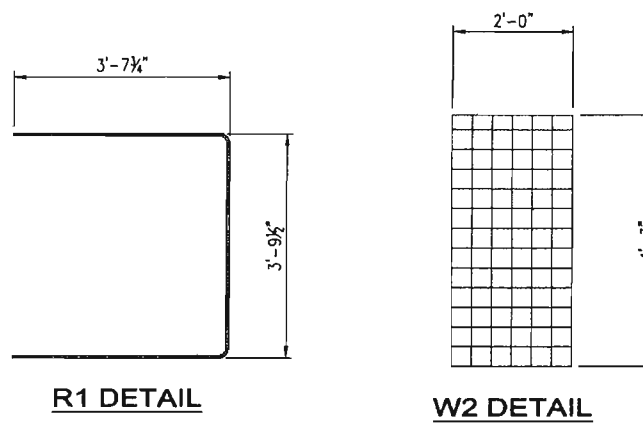


645 CABLE VAULT BASE - WSDOT  
LAYOUT DETAILS  
CUSTOMER STANDARD PRODUCT

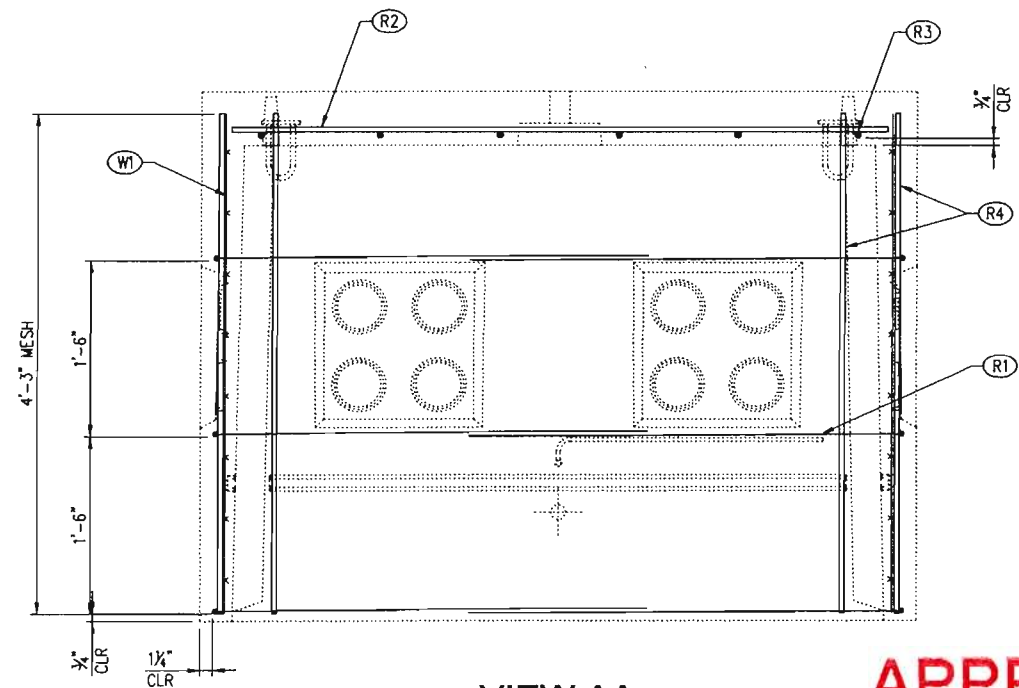
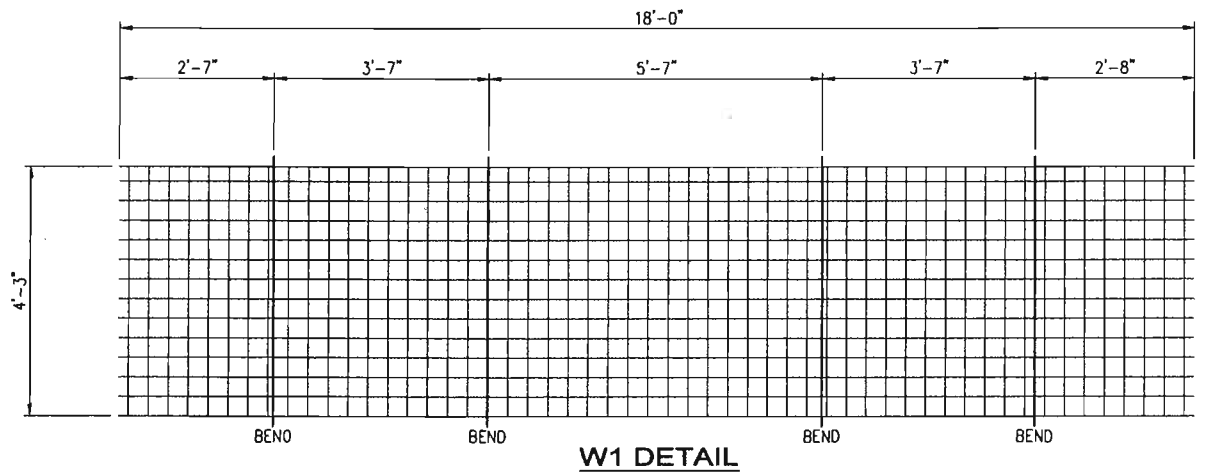
CUSTOMER	SHEET
WASHINGTON STATE DOT	1 of 2
DRAWING NUMBER	REVISION
010-X806401-001	B



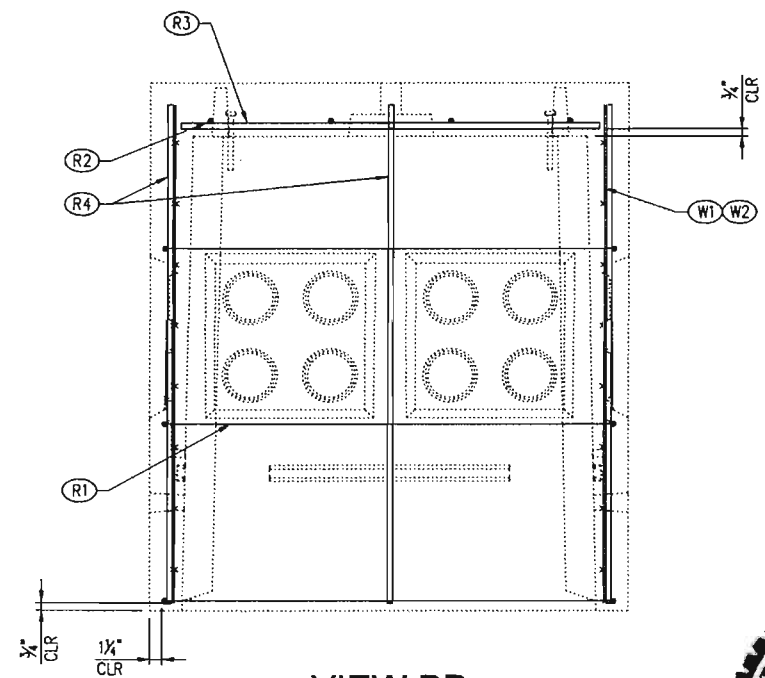
**PLAN VIEW**  
REINFORCING (SHOWN AS POURED)



REINFORCING CUT LIST					
PART	QTY	DESCRIPTION	FT	IN	SHAPE
R1	6	#4 Rebar	10	10	BENT
R2	4	#4 Rebar	5	6	STR
R3	6	#5 Rebar	3	6	STR
R4	6	#4 Rebar	4	3	STR
W1	1	Mesh 4x4 - W2.9 x W2.9			BENT
W2	1	Mesh 4x4 - W2.9 x W2.9			STR

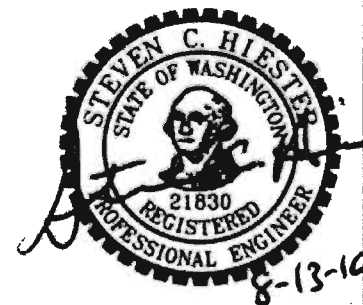


**VIEW AA**  
W2 NOT SHOWN



**VIEW BB**

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE September 27, 2010 TAT



LTR.	REVISION	DATE	BY
B	REVISED STRUT LENGTH, (4) PULL IRON WAS (2)	8/5/10	JG
A	REVISED STEEL DESIGN & ADD GROUND PER SUBMITTAL COMMENTS	7/1/10	JG
-	(SEE CAD FILE FOR REVISION HISTORY)	-	-

THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved.

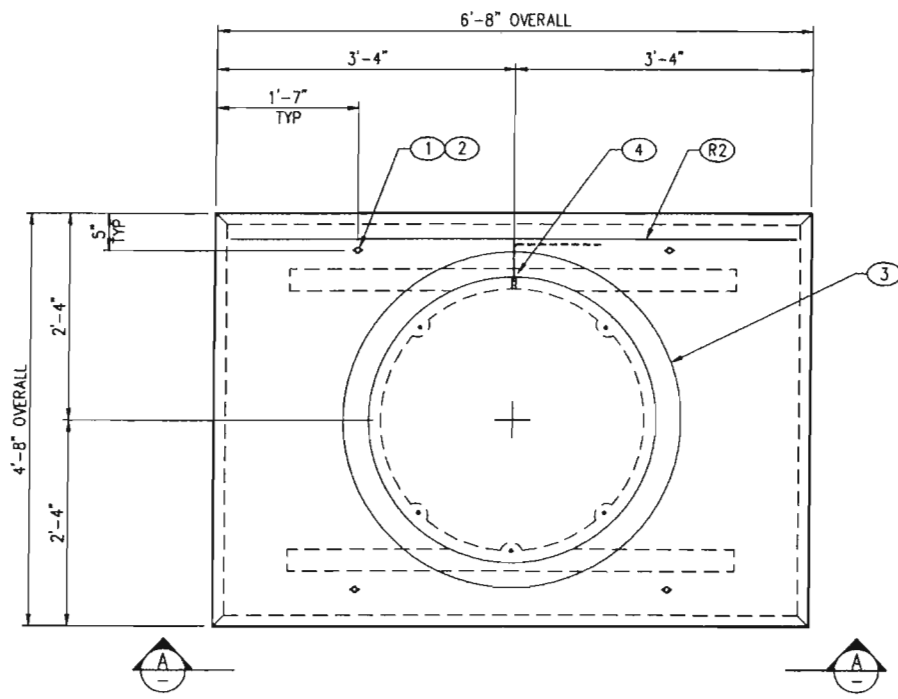
SALES	DATE	1/16/08
DESIGNER	WS	WEIGHT
CHECKED	CALC NO	



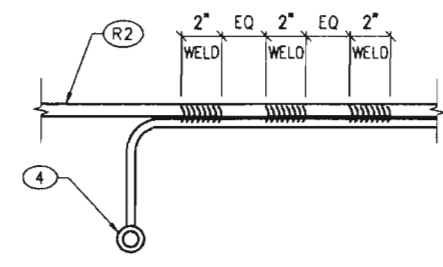
645 CABLE VAULT BASE - WSDOT  
REINFORCING DETAILS  
CUSTOMER STANDARD PRODUCT

CUSTOMER  
WASHINGTON STATE DOT  
DRAWING NUMBER  
010-X806401-001

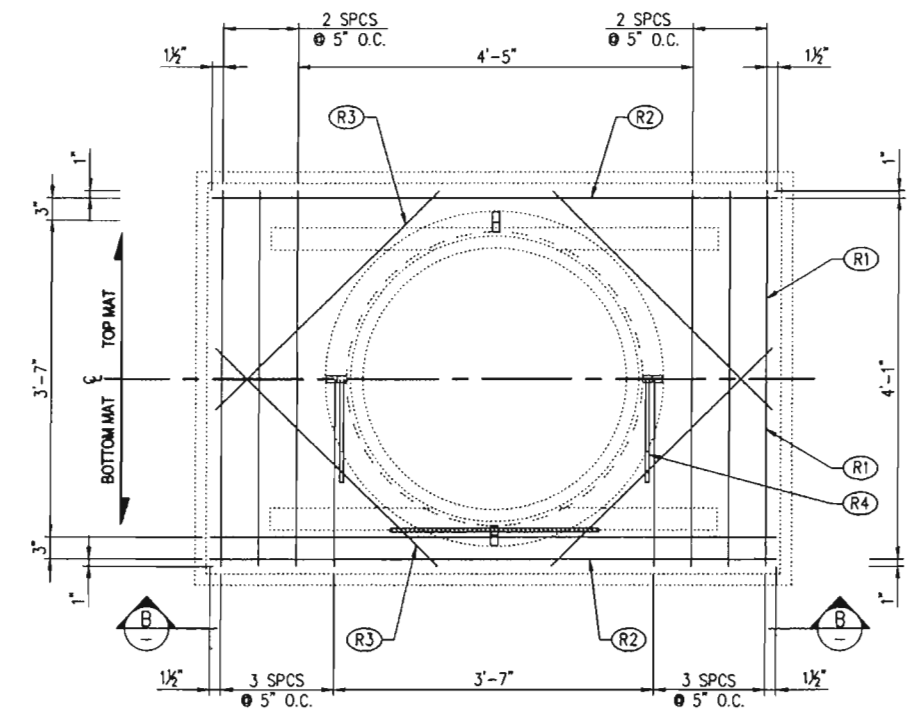
SHEET  
2 of 2  
REVISION  
B



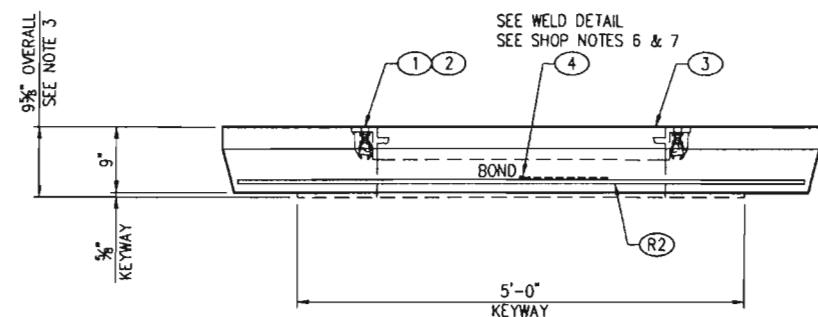
**PLAN VIEW**  
LAYOUT (SHOWN AS POURED)



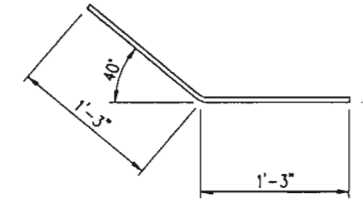
**WELD DETAIL**



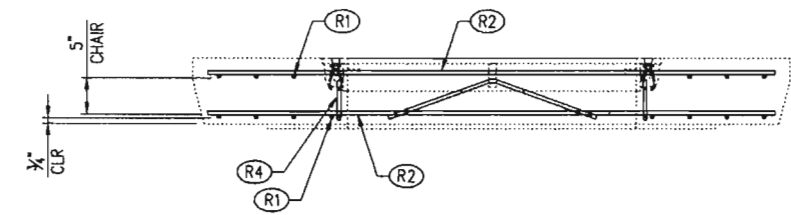
**PLAN VIEW**  
REINFORCING (SHOWN AS POURED)



**VIEW AA**



**R4 DETAIL**  
SEE NOTE 5



**VIEW BB**  
R3 NOT SHOWN

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE September 27, 2010 TAT

**SHOP NOTES**

1. USE "660 LA BASE w/645 PALLET" STEEL FORM
2. CONCRETE FINISH: FLAT FLOAT FINISH WITH MACHINED EDGES
3. FLIP MEATHOD: TRUNNION
4. FILL GROUND INSERT WITH GREASE & INSTALL CAP PROTECTOR
5. MARK GROUND INSERTS "BOND" IN 2" LETTERS WITH GREEN PAINT

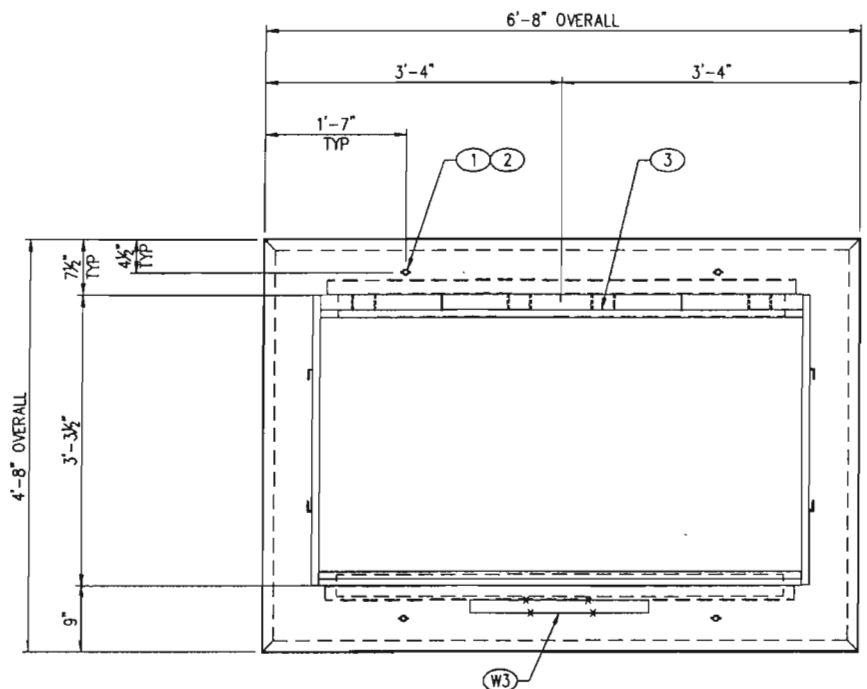
BILL OF MATERIAL				
PART	QTY	UM	DESCRIPTION	ITEM #
1	4	ea	Insert Loop Ferr 3/4"	010-5100100-000
2	4	ea	Insert Plastic Plug 3/4" 'UV'	010-5100050-000
3	1	ea	36" FRAME FLANGE UP (EJW 2688Z2PT)	010-4000080-000
4	1	ea	1/4" Ground w/ 3/16"x16" Rod- Brass	010-5100393-000
	0.63	cu-yd	Concrete Mix - SCC	010-5010000-000
	3.40	bar	Rebar #4 X 40' GR60	010-5510030-000
	20.00		Wood & Steel Forming Charge	010-9300050-000

**SHOP NOTES**

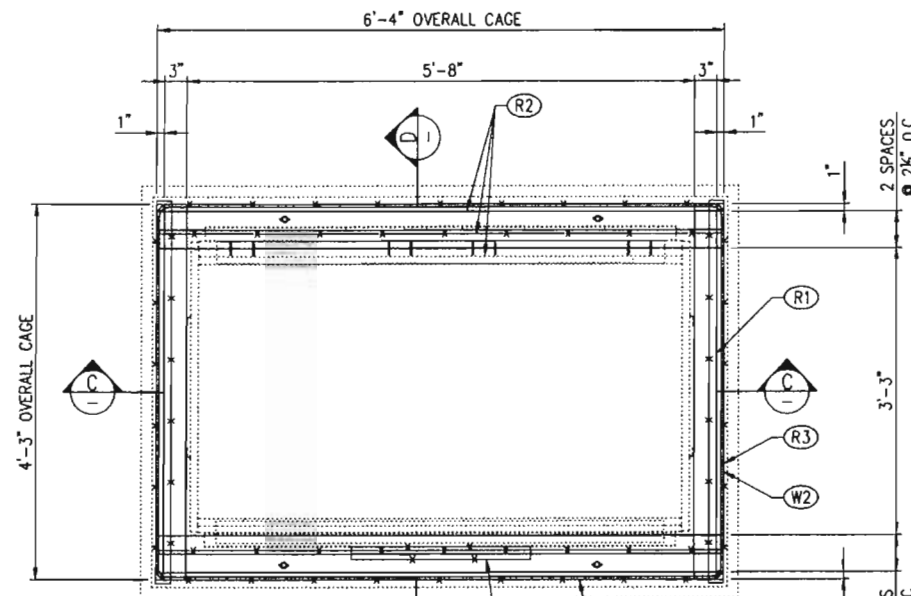
1. USE "64 COVER" STEEL FORM
2. CONCRETE FINISH: BROOM FINISH WITH MACHINED EDGES
3. ADD 3" TO SLAB
4. EAST JORDAN IRON WORKS (EJW) # 00268819 TAPPED FOR GROUNDING
5. PLACE THROUGH HOLE IN FRAME EAR AND TIE TO (R1) OR (R2)
6. FILL GROUND INSERT WITH GREASE & INSTALL CAP PROTECTOR
7. MARK GROUND INSERTS "BOND" IN 2" LETTERS WITH GREEN PAINT

REINFORCING CUT LIST					
PART	QTY	DESCRIPTION	FT	IN	SHAPE
R1	14	#4 Rebar	4	3	STR
R2	6	#4 Rebar	6	4	STR
R3	8	#4 Rebar	3	6	STR
R4	4	#4 Rebar	2	6	BENT

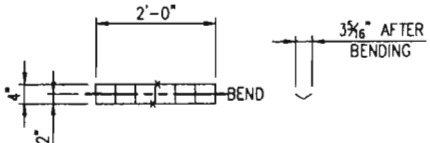




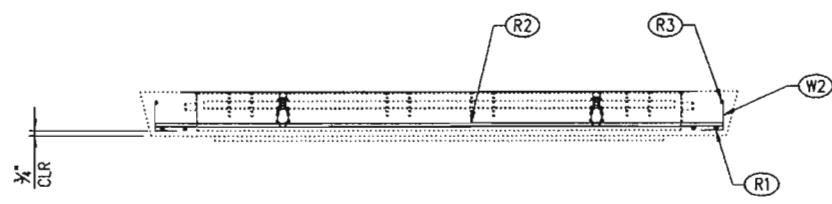
**PLAN VIEW**  
LAYOUT (SHOWN AS POURED)



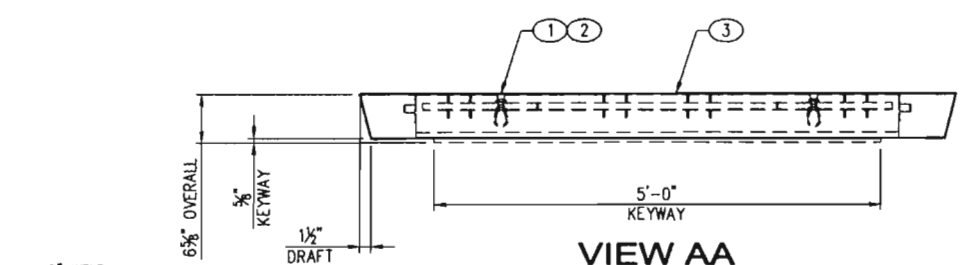
**PLAN VIEW**  
REINFORCING (SHOWN AS POURED)



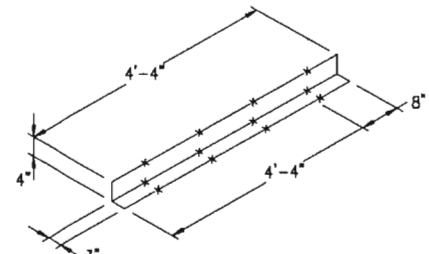
**W3 DETAIL**



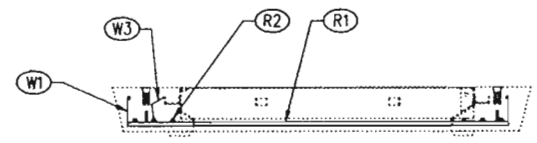
**SECTION CC**  
W1 & W3 NOT SHOWN



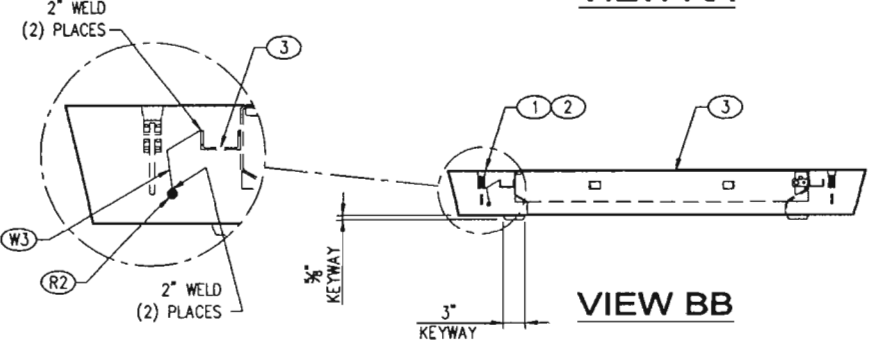
**VIEW AA**



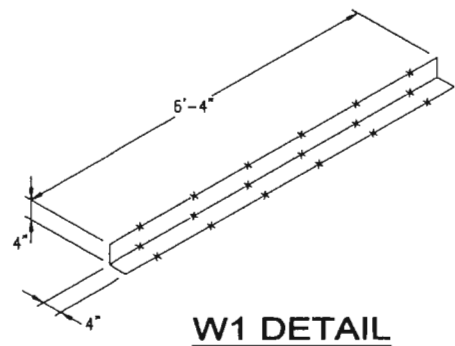
**W2 DETAIL**



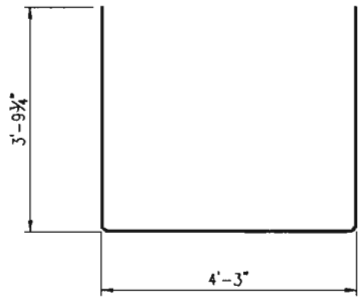
**SECTION DD**  
W2 NOT SHOWN



**VIEW BB**



**W1 DETAIL**



**R3 DETAIL**

BILL OF MATERIAL				
PART	QTY	U/M	DESCRIPTION	ITEM #
1	4	ea	Insert Loop Ferr 3/4"	010-5100100-000
2	4	ea	Insert Plastic Plug 3/4" 'UV'	010-5100050-000
3	1	ea	WSDOT 2-332-SA-80 Frame	010-X800120-001
	18.00	ft	Conseal 3/4" CS-101	010-5130005-000
	0.24	cu-yd	Concrete Mix - SCC	010-5010000-000
	0.58	bar	Rebar #3 X 40' GR60	010-5510010-000
	1.38	bar	Rebar #4 X 40' GR60	010-5510030-000
	14.16	sq-ft	Mesh - (Square Feet)	010-5500000-000

- SHOP NOTES**
- USE STEEL FORM "64 COVER"
  - CONCRETE FINISH: BROOM FINISH WITH MACHINED EDGES

REINFORCING CUT LIST					
PART	QTY	DESCRIPTION	FT	IN	SHAPE
R1	4	#4 Rebar	4	3	STR
R2	6	#4 Rebar	6	4	STR
R3	2	#3 Rebar	11	8	BENT
W1	2	Mesh 4x4 - W2.9 x W2.9			BENT
W2	2	Mesh 4x4 - W2.9 x W2.9			BENT
W3	1	Mesh 4x4 - W2.9 x W2.9			BENT

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE September 27, 2010 TAT



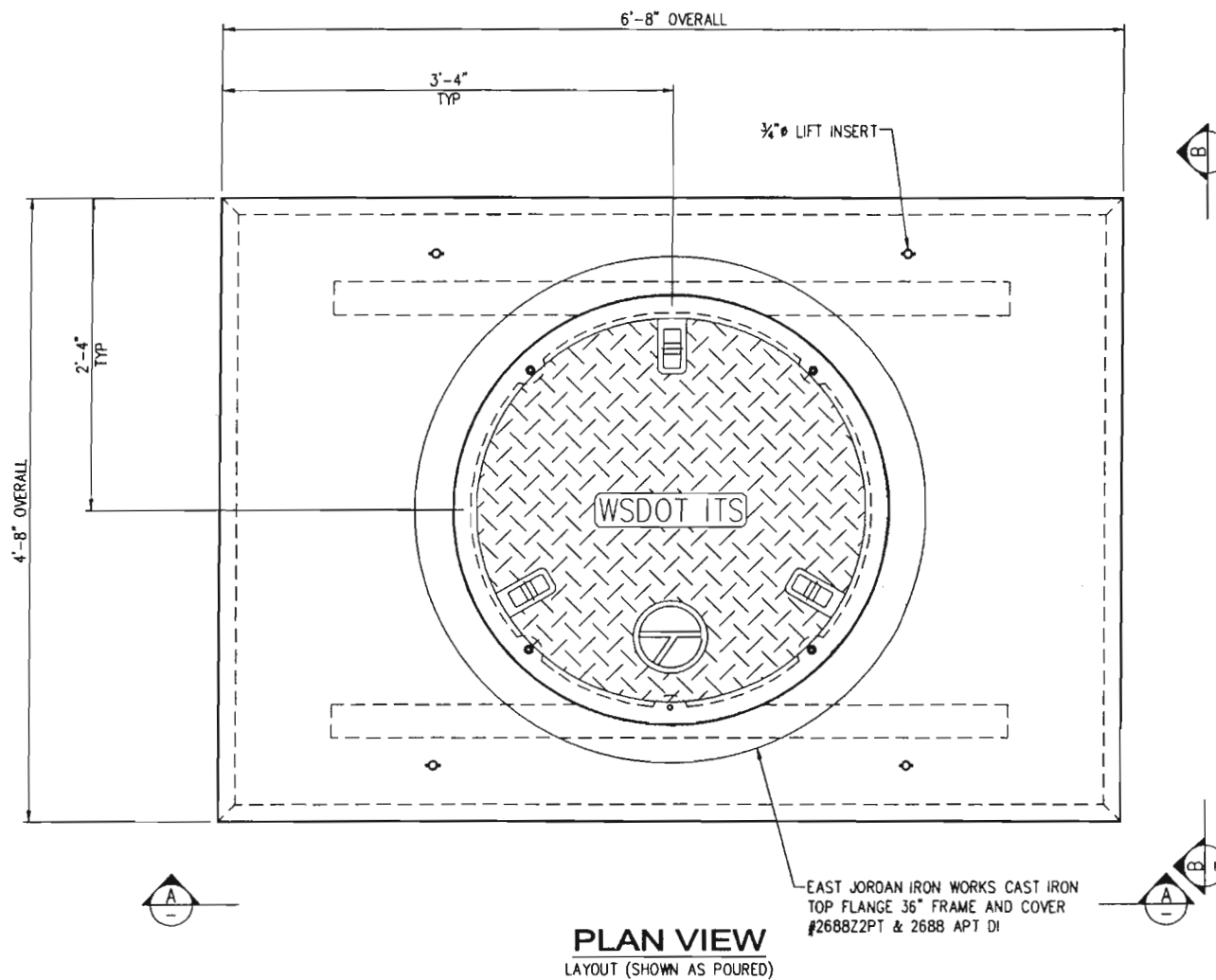
LTR.	REVISION	DATE	BY
A	CHANGED FRAME TO WSDOT 80 STYLE	6/23/10	JG
-	(SEE CAD FILE FOR COMPLETE REVISION HISTORY)	-	-

SALES	DATE
JG	4/3/10
DESIGNER	WEIGHT
JG	1,075 lbs
CHECKED	CALC NO



645-2-33F STD DUTY COVER - WSDOT  
LAYOUT & REINFORCING DETAILS  
CUSTOMER STANDARD PRODUCT

CUSTOMER	SHEET
WASHINGTON STATE DOT	1 of 1
DRAWING NUMBER	REVISION
010-X806403-001	A



**NOTE:**  
 PENTA HEAD BOLT IS RECESSED  
 MINIMUM 1/8" BELOW PLATE SURFACE.  
 PENTA HEAD BOLT TO BE LIBERALLY  
 COATED WITH ANTI-SEIZE COMPOUND.

**STRUCTURAL NOTES**

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f_c = 4,000$  psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: ACI-318-05 BUILDING CODE
5. LOADS: WHEEL LOAD = 46,000 lbs  
 ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"  
 30% IMPACT FOR LESS THAN 2'-0" SOIL COVER  
 TOP OF VAULT AT FINISHED GRADE

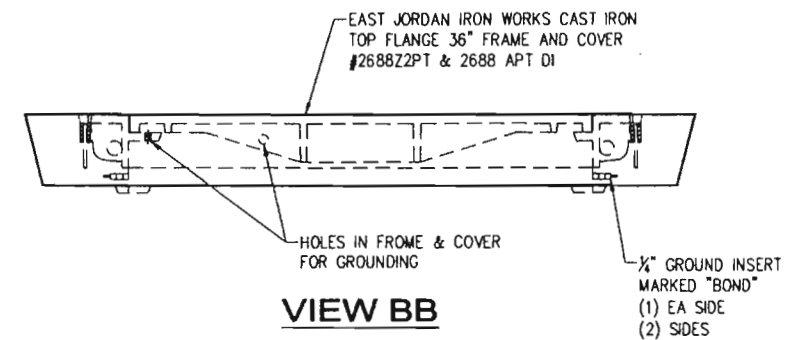
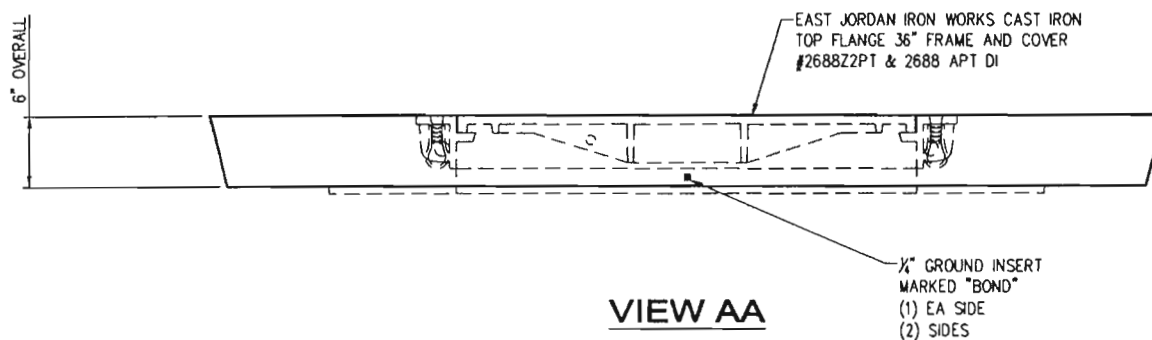
**GENERAL NOTES**

1. CUSTOMER TO:  
 VERIFY ALL FEATURES  
 DO ALL GROUTING & EPOXY OF VAULTS, HOLES & SEAMS  
 (USING NON-SHRINK GROUT)  
 SUPPLY & INSTALL ALL PIPING & ELECTRICAL  
 INSTALL ALL LADDERS  
 DO ALL PAINTING

**NOTE**

USE THE 645-36F 6" HEAVY DUTY COVER  
 WHEN CONVERTING A STANDARD DUTY  
 CABLE VAULT INTO A HEAVY DUTY CABLE  
 VAULT.

**APPROVED**  
 Washington State  
 Department of Transportation  
 HQ Traffic Operations Office  
 DATE September 27, 2010 TAT



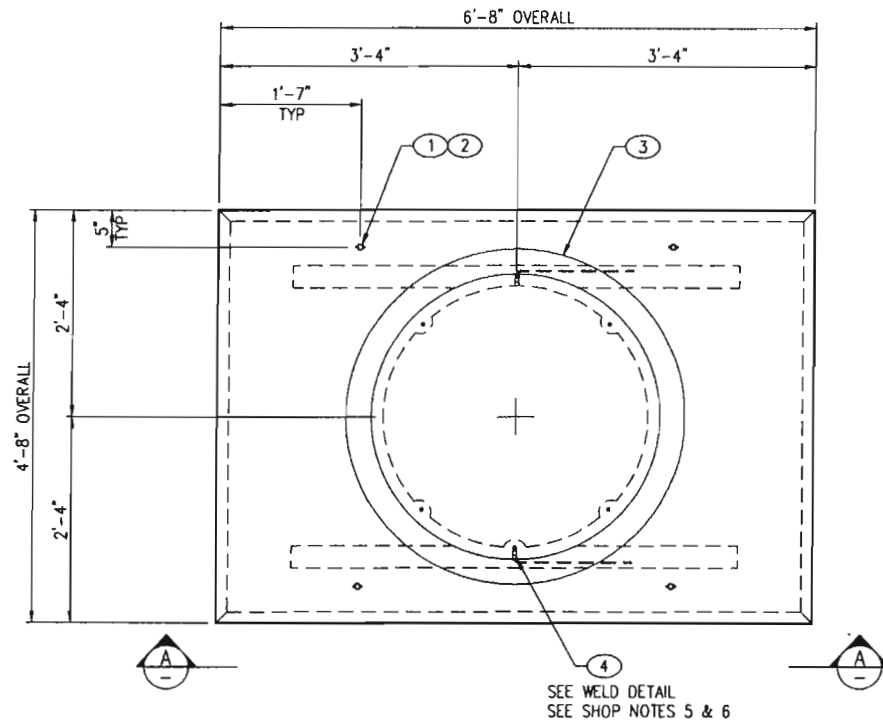
B	REVISED FRAME & COVER CALL OUTS	8/5/10	JG
A	ADD GROUNDS	7/7/10	JG
-	(SEE CAD FILE FOR COMPLETE REVISION HISTORY)	-	-
LTR.	REVISION	DATE	BY

SALES	DATE	4/11/10
DESIGNER	WEIGHT	2,300 lbs
CHECKED	CALC NO	

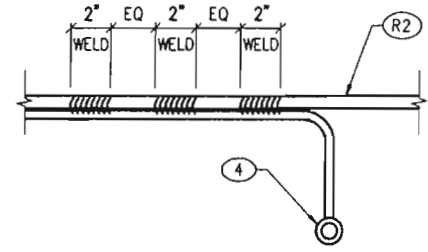
**Oldcastle Precast®**  
 P.O. BOX 508 ALBURN, WA 98021-0508  
 PHONE: 800-862-1538 FAX: 253-735-4201

645-36F 6" HEAVY DUTY COVER - WSDOT  
 CUSTOMER LAYOUT (WITH COVER)  
 CUSTOMER STANDARD PRODUCT

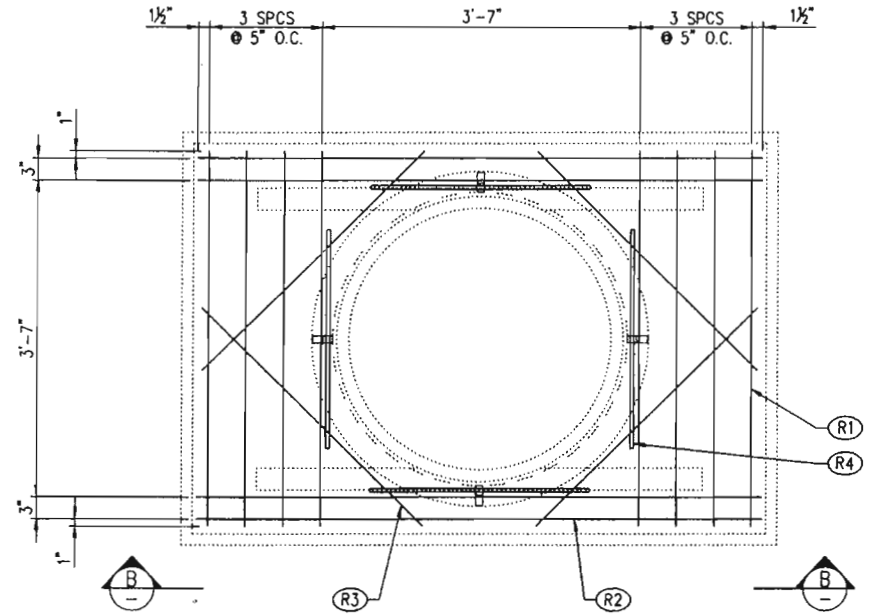
CUSTOMER	WASHINGTON STATE DOT	SHEET	1 of 2
DRAWING NUMBER	010-X806404-001	REVISION	B



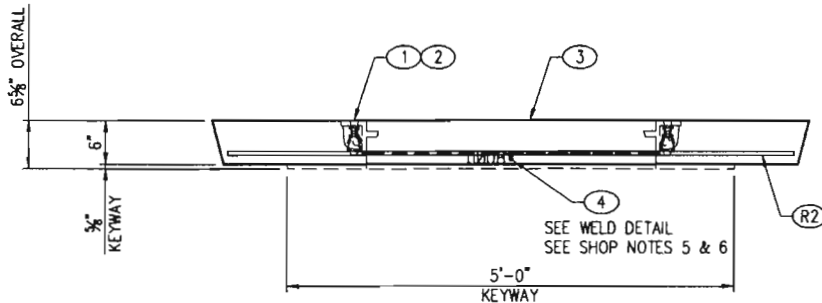
**PLAN VIEW**  
LAYOUT (SHOWN AS POURED)



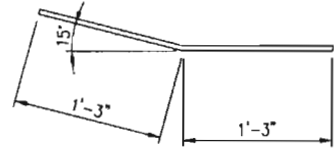
**WELD DETAIL**



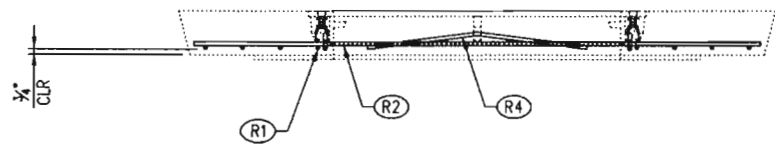
**PLAN VIEW**  
REINFORCING (SHOWN AS POURED)



**VIEW AA**



**R4 DETAIL**  
SEE NOTE 4



**VIEW BB**  
R3 NOT SHOWN

BILL OF MATERIAL				
PART	QTY	U/M	DESCRIPTION	ITEM #
1	4	ea	Insert Loop Ferr 3/4"	010-5100100-000
2	4	ea	Insert Plastic Plug 3/4" UV	010-5100050-000
3	1	ea	36" FRAME FLANGE UP (EJW 2688Z2PT)	010-4000080-000
4	2	ea	1/4" Ground w/ 3/16"x16" Rod- Brass	010-5100393-000
	0.42	cu-yd	Concrete Mix - SCC	010-5010000-000
	2.08	bar	Rebar #4 X 40' GR60	010-5510030-000
	20.00		Wood & Steel Forming Charge	010-9300050-000

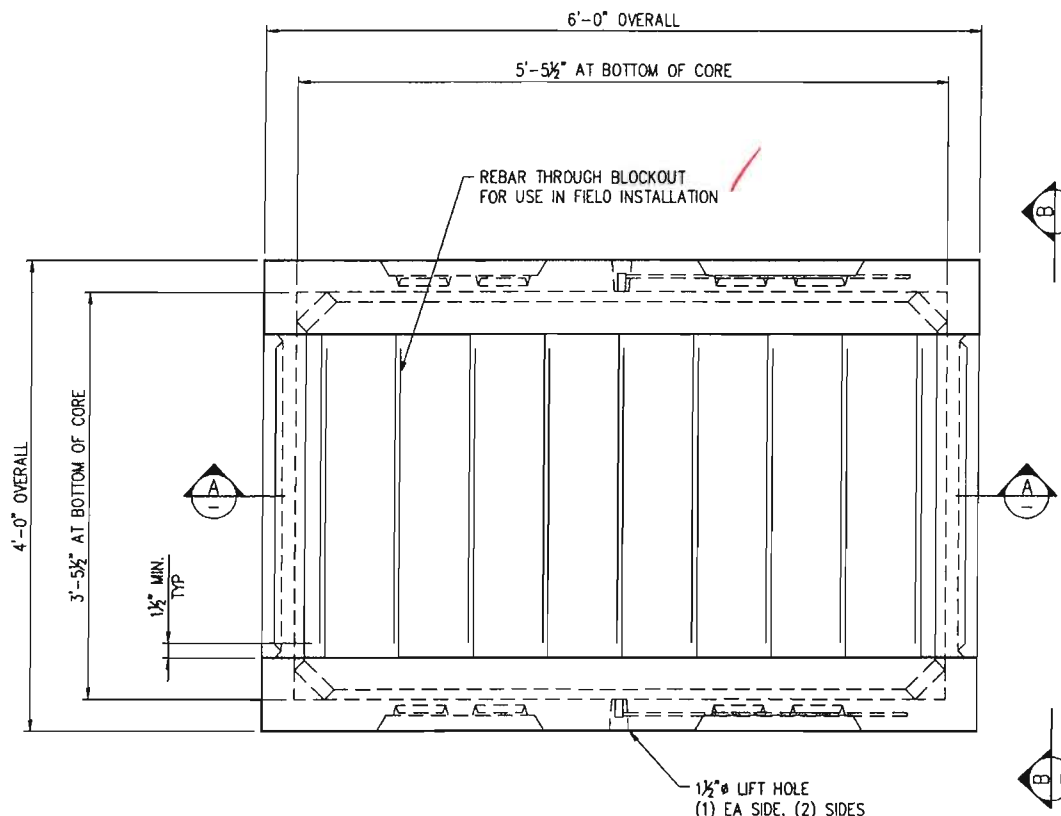
**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE September 27, 2010 TAT

**SHOP NOTES**

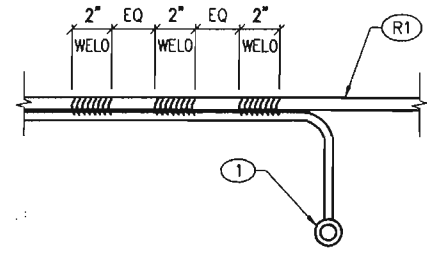
- USE "64 COVER" STEEL FORM
- CONCRETE FINISH: BROOM FINISH WITH MACHINED EDGES
- EAST JORDAN IRON WORKS (EJW) # 00268819 TAPPED FOR GROUNDING
- PASS THROUGH HOLE IN FRAME EAR AND TIE TO (R1) OR (R2)
- FILL GROUND INSERT WITH GREASE & INSTALL CAP PROTECTOR
- MARK GROUND INSERTS "BOND" IN 2" LETTERS WITH GREEN PAINT

REINFORCING CUT LIST					
PART	QTY	DESCRIPTION	FT	IN	SHAPE
R1	8	#4 Rebar	4	3	STR
R2	4	#4 Rebar	6	4	STR
R3	4	#4 Rebar	3	6	STR
R4	4	#4 Rebar	2	6	BENT

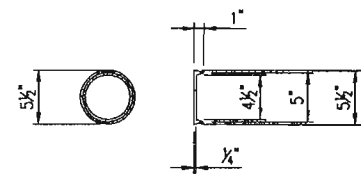




**PLAN VIEW**  
LAYOUT (SHOWN AS POURED)



**WELD DETAIL**



**5" Ø KNOCKOUT**

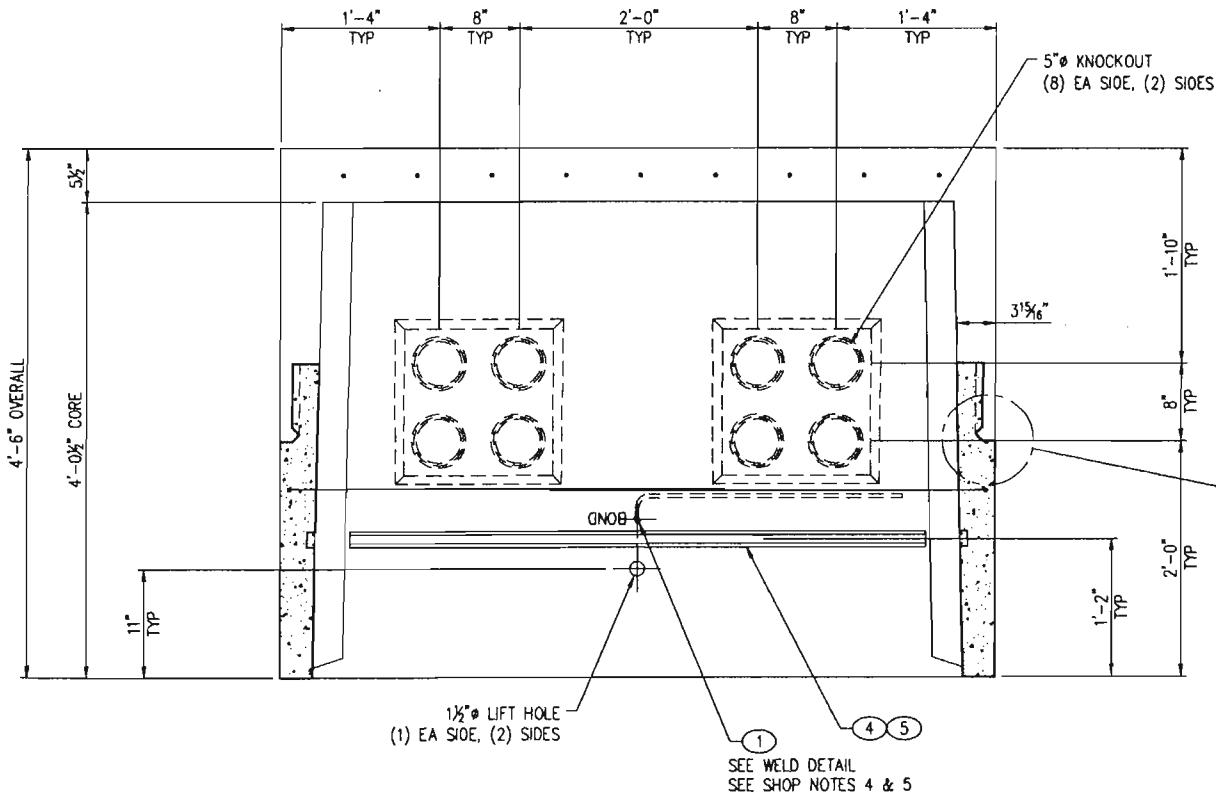
**SHOP NOTES**

1. USE "660 LA BASE w/645 PALLET" STEEL FORM
2. CONCRETE FINISH: FLAT FLOAT FINISH WITH MACHINED EDGES
3. FLIP METHOD: TRUNNION
4. FILL GROUND INSERT WITH GREASE & INSTALL CAP PROTECTOR
5. MARK GROUND INSERTS "BONO" IN 2" LETTERS WITH GREEN PAINT

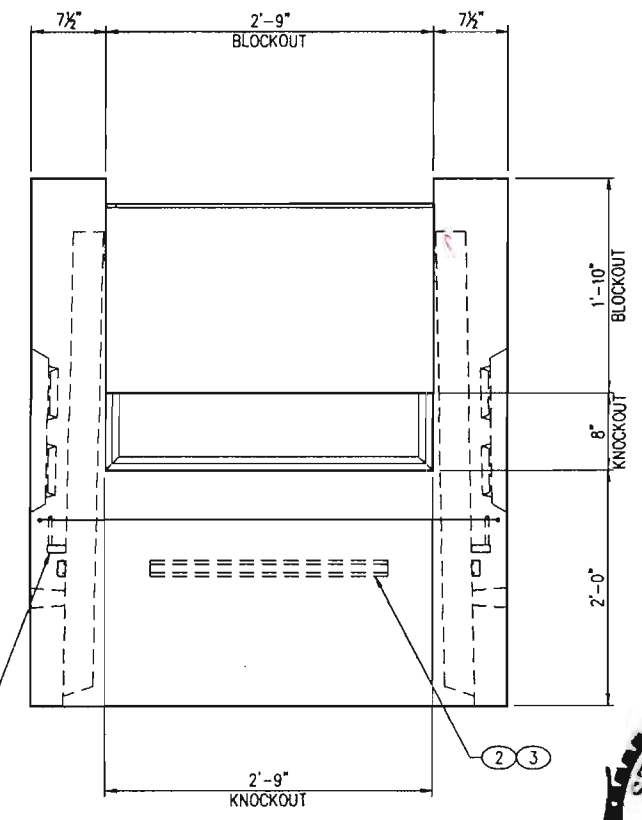
BILL OF MATERIAL				
PART	QTY	U/M	DESCRIPTION	ITEM #
1	2	ea	1/4" Ground w/ 3/16"x16" Rod- Brass	010-5100393-000
	13.67	ft	B54-240 304 SS Std Strut	010-5110060-000
	13.67	ft	Unistrut-Plastic Closure	010-5120020-000
	0.82	cu-yd	Concrete Mix - SCC	010-5010000-000
	6.13	bar	Rebar #3 X 40' GR60	010-5510010-000
	110.34	sq-ft	Mesh - (Square Feet)	010-5500000-000

LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
2	2	B54-240 304 SS Std Strut	2'-0"
3	2	Unistrut-Plastic Closure	2'-0"
4	2	B54-240 304 SS Std Strut	4'-10"
5	2	Unistrut-Plastic Closure	4'-10"

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE September 27, 2010 TAT



**SECTION AA**



**VIEW BB**



REVISION	DATE	BY
B	8/5/10	JG
A	7/1/10	JG
-	-	-

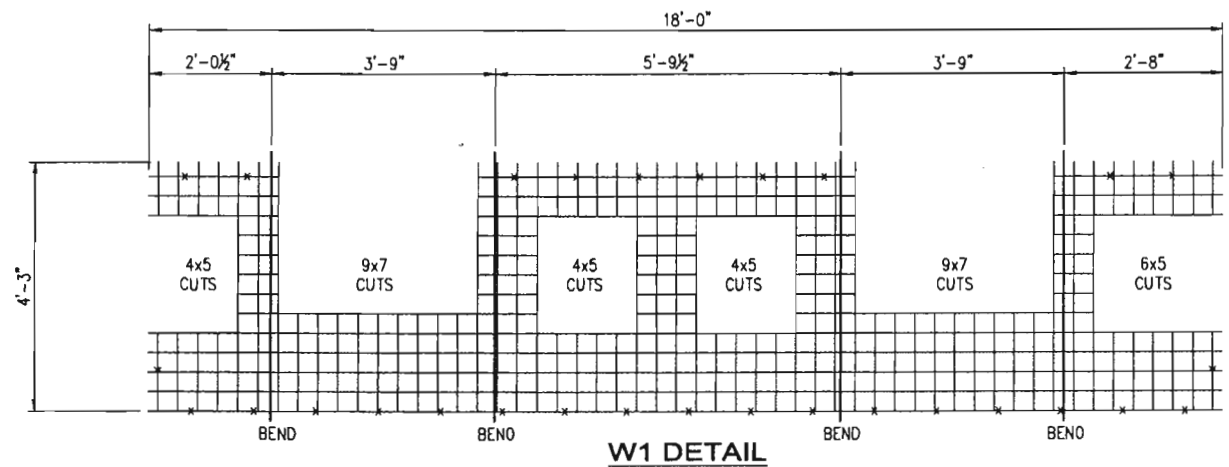
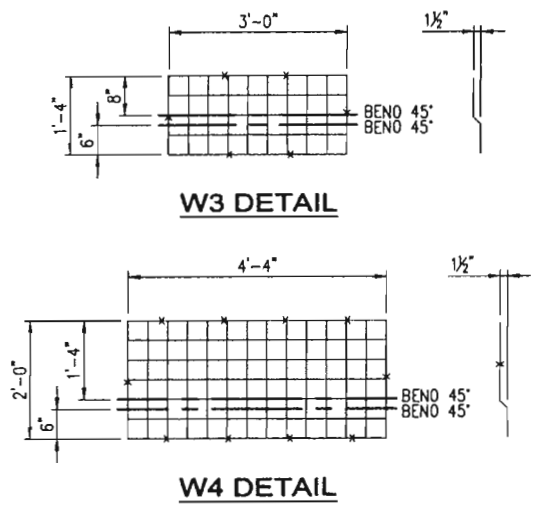
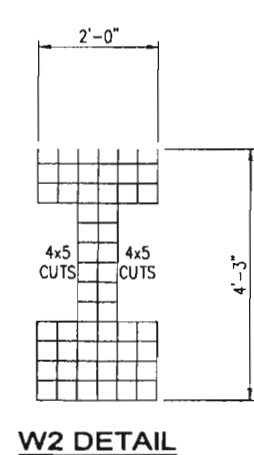
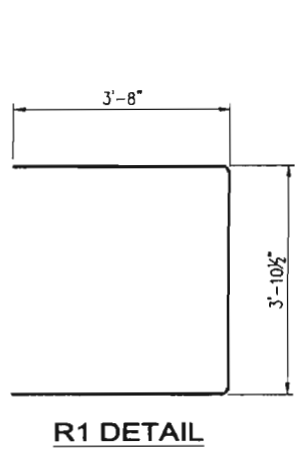
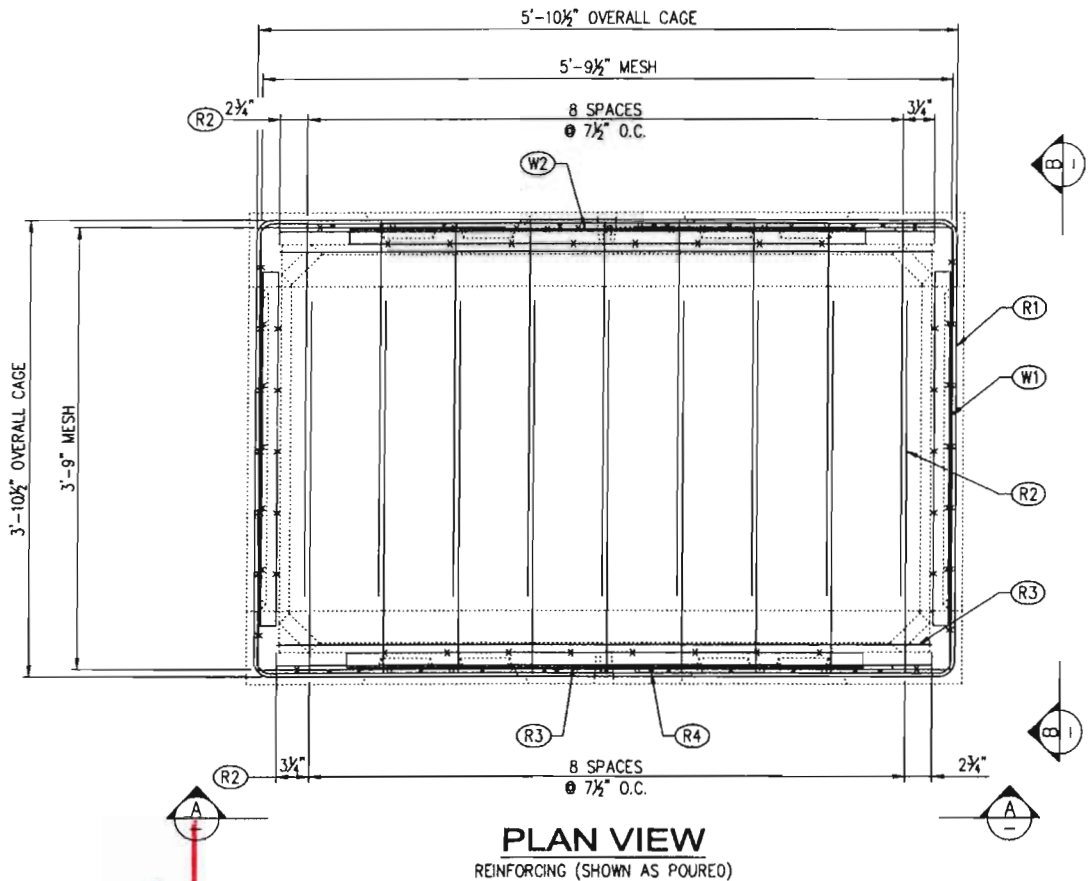
THIS DOCUMENT IS THE PROPERTY OF Oldcastle Precast, Inc. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved

SALES	DATE	4/29/10
DESIGNER	WEIGHT	3,210 lbs
CHECKED	CALC NO	



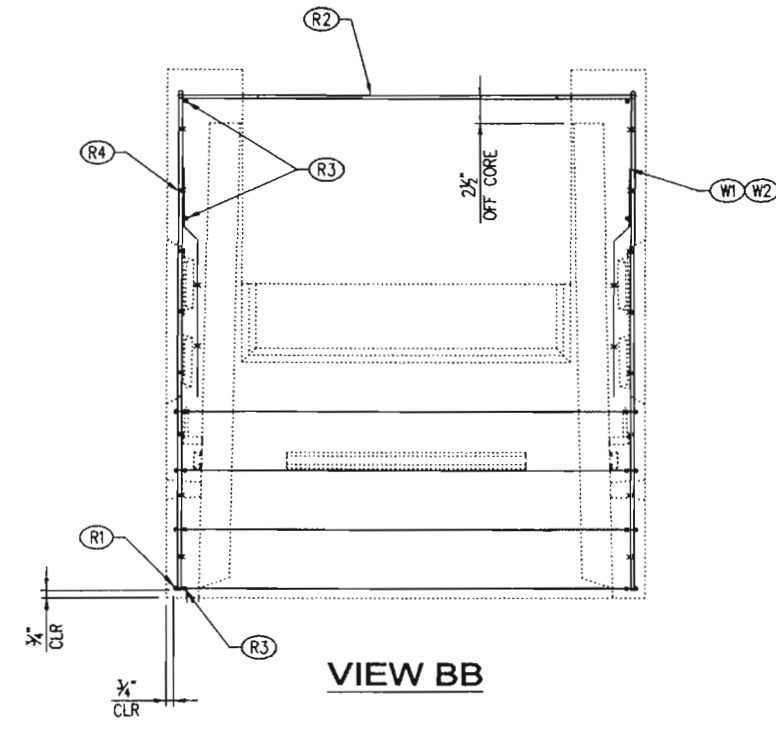
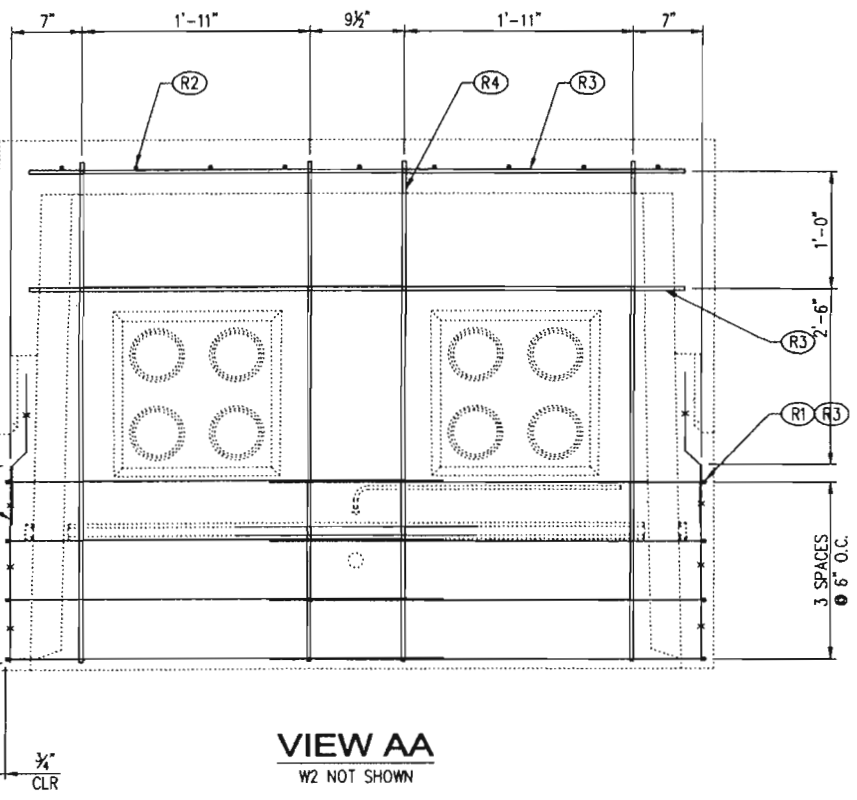
645 SPLIT CABLE VAULT BASE - WSDOT  
LAYOUT DETAILS  
CUSTOMER STANDARD PRODUCT

CUSTOMER	WASHINGTON STATE DOT	SHEET	1 of 2
DRAWING NUMBER	010-X806405-001	REVISION	B



APPROVED

Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE: September 27, 2010 TAT



REINFORCING CUT LIST					
PART	QTY	DESCRIPTION	FT	IN	SHAPE
R1	8	#3 Rebar	11	0	BENT
R2	18	#3 Rebar	3	2	STR
R3	12	#3 Rebar	5	6	STR
R4	8	#3 Rebar	4	3	STR
W1	1	Mesh 4x4 - W2.9 x W2.9			BENT
W2	1	Mesh 4x4 - W2.9 x W2.9			STR
W3	2	Mesh 4x4 - W2.9 x W2.9			BENT
W4	2	Mesh 4x4 - W2.9 x W2.9			STR



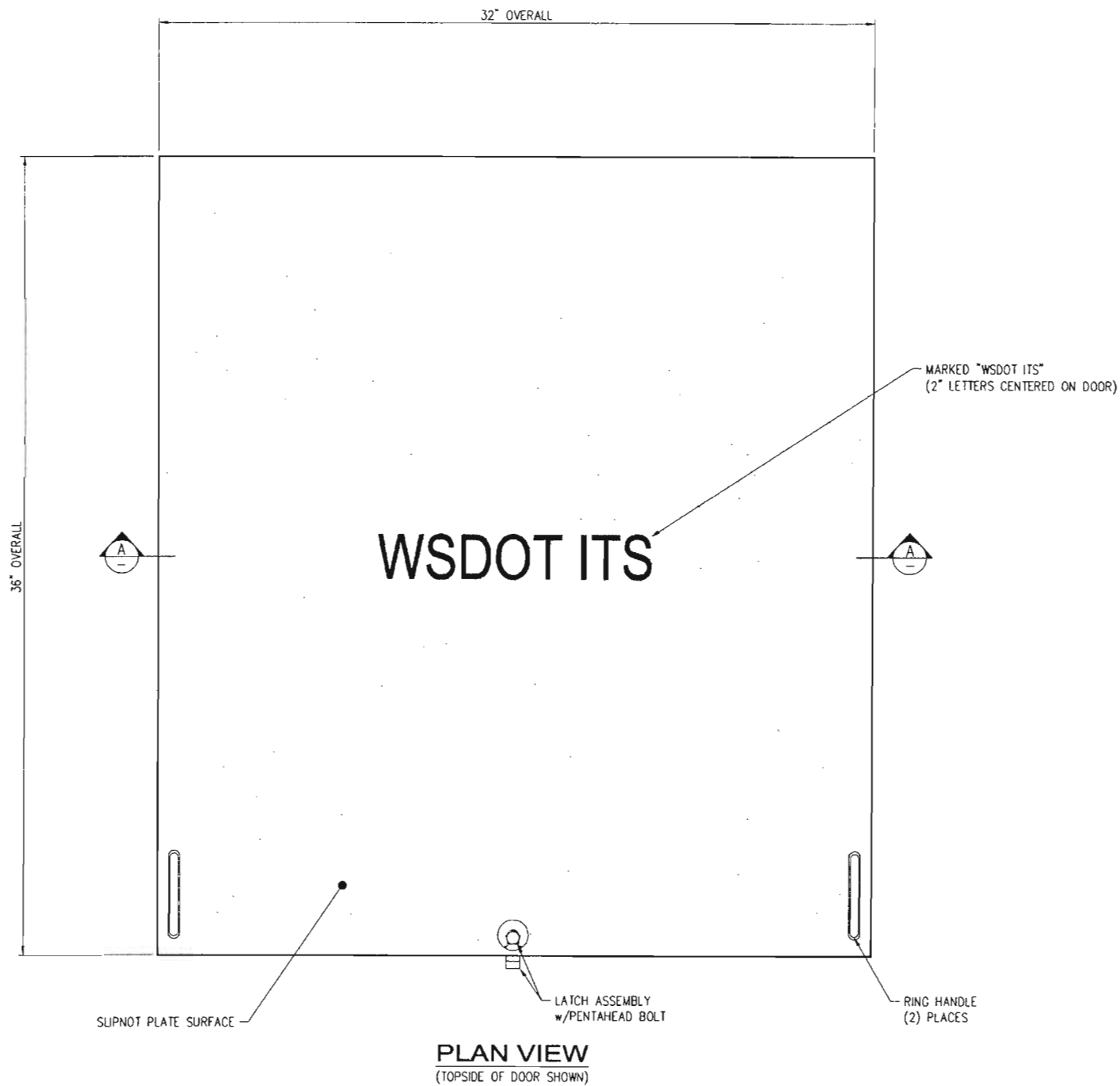
LTR.	REVISION	DATE	BY
B	REVISED STRUT LENGTH	8/5/10	JG
A	REVISED STEEL DESIGN & ADD GROUND PER SUBMITTAL COMMENTS (SEE CAO FILE FOR REVISION HISTORY)	7/1/10	JG
-			

SALES	DATE
	4/29/10
DESIGNER	WEIGHT
JG	
CHECKED	CALC NO



645 SPLIT CABLE VAULT BASE - WSDOT  
REINFORCING DETAILS  
CUSTOMER STANDARD PRODUCT

CUSTOMER	SHEET
WASHINGTON STATE DOT	2 of 2
DRAWING NUMBER	REVISION
010-X806405-001	B



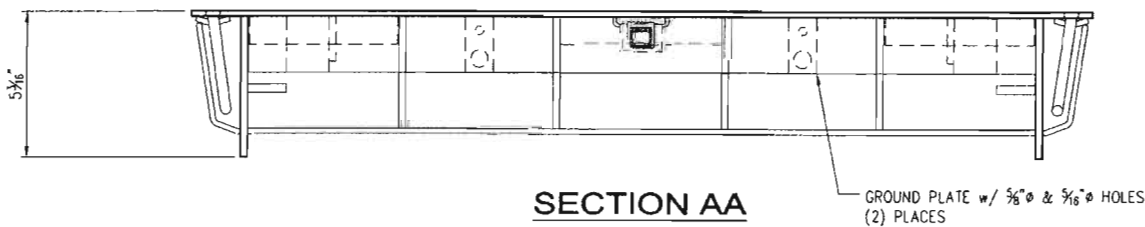
**STRUCTURAL NOTES**

1. MATERIAL: ASTM A36 STRUCTURAL STEEL STANDARDS
2. ASSEMBLY: AWS D1.1 WELDING STANDARDS
3. COATING: ASTM A123 HOT-DIP GALVANIZING STANDARDS
4. LOADS: SUITABLE FOR AASHTO H-20 WHEEL LOADING IN OFF-STREET LOCATIONS WHERE NOT SUBJECTED TO HIGH-DENSITY TRAFFIC

**GENERAL NOTES**

1. FRAMES AVAILABLE TO USE WITH THIS DOOR:  
X800120 (WSDOT 2-332-SA-80 FRAME)
2. OPTIONAL LETTERING FOR DOORS AS REQUESTED:  
WSDOT TS  
WSDOT LT  
WSDOT TEL  
WSDOT COMM

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE December 2, 2010 TAT



il-227

C	REDESIGNED DOOR	11/19/10	JG
-	(SEE CAD FILE FOR COMPLETE REVISION HISTORY)	-	-
LTR	REVISION	DATE	BY

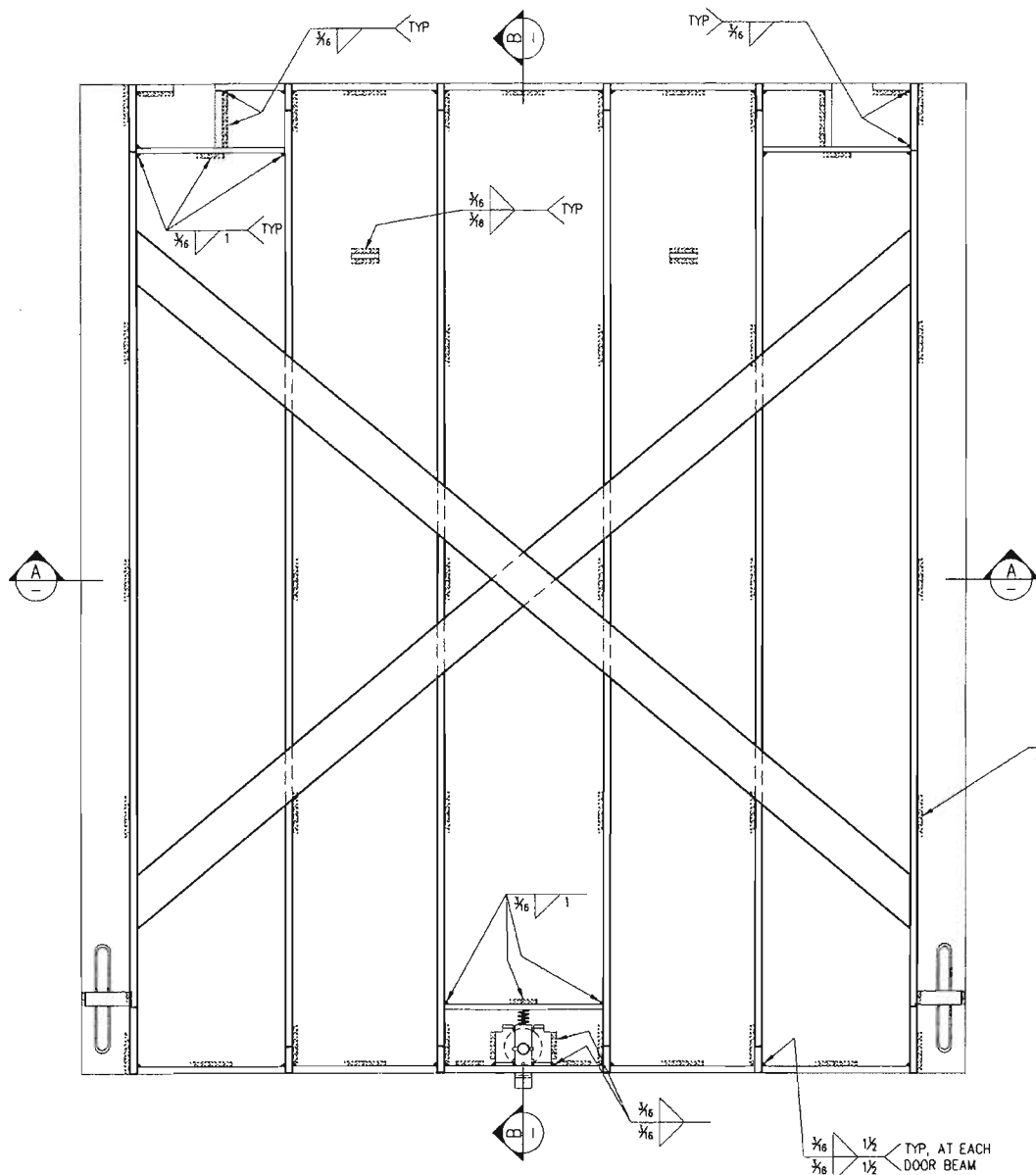
SALES	DATE	6/22/10
DESIGNER	JG	WEIGHT
CHECKED		CALC NO

**Oldcastle Precast®**  
P.O. BOX 588 ALBUQUERQUE, NM 80771-0588  
PHONE: 800-962-1536 FAX: 203-735-4251

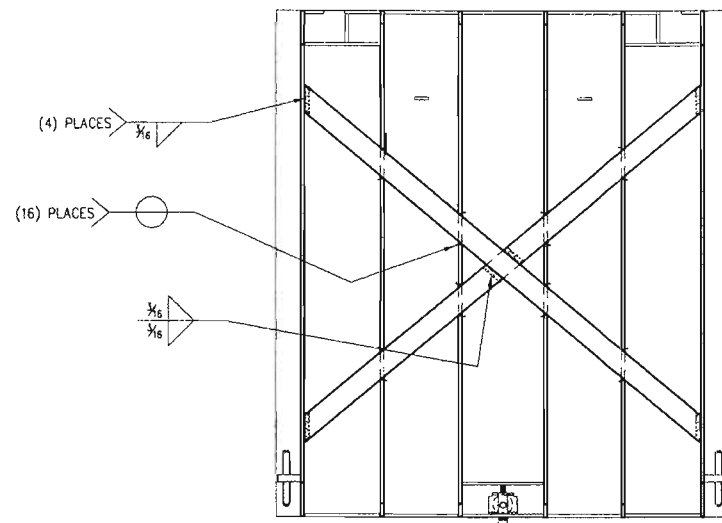
WSDOT 332-NS-SA-80 "WSDOT ITS"  
WSDOT STANDARD PRODUCT

CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	1 of 5
DRAWING NUMBER	010-X800102-001	REVISION	C





**PLAN VIEW**  
(UNDERSIDE OF DOOR SHOWN)



**CROSS BRACE WELD DETAIL**  
(TOPSIDE OF DOOR SHOWN)

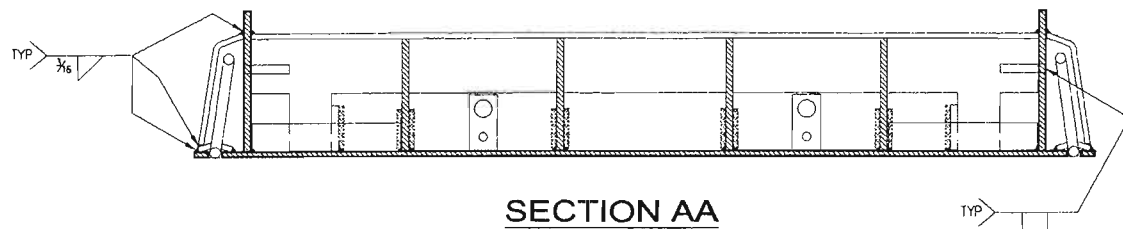
**STRUCTURAL NOTES**

1. ASSEMBLY: AWS D1.1 WELDING STANDARDS

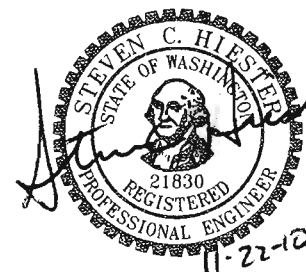
**SHOP NOTES**

1. ALL WELDS ARE TYPICAL 3/16" FILLET WELDS, UNLESS OTHERWISE NOTED

**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE December 2, 2010 TAT



**SECTION AA**



C	REDESIGNED DOOR	11/19/10	JG
-	(SEE CAD FILE FOR COMPLETE REVISION HISTORY)	-	-
LTR.	REVISION	DATE	BY

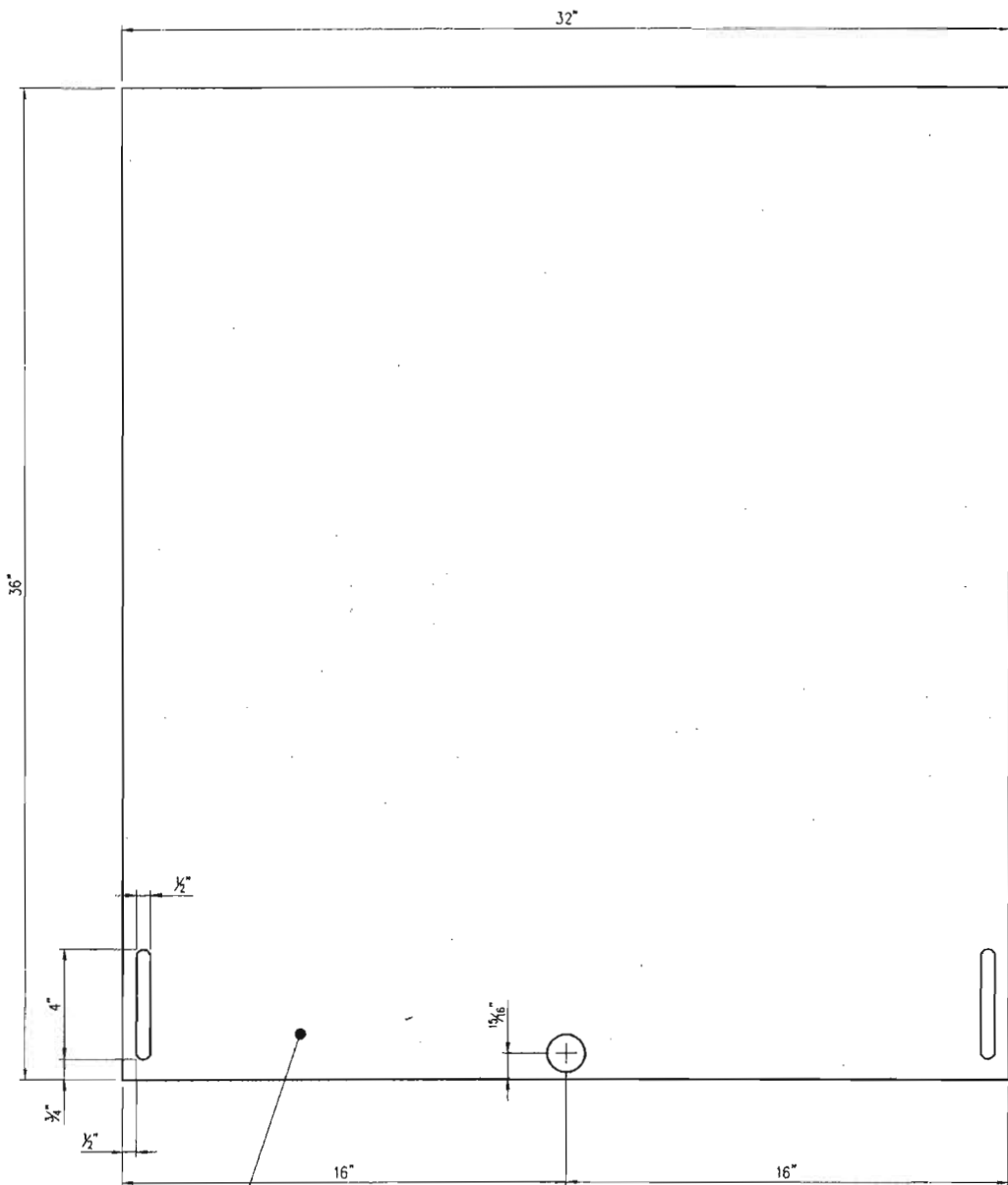
THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved

SALES	DATE	6/22/10
DESIGNER	JG	WEIGHT
CHECKED		CALC NO

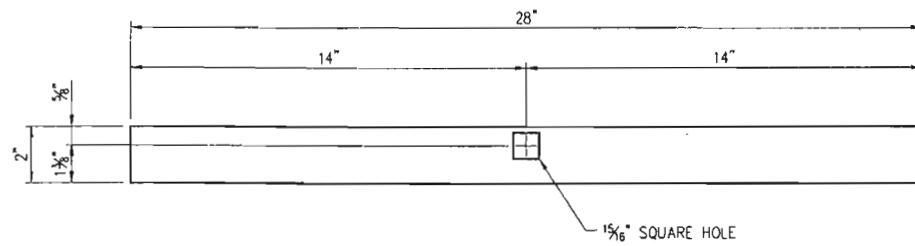


WSDOT 332-NS-SA-80 "WSDOT ITS"  
WELDMENT DETAILS  
WSDOT STANDARD PRODUCT

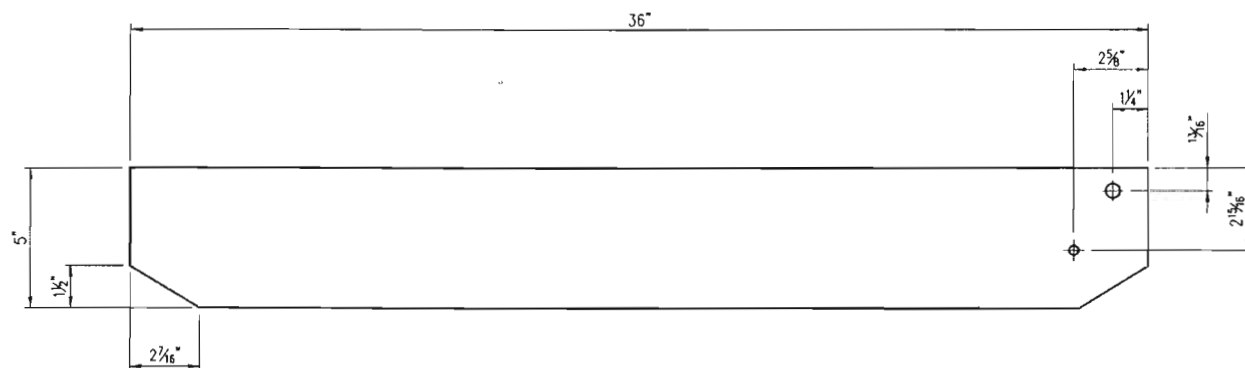
CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	3 OF 5
DRAWING NUMBER	010-X800102-001	REVISION	C



**PART No. 15**



**PART No. 16**



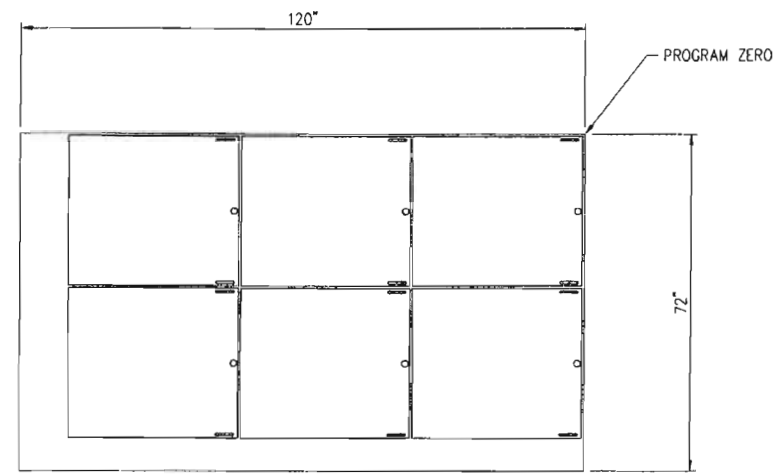
**PART No. 23**

**SHOP NOTES**

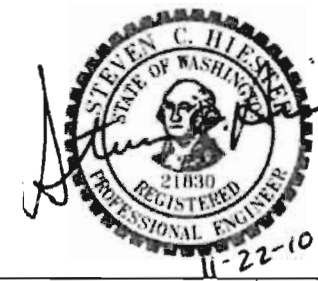
1. PLASMA PROGRAM NAMES: 010-X800102S (SINGLE CUT)  
010-X800102M (MULTIPLE CUT)
2. CUT w/SLIPNOT PATTERN UP

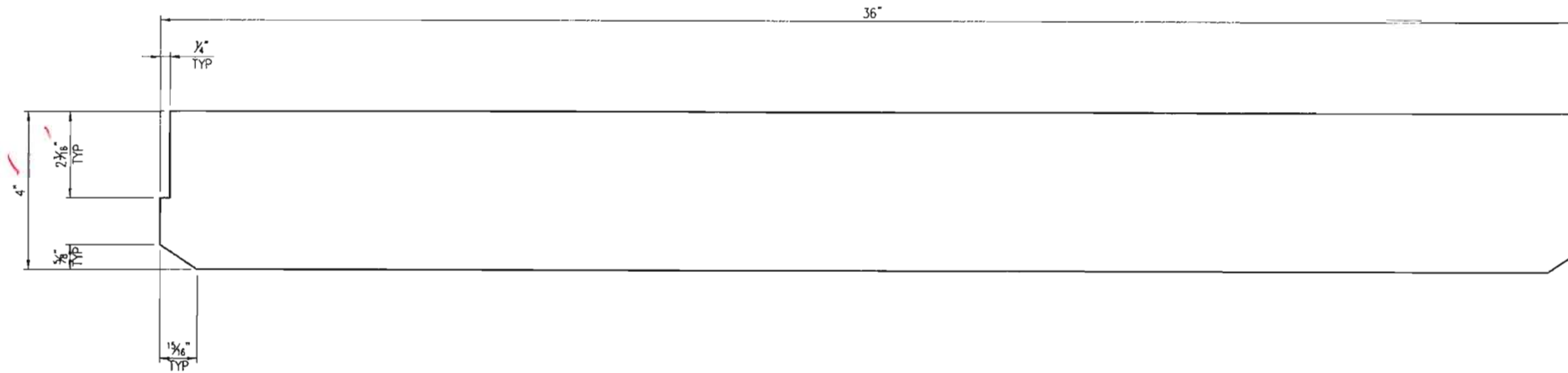
LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
15	1	Slipnot Plate 72" x 120" x 3/16"	
16	1	Flatbar 1/4" x 2"	28"
23	2	Flatbar 1/4" x 5"	36"

**APPROVED**  
 Washington State  
 Department of Transportation  
 HQ Traffic Operations Office  
 DATE December 2, 2010 TAT

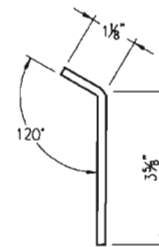


**PLASMA DETAIL**



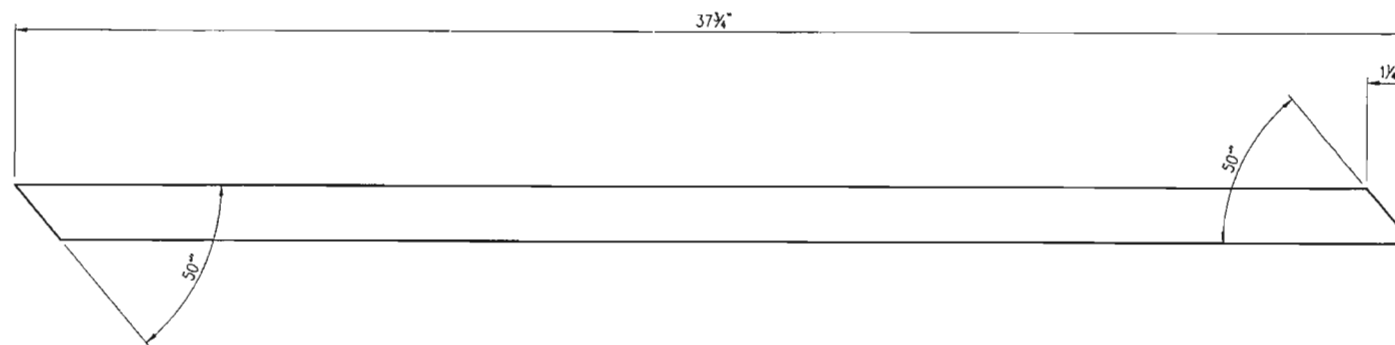


**PART No. 19**



**PART No. 20**

LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
19	4	Flatbar 1/4" x 4"	36"
20	2	Flatbar 3/16" x 1/2"	4 1/2"
22	2	Flatbar 3/16" x 1-1/2"	37 3/4"



**PART No. 22**

**APPROVED**

Washington State  
Department of Transportation  
HQ Traffic Operations Office

DATE December 2, 2010 TAT



11-22-10

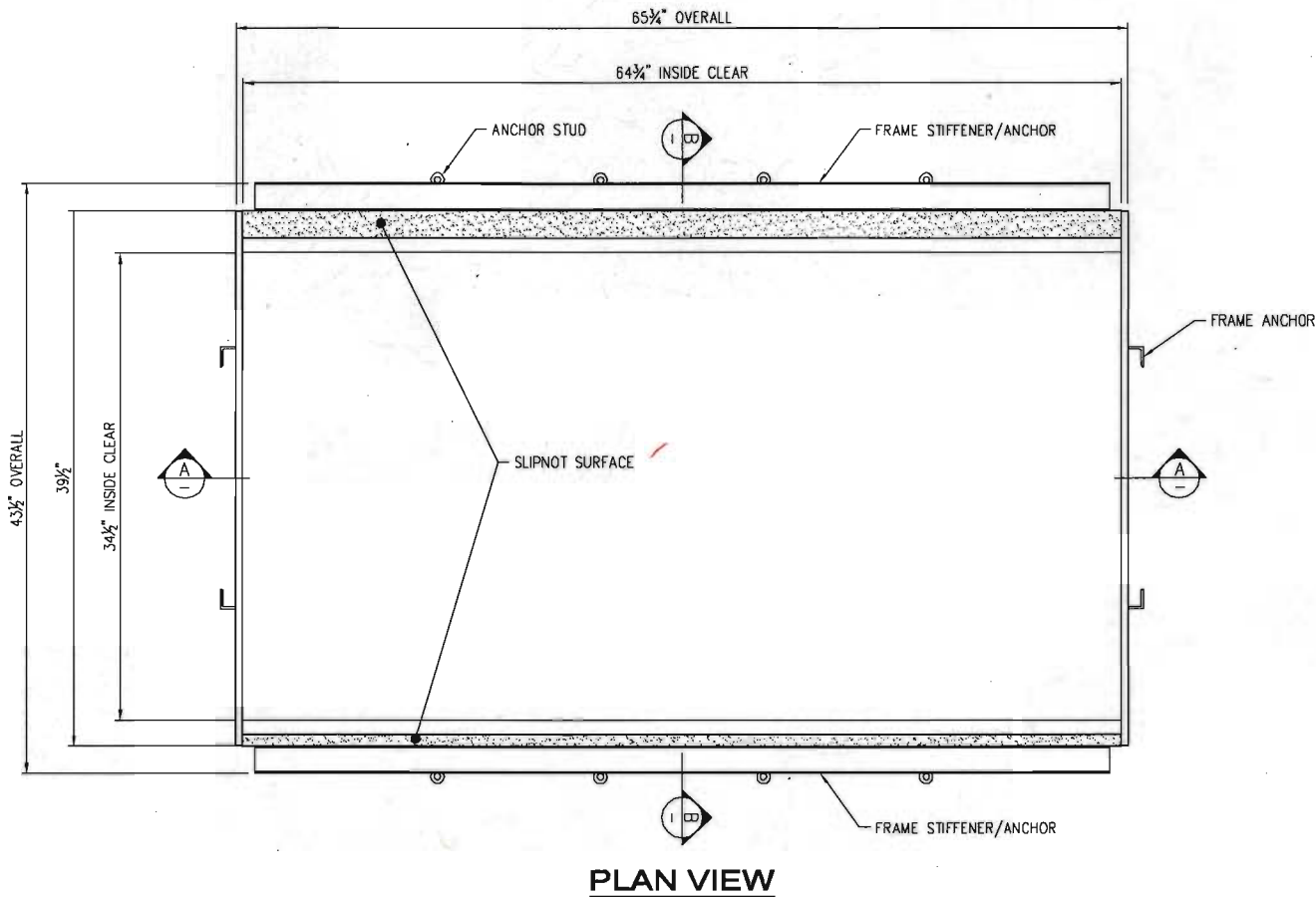
LTR.	REVISION	DATE	BY
C	REDESIGNED DOOR	11/19/10	JG
-	(SEE CAD FILE FOR COMPLETE REVISION HISTORY)	-	-

DESIGNER	JG	DATE	6/22/10
CHECKED		WEIGHT	
		CALC NO	



WSDOT 332-NS-SA-80 "WSDOT ITS"  
PART CUT DETAILS  
WSDOT STANDARO PRODUCT

CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	5 of 5
DRAWING NUMBER	010-X800102-001	REVISION	C



**STRUCTURAL NOTES**

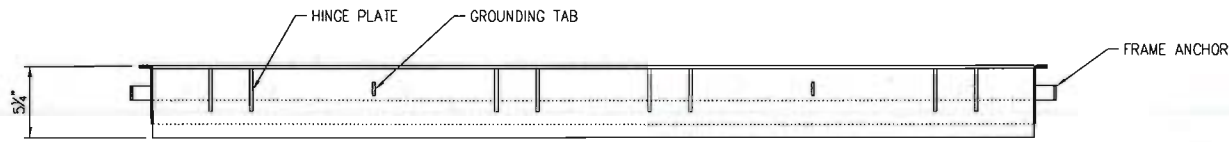
1. MATERIAL: ASTM A36/A1011 STRUCTURAL STEEL STANDARDS
2. ASSEMBLY: AWS D1.1 WELDING STANDARDS
3. COATING: ASTM A123 HOT-DIP GALVANIZING STANDARDS
4. LOADS: SUITABLE FOR AASHTO H-20 WHEEL LOADING IN OFF-STREET LOCATIONS WHERE NOT SUBJECTED TO HIGH-DENSITY TRAFFIC

**GENERAL NOTES**

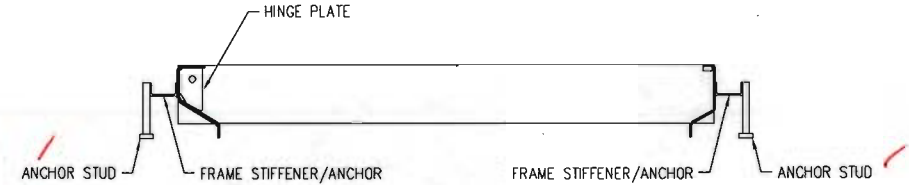
1. DOORS AVAILABLE TO USE WITH THIS FRAME: X800102 (WSDOT 332-DP-SA-80 "WSDOT ITS")

APPROVED

Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE June 14, 2011 TAT



**SECTION AA**



**SECTION BB**

D	ADDED ANCHOR STUDS	5/26/11	WS
C	ADDED A1011 TO STRUCTURAL NOTE 1	4/7/11	WS
B	NO CHANGES TO THIS SHEET	11/19/10	JG
A	CHANGED MATERIAL TO SLIPNOT	8/5/10	JC
LTR.	REVISION	DATE	BY

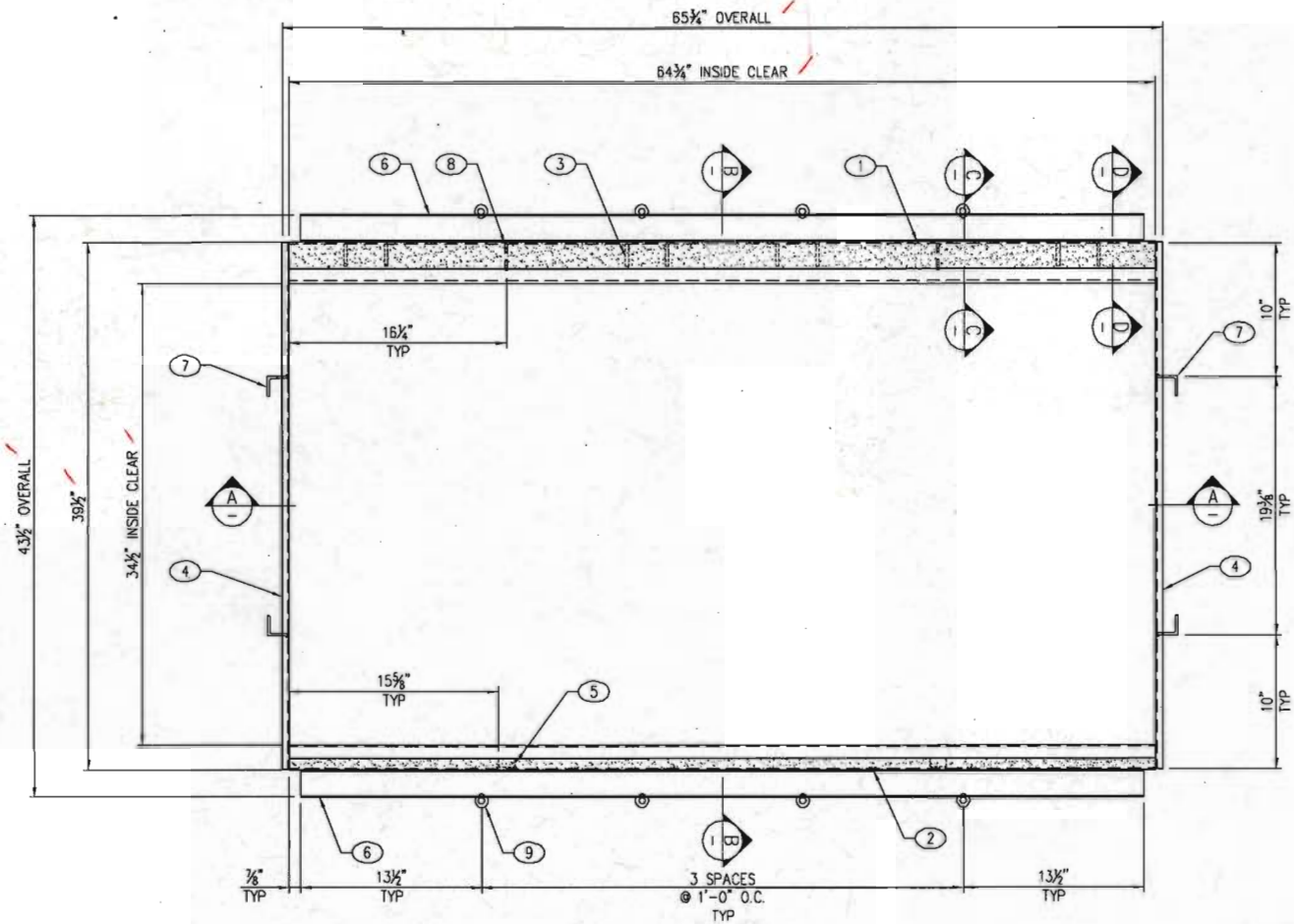
THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2011 Oldcastle Precast, Inc. All Rights Reserved

SALES	DATE	6/23/10
DESIGNER	WEIGHT	72 lbs
CHECKED	CALC NO	

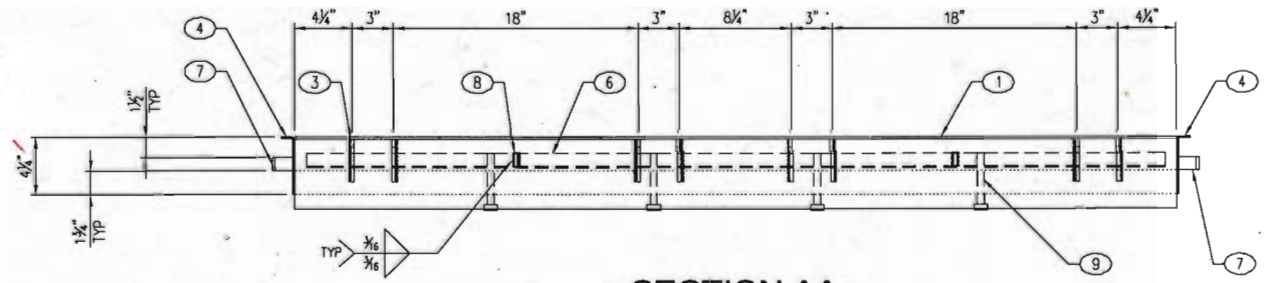


WSDOT 2-332-SA-80 FRAME  
WSDOT STANDARD PRODUCT

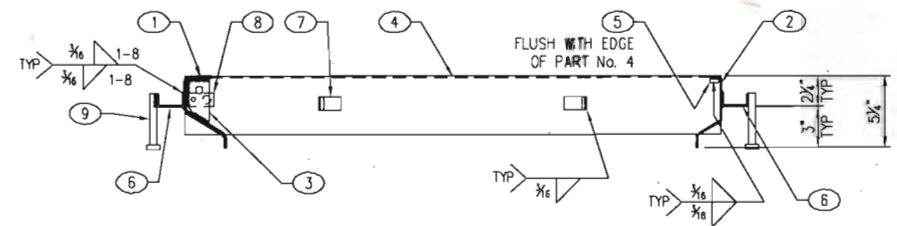
CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	1 of 4
DRAWING NUMBER	010-X800120-001	REVISION	D



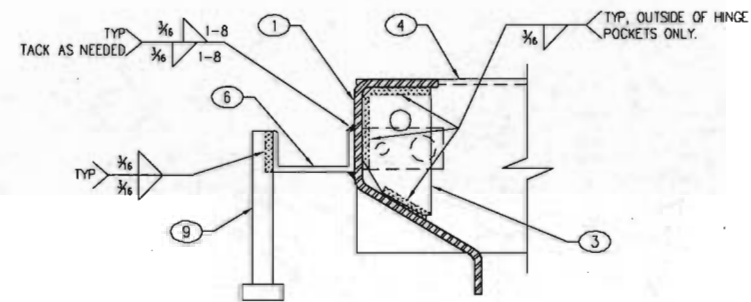
**PLAN VIEW**



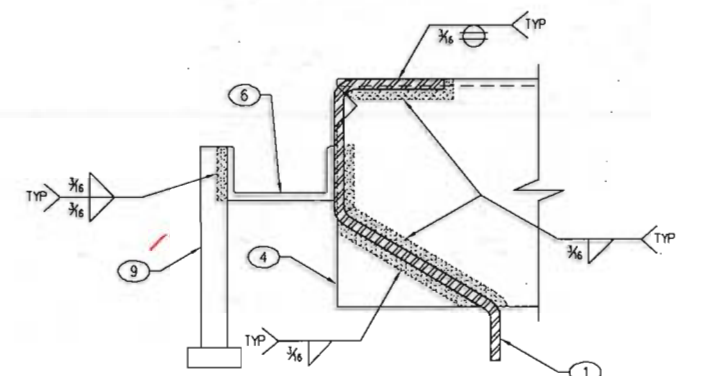
**SECTION AA**



**SECTION BB**



**SECTION CC**



**SECTION DD**

TYPICAL ALL CORNERS

BILL OF MATERIAL				
PART	QTY	UM	DESCRIPTION	ITEM #
1	1	ea	Rear Frame Member	Sheet 4
2	1	ea	Front Frame Member	Sheet 4
3	8	ea	Hinge Plate	010-5220100-001
8	2	ea	Ground Plate w/ 2 Holes	010-5210010-001
9	8	ea	Stud 1/2" x 4-1/8"	010-5910460-000
	0.17	lbs	Flatbar 3/8" x 1-1/4"	010-5520181-000
	0.05	shl	Smooth Plate 72" x 120" x 11GA	-
	16.80	lbs	Channel 2" x 1" x 1/8"	010-5520230-000
	0.60	lbs	Angle 1-1/2" x 1-1/2" x 3/16"	010-5510210-000
	72	lbs	Galvanizing Per Lb.	010-5800000-000
	0.03	shl	SlipNot Plate 72" x 120" x 3/16"	010-5540120-000
	0.11	shl	Smooth Plate 72" x 120" x 3/16"	010-5540174-000

LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
4	2	Smooth Plate 72" x 120" x 11GA	Sheet 3
5	2	Flatbar 3/8" x 1 1/4"	5/8"
6	2	Channel 2" x 1" x 1/8"	63"
7	4	Angle 1-1/2" x 1-1/2" x 3/16"	1"
8	1	Smooth Plate 72" x 120" x 3/16"	Sheet 4
9	1	Smooth Plate 72" x 120" x 3/16"	Sheet 4
10	1	Slipnot Plate 72" x 120" x 3/16"	Sheet 4
11	1	Slipnot Plate 72" x 120" x 3/16"	Sheet 4

THESE PARTS ARE USED TO CREATE PART No. 1 & 2

**SHOP NOTES**

- OVERALL DIMENSIONS HAVE A MAXIMUM ALLOWABLE TOLERANCE OF  $\pm 1/16"$
- ALL WELDS ARE  $3/16"$  FILLET WELDS, UNLESS OTHERWISE NOTED
- GRIND ALL SHARP EDGES
- DOOR TO BE HOT-DIPPED GALVANIZED AFTER FABRICATION.

APPROVED

Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE: June 14, 2011

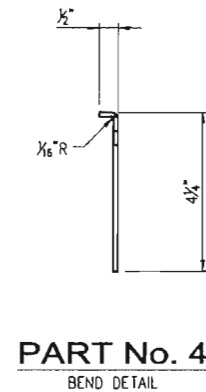
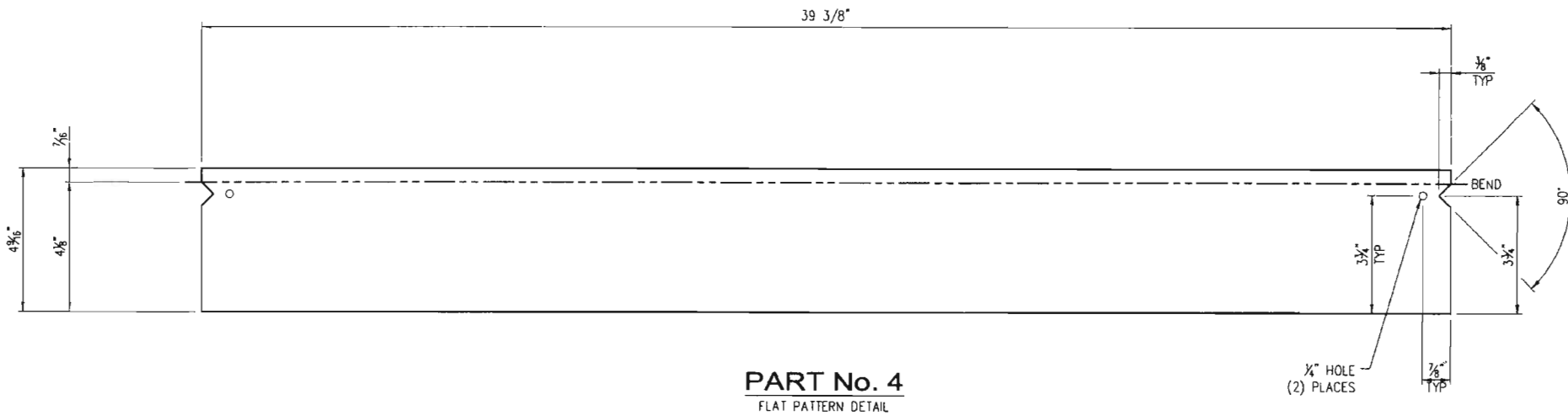
REVISION	DATE	BY
D ADDED STUDS	5/26/11	WS
C PART 5 MATL CNG FOR DOMESTIC	4/7/11	WS
B ADD NOTE "TACK AS NEEDED" FOR WELDING	11/19/10	JG
A CHANGED MATERIAL TO SLIPNOT	8/5/10	JG

SALES	DATE	6/23/10	
DESIGNER	JG	WEIGHT	72 lbs
CHECKED		CALC NO	

**Oldcastle Precast**  
P.O. BOX 588 ALUMIN, WA 98071-0588  
PHONE: 800-882-1288 FAX: 253-735-4281

WSDOT 2-332-SA-80 FRAME  
ASSEMBLY & WELD DETAILS  
WSDOT STANDARD PRODUCT

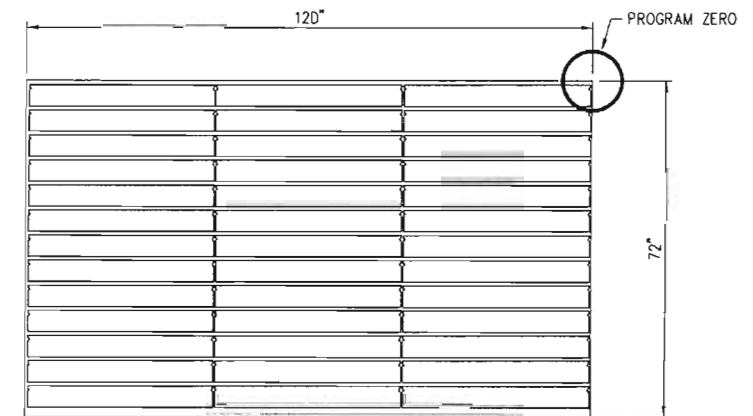
CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	2 of 4
DRAWING NUMBER	010-X800120-001	REVISION	D



LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
4	2	Smooth Plate 72" x 120" x 11GA	--

**SHOP NOTES**

1. PLASMA PROGRAM NAMES: WSDOT-80FRS-S (SINGLE CUT)  
WSDOT-80FRS-M (MULTIPLE CUT)

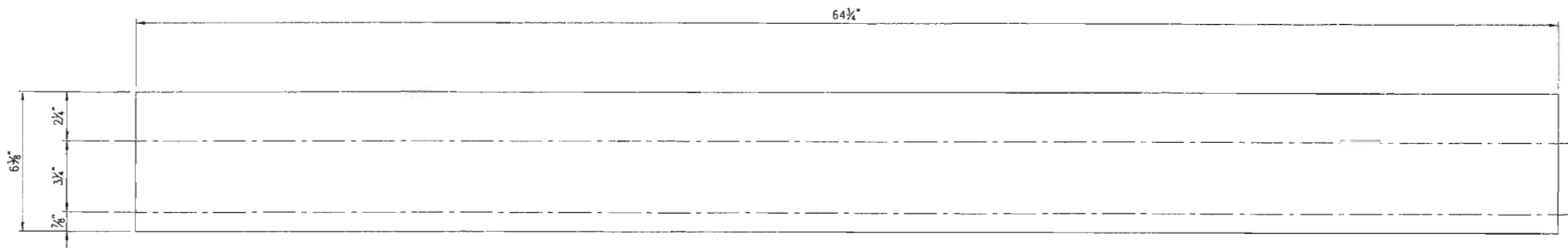


**APPROVED**  
Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE December 2, 2010 TAT

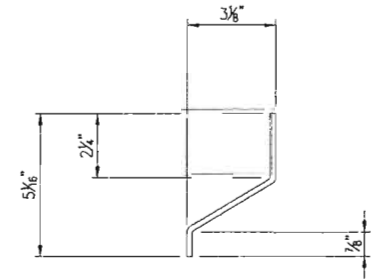


1122-10

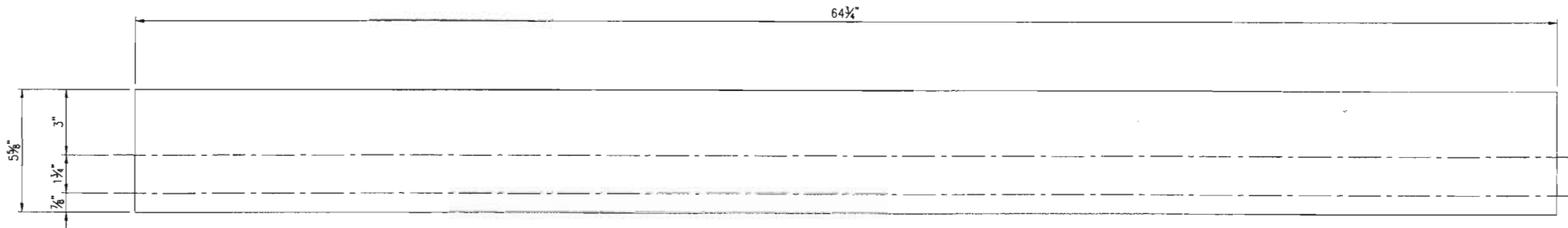
B	ADD 1/4" HOLE FOR GALV	11/19/10	JG	THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved.	SALES	DATE	6/23/10	<p><b>Oldcastle Precast</b> P.O. BOX 588 ALBUQUERQUE, NM 87071-0588 PHONE: 800-462-1536 FAX: 203-736-4201</p>	<b>WSDOT 2-332-SA-80 FRAME</b> PART CUT & PLASMA DETAILS WSDOT STANDARD PRODUCT	CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	3 OF 4
A	CHANGED MATERIAL TO SLIPNOT	8/5/10	JG		DESIGNER	JG	WEIGHT			DRAWING NUMBER	010-X800120-001	REVISION	B
LIR	REVISION	DATE	BY		CHECKED	CALC NO							



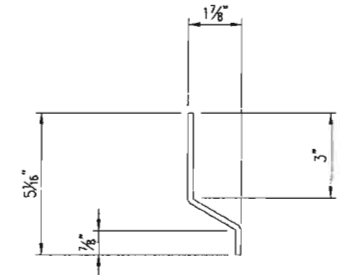
**PART No. 8**  
FLAT PATTERN DETAIL



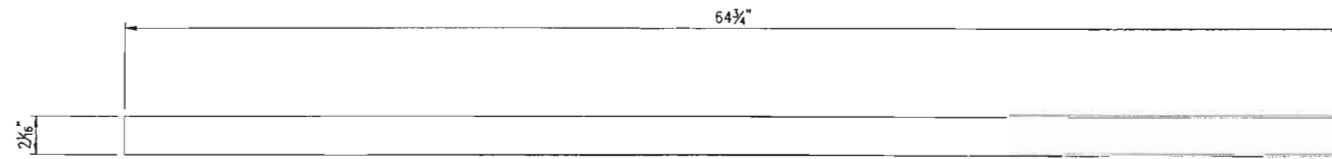
**PART No. 8**  
BEND DETAIL



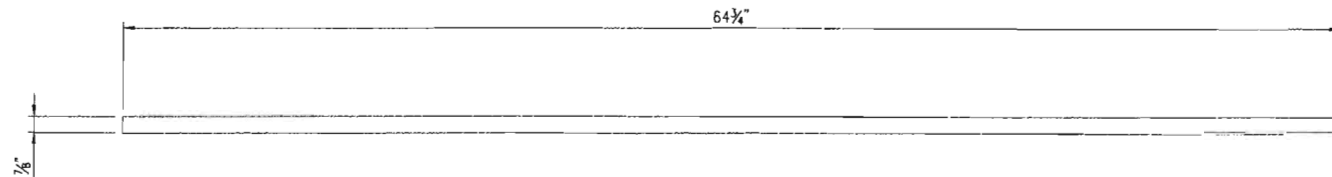
**PART No. 9**  
FLAT PATTERN DETAIL



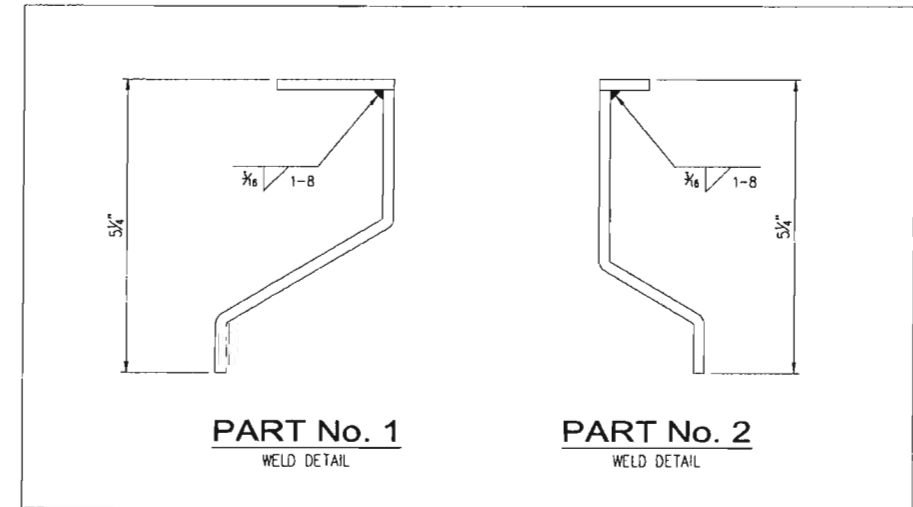
**PART No. 9**  
BEND DETAIL



**PART No. 10**



**PART No. 11**



**PART No. 1**  
WELD DETAIL

**PART No. 2**  
WELD DETAIL

LAYOUT CUT LIST			
PART	QTY	DESCRIPTION	SIZE
8	1	Smooth Plate 72" x 120" x 3/16"	---
9	1	Smooth Plate 72" x 120" x 3/16"	---
10	1	Slipnot Plate 72" x 120" x 3/16"	---
11	1	Slipnot Plate 72" x 120" x 3/16"	---

**APPROVED**

Washington State  
Department of Transportation  
HQ Traffic Operations Office  
DATE December 2, 2010 TAT



11-22-10

B	NO CHANGES TO THIS SHEET	11/19/10	JG	THIS DOCUMENT IS THE PROPERTY OF OLDCASTLE PRECAST, INC. IT IS SUBMITTED FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED IN ANY WAY INJURIOUS TO THE INTERESTS OF SAID COMPANY. COPYRIGHT © 2010 Oldcastle Precast, Inc. All Rights Reserved.	SALES	DATE	6/23/10	
A	CHANGED MATERIAL TO SLIPNOT	8/5/10	JG		DESIGNER	JG	WEIGHT	
LTR.	REVISION	DATE	BY		CHECKED		CALC NO	



WSDOT 2-332-SA-80 FRAME  
PART CUT & WELDMENT DETAIL  
WSDOT STANDARD PRODUCT

CUSTOMER	WASHINGTON STATE D.O.T.	SHEET	4 OF 4
DRAWING NUMBER	010-X800120-001	REVISION	B

**EJIW EAST JORDAN**  
 IRON WORKS EST. 1883  
 800-626-4653  
 www.ejiw.com  
 MADE IN USA

PRODUCT NUMBER  
**00268801**

CATALOG NUMBER  
**2688Z2PT**  
**2688 APT DI**

**MANHOLE**  
**ASSEMBLY**

LOAD RATING  
**HEAVY DUTY**

COATING  
**UNDIPPED**

ESTIMATED WEIGHT  
 COVER: 311 LBS  
 FRAME: 225 LBS  
 UNIT: 532 LBS

MATERIAL SPECIFICATION  
 COVER - DUCTILE IRON ✓  
 ASTM A536  
 FRAME - GRAY IRON  
 ASTM A48 CL35B

OPEN AREA  
 N/A

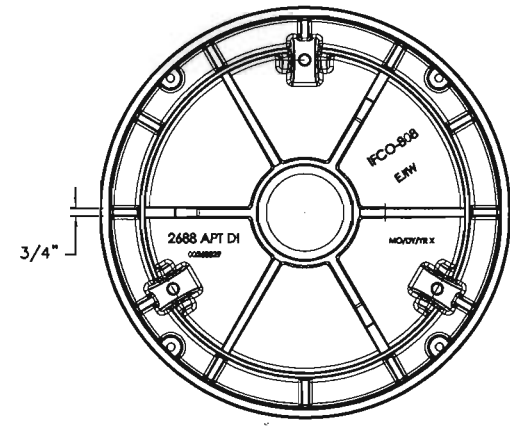
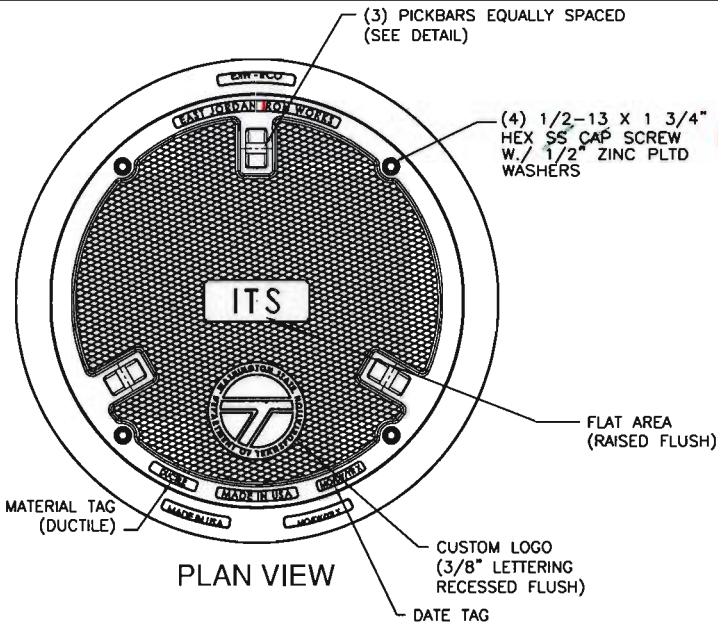
✓ DESIGNATES MACHINED SURFACE

DRAWN DEW	DATE 05/18/06
--------------	------------------

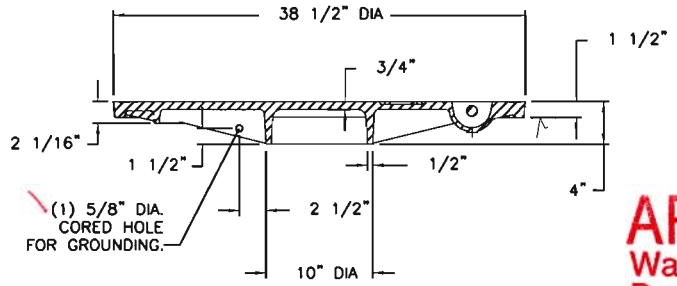
LAST REVISED JJD	DATE 05/22/08
---------------------	------------------

REFERENCE INFORMATION

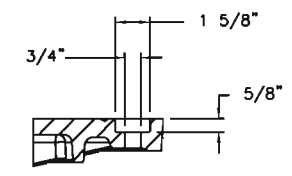
00XXXXXX



COVER BOTTOM

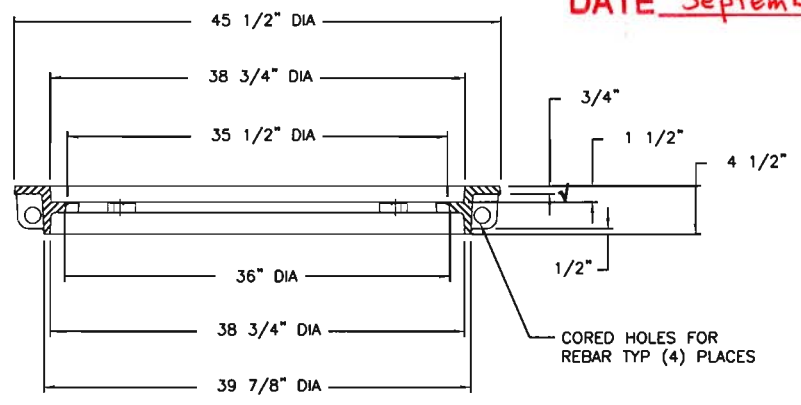


COVER SECTION

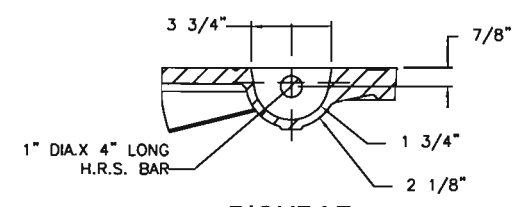


BOLTHOLE DETAIL

**APPROVED AS NOTED**  
 Washington State  
 Department of Transportation  
 HQ Traffic Operations Office  
 DATE September 1, 2010 *TAT*



FRAME SECTION



PICKBAR DETAIL

✓ MACHINED SURFACE

**EJIW EAST JORDAN**  
 IRON WORKS EST. 1883  
 800-626-4653  
 www.ejiw.com  
 MADE IN USA

PRODUCT NUMBER  
**00268829**

CATALOG NUMBER  
**2688APT DI**

**COVER**

LOAD RATING  
**HEAVY DUTY**

COATING  
**UNDIPPED**

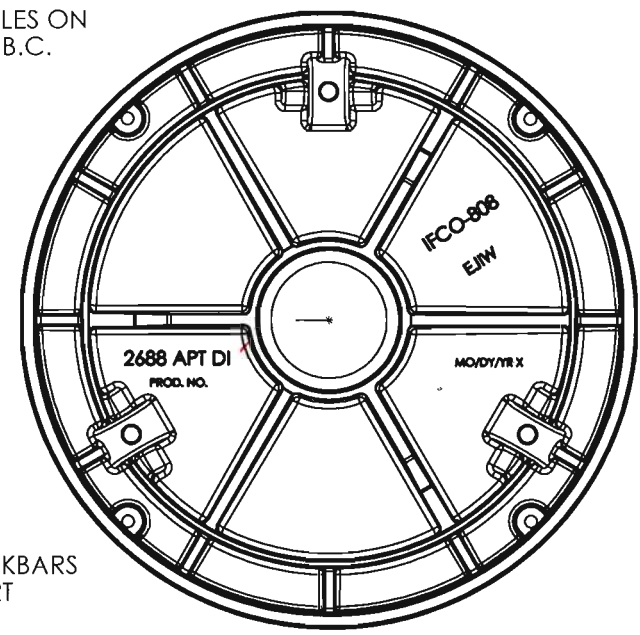
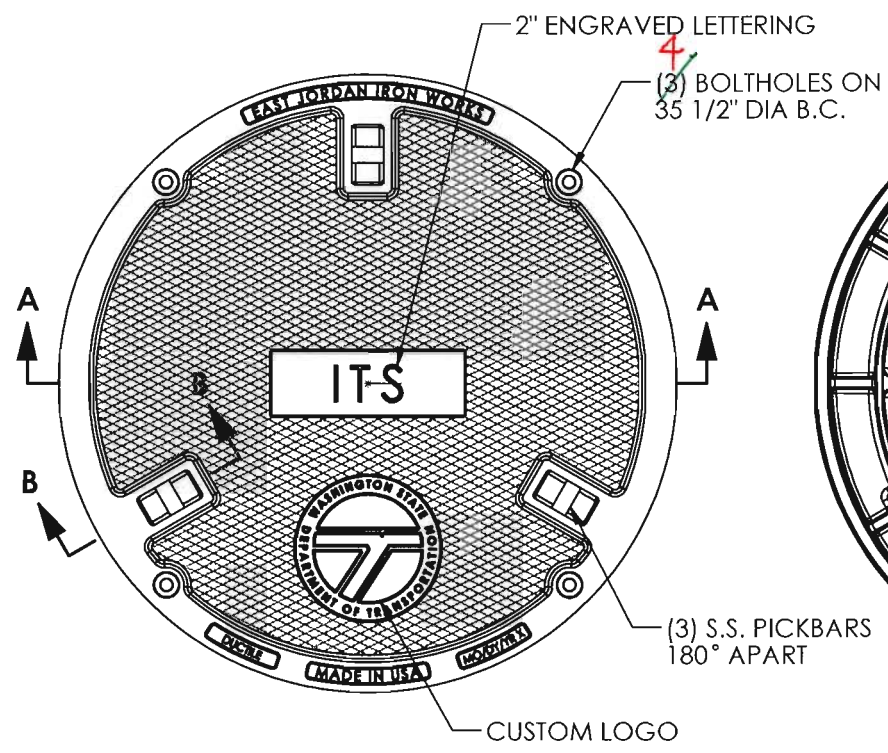
SPECIFICATION

COVER-DUCTILE IRON  
 ASTM A536

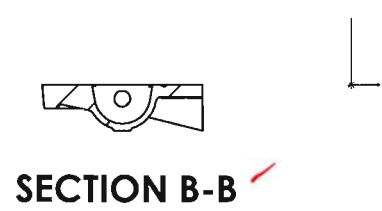
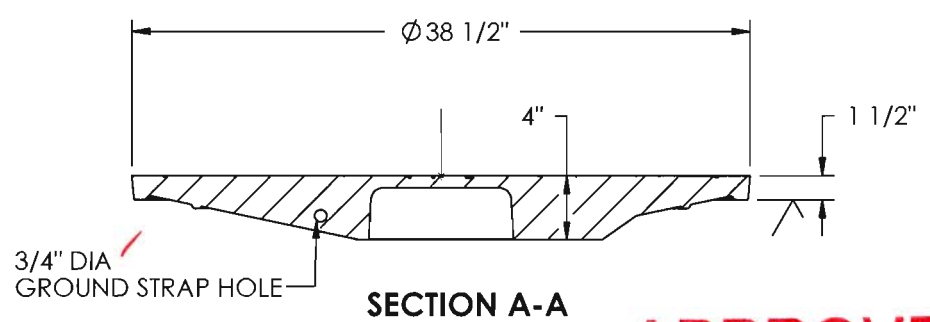
OPEN AREA  
 N/A

√ DESIGNATES  
 MACHINED SURFACE

DRAWN DEW	DATE 8/30/2007
LAST REVISED DEW	DATE 5/19/2009



**BOTTOM VIEW**



**APPROVED**  
 Washington State  
 Department of Transportation  
 HQ Traffic Operations Office  
 DATE September 1, 2010 TAT