

STRUCTURAL PLANS FOR

BID NO. \_\_\_\_\_

**OWNER:**  
 GREEN RIVER JOINT POWERS WATER BOARD  
 3 TELEPHONE CANYON RD.  
 GREEN RIVER, WY 82935  
 307-875-4317

**ENGINEER:**

**AVI PC**  
 1103 OLD TOWN LANE,  
 SUITE 101  
 CHEYENNE, WYOMING 82001  
 307.637.6017  
 FAX 307.632.9326  
 WWW.AVIPC.COM

IN ASSOCIATION WITH

KB ENGINEERING, LLC - STRUCTURAL ENGINEER  
 1716 CAPITOL AVE  
 CHEYENNE, WY 82001

CYBERCON - ROOFING CONSULTANT  
 PO BOX 621832  
 LITTLETON, CO 80162

**GREEN RIVER WATER  
 TREATMENT PLANT  
 CLEARWELL**

INTERIOR STRUCTURAL REPAIRS AND  
 ROOF REPLACEMENT PROJECT



Vicinity Map - Green River, Wyoming

ENGINEER'S CERTIFICATE  
 WE HEREBY CERTIFY THAT THESE PLANS WERE PREPARED  
 BY US OR UNDER OUR DIRECT SUPERVISION AND THAT WE  
 ARE DULY REGISTERED PROFESSIONAL ENGINEERS IN THE  
 STATE OF WYOMING.



DARYL JOHNSON, AVI PC



BRUCE PERRYMAN, AVI PC



KB ENGINEERING, LLC

PRE-BID MEETING: SEPTEMBER 13, 2012 AT 1:00 p.m.  
 BID OPENING: SEPTEMBER 18, 2012 AT 3:00 p.m.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES
3	ROOF PLAN
4	REPAIR PLAN VIEW
5	ROOFING DETAILS
6	ROOFING DETAILS
7	HATCH OPENING DETAIL AND WALL SECTION
8	ROOF HATCH DETAILS
9	INTERIOR STRUCTURAL DETAILS
10	INTERIOR STRUCTURAL DETAILS
11	EXISTING CLEARWELL ROOF PLAN
12	EXISTING CLEARWELL SECTIONS
13	EXISTING CLEARWELL DETAILS

APPROVAL BLOCK	
BRYAN SEEPIE JPWB	DATE APPROVED
CITY OF GREEN RIVER	DATE APPROVED

NO.	REVISION	DATE

PREPARED FOR:  
 GR/RS/SW CO. JOINT POWERS WATER BOARD  
 3 TELEPHONE CANYON RD.  
 GREEN RIVER, WY 82935  
 307-875-4317

PROJECT:  
**GREEN RIVER WATER TREATMENT PLANT  
 CLEARWELL**  
 DRAWING TITLE:  
**TITLE SHEET**

engineering  
 consulting  
 surveying  
**avi** P.C.  
 1103 OLD TOWN LANE, SUITE 101  
 CHEYENNE, WY 82001  
 WWW.AVIPC.COM

DATE: 9/10/12  
 DRAWN BY: TF  
 DESIGNED BY: KB  
 CHECKED BY: BP/DJ  
 JOB NO.: 3391

**GENERAL NOTES:**

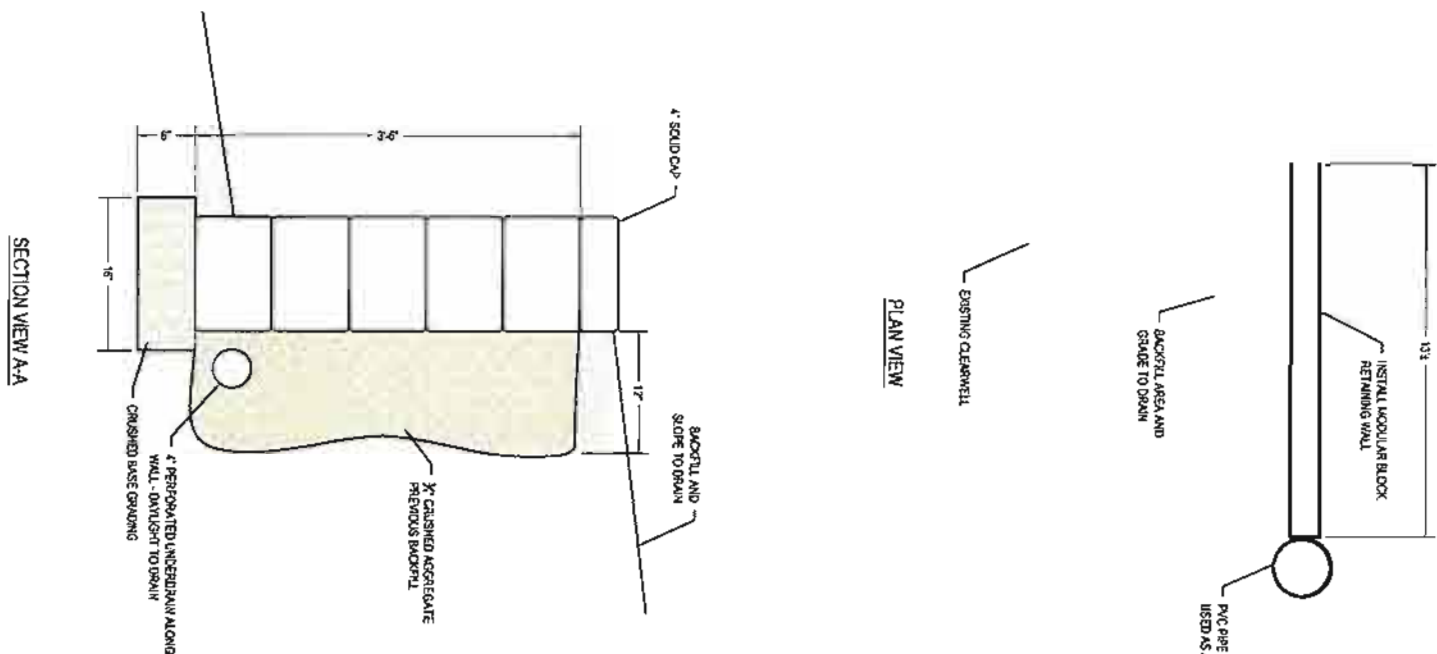
1. ALL WORK SHOWN ON THESE CIVIL DRAWINGS WHETHER PUBLIC OR PRIVATE IMPROVEMENTS SHALL COMPLY WITH THE CITY OF GREEN RIVER JOINT POWERS WATER BOARD CONSTRUCTION SPECIFICATIONS LATEST VERSION, AND THE PROJECT SPECIFICATIONS, IF CONFLICTS EXIST BETWEEN THE PROJECT SPECIFICATIONS AND/OR DRAWING AND THE CITY SPECIFICATIONS, THE PROJECT SPECIFICATIONS AND/OR DRAWINGS SHALL BE REVISED AND THE MORE STRINGENT OR CONSERVATIVE SPECIFICATION IDENTIFIED THE OWNER SHALL PREVAIL.
2. ALL WORK IN RIGHT-OF-WAY SHALL CONFORM TO THE CITY OF GREEN RIVER AND JWB CONSTRUCTION SPECIFICATIONS AND THE CONSTRUCTION PLANS IN THEIR ENTIRETY.
3. PLEASE REFER TO OTHER REQUIREMENTS & SPECIAL CONDITIONS AS PROVIDED FOR IN THE "NOTATION TO BID" WHICH ARE HEREBY INCORPORATED HEREBY BY REFERENCE.
4. PLEASE INCORPORATE ALL OTHER NOTES AS MAY BE PRESENTED WITHIN AND THROUGHOUT THIS PLAN SET AS SET FORTH HEREBY.
5. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A DETAILED WRITTEN CONSTRUCTION PLAN, AND CONSTRUCTION SCHEDULE TO BE APPROVED BY THE ENGINEER PRIOR TO THE PRE-CONSTRUCTION MEETING.
6. THE CONTRACTOR SHALL PROVIDE A PROJECT SUPERINTENDENT ON-SITE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES THE SUPERINTENDENT SHALL BE RESPONSIBLE FOR, BUT NOT LIMITED TO THE FOLLOWING TASKS:
  - A. MAINTAIN THE CONSTRUCTION ACTIVITIES OF ALL SUB-CONTRACTORS ON-SITE
  - B. MANAGE THE CONSTRUCTION ACTIVITIES OF ALL SUB-CONTRACTORS ON-SITE
  - C. REVIEW AND APPROVE SHOP DRAWINGS INCLUDING SUB-CONTRACTORS
  - D. OBTAIN APPROVAL FROM THE OWNER/ENGINEER PRIOR TO BEGINNING ANY FORCE ACCOUNT EFFORTS
  - E. PROVIDE AN ACCURATE WEEKLY CONSTRUCTION SCHEDULE
  - F. FURNISH AN ACCURATE NON-WORKING HOURS FOR EMERGENCIES
  - G. SUBSTITUTION BY PERMISSION ONLY.
7. THE CONTRACTOR SHALL HIRE AN INDEPENDENT REPUTABLE MATERIAL TESTING COMPANY FOR CONCRETE AND MATERIAL TO COMPLETE THE PROJECT.
8. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS INDICATED ON DRAWINGS BEFORE FABRICATION OR ORDERING MATERIALS. DO NOT SCALE DRAWINGS.

**CONTRACTOR'S AS-BUILT DRAWING NOTES:**

- 1) THE CONTRACTOR SHALL PROVIDE, AT THE COMPLETION OF THE PROJECT OR EACH PHASE OF THE PROJECT, A COMPLETE SET OF REPRODUCIBLE "AS-BUILT" DRAWINGS TO THE OWNER PRIOR TO FINAL PAYMENT. THE AS-BUILT DRAWINGS WILL CONSIST OF A MARKED-UP SET OF "ISSUED FOR CONSTRUCTION" DRAWINGS WITHIN THE FOLLOWING:
  - A) ALL LENGTHS, SIZES AND MATERIAL OF INSTALLED PIPES, ACCESS HATCHES, LADDERS, ETC.
  - B) ANY OTHER VARIATIONS FROM THE CONSTRUCTION DOCUMENTS MUST BE CLEARLY NOTED AND DETAILED ON THE PLANS.
- 2) THE FINAL AS-BUILT DRAWING CERTIFICATE SHALL BE SIGNED ON EACH SHEET BY THE CONTRACTOR OR SUBCONTRACTOR RESPONSIBLE FOR THE WORK.
- 3) CONTRACTOR AS-BUILT DRAWINGS WILL BE DUE PRIOR TO SUBMITTING THE FINAL PAY REQUEST. NON-COMPLYING AS-BUILT DRAWINGS WILL BE RETURNED TO THE CONTRACTOR FOR REVISIONS AND RESUBMITTAL. FINAL PAYMENT WILL NOT BE ISSUED UNTIL THE OWNER HAS REVIEWED AND APPROVED THE AS-BUILT DRAWINGS.

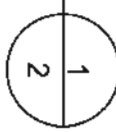
**DRAWING SCALE NOTE:**

- 1) FULL SIZE DRAWINGS ARE BASED ON 2270X4" (FULL SIZE) OR 117X17" (HALF SIZE)
- 2) DIMENSIONS FOR LAYOUT AND CONSTRUCTION ARE NOT TO BE SCALED FROM DRAWINGS IF APPROPRIATE DIMENSIONS ARE NOT SHOWN. CONTACT THE CONSULTING ENGINEER FOR CLARIFICATION AND ANNOTATION ON REBAR "AS-BUILTS".



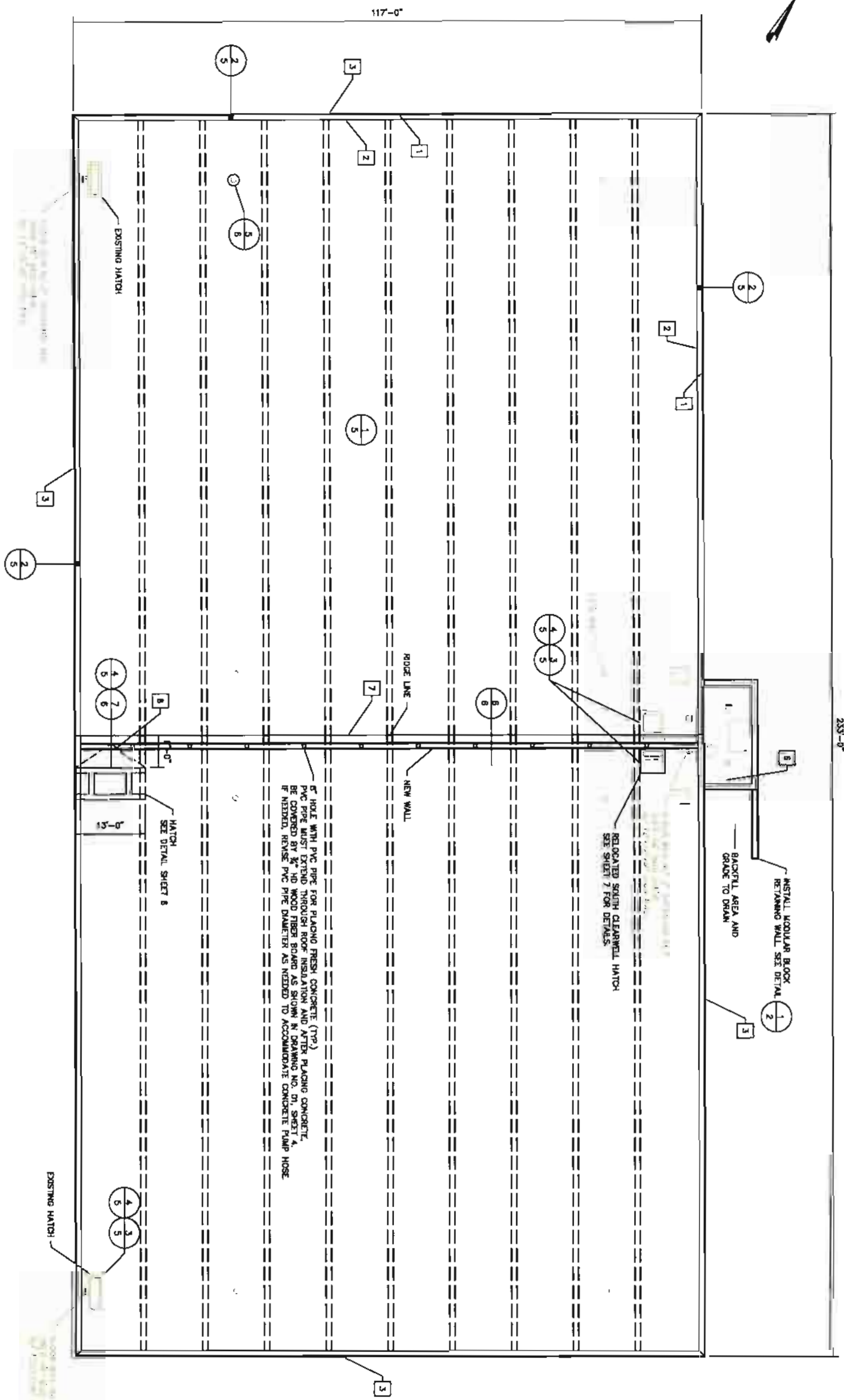
**MODULAR BLOCK RETAINING WALL**

NOT TO SCALE



NOTE:  
CONTRACTOR SHALL PROVIDE SUBMITTAL AND DETAILS FOR THE MODULAR BLOCK RETAINING WALL SYSTEM TO BE INSTALLED.

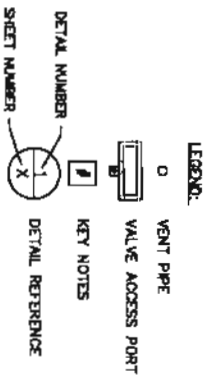
	PROJECT: <b>GREEN RIVER WATER TREATMENT PLANT CLEARWELL</b>	PREPARED FOR: <b>GR/RS/SW CO. JOINT POWERS WATER BOARD</b> 3 TELEPHONE CANYON RD. GREEN RIVER, WY 82935 307-875-4317	NO. _____ REVISION _____ DATE _____
	DRAWING TITLE: <b>GENERAL NOTES RETAINING WALL DETAIL</b>		
DATE: 09/10/12			
DESIGNED BY: JT			
CHECKED BY: KB			
DESIGNED BY: BP/DU			
JOB NO.: <b>3391</b>			
DRAWING NO.: <b>2</b> OF 13			



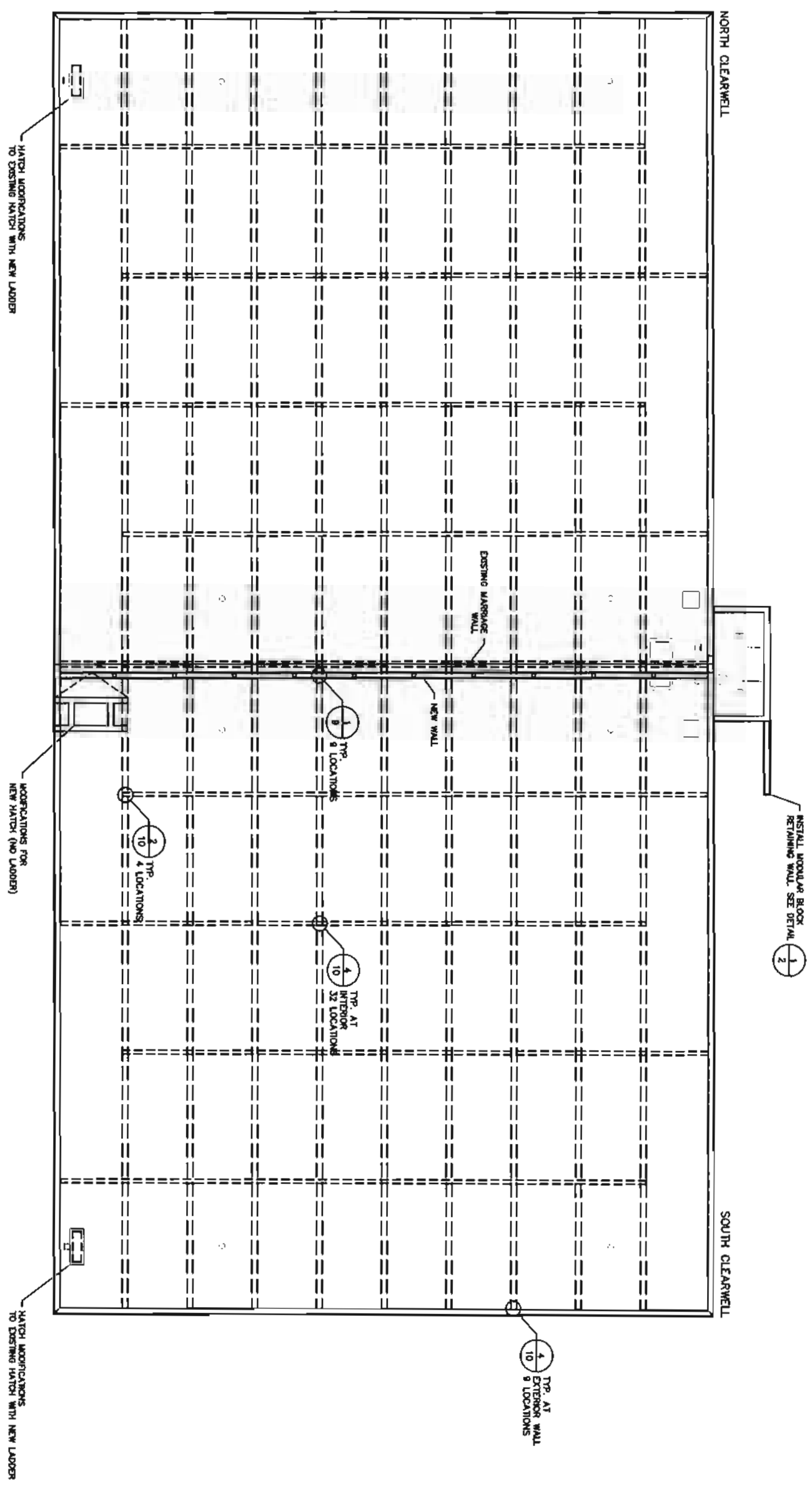
- KEY NOTES - RE-ROOFING:**
1. NEW P.T. STACKED WOOD NAILERS OVER VAPOR RETARDER SECURED TO WITHSTAND 200 LFT.LBS.
  2. TAPERED EDGE STRIP AT PERIMETER PER DETAIL DRAWINGS.
  3. ENCAPSULATE WALL WITH HIGH MELT ICE AND WATER DAM PROTECTION MEMBRANE AND FLUSH SEAL PRE-FINISHED METAL WALL PANELS PER DETAIL DRAWINGS.
  4. SEAL VAPOR RETARDER TO ALL CURBS AND PENETRATIONS (TYP).
  5. FLASH CURB WITH CANT STRIP, BACKER FELT AND REINFORCED BASEFLASHING PER DETAIL DRAWINGS.
  6. LOWER DECK WITH PORTAL IS NOT INCLUDED.
  7. EXPANSION JOINTS AT DECK AND ROOF LEVEL TIED TO VAPOR RETARDER AND ROOF MEMBRANE.
  8. CRICKET ON HIGH SIDE OF CURB.

**DESCRIPTION OF NEW ROOF:**  
 VAPOR RETARDER, 2 LAYERS OF RIGID INSULATION AND ONE LAYER OF COVER BO AND TWO-PLY MOD. BIT. CAP SHEET MEMBRANE WITH ACRYLIC COATING OVER A CONCRETE DECK.

4\"/>



	PROJECT: <b>GREEN RIVER WATER TREATMENT PLANT CLEARWELL</b>	PREPARED FOR: <b>GR/RS/SW CO. JOINT POWERS WATER BOARD                  3 TELEPHONE CANYON RD.                  GREEN RIVER, WY 82935                  307-875-4317</b>	NO. _____ REVISION _____ DATE _____
	DRAWING TITLE: <b>CLEARWELL ROOF PLAN</b>		
DATE: 08-24-12 DRAWN BY: TF DESIGNED BY: XB CHECKED BY: BP/OU JOB NO.: 3391	DRAWING NO. 3 of 15		



- NOTES:**
1. THE NORTH CLEARWELL SHALL REMAIN OPERATIONAL DURING REPAIRS TO THE SOUTH CLEARWELL.
  2. USE OF ONE SIZED FORMING METHODS FOR THE NEW WALL WILL REQUIRE THE NORTH CLEARWELL TO BE FULL OF WATER WHEN CONCRETE IS PLACED.
  3. BEAM/END BATTLE WALL REPAIR QUANTITY - 4 EA. **2**
  4. INTERIOR ROOF BEAM AND BATTLE WALL CONNECTION **4** HAS POTENTIAL FOR 41 REPAIR LOCATIONS. LOCATIONS REQUIRING REPAIR WILL BE DETERMINED BY THE ENGINEER. FOR PURPOSES OF ESTABLISHING UNIT PRICES, 12 LOCATIONS REQUIRING 1' OF REPAIR PER LOCATION HAS BEEN ESTIMATED.
  5. EXISTING ROOF BEAM AND NEW WALL CONNECTION DETAILS **1** AND **3** ARE UTILIZED AT 9 LOCATIONS ALONG THE NEW WALL WALL CONNECTIONS ARE INCLUDED IN THE PAYMENT ITEM NEW 4000 PSI CONCRETE WALL LUMP SUM.
  6. MISCELLANEOUS GRADING AND EXCAVATION AROUND PERIMETER OF CLEARWELL TO INSTALL INSULATION AND FLUSH SEAM WALL PANELS IN ACCORDANCE WITH DETAIL **2**. SLOPE FINISH GRADE TO DRAIN AWAY FROM CLEAR WELL.

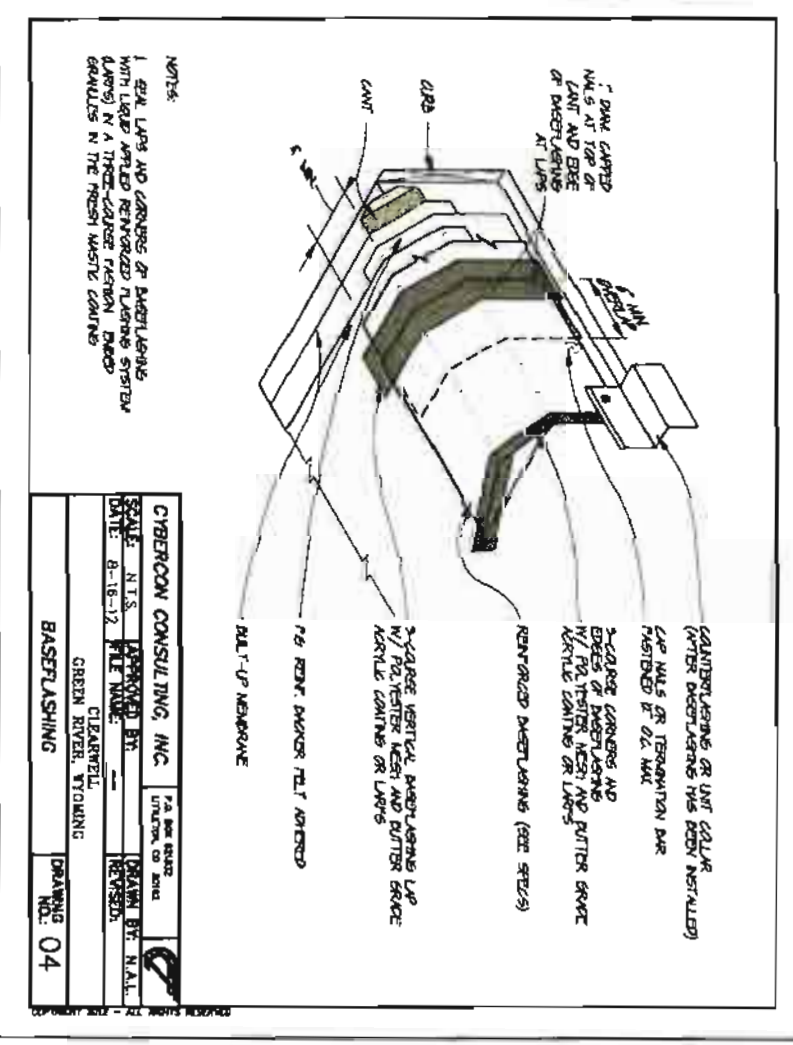
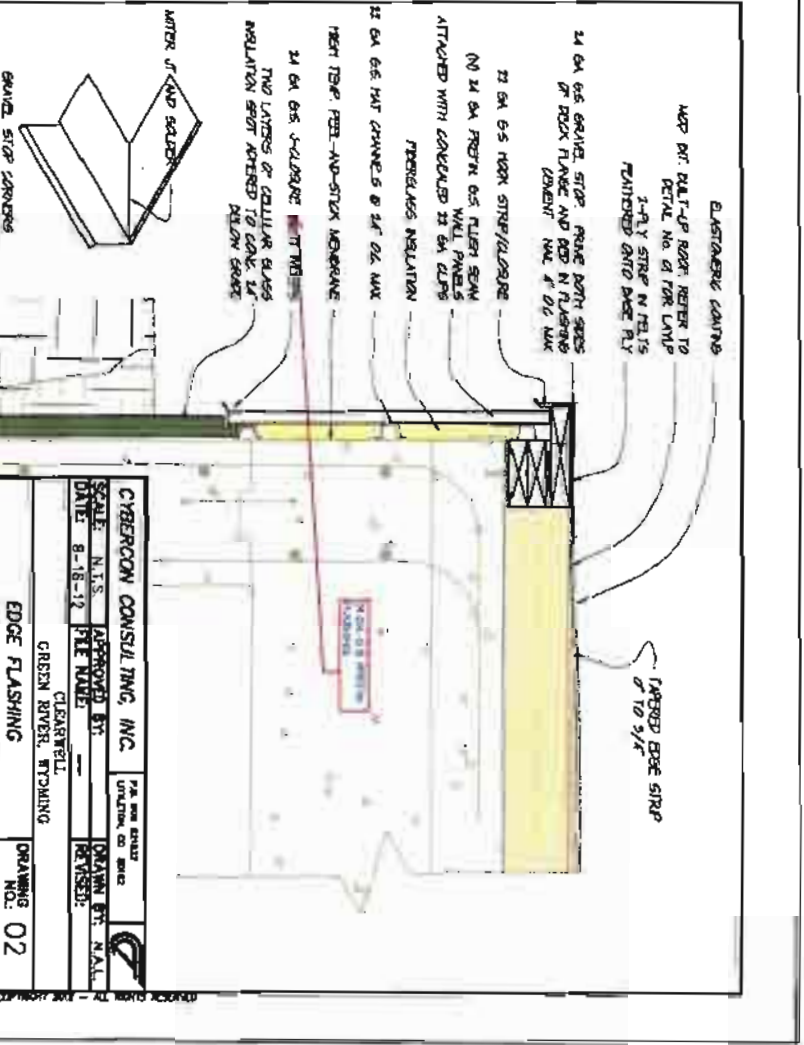
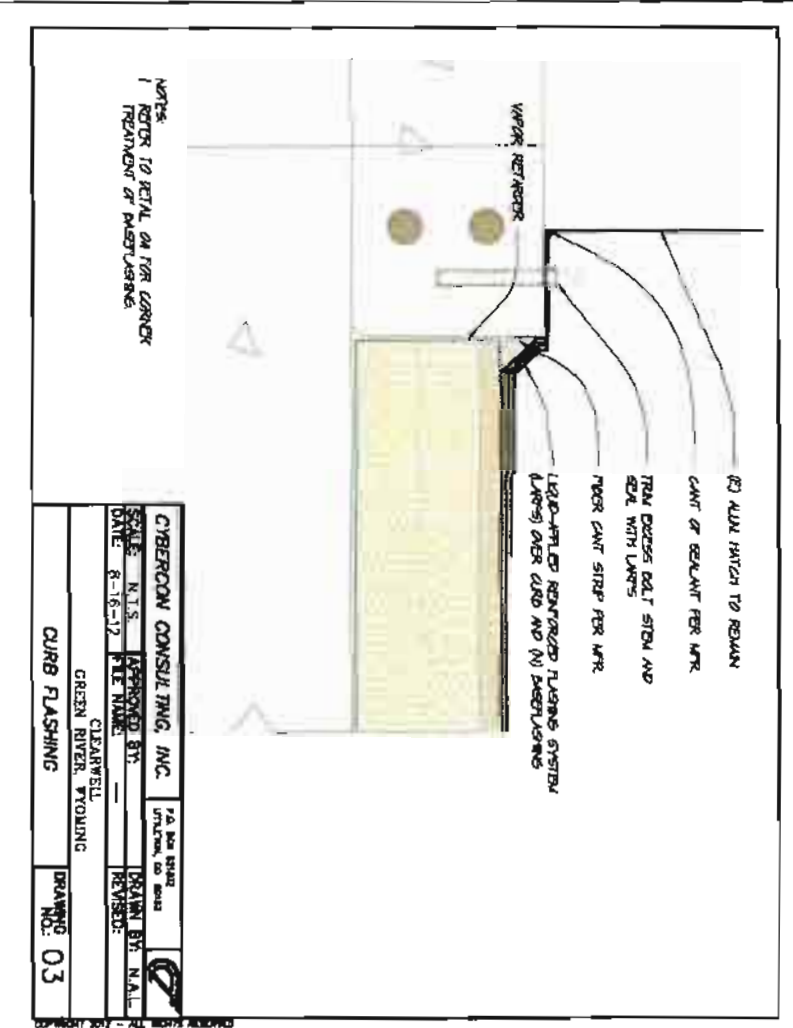
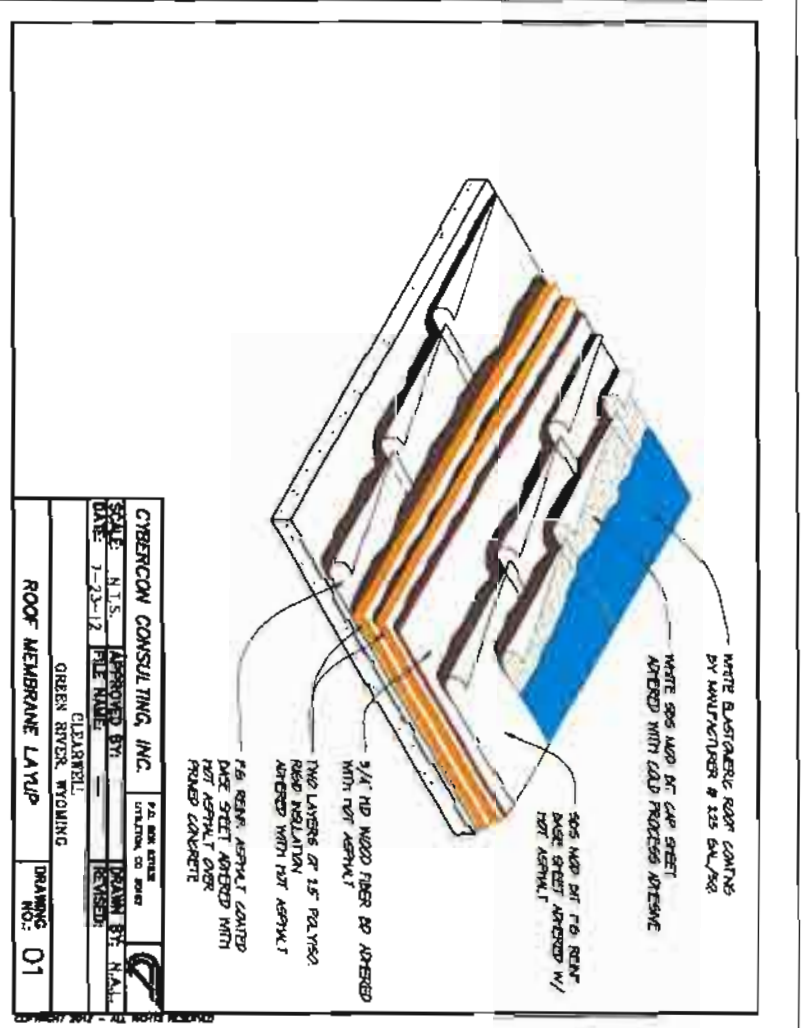
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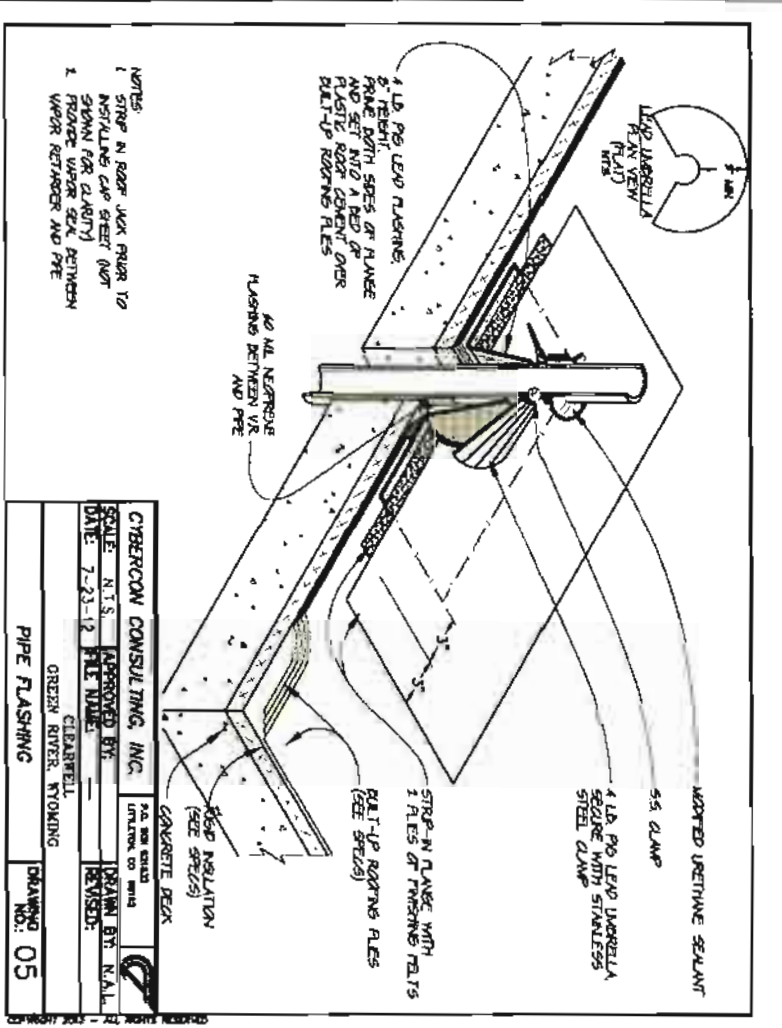
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 PREPARED FOR: GR/RS/SW CO. JOINT POWERS WATER BOARD  
 3 TELEPHONE CANYON RD.  
 GREEN RIVER, WY 82935  
 307-875-4317

DATE: 09/10/12  
 DRAWN BY: [Signature]  
 CHECKED BY: [Signature]  
 DESIGNED BY: [Signature]

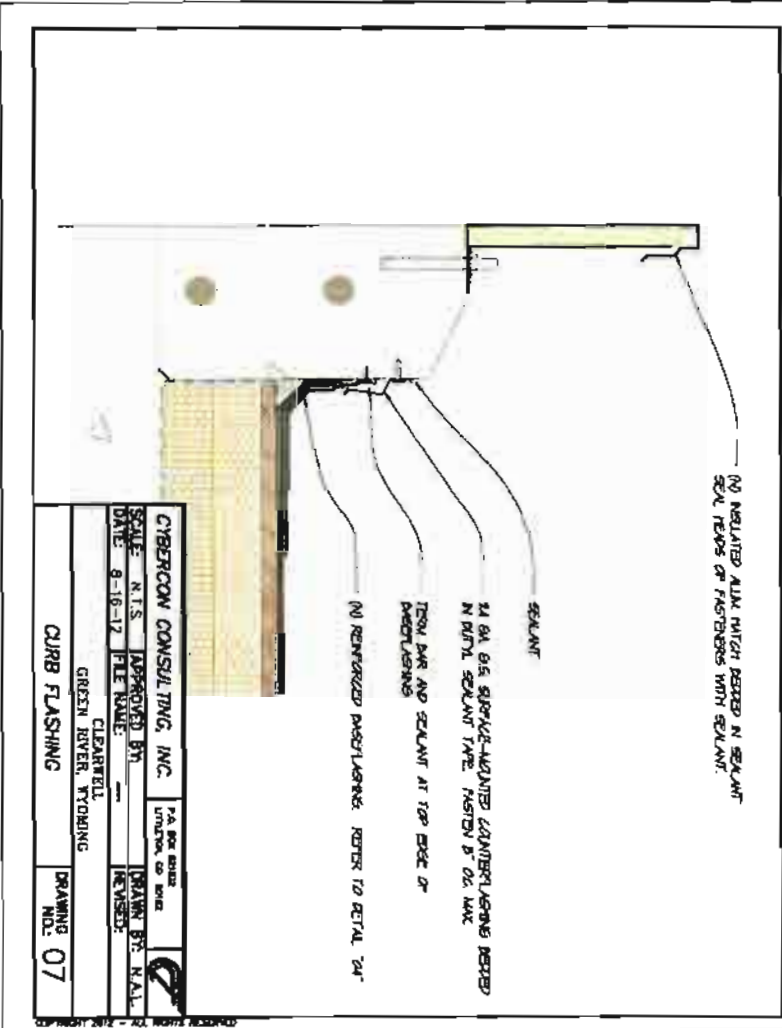
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 DRAWING NO. 4 of 13

NO.	REVISION	DATE

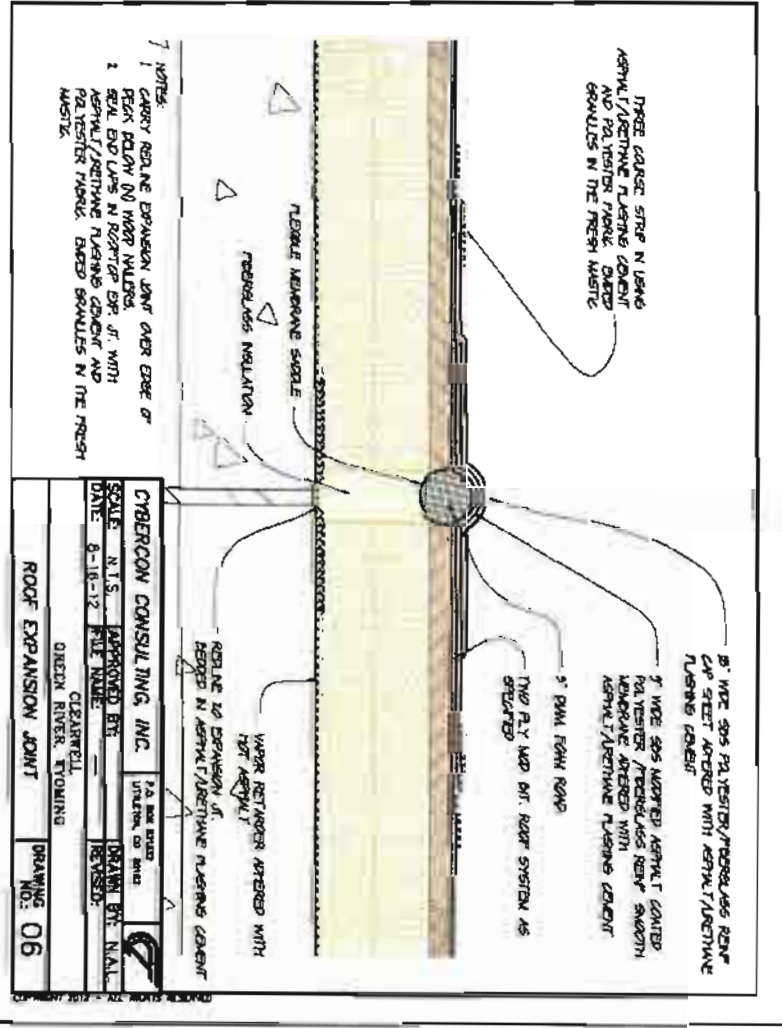




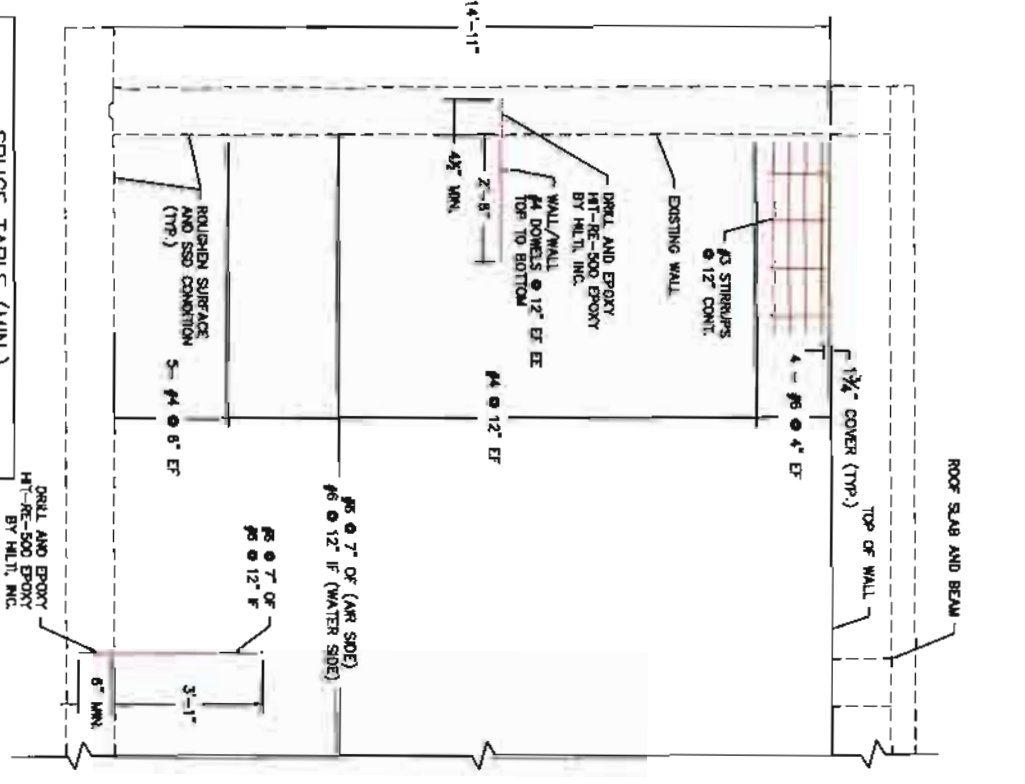
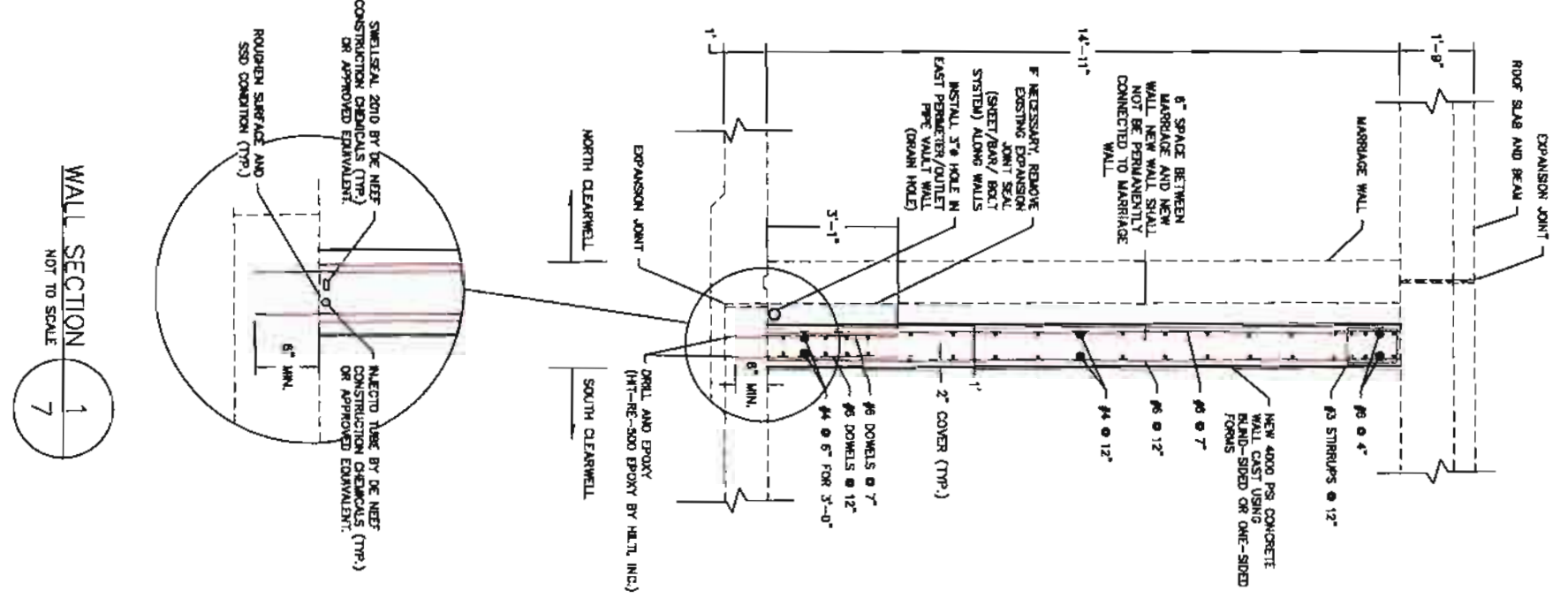
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 DATE: 7-23-12 FILE NAME: [Blank] REVISION: [Blank]  
 CLEARWELL  
 GREEN RIVER, WYOMING  
 PIPE FLASHING DRAWING NO.: 05



CYBERCON CONSULTING, INC.  
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 CLEARWELL  
 GREEN RIVER, WYOMING  
 CURB FLASHING DRAWING NO.: 07

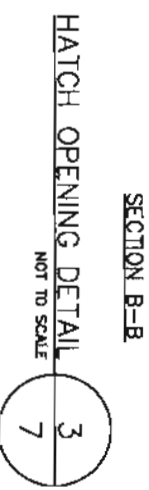
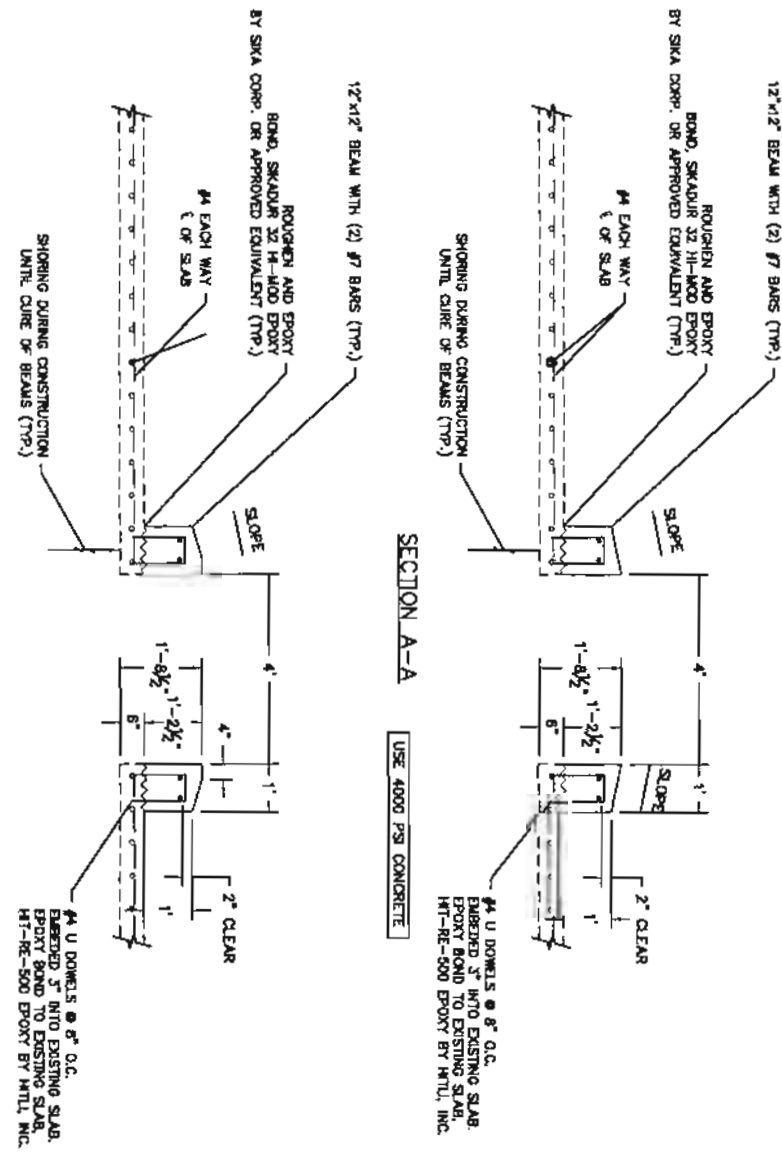
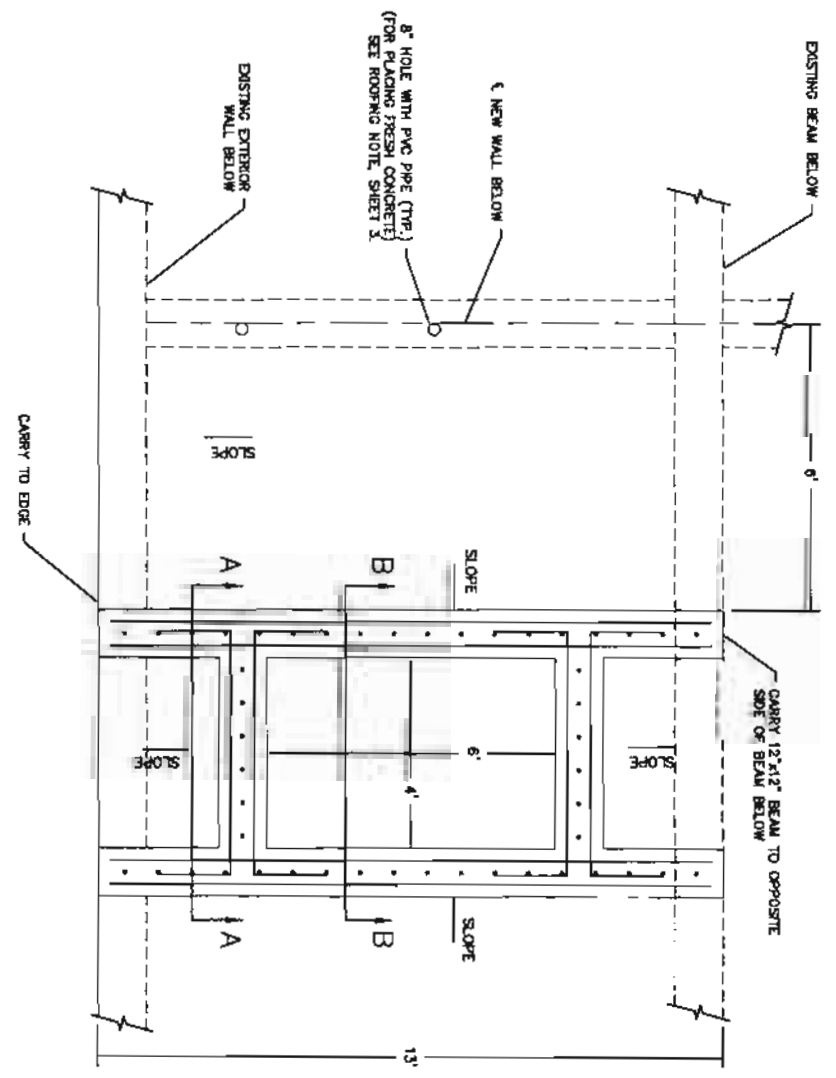


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 CLEARWELL  
 GREEN RIVER, WYOMING  
 ROOF EXPANSION JOINT DRAWING NO.: 06

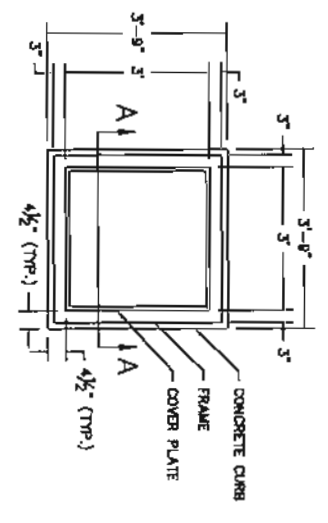


**SPLICE TABLE (MIN.)**

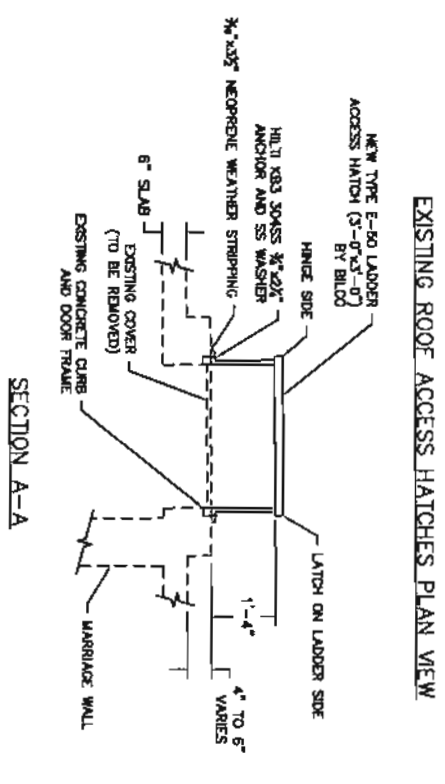
SIZE	VERTICAL REBAR	HORIZONTAL REBAR
#4	25"	37" (TOP BAR)
#6	37"	45" (TOP BAR)
#7		54"



<p>PROJECT: <b>GREEN RIVER WATER TREATMENT PLANT CLEARWELL</b></p> <p>DRAWING TITLE: <b>NEW HATCH OPENING DETAIL AND WALL SECTIONS</b></p>	<p>PREPARED FOR: <b>GR/RS/SW CO. JOINT POWERS WATER BOARD</b> 3 TELEPHONE CANYON RD. GREEN RIVER, WY 82935 307-875-4317</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	NO.	REVISION	DATE													<p>DATE: 09/10/12 DRAWN BY: JT DESIGNED BY: NS CHECKED BY: SP/DJ</p> <p>JOB NO: 3391</p> <p>DRAWING NO: 7 OF 13</p>
NO.	REVISION	DATE																

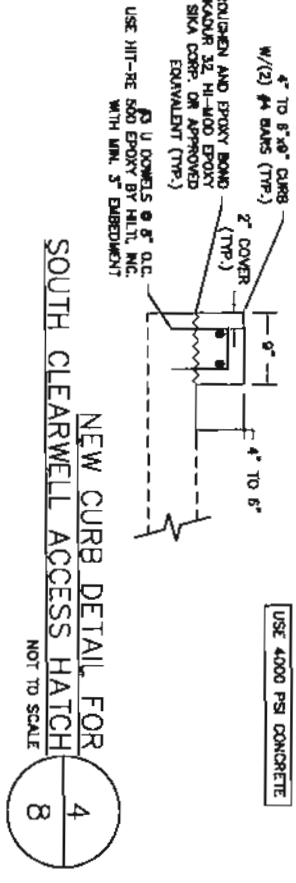


NORTH AND SOUTH EXISTING 515 ACCESS DOOR (3'x3') BY HALLWAY PRODUCTS (MODEL #S1R635)

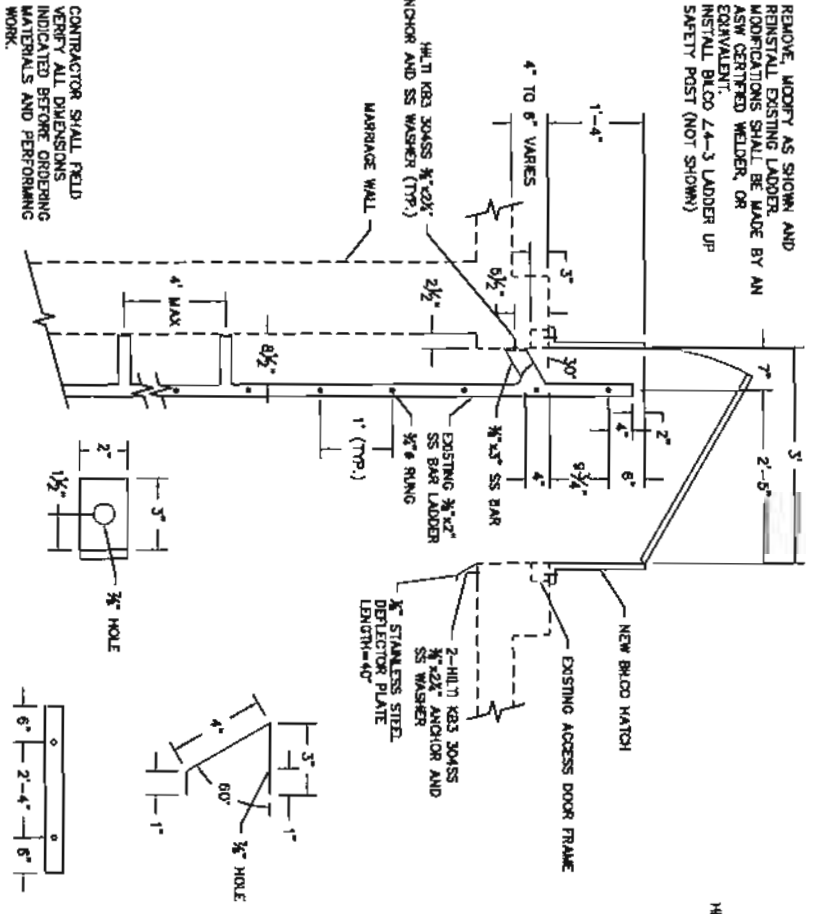


NOTE: REMOVE EXISTING CLEARWELL ACCESS DOOR, SEAL EXISTING DOOR OPENING AS DIRECTED BY OWNER. INSTALL TYPE E-50 LADDER ACCESS HATCH BY BILCO. DO NOT ALLOW DIRT, DEBRIS, WATER OR OTHER CONTAMINANTS TO ENTER ONLINE CLEARWELL.

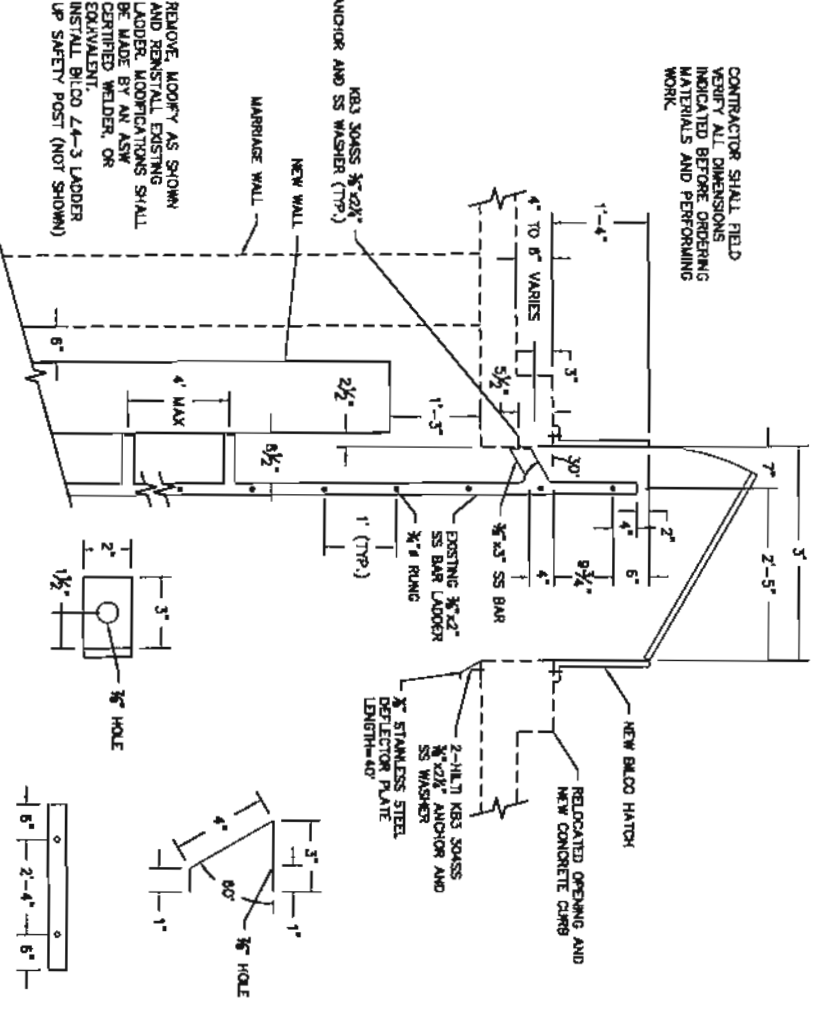
NEW NORTH CLEARWELL ACCESS HATCH  
NOT TO SCALE  
1  
8



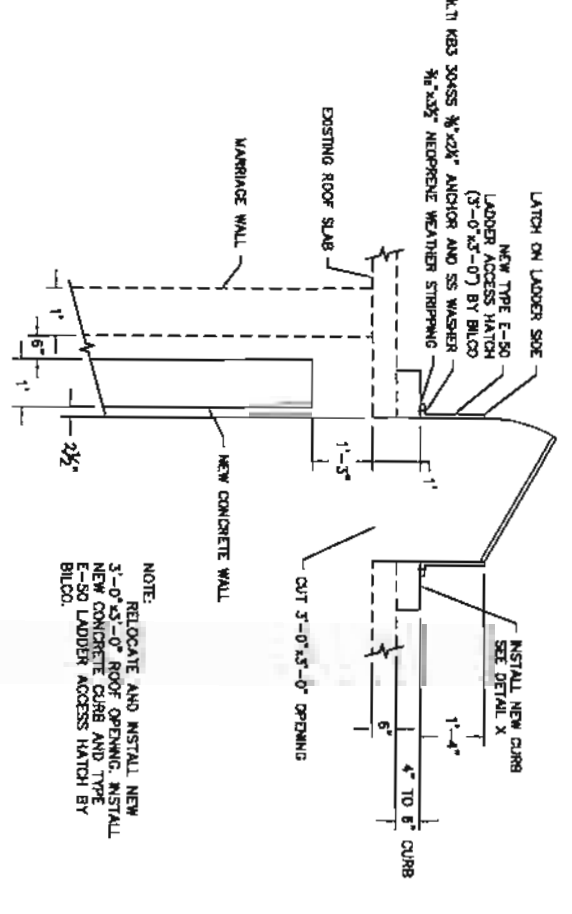
NEW CURB DETAIL FOR SOUTH CLEARWELL ACCESS HATCH  
NOT TO SCALE  
4  
8



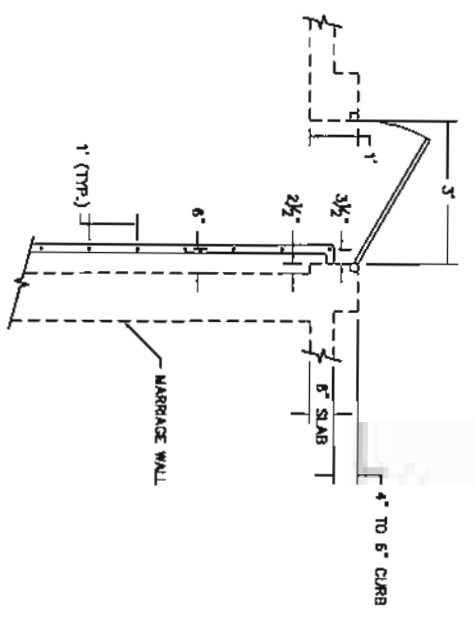
NEW LADDER HATCH DETAILS (NORTH CLEARWELL)  
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8



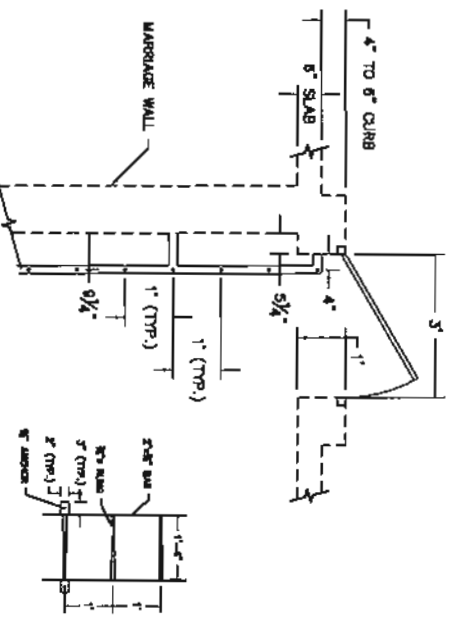
NEW LADDER HATCH DETAILS (SOUTH CLEARWELL)  
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8



NEW SOUTH CLEARWELL ACCESS HATCH  
NOT TO SCALE  
3  
8



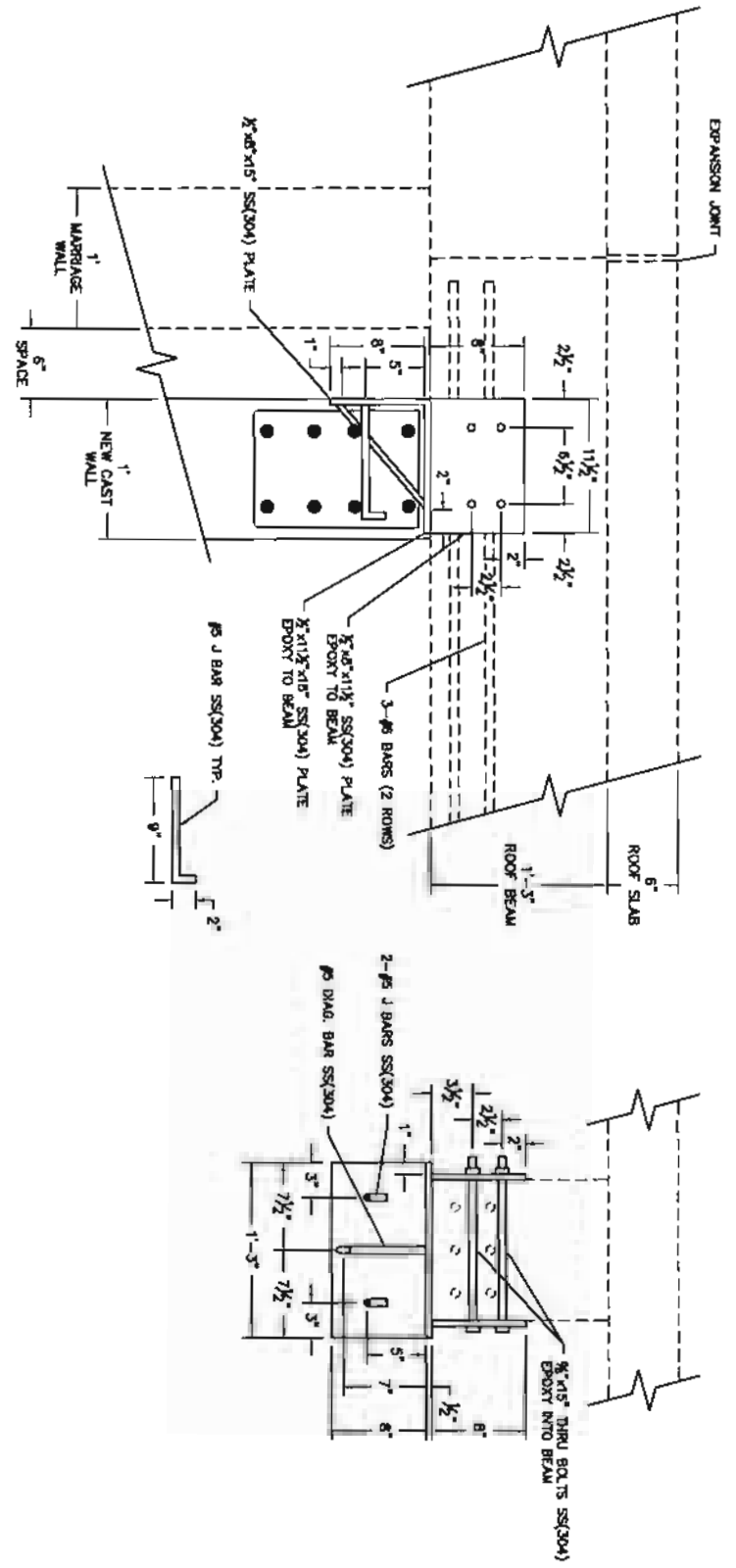
EXISTING HATCH AND LADDER (NORTH CLEARWELL)  
NOT TO SCALE  
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8



EXISTING HATCH AND LADDER (SOUTH CLEARWELL)  
NOT TO SCALE  
7  
8

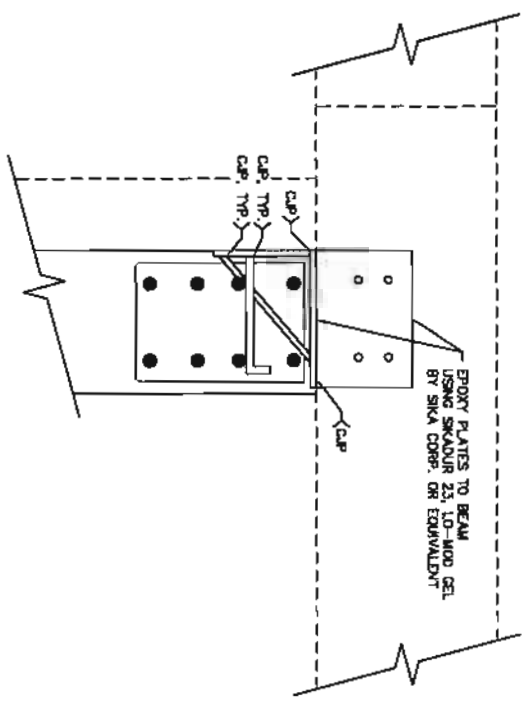
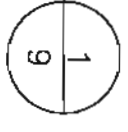
<p>PROJECT: <b>GREEN RIVER WATER TREATMENT PLANT CLEARWELL</b></p> <p>DRAWING TITLE: <b>ROOF HATCH DETAILS</b></p>	<p>PREPARED FOR: <b>GR/RS/SW CO. JOINT POWERS WATER BOARD</b> 3 TELEPHONE CANYON RD. GREEN RIVER, WY 82935 307-875-4317</p>	NO.	REVISION	DATE
		8		
<p>DATE: 09/10/12</p> <p>DRAWN BY: [Signature]</p> <p>CHECKED BY: [Signature]</p> <p>DESIGNED BY: [Signature]</p> <p>DESIGNED BY: [Signature]</p> <p>DATE: 09/10/12</p>		<p>JOB NO.: <b>3391</b></p> <p>DRAWING NO.: <b>8</b> OF <b>13</b></p>		





EXISTING ROOF BEAM AND NEW WALL CONNECTION

NOT TO SCALE



EXISTING ROOF BEAM AND NEW WALL CONNECTION (WELDS AND EPOXY)

NOT TO SCALE



FORM-AND-POUR REPAIR PROCEDURE

1. SURFACE PREPARATION - IDENTIFY AND MARK AREAS TO BE REPAIRED AND/OR STRENGTHENED. USING A SMALL HAND-HELD CHIPPING HAMMER (15# CLASS), REMOVE ALL CRACKED, LOOSE AND UNSOUND CONCRETE. CHIP DOWN TO SOLID CONCRETE AND ACHIEVE A SURFACE PROFILE OVER THE ENTIRE FORM WORK AREA OF AT LEAST 1/8" HIGH FOR (CBI CSP-8 - 9) BY HIGH-PRESSURE WATER BLAST OR MECHANIC MEANS. CHIP CONCRETE IN SUCH A MANNER SO REPAIR MATERIAL CAN ROW DOWN THE PREPARED SURFACE WITHOUT TRAPPING AIR. UPPER EDGES OF VERTICAL SURFACES SHOULD BE TRIMMED OR SLOPED TO ELIMINATE POTENTIAL POCKETS OF ENTRAPPED AIR AND TO PROMOTE COMPLETE FILLING OF THE CAVITY. IF MORE THAN ONE-SIDE OF THE CIRCUMFERENCE OF A REPAIR IS EXPOSED, UNDERCUT THE REPAIR WITH A MINIMUM 1-INCH CLEARANCE SO REPAIR MATERIAL CAN EASILY BE PLACED AROUND THE REPAIR (CHECK CLEARANCE WITH FINGER). IF REPAIR IS DAMAGED, CONTACT REB. CLEAN SUBSTRATE AND EXPOSED REBARS. THE SURFACE TO BE REPAIRED SHALL BE SOUND AND FREE OF DUST, DIRT, OIL OR OTHER CONTAMINANTS THAT COULD INHIBIT OR REDUCE BOND. CLEANING SHOULD OPEN THE PORES OF THE SUBSTRATE. EXPOSED REINFORCEMENT SHALL BE CLEANED TO "WHITE" STEEL. SUBSTRATE SHALL BE SATURATED SURFACE DRY (SSD). THOROUGHLY WET PREPARED SURFACE WITH WATER (SSD CONDITION) BEFORE PLACING REPAIR MATERIAL. DO NOT OVER WET THE SURFACE; SUBSTRATE MUST ABSORB THE REPAIR MATERIAL.
2. REINFORCEMENT - DRILL AND INSTALL THE THROUGH WALL #4 REBAR USING HIT-RE 500 EPOXY AS MANUFACTURED BY HULTI, INC. (WWW.US.HULTI.COM). INSTALL #4 U-BARS AND VERTICAL BARS AS SHOWN. TYPICAL CONCRETE COVER SHALL BE 2-INCHES.
3. FORMWORK - DESIGN AND CONSTRUCT FORMWORK SIMILAR TO STANDARD CAST-IN-PLACE CONSTRUCTION. APPLY AN APPROVED CONCRETE RELEASE AGENT TO THE FORMWORK FACE BEFORE ATTACHING OR INSTALLING THE FORMWORK. FORMWORK IS BEST ATTACHED DIRECTLY TO THE CONCRETE SURFACE USING EXPANSIVE ANCHORS AND/OR TIES. DO NOT ATTACH OR CLOSE-UP FORMWORK UNTIL THE OWNER'S ON-SITE REPRESENTATIVE HAS INSPECTED AND APPROVED THE WORK. USE FOAM GASKETS OR SEALANT AND ATTACH FORMWORK TIGHTLY AGAINST EXISTING CONCRETE SURFACES USING SUFFICIENT NUMBER OF ANCHORS TO PREVENT FORMWORK LEAKAGE AND BLOWOUTS. MAXIMUM FORMWORK PRESSURE WILL OCCUR AFTER FORMWORK CAVITY IS FULL. CREATE NECESSARY FIL-CHUTES TO PROVIDE ACCESS FOR POURING THE REPAIR MATERIAL INTO THE FORMED CAVITY. FOR LARGE REPAIRS, INSTALL AND USE MORE THAN ONE FIL-CHUTE WITH A MAXIMUM HORIZONTAL SPACING OF 3 TO 4 FEET. FOR THROUGH-WALL CAVITIES, INSTALL FIL-CHUTES ON BOTH SIDES OF WALL. IN SOME APPLICATIONS, COMPLETELY FILING OF THE CAVITY MAY BE DIFFICULT. FOR THESE AREAS AND AREAS LESS THAN APPROXIMATELY 1-INCH DEEP, IT IS ACCEPTABLE TO HAND-APPLY SIKATOP 123 PLUS AS SPECIFIED ON SHEET XX AND IN ACCORDANCE WITH SIKAS' WRITTEN DIRECTIONS. FOR AREAS MORE THAN 1-INCH IN DEPTH, REPAIR AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE.
4. REPAIR MATERIAL SIKATOP 111 PLUS, AS MANUFACTURED BY SIKACORP. (WWW.SIKACONSTRUCTION.COM) OR AN APPROVED EQUIVALENT, EXTENDED WITH NON-REACTIVE, CLEAN NO. 8 AGGREGATE MEETING THE REQUIREMENTS OF ASTM C33. REPAIR MATERIAL SHALL BE ANSI/NSF STANDARD 61 PORTABLE WATER APPROVED.
5. POURING & CURING - MIX CONCRETE REPAIR MATERIAL IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN DIRECTIONS. FOR VERTICAL SURFACES, PLACE OR POUR REPAIR MATERIAL INTO FIL-CHUTES USING BUCKETS OR SCOWS. USE RODDING, AN INTERNAL VIBRATOR AND EXTERNAL VIBRATION (TAMPING FORMWORK WITH HAMMER) TO CONSOLIDATE REPAIR MATERIAL. ROD, TAMP OR VIBRATE AS NECESSARY TO ENSURE PROPER FILLING AND CONSOLIDATION OF REPAIR MATERIAL. WHEN THE CAVITY IS FILLED, USE EXTRA CARE TO ENSURE THAT THE UPPERMOST SURFACES ARE FUSED ADJACENT TO THE FIL-CHUTES OR OPENINGS WHERE PLACEMENT OCCURRED.
6. CURING - LEAVE (NON-ABSORPTIVE) FORMWORK IN PLACE FOR A MINIMUM OF 7 DAYS. AFTER STRIPPING, REPAIR ANY VOIDS LESS THAN 1-INCH IN DEPTH BY SAW CUTTING PERIMETER, CHIPPING, CLEANING AND REPAIRING USING SIKATOP 123 PLUS. FOR VOIDS DEEPER THAN 1-INCH, REPAIR AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE. IF FORMWORK IS REMOVED PRIOR TO 7 DAYS, REPAIR ANY REMAINING VOIDS AND WET CURE FOR THE BALANCE OF THE 7 DAYS.
7. QUALITY ASSURANCE - AFTER 7 DAYS, SOUND THE REPAIR-STRENGTHENED AREAS BY LIGHTLY TAPPING WITH A HAMMER AND LISTEN TO THE RESULTING SOUND. A SOLID RING (VERSUS A DULL SOUND) INDICATES THE REPAIR MATERIAL IS BONDED TO THE SUBSTRATE. IF ANY DULL SOUNDS ARE HEARD (INDICATING POOR OR NO BOND), CHIP OUT UN-BONDED REPAIR MATERIAL AND REPLACE AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE.

FOR MORE INFORMATION OR DESIGN ASSISTANCE, CONTACT REB (KIM BASHAM AT 303/324-9469 OR KBASHAM@REBENCLL.COM).

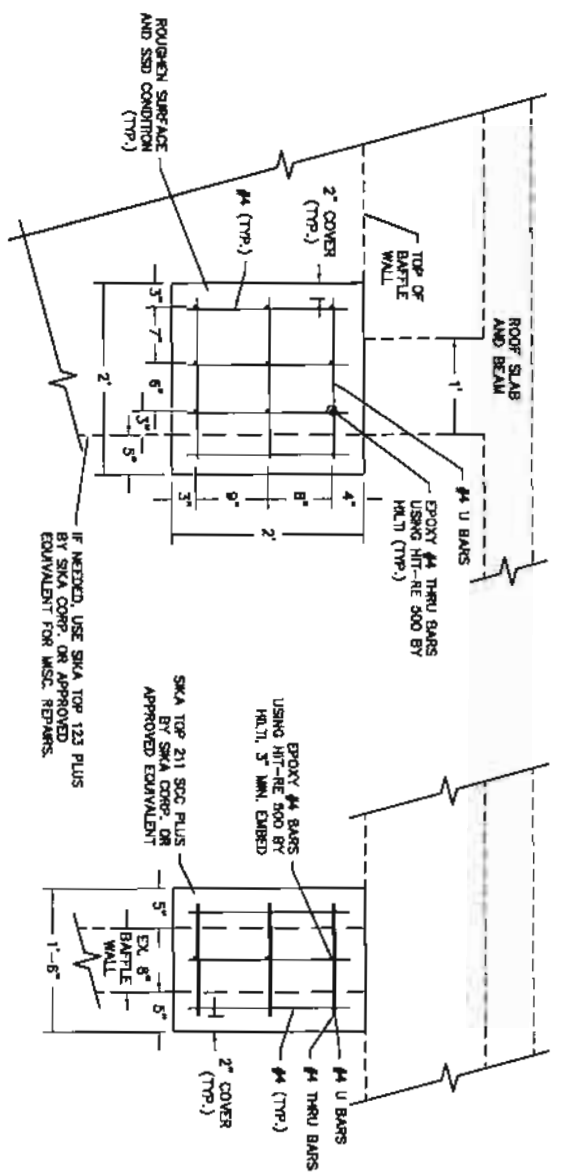
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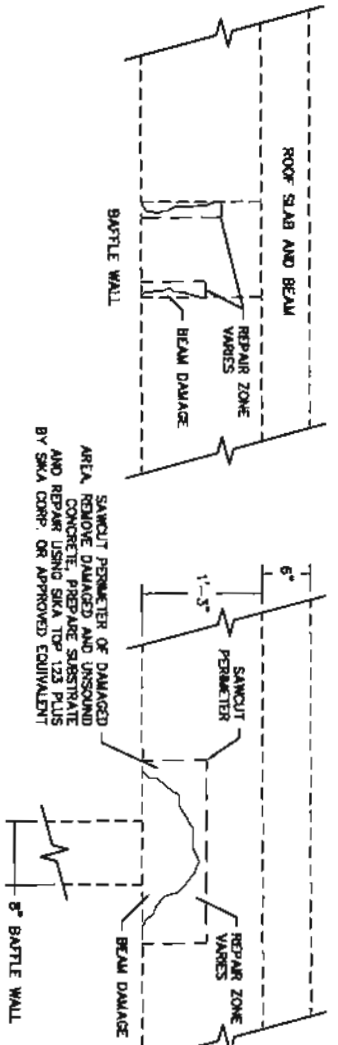
PROJECT:	GREEN RIVER WATER TREATMENT PLANT CLEARWELL	PREPARED FOR:	GR/RS/SW CO. JOINT POWERS WATER BOARD 3 TELEPHONE CANYON RD. GREEN RIVER, WY 82935 307-875-4317
DRAWING TITLE:	INTERIOR STRUCTURAL DETAILS	DATE:	09/10/12

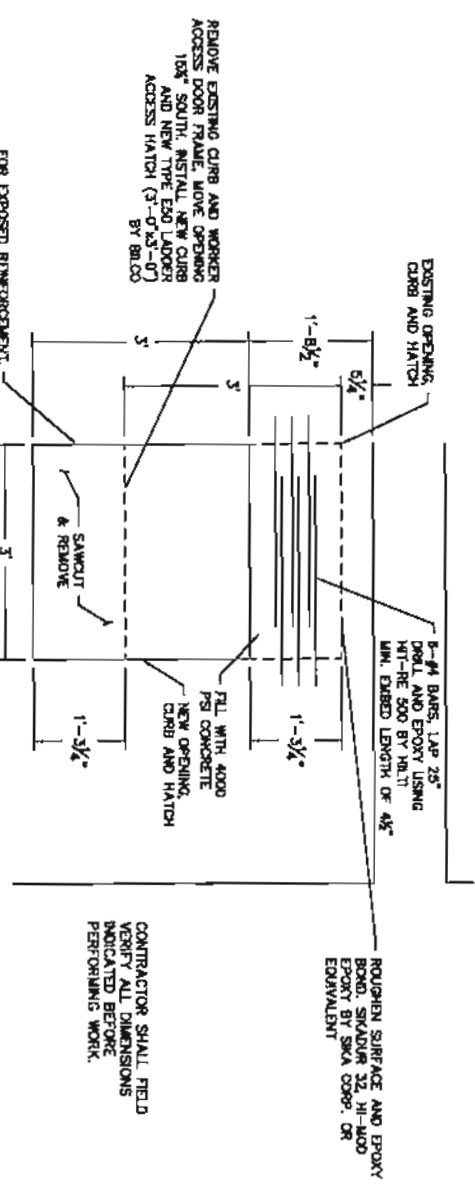
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JOB NO.:	3391
DRAWING NO.:	9 OF 13



BEAM/BAFFLE WALL REPAIR DETAILS  
NOT TO SCALE  
2  
10



INTERIOR ROOF BEAM AND BAFFLE WALL CONNECTION REPAIR DETAILS  
NOT TO SCALE  
4  
10



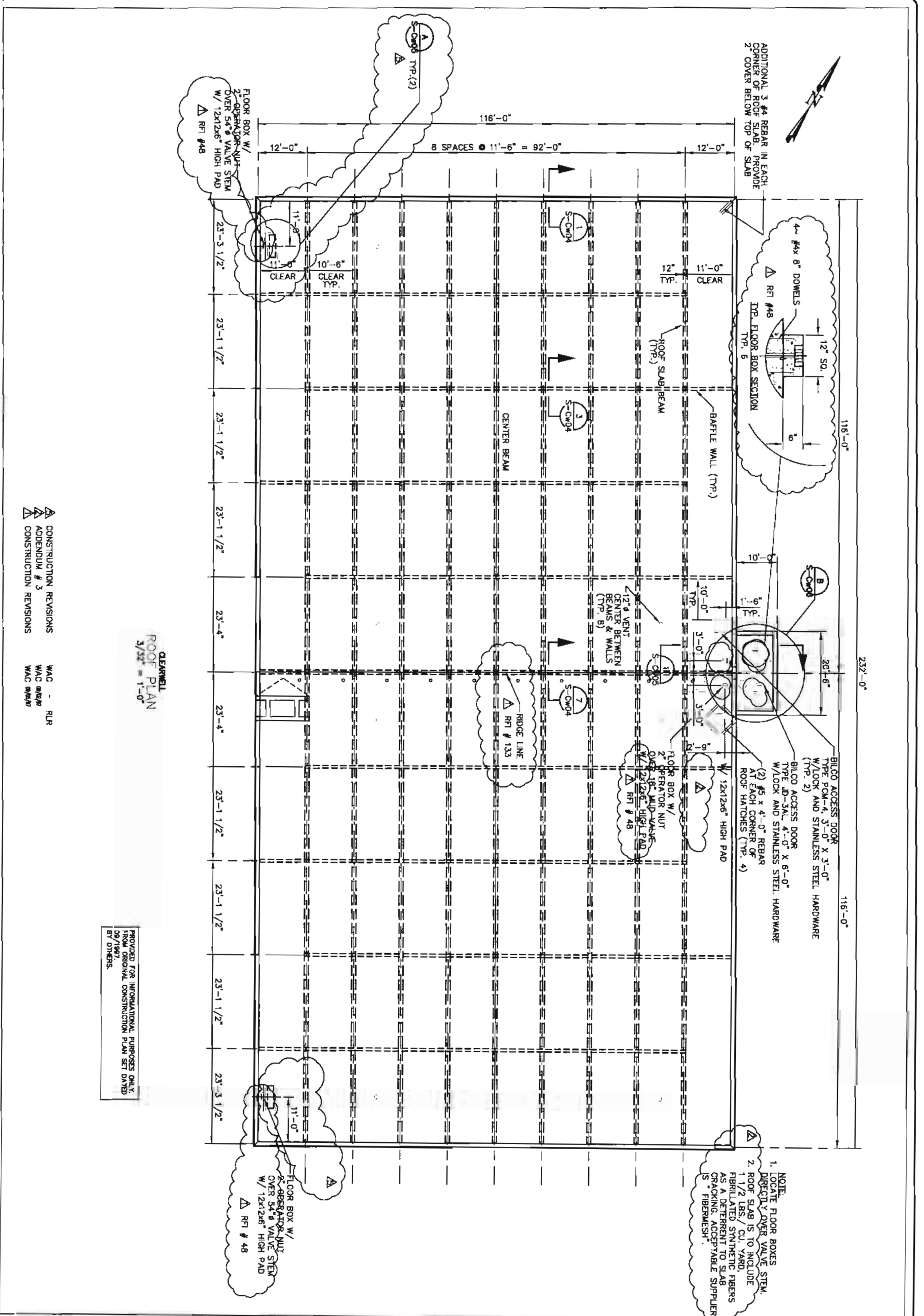
NEW HATCH AND REPAIR DETAIL (SOUTH CLEARWELL)  
NOT TO SCALE  
5  
10

HAND-APPLIED SURFACE REPAIR PROCEDURE

1. SURFACE PREPARATION - INSPECT BEAM AND WALL CONNECTION FOR CRACKS AND DAMAGE. IDENTIFY AND MARK AREAS TO BE REPAIRED. LAYOUT AREAS TO BE REPAIRED WITH SYSTEMICALLY BOUNDARIES AND MINIMIZE THE NUMBER OF JOINTS TO IMPROVE APPEARANCE (E.G., RECTANGULAR SHAPES). PREPARE SURFACE REPAIR BOUNDARIES BY SAW CUTTING STRAIGHT EDGES TO A MINIMUM DEPTH OF 1/4 INCH TO PREVENT FEATHEREDGING OF THE REPAIR MATERIAL. IF POSSIBLE, ANGLE THE SAW BLADE TO CREATE A SLIGHT UNDERCUT. USING A SMALL HAND-HELD CHIPPING HAMMER (1.5# CLASS), REMOVE ALL DAMAGED, LOOSE AND UNSOUND CONCRETE. CHIP DOWN TO SOLID CONCRETE AND ACHIEVE A SURFACE PROFILE OF 3/16 TO 1/8 INCH (OR ICR CSP 5.8 ABOVE). IF MORE THAN ONE-HALF OF THE CIRCUMFERENCE OF A REBAR IS EXPOSED, UNDERCUT THE REBAR WITH A MINIMUM 3-INCH CLEARANCE SO REPAIR MATERIAL CAN EASILY BE PLACED AROUND THE REBAR (CHECK CLEARANCE WITH FINGER). IF REBAR IS DAMAGED, CONTACT REBAR CLEAN SUBSTRATE AND EXPOSED REBAR. THE SURFACE TO BE REPAIRED SHALL BE SOUND AND FREE OF DUST, OIL, OR OTHER CONTAMINANTS THAT COULD INHIBIT OR REDUCE BOND. CLEANING SHOULD OPEN THE PORES OF THE SUBSTRATE. EXPOSED STEEL SHALL BE CLEANED TO "WHITE" STEEL. SUBSTRATE SHALL BE SATURATED SURFACE DRY (SSD). THOROUGHLY WET REPAIRED SURFACE WITH WATER (SSD CONDITION) BEFORE PLACING REPAIR MATERIAL. DO NOT OVER WET THE SURFACE; SUBSTRATE MUST ABSORB THE REPAIR MATERIAL.
2. REPAIR MATERIAL - USE SIKATOP 123 PLUS AS MANUFACTURED BY SIKACORP. (WWW.SIKACONSTRUCTION.COM) OR AN APPROVED EQUIVALENT. REPAIR MATERIAL SHALL BE ANSI/NSF STANDARD 61 PORTABLE WATER APPROVED.
3. MIXING - FOLLOW WRITTEN DIRECTIONS PROVIDED BY MANUFACTURER FOR SIKATOP 123 PLUS. APPLICATION TIME IS APPROXIMATELY 15-MINUTES AFTER ADDING COMPONENT "B" TO COMPONENT "A". DO NOT ATTEMPT TO USE OLD OR STIFFENED MATERIAL.
4. PLACING REPAIR MATERIAL - USING A TROWEL OR SIMILAR TOOL, PLACE AND PRESS THE REPAIR MATERIAL INTO THE SUBSTRATE. APPLY MATERIAL IN SUCH A MANNER SO AIR Voids ARE NOT TRAPPED. USE SUFFICIENT PRESSURE TO FORCE THE REPAIR MATERIAL IN AND AROUND EXPOSED REBARS. ANY EXPOSED REBARS, IF NEEDED, USE AN APPROPRIATE TOOL TO FORCE AND COMPACT REPAIR MATERIAL IN AND AROUND EXPOSED REBARS. MINIMUM APPLICATION THICKNESS IS 1/8-INCH AND THE MAXIMUM THICKNESS FOR ONE LIFT IS 3-INCHES. WHEN MULTIPLE LIFTS ARE REQUIRED, SCORE THE TOP SURFACE OF EACH LIFT TO PRODUCE A ROUGHENED SURFACE FOR THE NEXT LIFT. ALLOW PRECEDING LIFT TO REACH FINAL SET (30 MINUTES MINIMUM) BEFORE APPLY THE NEXT LIFT. KEEP THE SURFACE OF THE PREVIOUS LIFT DAMP AND SCRUB A COAT OF SIKADUR 123 PLUS INTO THE ROUGHENED SURFACE OF THE PREVIOUS LIFT USING A STIFF BRUSH BEFORE PLACING THE NEXT LIFT. FOR VERTICAL SURFACES, START AT THE BOTTOM AND WORK UPWARDS IN A MANNER SO AIR IS NOT TRAPPED. THIS SEQUENCE IS CONTINUED UNTIL THE CAVITY IS COMPLETELY FILLED. COMPACT MORTAR IN PLACE AND STRIKE OFF SLIGHT HIGHER THAN SURROUNDING SURFACE. ONCE THE CAVITY IS COMPLETELY FILLED, FINISH THE SURFACE TO MATCH THE TEXTURE OF THE SURROUNDING CONCRETE. DO NOT PLACE REPAIR MATERIAL UNTIL OWNER'S ON-SITE REPRESENTATIVE HAS INSPECTED AND APPROVED THE WORK.
5. CURING - APPROVED CURING METHODS INCLUDE MOSTLY CURING WITH BURLAP AND POLYETHYLENE SHEETING, FINE MISTING OF WATER (7-DAY MINIMUM) OR SPRAY-ON WATER-BASED CURING COMPOUND. CAUTION: CURING COMPOUNDS ADVERSELY AFFECT THE BOND OF SUBSEQUENT LIFTS OR LAYERS OF THE REPAIR MATERIAL AND SURFACE COATINGS. IF SPRAY-ON-CURING COMPOUND IS USED, REMOVE CURING COMPOUND BY PRESSURE WASHING AS DIRECTED BY OWNER'S ON-SITE REPRESENTATIVE.
6. QUALITY ASSURANCE - AFTER 7 DAYS, SOUND THE REPAIR AREA BY LIGHTLY TAPPING WITH A HAMMER AND LISTEN TO THE RESULTING SOUND. A SOUND RING (VERSUS A DULL SOUND) INDICATES THE REPAIR MATERIAL IS BONDED TO THE SUBSTRATE. IF ANY DULL SOUNDS ARE HEARD (INDICATING POOR OR NO BOND), CHIP OUT UN-BONDED REPAIR MATERIAL AND REPLACE AS DIRECTED BY THE OWNER'S ON-SITE REPRESENTATIVE. OPTIONAL REPAIR PROCEDURE: THE CONTRACTOR MAY USE THE FORM-AND-POUR REPAIR PROCEDURE AS SPECIFIED ON SHEET XX IN LIEU OF THE HAND-APPLIED SURFACE PROCEDURE FOR MAKING INTERIOR ROOF BEAM/BAFFLE WALL CONNECTION REPAIRS.

FOR MORE INFORMATION OR DESIGN ASSISTANCE, CONTACT XBE (KIM BASHAM AT 303/224-8469 OR KASHAM@XBENGL.COM).

	PROJECT:	GREEN RIVER WATER TREATMENT PLANT CLEARWELL	PREPARED FOR:	GR/RS/SW CO. JOINT POWERS WATER BOARD 3 TELEPHONE CANYON RD. GREEN RIVER, WY 82935 307-875-4317	<table border="1"> <thead> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	NO.	REVISION	DATE									
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CLEARWELL  
ROOF PLAN  
3/32" = 1'-0"

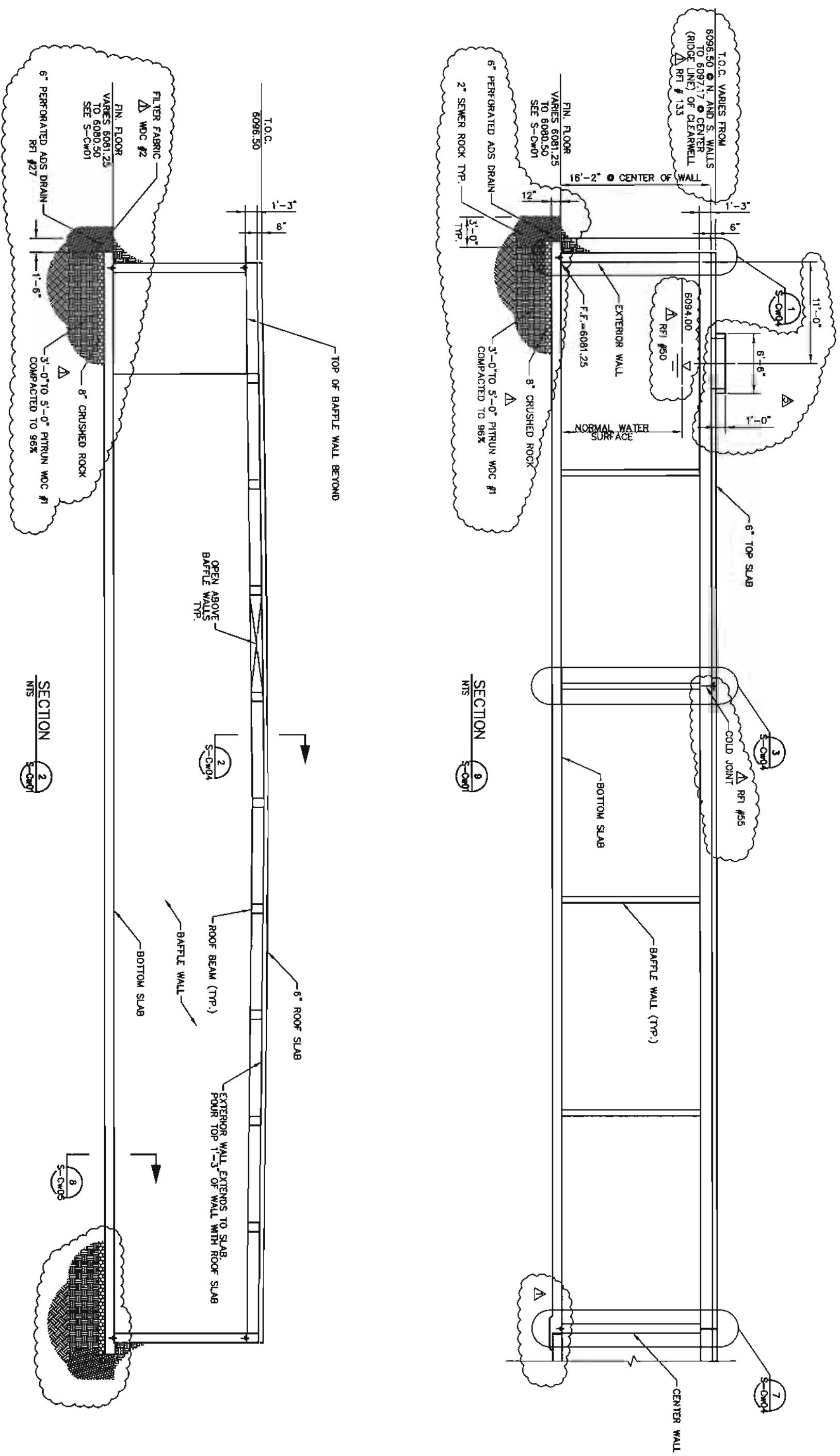
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△ ADDENDUM # 3  
△ CONSTRUCTION REVISIONS  
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WAC 09/09/12  
WAC 09/09/12

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NOTE:  
1. LOCATE FLOOR BOXES  
DIRECTLY OVER VALVE STEM.  
2. ROOF SLAB IS TO INCLUDE  
1 1/2 LBS./CU. YARD,  
FIBRILLATED SYNTHETIC FIBERS  
AS A DETERRENT TO SLAB  
CRACKING. ACCEPTABLE SUPPLIER  
IS "FIBERMESH".

FLOOR BOX W/  
2" OPERATOR NUT  
OVER 5/4" VALVE STEM  
W/ 12x12x6" HIGH PAD  
△ RFI # 48

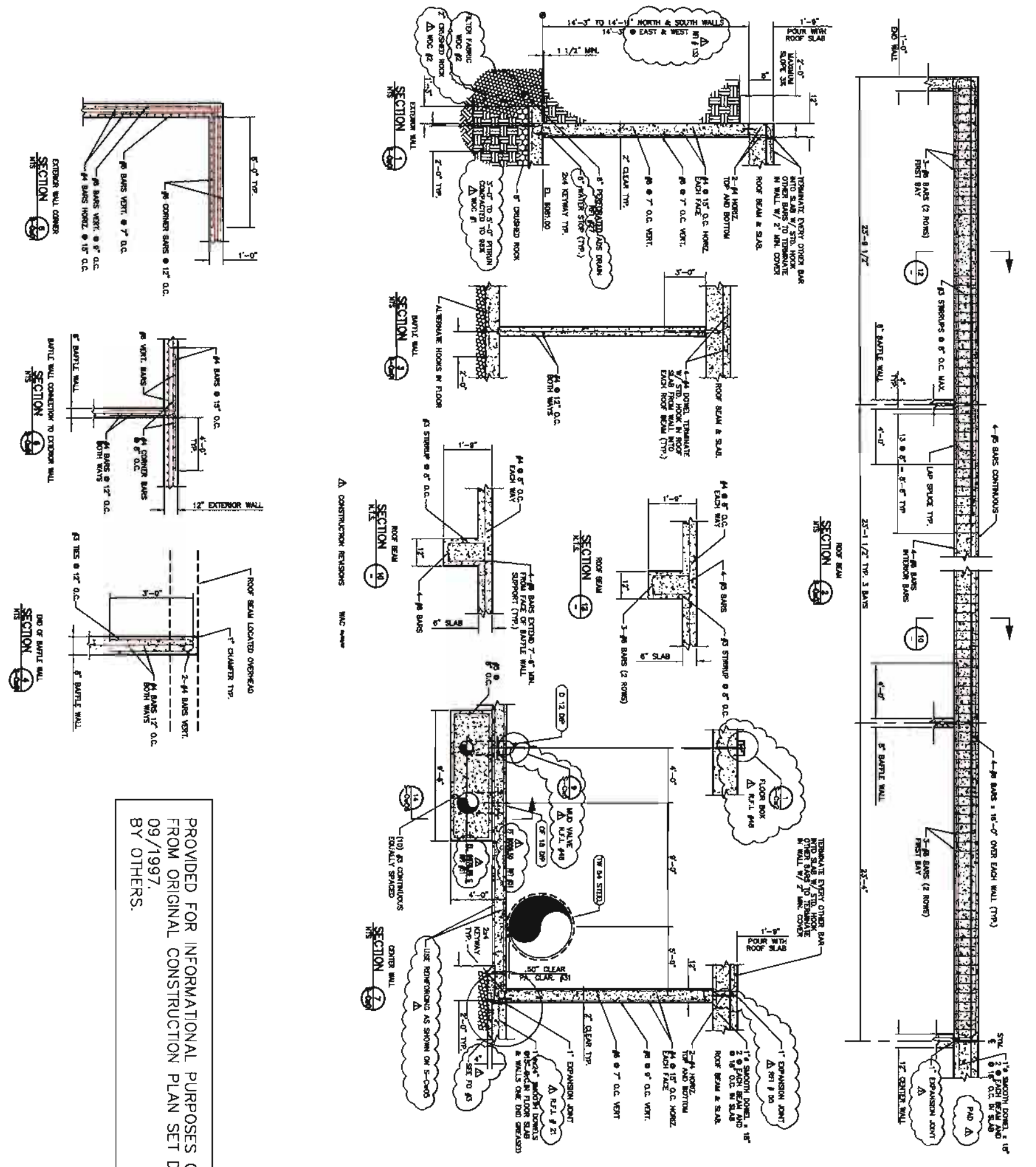
ENGINEERING <b>QPI</b> P.C. PHONE (307) 637-6017 1103 OLD TOWN LANE, SUITE 101 CHEYENNE, WY 82009 AM@QPI.COM	PROJECT: <b>GREEN RIVER WATER TREATMENT PLANT CLEARWELL</b>	PREPARED FOR: <b>GR/RS/SW CO. JOINT POWERS WATER BOARD 3 TELEPHONE CANYON RD. GREEN RIVER, WY 82935 307-875-4317</b>	NO.	REVISION	DATE
	DRAWN BY: CHECKED BY: DESIGNED BY: OTHERS: DATE: 09/10/12	DRAWING TITLE: <b>EXISTING CLEARWELL ROOF PLAN</b>			



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<p>Geotechnical                  Engineering                  Inc.</p> <p>7000 6201 627 5017                  1100 CRENSHAW WY #2000                  AVONDALE, CO CO                  AV@GRI.COM</p>	PROJECT: <b>GREEN RIVER WATER TREATMENT PLANT                  CLEARWELL</b>	PREPARED FOR: <b>GR/RS/SW CO. JOINT POWERS WATER BOARD                  3 TELEPHONE CANYON RD.                  GREEN RIVER, WY 82935                  307-875-4317</b>	NO.      REVISION      DATE
	DRAWING TITLE: <b>EXISTING CLEARWELL                  SECTIONS</b>	DATE: 09/10/12 DRAWN BY: OTHERS DESIGNED BY: OTHERS CHECKED BY: OTHERS	JOB NO.: <b>3391</b>



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