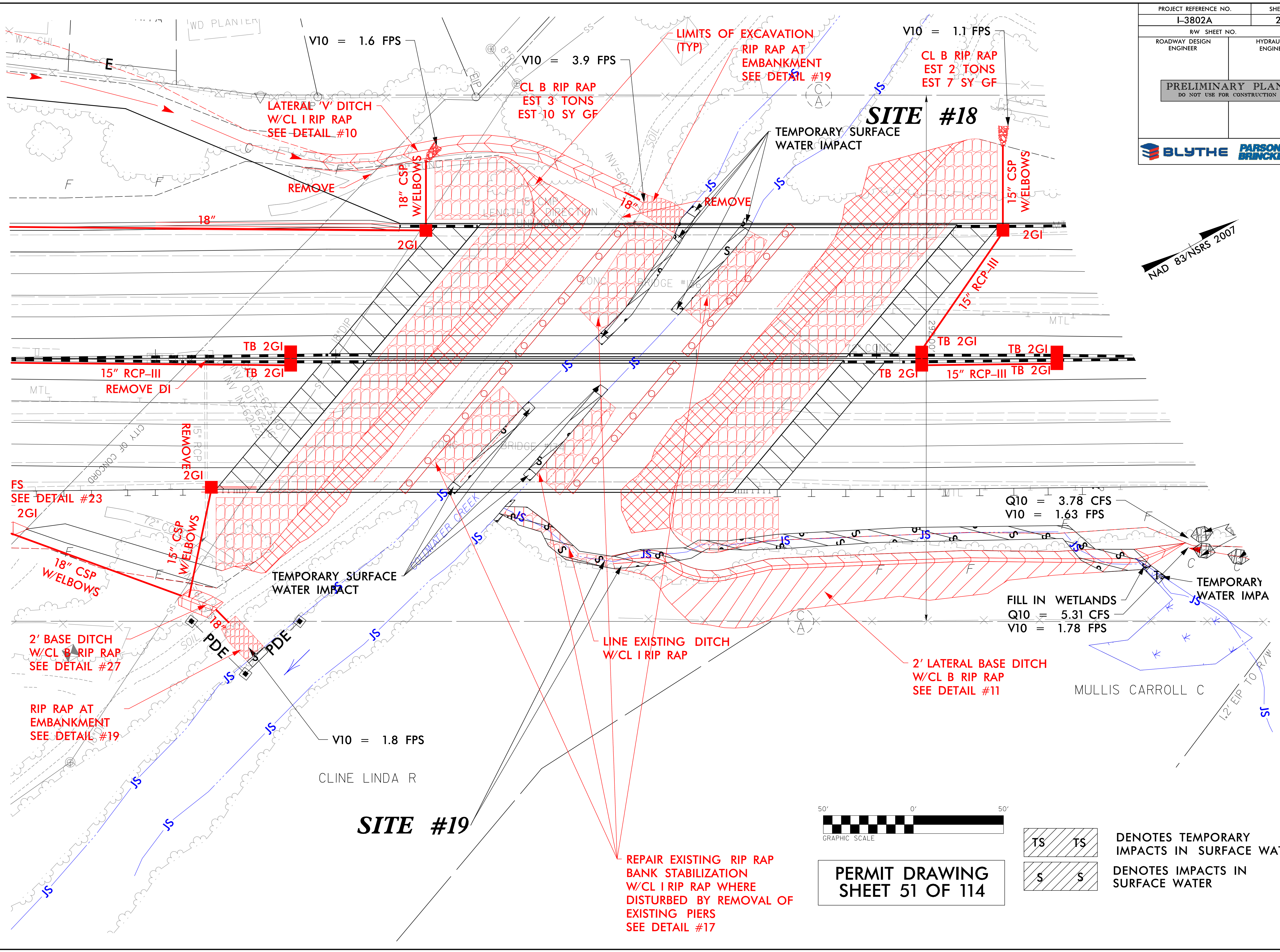


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PARSONS BRINCKERHOFF

PROJECT REFERENCE NO.		SHEET NO.	
I-3802A		22A	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
BLYTHE		PARSONS BRINCKERHOFF	



50' 0' 50'

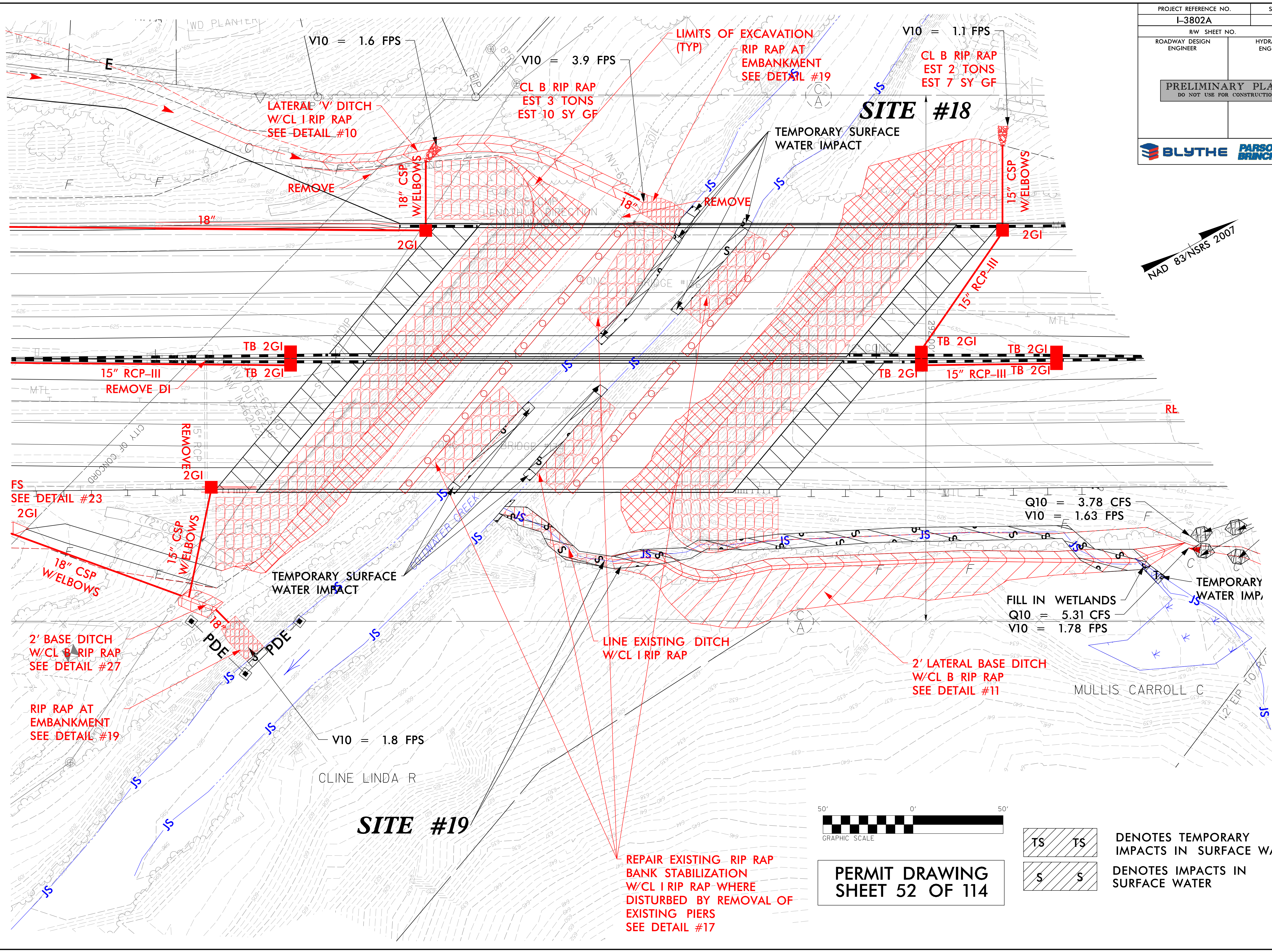
GRAPHIC SCALE

**PERMIT DRAWING
SHEET 51 OF 114**

TS	TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
S	S	

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PARSONS BRINCKERHOFF

PROJECT REFERENCE NO. I-3802A		SHEET NO. 22A	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
BLYTHE		PARSONS BRINCKERHOFF	



50' 0' 50'

GRAPHIC SCALE

**PERMIT DRAWING
SHEET 52 OF 114**

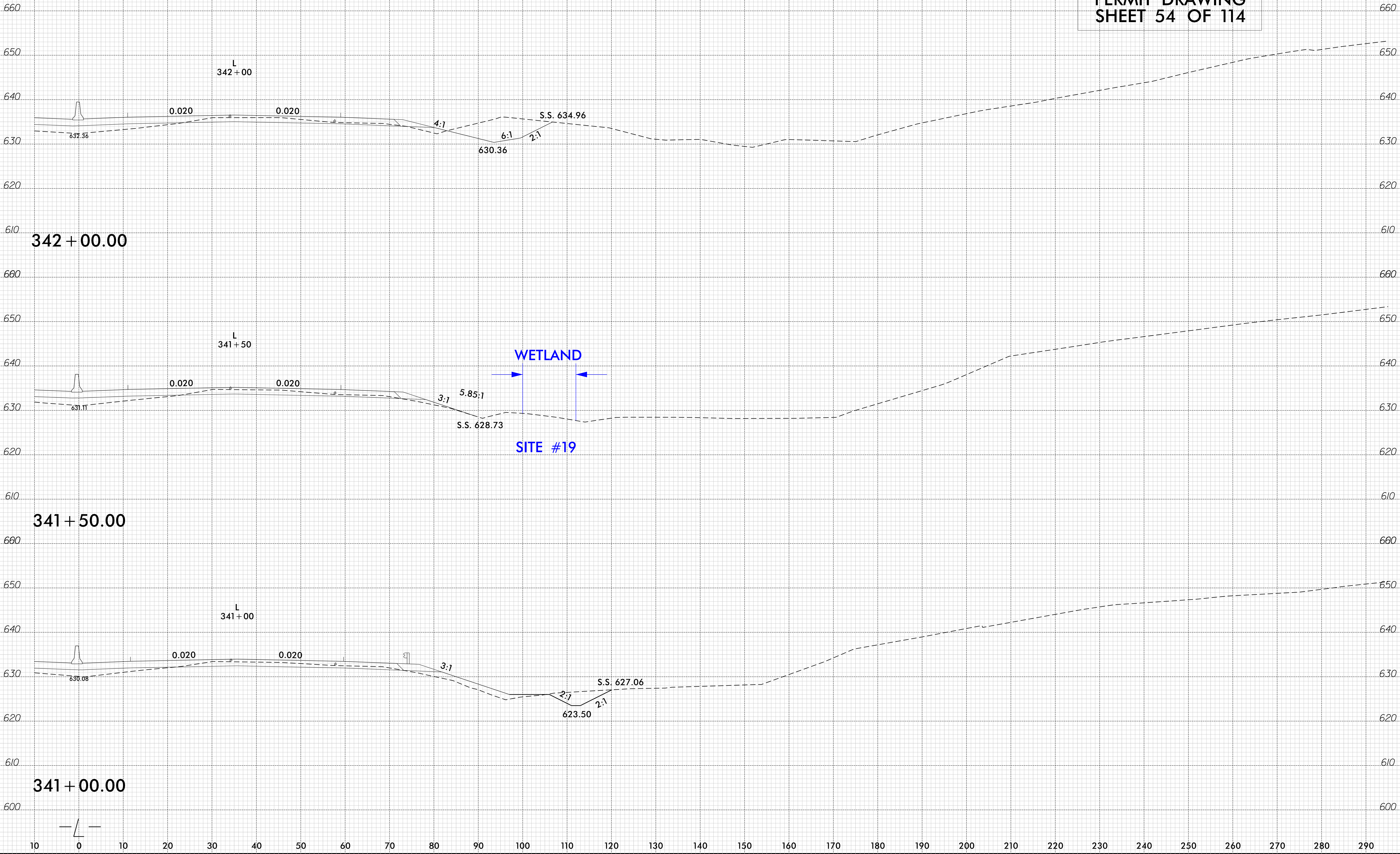
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|--|----|----|---|
| | TS | TS | DENOTES TEMPORARY
IMPACTS IN SURFACE WATER |
| | S | S | |
| | | | DENOTES IMPACTS IN
SURFACE WATER |



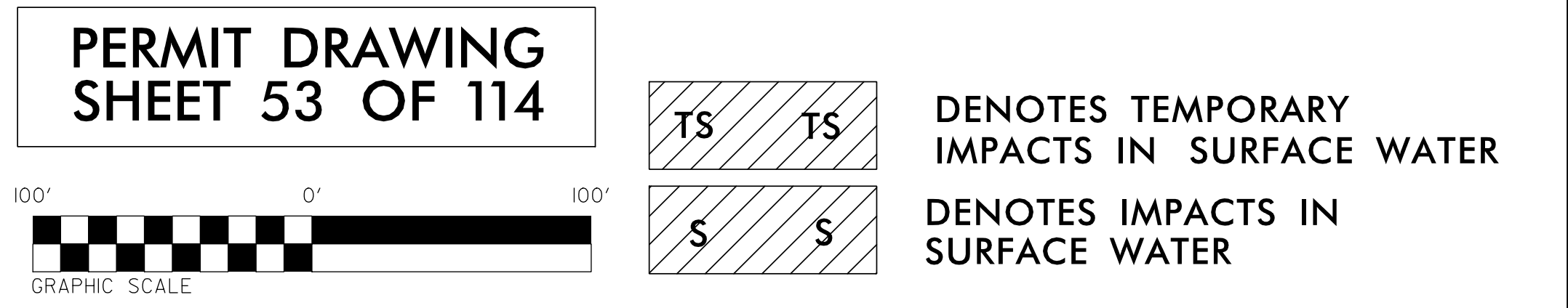
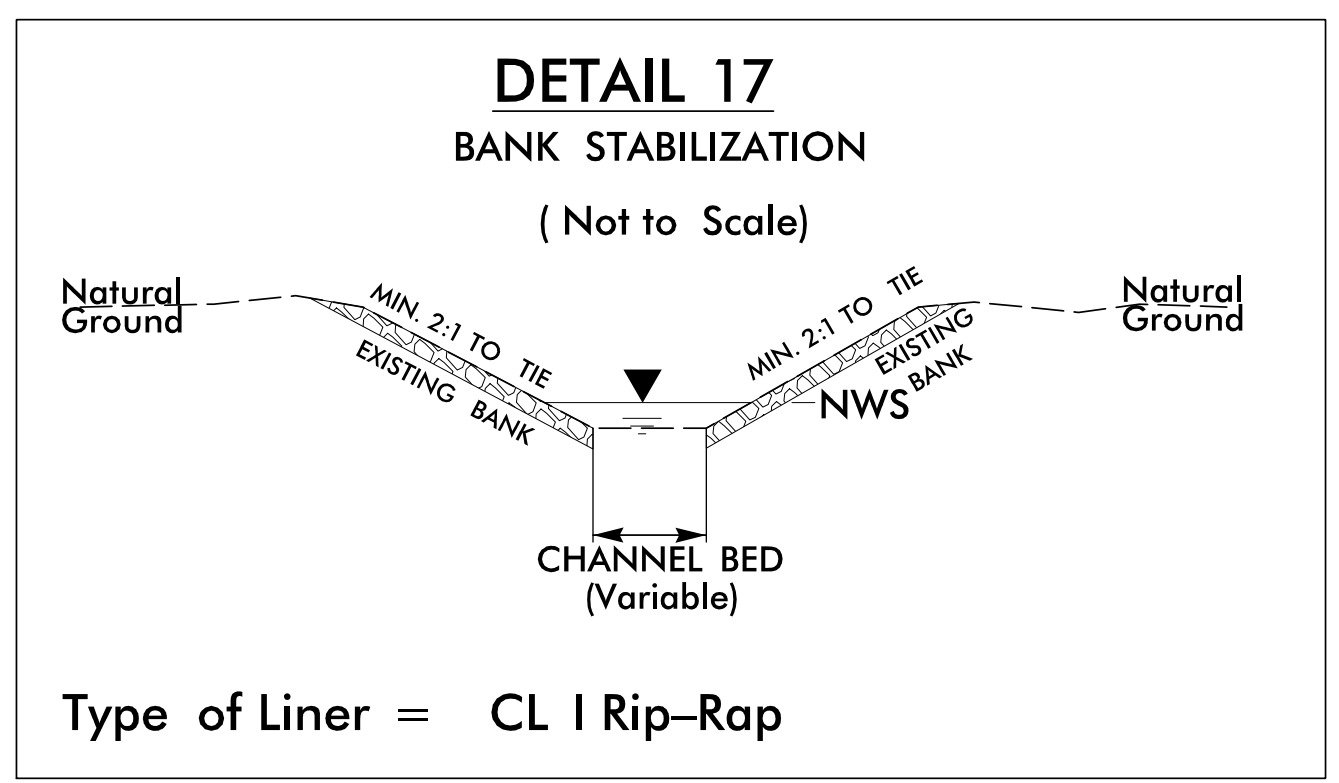
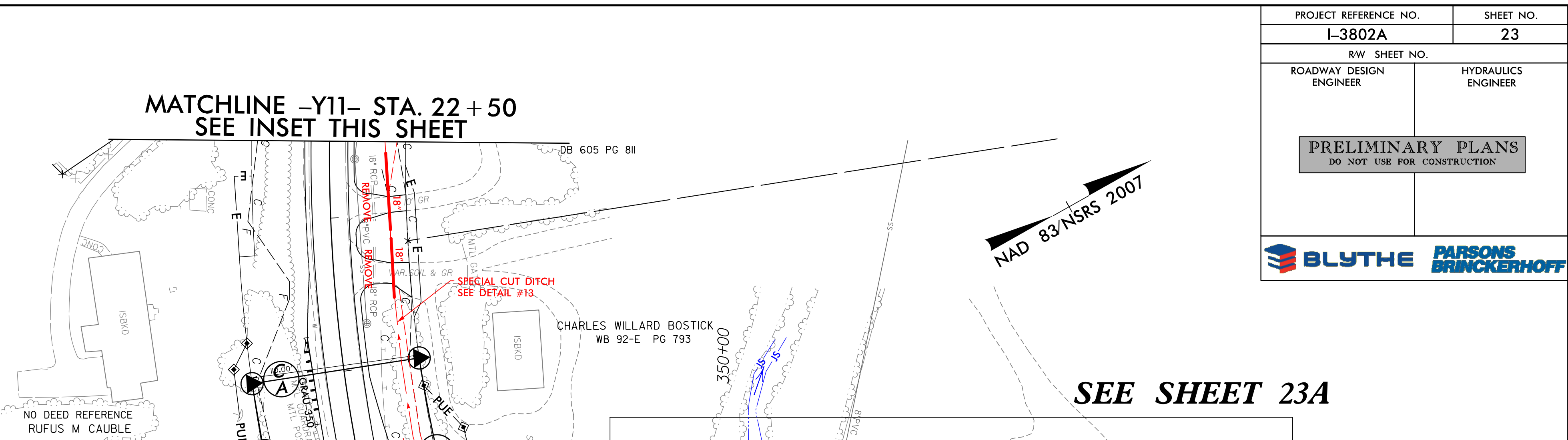
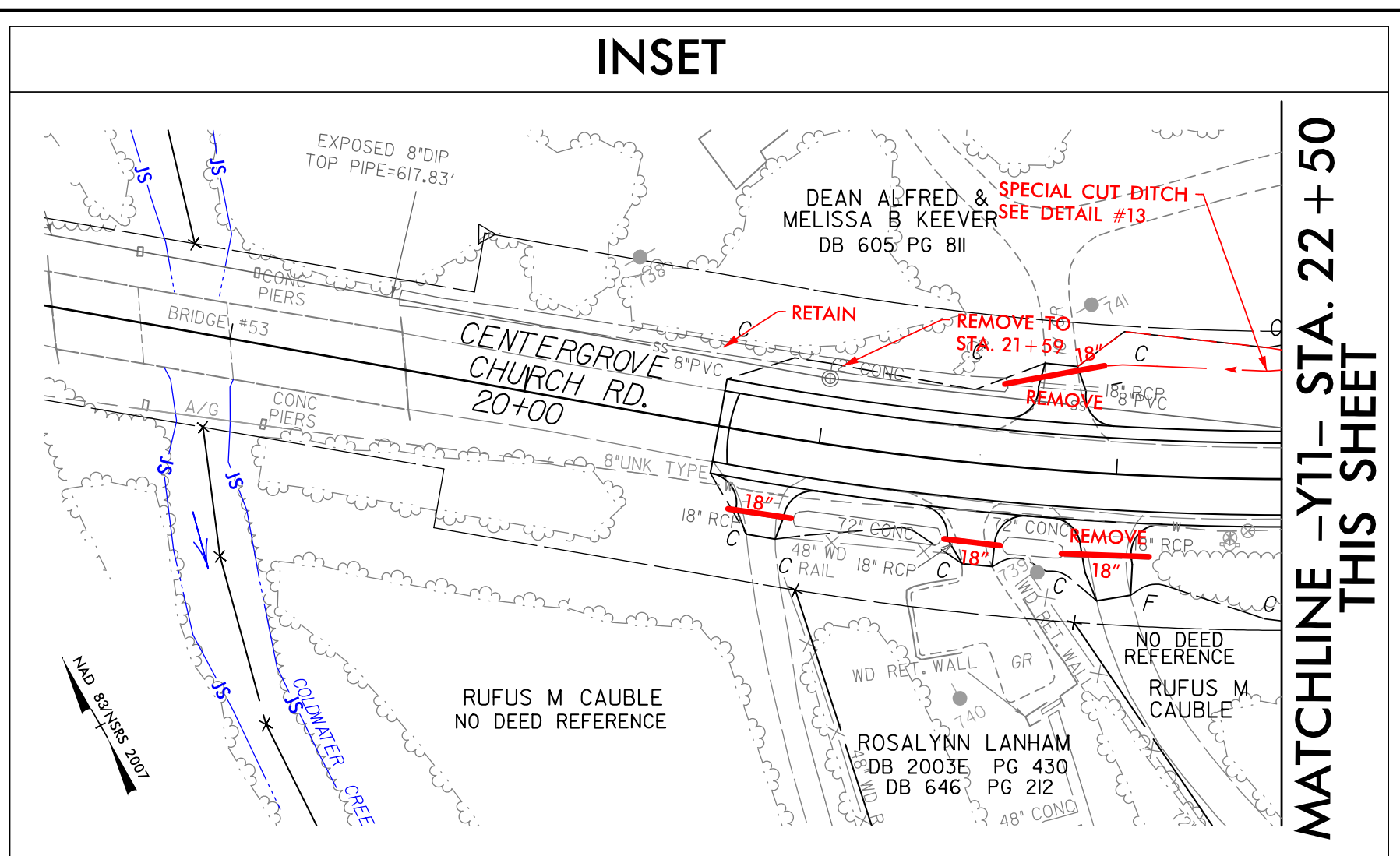
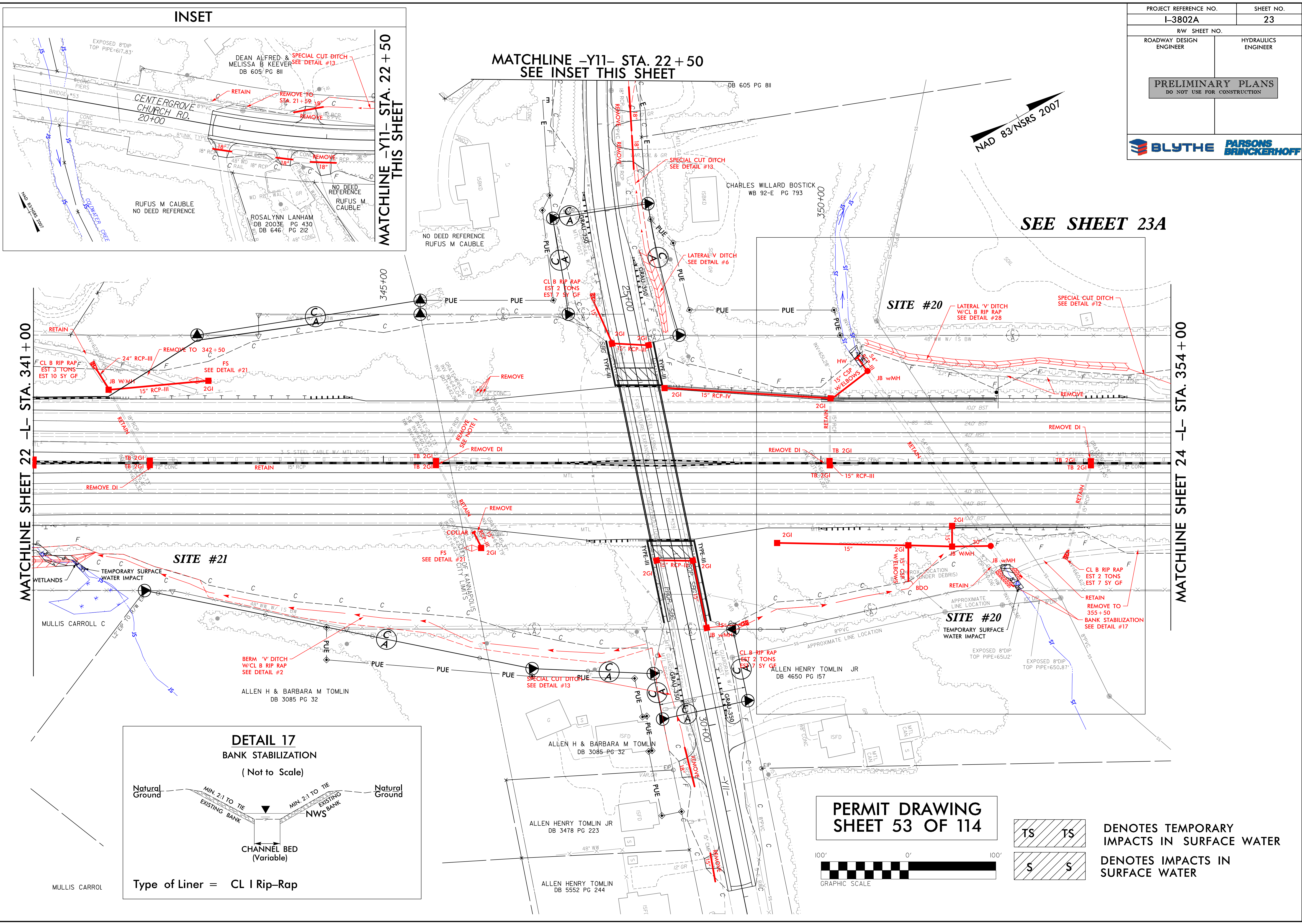
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10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290

PERMIT DRAWING
SHEET 54 OF 114



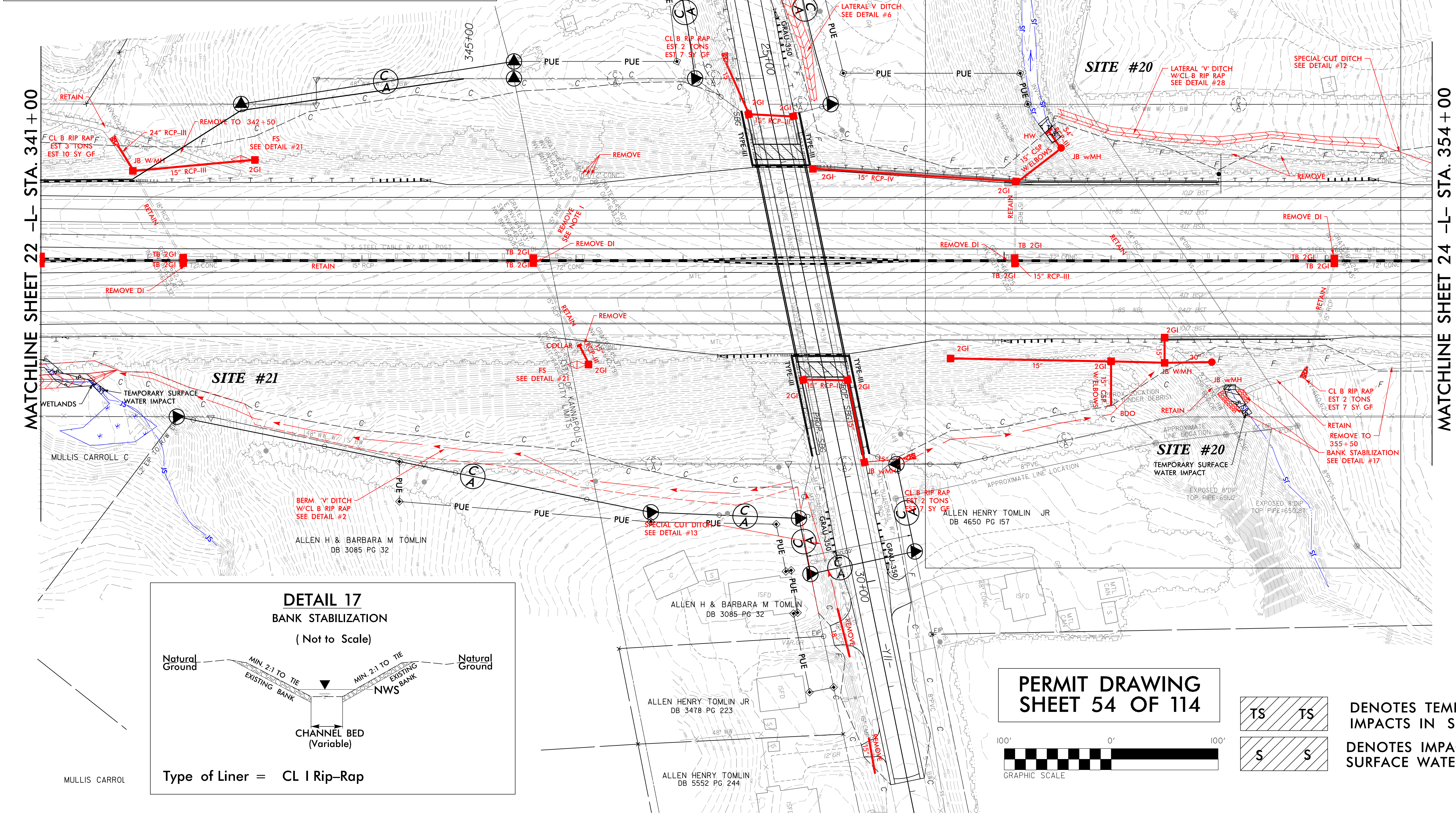
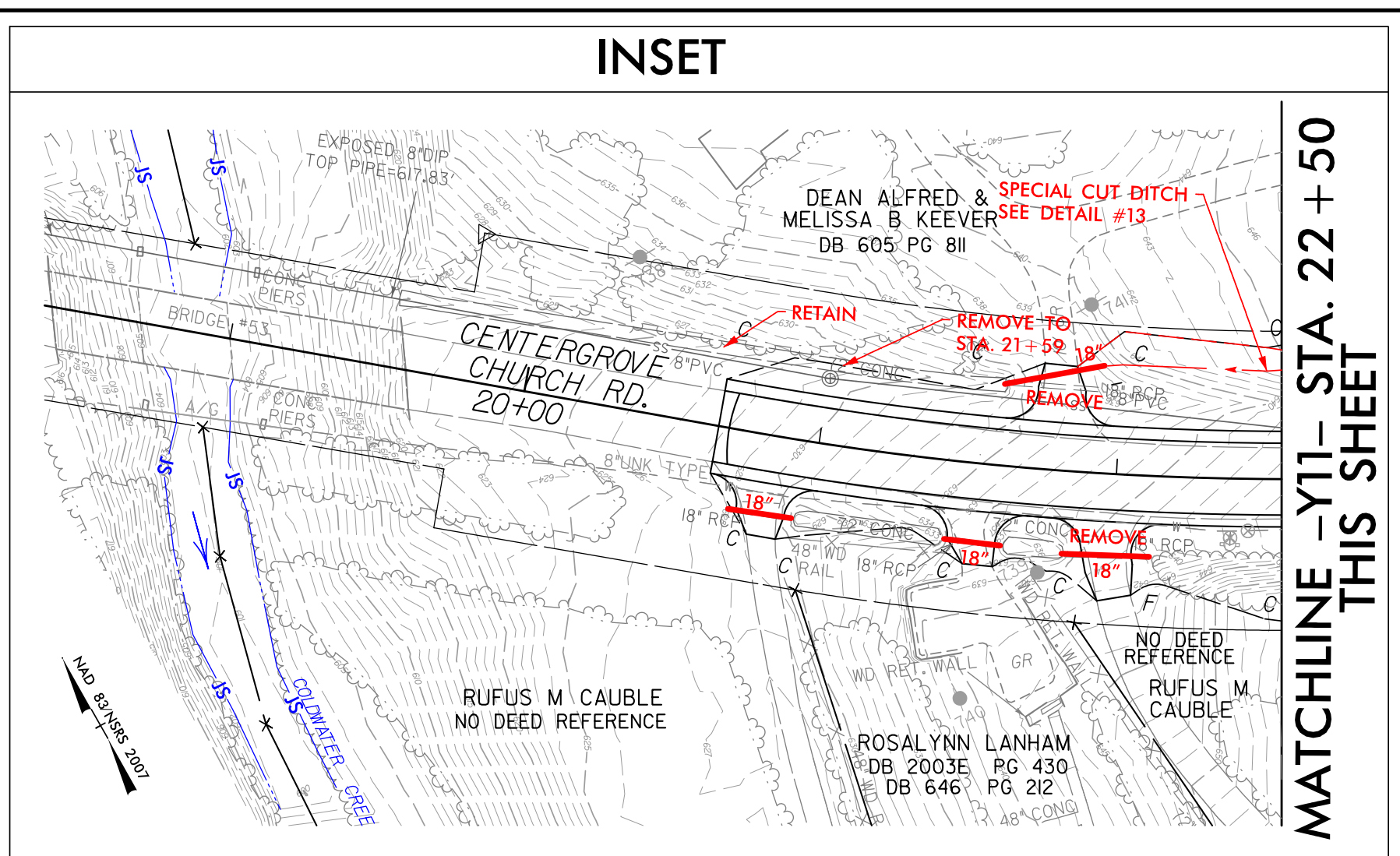
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PARSONS BRINCKERHOFF



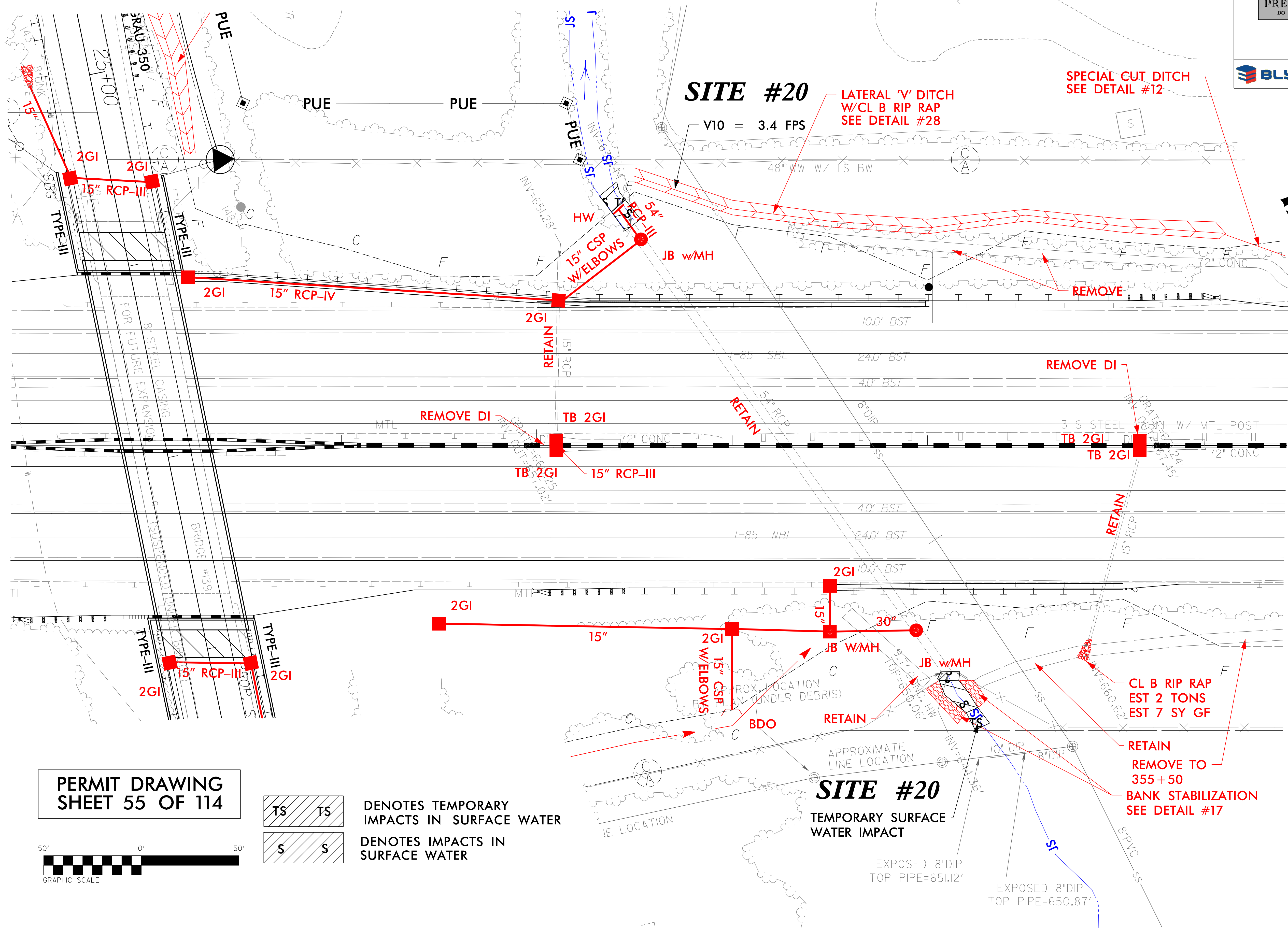
PROJECT REFERENCE NO.	SHEET NO.
I-3802A	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
BLYTHE PARSONS BRINCKERHOFF	

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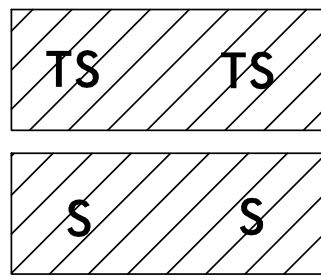
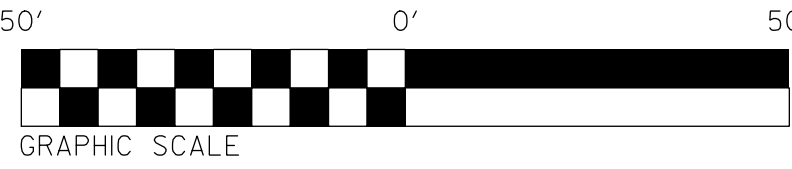
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PARSONS BRINCKERHOFF



PROJECT REFERENCE NO.	SHEET NO.
I-3802A	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
BLYTHE PARSONS BRINCKERHOFF	



PERMIT DRAWING
SHEET 55 OF 114



TS TS
S S

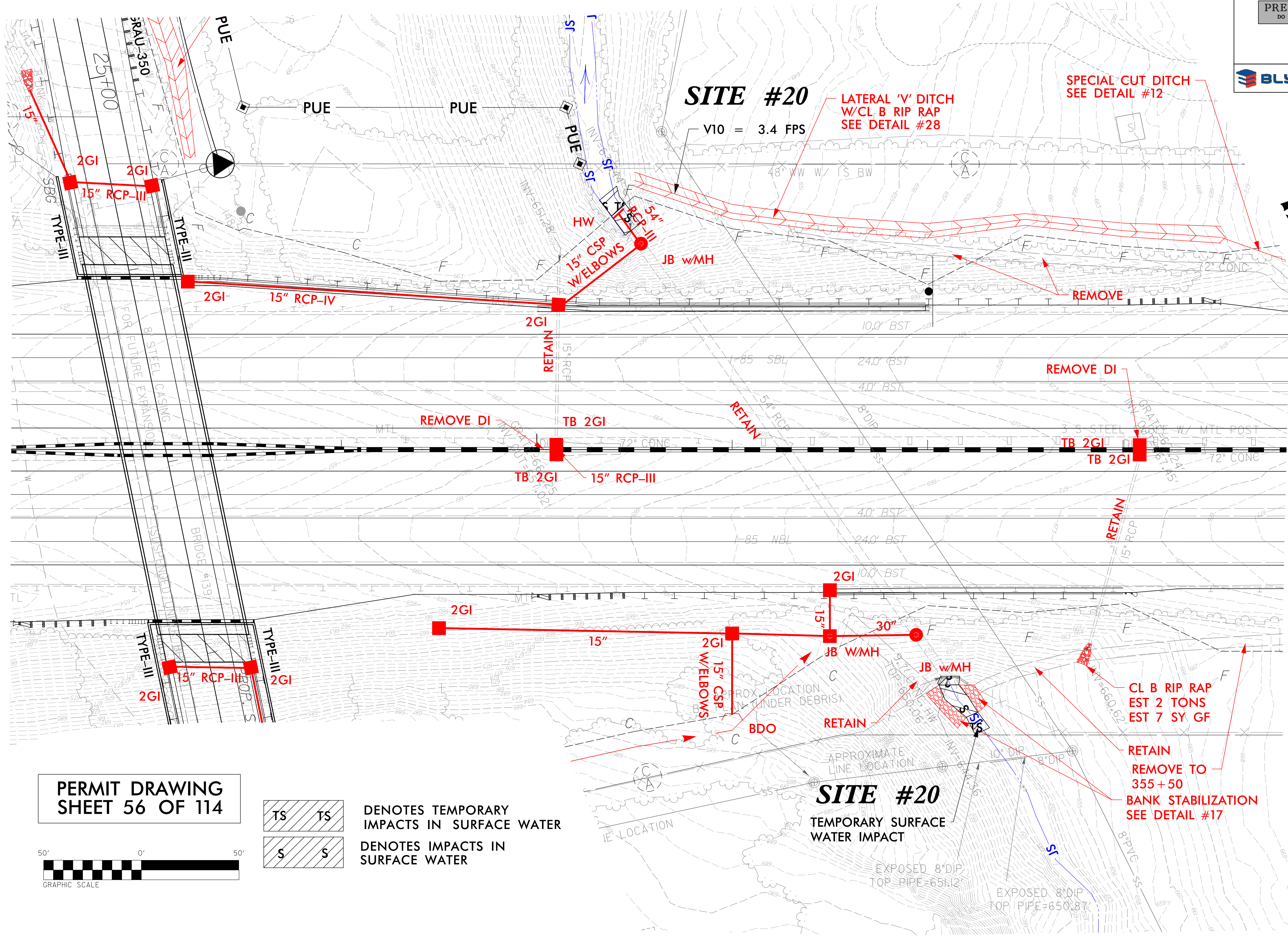
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN
SURFACE WATER

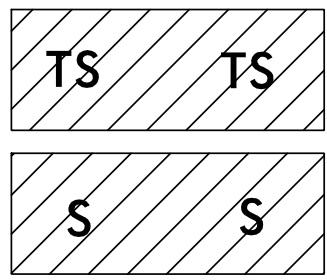
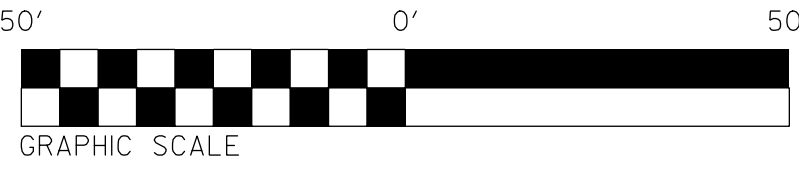
SITE #20
TEMPORARY SURFACE
WATER IMPACT

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PARSONS BRINCKERHOFF

PROJECT REFERENCE NO.		SHEET NO.
I-3802A		23A
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
		



PERMIT DRAWING
SHEET 56 OF 114

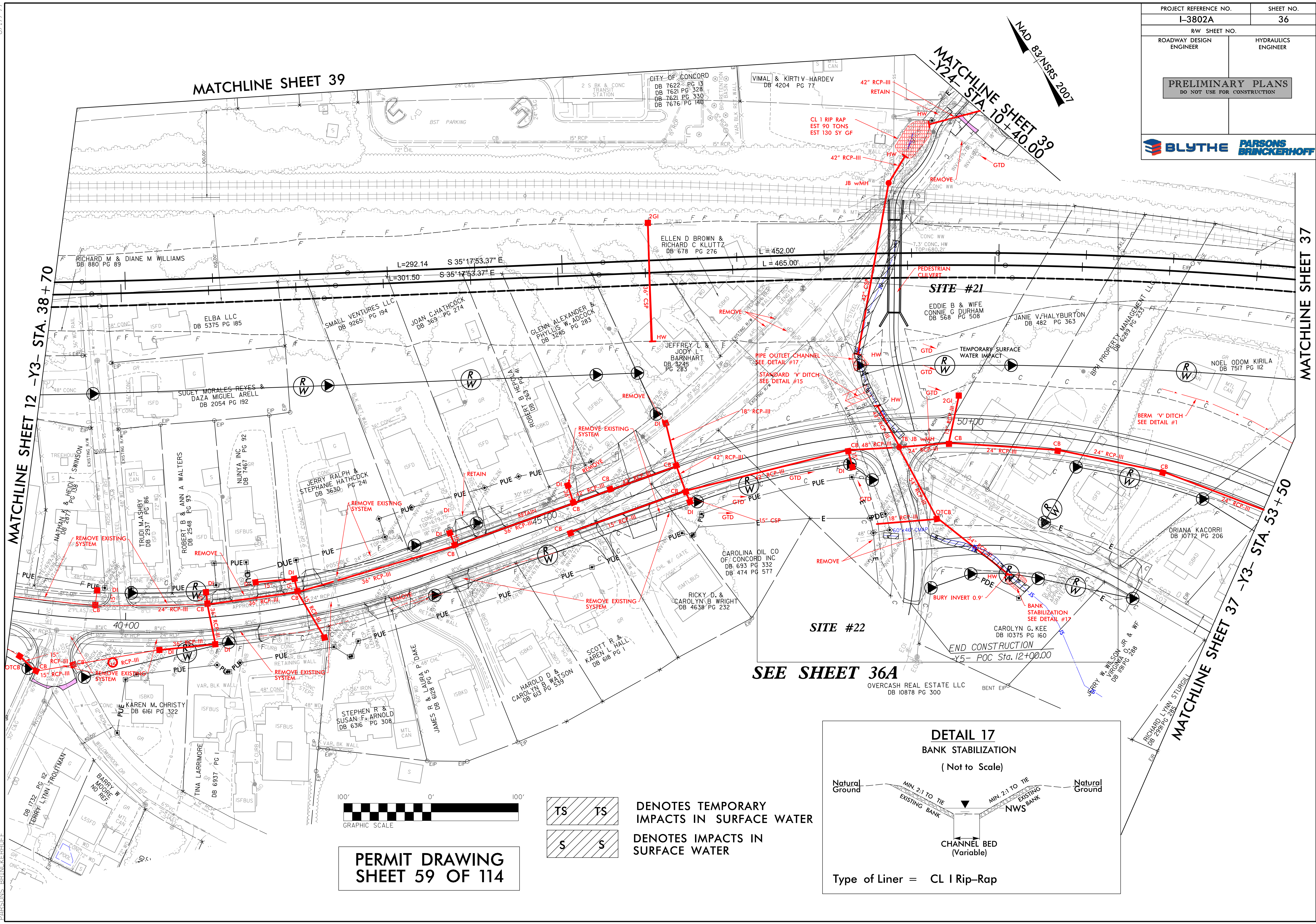


TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER
S S DENOTES IMPACTS IN SURFACE WATER

NAD 83/NSRS 2007

8/17/99
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PARSONS BRINCKERHOFF

PROJECT REFERENCE NO.		SHEET NO.	
I-3802A		36	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
BLYTHE		PARSONS BRINCKERHOFF	

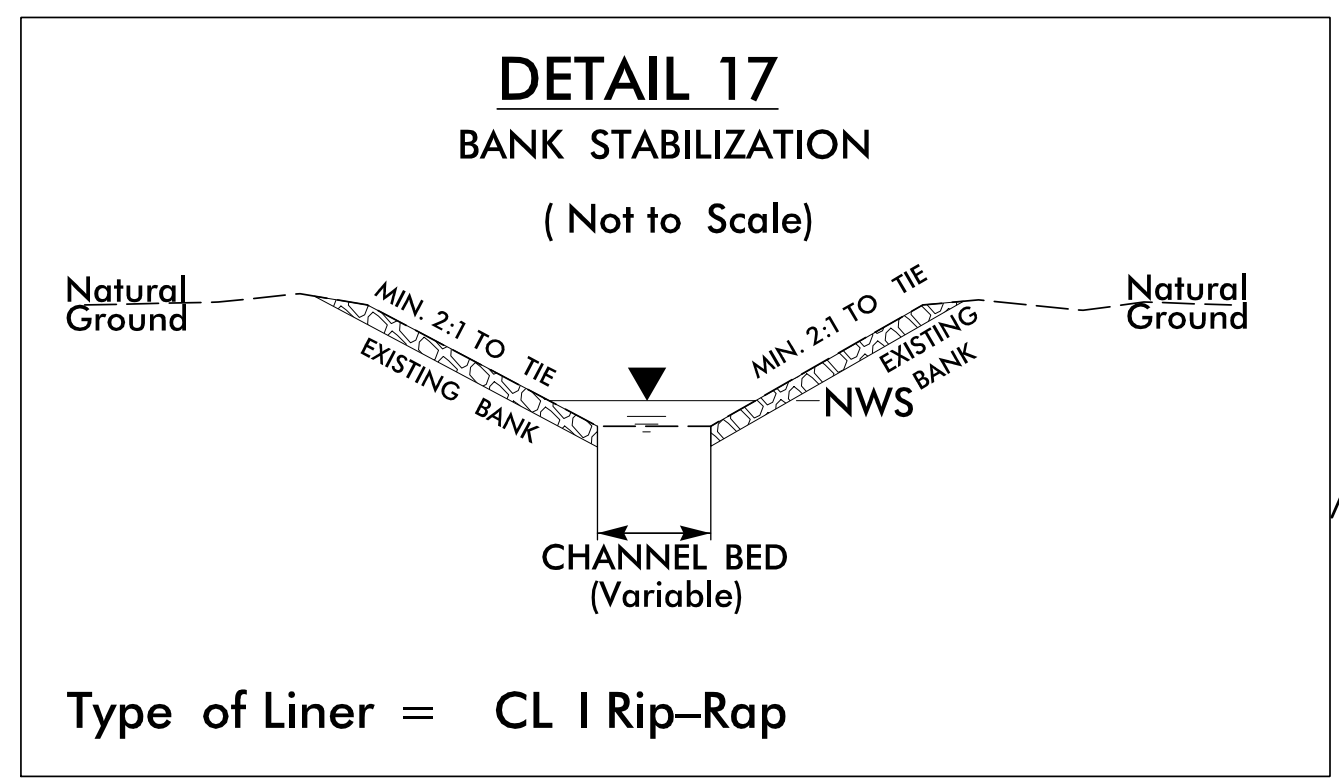


100' 0' 100'

GRAPHIC SCALE

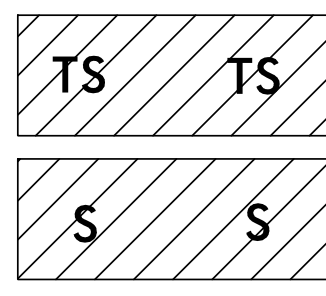
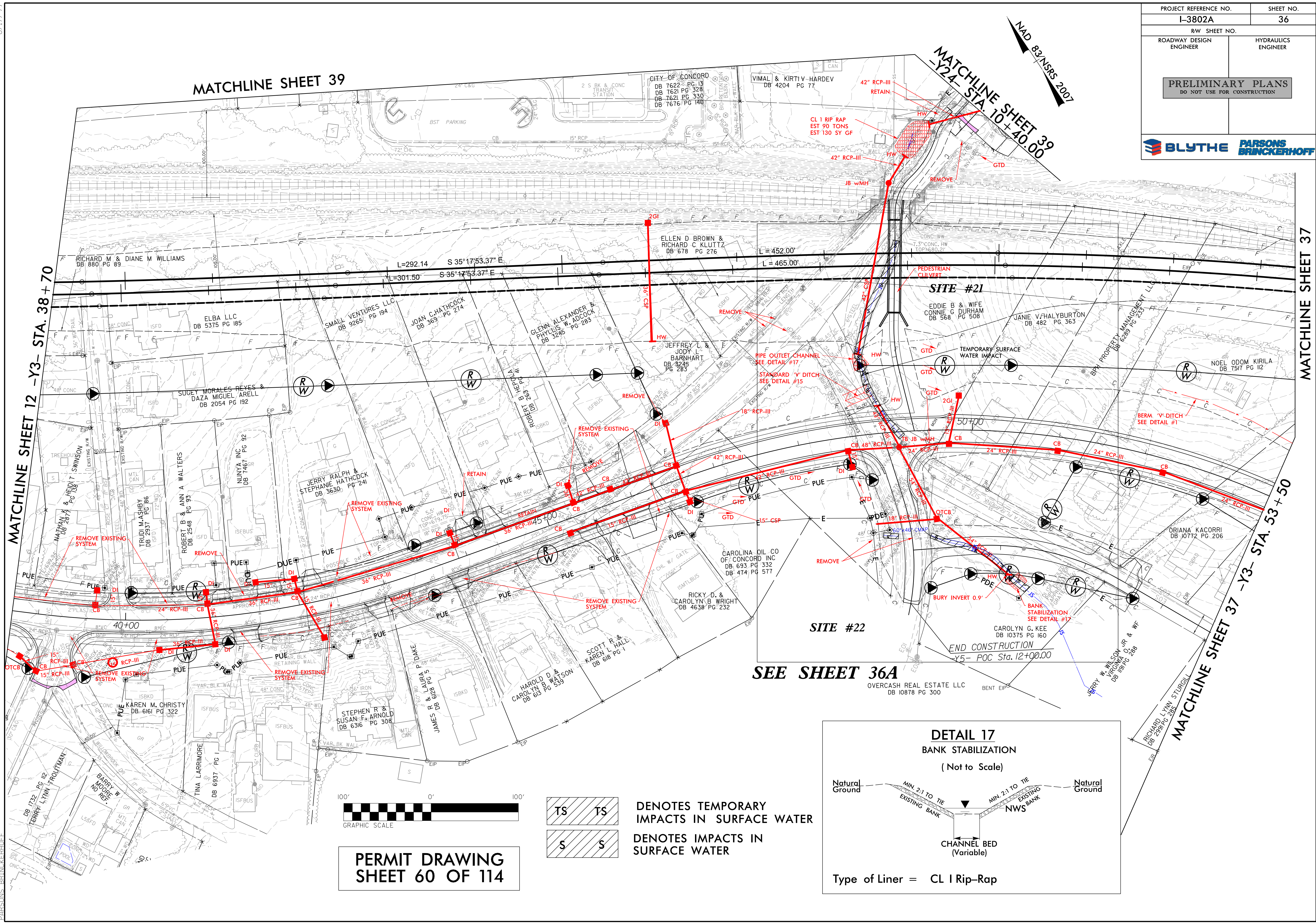
**PERMIT DRAWING
SHEET 59 OF 114**

	TS	TS	DENOTES TEMPORARY IMPACTS IN SURFACE WATER
	S	S	



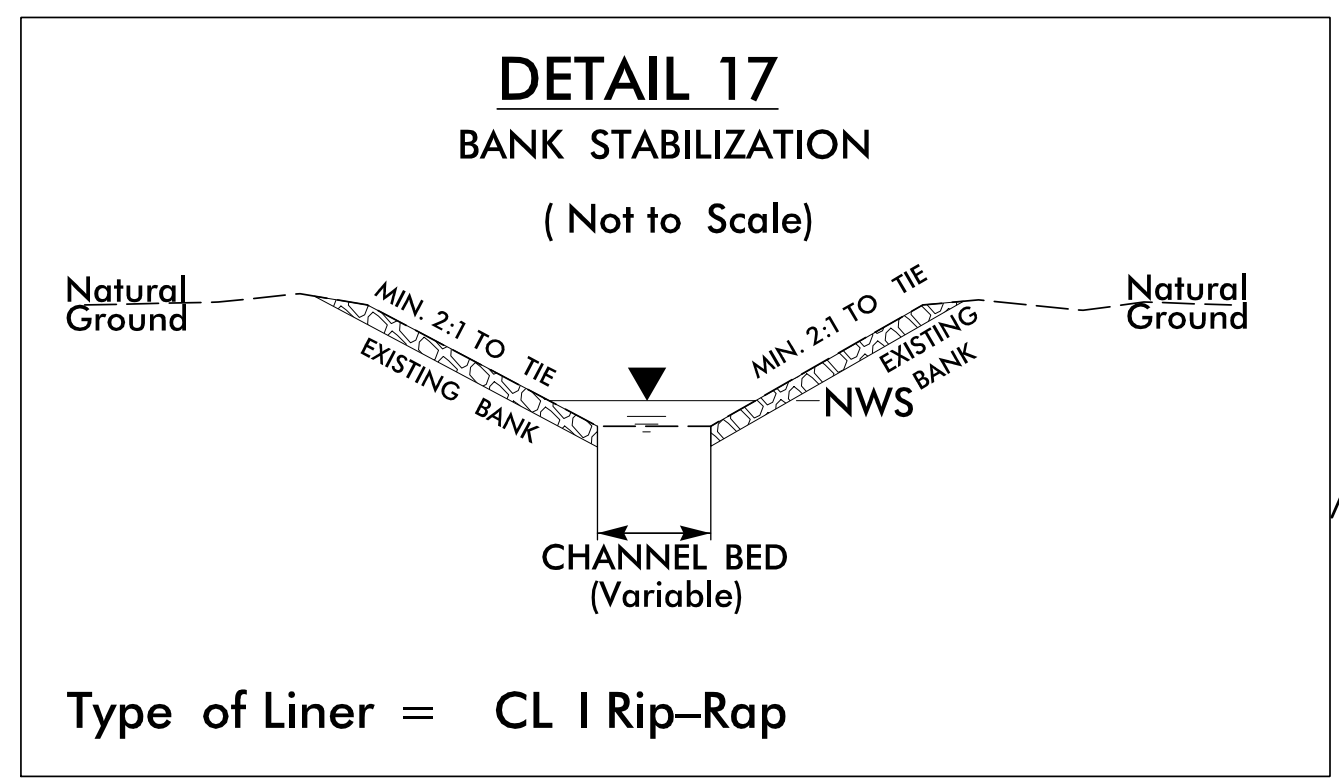
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1/28/2015
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PARSONS BRINCKERHOFF

PROJECT REFERENCE NO.		SHEET NO.	
I-3802A		36	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
			



TS TS
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

S S
DENOTES IMPACTS IN
SURFACE WATER

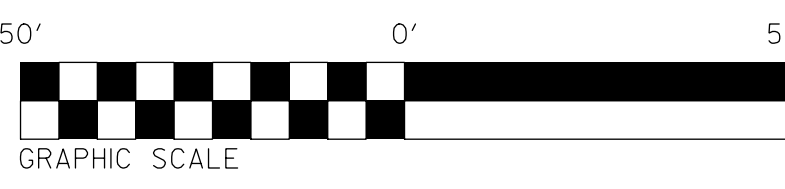


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PARSONS BRINCKERHOFF

TS TS
S S

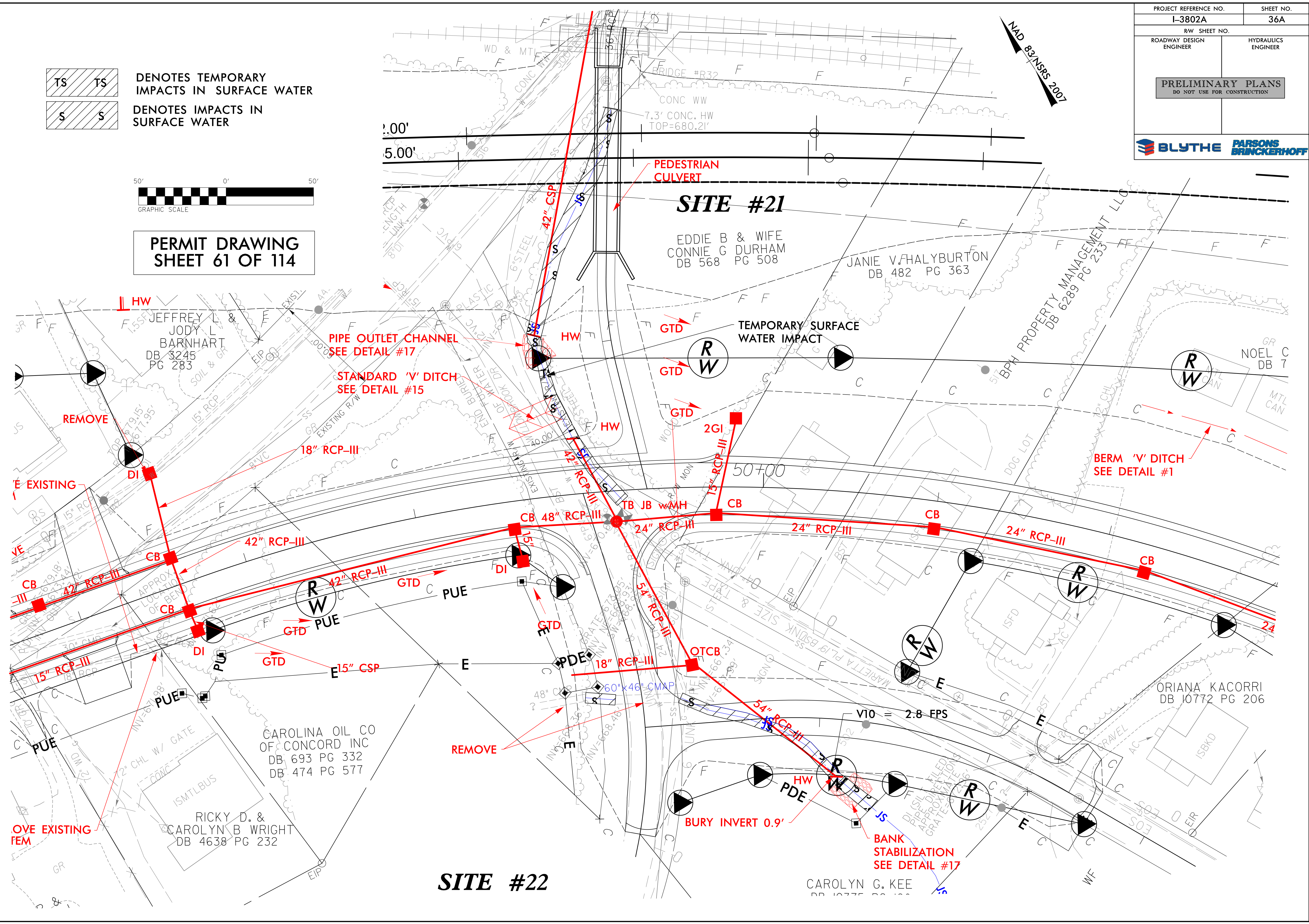
DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

DENOTES IMPACTS IN
SURFACE WATER



PERMIT DRAWING
SHEET 61 OF 114

PROJECT REFERENCE NO.		SHEET NO.	
I-3802A		36A	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
BLYTHE		PARSONS BRINCKERHOFF	



- F F DENOTES FILL IN WETLAND
- HC HC DENOTES HAND CLEARING
- TS TS DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- S S DENOTES IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO.	SHEET NO.
I-3802A	37
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
BLYTHE PARSONS BRINCKERHOFF	

MATCHLINE SHEET 41 -Y3- STA. 71 + 50

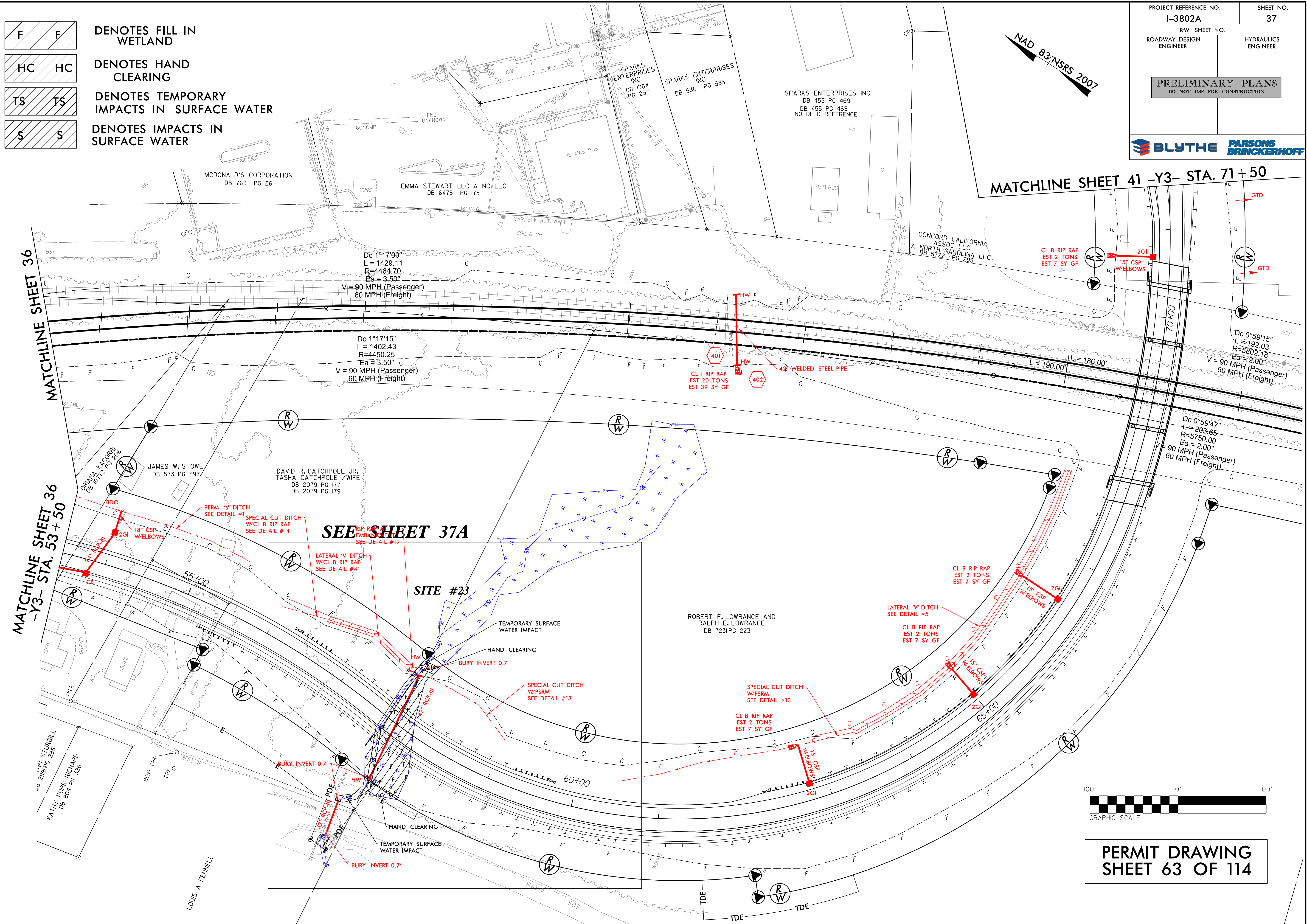
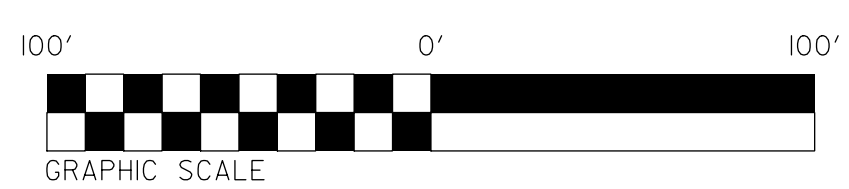
MATCHLINE SHEET 36

MATCHLINE SHEET 36
-Y3- STA. 53 + 50

SEE SHEET 37A

SITE #23

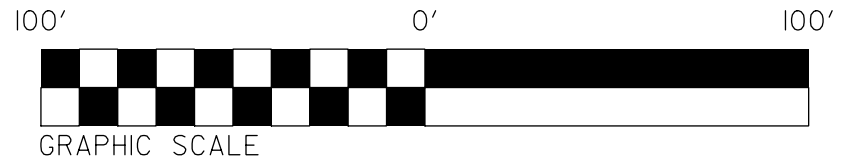
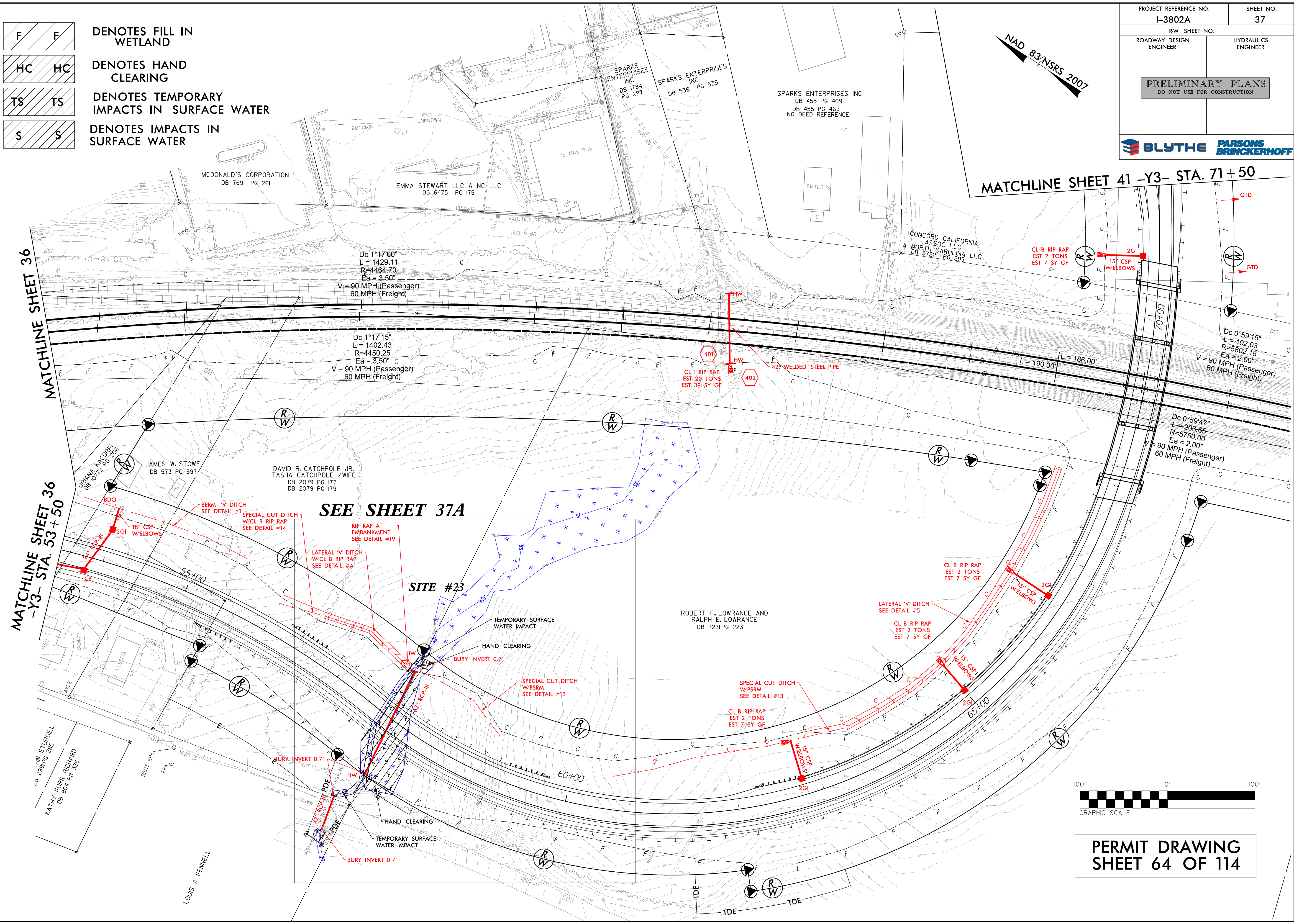
PERMIT DRAWING
SHEET 63 OF 114



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1/28/2015
KATHY FURR RICHARD DB 804 PG 326
LOUIS A FENNEL
PARSONS BRINCKERHOFF

- DENOTES FILL IN WETLAND
- DENOTES HAND CLEARING
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES IMPACTS IN SURFACE WATER

PROJECT REFERENCE NO.		SHEET NO.	
I-3802A		37	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			

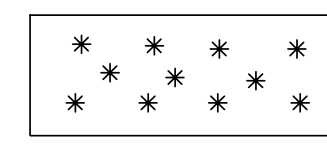


PERMIT DRAWING
SHEET 64 OF 114

8/17/99
1/28/2015
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PARSONS BRINCKERHOFF

F	F
HC	HC
TS	TS
S	S

DENOTES FILL IN WETLAND
DENOTES HAND CLEARING
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING

SPECIAL CUT DITCH
W/CL B RIP RAP
SEE DETAIL #14

RIP RAP AT
EMBANKMENT
SEE DETAIL #19

LATERAL 'V' DITCH
W/CL B RIP RAP
SEE DETAIL #4

Q10 = 8.21 CFS
V10 = 1.98 FPS

PERMANENT ROCK
CHECK DAM

SITE #23

TEMPORARY SURFACE
WATER IMPACT

HAND CLEARING

BURY INVERT 0.7'

Q10 = 1.06 CFS
V10 = 1.19 FPS

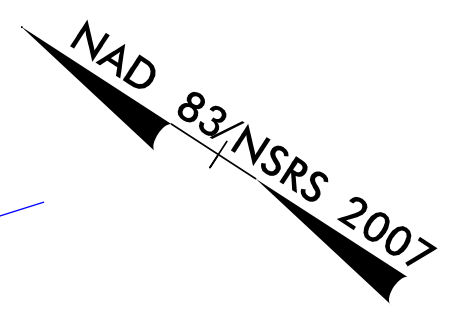
SPECIAL CUT DITCH
W/PSRM
SEE DETAIL #13

BURY INVERT 0.7'

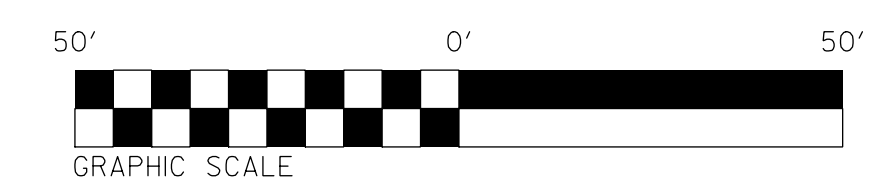
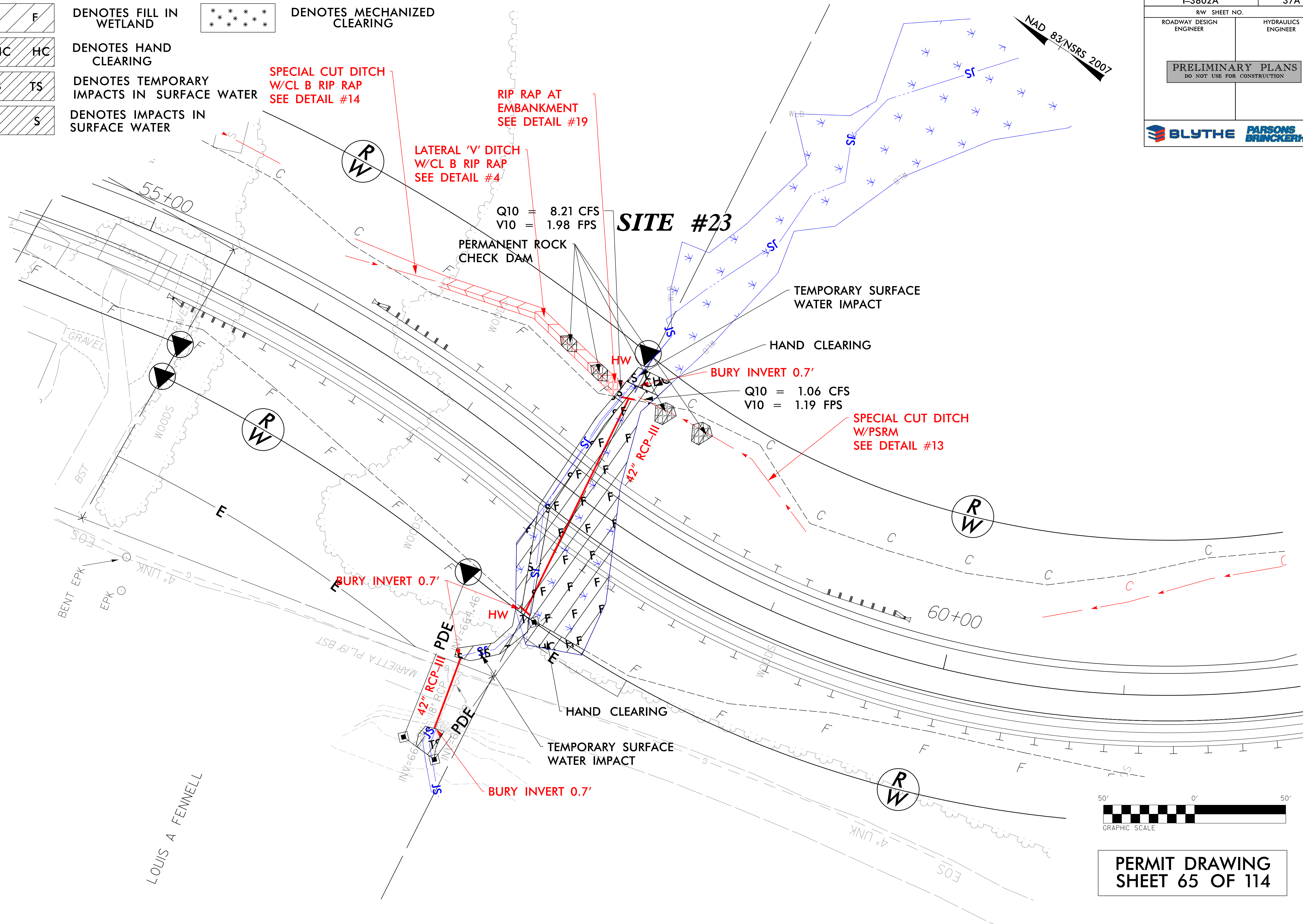
BURY INVERT 0.7'

HAND CLEARING

TEMPORARY SURFACE
WATER IMPACT



PROJECT REFERENCE NO.	SHEET NO.
I-3802A	37A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
BLYTHE PARSONS BRINCKERHOFF	

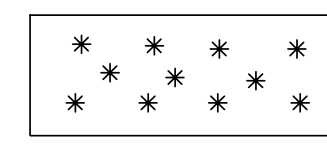


PERMIT DRAWING
SHEET 65 OF 114

8/17/99
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PARSONS BRINCKERHOFF

F	F
HC	HC
TS	TS
S	S

DENOTES FILL IN WETLAND
DENOTES HAND CLEARING
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER



DENOTES MECHANIZED CLEARING

SPECIAL CUT DITCH
W/CL B RIP RAP
SEE DETAIL #14

RIP RAP AT
EMBANKMENT
SEE DETAIL #19

LATERAL 'V' DITCH
W/CL B RIP RAP
SEE DETAIL #4

Q10 = 8.21 CFS
V10 = 1.98 FPS
PERMANENT ROCK
CHECK DAM

SITE #23

TEMPORARY SURFACE
WATER IMPACT

HAND CLEARING

BURY INVERT 0.7'
Q10 = 1.06 CFS
V10 = 1.19 FPS

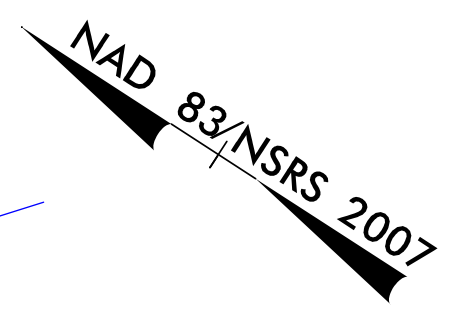
SPECIAL CUT DITCH
W/PSRM
SEE DETAIL #13

BURY INVERT 0.7'

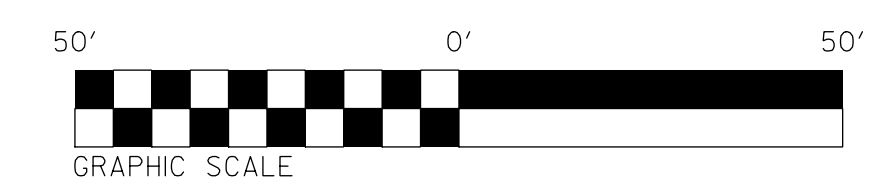
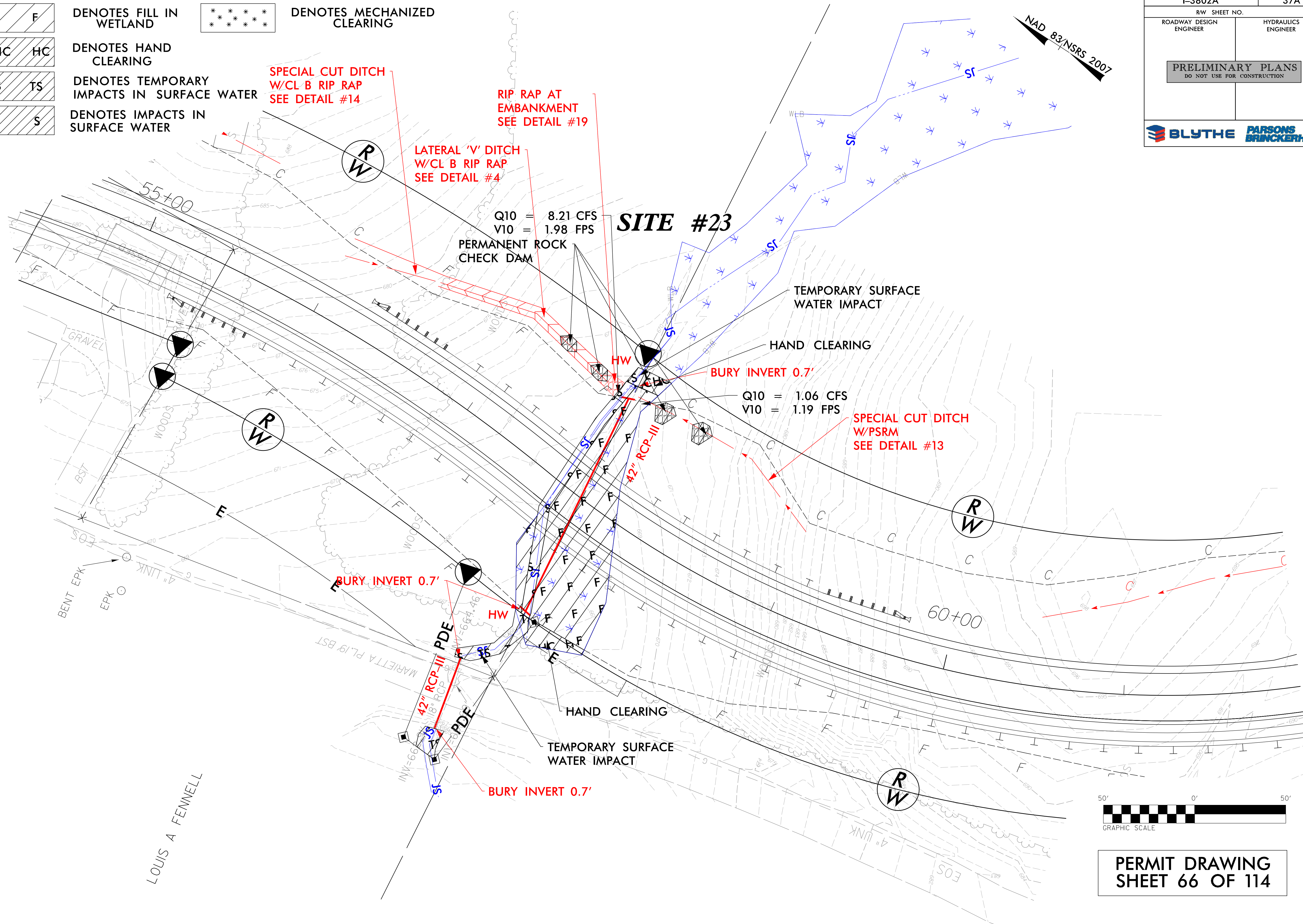
HAND CLEARING

TEMPORARY SURFACE
WATER IMPACT

BURY INVERT 0.7'

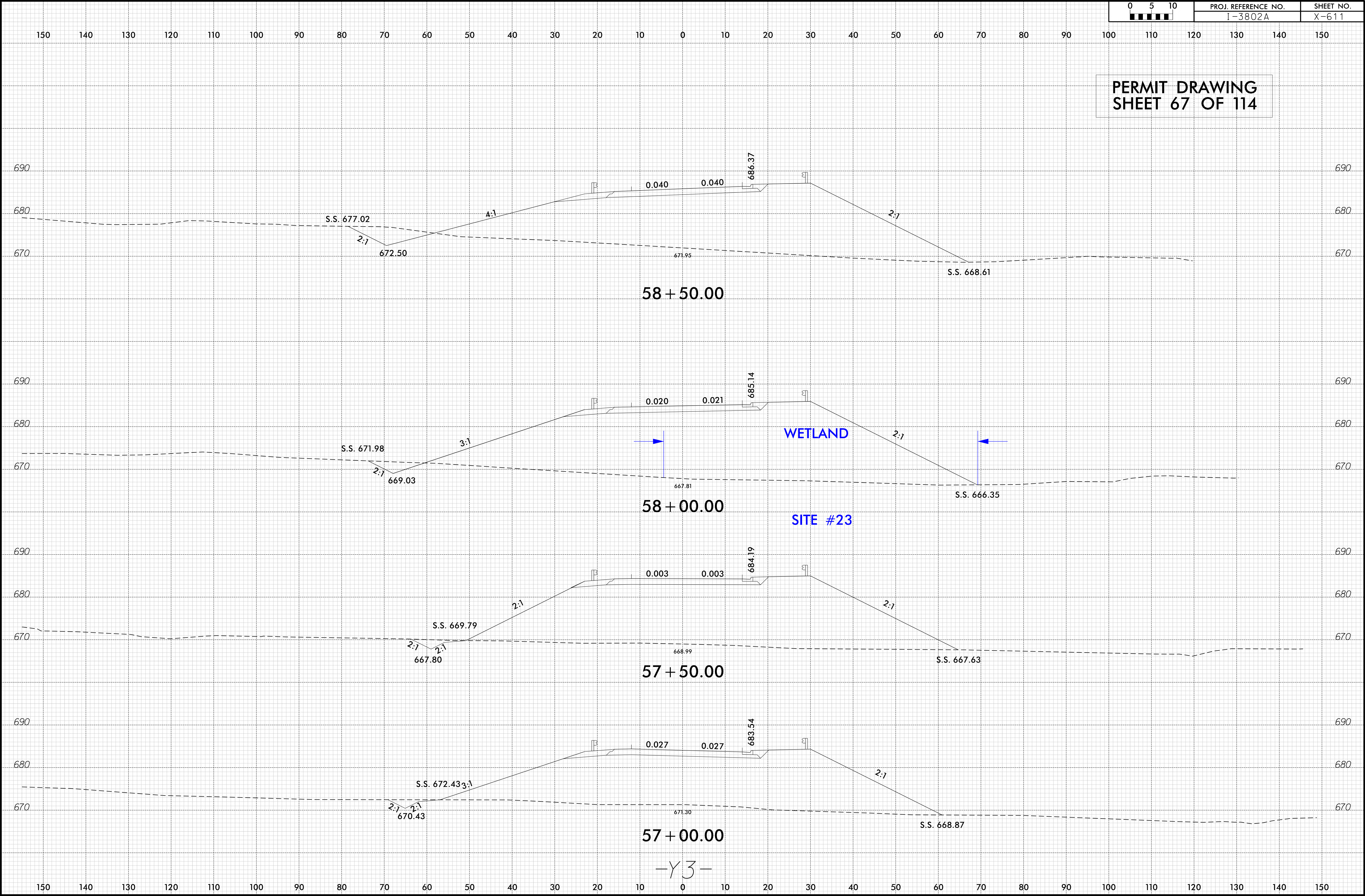


PROJECT REFERENCE NO.	SHEET NO.
I-3802A	37A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	
BLYTHE PARSONS BRINCKERHOFF	



PERMIT DRAWING
SHEET 66 OF 114

8/23/99

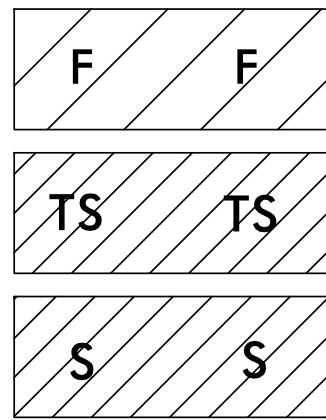


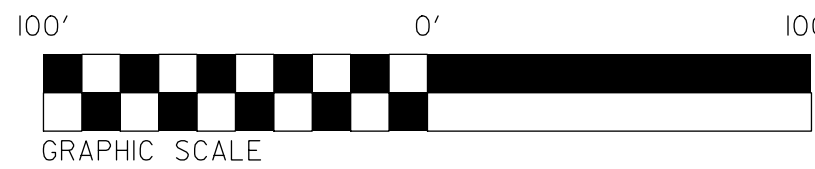
PERMIT DRAWING
SHEET 67 OF 114

WETLAND

SITE #23

-Y3-

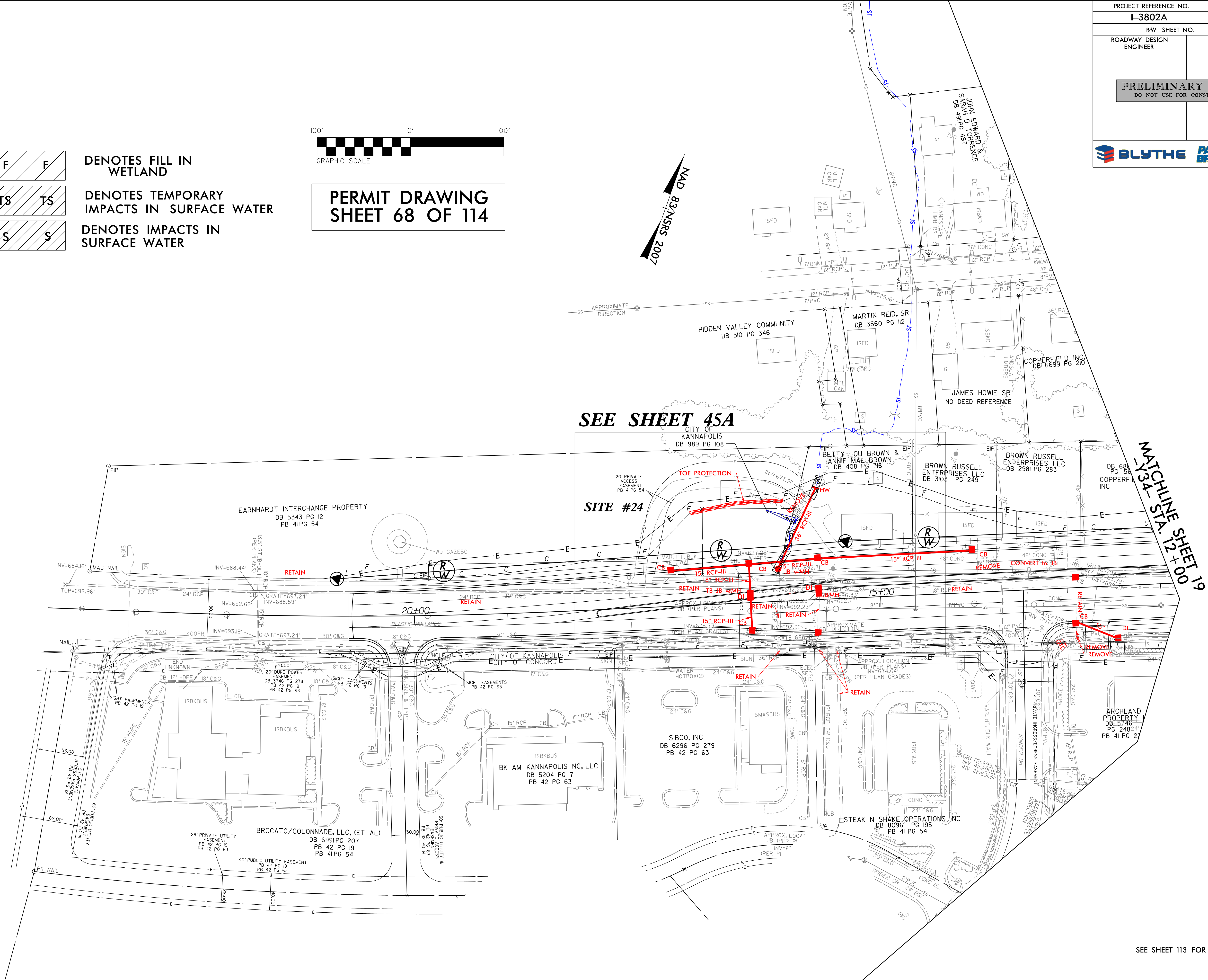
 DENOTES FILL IN WETLAND
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER



PERMIT DRAWING
SHEET 68 OF 114

NAD 83 NSRS 2007

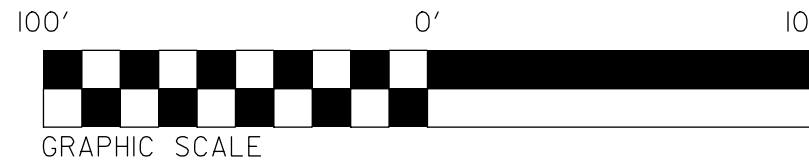
PROJECT REFERENCE NO.		SHEET NO.
I-3802A		45
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
 BLYTHE		



DENOTES FILL IN WETLAND

DENOTES TEMPORARY IMPACTS IN SURFACE WATER

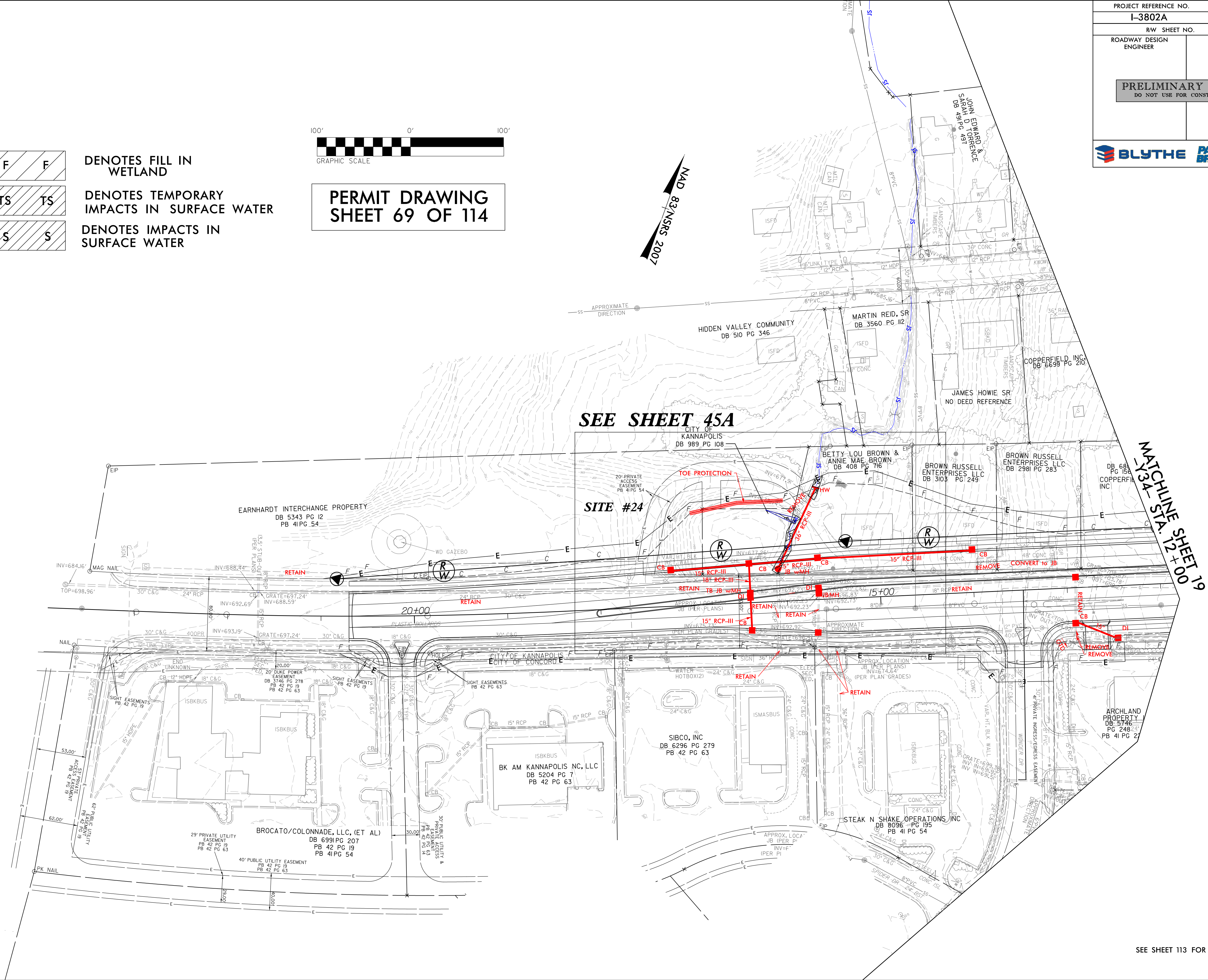
DENOTES IMPACTS IN SURFACE WATER



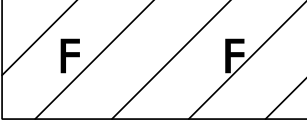
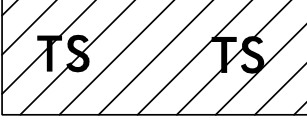
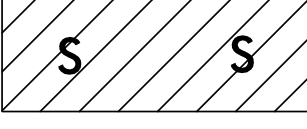
PERMIT DRAWING
SHEET 69 OF 114

NAD 83 NSRS 2007

PROJECT REFERENCE NO.		SHEET NO.
I-3802A		45
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
		



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PARSONS BRINCKERHOFF

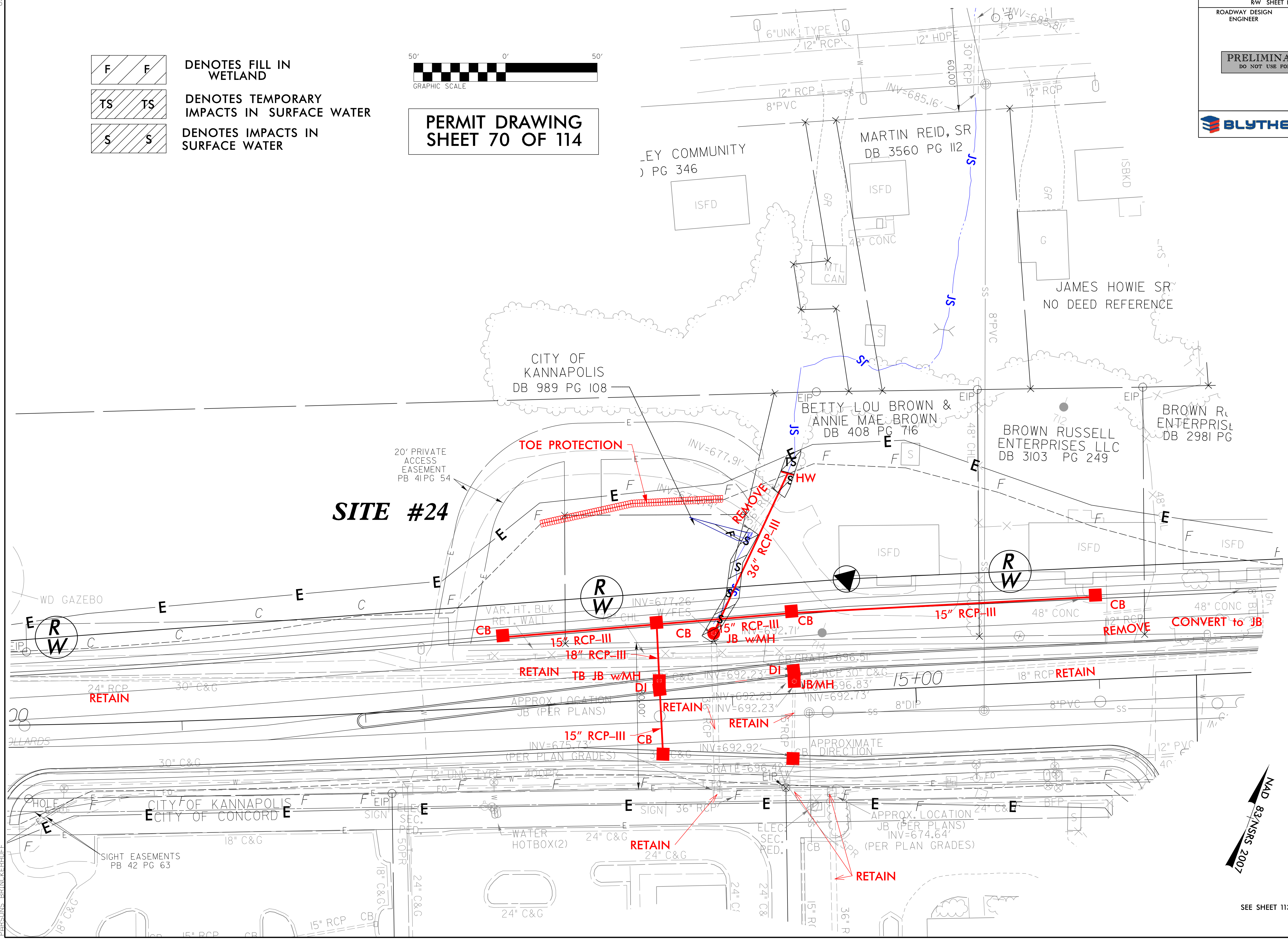
-  DENOTES FILL IN WETLAND
-  DENOTES TEMPORARY IMPACTS IN SURFACE WATER
-  DENOTES IMPACTS IN SURFACE WATER

50' 0' 50'

GRAPHIC SCALE

**PERMIT DRAWING
SHEET 70 OF 114**

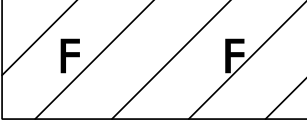
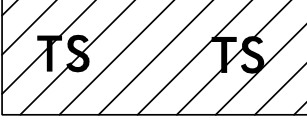
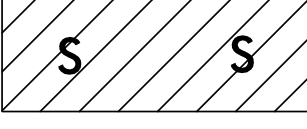
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RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
 BLYTE			

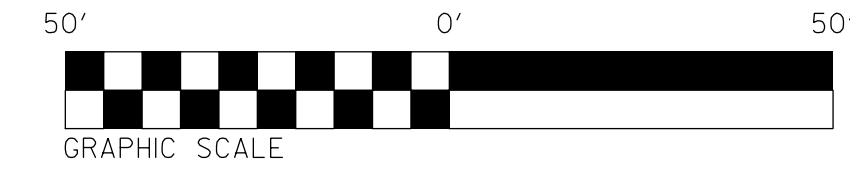


NAD 83/NSRS 2007

SEE SHEET 113 FOR -Y34- PROFILE

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PARSONS BRINCKERHOFF

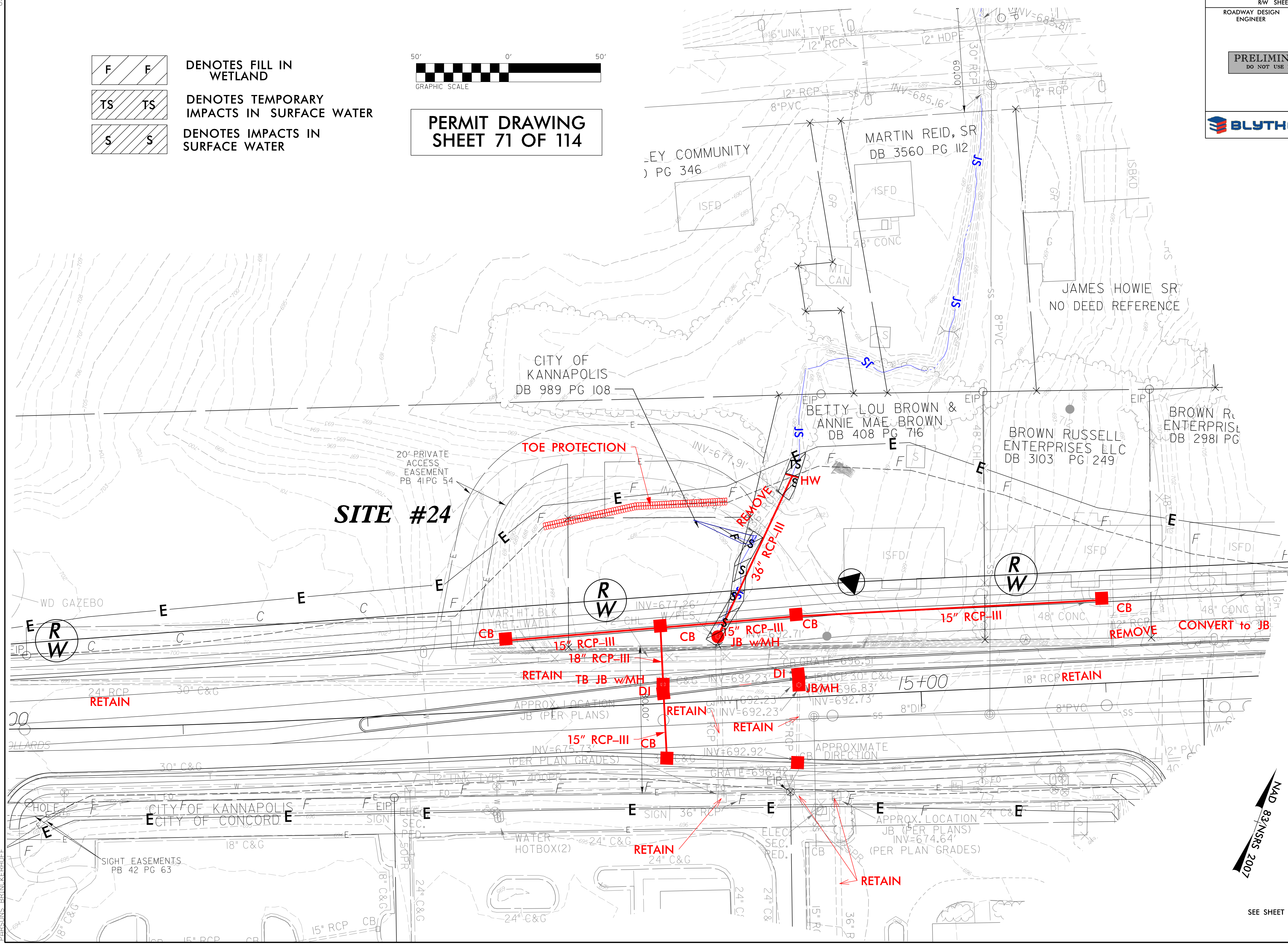
- | | | | |
|---|----|-------------------------|--|
|  | F | DENOTES FILL IN WETLAND | |
|  | TS | TS | DENOTES TEMPORARY IMPACTS IN SURFACE WATER |
|  | S | S | DENOTES IMPACTS IN SURFACE WATER |



PERMIT DRAWING
SHEET 71 OF 114

PROJECT REFERENCE NO.		SHEET NO.
I-3802A		45A
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		

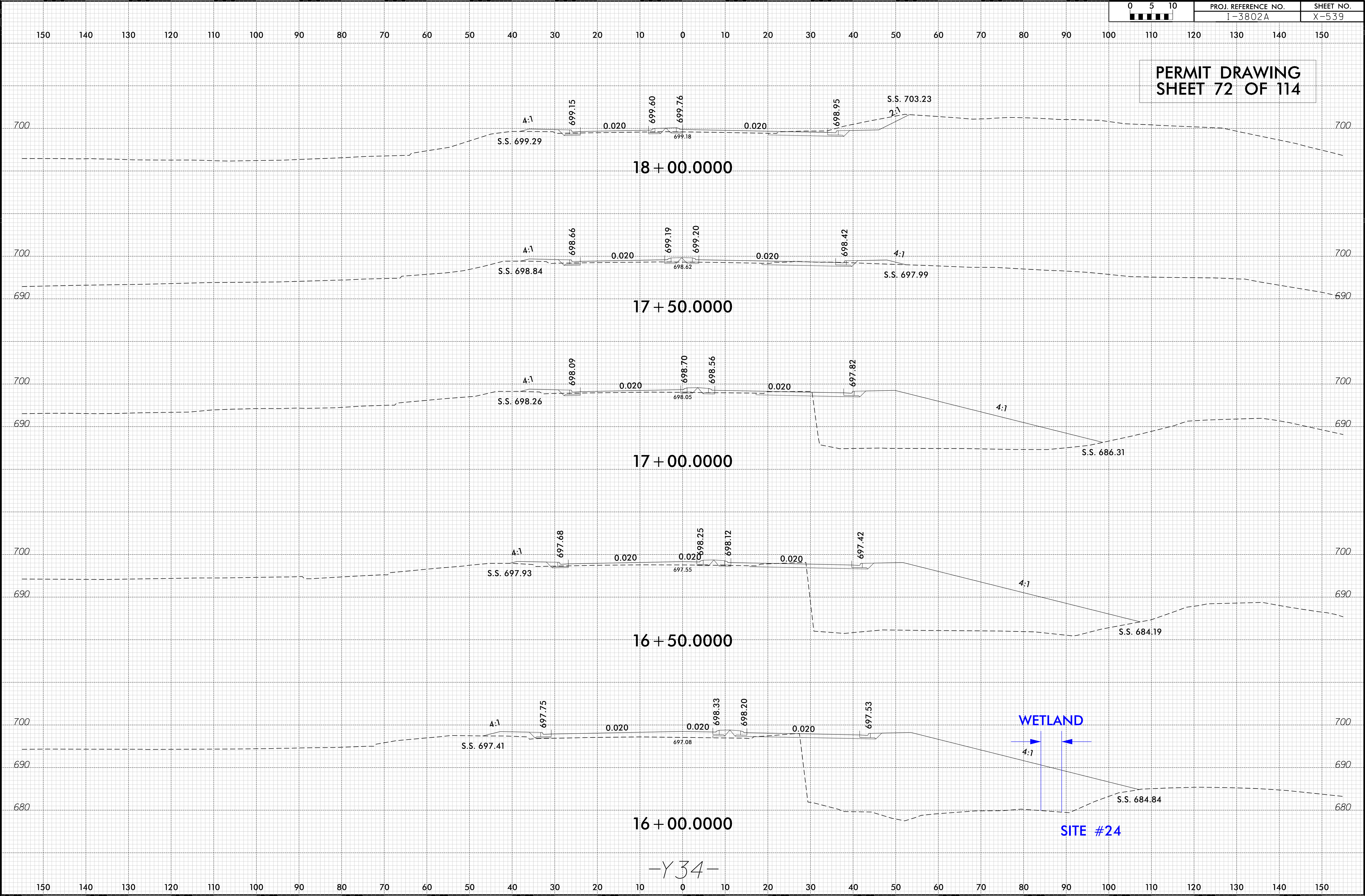
**BLYTE**
**PARSONS
BRINCKERHOFF**



NAD 83/NSRS 2007

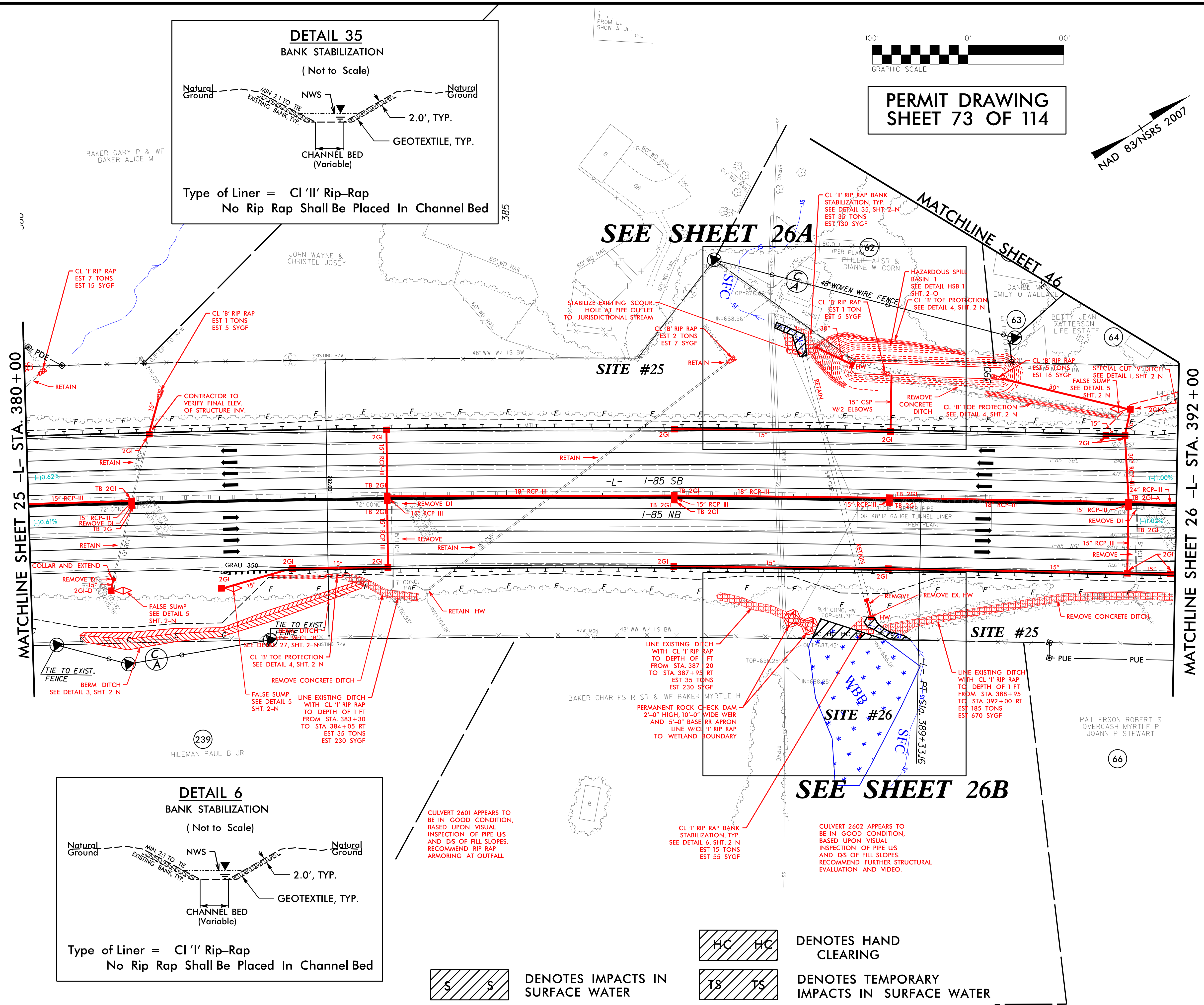
SEE SHEET 113 FOR -Y34- PROFILE

8/23/99



8/17/99

1/27/2015
I:\2015\2015A bud.prj\wet_73.psh26.dgn
11/11/2015



DETAIL 35
BANK STABILIZATION
(Not to Scale)

Natural Ground
MIN. 2:1 TO TIE
EXISTING BANK TYP.

NWS

2.0', TYP.

GEOTEXTILE, TYP.

CHANNEL BED
(Variable)

Type of Liner = CL '11' Rip-Rap
No Rip Rap Shall Be Placed In Channel Bed

DETAIL 6
BANK STABILIZATION
(Not to Scale)

Natural Ground
MIN. 2:1 TO TIE
EXISTING BANK TYP.

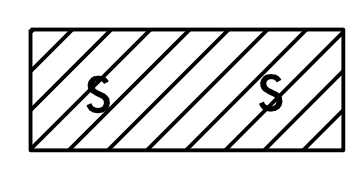
NWS

2.0', TYP.

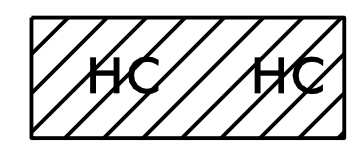
GEOTEXTILE, TYP.

CHANNEL BED
(Variable)

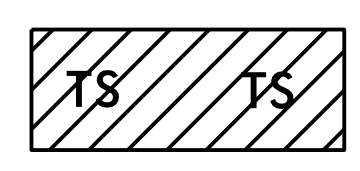
Type of Liner = CL '1' Rip-Rap
No Rip Rap Shall Be Placed In Channel Bed



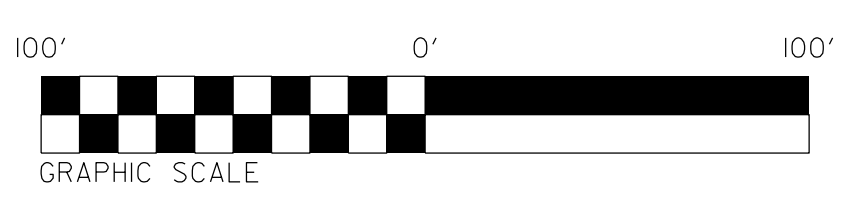
DENOTES IMPACTS IN
SURFACE WATER



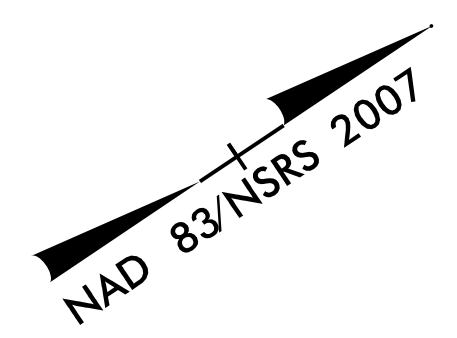
DENOTES HAND
CLEARING



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER



PERMIT DRAWING
SHEET 73 OF 114



PROJECT REFERENCE NO. I-3802A		SHEET NO. 26	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION			
BLYTHE		PARSONS BRINCKERHOFF	
SEPI ENGINEERING & CONSTRUCTION		1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197	

NOTES:
1. EXISTING PIPE MAY BE RETAINED FOR
TEMPORARY DRAINAGE DURING CONSTRUCTION.
ONCE PROPOSED DRAINAGE SYSTEM IS
INSTALLED AND FUNCTIONING PIPE IS TO
BE REMOVED. THE PORTION OF PIPE
REMAINING UNDER NEW PAVEMENT IS TO BE
PLUGGED AND THE FILLED WITH FLOWABLE
FILL.

SEE SHEET 72 FOR -LSB- & -LNB- PROFILES

8/17/99

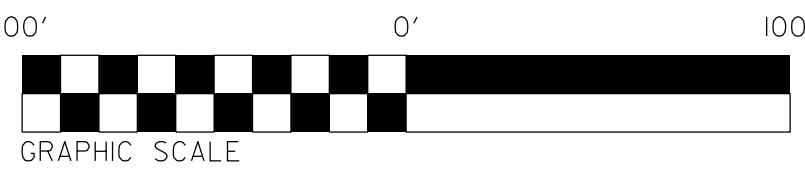
1/27/2015 13802A.bud.prm.wet_74.psh26.con.dgn

DETAIL 35
BANK STABILIZATION
(Not to Scale)

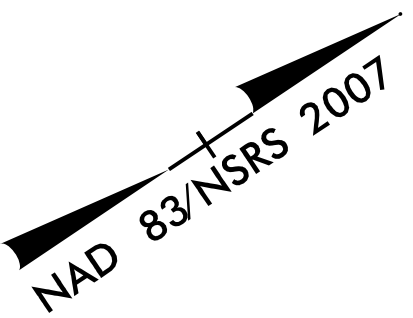
CL '11' Rip-Rap
No Rip Rap Shall Be Placed In Channel Bed

DETAIL 6
BANK STABILIZATION
(Not to Scale)

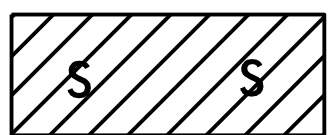
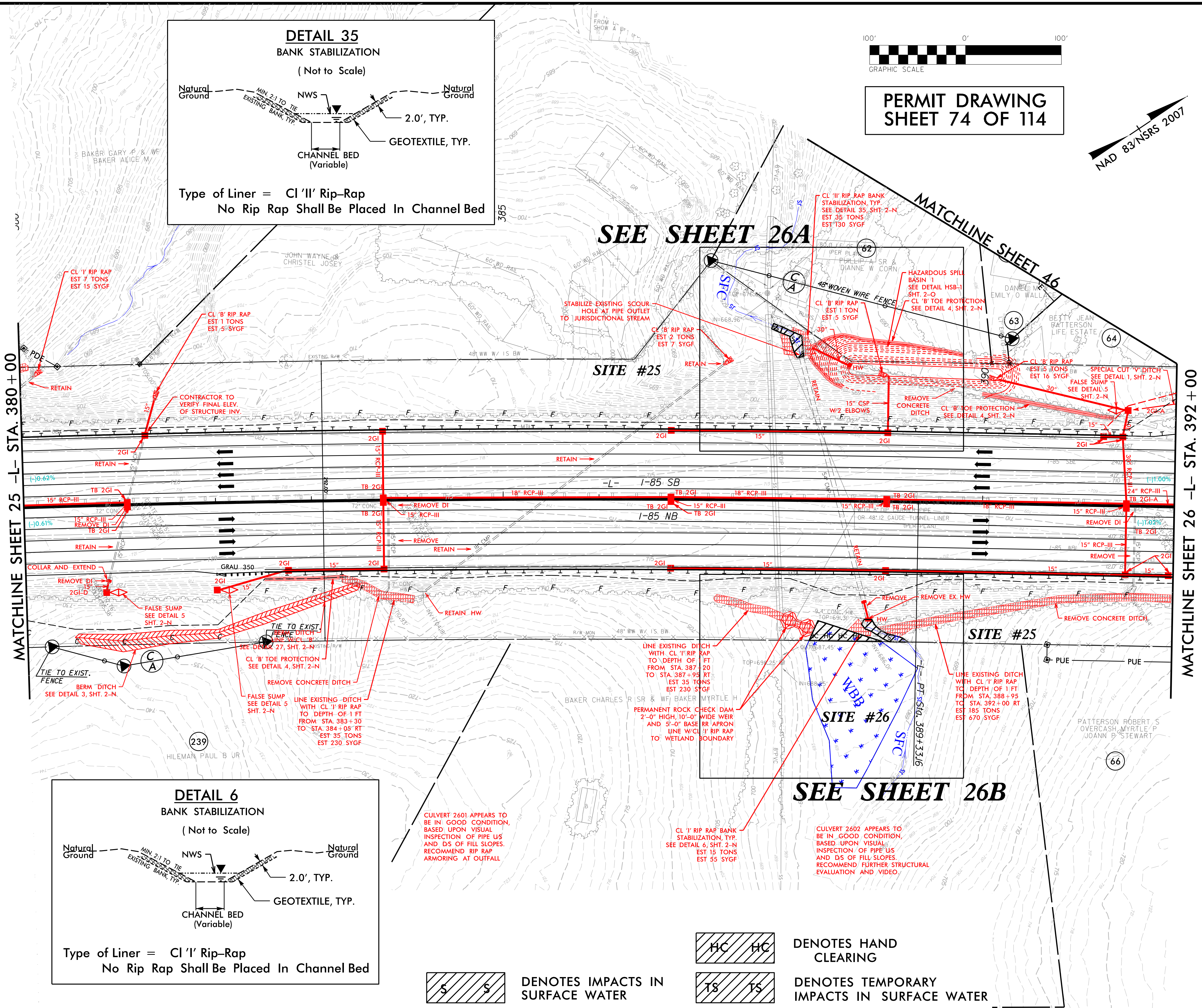
CL '1' Rip-Rap
No Rip Rap Shall Be Placed In Channel Bed



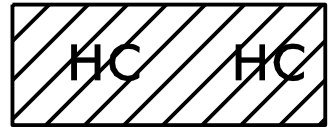
PERMIT DRAWING
SHEET 74 OF 114



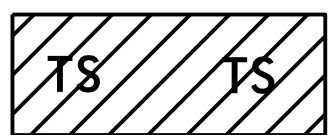
PROJECT REFERENCE NO. I-3802A		SHEET NO. 26
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		
SEPI ENGINEERING & CONSTRUCTION 1025 Wade Avenue Raleigh, NC 27605 Tel: 919-789-9977 Fax: 919-789-9591 License: C-2197		



DENOTES IMPACTS IN
SURFACE WATER



DENOTES HAND
CLEARING



DENOTES TEMPORARY
IMPACTS IN SURFACE WATER

NOTES:
1. EXISTING PIPE MAY BE RETAINED FOR TEMPORARY DRAINAGE DURING CONSTRUCTION. ONCE PROPOSED DRAINAGE SYSTEM IS INSTALLED AND FUNCTIONING PIPE IS TO BE REMOVED. THE PORTION OF PIPE REMAINING UNDER NEW PAYMENT IS TO BE PLUGGED AND THE FILLED WITH FLOWABLE FILL.

SEE SHEET 72 FOR -LSB- & -LNB- PROFILES

