

Project: Hamilton College Theatre & Studio Arts

Location: Town of Clinton, New York

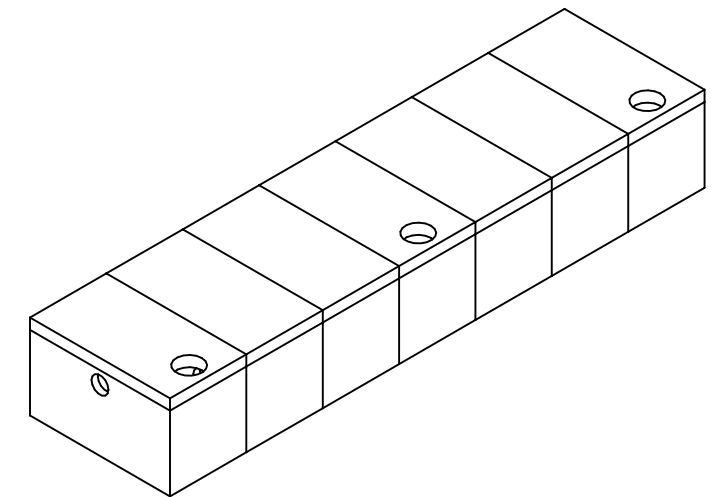
Product: Sand Filter Tank #1

Contractor: Fred Burrows Trucking & Exec., LLC Acct # 11365

Engineer: Machado and Silveti Associates, LLC

Job ID: HamiltonCollegeT&SA-Clinton-FredBurrows-SandFilter#1

SHT. NO	DESCRIPTION
1	TITLE SHEET & INDEX
2	NOTES & DETAILS
3	PLAN, PROFILE & END VIEW
4	PIECES
5	TYPICAL INSTALLATION PROCEDURE 1 OF 2
6	SEGMENTAL TANK DETAILS 2 OF 2



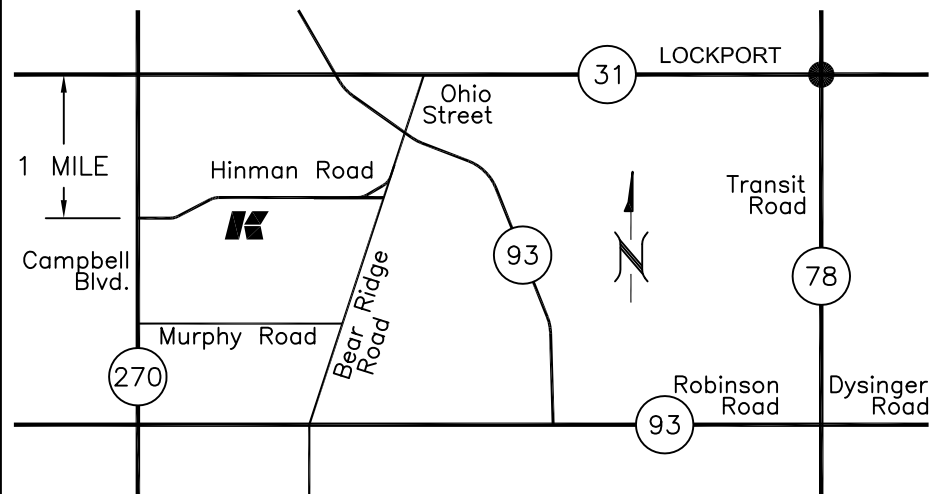
SAND FILTER TANK #1

MAILING ADDRESS:
SALES/ENGINEERING & CORPORATE HEADQUARTERS
 KISTNER CONCRETE PRODUCTS, INC.
 8713 READ ROAD, P.O. BOX 218
 EAST PEMBROKE, NEW YORK 14056
 (716) 894-2267
 (585) 762-8216
 FAX: (585) 762-8315

MANUFACTURING FACILITY
 KISTNER CONCRETE PRODUCTS, INC.
 5550 HINMAN ROAD
 LOCKPORT, N.Y.
 (716) 434-6157
 (716) 693-0174
 FAX: (716) 434-0138

MANUFACTURING FACILITY
 KISTNER CONCRETE PRODUCTS, INC.
 5726 ROUTE 39 - RD 1
 SPRINGVILLE, N.Y.
 (716) 592-2811
 FAX: (716) 592-3045

MANUFACTURING FACILITY
 KISTNER CONCRETE PRODUCTS, INC.
 10002 EAST ROAD
 EAST BETHANY, N.Y.
 (585) 343-7811
 FAX: (585) 343-2546



REV. NO.	DATE	SHEETS AFFECTED
PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492		
JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1		
DATE: 6/22/12	SHEET TITLE: TITLE SHEET & INDEX	DRAWN BY: DAR
SCALE: NONE		CK'D BY: CJC
PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1		
KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01	
KISTNER SHT NO: 1 OF 6	NYS DOT DWG NO:	
 KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.		

By: _____ DATE _____

Approved
 Approved As Noted

SPECIFICATIONS:

CONCRETE: 5,000 P.S.I. @ 28 DAYS.
 ENTRAINED AIR: 5% - 9%.
 STEEL: A.S.T.M. A496-A615
 GRADE 60-60 KSI.
 DESIGN LOADING: ACI LOAD FACTORS.
 A.A.S.H.T.O. METHOD OF DESIGN.
 EQUIVALENT SOIL PRESSURE
 OF 60 (PCF).
 LIVE LOAD: H2O
 EARTH FILL: 2 TO 6'
 WATER TABLE: 3' BELOW GRADE

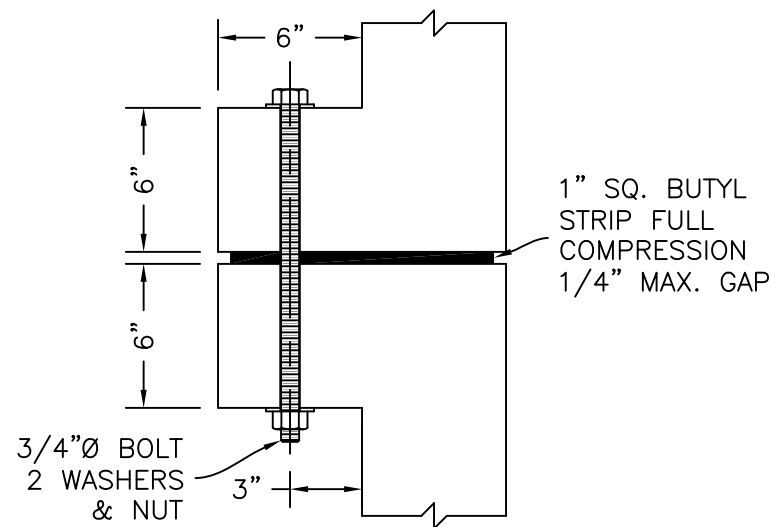
WEIGHT:

COVER W/OPNG (3 EA.): 8,536 LBS.
 COVER WO/OPNG (4 EA.): 8,963 LBS.
 SEGMENT A (INLET) (1 ONLY): 20,104 LBS.
 SEGMENT B W/SOLID WALL (1 ONLY): 17,327 LBS.
 SEGMENT B (3 EA.): 14,754 LBS.
 SEGMENT C (1 ONLY): 17,391 LBS.
 SEGMENT C (OUTLET) (1 ONLY): 20,157 LBS.
 TOTAL: 180,701 LBS.

A	B	C
LOC.:INLET END WALL	LOC.:INLET SIDE WALL	LOC.:B/T SEG A & SEG B
QTY.:1	QTY.:1	QTY.:3 PER WALL (6 TOTAL)
PIPE (SIZE & TYPE):12" CPP	PIPE (SIZE & TYPE):6" CPP	PIPE (SIZE & TYPE):12" CPP W/ELBOW
PIPE OD:	PIPE OD:	PIPE OD:
INVERT ELEV.:904.99	INVERT ELEV.:904.99	INVERT ELEV.:903.91
CL ELEV:905.49	CL ELEV:905.24	CL ELEV:904.41
HOLE:16"	HOLE:11"	HOLE:16"
TBS TO CL:50"	TBS TO CL:47"	TBS TO CL:37"
D	E	F
LOC.:B/T SEG C & SEG C	LOC.:B/T SEG C & SEG C WALLS	LOC.:OUTLET END WALL
QTY.:3 PER WALL (6 TOTAL)	QTY.:4 PER WALL (8 TOTAL)	QTY.:1
PIPE (SIZE & TYPE):8" CPP	PIPE (SIZE & TYPE):4" PERF. UD	PIPE (SIZE & TYPE):15" CPP
PIPE OD:	PIPE OD:	PIPE OD:
INVERT ELEV.:904.91	INVERT ELEV.:901.83	INVERT ELEV.:901.99
CL ELEV:905.24	CL ELEV:902.00	CL ELEV:902.62
HOLE:12"	HOLE:8"	HOLE:20"
TBS TO CL:47"	TBS TO CL:8"	TBS TO CL:15 1/2"

NOTE: ADDITIONAL GRAVEL ADDED UNDER 6" PIPE TO ACCOMMODATE FIXED TANK HEIGHT AND TO ALLOW MINIMAL COVER PER PLANS OVER TANK.

SAND FILTER TANK #1



WATERTIGHT BUTYL-RUBBER COMPRESSION JOINT SEAL DETAIL

SCALE: N/A

⚠ WARNING

WATER TABLE NO HIGHER THAN INVERT OF OUTLET PIPE.

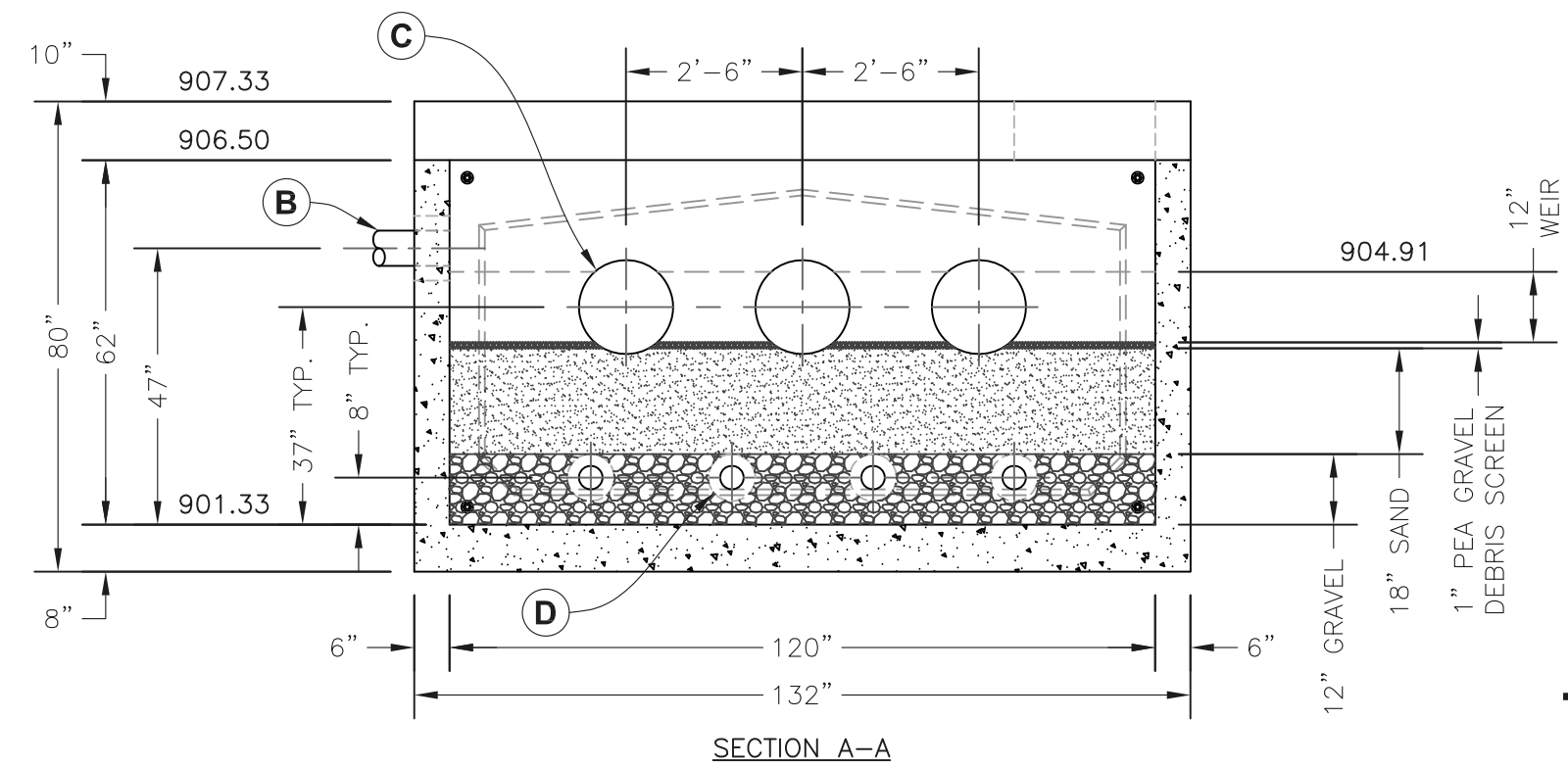
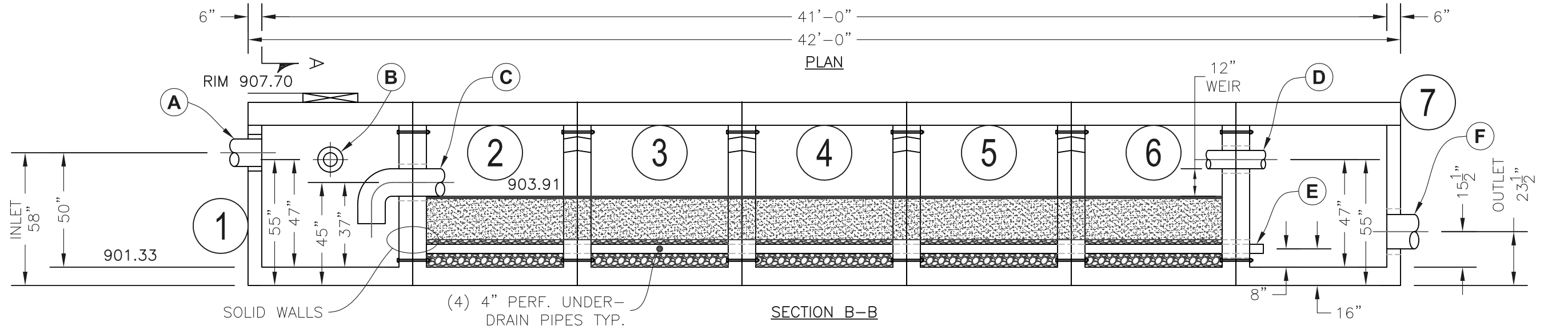
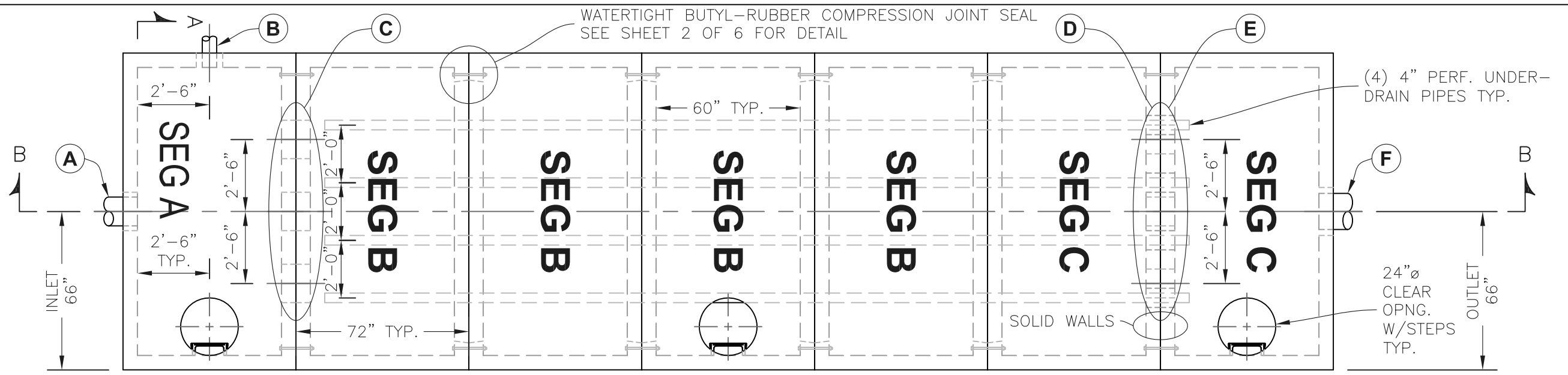
FILL OVER TANK _____

WATER TABLE BELOW FINISHED GRADE _____

WATERTIGHTNESS IS THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR ASK FOR WATERTIGHT JOINT INSTALLATION DETAIL.

<input type="checkbox"/> Approved <input type="checkbox"/> Approved As Noted By: _____ DATE: _____	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">REV. NO.</th> <th style="width: 15%;">DATE</th> <th style="width: 70%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td colspan="3">PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492</td> </tr> <tr> <td colspan="3">JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1</td> </tr> <tr> <td>DATE: 6/25/12</td> <td>SHEET TITLE: NOTES & DETAILS</td> <td>DRAWN BY: DAR</td> </tr> <tr> <td>SCALE: NONE</td> <td></td> <td>CK'D BY: CJC</td> </tr> <tr> <td colspan="3">PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1</td> </tr> <tr> <td>KISTNER DWG NO: 12KCP031-0</td> <td>CONTRACT DWG NO: CE4.01</td> <td></td> </tr> <tr> <td>KISTNER SHT NO: 2 OF 6</td> <td>NYS DOT DWG NO:</td> <td></td> </tr> </tbody> </table> <div style="text-align: center; margin-top: 10px;"> <p>KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 <small>PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.</small></p> </div>	REV. NO.	DATE	DESCRIPTION	PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492			JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1			DATE: 6/25/12	SHEET TITLE: NOTES & DETAILS	DRAWN BY: DAR	SCALE: NONE		CK'D BY: CJC	PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1			KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01		KISTNER SHT NO: 2 OF 6	NYS DOT DWG NO:	
REV. NO.	DATE	DESCRIPTION																							
PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492																									
JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1																									
DATE: 6/25/12	SHEET TITLE: NOTES & DETAILS	DRAWN BY: DAR																							
SCALE: NONE		CK'D BY: CJC																							
PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1																									
KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01																								
KISTNER SHT NO: 2 OF 6	NYS DOT DWG NO:																								

O:\Drawings\PROJECTS\23-TANKS\Hamilton College Theatre & Studio Arts\Sand Filter #1\12KCP031-0.dwg



NOTE: SEE SHEET 2 OF 6 FOR ELEVATION STAMPS OF PIPES A, B, C, D, E & F. ALL DIMS. TO CL OF PIPES.

SAND FILTER TANK #1

- Approved
- Approved As Noted

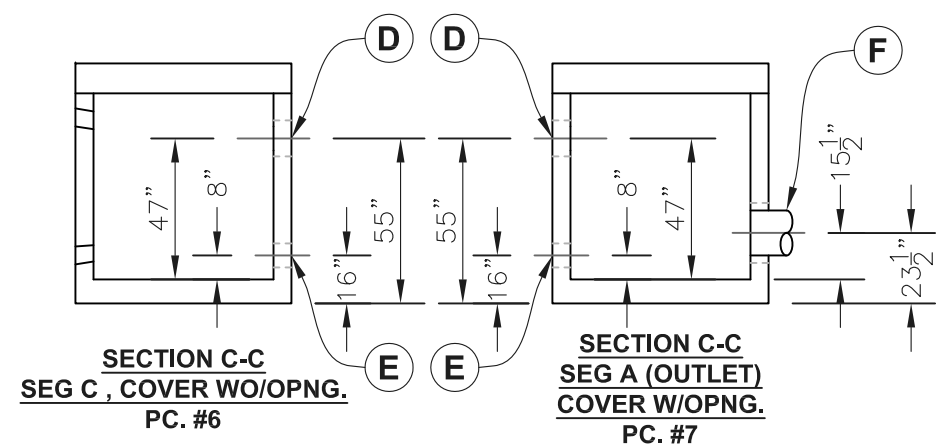
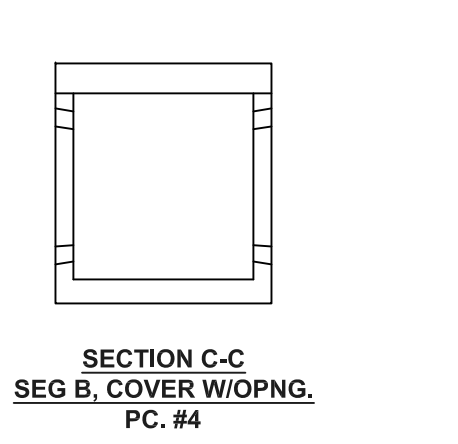
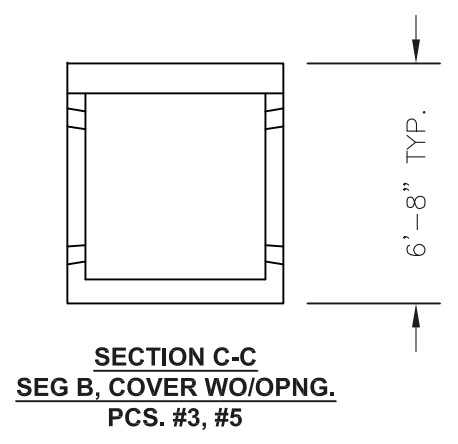
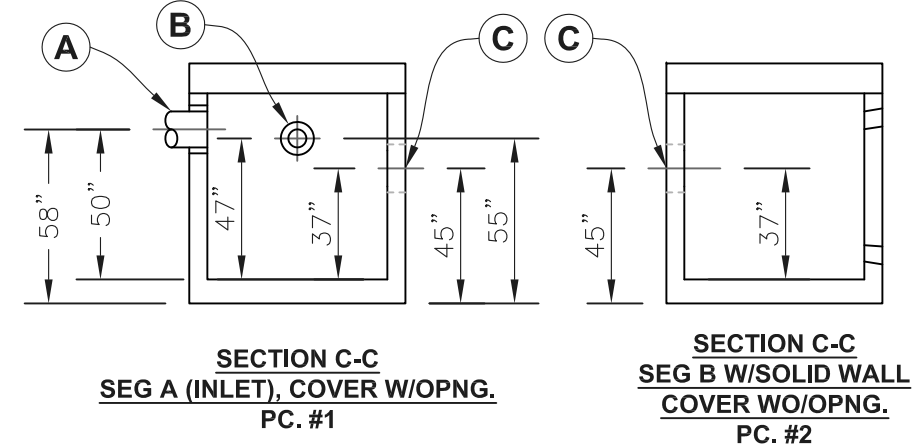
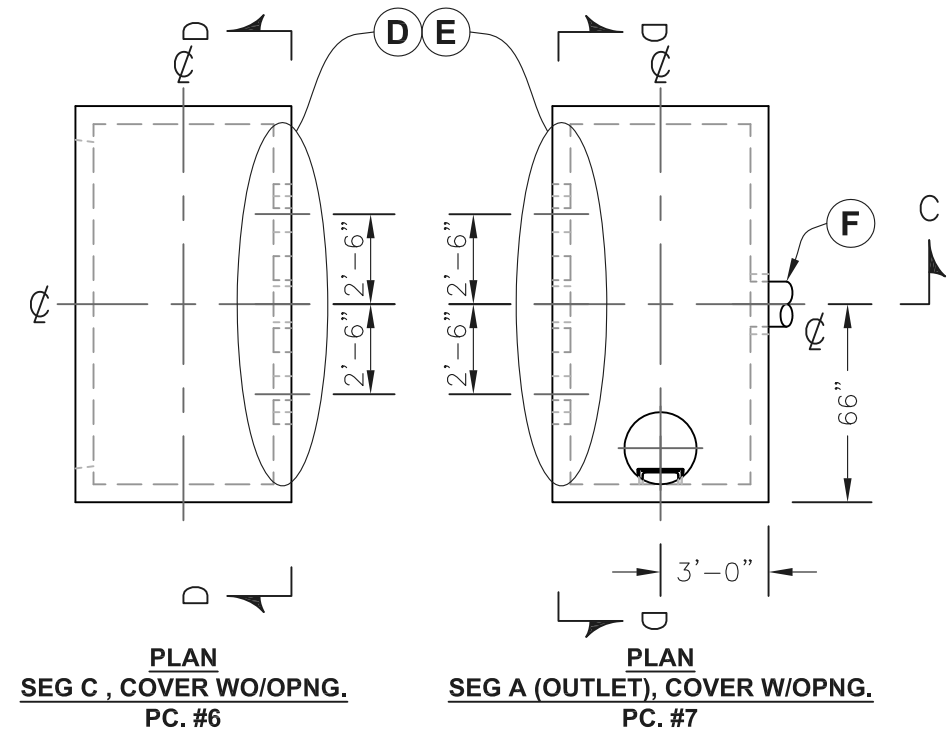
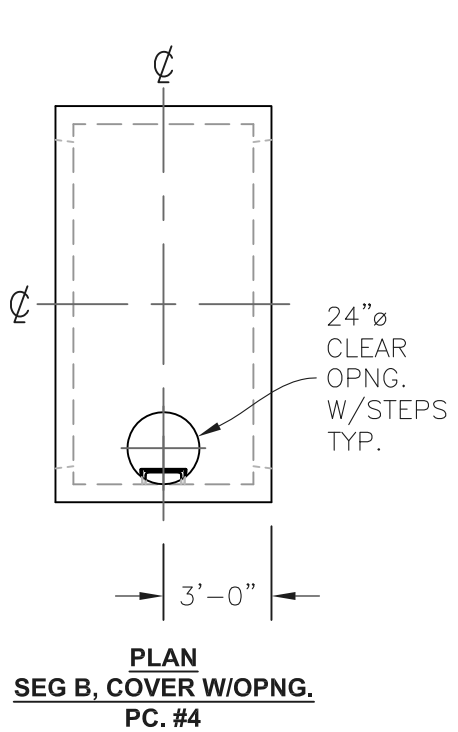
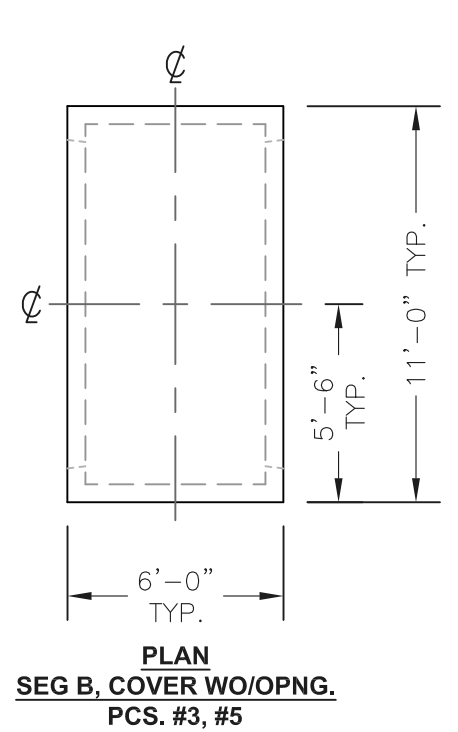
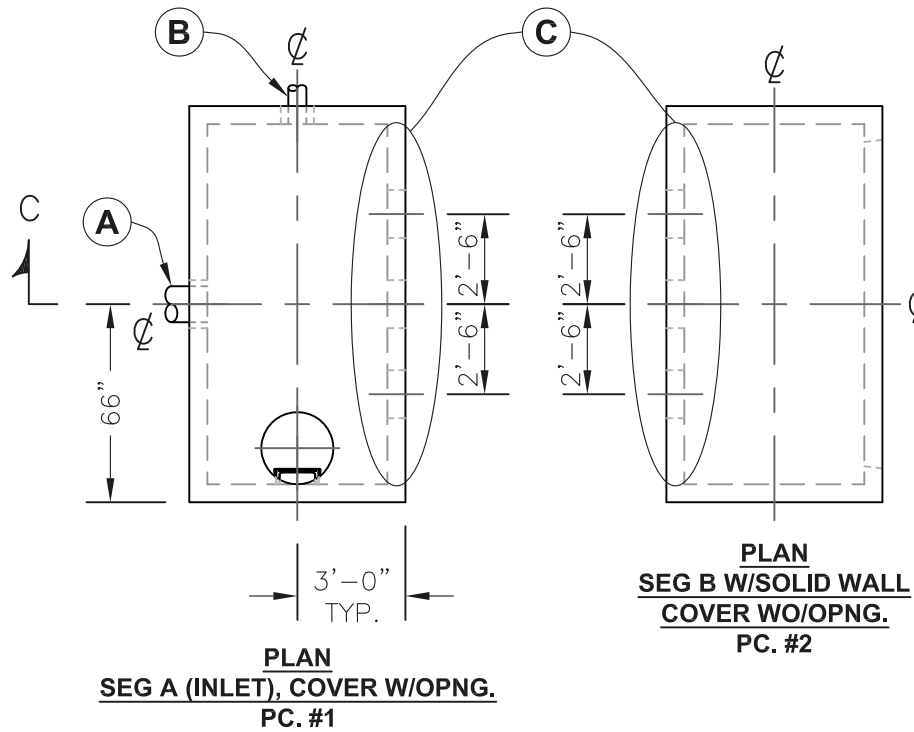
By: _____ DATE _____

REV. NO.	DATE	DESCRIPTION

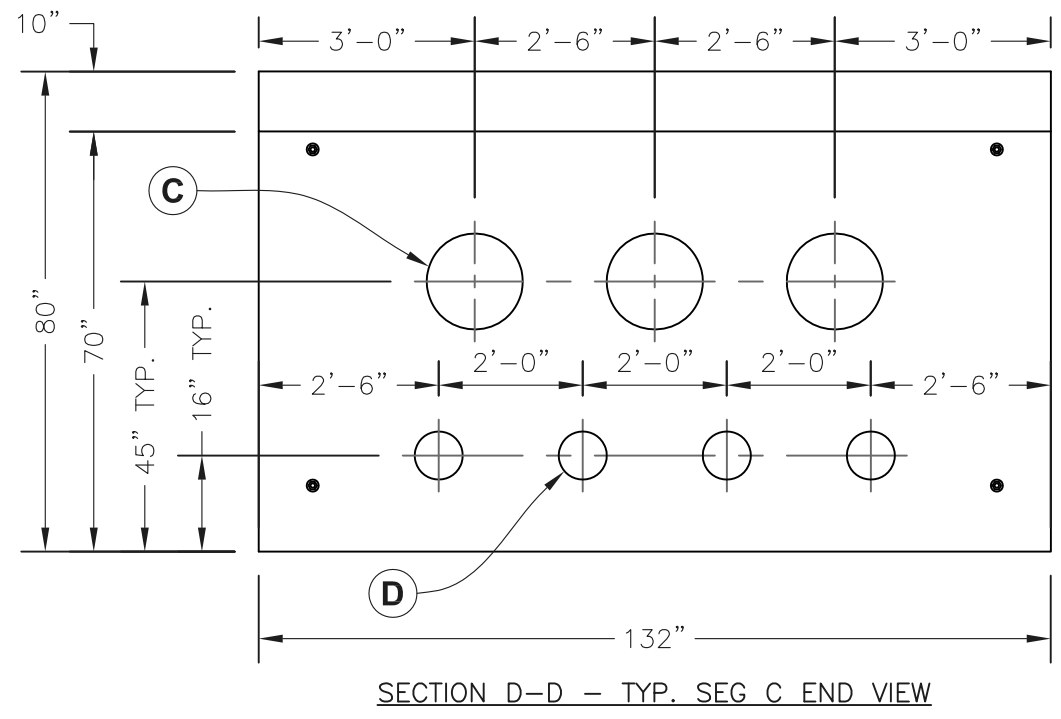
PREPARED FOR: **FRED BURROWS TRUCKING & EXC., LLC**
 437 ORISKANY BLVD
 WHITESBORO, NEW YORK 13492
 JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1
 DATE: 6/25/12 SHEET TITLE: **PLAN, PROFILE & END VIEW** DRAWN BY: **DAR**
 SCALE: NONE CK'D BY: **CJC**
 PROJECT: **HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1**

KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01
KISTNER SHT NO: 3 OF 6	NYSDOT DWG NO:

KISTNER CONCRETE PRODUCTS, INC.
 5550 HINMAN ROAD
 LOCKPORT, NEW YORK 14094
 PHONE 716-434-6157
PROPRIETARY INFORMATION
 ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.



NOTE: SEE SHEET 2 OF 6 FOR ELEVATION STAMPS OF PIPES A, B, C, D, E & F. ALL DIMS. TO CL OF PIPES.



SAND FILTER TANK #1

<div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Approved <input type="checkbox"/> Approved As Noted </div> <p>By: _____ DATE: _____</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">REV. NO.</th> <th style="width: 15%;">DATE</th> <th style="width: 70%;">DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td colspan="3">PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492</td> </tr> <tr> <td colspan="3">JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1</td> </tr> <tr> <td>DATE: 6/22/12</td> <td>SHEET TITLE: PIECES</td> <td>DRAWN BY: DAR</td> </tr> <tr> <td>SCALE: NONE</td> <td></td> <td>CK'D BY: CJC</td> </tr> <tr> <td colspan="3">PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1</td> </tr> <tr> <td>KISTNER DWG NO: 12KCP031-0</td> <td>CONTRACT DWG NO: CE4.01</td> <td></td> </tr> <tr> <td>KISTNER SHT NO: 4 OF 6</td> <td>NYS DOT DWG NO: _____</td> <td></td> </tr> <tr> <td colspan="3" style="text-align: center;"> KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 <small>PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.</small> </td> </tr> </tbody> </table>	REV. NO.	DATE	DESCRIPTION	PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492			JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1			DATE: 6/22/12	SHEET TITLE: PIECES	DRAWN BY: DAR	SCALE: NONE		CK'D BY: CJC	PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1			KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01		KISTNER SHT NO: 4 OF 6	NYS DOT DWG NO: _____		KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 <small>PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.</small>		
REV. NO.	DATE	DESCRIPTION																										
PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492																												
JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1																												
DATE: 6/22/12	SHEET TITLE: PIECES	DRAWN BY: DAR																										
SCALE: NONE		CK'D BY: CJC																										
PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1																												
KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01																											
KISTNER SHT NO: 4 OF 6	NYS DOT DWG NO: _____																											
KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 <small>PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.</small>																												

EQUIPMENT REQUIRED BY G.C. FOR INSTALLATION:

- 4 OPEN END WRENCHES FOR 1 1/8"(28.575) NUTS
- 2 PAIR MED-LARGE VISE GRIPS
- 3 PRY BARS
- 1 CUTOFF SAW
- 1 STANDARD SIZE CAULK GUN

HARDWARE LIST

QTY	DESCRIPTION	LOCATION
4 SETS/JOINT	3/4"(19.05) BOLT X 10"(254.0) LG. W/2 WASHERS/NUT	CORNERS OF EACH SECTION

GENERAL NOTES:

- "A" – JOINT SEALANT, ONE STRIP BY K.C.P.
- "B" – WATERPLUG BY G.C.
- "C" – 6"(152.4) BUTYL WRAP SUPPLIED BY K.C.P. AT CUSTOMER REQUEST.
- "D" – TAR BY G.C.
- "E" – SIKAL-1A ADHESIVE BY K.C.P.

INSTALLATION PROCEDURE:

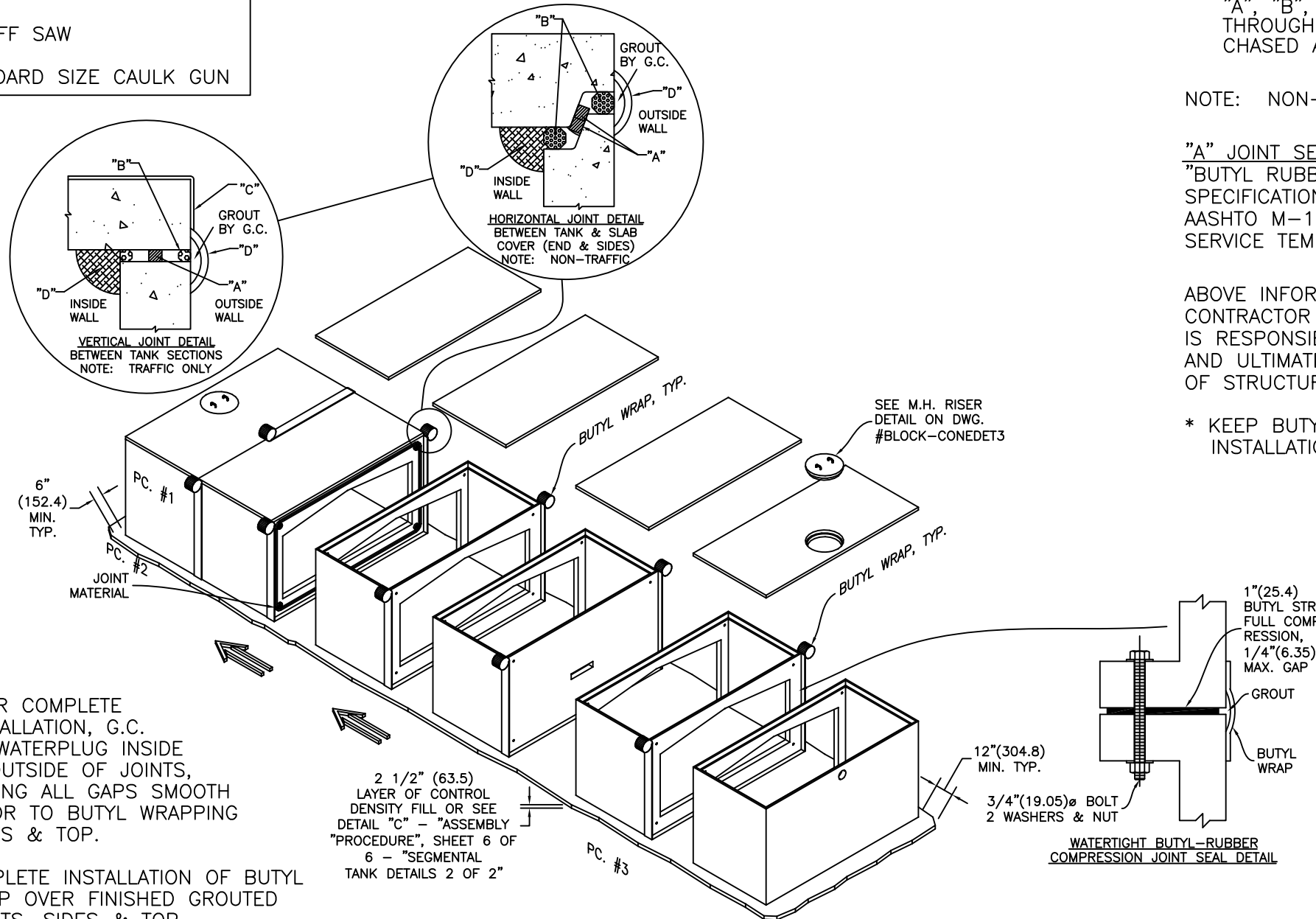
1. PREPARE DRY EXCAVATION & BEDDING PER CONTRACT SPECIFICATIONS. MIN. 2 1/2"(63.5) THICK CONTROL DENSITY FILL LEVELED TO SMOOTH BEDDING SURFACE. ALLOW PROPER AREA IN EXCAVATION TO SET TANK.
2. PREPARE BUTYL WRAP ON BEDDING IN EXCAVATION AT BOTTOM OF PC. #1 FOR SETTING.
3. SET PC. #1 IN EXCAVATION ON BUTYL WRAP.
4. INSTALL BUTYL STRIP ON SIDE OF PC. #2. 2 STRIPS – START AT TOP AND WRAP AROUND WALLS. STAGGER BUTT END'S JOINT AT START. CONTRACTOR MAY APPLY TAR TO JOINT TO LOCATE BUTYL STRIP.
5. PREPARE BUTYL WRAP IN HOLE FOR PC. #2.
6. INSTALL PC. #2. DRAW FULLY TOGETHER W/BOLT SYSTEM, 1/4"(6.35) GAP MAX. BEFORE RELEASING TENSION ON CABLES. APPLY BUTYL AROUND BOLT AND PLATE WASHERS TO SEAL BOLT HOLES.
7. DRAW SECTIONS INTO PLACE TO PREVIOUSLY SET SECTION THRU HOLES.
8. REPEAT PROCEDURE UNTIL COMPLETE.

NOTE: NON-POTABLE INSTALLATIONS ONLY.

"A" JOINT SEALANT
 "BUTYL RUBBER" MEETS FEDERAL SPECIFICATION #SS-S-00210 (210-A) AASHTO M-198
 SERVICE TEMP: -65° TO +200°F

ABOVE INFORMATION IS SUPPLIED FOR CONTRACTOR KNOWLEDGE. CONTRACTOR IS RESPONSIBLE FOR PROPER APPLICATION AND ULTIMATE WATERTIGHT INSTALLATION OF STRUCTURE.

* KEEP BUTYL WRAP WARM PRIOR TO INSTALLATION.



9. AFTER COMPLETE INSTALLATION, G.C. TO WATERPLUG INSIDE & OUTSIDE OF JOINTS, FILLING ALL GAPS SMOOTH PRIOR TO BUTYL WRAPPING SIDES & TOP.
10. COMPLETE INSTALLATION OF BUTYL WRAP OVER FINISHED GROUDED JOINTS, SIDES & TOP.
11. TAR INTERIOR JOINTS – BOTTOM & SIDES AFTER FINISH OF GROUDED OF ALL GAPS SMOOTH.
12. FINISHED JOINT – SEE JOINT DETAIL.
13. MANUFACTURER RECOMMENDS CONTRACTOR TO BACKFILL WITH IMPERVIOUS MATERIAL AROUND TANK AND DAM INLET PIPE TRENCH PATH.
14. EQUIPMENT MUST NEVER BE USED TO FORCE TANK SECTIONS TOGETHER. IF DIFFICULTY IS ENCOUNTERED, REMOVE SECTION AND REPEAT PREVIOUS STEPS. CALL KISTNER'S SALES &

2 1/2" (63.5) LAYER OF CONTROL DENSITY FILL OR SEE DETAIL "C" – "ASSEMBLY PROCEDURE", SHEET 6 OF 6 – "SEGMENTAL TANK DETAILS 2 OF 2"

ENGINEERING DEPARTMENT IMMEDIATELY.

15. MANUFACTURER RECOMMENDS WATER TESTING AFTER BACKFILL PRIOR TO SERVICING.

16. TANKS DESIGNED FOR STATIC WATER LEVEL NON-PRESSURIZED.

MATERIALS:

- TANK – K.C.P.
- BUTYL WRAP – K.C.P.
- BUTYL JOINT MATERIAL – K.C.P.
- NONSHRINK GROUT – G.C.
- TAR – G.C.

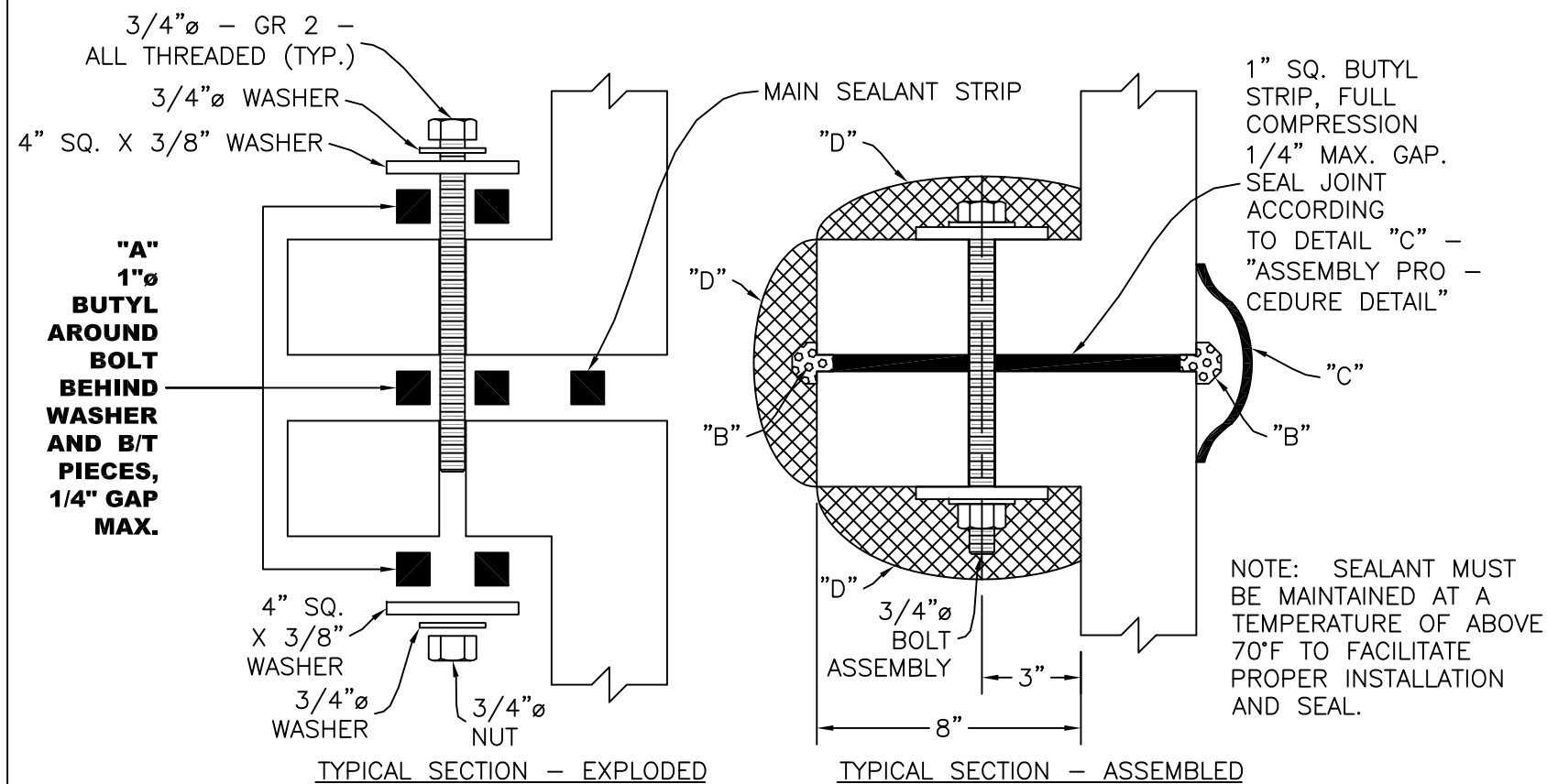
WARNING
 WATER TABLE NO HIGHER THAN INVERT OF OUTLET PIPE.

SAND FILTER TANK #1

REV. NO.	DATE	DESCRIPTION
PREPARED FOR: ACCT # 11365 FRED BURROWS TRUCKING & EXC., LLC 437 ORISKANY BLVD WHITESBORO, NEW YORK 13492 JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1		
DATE:	SHEET TITLE:	DRAWN BY:
6/26/12	TYPICAL INSTALLATION PROCEDURE 1 OF 2	DAR
SCALE:		CK'D BY:
NONE		CJC
PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1		
KISTNER DWG NO:	KISTNER SHT NO:	CONTRACT DWG NO:
12KCP031-0	5 OF 6	CE4.01
5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.		

Approved
 Approved As Noted

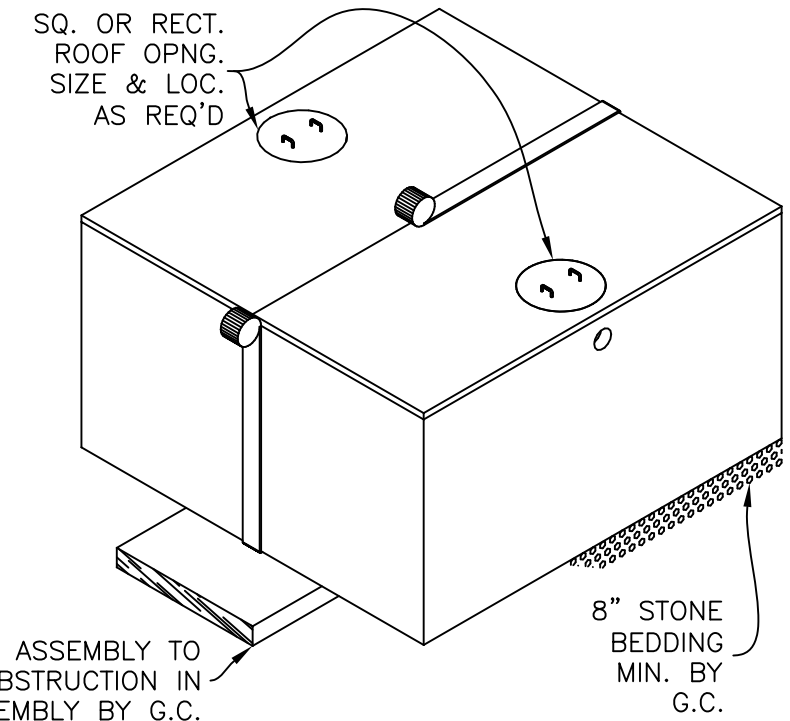
By: _____ DATE: _____



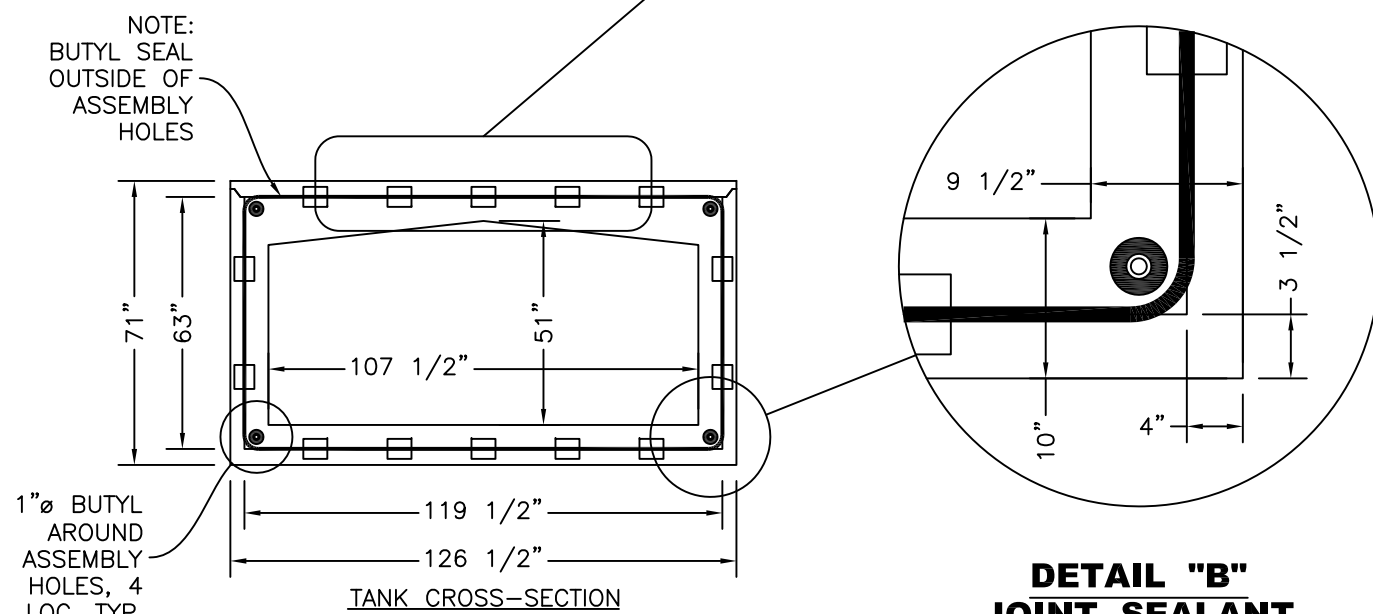
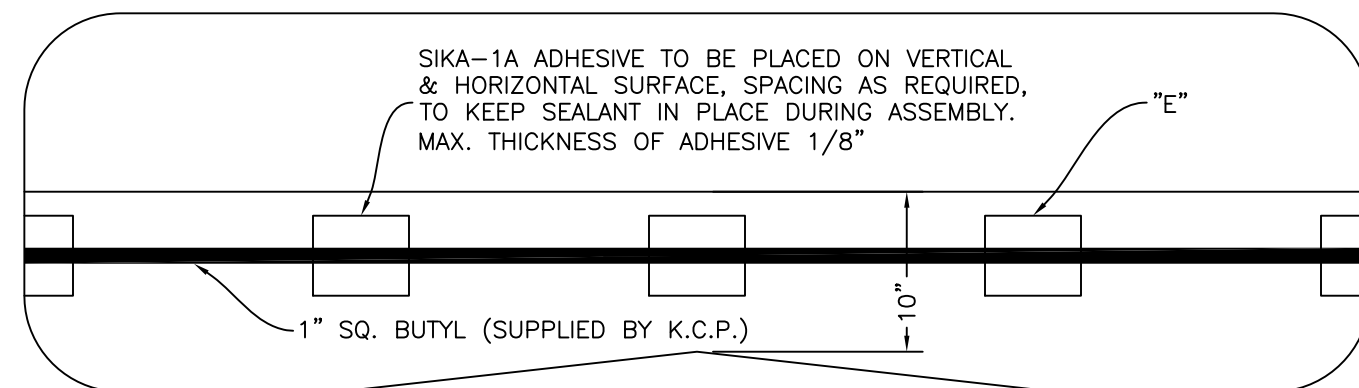
DETAIL "A"
JOINT ASSEMBLY DETAIL

CAUTION:
COMPRESSION OF SEALANT TO 50% CROSS-SECTION OF SEALANT REQUIRED.

WARNING
 WATER TABLE NO HIGHER THAN INVERT OF OUTLET PIPE.



DETAIL "C"
ASSEMBLY PROCEDURE DETAIL



DETAIL "B"
JOINT SEALANT PREPARATION DETAIL

SAND FILTER TANK #1

REV. NO.	DATE	DESCRIPTION
PREPARED FOR: ACCT # 11365		
FRED BURROWS TRUCKING & EXC., LLC		
437 ORISKANY BLVD		
WHITESBORO, NEW YORK 13492		
JOB ID: HAMILTONCOLLEGET&SA-CLINTON-FREDBURROWS-SANDFILTER#1		
DATE: 6/26/12	SHEET TITLE: SEGMENTAL TANK DETAILS 2 OF 2	DRAWN BY: DAR
SCALE: NONE		CK'D BY: CJC
PROJECT: HAMILTON COLLEGE THEATRE & STUDIO ARTS SAND FILTER TANK #1		
KISTNER DWG NO: 12KCP031-0	CONTRACT DWG NO: CE4.01	
KISTNER SHT NO: 6 OF 6	NYS DOT DWG NO:	
 KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.		

By: _____ DATE _____

Approved
 Approved As Noted