PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-8B/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

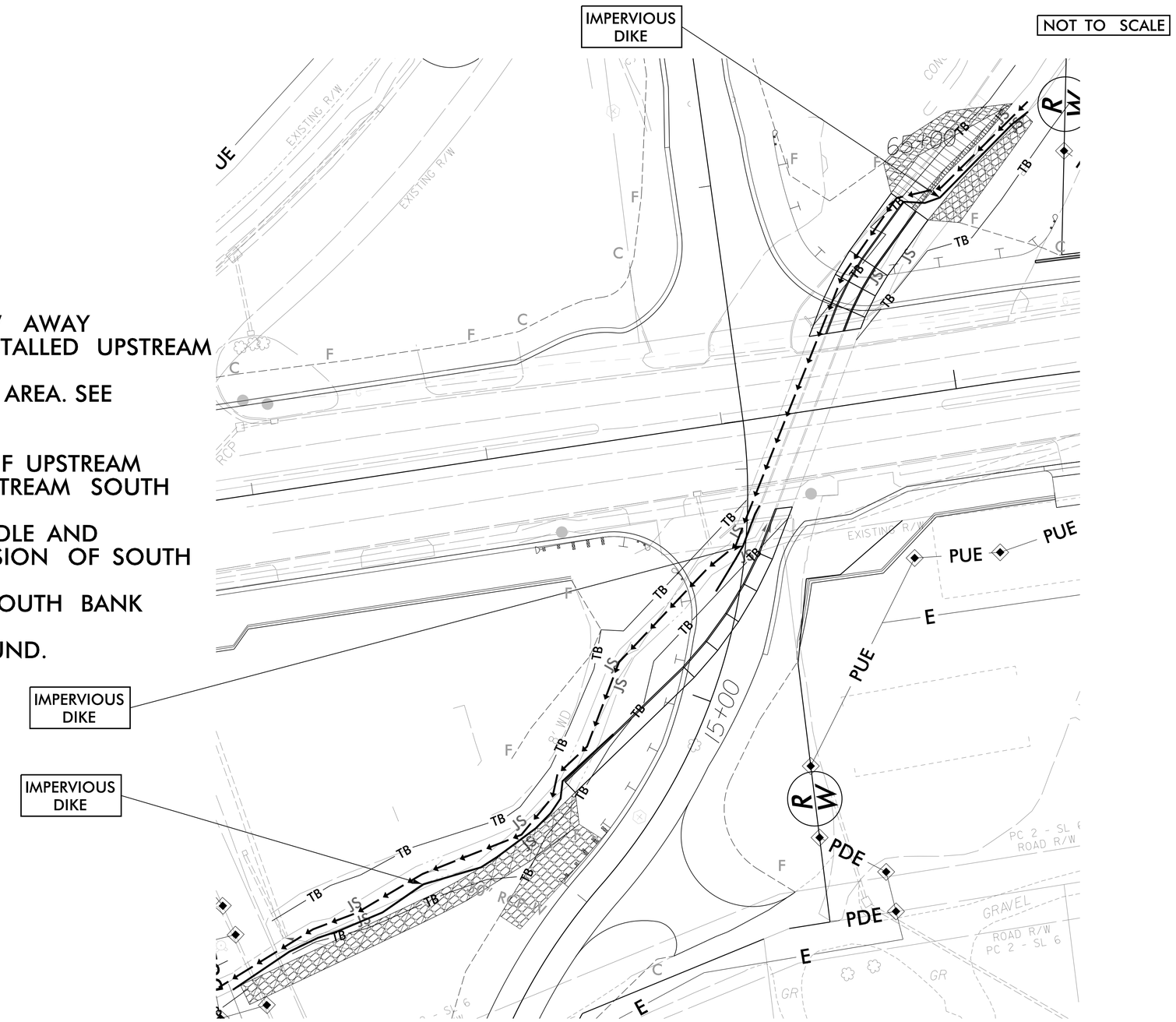
3@6'x6' RCBC CULVERT CONSTRUCTION SEQUENCE STA. 64+25 –L–

NOT TO SCALE

NAD 83/NA 2011

PHASE II

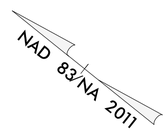
1. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW AWAY FROM WORK AREA AND INTO NEWLY INSTALLED UPSTREAM NORTH BARREL OF CULVERT.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. REMOVE PORTION OF EXISTING CULVERT AS NECESSARY TO CONSTRUCT EXTENSIONS OF UPSTREAM MIDDLE AND SOUTH BARREL, AND DOWNSTREAM SOUTH BARREL OF CULVERT.
4. CONSTRUCT UPSTREAM EXTENSIONS OF MIDDLE AND SOUTH BARREL AND DOWNSTREAM EXTENSION OF SOUTH BARREL OF CULVERT.
5. COMPLETE UPSTREAM AND DOWNSTREAM SOUTH BANK CHANNEL IMPROVEMENTS.
6. REMOVE IMPERVIOUS DIKES AND PUMP–AROUND.



PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-8C/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

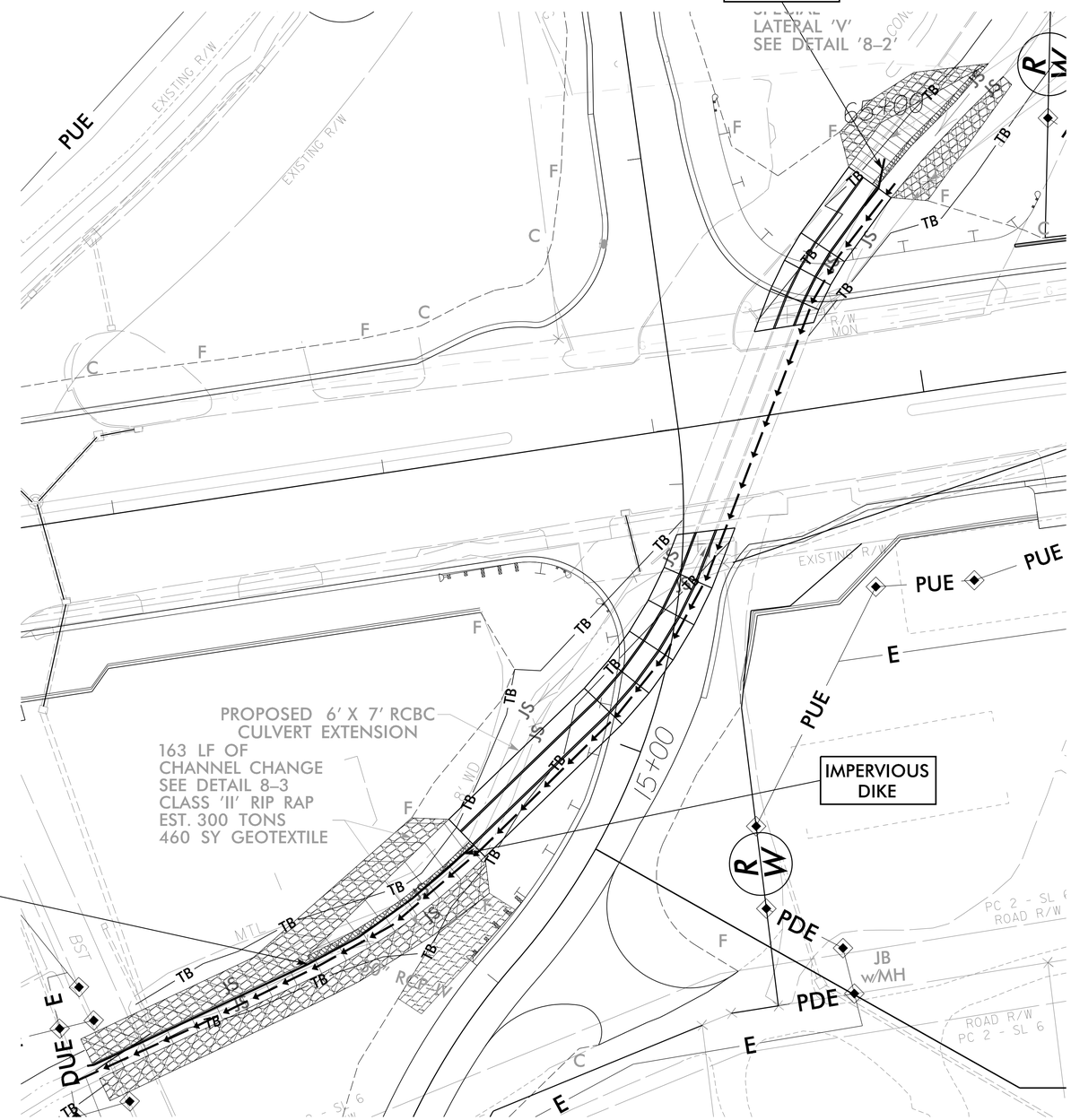
3@6'x6' RCBC CULVERT CONSTRUCTION SEQUENCE STA. 64+25 –L–

NOT TO SCALE



PHASE III

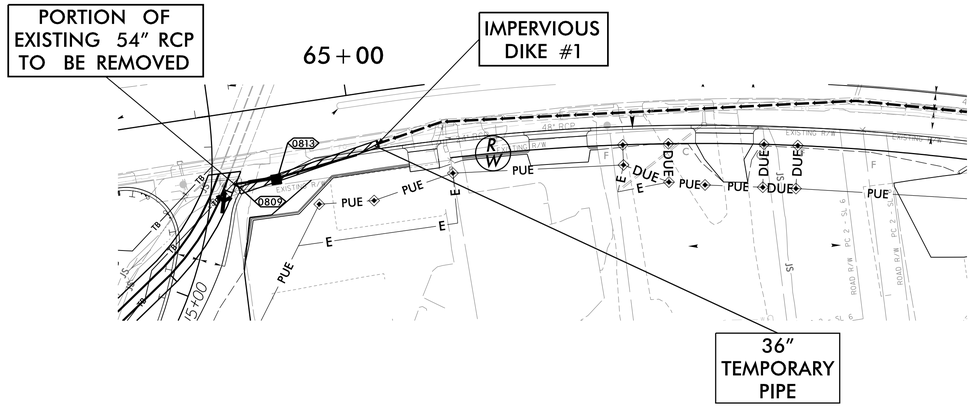
1. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW AWAY FROM WORK AREA AND INTO NEWLY CONSTRUCTED UPSTREAM SOUTH BARREL.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. REMOVE PORTION OF EXISTING CULVERT AS NECESSARY TO CONSTRUCT EXTENSIONS OF DOWNSTREAM NORTH AND MIDDLE BARRELS.
4. CONSTRUCT DOWNSTREAM EXTENSIONS OF NORTH AND MIDDLE BARRELS OF CULVERT, USING SPECIAL STILLING BASIN AND BYPASS PUMPS TO DE–WATER THE WORK ZONE.
5. COMPLETE DOWNSTREAM NORTH BANK CHANNEL IMPROVEMENTS.
6. REMOVE DOWNSTREAM IMPERVIOUS DIKE AND PUMP–AROUND.
7. REMOVE UPSTREAM IMPERVIOUS DIKE, SPECIAL STILLING BASIN(S), AND PUMP–AROUND AND ALLOW WATER TO FLOW THROUGH NEWLY CONSTRUCTED BARRELS OF CULVERT.



PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-8D/CONST.8
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

60" RCP CULVERT CONSTRUCTION SEQUENCE FROM STA. 64+00 TO 71+00 –L–

NOT TO SCALE



PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NECESSARY.
2. INSTALL IMPERVIOUS DIKE #1.
3. REMOVE PORTION OF EXISTING 54" RCP AS SHOWN.
4. USE PUMP–AROUND OPERATION AS NECESSARY TO DIVERT WATER FROM NEW OUTLET OF EXISTING 54" RCP TO STREAM. SEE EC–2B.
5. INSTALL PORTION OF PROPOSED STORM DRAIN SYSTEM AS SHOWN IN THIS PHASE.
6. REMOVE PUMP–AROUND OPERATION AND INSTALL TEMPORARY 36" PIPE TO DIRECT FLOW INTO NEWLY INSTALLED SYSTEM.

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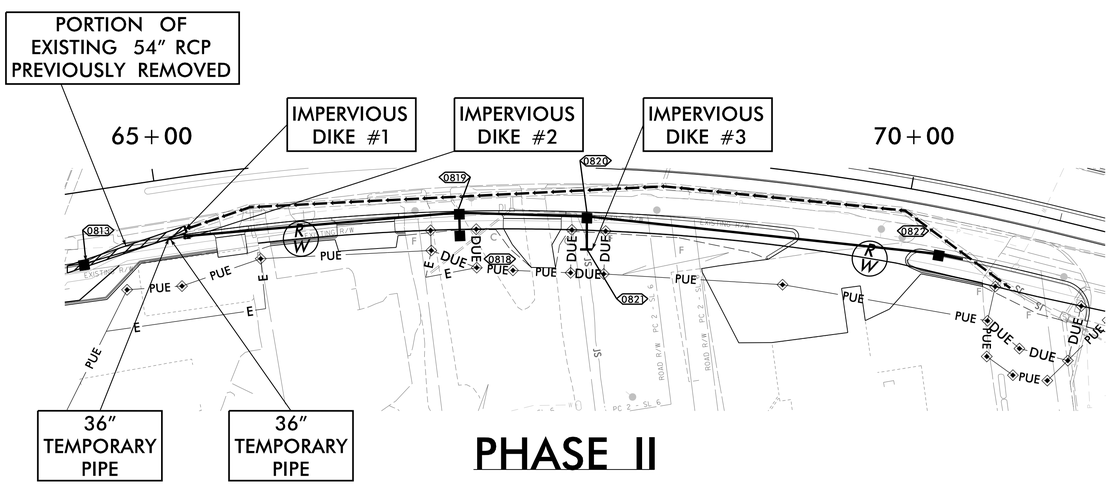
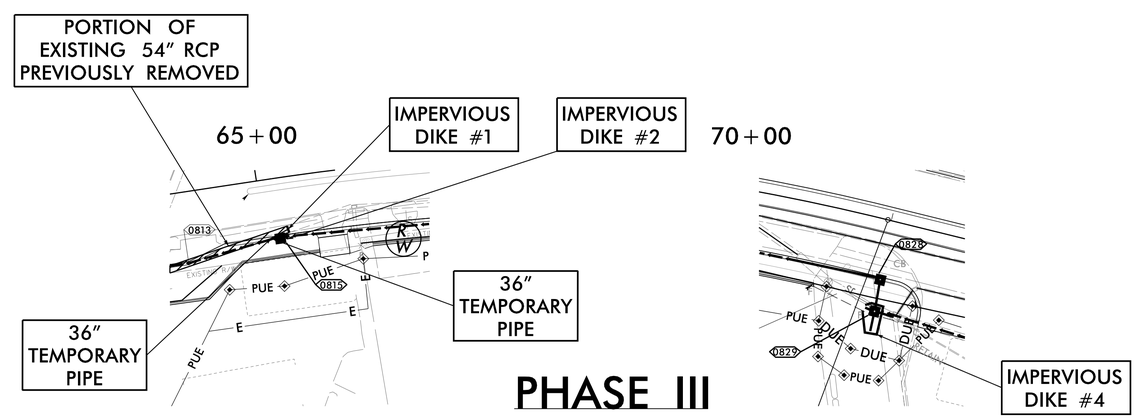


PHASE II

1. UTILIZE SPECIAL STILLING BASIN(S) AS NECESSARY.
2. INSTALL STRUCTURES 0819 AND 0818 AND 15" RCP BETWEEN 0818 AND 0819. INSTALL PORTION OF 60" RCP AS SHOWN.
3. INSTALL IMPERVIOUS DIKE #2 AT END OF NEWLY INSTALLED PORTION OF 60" RCP AS SHOWN AND TEMPORARY 36" PIPE TO DIVERT FLOW INTO PREVIOUSLY INSTALLED SYSTEM.
4. INSTALL IMPERVIOUS DIKE #3 AND USE PUMP–AROUND OPERATION TO DIVERT WATER INTO STRUCTURE 0818. SEE EC–2B.
5. INSTALL STRUCTURES 0821 AND 0820, 18" RCP BETWEEN 0821 AND 0820, AND 60" RCP BETWEEN 0820 AND 0819.
6. REMOVE IMPERVIOUS DIKE #3 AND PUMP–AROUND.
7. INSTALL STRUCTURE 0822, 60" RCP BETWEEN 0822 AND 0820, PORTION OF 60" RCP FROM FUTURE 0828 TO 0822 AS SHOWN.



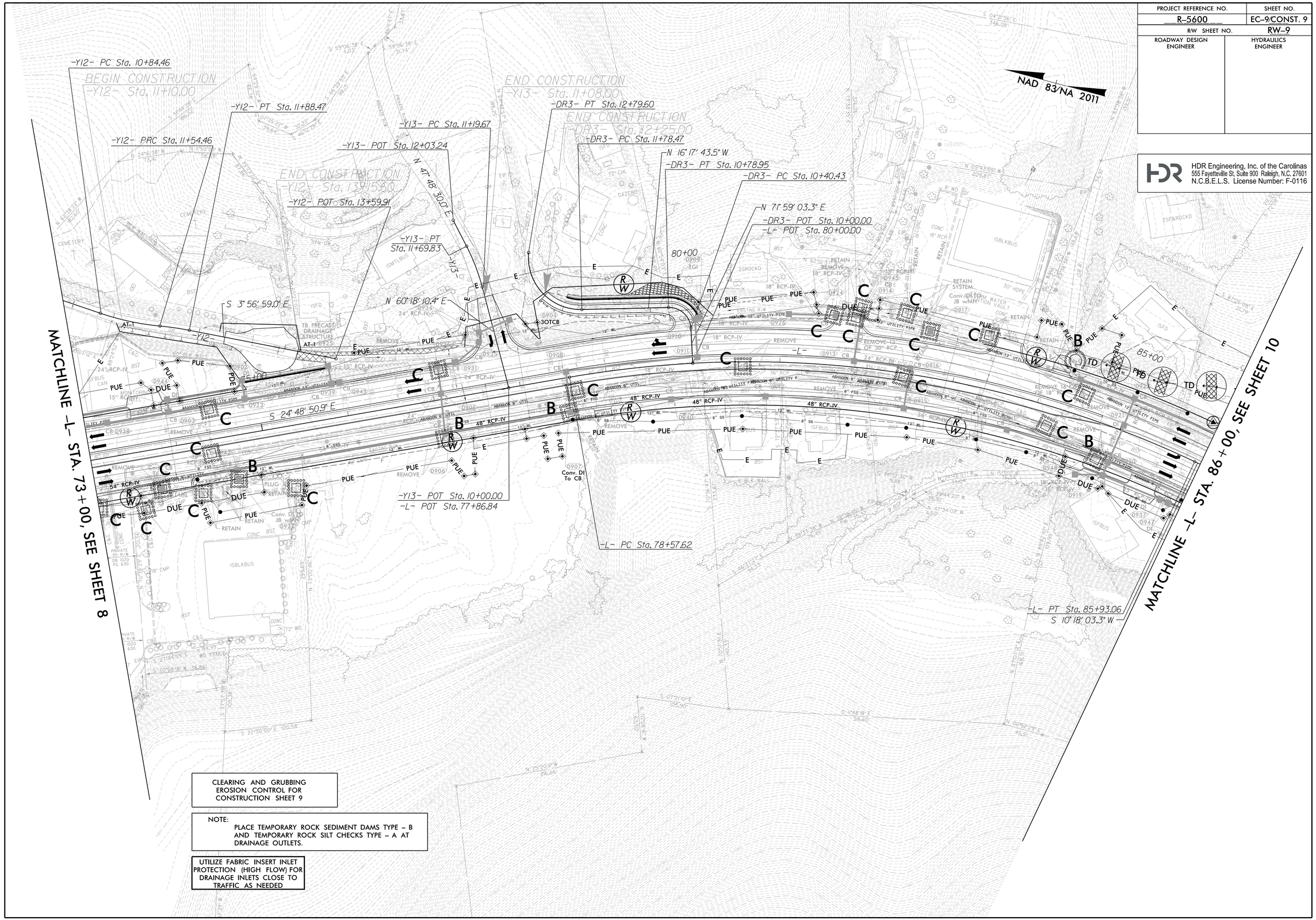
PHASE III

1. UTILIZE SPECIAL STILLING BASIN(S) AS NECESSARY.
2. REMOVE TEMPORARY 36" AND 36" PIPES.
3. INSTALL STRUCTURE 0815 AND REMAINING PORTION OF 60" RCP IN VICINITY. REMOVE IMPERVIOUS DIKES #1 AND #2.
4. INSTALL IMPERVIOUS DIKE #4 AND USE PUMP–AROUND OPERATION TO DIVERT WATER INTO PREVIOUSLY INSTALLED PORTION OF 60" RCP. SEE EC–2B.
5. INSTALL STRUCTURES 0828 AND 0829, 24" RCP UPSTREAM OF 0829, 48" RCP BETWEEN 0829 AND 0828, AND REMAINING PORTION OF 60" RCP BETWEEN 0828 AND 0822.
6. REMOVE IMPERVIOUS DIKE #4 AND ALLOW WATER TO FLOW INTO NEWLY INSTALLED SYSTEM.
7. INSTALL REMAINING PORTIONS OF STORM DRAIN SYSTEM.
8. REMOVE REMAINING PORTIONS OF EXISTING STORM DRAIN SYSTEM OR FILL WITH FLOWABLE FILL.

NOTE: STEPS 2–7 TO BE PERFORMED SIMULTANEOUSLY

PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-9/CONST. 9
R/W SHEET NO.	RW-9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



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.

UTILIZE FABRIC INSERT INLET PROTECTION (HIGH FLOW) FOR DRAINAGE INLETS CLOSE TO TRAFFIC AS NEEDED

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PENTABLE: NCDOT_EC_C&G BW.tbl
TIME: 3:08:57 PM

PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-10/CONST. 10
R/W SHEET NO.	RW-10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
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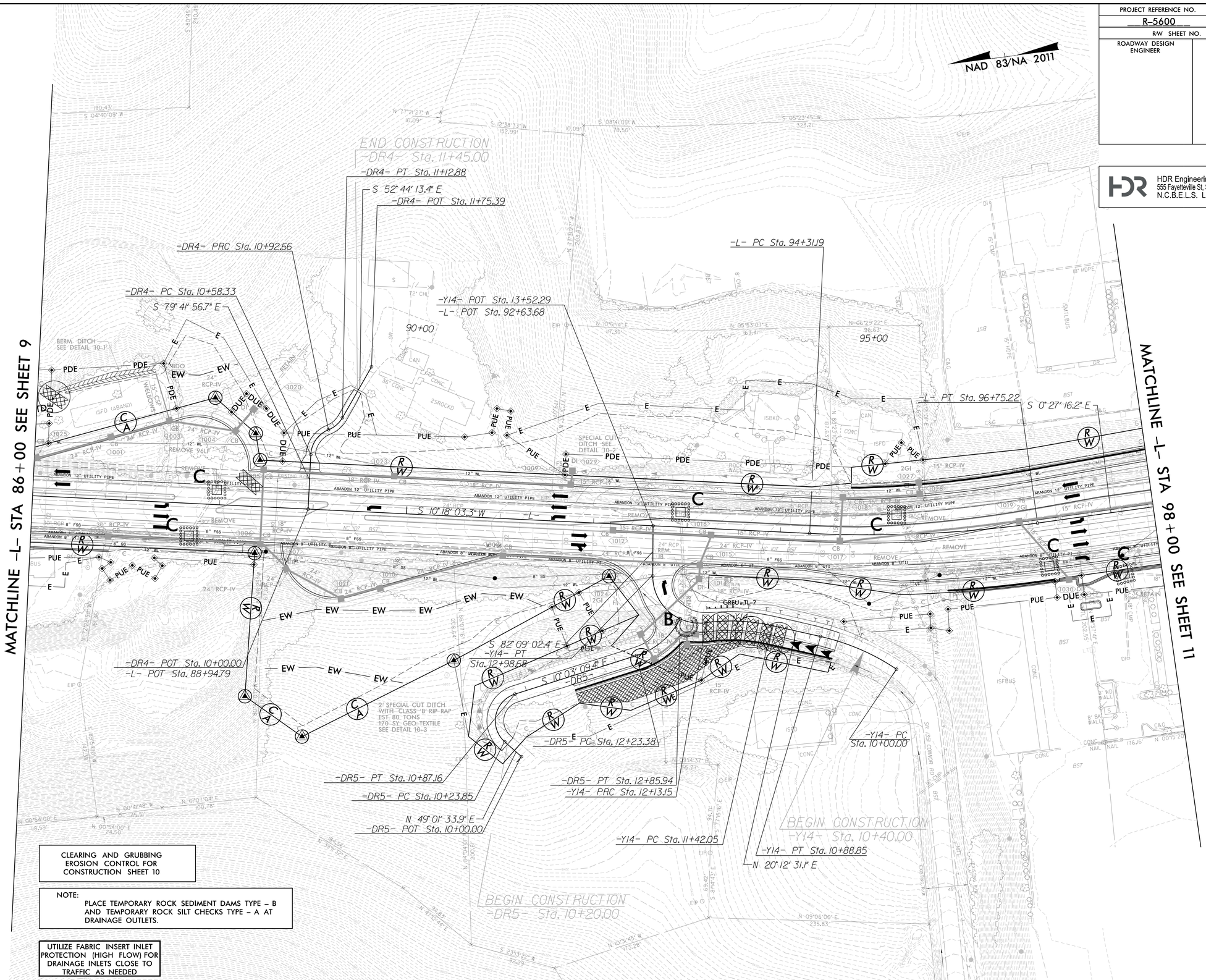
N.C.B.E.L.S. License Number: F-0116



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10

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

UTILIZE FABRIC INSERT INLET PROTECTION (HIGH FLOW) FOR DRAINAGE INLETS CLOSE TO TRAFFIC AS NEEDED

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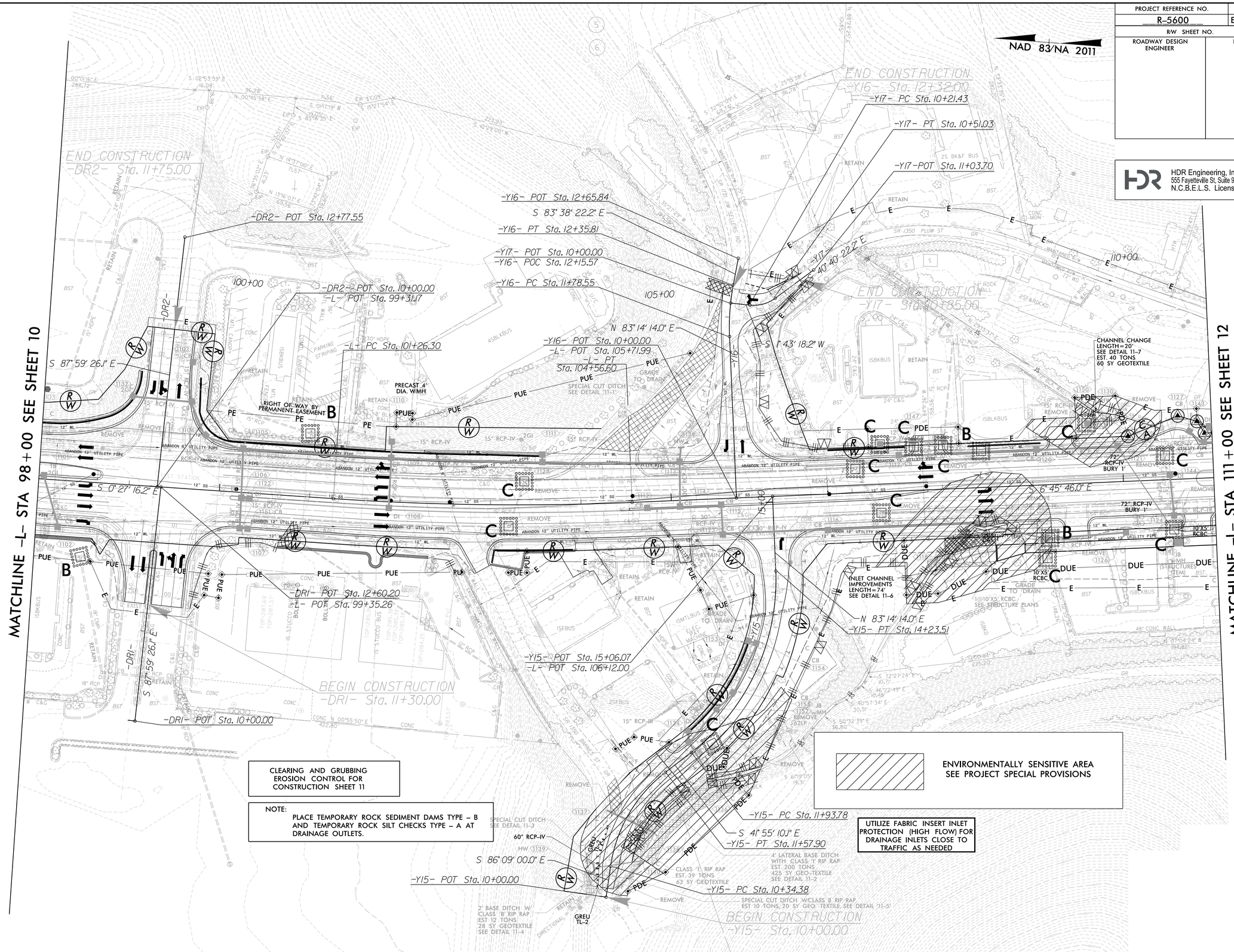
PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-11/CONST. 11
R/W SHEET NO.	RW-11
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 11

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

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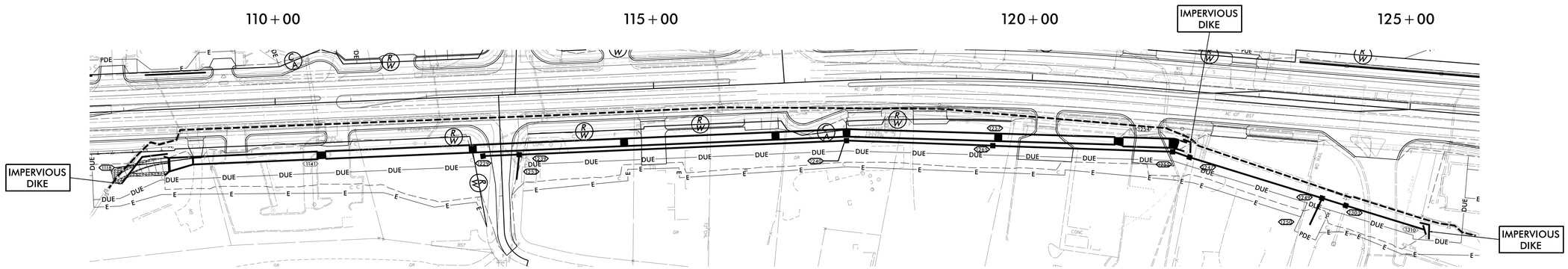
PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-11A/CONST.JI
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

12′ X 5′ RCBC CULVERT CONSTRUCTION SEQUENCE FROM STA. 99 + 00 TO 125 + 00 –L–

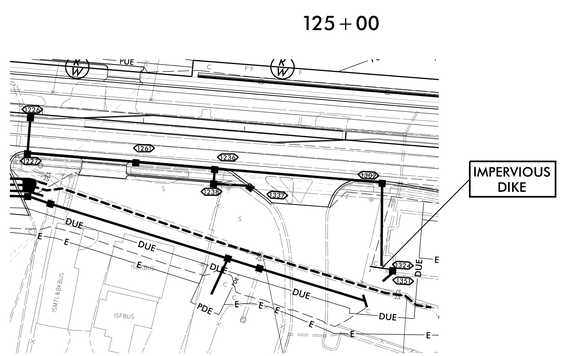
NAD 83/NA 2011

NOT TO SCALE



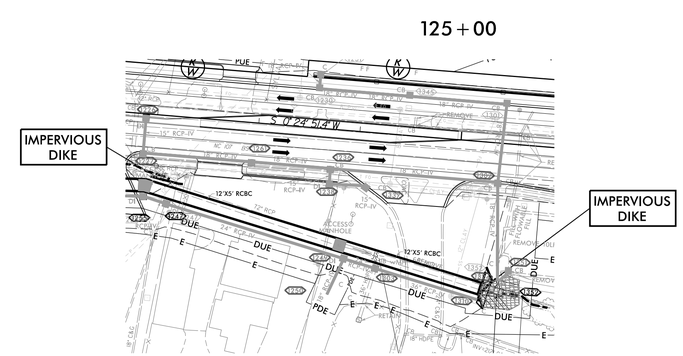
PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) DURING CULVERT CONSTRUCTION AS NEEDED.
2. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW AWAY FROM WORK AREA.
3. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. EC–2B.
4. INSTALL PORTION OF 12′ X 5′ RCBC AND PROPOSED SYSTEM 1310 AS SHOWN.
5. UTILIZE TEMPORARY IMPERVIOUS DIKES AND PUMP AROUND AS NECESSARY TO COMPLETE UPSTREAM CHANNEL IMPROVEMENTS. SEE EC–2B.
6. REMOVE IMPERVIOUS DIKES AND PUMP–AROUND AND ALLOW FLOW THROUGH NEWLY INSTALLED PORTION OF 12′ X 5′ RCBC AND SYSTEM 1310.



PHASE II

1. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW AWAY FROM WORK AREA.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. EC–2B.
3. IN DRY CONDITIONS, INSTALL PORTION OF PROPOSED SYSTEM 1324 AS SHOWN.
4. REMOVE IMPERVIOUS DIKE AND PUMP–AROUND AND ALLOW FLOW THROUGH NEWLY INSTALLED SYSTEM 1324.



PHASE III

1. INSTALL IMPERVIOUS DIKES AND USE PUMP AROUND OPERATION TO DIVERT FLOW AROUND WORK AREA AS SHOWN.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. UTILIZE TEMPORARY IMPERVIOUS DIKE(S) AND PUMP WITH SPECIAL STILLING BASIN AS NECESSARY TO IMPROVE CHANNEL BETWEEN PREVIOUSLY INSTALLED PORTION OF 12′ X 5′ RCBC AND EXISTING 72″ RCP.
4. REMOVE EXISTING 72″ RCP AND 60″ RCP AND INSTALL REMAINDER OF 12′ X 5′ RCBC AS SHOWN.
5. UTILIZE TEMPORARY IMPERVIOUS DIKES AND PUMP AROUND AS NECESSARY TO COMPLETE DOWNSTREAM CHANNEL IMPROVEMENTS. SEE EC–2B.
6. REMOVE IMPERVIOUS DIKES AND PUMP–AROUND AND ALLOW FLOW THROUGH NEWLY INSTALLED 12′ X 5′ RCBC.

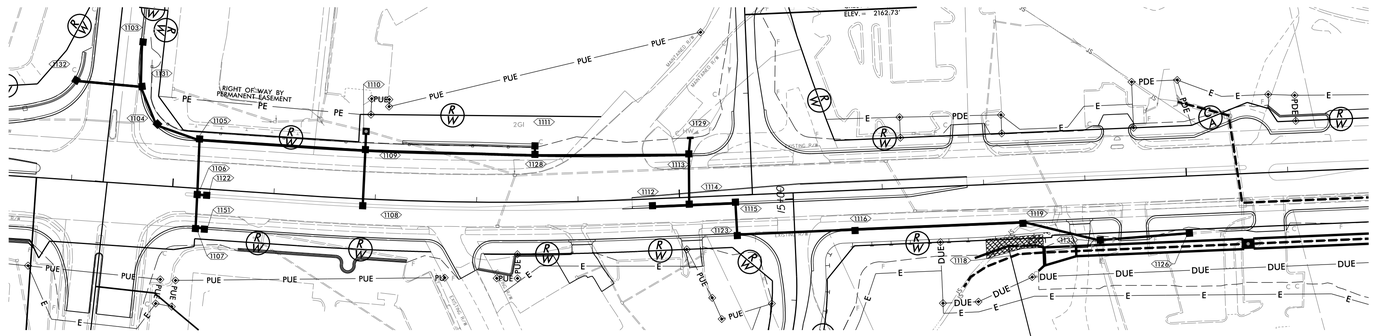
PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-11B/CONST.JI
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

12′ X 5′ RCBC CULVERT CONSTRUCTION SEQUENCE FROM STA. 99+00 TO 125+00 –L–

NAD 83/NA 2011

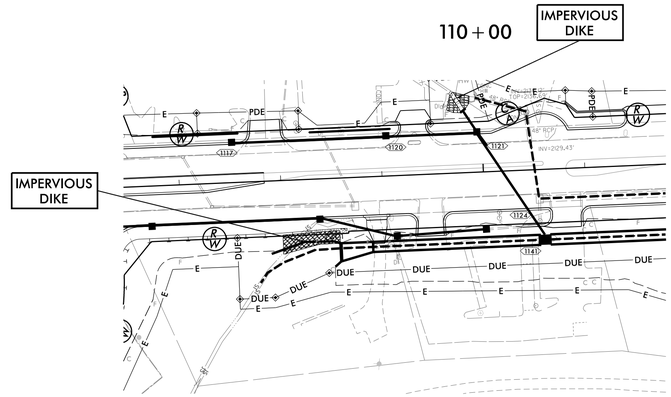
NOT TO SCALE

100+00 105+00 110+00



PHASE IV

1. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW INTO NEWLY INSTALLED 12′ X 5′ RCBC.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. INSTALL PORTION OF PROPOSED SYSTEM 1118 AS SHOWN.
4. REMOVE OR FILL PORTIONS OF EXISTING STORM DRAIN SYSTEM IN CONFLICT WITH PROPOSED SYSTEM 1118.
5. REMOVE IMPERVIOUS DIKE AND PUMP–AROUND AND DIVERT FLOW INTO PROPOSED SYSTEM 1118.

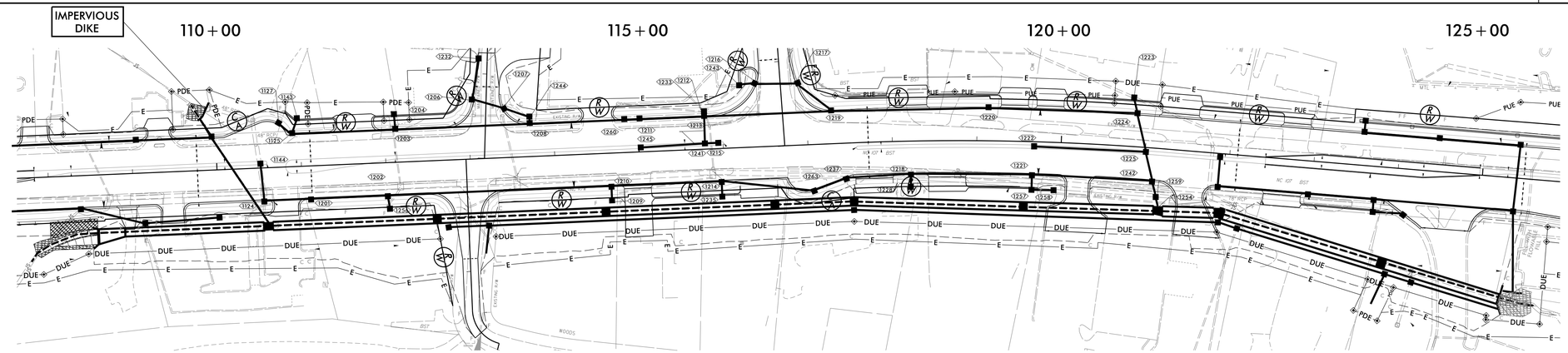


PHASE V

1. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW INTO EXISTING 48″ RCP.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. INSTALL PORTION OF PROPOSED SYSTEM 1141 AS SHOWN.
4. REMOVE OR FILL PORTIONS OF EXISTING STORM DRAIN SYSTEM IN CONFLICT WITH PROPOSED SYSTEM 1141.
5. REMOVE IMPERVIOUS DIKE AND PUMP–AROUND AND DIVERT FLOW INTO PROPOSED SYSTEM 1141.

PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-11C/CONST.JI
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

12' X 5' RCBC CULVERT CONSTRUCTION SEQUENCE FROM STA. 99+00 TO 125+00 –L–



NOT TO SCALE

NAD 83/NA 2011

PHASE VI

1. INSTALL IMPERVIOUS DIKES TO DIRECT FLOW INTO NEWLY INSTALLED 72" RCP.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. INSTALL PORTION OF PROPOSED SYSTEM 1254 AS SHOWN.
4. REMOVE OR FILL PORTIONS OF EXISTING STORM DRAIN SYSTEM IN CONFLICT WITH PROPOSED SYSTEM 1254.
5. REMOVE IMPERVIOUS DIKES, SPECIAL STILLING BASIN(S), AND PUMP–AROUND.

PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-12/CONST. 12
R/W SHEET NO.	RW-12
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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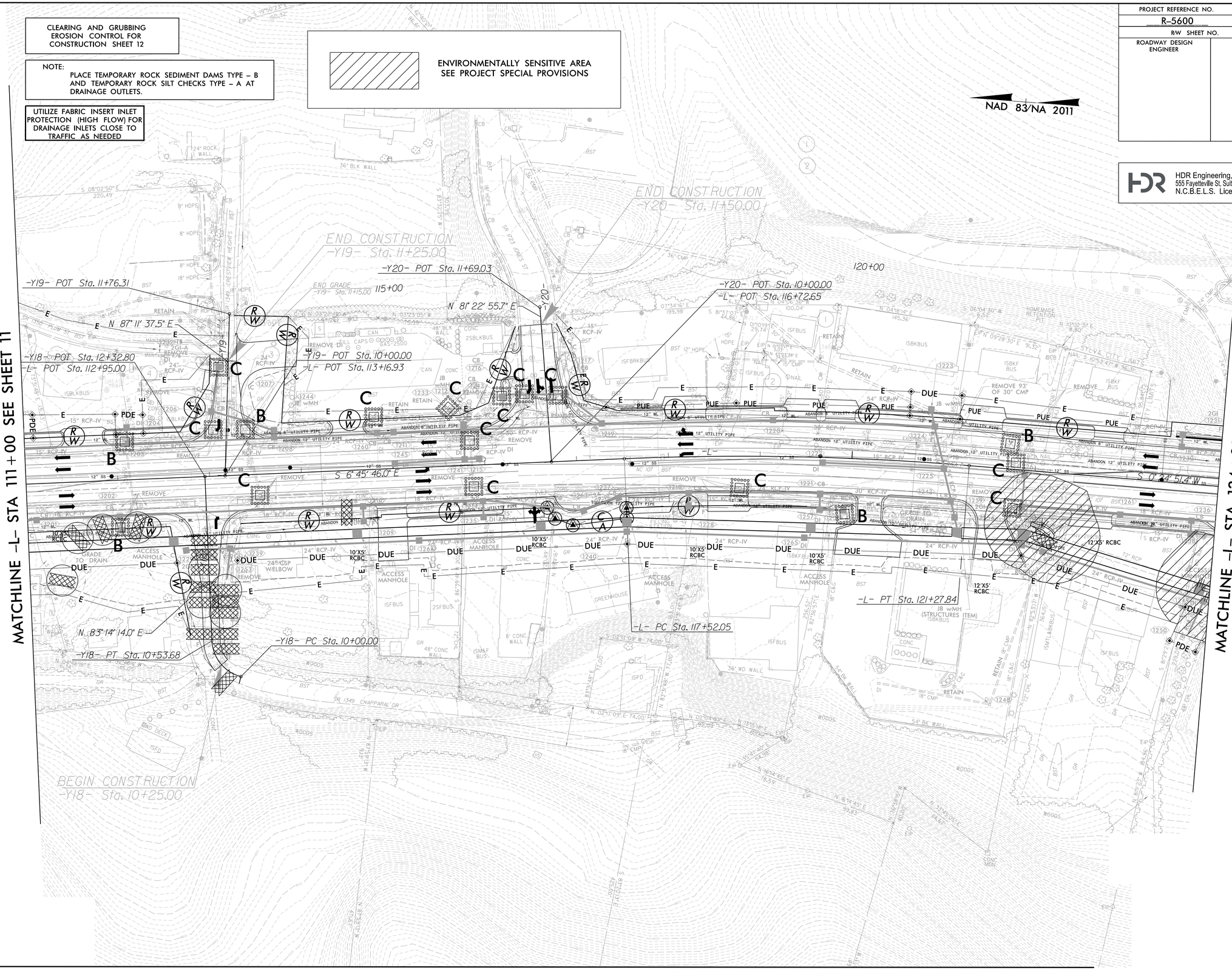
CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 12

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

UTILIZE FABRIC INSERT INLET PROTECTION (HIGH FLOW) FOR DRAINAGE INLETS CLOSE TO TRAFFIC AS NEEDED

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

NAD 83/NA 2011



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CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13

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

UTILIZE FABRIC INSERT INLET PROTECTION (HIGH FLOW) FOR DRAINAGE INLETS CLOSE TO TRAFFIC AS NEEDED

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-13/CONST. 13
R/W SHEET NO.	RW-13
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NAD 83/NA 2011

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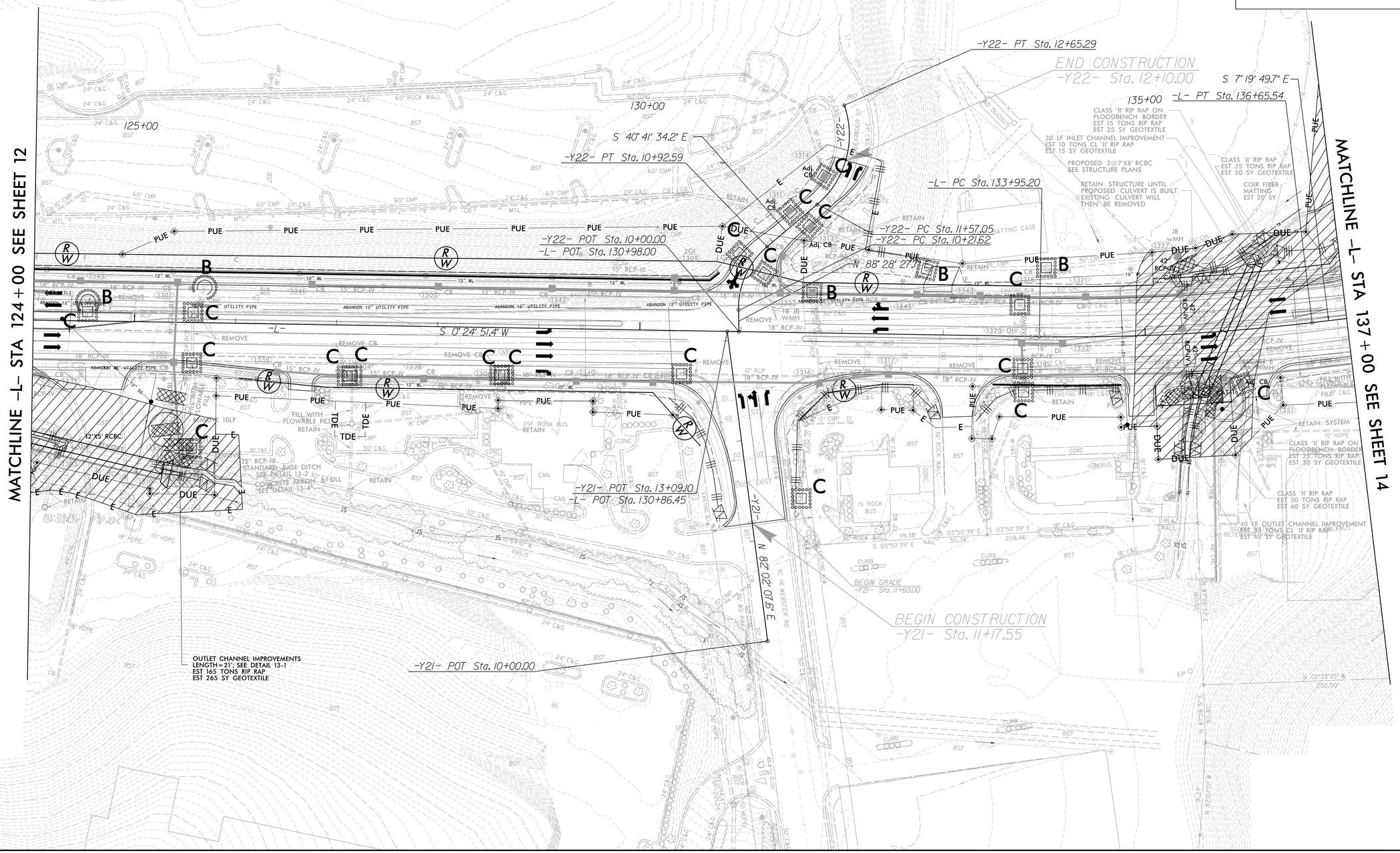
N.C.B.E.L.S. License Number: F-0116



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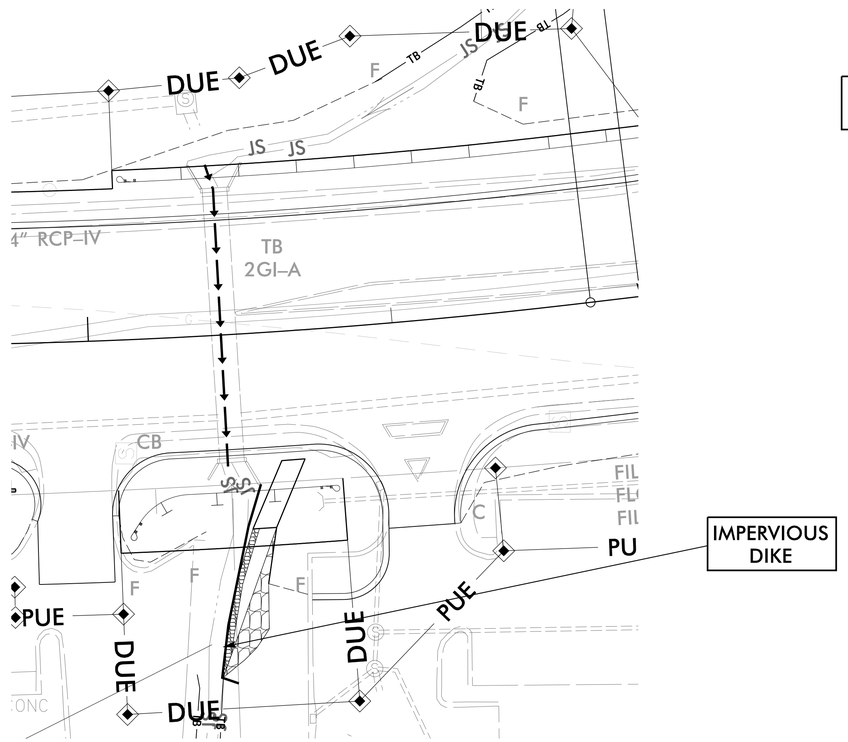
PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-13A/CONST.13
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

2@7'x8' RCBC CULVERT CONSTRUCTION SEQUENCE STA. 135+88 –L–

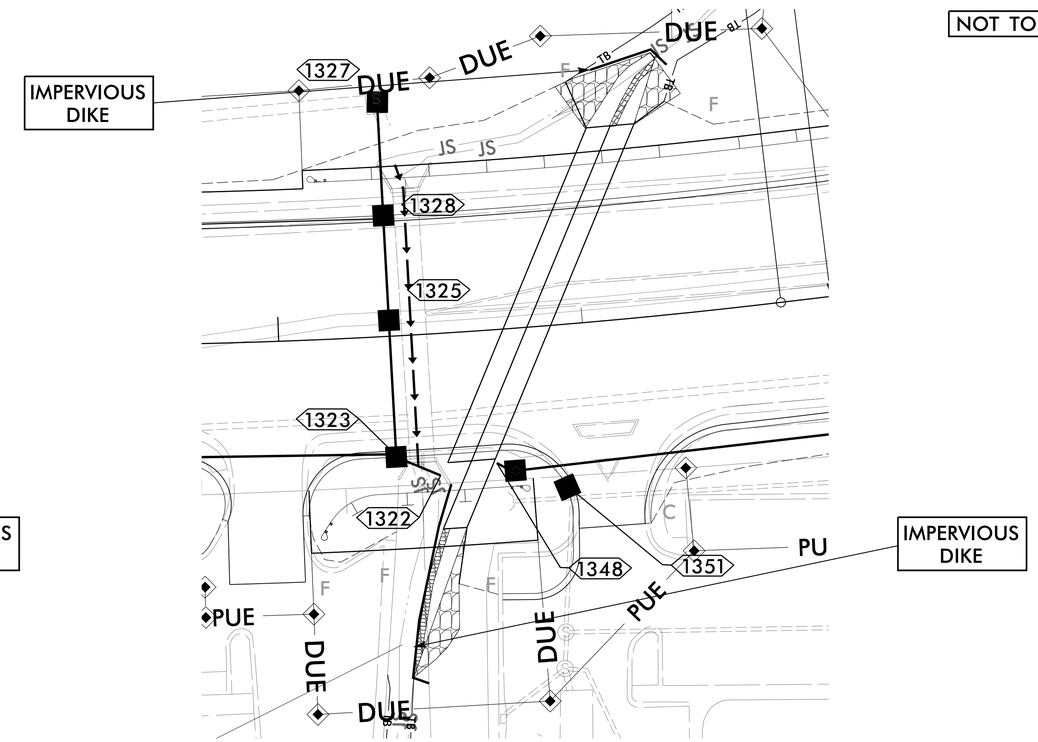
NAD 83/NA 2011

NOT TO SCALE



PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) DURING CONSTRUCTION AS NEEDED.
2. INSTALL IMPERVIOUS DIKE WEST OF ROADWAY AND UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. INSTALL PORTION OF CAST–IN–PLACE HIGH FLOW BARREL AS SHOWN (NOTE: DO NOT INSTALL BAFFLES IN THIS PHASE).
4. COMPLETE DOWNSTREAM CHANNEL IMPROVEMENTS AS SHOWN.



PHASE II

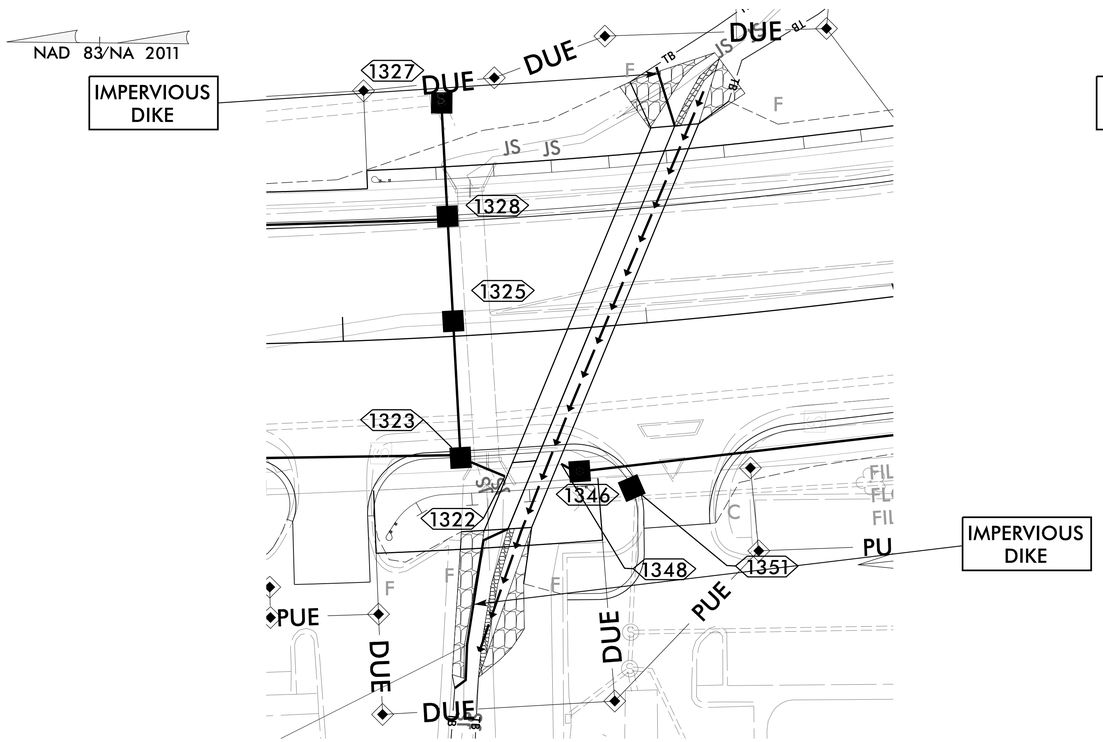
1. INSTALL IMPERVIOUS DIKE EAST OF ROADWAY AND UTILIZE PUMP–AROUND TO DEWATER WORK AREA AND TO DIRECT FLOW THROUGH EXISTING CULVERT. SEE EC–2B.
2. INSTALL PORTIONS OF PRE–CAST HIGH FLOW AND LOW FLOW BARRELS AS SHOWN (NOTE: DO NOT INSTALL BAFFLES IN THIS PHASE.)
3. COMPLETE UPSTREAM CHANNEL IMPROVEMENTS.
4. REMOVE IMPERVIOUS DIKES AND PUMP–AROUND AND DIVERT FLOW INTO HIGH FLOW BARREL.
5. REMOVE EXISTING CULVERT OR FILL WITH FLOWABLE FILL AND INSTALL STORM DRAIN SYSTEMS

PROJECT REFERENCE NO.	SHEET NO.
R-5600	EC-13B/CONST J3
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

2@7'x8' RCBC CULVERT CONSTRUCTION SEQUENCE STA. 135+88 –L–

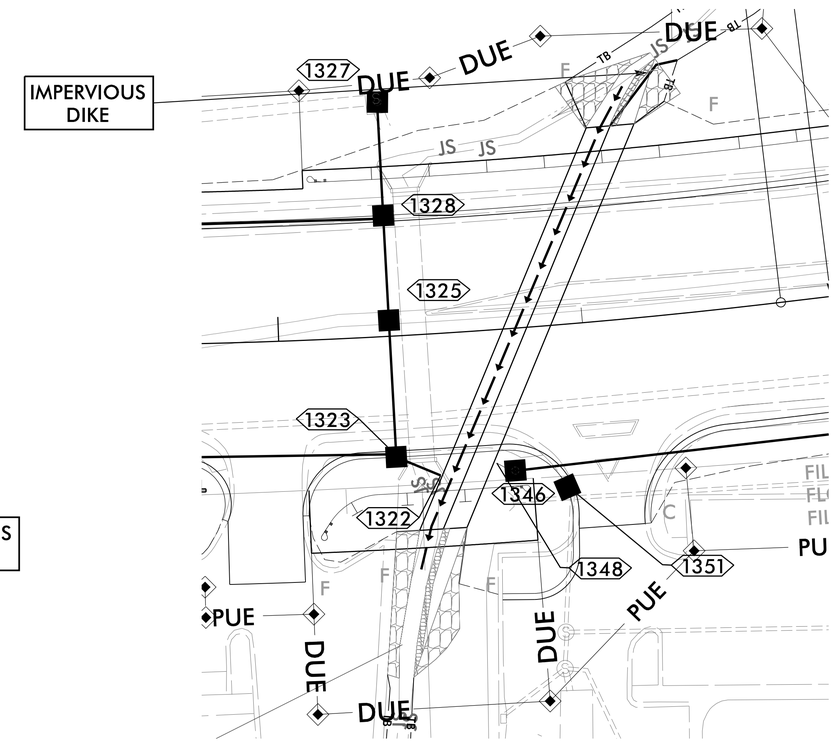
NOT TO SCALE

NAD 83/NA 2011



PHASE III

1. INSTALL IMPERVIOUS DIKES TO DIVERT FLOW THROUGH HIGH FLOW BARREL.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. INSTALL CAST–IN–PLACE PORTION OF LOW FLOW BARREL AS SHOWN.
4. COMPLETE DOWNSTREAM CHANNEL IMPROVEMENTS
5. REMOVE IMPERVIOUS DIKES AND PUMP–AROUND.



PHASE IV

1. INSTALL IMPERVIOUS DIKE TO DIVERT FLOW THROUGH LOW FLOW BARREL.
2. UTILIZE PUMP–AROUND TO DEWATER WORK AREA. SEE EC–2B.
3. INSTALL BAFFLES IN HIGH FLOW BARREL.
4. REMOVE IMPERVIOUS DIKE, SPECIAL STILLING BASIN(S), AND PUMP–AROUND.
5. COMPLETE ROADWAY WORK.