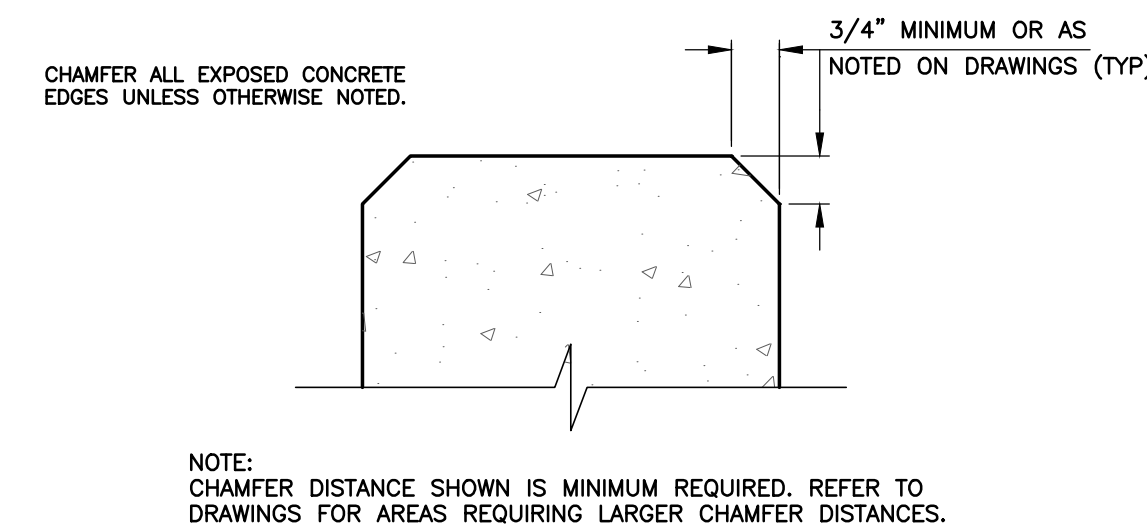
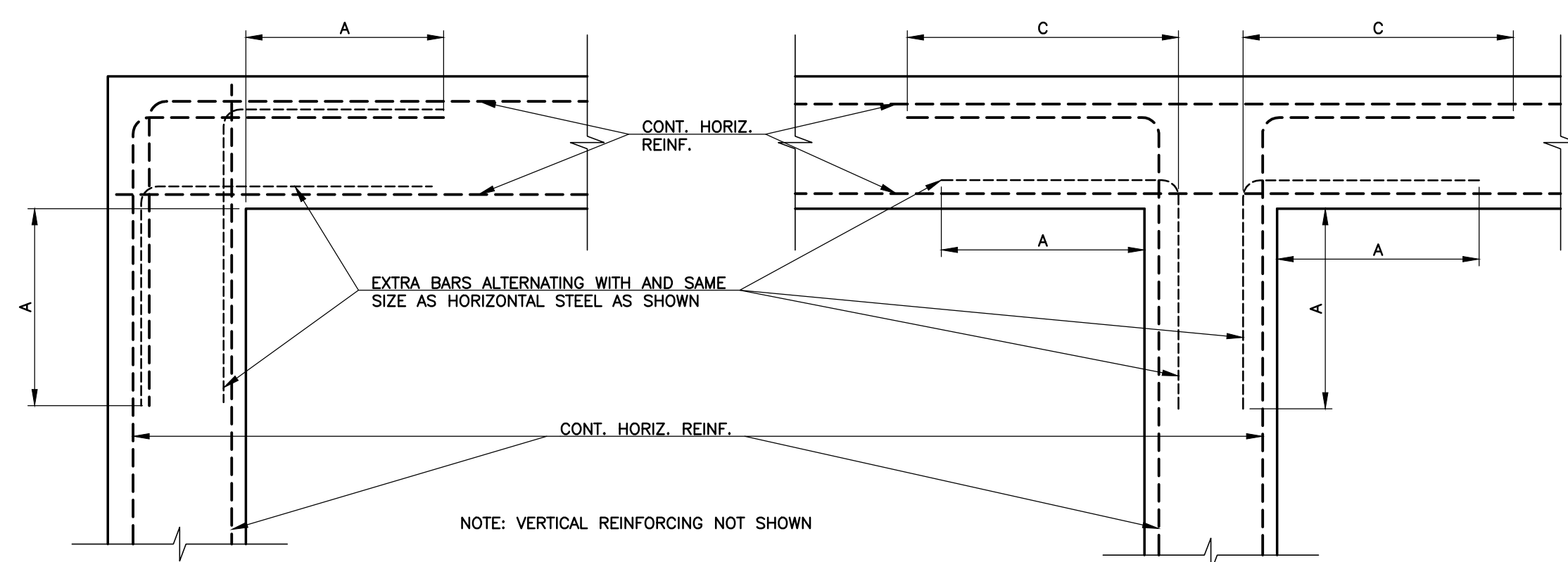
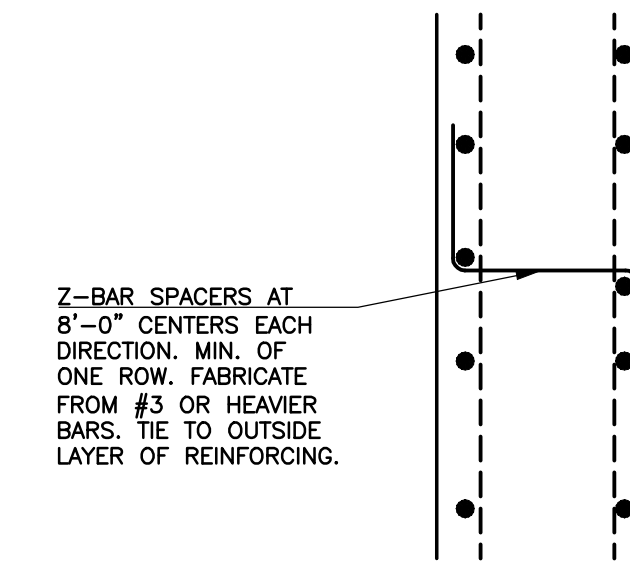


**GENERAL NOTE: ITEMS ON THIS SHEET APPLY TO THE ENTIRE SET OF DRAWINGS EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE.**



**TYPICAL CORNER CHAMFER DETAIL**



**SPACERS FOR WALL REINFORCEMENT**

BAR SIZE	LENGTH OF LAPPED SPICES FOR HORIZ. REINFORCING IN INCHES		LENGTH OF EMBEDMENT FOR AND ANCHORAGE OF REINFORCING WITH STANDARD HOOKS IN INCHES	
	TOP BARS	OTHERS	TOP BARS	OTHERS
3	19	14	14	14
4	25	19	16	16
5	31	24	19	18
6	37	29	26	20
7	53	41	35	22
8	61	47	43	27
9	69	53	54	33
10	76	59	66	42
11	84	65	78	52
14	NOT PERMITTED		NOT PERMITTED	
18	NOT PERMITTED		NOT PERMITTED	

**WALLS 10" AND GREATER**

**WALLS 10" AND GREATER**

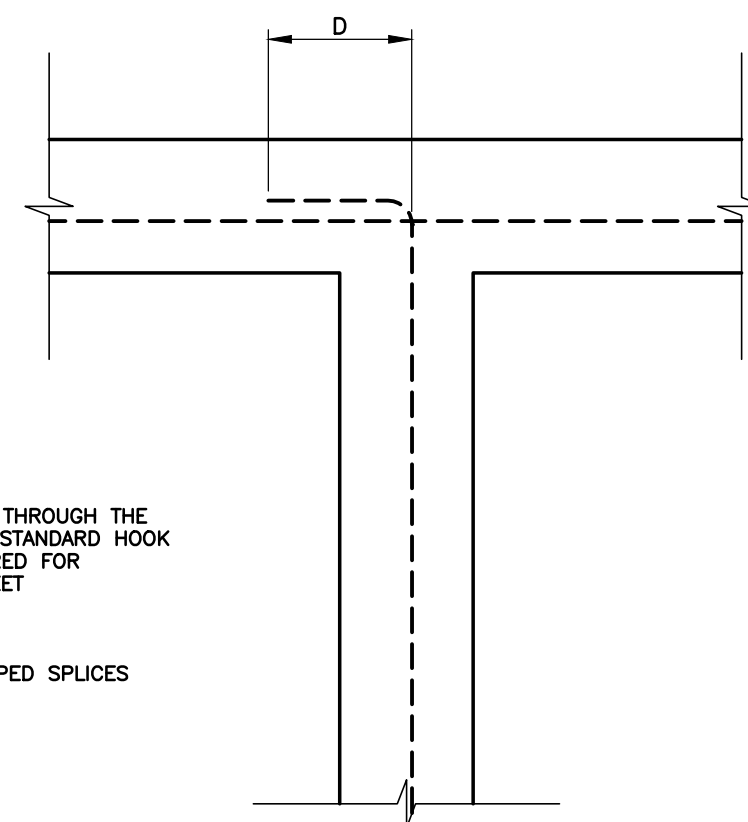
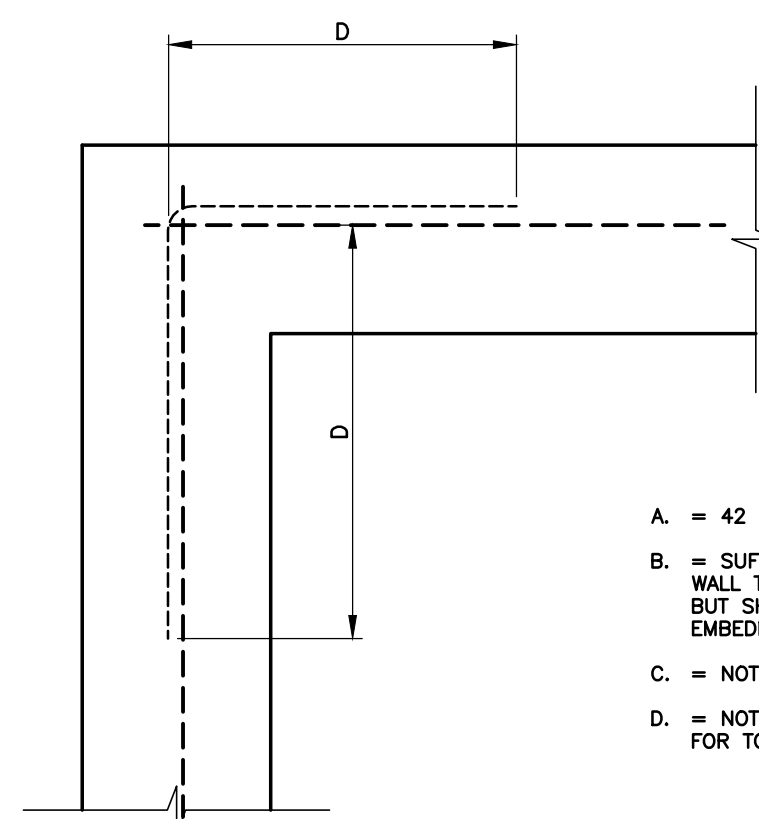
**CONCRETE COVER FOR REINFORCEMENT**

LOCATION	MINIMUM COVER
UNIFORMED SURFACES ADJACENT TO EXCAVATION	3"
FORMED OR TOP SURFACES EXPOSED TO WEATHER OR SATURATED AIR SUBMERGED OR IN CONTACT WITH EARTH:	
#7 OR LARGER BARS	2"
#6 OR SMALLER	1-1/2"
OTHER LOCATIONS:	
BARS IN BEAMS OR GIRDERS, INCLUDING STIRRUPS AND COLUMN SPIRALS OR TIES	
#14 AND #18	1-1/2"
#11 AND SMALLER	3/4"

UNLESS OTHERWISE NOTED ON THE DRAWINGS, COVER FOR REINFORCING STEEL SHALL NOT BE LESS THAN THE MINIMUM GIVEN ABOVE (NO MINUS TOLERANCE), AND SHALL NOT EXCEED THE MINIMUM BY MORE THAN 1/4 INCH WHERE THE CONCRETE THICKNESS IS 24 INCHES OR LESS OR MORE THAN 1/2 INCH WHERE THE CONCRETE THICKNESS IS MORE THAN 24 INCHES.

**NOTES:**

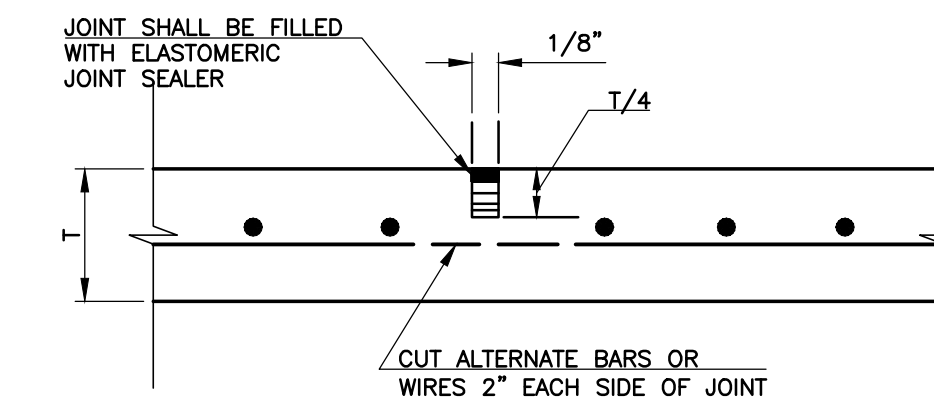
- TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12" OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR. HORIZONTAL BARS IN WALLS ARE TO BE PROVIDED WITH LAPS AS REQUIRED FOR TOP BARS.
- EXCEPT AS OTHERWISE INDICATED ON THE PLANS, EMBEDMENT LENGTHS FOR END ANCHORAGE AND LAPPED SPICES SHALL NOT BE LESS THAN (NO MINUS TOLERANCE) SHOWN ABOVE. LAPPED SPICES SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS AS DETERMINED BY THE ENGINEER, AND SHALL NOT BE SPICED CLOSER THAN 6" ON CENTERS.
- LENGTH OF SPICES OR EMBEDMENTS SHALL BE INCREASED BY 50% FOR EPOXY-COATED BARS.



- A = 42 BAR DIAMETERS  
 B = SUFFICIENT LENGTH TO PERMIT BARS TO EXTEND THROUGH THE WALL TO THE OPPOSITE FACE AND TERMINATE IN A STANDARD HOOK BUT SHALL NOT BE LESS THAN THE LENGTH REQUIRED FOR EMBEDMENT OF TOP BARS, AS SHOWN ON THIS SHEET  
 C = NOT LESS THAN 42 BAR DIAMETERS  
 D = NOT LESS THAN THE LENGTH REQUIRED FOR LAPPED SPICES FOR TOP BARS, AS SHOWN ON THIS SHEET.

**WALLS LESS THAN 10"**

**WALLS LESS THAN 10"**



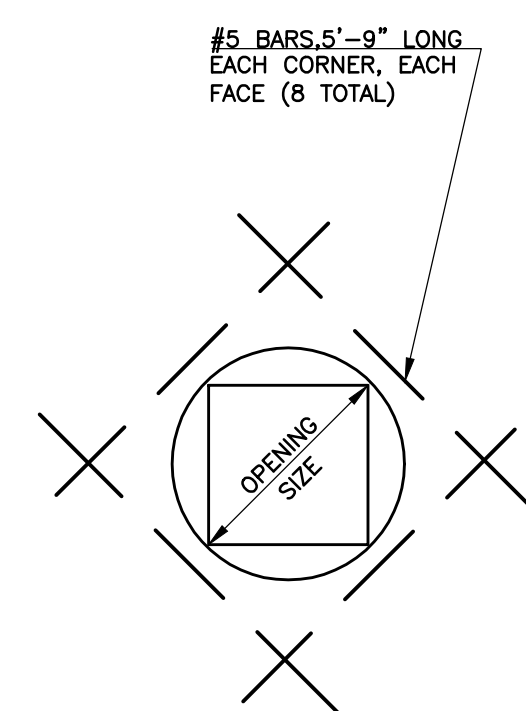
**NOTES:**

- Joint shall be tooled or sawcut. If sawcut, it must be sawcut as soon as possible without spalling edges, 18 hours maximum.
- A keyed, formed construction joint may be substituted for the control joint.
- Joints shall occur at 12'-0" O.C. in all directions unless otherwise noted.
- SUBMIT PROPOSED JOINT LOCATION FOR REVIEW PRIOR TO CONCRETE PLACEMENT.

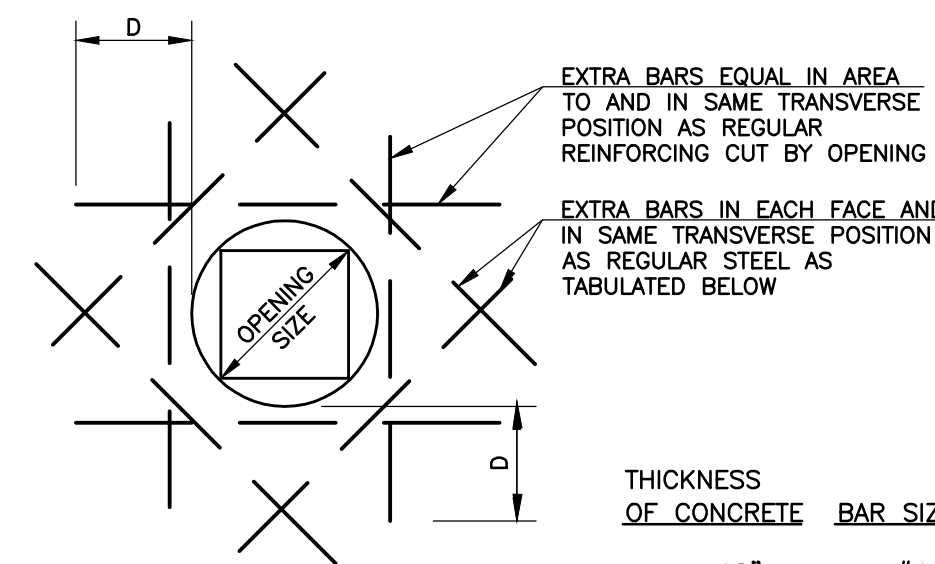
**FLOOR CONTROL JOINT FOR SLABS ON GRADE ONLY**

(NOT APPLICABLE TO LIQUID CONTAINING STRUCTURES)

**TYPICAL CORNER REINFORCING DETAILS**



**FOR OPENINGS 21" AND SMALLER IN DIAMETER OR DIAGONAL**



THICKNESS OF CONCRETE	BAR SIZE	BAR LENGTH
<12"	#4	3'-0"
12" TO 18"	#5	4'-0"
>18"	#6	4'-8"

D=THE REQUIRED LENGTH FOR LAPPED SPICE FOR TOP BARS AS SHOWN ON THIS SHEET

**FOR OPENINGS LARGER THAN 21" IN DIAMETER OR DIAGONAL**

**TYPICAL EXTRA REINFORCING AT OPENINGS (UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS)**

REVISIONS			REVISIONS		
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
13	09/16/2011	ISSUED FOR FOUNDATION PERMIT SUBMITTAL TO PPRBD (PUMPING AND DISINFECTION BLDG)	1	12/21/2010	ISSUED FOR FOUNDATION PERMIT SUBMITTAL TO PPRBD (A-BASINS AND DIGESTER)
14	10/17/2011	ISSUED FOR CONSTRUCTION PER PPRBD FOUNDATION PERMIT #8893 (PUMP AND DISINFECTION BLDG)	2	01/07/2011	ISSUED FOR CONSTRUCTION PER PPRBD PERMIT #5854 (FDN ONLY)
15	11/23/2011	ISSUED FOR BUILDING PERMIT SUBMITTAL TO PPRBD (EQUIP. MAINT. & STOR. BLDG.)	3	01/28/2011	ISSUED FOR FOUNDATION PERMIT SUBMITTAL TO PPRBD (HEADWORKS)
16	01/09/2012	ISSUED FOR CONSTRUCTION PER PPRBD BUILDING PERMIT #83002 (EQUIP. MAINT. & STOR. BLDG.)	4	03/30/2011	ISSUED FOR BUILDING PERMIT SUBMITTAL TO PPRBD (SECONDARY CLARIFIER COMPLEX)
17	01/25/2012	ISSUED FOR PFD BUILDING WALLS ENGINEERING REVIEW AND COMMENTS	5	04/08/2011	ISSUED FOR PREPARATION OF CMO
18	04/16/2012	ISSUED FOR BUILDING PERMIT SUBMITTAL TO PPRBD (PUMPING AND DISINFECTION BLDG)	6	05/17/2011	ISSUED FOR PREPARATION OF CMO
19	05/21/2012	ISSUED FOR CONSTRUCTION PER PPRBD BLDG PERMIT #8893 (PUMP AND DISINFECTION BLDG)	7	06/10/2011	ISSUED FOR CONSTRUCTION (SECONDARY CLARIFIER COMPLEX)
20	06/21/2012	ISSUED FOR BUILDING PERMIT SUBMITTAL TO PPRBD (BLOWER BUILDING)	8	06/20/2011	ISSUED FOR BUILDING PERMIT SUBMITTAL TO PPRBD (HEADWORKS BUILDING)
21	06/29/2012	ISSUED FOR BUILDING PERMIT SUBMITTAL TO PPRBD (OPERATIONS BUILDING)	9	07/28/2011	ISSUED FOR FOUNDATION PERMIT SUBMITTAL TO PPRBD (EQUIP. MAINT. AND STOR. BLDG.)
22	07/17/2012	ISSUED FOR CONSTRUCTION PER PPRBD BLDG PERMIT NO. 120081 (BLOWER BLDG)	10	08/02/2011	ISSUED FOR CONSTRUCTION PER PPRBD BUILDING PERMIT #8810 (HEADWORKS BLDG)
23	08/15/2012	ISSUED FOR CONSTRUCTION PER PPRBD BUILDING PERMIT #35220 (OPERATIONS BLDG)	11	08/24/2011	ISSUED FOR CONSTRUCTION PER PPRBD FDN PERMIT #83002 (EQUIP., MAINT. AND STOR. BLDG)
			12	09/16/2011	ISSUED FOR CMO PREPARATION (PUMPING AND DISINFECTION BUILDING FOUNDATION)

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**STANDARD STRUCTURAL DETAILS**  
 HAROLD D. THOMPSON REGIONAL WATER RECLAMATION FACILITY  
 LOWER FOUNTAIN METROPOLITAN SEWAGE DISPOSAL DISTRICT

DRAWN: MAL/MAM  
 DESIGNED: JP  
 CHECKED: RJS  
 DATE: 2010  
 PROJECT NO.: 20166.510  
 GMS FILE NO.: 2599

**GMS, INC.**  
 CONSULTING ENGINEERS  
 611 N. WEBER, SUITE 300  
 COLORADO SPRINGS, COLORADO 80903

SHEET  
**DL-1**  
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