

STATE OF MAINE DEPARTMENT OF TRANSPORTATION



CUMBERLAND CUMBERLAND COUNTY RIDEOUT BRIDGE OVER DEW DROP BROOK WINN ROAD STATE PROJECT NO. 16695.00 BRIDGE CULVERT REHABILITATION BRIDGE NO. 5340

LIST OF DRAWINGS

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| Invert Plan | 4 |
| Pipe Elevation | 5 |
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TRAFFIC DATA

| | |
|---|------|
| Current (2010) AADT | 2620 |
| Future (2020) AADT | 3140 |
| DHV - % of AADT | 12 |
| Design Hour Volume | 440 |
| Heavy Trucks (% of AADT) | 3 |
| Heavy Trucks (% of DHV) | 3 |
| Directional Distribution (% of DHV) | 66 |
| 18 kip Equivalent P 2.0 | 60 |
| 18 kip Equivalent P 2.5 | 58 |

HYDROLOGIC DATA

| | |
|----------------------------------|-------------|
| Drainage Area | 3.915 sq mi |
| Design Discharge (Q50) | 837.7 cfs |
| Check Discharge (Q100) | 992.7 cfs |
| Headwater Elevation (Q50) | 56.62 ft |
| Headwater Elevation (Q100) | 57.53 ft |
| Discharge Velocity (Q50) | 8.06 fps |
| Discharge Velocity (Q100) | 9.56 fps |
| Headwater Elevation (Q1.1) | 7.24 ft |
| Discharge Velocity (Q1.1) | 46.04 fps |
| Headwater Elevation (Q25) | 55.75 ft |

MATERIALS

| | |
|-------------------------|------------------------------|
| Concrete | Modified "LP" or "Shotcrete" |
| Reinforcing Steel | ASTM A 615/A 615M, Grade 60 |

BASIC DESIGN STRESSES

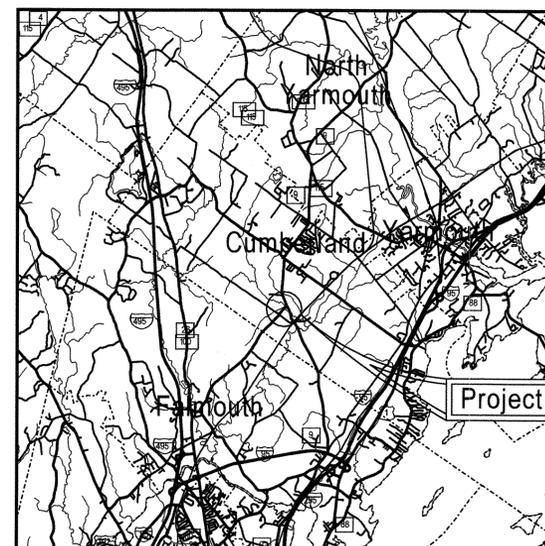
| | |
|-------------------------|------------------|
| Concrete | f 'c = 5,000 psi |
| Reinforcing Steel | f y = 60,000 psi |

UTILITIES

| | |
|--------------------------------------|-------------------------|
| Central Maine Power Company | Time Warner Cable |
| Northern New England Operations, LLC | Portland Water District |

MAINTENANCE OF TRAFFIC

Maintain two 11'-0" wide lanes allowing occasional alternating two - way traffic using flaggers when a lane closure is necessary.



LOCATION MAP



SIGNATURE: *[Signature]*
11157
P.E. NUMBER: 3-24-10
DATE

| | |
|-------------------------|------------------|
| PROGRAM | BRIDGE PROGRAM |
| PROJECT MANAGER | Jim D. Wentworth |
| DESIGNER | Joe R. Veiloux |
| CONSULTANT | |
| PROJECT RESIDENT | |
| CONTRACTOR | |
| PROJECT COMPLETION DATE | |

CUMBERLAND
RIDEOUT BRIDGE
TITLE SHEET

SHEET NUMBER

1

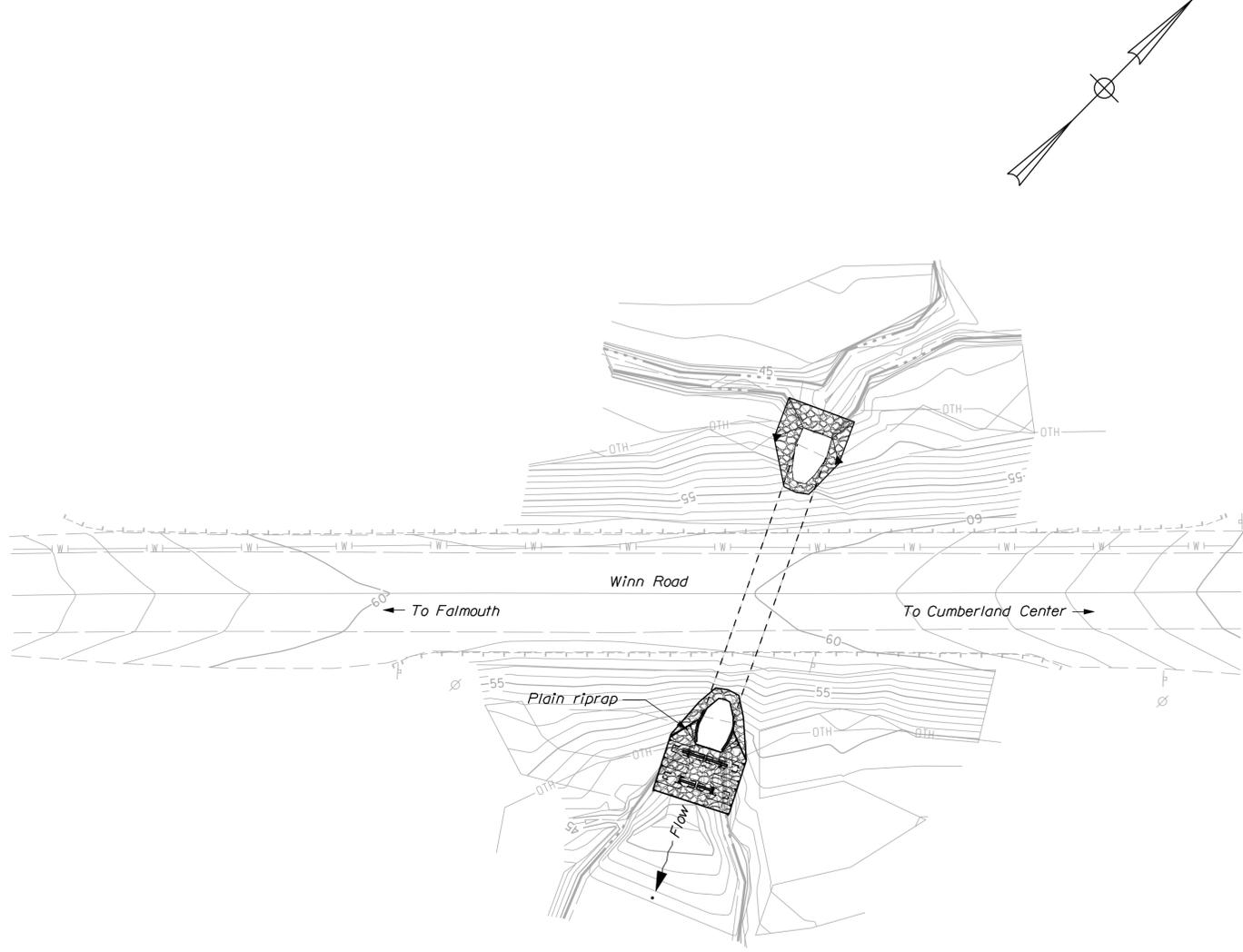
OF 8

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
APPROVED: *[Signature]*
COMMISSIONER: *[Signature]*
CHIEF ENGINEER: *[Signature]*

DATE: 7/25/12
3/24/10

PIN 16695.00

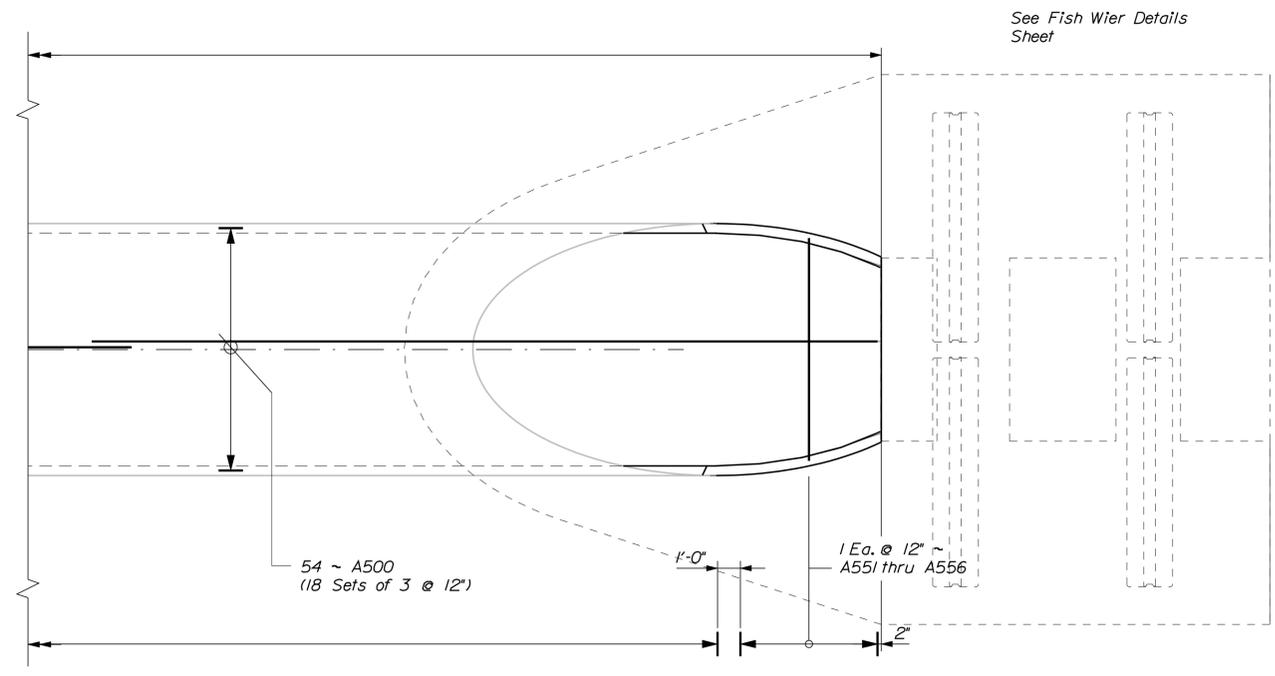
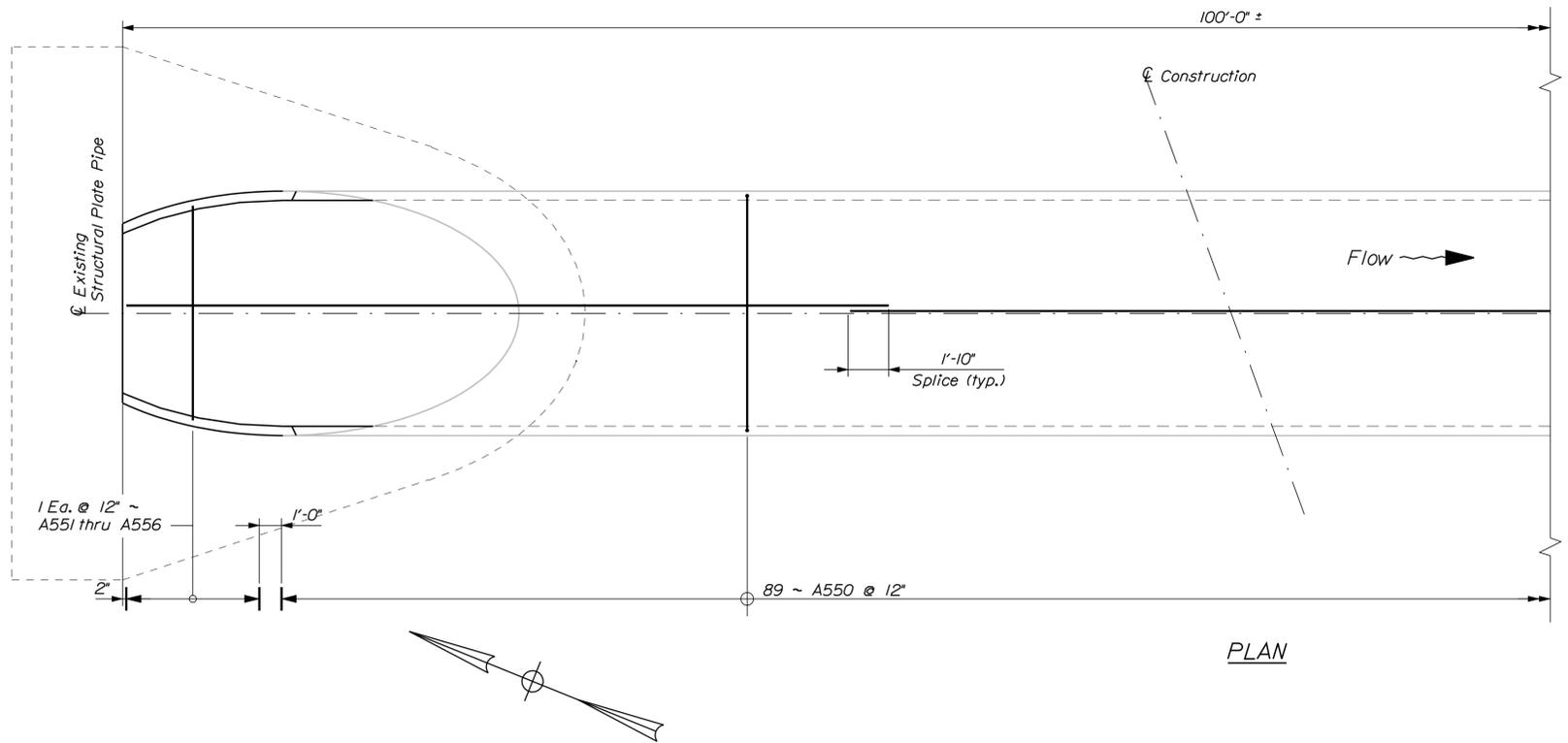
16695.00



| | | | | |
|--|--------------|-----------------|--|-----------------|
| RIDEOUT BRIDGE DEW DROP BROOK CUMBERLAND COUNTY PLANS | SHEET NUMBER | | STATE OF MAINE DEPARTMENT OF TRANSPORTATION | |
| | 3 | | 16695.00 | |
| | | BRIDGE NO. 5340 | | PIN 16695.00 |
| | | | | BRIDGE PLANS |

| PROJ. MANAGER | JWM | BY | DATE |
|------------------|-----|-----|------|
| DESIGN DETAILED | | ADN | |
| CHECKED-REVIEWED | | | |
| DESIGNS DETAILED | | | |
| REVISIONS 1 | | | |
| REVISIONS 2 | | | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |

| | |
|--|-------------|
| | SIGNATURE |
| | P.E. NUMBER |
| | DATE |

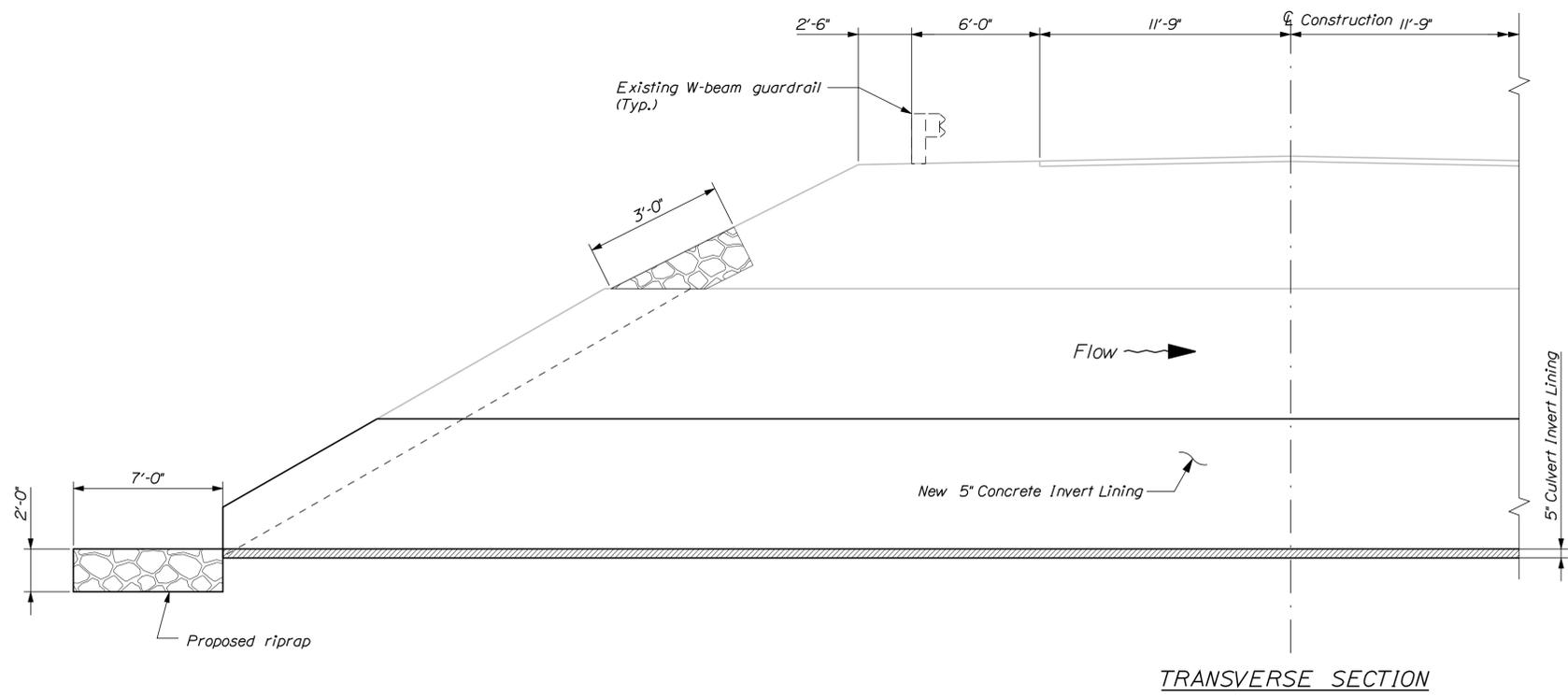
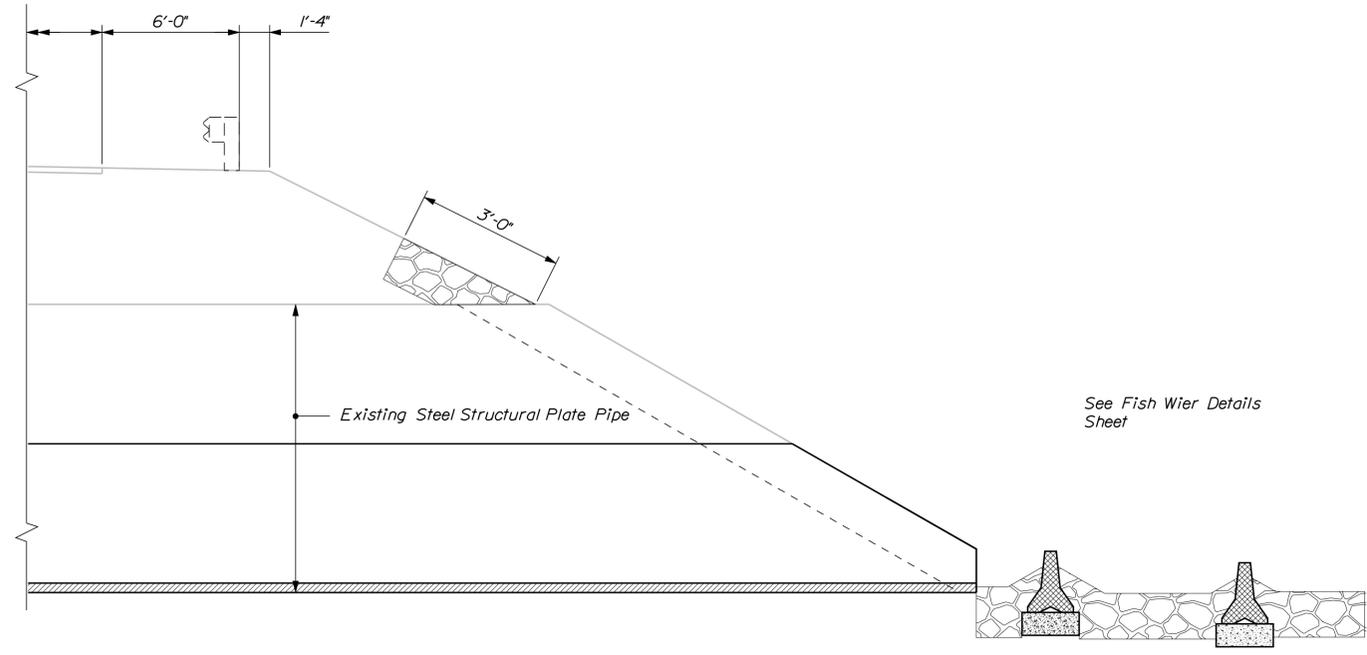


SHEET NUMBER
4
OF 8

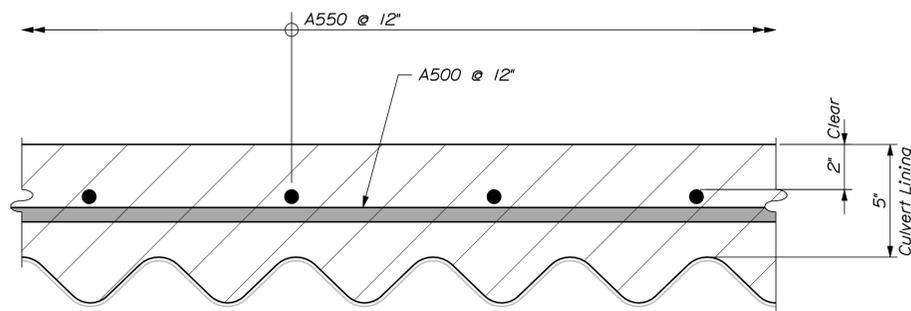
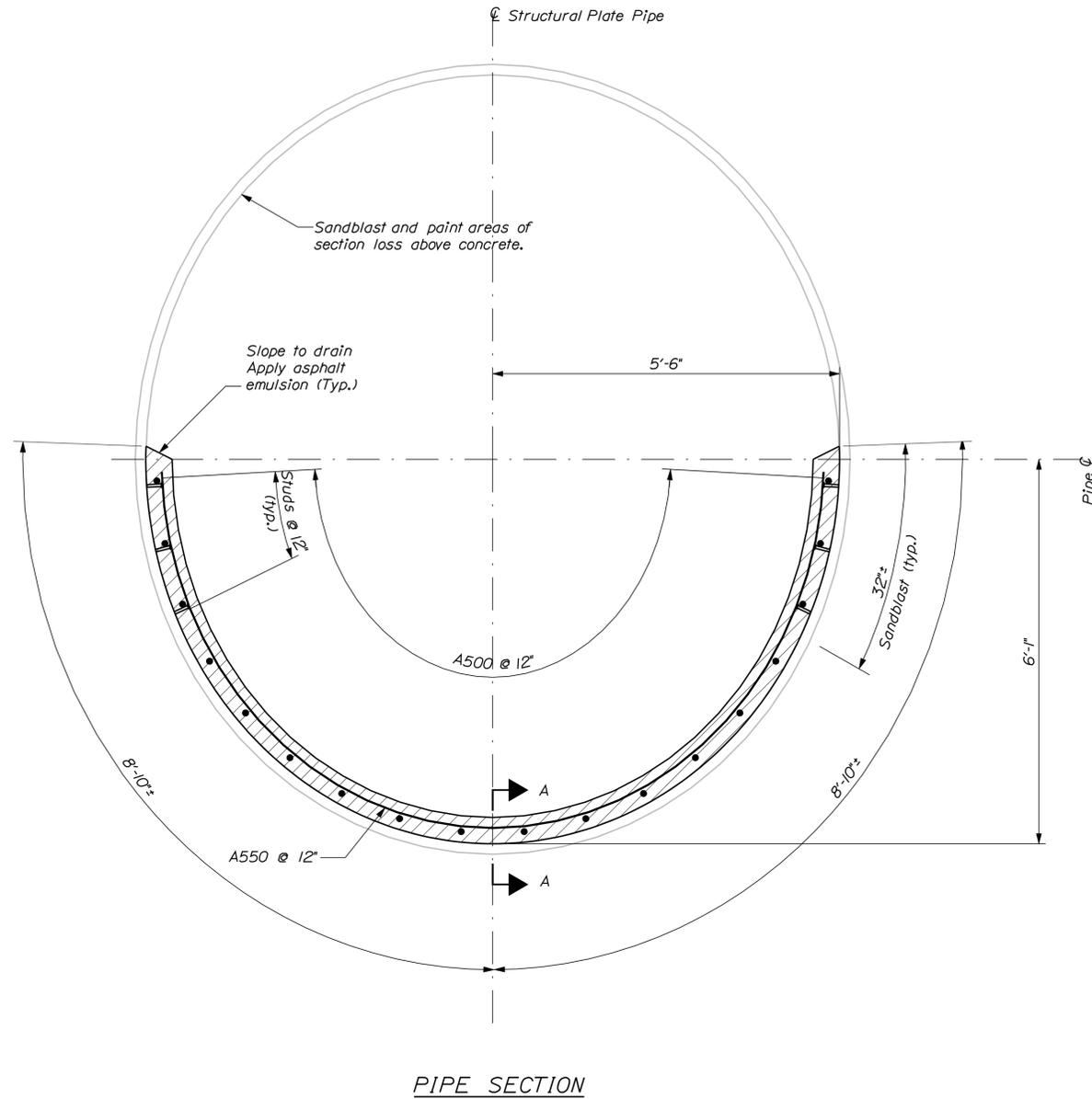
RIDEOUT BRIDGE
DEW DROP BROOK
CUMBERLAND COUNTY
INVERT PLAN

| PROJ. MANAGER | BY | DATE |
|------------------|-----|------|
| DESIGN DETAILED | JRW | |
| CHECKED-REVIEWED | ADN | |
| DESIGN DETAILED | | |
| REVISIONS 1 | | |
| REVISIONS 2 | | |
| REVISIONS 3 | | |
| REVISIONS 4 | | |
| FIELD CHANGES | | |

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16695.00
BRIDGE NO. 5340
PIN
16695.00
BRIDGE PLANS



| | | | |
|------------------|-----------------|------------------------------|----|
| STATE OF MAINE | | DEPARTMENT OF TRANSPORTATION | |
| 16695.00 | | PIN 16695.00 | |
| BRIDGE NO. 5340 | | BRIDGE PLANS | |
| PROJ. MANAGER | DESIGN-DETAILED | IRV | BY |
| CHECKED-REVIEWED | ADN | DATE | |
| DESIGN-DETAILED | | SIGNATURE | |
| REVISIONS 1 | | P.E. NUMBER | |
| REVISIONS 2 | | DATE | |
| REVISIONS 3 | | | |
| REVISIONS 4 | | | |
| FIELD CHANGES | | | |
| RIDEOUT BRIDGE | | CUMBERLAND COUNTY | |
| DEW DROP BROOK | | PIPE ELEVATION | |
| SHEET NUMBER | | | |
| 5 | | | |
| OF 8 | | | |



SECTION A-A

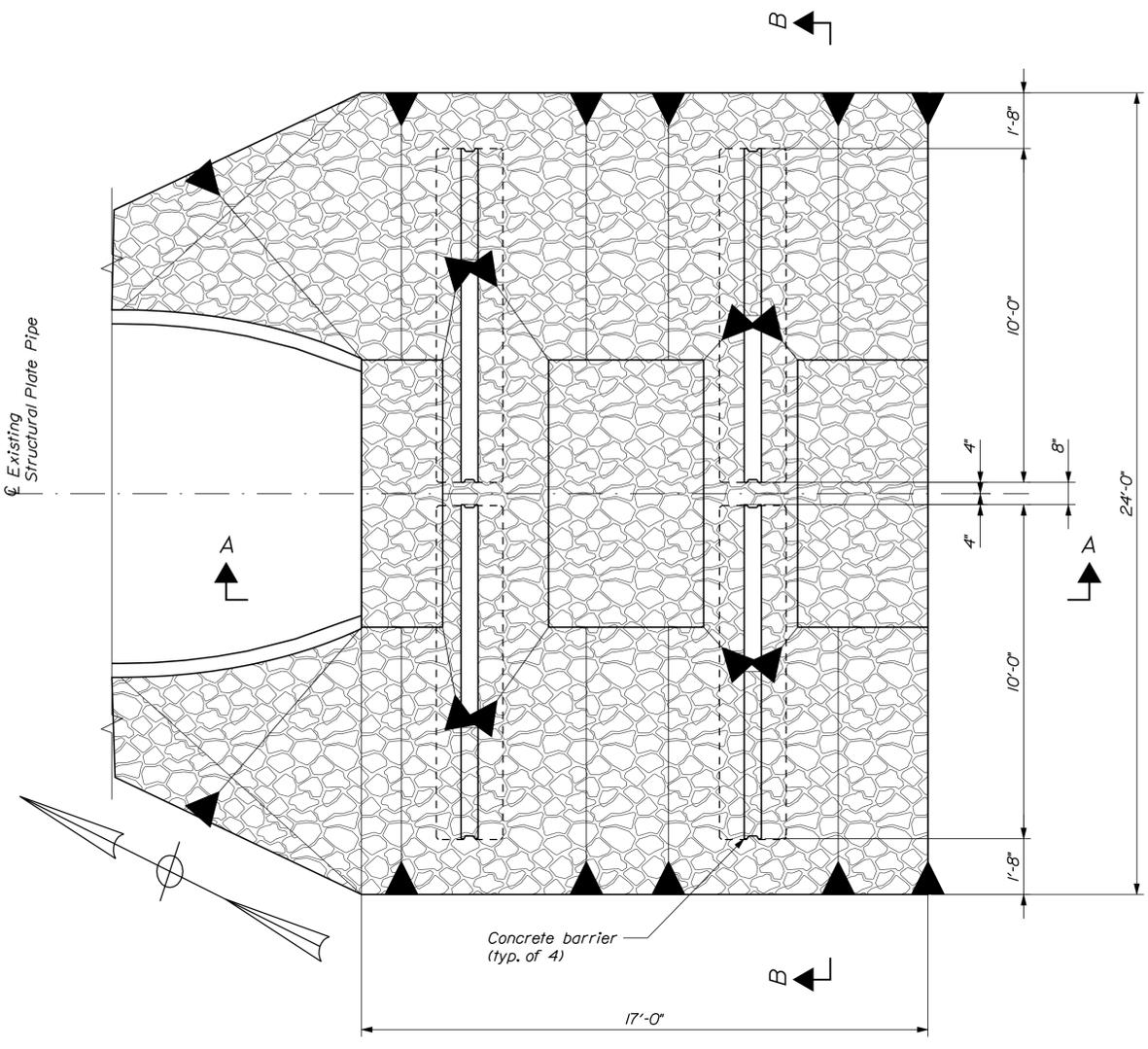
INVERT NOTES

1. Surfaces of the pipe against which concrete is to be placed shall be thoroughly cleaned so as to remove all loose corrosion. In areas where the metal is non-existent, a preliminary concrete placement shall be made, using forms where required, to fill voids and to establish the original lines of the pipe. The final placement shall then be made as shown. Payment for this work will be considered incidental to Item No. 502.325, Structural Concrete Invert Lining.
2. Three rows of shear connectors shall be staggered longitudinally at 12" spacing along each side of the pipe barrel. Shear connectors shall be 1/2" x 3" studs or machine bolts welded to the crests of the corrugations. Approximately 558 shear connectors are required. Payment will be considered incidental to contract items.
3. Reinforcing steel shall have a minimum concrete cover of 2" unless otherwise shown. Any cutting and bending to field fit reinforcing steel shall be considered incidental to resteel item.
4. The existing structural plate pipe may have a slight deformation requiring field bending and/or cutting of the reinforcing steel.
5. The concrete shall have a rough broom or gun finish along the entire length of the pipe invert.
6. Stream water shall not be allowed contact with fresh concrete until the pH factor is 8.5 or less and within one pH unit of the background pH level in the stream.

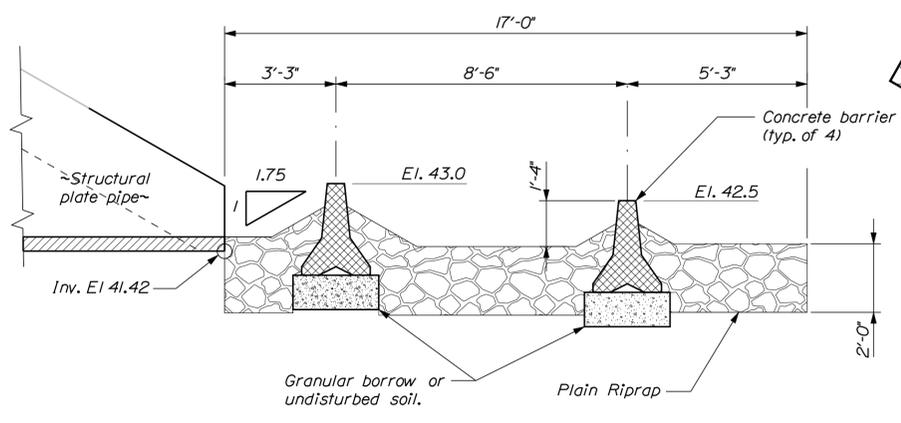
| REINFORCING STEEL SCHEDULE | | | | |
|----------------------------|------|----------|-------------------------------------|---------------|
| Mark | Size | Quantity | Length | Description |
| A500 | #5 | 54 | 34'-4 ³ / ₄ " | Longitudinal |
| A550 | #5 | 89 | 17'-1" | Transverse |
| A551 | #5 | 2 | 10'-5" | Trans. - Ends |
| A552 | #5 | 2 | 11'-8" | Trans. - Ends |
| A553 | #5 | 2 | 12'-11" | Trans. - Ends |
| A554 | #5 | 2 | 14'-1" | Trans. - Ends |
| A555 | #5 | 2 | 15'-3" | Trans. - Ends |
| A556 | #5 | 2 | 16'-5" | Trans. - Ends |

Length varies

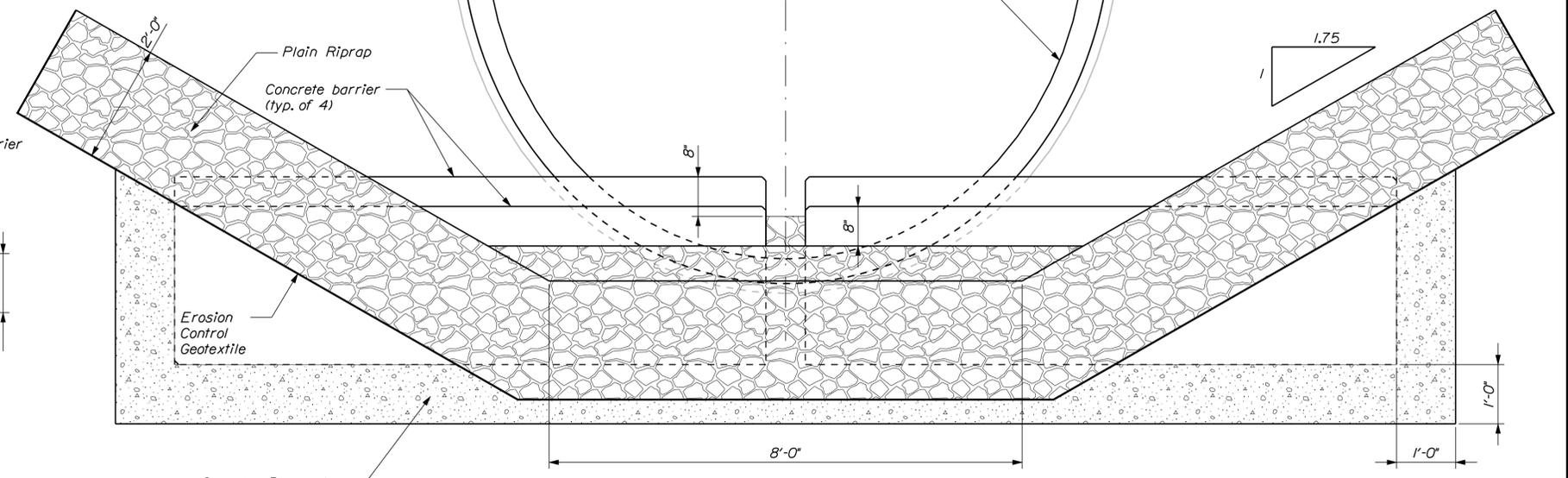
| | | |
|---|---|--------------|
| STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16695.00 | BRIDGE NO. 6340 PIN 16695.00 | BRIDGE PLANS |
| RIDGUT BRIDGE DEW DROP BROOK CUMBERLAND COUNTY | INVERT LINING DETAILS | |
| SHEET NUMBER <div style="font-size: 2em; font-weight: bold; margin: 5px 0;">6</div> OF 8 | | |



WIER PLAN



SECTION A-A



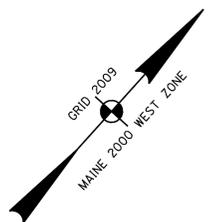
UPSTREAM SECTION B-B
(Facing North)

NOTE

This work shall be considered incidental to riprap and barrier items. Any material excavated shall remain on site and be re-used to fill and shape roadway embankments and/or slopes adjacent to the culvert, as directed by Resident.

| | | | | | | | | | |
|-----------------|-----------|------------------------------|------------------|-------------------|-------------|-------------------|-------------|--------------|---------------|
| STATE OF MAINE | | DEPARTMENT OF TRANSPORTATION | | BRIDGE NO. 6340 | | PIN 16695.00 | | BRIDGE PLANS | |
| RIDEOUT BRIDGE | | DEW DROP BROOK | | CUMBERLAND COUNTY | | FISH WIER DETAILS | | SHEET NUMBER | |
| PROJECT MANAGER | | DESIGN DETAILED | CHECKED-REVIEWED | DESIGNED-DETAILED | REVISIONS 1 | REVISIONS 2 | REVISIONS 3 | REVISIONS 4 | FIELD CHANGES |
| JW | ADN | | | | | | | | |
| DATE | SIGNATURE | P.E. NUMBER | DATE | | | | | | |
| | | | | | | | | | |

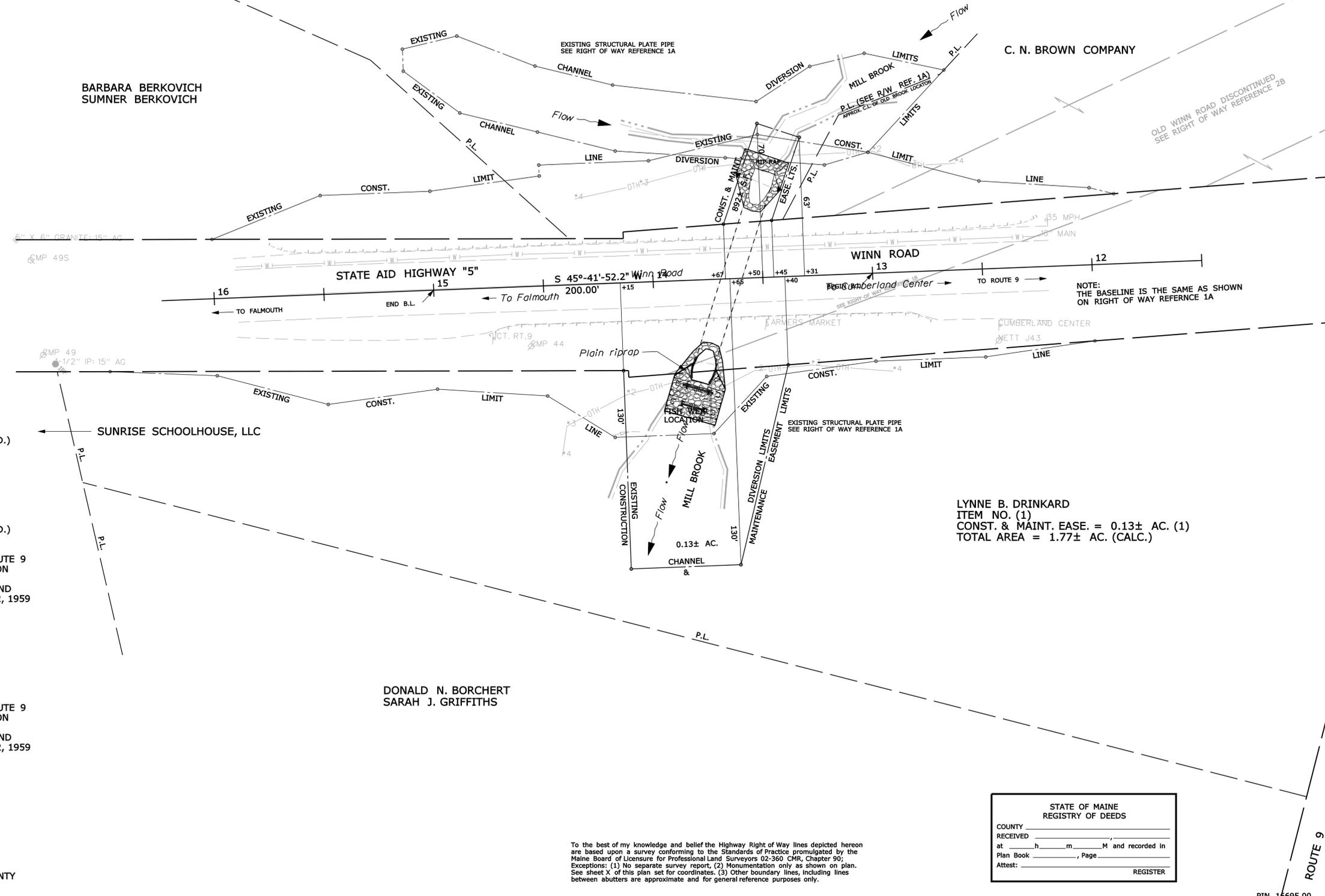
Filename: ...:\00\ROW\MSTA001_RWP\PLAN1.dgn Division: BRIDGE Username: alan.nadeau Date: 4/6/2010



CONTROL INFORMATION
 HORIZONTAL DATUM - US STATE PLANE NAD83 (1996)
 ZONE - MAINE 2000 WEST ZONE
 VERTICAL DATUM - NAVD 88
 COMBINED SCALE FACTOR - 0.9999778

BARBARA BERKOVICH
 SUMNER BERKOVICH

PETER DAVID SEGAL
 JENNIFER L. SEGAL
 ITEM NO. (2)
 CONST. & MAINT. EASE. = 892± S.F.(1)
 TOTAL AREA = 4.05± AC. (PER TOWN)



- EXISTING RIGHT OF WAY**
- 1) WINN ROAD (STATE AID HIGHWAY NO. 5)
 - A) STATE OF MAINE DEPARTMENT OF TRANSPORTATION (D.O.T.) BUREAU OF HIGHWAYS RIGHT OF WAY MAP STATE AID HIGHWAY NO. 5 CUMBERLAND, CUMBERLAND COUNTY PLAN DATE - AUGUST 1973 D.O.T. FILE NO. S-3-345 CUMBERLAND COUNTY REGISTRY OF DEEDS (C.C.R.D.) PLAN BOOK/PAGE - 121/11 RECORDING DATE - SEPTEMBER 8, 1978
 - B) MAINE STATE HIGHWAY COMMISSION (S.H.C.) RIGHT OF WAY MAP STATE AID HIGHWAY NO. 5 CUMBERLAND, CUMBERLAND COUNTY PLAN DATE - MARCH 1960 S.H.C. FILE NO. S-3-233 CUMBERLAND COUNTY REGISTRY OF DEEDS (C.C.R.D.) PLAN BOOK/PAGE - 59/21 RECORDING DATE - SEPTEMBER 28, 1961
 - C) PLAN OF INTERSECTION OF WINN ROAD WITH ROUTE 9 TOWN OF CUMBERLAND, SHOWING ALTERED SECTION OF WINN ROAD AND PORTION OF ROUTE 9 REDEFINED BY THE COMMISSIONERS OF CUMBERLAND COUNTY FOLLOWING A HEARING ON SAME JULY 22, 1959 PLAN BY H.H. SWEETSER H.I. & E.C. JORDAN SURVEYORS DIVISION OF EDWARD C. JORDAN CO., INC. PLAN DATE - SEPTEMBER 3, 1959 PLAN BOOK/PAGE - 7/45 RECORDIGN AND FILE DATE - DECEMBER 22, 1959
 - D) CUMBERLAND COUNTY COMMISSIONERS RECORDS VOLUME 17, PAGE 318 1907 - 60' WIDE
 - 2) OLD WINN ROAD
 - A) PLAN OF INTERSECTION OF WINN ROAD WITH ROUTE 9 TOWN OF CUMBERLAND, SHOWING ALTERED SECTION OF WINN ROAD AND PORTION OF ROUTE 9 REDEFINED BY THE COMMISSIONERS OF CUMBERLAND COUNTY FOLLOWING A HEARING ON SAME JULY 22, 1959 PLAN BY H.H. SWEETSER H.I. & E.C. JORDAN SURVEYORS DIVISION OF EDWARD C. JORDAN CO., INC. PLAN DATE - SEPTEMBER 3, 1959 PLAN BOOK/PAGE - 7/45 RECORDING AND FILE DATE - DECEMBER 22, 1959
 - B) DISCONTINUANCE OF OLD WINN ROAD EFFECTIVE NOVEMBER 15, 1959
 - 3) AS-BUILT PLANS
 - A) STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIDEOUT BRIDGE OVER MILL BROOK IN THE TOWN OF CUMBERLAND, CUMBERLAND COUNTY PLAN DATE - DECEMBER 1972

DONALD N. BORCHERT
 SARAH J. GRIFFITHS

LYNNE B. DRINKARD
 ITEM NO. (1)
 CONST. & MAINT. EASE. = 0.13± AC. (1)
 TOTAL AREA = 1.77± AC. (CALC.)

To the best of my knowledge and belief the Highway Right of Way lines depicted hereon are based upon a survey conforming to the Standards of Practice promulgated by the Maine Board of Licensure for Professional Land Surveyors 02-360 CMR, Chapter 90; Exceptions: (1) No separate survey report, (2) Monumentation only as shown on plan. See sheet X of this plan set for coordinates. (3) Other boundary lines, including lines between abutters are approximate and for general reference purposes only.

STATE OF MAINE
 REGISTRY OF DEEDS
 COUNTY RECEIVED _____
 at _____ h _____ m _____ M and recorded in
 Plan Book _____, Page _____
 Attest: _____ REGISTER

SYMBOLS

| | |
|---|--------------------------------------|
| ○ | WELL |
| — | GRADING LIMIT LINE |
| — | CONSTRUCTION LIMIT LINE |
| — | PROPERTY LINE |
| — | LIMITS OF TROUGHT PORTION (L.O.W.P.) |
| — | EXISTING RIGHT OF WAY |
| — | NEW RIGHT OF WAY |
| — | NEW ROW WITHIN EXIST. ROW |
| — | CONTROL OF ACCESS |
| ● | IP or # (IRON PIPE OR PIN FOUND) |
| □ | SEPTIC TANK |
| □ | S.T. (TRAVERSE POINT) |
| — | WATER LINE |
| — | GAS LINE |
| — | ELECTRIC LINE |
| — | TELEPHONE LINE |
| — | SEWER LINE |

| ITEM | TECH | CHECKED |
|-------------|--------|---------|
| BASE MAP | | |
| EXIST. R/W | G.L.L. | C.W.K. |
| PROP. LINES | G.L.L. | |
| AREAS | G.L.L. | J.C.C. |

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 16 STATE HOUSE STATION - AUGUSTA, ME. 04333-0016
 CUMBERLAND
 RIGHT OF WAY MAP

| REVISIONS | | | PLAN FILED IN PLAN BOOK | | | | COUNTY RECORD | | | | | | |
|-----------|------|-------------|-------------------------|-----|---------|------------|---------------|-------|------|-------|------|------|------|
| NO. | DATE | DESCRIPTION | BY | NO. | GRANTOR | INSTRUMENT | DATE | BOOK | PAGE | COND. | DATE | BOOK | PAGE |
| | | | | | | | 3/29/10 | 27671 | 310 | | | | |

DAVID A. COLE
 COMMISSIONER
 KENNETH L. SWEENEY
 ACTING CHIEF ENGINEER
 DATE



STATE AID HIGHWAY NO. 5
 WINN ROAD
 CUMBERLAND CUMBERLAND COUNTY
 STATE PROJECT NO. 16695.00
 JANUARY 2010 RIGHT-OF-WAY MAP
 SCALE 1" = 25' SHEET 1 OF 1
 D.O.T. FILE NO. 3-563

SHEET NUMBER
8
 OF 8