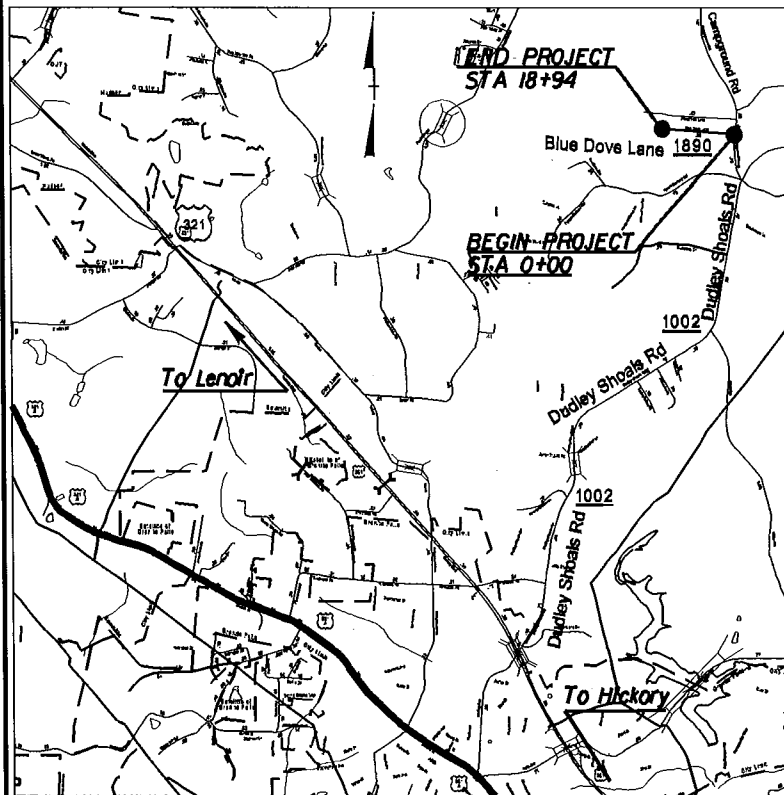


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PROJECT: IIC.014096

VICINITY MAP



Porous Baffle Spacing
 *Baffles in Silt Basins at drainage turnouts and all other temporary rock sediment dams--Type B:
 -If basin length = 10' or less; 1 baffle
 -If basin length = 11' to 20'; 2 baffles
 -If basin length = 20' or more; 3 baffles equally spaced in basin

NOTE:
 PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

Level III Cert # 3498

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL

CALDWELL COUNTY

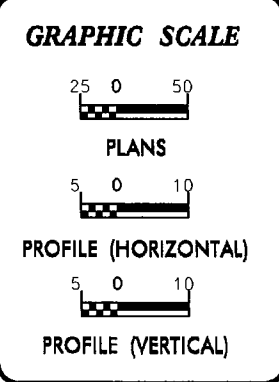
**LOCATION: SR 1890 BLUE DOVE LANE FROM
 SR 1751 CAMPGROUND RD TO E.O.P.
 STA 0+00 TO EOP STA 18+94**
**TYPE OF WORK: GRADING, DRAINAGE, BASE
 AND PAVING - 0.36 MILES**

| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|-----------------|-----------------------------|-------------|--------------|
| N.C. | IIC.014096 | EC-1 | 10 |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| | | | |
| | | | |
| | | | |

EROSION AND SEDIMENT CONTROL MEASURES

| Std. # | Description | Symbol |
|---------|--|-------------------|
| 1630.03 | Temporary Silt Ditch | --- TD --- |
| 1630.05 | Temporary Diversion | --- TD --- |
| 1605.01 | Temporary Silt Fence | --- SF --- |
| 1606.01 | Special Sediment Control Fence | --- SCF --- |
| 1622.01 | Temporary Berms and Slope Drains | --- TBSD --- |
| 1630.02 | Silt Basin Type B | --- SB --- |
| 1633.01 | Temporary Rock Silt Check Type-A | --- TRSCA --- |
| | Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM) | --- TRSCA-PAM --- |
| 1633.02 | Temporary Rock Silt Check Type-B | --- TRSCB --- |
| | Wattle / Coir Fiber Wattle with Polyacrylamide (PAM) | --- W/PAM --- |
| 1634.01 | Temporary Rock Sediment Dam Type-A | --- TRSDA --- |
| 1634.02 | Temporary Rock Sediment Dam Type-B | --- TRSDA --- |
| 1635.01 | Rock Pipe Inlet Sediment Trap Type-A | --- RPIS --- |
| 1635.02 | Rock Pipe Inlet Sediment Trap Type-B | --- RPIS --- |
| 1630.04 | Stilling Basin | --- SB --- |
| 1630.06 | Special Stilling Basin | --- SSB --- |
| | Rock Inlet Sediment Trap: | |
| 1632.01 | Type A | --- RIST --- |
| 1632.02 | Type B | --- RIST --- |
| 1632.03 | Type C | --- RIST --- |
| | Skimmer Basin | --- SB --- |
| | Tiered Skimmer Basin | --- TSB --- |
| | Infiltration Basin | --- IB --- |

THIS PROJECT CONTAINS
 EROSION CONTROL PLANS
 FOR CLEARING AND
 GRUBBING PHASE OF
 CONSTRUCTION.



ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
 WITH THE REGULATIONS SET FORTH BY THE
 NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011
 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND
 NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:
DIVISION OF HIGHWAYS
 DIVISION 11, DISTRICT 2 BOONE
 P.O. BOX 1460, BOONE, N.C. 28607
2012 STANDARD SPECIFICATIONS

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

| | |
|--|--|
| 1604.01 Railroad Erosion Control Detail | 1632.01 Rock Inlet Sediment Trap Type A |
| 1605.01 Temporary Silt Fence | 1632.02 Rock Inlet Sediment Trap Type B |
| 1606.01 Special Sediment Control Fence | 1632.03 Rock Inlet Sediment Trap Type C |
| 1607.01 Gravel Construction Entrance | 1633.01 Temporary Rock Silt Check Type A |
| 1622.01 Temporary Berms and Slope Drains | 1633.02 Temporary Rock Silt Check Type B |
| 1630.01 Riser Basin | 1633.03 Temporary Rock Silt Check Type C |
| 1630.02 Silt Basin Type 3 | 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 | 1640.01 Coir Fiber Wattle |
| 1631.01 Matting Installation | 1645.01 Temporary Stream Crossing |

EROSION CONTROL & PIPE INSTALLATION SCHEDULE

TROUT BUFFER ZONE SEQUENCE

GENERAL E&SC NOTES

GROUND STABILIZATION CHART

Erosion Control Schedule and Notes

1. Generally, the order of installation of the erosion control measures will be as follows:
 - A. Temporary silt basins shall be installed before clearing and grubbing begins.
 - B. Silt fences and temporary silt ditches shall be installed after clearing and before grading.
 - C. Temporary stone ditch checks with PAM or wattles with PAM shall be installed in all disturbed areas as soon as the disturbance begins.
 - D. Final stone ditch checks or wattles shall be installed as soon as ditch line is established.
 - E. Pipe outlet and inlet protection will be done as soon as the pipe is installed.
 - F. Other permanent erosion control measures are to be implemented as soon as practical.
2. Temporary rock silt checks, type B will be spaced by percent grade as shown in the erosion control plan.
3. No. 5 stone, or equivalent, will be used in conjunction with the temporary rock silt checks in locations where water is leaving the project or entering a pipe.
4. All devices are to be cleaned out when half full.
5. Establish permanent vegetation per ground stabilization chart.

Notes:

For silt basin size see the attached erosion control plans.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

Wet Pipe Installation Schedule and Notes

1. Prior to installing any E&SC measures identify permit conditions and impact area limits.
2. Install erosion control devices.
3. Manage the water course. The pipe must be placed in the dry. Install dewatering measures.
4. Remove material and existing pipe while limiting, material and sediment from entering stream and escaping the project.
5. Excavation of stream channel shall not exceed 10' on either side of new pipe or culvert unless indicated on permit.
6. Per permit conditions for Corps of Engineers and the Wildlife Resources Commission, all pipes in streams 48" or greater must be buried 12" below streambed elevation. Pipes less than 48" must be buried with 20% of the diameter below streambed elevation.
7. Place the new pipe and compact backfill.
8. Install slope protection on the outlet and inlet ends of the pipe. Also complete installation of erosion control measures and perform maintenance as needed on existing measures.
9. Establish permanent vegetation per ground stabilization chart.
10. More information on wet pipe installation can be found in the BMP manual section 4.2 "Pipe & Culvert installation"

General Erosion Control Sequence & Notes for NC DOT Projects in Trout Buffer Zones

1. Prior to installing any E&SC measures identify permit conditions and impact area limits. Review trout buffer variance approval conditions for any special provisions.
2. All materials should be on the hand before work is commenced.
3. Install EC devices
4. Work within the buffer zone should be sequenced to minimize the length of time that disturbed areas are exposed. Stream bank stabilization, which includes the area from the edge of water to the top of bank, should be phased so that each day's work is a completed work, including provision of adequate ground cover.
5. Graded slopes and fills within the trout buffer zone will within 7 calendar days of completion of any phase of grading be planted or otherwise provided with temporary or permanent ground cover, devices, or structures sufficient to restrain erosion.
6. Graded slopes and fills within the trout buffer zone (excluding road shoulders) shall be protected with rolled erosion control product, bonded fiber matrix, or flexible growth medium after seeding.

Notes:

Silt fence backed by woven wire, with a post spacing of 6 feet, shall be used instead of standard silt fence in trout buffer zone. Special sediment control fence shall be used in areas where bedrock is encountered which prohibits the proper anchoring of fabric, and in low points of the silt fence in 3-foot sections to allow for concentrated flows.

The disturbed areas within the stream buffer shall be restored to native vegetation characteristic of an undisturbed buffer to the extent practical upon completion of construction.

Flyrock protection such as blast mats should be provided for blasting in close proximity to streams.

PAM is to be placed on all Type A checks and wattles in the erosion control chain except for the final device in HWQ and Trout projects.

GROUND STABILIZATION CHART

| Site Area Description | Stabilization Time Frame | Stabilization Time Frame Exceptions |
|---|--------------------------|--|
| Perimeter dikes, swales, ditches and slopes | 7 days | None |
| High Quality Water Zones | 7 days | None |
| Slopes steeper than 3:1 | 7 days | If slopes are 10 ft. or less in length and are not steeper than 2:1, 14 days are allowed |
| Slopes 3:1 or flatter | 14 days | 7 days for slopes greater than 50' in length |
| All other areas flatter than 4:1 | 14 days | None (except for perimeters and HQW zones) |

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

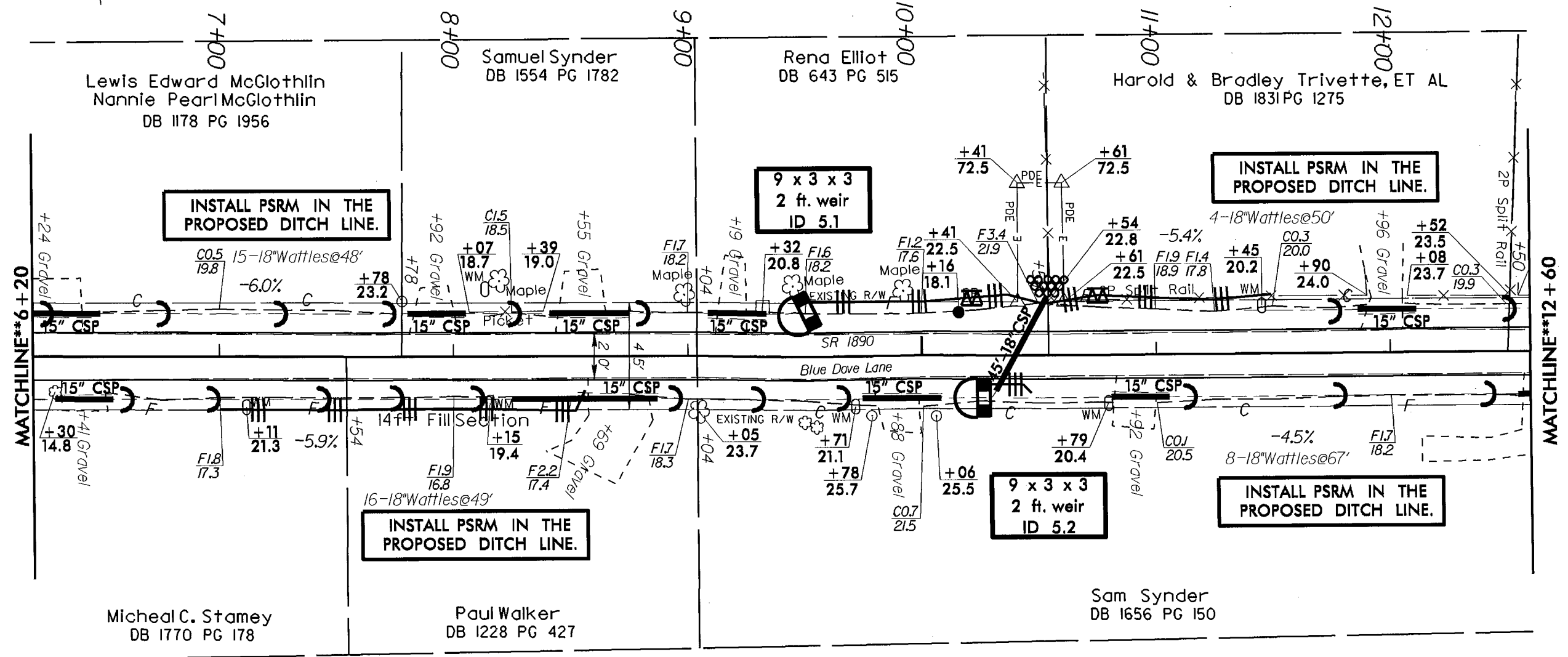
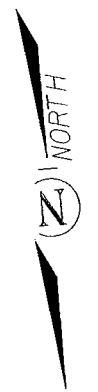
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| 11C.014096 | EC-3B |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

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 (HOW) 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 OR FLATTER | 14 DAYS | 7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH. |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS | NONE, EXCEPT FOR PERIMETERS AND HOW ZONES. |

| | |
|-------------------------------------|------------------------|
| PROJECT REFERENCE NO. 11C.014096 | SHEET NO. EC-5 |
| RW SHEET NO. 5 | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

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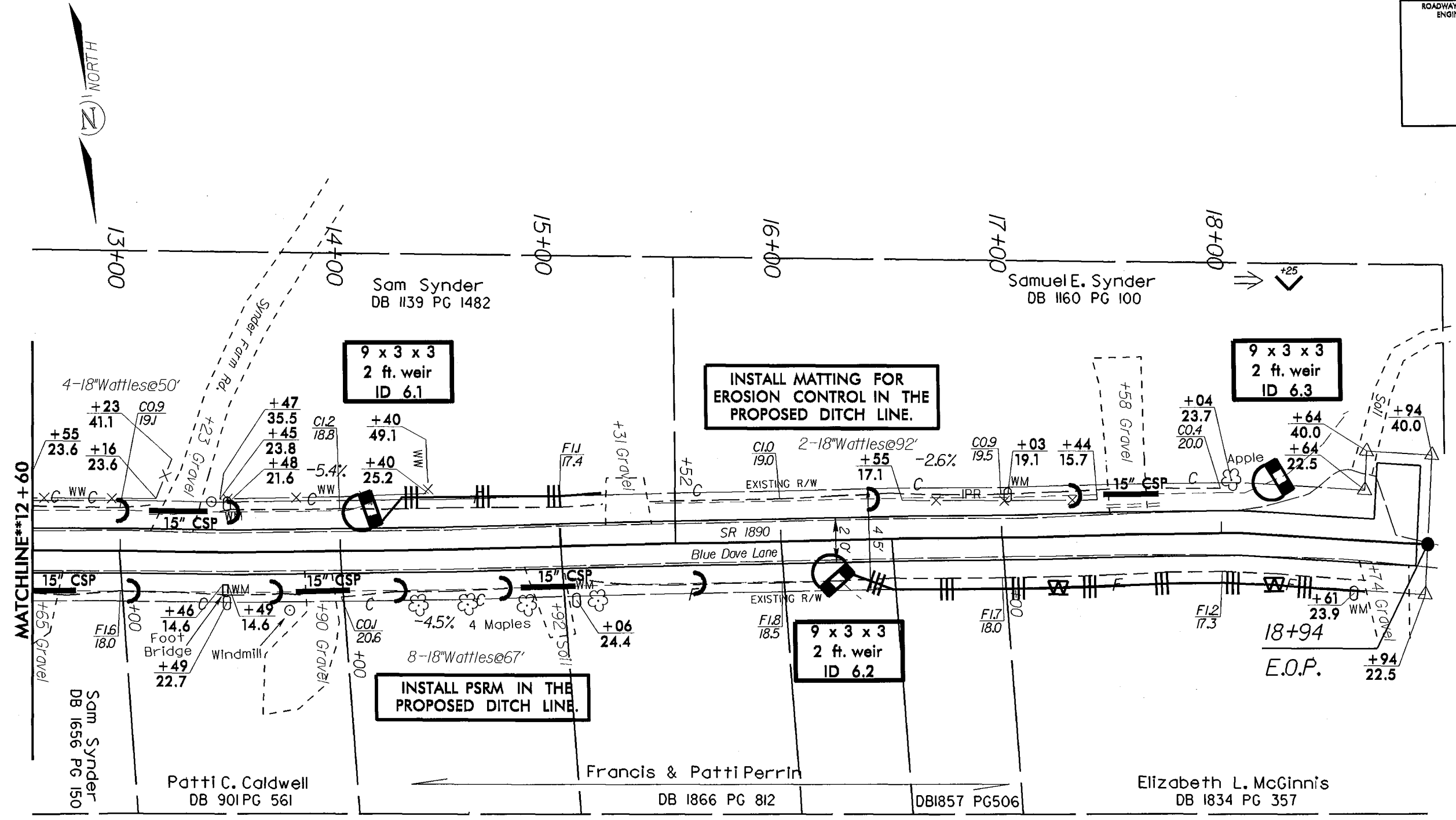
REVISIONS

MATCHLINE**6 + 20

MATCHLINE**12 + 60

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|-------------------------------------|---------------------|
| PROJECT REFERENCE NO. 11C.014096 | SHEET NO. EC-6 |
| RW SHEET NO. 6 | |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

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MATCHLINE**12 + 60

9 x 3 x 3
2 ft. weir
ID 6.1

INSTALL MATTING FOR
EROSION CONTROL IN THE
PROPOSED DITCH LINE.

9 x 3 x 3
2 ft. weir
ID 6.3

9 x 3 x 3
2 ft. weir
ID 6.2

INSTALL PSRM IN THE
PROPOSED DITCH LINE.

18+94
E.O.P.