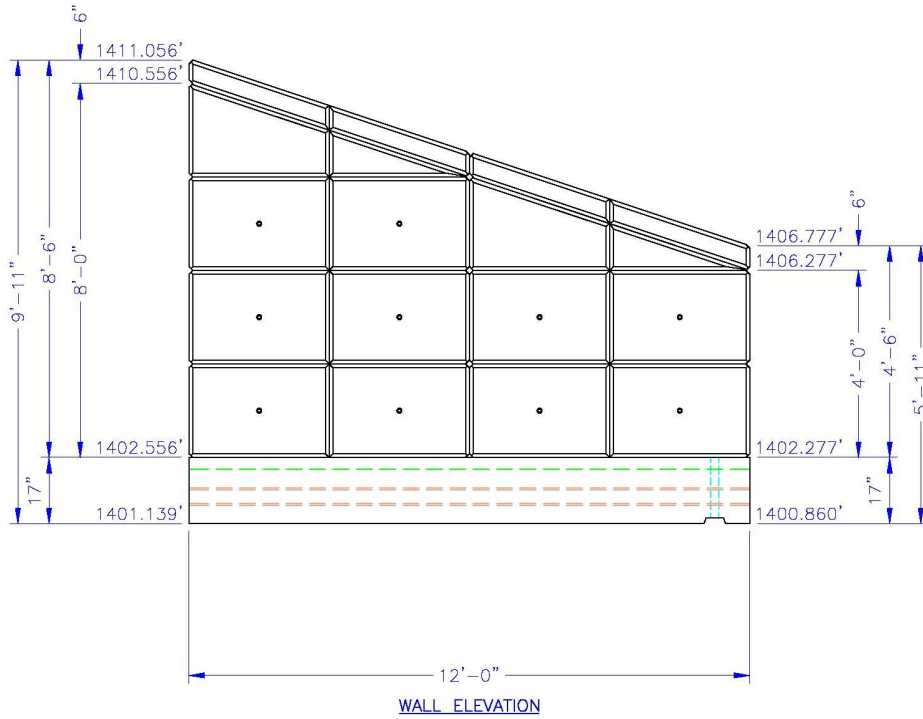
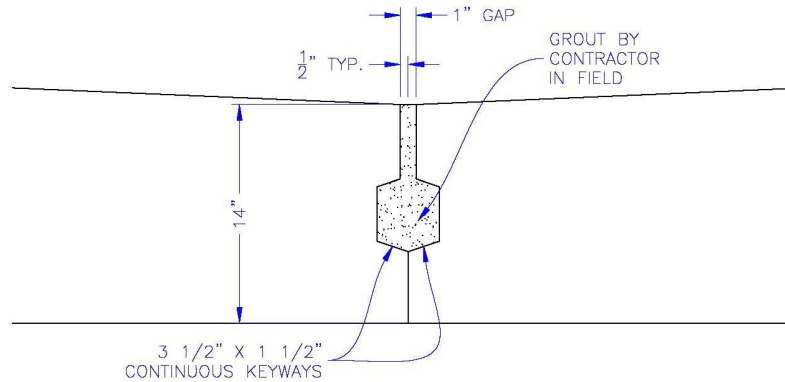
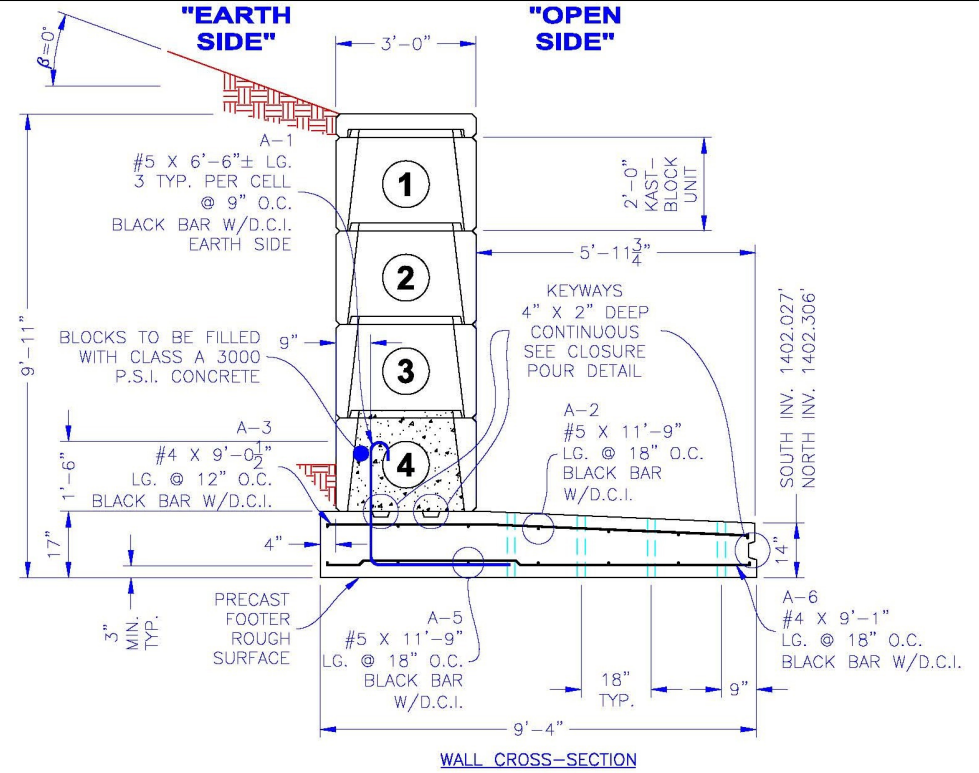


NORTH



SOUTH

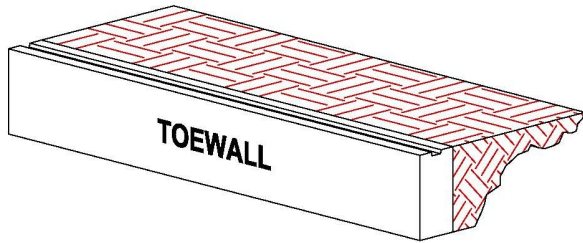


SCALE: 1/8" = 1"

GROUP A	
NO. OF KAST-BLOCK = 4	4
MAX. HT. = 9'-11"	
FRICTION ANGLE ϕ (phi) = 34°	
SOIL ALLOWABLE BEARING = 5000 PSF	
SOIL COEFFICIENT OF FRICTION = 0.50	
SAFETY FACTORS: 1.5 MIN. FOR SLIDING	
2.0 MIN. FOR OVERTURNING	

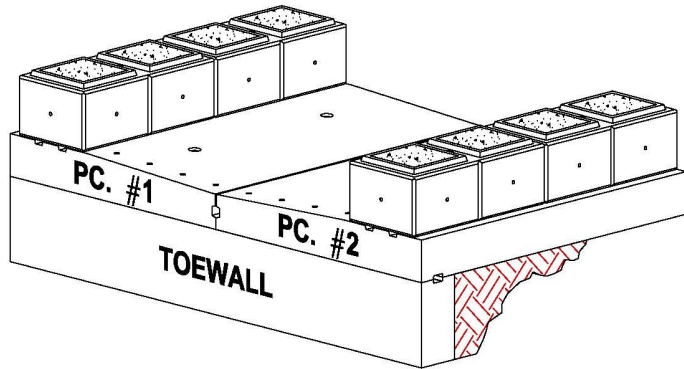
<input type="checkbox"/> Approved <input type="checkbox"/> Approved As Noted	2	8/1/07	ADD 2ND KEYWAY MIRROR EARTH HATCH																											
	1	7/23/07	CHNG. FOOTER DIMS ADD ELEVATION VIEW & FIGS. & CLSR. POUR																											
<table border="1"> <thead> <tr> <th>REV. NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td colspan="3">PREPARED FOR:</td> </tr> <tr> <td colspan="3">VILLAGE OF ANGELICA 21 PEACOCK HILL ROAD ANGELICA, NEW YORK 14709</td> </tr> <tr> <td colspan="3">ACCT # 66202</td> </tr> <tr> <td>DATE: 7/12/07</td> <td>SHEET TITLE: KAST-BLOCK OUTLET END CROSS-SECTION, ELE- VATION & GROUP CHART</td> <td>DRAWN BY: DAR</td> </tr> <tr> <td>SCALE: 3/8" = 1'</td> <td></td> <td>CR'D BY: DJL</td> </tr> <tr> <td colspan="3">PROJECT: WEST MAIN STREET CULVERT REPLACEMENT OVER WICKHAM CREEK KAST-BLOCK END SECTION</td> </tr> <tr> <td colspan="2">KISTNER PROJECT NO: 07KCP037</td> <td>SHT NO: 1 OF 4</td> </tr> <tr> <td colspan="2">KISTNER DWG NO: 07KCP037-KB-01</td> <td></td> </tr> </tbody> </table>				REV. NO.	DATE	DESCRIPTION	PREPARED FOR:			VILLAGE OF ANGELICA 21 PEACOCK HILL ROAD ANGELICA, NEW YORK 14709			ACCT # 66202			DATE: 7/12/07	SHEET TITLE: KAST-BLOCK OUTLET END CROSS-SECTION, ELE- VATION & GROUP CHART	DRAWN BY: DAR	SCALE: 3/8" = 1'		CR'D BY: DJL	PROJECT: WEST MAIN STREET CULVERT REPLACEMENT OVER WICKHAM CREEK KAST-BLOCK END SECTION			KISTNER PROJECT NO: 07KCP037		SHT NO: 1 OF 4	KISTNER DWG NO: 07KCP037-KB-01		
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KISTNER DWG NO: 07KCP037-KB-01																														
<p>By: _____ DATE _____</p> <p 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></p>																														

1



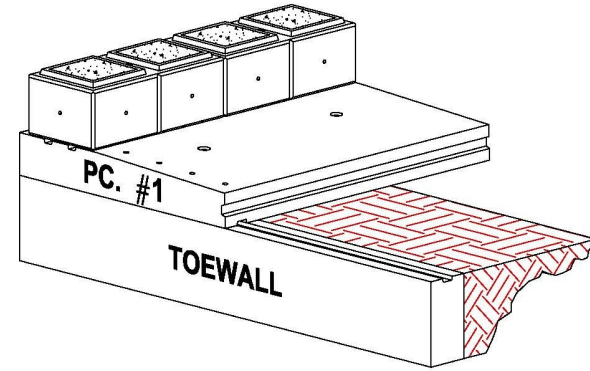
SET TOEWALL & BACKFILL FLUSH.

3



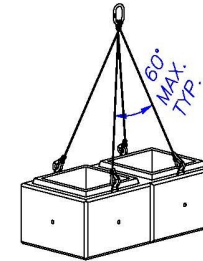
SET PC. 2 OF WINGWALL ASSEMBLY
DRILL & GROUT TOEWALL & KEYWAY BETWEEN SECTIONS.

2




SET PC. 1 OF WINGWALL ASSEMBLY.

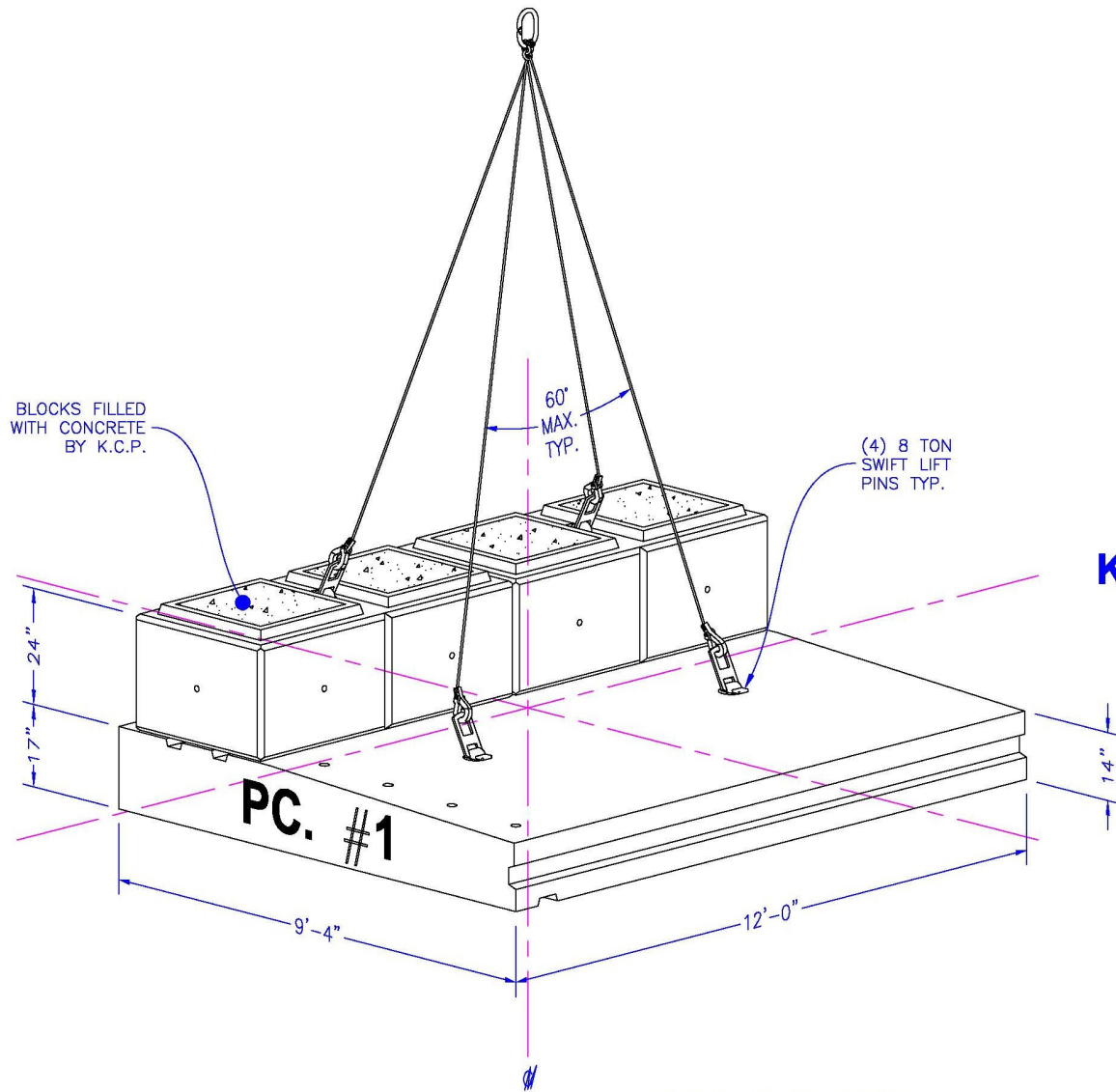
4



SET BALANCE OF KAST-BLOCK WINGWALL BLOCKS
PER DETAIL. FILL & COMPACT BALANCE OF
WINGWALL BLOCKS WITH #1A STONE UP TO ROW 2.

KAST-BLOCK® WINGWALL SYSTEM PRODUCT CYCLE INSTALLATION PROCEDURE DETAILS

<input type="checkbox"/> Approved <input type="checkbox"/> Approved As Noted	REV. NO. DATE DESCRIPTION PREPARED FOR: VILLAGE OF ANGELICA 21 PEACOCK HILL ROAD ANGELICA, NEW YORK 14709 ACCT # 66202
	DATE: 7/23/07 SHEET TITLE: KAST-BLOCK WINGWALL SYSTEM PRODUCT CYCLE INSTALLATION DRAWN BY: DAR SCALE: NONE PROJECT: WEST MAIN STREET CULVERT REPLACEMENT OVER WICKHAM CREEK KAST-BLOCK END SECTION CR'D BY: DJL
By: _____ DATE: _____	PROJECT NO: 07KCP037 SHEET NO: 2 OF 4 KISTNER DWG. NO: 07KCP037-KB-02  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>



BLOCKS FILLED WITH CONCRETE BY K.C.P.

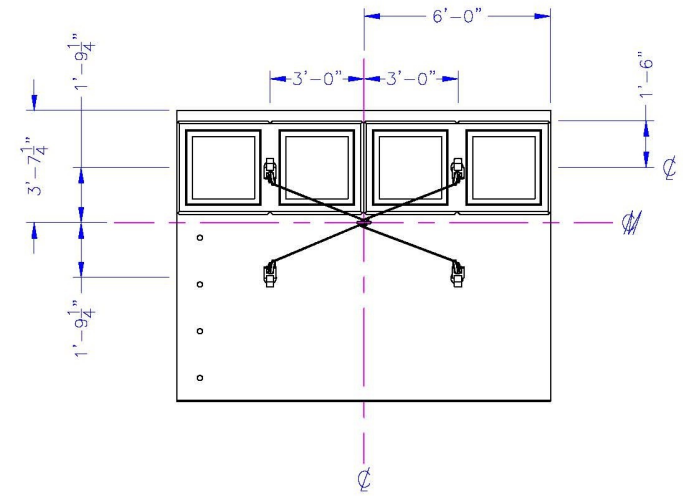
60" MAX. TYP.

(4) 8 TON SWIFT LIFT PINS TYP.

PC. #1

WINGWALL ASSEMBLY

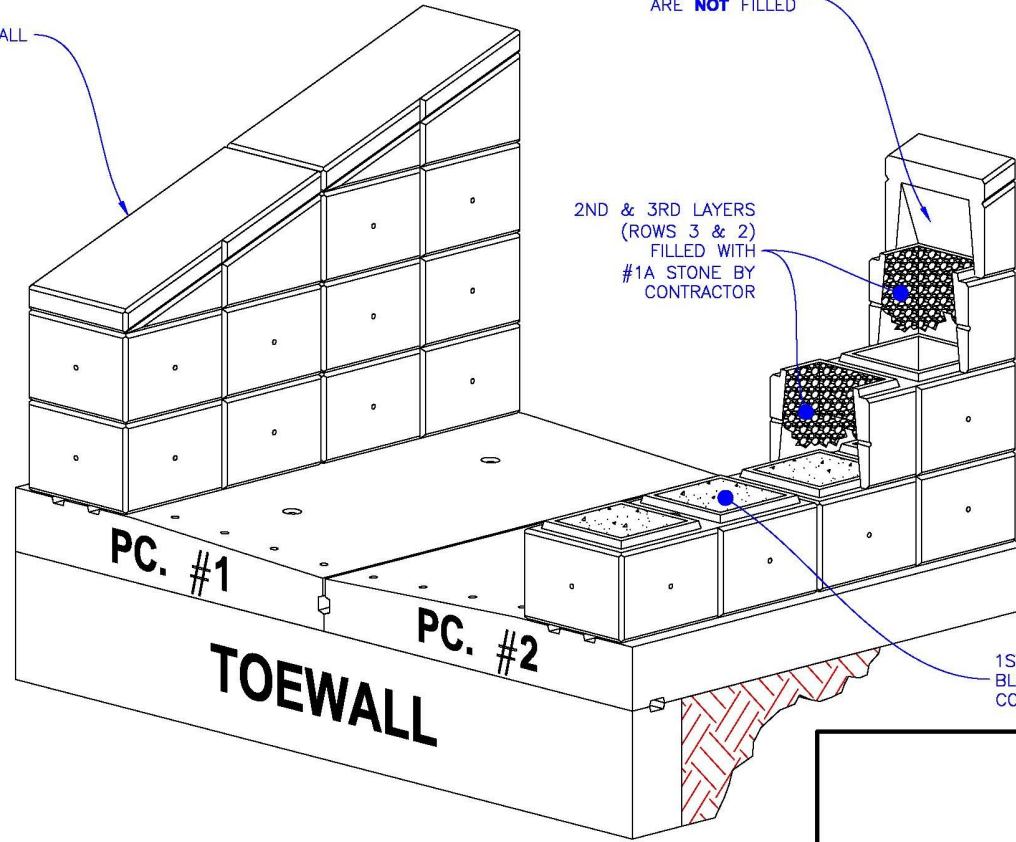
- 2 FILL 3/4 = 3,000# = 6,000#
- 2 FULL KAST-BLOCKS 2,500# = 5,000#
- 1 FOOTER SLAB 20,733#
- 31,733# = 15.8 TONS**



**KAST-BLOCK® WINGWALL SYSTEM
PRODUCT CYCLE INSTALLATION
PROCEDURE DETAILS**

<input type="checkbox"/> Approved <input type="checkbox"/> Approved As Noted	SHEET TITLE: KAST-BLOCK WINGWALL SYSTEM PRODUCT CYCLE INSTALLATION PROCEDURE DETAILS 2		DRAWN BY: DAR
	PROJECT: WEST MAIN STREET CULVERT REPLACEMENT OVER WICKHAM CREEK KAST-BLOCK END SECTION		CK'D BY: DJL
PROJECT NO: 07KCP037		SHEET NO.: 3 OF 4	
PROJECT NO.: 07KCP037		KISTNER DWG. NO.: 07KCP037-KB-03	
By: _____ DATE _____		<p>KISTNER CONCRETE PRODUCTS, INC. 5550 HINMAN ROAD LOCKPORT, NEW YORK 14094 PHONE 716-434-6157 PROPRIETARY INFORMATION ALL RIGHTS OF KISTNER CONCRETE PRODUCTS, INC.</p>	

COMPLETE WINGWALL



NOTE: SLOPED BLOCKS ARE **NOT** FILLED

2ND & 3RD LAYERS
(ROWS 3 & 2)
FILLED WITH
#1A STONE BY
CONTRACTOR

1ST LAYER (ROW 4) OF
BLOCKS FILLED WITH
CONCRETE BY K.C.P.

PC. #1

PC. #2

TOEWALL

KAST-BLOCK® WINGWALL SYSTEM FINISHED WINGWALL ASSEMBLY

NOTE: SEE SHEET 1 OF 4 FOR WINGWALL CROSS-SECTION & ROW NUMBERING.

REV. NO.	DATE	DESCRIPTION
PREPARED FOR: VILLAGE OF ANGELICA 21 PEACOCK HILL ROAD ANGELICA, NEW YORK 14709 ACCT # 66202		
DATE: 7/23/07	SHEET TITLE: KAST-BLOCK WINGWALL SYSTEM FINISHED WINGWALL ASSEMBLY	DRAWN BY: DAR
SCALE: NONE		CHECKED BY: DJL
PROJECT: WEST MAIN STREET CULVERT REPLACEMENT OVER WICKHAM CREEK KAST-BLOCK END SECTION		
KISTNER PROJECT NO.: 07KCP037		SHT. NO.: 4 OF 4
KISTNER DWG. NO.: 07KCP037-KB-04		
By: _____		DATE: _____
<input type="checkbox"/> Approved <input type="checkbox"/> Approved As Noted		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>