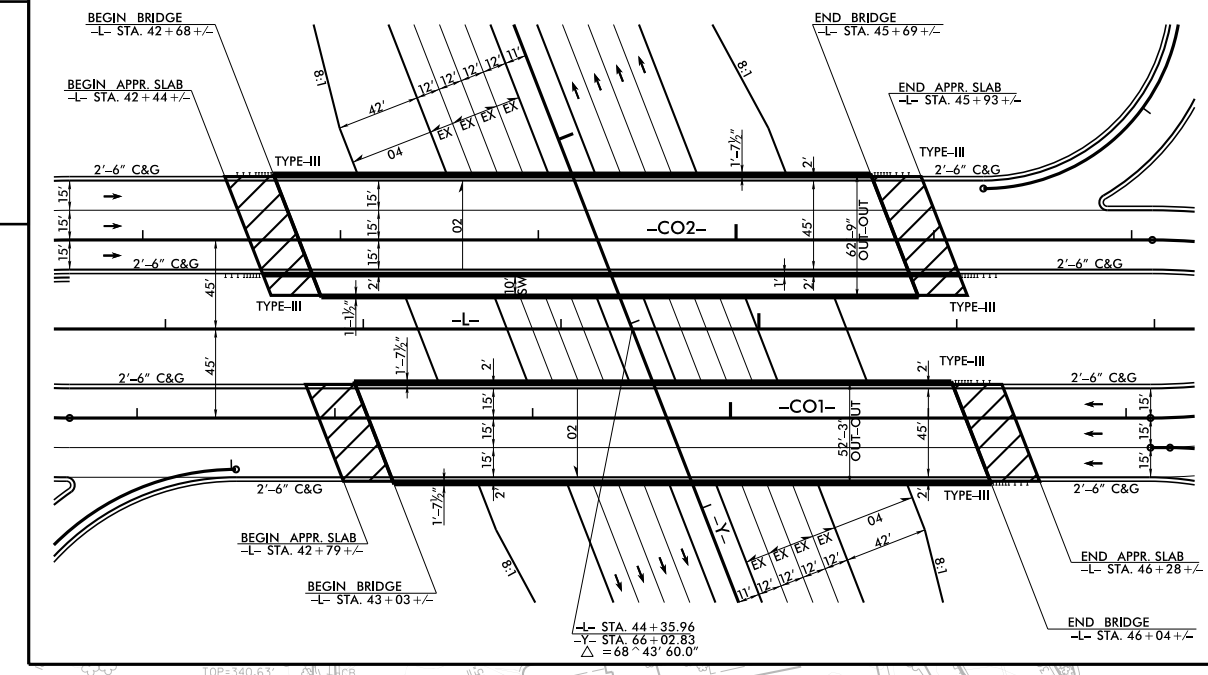


REVISIONS

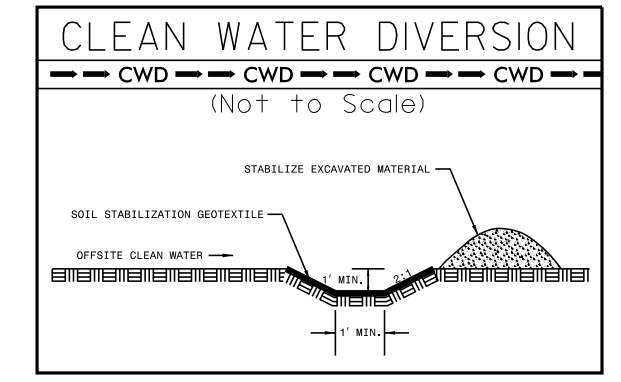
SKETCH SHOWING PAVEMENT STRUCTURE RELATIONSHIP



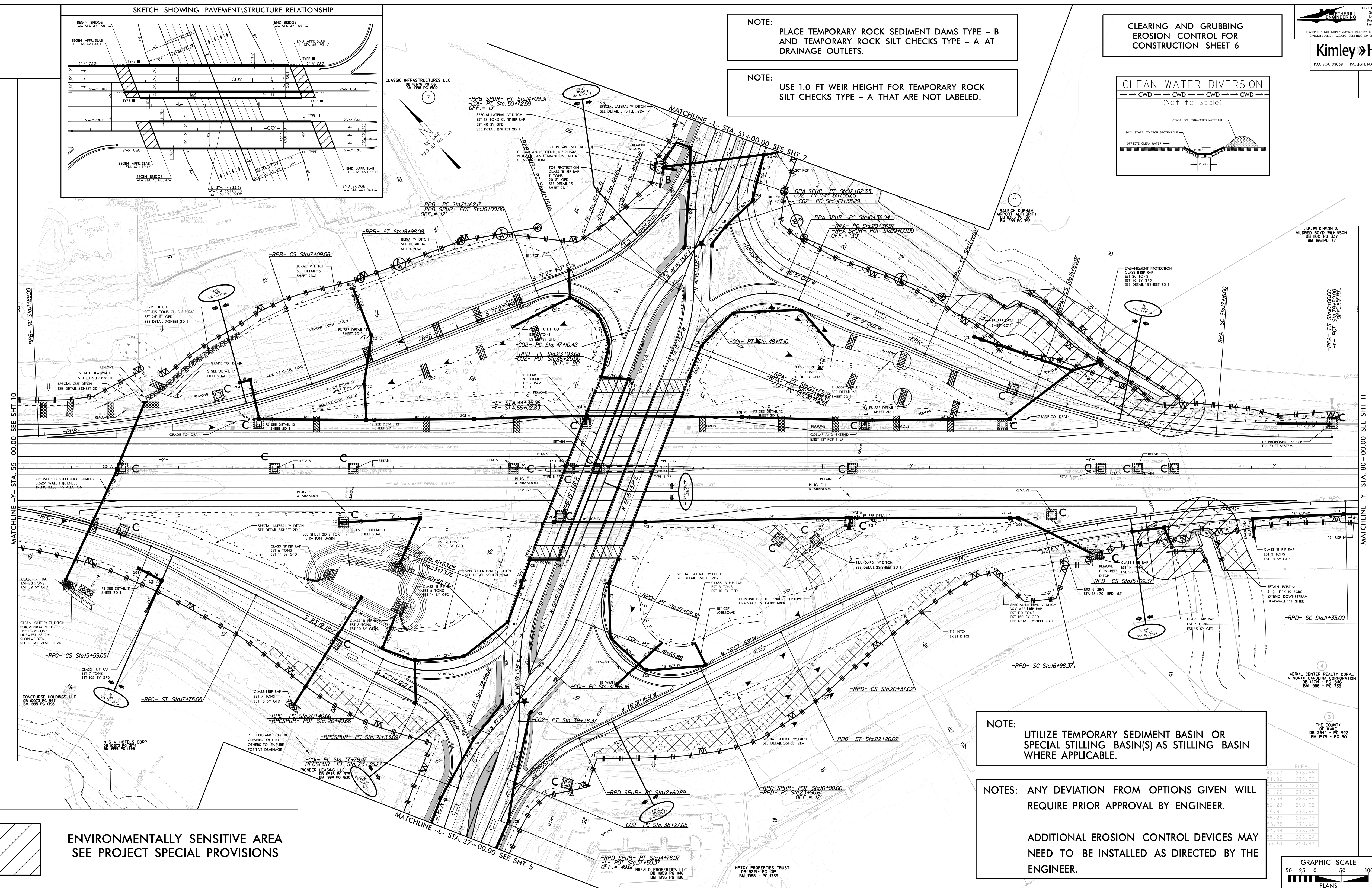
NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

NOTE: USE 1.0 FT WEIR HEIGHT FOR TEMPORARY ROCK SILT CHECKS TYPE - A THAT ARE NOT LABELED.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 6



Kimley-Horn logo and contact information: 1223 Johns Road, Raleigh, NC 27606. Project Reference No: I-5700, EC-6/CONST. Includes fields for SHEET NO., ROADWAY DESIGN ENGINEER, and HYDRAULICS ENGINEER.

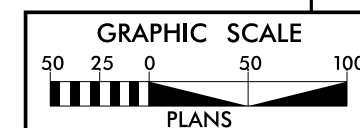


NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS



PROPOSED TRAFFIC SIGNAL

STATION	ELEVATION
2+10	270.68
2+20	270.72
2+30	270.77
2+40	270.81
2+50	270.85
2+60	270.89
2+70	270.93
2+80	270.97
2+90	271.01
3+00	271.05
3+10	271.09
3+20	271.13
3+30	271.17
3+40	271.21
3+50	271.25
3+60	271.29
3+70	271.33
3+80	271.37
3+90	271.41
4+00	271.45
4+10	271.49
4+20	271.53
4+30	271.57
4+40	271.61
4+50	271.65
4+60	271.69
4+70	271.73
4+80	271.77
4+90	271.81
5+00	271.85

TP NO. I-5700 COUNTY WAKE

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

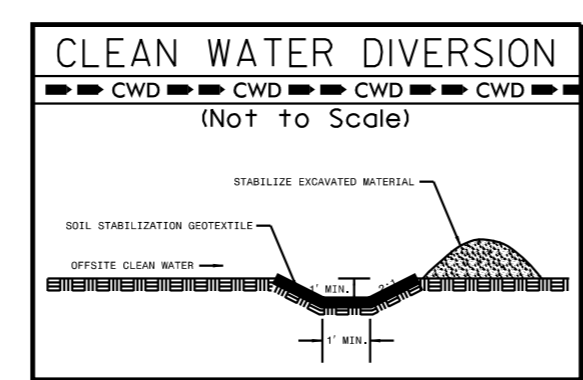


5/14/99

**NOTE:**  
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

**NOTES:** ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.



**NOTE:** PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

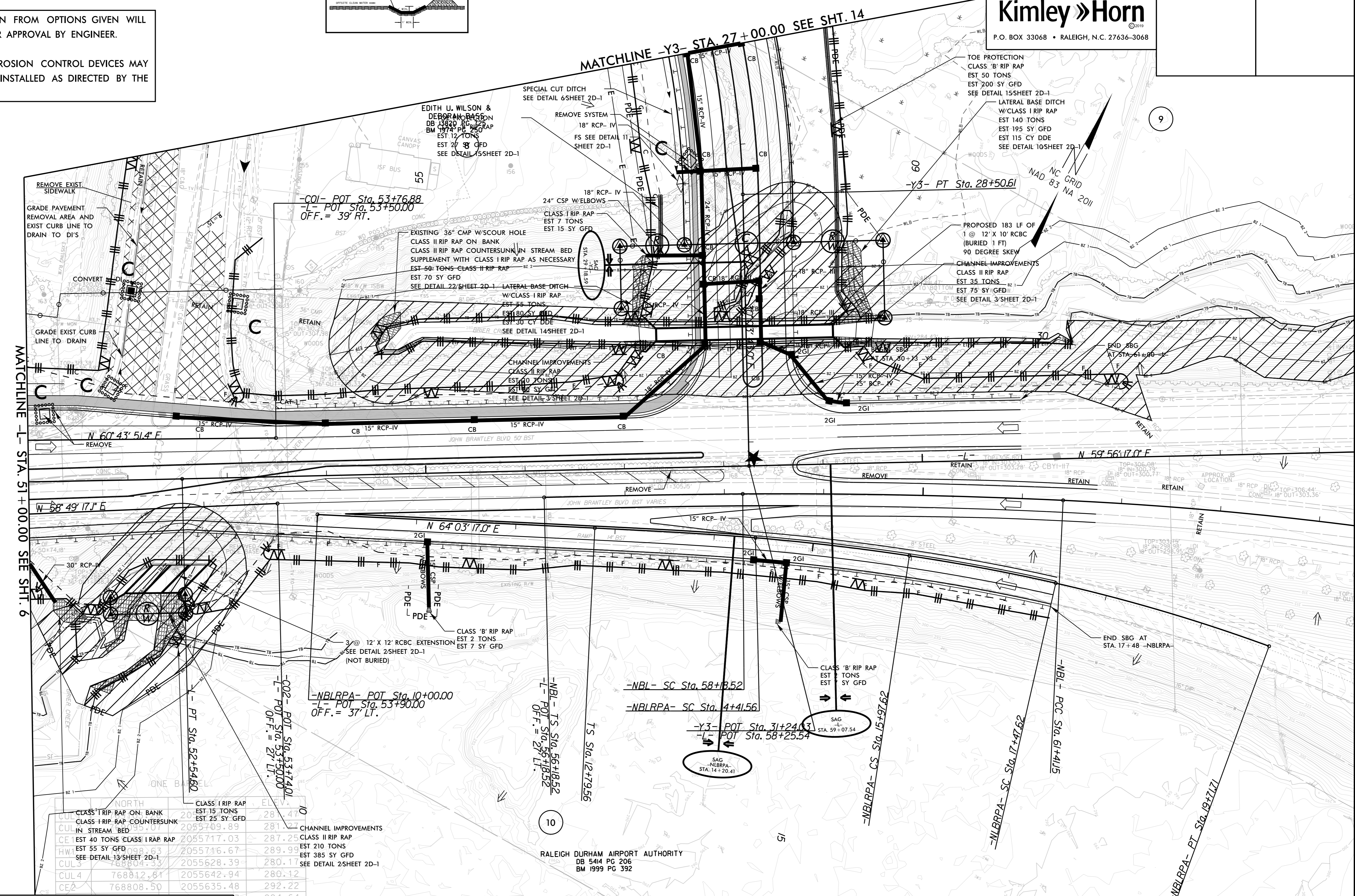
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7

**ETHERILL ENGINEERING**  
1223 Jones Franklin Rd.  
Raleigh, N.C. 27606  
License No. F-0377  
Bus: 919 851 8077  
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN  
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

**Kimley Horn**  
P.O. BOX 33068 • RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. <b>I-5700</b>	SHEET NO. <b>EC-7/CONST.7</b>
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	



	NORTH	CLASS I RIP RAP	EST	CLASS II RIP RAP	EST
CUL 1	768812.81	ON BANK	20	EST 15 TONS	28.47
CUL 2	768808.50	ON BANK	20	EST 25 SY GFD	281.00
CUL 3	768804.53	IN STREAM BED	2055709.89		281.00
CUL 4	768812.81	EST 40 TONS CLASS I RIP RAP	2055717.03	CHANNEL IMPROVEMENTS	287.25
HW	768808.63	EST 55 SY GFD	2055716.67	CLASS II RIP RAP	289.91
CUL 5	768804.53	SEE DETAIL 13/SHEET 2D-1	2055628.39	EST 210 TONS	280.11
CE 2	768808.50		2055635.48	EST 385 SY GFD	292.22
				SEE DETAIL 2/SHEET 2D-1	294.64

ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

★ PROPOSED TRAFFIC SIGNAL

SEE SHTS. 15 & 16 FOR -L- PROFILE  
SEE SHTS. 18 & 19 FOR -Y3- PROFILE  
SEE SHT. 17 FOR -NBL- PROFILE

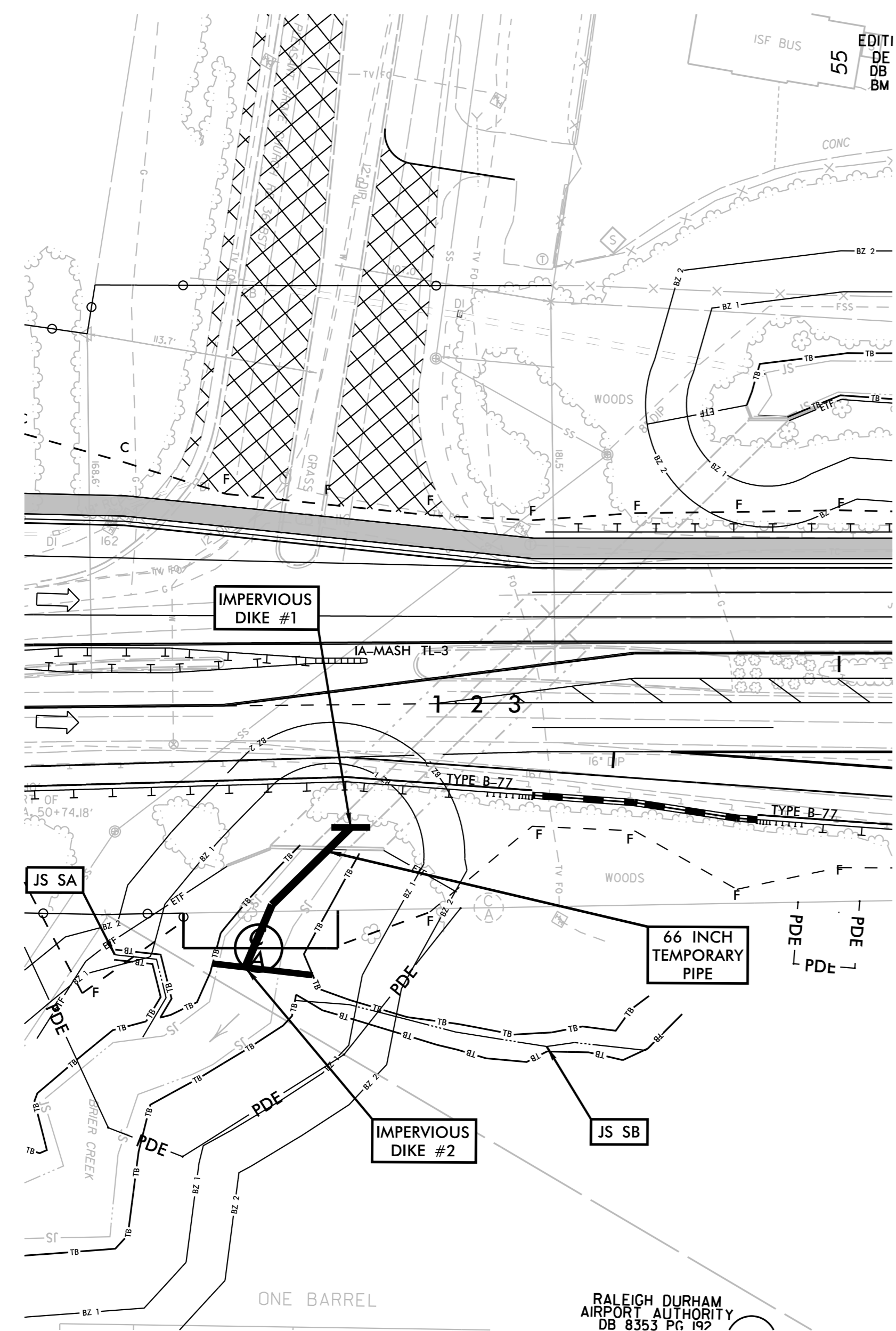


PROJECT REFERENCE NO.	SHEET NO.
I-5700	EC-7A/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# CULVERT CONSTRUCTION SEQUENCE STA. 53+39 -L-

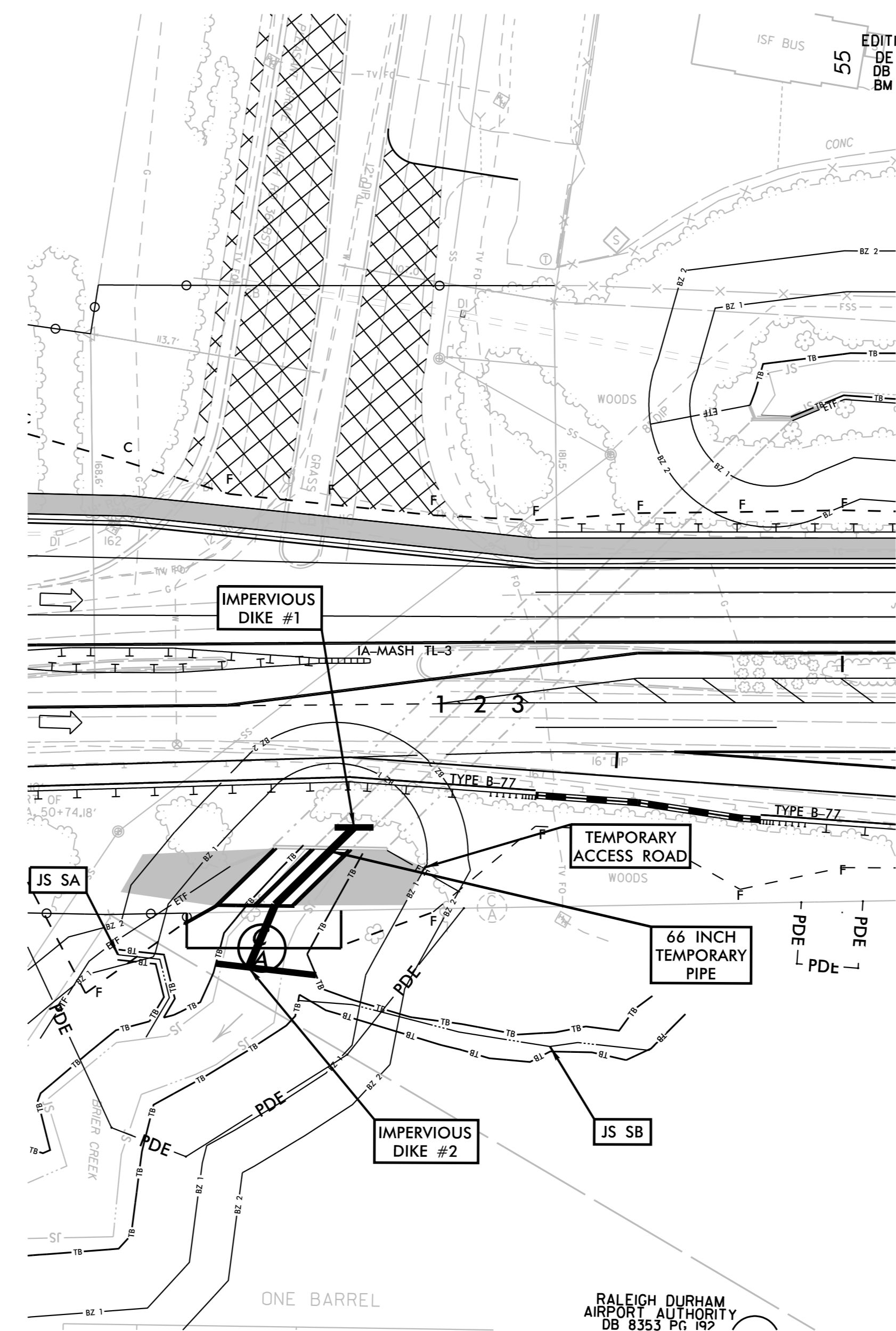
## PHASE I

- 1.) CONSTRUCT TEMPORARY SPECIAL STILLING BASIN, AND ALL OTHER TEMPORARY EROSION CONTROL MEASURES TO STABILIZE WORK AREA.
- 2.) CONSTRUCT IMPERVIOUS DIKES AT LOCATIONS SHOWN IN SKETCH AND INSTALL 1 @ 66" TEMPORARY PIPE IN BARREL 2. PIPE TO BE SUSPENDED OVER DOWNSTREAM EXCAVATION AS NEEDED.
- 3.) DEWATER THE AREA BETWEEN THE EXISTING CULVERT AND UPSTREAM OF OUTLET CHANNEL IMPROVEMENTS. EXCAVATE UNDER PROPOSED CULVERT FOOTPRINT AND STREAM BED PER GEOTECHNICAL RECOMMENDATIONS/STRUCTURAL PLANS.



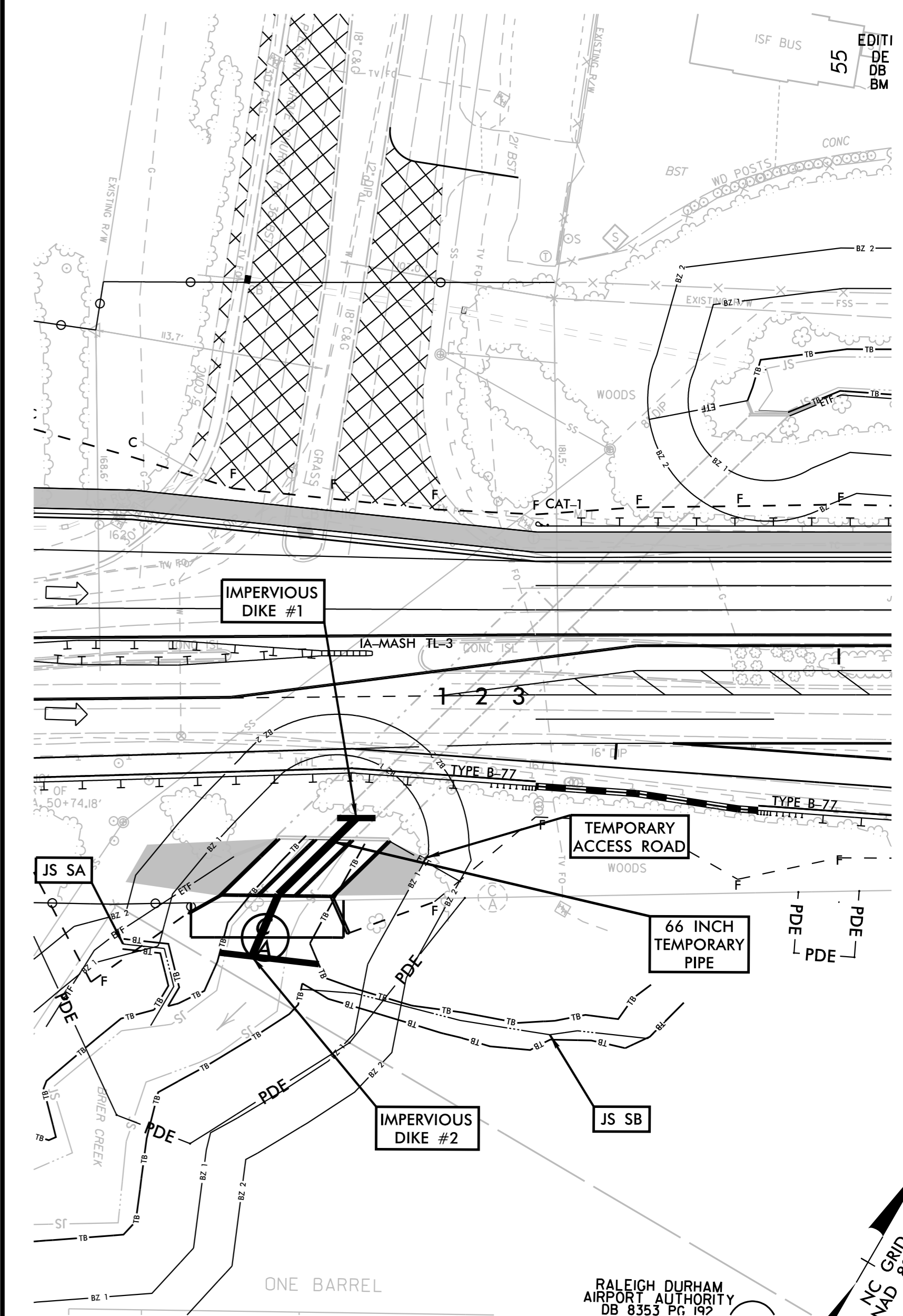
## PHASE II

- 1.) CONSTRUCT BARRELS 1 AND 2 OF 3 @ 12' X 12' RBCB DOWNSTREAM EXTENSION IN EXCAVATED TRENCH AS SHOWN, INCLUDING WESTERN MOST WINGWALL AT STATION 51+86 -L-.
- 2.) ONCE BARRELS 1 AND 2 ARE STABILIZED, FILL ON TOP OF AND ON BOTH SIDES OF BARRELS 1 AND 2 AND CONSTRUCT TEMPORARY ACCESS ROAD TO ACCESS EASTERN MOST CHANNEL BANKS
- 3.) USE TEMPORARY ACCESS ROAD TO MOVE CONSTRUCTION EQUIPMENT TO THE EASTERN MOST CHANNEL BANKS TO COMPLETE BARREL 3.



## PHASE III

- 1.) CONSTRUCT BARREL 3 OF 3 @ 12' X 12' RBCB DOWNSTREAM EXTENSION IN EXCAVATED TRENCH AS SHOWN, INCLUDING EASTERN MOST WINGWALL AT STATION 52+54 -L-.
- 2.) ONCE BARREL 3 IS STABILIZED, ADJUST TEMPORARY ACCESS ROAD AS NEEDED TO MAINTAIN ACCESS TO BOTH SIDES OF THE CHANNEL BANKS.



REVISIONS  
 CONST. REVISION - 9/202021 - UPDATED CULVERT SEQUENCING PHASING FOR 3@12' X 12' RBCB AT STA 53+39 -L- (DLH)

PROJECT REFERENCE NO.	SHEET NO.
I-5700	EC-7A/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

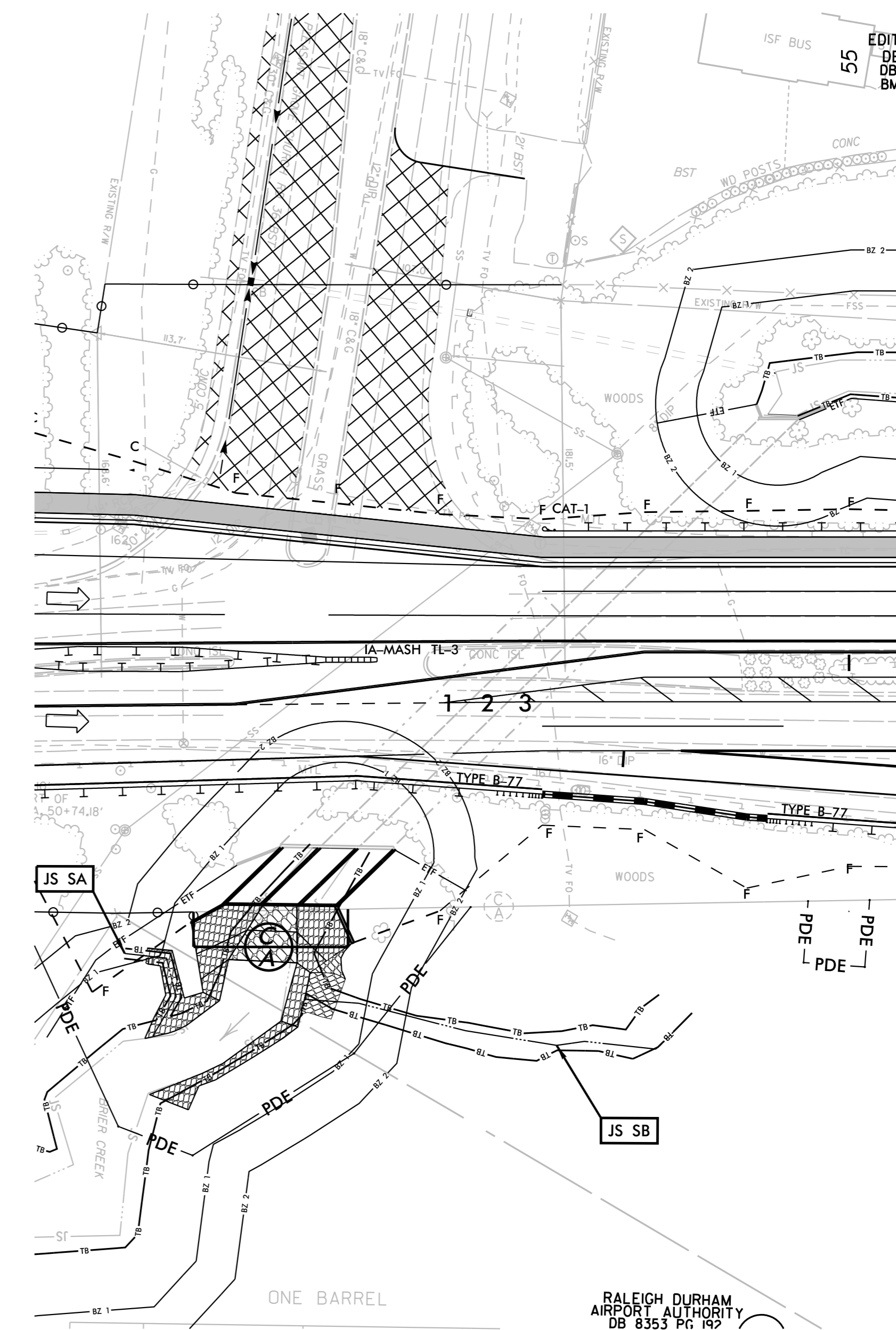
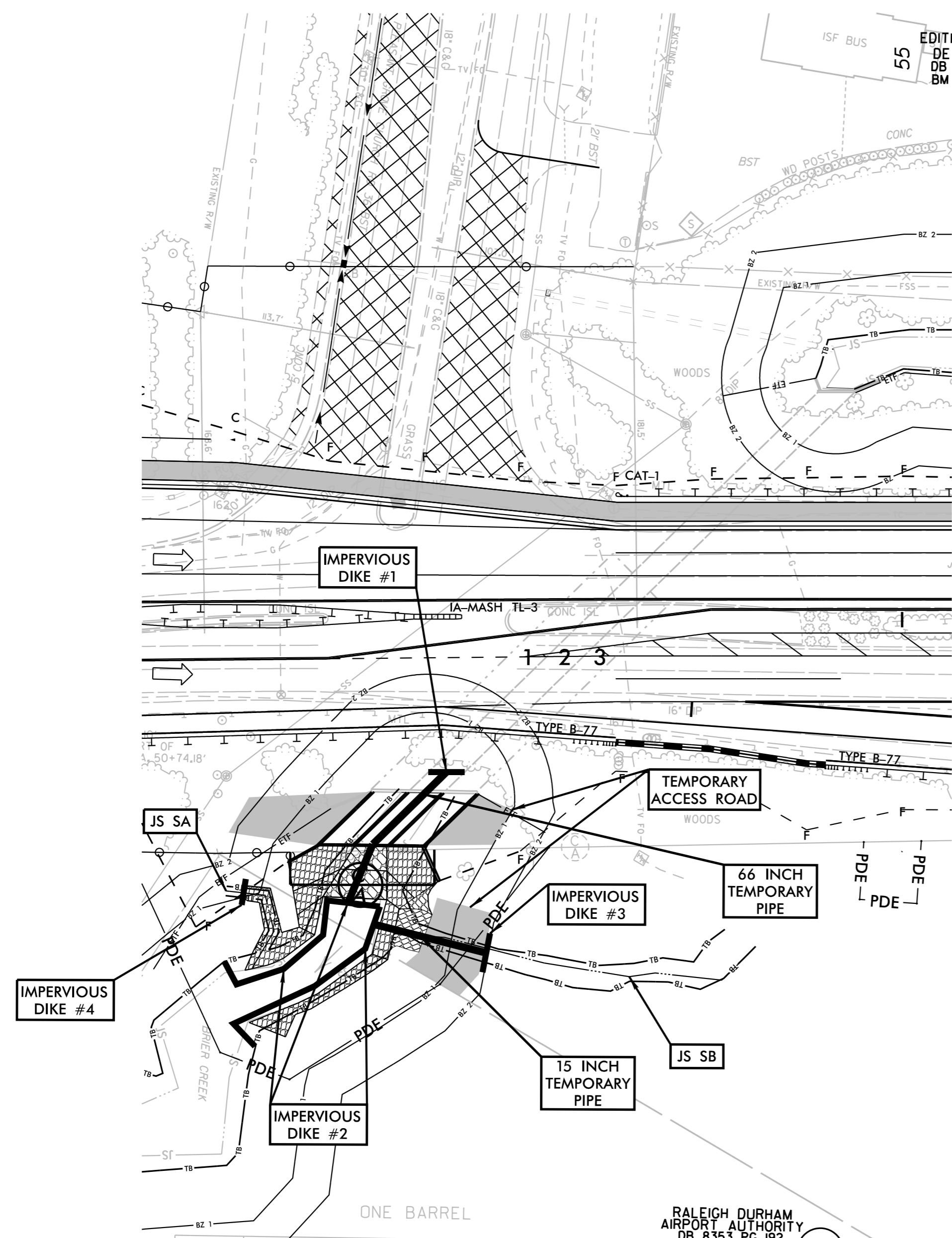
# CULVERT CONSTRUCTION SEQUENCE STA. 53 + 39 -L-

## PHASE IV

- 1.) CONSTRUCT IMPERVIOUS DIKE 3 AS SHOWN IN SKETCH AND INSTALL 1 @ 15" TEMPORARY PIPE IN JS SB. CONTRACTOR TO UTILIZE PUMP AROUND OPERATION AS NEEDED TO INSTALL 1@15" TEMPORARY PIPE. ACCESS ROAD WILL BE INSTALLED OVER TEMPORARY PIPE, ENSURING PIPE INLET AND OUTLET ARE NOT COVERED. TEMPORARY PIPE TO OUTFALL INTO MAIN CHANNEL DIRECTLY DOWNSTREAM OF IMPERVIOUS DIKE 2.
- 2.) EXTEND IMPERVIOUS DIKE 2 TO FULLY ENCOMPASS THE PROPOSED CHANNEL IMPROVEMENTS AND BANK STABILIZATION ON BOTH THE WEST AND EAST CHANNEL BANKS. 15" TEMPORARY PIPE ON JS SB TO CONVEY FLOW THROUGH IMPERVIOUS DIKE 2.
- 3.) CONSTRUCT DOWNSTREAM CHANNEL IMPROVEMENTS AND PLACE REQUIRED RIPRAP AND MATTING ON EAST CHANNEL BANKS. CONTRACTOR TO UTILIZE IMPERVIOUS DIKES TO WORK IN THE DRY. CONTRACTOR TO UTILIZE PUMP AROUND OPERATION AS NEEDED TO COMPLETE THE WORK WITHIN JS SB.
- 4.) CONSTRUCT IMPERVIOUS DIKE 4 AS SHOWN IN SKETCH.
- 5.) CONSTRUCT DOWNSTREAM CHANNEL IMPROVEMENTS AND PLACE REQUIRED RIPRAP AND MATTING ON WEST CHANNEL BANKS. CONTRACTOR TO UTILIZE IMPERVIOUS DIKES TO WORK IN THE DRY. CONTRACTOR TO UTILIZE PUMP AROUND OPERATION AS NEEDED TO COMPLETE THE WORK WITHIN JS SA.

## PHASE V

- 1.) REMOVE IMPERVIOUS DIKES AND 1 @ 66" AND 1 @ 15" TEMPORARY PIPES.
- 2.) REMOVE TEMPORARY SPECIAL STILLING BASIN.
- 3.) STABILIZE DISTURBED AREA, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES, AND REMOVE TEMPORARY ACCESS ROAD AS DIRECTED BY ENGINEER AND PLACE FINAL PROPOSED FILL ON TOP OF CULVERT.



REVISIONS  
 CONST. REVISION - 9/20/2021 - UPDATED CULVERT SEQUENCING PHASING FOR 3@12' X 12' RCBC AT STA 53+39 -L- (DLH)



5/14/99

PROJECT REFERENCE NO. I-5700	SHEET NO. EC-7B/CONST.7
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

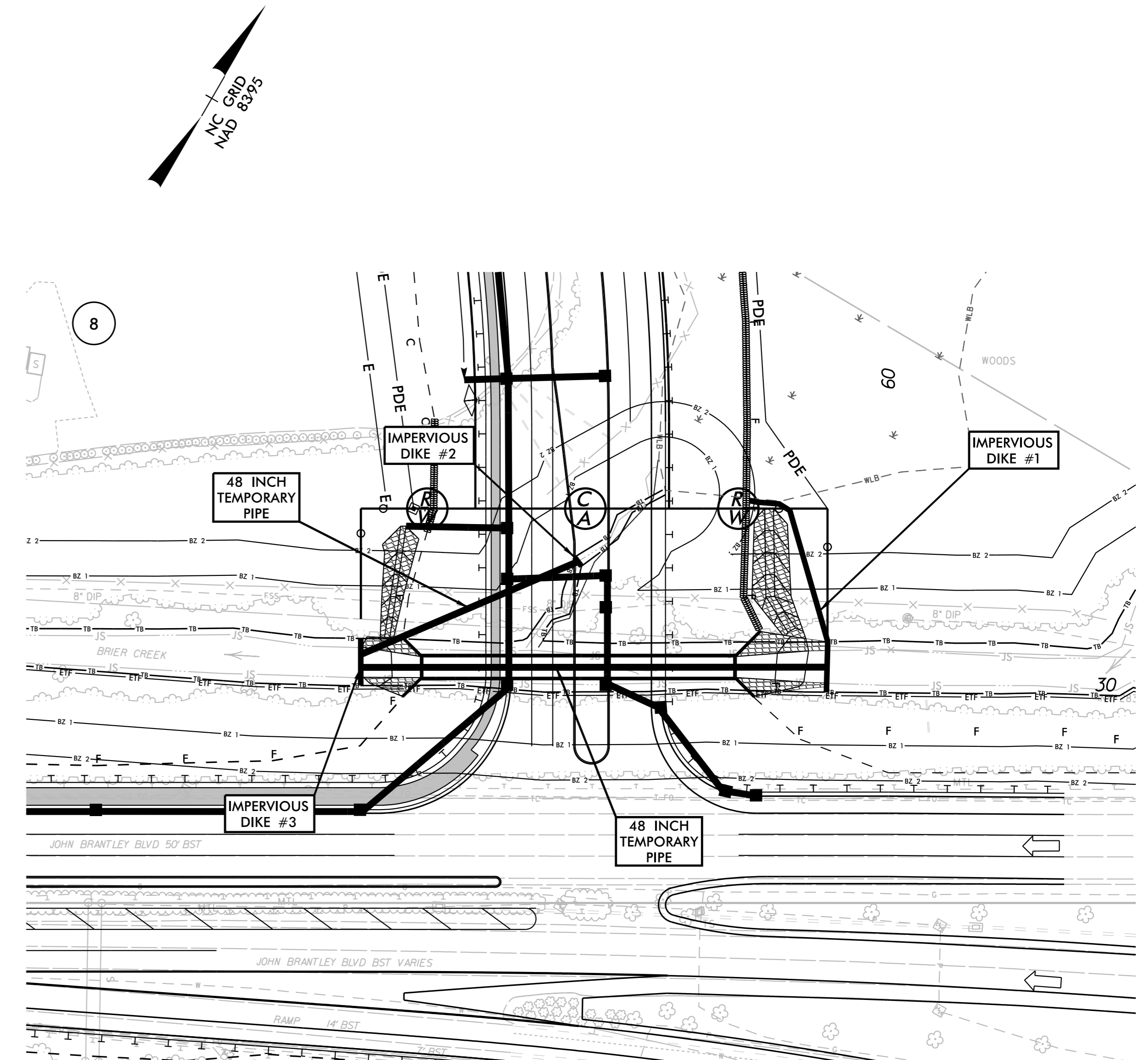
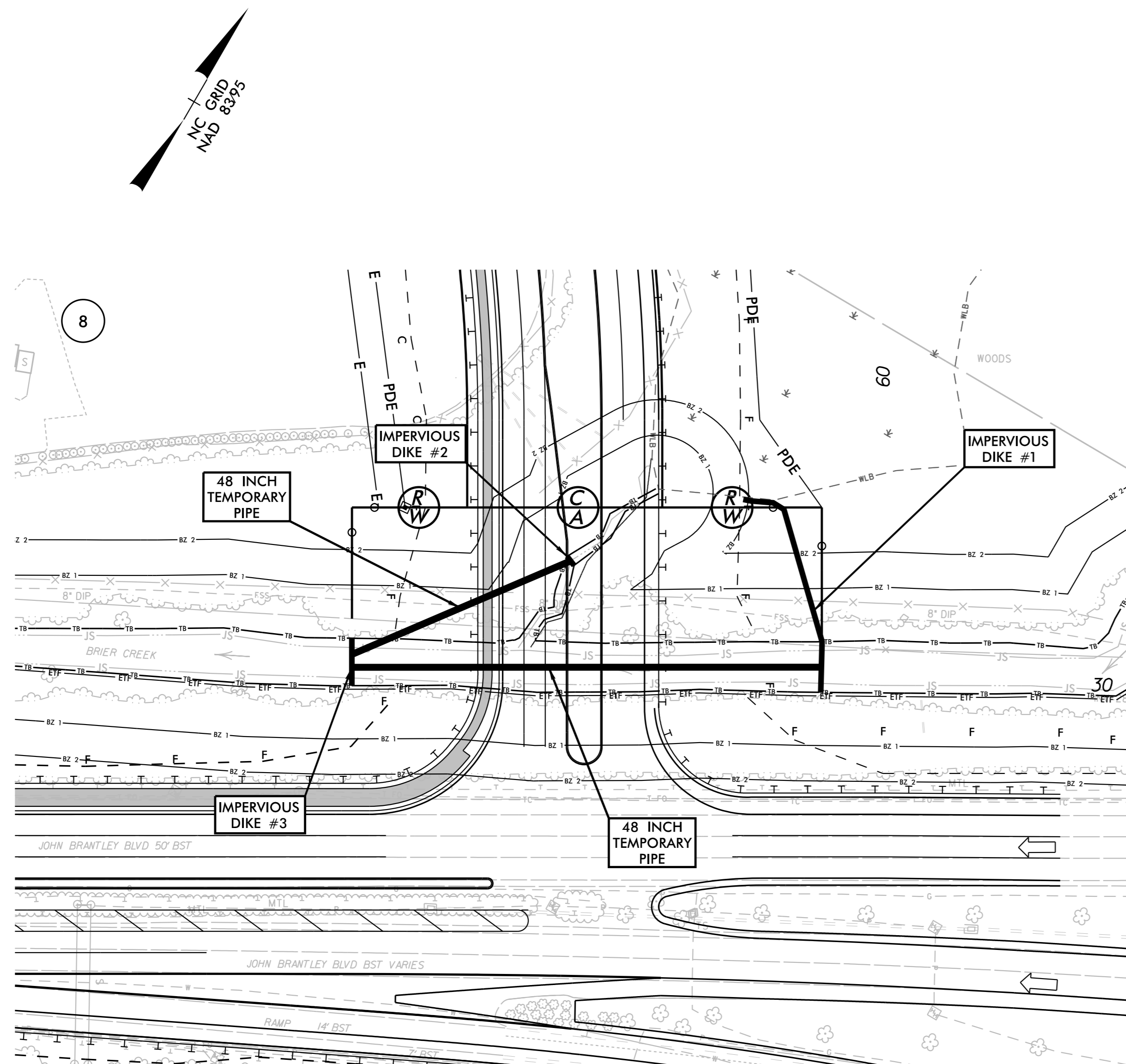
# CULVERT CONSTRUCTION SEQUENCE STA. 29+90 -Y3-

## PHASE I

- 1.) CONSTRUCT TEMPORARY SPECIAL STILLING BASIN, AND ALL OTHER TEMPORARY EROSION CONTROL MEASURES TO STABILIZE WORK AREA.
- 2.) CONSTRUCT IMPERVIOUS DIKES AT LOCATIONS SHOWN IN SKETCH AND INSTALL 2 @ 48" TEMPORARY PIPES. PIPES TO BE SUSPENDED OVER CULVERT EXCAVATION AS NEEDED.
- 3.) DEWATER THE PROPOSED CULVERT AREA BETWEEN THE IMPERVIOUS DIKES. EXCAVATE UNDER PROPOSED CULVERT FOOTPRINT AND STREAM BED PER GEOTECHNICAL RECOMMENDATIONS / STRUCTURAL PLANS.
- 4.) REFERENCE SHEET TMP SHEETS FOR ADDITIONAL DETAIL REGARDING TRAFFIC MANAGEMENT.

## PHASE II

- 1.) CONSTRUCT 1 @ 12' X 10' RCBC, BURIED 1' IN EXCAVATED TRENCH, WINGWALLS AT STATION 33+31 -L- AND CONSTRUCT ROADWAY FILL.
- 2.) MAKE UPSTREAM AND DOWNSTREAM CHANNEL IMPROVEMENTS AND PLACE REQUIRED RIPRAP AND MATTING ON CHANNEL BANKS.
- 3.) REMOVE IMPERVIOUS DIKES AND 2 @ 48" SMOOTH WALL TEMPORARY PIPES.
- 4.) REMOVE TEMPORARY SPECIAL STILLING BASIN.
- 5.) STABILIZE DISTURBED AREA AND REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES AS DIRECTED BY ENGINEER.



10/9/2019



5/14/99

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 8

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PROJECT REFERENCE NO.  
1-5700  
SHEET NO.  
EC-8/CONST.8

RW SHEET NO.  
ROADWAY DESIGN  
ENGINEER  
HYDRAULICS  
ENGINEER

Kimley & Horn  
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P.O. BOX 33068 RALEIGH, N.C. 27636-3068

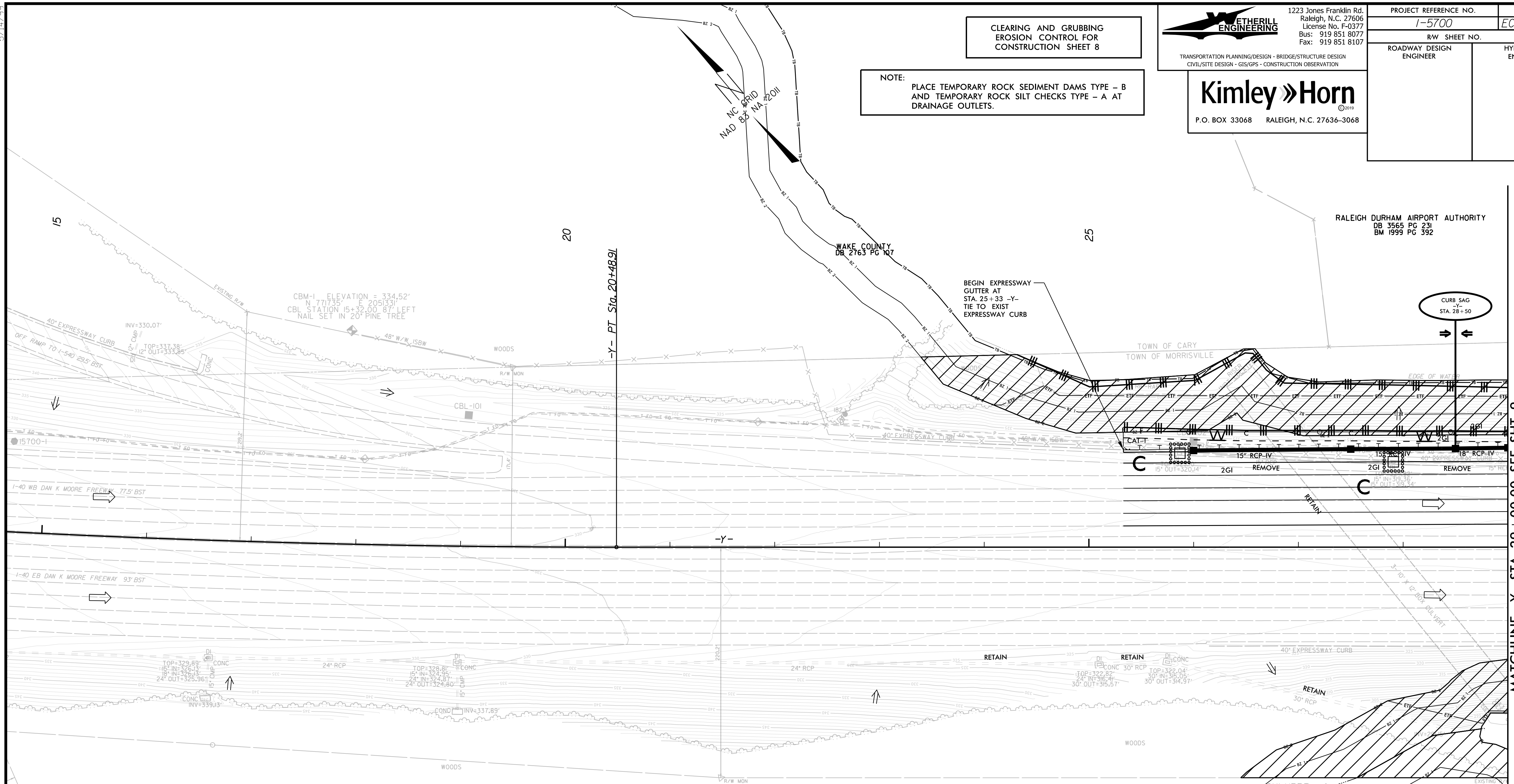
NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

RALEIGH DURHAM AIRPORT AUTHORITY  
DB 3565 PG 231  
BM 1999 PG 392

WAKE COUNTY  
DB 2163 PG 107

-Y- PT Sta. 20+48.91

MATCHLINE -Y- STA. 29+00.00 SEE SHT. 9



SLATER ROAD ILLC  
DB 16199 PG 2760  
BM 2017 PG 709

	NORTH	EAST	ELEV.
CUL1	770756.19	2051929.68	284.48
CUL2	770748.23	2051933.22	283.82
CUL3	770747.54	2051940.12	283.76
CUL4	770739.36	2051949.65	283.79
CUL5	770738.66	2051950.55	283.78
CUL6	770730.61	2051959.90	284.21
CE1	770743.		
HW1	770743.		

NOTE:  
UTILIZE TEMPORARY SEDIMENT BASIN OR  
SPECIAL STILLING BASIN(S) AS STILLING BASIN  
WHERE APPLICABLE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL  
REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY  
NEED TO BE INSTALLED AS DIRECTED BY THE  
ENGINEER.

 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

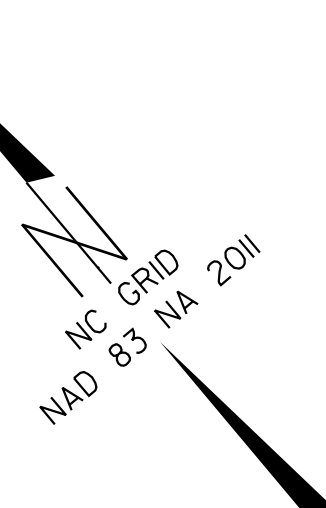
SEE SHTS. 20 THRU 23 FOR -Y- PROFILE



5/14/99

RALEIGH DURHAM AIRPORT AUTHORITY  
DB 3565 PG 231  
BM 1939 PG 392

POSSIBLE OVERLAP



**CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 9**

NOTE:  
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B  
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT  
DRAINAGE OUTLETS.

NOTE:  
USE 1.0 FT WEIR HEIGHT FOR TEMPORARY ROCK  
SILT CHECKS TYPE - A THAT ARE NOT LABELED.

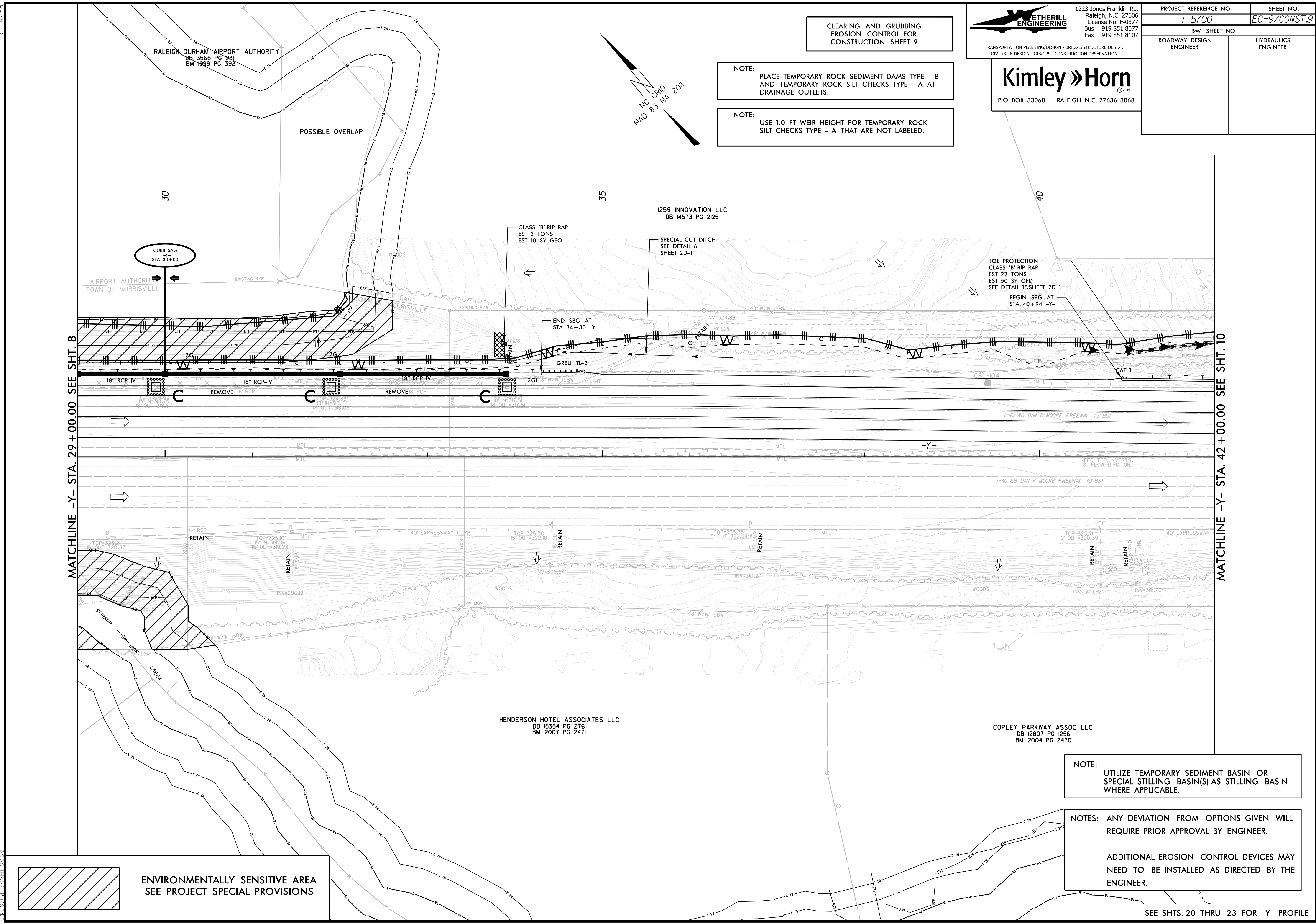
**ETHERILL  
ENGINEERING**  
1223 Jones Franklin Rd.  
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Fax: 919 851 8107

**Kimley Horn**  
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P.O. BOX 33068 RALEIGH, N.C. 27636-3068

PROJECT REFERENCE NO. 1-5700	SHEET NO. EC-9/CONST.9
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

MATCHLINE -Y- STA. 29+00.00 SEE SHT. 8

MATCHLINE -Y- STA. 42+00.00 SEE SHT. 10



 ENVIRONMENTALLY SENSITIVE AREA  
SEE PROJECT SPECIAL PROVISIONS

NOTE:  
UTILIZE TEMPORARY SEDIMENT BASIN OR  
SPECIAL STILLING BASIN(S) AS STILLING BASIN  
WHERE APPLICABLE.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL  
REQUIRE PRIOR APPROVAL BY ENGINEER.  
  
ADDITIONAL EROSION CONTROL DEVICES MAY  
NEED TO BE INSTALLED AS DIRECTED BY THE  
ENGINEER.

SEE SHTS. 20 THRU 23 FOR -Y- PROFILE

30  
CURB SAG  
STA. 30+00

35

40

1259 INNOVATION LLC  
DB 14573 PG 2125

CLASS 'B' RIP RAP  
EST 3 TONS  
EST 10 SY GEO

SPECIAL CUT DITCH  
SEE DETAIL 6  
SHEET 2D-1

TOE PROTECTION  
CLASS 'B' RIP RAP  
EST 22 TONS  
EST 50 SY GFD  
SEE DETAIL 15 SHEET 2D-1  
BEGIN SBG AT  
STA. 40+94 -Y-

END SBG AT  
STA. 34+30 -Y-

GREU TL-3

1-40 WB DAN K MOORE FREEWAY 73' BST

1-40 EB DAN K MOORE FREEWAY 79' BST

HENDERSON HOTEL ASSOCIATES LLC  
DB 15354 PG 276  
BM 2007 PG 2471

COPLEY PARKWAY ASSOC LLC  
DB 12807 PG 1256  
BM 2004 PG 2470