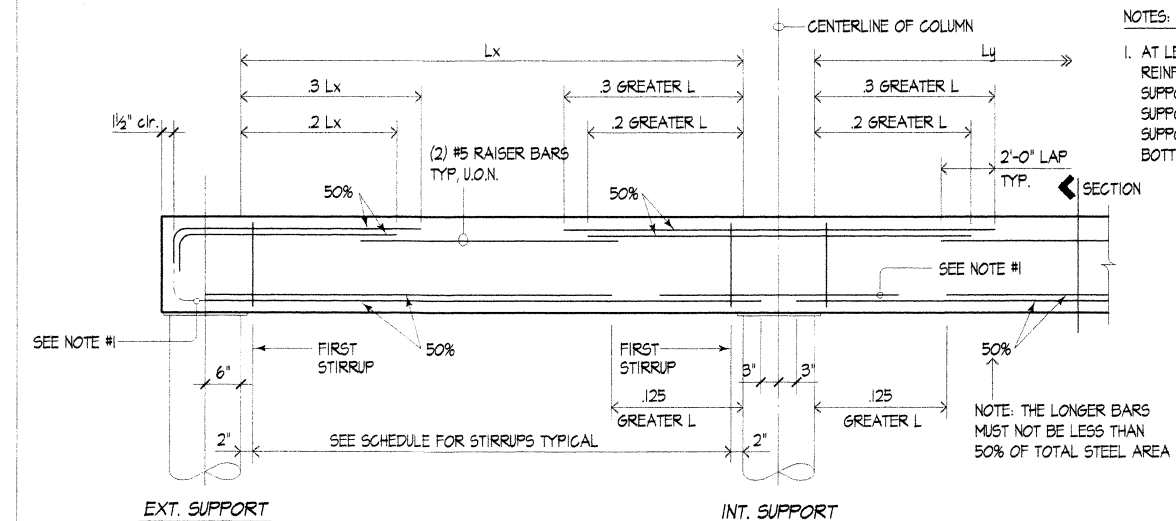


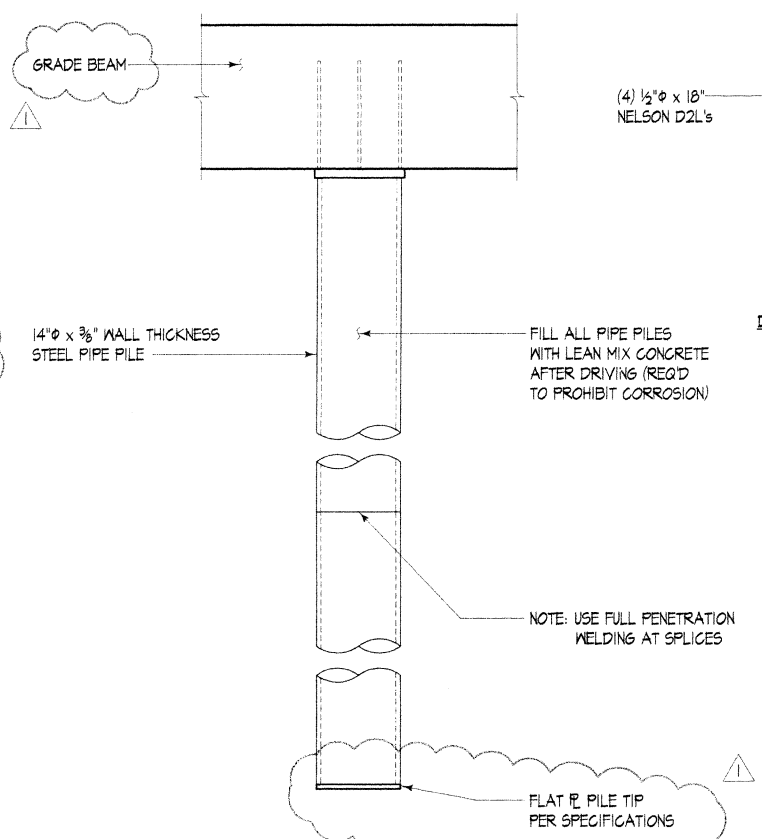
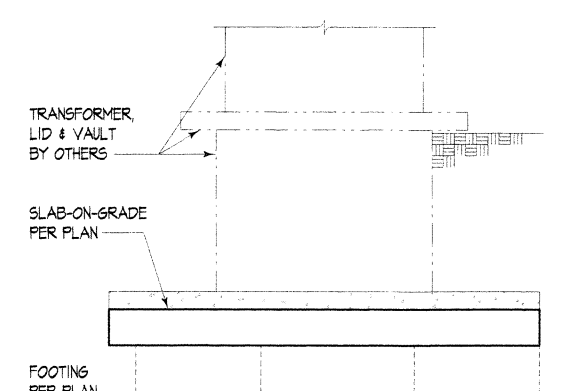
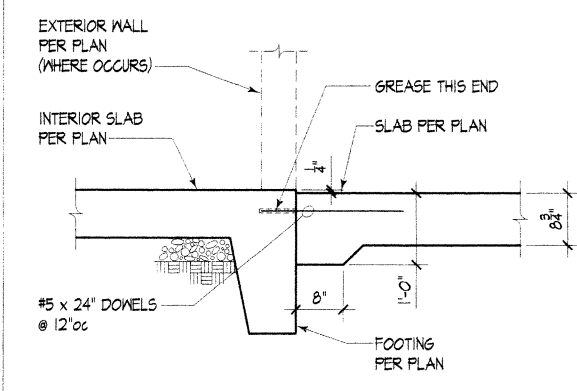
KEY:
 L = CLEAR SPAN
 Lx = CLEAR SPAN
 Ly = CLEAR SPAN
 Ln = Lx or Ly

EXT. SUPPORT INT. SUPPORT Typical Slab Section 4



NOTES:
 1. AT LEAST 1/4 OF THE SPECIFIED BOTTOM REINFORCING SHALL BE CONTINUOUS THROUGH SUPPORT OR SHALL BE LAP SPICED THROUGH SUPPORT WITH CLASS 'A' SPLICES. AT EXTERIOR SUPPORTS, TERMINATE 1/4 OF SPECIFIED BOTTOM REINFORCING IN STANDARD HOOK.
 2. EXTEND BOTTOM BARS 6" OVER SUPPORTS, TYP.
 3. EXTEND TOP BARS TO FAR FACE OF SUPPORT & USE STANDARD HOOKS.

SECTION Typical Grade Beam Elevation 10



NOTE: STEEL PILE, PLATE AND D2L'S MUST NOT BE IN CONTACT WITH ANY REINFORCING STEEL

14" Steel Pipe Pile 22

MINIMUM STRAIGHT DEVELOPMENT LENGTH (l_d)

BAR SIZE	$f_c = 3000$ PSI		$f_c = 4000$ TO 5000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	16"	15"	14"	12"
#4	22"	17"	19"	15"
#5	27"	21"	23"	18"
#6	35"	27"	31"	24"
#7	48"	37"	42"	32"
#8	63"	44"	55"	42"
#9	80"	62"	64"	53"
#10	102"	78"	88"	68"

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.
 IF CLEAR CONCRETE COVER IS LESS THAN 2x THE DIAMETER OF THE BAR OR THE CENTER-TO-CENTER SPACING IS LESS THAN (4) BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%.

MINIMUM LAP SPLICE LENGTHS (l_s) (CLASS B)

BAR SIZE	$f_c = 3000$ PSI		$f_c = 4000$ TO 5000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	21"	16"	18"	16"
#4	28"	22"	24"	18"
#5	35"	27"	30"	23"
#6	46"	35"	40"	31"
#7	63"	48"	54"	42"
#8	82"	63"	71"	55"
#9	104"	80"	90"	64"
#10	132"	102"	114"	88"

TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONCRETE CAST BELOW THEM.
 IF CLEAR CONCRETE COVER IS LESS THAN 2x THE DIAMETER OF THE BAR OR THE CENTER-TO-CENTER SPACING IS LESS THAN (4) BAR DIAMETERS, THEN VALUES SHALL BE INCREASED BY 43%.

MINIMUM EMBEDMENT LENGTHS (l_{dh}) FOR STANDARD END HOOKS

BAR SIZE	$f_c = 3000$ PSI		$f_c = 4000$ TO 5000 PSI	
	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	6"	6"	6"	6"
#4	8"	7"	8"	7"
#5	10"	9"	10"	9"
#6	12"	10"	12"	10"
#7	14"	12"	14"	12"
#8	16"	14"	16"	14"
#9	18"	15"	18"	15"
#10	20"	17"	20"	17"

SIDE COVER MUST BE EQUAL TO OR GREATER THAN 2x.
 END COVER FOR 90° HOOKS MUST BE EQUAL TO OR GREATER THAN 2".

MINIMUM STRAIGHT DEVELOPMENT LENGTH (l_d) FOR BARS IN COMPRESSION

BAR SIZE	$f_c \geq 3000$ PSI	
	TOP BARS	OTHER BARS
#3	9"	9"
#4	11"	11"
#5	14"	14"
#6	17"	17"
#7	20"	20"
#8	22"	22"
#9	25"	25"
#10	28"	28"

MINIMUM LAP SPLICE LENGTH (l_s) FOR BARS IN COMPRESSION

BAR SIZE	$f_c \geq 3000$ PSI	
	TOP BARS	OTHER BARS
#3	12"	12"
#4	15"	15"
#5	19"	19"
#6	23"	23"
#7	26"	26"
#8	30"	30"
#9	34"	34"
#10	39"	39"

Reinforcing Splice & Development Length Schedule 26

BEAM MARK	WIDTH	DEPTH	BEAM REINFORCING SCHEDULE		REMARKS or DETAIL REF.
			EXTERIOR SUPPORT	INTERIOR SUPPORT	
GB-1	24"	24"	(4)#5 T (11)#4 @ 9"oc (16)#4 @ 16"oc	(4)#5 T (5)#5 B (12)#4 @ 9"oc	10/53, TYP. 24/53 BEND TOP BARS @ STEP @ GRID S21
GB-2	24"	24"	(4)#5 T (12)#4 @ 10"oc (16)#4 @ 16"oc	(4)#5 T (5)#5 B (11)#4 @ 10"oc	
GB-3	12"	24"	(2)#5 T (3)#5 B (3)#4 @ 10"oc (24)#4 @ 24"oc	(2)#5 T (3)#5 B (3)#4 @ 10"oc	30/53,1
GB-4	12"	24"	(2)#5 T (3)#5 B (3)#4 @ 10"oc (24)#4 @ 24"oc	(2)#5 T (3)#5 B (3)#4 @ 10"oc	EXTEND WHERE GRADE BEAM ADJACENT
GB-5	24"	24"	(4)#5 T (9)#5 B (16)#4 @ 10"oc (16)#4 @ 16"oc	(4)#5 T (9)#5 B (16)#4 @ 16"oc (16)#4 @ 10"oc	
GB-6	24"	24"	(4)#5 T (9)#5 B (16)#4 @ 10"oc (16)#4 @ 16"oc	(4)#5 T (9)#5 B (16)#4 @ 16"oc (16)#4 @ 10"oc	
GB-7	24"	24"	(4)#5 T (9)#5 B (16)#4 @ 10"oc (16)#4 @ 16"oc	(4)#5 T (9)#5 B (16)#4 @ 16"oc (16)#4 @ 10"oc	
GB-8	12"	24"	(2)#5 T (3)#5 B (3)#4 @ 10"oc (24)#4 @ 24"oc	(2)#5 T (3)#5 B (3)#4 @ 10"oc	
GB-9	24"	24"	(4)#5 T (7)#4 @ 10"oc (16)#4 @ 16"oc (16)#4 @ 10"oc	(4)#5 T (7)#4 @ 16"oc (16)#4 @ 10"oc	
GB-10	24"	24"	(4)#5 T (7)#4 @ 10"oc (16)#4 @ 16"oc (16)#4 @ 10"oc	(4)#5 T (7)#4 @ 16"oc (16)#4 @ 10"oc	EXTEND WHERE GRADE BEAM ADJACENT
GB-11	24"	24"	(2)#5 T (7)#4 @ 10"oc (16)#4 @ 16"oc (16)#4 @ 10"oc	(3)#5 T (7)#4 @ 16"oc (16)#4 @ 10"oc	
GB-12	12"	24"	(4)#4 @ 10"oc (6)#4 @ 24"oc (6)#4 @ 10"oc	(3)#5 B (4)#4 @ 10"oc (6)#4 @ 10"oc	
GB-13	12"	24"	(2)#5 T (6)#4 @ 10"oc (6)#4 @ 24"oc (6)#4 @ 10"oc	(3)#5 B (6)#4 @ 24"oc (6)#4 @ 10"oc	
GB-14	12"	24"	(2)#5 T (6)#4 @ 10"oc (6)#4 @ 24"oc (6)#4 @ 10"oc	(3)#5 B (6)#4 @ 24"oc (6)#4 @ 10"oc	
GB-15	12"	24"	(5)#5 T (4)#4 @ 10"oc (4)#4 @ 24"oc (5)#4 @ 10"oc	(3)#5 B (4)#4 @ 10"oc (5)#4 @ 10"oc	
GB-16	12"	24"	(2)#5 T (2)#5 T (2)#5 T	(2)#5 B (2)#5 T (2)#5 T	
GB-17	12"	24"	(4)#5 T (12)#4 @ 9"oc (12)#4 @ 24"oc (12)#4 @ 9"oc	(5)#5 (2 LAYERS) (12)#4 @ 9"oc (12)#4 @ 24"oc (12)#4 @ 9"oc	15/53,1
GB-18	varies	24"	(4)#5 T (7)#4 @ 9"oc (7)#4 @ 24"oc (7)#4 @ 9"oc	(5)#5 (2 LAYERS) (7)#4 @ 9"oc (7)#4 @ 24"oc (7)#4 @ 9"oc	

Grade Beam Schedule 30

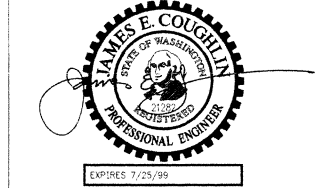


SUN HEALTHCARE SYSTEMS, INC.
 CAMPUS: PHASE ONE
 ANACORTES, WASHINGTON

DATE: 5/18/99
 CONSTRU. SET

JEC
 PROJECT MANAGER
 BTL
 PROJECT MANAGER
 CSD
 PROJECT ENGINEER
 HRB
 DESIGNER
 JEC
 CHECKER

COUGHLIN PORTER LUNDEEN
 A CONSULTING STRUCTURAL AND CIVIL ENGINEERING CORPORATION
 225 PINE STREET, SUITE 300
 SEASIDE, WA 98138
 P: 206.344.9400
 F: 206.344.9401



FOUNDATION DETAILS

98-0027-04
 MAY 18, 1999

S3.2 CONSTRUCTION SET