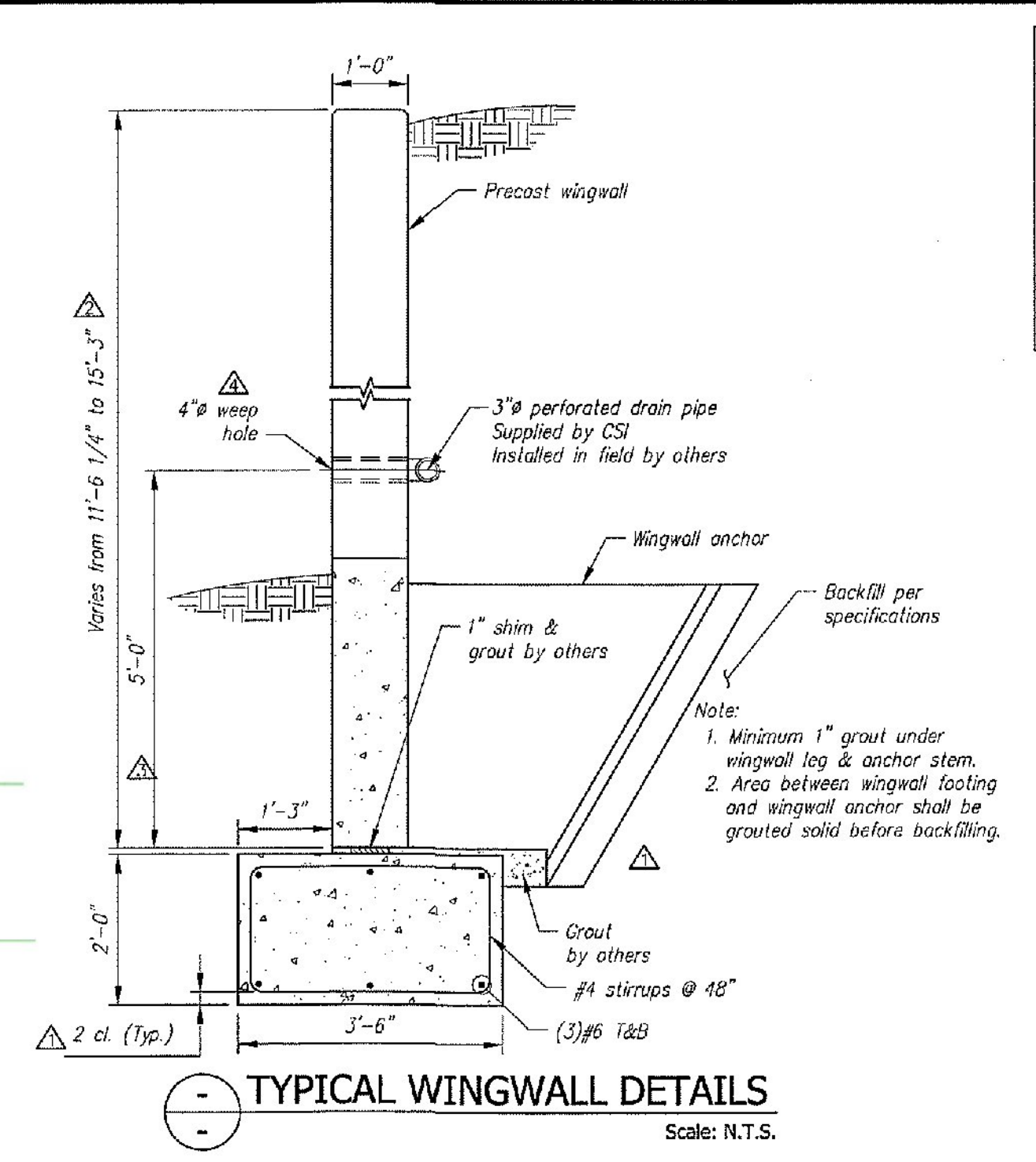


WINGWALL GENERAL NOTES:

- Reference standard: AASHTO LRFD Specifications
- Design Parameters:
 - Normal Bearing Resistance: 10 ksf (Footing width > 6 ft.)
 - Earth Cover: 1.0 ft.
 - Concrete: Design strength $f'_c = 5000$ psi, Unit weight = 150 pcf
 - Reinforcing: Z-BAR(rebar), OR 60(VIAOT Level II), Unit weight = 125 pcf
 - Soil: Minimum lateral pressure coefficient .25, Maximum lateral pressure coefficient .50
- Cover to reinforcing: 2" min.
- The wingwalls have been designed for general site conditions. The project engineer shall be responsible for the structure's suitability to the existing site conditions and for the hydraulic evaluation, including scour and confirmation of soil conditions.
- Prior to construction, contractor must verify all elevations shown through the engineer.

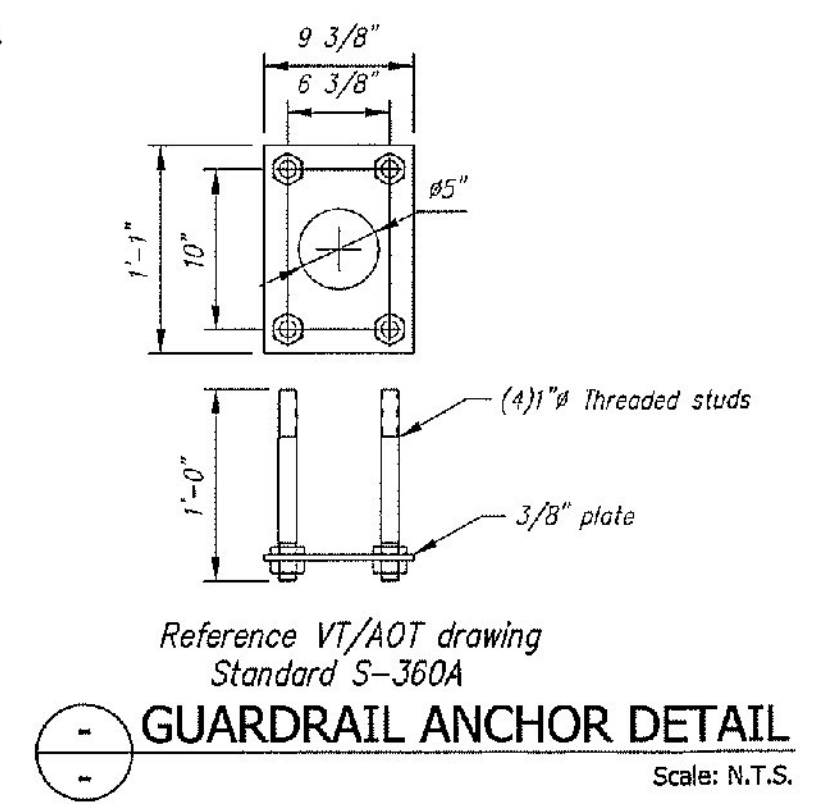
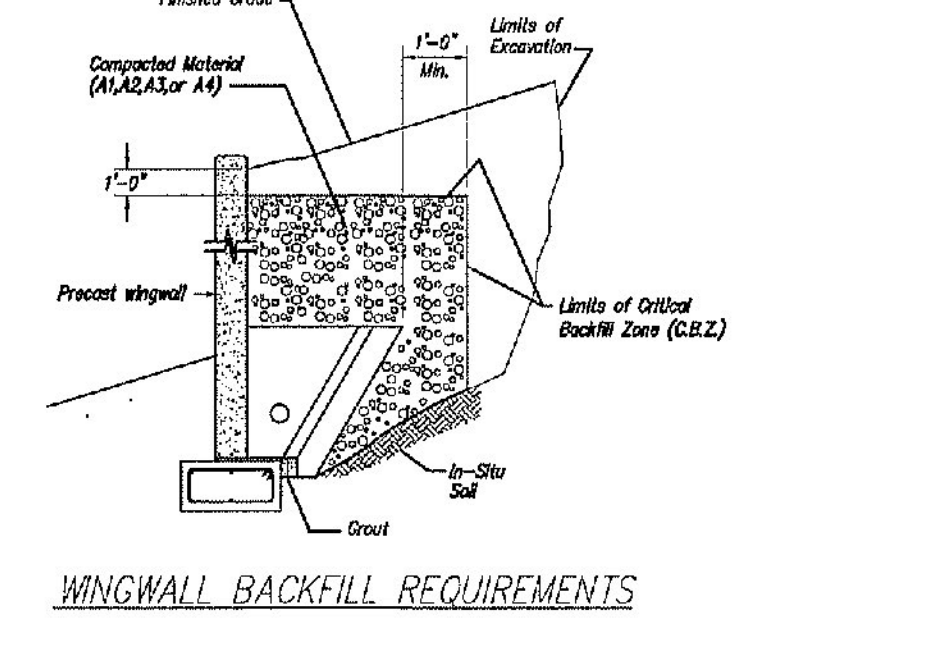
Vermont Agency of Transportation
RECEIVED
CK'D BY FDB OK'D BY HIS
June 29, 2015
RESUBMIT No Approved
BY Carolyn Carlson DATE 06/29/15



Group Classification	A-1		A-3		A-2	
	A-1-a	A-1-b	A-3-a	A-3-b	A-2-a	A-2-b
Sieve Analysis, Percent Passing						
No. 10	50 max.	50 max.	51 min.	35 max.	35 max.	35 max.
No. 40	30 max.	30 max.	10 min.	10 max.	10 max.	10 max.
No. 200	15 max.	15 max.	10 max.	10 max.	10 max.	10 max.
Characteristics of Fraction Passing No. 40						
Liquid Limit	8 max.	8 max.	40 max.	41 min.	40 max.	41 min.
Plasticity Index	6 max.	6 max.	10 max.	10 max.	11 min.	11 min.
Usual Types of Significant Constituent Materials	Gravel & Sand	Gravel & Sand	Clay	Silty or Clayey Gravel and Sand	Sand	Excellent to Good
General Rating as Subgrade						

NOTES:

- BACKFILL OPERATIONS WITHIN THE C.B.Z. SHALL BE PERFORMED IN LIFTS OF 6" OR LESS (LOOSE DEPTH).
- MAXIMUM DRY DENSITY SHALL BE DETERMINED BY AASHTO T-99 OR OTHER APPROVED METHODS.
- BACKFILL SHALL BE COMPACTED IN LAYERS UNTIL THE DENSITY IS NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY.



ALL REINFORCING TO BE Z-BAR GR 60(VIAOT LEVEL 2)

BAR LIST

MARK	QTY.	SIZE	a	TYPE	LENGTH
b ₁	8	#5	3'-0"	3	
b ₂	4	#5	Str.	Str.	3'-2"
b ₃	4	#5	Str.	Str.	4'-3"
b ₄	11	#5	Str.	Str.	2'-2"
b ₅	2	#5	3'-8"	2	
b ₆	1	#5	4'-9"	1	
b ₇	1	#5	5'-4"	1	
b ₈	1	#5	5'-6"	1	
b ₉	1	#5	5'-8"	1	
b ₁₀	1	#5	5'-10"	1	
b ₁₁	1	#5	6'-0"	1	
b ₁₂	1	#5	6'-1"	1	
b ₁₃	1	#5	6'-3"	1	

Note: "Str." denotes straight bar. Standard clearance = 2"

PLAN

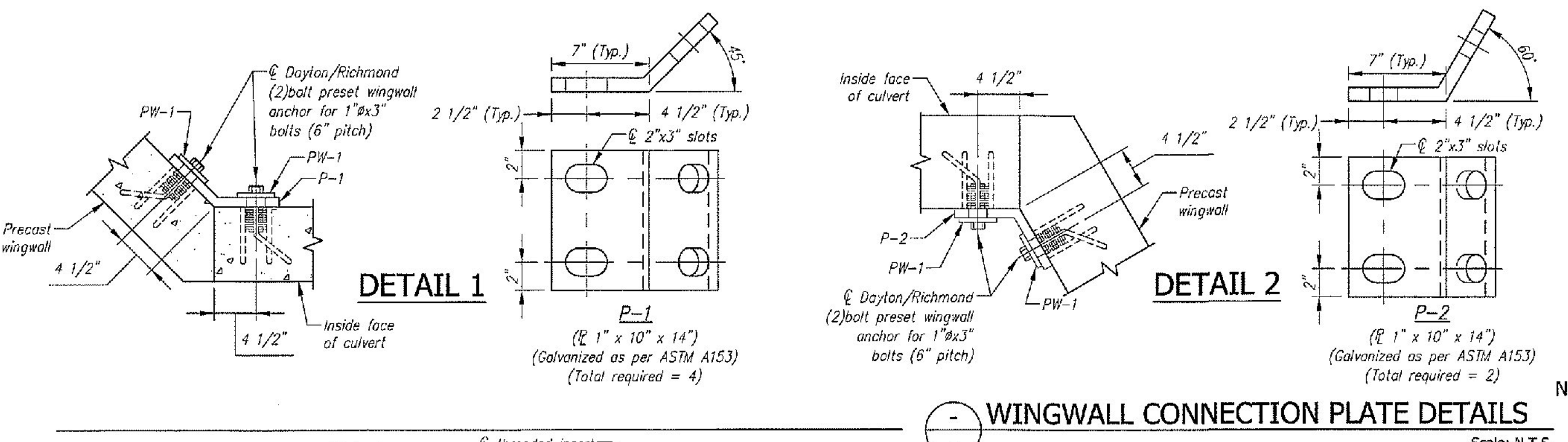
Note: Additional reinforcing required at wingwall anchors and around edges of wingwall. #5 bar E.F. around perimeter of wingwall.

SECTION

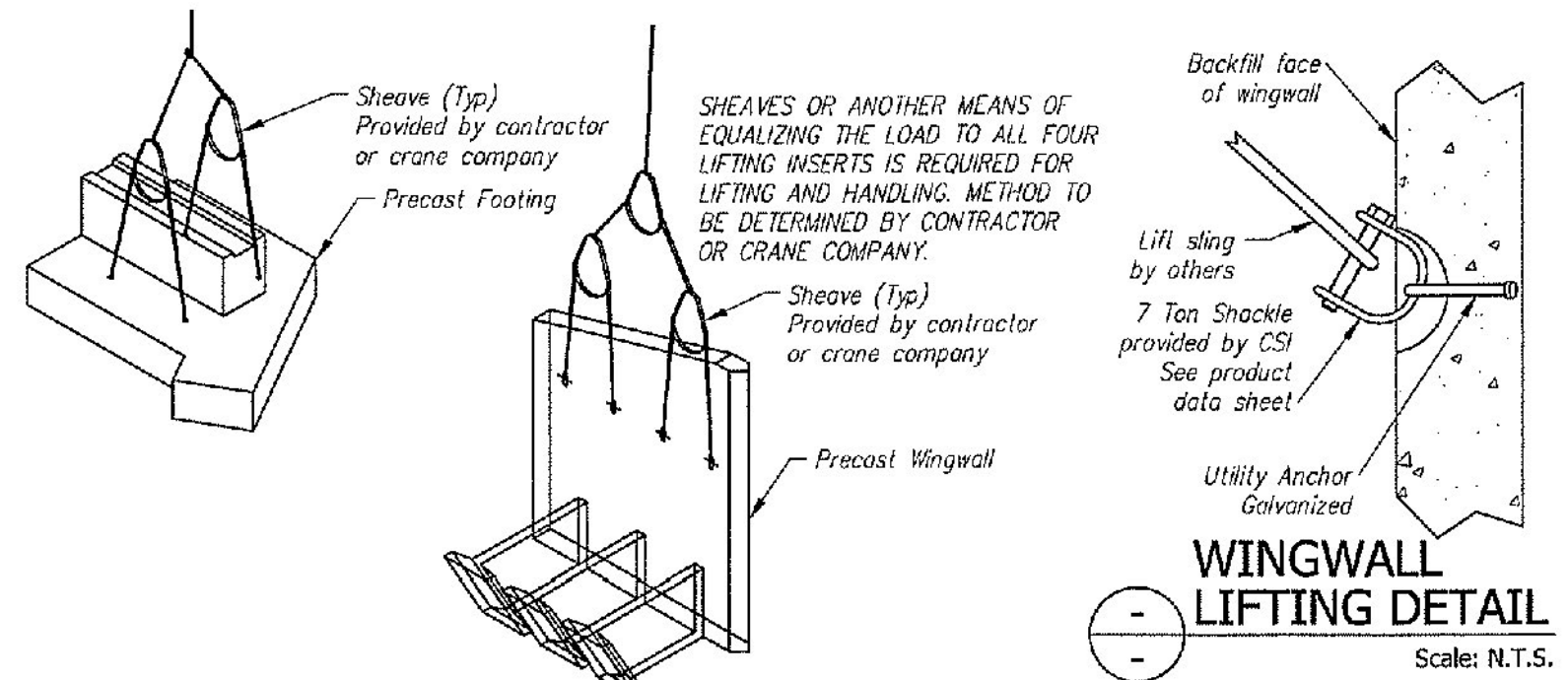
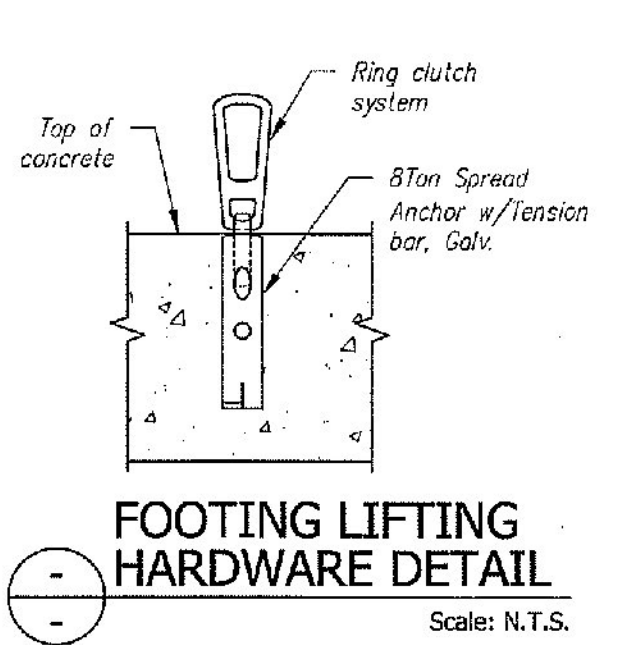
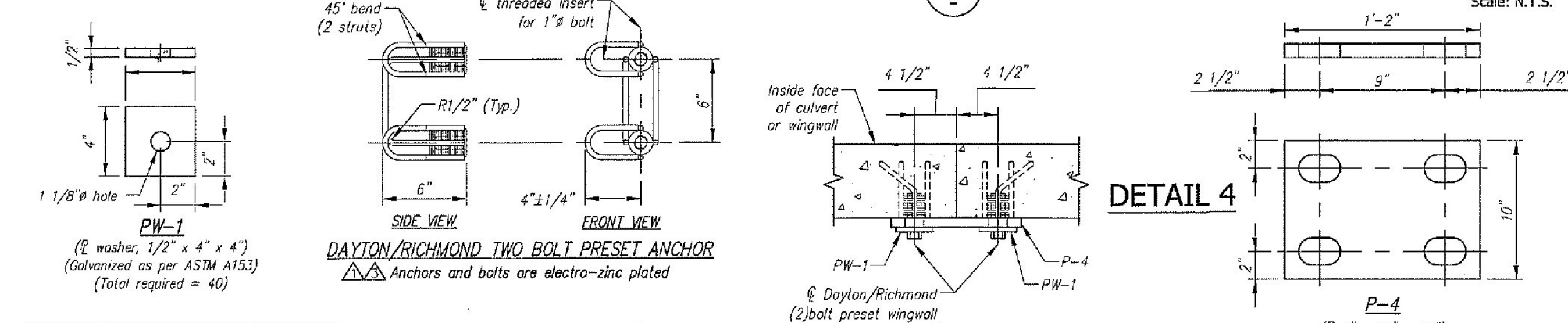
Note: (6) Add'l #7 bars at anchor.

PRECAST ANCHOR TYPE E

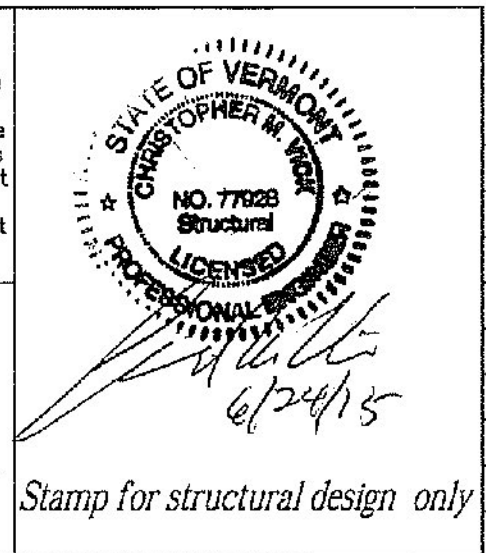
Note: (9) b₂ bars spaced as shown.



Note: All wingwall joints are covered with 2' wide strip of barrier membrane by others. See note, Sheet 1, Plan View.



Contractor is to verify that all information shown on drawings has been thoroughly checked, complies with the contract documents and is adequate to meet the field conditions. Some dimensions and details may differ slightly from contract drawings to accommodate the manufacturing or design process. Approval of this drawing indicates that any deviation from the contract documents has been reviewed and found to be acceptable. Production will not commence until receipt of signed, approved shop drawings.



Rev.	Date	DESCRIPTION	By
7			
6			
5			
4	17JUN2015	REVISED PER CUSTOMER REVIEW	BSS
3	04JUN2015	REVISED PER CUSTOMER REVIEW	RY
2	28MAY2015	EL A-A & B-B: 437.17 WAS 437.13, EXTENDED WINGWALLS EVEN WITH HEADWALL	RY
1	14MAY2015	REVISED PER CUSTOMER REVIEW, SEE SHEET 1	RY

This drawing is based upon information provided from the following documents and/or sources:

Engineer: STATE OF VT/AOT PROGRAM DEVELOPMENT
Project No: ---
Drawings: STATE OF VT/AOT PROPOSED IMPROVEMENT BRIDGE PROJECT, TOWN OF RICHFORD SHEETS 1,2,4,22,23,24 OF 36
Specifications: STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011
Other Sources: ---

Concrete Systems Inc.
9 Commercial St., Hudson, NH, 03051
Phone 603-889-4165
Fax 603-889-2417

STATE AGENCY
VTTrans

Drawn by: R. YEAGER
Checked by: B. KOLAWOLE
Approved by: C. VICK

Date: 31 MAR 2015
Date: 17 JUN 2015

G.W. TATRO CONSTRUCTION, INC.
VT/AOT BRIDGE REPLACEMENT— ROAD IMPROVEMENT RICHFORD, VT.

26' SPAN X 10' RISE 3-SIDED CULVERT

Drawing No: C22312-101B

Quantity: 1
Project No: BRFO30229

REV 4
SHEET 2 OF 2