

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

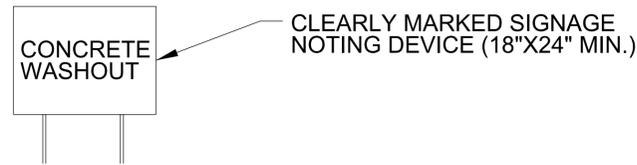
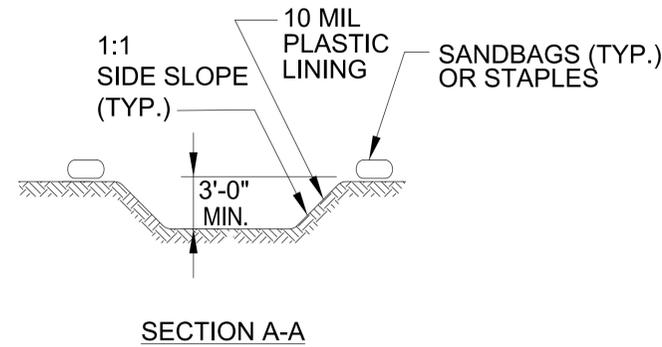
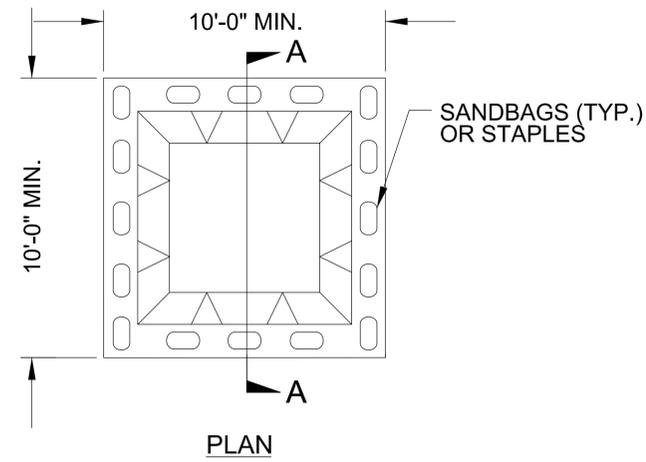
PROJECT REFERENCE NO. W03291	SHEET NO. EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol	Std. #	Description	Symbol
1605.01	Temporary Silt Fence		1633.01	Temporary Rock Silt Check Type A	
1606.01	Special Sediment Control Fence		1633.02	Temporary Rock Silt Check Type B	
1622.01	Temporary Berms and Slope Drains		1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1630.02	Silt Basin Type B		1634.01	Temporary Rock Sediment Dam Type A	
1630.03	Temporary Silt Ditch		1634.02	Temporary Rock Sediment Dam Type B	
1630.04	Stilling Basin		1635.01	Rock Pipe Inlet Sediment Trap Type A	
1630.05	Temporary Diversion		1635.02	Rock Pipe Inlet Sediment Trap Type B	
1630.06	Special Stilling Basin		1636.01	Excelsior Wattle Check	
1630.07	Skimmer Basin		1636.01	Excelsior Wattle Check with Flocculant	
1630.08	Tiered Skimmer Basin		1636.01	Coir Fiber Wattle Check	
1630.09	Earthen Dam with Skimmer		1636.01	Coir Fiber Wattle Check with Flocculant	
	Infiltration Basin		1636.02	Silt Fence Excelsior Wattle Break	
	Rock Inlet Sediment Trap:			Silt Fence Coir Fiber Wattle Break	
1632.01	Type A		1636.03	Excelsior Wattle Barrier	
1632.02	Type B		1636.03	Coir Fiber Wattle Barrier	
1632.03	Type C				

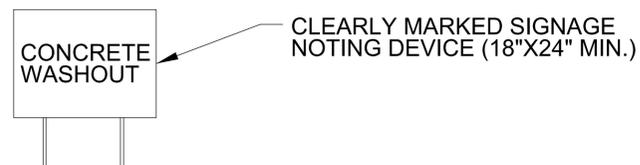
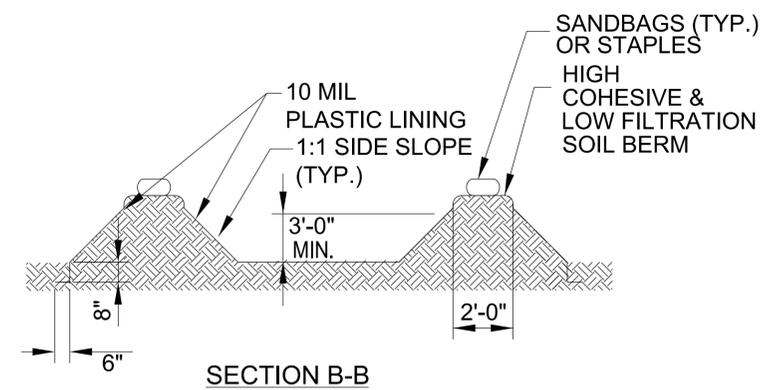
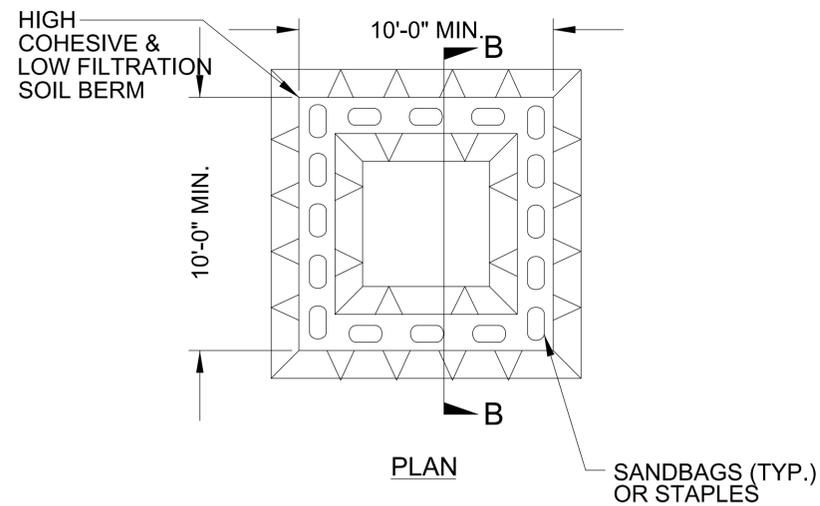
PROJECT REFERENCE NO. <i>W03291</i>	SHEET NO. <i>EC-2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

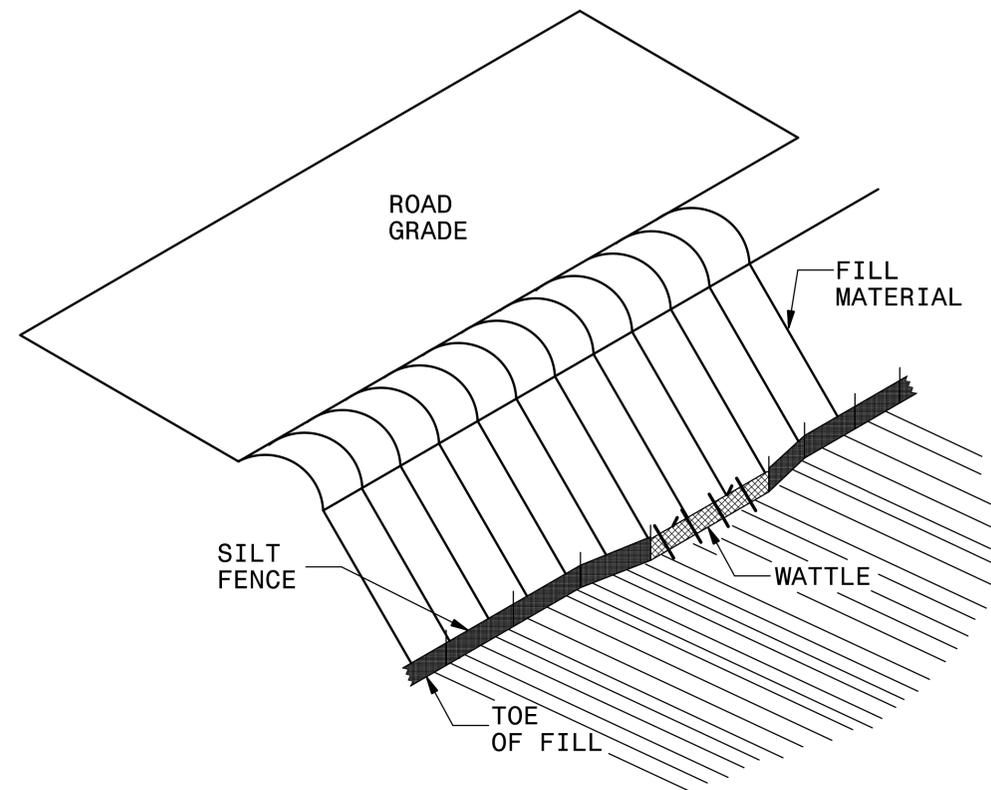


ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

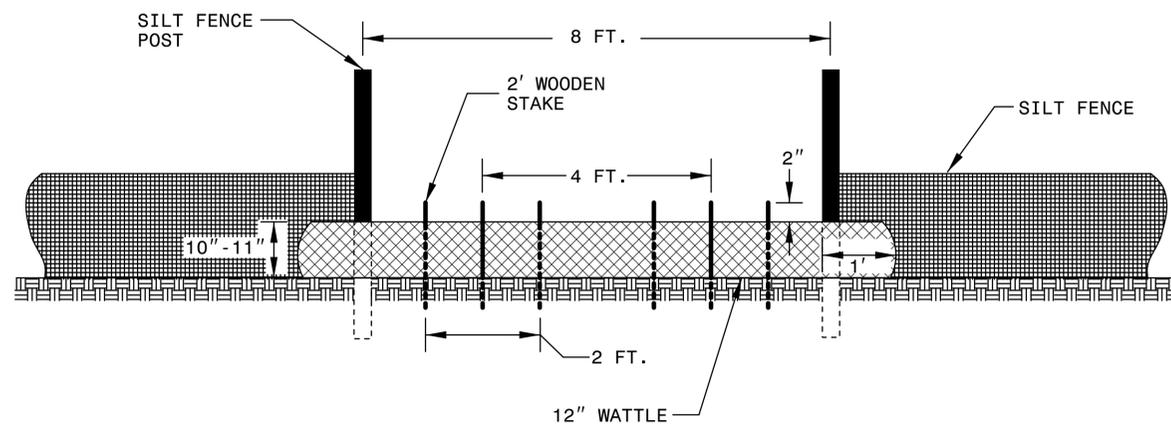
- NOTES:**
1. ACTUAL LOCATION DETERMINED IN FIELD
 2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
 3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

PROJECT REFERENCE NO. W03291	SHEET NO. EC-2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW



VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

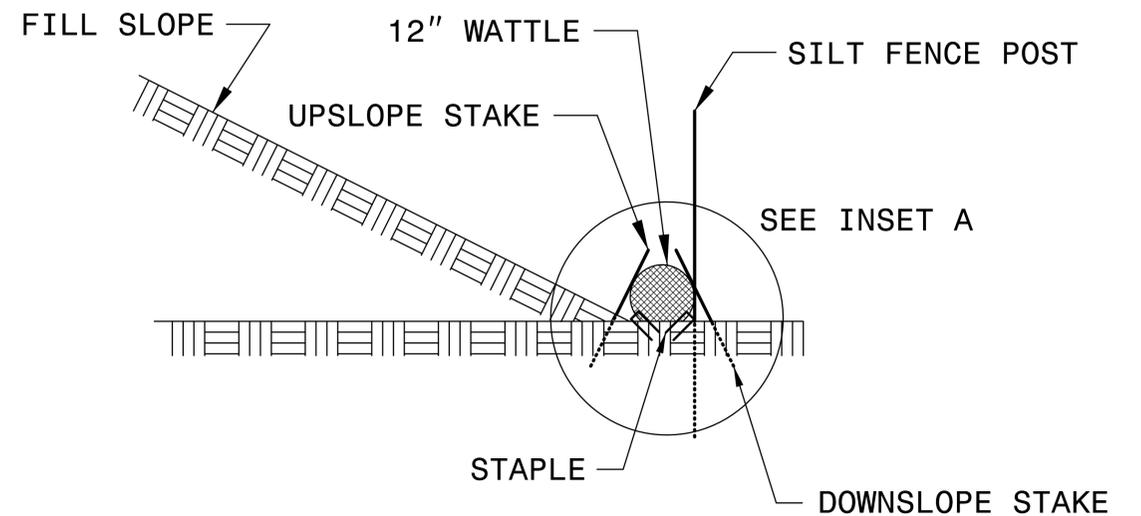
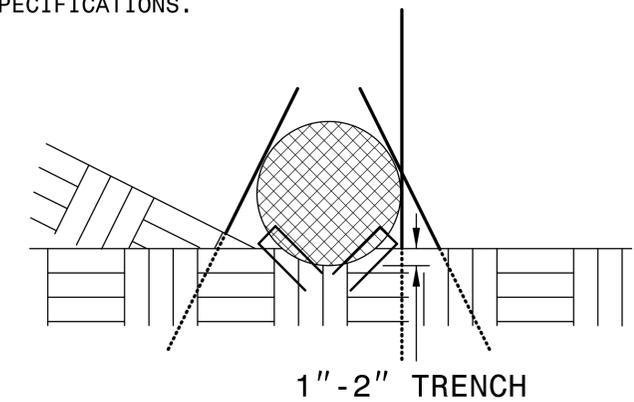
PROVIDE STAPLES MADE OF 11 GAUGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A



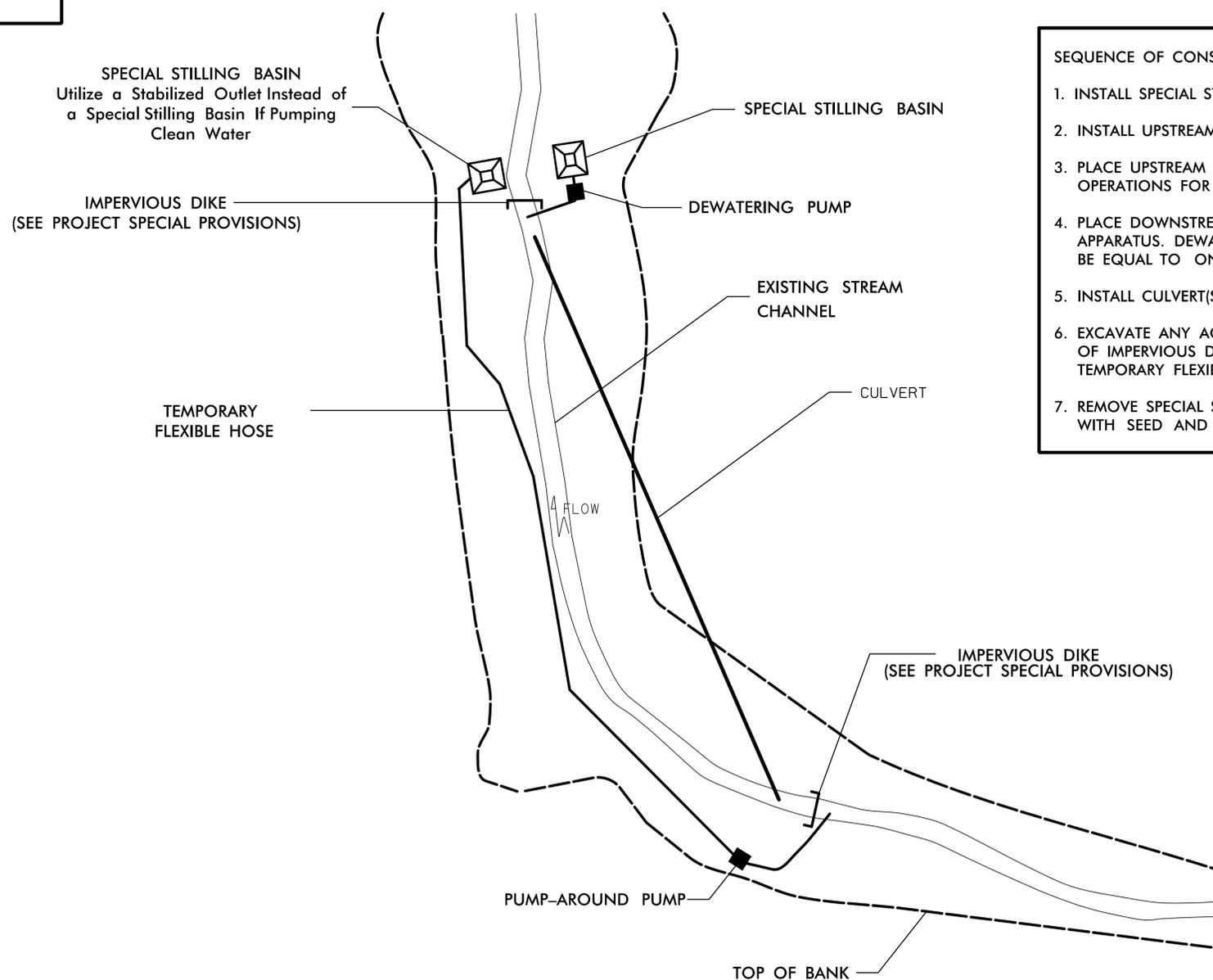
SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
W03291	EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EXAMPLE OF PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 4) Pumps and hoses shall be of sufficient size to dewater the work area.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>W03291</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

STRAW MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
<i>SLOPE</i>	<i>STRAW MATTING</i>				
4	L1	21+00	23+00	LT	299
7	L2	22+00	22+50	LT	150
7	L2	22+00	22+50	RT	125
10	L3	17+50	20+00	RT	528
10	L3	18+50	20+00	LT	211
15	L4	56+50	57+00	LT	87
	<i>SLOPE STRAW MATTING SUBTOTAL</i>				1,400

STRAW MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
	<i>DITCHLINE STRAW MATTING *CONT.*</i>				
8	L2	29+50	33+38	RT	190
8	L2	35+00	36+85	LT	185
8	L2	27+00	29+50	RT	155
9	L2	36+95	37+50	LT	30
9	L2	37+50	38+10	LT	10
9	L2	38+55	41+00	LT	180
9	L2	41+00	42+25	LT	65
10	L3	11+75	13+40	LT	200
10	L3	13+70	13+70	RT	15
10	L3	16+80	16+80	RT	20
10	L3	19+13	20+50	LT	125
10	L3	21+50	23+05	LT	235
11	L3	23+05	2500	LT	120
12	L4	24+00	26+19	LT	270
12	L4	26+19	27+50	LT	65
12	L4	27+50	28+98	LT	75
13	L4	28+98	29+50	LT	30
13	L4	30+50	31+00	LT	25
13	L4	31+00	35+00	LT	200
13	L4	35+84	37+00	LT	60
14	L4	51+00	51+78	LT	40
14	L4	51+78	52+50	LT	40
15	L4	57+35	60+00	RT	195
15	L4	60+00	62+22	RT	165
16	L5	10+50	11+24	RT	40
16	L5	12+50	14+80	RT	125
16	L5	18+00	19+05	RT	55
16	L5	19+05	19+50	RT	25
L5	L5	22+60	25+15	RT	125

DITCHLINE STRAW MATTING

4	L1	11+00	13+50	RT	245
4	L1	13+50	16+65	RT	190
4	L1	19+00	20+38	LT	85
4	L1	19+25	20+14	RT	110
4	L1	20+14	20+85	RT	55
4	L1	23+25	23+67	RT	55
4	L1	23+67	24+50	RT	65
5	L1	29+00	30+50	RT	150
5	L1	30+50	35+27	RT	640
5	L1	27+50	28+00	RT	35
5	L1	28+30	28+50	LT	15
6	RT	38+25	39+97	RT	210
6	L1	42+00	42+47	RT	35
6	L1	42+47	44+50	RT	150
7	L2	12+76	13+75	RT	90
7	L2	14+50	16+50	RT	185
7	L2	16+50	19+00	RT	245
7	L2	19+00	21+41	RT	325
8	L2	27+00	29+00	LT	100

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>W03291</i>	SHEET NO. <i>EC-3A</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION SUMMARY SHEET

STRAW MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
<i>DITCHLINE STRAW MATTING *CONT.*</i>					
17	L5	25+50	30+17	RT	230
17	L5	30+17	31+25	RT	55
17	L5	31+52	32+83	RT	130
17	L5	33+00	34+06	RT	65
18	L5	39+00	40+50	RT	75
18	L5	40+50	40+90	RT	70
18	L5	40+90	43+00	RT	360
18	L5	43+50	47+50	RT	200
19	L5	47+70	50+50	RT	285
<i>DITCHLINE STRAW MATTING SUBTOTAL</i>					7,520

MATTING TOTALS

SLOPE STRAW MATTING SUBTOTAL	1,400
DITCHLINE STRAW MATTING SUBTOTAL	7,520
DITCHLINE EXCELSIOR MATTING SUBTOTAL	995
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER	27,605
TOTAL	37,520

EXCELSIOR MATTING FOR EROSION CONTROL

<i>DITCHLINE EXCELSIOR MATTING</i>					
CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	L1	10+50	13+38	LT	175
4	L1	10+75	11+00	RT	20
4	L1	17+00	17+81	RT	50
4	L1	17+50	19+00	LT	85
5	L1	35+38	37+50	RT	160
8	L2	25+00	26+07	LT	65
9	L2	42+80	44+00	LT	60
10	L3	13+40	14+00	LT	40
10	L3	16+00	16+81	LT	50
13	L4	35+00	35+84	LT	45
16	L5	11+40	12+50	RT	55
16	L5	15+50	16+15	RT	50
16	L5	21+75	22+40	RT	35
17	L5	34+06	34+60	RT	45
19	L5	50+90	51+50	RT	60
<i>DITCHLINE EXCELSIOR MATTING SUBTOTAL</i>					995

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	PSRM TYPE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
7	L2	2	11+00	12+76	RT	175
8	L2	3	26+07	26+25	LT	10
9	L2	3	42+79	42+79	LT	20
12	L4	2	18+50	21+50	LT	150
12	L4	1	21+65	22+25	LT	30
					<i>PSRM TYPE 1 TOTAL</i>	30
					<i>PSRM TYPE 2 TOTAL</i>	325
					<i>PSRM TYPE 3 TOTAL</i>	30
					<i>PSRM TYPE 4 TOTAL</i>	0
<i>ADDITIONAL PSRM TO BE INSTALLED</i>						0
					TOTAL	385

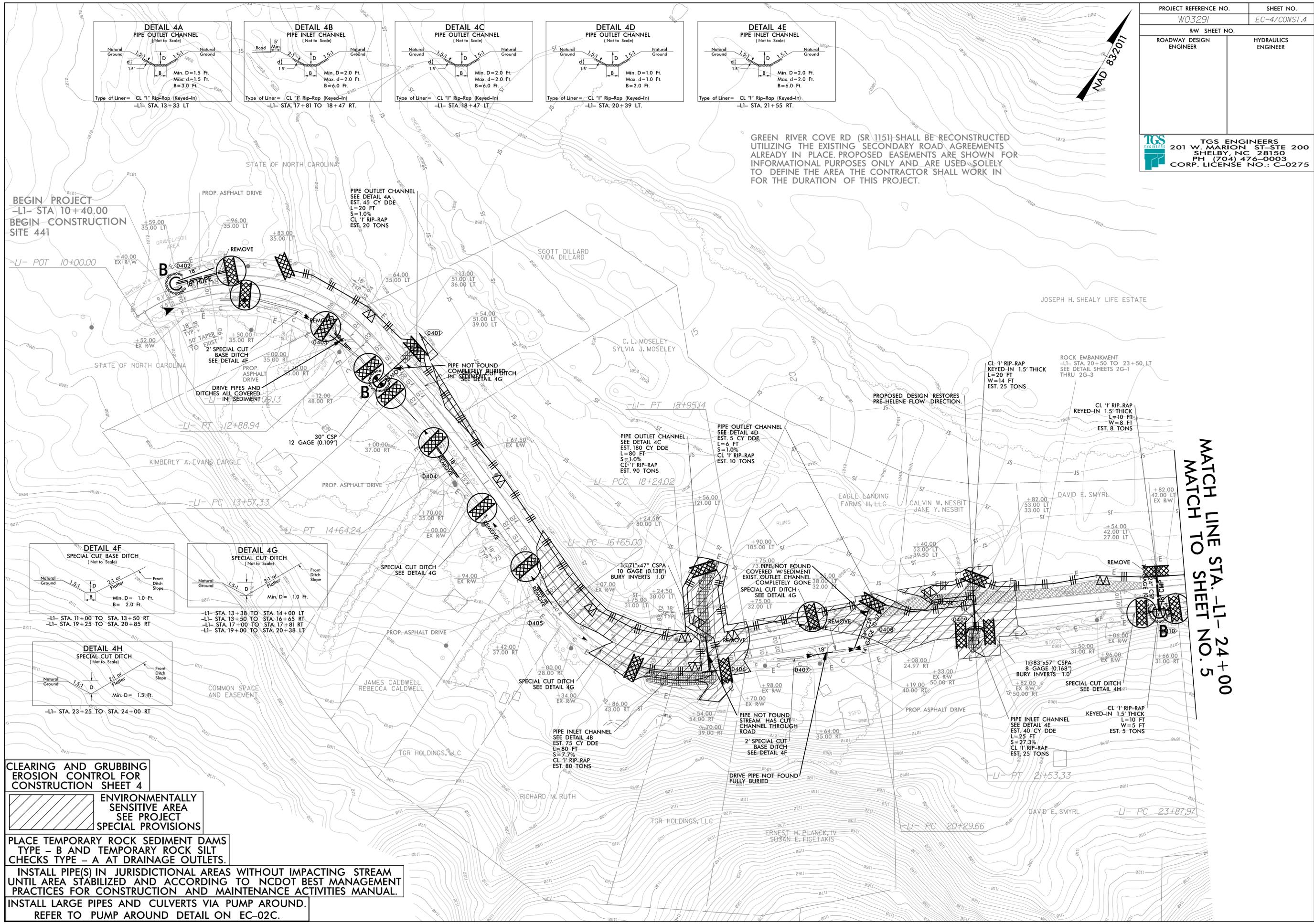
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>W03291</i>	SHEET NO. <i>EC-3B</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

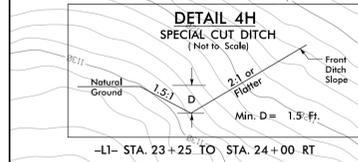
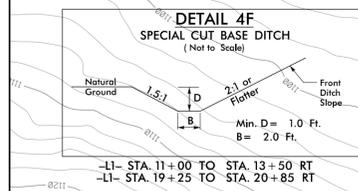
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

PROJECT REFERENCE NO. W03291		SHEET NO. EC-4/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			



BEGIN PROJECT
 -LI- STA 10+40.00
BEGIN CONSTRUCTION
 SITE 441

GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4

 **ENVIRONMENTALLY SENSITIVE AREA**
 SEE PROJECT SPECIAL PROVISIONS

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

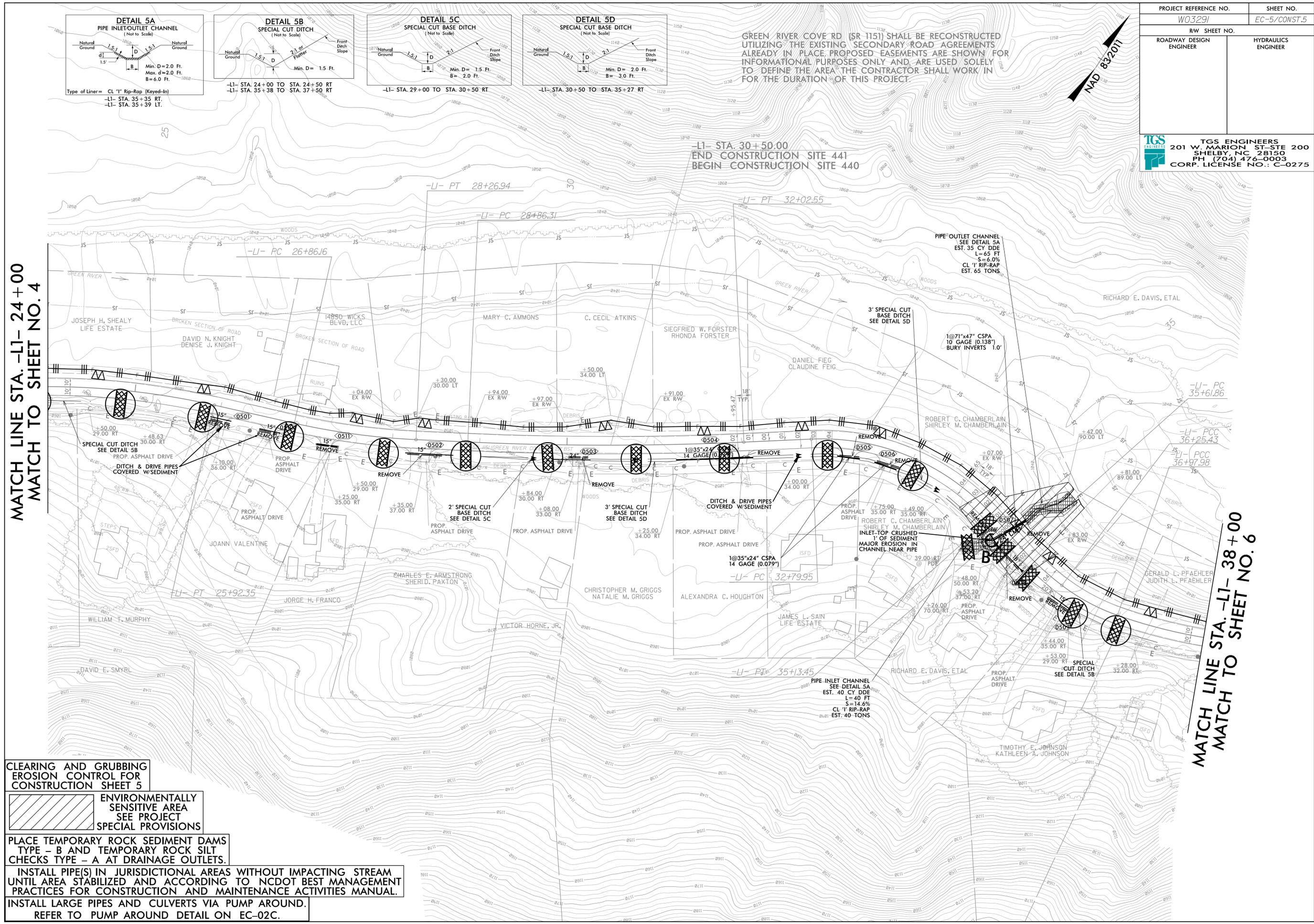
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM
 UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
 REFER TO PUMP AROUND DETAIL ON EC-02C.

MATCH LINE STA. -LI- 24+00
MATCH TO SHEET NO. 5

PROJECT REFERENCE NO. W03291		SHEET NO. EC-5/CONST.5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

TGS ENGINEERS
 201 W. MARION ST. STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275



MATCH LINE STA. -LI- 24+00
MATCH TO SHEET NO. 4

MATCH LINE STA. -LI- 38+00
MATCH TO SHEET NO. 6

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

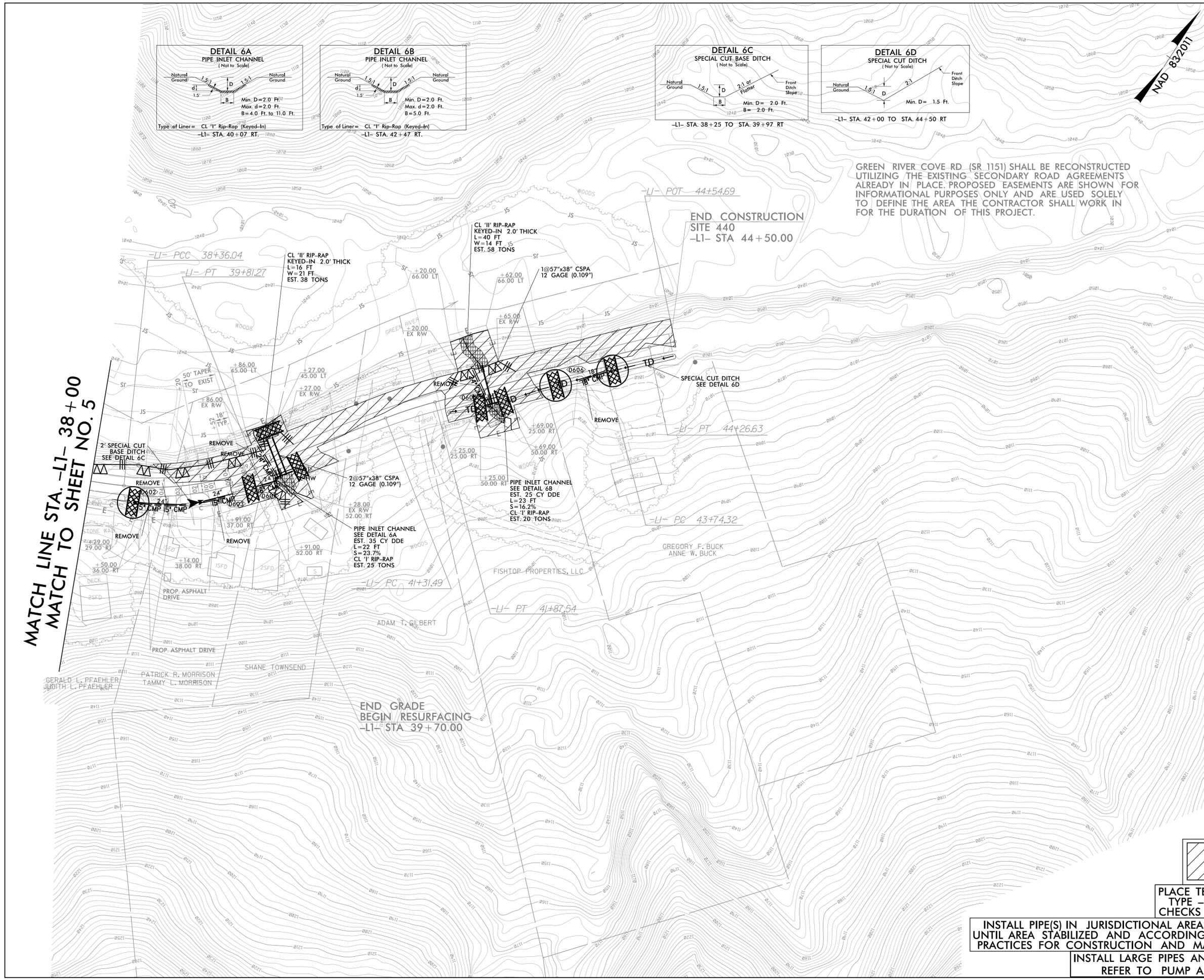
 ENVIRONMENTALLY
SENSITIVE AREA
SEE PROJECT
SPECIAL PROVISIONS

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

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM
UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
REFER TO PUMP AROUND DETAIL ON EC-02C.

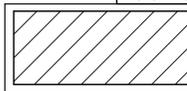
PROJECT REFERENCE NO. W03291		SHEET NO. EC-6/CONST.6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			



GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.

MATCH LINE STA. -LI- 38+00
MATCH TO SHEET NO. 5

**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 6**

 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

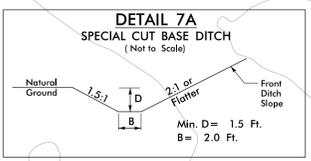
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

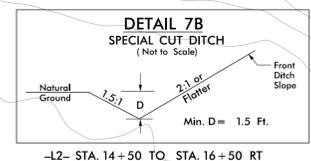
INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND. REFER TO PUMP AROUND DETAIL ON EC-02C.

PROJECT REFERENCE NO. W03291		SHEET NO. EC-7/CONST.7	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			

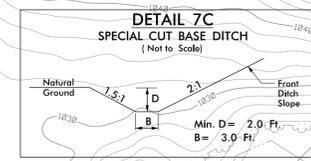
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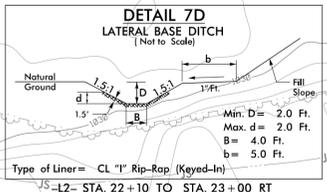
-L2- STA. 11+00 TO STA. 13+75 RT
-L2- STA. 16+50 TO STA. 19+00 RT



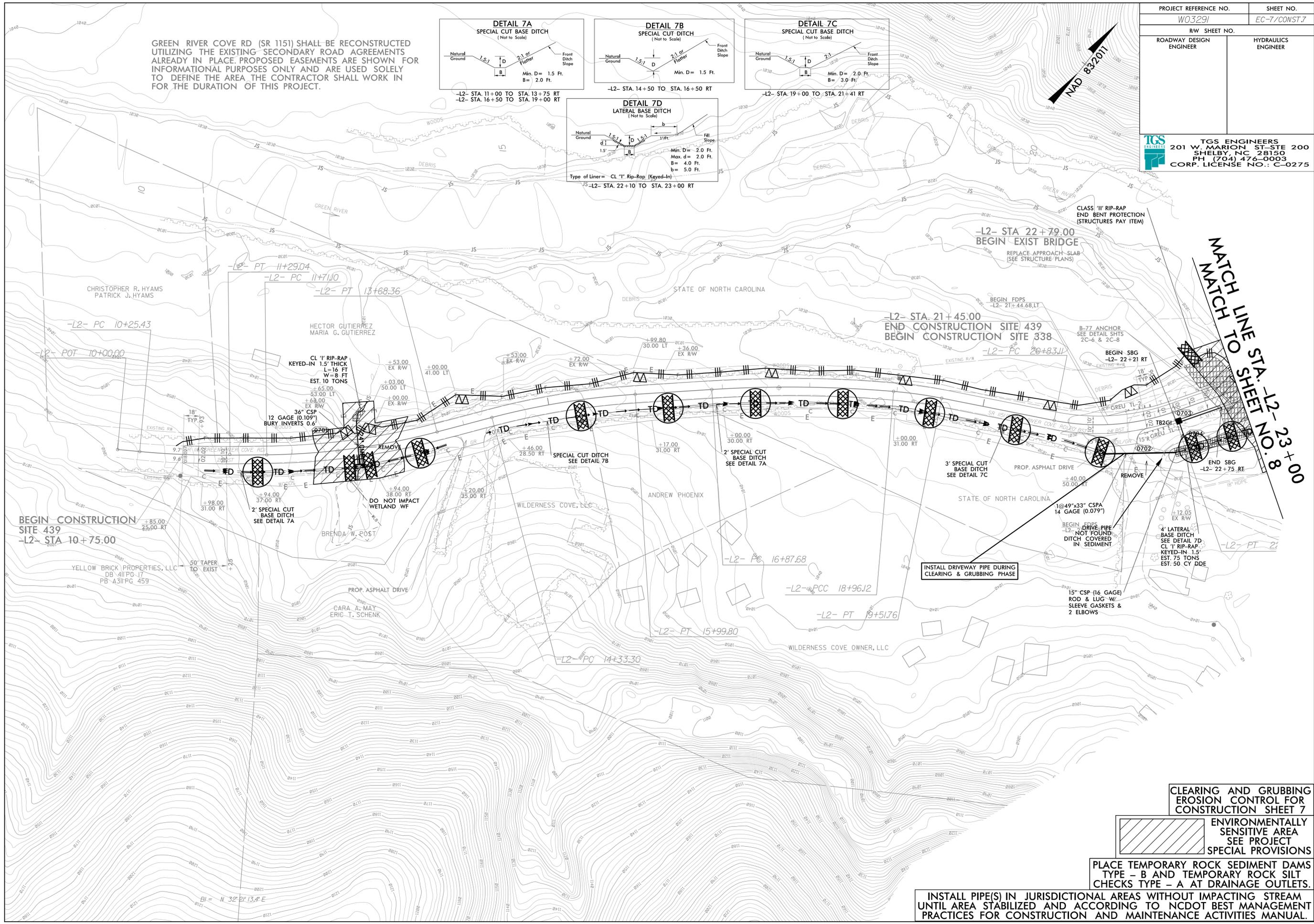
-L2- STA. 14+50 TO STA. 16+50 RT



-L2- STA. 19+00 TO STA. 21+41 RT



Type of Liner = CL "I" Rip-Rap (Keyed-In)
-L2- STA. 22+10 TO STA. 23+00 RT



MATCH LINE TO SHEET NO. 8
-L2- STA. 23+00

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 7



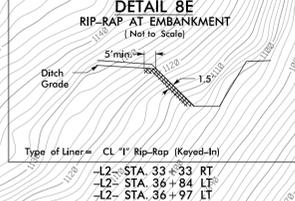
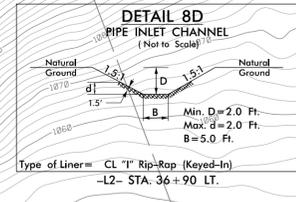
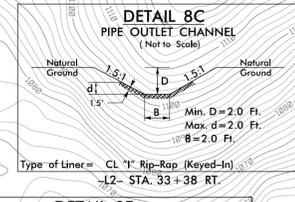
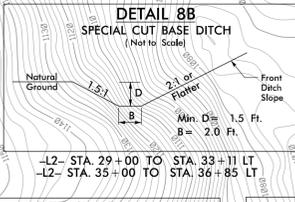
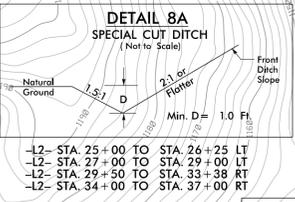
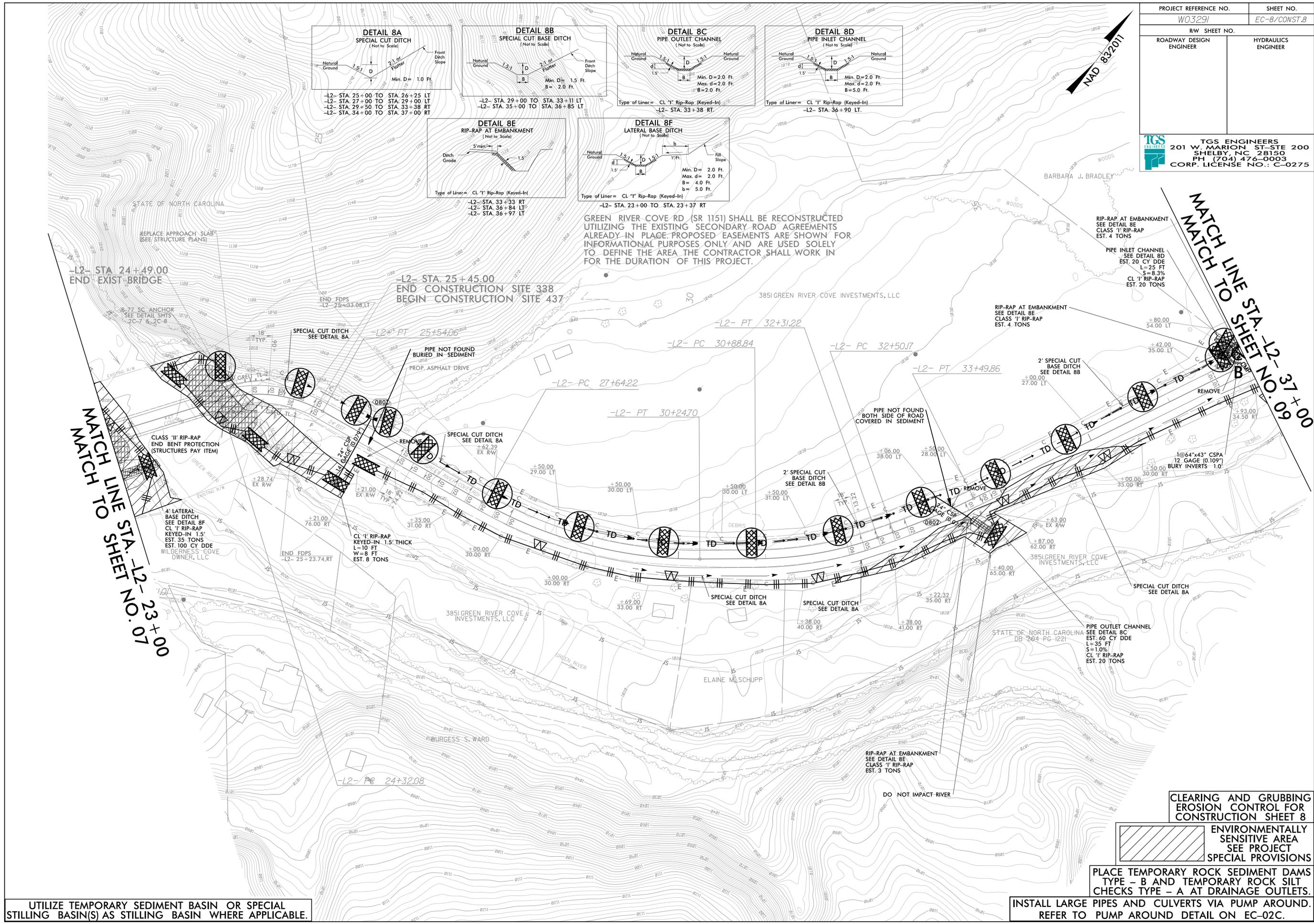
ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

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

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO. W03291	SHEET NO. EC-8/CONST.8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
201 W. MARION ST. STE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.

-L2- STA. 24+49.00
END EXIST. BRIDGE

-L2- STA. 25+45.00
END CONSTRUCTION SITE 338
BEGIN CONSTRUCTION SITE 437

RIP-RAP AT EMBANKMENT
SEE DETAIL 8E
CLASS "1" RIP-RAP
EST. 4 TONS

PIPE INLET CHANNEL
SEE DETAIL 8D
EST. 20 CY DDE
L = 25 FT
S = 8.3%
CL "1" RIP-RAP
EST. 20 TONS

RIP-RAP AT EMBANKMENT
SEE DETAIL 8E
CLASS "1" RIP-RAP
EST. 4 TONS

MATCH LINE STA. 37+00
SHEET NO. 3109

MATCH LINE STA. 23+00
SHEET NO. 07

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 8

ENVIRONMENTALLY
SENSITIVE AREA
SEE PROJECT
SPECIAL PROVISIONS

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

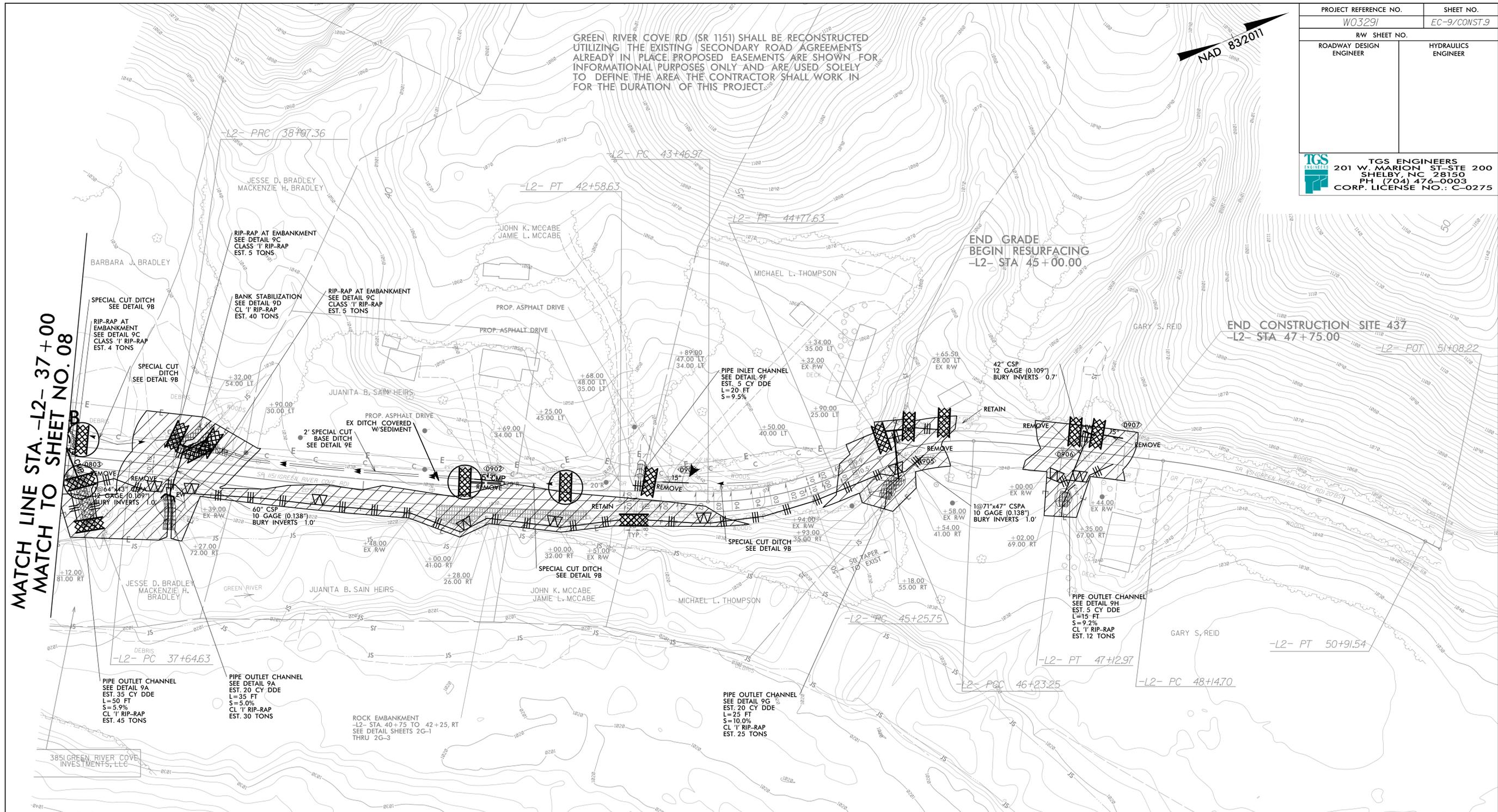
INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
REFER TO PUMP AROUND DETAIL ON EC-02C.

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

PROJECT REFERENCE NO.		SHEET NO.	
W03291		EC-9/CONST.9	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

TGS ENGINEERS
 201 W. MARION ST. STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.

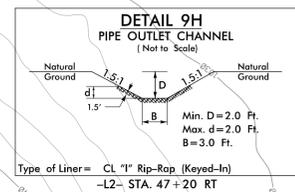
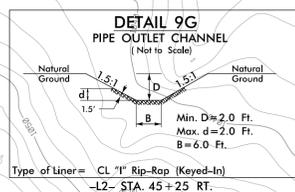
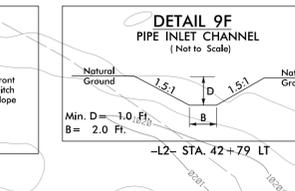
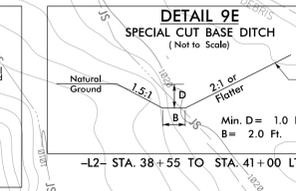
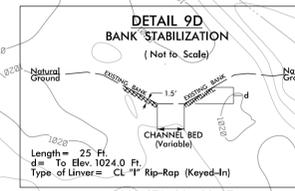
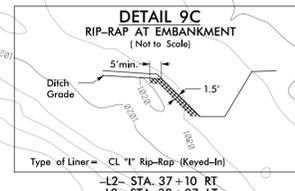
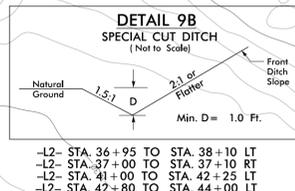
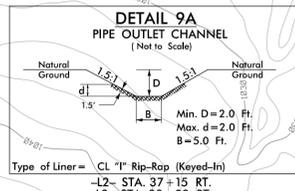


MATCH LINE STA. -L2- 37+00
MATCH TO SHEET NO. 08

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 9

ENVIRONMENTALLY SENSITIVE AREA SEE PROJECT SPECIAL PROVISIONS

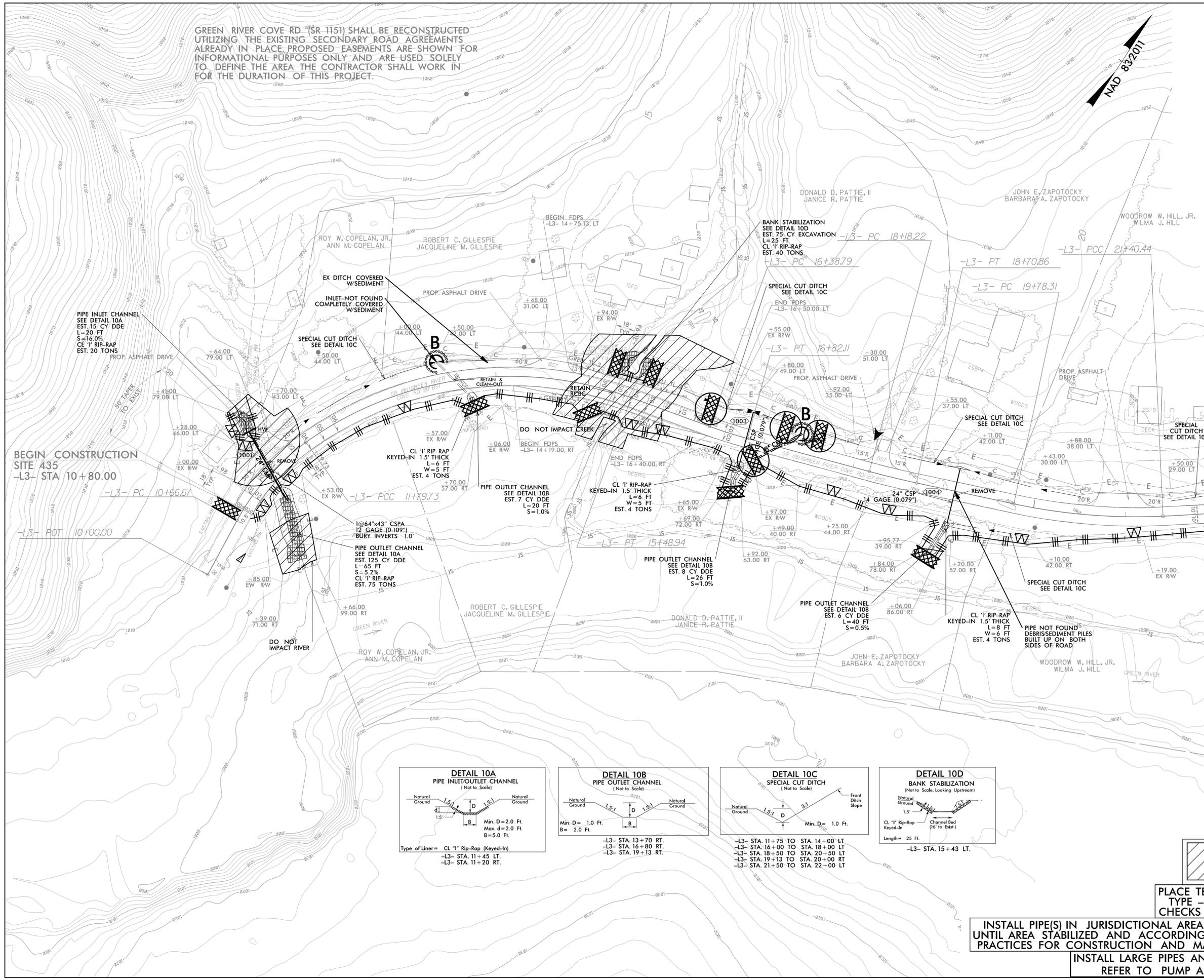
INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND. REFER TO PUMP AROUND DETAIL ON EC-02C.



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

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

PROJECT REFERENCE NO. W03291		SHEET NO. EC-10/CONST.10	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			

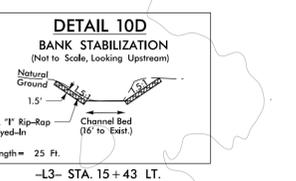
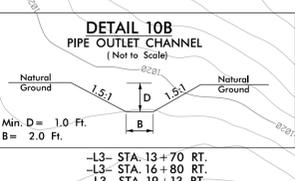
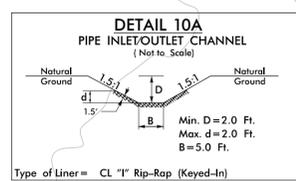


GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



MATCH LINE STA. -L3- 22+00
MATCH TO SHEET NO. 11

BEGIN CONSTRUCTION
SITE 435
-L3- STA 10+80.00



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 10



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

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM
UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
REFER TO PUMP AROUND DETAIL ON EC-02C.

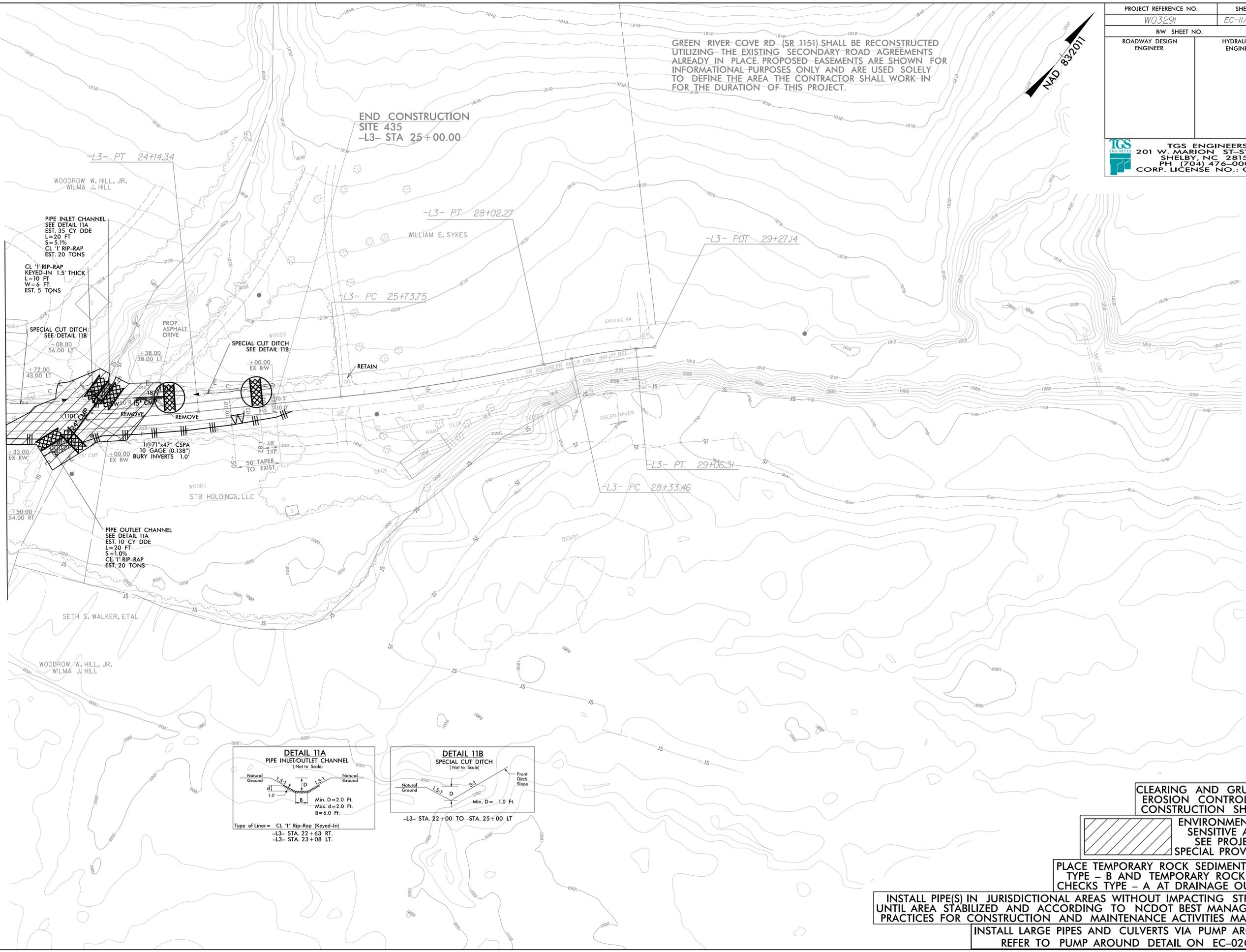
PROJECT REFERENCE NO. W03291		SHEET NO. EC-11/CONST.11	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

TGS ENGINEERS
 201 W. MARION ST. STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

GREEN RIVER COVE RD. (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



MATCH LINE STA. -L3- 22+00
MATCH TO SHEET NO. 10



END CONSTRUCTION
 SITE 435
 -L3- STA 25+00.00

PIPE INLET CHANNEL
 SEE DETAIL 11A
 EST. 35 CY DDE
 L=20 FT
 S=5.1%
 CL 1" RIP-RAP
 EST. 20 TONS

CL 1" RIP-RAP
 KEYED-IN 1.5" THICK
 L=10 FT
 W=6 FT
 EST. 5 TONS

SPECIAL CUT DITCH
 SEE DETAIL 11B
 +08.00
 56.00 LT

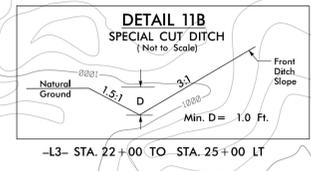
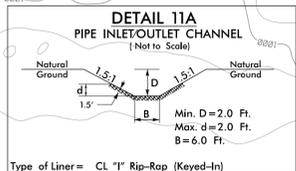
+72.00
 43.00 LT

+33.00
 EX. RW

+50.00
 54.00 RT

PIPE OUTLET CHANNEL
 SEE DETAIL 11A
 EST. 10 CY DDE
 L=20 FT
 S=1.0%
 CL 1" RIP-RAP
 EST. 20 TONS

1@71"x47" CSPA
 10 GAGE (0.138")
 BURY INVERTS 1.0'



CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 11

ENVIRONMENTALLY SENSITIVE AREA
 SEE PROJECT SPECIAL PROVISIONS

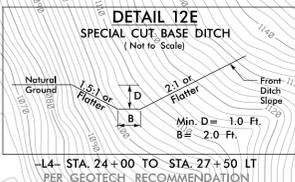
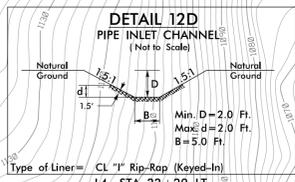
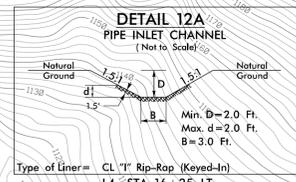
PLACE TEMPORARY ROCK SEDIMENT DAMS
 TYPE - B AND TEMPORARY ROCK SILT
 CHECKS TYPE - A AT DRAINAGE OUTLETS.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM
 UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
 PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
 REFER TO PUMP AROUND DETAIL ON EC-02C.

PROJECT REFERENCE NO. W03291	SHEET NO. EC-12/CONST12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
 201 W. MARION ST. STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275

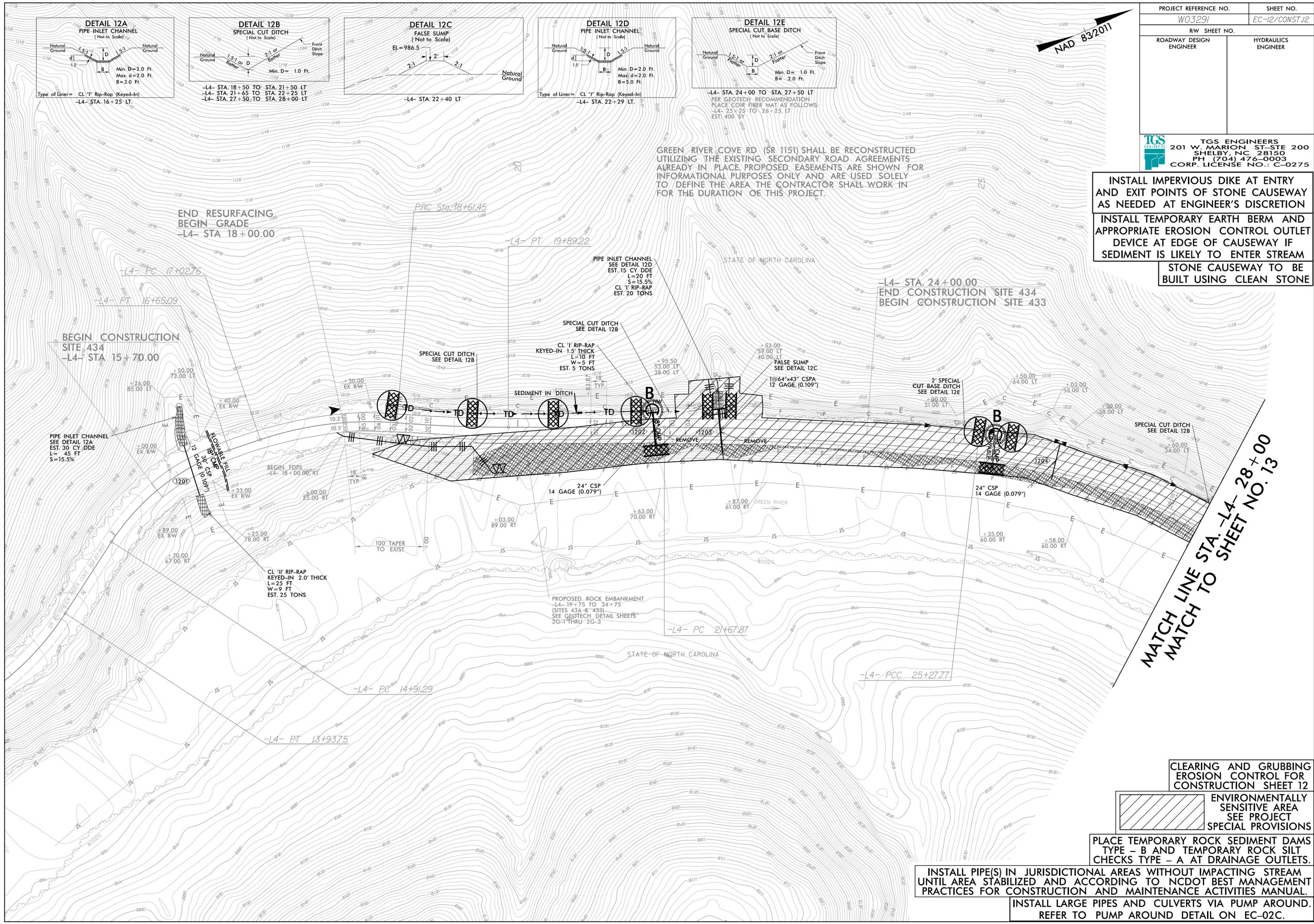


GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.

INSTALL IMPERVIOUS DIKE AT ENTRY AND EXIT POINTS OF STONE CAUSEWAY AS NEEDED AT ENGINEER'S DISCRETION

INSTALL TEMPORARY EARTH BERM AND APPROPRIATE EROSION CONTROL OUTLET DEVICE AT EDGE OF CAUSEWAY IF SEDIMENT IS LIKELY TO ENTER STREAM

STONE CAUSEWAY TO BE BUILT USING CLEAN STONE



MATCH LINE STA. -L4- 28+00
 MATCH TO SHEET NO. 13

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 12

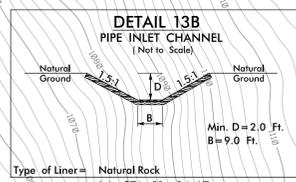
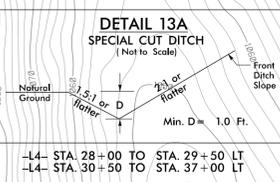
ENVIRONMENTALLY SENSITIVE AREA
 SEE PROJECT SPECIAL PROVISIONS

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

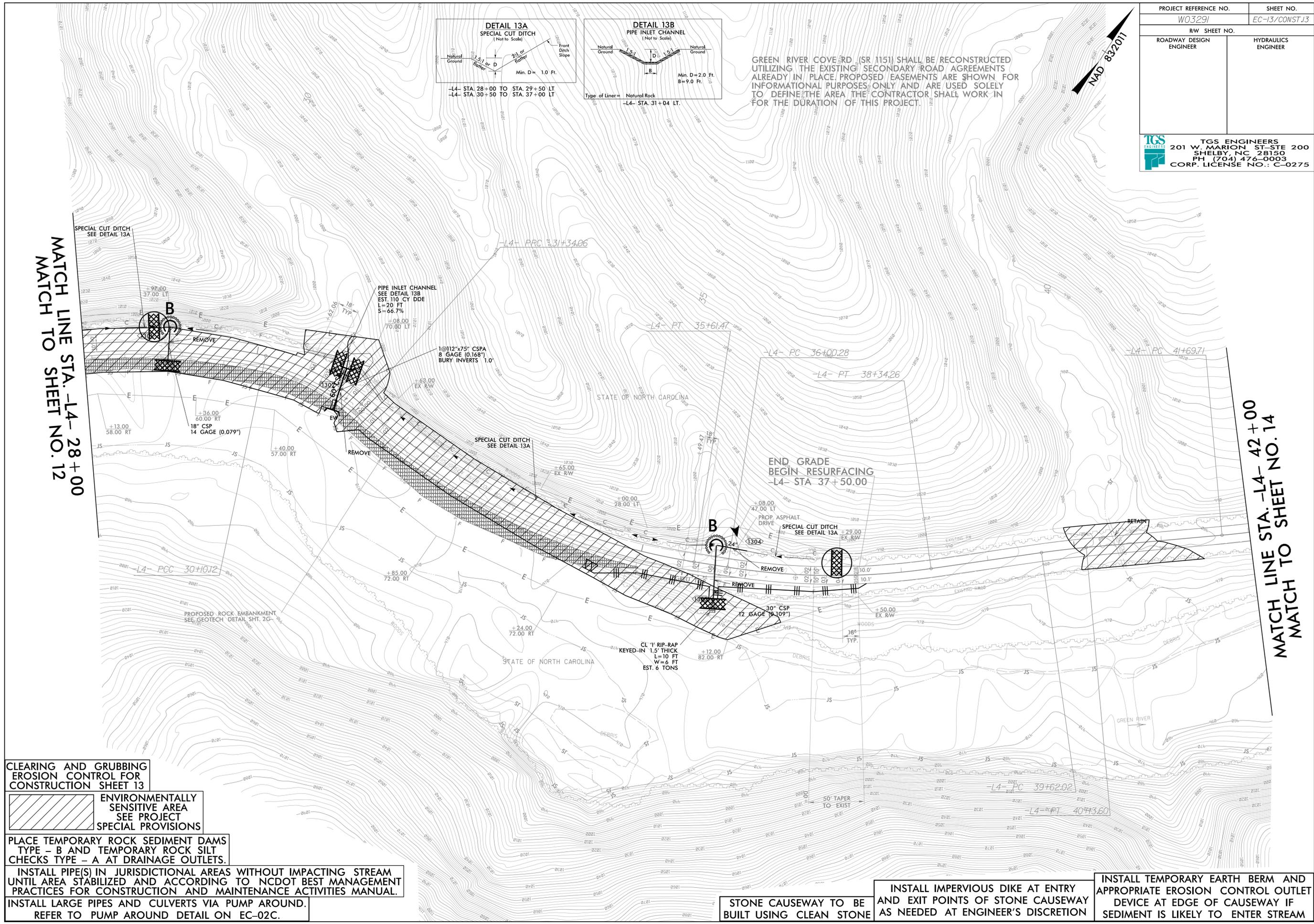
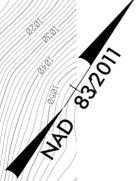
INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND. REFER TO PUMP AROUND DETAIL ON EC-02C.

PROJECT REFERENCE NO. W03291		SHEET NO. EC-13/CONST.13	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
		TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	



GREEN RIVER COVERD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



MATCH LINE STA. -L4- 28+00
MATCH TO SHEET NO. 12

MATCH LINE STA. -L4- 42+00
MATCH TO SHEET NO. 14

**CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 13**

 **ENVIRONMENTALLY
SENSITIVE AREA
SEE PROJECT
SPECIAL PROVISIONS**

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

**INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM
UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.**

**INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
REFER TO PUMP AROUND DETAIL ON EC-02C.**

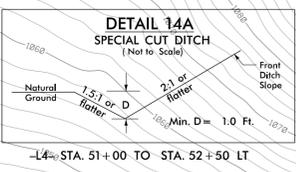
**STONE CAUSEWAY TO BE
BUILT USING CLEAN STONE**

**INSTALL IMPERVIOUS DIKE AT ENTRY
AND EXIT POINTS OF STONE CAUSEWAY
AS NEEDED AT ENGINEER'S DISCRETION**

**INSTALL TEMPORARY EARTH BERM AND
APPROPRIATE EROSION CONTROL OUTLET
DEVICE AT EDGE OF CAUSEWAY IF
SEDIMENT IS LIKELY TO ENTER STREAM**

PROJECT REFERENCE NO.	SHEET NO.
W03291	EC-14/CONST.14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TGS ENGINEERS
 201 W. MARION ST. STE 200
 SHELBY, NC 28150
 PH (704) 476-0003
 CORP. LICENSE NO.: C-0275



GREEN RIVER COVE RD (SR#1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.

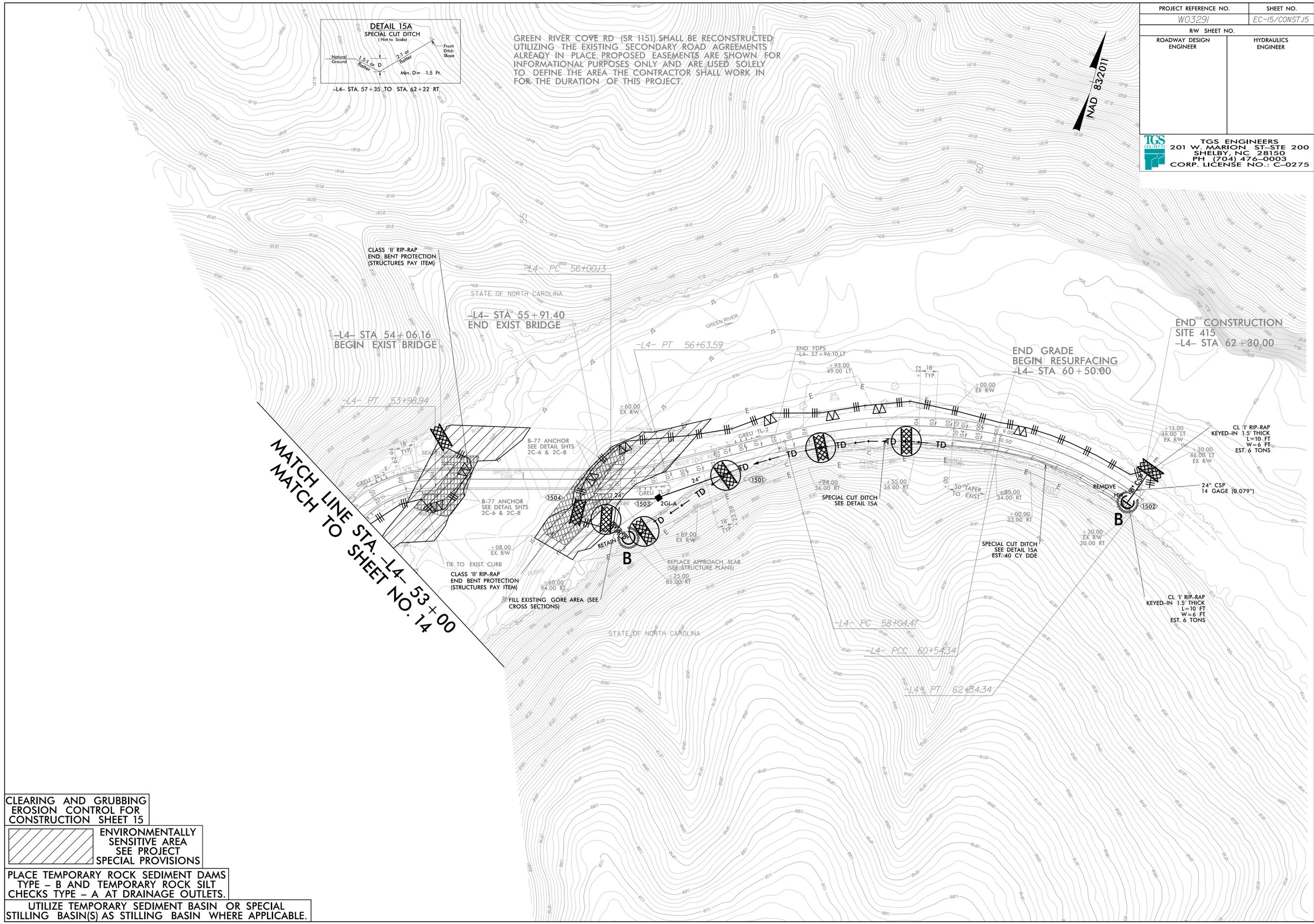


CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 14



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

PROJECT REFERENCE NO. W03291		SHEET NO. EC-15/CONST.15	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275			



GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 15

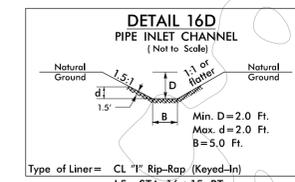
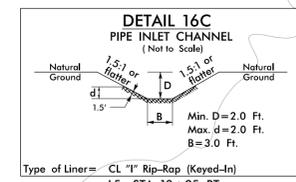
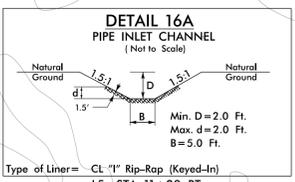


PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.

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

PROJECT REFERENCE NO. W03291		SHEET NO. EC-16/CONST.16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

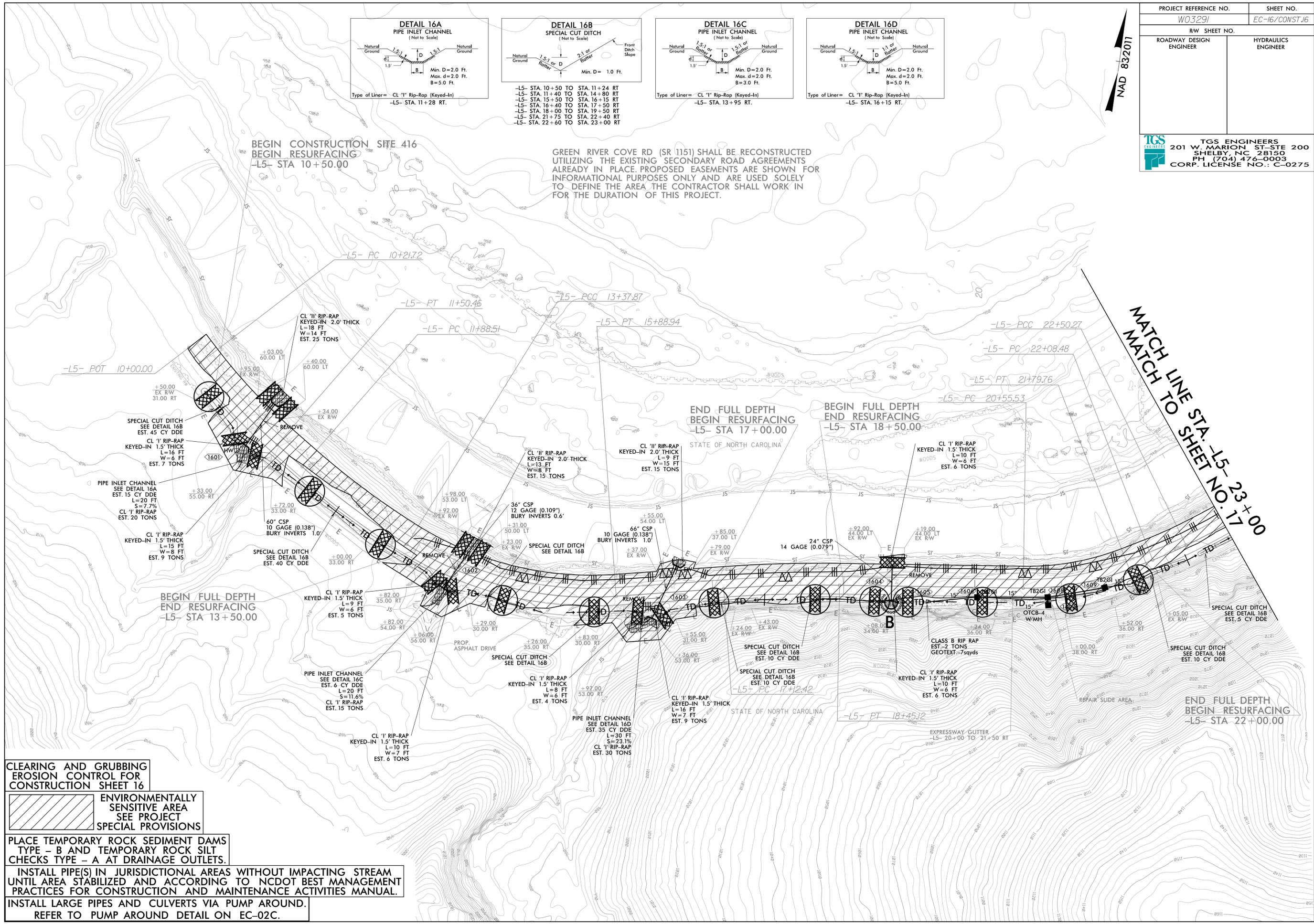
TGS ENGINEERS
201 W. MARION ST. STE 200
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275



NAD 832017

BEGIN CONSTRUCTION SITE 416
BEGIN RESURFACING
-L5- STA 10+50.00

GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



MATCH LINE STA. 15-23+00
MATCH LINE TO SHEET NO. 17+00

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 16

ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

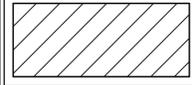
PLACE TEMPORARY ROCK SEDIMENT DAMS
TYPE - B AND TEMPORARY ROCK SILT
CHECKS TYPE - A AT DRAINAGE OUTLETS.

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM
UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT
PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

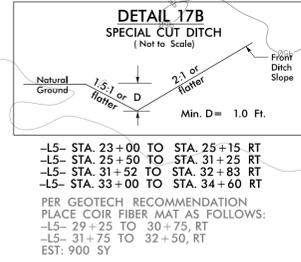
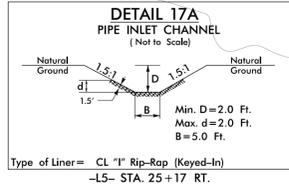
INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
REFER TO PUMP AROUND DETAIL ON EC-02C.

INSTALL LARGE PIPES AND CULVERTS VIA PUMP AROUND.
REFER TO PUMP AROUND DETAIL ON EC-02C.

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

 ENVIRONMENTALLY
SENSITIVE AREA
SEE PROJECT
SPECIAL PROVISIONS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 17



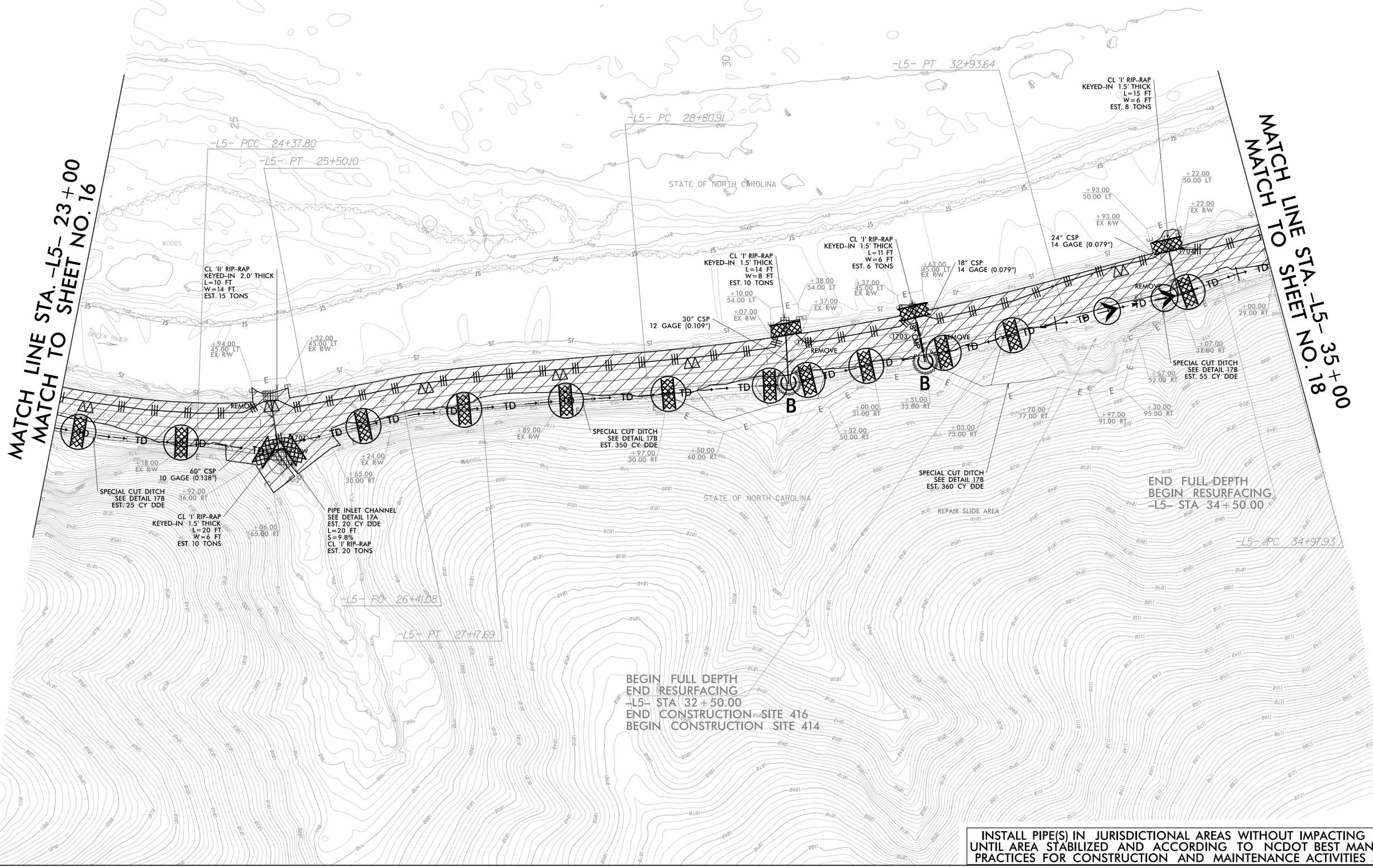
GREEN RIVER COVE RD (SR 1151) SHALL BE RECONSTRUCTED UTILIZING THE EXISTING SECONDARY ROAD AGREEMENTS ALREADY IN PLACE. PROPOSED EASEMENTS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE USED SOLELY TO DEFINE THE AREA THE CONTRACTOR SHALL WORK IN FOR THE DURATION OF THIS PROJECT.



PROJECT REFERENCE NO. W03291	SHEET NO. EC-17/CONST.17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 TGS ENGINEERS 201 W. MARION ST. STE 200 SHELBY, NC 28150 PH (704) 476-0003 CORP. LICENSE NO.: C-0275	

MATCH LINE STA. -L5- 23+00
MATCH TO SHEET NO. 16

MATCH LINE STA. -L5- 35+00
MATCH TO SHEET NO. 18



BEGIN FULL DEPTH
END RESURFACING
-L5- STA 32+50.00
END CONSTRUCTION SITE 416
BEGIN CONSTRUCTION SITE 414

INSTALL PIPE(S) IN JURISDICTIONAL AREAS WITHOUT IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.