STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

DESIGN: AASHTO LRFD Bridge Design Specifications, Second Edition 1998 and Interim Specifications through 2003.

DESIGN LOADING

Live Load ..... HL - 93 Modified for Strength 1

TRAFFIC DATA

Current (1999) AADT	15520
Future (2019) AADT	18620
DHV - % of AADT	10
Design Hour Volume	1862
% Heavy Trucks (AADT)	5
% Heavy Trucks (DHV)	4
Directional Distribution (DHV)	64
80 kN Equivalent P 2.0	978
80 kN Equivalent P 2.5	932
Design Speed (km/h)	40

HYDROLOGIC DATA

Drainage Area	19,865 km²
Design Discharge (Q50)	1656.5 m³/s
Check Discharge (Q100)	1748.5 m³/s
Headwater Elevation (Q50)	28.99 m
Headwater Elevation (Q100)	29.33 m
Discharge Velocity (Q50)	3.11 m/s
Discharge Velocity (Q100)	3.06 m/s

MATERIALS

Concrete:	
Curbs, Sidewalks And Transition Barriers	Class LP
Seals	Class S
Fill	Fill
All Other	Class A
Reinforcing Steel:	ASTM A615M Grade 420
Structural Steel:	
Section Over Pier	ASTM A709/A709M, Grade HPS 485W
All Other	ASTM A709/A709M, Grade 345W
(Except As Otherwise Noted)	(Unpainted)
High Strength Bolts	ASTM A325M, Type 3

BASIC DESIGN STRESSES

Concrete:	
Seals	f'_c = 20 MPa
Fill	f'_c = 20 MPa
All Other	f'_c = 30 MPa
Reinforcing Steel:	f_y = 420 MPa
Structural Steel:	
ASTM A 709/A 709M, Grade HPS 485W	F_y = 485 MPa
ASTM A 709/A 709M, Grade 345W	F_y = 345 MPa
ASTM A 709/A 709M, Grade 250	F_y = 250 MPa
ASTM A 325M, Type 3	F_t = 827 MPa

UTILITIES

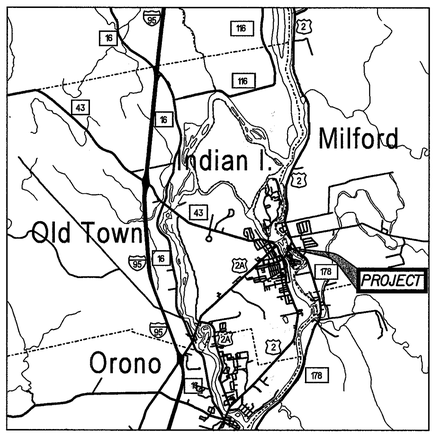
Adelphia Communications Corporation	Verizon
Maine Central Railroad Company	Old Town Water District
Old Town Sewer Department	Milford Sewer Department
Bangor Hydro - Electric Company	Bangor Gas Company

MAINTENANCE OF TRAFFIC

Traffic shall be maintained by the means of a two lane 7.2 m wide temporary detour with a 1.5 m wide lighted sidewalk that runs along the upstream side of the existing bridge.

OLD TOWN - MILFORD
PENOBSCOT COUNTY
OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
ROUTE 2

PROJECT LENGTH 0.340 km
SCOPE OF WORK
BRIDGE NO. 2630



LOCATION MAP

2 0 2 4

Scale in Kilometers

LIST OF DRAWINGS

SCOPE OF WORK

1. Construct temporary detour bridge/work trestle and temporary detour approaches. Shift traffic and pedestrians to the temporary detour.

2. Construct in stages, new 122 m two (2) span continuous composite constant depth welded steel girders with structural concrete slab and wearing surface on new alignment, 12.12 m curb-to-curb width with 1.525 m sidewalk on the upstream side. New structure will be supported on full height cantilever type abutments and mass type pier with distribution slab on concrete seal founded on ledge. Remove and dispose of the existing bridge structure and appurtenances.

3. Construct 132 m of 2 - 3.6 m travel approach lanes with variable width paved shoulders, closed drainage system and a single 1.5 m wide lighted sidewalk on the Old Town side. Construct 125 m of 1 - 3.6 m and 1- 3.3 m travel approach lanes with 1 - 3.3 m right turn lane, variable width paved shoulder, closed drainage system and a single 1.5 m wide lighted sidewalk on the Milford side.

4. Shift traffic over to the new bridge, remove and dispose of the temporary detour.

5. Complete approach work.

ERDMAN ANTHONY

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

		DATE
APPROVED		
COMMISSIONER:		3/16/05
CHIEF ENGINEER:		03/15/05

STATE OF MAINE Stephen C. Gauthier 9210 REGISTERED PROFESSIONAL ENGINEER

SIGNATURE	
P.E. NUMBER	9210
DATE	March 8, 2005

PROJECT INFORMATION

PROGRAM	BRIDGE
PROJECT MANAGER	J. KITTREDGE
DESIGNER	S. GAUTHIER / F. DAHAR
CONSULTANT	ERDMAN ANTHONY
PROJECT RESIDENT	P. ROBERTS
CONTRACTOR	
PROJECT COMPLETION DATE	

PIN 008979.00

BR-8979(00)X

OLD TOWN - MILFORD
OLD TOWN-MILFORD BRIDGE

TITLE SHEET

SHEET NUMBER 1 OF 90

Filename: ...\00\Bridge\MSTA\001_Title.dgn Division: BRIDGE Username: davistr Date:03/08/2005

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SHARE 1 QTY.	SHARE 2 QTY.	SHARE 3 QTY.	SHARE 4 QTY.	SHARE 5 QTY.	SHARE 6 QTY.	COMBINED TOTAL QUANTITY
107.51	Prosecution of Work - Initial Schedule	LS	1						1
107.52	Prosecution of Work - Monthly Update	EA	28						28
202.08	Removing Building No. 1	LS	1						1
202.13	Removing Existing Railings - Retained By Department	m	240						240
202.19	Removing Existing Bridge [5000 m3]	LS	1						1
203.20	Common Excavation	m3	3300		918				4218
203.21	Rock Excavation	m3	30						30
203.231	Disposal of Riverbed Excavation	Mg	360						360
203.2312	Health and Safety Plan	LS	1						1
203.2333	Disposal of Special Excavation	Mg	100						100
203.25	Granular Borrow	m3	990						990
206.061	Structural Earth Excavation								
	-Drainage Minor Structures Below Grade	m3	50						50
206.07	Structural Rock Excavation								
	- Drainage & Minor Structures	m3	154	21	231	171	34	6	617
206.082	Structural Earth Excavation - Major Structures	m3	1800						1800
206.092	Structural Rock Excavation - Major Structures	m3	210						210
206.10	Structural Earth Excavation - Piers	m3	1500						1500
206.11	Structural Rock Excavation - Piers	m3	135						135
304.10	Aggregate Subbase Course - Gravel	m3	2250		268				2518
403.207	Hot Mix Asphalt, 19.0 mm Nominal Max. Size, Base	Mg	1130						1130
403.208	Hot Mix Asphalt, 12.5 mm Nominal Max. Size, Surface	Mg	305						305
403.209	Hot Mix Asphalt, 9.5 mm Nominal Max. Size, Surface								
	(Sidewalks Included)	Mg	160						160
403.210	Hot Mix Asphalt, 9.5 mm Nominal Max. Size, Surface	Mg	290						290
403.213	Hot Mix Asphalt, 12.5 mm Nominal Max. Size, Binder	Mg	460						460
409.15	Bituminous Tack Coat, Applied	L	800						800
502.219	Structural Concrete, Abutments and Retaining Walls [845 m3]	LS	1						1
502.229	Structural Concrete, Abutments and Retaining Walls								
	(placed under water) [835 m3]	LS	1						1
502.239	Structural Concrete Piers [740 m3]	LS	1						1
502.24	Structural Concrete Piers (placed under water)	m3	110						110
502.249	Structural Concrete Piers (placed under water) [1240 m3]	LS	1						1
502.26	Structural Concrete Roadway and Sidewalk On Steel Bridges								
	[580 m3]	LS	1						1
502.31	Structural Concrete Approach Slab [23 m3]	LS	1						1
502.49	Structural Concrete Curbs and Sidewalks [96 m3]	LS	1						1
502.56	Concrete Fill	m3	270	40	11		58	10	389
503.12	Reinforcing Steel, Fabricated and Delivered	kg	123300						123300
503.13	Reinforcing Steel, Placing	kg	123300						123300
503.17	Mechanical/Welded Splice	EA	130						130
504.702	Structural Steel Fabricated and Delivered, Welded [486600 kg]	LS	0.953	0.009	0.022	0.001	0.012	0.003	1
504.71	Structural Steel Erection [486600 kg]	LS	0.953	0.009	0.022	0.001	0.012	0.003	1
505.08	Shear Connectors [3911 ea]	LS	1						1
507.0811	Steel Bridge Rail, 2 Bar [122 m]	LS	1						1
507.0831	Steel Bridge Rail, 4 Bar [140 m]	LS	1						1
508.14	High Performance Membrane Waterproofing [1490 m2]	LS	1						1
510.12	Special Detour, 7.2 Meter Roadway With Vehicular								
	and Pedestrian Traffic Separated	LS	1						1
511.07	Cofferdam, Abutment 1	LS	1						1
511.07	Cofferdam, Abutment 2	LS	1						1
511.07	Cofferdam, Pier	LS	1						1

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SHARE 1 QTY.	SHARE 2 QTY.	SHARE 3 QTY.	SHARE 4 QTY.	SHARE 5 QTY.	SHARE 6 QTY.	COMBINED TOTAL QUANTITY
512.081	French Drains [73 m]	LS	1						1
514.06	Curing Box for Concrete Cylinders	EA	1						1
515.21	Protective Coating for Concrete Surfaces [490 m2]	LS	1						1
520.21	Expansion Device - Gland Joint	EA	2						2
523.52	Bearing Installation	EA	15						15
523.5551	Pot or Disc Bearings, Fixed	EA	5						5
523.5552	Pot or Disc Bearings, Expansion	EA	10						10
524.301	Temporary Structural Support (Girder 1 And Girder 2)	LS	1						1
524.301	Temporary Structural Support (Railroad Approaches)	LS	1						1
526.301	Temporary Concrete Barrier Type 1 [380 m]	LS	1						1
526.34	Permanent Concrete Transition Barrier	EA	4						4
527.34	Work Zone Crash Cushion	UNIT	11						11
603.159	300 mm Pipe Option III	m	162						162
603.199	600 mm Pipe Option III	m	88						88
604.15	Manhole	EA	2.8						2.8
604.156	2400 mm Manhole	EA		2					2
604.252	Catch Basin Type A5-C	EA	11.6						11.6
605.09	150 mm Underdrain Type B	m	135						135
605.11	300 mm Underdrain Type C	m	110						110
605.15	600 mm Underdrain Type C	m	28						28
606.1721	Bridge Transition Type 1	EA	4						4
606.24	Guardrail Type 3d - Single Rail	m	50						50
606.242	Guardrail Type 3d - Over 4.5 m Radius	m	8						8
606.265	Terminal End Single Rail Galvanized Steel	EA	1						1
606.35	Guardrail Delineator Post	EA	6						6
606.361	Guardrail, Removed And Reset, Type 3b	m	8						8
606.79	Guardrail 350 Flared Terminal	EA	3						3
607.294	Barrier Boulders	EA	12						12
609.11	Vertical Curb Type 1	m	533						533
609.13	Vertical Bridge Curb Type 1	m	247						247
609.234	Terminal Curb Type 1 - 1.2 m	EA	2						2
609.237	Terminal Curb Type 1 - 2.1 m	EA	15						15
610.11	Stone Blanket	m3	140						140
610.16	Heavy Riprap	m3	1800						1800
610.18	Stone Ditch Protection	m3	25						25
613.319	Erosion Control Blanket	m2	1000						1000
615.07	Loam	m3	100						100
618.1401	Seeding Method Number 2, Plan Quantity	UNIT	2						2
618.1411	Seeding Method Number 3, Plan Quantity	UNIT	20						20
618.143	Special Seed Mix: Penobscot Woody Seed Mix	UNIT	15						15
618.15	Temporary Seeding	kg	70						70
619.1201	Mulch, Plan Quantity	UNIT	20						20
619.1301	Bark Mulch	m3	60						60
619.1401	Erosion Control Mix	m3	60						60
620.58	Erosion Control Geotextile	m2	1700						1700

NOTE:

Share 1 = Maine D.O.T. Bridge Project
Share 2 = Bangor Hydro-Electric Company
Share 3 = Milford Sewer Department
Share 4 = Old Town Water District
Share 5 = Verizon
Share 6 = Adelphia

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

ESTIMATED QUANTITIES

SHEET OF — AUGUSTA, MAINE

PLANS	BY		DATE
PROJECT DESIGN ENGINEER	F. DAHAR	T. DAVIS	03/08/2005
DESIGN-DETAILED	F. DAHAR	S. GAUTHIER	03/08/2005
CHECKED	S. GAUTHIER	S. GAUTHIER	03/16/2005
REVISIONS			
FIELD CHANGES			

Filename: ...\OLKF\002_Estimate-001.dgn Division: BRIDGE Username: michael.wight Date:3/16/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	3	90

008979.00

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SHARE 1 QTY.	SHARE 2 QTY.	SHARE 3 QTY.	SHARE 4 QTY.	SHARE 5 QTY.	SHARE 6 QTY.	COMBINED TOTAL QUANTITY
621.019	Evergreen Trees 2' - 3' (600 mm - 900 mm) Group A								
	Pinus Strobus (Eastern White Pine)	EA	36						36
	Thuja Occidentalis (Eastern Cedar)	EA	36						36
621.026	Evergreen Trees 3' - 4' (900 mm - 1200 mm) Group A								
	Pinus Glauca (White Spruce)	EA	48						48
621.267	Large Deciduous Trees 1-3/4" To 2" cal. (45 mm - 50 mm cal.)								
	B&B Group A	EA	12						12
621.389	Dwarf Evergreens 15" - 18" (375 Mm - 450 mm) Cont. Group A								
	Pinus Mugo Mugo (Dwarf Mugho Pine)	EA	6						6
621.54	Deciduous Shrubs 18" - 24" (450 mm - 600 mm) Group A								
	Alnus Rugosa (Speckled Alder)	EA	48						48
621.71	Herbaceous Perennials Group A No. 1 Cont. (150 mm)								
	Hemerocallis Assorted Hybrids	EA	36						36
621.80	Estabishment Period - Two Years	LS	1						1
626.22	Non-Metallic Conduit	m	180						180
626.32	600 mm Foundation	EA	4						4
626.35	Controller Cabinet Foundation	EA	2						2
627.711	White or Yellow Pavement Marking Line - Plan Quantity	m	1650						1650
627.75	White or Yellow Pavement Curb Markings	m2	12						12
627.76	Temporary Pavement Marking Line, White or Yellow	LS	1						1
627.77	Removing Existing Pavement Marking	m2	300						300
627.811	Temporary Bi-Directional Yellow Delineators	EA	100						100
629.05	Hand Labor, Straight Time	MH	40						40
631.12	All Purpose Excavator (Incl. Operator)	HR	24						24
631.14	Grader (Incl. Operator)	HR	24						24
631.15	Roller, Earth and Base Course (Incl. Operator)	HR	24						24
631.172	Truck - Large (Incl. Operator)	HR	40						40
631.36	Foreman	MH	40						40
634.16	Highway Lighting	LS	1						1
634.21	Conventional Light Standard	EA	6						6
637.071	Dust Control	LS	1						1
638.01	Embedded Work in Structure	LS	1						1
639.18	Field Office Type A	EA	1						1
652.38	Flagger	HR	4500						4500
652.39	Work Zone Traffic Control	LS	1						1
652.42	Automatic Electronic Variable Message Board	EA	2						2
653.22	50 mm Poly Plastic Insulation	m2		104			130	26	260
656.75	Temporary Soil and Water Pollution Control	LS	1						1
659.10	Mobilization	LS	1						1
660.21	On - The - Job Training	HR	3000						3000
801.194	450 mm PVC Sanitary Sewer (SDR-35)	m			66				66
801.208	450 mm Class 52 Ductile Iron Pipe (Bridge Crossing)	m			168				168
801.4401	Sewer Pipe Insulation (168 m)	LS			1				1
802.201	Sewage Pumping Allowance (5 days)	LS			1				1
803.172	Sewer Manhole 1524 mm Diameter	EA			6				6
803.1732	Sewer Manhole 1829 mm Diameter	EA			1				1
805.293	Additional Select Backfill Material	m3			191				191
806.68	Utility Conduit	LS		1					1

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	SHARE 1 QTY.	SHARE 2 QTY.	SHARE 3 QTY.	SHARE 4 QTY.	SHARE 5 QTY.	SHARE 6 QTY.	COMBINED TOTAL QUANTITY
822.36	305 mm Class 52 Ductile Iron Pipe	m				250			250
822.3602	305 mm Class 53 Mechanical Joint Ductile Iron Pipe	m				140			140
823.311	305 mm Diameter Gate Valve with Box	EA				4			4
824.30	Fire Hydrant	EA				2			2
825.331	25 mm Corporation	EA				4			4
825.332	25 mm Curb Stop with Boxes	EA				4			4
825.43	25 mm Copper service	m				20			20
827.31	Removal of Unsuitable Material	m3			268				268
827.33	Trench Insulation	m			99	30			129
845.10	Structural Steel Utility Support - Sewer	LS			1				1

NOTE:

Share 1 = Maine D.O.T. Bridge Project

Share 2 = Bangor Hydro-Electric Company

Share 3 = Milford Sewer Department

Share 4 = Old Town Water District

Share 5 = Verizon

Share 6 = Adelphia

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

ESTIMATED QUANTITIES

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	T. DAVIS	03/08/2005
CHECKED	S. GAUTHIER	03/08/2005
REVISIONS	S. GAUTHIER	03/16/2005
FIELD CHANGES		

PLANS

Filename: ...\MSTA\003_Estimate-002.dgn Division: BRIDGE Username: david.shaw Date:3/24/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	4	90
				008979.00		

GENERAL CONSTRUCTION NOTES

1. All utility facilities shall be adjusted by the respective utilities unless otherwise noted. The sewer work by the town of Milford to be included with this project is only the work described as alternative bid item #1 from station 9+718.966 to station 10+104.409.
2. For easements, construction limits, and right-of-way lines, refer to Right-of-Way Maps.
3. Refer to the Special Provisions in the Contract Documents for the Temporary Structural Supports for the Railroad Approaches.
4. Place a 600 mm wide strip of temporary erosion control blanket on the side slopes along the top of the riprap and behind the wingwalls.
5. All embankment material, except as otherwise shown, placed below Elevation 26.1, shall be granular borrow meeting the requirements of Subsection 703.19, Material for Underwater Backfill.
6. The clearing limits as shown on the plans are approximate.The actual clearing limits for payment will be established in the field by the Resident.
7. Place loam 50 mm deep on slopes between Station 9+720 and Station 10+100 or as directed by the Resident.
8. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
9. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 150 mm or less thick will be made under appropriate equipment rental items.
10. Stones which cannot be rolled or compacted into the surface of the shoulder shall be removed by hand raking. Payment for hand raking will be considered incidental to Item 304.10 Aggregate Subbase Course - Gravel.
11. Two guardrail delineator posts shall be installed at each leading guardrail end and one at each trailing guardrail end.
12. Guardrail 350 Flared terminals shall be installed concurrently with the placement of each section of beam guardrail.
13. The guardrail posts that interfere with the underground utilities in the vicinity of station 9+820 +/- left shall be cut to length in the field and cast into a concrete base in accordance with MDOT standard detail 606 (24) as shown on the plans or as directed by the Resident. Payment will be considered incidental to the guardrail pay items.
14. The Guardrail between Station 10+010.5, 39.5 m left and Station 10+007, 43.5 m left shall be removed and reset. Payment for this work will be under Item 606.361, Guardrail, Remove and Reset, Type 3b.
15. Extended-use erosion control blanket, seeded gutters, riprap downspouts, and other gutters lined with stone ditch protection shall be constructed after paving and shoulder work is completed, where it is apparent that runoff will cause continual erosion. Payment will be made under appropriate Contract items.
16. Protective coating for concrete surfaces shall be applied to the following areas: All exposed surfaces of concrete curbs and sidewalks, Fasciadown to drip notch, All exposed surfaces of concrete transition barriers, Top of abutment backwalls and to 300 mm below the top of backwalls on the back side.
17. Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specification 619 Mulch. Payment will be made under Item 619.1401 Erosion Control Mix.
18. Place riprap on sideslopes up to elevation 31.100m.
19. Construct the riprap shelf at Abutment #2 at elevation 31.100m.
20. Bidders and Contractors may obtain a copy of the existing bridge plans by contacting the Project Manager. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations, which may have been made to the bridge during its life span.
21. Bidders and Contractors may obtain a copy of the hydrologic report of the bridge site by contacting the Project Manager. The hydrologic report is based on the Department's interpretation of information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.
22. Bidders and Contractors may obtain a copy of the project Geotechnical Report, Old Town-Milford Bridge over East Channel of the Penobscot River, MDOT Soils Report Number 2003-43, September 2003, by contacting the Project Manager.
23. Bidders and Contractors may obtain a copy of the underwater dive team inspection done in 2001 by contacting the Project Manager. The inspection documentation consists of a VHS video tape and a short written report. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time construction.
24. The limits shown on the plans for the timber cribbing under the existing railroad pier located at station 9+913± right are very approximate. The limits of the timber cribbing are based on very limited survey information and a visual inspection by the Maine DOT Dive Team. Maine DOT has not been able to obtain any original or as built plans for the railroad bridge. The actual limits of the timber cribbing may vary. The Contractor shall make every effort to avoid damaging the timber cribbing under the existing railroad pier. These facts should be taken into consideration by the Contractor when bidding.
25. Nondestructive testing was completed in an effort to determine the elevation of the bottom of the existing highway bridge pier near Station 9+920. The results of the testing is as follows:

    - Based on the mean of the data, bottom of pier elevation = 14.57 meters.
    - Based on the median of the data, bottom of pier elevation = 14.87 meters.
    - The standard deviation is 1.71 meters.

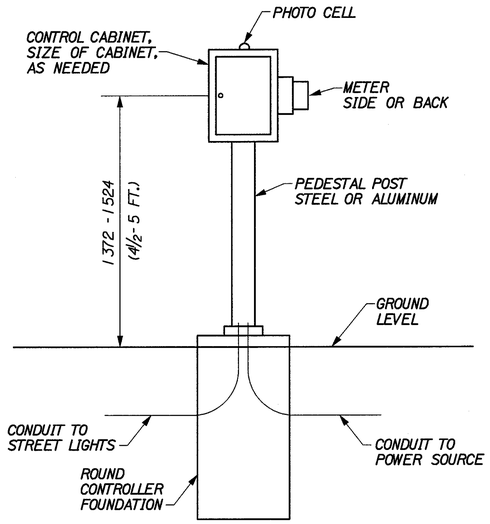
    This information is provided to the Contractor to aid in construction. This information cannot be verified, nor is it absolute. No compensation will be made in the event that the pier configuration is different. Bidders and Contractors may obtain a copy of the nondestructive testing results for the pier by contacting the Project Manager.
26. Geotechnical Information furnished or referred to in this plan set is for the Bidder's and Contractor's use. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the time of construction. The Department shall not be responsible for the Bidder's and Contractor's interpretations of, or conclusions drawn from, the Geotechnical Information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between boring locations.
27. All aluminum bridge rail, rail posts and associated hardware which are to be removed shall be carefully salvaged by the Contractor and will remain the property of the Department. The work shall be done in accordance with the Special Provision Section 202 Removing Existing Rail-Retained by the Department. Payment shall be under item 202.13 Remove Existing Railings-Retained by Department.
28. Highway lighting shall be installed on the bridge structure and approaches. Temporary highway lighting shall be installed on the temporary detour in accordance with special provision section 510.
29. The existing bituminous curbing along the edge of the concrete slab for the Mobil Station gas pumps between station10+039 left and station 10+049 shall remain in place while the temporary detour is operating.

GENERAL NOTES - HIGHWAY LIGHTING

1. Install lighting as shown on the plans or as directed by the Resident.
2. Luminaires shall be IES cutoff with tempered flat glass refractor, 250 watt, high pressure sodium, 240 volt lamps.
3. Luminaires shall be top mounted (no bracket arm) on 10.67m (35 ft) galvanized steel or aluminum poles. The poles on the bridge structure shall have vibration dampeners. Each pole shall have duplex outlet in or near the handhold of the pole. They shall be installed in a manner that only authorized town personnel can access them.
4. Luminaires shall be gasketed, have a protected starter, a double fuse kit, terminal block and NEMA decal. Fixtures shall be gray in color.
5. The plans were designed with a Holophane Mongoose, Catalog No. G250HP24LNF, IES Test No. 49260. IES Type 2 Distribution. If different luminaires are proposed, the Contractor must demonstrate that the proposed luminaires will meet or exceed design light levels.
6. Install the service poles and control cabinets at locations acceptable to the Utility Company.
7. Install 50mm PVC conduit in the bridge structure. Install appropriate expansion devices.
8. The Contractor shall install temporary lighting on the detour structure and approaches. The lighting fixtures shall be IES cutoff or semi-cutoff luminaries. The average light level shall be one foot candle. Luminarie mounting height shall be 7.5 to 11 meters. The temporary lighting equipment does not have to be new and shall remain the property of the contractor upon completion of the project.

LOCATION OF LIGHTING POLES AND FIXTURES AND FOUNDATIONS

STATION AND OFFSET			
STA.	(M)	SIDE	DESCRIPTION
9+742.50	8.6	LT.	CONTROLLER FOUNDATION FOR SERVICE
9+746	7.0	LT.	600 mm FOUNDATION
9+818	8.2	LT.	600 mm FOUNDATION BEHIND GUARDRAIL
9+872	8.225	LT	ON BRIDGE STRUCTURE
9+929	8.225	LT	ON BRIDGE STRUCTURE
9+988	9.0	LT.	600 mm FOUNDATION BEHIND GUARDRAIL
10+054	7.0	LT.	600 mm FOUNDATION
10+076	8.9	LT.	CONTROLLER FOUNDATION FOR SERVICE



CONTROL CABINET AND SERVICE

INSTALL ONE IN OLD TOWN AND ONE IN MILFORD

LEGEND

- PVC CONDUIT
- SERVICE AND CONTROL CABINET
- LIGHT POLE AND FOUNDATION

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	F. DAHAR	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS	T. DAVIS	03/08/2005
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

GENERAL NOTES

SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\004_General_Notes.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	5	90

008979.00

CURVE DATA

PI = 9+700.057
Δ = 18° - 18' - 09.6" LT.
R = 350.000 m
L = 111.805 m
T = 56.383 m
E = 4.512 m

STA. 9+722 TO STA. 9+738 LT.
VERIZON TO INSTALL 9-100 mm DUCT BANK
UPON COMPLETION OF STAGE I WORK.
TRANSITION TO EXISTING SYSTEM AT
STA. 9+722, LT. AND ENCASE IN CONCRETE.

End Transition
Begin Project Sta. 9+740.000

INSTALL CONTROLLER FOUNDATION,
POST, SERVICE AND CONTROL CABINET
AT STA. 9+742.50, 8.6 LT., FOR THE TWO
LIGHTS IN OLD TOWN

INSTALL LIGHTING FIXTURE, POLE
AND 600mm FOUNDATION AT
STA 9+746, 7.2m LT.

PC STA 9+643.674

STA. 9+738 TO STA. 9+854 LT. BHE AND
ADELPHIA TO INSTALL 5-125 mm DUCT
PRIOR TO STAGE I CONSTRUCTION.
CAP CONDUIT ENDS ENCASE IN CONCRETE

PRC STA 9+755.479

STA. 9+738 TO STA. 9+840 LT.
VERIZON TO INSTALL 9-100 mm DUCT BANK
PRIOR TO STAGE I CONSTRUCTION. CAP
CONDUIT ENDS ENCASE IN CONCRETE.

STA. 9+780, 10.5 m LT.
BHE TO SET TEMP.
UTILITY POLE

Begin Transition Sta. 9+720.000

REPLACE EXIST.
M.H. SEW#6

FOR PROPOSED
SEWER UPGRADES
SEE ATTACHED
UTILITY DRAWINGS

CONSTRUCT
FLOWER BED

NEW
SEW #

EXTEND FORCE MAIN
TO NEW SEW #7 MH

INSTALL (2) 45°
M.J. ELBOWS W/
THRUST BLOCKS

MATCHLINE STA. 9+810

TYPE A5-C

300 mm
OPT. III

REMOVE

WORKING
MANHOLE

9+640
9+660
9+680
9+700
9+720
9+740
9+760
9+780
9+800

1.2 m
To OldTown
Route 2

150 mm
TYPE B U.D.

2.4 m

(REMOVE EXIST. M.H.)

0.9 m
ROR
END CAP
CAP EXIST. WATERMAIN
ABANDON IN PLACE

INSTALL 300 mm DIA. GATE
VALVE W/BOX CONNECT
TO EXISTING MAIN

INSTALL APPROXIMATELY 134.11 m OF 300 mm
DIA. CLASS 52 C.L.D.I. WATERMAIN. (WATERMAIN,
HYDRANTS & APPURTENANCES TO BE SUPPLIED
BY THE OLD TOWN WATER DISTRICT)

INSTALL 203 mm x 203 mm M.J. SOLID SLEEVE,
CONNECT TO EXIST. 203 mm DIA. WATERMAIN

INSTALL HYDRANT ASSEMBLY
WITH 150 mm GATE VALVE

INSTALL 300 mm GATE VALVE
W/BOX, INSTALL 300 mm x 150 mm
M.J. TEE W/THRUST BLOCK

FRONT STREET
(ONE WAY)

BOSWORTH STREET
(ONE WAY)

ROR

CURVE DATA

PI = 9+808.562
Δ = 7° - 50' - 12.1" RT.
R = 775.000 m
L = 106.002 m
T = 53.084 m
E = 1.816 m

BRIDGE NO. 2630

P L A N

10 0 10 20

SCALE
(In meters)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PLAN

SHEET OF AUGUSTA, MAINE

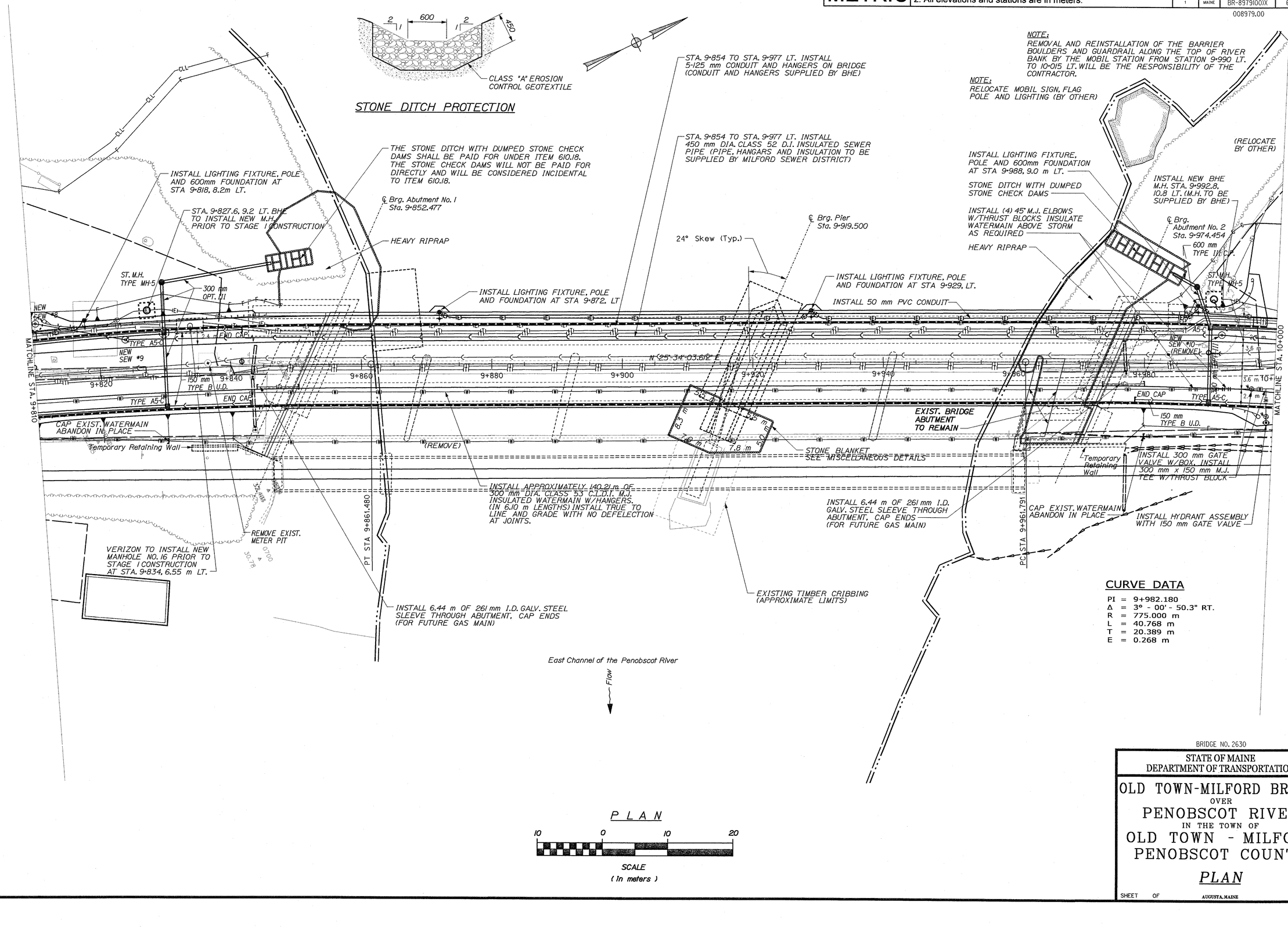
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\00\BRIDGE\MSTA\005_Plan_01.dgn Username: david.shaw Date:3/15/2005 Division: BRIDGE

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	6	90

008979.00



CURVE DATA

PI = 9+982.180
Δ = 3° - 00' - 50.3" RT.
R = 775.000 m
L = 40.768 m
T = 20.389 m
E = 0.268 m

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PLAN

SHEET OF AUGUSTA, MAINE

Filename: ...\00\BRIDGE\MSTA\006_Plan_02.dgn Division: BRIDGE
Username: david.shaw Date:3/15/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	7	90

008979.00

CURVE DATA

PI = 10+026.054
Δ = 3° - 28' - 22.9" LT.
R = 775.000 m
L = 46.977 m
T = 23.496 m
E = 0.356 m

CURVE DATA

PI = 10+142.123
Δ = 33° - 49' - 00.3" LT.
R = 130.000 m
L = 76.728 m
T = 39.518 m
E = 5.874 m

THE TEMPORARY ENTRANCE FOR THE MOBIL STATION BETWEEN STA. 10+089.5± AND STA. 10+099.5±, LT. SHALL BE MAINTAINED DURING CONSTRUCTION UNTIL THE TEMPORARY DETOUR HAS BEEN REMOVED

(RELOCATE BY OTHER)

(TO REMAIN)

(RELOCATE BY OTHER)

STA. 9+977 TO STA. 10+073 LT. BHE AND ADELPHIA TO INSTALL 5-125 mm DUCT PRIOR TO STAGE I CONSTRUCTION. CAP CONDUIT ENDS ENCASE IN CONCRETE

INSTALL CONTROLLER FOUNDATION, POST, SERVICE AND CONTROL CABINET AT STA. 10+076, 8.9 LT., FOR THE TWO LIGHTS IN OLD TOWN.

INSTALL LIGHTING FIXTURE, POLE AND 600mm FOUNDATION AT STA 10+054, 7.0 m LT.

Begin Transition Sta. 10+080.000
End Project

End Transition Sta. 10+100.000

PT STA 10+049.536

PT STA 10+102.605

PT STA 10+119.333

600 mm OPT. III

(REMOVE)

(RELOCATE BY OTHER)

(REMOVE)

600 mm TYPE C U.D.

TAPER SW.

END CAP

WORKING MANHOLE

REPLACE EXIST. M.H. SEW #12

To Milford

N 25°-06'-30.961" E

N 8°-42'-29.359" W

MATCHLINE STA. 10+000

10+020 10+040 10+060 10+080 10+100 10+120 10+140 10+160 10+180

3.3 m 3.6 m 1.8 m 6.6 m

TYPE A5-C

NEW SEW #11

300 mm TYPE C U.D.

END CAP

0.6 m

CAP EXIST. WATERMAIN ABANDON IN PLACE

INSTALL APPROXIMATELY 115.83 m OF 300 mm DIA. CLASS 52 C.L.D.I. WATERMAIN

INSTALL 300 mm DIA. GATE VALVE W/BOX, CONNECT TO EXIST. WATERMAIN

PRC STA 10+002.559

STA. 9+988 TO STA. 10+080 LT. VERIZON TO INSTALL 9-100 mm DUCT BANK PRIOR STAGE I CONSTRUCTION. CAP CONDUIT ENDS AND ENCASE IN CONCRETE.

STA. 10+080 TO STA. 10+090 LT. VERIZON TO INSTALL 9-100 mm DUCT BANK UPON COMPLETION OF STAGE I WORK. TRANSITION TO EXISTING SYSTEM AT STA. 10+090, LT. AND ENCASE IN CONCRETE.

Route 178

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN DETAILED	R. PARKER	03/08/2005
	DESIGNED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

PLAN

10 0 10 20

SCALE
(In meters)

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PLAN

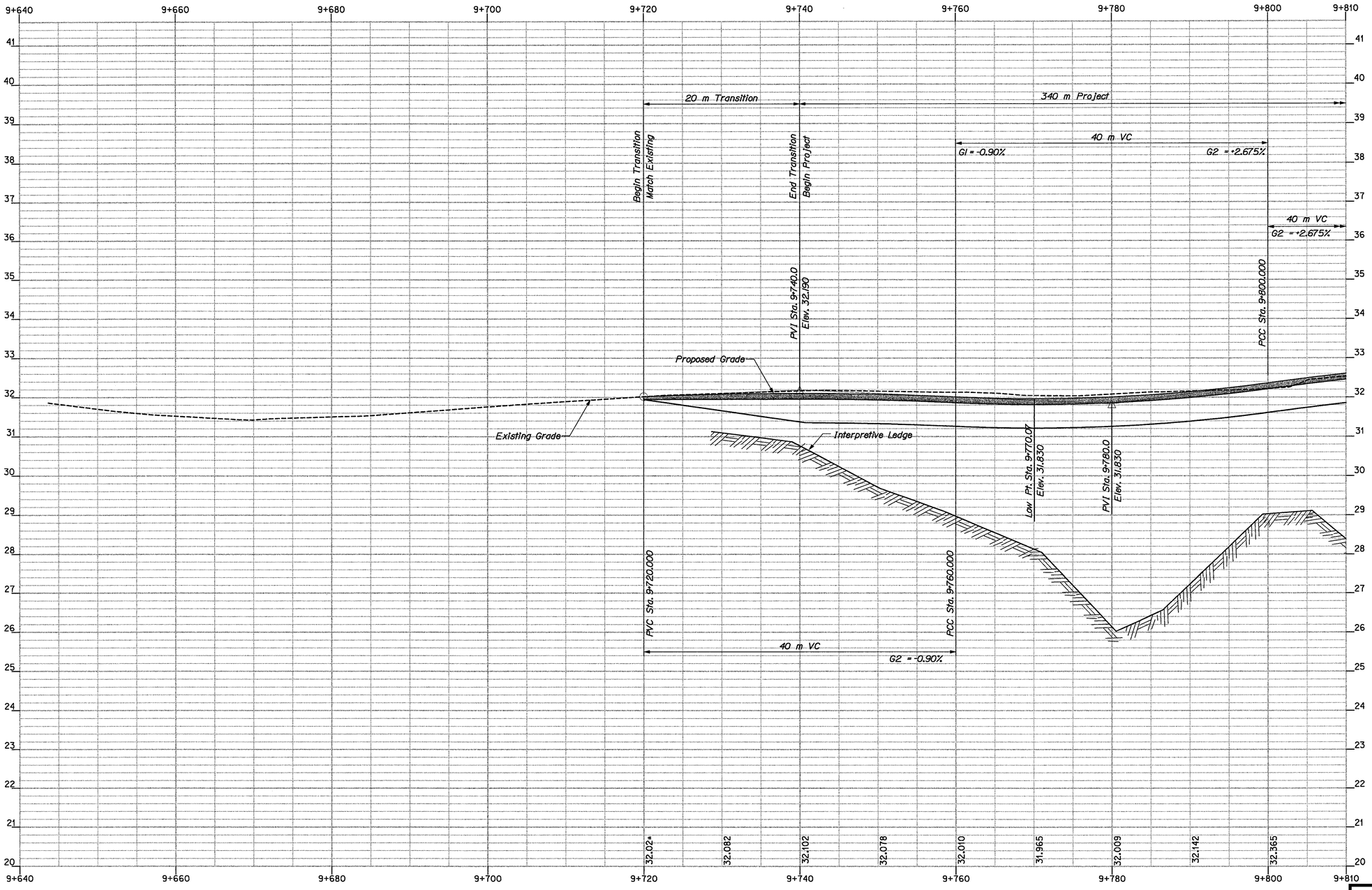
SHEET OF AUGUSTA, MAINE

METRIC

1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	8	90

008979.00



BRIDGE NO. 2630

NOTE:
The ledge elevations shown on the profile, sheet number 8 through 10, are interpretive and are shown for estimating purposes only. The actual ledge elevation may vary.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PROFILE

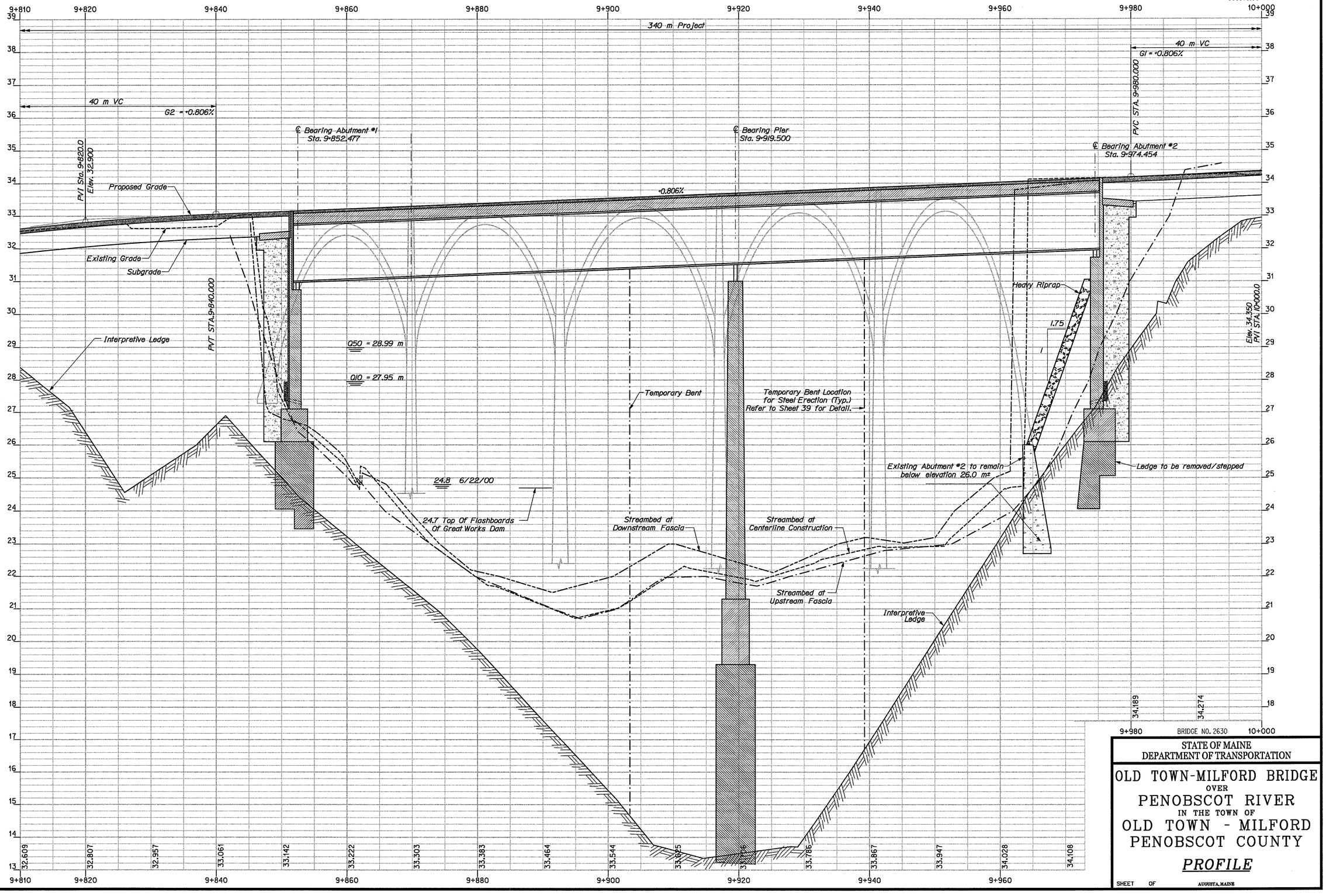
SHEET OF AUGUSTA, MAINE

Filename: ...\00\Bridge\MSTA\008_Prof_01.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	9	10

008979.00



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PROFILE

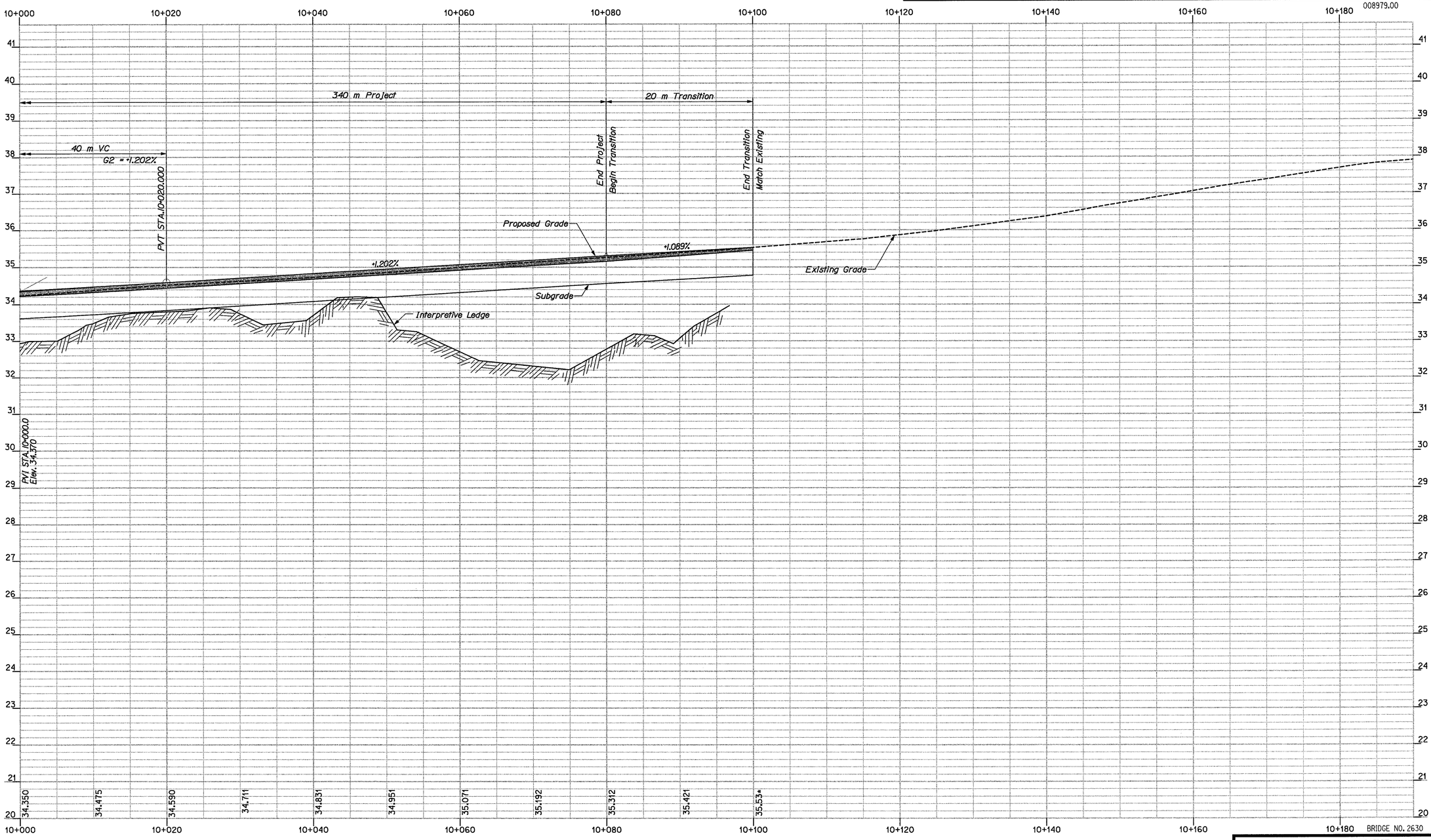
SHEET OF AUGUSTA, MAINE

Filename: ...\00\Bridge\MSTA\009_Prof_02.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	10	90

008979.00



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PROFILE

SHEET OF AUGUSTA, MAINE

Filename: ...\00\Bridge\MSTA\010_Prof_03.dgn Division: BRIDGE Username: davistr Date:03/09/2005

Username: michael.wight Date:3/11/2005

Division: BRIDGE

Filename: ...\011_Foundation Survey Plan1.dgn

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	J. TWEEDIE	JUNE 2003
CHECKED	T. WHITE	
REVISIONS		
FIELD CHANGES		

PLANS

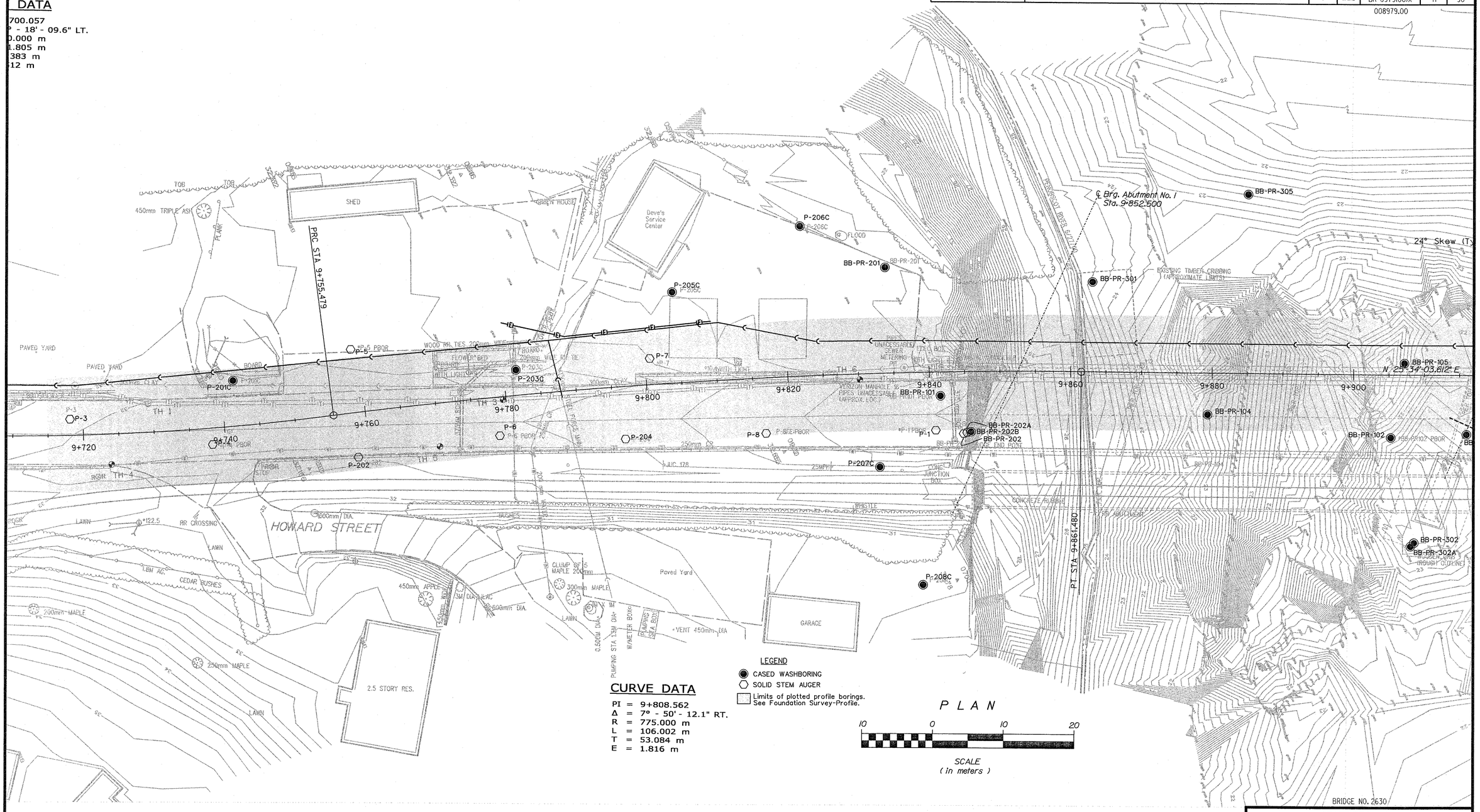
DATA

700.057
- 18' - 09.6" LT.
0.000 m
1.805 m
383 m
12 m

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	11	90

008979.00



CURVE DATA

PI = 9+808.562
Δ = 7° - 50' - 12.1" RT.
R = 775.000 m
L = 106.002 m
T = 53.084 m
E = 1.816 m

LEGEND

- CASED WASHBORING
- SOLID STEM AUGER
- Limits of plotted profile borings. See Foundation Survey-Profile.

PLAN

10 0 10 20

SCALE
(in meters)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

FOUNDATION SURVEY-PLAN1

SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	12	90

008979.00

BB-PR-307
℄ Brg. Pier Sta. 9+919.500
℄ Brg. Abutment No. 2 Sta. 9+974.500
24° Skew (Typ.)
BB-PR-304
BB-PR-303
BB-PR-105
BB-PR-106
N 25°-34'-03.612" E
9+920
9+940
9+960
9+980
BB-PR-204
BB-PR-204A
P-2
BB-PR-206
BB-PR-102
BB-PR-203
BB-PR-103
BB-PR-103A
BB-PR-205
P-9
BB-PR-302
BB-PR-302A
PC STA 9+961.791
PRC STA 10+002.559
BB-PR-207
P-210C
10+000
P-10
10+020
P-209C
P-11
10+040
PT STA 10+049.536
P-211C
P-12
P-212
10+060
P-213C
P-13
10+080
P-14
P-214
10+100
PC STA 10+102.605
N 25°-06'-30.961" E
EXIST. LIGHT
BOLLARD 200 mm (TYP.)
PROPANE FILLING STATION
PROPANE TANK 500 GAL WITH TEMP. CONC. BARRIER
75mm GAS VENTS
100mm GAS VENT
FUEL FILL COVER 450mm DIA
VENT COVER 300mm DIA
VENT COVER 450mm DIA
MERRILL BANK
MOBIL
CANOPY
GENERATOR
BOLLARD 175MM
MT ASH
ENTRANCE ONLY
CHRISTY STORE
TOP BANK
7 BRADLEY RD
BRICK DECK
UG WATER
LAWN
BRIDGE NO. 2630

CURVE DATA

PI = 10+026.054
Δ = 3° - 28' - 22.9" LT.
R = 775.000 m
L = 46.977 m
T = 23.496 m
E = 0.356 m

CURVE DATA

PI = 9+982.180
Δ = 3° - 00' - 50.3" RT.
R = 775.000 m
L = 40.768 m
T = 20.389 m
E = 0.268 m

LEGEND

- ● CASED WASHBORING
- ⬡ SOLID STEM AUGER
- ☐ Limits of plotted profile borings. See Foundation Survey-Profile.

PLAN

10 0 10 20

SCALE (in meters)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

FOUNDATION SURVEY-PLAN2

SHEET OF AUGUSTA, MAINE

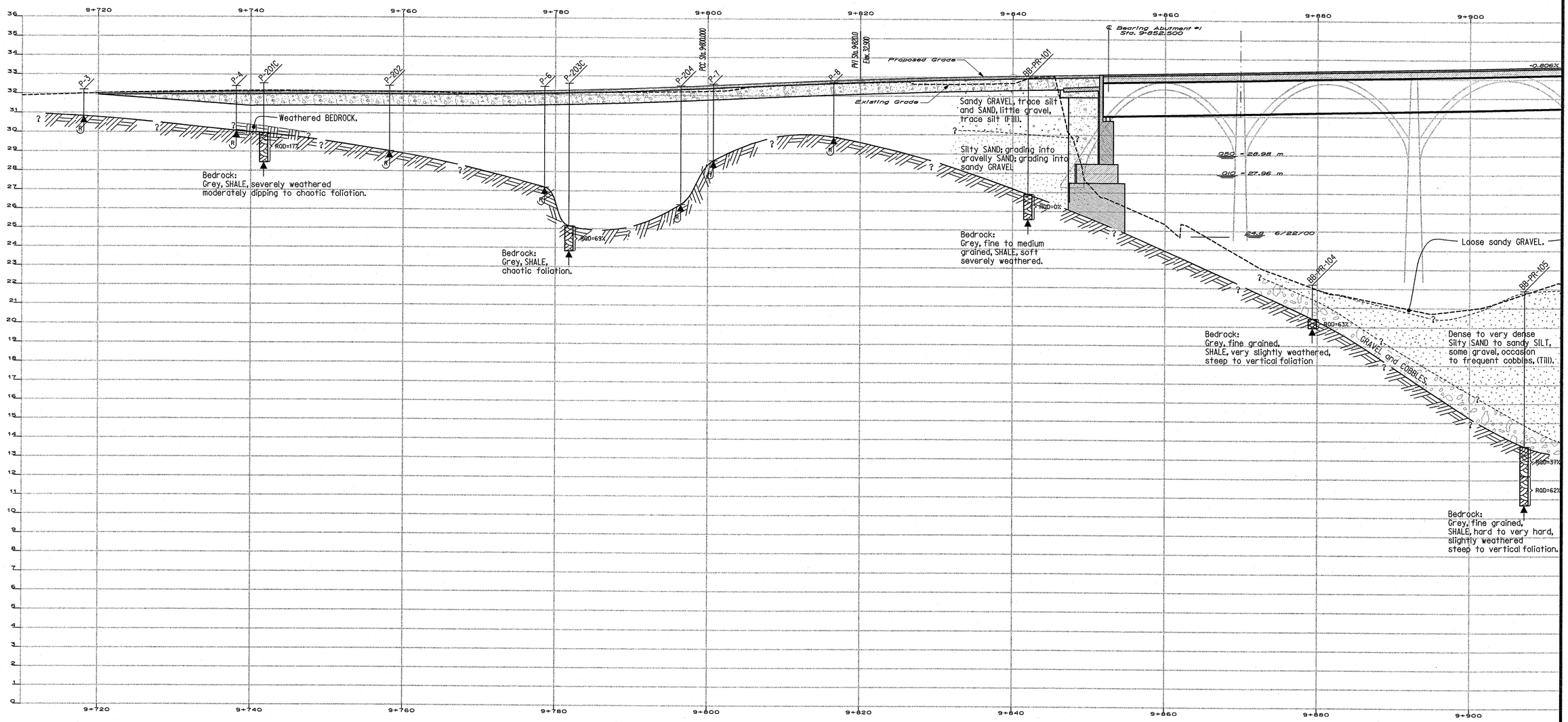
PLANS		BY	DATE
PROJECT DESIGN ENGINEER			
DESIGN-DETAILED		J. TWEEDE	T. WHITE	JUNE 2003
CHECKED			
REVISIONS			
FIELD CHANGES			

Filename: ...\012_Foundation Survey Plan2.dgn Division: BRIDGE Username: david.show Date:3/15/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	13	90

8979.00



PROFILE

HORIZ. 10 0 10 20

VERT. 4 0 4 8

SCALE
(in meters)

Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	J.TWEEDIE	T.WHITE	JUNE 2003
CHECKED			
REVISIONS			
FIELD CHANGES			

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

FOUNDATION SURVEY-PROFILE1

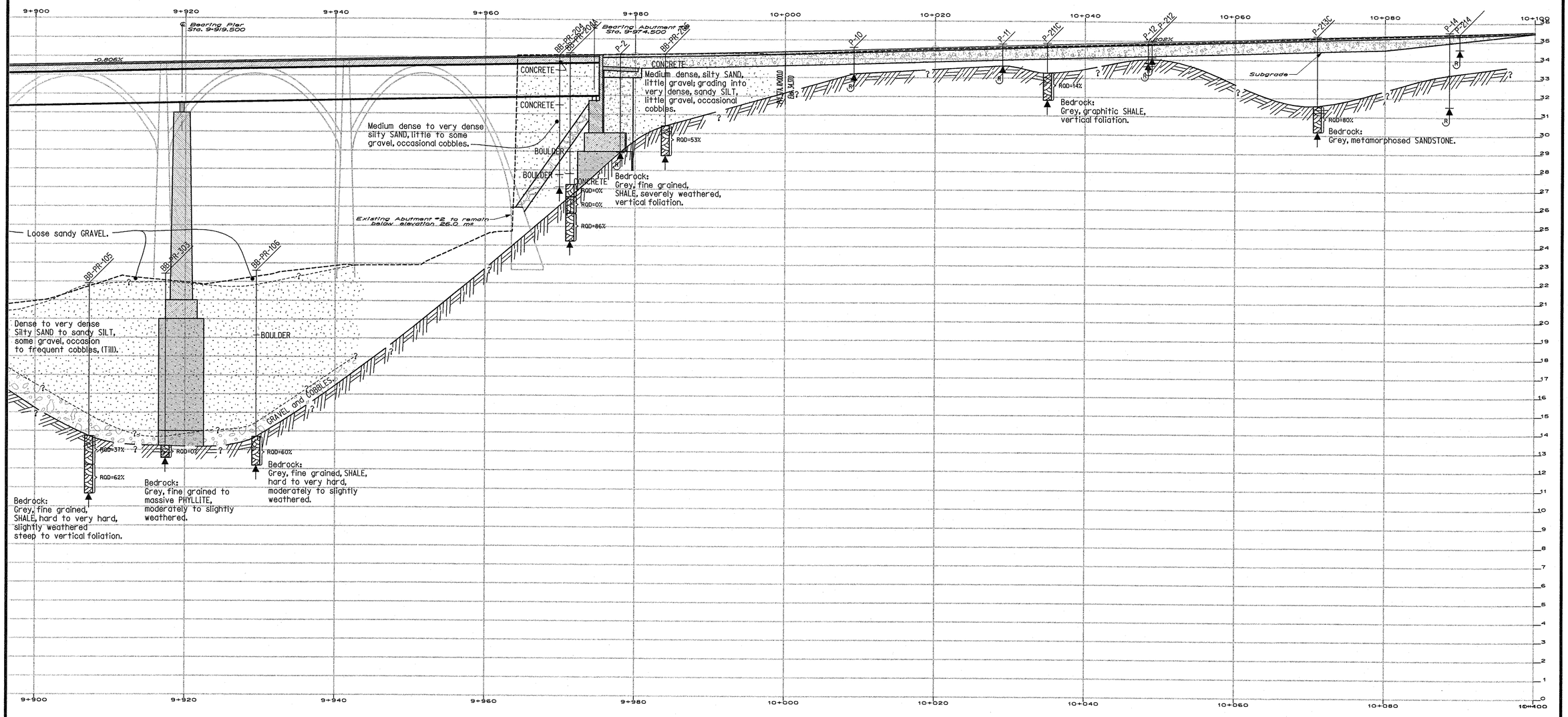
SHEET 1 OF 2 AUGUSTA, MAINE

Filename: ...\013_Foundation Survey Profile1.dgn Division: BRIDGE Username: michael.wight Date:3/11/2005

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	14	90

8979.00



PROFILE

HORIZ. 10 0 10 20

VERT. 4 0 4 8

SCALE (in meters)

Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	J.TWEEDIE	T.WHITE	JUNE 2003
CHECKED			
REVISIONS			
FIELD CHANGES			

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

FOUNDATION SURVEY-PROFILE2

SHEET 2 OF 2 AUGUSTA, MAINE

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	P-201C
		PIN:	8979.00
Driller: Maine Test Borings	Elevation (m): 32.55	Auger ID/OD:	SSA: 102 mm
Operator: Mel Coffin	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/18/02-4/18/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+741.7, 6.45 LT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
T_v = Pocket Torvane Shear Strength (kPa)
q_p = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOH = weight of 64 kg hammer
WOR = weight of rods

Definitions:
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA				
							30.33		Weathered BEDROCK. (2.23)	
	R1	152.4/ 152.4	2.59 - 4.11	RQD = 17%		NQ	29.96		Grey SHALE, severely weathered, moderately dipping to chaotic foliation R1: Core Times (min:sec) 2.59-2.89 (7:32) 2.89-3.2 (4:20) 3.2-3.5 (4:45) 3.5-3.8 (5:02) 3.8-4.11 (5:58) (2.59)	
							28.44		Bottom of Exploration at 4.11 m below ground surface. (4.11)	

Depth scale: 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-201C

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	P-202
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 32.44	Auger ID/OD:	SSA: 125 mm
Operator: C.Mann	Datum: NGVD	Sampler:	N/A
Logged By: Bruce Wilder	Rig Type: CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish: 4/22/02-4/22/02	Drilling Method: Solid Stem Auger	Core Barrel:	N/A
Boring Location: 9+758.2, 6.31 RT.	Casing ID/OD: N/A	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA				
							29.06		REFUSAL 3.38 m bgs Bottom of Exploration at 3.38 m below ground surface. (3.38)	

Depth scale: 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-202

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	P-203C
		PIN:	8979.00
Driller: Maine Test Borings	Elevation (m): 32.60	Auger ID/OD:	SSA: 100 mm
Operator: Mel Coffin	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/18/02-4/18/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+781.8, 3.6 LT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA				
						21				
						17				
						56				
						27				
						31				
						26				
						24				
						36				
						57				
						29				
						18				
						19				
						107				
						215				
						110				
						130				
						153				
						125			Washed ahead from 6.74 to 7.47 m bgs.	
						31				
						50a			a50 blows for 150 mm	
	R1	131.6/ 129.5	7.47 - 8.78	RQD = 69%		NQ	25.14		Grey SHALE, chaotic foliation R1: Core Times (min:sec) 7.47-7.8 (8:40) 7.8-8.1 (8:10) 8.1-8.4 (8:33) 8.4-8.7 (7:25) 8.7-8.78 (3:50) (7.47)	
							23.83		Bottom of Exploration at 8.78 m below ground surface. (8.78)	

Depth scale: 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-203C

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	P-205C
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 32.78	Auger ID/OD:	SSA: 125 mm
Operator: C.Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Bruce Wilder	Rig Type: CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/17/02-4/17/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+804.4, 12.86 LT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						DC			Drove Casing from 0 to 10.05 m bgs.	
							25.31		COBBLES and BOULDERS. (7.47)	
						RC			Washed ahead from 10.06 to 10.36 m bgs	
	R1	152.4/ 137.2	10.36 - 11.89	RQD = 64%		NQ	22.42		Grey calcareous SHALE, steep bedding R1: Core Times (min:sec) 10.36-10.7 (7:00) 10.7-11.0 (5:00) 11.0-11.3 (5:00) 11.3-11.6 (5:00) 11.6-11.89 (5:00) (10.36)	
							20.89		Bottom of Exploration at 11.89 m below ground surface. (11.89)	

Depth scale: 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6, 10.8, 12, 13.2, 14.4, 15.6, 16.8, 18, 19.2

Remarks:
DC: Drove Casing
RC: Roller Cone

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-205C

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	P-207C
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 32.68	Auger ID/OD:	SSA: 125 mm
Operator: C.Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Bruce Wilder	Rig Type: CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/22/02-4/22/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+832.7, 13.3 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA			Solid stem auger from 0 to 3.05 m bgs	
						DC			Drove casing from 3.05 to 6.03 m bgs	
						10				
	R1	152.4/ 147.3	6.10 - 7.62	RQD = 0%		RC NQ	26.65		Grey graphitic SHALE, steep foliation. R1: Core Times (min:sec) 6.1-6.4 (8:00) 6.4-6.7 (6:00) 6.7-7.0 (6:00) 7.0-7.3 (6:00) 7.3-7.62 (9:00) (6.04)	
							25.06		Bottom of Exploration at 7.62 m below ground surface. (7.62)	

Depth scale: 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Remarks:
DC: Drove Casing
RC: Roller Cone

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-207C

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	P-208C
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 30.87	Auger ID/OD:	SSA: 100 mm
Operator: C.Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/12/02-4/12/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+838.5, 30.18 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	61.0/27.9	0.00 - 0.61	4/15/9/17	24	SSA			Brown, sandy GRAVEL, trace silt, trace ash, (Fill).	
	2D	61.0/20.3	1.52 - 2.13	6/11/9/8	20	10	29.35		Brown, silty fine to coarse SAND, little gravel, trace ash, trace brick, (Fill). (1.52)	
						4				
						13	28.74		SAND and GRAVEL (2.13)	
						46				
						94				
						44				
						150a			a150 blows 240 mm.	
	R1	125.2/ 116.8	3.60 - 4.85	RQD = 48%		NQ	27.30 27.21		COBBLE. R1: Core Times (min:sec) 3.6-3.9 (8:10) (3.57)	
									Grey, calcareous SHALE, vertical foliation. 3.9-4.2 (7:32) 4.2-4.5 (7:45) 4.5-4.8 (8:07) 4.8-4.85 (8:20) (3.66)	
							26.02		Bottom of Exploration at 4.85 m below ground surface. (4.85)	

Depth scale: 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-208C

Filename: ...\MSTA\015_Boring Details1.dgn   Division: BRIDGE   Username: michael.wight   Date:3/11/2005

	BY	DATE
PROJECT DESIGN ENGINEER		
DESIGN-DETAILED	J.TWEEDIE	
CHECKED	T.WHITE	JULY 2003
REVISIONS		
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BORING DETAILS

SHEET 1 OF 7   AUGUSTA, MAINE

METRIC

1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford

Boring No.: P-206C (PIN: 8979.00)

Driller:	Maine DOT	Elevation (m):	32.75	Auger ID/OD:	SSA: 125 mm
Operator:	C.Mann	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	Bruce Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/17/02-4/18/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+822.6, 21.22 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
					SSA		Solid stem auger from 0 to 4.57 m bgs	
					DC		Drove casing from 4.57 to 10.09 m bgs.	
R1	152.4/ 134.6	10.09 - 11.61	RQD = 88%		NQ	22.66	10.09 Grey calcareous SHALE, chaotic foliation. R1: Core Times (min:sec) 10.09-10.4 (11:00) 10.4-10.7 (13:00) 10.7-11.0 (10:00) 11.0-11.3 (12:00) 11.3-11.61 (12:00)	
						21.13	11.61 Bottom of Exploration at 11.61 m below ground surface.	

Remarks: DC: Drove Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-206C

Boring No.: BB-PR-201 (PIN: 8979.00)

Driller:	Maine DOT	Elevation (m):	32.81	Auger ID/OD:	SSA: 102 mm
Operator:	C.Mann	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	Greg Lidstone	Rig Type:	CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/18/02-4/19/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+834.1, 14.97 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	1.21 m bgs

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					SSA		Brown, wet, medium dense gravelly SAND, trace silt, old pavement, (Fill).
1D	61.0/22.9	1.52 - 2.13	3/3/10/13	13			
					6	30.07	2.74 Dark brown, wet, loose, sandy GRAVEL, little silt.
2D	61.0/33.0	3.05 - 3.66	2/3/2/2	5	10		
					5		
					14		
					20		
					16		
3D	61.0/25.4	4.57 - 5.18	10/6/5/10	11	14	28.24	4.57 Grey, wet, medium dense sandy GRAVEL, little silt, trace bedrock fragments.
					47		
					30		
					121		
					24	27.02	5.79 Brown, wet, very dense, sandy GRAVEL, trace silt, frequent cobbles.
4D	61.0/27.9	6.10 - 6.71	15/19/38/18	57	101		
					69		
					65		
					65		Washed ahead from 7.01 m to 7.62 m bgs.
					350		
MD	3.8/0.0	7.62 - 7.66	30(30)	—	68	25.19	7.62 BOULDER Washed ahead from 7.62 m to 7.80 m bgs.
					52	25.01	7.80 Washed ahead from 7.93 m to 9.14 m bgs.
					62		
					81		
					80		
5D	61.0/40.6	9.14 - 9.75	24/31/38/49	69	13	23.66	9.14 Grey, wet, very dense, gravelly SAND, trace silt and frequent cobbles.
					10		
					10		
					39		
R1	152.4/ 152.4	10.42 - 11.95	RQD = 68%		59a NQ	22.38	a59 blows for 60 mm. 10.42 Grey, graphitic SHALE, vertical foliation. R1: Core Times (min:sec) 10.42-10.7 (9:00) 10.7-11.0 (8:00) 11.0-11.3 (7:00) 11.3-11.6 (6:00) 11.6-11.95 (7:00)
						20.86	11.95 Bottom of Exploration at 11.95 m below ground surface.

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-201

Boring No.: BB-PR-101 (PIN: 8979.00)

Driller:	Maine DOT	Elevation (m):	32.96	Auger ID/OD:	SSA: 102 mm
Operator:	Greg Lidstone	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	Greg Lidstone	Rig Type:	CME45C	Hammer Wt./Fall:	63.5 kg/762 mm
Date Start/Finish:	7/9/01-7/9/01	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+841.5, 3.39 RT.	Casing ID/OD:	HW (101.6/114.3 mm)	Water Level*:	None observed

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					SSA		Pavement
						32.76	0.20 Brown, sandy GRAVEL, trace silt, few cobbles, (Fill).
						31.74	1.22
1D	61.0/17.8	1.52 - 2.13	4/5/6/4	11			Brown, medium dense, fine to medium SAND, some coarse sand, little gravel, trace silt, well graded. (Fill)
						30.07	2.90
2D	61.0/12.7	3.05 - 3.66	5/8/5/4	13	60		Olive-brown, loose, silty, fine to coarse SAND, some to little gravel, well graded.
					32		
					29		
					110	29.00	3.96
3D	61.0/10.2	4.27 - 4.88	27/10/12/10	22	63		Grey, damp, medium dense, gravelly, fine to coarse SAND, some silt. Approximately 50% of gravel portion consists of bedrock fragments.
					26		
					32		
					29		
					17	27.47	5.49
4D	25.4/5.1	5.79 - 6.05	12/25(100)		25a		Grey, wet, sandy GRAVEL, little silt, trace organics. Gravel consists of bedrock fragments. a25 blows for 100 mm
R1	132.1/ 121.9	6.07 - 7.39	RQD = 0%		NQ	26.90	6.07 Grey, fine to medium grained, SHALE, soft, severely weathered, foliation steep to vertical. Core Times (m:s) 6.1-6.4 (6:35) 6.4-6.7 (8:52) 6.7-7.0 (9:05) 7.0-7.3 (11:40) 7.3-7.4 (3:38)
						25.58	7.38 Bottom of Exploration at 7.38 m below ground surface.

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-101

Boring No.: BB-PR-202 (PIN: 8979.00)

Driller:	Maine Test Boring, Inc.	Elevation (m):	33.00	Auger ID/OD:	SSA: 102 mm
Operator:	Mel Coffin	Datum:	NGVD	Sampler:	N/A
Logged By:	Greg Lidstone	Rig Type:	MOBIL B-47	Hammer Wt./Fall:	N/A
Date Start/Finish:	4/23/02-4/23/02	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	9+844.8, 8.78 RT.	Casing ID/OD:	N/A	Water Level*:	None Observed

Casing Blows	Elevation (m)	Visual Description and Remarks
SSA		Pavement
	32.85	0.15 Brown, sandy GRAVEL, trace silt, (Fill).
	31.47	1.52 Bottom of Exploration at 1.52 m below ground surface.

Remarks: Looking for Abutment, encountered no concrete within 1.52 m, moved to BB-PR-202A.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-202

Boring No.: BB-PR-202A (PIN: 8979.00)

Driller:	Maine Test Boring, Inc.	Elevation (m):	32.99	Auger ID/OD:	SSA: 102 mm
Operator:	Mel Coffin	Datum:	NGVD	Sampler:	N/A
Logged By:	Greg Lidstone	Rig Type:	MOBIL B-47	Hammer Wt./Fall:	N/A
Date Start/Finish:	4/23/02-4/23/02	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	9+845.2, 8.5 RT.	Casing ID/OD:	N/A	Water Level*:	None Observed

Casing Blows	Elevation (m)	Visual Description and Remarks
SSA		Pavement
	32.84	0.15 Brown, sandy GRAVEL, trace silt, (Fill).
	31.46	1.52 Bottom of Exploration at 1.52 m below ground surface.

Remarks: Looking for Abutment, encountered no concrete within 1.52 m, moved to BB-PR-202B.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-202A

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BORING DETAILS

SHEET 2 OF 7 — AUGUSTA, MAINE

	BY	DATE
PROJECT DESIGN ENGINEER		
DESIGN-DETAILED	J.TWEEDIE	T.WHITE	JULY 2003
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\MSTA\016_Boring Details2.dgn   Division: BRIDGE   Username: michael.wight   Date:3/11/2005

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	BB-PR-202B
		PIN:	8979.00
Driller: Maine Test Boring, Inc.	Elevation (m): 33.02	Auger ID/OD:	N/A
Operator: Mel Coffin	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/23/02-4/23/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+845.8, 8.5 RT.	Casing ID/OD: NW (76.2/88.9mm)	Water Level*:	None Observed

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
T_v = Pocket Torvane Shear Strength (kPa)
q_p = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOH = weight of 64 kg hammer
WOR = weight of rods

Definitions:
WC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
R1	198.1/43.2	0.21 - 2.19		
1D	61.0/10.2	3.05 - 3.66	11/14/9/7	23
R2	152.4/116.8	4.51 - 6.04		
R3	132.1/132.1	6.04 - 7.36		
R4	121.9/116.8	7.35 - 8.56	RQD = 44%	

Casing Blows: 28, 39, 15, 14, 18, 26, 26, 45, 40, 46, 11, 13, 37, 41, 52a, NQ, NQ, NQ

Elevation (m): 32.87, 32.81, 32.62, 29.97, 28.51, 26.07, 24.45

Depth (m): 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Visual Description and Remarks:
- Pavement — 0.15
- Brown, sandy GRAVEL, trace silt, (Fill). — 0.21
- Concrete — 0.40
- Brown, sandy GRAVEL, trace silt, (Fill). — 3.05
- Brown, damp, silty fine to coarse SAND, little gravel, occasional cobbles, (Fill).
- a 52 blows for 200 mm. — 4.51
- CONCRETE. R2: Core Times (min:sec) 4.5-4.8 (3:45) 4.8-5.1 (3:17) 5.1-5.4 (4:10) 5.4-5.7 (5:35) 5.7-6.04 (5:40)
- CONCRETE R3: Core Times (min:sec) 6.04-6.3 (3:42) 6.3-6.6 (4:17) 6.6-6.9 (4:20) — 6.95
- Grey, severely weathered, graphitic SHALE, fractured throughout. 6.9-7.25 (5:45) 7.25-7.36 (5:30) R4: Core Times (min:sec) 7.35-7.7 (4:56) 7.7-8.0 (5:10) 8.0-8.3 (5:27) 8.3-8.56 (5:49) — 8.56
- Bottom of Exploration at 8.56 m below ground surface. Core Blocked

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-202B

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	BB-PR-301
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 24.03	Auger ID/OD:	N/A
Operator: G.Lidstone	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: CME 45C on barge	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 8/5/02-8/6/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+862.97, 12.7 LT.	Casing ID/OD: HW (101.6/114.3 mm)	Water Level*:	Above river bed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
1D	61.0/10.2	0.00 - 0.61		
R1	152.4/152.4	2.23 - 3.75	RQD = 38%	
R2	61.0/55.9	3.75 - 4.36	RQD = 92%	

Casing Blows: SC, NQ, NQ

Elevation (m): 23.70, 23.57, 21.93, 19.67

Depth (m): 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Visual Description and Remarks:
- Brown, wet, loose, sandy GRAVEL, trace silt, trace organics, occasional cobbles. — 0.34
- Wood — 0.46
- Brown, wet, sandy GRAVEL, trace silt, trace organics, occasional cobbles and brick. — 2.10
- Bedrock: Grey, fine grained PHYLLITE, vertical foliation R1: Core Times (min:sec) 2.23-2.5 (11:58) 2.5-2.8 (10:05) 2.8-3.1 (9:02) 3.1-3.4 (11:52) 3.4-3.75 (8:55)
- R2: Core Times (min:sec) 3.75-4.1 (11:37) 4.1-4.36 (11:43) — 4.36
- Bottom of Exploration at 4.36 m below ground surface.

Remarks:
Deck elevation 25.52 m.
Deck to ground 1.49 m.
SC: Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-301

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	BB-PR-105
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 21.90	Auger ID/OD:	N/A
Operator: Clyde Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: CME45C from barge	Hammer Wt./Fall:	63.5 kg/762 mm
Date Start/Finish: 8/13/01-8/15/01	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+907.2, 1.6 LT.	Casing ID/OD: HW/NW	Water Level*:	2.6 m above river bed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
1D	61.0/25.4	0.00 - 0.61	6/11/23/37	34
2D	61.0/12.7	0.91 - 1.52	17/16/20/37	36
MD	61.0/0.0	2.44 - 3.05	14/18/18/20	36
3D	61.0/38.1	3.96 - 4.57	9/10/13/16	23
4D	61.0/10.2	5.49 - 6.10	11/12/12/14	24
5D	40.6/17.8	7.01 - 7.42	18/22/50(75)	—
R1	152.4/147.3	8.17 - 9.69	RQD = 37%	
R2	152.4/134.6	9.69 - 11.22	RQD = 62%	

Casing Blows: 19, 28, 43, 72, 42, 67, 95, 165, 32, 31, 30, 37, 48, 37, 32, 37, 48, 155, 40, 37, 47, 45, 53, 48, 52, 81, 100a, 64b

Elevation (m): 21.81, 18.55, 14.89, 13.73, 10.68

Depth (m): 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6, 10.8, 12, 13.2, 14.4, 15.6, 16.8, 18, 19.2

Visual Description and Remarks:
- Brown, wet, loose, GRAVEL, some sand, little silt and clay. — 0.09 (Lab: G#98476 A-2-4, GC-GM WC=8.6%)
- Grey, dense GRAVEL, some sand and silt, little clay, (Till). Changed to NW casing. (Lab: G#98477 A-4, GC-GM WC=7.6%)
- Washed ahead from 2.44 m to 3.96 m bgs. — 3.35
- Grey, medium dense sandy SILT, some gravel, trace clay, (Till).
- Washed ahead from 3.96 m to 5.49 m bgs.
- Washed ahead from 5.49 m to 7.01 m bgs.
- Washed ahead from 7.01 m to 8.02 m bgs. — 7.01
- Grey, dense, silty, fine to coarse SAND, some gravel, occasional cobble, (Till).
- a 100 blows for 90 mm. Washed ahead from 8.02 m to 8.17 m bgs. b 64 blows for 150 mm — 8.17
- Grey, fine grained, calcareous SHALE, hard to very hard, slightly weathered, steep to vertical foliation. Core Times (m:s) 8.2-8.5 (14:38) 8.5-8.8 (16:21) 8.8-9.1 (12:35) 9.1-9.4 (13:24) 9.4-9.69 (12:22)
- Same as R1. Core Times (m:s) 9.69-10.0 (16:36) 10.0-10.3 (15:33) 10.3-10.6 (15:29) 10.6-10.9 (15:30) 10.9-11.2 (15:47) — 11.22
- Bottom of Exploration at 11.22 m below ground surface.

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-105

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	BB-PR-102
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 22.60	Auger ID/OD:	N/A
Operator: Greg Lidstone	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: CME45C	Hammer Wt./Fall:	63.5 kg/762 mm
Date Start/Finish: 7/10/01-7/17/01	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+905.3, 8.9 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	2.1 m above river bed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
R1	35.6/20.3	0.00 - 0.36		
R2	152.4/35.6	1.04 - 2.56		
1D	61.0/17.8	2.56 - 3.17	13/13/24/25	37
2D	61.0/30.5	4.88 - 5.49	17/23/24/27	47
3D	61.0/22.9	6.40 - 7.01	15/17/18/23	35
4D	45.7/25.4	7.92 - 8.38	29/33/50	83
R3	152.4/127.0	8.63 - 10.15	RQD = 32%	
R4	147.3/142.2	10.15 - 11.62	RQD = 11%	

Casing Blows: SC, 16, 23, 25, 23, 47, 88, 52, 238, 23, 16, 15, 17, 32, 48, 37, 50, 78, 120, 34, 31, 38, 45, 72, 165, 100a, 100b, NQ, NQ

Elevation (m): 22.48, 17.72, 13.98, 10.99

Depth (m): 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6, 10.8, 12, 13.2, 14.4, 15.6, 16.8, 18, 19.2

Visual Description and Remarks:
- Gravel HW casing — 0.12
- Washed ahead from 0.88 m to 1.04 m. Telescope NW casing inside HW casing.
- Grey, damp, medium dense SILT, some sand and gravel, little clay, frequent cobbles. Till appears reworked. (Lab: G#97804 A-4, CL-ML WC=8.1%)
- Washed ahead from 3.20 m to 4.88 m bgs. — 4.88
- Grey, damp, dense SILT, some sand, little gravel and clay, occasional cobbles. Washed ahead from 4.88 m to 6.40 m bgs. (Lab: G#97805 A-4, CL-ML WC=8.3%)
- Same as 2D, medium dense.
- Same as 2D, very dense.
- a100 blows for 90 mm. b100 blows for 90 mm. Washed ahead from 8.32 m to 8.63 m bgs — 8.63
- Grey, fine to medium grained, SHALE, soft, severely weathered, foliation vertical. Core Times (m:s) 8.6-8.9 (3:52) 8.9-9.2 (6:02) 9.2-9.5 (8:17) 9.5-9.8 (8:35) 9.8-10.1 (8:49)
- Similar to R3. Core Times (m:s) 10.1-10.4 (5:09) 10.4-10.7 (3:51) 10.7-11.1 (3:58) 11.1-11.4 (4:10) 11.4-11.6 (3:25) — 11.61
- Bottom of Exploration at 11.61 m below ground surface.

Remarks:
Advanced HW casing from bridge deck to a depth of 0.88 m, telescoped NW casing inside HW casing.
11.46 m from bridge pavement surface to river bed
SC: Spun casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-102

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	BB-PR-305
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 22.55	Auger ID/OD:	N/A
Operator: G.Lidstone	Datum: NGVD	Sampler:	N/A
Logged By: B.Wilder	Rig Type: CME 45C on barge	Hammer Wt./Fall:	N/A
Date Start/Finish: 8/6/02-8/7/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+884.4, 25.3 LT.	Casing ID/OD: HW/NW	Water Level*:	Above river bed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
R1	152.4/119.4	6.10 - 7.62	RQD = 68%	

Casing Blows: SC, SC NW, NQ

Elevation (m): 22.34, 16.51, 14.93

Depth (m): 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Visual Description and Remarks:
- Brown, wet, sandy GRAVEL, trace silt and organics. Spun HW casing from 0 to 1.52 m bgs. — 0.21
- Grey, moist, sandy SILT, cobbles, little gravel, (Till).
- Spun NW casing from 1.52 to 6.10 m bgs.
- Washed ahead from 2.83 to 3.11 m bgs. — 6.04
- Bedrock: Grey, fine grained PHYLLITE, vertical foliation R1: Core Times (min:sec) 6.10-6.4 (11:47) 6.4-6.7 (12:53) 6.7-7.0 (6:49) 7.0-7.3 (6:21) 7.3-7.62 (6:18) Rec=78% — 7.62
- Bottom of Exploration at 7.62 m below ground surface.

Remarks:
Deck elevation 25.63 m.
Deck to ground 3.08 m.
SC: Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-305

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford	Location: Rte. 2, Penobscot River, Old Town and Milford	Boring No.:	BB-PR-104
		PIN:	8979.00
Driller: Maine DOT	Elevation (m): 22.20	Auger ID/OD:	N/A
Operator: Clyde Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: CME45C from barge	Hammer Wt./Fall:	63.5 kg/762 mm
Date Start/Finish: 8/21/01-8/21/01	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+879.4, 5.87 RT.	Casing ID/OD: HW (101.6/114.3 mm)	Water Level*:	3.7 m above river bed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample Information

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
1D	20.3/5.1	0.00 - 0.20	9/50(100)	—
R1	149.9/73.7	0.76 - 2.26	RQD = 63%	

Casing Blows: SC, NQ

Elevation (m): 21.99, 21.44, 20.43, 19.94

Depth (m): 0, 1.2, 2.4, 3.6, 4.8, 6, 7.2, 8.4, 9.6

Visual Description and Remarks:
- Brown, wet, loose, sandy GRAVEL, trace silt. — 0.21
- Grey, damp, dense, silty fine to coarse SAND, some gravel, occasional cobbles (Till). — 0.76
- GRAVEL and COBBLES Core Times (m:s) 0.76-1.1 (5:28) 1.1-1.4 (1:03) 1.4-1.7 (0:25) 1.7-2.0 (7:19) 2.0-2.25 (7.35) — 1.77
- Grey, fine grained, hard to very hard, calcareous SHALE, very slightly weathered, steep to vertical foliation. Recovered 480 mm of bedrock. — 2.26
- Bottom of Exploration at 2.26 m below ground surface.

Remarks:
SC: Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-104

Filename: ...\MSTA\017_Boring Details3.dgn Division: BRIDGE Username: michael.wight Date:3/11/2005

	BY	DATE
PROJECT DESIGN ENGINEER		
DESIGN-DETAILED	J.TWEEDIE	
CHECKED	T.WHITE	JULY 2003
REVISIONS		
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BORING DETAILS

SHEET 3 OF 7 AUGUSTA, MAINE

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Boring No.: BB-PR-304 — PIN: 8979.00

Project:	Old Town-Milford	Location:	Rte. 2, Penobscot River, Old Town and Milford		
Driller:	MAINE DOT	Elevation (m):	22.90	Auger ID/OD:	N/A
Operator:	G.Lidstone	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	B.Wilder	Rig Type:	CME 45C on barge	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	7/31/02-8/1/02	Drilling Method:	Cased Wash boring	Core Barrel:	NQ
Boring Location:	9+925.3, 14.9 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	Above river bed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger

Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods

Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample Information:

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
1D/AB	61.0/20.3	0.00 - 0.61	11/12/14/17	26
2D	61.0/17.8	1.83 - 2.44	29/32/35/43	67
3D	61.0/22.9	4.88 - 5.49	9/10/8/10	18
R1	83.8/45.7	7.99 - 8.82		
R2	175.3/114.3	8.84 - 10.59	RQD = 78%	

Casing Blows: 68, 77, 169, 195, 163, 94, 22, 26, 33, 85, 163, 110, 55, 50, 51, 54, 47, 50, 49, 45, 33, 31, 61, 81, 249, 253, 69, 249, 50a, NQ

Elevation (m): 22.75, 22.29, 19.61, 19.36, 15.89, 14.91, 14.73, 14.43, 14.24, 12.96, 12.29

Visual Description and Remarks:

- Brown, wet, sandy GRAVEL, trace silt. 1D/A (0.0-0.15 m). — 0.15
- Grey, wet, medium dense, sandy SILT, little gravel, trace clay. 1D/B (0.15-0.61 m). — 0.61
- Grey, damp, very dense, sandy SILT, little gravel, occasional cobbles. Washed ahead from 1.28 to 1.83 m bgs.
- Washed ahead from 1.83 to 3.29 m bgs. — 3.29
- COBBLE. Washed ahead from 3.29-4.88 m bgs. — 3.54
- Grey, moist, medium dense, sandy SILT, little gravel, trace clay, (Till).
- Washed ahead from 4.88 to 6.40 m bgs.
- Washed ahead from 6.40 to 7.92 m bgs. — 7.01
- Grey, moist, sandy SILT, little gravel, trace clay, occasional cobbles (Till).
- Washed ahead from 7.93 to 7.98 m bgs. — 7.99
- COBBLE — 8.17
- Grey, sandy SILT, little gravel, (Till). — 8.47
- COBBLE. a50 blows for 30 mm. Washed ahead from 8.56 to 8.84 m bgs. — 8.66
- Grey, sandy SILT, cobbles, little gravel, (Till). R2: Core Times (min:sec) 8.84-9.1 (5:15) 9.1-9.4 (5:34) 9.4-9.7 (5:29) 9.7-10.0 (9:17) — 9.94
- Bedrock: Grey, medium grained PELITE. Core Times (min:sec) 10.0-10.4 (15:21) 10.4-10.61 (15:42) — 10.61
- Bottom of Exploration at 10.61 m below ground surface.

Remarks: Deck elevation 25.60 m. Deck to ground 2.7 m.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-304

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Boring No.: BB-PR-303 — PIN: 8979.00

Project:	Old Town-Milford	Location:	Rte. 2, Penobscot River, Old Town and Milford		
Driller:	Maine DOT	Elevation (m):	22.42	Auger ID/OD:	N/A
Operator:	G.Lidstone	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	B.Wilder	Rig Type:	CME 45C on barge	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	7/27/02-7/30/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+917.4, 2.75 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	Above river bed

Definitions: (as above)

Sample Information:

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
1D	61.0/30.5	0.00 - 0.61	6/10/10/60	20
2D	61.0/20.3	2.74 - 3.35	26/27/26/38	53
MD	61.0/0.0	5.79 - 6.40	15/14/21/22	35
3D	61.0/7.6	6.40 - 7.01	12/10/17/21	27
R1	101.6/55.9	8.84 - 9.86	RQD = 0%	

Casing Blows: 15, 101, 186, 34, 176, 210, 49, 43, 78, 39, 58, 125, 122, 135, 44, 51, 90, 93, 88, 91, 43, 50, 39, 37, 57, 48, 37, 68, 128a, NQ

Elevation (m): 21.96, 16.33, 13.70, 13.49, 13.16, 12.58

Visual Description and Remarks:

- Brown, wet, medium dense, GRAVEL, some sand and silt, trace clay. — 0.46 — G#98954 A-2-4, GC-GM WC=9.1%
- Grey, wet, very dense, sandy SILT, little gravel, (Till). Washed ahead from 0.70 to 1.22 m bgs.
- Washed ahead from 1.52 to 1.68 m bgs.
- Cobbles. Cored from 1.68 to 1.77 m bgs. No sample taken
- Grey, wet, very dense, GRAVEL, some sand and silt, trace clay, occasional cobbles, (Till). Washed ahead 2.74 to 5.79 m bgs. — G#98955 A-2-4, GC-GM WC=5.9%
- Washed ahead from 6.10 to 6.40 m bgs. — 6.10
- Grey, wet, dense, sandy SILT, little gravel, occasional cobbles, trace clay (Till).
- a128 blows from 180 mm. — 8.72
- COBBLES — 8.93
- GRAVEL — 9.27
- Bedrock: Grey, fine grained and massive PHYLLITE — 9.85
- Bottom of Exploration at 9.85 m below ground surface.

Remarks: Deck elevation 25.68 m. Deck to ground 3.26 m.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-303

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Boring No.: BB-PR-203 — PIN: 8979.00

Project:	Old Town-Milford	Location:	Rte. 2, Penobscot River, Old Town and Milford		
Driller:	Maine DOT	Elevation (m):	10.27	Auger ID/OD:	N/A
Operator:	Clyde Mann	Datum:	NGVD	Sampler:	N/A
Logged By:	Bruce Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	4/23/02-4/23/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+916, 8.4 RT	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	None Observed

Definitions: (as above)

Sample Information:

Sample No.	Pen/Rec (cm)	Sample Depth (m)
R1	152.4/83.8	3.05 - 4.57
R2	146.3/146.3	4.57 - 6.04
R3	146.3/146.3	6.04 - 7.50
R4	149.4/149.4	7.50 - 8.99
R5	149.4/149.4	8.99 - 10.49

Casing Blows: SC, NQ

Elevation (m): 6.01, -0.21

Visual Description and Remarks:

- GRAVEL and COBBLES — 4.27
- CONCRETE — 10.49
- Bottom of Exploration at 10.49 m below ground surface.

Remarks: SC: Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-203

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Boring No.: BB-PR-302 — PIN: 8979.00

Project:	Old Town-Milford	Location:	Rte. 2, Penobscot River, Old Town and Milford		
Driller:	Maine DOT	Elevation (m):	23.68	Auger ID/OD:	N/A
Operator:	G.Lidstone	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	B.Wilder	Rig Type:	CME 45C on barge	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	7/24/02-7/25/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+908.7, 23.8 RT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	Above river bed

Definitions: (as above)

Sample Information:

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value
1D	61.0/12.7	0.00 - 0.61	WOH/WOH/1/2	1
2D	61.0/17.8	0.91 - 1.52	7/2/1/22	3
3D	61.0/61.0	2.44 - 3.05	23/31/31/34	62
4D	61.0/5.1	3.96 - 4.57	21/25/34/30	59
5D	61.0/15.2	5.49 - 6.10	6/9/12/11	21
6D	61.0/45.7	7.01 - 7.62	8/9/6/10	15
7D		8.69 - 9.30	15/22/20/28	42

Casing Blows: 1, 4, 7, 6, 3, 256, NQ, 48, 105, 19, 44, 44, 66, 64, 100, 35, 47, 43, 35, 37, 40, 41, 44, 58, 37, 42, 29, 43, 345, 172

Elevation (m): 22.28, 22.06, 21.82, 16.97, 15.76, 13.93

Visual Description and Remarks:

- Dark brown, wet, very loose, medium to coarse SAND, little gravel. — G#98951 A-1-b, SW WC=37.3%
- Dark brown, wet, very loose, fine to medium SAND, some gravel, little organics, trace wood. — 1.40 — G#98952 A-1-b, SW WC=91.4%
- Washed ahead from 1.52 to 1.62 m bgs. — 1.62
- Granite Block — 1.86
- Grey, wet, very dense, SILT, some sand, little gravel and clay, (Till). — G#98953 A-4, CL-ML WC=9.0%
- Washed ahead from 3.05 to 3.96 m bgs.
- Cobble fragments
- Washed ahead from 4.57 to 5.49 m bgs.
- Grey, wet, dense, sandy SILT, little gravel, trace clay, (Till). — 6.71
- Grey, wet, medium dense, silty fine to medium SAND, trace clay and gravel. — 7.92
- Grey, wet, dense, sandy SILT, little gravel, trace clay, (Till).
- Washed ahead from 9.30 to 9.75 m bgs. Casing bent.
- REFUSAL 9.75 m bgs — 9.75
- Bottom of Exploration at 9.75 m below ground surface.

Remarks: Deck elevation 25.58 m. Deck to ground 1.9 m.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-302

	BY	DATE
PROJECT DESIGN ENGINEER		
DESIGN-DETAILED	J.TWEEDIE	
CHECKED	T.WHITE	JULY 2003
REVISIONS		
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR. OVER PENOBSCOT RIVER IN THE TOWNS OF OLD TOWN - MILFORD PENOBSCOT COUNTY

BORING DETAILS

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	19	90

8979.00

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford

Boring No.: BB-PR-302A
PIN: 8979.00

Drillers:	Maine DOT	Elevation (m):	23.64
Operators:	G.Lidstone	Datum:	NGVD
Logged By:	B.Wilder	Rig Type:	CME 45C on barge
Date Start/Finish:	7/26/02-7/27/02	Drilling Methods:	Cased wash boring
Boring Location:	9+908.2, 24.3 RT.	Casing ID/OD:	HW/NW

Auger ID/OD:	N/A
Sampler:	Standard Split Spoon
Hammer Wt./Fall:	63.5 kg/760 mm
Core Barrel:	NQ
Water Level*:	Above river bed

Definitions: B = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_u = Unconfined Compressive Strength (Pa); $S_u(qp)$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Rec/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						HW			Spun HW casing from 0 to 7.62 m bgs.	
1.2										
						NQ	22.33		Granite Block — 1.31	
							21.72		— 1.92	
2.4										
3.6										
4.8										
6										
7.2										
						SC			Spun NW casing from 7.62 to 10.85 m bgs.	
8.4										
9.6										
10.8	R1	152.4/- 140.5	10.85 - 12.37	RQD = 76%		NQ	12.79		Bedrock: Grey, fine grained PHYLLITE, vertical foliation — 10.85 R1: Core Times (min:sec) 10.85-11.2 (12:30) 11.2-11.5 (12:45) 11.5-11.8 (14:30) 11.8-12.1 (12:00) 12.1-12.37 (10:45)	
							11.27		Bottom of Exploration at 12.37 m below ground surface. — 12.37	
13.2										
14.4										
15.6										
16.8										
18										
19.2										

Remarks:
Deck elevation 25.64 m.
Deck to ground 2.0 m.
SC= Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-302A

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford

Boring No.: BB-PR-307
PIN: 8979.00

Drillers:	Maine DOT	Elevation (m):	22.97
Operators:	G.Lidstone	Datum:	NGVD
Logged By:	B.Wilder	Rig Type:	CME 45C on barge
Date Start/Finish:	8/8/02-8/9/02	Drilling Methods:	Cased wash boring
Boring Location:	9+943.9, 25.6 LT.	Casing ID/OD:	HW (101.6/114.3 mm)

Auger ID/OD:	N/A
Sampler:	N/A
Hammer Wt./Fall:	N/A
Core Barrel:	NQ
Water Level*:	Above river bed

Definitions: B = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_u = Unconfined Compressive Strength (Pa); $S_u(qp)$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Rec/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0										
1.2										
	R1	159.7/0.0	1.89 - 3.29				22.66		Brown, wet, sandy GRAVEL, trace organics and silt, frequent cobbles. Boulders evident on ground surface. — 0.30	
2.4									Grey, moist, sandy SILT, little gravel, occasional cobbles (Till). Washed ahead from 0.37 to 0.97 m bgs.	
3.6									Washed ahead from 1.77 to 1.89 m bgs.	
4.8										
6										
7.2										
						NQ			Washed ahead from 5.03 to 5.30 m bgs.	
8.4										
9.6										
10.8							11.57		NO REFUSAL 11.40 m bgs. — 11.40 Bottom of Exploration at 11.40 m below ground surface.	
12										
13.2										
14.4										
15.6										
16.8										
18										
19.2										

Remarks:
Deck elevation 25.56 m.
Deck to ground 2.59 m.
SC= Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-307

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford

Boring No.: BB-PR-106
PIN: 8979.00

Drillers:	Maine DOT	Elevation (m):	22.60
Operators:	Clyde Mann	Datum:	NGVD
Logged By:	Greg Lidstone	Rig Type:	CME45C from barge
Date Start/Finish:	8/15/01-8/20/01	Drilling Methods:	Cased wash boring
Boring Location:	9+929.5, 0.6 LT.	Casing ID/OD:	HW/NW

Auger ID/OD:	N/A
Sampler:	Standard Split Spoon
Hammer Wt./Fall:	63.5 kg/762 mm
Core Barrel:	NQ
Water Level*:	2.1 m above river bed

Definitions: B = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_u = Unconfined Compressive Strength (Pa); $S_u(qp)$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Rec/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0	1D	61.0/5.1	0.00 - 0.61	3/7/12/10	19	47			Brown, wet, loose, sandy GRAVEL, wood, trace silt.	
1.2						45				
						92	21.84		Grey, damp, dense, sandy SILT, some gravel, occasional cobbles. (Till). — 0.76	
						188			Washed ahead from 1.52 m to 2.13 m bgs.	
2.4	2D	25.3/5.1	1.52 - 1.73	22/50/100)	—	200			— 2.13	
						52	20.47		Same as above but, frequent cobbles. (Till).	
3.6						75				
						123				
						148				
4.8	3D	38.1/36.6	3.05 - 3.43	8/16/50(90)	—	68				
	R1	71.1/27.3	3.44 - 4.16			1200	19.16		DIORITE BOULDER — 3.44 Washed ahead from 3.40 m to 4.57 m bgs.	
6						1050	18.82		— 3.78	
						192			Grey, dense, sandy SILT, some gravel, frequent cobbles. (Till).	
						210				
7.2	MD	61.0/0.0	4.57 - 5.18	16/15/11/12	26	87				
						105				
						173				
8.4						198				
						260				
9.6	MD	0.0/0.0	6.10 - 6.10	50(0)	—	340				
						228				
						162				
10.8						215				
						230				
						70				
12	4D	40.6/17.8	7.80 - 8.21	16/20/50(75)	—	71			Washed ahead from 7.62 m to 7.80 m bgs. Grey, very dense, fine to coarse sandy SILT, some gravel.	
						212				
						250				
13.2	R2	152.4/- 137.2	8.90 - 10.42	RQD = 60%		NQ	13.70		Washed ahead from 8.72 m to 8.97 m bgs. — 8.90 Grey, fine grained, calcareous SHALE, hard to very hard, slightly weathered, steep to vertical foliation. Core Times (min) 8.9-9.2 (01:24) 9.2-9.5 (01:35) 9.5-9.8 (01:08) 9.8-10.1 (01:19) 10.1-10.4 (1:14)	
14.4							12.18		Bottom of Exploration at 10.42 m below ground surface. — 10.42	
15.6										
16.8										
18										
19.2										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-106

Maine Department of Transportation — Soil/Rock Exploration Log — METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford

Boring No.: BB-PR-103
PIN: 8979.00

Drillers:	Maine DOT	Elevation (m):	34.10
Operators:	Clyde Mann	Datum:	NGVD
Logged By:	Bruce Wilder	Rig Type:	CME45C
Date Start/Finish:	6/27/01-6/27/01	Drilling Methods:	Cased wash boring
Boring Location:	9+962.5, 9.26 RT.	Casing ID/OD:	HW (76.2/88.9 mm)

Auger ID/OD:	SSA: 127 mm
Sampler:	Standard Split Spoon
Hammer Wt./Fall:	63.5 kg/762 mm
Core Barrel:	NQ
Water Level*:	None observed

Definitions: B = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_u = Unconfined Compressive Strength (Pa); $S_u(qp)$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Depth (m)	Sample No.	Rec/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class.
0						SSA	34.10		Pavement — 0.20	
1.2							33.90		Brown, sandy GRAVEL — 0.33	
							33.77		Concrete — 0.45	
									Brown, sandy GRAVEL (Fill).	
	1D	61.0/40.6	1.52 - 2.13	5/6/6/7	12		32.58		— 1.52	
2.4									Brown, moist, medium dense, silty, fine to coarse SAND, little gravel. Gravel portion consists of bedrock fragments.	
	2D	61.0/35.6	2.74 - 3.35	24/50/8/10	28	30	31.36		— 2.74	
3.6						42			Olive-Brown, moist, medium dense, gravelly, fine to coarse SAND, little silt, uniform. Gravel consists of bedrock fragments.	
						54				
	R1	106.7/15.2	3.81 - 4.88			120			150-mm dia. cobble	
4.8						30				
						31				
						29				
6						87				
						100				
						91				
	3D	61.0/22.9	5.79 - 6.40	37/36/10/12	46	12	28.31		Brown, wet, dense, silty, fine to coarse SAND, little gravel. — 5.79	
7.2						53				
						110				
						45				
8.4						100				
	R2	61.0/61.0	7.44 - 8.05			1000			9100 blows for 120 mm	
						NQ	26.66		Concrete — 7.44	
9.6							26.05		Bottom of Exploration at 8.05 m below ground surface. — 8.05	
10.8										
12										
13.2										
14.4										
15.6										
16.8										
18										
19.2										

Remarks:
Boring was relocated to BB-PR-103A after encountering concrete at a depth of 7.44 m.

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-103

PROJECT DESIGN ENGINEER — PLANS

	BY	DATE
DESIGN-DETAILED	J.LTWEEDIE	
CHECKED	T.WHITE	JULY 2003
REVISIONS		
FIELD CHANGES		

Filename: ...\MSTA\019_Boring Details5.dgn Username: michael.wight Date:3/11/2005 Division: BRIDGE

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BORING DETAILS

SHEET 5 OF 7 AUGUSTA, MAINE

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	20	90

8979.00

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
PIN: 8979.00

Boring No.: BB-PR-204

Driller: Maine Test Boring, Inc.	Elevation (ft): 34.15	Auger ID/OD:	SSAi 102 mm
Operator: Mel Coffin	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/19/02-4/19/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+980.9, 3.0 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None Observed

Definitions:
S = Split Spoon Sample
SSAi = Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
S_v = Pocket Torvane Shear Strength (kPa)
q_u = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOR = weight of 64 kg hammer
WOR = weight of rods

Definitions:
MC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log
						SSA		
0							34.05	
1.2	10	7.6/5.1	1.52 - 1.60	100/60*	—			
2.4	20	61.0/20.3	3.05 - 3.66	14/17/10/31	32	26		
						38		
						47		
						73		
						39		
4.8	30	61.0/2.5	4.57 - 5.18	31/24/21/16	45	25	29.57	
						20		
						30	28.97	
						39		
						30		
6	40	20.3/7.6	6.10 - 6.30	47/100/60*	—	719		
						RC	27.64	
	R1	36.8/25.4	6.68 - 7.04			NQ		
7.2							27.20	
							27.11	
8.4								
9.6								

Visual Description and Remarks

Pavement — 0.18
Brown, sandy GRAVEL, trace silt. (Fill). — 0.27
Concrete — 0.52
Brown, damp, dense silty fine to coarse SAND, little gravel. (Fill). Gravel is mostly bedrock fragments, occasional cobbles.
CONCRETE — 2.59
Brown, damp- medium dense, silty fine to coarse SAND, occasional cobbles, some gravel. — 2.74
Brown, wet, dense, silty fine to coarse SAND, some gravel. — 4.57
Brown, very dense, gravelly fine to coarse SAND, little silt. — 5.18
* 71 blows for 270 mm.
GRANITE BOULDER — 6.31
Washed ahead from 6.37 m to 6.67 m bgs.
Rt1 Core Times (minsec)
6.66-6.98 (7:18)
6.98-7.04 (0:10)
SAND and GRAVEL — 6.95
Bottom of Exploration at 7.04 m below ground surface. — 7.04

Laboratory Testing Results/ AASHTO and Unified Class.

Remarks:
Abandoned boring at 7.04 m bgs. due to bent casing. Moved to BB-PR-204A.
RC1: Roller Cone

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-204

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
PIN: 8979.00

Boring No.: BB-PR-204A

Driller: Maine Test Boring, Inc.	Elevation (ft): 34.24	Auger ID/OD:	SSAi 102 mm
Operator: Mel Coffin	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/24/02-4/25/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+971.3, 2.5 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None Observed

Definitions:
S = Split Spoon Sample
SSAi = Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
S_v = Pocket Torvane Shear Strength (kPa)
q_u = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOR = weight of 64 kg hammer
WOR = weight of rods

Definitions:
MC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log
						SSA		
0							34.05	
1.2								
2.4								
3.6								
4.8								
6	10/AB	30.5/15.2	6.10 - 6.40	33/128	—			
							27.86	
	R1	150+6*/ 134+6	7.01 - 8.53			RC		
7.2						NQ		
				RQD = 0%			26.71	
							26.58	
8.4	R2	76.2/73.1	8.53 - 9.30	RQD = 0%		NQ	25.70	
9.6	R3	71.1/71.1	9.30 - 10.01	RQD = 86%		NQ		
							24.24	
10.8								
12								
13.2								
14.4								
15.6								
16.8								
18								
19.2								

Visual Description and Remarks

Pavement — 0.18
BOULDER — 5.18
Brown, damp, gravelly, coarse to medium SAND, trace fine sand, trace silt. (Fill).
(A) 6.10-6.37 m
CONCRETE — 6.37
(B) 6.37-6.40 m
Washed ahead from 6.71 m to 7.01 m bgs.
Rt1 Core Times (minsec)
7.01-7.2 (4:38)
7.2-7.62 (4:20)
7.62-7.92 (1:17)
VOID — 7.53
Grey, SHALE, severely weathered, vertical bedding. — 7.65
Rt2 Core Times (minsec)
7.92-8.23 (5:22)
8.23-8.53 (5:20)
Rt2 Core Times (minsec)
8.53-8.84 (4:32)
8.84-9.1 (4:04)
9.1-9.3 (3:20) Core Blocked.
Rt3 Core Times (minsec)
9.3-9.6 (4:05)
9.6-9.9 (4:14)
9.9-10.0 (2:21)
Bottom of Exploration at 10.00 m below ground surface. — 10.00

Spun Casing from 4.57 m to 6.72 m bgs.

Laboratory Testing Results/ AASHTO and Unified Class.

Remarks:
SC: Spun Casing
RC1: Roller Cone

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-204A

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
PIN: 8979.00

Boring No.: BB-PR-103A

Driller: Maine EDT	Elevation (ft): 34.15	Auger ID/OD:	SSAi 127 mm
Operator: Clyde Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Bruce Wilder	Rig Type: CME45C	Hammer Wt./Fall:	63.5 kg/762 mm
Date Start/Finish: 6/26/01-6/29/01	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+973.1, 9.1 RT.	Casing ID/OD: NW (101.6/114.3 mm)	Water Level*:	None observed

Definitions:
S = Split Spoon Sample
SSAi = Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
S_v = Pocket Torvane Shear Strength (kPa)
q_u = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOR = weight of 64 kg hammer
WOR = weight of rods

Definitions:
MC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log
						SSA		
0								
1.2								
2.4								
3.6								
4.8								
6						23		
						25		
						450		
7.2	R1	101.6/ 101.6	7.22 - 8.44	RQD = 0%		NQ	26.93	
8.4	R2	150+6*/ 150+6	8.44 - 9.97	RQD = 70%		NQ		
9.6							24.18	
10.8								
12								
13.2								
14.4								
15.6								
16.8								
18								
19.2								

Visual Description and Remarks

Grey, fine to medium grained, graphitic and calcareous SHALE; medium hard, moderately to severely weathered, vertical foliation. — 7.22
Core Times (min:sec)
7.22-7.5 (4:38)
7.5-7.8 (4:20)
7.8-8.1 (4:55)
8.1-8.4 (4:05)
Grey, fine to medium grained, graphitic and calcareous SHALE; medium hard, moderately weathered, steep to vertical foliation.
Core Times (min:sec)
8.4-8.7 (3:47)
8.7-9.0 (3:50)
9.0-9.3 (3:00)
9.3-9.6 (3:39)
9.6-10.0 (4:00)
Bottom of Exploration at 9.97 m below ground surface. — 9.97

Laboratory Testing Results/ AASHTO and Unified Class.

Remarks:

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-103A

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
PIN: 8979.00

Boring No.: BB-PR-205

Driller: Maine Test Boring, Inc.	Elevation (m): 34.22	Auger ID/OD:	SSAi 102 mm
Operator: Mel Coffin	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/25/02-4/25/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+979.1, 9.5 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None Observed

Definitions:
S = Split Spoon Sample
SSAi = Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
S_v = Pocket Torvane Shear Strength (kPa)
q_u = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOR = weight of 64 kg hammer
WOR = weight of rods

Definitions:
MC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log
						SSA		
0							34.00	
							33.79	
							33.73	
1.2							33.15	
	10	61.0/12.7	1.52 - 2.13	14/13/17/14	30	20		
						32		
						40		
2.4	20	45.7/5.1	3.14 - 3.40	19/67/85	147	15	31.78	
						123		
						33		
3.6						33		
						32		
						55		
4.8	30	50.8/12.7	4.57 - 5.08	8/13/30/90	51	18		
						62		
	R1	150+6*/ 150+6	5.09 - 6.65	RQD = 52%		850	29.25	
6						NQ	29.13	
							27.60	
7.2								
8.4								
9.6								

Visual Description and Remarks

Pavement — 0.21
Brown, sandy GRAVEL, trace silt. (Fill). — 0.27
Concrete — 0.37
Brown, sandy GRAVEL, trace silt. (Fill). — 1.07
Brown, medium dense, silty SAND, little gravel. — 2.44
Brown, damp, very dense, sandy SILT, little gravel, occasional cobbles.
Washed ahead from 3.05 m to 3.14 m bgs.
0 85 blows for 200 mm
Weathered BEDROCK — 4.97
Grey SHALE, chaotic foliation — 6.09
Rt1 Core Times (min:sec)
5.09-5.39 (5:02)
5.39-5.7 (3:51)
5.7-6.0 (3:10)
6.0-6.3 (2:45)
6.3-6.61 (2:30)
Bottom of Exploration at 6.61 m below ground surface. — 6.61

Laboratory Testing Results/ AASHTO and Unified Class.

Remarks:

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-205

Maine Department of Transportation

Soil/Rock Exploration Log
METRIC UNITS

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
PIN: 8979.00

Boring No.: BB-PR-206

Driller: Maine DOT	Elevation (m): 34.29	Auger ID/OD:	SSAi 102 mm
Operator: C.Mann	Datum: NGVD	Sampler:	Standard Split Spoon
Logged By: Greg Lidstone	Rig Type: CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish: 4/19/02-4/19/02	Drilling Method: Cased wash boring	Core Barrel:	NQ
Boring Location: 9+984, 2.5 RT.	Casing ID/OD: NW (76.2/88.9 mm)	Water Level*:	None Observed

Definitions:
S = Split Spoon Sample
SSAi = Split Spoon Sample attempt
U = Thin Wall Tube Sample
R = Rock Core Sample
V = Insitu Vane Shear Test
SSA = Solid Stem Auger

Definitions:
S_u = Insitu Field Vane Shear Strength (kPa)
S_v = Pocket Torvane Shear Strength (kPa)
q_u = Unconfined Compressive Strength (Pa)
$S_{u(lab)}$ = Lab Vane Shear Strength (kPa)
WOR = weight of 64 kg hammer
WOR = weight of rods

Definitions:
MC = water content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Sample Information

Depth (m)	Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Graphic Log
						SSA		
0							34.10	
							33.92	
1.2	10/AB	61.0/20.3	1.52 - 2.13	3/2/2/4	4			
							32.22	
							32.03	
2.4	20	61.0/22.9	3.05 - 3.66	3/3/11/8	14	13		
						16		
3.6							30.93	
		150+6*/ 142+2				1000		
	R1		3.90 - 5.43	RQD = 53%		NQ	30.39	
4.8								
							28.86	
6								
7.2								
8.4								
9.6								

Visual Description and Remarks

Pavement — 0.18
Brown, sandy GRAVEL, trace silt. (Fill).
Brown, loose, silty fine to coarse SAND, little gravel. (Fill).
(A) 1.52-2.07 m — 1.07
Dark brown, loose, silty fine to coarse SAND, little gravel (Fill). Petroleum odor. — 2.07
(B) 2.07-2.13 m.
Brown, wet, loose, silty fine to coarse SAND, some gravel. (Fill). — 2.13
Brown, wet, medium dense, fine to coarse SAND, some gravel, trace silt. (Fill). — 3.35
* 100 blows for 240 mm.
Grey SHALE, vertical foliation. — 3.90
Rt1 Core Times (min:sec)
3.9-4.2 (5:43)
4.2-4.5 (5:32)
4.5-4.8 (5:47)
4.8-5.1 (5:03)
5.1-5.43 (6:25)
Bottom of Exploration at 5.43 m below ground surface. — 5.43

Laboratory Testing Results/ AASHTO and Unified Class.

Remarks:

Stratification lines represent approximate boundaries between soil types: transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: BB-PR-206

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN DETAILED	J.TWEEDIE	JULY 2003
CHECKED	T.WHITE	
REVISIONS		
FIELD CHANGES		

PLANS

Username: michael.wight Date:3/11/2005
Division: BRIDGE
Filename: ...\MSTA\020_Boring Details6.dgn

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BORING DETAILS

SHEET 6 OF 7 AUGUSTA, MAINE

Maine Department of Transportation — Soil/Rock Exploration Log (METRIC UNITS)

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
Boring No.: BB-PR-207
PIN: 8979.00

Driller:	Maine Test Borings	Elevation (m):	34.96	Auger ID/OD:	SSA: 102 mm
Operator:	Mel Coffin	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	Greg Lidstone	Rig Type:	MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/16/02-4/17/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	9+993.5, 14.2 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	None observed

Definitions: D = Split Spoon Sample; MD = Unsuccessful Split Spoon Sample attempt; U = Thin Wall Tube Sample; R = Rock Core Sample; V = Insitu Vane Shear Test; SSA = Solid Stem Auger
Definitions: S_u = Insitu Field Vane Shear Strength (kPa); T_v = Pocket Torvane Shear Strength (kPa); q_p = Unconfined Compressive Strength (Pa); $S_{u(lab)}$ = Lab Vane Shear Strength (kPa); WOH = weight of 64 kg hammer; WOR = weight of rods
Definitions: WC = water content, percent; LL = Liquid Limit; PL = Plastic Limit; PI = Plasticity Index; G = Grain Size Analysis; C = Consolidation Test

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					SSA	34.91	Pavement (0.05)
							Brown, damp, sandy GRAVEL, trace silt, occasional cobbles (Fill).
						33.74	(1.22) Brown, dense sandy SILT, occasional cobbles, little gravel, trace weathered bedrock.
1D	50.8/12.7	1.52 - 2.03	35/17/26/50	43	21		
					32		
					35		
					57		
R1	152.4/106.7	2.80 - 4.33			45a NQ	32.25	(2.71) COBBLES and BOULDERS a45 for 60 mm R1: Core Times (min:sec) 2.8-3.1 (2:48) 3.1-3.4 (1:25) 3.4-3.7 (3:14) 3.7-4.0 (3:40) 4.0-4.33 (4:35)
R2	152.4/116.8	4.33 - 5.85	RQD = 61%		NQ	30.64	(4.33) R2: Core Times (min:sec) 4.33-4.6 (2:50) Drop from 4.38-4.5 m. 4.6-4.9 (4:45) 4.9-5.2 (5:07) Drop from 4.97-5.06 m.
						29.90	(5.06) Grey SHALE, chaotic foliation 5.2-5.5 (7:46) 5.5-5.85 (7:38)
R3	146.6/142.2	5.85 - 7.32	RQD = 79%		NQ	29.11	(5.85) R3: Core Times (min:sec) 5.85-6.2 (6:25) 6.2-6.5 (6:42) 6.5-6.77 (13:36) 6.77-7.1 (9:03) 7.1-7.32 (8:15)
						27.65	(7.32) Bottom of Exploration at 7.32 m below ground surface.

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: BB-PR-207

Maine Department of Transportation — Soil/Rock Exploration Log (METRIC UNITS)

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
Boring No.: P-210C
PIN: 8979.00

Driller:	Maine Test Borings	Elevation (m):	35.06	Auger ID/OD:	SSA 100 mm
Operator:	Mel Coffin	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	Greg Lidstone	Rig Type:	MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/17/02-4/17/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	10+013.4, 16.96 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	None observe

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					SSA		
					28		
					50a		a50 blows for 200 mm.
R1	152.4/142.2	2.96 - 4.48	RQD = 45%		NQ	32.10	(2.96) Grey, graphitic SHALE, steep foliation. R1: Core Times (min:sec) 2.96-3.26 (9:30) 3.26-3.57 (10:09) 3.57-3.87 (5:03) 3.87-4.17 (4:12) 4.17-4.48 (4:08)
						30.58	(4.48) Bottom of Exploration at 4.48 m below ground surface.

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-210C

Maine Department of Transportation — Soil/Rock Exploration Log (METRIC UNITS)

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
Boring No.: P-209C
PIN: 8979.00

Driller:	Maine Test Borings	Elevation (m):	34.58	Auger ID/OD:	SSA: 100 mm
Operator:	Mel Coffin	Datum:	NGSV	Sampler:	Standard Split Spoon
Logged By:	Greg Lidstone	Rig Type:	MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/22/02-4/22/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	10+009.16, 6.75 RT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	None observed

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					SSA	33.67	(0.91) Weathered BEDROCK.
R1	152.4/152.4	1.25 - 2.77	RQD = 58%		SC NQ	33.33	Spun casing from 1.19 to 1.25 m bgs. (1.25) Grey SHALE, chaotic foliation R1: Core Times (min:sec) 1.25-1.55 (6:20) 1.55-1.86 (5:35) 1.86-2.16 (5:52) 2.16-2.47 (6:43) 2.47-2.77 (7:05)
						31.81	(2.77) Bottom of Exploration at 2.77 m below ground surface.

Remarks:

SC: Spun Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-209C

Maine Department of Transportation — Soil/Rock Exploration Log (METRIC UNITS)

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
Boring No.: P-211C
PIN: 8979.00

Driller:	Maine DOT	Elevation (m):	34.85	Auger ID/OD:	N/A
Operator:	C.Mann	Datum:	NGVD	Sampler:	Standard Split Spoon
Logged By:	Bruce Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/22/02-4/22/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	10+034.96, 2.22 LT.	Casing ID/OD:	HW (101.6/114.3 mm)	Water Level*:	None observed

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					DC	34.79	Pavement (0.06) Drove casing from 0.061 to 1.64 m bgs.
R1	143.8/143.8	1.58 - 3.02	RQD = 14%		NQ	33.27	(1.58) Grey, graphitic SHALE, vertical foliation. R1: Core Times (min:sec) 1.58-1.89 (?) 1.89-2.19 (?) 2.19-2.49 (?) 2.49-2.8 (?) 2.8-3.02 (?)
						31.83	Core block at 3.02 m bgs. (3.02) Bottom of Exploration at 3.02 m below ground surface.

Remarks:

DC: Drove Casing

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-211C

Maine Department of Transportation — Soil/Rock Exploration Log (METRIC UNITS)

Project: Old Town-Milford
Location: Rte. 2, Penobscot River, Old Town and Milford
Boring No.: P-213C
PIN: 8979.00

Driller:	Maine Test Borings	Elevation (m):	35.27	Auger ID/OD:	SSA: 100 mm
Operator:	Mel Coffin	Datum:	NVGD	Sampler:	Standard Split Spoon
Logged By:	Greg Lidstone	Rig Type:	MOBIL B-47	Hammer Wt./Fall:	63.5 kg/760 mm
Date Start/Finish:	4/22/02-4/22/02	Drilling Method:	Cased wash boring	Core Barrel:	NQ
Boring Location:	10+070.98, 3.19 LT.	Casing ID/OD:	NW (76.2/88.9 mm)	Water Level*:	None observed

Sample No.	Pen/Rec (cm)	Sample Depth (m)	Blows (150 mm) Shear Strength (kPa) or RQD (%)	N-value	Casing Blows	Elevation (m)	Visual Description and Remarks
					SSA		
					11		
					7		
					8		
					5		
					3		
					9		
					66		
R1	139.7/127.0	3.69 - 5.09	RQD = 80%		30a NQ	31.58	a30 blows for 30 mm. (3.69) Grey, metamorphosed SANDSTONE. 3.69-3.99 (3:42) 3.99-4.3 (3:51) 4.3-4.6 (5:03) 4.6-4.9 (5:20) 4.9-5.09 (3:39)
						30.18	Core block at 5.09 m bgs. (5.09) Bottom of Exploration at 5.09 m below ground surface.

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1 — Boring No.: P-213C

State of Maine - Department of Transportation
Power Auger Probe Summary Sheet
Town(s): Old Town - Milford Project Number: 8979.00

Station (Meter)	Offset (Meter)	Weathered Bedrock Depth (Meter)	Refusal Depth (Meter)	No Refusal Depth (Meter)	Water Depth (m)	Comments Hole Number, Elevation (m)
9+840.8	8.2 RT.	4.82	4.88			P-1, 33.0
9+978	2.4 RT.		5.24			P-2, 34.2
9+718.1	2.28 LT.	1.0	1.37			P-3, 32.2
9+738.1	2.33 RT.	1.34	2.32			P-4, 32.4
9+759	8.96 LT.		3.26			P-5, 32.4
9+778.6	5.46 RT.	5.03	5.24			P-6, 32.4
9+800.7	3.69 LT.	3.84	3.99			P-7, 32.6
9+816.5	7.86 RT.		2.83			P-8, 32.7
9+989.3	8.79 RT.	1.52	1.89			P-9, 34.4
10+009.15	0.7 RT.	1.16	1.4			P-10, 34.6
10+029	5.3 RT.	0.94	1.16			P-11, 34.8
10+048.4	2.28 LT.		1.16			P-12, 35.0
10+069.1	7.86 RT.	2.38	2.47			P-13, 34.99
10+088.6	4.1 LT.	3.75	3.96		1.23	P-14, 35.5
10+048.9	5.44 RT.	0.73	0.88			P-212, 35.0
10+089.97	6.28 RT.	0.70	0.82			P-214, 35.42
9+796.5	7.44 RT.		6.2			P-204, 32.45
						Note: Elev. taken by Survey.

Note: Static water levels were not achieved in P-14.

PROJECT DESIGN ENGINEER	J.TWEEDIE	T.WHITE	JULY 2003
DESIGN-DETAILED			
CHECKED			
REVISIONS			
FIELD CHANGES			

PLANS (BY / DATE)

Filename: ...\MSTA\021_Boring Details7.dgn   Division: BRIDGE   Username: michael.wight   Date:3/11/2005

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BR.
OVER
PENOBSCOT RIVER
IN THE TOWNS OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BORING DETAILS

SHEET 7 OF 7   AUGUSTA, MAINE

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	22	90

008979.00

CURB TYPE 1 (LEFT SIDE)						
STATION	OFFSET	TO	STATION	OFFSET	LENGTH	COMMENTS
MAINLINE CURB SOUTH OF BRIDGE						
9+720.00	4.95 m LT.		9+721.46	4.91 m LT.	1.44	R=150 m
9+739.08	4.80 m LT.		9+747.87	4.80 m LT.	8.67	R=345.2 m
9+765.13	4.80 m LT.		9+769.39	4.80 m LT.	4.30	R=779.8 m
9+770.61	4.80 m LT.		9+793.81	4.83 m LT.	23.36	R=779.8 m, R=340 m
9+810.63	5.52 m LT.		9+829.40	5.98 m LT.	18.92	R=340 m
9+830.61	5.99 m LT.		9+855.27	6.00 m LT.	24.86	R=340 m, R=781 m
MAINLINE CURB NORTH OF BRIDGE						
9+977.10	6.00 m LT.		9+989.40	6.00 m LT.	12.44	R=781 m
9+990.61	6.00 m LT.		9+996.43	6.00 m LT.	5.87	R=781 m, R=180 m
9+995.00	6.00 m LT.		9+996.43	6.00 m LT.	1.44	R=180 m
10+013.64	5.15 m LT.		10+039.39	4.50 m LT.	25.61	R=180 m, R=770.5
10+040.61	5.15 m LT.		10+050.00	4.50 m LT.	9.34	R=770.5
10+050.00	4.50 m LT.		10+054.18	4.86 m LT.	4.19	
10+072.57	6.43 m LT.		10+085.00	7.50 m LT.	12.48	
10+085.00	7.50 m LT.		10+104.20	7.51 m LT.	19.11	
CURB BACK OF SIDEWALK SOUTH OF BRIDGE						
9+765.12	6.30 m LT.		9+793.77	6.33 m LT.	28.89	R=781.3 m, R=338.5 m
9+770.00	6.43 m LT.		9+770.00	7.97 m LT.	1.54	
9+770.00	8.10 m LT.		9+785.00	8.10 m LT.	15.16	R=783.1 m
9+785.00	7.97 m LT.		9+785.00	6.43 m LT.	1.54	
CURB BACK OF SIDEWALK NORTH OF BRIDGE						
10+013.77	6.65 m LT.		10+049.94	6.00 m LT.	35.90	R=178.5 m, R=769 m
10+049.94	6.00 m LT.		10+054.05	6.35 m LT.	4.13	
10+013.90	8.14 m LT.		10+054.27	7.50 m LT.	40.04	R=177 m, R=767.5 m

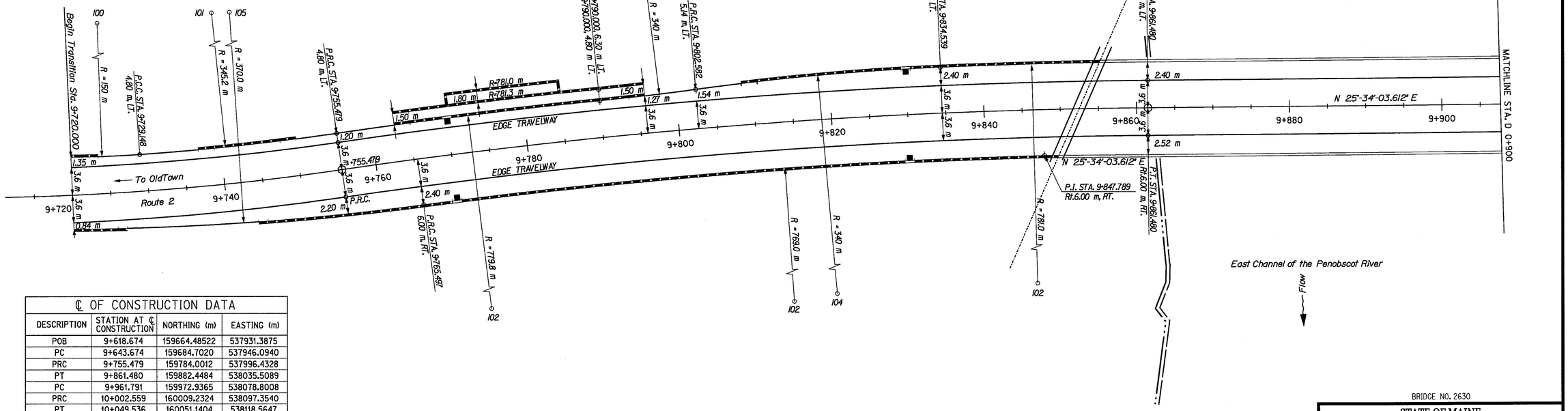
CURB TYPE 1 (RIGHT SIDE)						
STATION	OFFSET	TO	STATION	OFFSET	LENGTH	COMMENTS
MAINLINE CURB SOUTH OF BRIDGE						
9+720.00	4.44 m RT.		9+725.73	4.65 m RT.	5.80	R=370 m
9+745.10	5.39 m RT.		9+769.39	6.00 m RT.	24.36	R=370 m, R=769 m
9+770.62	6.00 m RT.		9+829.39	6.00 m RT.	58.32	R=769 m
9+830.62	6.00 m RT.		9+849.54	6.00 m RT.	18.86	R=769 m
MAINLINE CURB NORTH OF BRIDGE						
9+971.77	6.00 m RT.		9+989.39	6.00 m RT.	17.46	R=769 m
9+990.62	6.00 m RT.		10+039.40	7.20 m RT.	49.04	R=769 m, R=250 m, R=782.2 m
10+040.60	7.20 m RT.		10+049.54	7.20 m RT.	9.01	R=782.2 m
10+049.54	7.20 m RT.		10+069.39	7.20 m RT.	19.85	
10+070.61	7.20 m RT.		10+100.00	7.20 m RT.	29.39	

POINT SUMMARY			
POINT NO.	STATION	OFFSET	DESCRIPTION
100	9+729.148	154.800 LT.	CC
101	9+643.674	350.000 LT.	CC
102	9+861.480	775.000 RT.	CC
103	9+790.000	344.800 LT.	CC
104	9+834.539	334.000 RT.	CC
105	9+765.497	364.000 LT.	CC
106	10+002.559	775.000 RT.	CC
107	9+995.000	174.000 RT.	CC
108	10+031.229	184.500 LT.	CC
109	10+637.806	626.023 LT.	CC
110	9+995.008	256.000 RT.	CC
111	10+034.419	242.800 LT.	CC

1.2 m TERMINAL CURB - TYPE 1	
STATION	OFFSET
9+726.91	4.69 m RT.
9+743.91	5.34 m RT.

2.1 m TERMINAL CURB - TYPE 1	
STATION	OFFSET
SOUTH OF BRIDGE	
9+723.59	4.86 m LT.
9+736.95	4.80 m LT.
9+750.00	4.80 m LT.
9+763.04	4.80 m LT.
9+795.89	4.87 m LT.
9+808.54	5.43 m LT.
NORTH OF BRIDGE	
9+998.52	5.97 m LT.
10+011.53	5.32 m LT.
10+056.27	5.04 m LT.
10+069.26	6.15 m LT.
10+106.43	7.50 m LT.
BACK OF SIDEWALK	
9+763.034	6.30 m LT.
9+795.86	6.37 m LT.
10+011.66	6.81 m LT.
10+056.14	6.53 m LT.

1.22 m HEADER @ @ CATCH BASINS TYPE 1	
STATION	OFFSET
LEFT SIDE	
9+770.00	4.80 m LT.
9+830.00	5.98 m LT.
9+990.00	6.00 m LT.
10+040.00	4.50 m LT.
10+071.96	6.38 m LT.
RIGHT SIDE	
9+770.00	6.00 m RT.
9+830.00	6.00 m RT.
9+990.0	6.00 m RT.
10+040.00	7.20 m RT.
10+070.00	7.20 m RT.



℄ OF CONSTRUCTION DATA			
DESCRIPTION	STATION AT ℄ CONSTRUCTION	NORTHING (m)	EASTING (m)
POB	9+618.674	159664.48522	537931.3875
PC	9+643.674	159684.7020	537946.0940
PRC	9+755.479	159784.0012	537996.4328
PT	9+861.480	159882.4484	538035.5089
PC	9+961.791	159972.9365	538078.8008
PRC	10+002.559	160009.2324	538097.3540
PT	10+049.536	160051.1404	538118.5647
PC	10+102.605	160099.1951	538141.0840
PT	10+179.333	160174.0409	538151.8697
℄ BRG. ABUT. 1	9+852.477	159874.3042	538031.6705
℄ BRG. PIER	9+919.500	159934.7869	538060.5490
℄ BRG. ABUT. 2	9+974.454	159984.3149	538084.3592

PLAN

10 0 10 20

SCALE
(In meters)

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

CURB LAYOUT PLAN

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER
PLANS
DESIGN-DETAILED R. PARKER 03/08/2005
CHECKED F. DAHAR 03/08/2005
REVISIONS
FIELD CHANGES

Filename: ...\MSTA\022_Geom_Plan_01.dgn Division: BRIDGE Username: davistr Date:03/09/2005

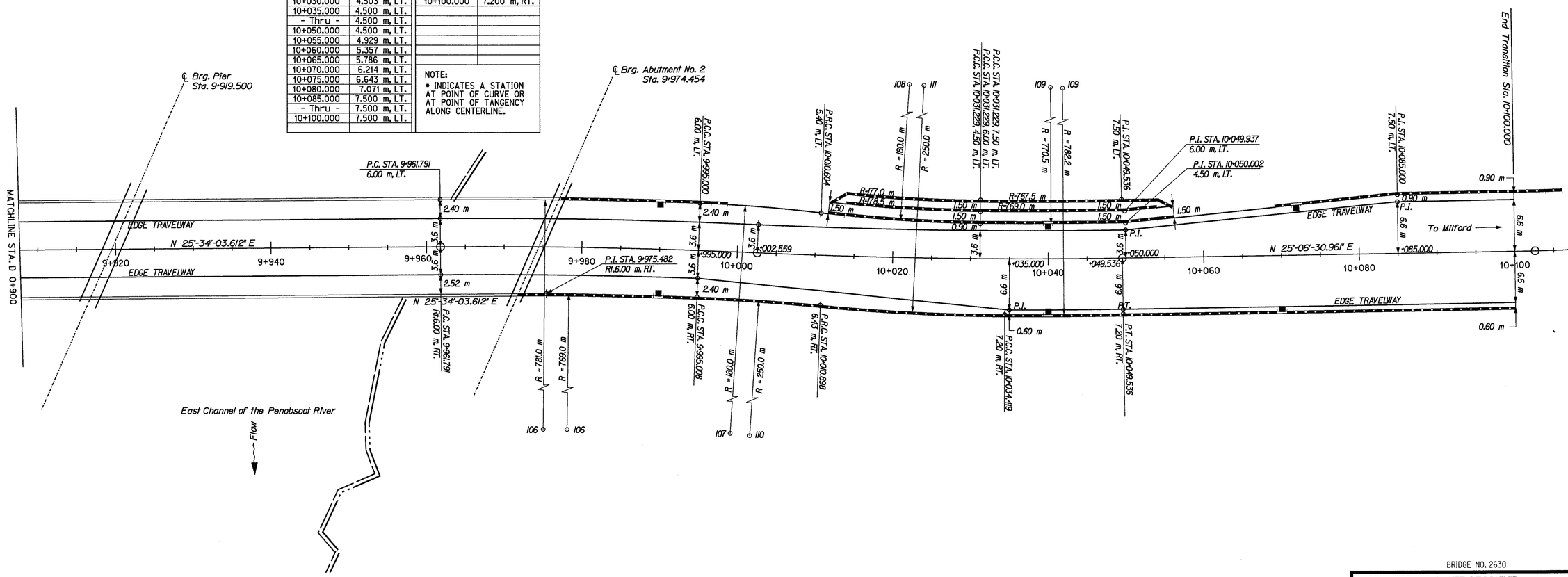
CURB OFFSET TABLE
5 m INTERVAL

LEFT CURB		RIGHT CURB	
STATION	OFFSET	STATION	OFFSET
9+720.000	4.953 m, LT.	9+720.000	4.440 m, RT.
9+725.000	4.832 m, LT.	9+725.000	4.623 m, RT.
9+730.000	4.800 m, LT.	9+730.000	4.808 m, RT.
- Thru -	4.800 m, LT.	9+735.000	4.997 m, RT.
9+790.000	4.800 m, LT.	9+740.000	5.189 m, RT.
9+795.000	4.854 m, LT.	9+745.000	5.384 m, RT.
9+800.000	5.014 m, LT.	9+750.000	5.582 m, RT.
9+805.000	5.264 m, LT.	9+755.000•	5.783 m, RT.
9+810.000	5.492 m, LT.	9+755.479•	5.802 m, RT.
9+815.000	5.678 m, LT.	9+760.000	5.940 m, RT.
9+820.000	5.822 m, LT.	9+765.000	6.000 m, RT.
9+825.000	5.923 m, LT.	- Thru -	6.000 m, RT.
9+830.000	5.983 m, LT.	9+995.000	6.000 m, RT.
9+835.000	6.000 m, LT.	10+000.000	6.033 m, RT.
- Thru -	6.000 m, LT.	10+002.559•	6.076 m, RT.
9+995.000 •	6.000 m, LT.	10+005.000	6.142 m, RT.
10+000.000	5.946 m, LT.	10+010.000	6.376 m, RT.
10+002.559 •	5.876 m, LT.	10+015.000	6.677 m, RT.
10+005.000	5.777 m, LT.	10+020.000	6.912 m, RT.
10+010.000	5.448 m, LT.	10+025.000	7.077 m, RT.
10+015.000	5.055 m, LT.	10+030.000	7.173 m, RT.
10+020.000	4.765 m, LT.	10+035.000	7.200 m, RT.
10+025.000	4.582 m, LT.	- Thru -	7.200 m, RT.
10+030.000	4.503 m, LT.	10+100.000	7.200 m, RT.
10+035.000	4.500 m, LT.		
- Thru -	4.500 m, LT.		
10+050.000	4.500 m, LT.		
10+055.000	4.929 m, LT.		
10+060.000	5.357 m, LT.		
10+065.000	5.786 m, LT.		
10+070.000	6.214 m, LT.		
10+075.000	6.643 m, LT.		
10+080.000	7.071 m, LT.		
10+085.000	7.500 m, LT.		
- Thru -	7.500 m, LT.		
10+100.000	7.500 m, LT.		

NOTE:
• INDICATES A STATION AT POINT OF CURVE OR AT POINT OF TANGENCY ALONG CENTERLINE.

CURB OFFSET TABLE
5 m INTERVAL - CURBED ISLANDS

CURB BACK OF SIDEWALK		CURB BACK OF ISLAND	
STATION	OFFSET	STATION	OFFSET
SOUTH OF BRIDGE		SOUTH OF BRIDGE	
9+765.000	6.300 m, LT.	9+770.000	8.100 m, LT.
- Thru -	6.300 m, LT.	- Thru -	8.100 m, LT.
9+790.000	6.300 m, LT.	9+780.000	8.100 m, LT.
9+795.000	6.354 m, LT.	NORTH OF BRIDGE	
NORTH OF BRIDGE		10+015.000	8.062 m, LT.
10+015.000	6.558 m, LT.	10+020.000	7.769 m, LT.
10+020.000	6.267 m, LT.	10+025.000	7.583 m, LT.
10+025.000	6.082 m, LT.	10+030.000	7.503 m, LT.
10+030.000	6.003 m, LT.	10+035.000	7.500 m, LT.
10+035.000	6.000 m, LT.	- Thru -	7.500 m, LT.
- Thru -	6.000 m, LT.	10+050.000	7.500 m, LT.
10+049.536	6.000 m, LT.	10+055.000	7.122 m, LT.
10+050.000	6.006 m, LT.		



P L A N

10 0 10 20

SCALE
(In meters)

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

CURB LAYOUT PLAN

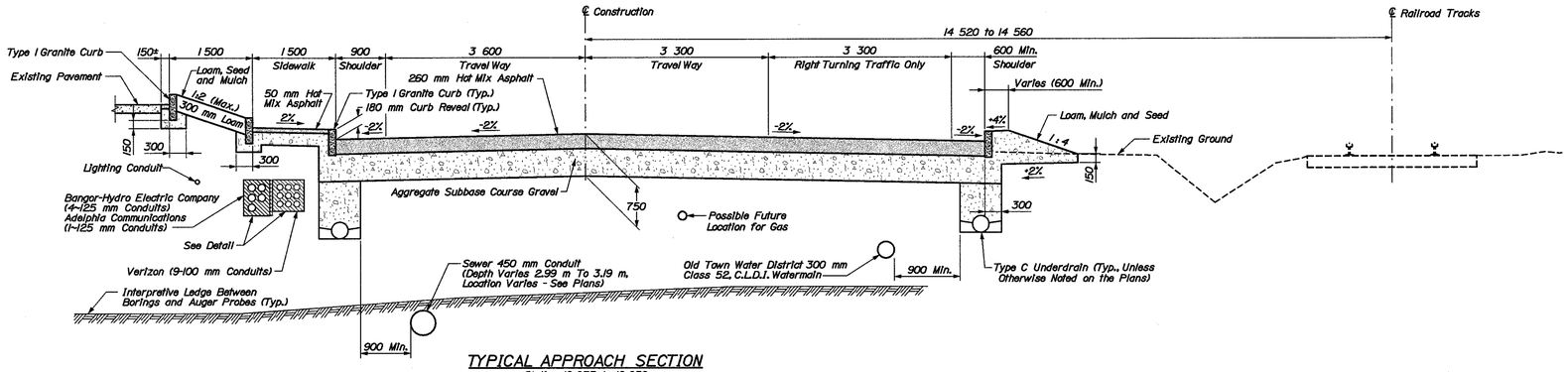
SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

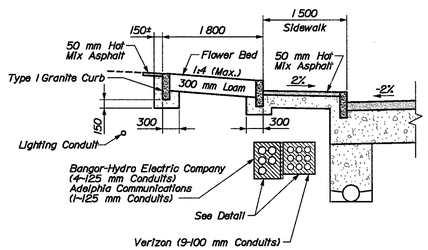
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	24	90

008979.00



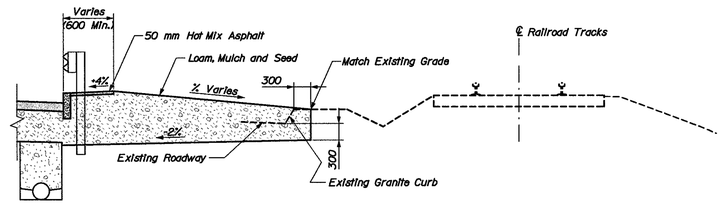
TYPICAL APPROACH SECTION

Station 10+035 to 10+050



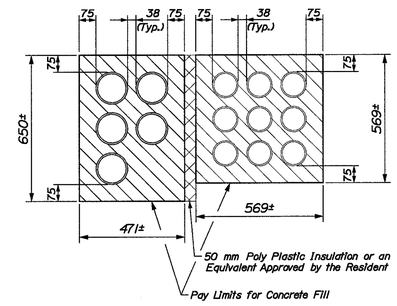
TYPICAL APPROACH SECTION WITH FLOWER BED

Station 9+770 to Station 9+785, Left

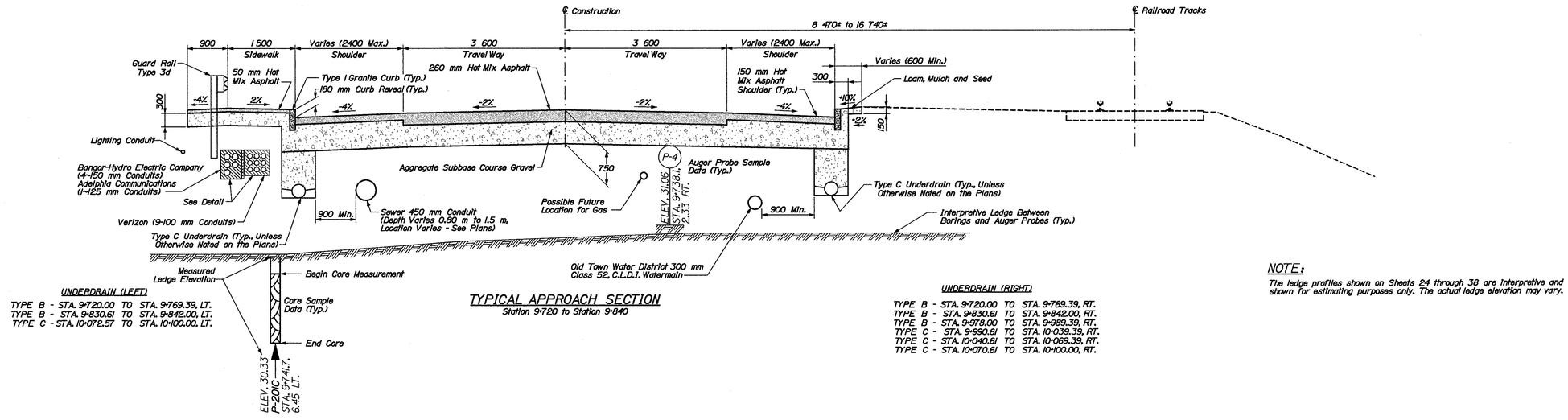


TYPICAL APPROACH SECTION WITH GUARDRAIL

Station 9+770 to Station 9+840, Right



CONDUIT CONCRETE ENCASEMENT DETAIL



TYPICAL APPROACH SECTION

Station 9+720 to Station 9+840

UNDERDRAIN (LEFT)

TYPE B - STA. 9+720.00 TO STA. 9+769.39, LT.
TYPE B - STA. 9+830.61 TO STA. 9+842.00, LT.
TYPE C - STA. 10+072.57 TO STA. 10+100.00, LT.

UNDERDRAIN (RIGHT)

TYPE B - STA. 9+720.00 TO STA. 9+769.39, RT.
TYPE B - STA. 9+830.61 TO STA. 9+842.00, RT.
TYPE B - STA. 9+978.00 TO STA. 9+989.39, RT.
TYPE C - STA. 9+990.61 TO STA. 10+039.39, RT.
TYPE C - STA. 10+040.61 TO STA. 10+069.39, RT.
TYPE C - STA. 10+070.61 TO STA. 10+100.00, RT.

NOTE:

The ledge profiles shown on Sheets 24 through 38 are interpretive and shown for estimating purposes only. The actual ledge elevation may vary.

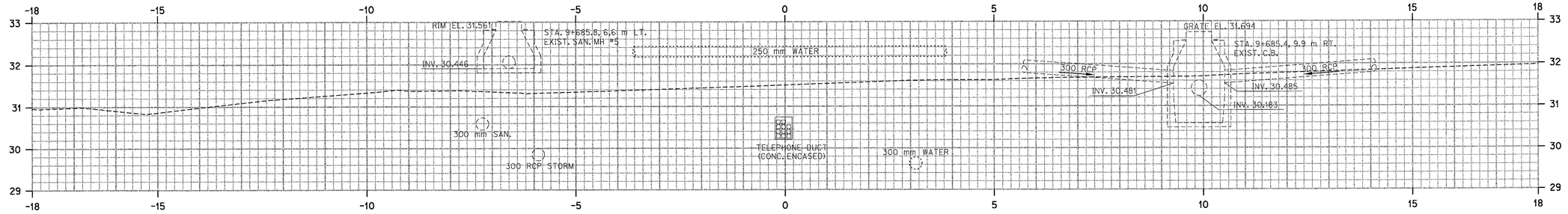
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\Bridge\MSTA\024_Xsect_01.dgn Username: davistr Date:03/09/2005 Division: BRIDGE

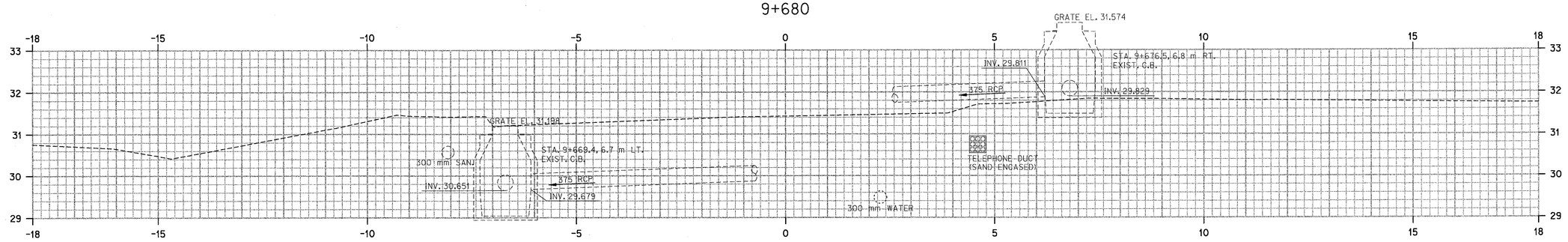
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	25	90

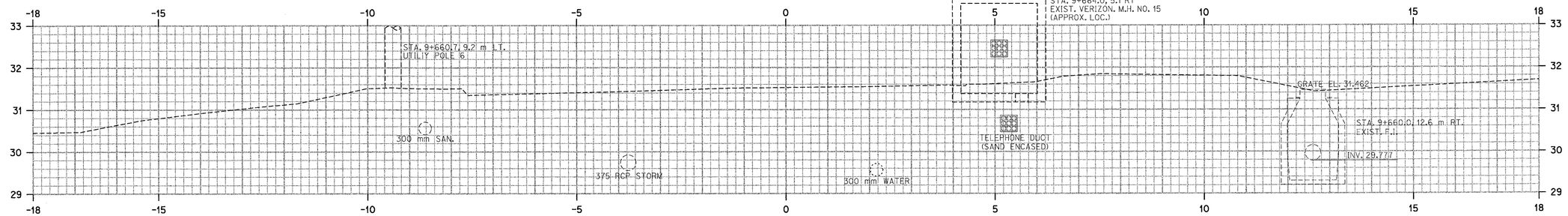
008979.00



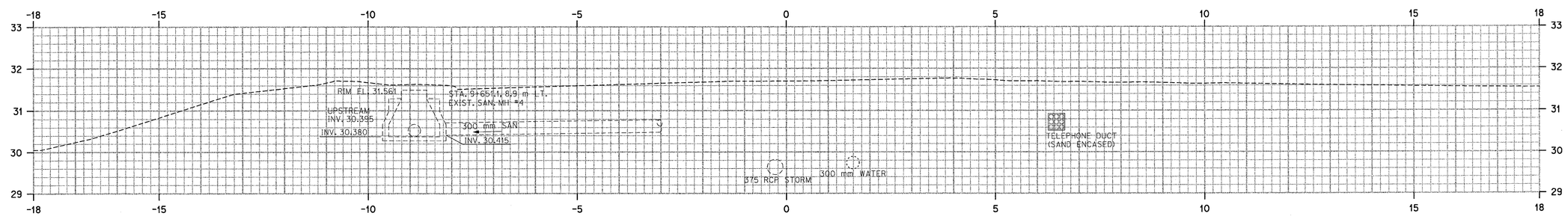
9+680



9+670



9+660



9+650

NOTE:
FOR SEWER UPGRADES
SEE ATTACHED UTILITY PLANS.

NOTE:
THE LEDGE PROFILES SHOWN ON SHEETS 24 THROUGH 38 ARE INTERPRETIVE AND SHOWN FOR ESTIMATING PURPOSES ONLY. THE ACTUAL LEDGE ELEVATION MAY VARY.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

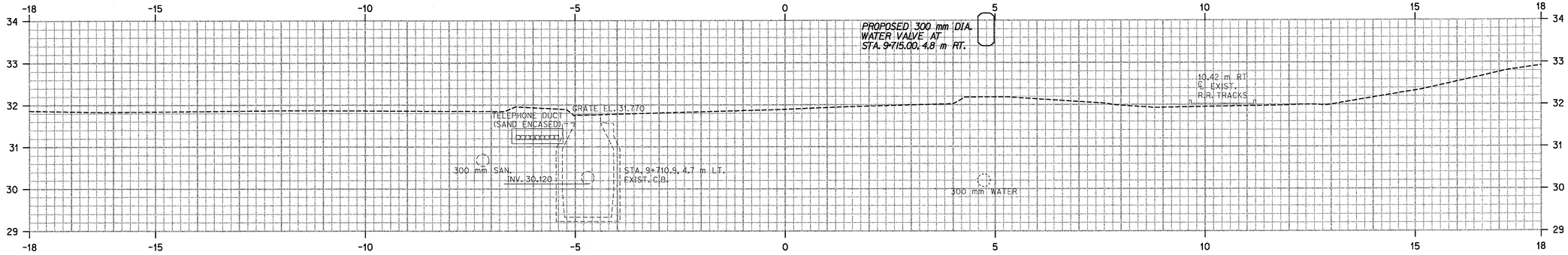
Filename: ...\Bridge\MSTA\025_Xsect_02.dgn Division: BRIDGE Username: dovistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA. 9+650 TO STA. 9+680

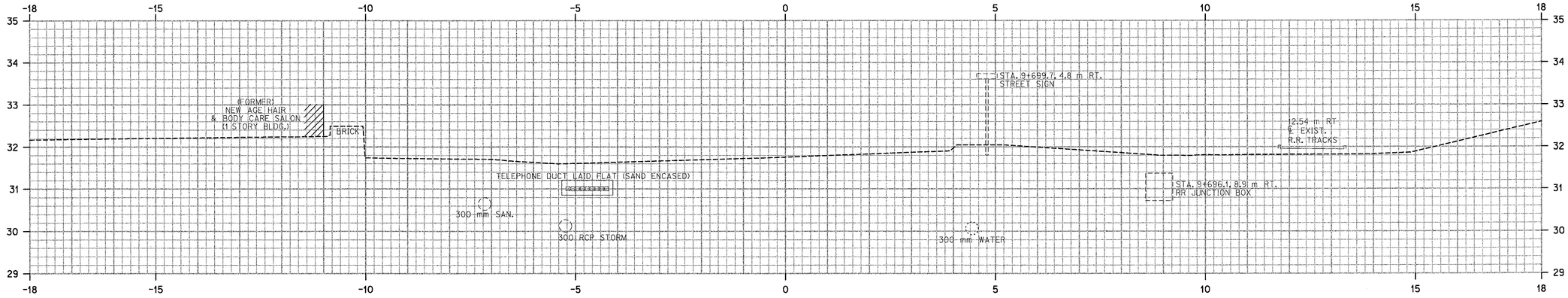
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	26	90

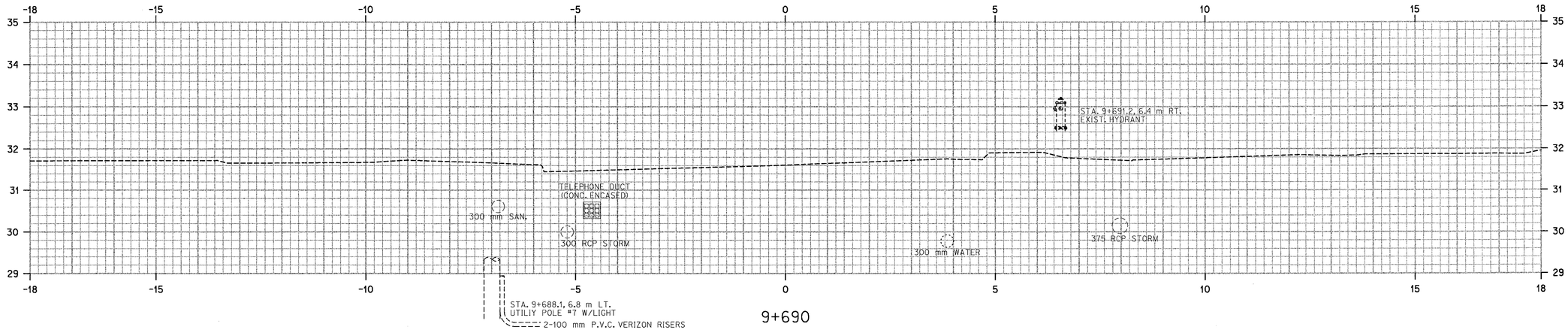
008979.00



9+710



9+700



9+690

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

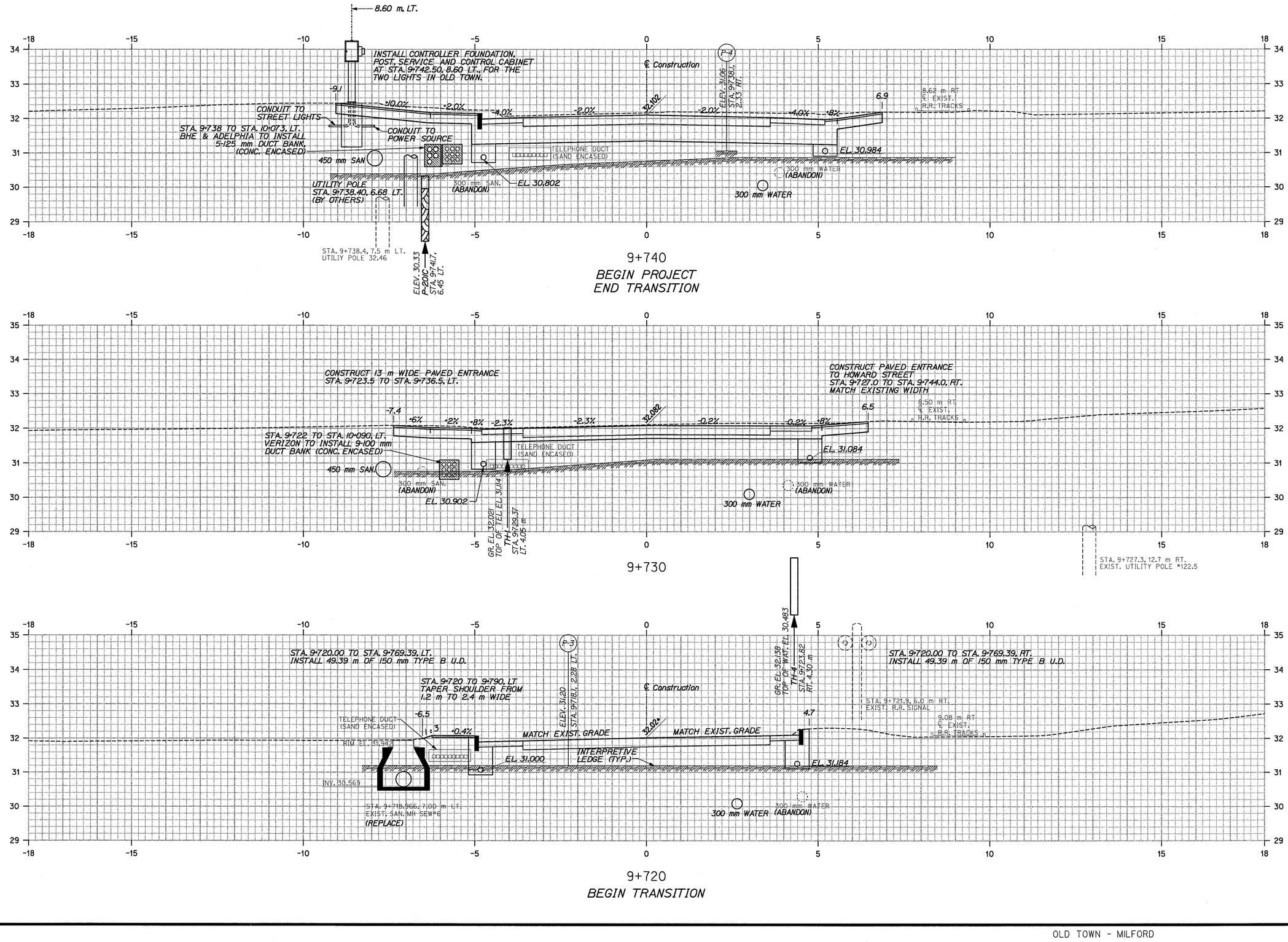
Filename: ...\Bridge\MSTA\026_Xsect_03.dgn Username: davistr Date:03/09/2005 Division: BRIDGE

OLD TOWN - MILFORD ROUTE 2 STA. 9+690 TO STA. 9+710

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	27	90

008979.00



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\Bridge\MSTA\027_Xsect_04.dgn Username: GauthierSL Date:3/10/2005 Division: BRIDGE

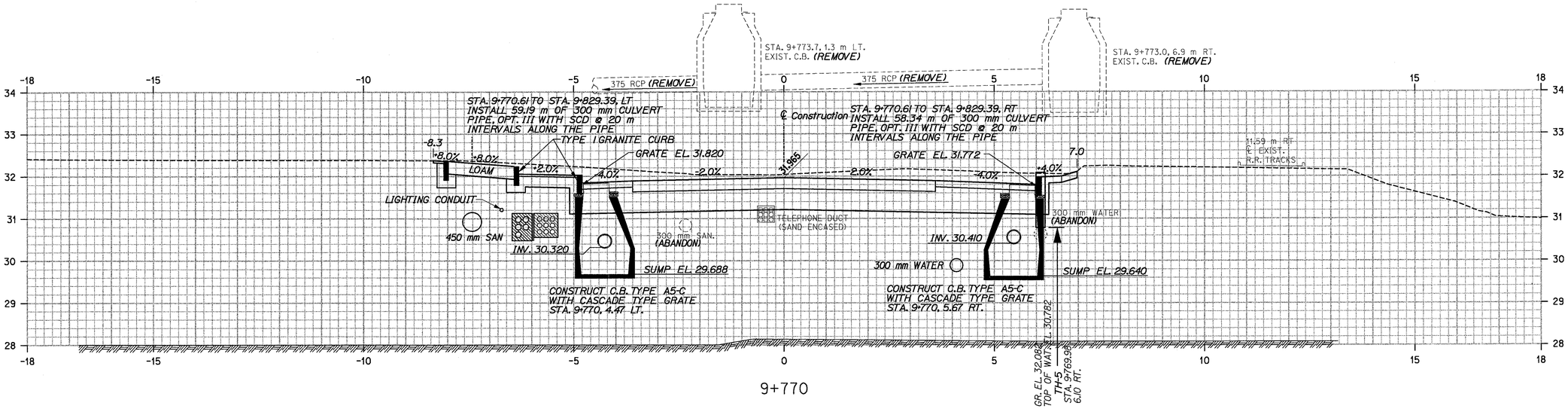
OLD TOWN - MILFORD ROUTE 2

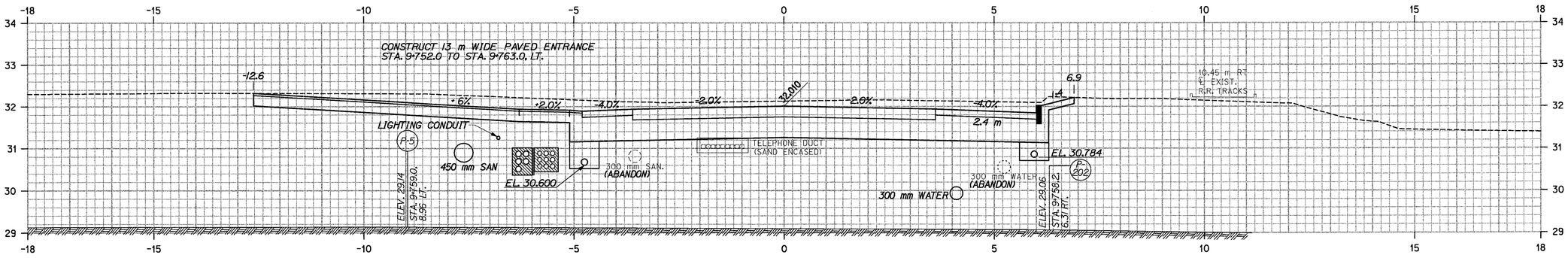
STA. 9+720 TO STA. 9+740

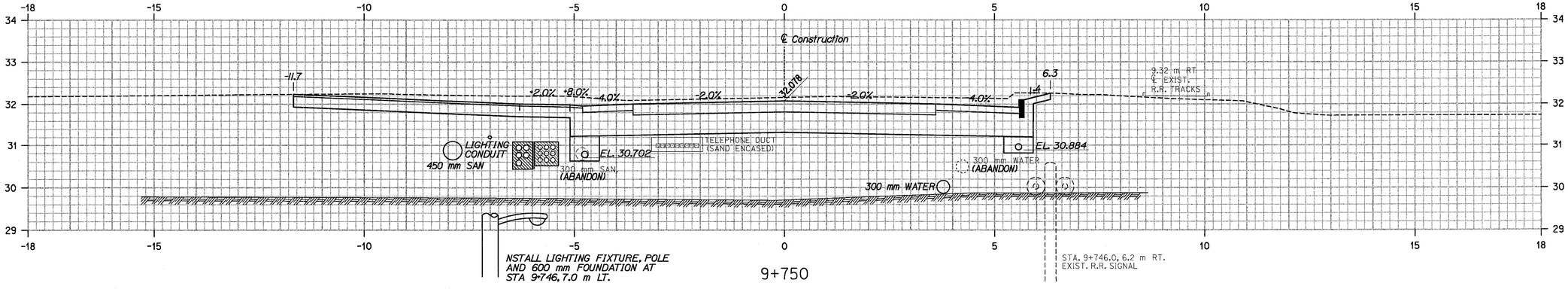
METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	28	90

008979.00







PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAVAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\Bridge\MSTA\028_Xsect_05.dgn Division: BRIDGE Username: davistr Date:03/09/2005

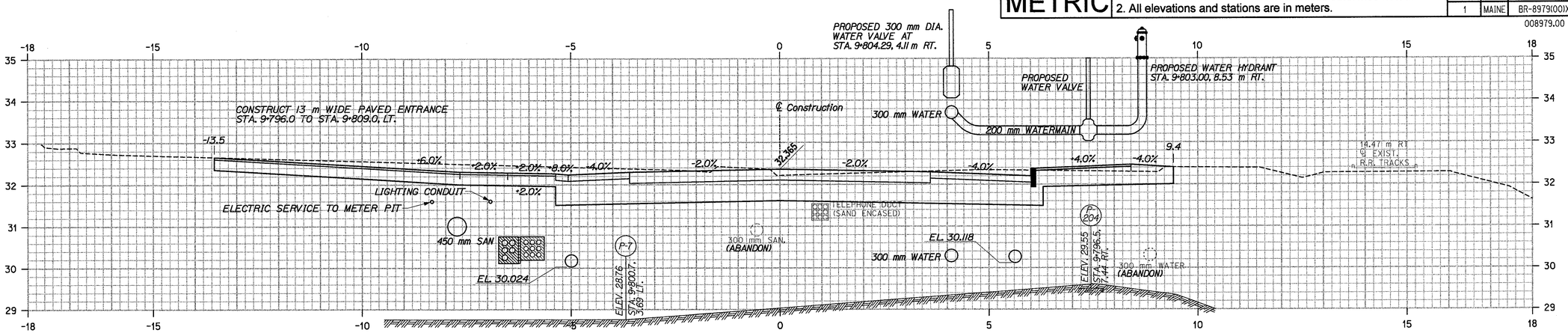
OLD TOWN - MILFORD ROUTE 2 STA. 9+750 TO STA. 9+770

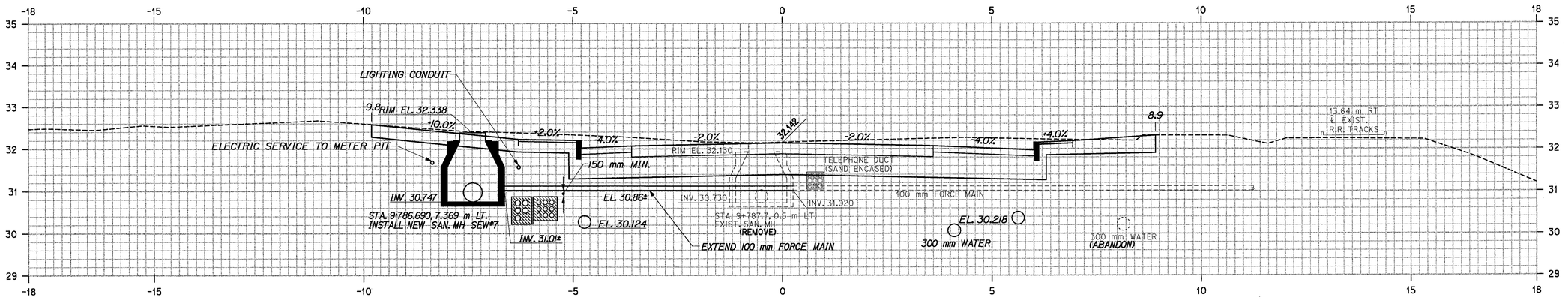
METRIC

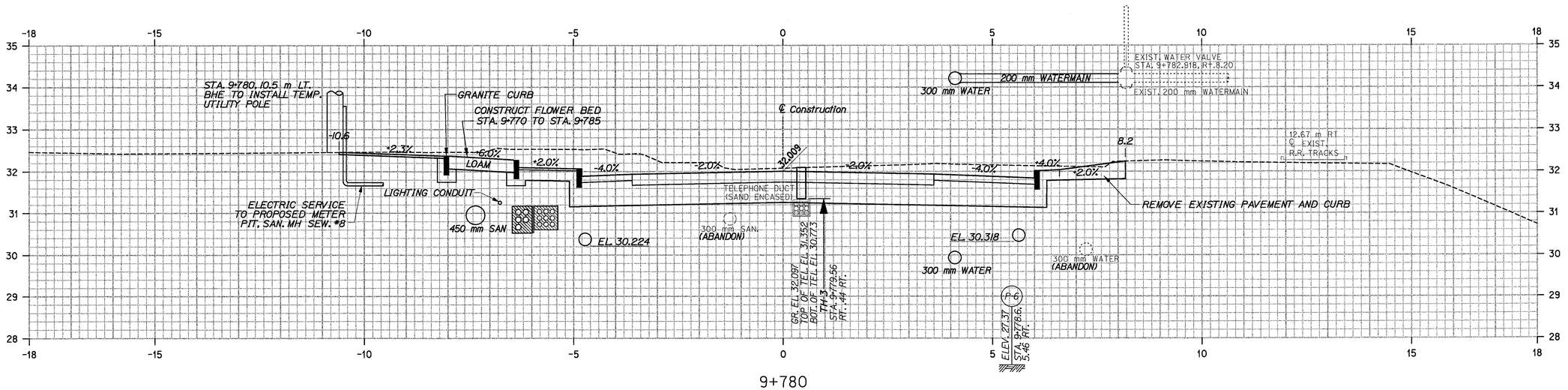
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	29	90

008979.00







PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\Bridge\MSTA\029_Xsect_06.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA.9+780 TO STA. 9+800

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	30	90

008979.00

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

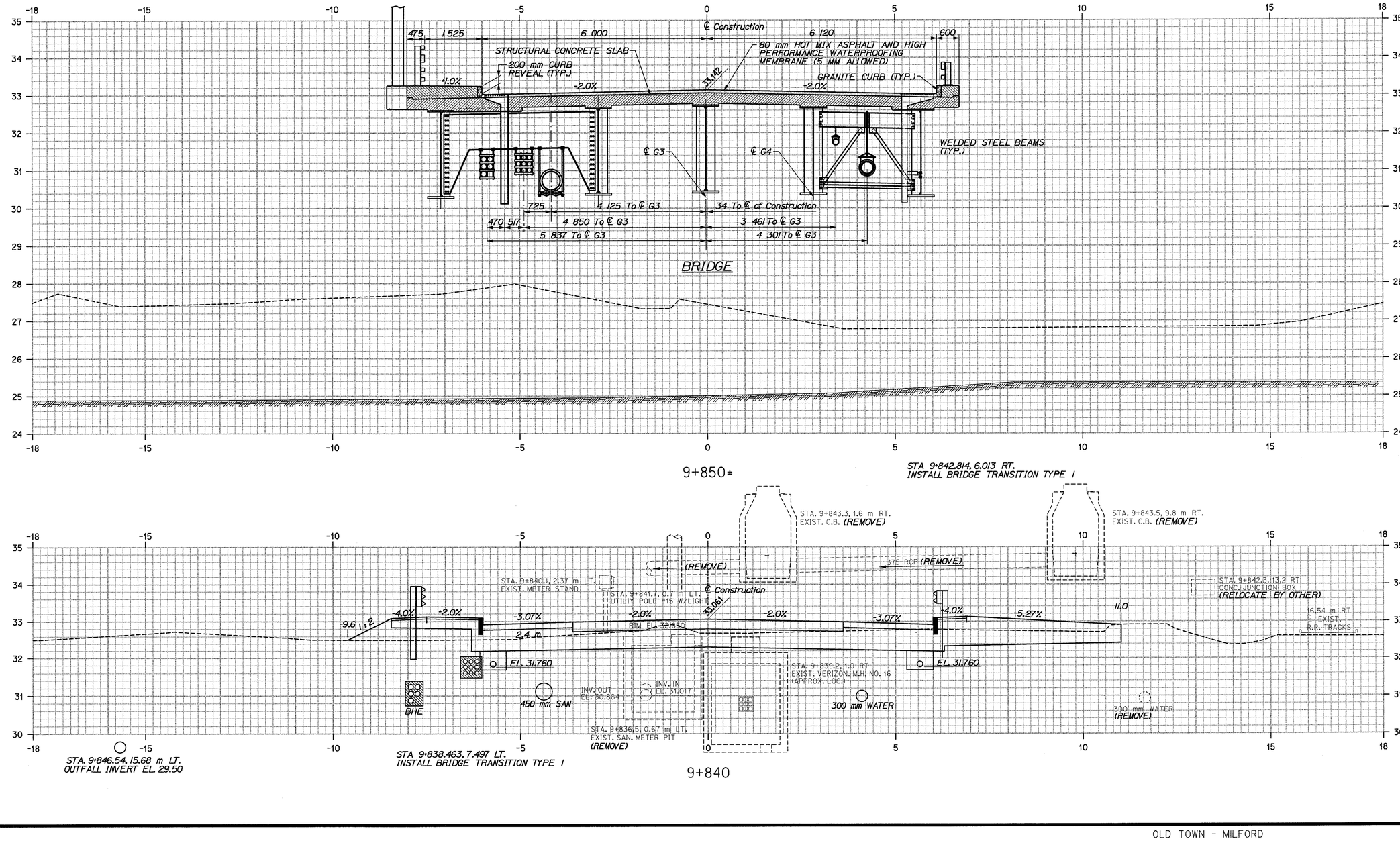
Filename: ...\Bridge\MSTA\030_Xsect_07.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA. 9+810 TO STA.9+830

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	31	90

008979.00



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\Bridge\WSTA\031_Xsect_08.dgn Division: BRIDGE Username: davistr Date:03/09/2005

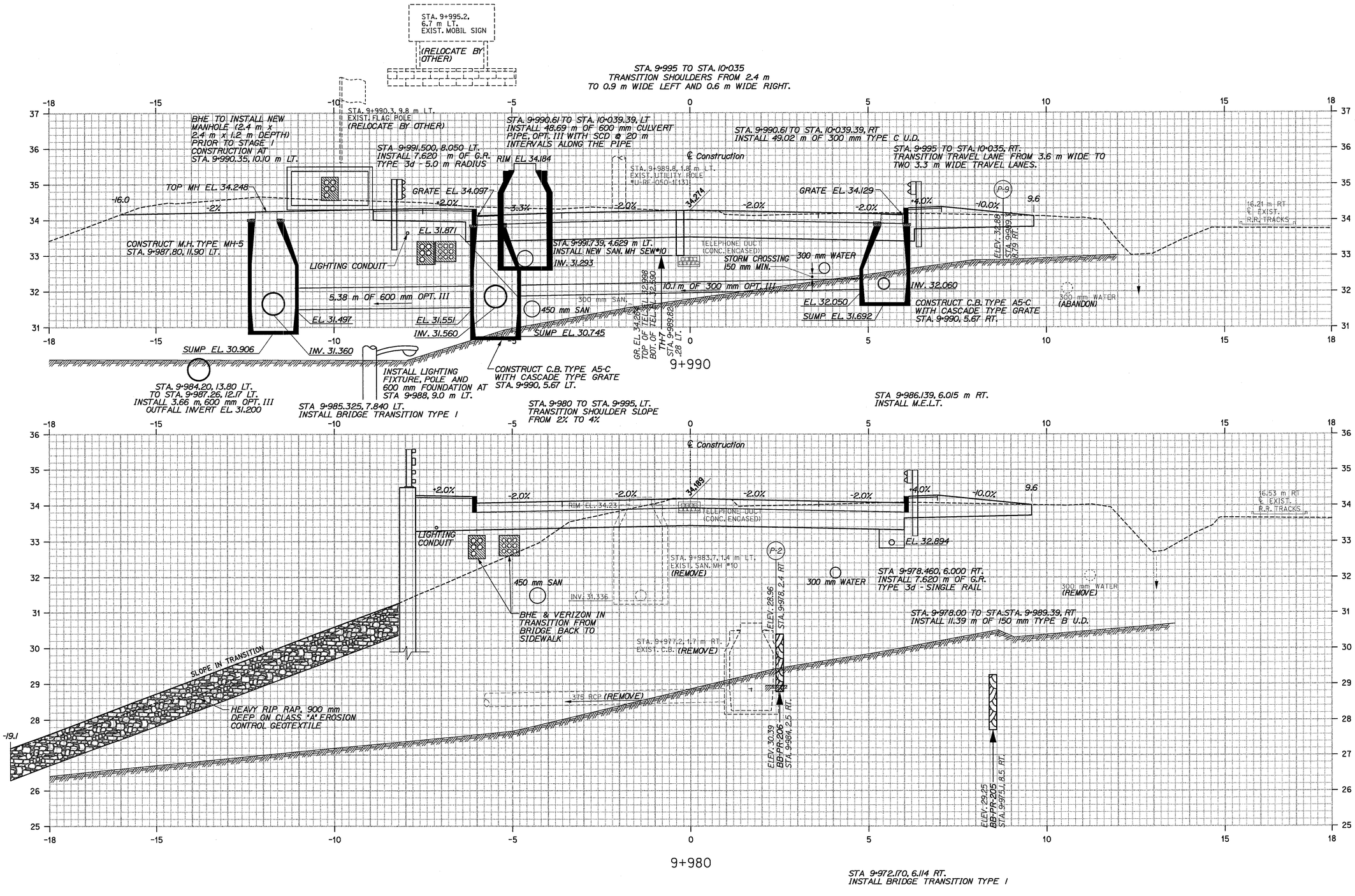
OLD TOWN - MILFORD ROUTE 2

STA. 9+840 TO STA. 9+850

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	32	90

008979.00



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\Bridge\MSTA\032_Xsect_09.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA. 9+980 TO STA. 9+990

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	33	90

008979.00

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\Bridge\MSTA\033_Xsect_10.dgn Username: davistr Date:03/09/2005

Division: BRIDGE

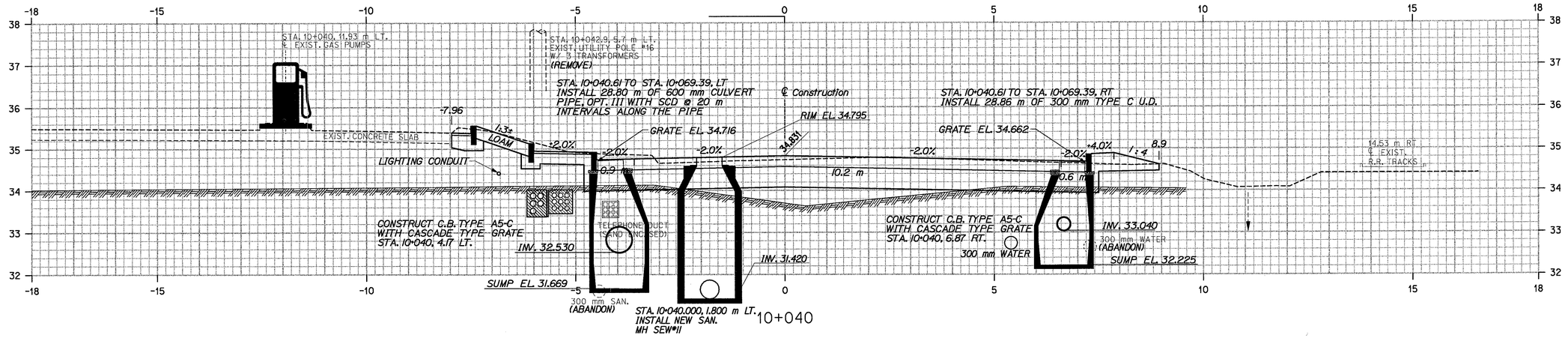
OLD TOWN - MILFORD ROUTE 2

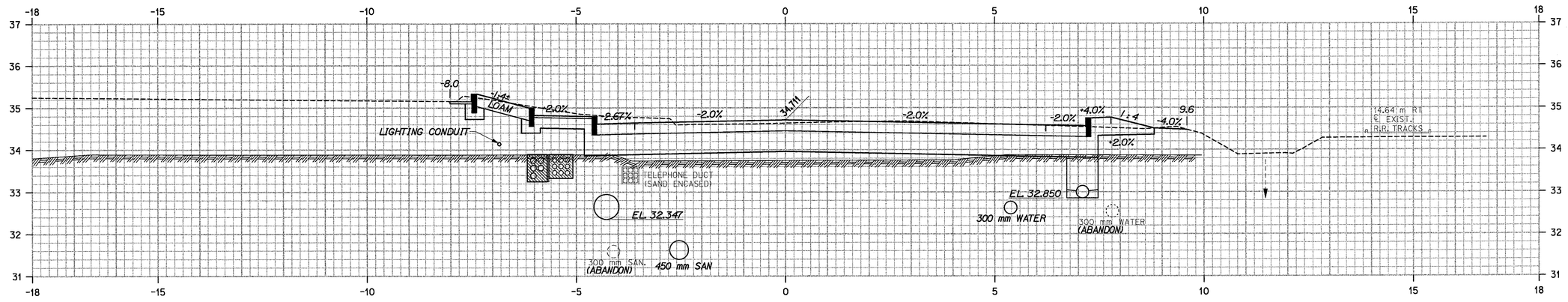
STA. 10+000 TO STA. 10+010

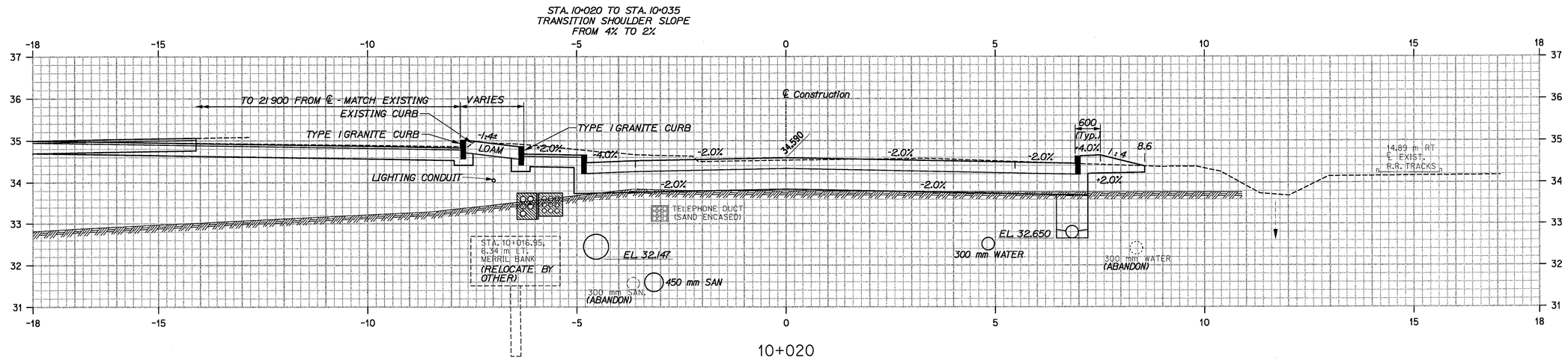
METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	34	90

008979.00







PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/09/2005
CHECKED	F. DAHAR	03/09/2005
REVISIONS		
FIELD CHANGES		

PLANS

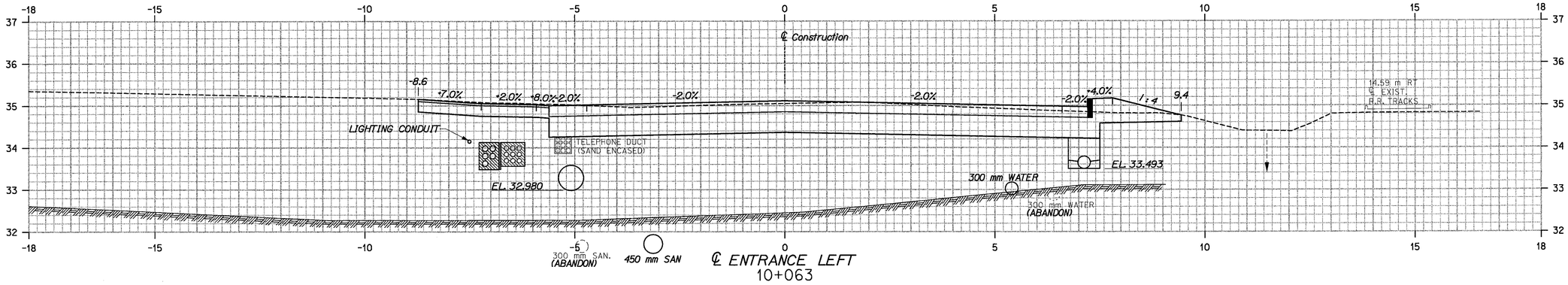
Filename: ...\Bridge\MSTA\034_Xsect_11.dgn Division: BRIDGE Username: davistr Date:03/09/2005

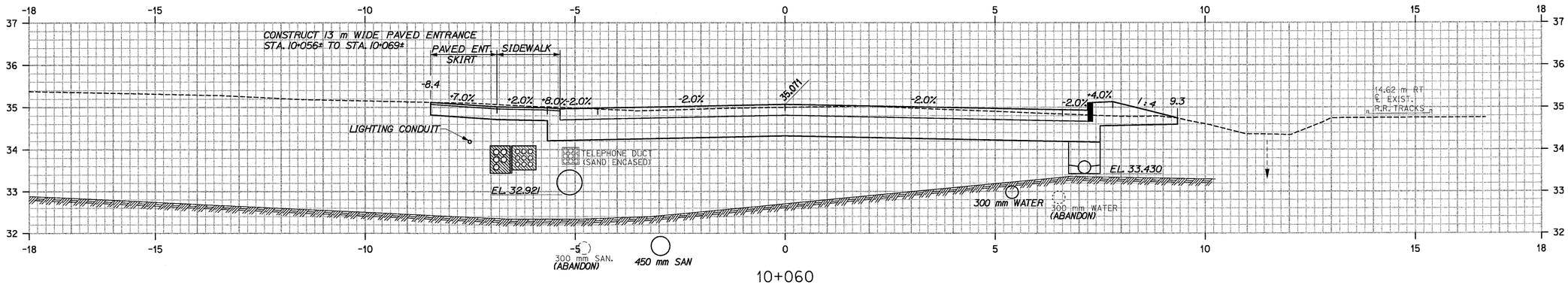
OLD TOWN - MILFORD ROUTE 2 STA. 10+020 TO STA. 10+040

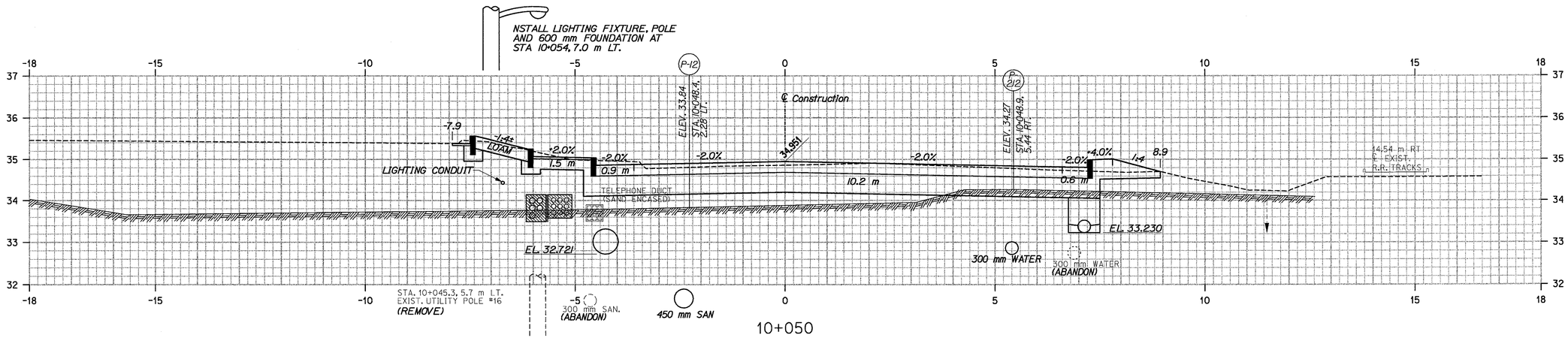
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	35	90

008979.00







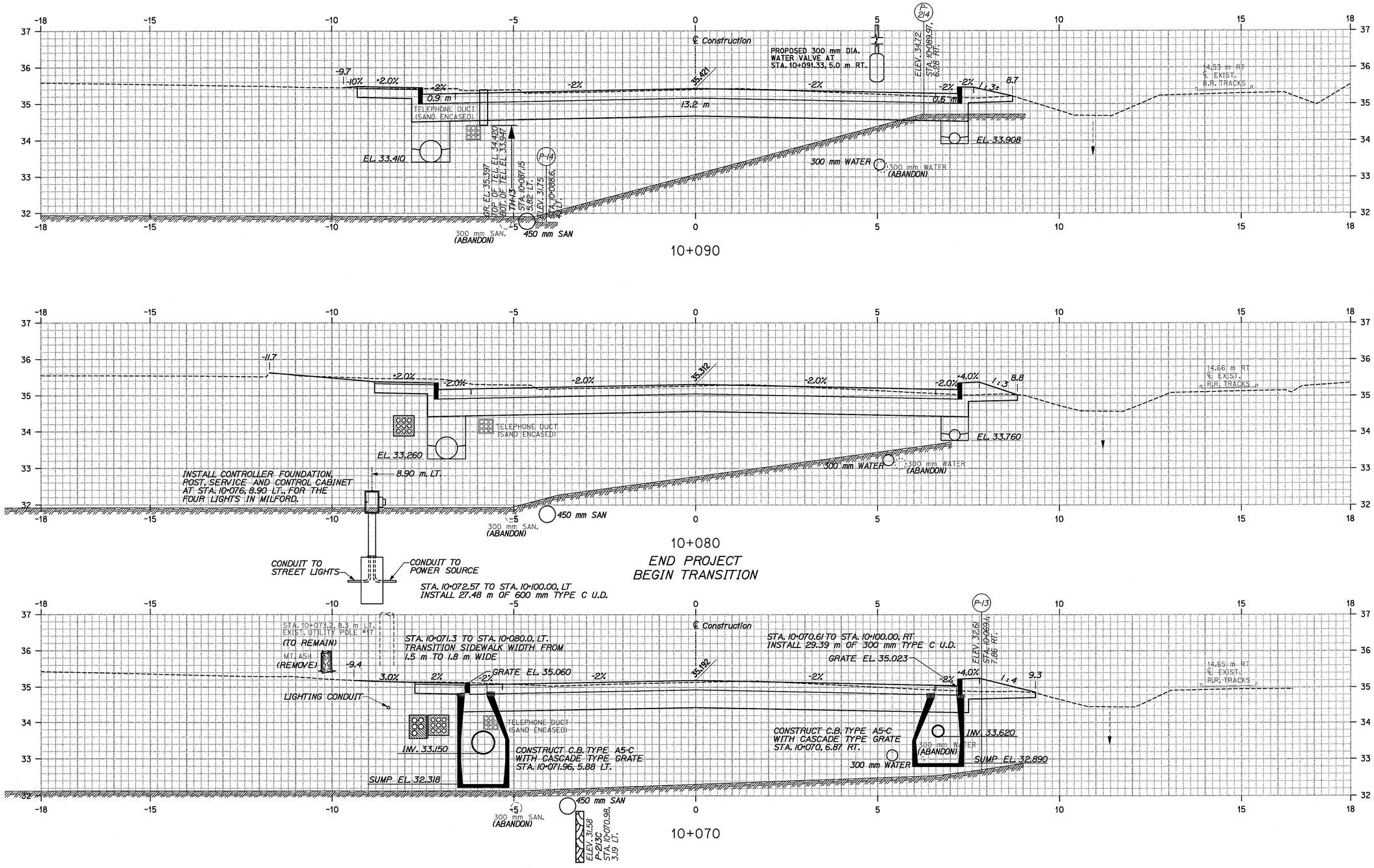
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAVAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\Bridge\WSTA\035_Xsect_12.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA. 10+050 TO STA. 10+063

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	36	90

008979.00



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2205
REVISIONS		
FIELD CHANGES		

PLANS

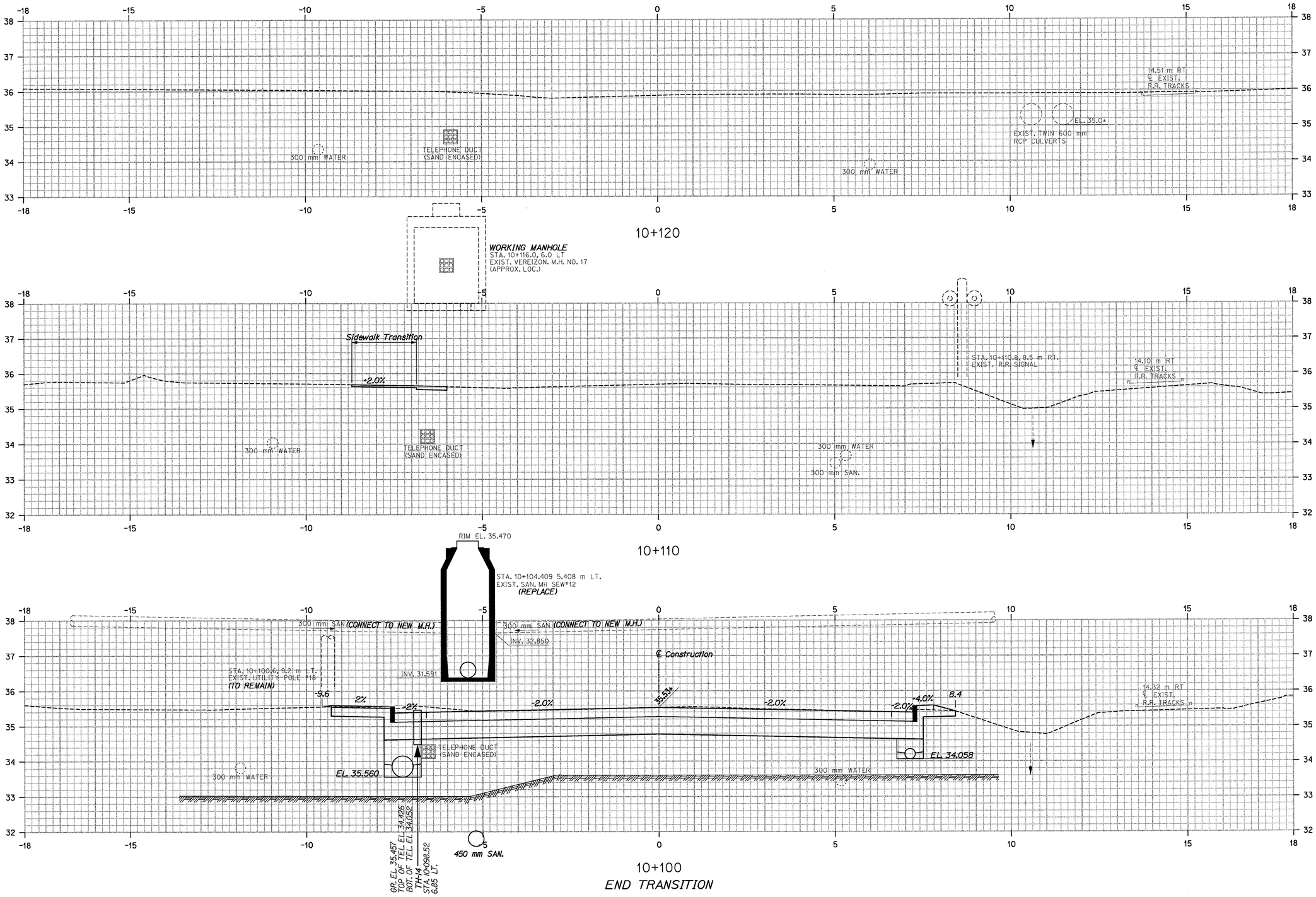
Filename: ...\Bridge\MSTA\036_Xsect_13.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2

STA. 10+070 TO STA. 10+090

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(001)X	37	90

008979.00

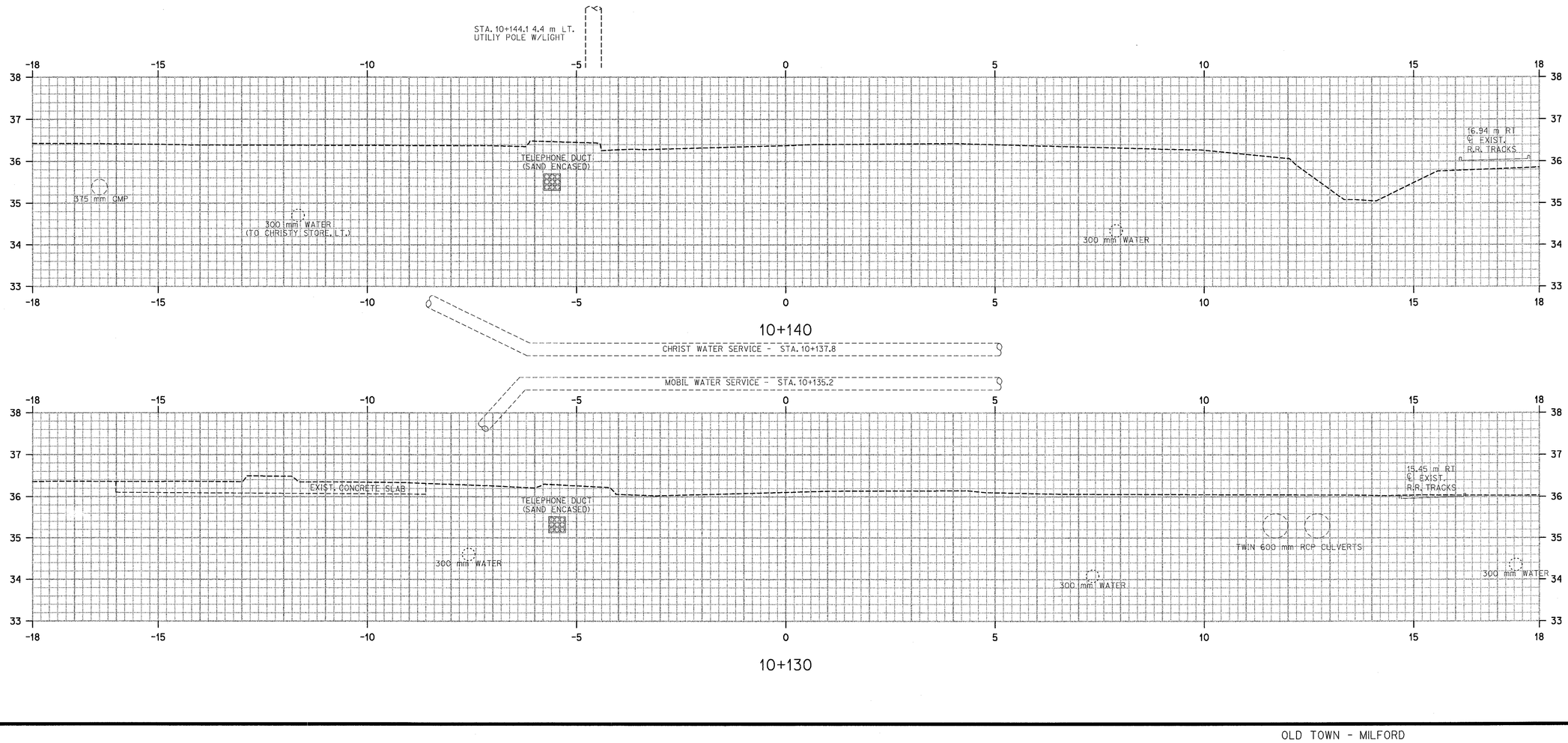


PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\Bridge\MSTA\037_Xsect_14.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA. 10+100 TO STA. 10+120

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	38	90
				008979.00		



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\Bridge\WSTA\038_Xsect_15.dgn Division: BRIDGE Username: davistr Date:03/09/2005

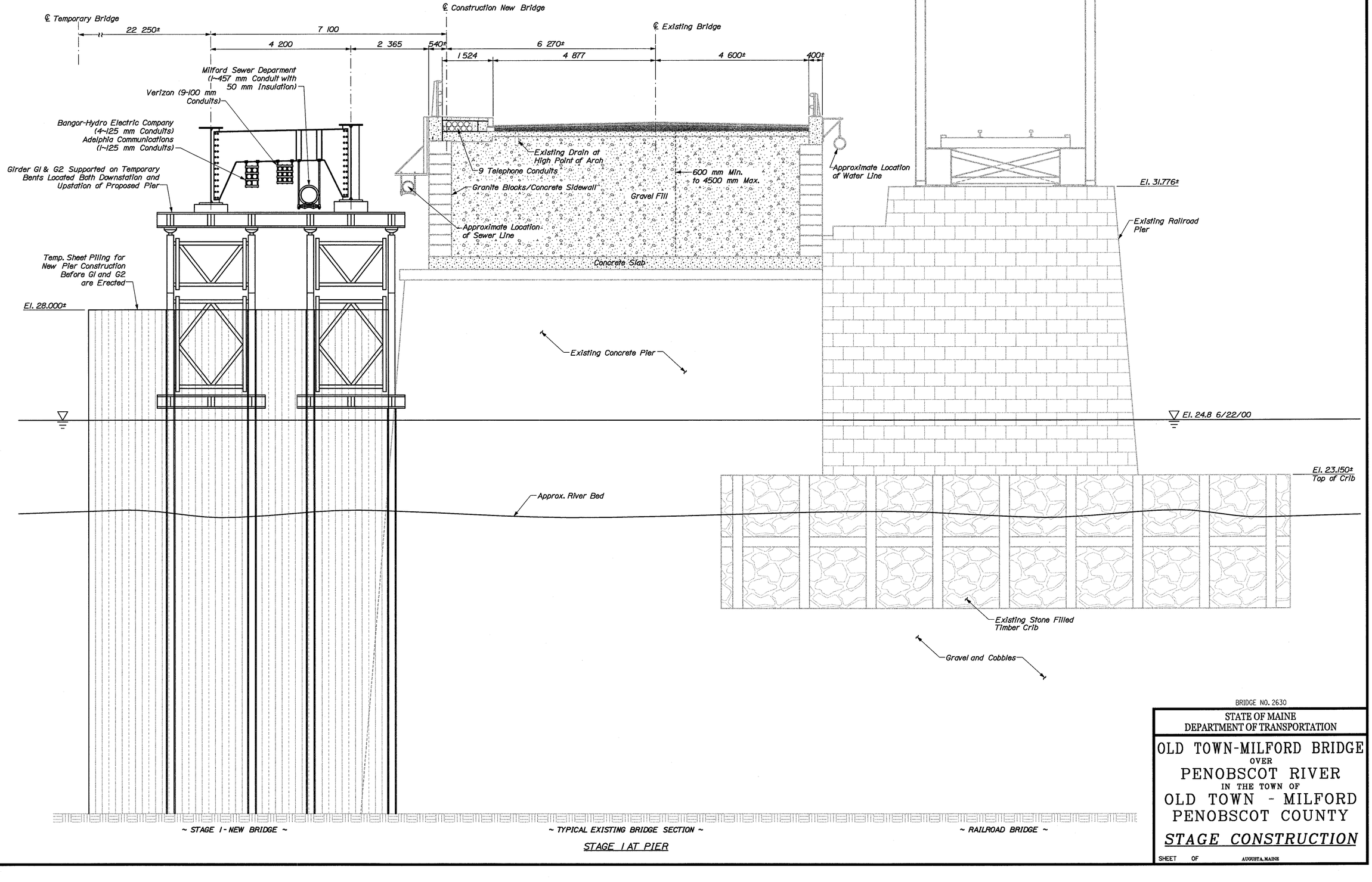
OLD TOWN - MILFORD ROUTE 2

STA. 10+130 TO STA. 10+140

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	39	90

008979.00



STAGE 1 AT PIER

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	S. PERCASSI	03/08/2005
	CHECKED	S. GAUTHIER	03/08/2005
	REVISIONS	T. DAVIS	03/08/2005
	FIELD CHANGES	S. GAUTHIER	03/08/2005

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

STAGE CONSTRUCTION

SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\039_StageConstr.dgn Division: BRIDGE Username: davistr Date:03/09/2005

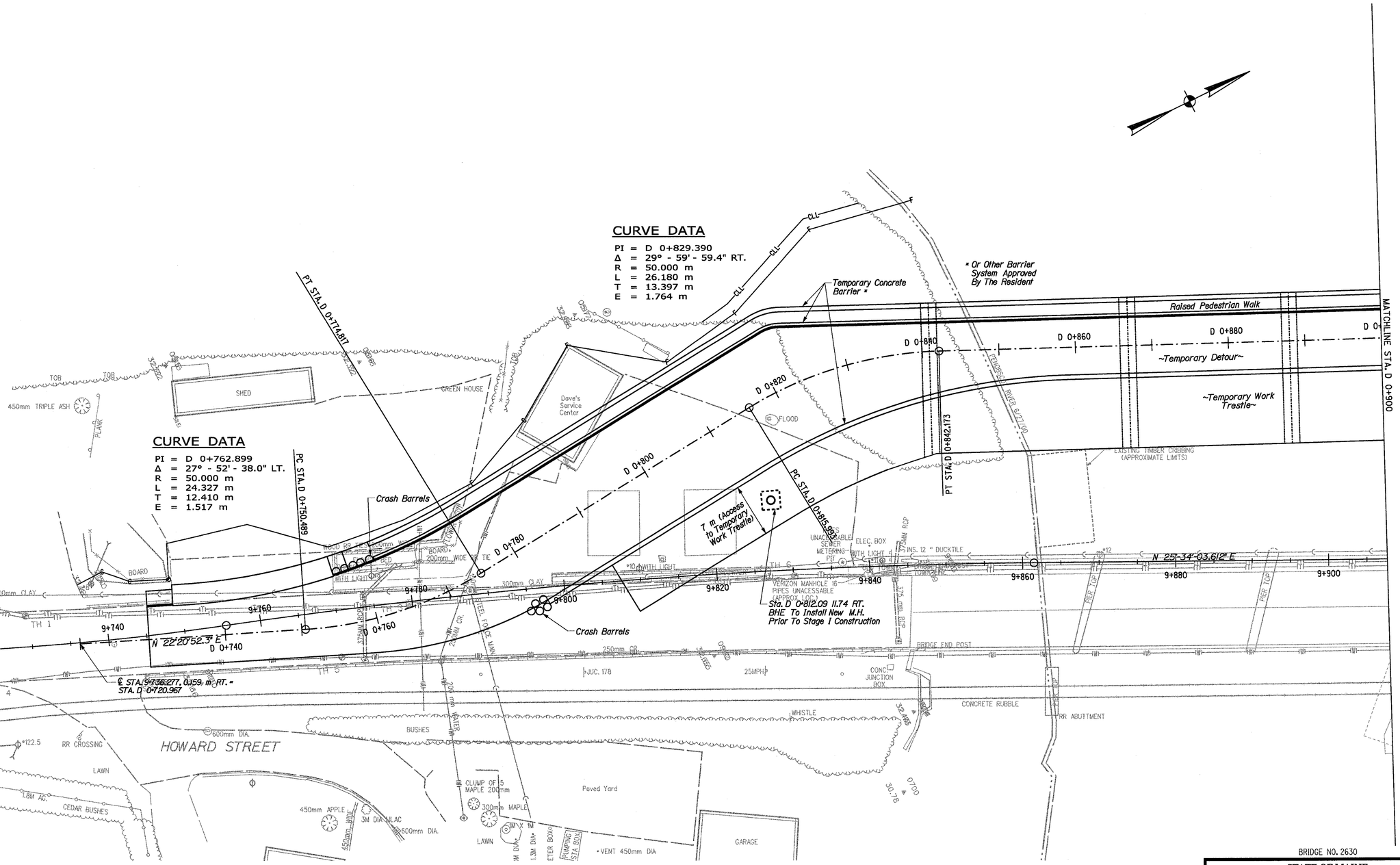
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	40	90

008979.00

Filename: ...\MSTA\040_Detour_Plan_01.dgn Division: BRIDGE Username: davistr Date:03/09/2005

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS



PLAN

10 0 10 20

SCALE
(In meters)

NOTE:
The interpretive ledge lines shown on the detour plans, sheet number 40 through 51 are to aid the contractor in the design and construction of the detour. The ledge profile may differ from that shown. The Department is not reponsible for subsurface conditions and ledge elevations which differ from these shown.

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

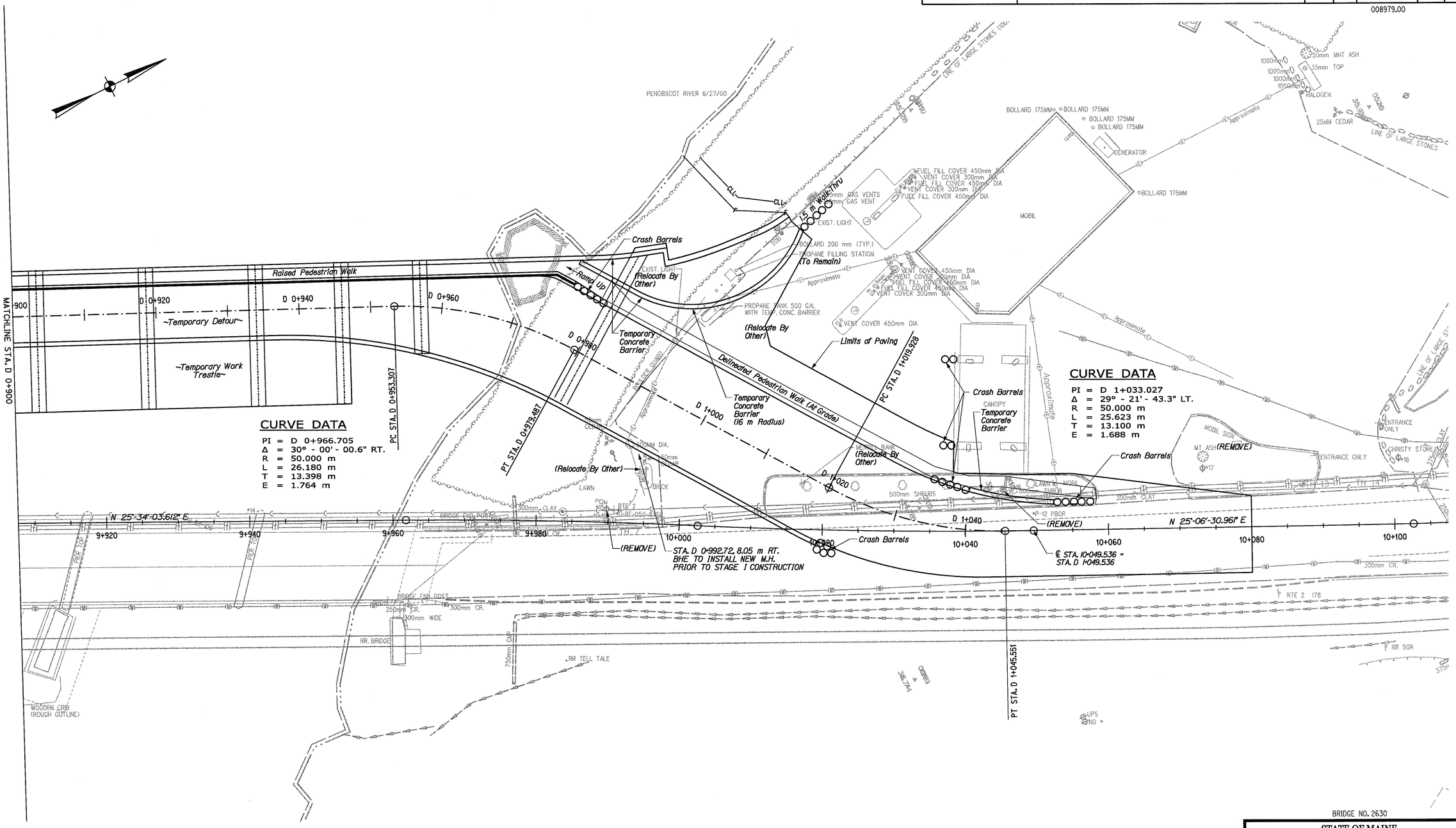
DETOUR PLAN

SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	41	90
				008979.00		

Filename: ...\MSTA\041_Detour_Plan_02.dgn Division: BRIDGE Username: davistr Date:03/09/2005

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		



CURVE DATA

PI = D 0+966.705
Δ = 30° - 00' - 00.6" RT.
R = 50.000 m
L = 26.180 m
T = 13.398 m
E = 1.764 m

CURVE DATA

PI = D 1+033.027
Δ = 29° - 21' - 43.3" LT.
R = 50.000 m
L = 25.623 m
T = 13.100 m
E = 1.688 m

P L A N

10 0 10 20

SCALE
(In meters)

BRIDGE NO. 2630

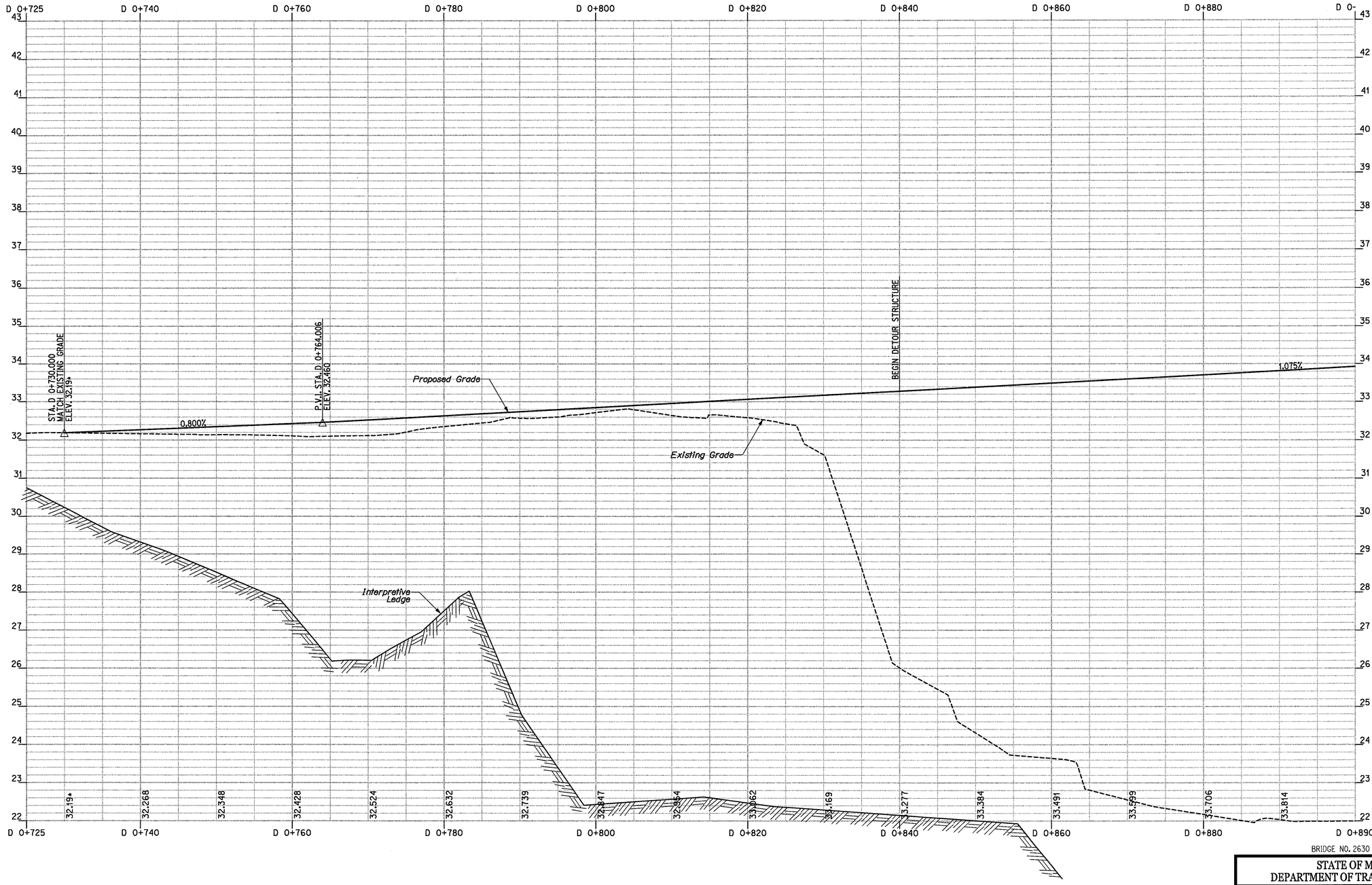
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

DETOUR PLAN

SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X 008979.00	42	90



NOTE:
The interpretive ledge lines shown on the detour plans, sheets 42 through 51, are to aid the Contractor in the design and construction of the detour. The ledge profile may differ from that shown. The Department is not responsible for subsurface conditions and ledge elevations which differ from those shown along the detour.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

DETOUR PROFILE

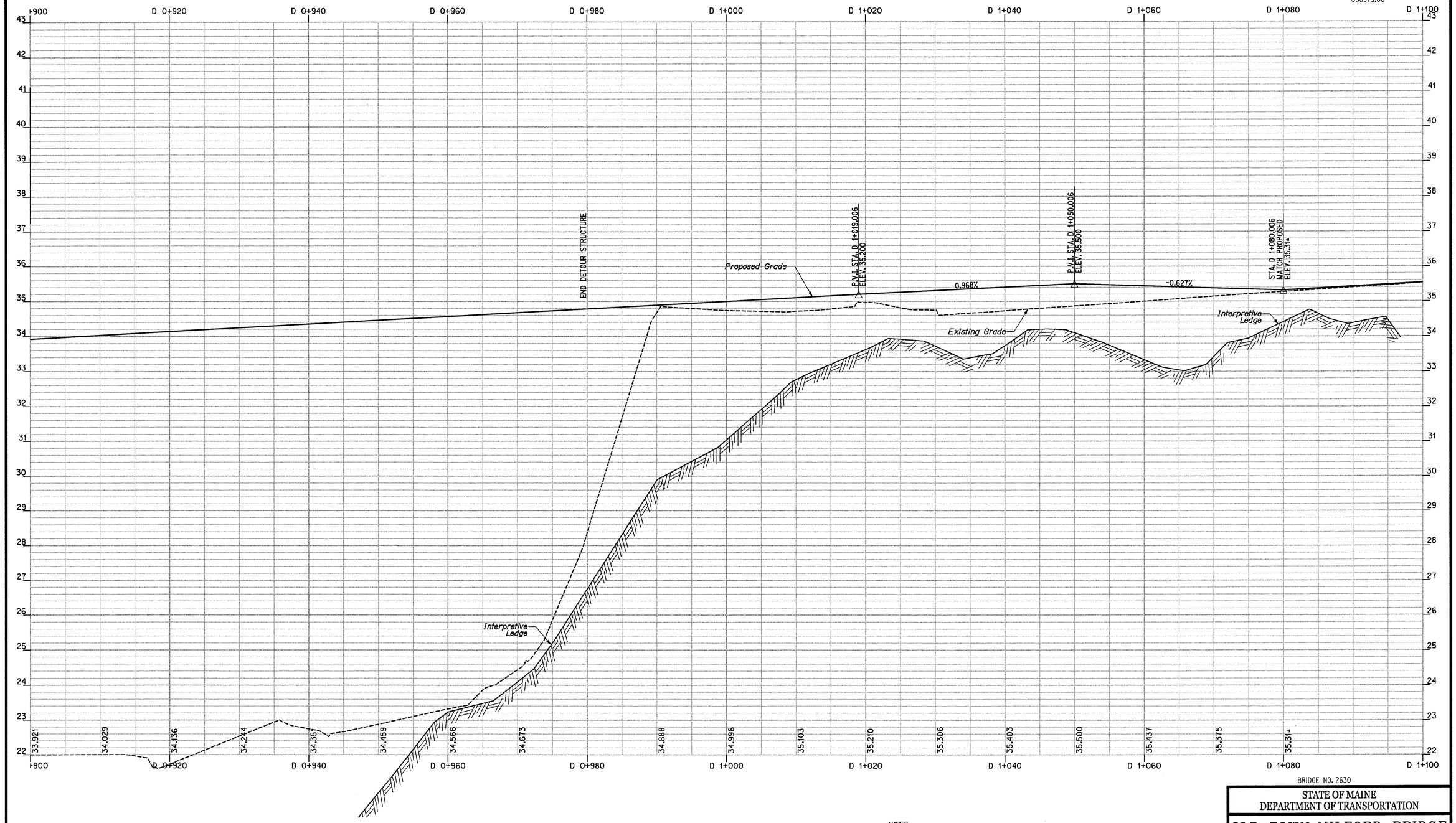
SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\MSTA\042_Detour_Prof_01.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	43	90
		008979.00		



BRIDGE NO. 2630

NOTE:
The interpretive ledge lines shown on the detour plans, sheets 42 through 51, are to aid the Contractor in the design and construction of the detour. The ledge profile may differ from that shown. The Department is not responsible for subsurface conditions and ledge elevations which differ from those shown along the detour.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

DETOUR PROFILE

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

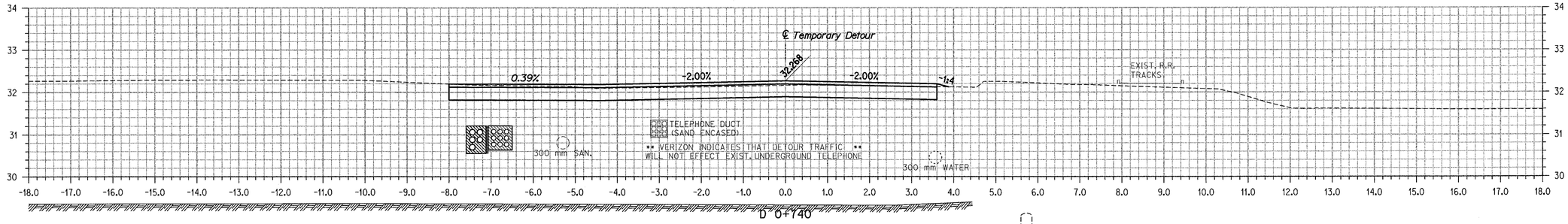
PLANS

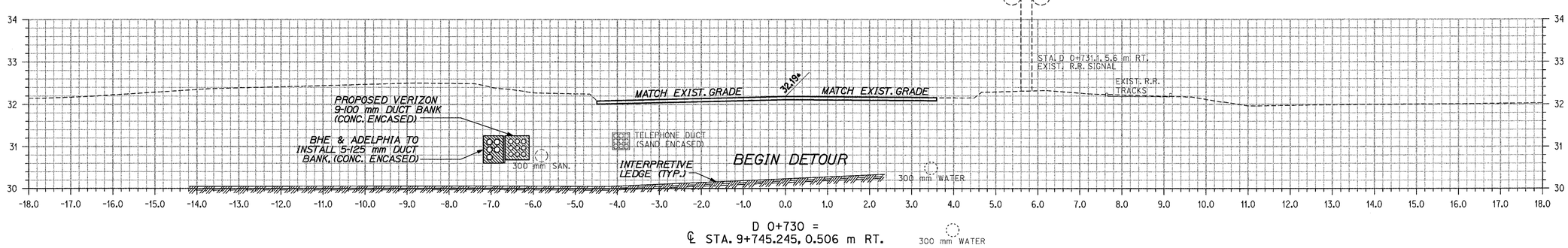
Filename: ...\MSTA\043_Detour_Prof_02.dgn Division: BRIDGE Username: davistr Date:03/09/2005

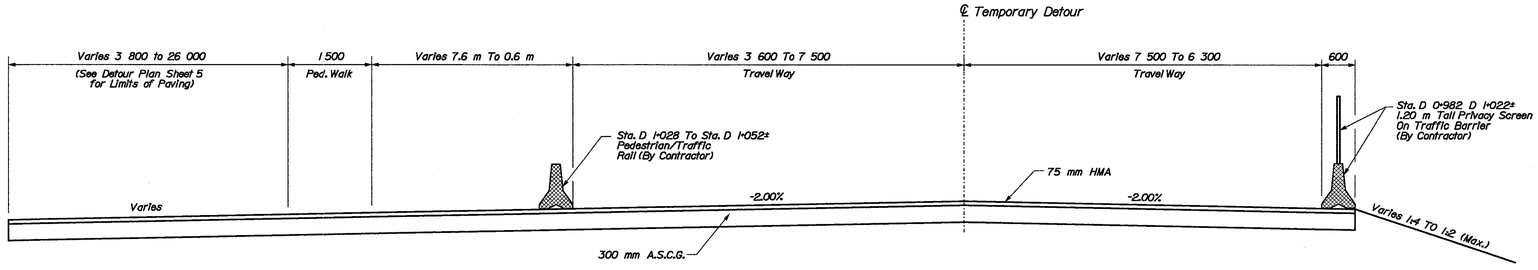
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REGS. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	44	90

008979.00



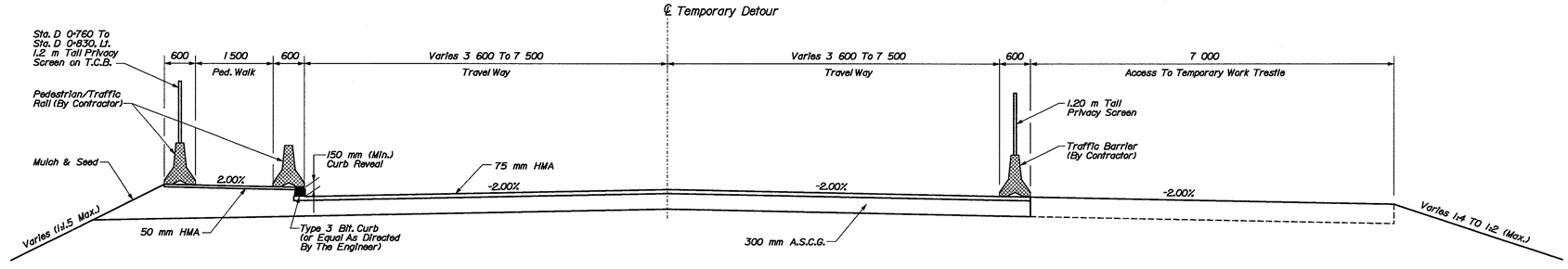




TYPICAL APPROACH SECTION

STA. D 0+982± TO STA. D 1+070±

Note:
Privacy Screen Shall Be Incidental To Special Provision 510.



TYPICAL APPROACH SECTION

STA. D 0+750 TO STA. D 0+830±

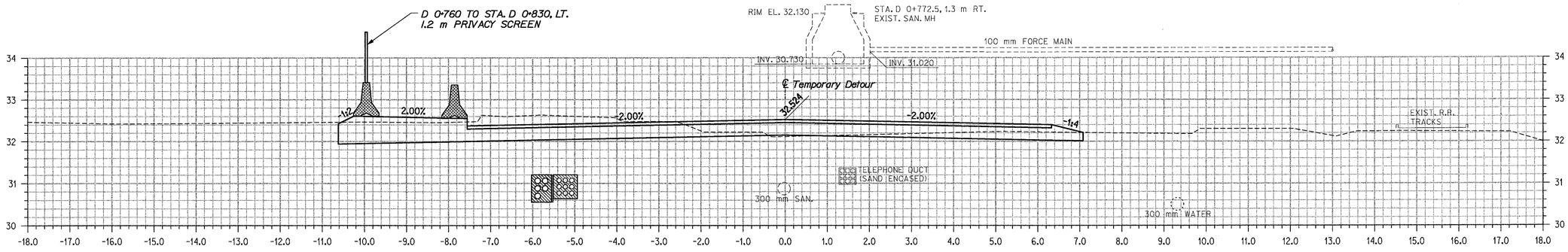
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAMAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

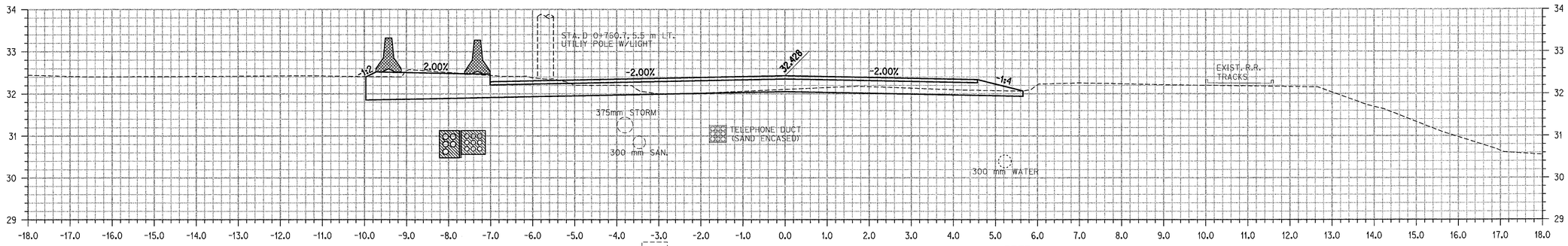
Filename: ...\MSTA\044_Detour_Xsect_01.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	45	90

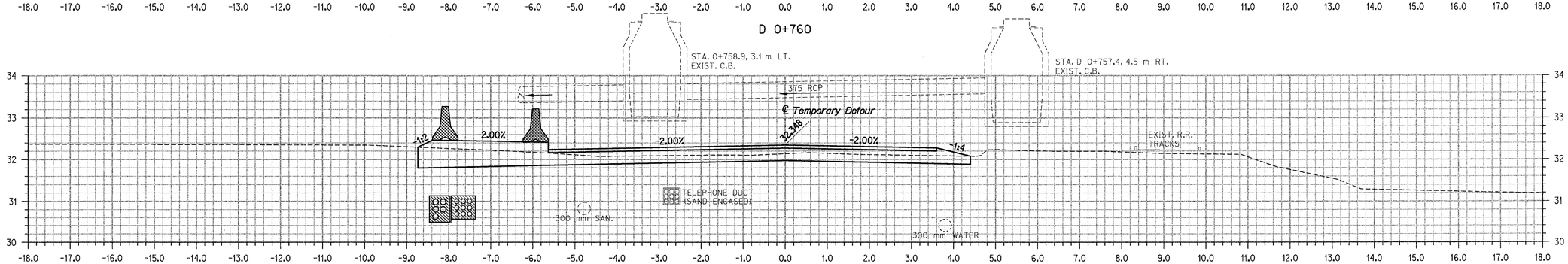
008979.00



D 0+770



D 0+760



D 0+750

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

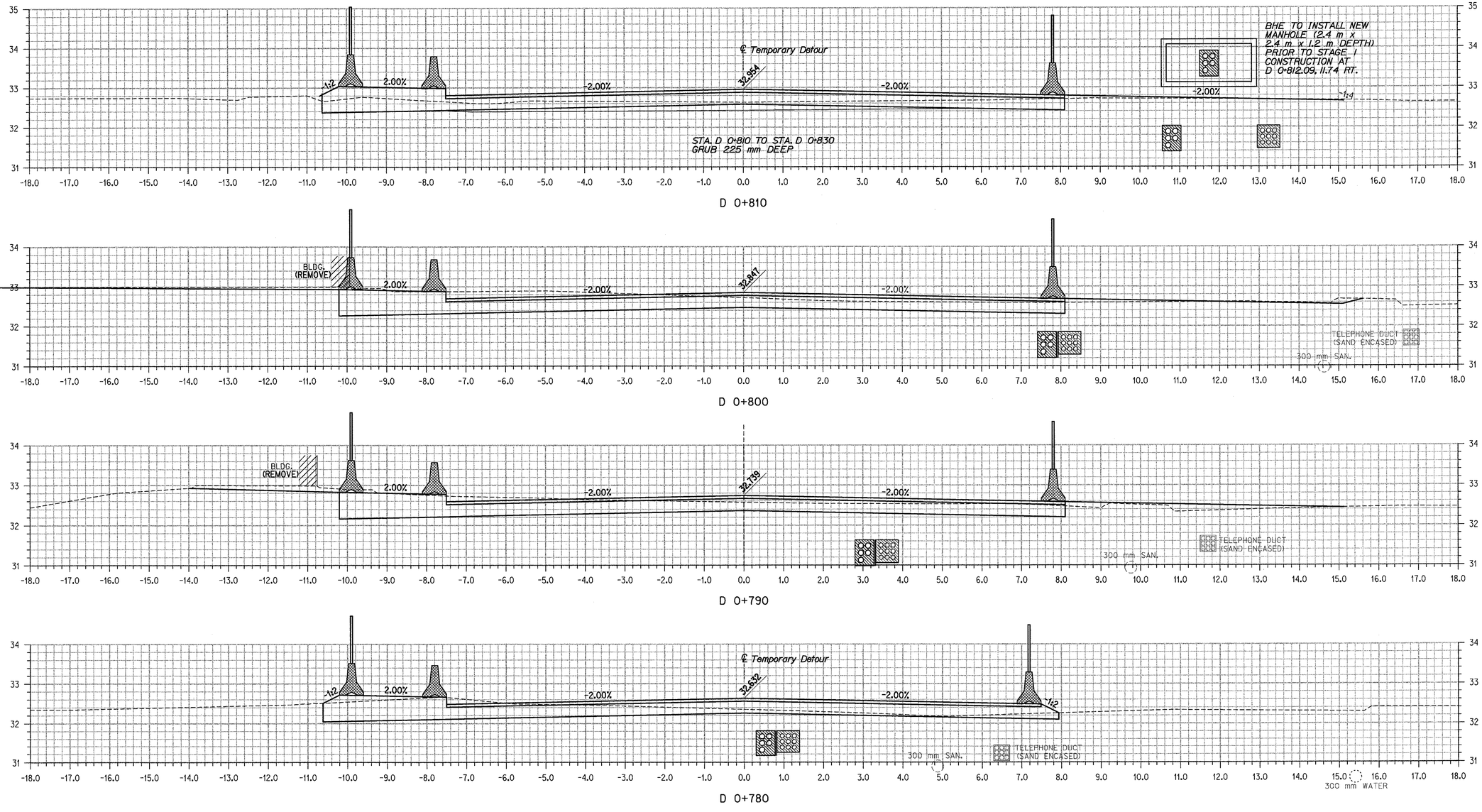
Filename: ...\MSTA\045_Detour_Xsect_02.dgn Username: davistr Date:03/09/2005

Division: BRIDGE

OLD TOWN - MILFORD ROUTE 2

STA. D 0+750 TO STA. D 0+770

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	46	90
				008979.00		



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

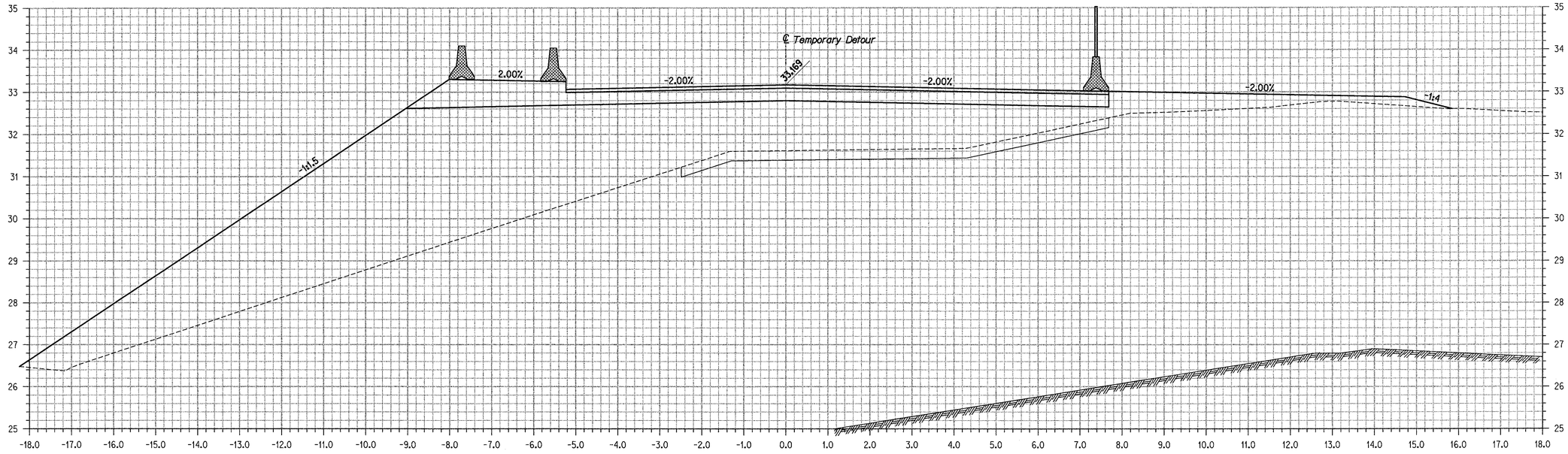
PLANS

Filename: ...\MSTA\046_Detour_Xsect_03.dgn Division: BRIDGE Username: davistr Date:03/09/2005

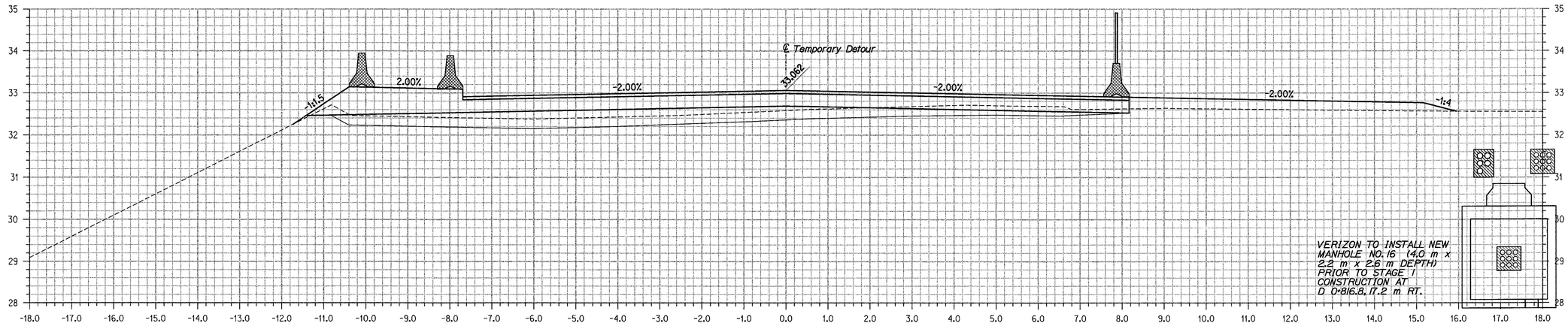
OLD TOWN - MILFORD ROUTE 2

STA. D 0+780 TO STA. D 0+810

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. RDG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	47	90
				008979.00		



D 0+830



D 0+820

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\MSTA\047_Detour_Xsect_04.dgn Division: BRIDGE

Username: davistr Date:03/09/2005

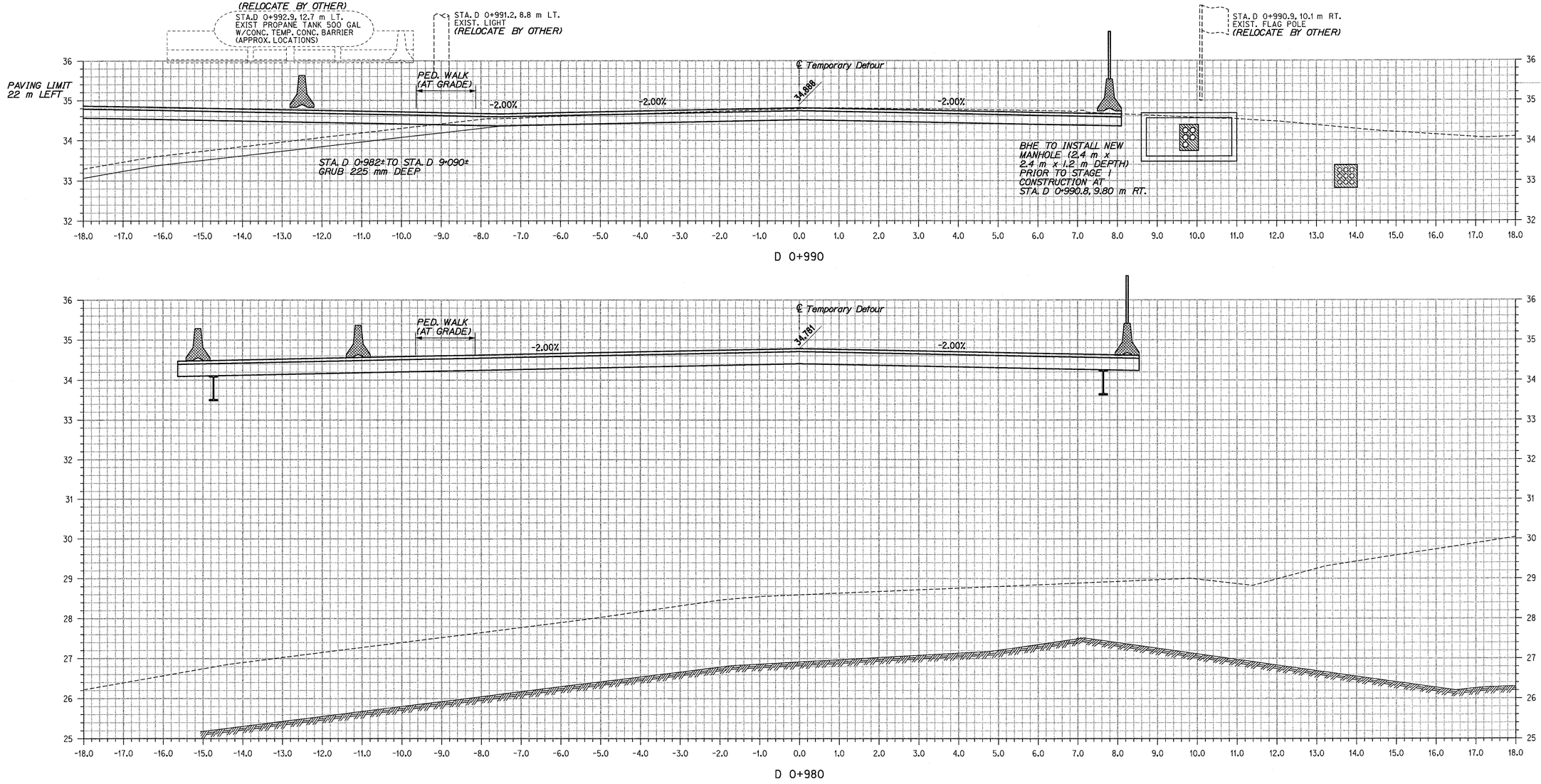
OLD TOWN - MILFORD ROUTE 2

STA. D 0+820 TO STA. D 0+830

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	48	90

008979.00



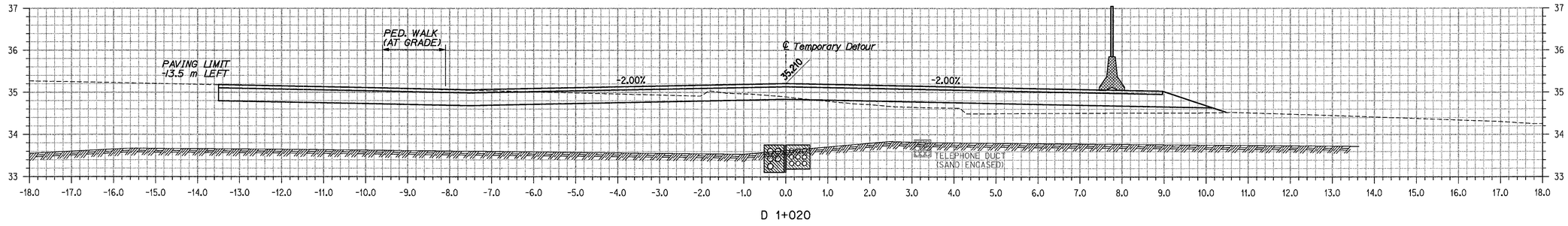
PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

Filename: ...\MSTA\048_Detour_Xsect_05.dgn Division: BRIDGE Username: dovistr Date:03/09/2005

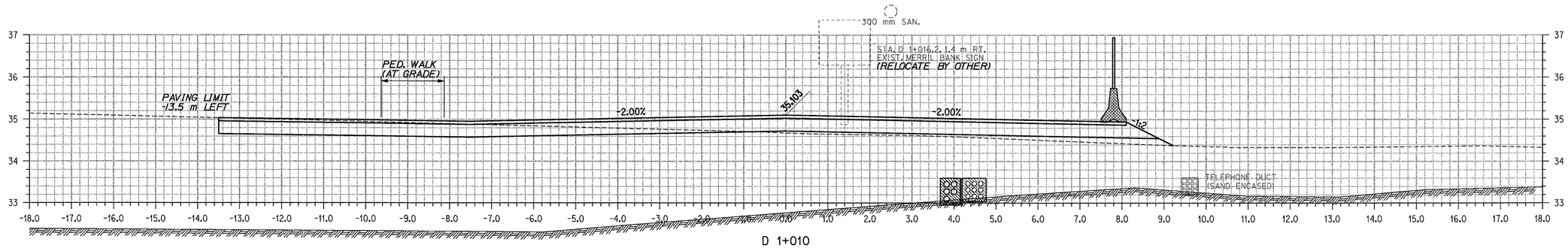
OLD TOWN - MILFORD ROUTE 2

STA. D 0+980 TO STA. D 0+990

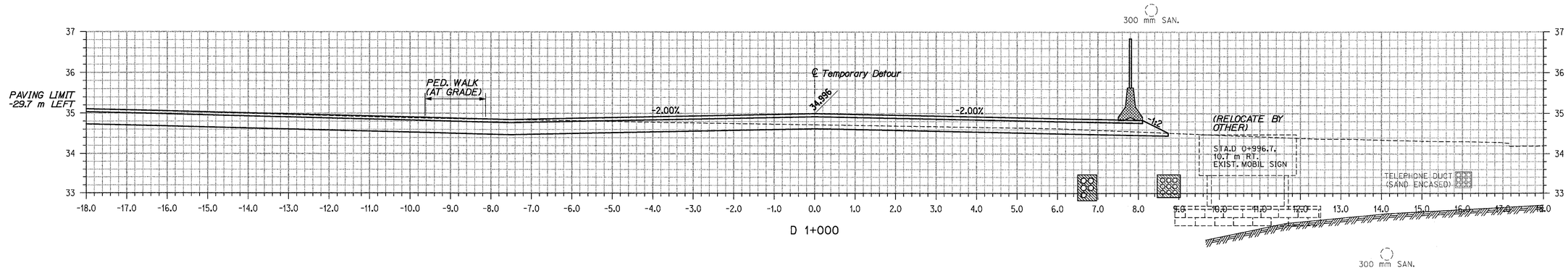
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	49	90
				008979.00		



D 1+020



D 1+010



D 1+000

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

Filename: ...\MSTA\049_Detour_Xsect_06.dgn Username: davistr Date:03/09/2005

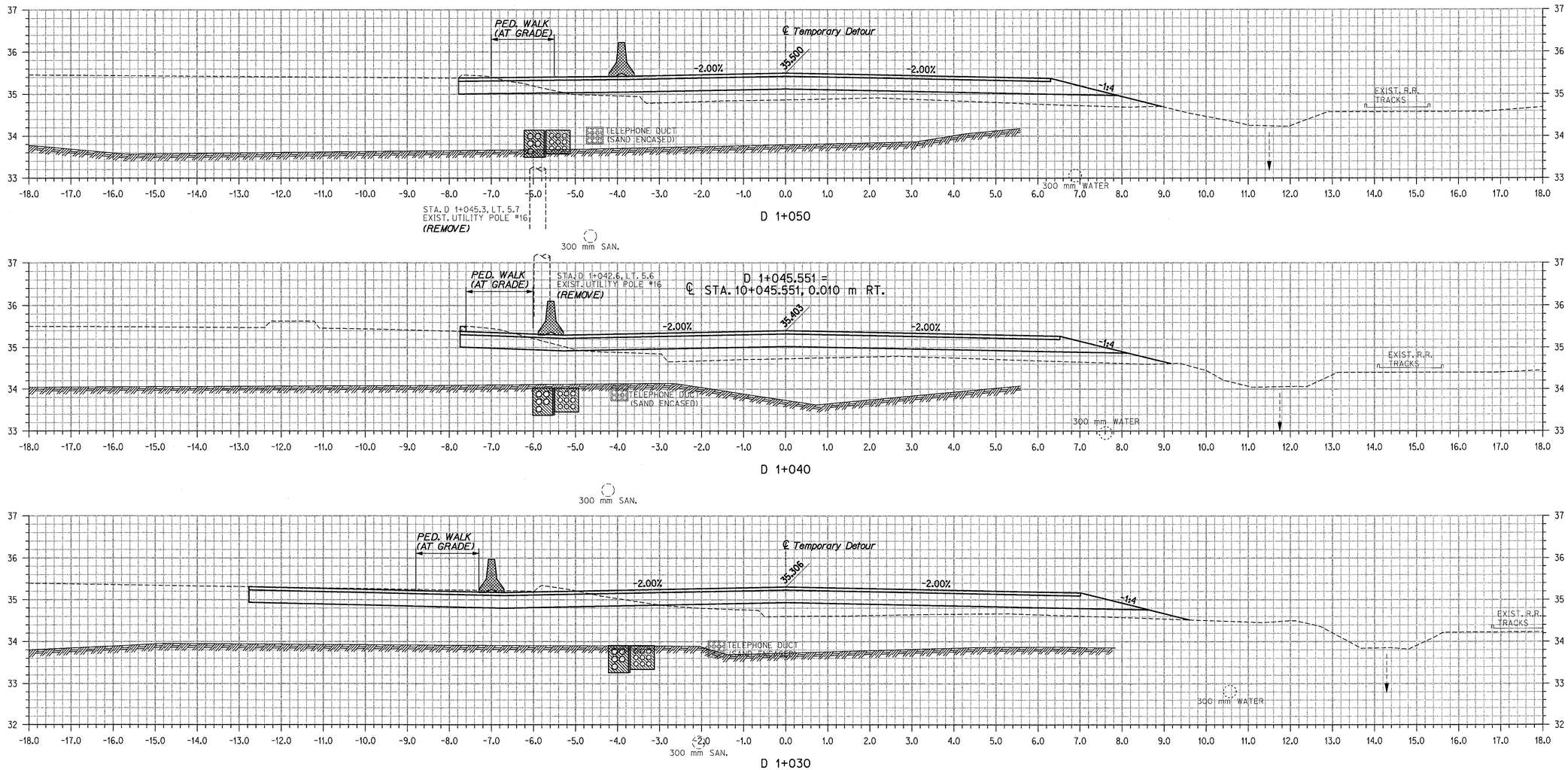
OLD TOWN - MILFORD ROUTE 2

STA. D 1+000 TO STA. D 1+020

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REGN. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	50	90

008979.00



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	R. PARKER	03/08/2005
CHECKED	F. DAHAR	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

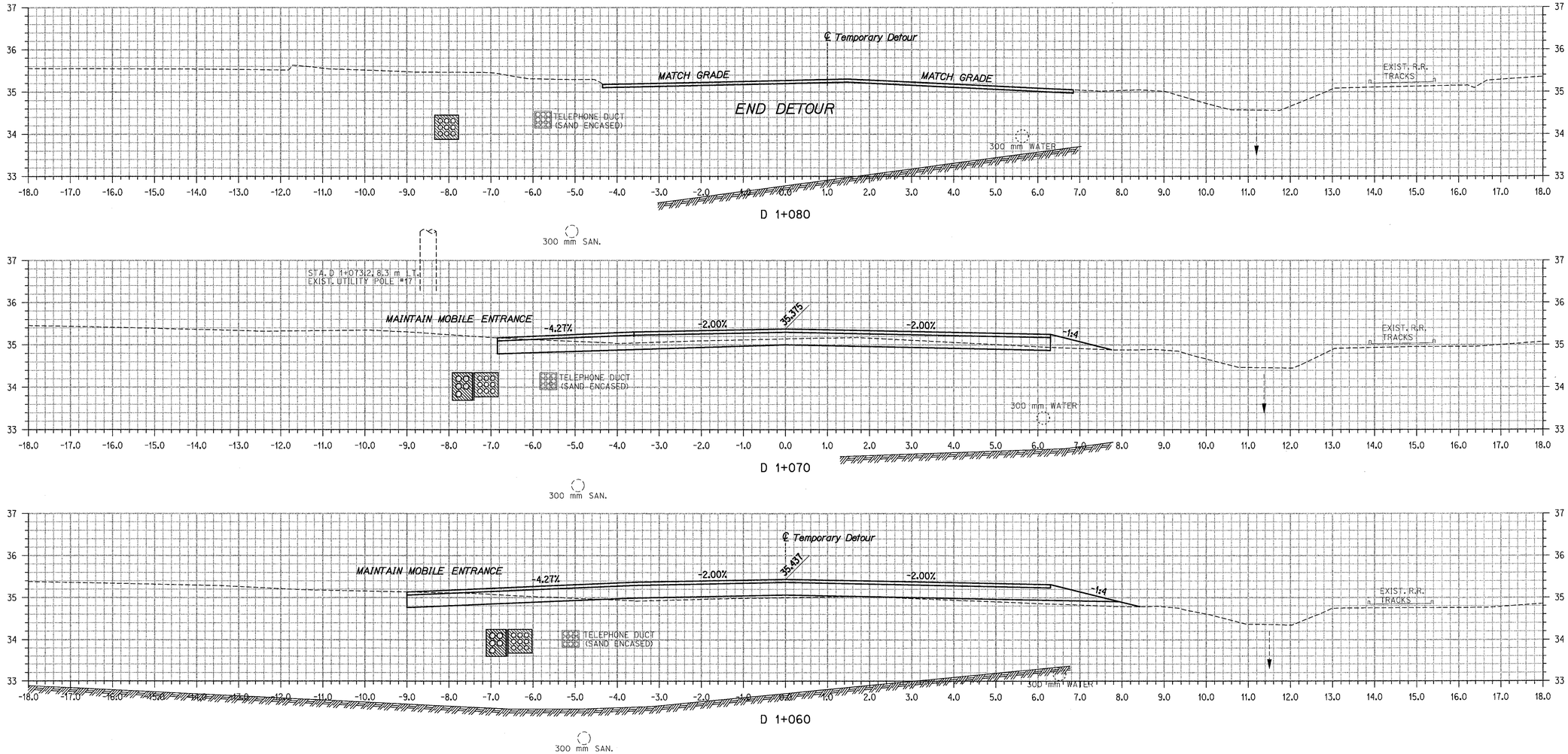
Filename: ...\MSTA\050_Detour_Xsect_07.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD

ROUTE 2

STA. D 1+030 TO STA. D 1+050

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	51	90
				008979.00		



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	R. PARKER	03/08/2005
	CHECKED	F. DAHAR	03/08/2005
	REVISIONS		
	FIELD CHANGES		

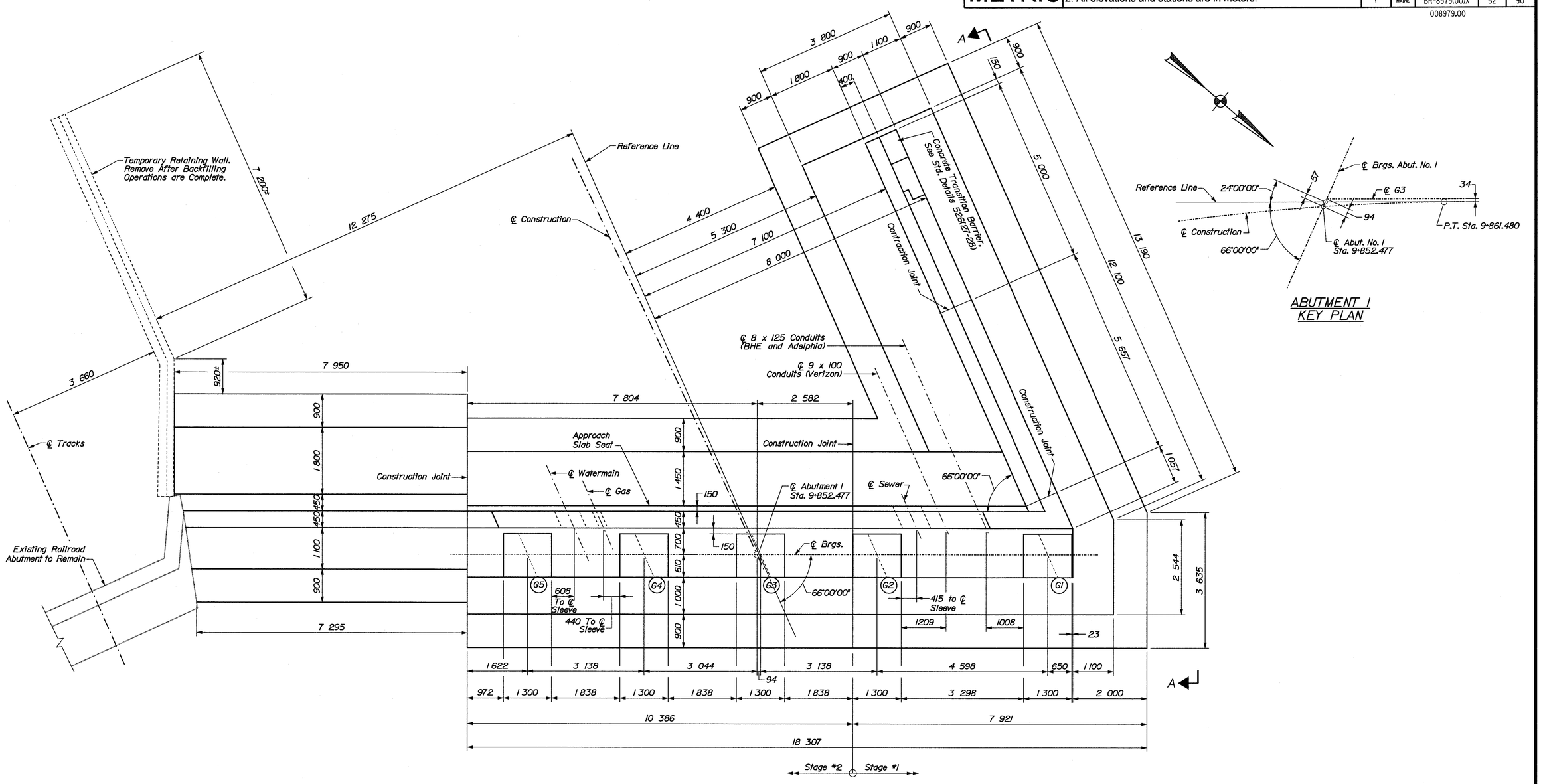
Filename: ...\MSTA\051_Detour_Xsect_08.dgn Division: BRIDGE Username: davistr Date:03/09/2005

OLD TOWN - MILFORD ROUTE 2 STA. D 1+060 TO STA. D 1+080

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	52	90

008979.00



ABUTMENT 1 KEY PLAN

ABUTMENT 1 PLAN

ABUTMENT NOTES

1. Reinforcing steel shall have 50 mm of cover in the walls and 75 mm of cover in the footings unless otherwise noted.
2. Cover joints in accordance with Standard Detail 502 (01) where waterstops are not required.
3. Place 100 diameter drains in breastwall and wings at 3000 mm maximum spacing. Exact location to be determined by the Resident in the field.
4. Construct french drains behind the abutments and wings in accordance with Standard Specification Section 512, French Drains.
5. Maximum calculated footing pressure is 579 kPa.
6. Sleeves For all utilities shall be fabricated from steel and shall be galvanized.
7. Abutments, wings, and their footings shall be backfilled with granular borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 3.0 meters behind the walls and 300 mm behind the footings in fill areas.
8. The ledge surface shall be cleared of all weathered and fractured material, as directed by the Resident.
9. Where ledge slopes toward the river channel, as designated by the Resident, the ledge surface shall be stepped or level, as approved by the Resident. Elsewhere, the bedrock surface shall be less than IV:6H or it shall be stepped or level.
10. Excavation of ledge for abutment foundations shall be performed using conventional construction equipment, pneumatic/hydraulic hammers/drills, and/or specialized rock drilling equipment, as approved by the Resident. Blasting of ledge for abutment foundations shall not be allowed. The final ledge surface shall be approved by the Resident prior to placement of abutment foundations.
11. The length of the following horizontal straight reinforcing steel bars was determined assuming 80 mm additional length to be embedded in the couplers for stage 1.

    Abutment #1: AF1606, AI618
    Abutment #2: BF1608, BI613

    The length of these reinforcing steel bars shall be adjusted by the Contractor based on the specific Mechanical/Welded splice selected.
12. A bond breaker shall be used between the existing railroad abutments and the new wingwalls. The bond breaker used shall be approved by the Resident and the Railroad.

SEAL COFFERDAM NOTES

1. The seal concrete placement dimensions represent the minimum seal necessary for design and are not based on any particular sheet pile section.
2. The horizontal pay limit for seal concrete shall be to the dimensions shown on the plans. No additional payment will be made for concrete placed outside of these limits.
3. When sheet piling is used for seal cofferdams:
   A. Appropriate rolled corners shall be used.
   B. The inside face of the sheet piling shall be at or outside of the seal concrete dimensions shown.
4. The depth of the seal is set for a water elevation of 27.95 (Q_{10}). If the water elevation at the time of construction is higher, the depth of the seal shall be adjusted.
5. The Resident shall approve the method of placing dowels in the seal concrete.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	L. JANIK	03/08/2005
CHECKED	S. PERCASSI	03/08/2005
REVISIONS	S. GAUTHIER	03/08/2005
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

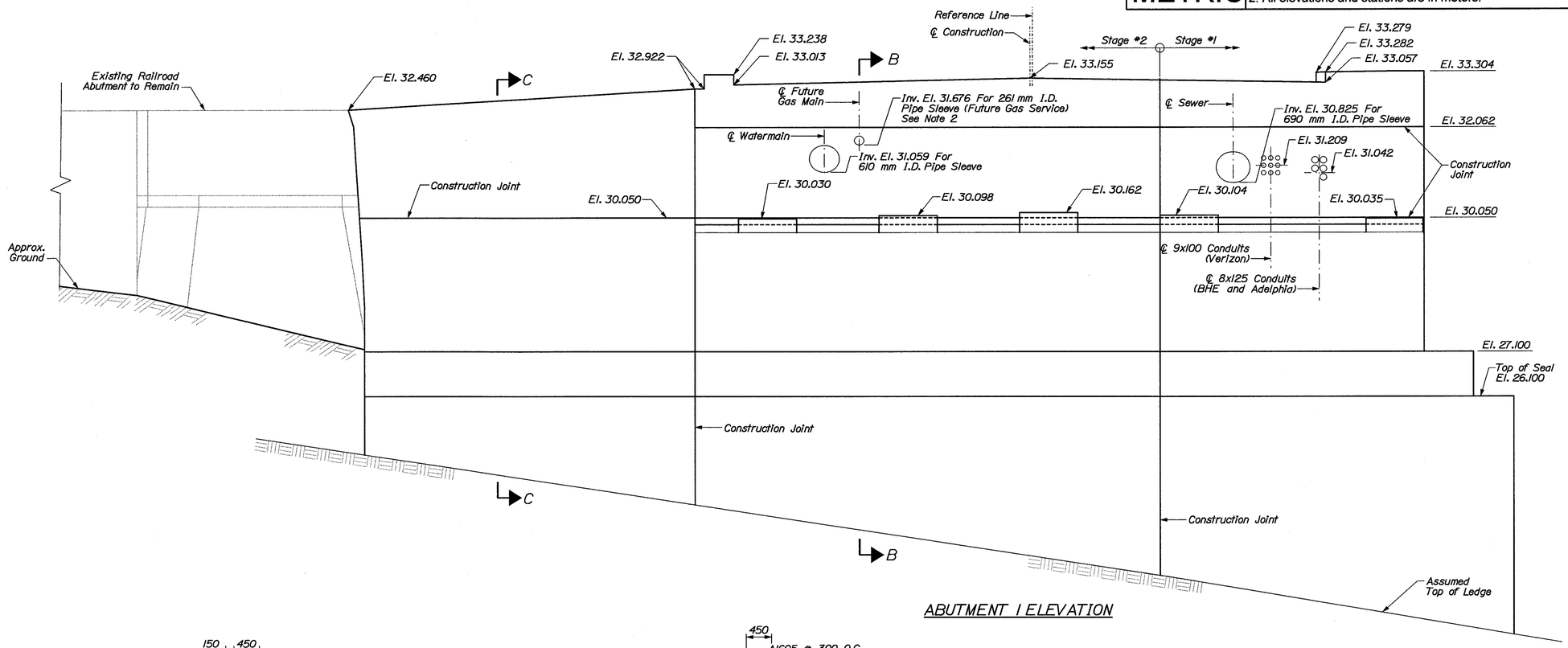
ABUTMENT 1 PLAN

SHEET OF AUGUSTA, MAINE

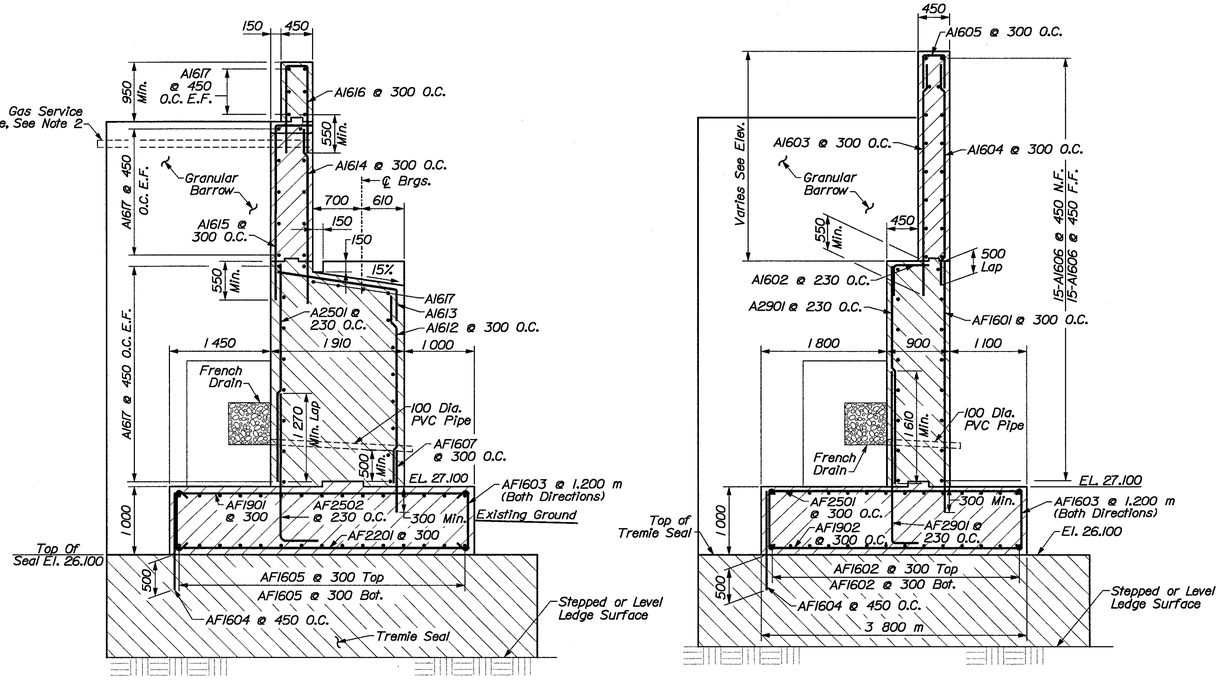
METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	53	90

008979.00



ABUTMENT 1 ELEVATION



SECTION B-B

SECTION C-C

NOTES:

1. Bridge seat elevations based on assumed bearing heights. Actual elevations shall be coordinated with bearing manufacturer.
2. Sleeve for future gas service shall extend 5400 mm (min.) behind the back face of the abutment. Sleeve shall be capped on both ends until the gas main is in service. Sleeve and caps shall be provided to the Contractor by Bangor Gas Company.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	L. JANIK	03/08/2005
	CHECKED	T. DAVIS	03/08/2005
	REVISIONS	S. PERCASSI	
	FIELD CHANGES	S. GAUTHIER	

BRIDGE NO. 2630
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

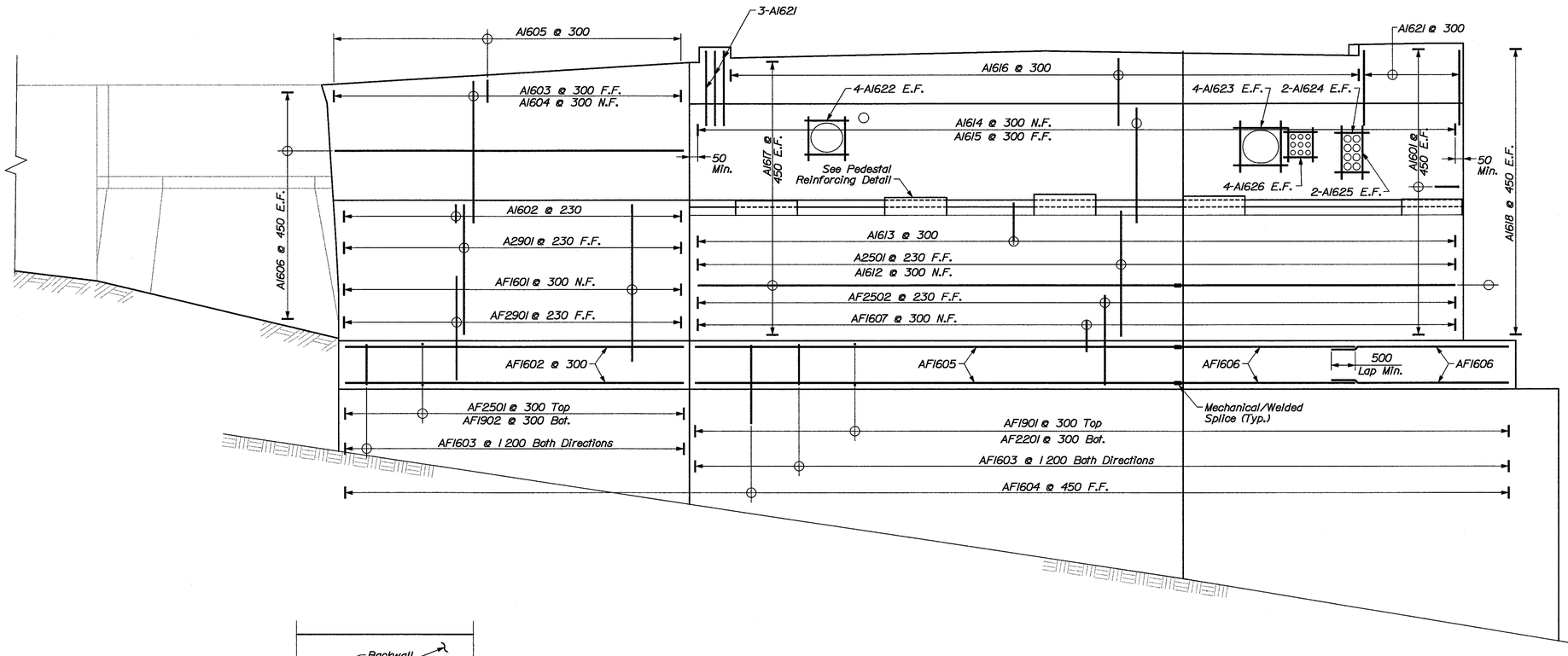
OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY
ABUTMENT 1
ELEVATION & SECTIONS

SHEET OF AUGUSTA, MAINE

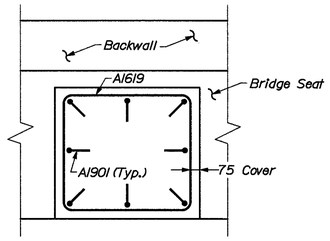
METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	54	90

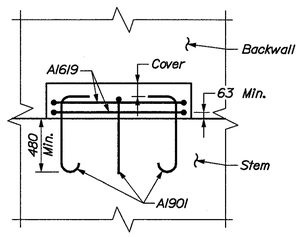
008979.00



ABUTMENT 1 REINFORCING ELEVATION



Pedestal Plan



Pedestal Elevation

PEDESTAL REINFORCING DETAIL

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	L. JANIK	03/08/2005
	CHECKED	S. PERCASSI	03/08/2005
	REVISIONS	L. JANIK	
	FIELD CHANGES		

BRIDGE NO. 2630
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

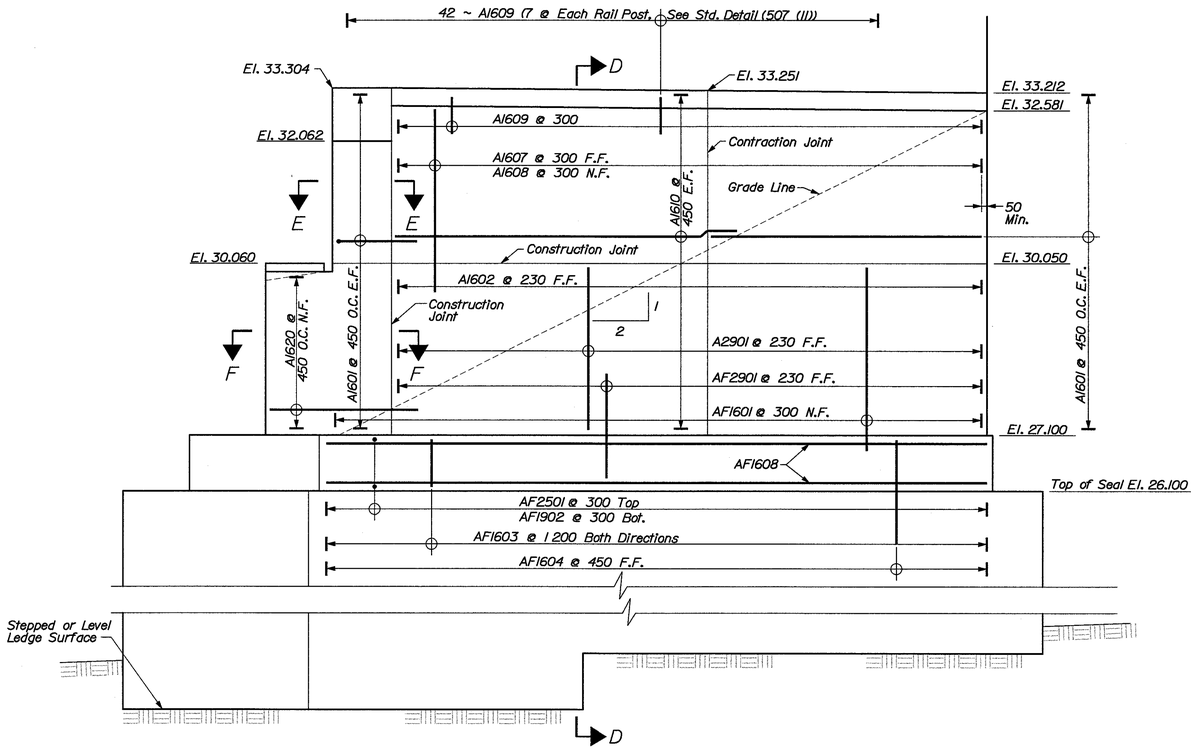
ABUTMENT 1
REINFORCING ELEVATION

SHEET OF AUGUSTA, MAINE

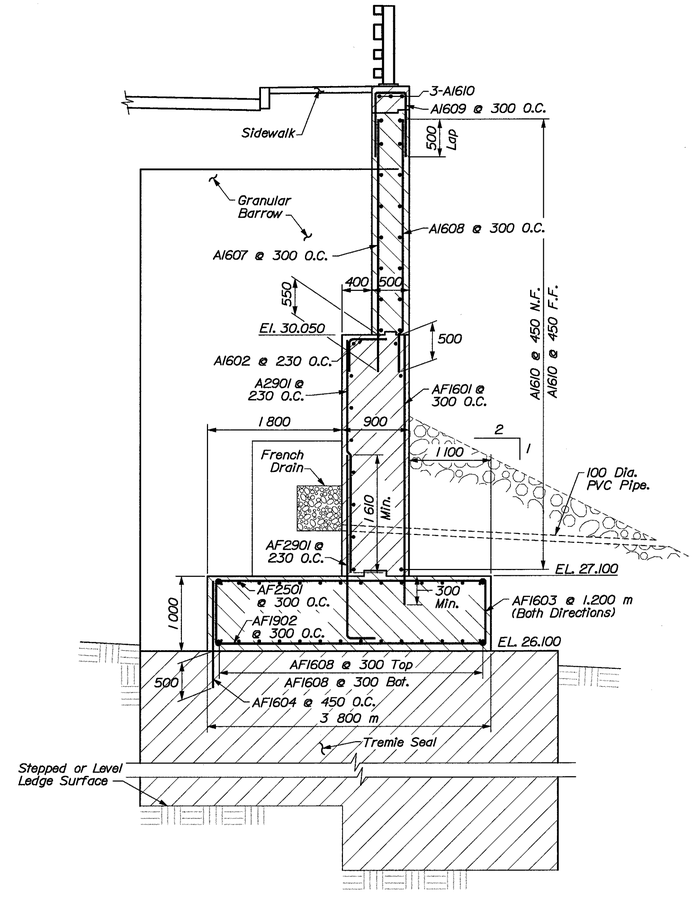
METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	55	90

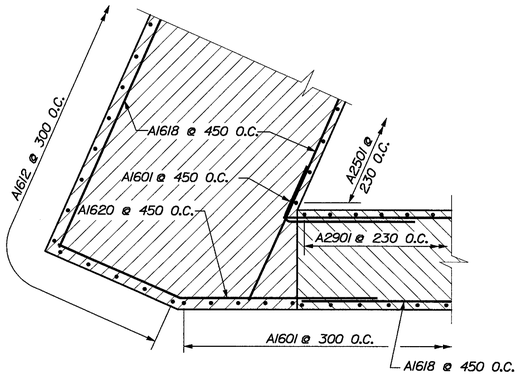
008979.00



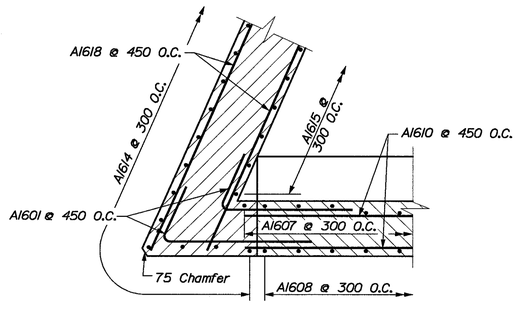
VIEW A-A



SECTION D-D



SECTION F-F



SECTION E-E

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	L. JANIK	03/08/2005
	CHECKED	S. PERCASSI	03/08/2005
	REVISIONS	L. JANIK	
	FIELD CHANGES		

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

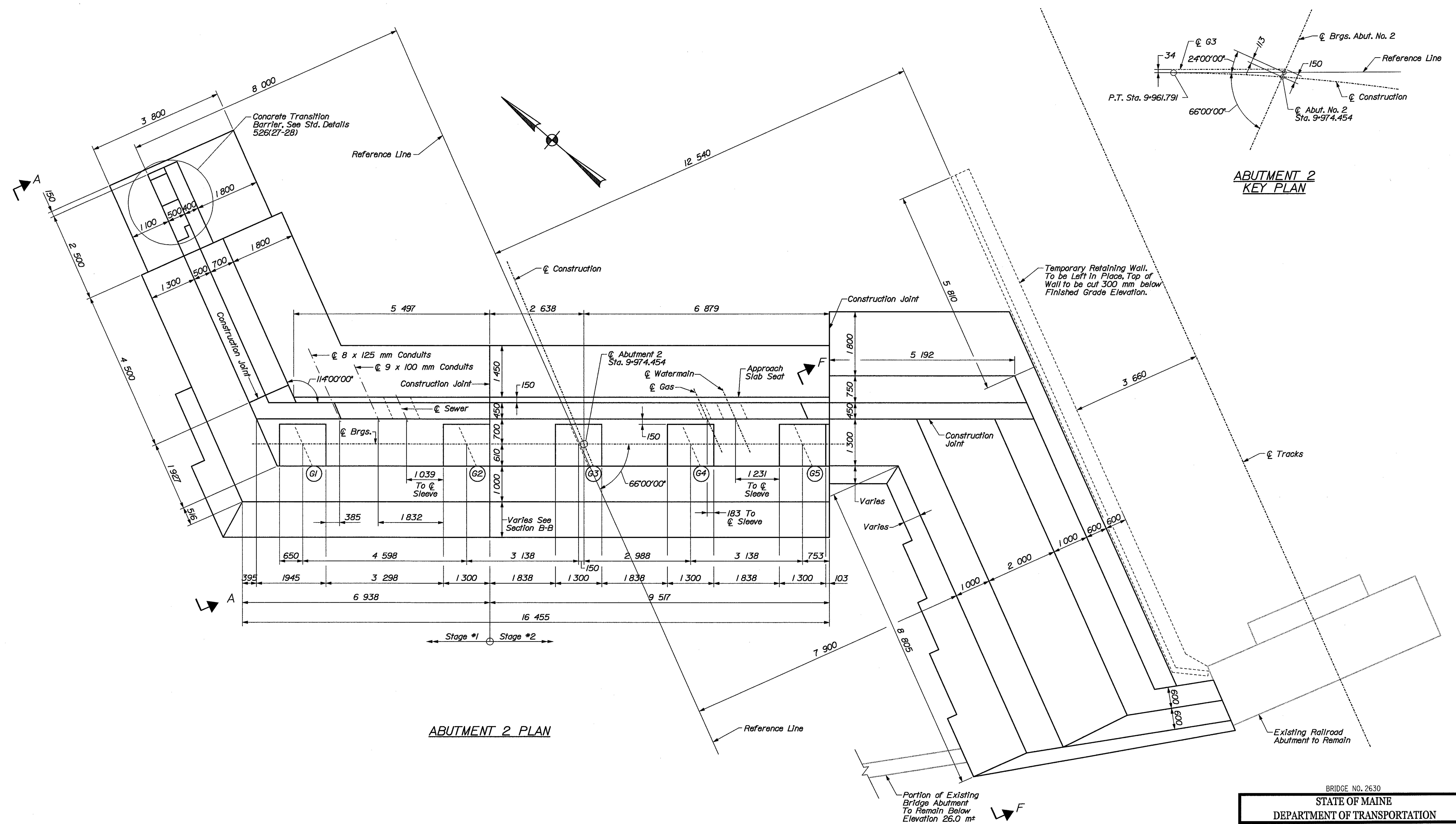
OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

ABUTMENT 1
WINGWALL ELEV. & SECTION

SHEET OF AUGUSTA, MAINE

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X 008979.00	56	90



Filename: ...\Bridge\MSTA\056_Abut2_plan.dgn Username: davistr Division: BRIDGE Date03/09/2005

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	L. JANIK / T. DAVIS	03/08/2005
	CHECKED	S. PERCASSI / L. JANIK	03/08/2005
	REVISIONS		
	FIELD CHANGES		

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

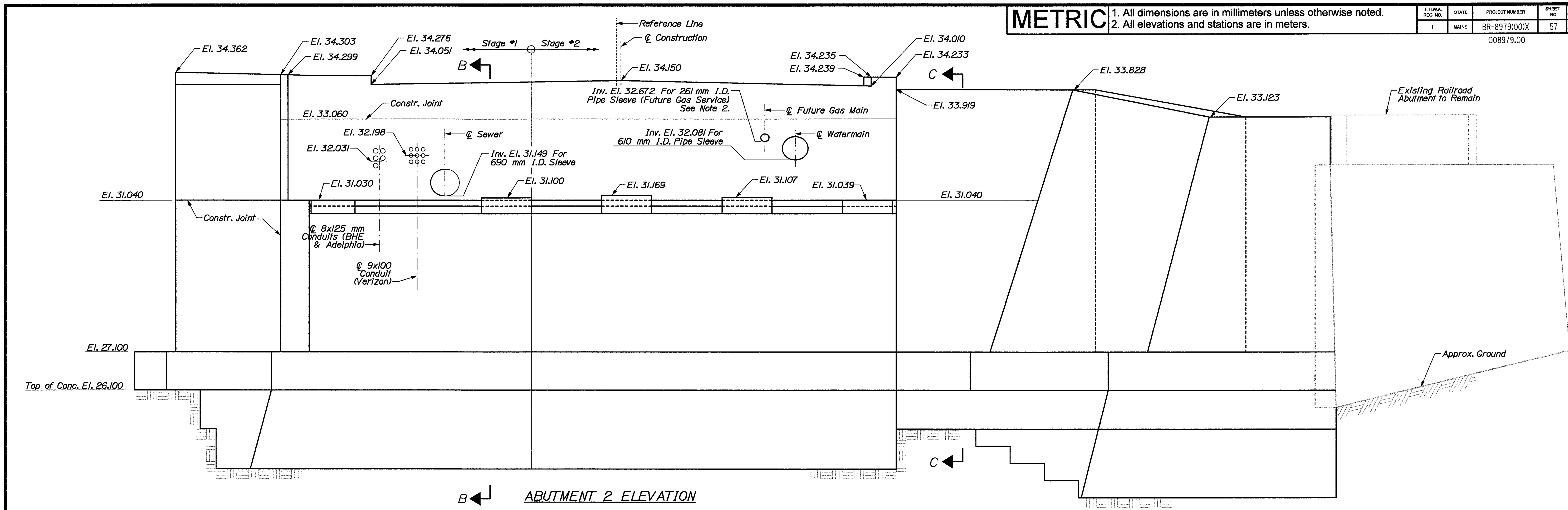
ABUTMENT 2 PLAN

SHEET OF AUGUSTA, MAINE

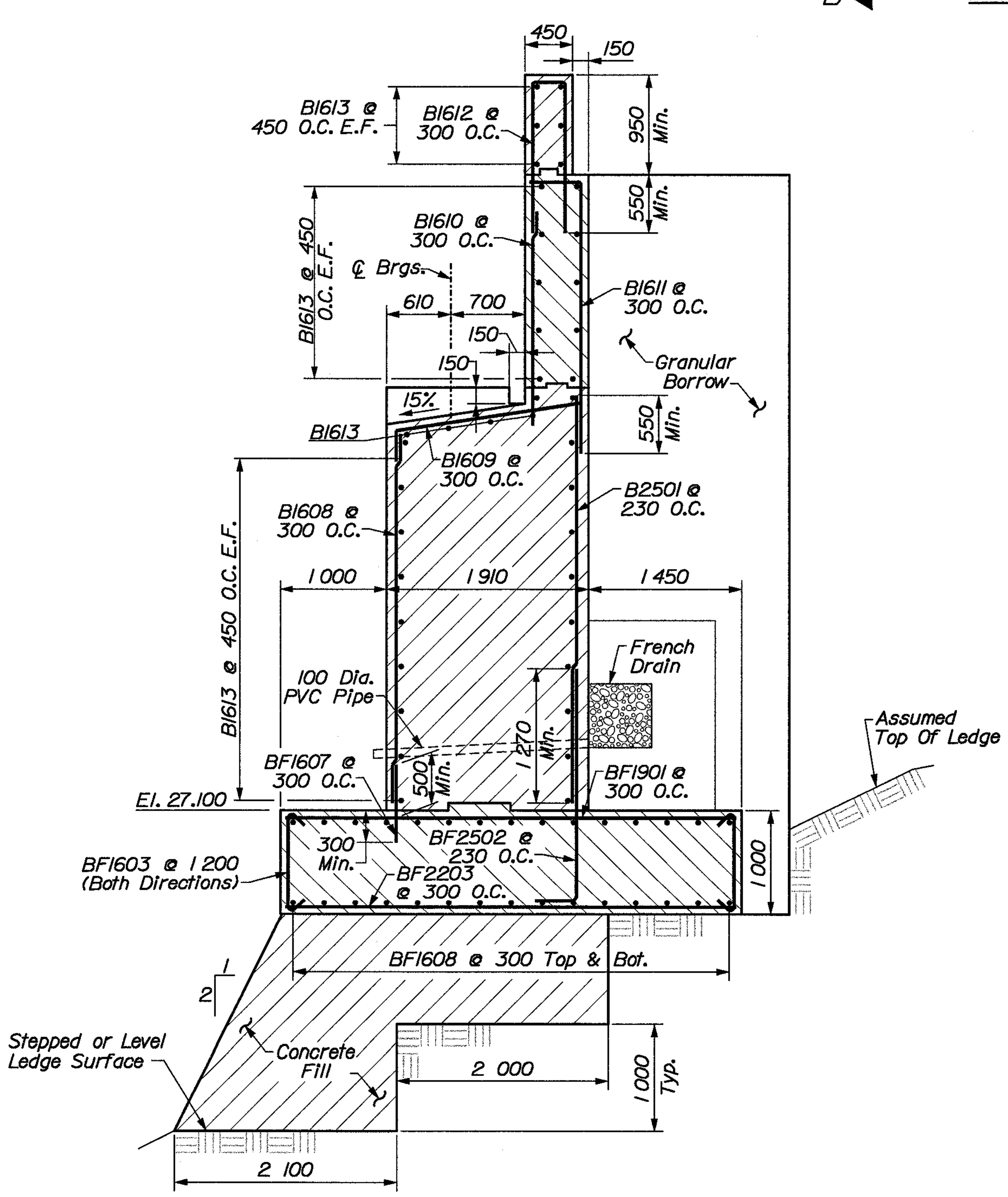
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	57	90

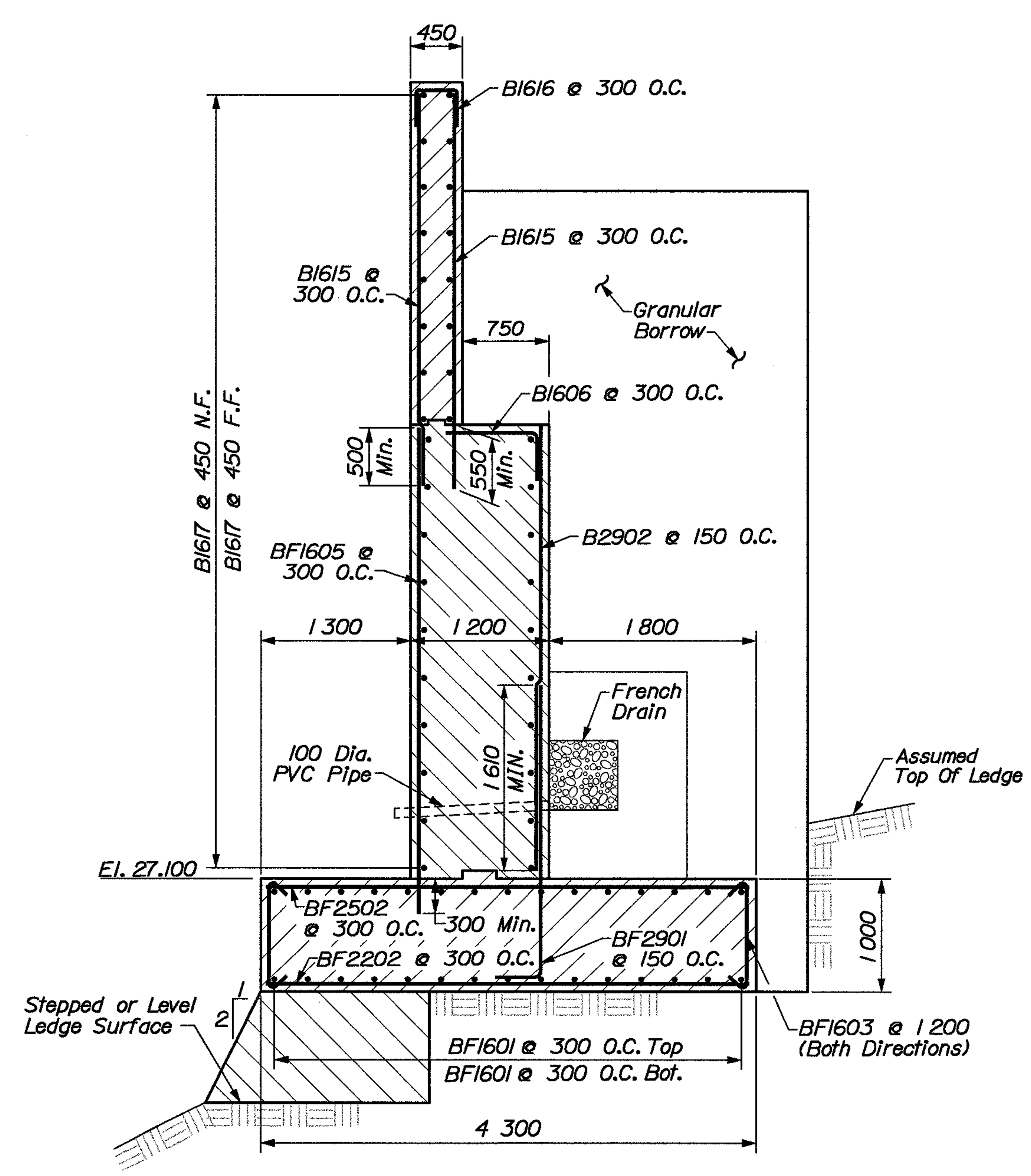
008979.00



ABUTMENT 2 ELEVATION



SECTION B-B



SECTION C-C

NOTES:

1. Bridge seat elevations based on assumed bearing heights. Actual elevations shall be coordinated with bearing manufacturer.
2. Sleeve for future gas service shall extend 5400 mm (min.) behind the back face of the abutment. Sleeve shall be capped on both ends until the gas main is in service. Sleeve and caps shall be provided to the contractor by Bangor Gas Company.

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

ABUTMENT 2 ELEVATION & SECTIONS

SHEET OF AUGUSTA, MAINE

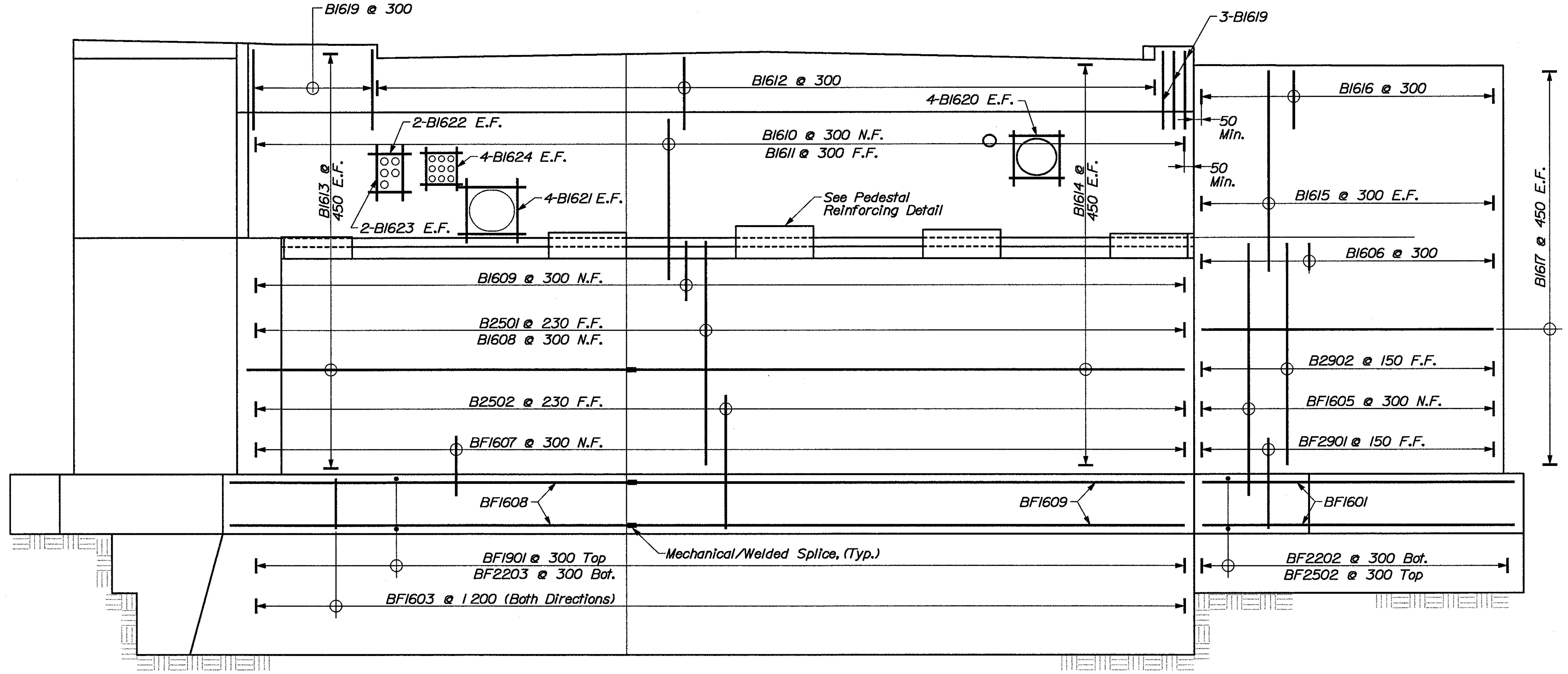
PLANS		BY	DATE
PROJECT DESIGN ENGINEER			
DESIGN-DETAILED		L. JANIK	T. DAVIS	03/08/2005
CHECKED		S. PERCASSI	L. JANIK	03/08/2005
REVISIONS			
FIELD CHANGES			

Filename: ...\Bridge\MSTA\057_Abut2_elev.dgn Division: BRIDGE Username: davistr Date03/09/2005

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

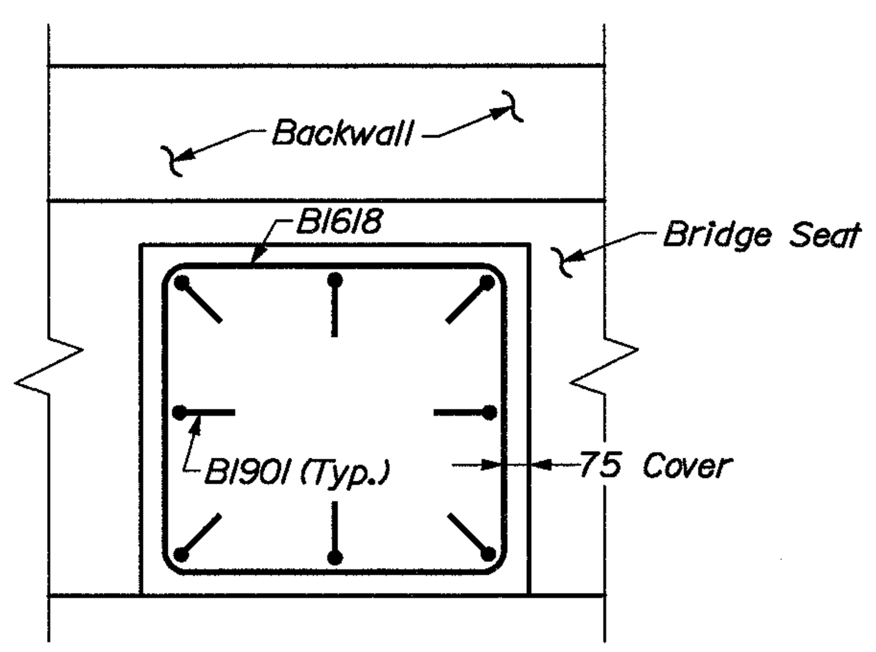
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	58	90

008979.00

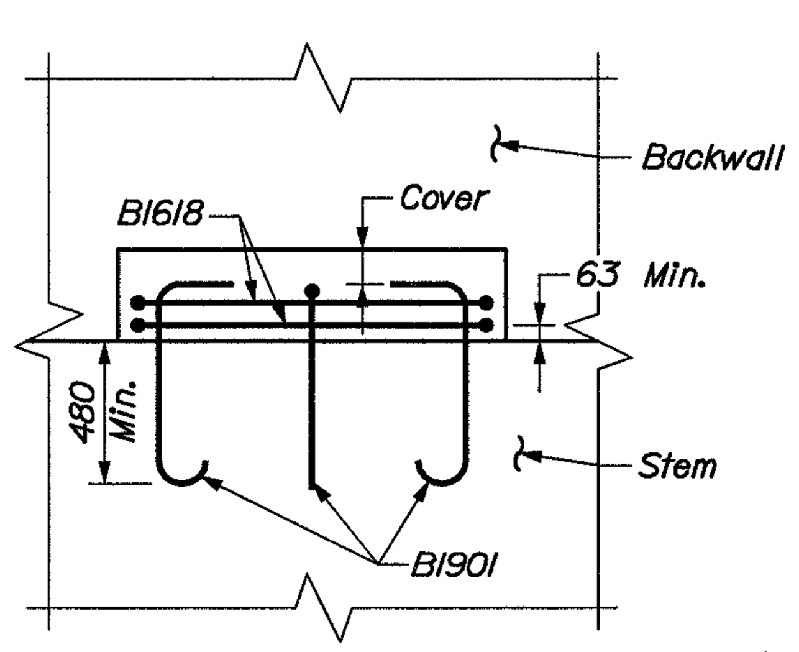


ABUTMENT 2 REINFORCING ELEVATION

NOTE:
Permanent Retaining Wall not shown for clarity.



Pedestal Plan



Pedestal Elevation

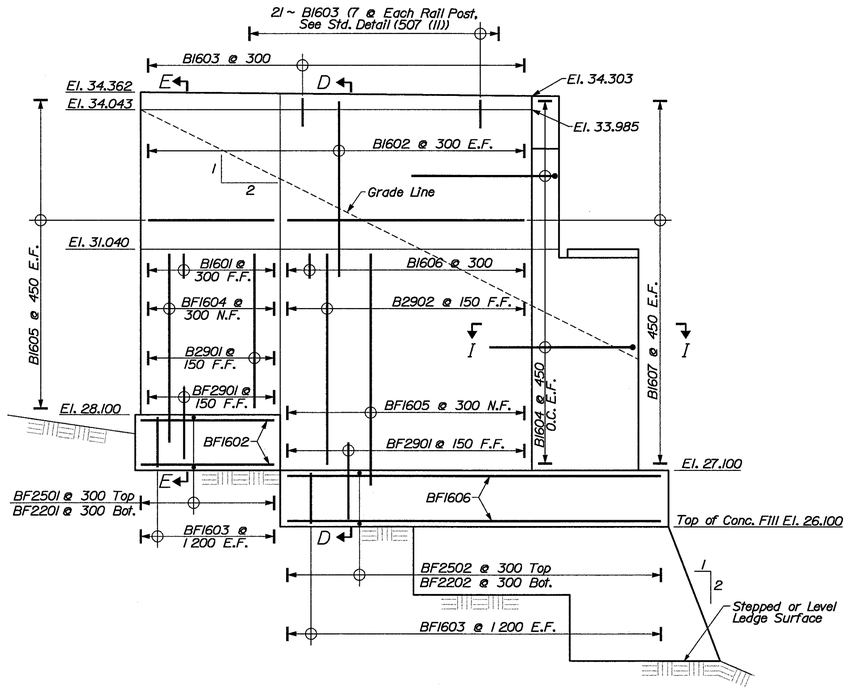
PEDESTAL REINFORCING DETAIL

Filename: ...\MSTA058_Abut2_reinf-elev.dgn   Division: BRIDGE   Username: davistr   Date03/09/2005

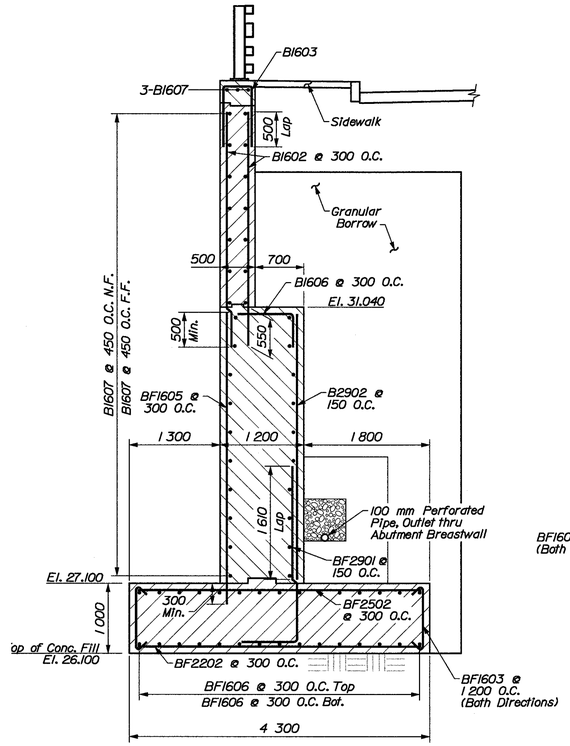
PLANS		BY	DATE
PROJECT DESIGN ENGINEER		L. JANIK	
DESIGN-DETAILED		S. VIJAY	03/08/2005
CHECKED		S. PERCASSI / L. JANIK	03/08/2005
REVISIONS			
FIELD CHANGES			

BRIDGE NO. 2630
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY
ABUTMENT 2
REINFORCING ELEVATION
SHEET OF   AUGUSTA, MAINE

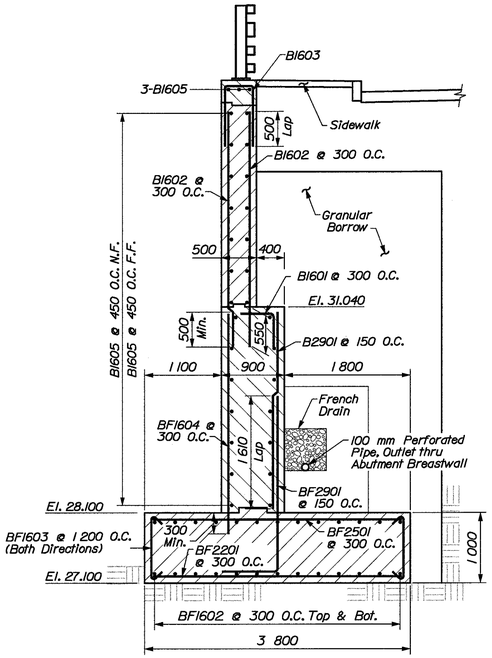
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	59	90
				008979.00		



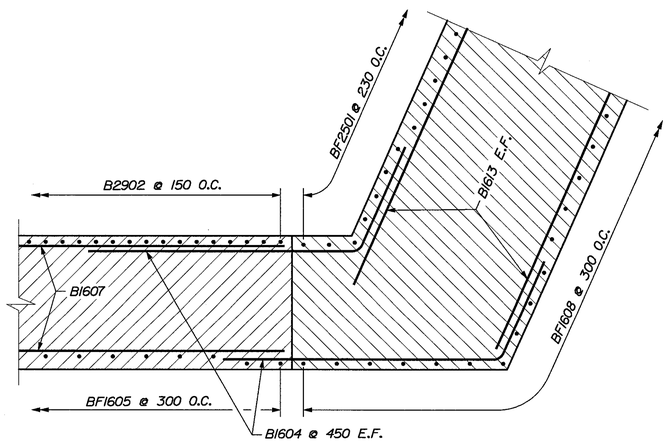
VIEW A-A



SECTION D-D



SECTION E-E



SECTION I-I

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	L. JANIK	03/08/2005
CHECKED	S. PERCASSI	03/08/2005
REVISIONS	L. JANIK	
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

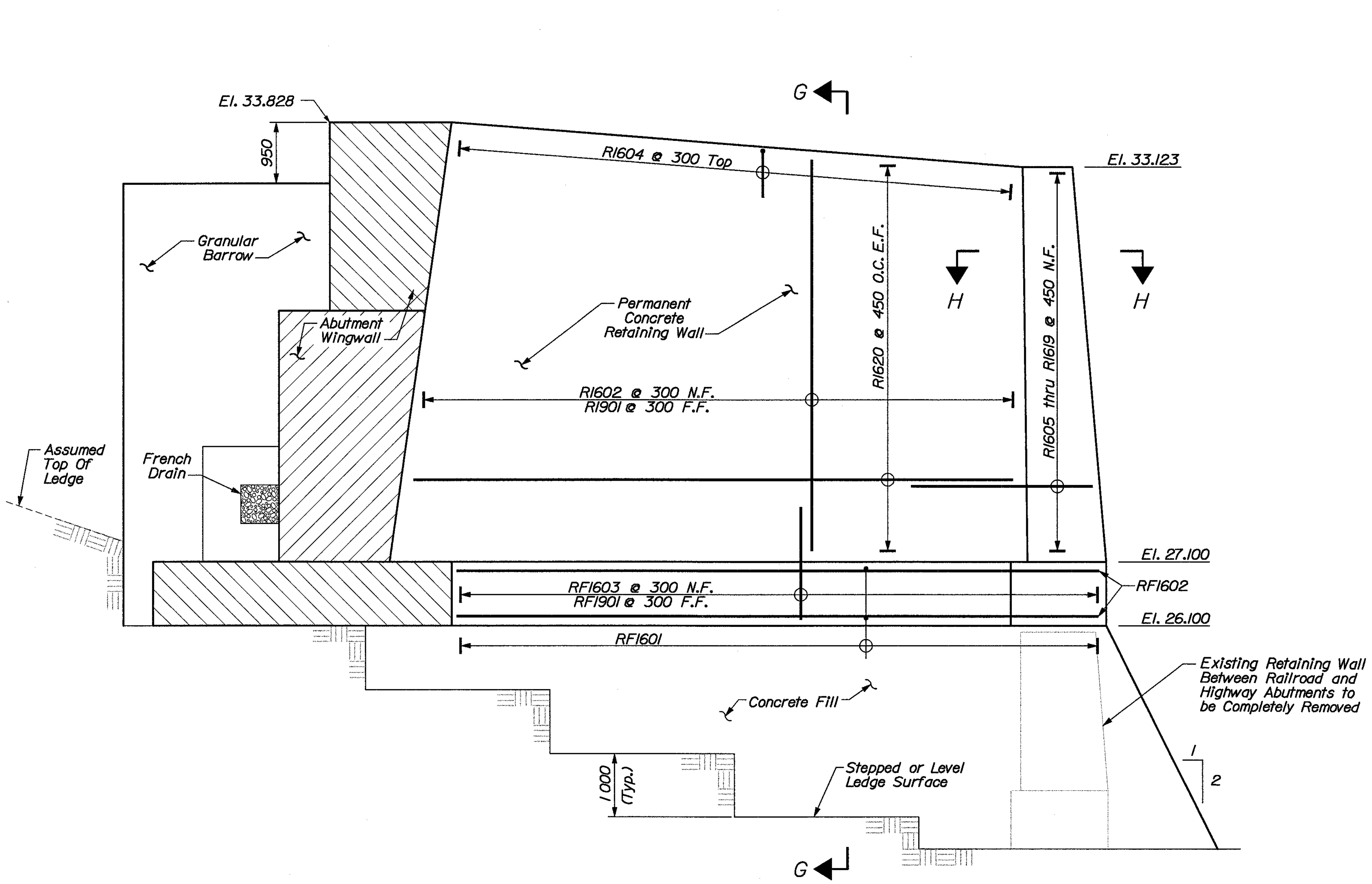
ABUTMENT 2
WINGWALL ELEV. & SECTIONS

SHEET OF AUGUSTA, MAINE

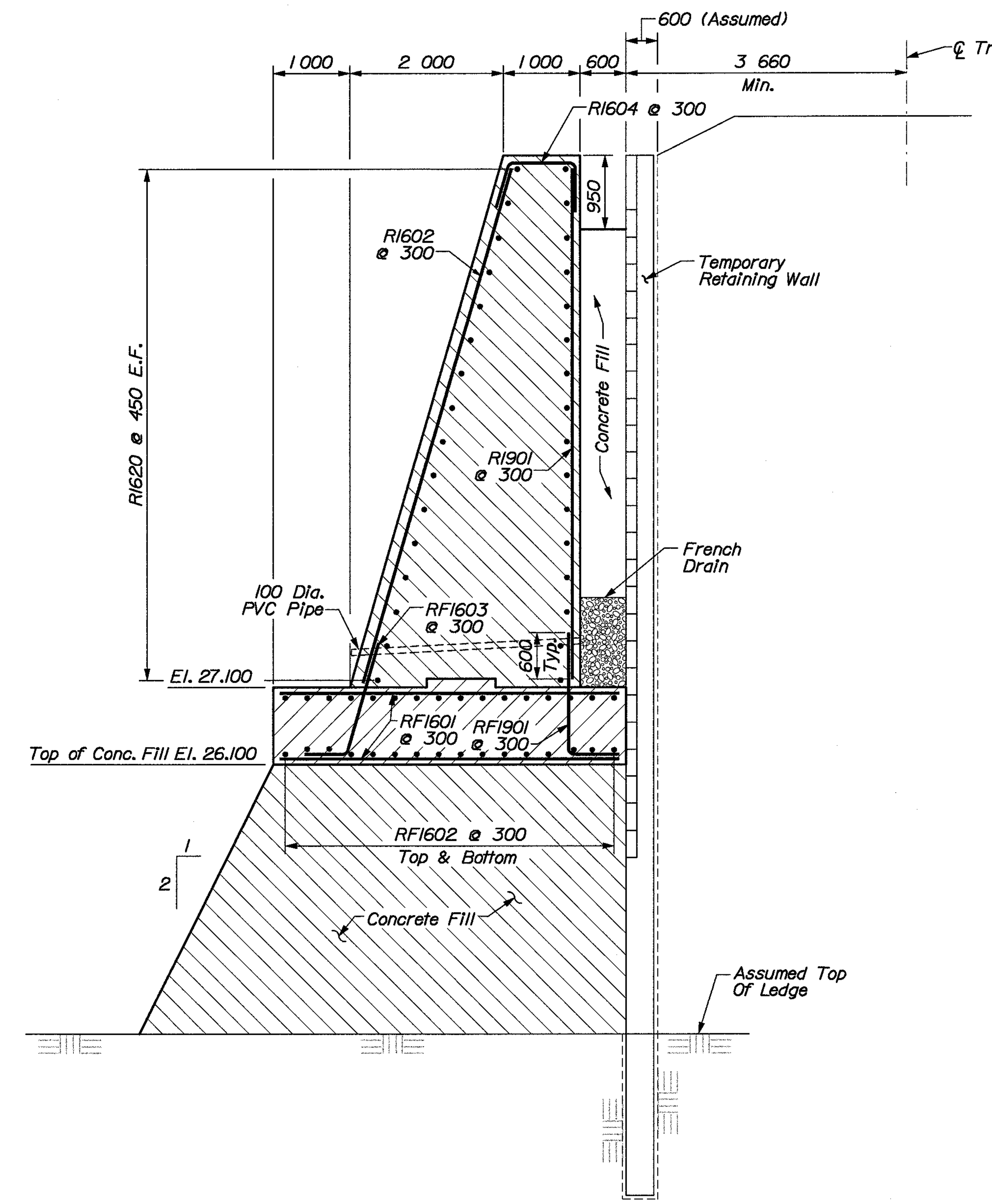
METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	60	90

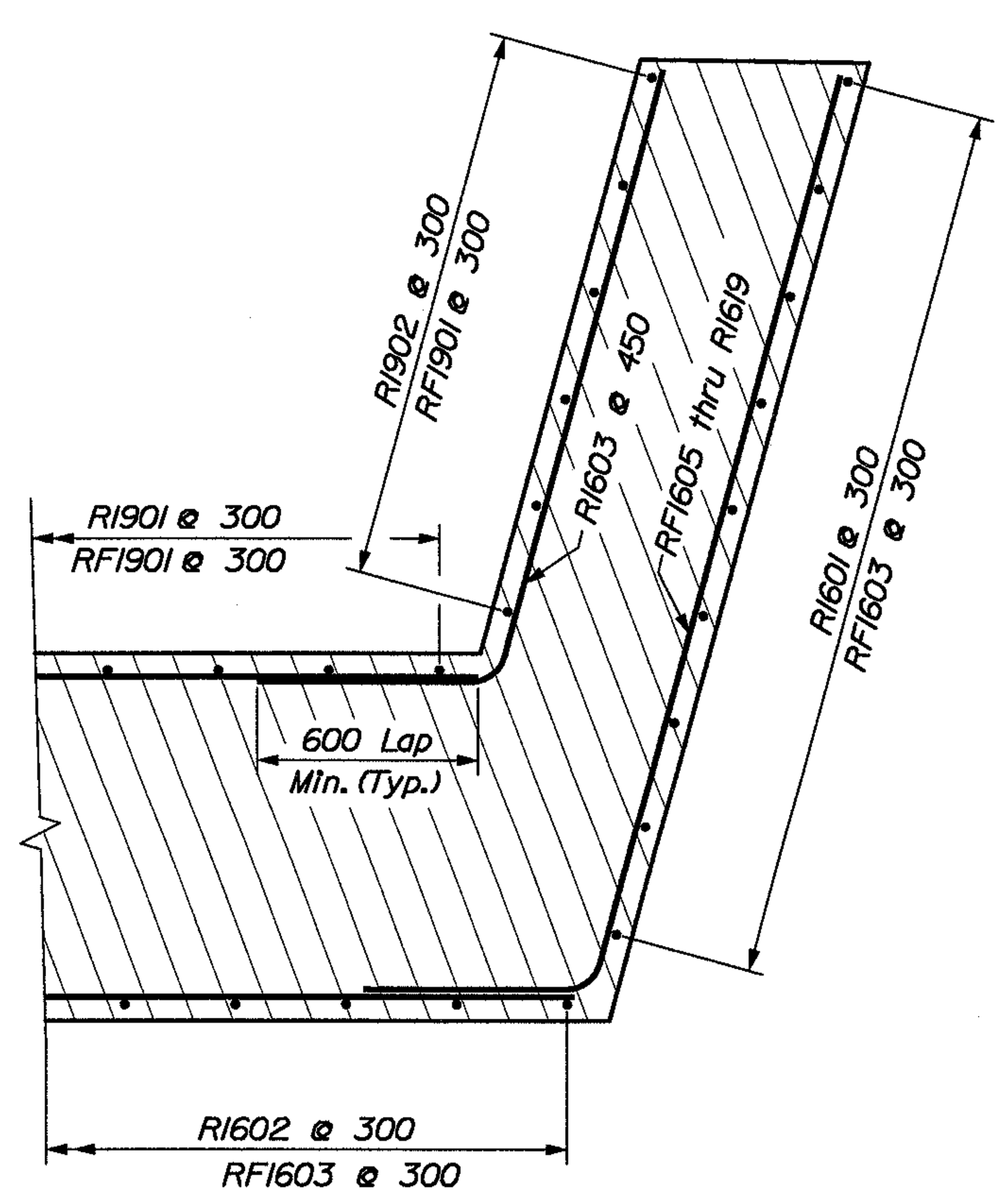
008979.00



VIEW F-F



SECTION G-G



SECTION H-H

Filename: ...\MSTA\060_Retain-wall.dgn   Division: BRIDGE   Username: davistr   Date03/09/2005

PLANS		BY	DATE
PROJECT DESIGN ENGINEER		B. BEARDSLEY	
DESIGN-DETAILED		S. VIJAY	03/08/2005
CHECKED		S. GAUTHIER	B. BEARDSLEY 03/08/2005
REVISIONS			
FIELD CHANGES			

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

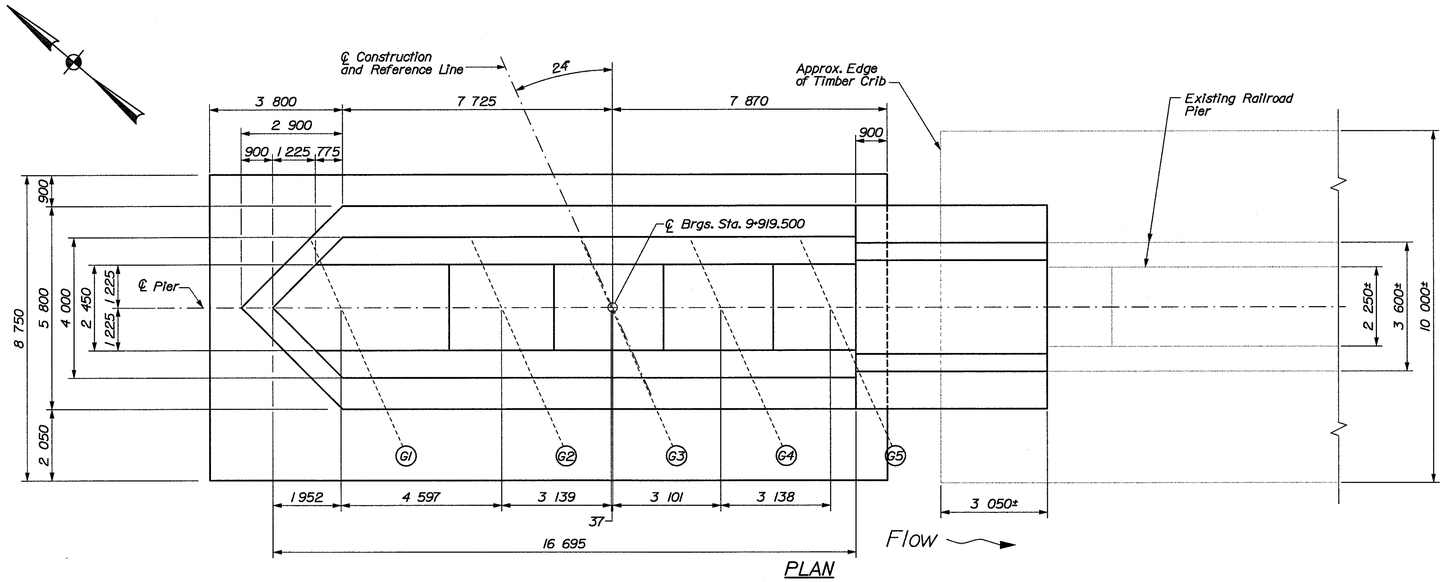
ABUTMENT 2
RETAINING WALL DETAILS

SHEET OF AUGUSTA, MAINE

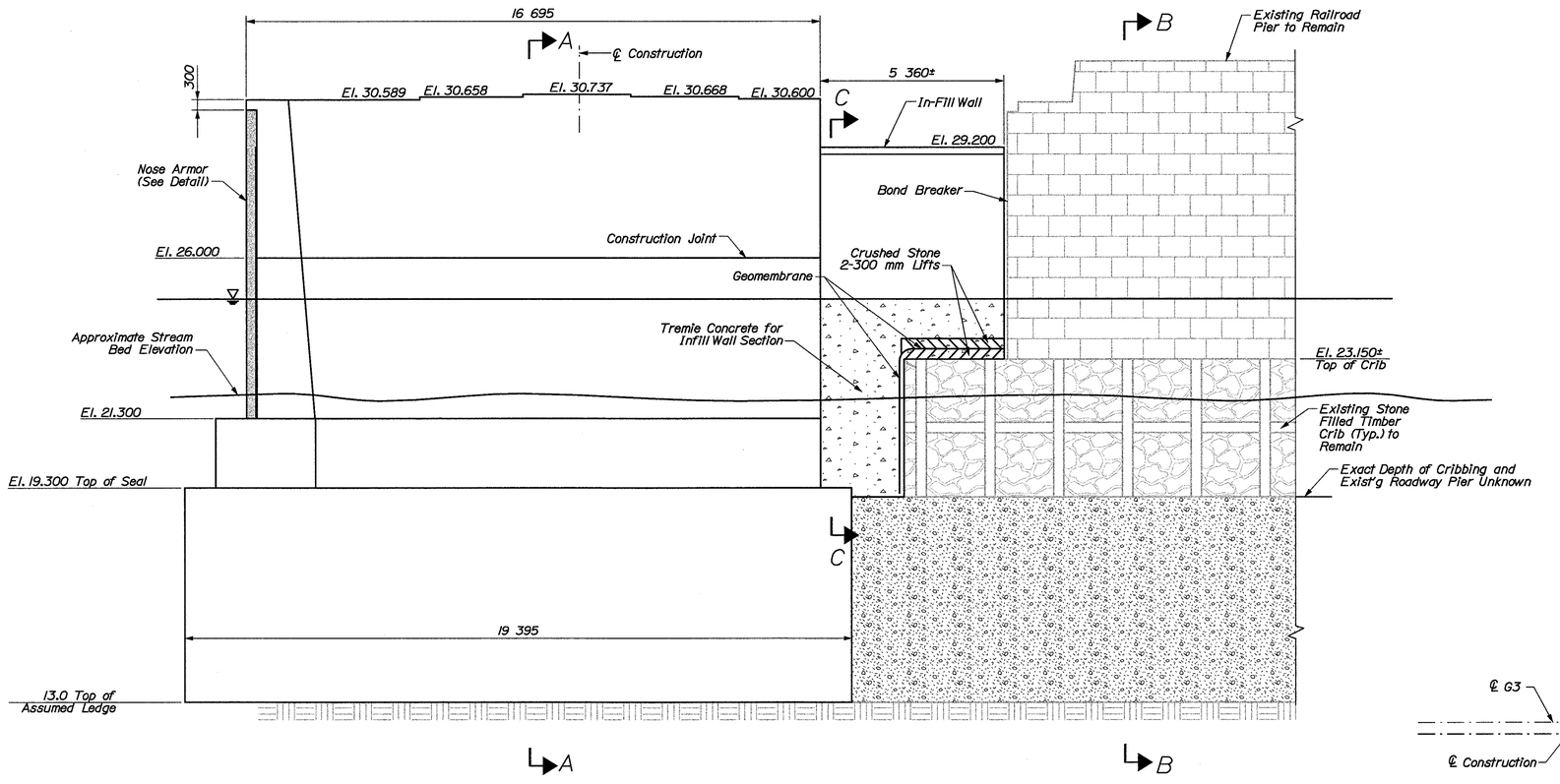
METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	61	90

008979.00



PLAN



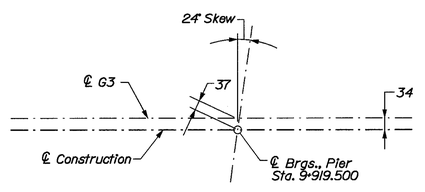
ELEVATION

PIER NOTES:

1. The limits shown on the plans for the timber cribbing under the existing railroad pier located at station 9+913± right are very approximate. The limits of the timber cribbing are based on very limited survey information and a visual inspection by the Maine DOT Dive Team. Maine DOT has not been able to obtain any original or as built plans for the railroad bridge. The actual limits of the timber cribbing may vary. The Contractor shall make every effort to avoid damaging the timber cribbing under the existing railroad pier. These facts should be taken into consideration by the Contractor when bidding.
2. The Contractor shall make very effort to avoid damaging the existing timber cribbing supporting the existing railroad bridge pier at station 9+913± right. The method of installing any steel sheet pile over or in the vicinity of the existing timber cribbing for the railroad bridge pier shall be approved by the Resident and the Railroad. Any damage to the timber cribbing shall be repaired by the Contractor at the Contractor's expense.
3. The elevation of 24.8 m for the top of the tremie concrete for the infill wall section is based on typical water elevations. The actual elevation for the top of the tremie seal may need to be adjusted at the time of construction depending upon the actual water elevation.
4. Reinforcing steel shall have 75 mm minimum cover unless otherwise noted.
5. Maximum calculated pier footing pressure is 530 kPa. Maximum calculated tremie footing pressure is 623 kPa.
6. Design Criteria:
   - A. Critical AASHTO Loading - Extreme Event II.
   - B. Buoyancy - Water level assumed at Elevation 28.99.
   - C. Stream flow - Velocity of 4.00 m/s skewed at 10° to longitudinal centerline of pier.
   - D. Wind - 1.9 kPa.
   - E. Ice - Thickness 700 mm, pressure 1.4 MPa at Elevation 25.54, 30% of nose force applied transverse to pier.
7. Bridge Seat Elevations Based on Assumed Bearing Heights. Actual elevations shall be coordinated with Bearing Manufacturer.
8. The ledge surface shall be cleared of all weathered and fractured material, as directed by the Resident.
9. The ledge surface shall be less than IV:6H or it shall be stepped or level.
10. Excavation of ledge for pier foundation shall be performed using conventional construction equipment, pneumatic/hydraulic hammers/drills, and/or specialized rock drilling equipment, as approved by the Resident. Blasting of ledge for the pier foundation not shall be allowed. The final ledge surface shall be approved by the Resident prior to placement of the pier foundation.
11. The tremie concrete for the Infill Wall Section, elevation 24.8 m and below, shall be paid for under Item 502.24 Structural Concrete Piers (Placed under water).
12. The concrete for the Infill Wall Section elevation 24.8 m and above shall be paid for under Item 502.239 Structural Concrete Piers.
13. A bond breaker shall be used between the Existing Railroad pier and the infill pier. The bond breaker used shall be approved by the Resident and the Railroad.
14. The geomembrane between the layers of crushed stone below the tremie concrete for the infill wall shall have a minimum thickness of 40 mils. The geomembrane shall be approved by the Resident and the Railroad before being installed. The crushed stone below and above the geomembrane shall meet the requirements of subsection 703.12. The geomembrane and crushed stone under the infill pier shall not be paid for directly, but will be considered incidental to related contract items.

SEAL COFFERDAM NOTES:

1. The seal concrete placement dimensions represent the minimum seal necessary for design and are not based on any particular sheet pile section.
2. The cofferdam for the pier will need to be built in two phases. The sheet piling under girder 1 and girder 2 will most likely have to remain in place. The sheet piles to remain in place shall be cut off at stream bed or the top of seal elevation, whichever is higher.
3. The horizontal pay limit for seal concrete shall be to the dimensions shown on the plans. No additional payment will be made for concrete placed outside of these limits.
4. When sheet piling is used for seal cofferdams:
   - A. Appropriate rolled corners shall be used.
   - B. The inside face of the sheet piling shall be at or outside of the seal concrete dimensions shown.
5. The depth of the seal is set for a water elevation of 27.95. If the water elevation at the time of construction is higher, the depth of the seal shall be adjusted.
6. The Resident shall approve the method of placing dowels in the seal concrete.



PIER KEY PLAN

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	T. DAVIS	03/08/2005
REVISIONS	S. PERCASSI	03/08/2005
FIELD CHANGES	S. GAUTHIER	03/08/2005

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

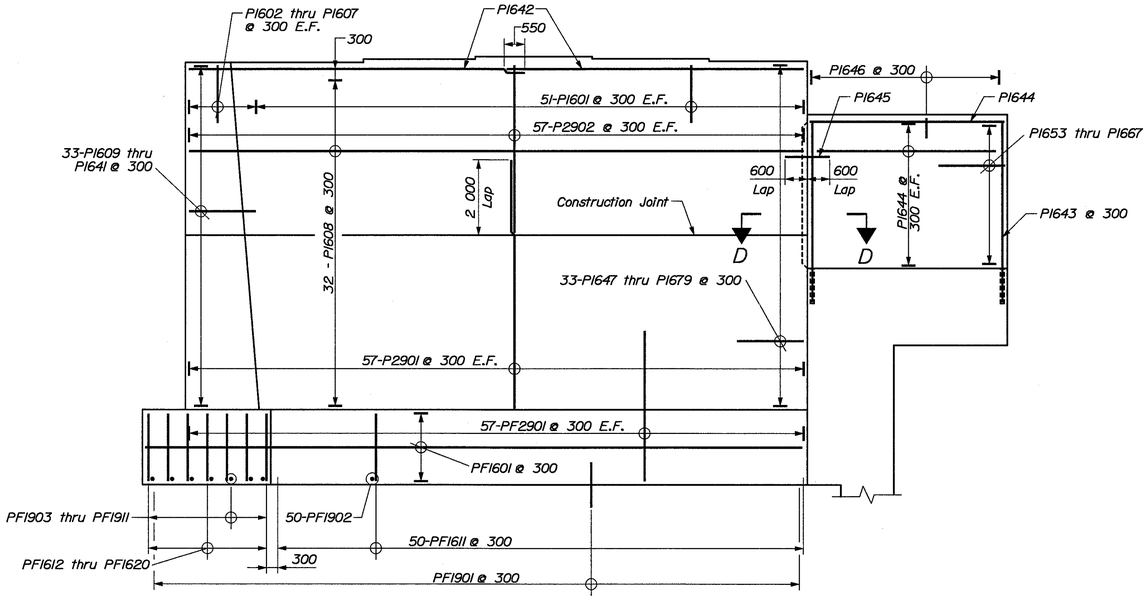
PIER DETAILS

SHEET OF AUGUSTA, MAINE

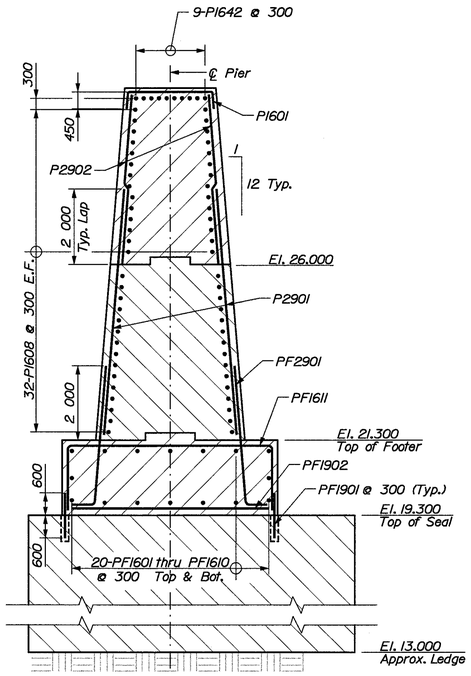
Filename: ...\MSTA\061_NEW_Pier_plnelev.dgn Division: BRIDGE Username: dovistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	62	90

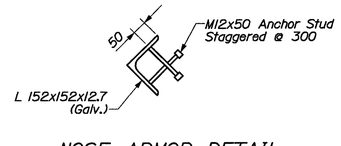
008979.00



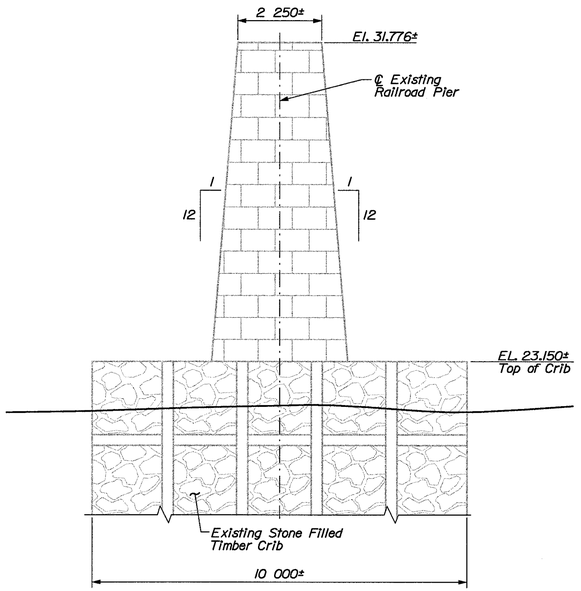
REINFORCEMENT ELEVATION



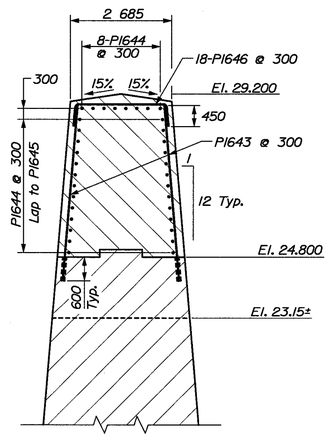
SECTION A-A



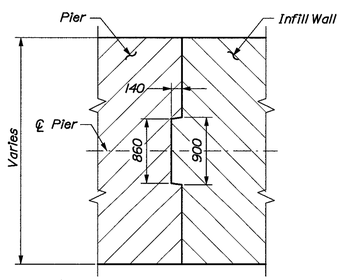
NOSE ARMOR DETAIL



SECTION B-B



SECTION C-C



SECTION D-D

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

PIER REINFORCEMENT

SHEET OF AUGUSTA, MAINE

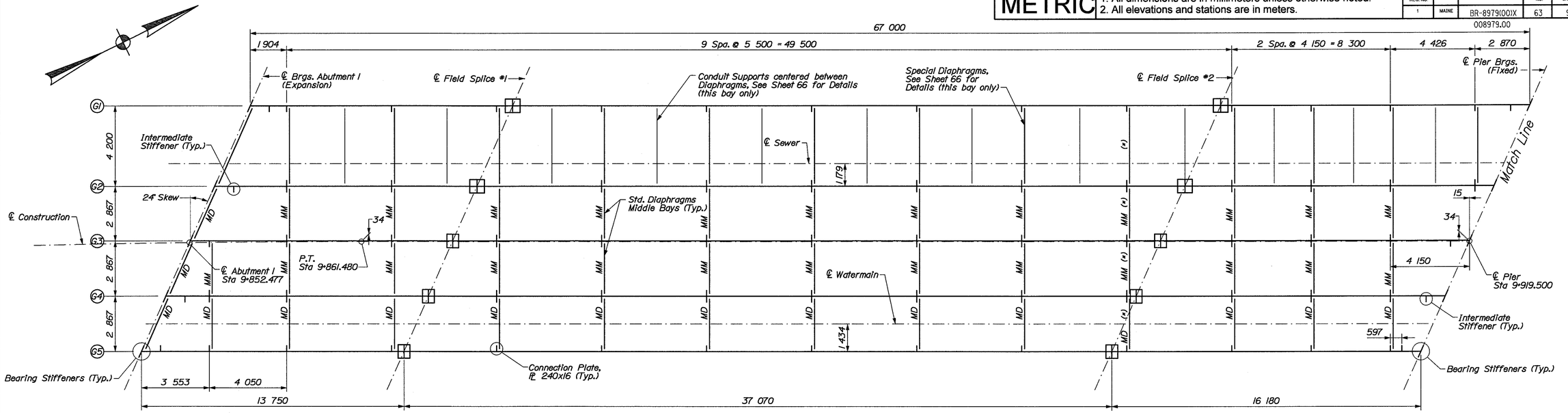
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	S. VIJAY	03/08/2005
REVISIONS	S. PERCASSI	B. BEARDSLEY
FIELD CHANGES		

PLANS

Filename: ...\MSTA\062_NEW_Pier_rein.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	63	90
		008979.00		

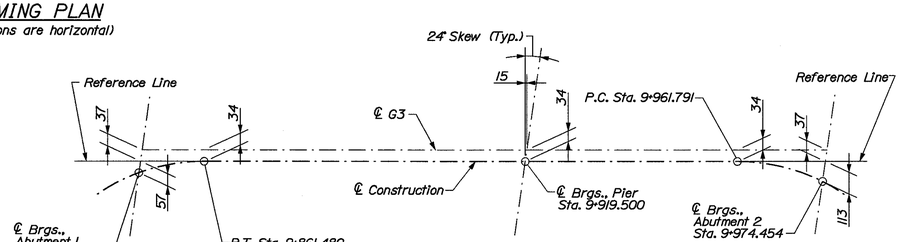


STRUCTURAL STEEL NOTES

1. Camber ordinates as shown are computed to compensate for all dead load deflections and for the curvature of the finished grade profile.
2. Theoretical blocking is 110 mm at the centerline of bearings at Abutment 1, Pier, and Abutment 2. Refer to Standard Details 502 (02) for blocking details.
3. Top and bottom flanges, and web plates in the negative moment section shall be ASTM A709/A709M Grade HPS 485W steel, all other flange and web plates shall be ASTM A709/A709M Grade 345W. All other steel shall be ASTM A709/A709M Grade 345W.
4. No transverse butt-weld splices will be allowed in the flange plates or web plates within 3.0 meters or 10% of the span length (whichever is greater) from the points of maximum negative moment or maximum positive moment. Butt-weld splices in flanges shall be not less than 1.0 meter from transverse butt-welds in the web plates and no transverse web or flange butt-welds shall be located within 1.0 meter of other transverse welds (e.g. connection plates to web welds) on either flange or web. No transverse butt-weld splices will be allowed in areas of stress reversal.
5. Sections of flange plates or web plates between transverse shop splices or between a transverse shop splice and a field splice shall be not less than 6.0 meters in length unless otherwise shown on the plans.
6. All bolted connections shall be made using 22 mm diameter, ASTM 325M, Type 3, high strength bolts. Holes shall be 24 mm diameter.
7. Bearing stiffeners shall be plumb after erection and dead loading of the structure. Intermediate web stiffeners may be either plumb or normal to the top flange.
8. Cross-frame or diaphragm connection plates may be either plumb or normal to the top flange.
9. At locations marked with an asterisk (*), the designated diaphragms shall be changed to a Type MD diaphragm as required to accommodate the Contractor's deck placement sequence. No extra compensation will be allowed for any diaphragms so substituted, and any additional costs will be considered incidental to the Contract items.
10. Type MD diaphragms used as intermediate diaphragms shall be modified to support the 300mm watermain. See sheet 66 for details.
11. Handhold bars shall be installed in accordance with the Plans and Standard Detail 504 (23-24).
12. Drip bars shall be attached to the low end of girders G1 and G5. See sheet 66 for details.
13. The girder ends and end crossframes shall be coated to a distance of three (3) meters from the centerline of bearing at the abutments in accordance with Special Provision Section 506 Protective Coating - Steel (Zinc Rich System).

FRAMING PLAN

(Dimensions are horizontal)



SUPERSTRUCTURE KEY PLAN

PROJECT DESIGN ENGINEER — PLANS

	BY	DATE
DESIGN-DETAILED	S. GAUTHIER	03/09/2005
CHECKED	B. BEARDSLEY	03/09/2005
REVISIONS	S. SCHAFFER	03/09/2005
FIELD CHANGES	S. GAUTHIER	03/09/2005

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

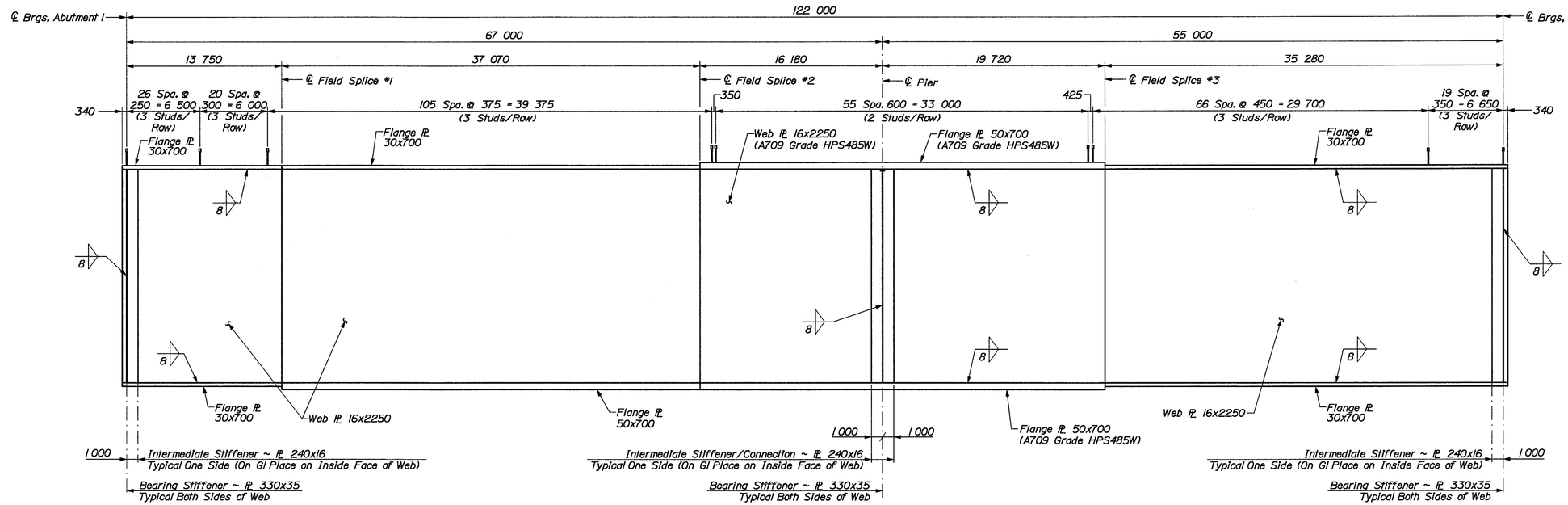
SUPERSTRUCTURE FRAMING PLAN

SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\063_Framing_PLN.dgn Username: davistr Division: BRIDGE Date03/09/2005

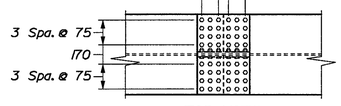
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	64	90

008979.00

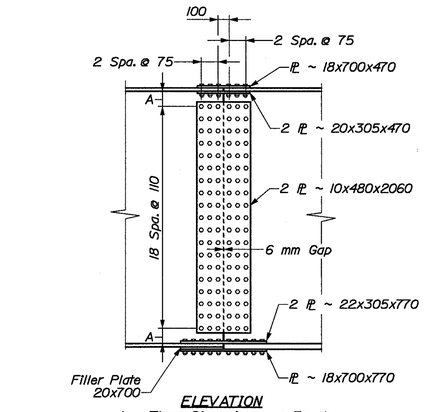


GI & G2 GIRDER ELEVATION

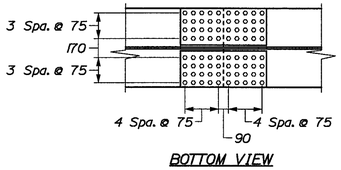
Total Shear Connectors
2 Girders x 826 Studs/Girder = 1652 Ea.



TOP VIEW

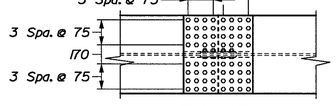


ELEVATION
A ~ These Dimensions are Equal

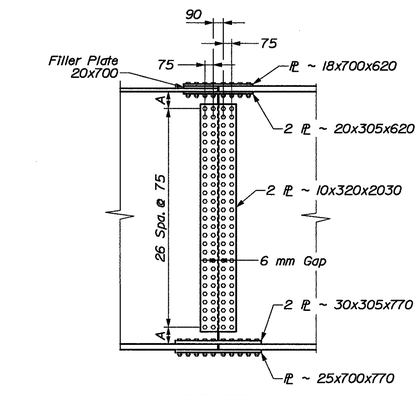


BOTTOM VIEW

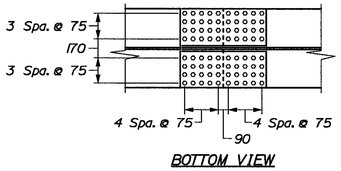
FIELD SPLICE #1 DETAILS



TOP VIEW

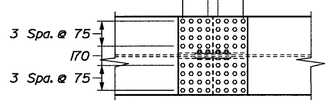


ELEVATION
A ~ These Dimensions are Equal

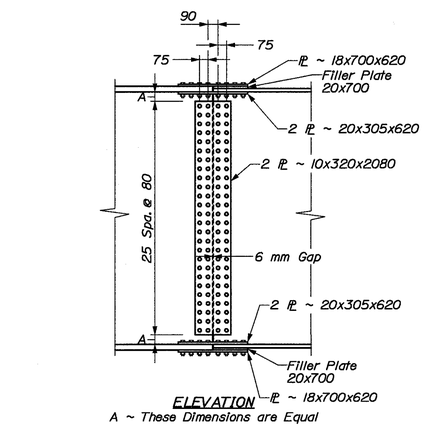


BOTTOM VIEW

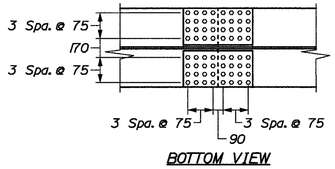
FIELD SPLICE #2 DETAILS



TOP VIEW



ELEVATION
A ~ These Dimensions are Equal



BOTTOM VIEW

FIELD SPLICE #3 DETAILS

PROJECT DESIGN ENGINEER		BY	DATE
	DESIGN-DETAILED	S. GAUTHIER	S. SCHAFFER 03/08/2005
	CHECKED	B. BEARDSLEY	S. GAUTHIER 03/08/2005
PLANS	REVISIONS		
	FIELD CHANGES		

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

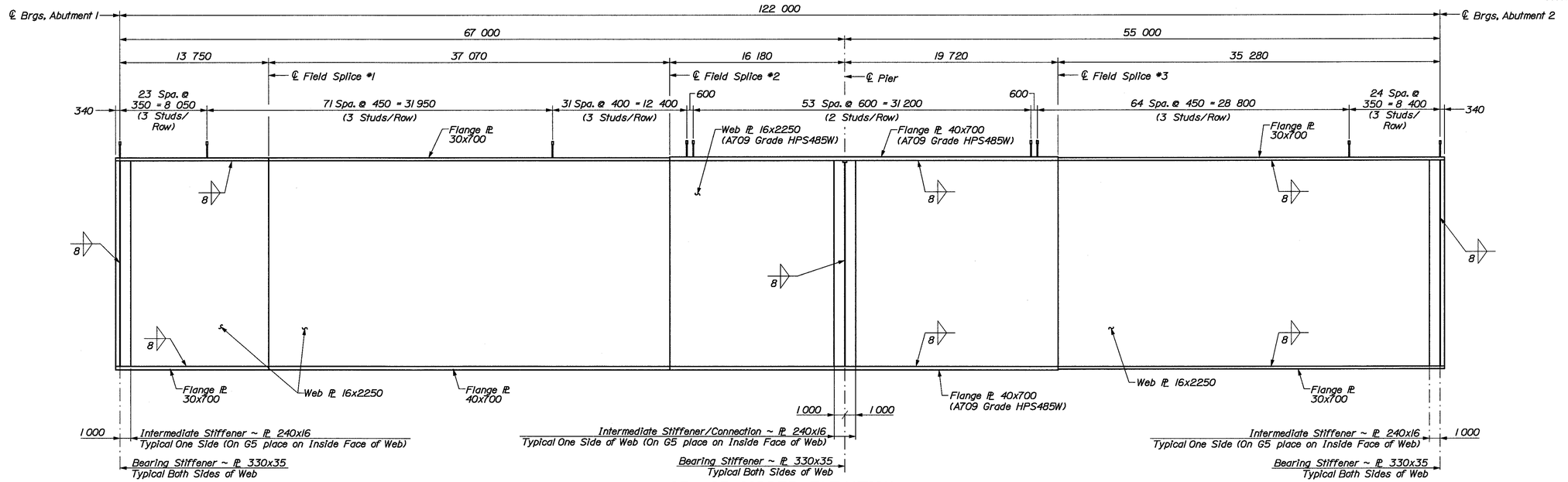
G1 & G2 GIRDER ELEVATION & FIELD SPLICE DETAILS

SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\064_Framing_g1g2.dgn Division: BRIDGE Username: davistr Date:03/09/2005

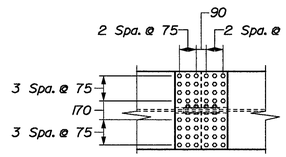
METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	65	90

008979.00

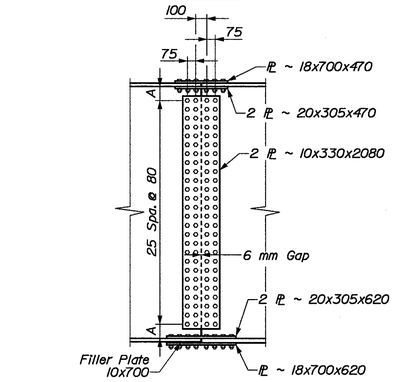


G3 - G5 GIRDER ELEVATION

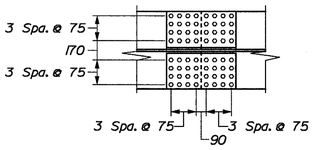
Total Shear Connectors
3 Girders x 753 Studs/Girder = 2259 Ea.



TOP VIEW

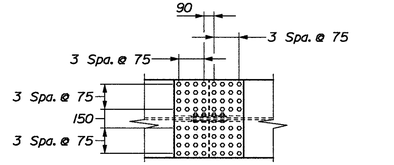


ELEVATION
A ~ These Dimensions are Equal

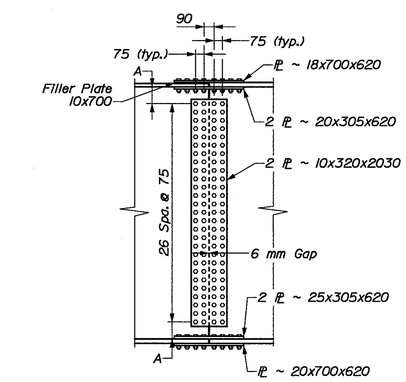


BOTTOM VIEW

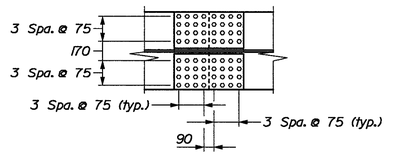
FIELD SPLICE #1 DETAILS



TOP VIEW

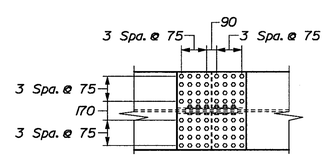


ELEVATION
A ~ These Dimensions are Equal

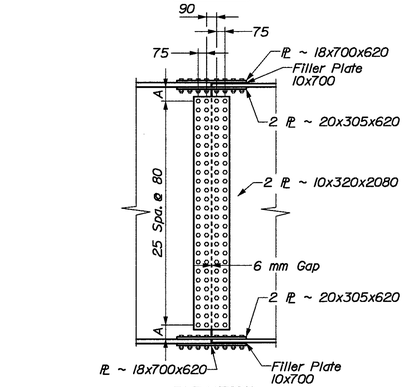


BOTTOM VIEW

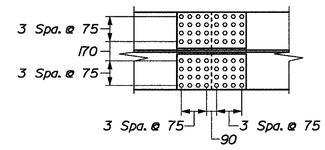
FIELD SPLICE #2 DETAILS



TOP VIEW



ELEVATION
A ~ These Dimensions are Equal



BOTTOM VIEW

FIELD SPLICE #3

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

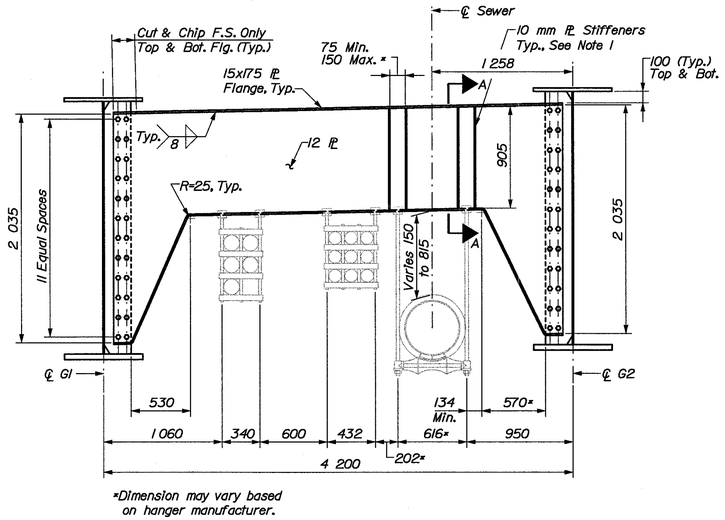
G3, G4, & G5
GIRDER ELEVATION & FIELD SPLICE DETAILS

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	S. GAUTHIER	S. SCHAFFER	03/08/2005
	CHECKED	B. BEARDSLEY	S. GAUTHIER	03/08/2005
	REVISIONS			
	FIELD CHANGES			

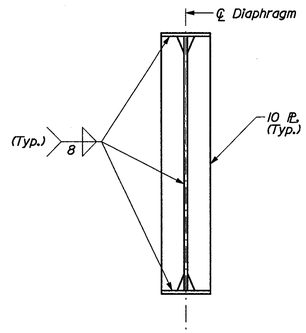
Filename: ...\MSTA\065_Framing_g3-g5.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X 008979.00	66	90

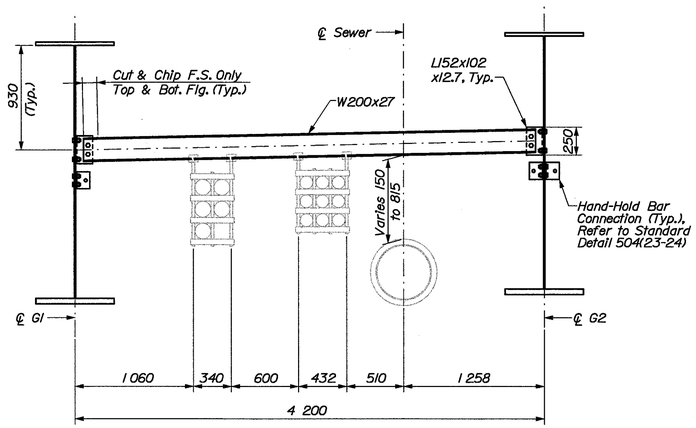


*Dimension may vary based on hanger manufacturer.

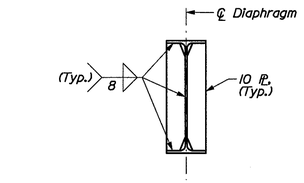
G1-G2 DIAPHRAGM DETAILS



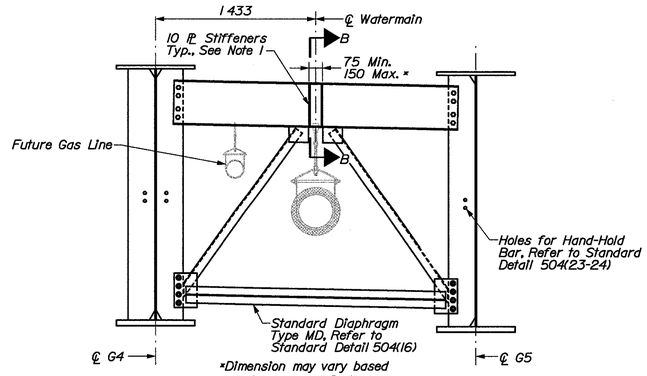
SECTION A-A



CONDUIT SUPPORT DETAILS



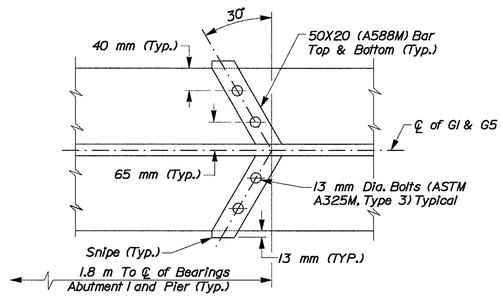
SECTION B-B



*Dimension may vary based on hanger manufacturer.

MODIFIED TYPE MD CROSSFRAME

Used Between G4 & G5



Place brown color silicone sealer between drip bars and flange and web prior to bolting. Bars below flange shall be longer than those above so as to touch at ℄ of girder.

DRIP BAR DETAIL

NOTES:

1. Locate stiffeners on both sides of the diaphragm web and on both sides of pipe hanger connection.
2. The utility support connections shown herein are conceptual. Refer to the Utility Drawings for actual orientation, configuration and connection details.
3. The Contractor shall be responsible to coordinate with the various utility organizations, the required hardware necessary to support their respective utilities.

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

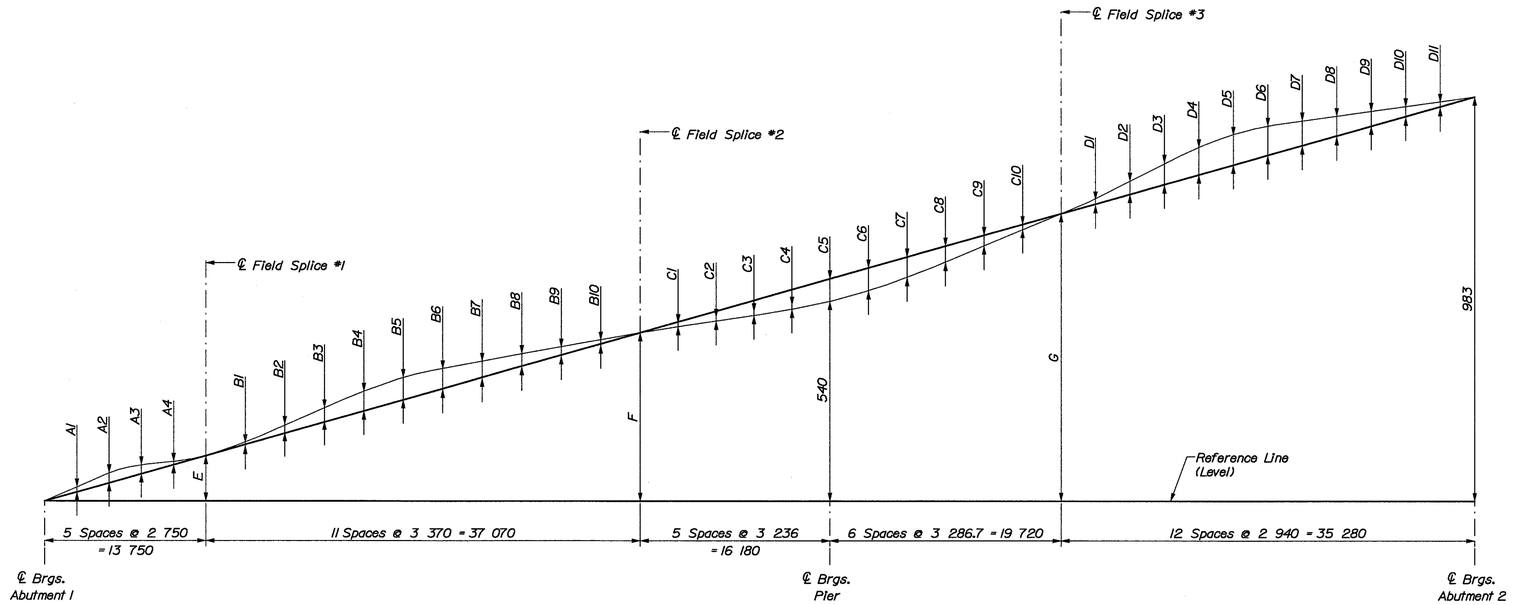
DIAPHRAGM DETAILS

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	S. GAUTHIER	S. SCHAFFER	03/08/2005
	CHECKED	B. BEARDSLEY	S. GAUTHIER	03/08/2005
	REVISIONS			
	FIELD CHANGES			

Filename: ...\066_Framing_util-details.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	67	90
				008979.00		



CAMBER DIAGRAM

	E	F	G
G1	299	542	737
G2	321	557	742
G3	299	547	738
G4	305	551	739
G5	289	539	736

TABLE OF CAMBER ORDINATES

BEAM NUMBER	℄ Brgs. Abutment 1	A1	A2	A3	A4	℄ Splice 1	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	℄ Splice 2	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	℄ Splice 3	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	℄ Brgs. Abutment 2
Beam 1	0	6	8	9	7	0	37	65	87	100	105	103	92	76	54	29	0	-24	-46	-67	-82	-90	-88	-78	-63	-44	-22	0	15	29	40	49	54	56	54	48	39	28	14	0
Beam 2	0	6	9	10	8	0	41	73	97	112	117	114	103	85	60	32	0	-26	-52	-75	-92	-100	-98	-87	-70	-49	-25	0	17	32	45	55	61	62	60	54	44	31	16	0
Beam 3	0	5	8	9	6	0	37	67	88	102	108	105	95	79	56	30	0	-24	-48	-69	-85	-93	-91	-81	-65	-45	-23	0	15	28	39	47	52	53	51	46	37	27	14	0
Beam 4	0	5	8	9	7	0	38	68	91	105	111	108	98	81	58	31	0	-25	-49	-71	-87	-95	-93	-83	-67	-46	-23	0	15	29	40	48	53	55	53	47	38	27	14	0
Beam 5	0	5	7	8	6	0	35	63	83	96	101	99	89	74	53	28	0	-23	-45	-65	-80	-87	-85	-76	-61	-42	-21	0	14	26	37	44	49	50	48	43	35	25	13	0

BOTTOM OF SLAB ELEVATIONS - SPAN 1

BEAM NUMBER	℄ Brgs. Abutment 1	+3 000	+6 000	+9 000	+12 000	+15 000	+18 000	+21 000	+24 000	+27 000	+30 000	+33 000	+36 000	+39 000	+42 000	+45 000	+48 000	+51 000	+54 000	+57 000	+60 000	+63 000	+66 000	℄ Brgs. Pier	BEAM NUMBER
Beam 1	32.680	32.743	32.803	32.860	32.913	32.963	33.007	33.048	33.084	33.114	33.139	33.158	33.173	33.184	33.191	33.195	33.196	33.196	33.195	33.196	33.199	33.205	33.216	33.220	Beam 1
Beam 2	32.749	32.817	32.882	32.944	33.002	33.055	33.103	33.145	33.184	33.214	33.239	33.258	33.271	33.279	33.285	33.286	33.283	33.280	33.277	33.274	33.274	33.277	33.286	33.289	Beam 2
Beam 3	32.795	32.858	32.917	32.975	33.028	33.078	33.124	33.165	33.202	33.233	33.259	33.278	33.293	33.304	33.312	33.316	33.316	33.316	33.316	33.315	33.317	33.322	33.332	33.336	Beam 3
Beam 4	32.731	32.794	32.854	32.911	32.967	33.018	33.064	33.106	33.142	33.173	33.200	33.220	33.234	33.245	33.251	33.254	33.255	33.254	33.252	33.251	33.251	33.255	33.266	33.270	Beam 4
Beam 5	32.663	32.722	32.778	32.833	32.885	32.933	32.977	33.018	33.053	33.083	33.108	33.128	33.144	33.158	33.166	33.170	33.173	33.174	33.175	33.178	33.180	33.186	33.198	33.202	Beam 5

BOTTOM OF SLAB ELEVATIONS - SPAN 2

BEAM NUMBER	℄ Brgs. Pier	+3 000	+6 000	+9 000	+12 000	+15 000	+18 000	+21 000	+24 000	+27 000	+30 000	+33 000	+36 000	+39 000	+42 000	+45 000	+48 000	+51 000	+54 000	℄ Brgs. Abutment 2	BEAM NUMBER
Beam 1	33.220	33.239	33.263	33.292	33.325	33.358	33.392	33.426	33.460	33.492	33.523	33.550	33.573	33.594	33.612	33.627	33.639	33.648	33.656	33.659	Beam 1
Beam 2	33.289	33.307	33.331	33.361	33.395	33.429	33.465	33.501	33.536	33.569	33.601	33.628	33.652	33.672	33.688	33.702	33.714	33.720	33.727	33.729	Beam 2
Beam 3	33.336	33.355	33.379	33.408	33.440	33.474	33.508	33.542	33.575	33.606	33.637	33.663	33.687	33.708	33.725	33.741	33.754	33.765	33.774	33.777	Beam 3
Beam 4	33.270	33.289	33.313	33.342	33.373	33.409	33.442	33.477	33.511	33.542	33.572	33.599	33.623	33.644	33.661	33.676	33.690	33.701	33.711	33.715	Beam 4
Beam 5	33.202	33.221	33.245	33.275	33.306	33.338	33.372	33.405	33.438	33.470	33.499	33.525	33.549	33.570	33.588	33.605	33.618	33.632	33.643	33.647	Beam 5

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

CAMBER DATA

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	S. GAUTHER	
CHECKED	B. BEARDSLEY	
REVISIONS	S. SCHAFFER	03/08/2005
FIELD CHANGES	S. GAUTHER	03/08/2005
PLANS		

Filename: ...\MSTA\067_Camber_Table.dgn Division: BRIDGE Username: dovistr Date:03/09/2005

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	S. GAUTHIER	03/08/2005
	CHECKED	S. SCHAFFER	03/08/2005
	REVISIONS	B. BEARDSLEY	S. GAUTHIER
	FIELD CHANGES		

METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	68	90

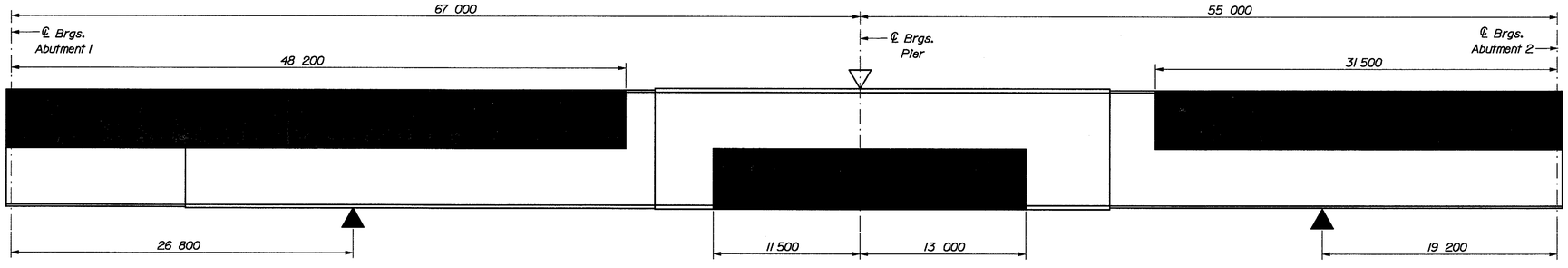
008979.00

TABLE OF DEFLECTIONS - SPAN 1

	BEAM NUMBER	℄ Brgs. Abutment 1	+3 000	+6 000	+9 000	+12 000	+15 000	+18 000	+21 000	+24 000	+27 000	+30 000	+33 000	+36 000	+39 000	+42 000	+45 000	+48 000	+51 000	+54 000	+57 000	+60 000	+63 000	+66 000	℄ Brgs. Pier
GIRDER #1	Steel Dead Load	0	9	18	25	33	39	44	47	50	52	52	51	48	45	41	36	31	25	19	14	9	4	1	0
	Fluid Dead Load	0	30	58	84	107	127	143	156	165	169	170	166	158	148	134	118	100	81	62	44	27	13	3	0
	Superimposed Dead Ld.	0	8	16	23	29	35	39	43	45	47	47	46	45	42	38	34	29	24	18	13	8	4	1	0
	Total Camber	0	47	91	132	169	200	226	246	260	268	269	263	251	235	213	188	160	130	100	71	44	21	5	0
	Total Blocking	0	38	74	107	136	162	183	199	210	216	217	212	203	189	172	152	129	105	81	57	35	17	4	0
GIRDER #2	Steel Dead Load	0	9	18	25	33	39	44	47	50	52	52	51	48	45	41	36	31	25	19	14	9	4	1	0
	Fluid Dead Load	0	36	69	100	128	152	171	186	197	202	203	198	189	176	160	141	119	97	75	53	33	16	4	0
	Superimposed Dead Ld.	0	8	15	22	28	33	38	41	44	45	45	45	43	40	37	33	28	23	18	13	8	4	1	0
	Total Camber	0	53	102	148	189	224	252	275	290	299	300	293	280	262	238	210	178	145	112	79	49	24	5	0
	Total Blocking	0	44	84	122	156	185	209	227	240	247	248	243	232	217	197	173	148	120	92	65	40	19	5	0
GIRDER #3	Steel Dead Load	0	9	18	26	33	39	45	49	51	53	53	52	50	47	43	38	32	26	20	15	9	4	1	0
	Fluid Dead Load	0	29	56	82	104	124	141	154	163	168	169	165	158	148	135	119	101	82	64	45	28	14	3	0
	Superimposed Dead Ld.	0	9	17	24	31	37	42	46	49	51	52	51	49	46	42	38	32	27	21	15	9	4	1	0
	Total Camber	0	47	90	132	169	201	228	249	263	272	274	268	257	241	220	194	166	135	105	75	46	22	5	0
	Total Blocking	0	38	73	106	136	162	183	200	212	219	220	216	207	194	177	156	134	109	84	60	37	18	4	0
GIRDER #4	Steel Dead Load	0	9	18	26	33	39	45	49	51	53	53	52	50	47	43	38	32	26	20	15	9	4	1	0
	Fluid Dead Load	0	30	59	85	109	130	147	161	170	175	176	173	165	155	141	124	106	86	66	47	29	14	3	0
	Superimposed Dead Ld.	0	9	17	24	31	37	42	46	49	51	52	51	49	46	42	38	32	27	21	15	9	4	1	0
	Total Camber	0	48	93	136	174	207	234	256	271	280	281	276	265	248	226	200	171	139	108	77	47	23	5	0
	Total Blocking	0	39	75	110	141	167	190	207	219	226	228	224	214	201	183	162	138	113	87	62	38	18	4	0
GIRDER #5	Steel Dead Load	0	9	18	26	33	39	45	49	51	53	53	52	50	47	43	38	32	26	20	15	9	4	1	0
	Fluid Dead Load	0	26	50	73	94	111	126	138	146	150	151	148	142	133	121	106	91	74	57	41	25	12	3	0
	Superimposed Dead Ld.	0	9	17	25	32	39	44	48	51	53	53	52	50	48	44	39	33	27	21	15	9	4	1	0
	Total Camber	0	44	85	124	159	189	214	234	248	256	258	253	242	227	207	183	156	127	99	70	43	21	5	0
	Total Blocking	0	35	67	98	126	150	170	185	197	203	204	200	192	180	164	145	124	101	78	56	34	17	4	0

TABLE OF DEFLECTIONS - SPAN 2

	BEAM NUMBER	℄ Brgs. Pier	+3 000	+6 000	+9 000	+12 000	+15 000	+18 000	+21 000	+24 000	+27 000	+30 000	+33 000	+36 000	+39 000	+42 000	+45 000	+48 000	+51 000	+54 000	℄ Brgs. Abutment 2
GIRDER #1	Steel Dead Load	0	-1	-2	-1	0	2	4	6	9	10	12	13	13	12	11	9	7	4	1	0
	Fluid Dead Load	0	-4	-4	-1	5	12	19	27	35	41	46	48	48	46	41	34	26	15	4	0
	Superimposed Dead Ld.	0	-1	-1	1	3	5	8	10	12	14	15	16	15	14	13	11	8	5	1	0
	Total Camber	0	-6	-6	-1	8	19	31	44	56	65	73	77	76	73	65	54	40	24	6	0
	Total Blocking	0	-5	-5	0	7	17	27	37	47	55	61	64	64	61	54	45	33	20	5	0
GIRDER #2	Steel Dead Load	0	-1	-2	-1	0	2	4	6	9	10	12	13	13	12	11	9	7	4	1	0
	Fluid Dead Load	0	-5	-5	-1	6	14	23	33	42	49	55	58	58	55	49	41	31	18	5	0
	Superimposed Dead Ld.	0	-1	-1	1	3	5	8	10	12	14	15	15	15	14	12	10	8	4	1	0
	Total Camber	0	-7	-7	-1	9	21	35	49	62	73	81	86	86	81	73	61	45	27	7	0
	Total Blocking	0	-6	-5	0	8	19	31	42	54	63	69	73	73	69	62	52	38	23	6	0
GIRDER #3	Steel Dead Load	0	-1	-2	-1	1	3	5	7	9	11	13	13	13	13	11	9	7	4	1	0
	Fluid Dead Load	0	-4	-4	-1	4	11	19	26	33	39	43	45	45	43	38	32	24	14	4	0
	Superimposed Dead Ld.	0	-1	-1	1	3	6	8	11	13	14	16	16	16	15	13	11	8	5	1	0
	Total Camber	0	-7	-7	-1	8	19	32	44	55	64	71	75	74	70	63	52	39	23	6	0
	Total Blocking	0	-5	-5	0	7	17	27	37	46	53	59	61	61	58	51	43	32	19	5	0
GIRDER #4	Steel Dead Load	0	-1	-2	-1	1	3	5	7	9	11	13	13	13	13	11	9	7	4	1	0
	Fluid Dead Load	0	-4	-4	-1	4	12	19	27	35	41	45	47	47	45	40	33	25	15	4	0
	Superimposed Dead Ld.	0	-1	-1	1	3	6	8	11	13	14	16	16	16	15	13	11	8	5	1	0
	Total Camber	0	-7	-7	-1	8	20	33	45	57	66	73	77	76	72	65	54	40	23	6	0
	Total Blocking	0	-5	-5	-1	7	17	28	38	47	55	61	63	63	60	53	44	33	19	5	0
GIRDER #5	Steel Dead Load	0	-1	-2	-1	1	3	5	7	9	11	13	13	13	13	11	9	7	4	1	0
	Fluid Dead Load	0	-4	-4	-1	4	10	17	23	30	35	39	41	41	39	35	29	21	13	3	0
	Superimposed Dead Ld.	0	-1	-1	1	3	5	8	11	13	15	16	16	16	15	13	11	8	5	1	0
	Total Camber	0	-6	-6	-1	7	18	30	41	52	61	67	70	70	66	59	49	36	21	5	0
	Total Blocking	0	-5	-5	0	7	15	25	34	43	49	54	57	57	54	48	40	29	17	4	0



BEAM STRESS DIAGRAM ~ G1 - G5

Shaded Areas Always in Compression

▽ ~ Maximum Negative Moment

▲ ~ Maximum Positive Moment

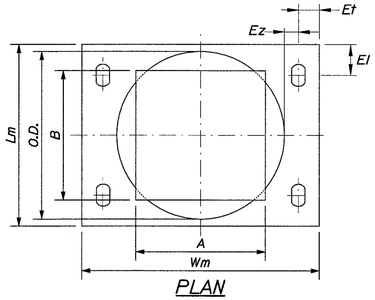
BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

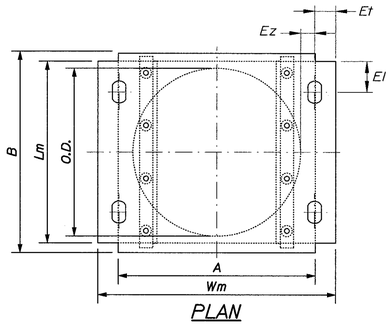
OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BLOCKING DATA

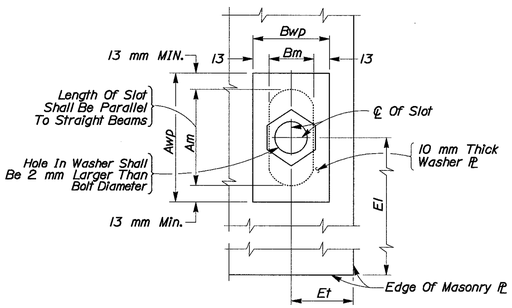
SHEET OF AUGUSTA, MAINE



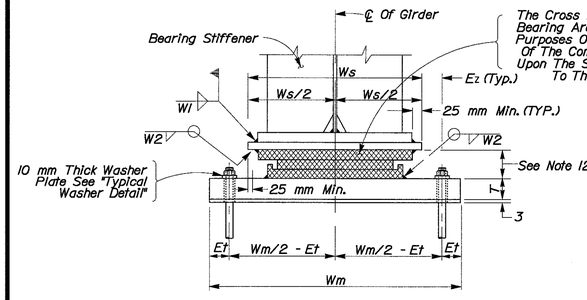
PLAN



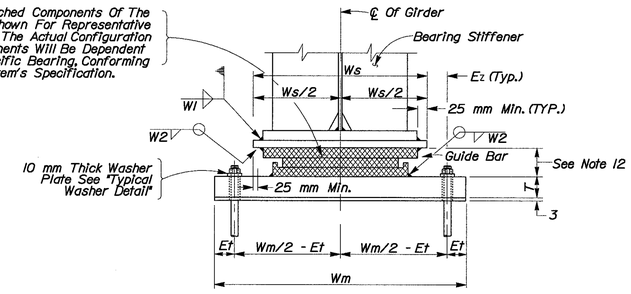
PLAN



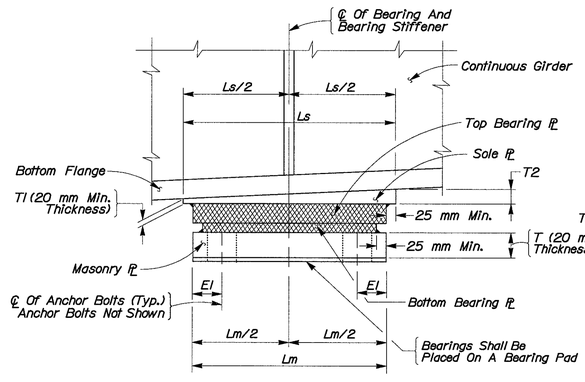
TYPICAL WASHER DETAIL



FRONT VIEW

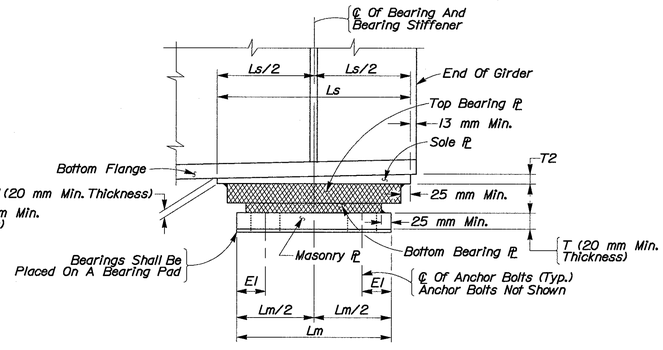


FRONT VIEW



SIDE VIEW

FIXED H.L.M.R. BEARING



SIDE VIEW

EXPANSION H.L.M.R. BEARING

BEARING TABLE

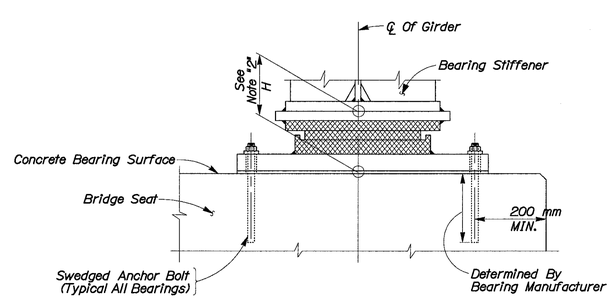
LOCATION	FIX./ EXP.	QUAN. REQ'D.	UNFACTORED DESIGN LOADS (kN)		DESIGN ROTATION (RADIALS)		*ONE WAY LONGIT. MOVEMENT	(G) GUIDE CLEARANCE	MASONRY PL						WASHER PL		SOLE PL				BRG. H	ANCHOR BOLTS		WELD SIZE	
			DEAD LOAD	LIVE LOAD	DEAD LOAD	LIVE LOAD			Lm	Wm	T	Et	El	Am	Bm	Awp	Bwp	Ls	Ws	T1	T2		DIA.	BOLTS/BRG.	W1	W2
G1 & G2: Abut. #1	Exp.	2	1142.2	1060.2	0.017	0.008	52															258				
G3 - G5: Abut. #1	Exp.	3	968.1	660.3	0.005	0.008	52															256				
G1 & G2: Pier	Fix.	2	3420.2	1856.1	0.003	0.007	-	-														224				
G3 - G5: Pier	Fix.	3	2888.1	1227.0	0.002	0.007	-	-														215				
G1 & G2: Abut. #2	Exp.	2	795.4	727.0	0.007	0.008	42															242				
G3 - G5: Abut. #2	Exp.	3	687.9	606.4	0.005	0.007	42															173				

T2 IS UPSTATION OF T1.

*One Way Longitudinal Movement is the Maximum One Way Movement of the Superstructure when Bearings are Set at 20°C Plus 25 mm of Tolerance.

NOTES:

1. Refer to the Standard Specifications for Design, Material, Fabrication, and General Construction Requirements.
2. The actual dimension "H" shall be the responsibility of the Contractor. Dimensions and sizes of plates not shown are dependent on design loads, bearing type, capacity, and the manufacturer of the bearings. The shop drawings, prepared by the manufacturer, shall provide all pertinent bearing information. The final bridge seat elevations shall be determined by the Contractor and submitted with the shop drawings for approval prior to construction of the substructure units.
3. Masonry plates shall be placed on 6 mm thick preformed pads in accordance with the Specifications.
4. All steel, except anchor rods, shall be AASHTO M270, Grade 345 W.
5. Anchor rods shall meet the requirements or ASTM F1554, Grade 345 W, and swedged on the embedded portion of the rod.
6. Anchor bolt spacing shall be coordinated with the bearing manufacturer.
7. Bearing installation shall be in strict conformance with the Special Provisions and the manufacturer's recommendations.
8. The abbreviation "PTFE" indicates Polytetrafluoroethylene.
9. The design temperature range shall be 84°C (-34°C to 50°C)
10. At abutment bearings only, all steel located below the PTFE sliding surface shall be coated in accordance with Special Provisions, Section 506, Protective Coating-Steel (Thermal Spray Coating). All remaining steel at abutment bearings shall be coated in accordance with Special Provision, Section 506, Protective Coating-Steel (Zinc Rich System).
11. All bearings shall be marked prior to shipping. The marks shall include the bearing location on the bridge, and a direction arrow that points up-station. All marks shall be permanent and shall be visible after the bearing is installed.
12. If the anchor bolts are set under the sole plate, a minimum clearance equal to two times the thickness of anchor nut plus 25 mm shall be maintained between the top of masonry plate and bottom of sole plate.



TYPICAL BEARING DETAIL

(Fixed Bearing Shown, Expansion Bearing Similar)

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

BEARING DETAILS

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	T. DAVIS	03/08/2005
REVISIONS	S. GAUTHIER	
FIELD CHANGES	S. GAUTHIER	

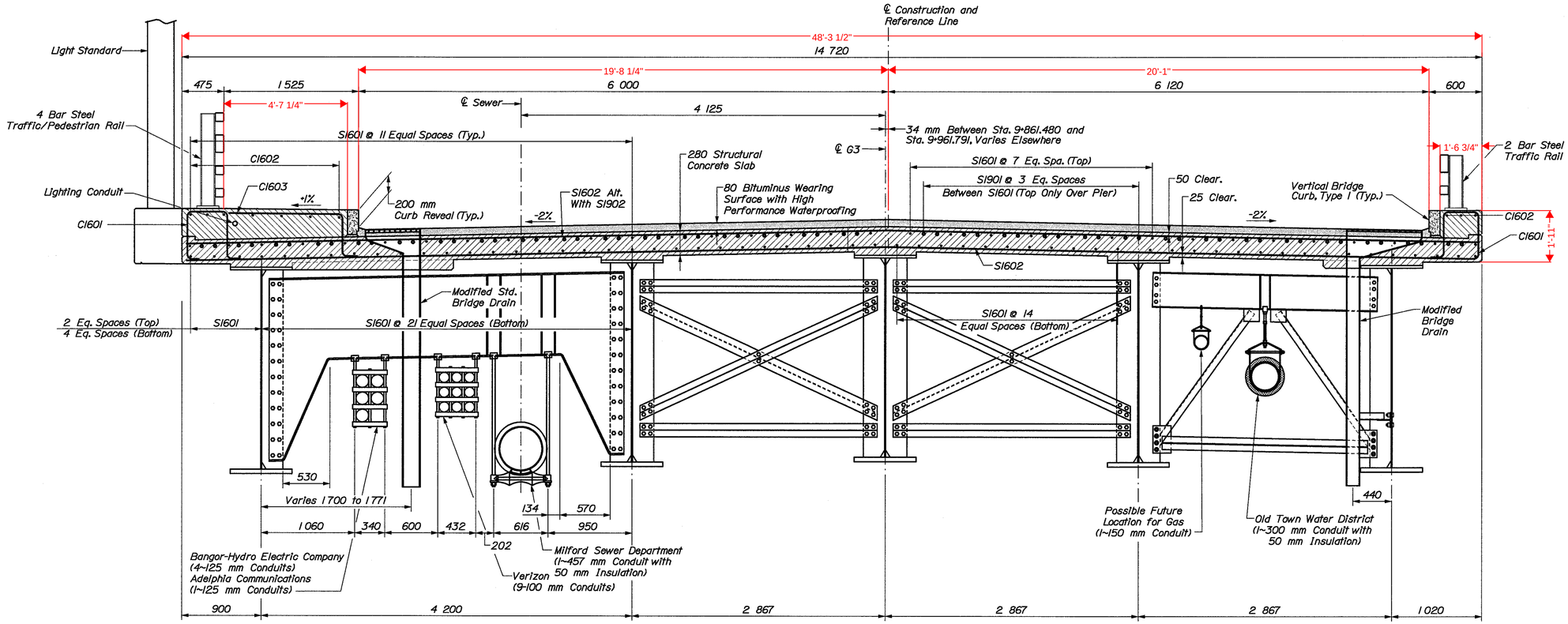
PLANS

Filename: ...\MSTA\069_Bearings_details.dgn Division: BRIDGE Username: davistr Date:03/09/2005

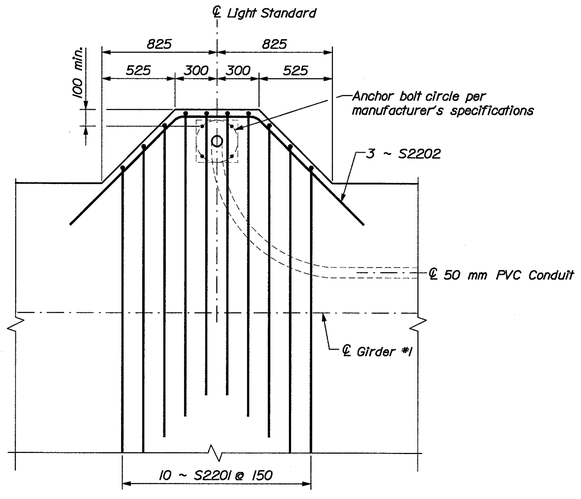
METRIC 1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	70	90

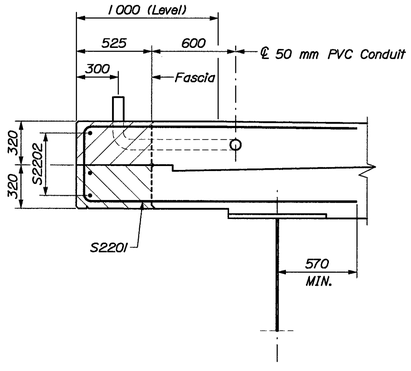
008979.00



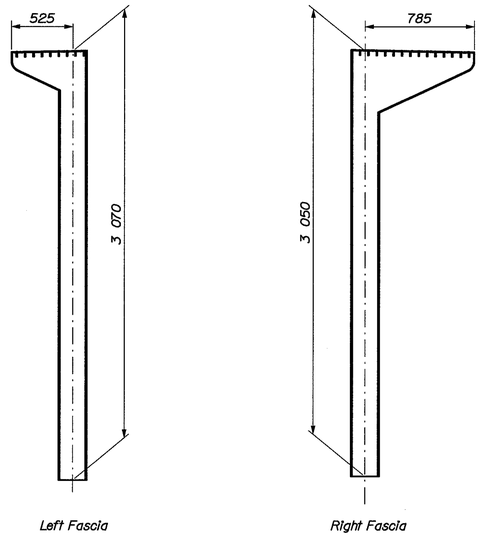
TRANSVERSE SECTION



PLAN ~ LIGHT STANDARD BASE



SECTION THRU LIGHT STANDARD BASE



BRIDGE DRAIN MODIFICATION

See Miscellaneous Details for additional information

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	S. GAUTHIER	03/08/2005
CHECKED	B. BEARDSLEY	03/08/2005
REVISIONS	T. DAVIS	03/08/2005
FIELD CHANGES	S. GAUTHIER	03/08/2005

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

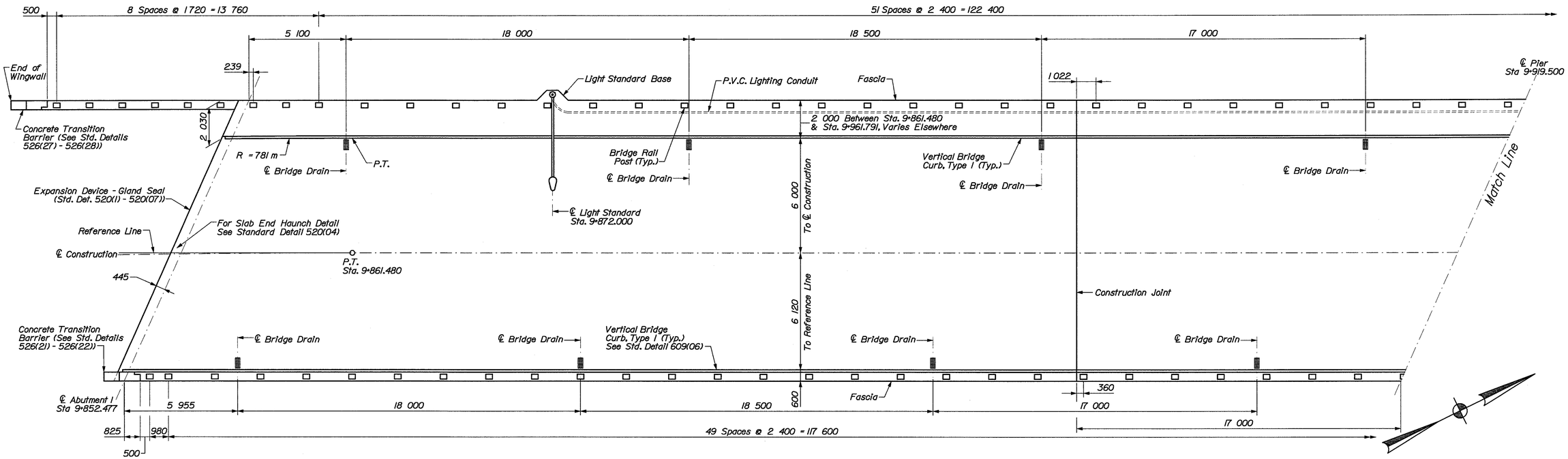
TRANSVERSE SECTION

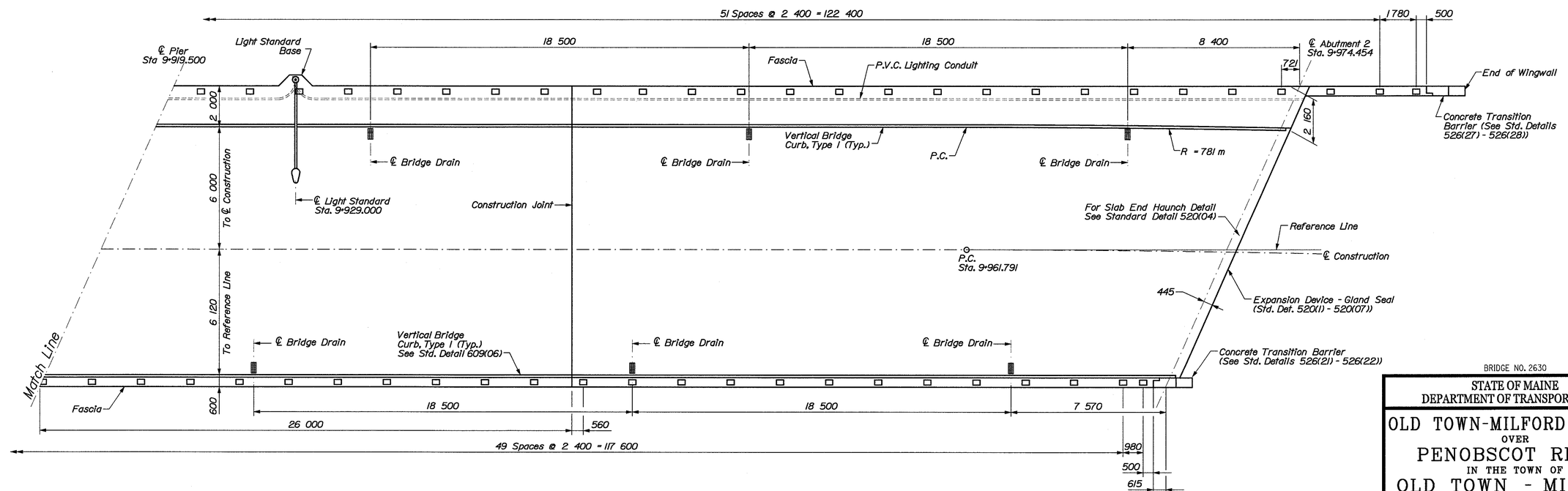
SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\070_Bridge_transsec.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	71	90

008979.00





SUPERSTRUCTURE PLAN

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY, T. DAVIS	03/08/2005
CHECKED	S. GAUTHIER	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

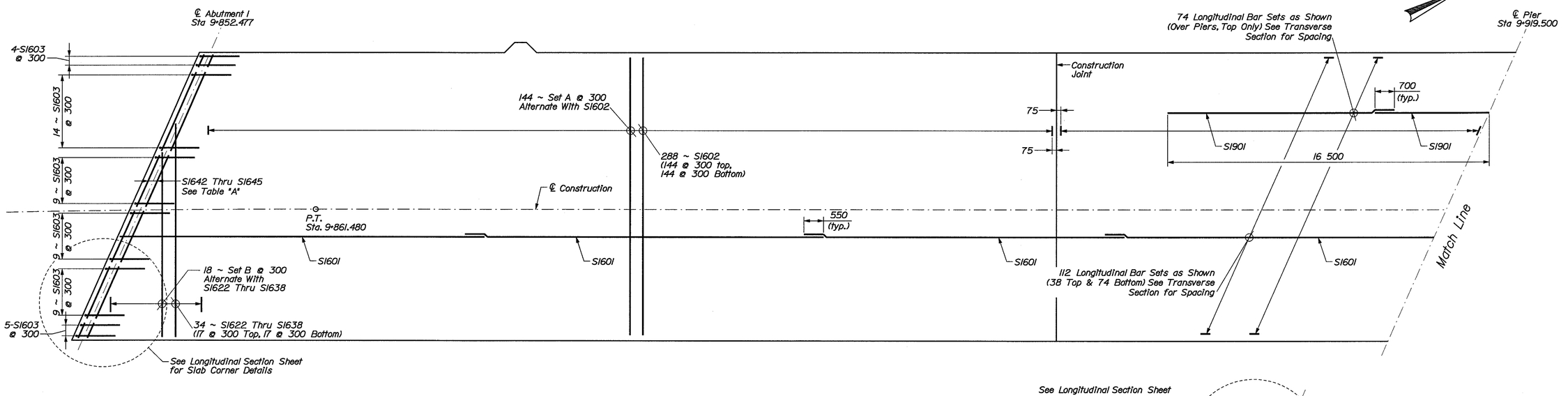
OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY
SUPERSTRUCTURE PLAN

SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\071_Sup_STRUC-PLN.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	72	90

008979.00



DECK REINFORCING PLAN

TABLE "A" Slab Haunch Transverse Rebars			
BAY	Qty.	Mark	Location
Left Overhang	4	S1644	1 Top & 3 Bottom
G1-G2	4	S1642	1 Top & 3 Bottom
G2-G3	4	S1642	1 Top & 3 Bottom
G3-G4	4	S1642	1 Top & 3 Bottom
G4-G5	4	S1643	1 Top & 3 Bottom
Right Overhang	4	S1645	1 Top & 3 Bottom

REINFORCING STEEL SETS	
Set "A"	1 ~ S1902, 1 ~ S1602
Set "B"	1 ~ S1903 Thru S1920, 1 ~ S1604 Thru S1621

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	S. ANTHONY	S. VIJAY	03/08/2005
CHECKED	B. BEARDSLEY	B. BEARDSLEY	03/08/2005
REVISIONS		
FIELD CHANGES		

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

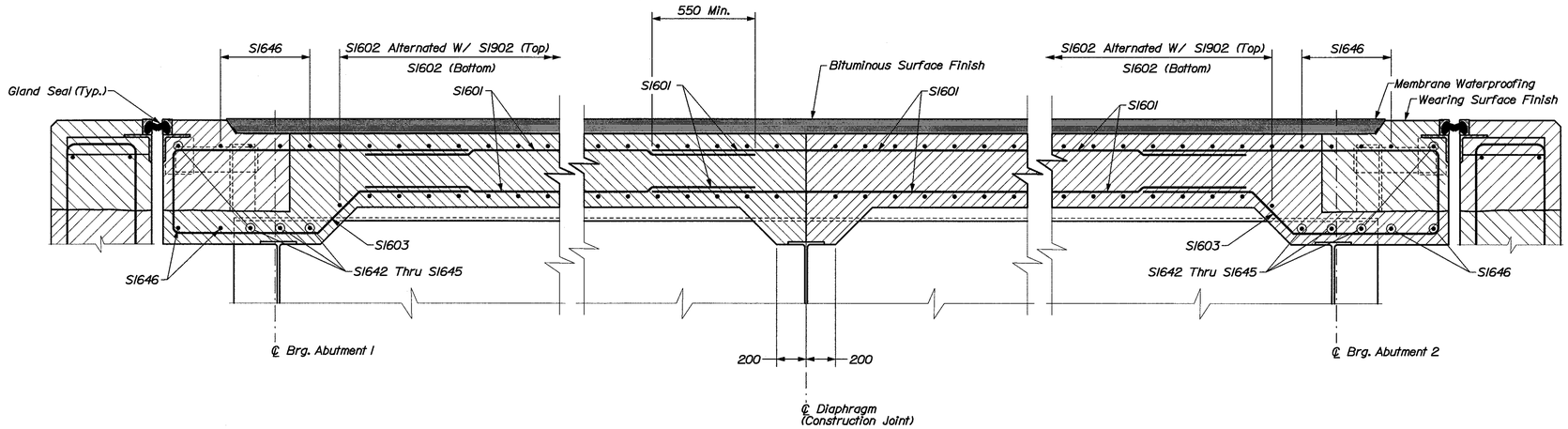
DECK REINFORCEMENT

SHEET OF AUGUSTA, MAINE

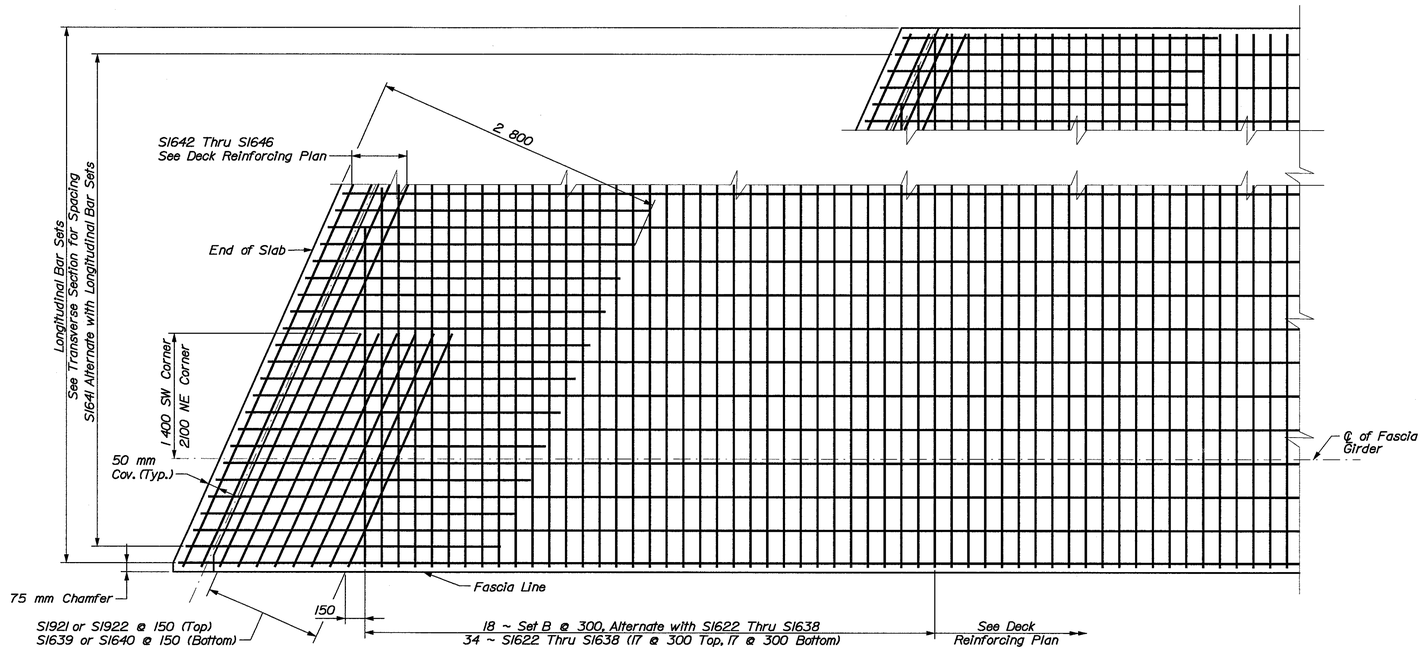
Filename: ...\MSTA\072_Sup_DECKREIN.dgn Division: BRIDGE Username: davistr Date:03/09/2005

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	73	90

008979.00



LONGITUDINAL SLAB SECTION



CORNER DETAILS

NOTES:

1. Form a 30 mm V-Groove on the fascias at the horizontal joint between the curb-sidewalk and slab.
2. Reinforcing steel shall have a minimum cover of 50 mm unless otherwise noted.
3. Adjust reinforcing steel to fit around the bridge drains in a manner approved by the Resident. Do not cut transverse reinforcing bars.
4. Unless the superstructure slab concrete is placed in one continuous operation, the initial placement shall start at a simply supported end of the deck slab and shall terminate at the completion of a positive moment section. Successive placements shall proceed from the end of the previous placement, terminate at the completion of a positive moment section, and include two or more spans. The Resident shall approve the placement sequence of the superstructure slab concrete.
5. Concrete in a placement shall be kept plastic one complete span behind the span being placed. A minimum of 5 days shall elapse between successive partial placements.
6. Protective Coating for Concrete Surfaces shall be applied to the tops and faces of the curb and sidewalk, fascias down to the drip notch, and to all surfaces of the concrete transition barriers.
7. Lighting shall be provided using conventional light standards. luminare mounting height shall be 12.2 meters on a 2-meter bracket arm.
8. Luminares shall be General Electric M-250R2 with Cut-Off Optics (Catalog No. M2TC25SBNIGMC3) or equal.
9. Lighting service shall be 240/120V. Wire size shall be 4C-12THW. Waterproof splices shall be used in the junction box.
10. All conduit shall be 100 mm diameter schedule 40 PVC, except the conduit under pavement shall be schedule 80. Provide a waterproof expansion coupling every 3 meters in conduit embedded in concrete.
11. Provisions shall be made to drain the conduit system in a manner approved by the Engineer.
12. Payment for bridge lighting conduit within the limits of the bridge will be made under Item No. 638.01-Embedded Work in Structures.
13. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
14. The seals to be furnished shall have a minimum Movement Rating of:
    Abutment Number 1 = 75 mm
    Abutment Number 2 = 60 mm

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN-DETAILED	S. ANTHONY	03/08/2005
	CHECKED	B. BEARDSLEY	03/08/2005
	REVISIONS	S. VIJAY	03/08/2005
	FIELD CHANGES	B. BEARDSLEY	03/08/2005

BRIDGE NO. 2630

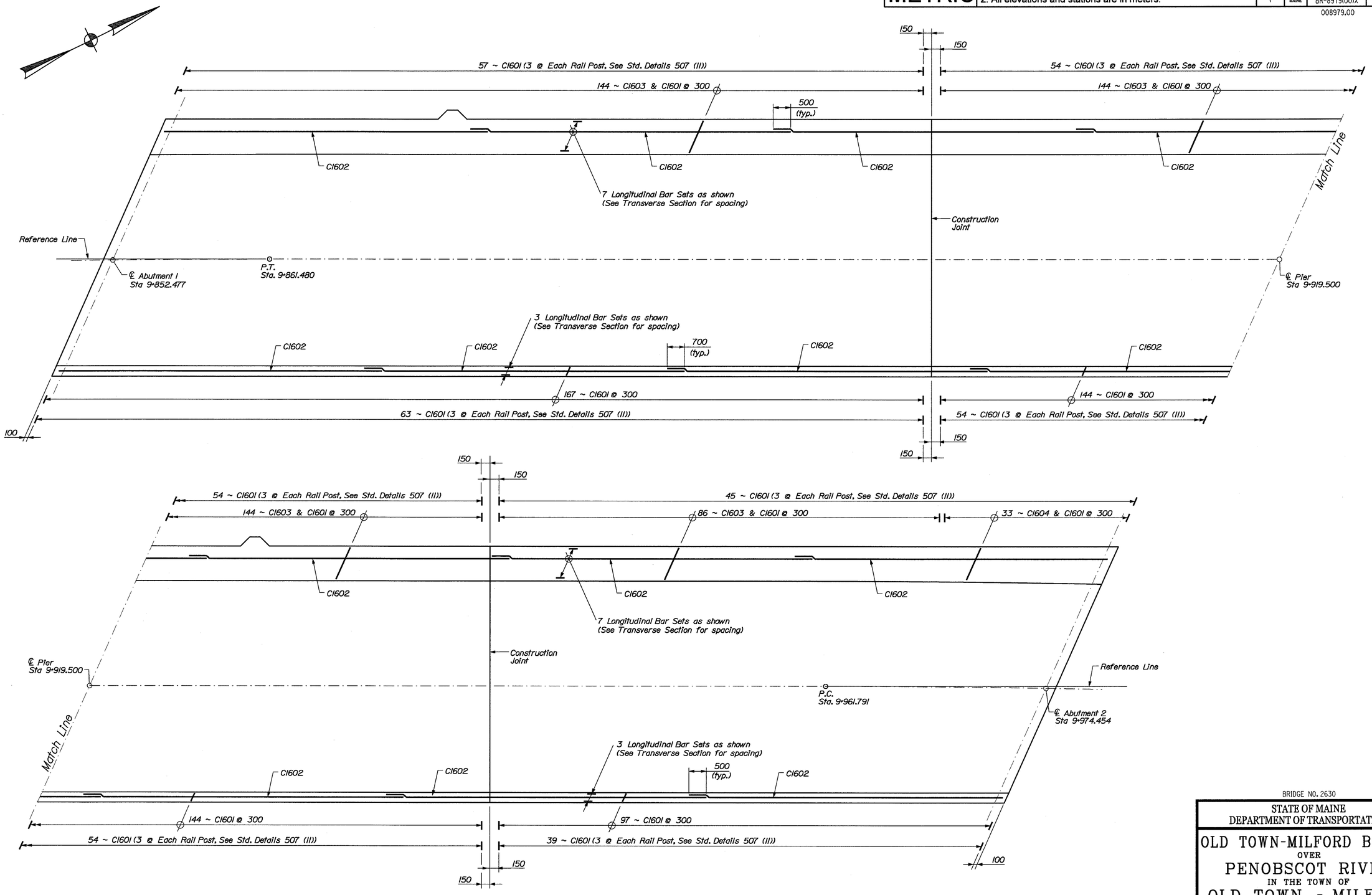
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN MILFORD
PENOBSCOT COUNTY

LONGITUDINAL SECTION

SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	74	90
				008979.00		



CURB & SIDEWALK REINFORCING PLAN

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	S. VIJAY	03/08/2005
REVISIONS	S. GAUTHIER	03/08/2005
FIELD CHANGES	B. BEARDSLEY	03/08/2005

PLANS

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLD TOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY
CURB & SIDEWALK REINFORCEMENT

SHEET OF AUGUSTA, MAINE

Filename: ...\MSTA\074_Sup_CURBREIN.dgn Division: BRIDGE Username: davistr Date:03/09/2005

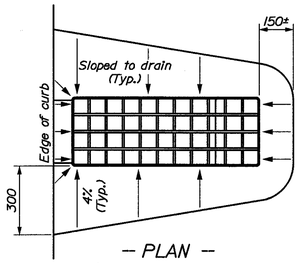
PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	S. VIJAY	03/08/2005
REVISIONS	S. GAUTHIER	B. BEARDSLEY
FIELD CHANGES		

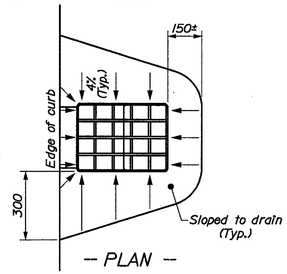
PLANS

METRIC 1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.

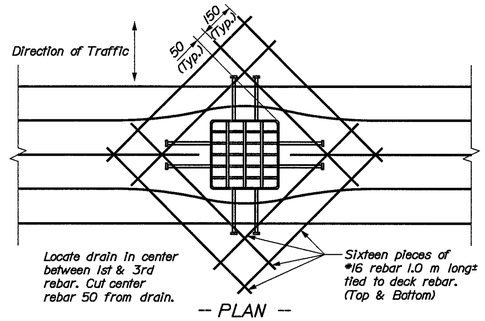
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	75	90

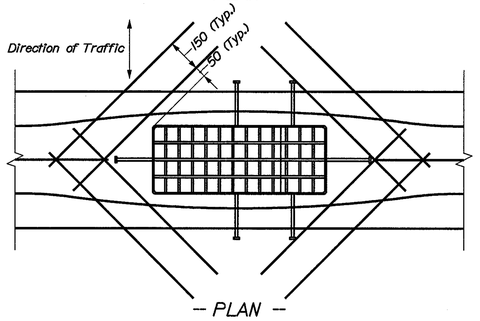
008979.00

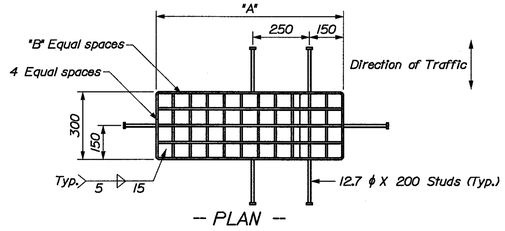


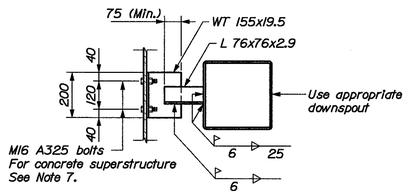


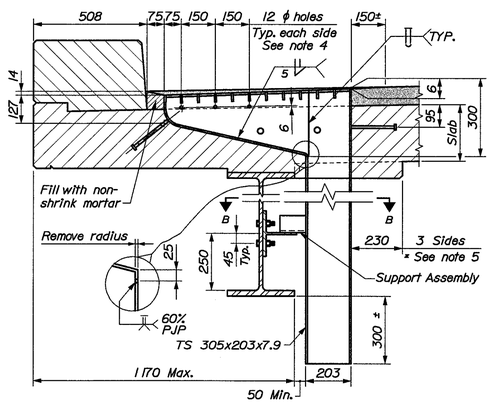
PAVEMENT DEPRESSION AROUND BRIDGE DRAINS









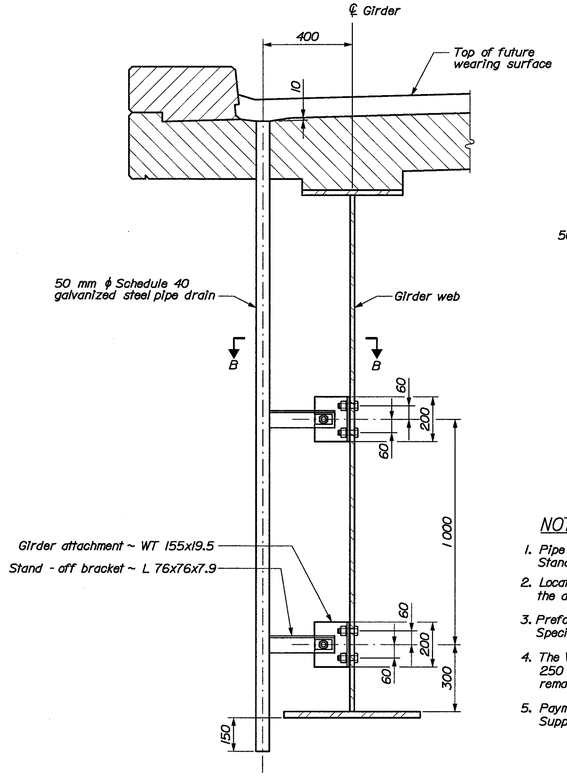


	UPSTREAM CURB	DOWNSTREAM CURB
"A"	525	785
"B"	7	11

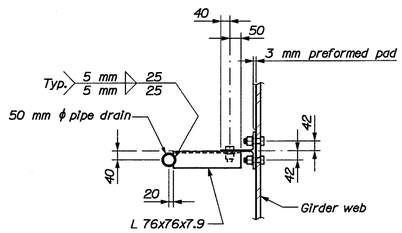
BRIDGE DRAIN DETAILS

NOTES:

1. All plates, if any, shall be 8 mm thick and shall conform to ASTM A 36.
2. The downspout shall conform to ASTM A500.
3. Grating shall be a commercial heavy - duty grating with 38 x 8 bearing bars and 10 ϕ cross bars.
4. The 12 ϕ holes are not required when a concrete wearing surface is specified.
5. If the minimum thickness of concrete below the drain is 50 mm or less, the concrete haunch shall be extended as shown.
6. Shear connectors welded to top flange of beam may need to be bent out of the way should an interference with the bridge drain occur.
7. Drains and L 76x76x7.9 shall be blast cleaned to the requirements of SSPC-SP6/NACE 3 and hot-dipped galvanized in accordance with ASTM A 123. Steel beam attachment: WT 155 x 19.5 and associated fasteners shall meet the same material specification and protective coating requirements as the structural steel.
8. Concrete superstructure support assembly configuration shall be similar to views utilizing anchoring material from the Maine Department of Transportation Prequalified List. WT 155 x 19.5 and fastener hardware shall be galvanized in accordance with ASTM A 123 and A 153 or B 695, Class 50, Type I.
9. Payment for bridge drains will be as specified under Subsection 502.19 of the Standard Specifications.
10. The additional reinforcing steel around each bridge drain will not be paid for directly. Payment will be considered incidental to related contract items.

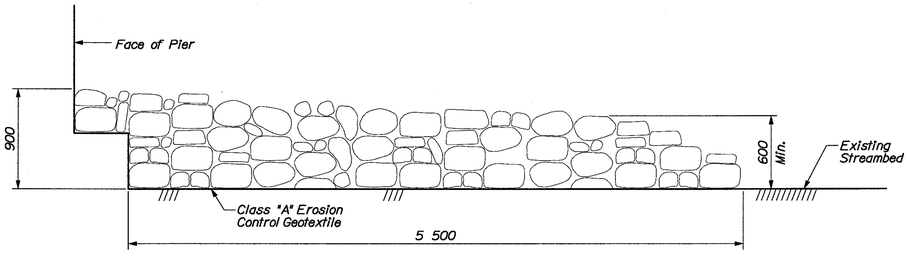


PIPE DRAIN ELEVATION



SECTION B-B

PIPE DRAIN DETAILS



STONE SCOUR PROTECTION

STONE BLANKET DETAIL

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

MISCELLANEOUS DETAILS

SHEET OF AUGUSTA, MAINE

METRIC	1. All dimensions are in millimeters unless otherwise noted. 2. All elevations and stations are in meters.	F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		1	MAINE	BR-8979(00)X	76	90

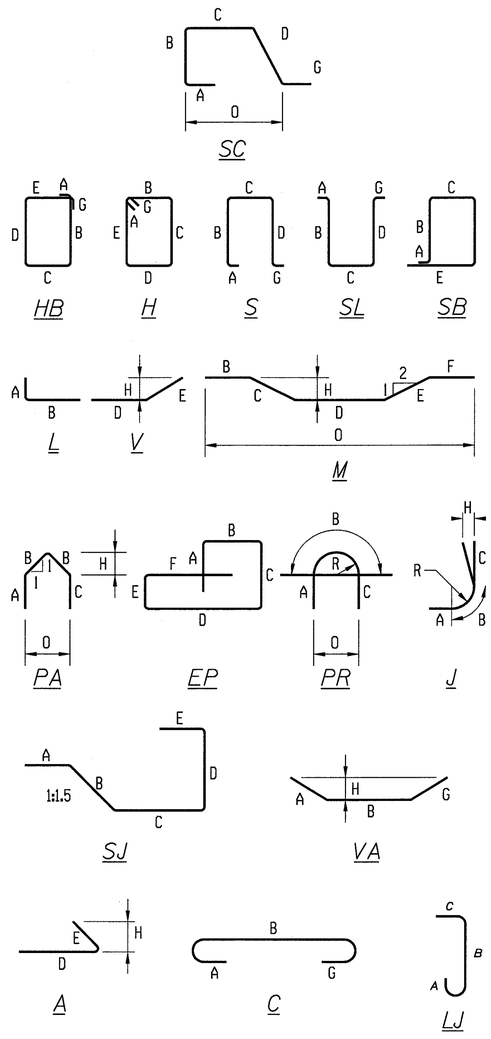
008979.00

REINFORCING STEEL SCHEDULE

STRAIGHT BARS			
MARK	QTY.	LENGTH	LOCATION
SUPERSTRUCTURE			
S1601	784	18020	LONGITUDINAL
S1602	1086	14620	TRANSVERSE
S1604	2	14285	TRANSVERSE AT ENDS
S1605	2	13610	TRANSVERSE AT ENDS
S1606	2	12935	TRANSVERSE AT ENDS
S1607	2	12260	TRANSVERSE AT ENDS
S1608	2	11590	TRANSVERSE AT ENDS
S1609	2	10915	TRANSVERSE AT ENDS
S1610	2	10240	TRANSVERSE AT ENDS
S1611	2	9565	TRANSVERSE AT ENDS
S1612	2	8890	TRANSVERSE AT ENDS
S1613	2	8215	TRANSVERSE AT ENDS
S1614	2	7545	TRANSVERSE AT ENDS
S1615	2	6870	TRANSVERSE AT ENDS
S1616	2	6195	TRANSVERSE AT ENDS
S1617	2	5520	TRANSVERSE AT ENDS
S1618	2	4850	TRANSVERSE AT ENDS
S1619	2	4175	TRANSVERSE AT ENDS
S1620	2	3500	TRANSVERSE AT ENDS
S1621	2	2825	TRANSVERSE AT ENDS
S1622	4	13945	TRANSVERSE AT ENDS
S1623	4	13270	TRANSVERSE AT ENDS
S1624	4	12600	TRANSVERSE AT ENDS
S1625	4	11925	TRANSVERSE AT ENDS
S1626	4	11250	TRANSVERSE AT ENDS
S1627	4	10575	TRANSVERSE AT ENDS
S1628	4	9900	TRANSVERSE AT ENDS
S1629	4	9230	TRANSVERSE AT ENDS
S1630	4	8555	TRANSVERSE AT ENDS
S1631	4	7880	TRANSVERSE AT ENDS
S1632	4	7205	TRANSVERSE AT ENDS
S1633	4	6530	TRANSVERSE AT ENDS
S1634	4	5860	TRANSVERSE AT ENDS
S1635	4	5185	TRANSVERSE AT ENDS
S1636	4	4510	TRANSVERSE AT ENDS
S1637	4	3835	TRANSVERSE AT ENDS
S1638	4	3160	TRANSVERSE AT ENDS
S1639	6	2600	SW CORNER BOT
S1640	6	3235	NE CORNER BOT
S1641	220	3015	END LONGITUDINAL
S1642	24	3040	HAUNCH BET GIRDERS
S1643	8	4500	HAUNCH BET GIRDERS
S1644	8	885	HAUNCH LEFT OVERHANG
S1645	8	1015	HAUNCH RIGHT OVERHANG
S1646	12	16000	DECK END TRANSVERSE
S1901	222	12865	LONGITUDINAL AT PIER
S1902	362	14620	TRANSVERSE TOP
S1903	2	14285	CORNER TRANSVERSE TOP
S1904	2	13610	CORNER TRANSVERSE TOP
S1905	2	12935	CORNER TRANSVERSE TOP
S1906	2	12260	CORNER TRANSVERSE TOP
S1907	2	11585	CORNER TRANSVERSE TOP
S1908	2	10915	CORNER TRANSVERSE TOP
S1909	2	10240	CORNER TRANSVERSE TOP
S1910	2	9565	CORNER TRANSVERSE TOP
S1911	2	8890	CORNER TRANSVERSE TOP
S1912	2	8215	CORNER TRANSVERSE TOP
S1913	2	7545	CORNER TRANSVERSE TOP
S1914	2	6870	CORNER TRANSVERSE TOP
S1915	2	6195	CORNER TRANSVERSE TOP
S1916	2	5520	CORNER TRANSVERSE TOP
S1917	2	4845	CORNER TRANSVERSE TOP
S1918	2	4175	CORNER TRANSVERSE TOP
S1919	2	3500	CORNER TRANSVERSE TOP
S1920	2	2825	CORNER TRANSVERSE TOP
S1921	6	2600	SW CORNER TOP
S1922	6	3235	NE CORNER TOP
CURB & SIDEWALK			
C1602	70	17995	LONGITUDINAL
APPROACH SLAB			
AS1600	32	11720	TRANSVERSE
AS1900	158	4590	LONGITUDINAL

BENT BARS																
MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
SUPERSTRUCTURE																
S1603	100	3165	SJ	570	255	615	360	1365								HAUNCH TIES
S2201	20	4540	S		2000	540	2000									LIGHT BASE
S2202	6	2620	VA	1060	500					1060	750					LIGHT BASE
CURB & SIDEWALK																
C1601	1126	1955	S	300	490	375	490			300						CURB STIRRUPS
C1603	374	2565	S			1775	490			300						SIDEWALK TIE
C1604	33	2680	S			1890	490			300						SIDEWALK TIE

TYPE - BENDING DIAGRAMS



Bars with the prefix "E" are epoxy coated bars.

All dimensions are out to out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 420.

General Notes:

1. The first two digits following the letter(s) of the mark indicate the size of the bar.
   Mark 'A1606' = bar size #16
   Mark 'B2203' = bar size #22
   Mark 'ES1901' = bar size #19

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

REINFORCING STEEL SCHEDULE

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	
CHECKED	S. VIJAY	03/08/2005
REVISIONS	S. GAUTHIER	03/08/2005
FIELD CHANGES	B. BEARDSLEY	03/08/2005

PLANS

REINFORCING STEEL SCHEDULE

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	77	90

008979.00

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
ABUTMENT 1			
AF1601	66	3175	VERTICAL NF
AF1602	52	4285	FTG TOP
AF1604	80	1425	FTG DOWEL
AF1605	30	10235	FTG LONGITUDINAL
AF1606	60	3800	FTG LONGITUDINAL
AF1607	64	800	FTG DOWEL
AF1608	26	11950	FTG LONGITUDINAL
AF2501	68	3650	FTG TOP
AF2201	62	4210	FTG BOT
AF1901	62	4210	FTG TOP
AF1902	68	3650	FTG TOP
A1603	26	3370	VERTICAL FF
A1604	26	3320	VERTICAL NF
A1606	30	7500	LONGITUDINAL
A1607	37	3120	VERTICAL FF
A1608	37	3070	VERTICAL NF
A1610	29	6307	LONGITUDINAL
A1611	29	4900	LONGITUDINAL
A1612	64	2500	VERTICAL NF
A1614	55	2510	VERTICAL NF
A1617	31	10285	LONGITUDINAL
A1618	32	6000	LONGITUDINAL
A2501	73	2850	VERTICAL FF
A2901	83	2850	VERTICAL FF
A1622	8	950	AROUND WATERMAIN
A1623	8	1200	AROUND SEWER
A1624	4	750	AROUND CONDUITS
A1625	4	1150	AROUND CONDUITS
A1626	8	715	AROUND CONDUITS
ABUTMENT 2			
BF1601	30	6700	FTG LONGITUDINAL
BF1602	26	2500	FTG LONGITUDINAL
BF1604	9	3190	FTG DOWEL
BF1605	34	4190	FTG DOWEL
BF1606	30	6795	FTG LONGITUDINAL
BF1607	62	800	FTG DOWEL
BF1608	30	6945	FTG LONGITUDINAL
BF1609	30	9365	FTG LONGITUDINAL
BF1901	55	4210	FTG TOP
BF2201	9	3650	FTG BOT TRANSVERSE
BF2202	42	4150	FTG BOT
BF2203	55	4210	FTG BOT
BF2501	9	3650	FTG TOP TRANSVERSE
BF2502	42	4150	FTG TOP
B1602	50	3500	VERTICAL EF
B1605	33	2400	HORIZONTAL EF
B1607	35	4400	HORIZONTAL EF
B1608	62	3500	VERTICAL FF
B1610	54	2520	VERTICAL NF
B1613	38	5990	HORIZONTAL EF
B1614	37	9415	HORIZONTAL EF
B1615	38	3380	VERTICAL EF
B1617	32	5500	HORIZONTAL EF
B2501	70	3840	VERTICAL NF
B2901	17	2840	VERTICAL FF
B2902	65	3840	VERTICAL FF
B1620	8	950	AROUND WATERMAIN
B1621	8	1200	AROUND SEWER
B1622	4	750	AROUND CONDUITS
B1623	4	1150	AROUND CONDUITS
B1624	8	715	AROUND CONDUITS
ABUTMENT 2 RETAINING WALL			
RF1601	62	4450	FTG HORIZONTAL
RF1602	32	9700	FTG LONGITUDINAL
R1601	9	5925	VERTICAL NF
R1602	35	6175	VERTICAL NF
R1620	30	8800	HORIZONTAL EF
R1901	28	5925	VERTICAL FF
R1902	6	5925	VERTICAL FF - END

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
ABUTMENT 1														
AF1603	152	1280	LJ	180	850	250								FTG SIDES
AF2502	73	2620	L	425	2195									FTG DOWEL
AF2901	83	3010	L	475	2535									FTG DOWEL
A1601	20	2000	A				500	1500			2420			CORNER BAR-HORIZ.
A1602	83	1000	L	550	450									L BAR AT CJ
A1605	26	1350	S		500	350	500							TOP HORIZONTAL
A1609	79	2740	S		1170	400	1170							TOP HORIZONTAL
A1613	55	2380	V				550	1830			1810			L BAR AT CJ
A1615	55	3015	L	500	2515									VERTICAL FF
A1616	44	3540	S		1595	350	1595							TOP HORIZONTAL
A1619	10	4600	H	140	1150	1010	1150	1010		140				BRG PAD TIE
A1901	40	1440	LJ	200	940	300								BRG PAD DOWELS
A1620	8	3000	A				1200	1800			1644			STEM CORNER
A1621	11	3750	S		1750	250	1750							TOP HORIZONTAL
ABUTMENT 2														
BF1603	117	1280	LJ	180	850	250								FTG SIDES
BF2502	72	2655	L	410	2245									FTG DOWELS
BF2901	55	3060	L	475	2585									FTG DOWELS
B1601	9	1100	L	550	550									L BAR AT CJ
B1603	46	2040	S		820	400	820							TOP HORIZONTAL
B1604	32	2970	V				500	2470			2256			
B1606	35	1550	L	1000	550									L BAR AT CJ
B1609	54	2380	V				550	1830			1810			L BAR AT CJ
B1611	54	3020	L	500	2520									L BAR AT FF
B1612	44	3540	S		1595	350	1595							TOP HORIZONTAL
B1616	19	1450	S		550	350	550							TOP HORIZONTAL
B1618	10	4600	H	140	1150	1010	1150	1010		140				BRG PAD TIE
B1901	40	1455	LJ	200	955	300								BRG PAD DOWELS
B1619	11	3750	S		1750	250	1750							TOP HORIZONTAL
ABUTMENT 2 RETAINING WALL														
RF1603	44	2105	V				300	1805			1730			DOWELS
RF1901	34	2380	L	600	1780									DOWELS
R1603	15	2200	V				1600	600			579			HORIZONTAL FF
R1604	31	2740	SC		900	900	940				284	1167		TOP HORIZONTAL
R1605	1	4200	V				2500	1700			1635			HORIZONTAL NF
R1606	1	4350	V				2650	1700			1635			HORIZONTAL NF
R1607	1	4500	V				2800	1700			1635			HORIZONTAL NF
R1608	1	4650	V				2950	1700			1635			HORIZONTAL NF
R1609	1	4800	V				3100	1700			1635			HORIZONTAL NF
R1610	1	4950	V				3250	1700			1635			HORIZONTAL NF
R1611	1	5100	V				3400	1700			1635			HORIZONTAL NF
R1612	1	5250	V				3550	1700			1635			HORIZONTAL NF
R1613	1	5400	V				3700	1700			1635			HORIZONTAL NF
R1614	1	5550	V				3850	1700			1635			HORIZONTAL NF
R1615	1	5700	V				4000	1700			1635			HORIZONTAL NF
R1616	1	5850	V				4150	1700			1635			HORIZONTAL NF
R1617	1	6000	V				4300	1700			1635			HORIZONTAL NF
R1618	1	6150	V				4450	1700			1635			HORIZONTAL NF
R1619	1	6300	V				4600	1700			1635			HORIZONTAL NF

Bars with the prefix "E" are epoxy coated bars.

All dimensions are out to out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 420.

General Notes:

1. The first two digits following the letter(s) of the mark indicate the size of the bar.
   Mark 'A1606' = bar size #16
   Mark 'B2203' = bar size #22
   Mark 'ES1901' = bar size #19

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

REINFORCING STEEL SCHEDULE

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	S. VIJAY	03/08/2005
REVISIONS	S. GAUTHIER	B. BEARDSLEY 03/08/2005
FIELD CHANGES	B. BEARDSLEY	

PLANS

border for 34" plotter (elvistone)

REINFORCING STEEL SCHEDULE

METRIC
1. All dimensions are in millimeters unless otherwise noted.
2. All elevations and stations are in meters.

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	78	90

008979.00

STRAIGHT BARS

MARK	QTY.	LENGTH	LOCATION
PIER			
PF1601	6	14500	FTG LONGITUDINAL
PF1602	4	14805	FTG LONGITUDINAL
PF1603	4	15115	FTG LONGITUDINAL
PF1604	4	15425	FTG LONGITUDINAL
PF1605	4	15735	FTG LONGITUDINAL
PF1606	4	16045	FTG LONGITUDINAL
PF1607	4	16355	FTG LONGITUDINAL
PF1608	4	16665	FTG LONGITUDINAL
PF1609	4	16975	FTG LONGITUDINAL
PF1610	4	17285	FTG LONGITUDINAL
PF1901	125	1200	FTG DOWELS
PF1902	50	5650	FTG TRANSVERSE
PF1903	1	5050	FTG TRANSVERSE
PF1904	1	4450	FTG TRANSVERSE
PF1905	1	3850	FTG TRANSVERSE
PF1906	1	3250	FTG TRANSVERSE
PF1907	1	2650	FTG TRANSVERSE
PF1908	1	2050	FTG TRANSVERSE
PF1909	1	1450	FTG TRANSVERSE
PF1910	1	850	FTG TRANSVERSE
PF1911	1	250	FTG TRANSVERSE
P1642	18	8800	LONGITUDINAL
P1643	36	4725	INFILL VERTICAL
P1644	34	5285	INFILL HORIZONTAL
P1645	30	1200	INFILL DOWEL
P2901	114	6725	VERTICAL
P2902	114	4540	VERTICAL

BENT BARS

MARK	QTY.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
PIER														
PF1611	50	9350	S		1850	5650	1850							FTG TOP
PF1612	1	8750	S		1850	5050	1850							FTG TOP
PF1613	1	8150	S		1850	4450	1850							FTG TOP
PF1614	1	7550	S		1850	3850	1850							FTG TOP
PF1615	1	6950	S		1850	3250	1850							FTG TOP
PF1616	1	6350	S		1850	2650	1850							FTG TOP
PF1617	1	5750	S		1850	2050	1850							FTG TOP
PF1618	1	5150	S		1850	1450	1850							FTG TOP
PF1619	1	4550	S		1850	850	1850							FTG TOP
PF1620	1	3950	S		1850	250	1850							FTG TOP
PF2901	114	4640	V				3940	700			697			FTG DOWELS
P1601	51	3200	VA	450	2300					450	450			TOP
P1602	1	2950	VA	450	2050					450	450			TOP NOSE
P1603	1	2585	VA	450	1685					450	450			TOP NOSE
P1604	1	2220	VA	450	1320					450	450			TOP NOSE
P1605	1	1855	VA	450	955					450	450			TOP NOSE
P1606	1	1490	VA	450	590					450	450			TOP NOSE
P1607	1	1125	VA	450	225					450	450			TOP NOSE
P1608	64	15070	V				14620	450			450			HORIZONTAL
P1609	1	3250	L	1625	1625									HORIZONTAL NOSE
P1610	1	3320	L	1660	1660									HORIZONTAL NOSE
P1611	1	3390	L	1695	1695									HORIZONTAL NOSE
P1612	1	3460	L	1730	1730									HORIZONTAL NOSE
P1613	1	3530	L	1765	1765									HORIZONTAL NOSE
P1614	1	3590	L	1795	1795									HORIZONTAL NOSE
P1615	1	3660	L	1830	1830									HORIZONTAL NOSE
P1616	1	3730	L	1865	1865									HORIZONTAL NOSE
P1617	1	3800	L	1900	1900									HORIZONTAL NOSE
P1618	1	3870	L	1935	1935									HORIZONTAL NOSE
P1619	1	3930	L	1965	1965									HORIZONTAL NOSE
P1620	1	4000	L	2000	2000									HORIZONTAL NOSE
P1621	1	4070	L	2035	2035									HORIZONTAL NOSE
P1622	1	4140	L	2070	2070									HORIZONTAL NOSE
P1623	1	4210	L	2105	2105									HORIZONTAL NOSE
P1624	1	4270	L	2135	2135									HORIZONTAL NOSE
P1625	1	4340	L	2170	2170									HORIZONTAL NOSE
P1626	1	4410	L	2205	2205									HORIZONTAL NOSE
P1627	1	4480	L	2240	2240									HORIZONTAL NOSE
P1628	1	4550	L	2275	2275									HORIZONTAL NOSE
P1629	1	4610	L	2305	2305									HORIZONTAL NOSE
P1630	1	4680	L	2340	2340									HORIZONTAL NOSE
P1631	1	4750	L	2375	2375									HORIZONTAL NOSE
P1632	1	4820	L	2410	2410									HORIZONTAL NOSE
P1633	1	4880	L	2440	2440									HORIZONTAL NOSE
P1634	1	4950	L	2475	2475									HORIZONTAL NOSE
P1635	1	5020	L	2510	2510									HORIZONTAL NOSE
P1636	1	5090	L	2545	2545									HORIZONTAL NOSE
P1637	1	5160	L	2580	2580									HORIZONTAL NOSE
P1638	1	5230	L	2615	2615									HORIZONTAL NOSE
P1639	1	5300	L	2650	2650									HORIZONTAL NOSE
P1640	1	5370	L	2685	2685									HORIZONTAL NOSE
P1641	1	5440	L	2720	2720									HORIZONTAL NOSE
P1646	18	3440	VA	450	2540					450	450			INFILL TOP
P1647	1	3200	S		450	2300	450							SOUTH END TRANSVERSE
P1648	1	3250	S		450	2350	450							SOUTH END TRANSVERSE
P1649	1	3295	S		450	2395	450							SOUTH END TRANSVERSE
P1650	1	3345	S		450	2445	450							SOUTH END TRANSVERSE
P1651	1	3390	S		450	2490	450							SOUTH END TRANSVERSE
P1652	1	3440	S		450	2540	450							SOUTH END TRANSVERSE
P1653	2	3490	S		450	2590	450							S. END TRANS./INFILL WALL
P1654	2	3535	S		450	2635	450							S. END TRANS./INFILL WALL
P1655	2	3585	S		450	2685	450							S. END TRANS./INFILL WALL
P1656	2	3635	S		450	2735	450							S. END TRANS./INFILL WALL
P1657	2	3680	S		450	2780	450							S. END TRANS./INFILL WALL
P1658	2	3730	S		450	2830	450							S. END TRANS./INFILL WALL
P1659	2	3775	S		450	2875	450							S. END TRANS./INFILL WALL
P1660	2	3825	S		450	2925	450							S. END TRANS./INFILL WALL
P1661	2	3875	S		450	2975	450							S. END TRANS./INFILL WALL
P1662	2	3920	S		450	3020	450							S. END TRANS./INFILL WALL
P1663	2	3970	S		450	3070	450							S. END TRANS./INFILL WALL
P1664	2	4020	S		450	3120	450							S. END TRANS./INFILL WALL
P1665	2	4065	S		450	3165	450							S. END TRANS./INFILL WALL
P1666	2	4115	S		450	3215	450							S. END TRANS./INFILL WALL
P1667	2	4165	S		450	3265	450							S. END TRANS./INFILL WALL
P1668	1	4215	S		450	3315	450							SOUTH END TRANSVERSE
P1669	1	4265	S		450	3365	450							SOUTH END TRANSVERSE
P1670	1	4315	S		450	3415	450							SOUTH END TRANSVERSE
P1671	1	4360	S		450	3460	450							SOUTH END TRANSVERSE
P1672	1	4410	S		450	3510	450							SOUTH END TRANSVERSE
P1673	1	4460	S		450	3560	450							SOUTH END TRANSVERSE
P1674	1	4510	S		450	3610	450							SOUTH END TRANSVERSE
P1675	1	4555	S		450	3655	450							SOUTH END TRANSVERSE
P1676	1	4605	S		450	3705	450							SOUTH END TRANSVERSE
P1677	1	4655	S		450	3755	450							SOUTH END TRANSVERSE
P1678	1	4705	S		450	3805	450							SOUTH END TRANSVERSE
P1679	1	4755	S		450	3855	450							SOUTH END TRANSVERSE

Bars with the prefix 'E' are epoxy coated bars.

All dimensions are out to out of bar.

Bending details and hooks shall conform to the recommendations of the current revision of ACI Standard 315 and ACI Standard 318.

Reinforcing Bar: ASTM A615/A615M, Grade 420.

General Notes:

1. *The first two digits following the letter(s) of the mark indicate the size of the bar.*
   Mark 'A1606' = bar size #16
   Mark 'B2203' = bar size #22
   Mark 'E5190' = bar size #19

BRIDGE NO. 2630

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

OLDTOWN-MILFORD BRIDGE
OVER
PENOBSCOT RIVER
IN THE TOWN OF
OLD TOWN - MILFORD
PENOBSCOT COUNTY

REINFORCING STEEL SCHEDULE

SHEET OF AUGUSTA, MAINE

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN-DETAILED	B. BEARDSLEY	03/08/2005
CHECKED	T. DAVIS	03/08/2005
REVISIONS	S. GAUTHIER	B. BEARDSLEY
FIELD CHANGES		

PLANS

Filename: ...\MSTA\078_Rebar_sched.dgn Division: BRIDGE Username: davistr Date03/09/2005

ITEM	TECH	CHECKED	NO.	DATE	REVISIONS DESCRIPTION	BY
BASE MAP						
EXIST. R/W	C.E.M. D.S.G.					
PROP. LINES	P.A.T.					
AREAS	P.A.T.	J.W.H.				

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED OR RELIED UPON TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

METRIC	F.H.W.A. REG. NO	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	1	MAINE	BR-8979(00)X	79	90

DETOUR CURVE DATA
PI = D 0+762.899
Δ = 27° - 52' - 38.0" LT.
R = 50.000 m
L = 24.327 m
T = 12.410 m
E = 1.517 m
DAWN TIL DONE FARMS
PARCEL NO. (1)
LAND TAKEN = 1770± S.F.
TEMP. CONST. RIGHTS = 2400± S.F.(1)
TEMP. ROAD EASE. = 995± S.F.(1)
TOTAL AREA = 20,565± S.F.
REM. AREA = 18,795± S.F.
PENOBSCOT RIVER
PARCEL NO. (1A)
DETOUR CURVE DATA
PI = D 0+829.390
Δ = 29° - 59' - 59.4" RT.
R = 50.000 m
L = 26.180 m
T = 13.397 m
E = 1.764 m
DAVID PRYGROCKI
ROBERTA E. PRYGROCKI
PARCEL NO. (1A)
LAND TAKEN = 32,700±S.F.(ENTIRE LOT)
BUILDING = (1)
PENOBSCOT RIVER
CURVE DATA
PI = 9+700.057
Δ = 18° - 18' - 09.6" LT.
R = 350.000 m
L = 111.805 m
T = 56.383 m
E = 4.512 m
End Transition Begin Project Sta. 9+740.000
Begin Transition Sta. 9+720.000
NOTE: THE CITY OF OLD TOWN HAS A SEWER COLLECTION EASEMENT ON THIS PARCEL
S.H.C. FILE NO. 10-218 UNDERDRAIN OUTLET PIPE
NOTE: BANGOR HYDRO ELECTRIC COMPANY HAS FLOWAGE RIGHTS ON THIS PROPERTY
NOTE: THE CITY OF OLD TOWN AND MILFORD HAVE SEWER COLLECTION EASEMENTS ON PARCEL 1A.
MAP 31 LOT 6
MAP 31 LOT 5
SHED
Dave's Service Center
Raised Pedestrian Walk
~Temporary Detour~
~Temporary Work Trestle~
24° Skew (Typ.)
CENTER STREET
U.S. ROUTE 2
N 25°-34'-03.6" E
HOWARD STREET
MAINE CENTRAL RAILROAD CO.
EUROPEAN AND NORTH AMERICAN RAILWAY TO STATE OF MAINE MARCH 11, 1919 PENOBSCOT COUNTY R.O.D. VOL. 903, PAGE 206
PLAN RECORDED IN PENOBSCOT COUNTY R.O.D. PLAN BOOK 11, PAGE 21
MAINE CENTRAL RAILROAD COMPANY
ITEM NO. (2-1)2
CONST. & MAINT. EASE. = 250± S.F.(1)
TEMP. CONST. RIGHTS = 150± S.F.(1)
MAINE CENTRAL RAILROAD
TIMOTHY LETOURNEAU
JOAN LETOURNEAU
STANLEY PETERSON
ARNETA PETERSON
PHILIP H. DOW
CATHY P. DOW
D/B/A DOW IV
MAP 31 LOT 18
MAP 31 LOT 21
2.5 STORY RES.
Paved Yard
GARAGE
NOTE: ROAD ASSUMED TO BE ABANDONED AS OF 1914.
CURVE DATA
PI = 9+808.562
Δ = 7° - 50' - 12.1" RT.
R = 775.000 m
L = 106.001 m
T = 53.084 m
E = 1.816 m
OLD TOWN MILFORD BRIDGE OVER THE EAST BRANCH OF THE PENOBSCOT RIVER BRIDGE NO. 2630
P.I.N. 008979.00

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY ____________________
RECEIVED ____________________, ____________
at ______h______m______ M and recorded in
Plan Book ______________, Page ______________
Attest: ____________________
REGISTER

PLAN FILED IN PLAN BOOK PAGE

NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
	PARCEL NO. 1A	COND.	03-30-2004	9256	206
		COND.	01-18-2005	9715	014

EXISTING R/W

S.H.C. FILE NO. 10-118
D.O.T. FILE NO. 10-218
D.O.T. FILE NO. 10-289

SEE
MAP OF LAND OF EUROPEAN AND & NORTH AMERICAN RAILWAY OLD TOWN AND MILFORD, ME. PENOBSCOT COUNTY R.O.D. VOL. 11, PAGE 21 AUGUST, 1915 RECORDED MARCH 11,1919

ALSO SEE
MAINE CENTRAL RAILROAD R/W TRACK MAP NOS.
V 15/13 & V 15/14

ALSO SEE
DEED FROM EUROPEAN AND NORTH AMERICAN RAILWAY TO STATE OF MAINE MARCH 11, 1919 PENOBSCOT COUNTY R.O.D. BOOK 903, PAGE 206 PLAN RECORDED IN PENOBSCOT COUNTY R.O.D. PLAN BOOK 11, PAGE 21

STATE OF MAINE — JOHN E. DORITY 2093 — REGISTERED PROFESSIONAL ENGINEER

SYMBOLS

IP (IRON PIPE or PIN)
S.T. (SEPTIC TANK)
WATER LINE
GAS LINE
ELECTRIC LINE
TELEPHONE LINE
SEWER LINE
PROPERTY LINE
LIMITS OF WROUGHT PORTION
EXISTING RIGHT OF WAY
NEW RIGHT OF WAY
NEW RIGHT OF WAY WITHIN EXISTING RIGHT OF WAY
CONTROL OF ACCESS

○ - RAILROAD SPIKE Δ - CONTROL MONUMENTS
MAINE DEPARTMENT OF TRANSPORTATION - CENTERLINE CONTROL
MAINE STATE COORDINATE SYSTEM - ZONE

CENTERLINE CONTROL MONUMENTS			TRAVERSE CONTROL POINTS		
STATION	NORTH	EAST	NUMBER	NORTH	EAST

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

STATE HIGHWAY "50" (U.S. ROUTE 2)
OLD TOWN-MILFORD PENOBSCOT COUNTY
FEDERAL AID PROJECT NO. BR-8979(00)X

DATE: MARCH 2004
OCTOBER 2004
SCALE: 1 = 250
SHEET NO. 1 OF 2 SHEETS

DAVID A. COLE — COMMISSIONER

D.O.T. FILE NO. 10 - 401

JOHN E. DORITY — CHIEF ENGINEER

Filename: ...\00\ROW\MSTA\00\DWG\... Username: phil.trask Date: 3/9/2005

ITEM	TECH	CHECKED	REVISIONS			
			NO.	DATE	DESCRIPTION	BY
BASE MAP						
EXIST. R/W	C.R.M. D.S.G.					
PROP. LINES	P.A.T.					
AREAS	P.A.T.	J.W.H.				

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED OR RELIED UPON TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

METRIC

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BR-8979(00)X	80	90

PENOBSCOT RIVER
DETOUR CURVE DATA
PI = D 0+966.705
Δ = 30° - 00' - 00.6" RT.
R = 50.000 m
L = 26.180 m
T = 13.398 m
E = 1.764 m
OUTLET DRAINAGE STRUCTURE STA. 9+980.4 LT.
BANGOR HYDRO-ELECTRIC COMPANY
PARCEL NO. (3-1)2
LAND TAKEN = 936± S.F.
SLOPE EASE. = 945± S.F.(1)
TEMP. ROAD EASE. = 4690± S.F.± S.F.(1)
TEMP. CONST. RIGHTS = 3475± S.F.(1)
DRAINAGE EASE. = (1)
TOTAL AREA = 10.55± AC.
REM. AREA = 10.51± AC.
NOTE: BANGOR HYDRO-ELECTRIC COMPANY HAS FLOWAGE RIGHTS ON THIS PROPERTY
SEE PLAN OF R.H. FOSTER, INC. PROPERTY AS SURVEYED RICHARD N. PERRY, JR. APRIL 1, 1997
R. H. FOSTER ENERGY, L.L.C.
PARCEL NO. (4)
LAND TAKEN = 1690± S.F.
CONST. & MAINT. EASE. = 275± S.F.(1)
TEMP. ROAD EASE. = 5030± S.F.(1)
TEMP. CONST. RIGHTS = 7150± S.F.(1)
TOTAL AREA = 56,625± S.F.
REM. AREA = 54,935± S.F.
CURVE DATA
PI = 10+026.054
Δ = 3° - 28' - 22.9" LT.
R = 775.000 m
L = 46.977 m
T = 23.496 m
E = 0.356 m
ALSO SEE PLAN OF BANGOR HYDRO-ELECTRIC CO. PLAN IN MILFORD, ME. DATED SEPT. 18, 1946 DRAWING NO. C-129
ALSO SEE PLAN OF BANGOR HYDRO-ELECTRIC CO. PLAN IN MILFORD, ME. DATED DEC. 5, 1951 DRAWING NO. M-1444
CURVE DATA
PI = 10+142.123
Δ = 33° - 49' - 00.3" LT.
R = 130.000 m
L = 76.728 m
T = 39.518 m
E = 5.874 m
BANGOR HYDRO ELECTRIC COMPANY PARCEL NO. (3-2)2 LAND TAKEN = 778± S.F. TEMP. CONST. RIGHTS = 1120± S.F.(1) TOTAL AREA = 10.55± AC. REM. AREA = 10.51± AC.
MAP 17 LOTS 1 & 1A
DETOUR CURVE DATA
PI = D 1+033.027
Δ = 29° - 21' - 43.3" LT.
R = 50.000 m
L = 25.623 m
T = 13.100 m
E = 1.688 m
NOTE: R.H. FOSTER, INC. HAS A TEMPORARY LICENSE AGREEMENT WITH BANGOR HYDRO - ELECTRIC CO. FOR A TEMPORARY ENTRANCE ACROSS ITS PROPERTY UNTIL MDOT EITHER COMPLETES OR CANCELS THE BRIDGE REPLACEMENT.
SEWER EASEMENT TO THE TOWN OF MILFORD PENOBSCOT COUNTY R.O.D. VOL. 2727 PAGE 132
WEBBER ENERGY GASOLINE PCL. NO. (5) (SEE BELOW)
Raised Pedestrian Walk
Temporary Detour
Crash Barrels
Temporary Concrete Barrier
Delineated Pedestrian Walk (At Grade)
N 25°-34'-03.6" E 100.311 m
N 25°-06'-31.0" E 53.069 m
EUROPEAN AND NORTH AMERICAN RAILWAY TO STATE OF MAINE
PENOBSCOT COUNTY R.O.D. VOL. 903, PAGE 206 PLAN RECORDED IN PENOBSCOT COUNTY R.O.D. PLAN BOOK 11, PAGE 21
NOTE: PRIVATE ROADWAY EASEMENT GRANTED BY MAINE CENTRAL RAILROAD COMPANY TO ARTHUR JOHNSON DATED 1-24-84 RECORDED IN PENOBSCOT COUNTY R.O.D. BOOK 3489, PAGE 287. SEE D.O.T. FILE NO. 10-289.
R/W LIMITS MAINE CENTRAL RAILROAD R/W LIMITS
CURVE DATA
PI = 9+982.180
Δ = 3° - 00' - 50.3" RT.
R = 775.000 m
L = 40.768 m
T = 20.389 m
E = 0.268 m
DEWEY R. ELLINGWOOD
THERESE ELLINGWOOD
MAP 17 LOT 87
MAINE CENTRAL RAILROAD COMPANY
PARCEL NO. (2-2)2
LAND TAKEN = 2345± S.F.(EASE. FOR HWY. PURPOSES)
CONST. & MAINT. EASE = 945± S.F.(1)
TEMP. CONST. RIGHTS = 5320± S.F.(1)
(SEE ABOVE)
WEBBER ENERGY GASOLINE
PARCEL NO. (5)
LAND TAKEN = 266± S.F.
TOTAL AREA = 18,462± S.F.
REM. AREA = 18,196± S.F.
NOTE: ROAD ASSUMED TO BE ABANDONED AS OF 1914.
OLD TOWN MILFORD BRIDGE OVER THE EAST BRANCH OF THE PENOBSCOT RIVER BRIDGE NO. 2630
SEE D.O.T. FILE NO. 10-289
TO BRADLEY
Route 178
P.I.N. 008979.00

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY ____________________
RECEIVED ____________________,
at ______h______m______ M and recorded in
Plan Book __________, Page __________
Attest: ____________________
REGISTER

PLAN FILED IN PLAN BOOK ______ PAGE ______

NO.	GRANTOR	COUNTY RECORD			
		INSTRUMENT	DATE	BOOK	PAGE
		COND.	01-18-2005	9715	014

EXISTING R/W

S.H.C. FILE NO. 10-118
D.O.T. FILE NO. 10-218
D.O.T. FILE NO. 10-289

SEE
MAP OF LAND OF EUROPEAN AND & NORTH AMERICAN RAILWAY OLD TOWN AND MILFORD, ME. PENOBSCOT COUNTY R.O.D. VOL. 11, PAGE 21 AUGUST, 1915 RECORDED MARCH 11,1919

ALSO SEE
MAINE CENTRAL RAILROAD R/W TRACK MAP NOS. V 15/13 & V 15/14

ALSO SEE
DEED FROM EUROPEAN AND NORTH AMERICAN RAILWAY TO STATE OF MAINE MARCH 11, 1919 PENOBSCOT COUNTY R.O.D. BOOK 903, PAGE 206 PLAN RECORDED IN PENOBSCOT COUNTY R.O.D. PLAN BOOK 11, PAGE 21

STATE OF MAINE — JOHN E. DORITY 2093 — REGISTERED PROFESSIONAL ENGINEER

SYMBOLS
- IP (IRON PIPE or PIN)
- S.T. (SEPTIC TANK)
- WATER LINE
- GAS LINE
- ELECTRIC LINE
- TELEPHONE LINE
- SEWER LINE
- PROPERTY LINE
- LIMITS OF WROUGHT PORTION
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- NEW RIGHT OF WAY WITHIN EXISTING RIGHT OF WAY
- CONTROL OF ACCESS

○ - RAILROAD SPIKE; △ - CONTROL MONUMENTS

MAINE DEPARTMENT OF TRANSPORTATION - CENTERLINE CONTROL
MAINE STATE COORDINATE SYSTEM - ZONE

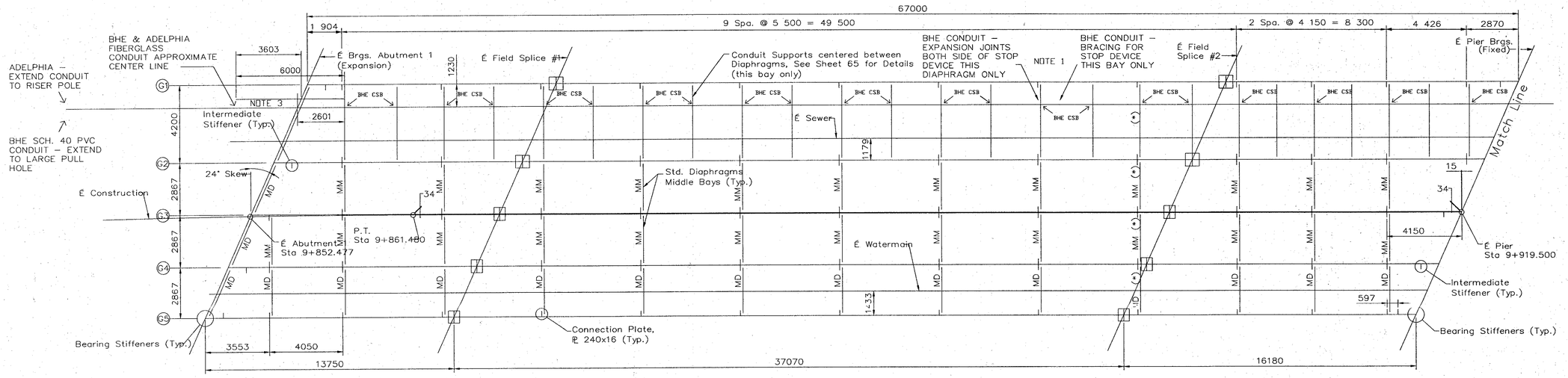
CENTERLINE CONTROL MONUMENTS			TRAVERSE CONTROL POINTS		
STATION	NORTH	EAST	NUMBER	NORTH	EAST

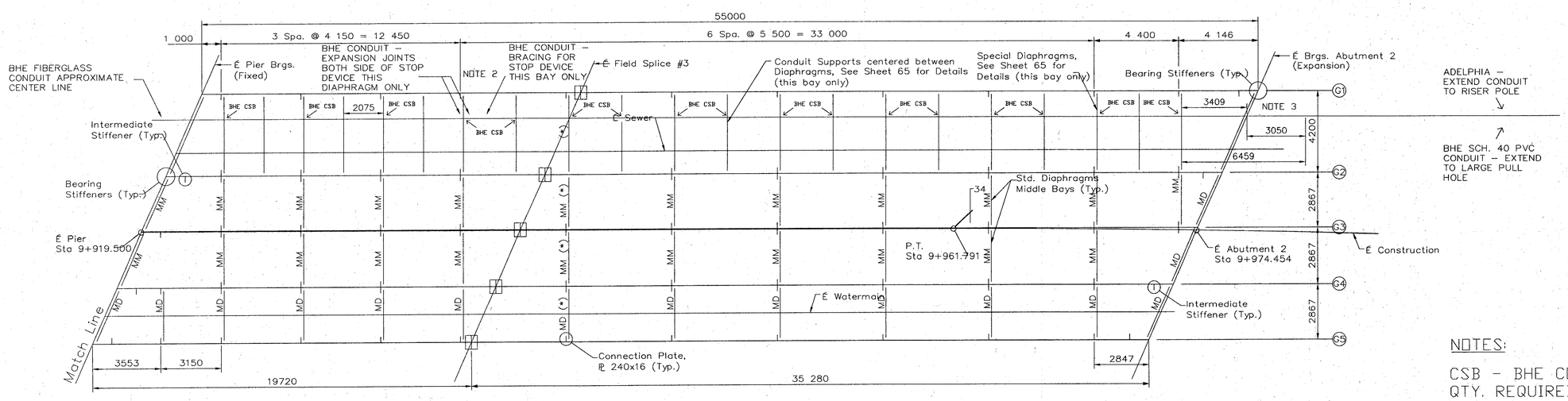
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016
RIGHT OF WAY MAP

STATE HIGHWAY "50" (U.S. ROUTE 2)
OLD TOWN-MILFORD PENOBSCOT COUNTY
FEDERAL AID PROJECT NO. BR-8979(00)X

DATE: MARCH 2004
OCTOBER 2004
SCALE: 1 =250
SHEET NO. 2 OF 2 SHEETS
DAVID A. COLE, COMMISSIONER
D.O.T. FILE NO. 10 - 401
JOHN E. DORITY, CHIEF ENGINEER

Date: 3/9/2005 Username: phil.trask Filename: ...\00\ROW\MSTA\002\BR897902.dgn





SUPERSTRUCTOR OLDTOWN-MILFORD BRIDGE
BY ERDMAN-ANTHONY
WITH BANGOR HYDRO ELECTRIC CO.
CONDUIT CENTER LINE AND SUPPORT HANGER INFORMATION

NOTES:

CSB - BHE CONDUIT SUPPORT BRACKET QTY. REQUIRED - 39 CONDUIT SUPPORT BRACKETS

1. EXPANSION JOINT LEFT OF STOP.
2. EXPANSION JOINT LEFT AND RIGHT OF STOP.
3. EXTEND FIBERGLASS CONDUIT APPROXIMATELY 10' BEYOND ABUTMENT

STATE OF MAINE GERARD R. CHASSE # 8714 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	DATE	BY

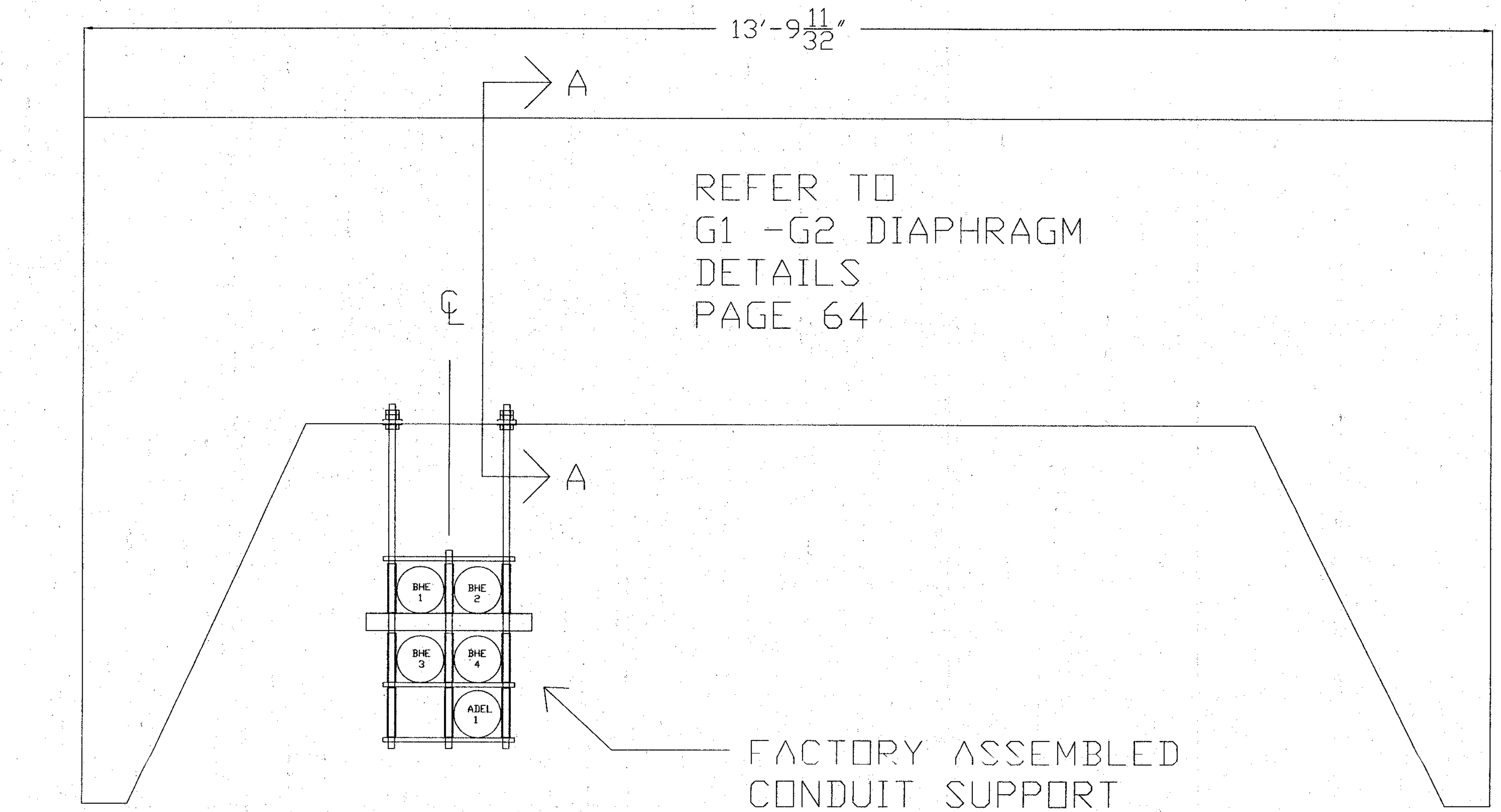
BANGOR HYDRO-ELECTRIC CO.
BANGOR, MAINE

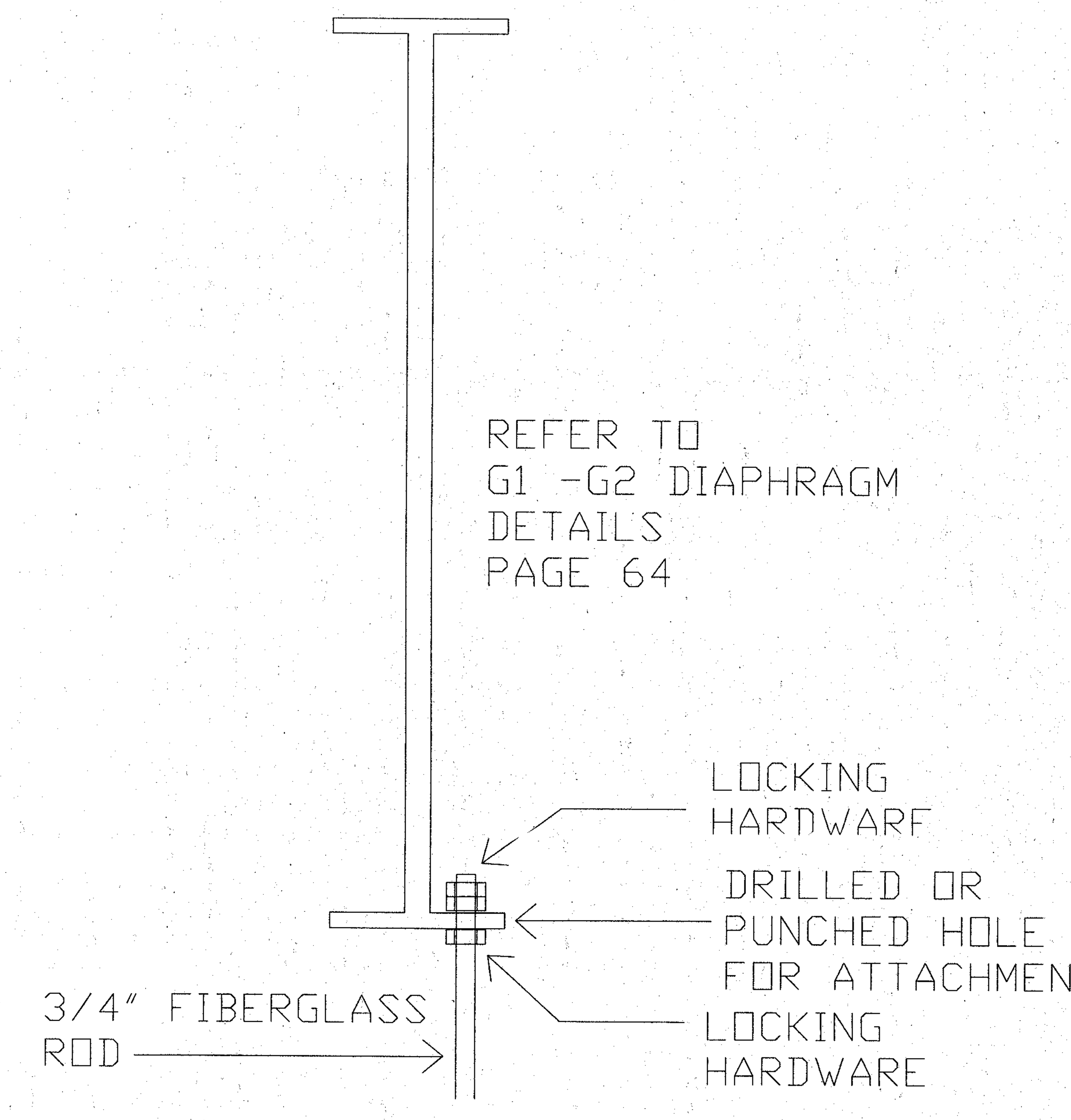
OLDTOWN-MILFORD BRIDGE
SUPERSTRUCTURE
GENERAL ARRANGEMENT
MILFORD, ME

SCALE: NONE DATE: 1/7/05
DRAWN: AJS SUBMITTED: _____
CHECKED: _____ APPROVED: _____
CAD REFERENCE: UNDERGND\DT_MF BRDG\M1867sh1

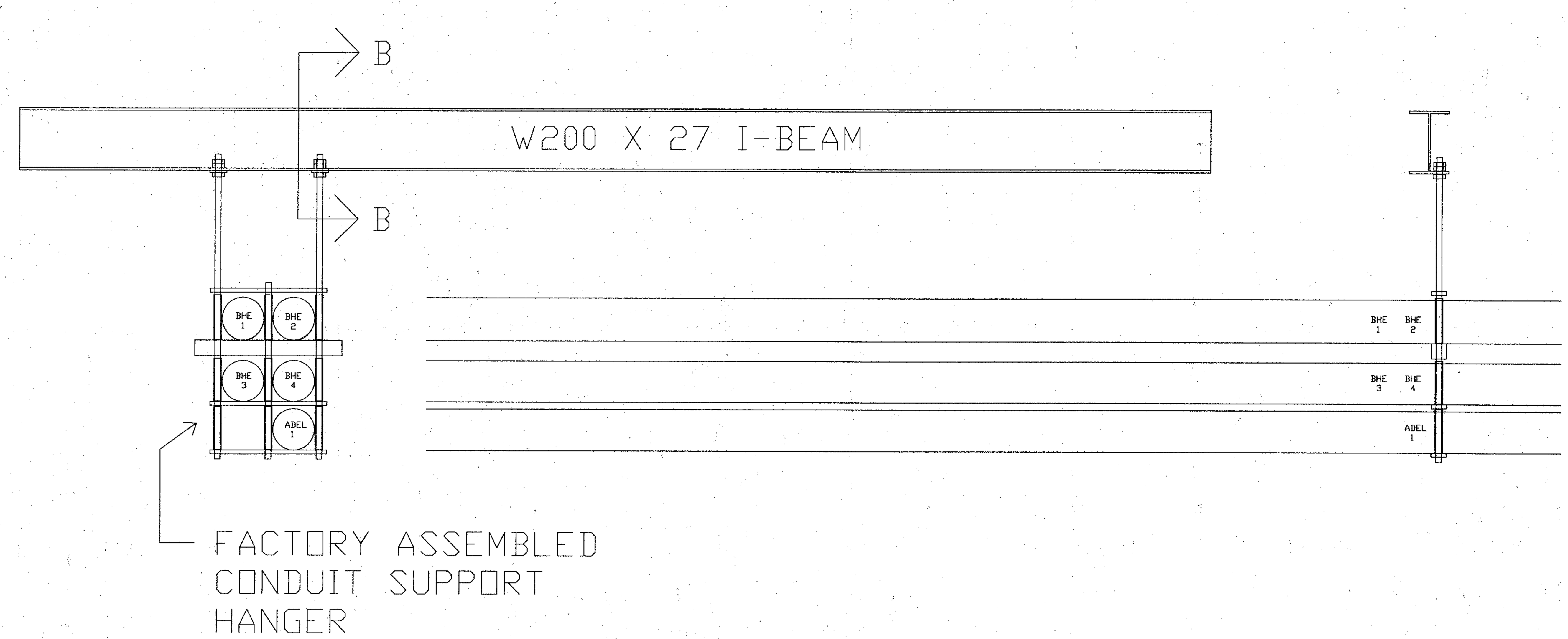
SHT. 1 OF 3 DWG: M1867

H:\UNDERGND\MILFORD BRIDGE\M1867sh1.dwg Fri Feb 11 10:44:49 2005

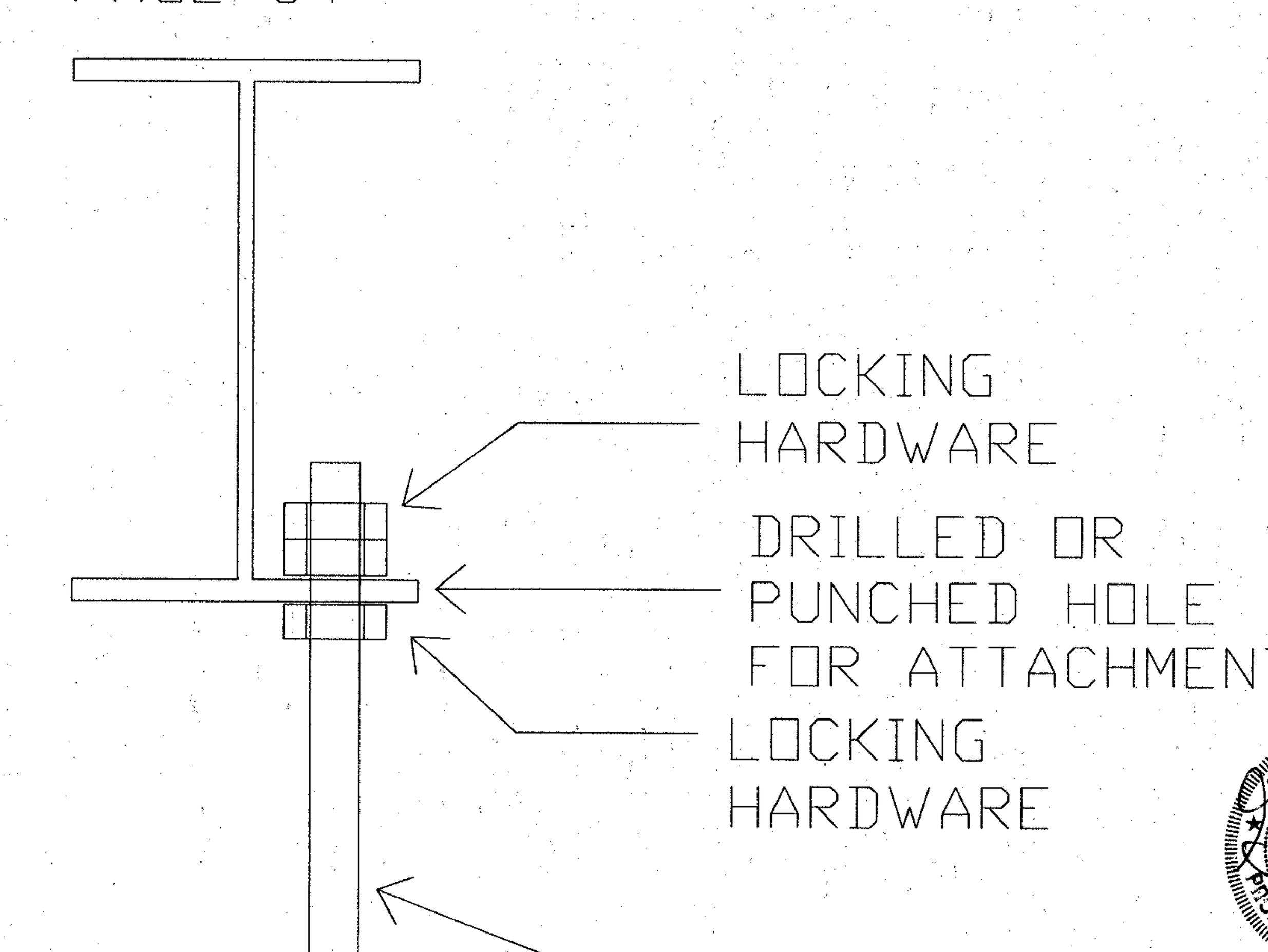




SECTION A-A



REFER TO
CONDUIT SUPPORT DETAILS
W200 X 27 I-BEAM
PAGE 64



SECTION B-B

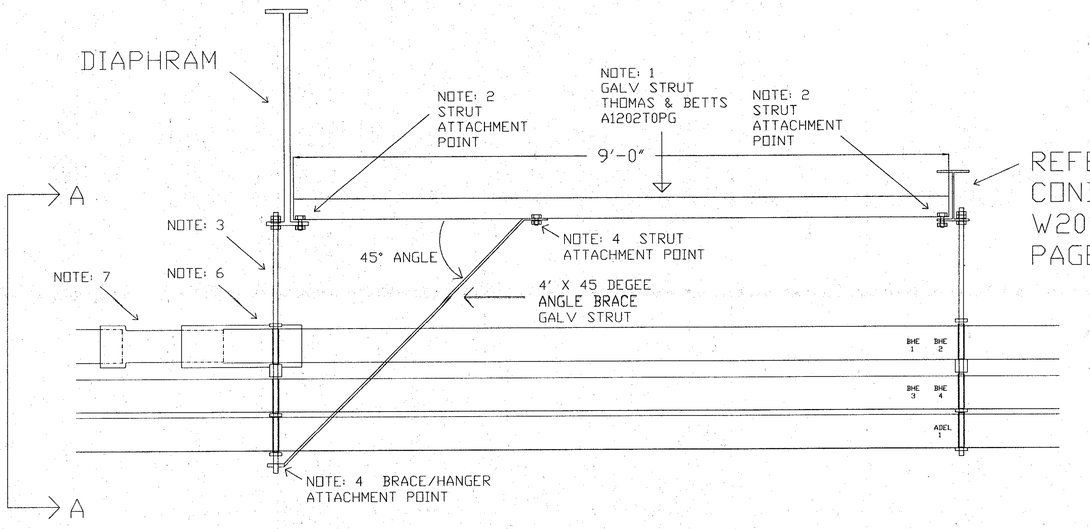
NO.	REVISION	DATE	BY

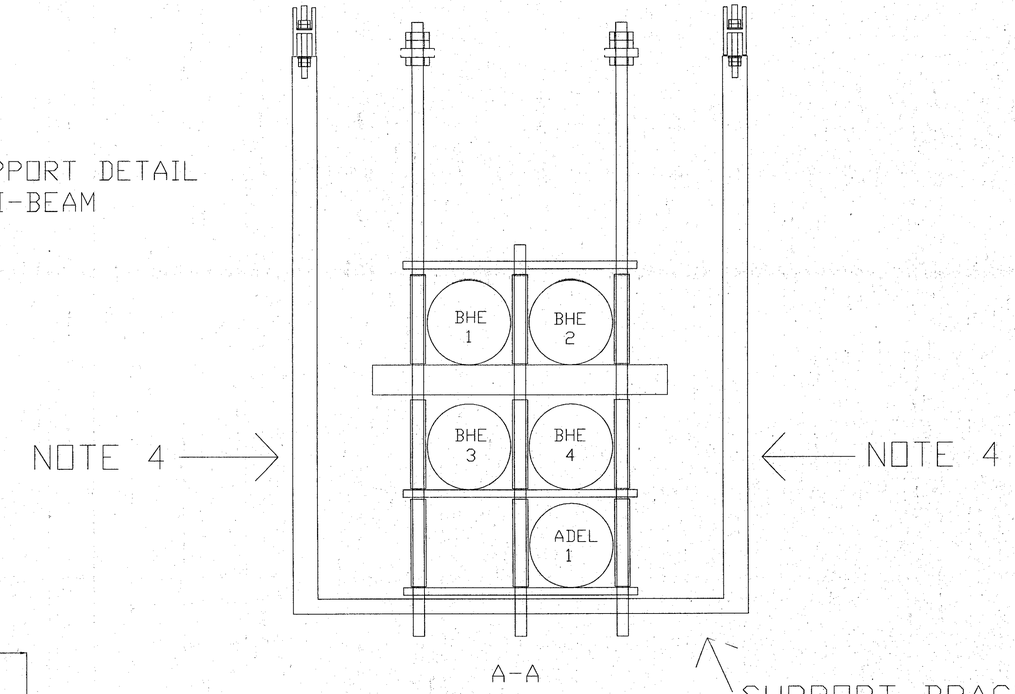
BANGOR HYDRO-ELECTRIC CO.
BANGOR, MAINE

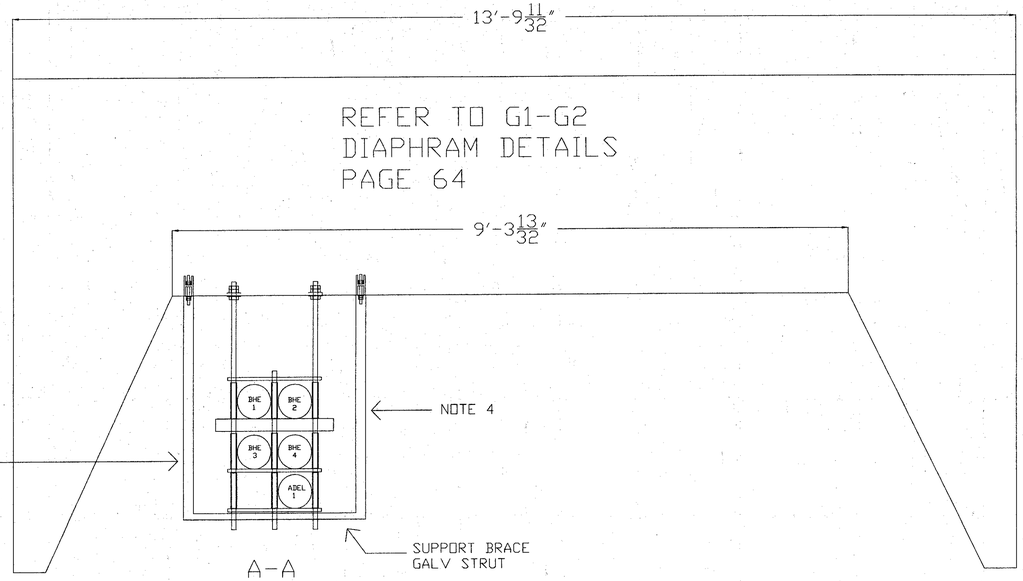
OLDTOWN MILFORD BRIDGE
DETAIL
CONDUIT HANGER SYSTEM
MILFORD

SCALE: NONE	DATE: 12/28/04
DRAWN: AJS	SUBMITTED:
CHECKED:	APPROVED:
CAD REFERENCE: UNDERGND\MILFORD\M6187sh1	
SHT. 2 OF 3	DWG: M6187

H:\UNDERGND\MILFORD BRIDGE\M6187sh2.dwg Fri Feb 11 10:45:05 2005







NOTES

1. FIELD CUT (2) SUPPORT STRUT

2. DRILL (4) 5/8" ATTACHMENT HOLES 2 PER STRUT

3. ATTACH SUPPORT BRACKET WITH SUPPORT STRUT TO DIAPHRAGM (APPROXIMATELY 1 PER 133')

4. ATTACH 4' X 45° ANGLE BRACE BETWEEN STRUT AND BASE OF SUPPORT BRACKET (1 PER SIDE)

5. ADJUST SUPPORT BRACKET HEIGHT TO ALLOW 45Ø BETWEEN BRACE AND SUPPORT BRACKET

6. STOP DEVICE (1 PER CONDUIT)

7. EXPANSION JOINT (1 PER CONDUIT)

STATE OF MAINE
GERARD R CHASSE
#8714
REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	DATE	BY

BANGOR HYDRO-ELECTRIC CO.
BANGOR, MAINE

OLDTOWN MILFORD BRIDGE
DETAIL
CONDUIT HANGER SYSTEM
MILFORD

SCALE: NONE DATE: 12/28/04
DRAWN: AJS SUBMITTED: _____
CHECKED: _____ APPROVED: _____
CAD REFERENCE: UNDERGND\MILFORD\M6187
SHT. 3 OF 3 DWG: M6187

H:\UNDERGND\MILFORD BRIDGE\M6187sh3.dwg Fri Feb 11 10:45:18 2005

NOTES:

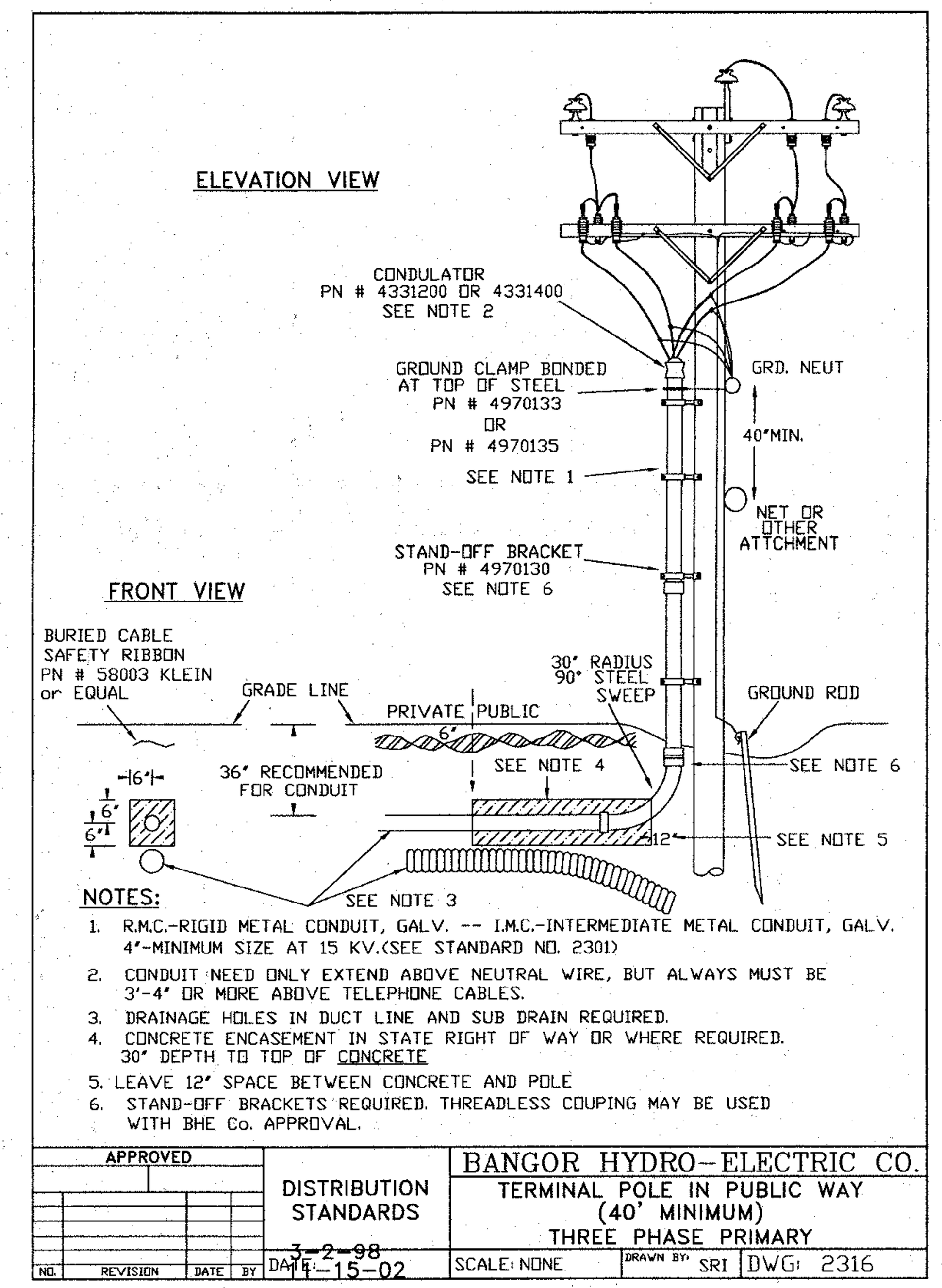
RISER POLE TO BE INSTALLED BY BHE.

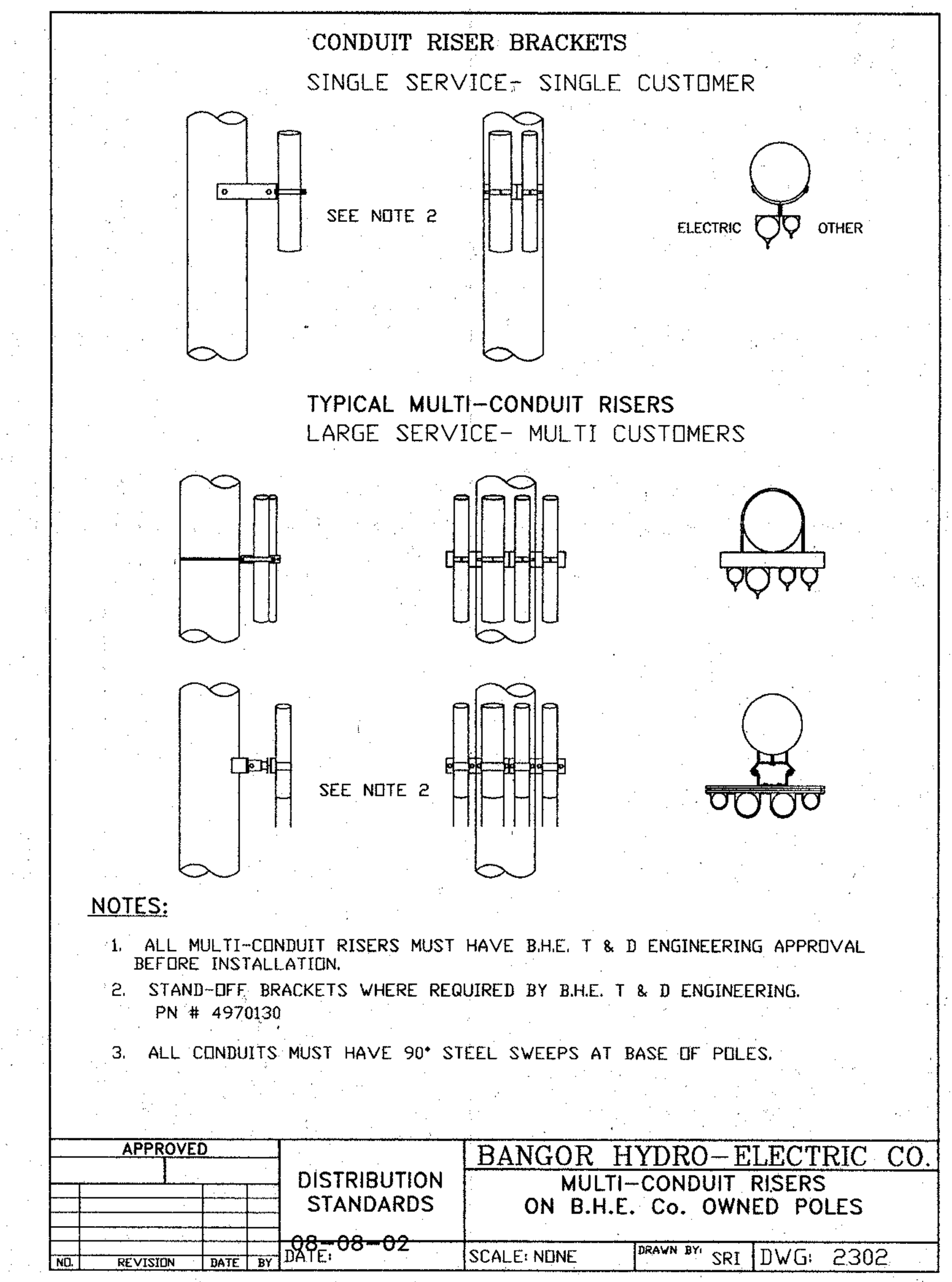
(2) - 24" STAND OFF BRACKETS TO BE INSTALLED BY BHE FOR 10' RIGID PIPE INSTALLATION

RIGID SWEEP AND 10' RIGID PIPE TO BE INSTALLED BY CONTRACTOR

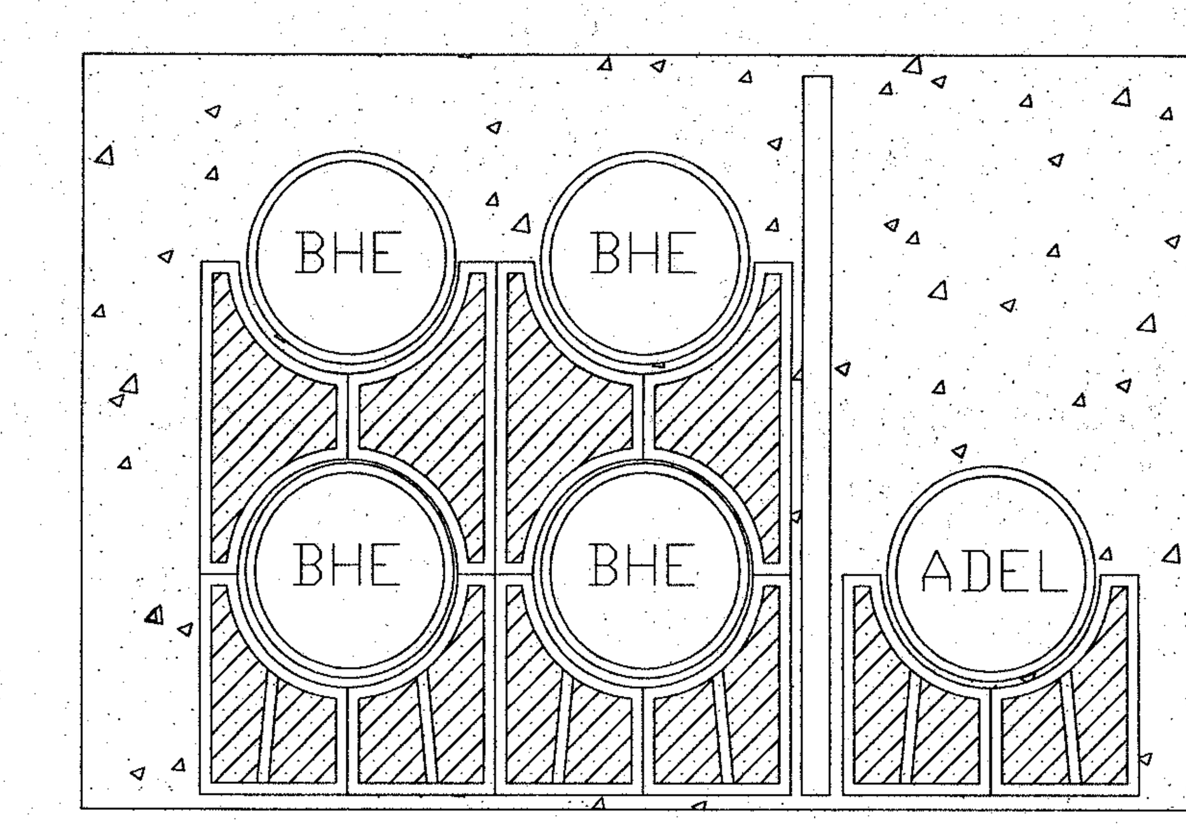
BHE TO INSPECT ALL CONDUIT INSTALLATION PRIOR TO CONCRETE ENCASEMENT

BHE LARGE PULL HOLE TO BE LOCATED AT EACH END BEYOND APPROACHS AREAS


ELEVATION VIEW
CONDULATOR PN # 4331200 OR 4331400 SEE NOTE 2
GROUND CLAMP BONDED AT TOP OF STEEL PN # 4970133 OR PN # 4970135
SEE NOTE 1
GRD. NEUT
40"MIN.
NET OR OTHER ATTCHMENT
STAND-OFF BRACKET PN # 4970130 SEE NOTE 6
FRONT VIEW
BURIED CABLE SAFETY RIBBON PN # 58003 KLEIN or EQUAL
GRADE LINE
PRIVATE PUBLIC
30" RADIUS 90° STEEL SWEEP
GROUND ROD
36" RECOMMENDED FOR CONDUIT
SEE NOTE 4
SEE NOTE 6
SEE NOTE 5
SEE NOTE 3
NOTES:
1. R.M.C.-RIGID METAL CONDUIT, GALV. -- I.M.C.-INTERMEDIATE METAL CONDUIT, GALV. 4"-MINIMUM SIZE AT 15 KV.(SEE STANDARD NO. 2301)
2. CONDUIT NEED ONLY EXTEND ABOVE NEUTRAL WIRE, BUT ALWAYS MUST BE 3'-4" OR MORE ABOVE TELEPHONE CABLES.
3. DRAINAGE HOLES IN DUCT LINE AND SUB DRAIN REQUIRED.
4. CONCRETE ENCASEMENT IN STATE RIGHT OF WAY OR WHERE REQUIRED. 30" DEPTH TO TOP OF CONCRETE
5. LEAVE 12" SPACE BETWEEN CONCRETE AND POLE
6. STAND-OFF BRACKETS REQUIRED. THREADLESS COUPING MAY BE USED WITH BHE Co. APPROVAL.
APPROVED
NO. REVISION DATE BY
DISTRIBUTION STANDARDS
DATE: 3-2-98 11-15-02
BANGOR HYDRO-ELECTRIC CO.
TERMINAL POLE IN PUBLIC WAY (40' MINIMUM) THREE PHASE PRIMARY
SCALE: NONE
DRAWN BY: SRI
DWG: 2316


CONDUIT RISER BRACKETS
SINGLE SERVICE- SINGLE CUSTOMER
SEE NOTE 2
ELECTRIC
OTHER
TYPICAL MULTI-CONDUIT RISERS
LARGE SERVICE- MULTI CUSTOMERS
SEE NOTE 2
NOTES:
1. ALL MULTI-CONDUIT RISERS MUST HAVE B.H.E. T & D ENGINEERING APPROVAL BEFORE INSTALLATION.
2. STAND-OFF BRACKETS WHERE REQUIRED BY B.H.E. T & D ENGINEERING. PN # 4970130
3. ALL CONDUITS MUST HAVE 90° STEEL SWEEPS AT BASE OF POLES.
APPROVED
NO. REVISION DATE BY
DISTRIBUTION STANDARDS
DATE: 08-08-02
BANGOR HYDRO-ELECTRIC CO.
MULTI-CONDUIT RISERS ON B.H.E. Co. OWNED POLES
SCALE: NONE
DRAWN BY: SRI
DWG: 2302

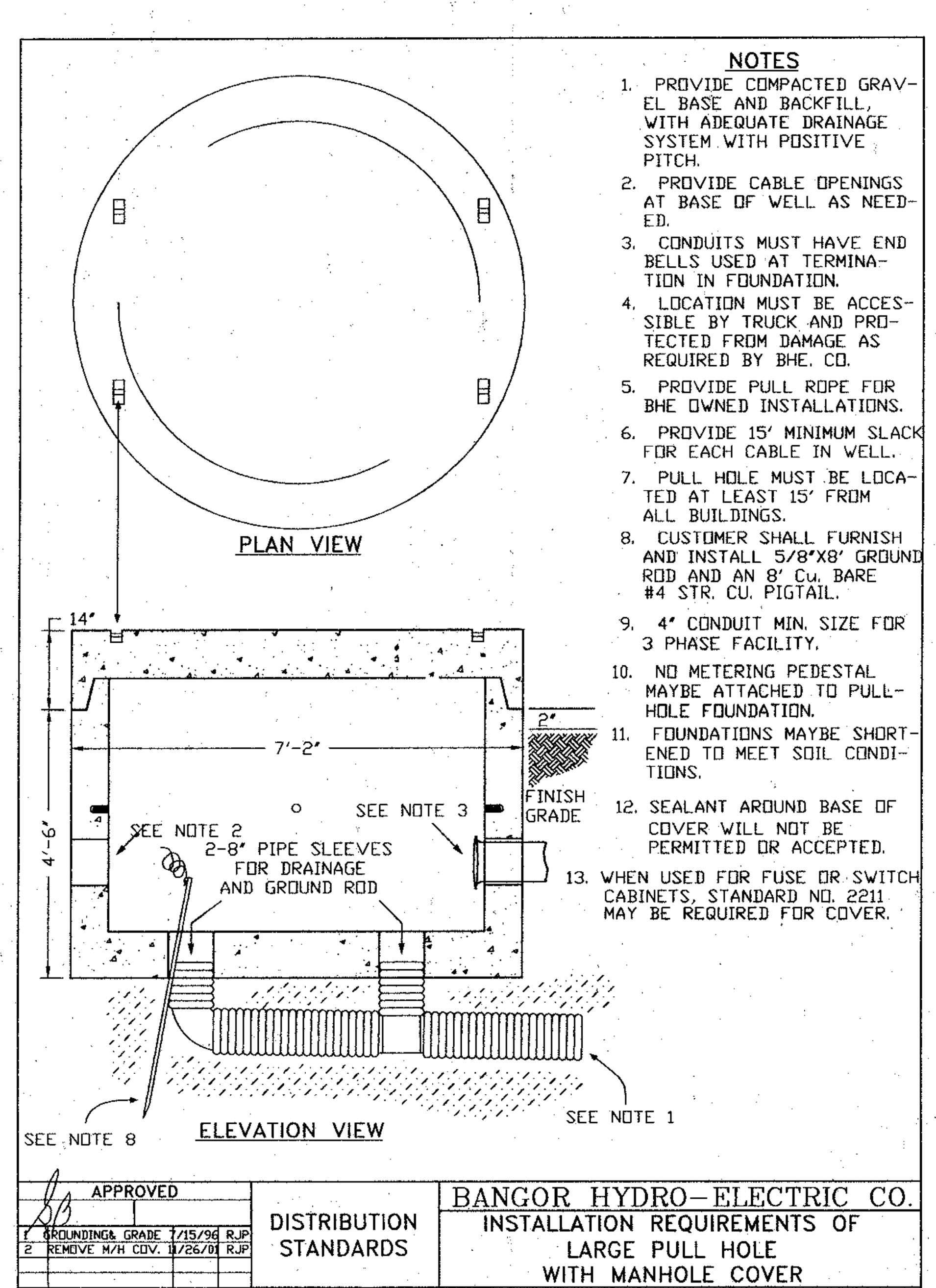
5" SCHEDULE 40 PVC CONDUIT ENCASEMENT

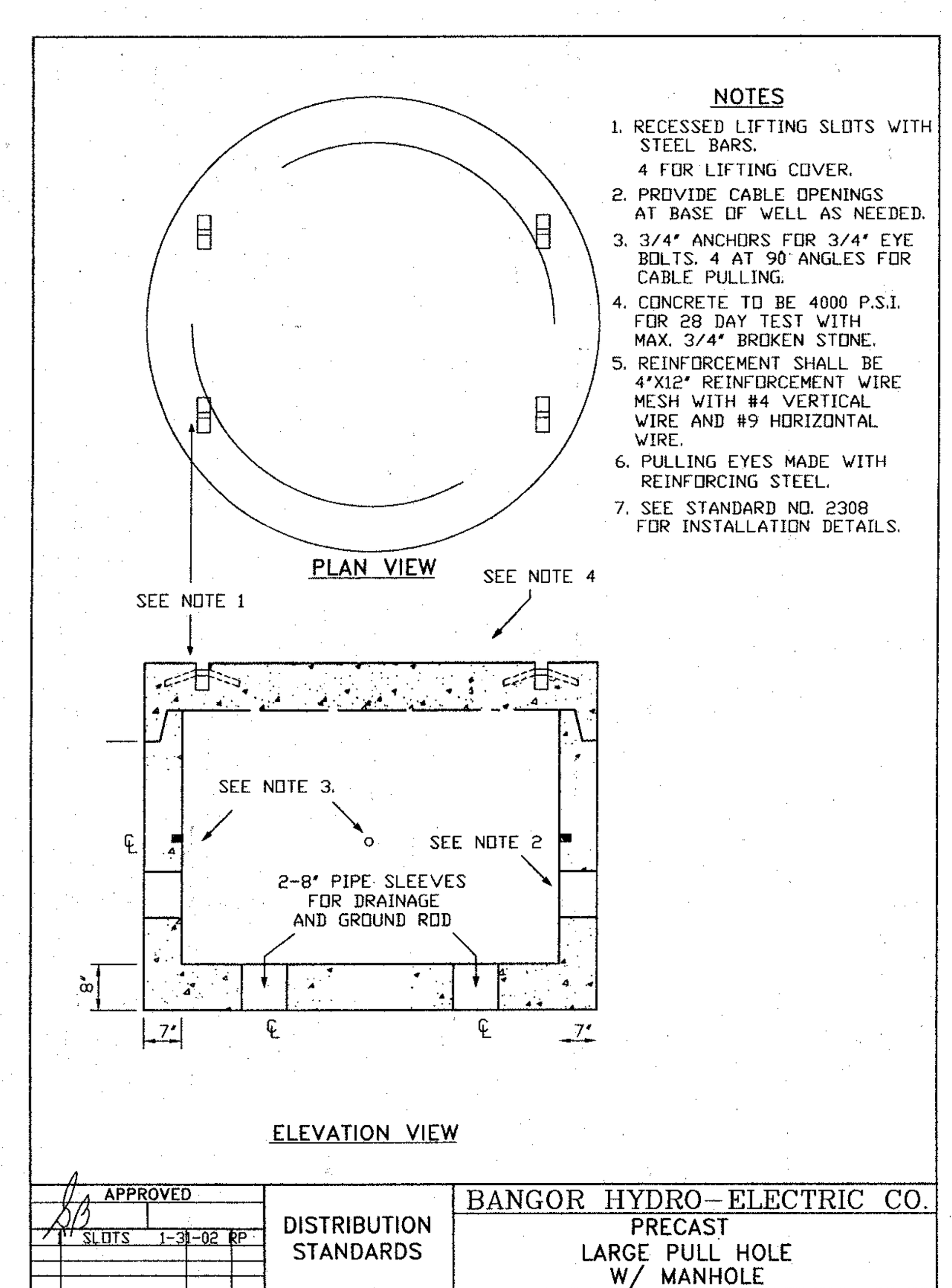


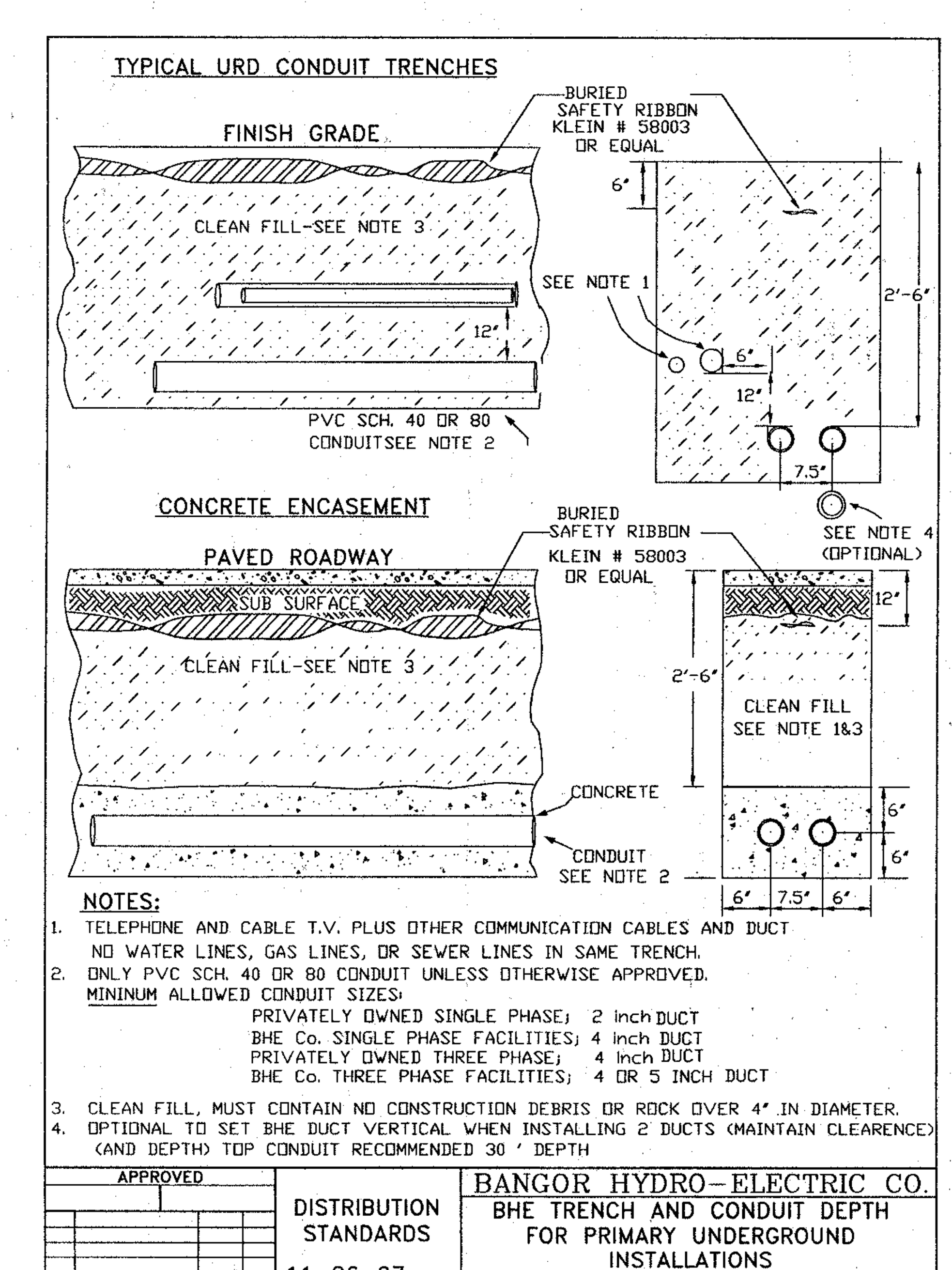
CONCRETE ENCASEMENT FROM APPROACH TO RISERS

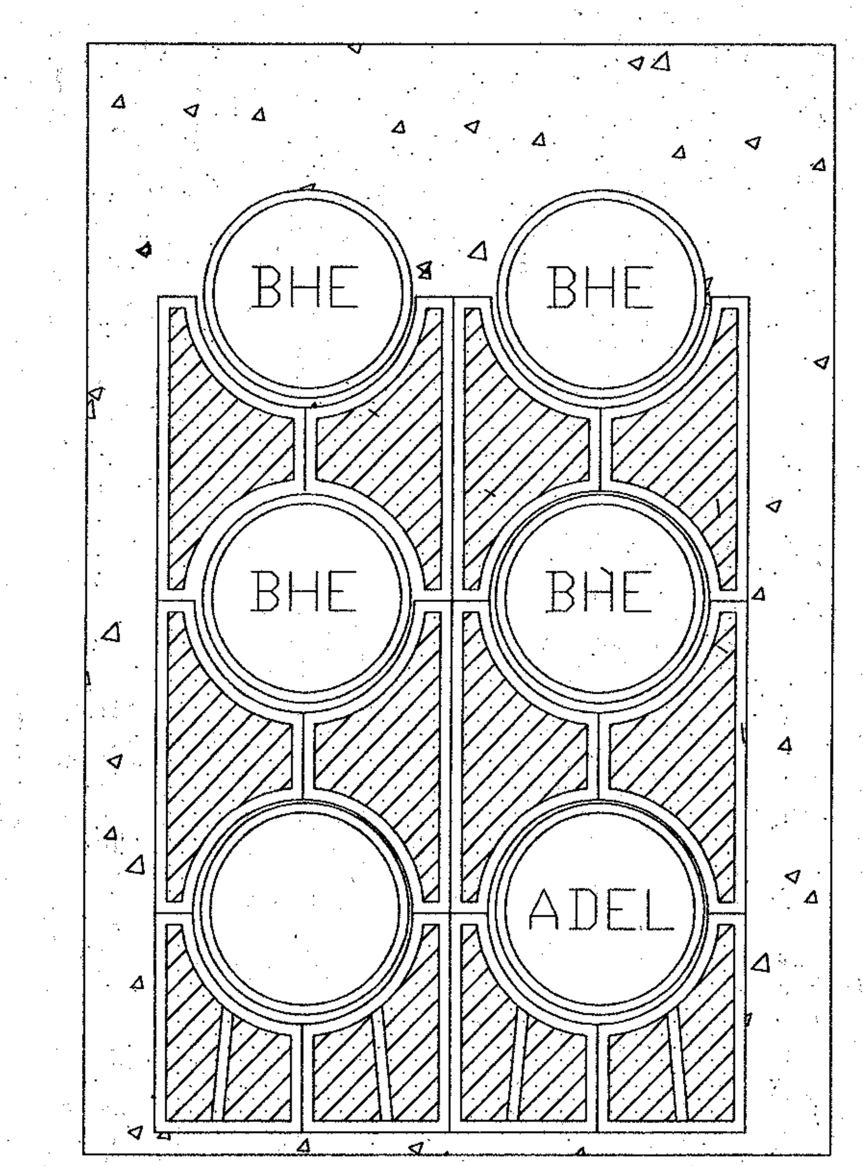
BHE & ADELPHIA CONDUIT WITH SUPPORT BRACKETS 1/2" BARRIER BETWEEN CONDUITS

3" COVERAGE TOP & SIDES OF CONDUITS


NOTES
1. PROVIDE COMPACTED GRAVEL BASE AND BACKFILL, WITH ADEQUATE DRAINAGE SYSTEM WITH POSITIVE PITCH.
2. PROVIDE CABLE OPENINGS AT BASE OF WELL AS NEEDED.
3. CONDUITS MUST HAVE END BELLS USED AT TERMINATION IN FOUNDATION.
4. LOCATION MUST BE ACCESSIBLE BY TRUCK AND PROTECTED FROM DAMAGE AS REQUIRED BY BHE. CO.
5. PROVIDE PULL ROPE FOR BHE OWNED INSTALLATIONS.
6. PROVIDE 15' MINIMUM SLACK FOR EACH CABLE IN WELL.
7. PULL HOLE MUST BE LOCATED AT LEAST 15' FROM ALL BUILDINGS.
8. CUSTOMER SHALL FURNISH AND INSTALL 5/8"X8' GROUND ROD AND AN 8' Cu. BARE #4 STR. CU. PIGTAIL.
9. 4" CONDUIT MIN. SIZE FOR 3 PHASE FACILITY.
10. NO METERING PEDESTAL MAYBE ATTACHED TO PULL-HOLE FOUNDATION.
11. FOUNDATIONS MAYBE SHORTENED TO MEET SOIL CONDITIONS.
12. SEALANT AROUND BASE OF COVER WILL NOT BE PERMITTED OR ACCEPTED.
13. WHEN USED FOR FUSE OR SWITCH CABINETS, STANDARD NO. 2211 MAY BE REQUIRED FOR COVER.
PLAN VIEW
14"
7'-2"
4'-6"
2"
FINISH GRADE
SEE NOTE 2
SEE NOTE 3
2-8" PIPE SLEEVES FOR DRAINAGE AND GROUND ROD
SEE NOTE 8
ELEVATION VIEW
SEE NOTE 1
APPROVED
1 GROUNDING& GRADE 7/15/96 RJP
2 REMOVE M/H COV. 11/26/01 RJP
NO. REVISION DATE BY
DISTRIBUTION STANDARDS
DATE: 4-27-90
BANGOR HYDRO-ELECTRIC CO.
INSTALLATION REQUIREMENTS OF LARGE PULL HOLE WITH MANHOLE COVER
SCALE: NONE
DRAWN BY: SRI
DWG: 2308


NOTES
1. RECESSED LIFTING SLOTS WITH STEEL BARS.
4 FOR LIFTING COVER.
2. PROVIDE CABLE OPENINGS AT BASE OF WELL AS NEEDED.
3. 3/4" ANCHORS FOR 3/4" EYE BOLTS. 4 AT 90 ANGLES FOR CABLE PULLING.
4. CONCRETE TO BE 4000 P.S.I. FOR 28 DAY TEST WITH MAX. 3/4" BROKEN STONE.
5. REINFORCEMENT SHALL BE 4"X12" REINFORCEMENT WIRE MESH WITH #4 VERTICAL WIRE AND #9 HORIZONTAL WIRE.
6. PULLING EYES MADE WITH REINFORCING STEEL.
7. SEE STANDARD NO. 2308 FOR INSTALLATION DETAILS.
PLAN VIEW
SEE NOTE 1
SEE NOTE 4
SEE NOTE 3.
SEE NOTE 2
2-8" PIPE SLEEVES FOR DRAINAGE AND GROUND ROD
8"
7"
7"
ELEVATION VIEW
APPROVED
1 SLOTS 1-31-02 RP
NO. REVISION DATE BY
DISTRIBUTION STANDARDS
DATE: 04-02-90
BANGOR HYDRO-ELECTRIC CO.
PRECAST LARGE PULL HOLE W/ MANHOLE
SCALE: NONE
DRAWN BY: SRI
DWG: 2206


TYPICAL URD CONDUIT TRENCHES
FINISH GRADE
BURIED SAFETY RIBBON KLEIN # 58003 OR EQUAL
CLEAN FILL-SEE NOTE 3
SEE NOTE 1
6"
12"
2'-6"
7.5"
PVC SCH. 40 OR 80 CONDUITSEE NOTE 2
CONCRETE ENCASEMENT
PAVED ROADWAY
SUB SURFACE
BURIED SAFETY RIBBON KLEIN # 58003 OR EQUAL
SEE NOTE 4 (OPTIONAL)
CLEAN FILL-SEE NOTE 3
CLEAN FILL SEE NOTE 1&3
CONCRETE
CONDUIT SEE NOTE 2
NOTES:
1. TELEPHONE AND CABLE T.V. PLUS OTHER COMMUNICATION CABLES AND DUCT NO WATER LINES, GAS LINES, OR SEWER LINES IN SAME TRENCH.
2. ONLY PVC SCH. 40 OR 80 CONDUIT UNLESS OTHERWISE APPROVED. MININUM ALLOWED CONDUIT SIZES:
PRIVATELY OWNED SINGLE PHASE; 2 inch DUCT
BHE Co. SINGLE PHASE FACILITIES; 4 inch DUCT
PRIVATELY OWNED THREE PHASE; 4 inch DUCT
BHE Co. THREE PHASE FACILITIES; 4 OR 5 INCH DUCT
3. CLEAN FILL, MUST CONTAIN NO CONSTRUCTION DEBRIS OR ROCK OVER 4" IN DIAMETER.
4. OPTIONAL TO SET BHE DUCT VERTICAL WHEN INSTALLING 2 DUCTS (MAINTAIN CLEARENCE) (AND DEPTH) TOP CONDUIT RECOMMENDED 30 ' DEPTH
APPROVED
NO. REVISION DATE BY
DISTRIBUTION STANDARDS
DATE: 11-26-97 08-09-02
BANGOR HYDRO-ELECTRIC CO.
BHE TRENCH AND CONDUIT DEPTH FOR PRIMARY UNDERGROUND INSTALLATIONS
SCALE: NONE
DRAWN BY: SRI
DWG: 2301



CONCRETE ENCASED BHE & ADELPHIA CONDUIT WITH SUPPORT BRACKETS IN APPROACH AREA

NO.	REVISION	DATE	BY

BANGOR HYDRO-ELECTRIC CO.
BANGOR, MAINE

OLDTOWN-MILFORD BRIDGE SPECIFICATIONS

MILFORD, ME

SCALE: NONE	DATE: 2/04/05
DRAWN: AJS	SUBMITTED:
CHECKED:	APPROVED:
CAD REFERENCE: UNDERGND/OT-MF BRIDGE	
SHT. OF	DWG:

H:\UNDERGND\MILFORD BRIDGE\MF-OT BRIDGE SPECS.DWG Fri Feb 11 10:42:05 2005

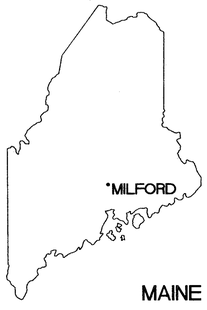
85 of 90

TOWN OF MILFORD
SEWER TRANSMISSION LINE
UPGRADE

MILFORD, MAINE

FEBRUARY 2005

JOB #3103



ENGINEERS • SURVEYORS

C E S

465 So. Main Street P.O. Box 639 Brewer, ME 04412 Tel: 207-989-4824 FAX 207-989-4881

INDEX:

SOURCE:

SITE INFORMATION FROM SEWER MANHOLE 5 TO MANHOLE 11 OBTAINED FROM A ELECTRONIC FILE AND DESIGN DRAWINGS PREPARED FOR THE MAINE DEPARTMENT OF TRANSPORTATION ENTITLED "OLD TOWN – MILFORD BRIDGE, DATED 11/05/04, PREPARED BY ERDMAN ANTHONY, ROCHESTER NEW YORK

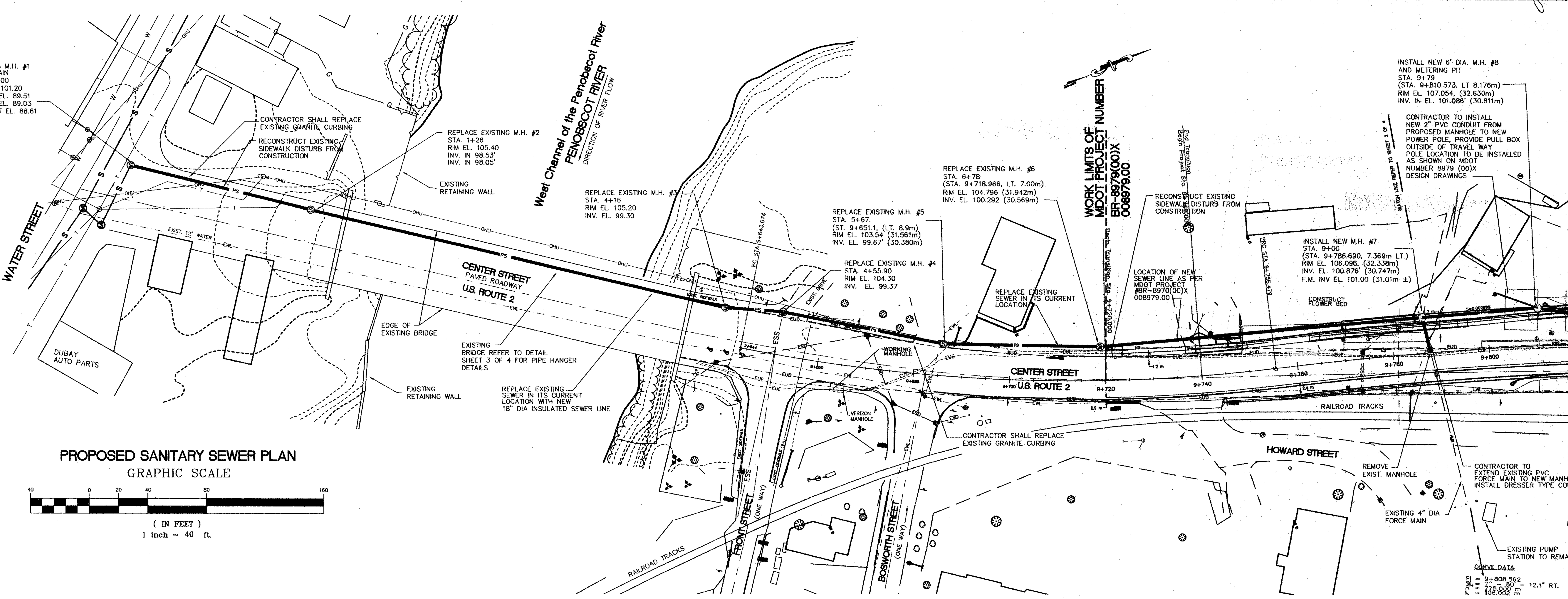
SITE INFORMATION FROM SEWER MANHOLE 1 TO MANHOLE 5 OBTAINED FROM A PLAN PREPARED BY JAMES W. SEWALL ENTITLED "CONSTRUCTION CONTRACT 1, INTERCEPTOR SEWER AND PUMP STATION, DATED FEBRUARY 18, 1976.

NOTES:

1. CONTRACTOR SHALL COORDINATE ALL WORK WITH BRIDGE CONTRACTOR PRIOR TO INSTALLATION OF NEW SANITARY SEWER LINE
2. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UNDERGROUND UTILITIES
3. CONTRACTOR SHALL FIELD VERIFY EXISTING MANHOLE INVERT ELEVATIONS PRIOR TO INSTALLATION OF PROPOSED SEWER LINE. PROVIDE ENGINEER FIELD DATA.
4. CONTRACTOR SHALL MEET ALL ADA STANDARD FOR SIDEWALK REPLACEMENT AND ROADWAY CROSSING
5. REFER TO GENERAL NOTES ON SHEET 4 OF 4
6. CONTRACTOR IS RESPONSIBLE TO RECONNECT ALL SANITARY SEWER SERVICE LINES. CONTRACTOR SHALL ALLOW ENGINEER TO INSPECT SERVICE PRIOR TO RECONNECTION

LEGEND

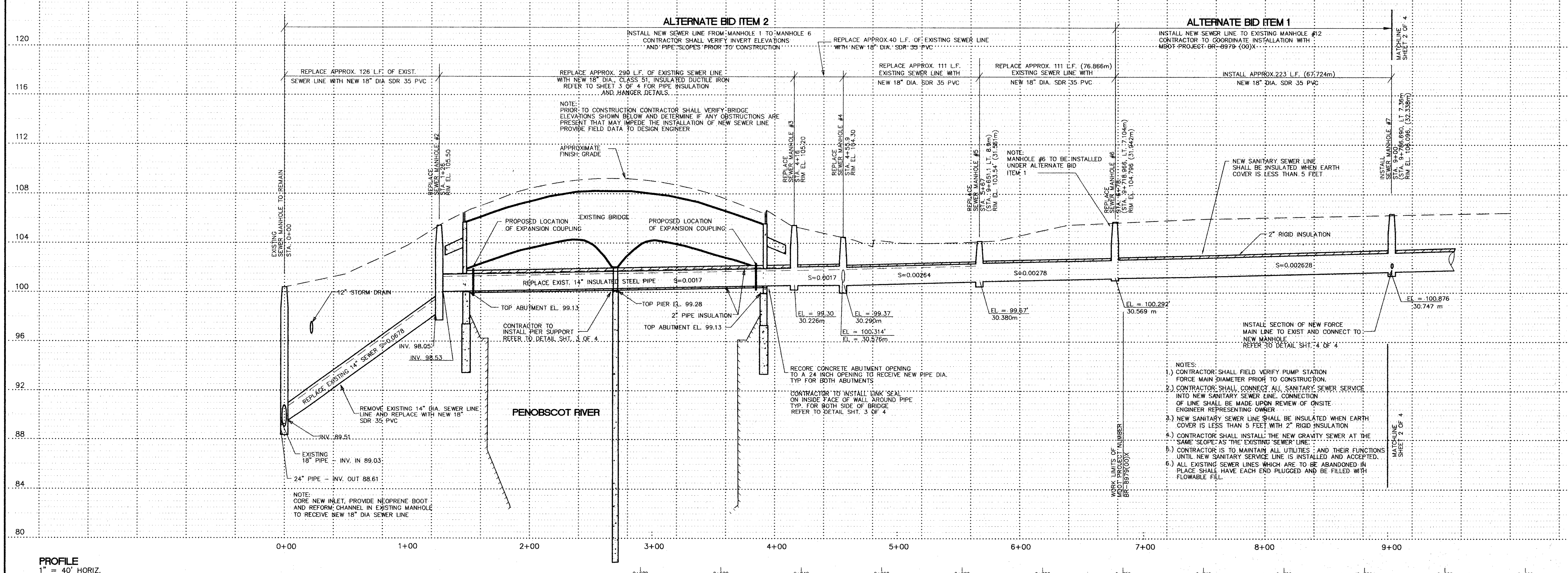
- EXISTING WATER VALVE
- EXISTING UTILITY POLE
- EXISTING SEWER MANHOLE
- EXISTING 2' CONTOUR
- EXISTING 10' CONTOUR
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF RIVER
- G — EXISTING 2" GAS LINE
- ES — EXISTING SEWER TO REMAIN
- ES — EXISTING SEWER TO BE DISCONTINUED
- ESS — EXISTING SEWER SERVICE
- W — EXISTING WATERLINE
- OHU — EXISTING OVERHEAD UTILITIES
- T — EXISTING TELEPHONE CABLE
- EUD — EXISTING ROADWAY UNDERDRAIN
- ESD — EXISTING STORM DRAIN
- T — EXISTING TELEPHONE CABLE
- EXISTING GATE VALVE
- EXISTING SIGN
- EXISTING HYDRANT
- ES — PROPOSED NEW SEWER
- PROPOSED NEW SEWER



PROPOSED SANITARY SEWER PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.



NOTES:

1.) CONTRACTOR SHALL FIELD VERIFY PUMP STATION FORCE MAIN DIAMETER PRIOR TO CONSTRUCTION.
2.) CONTRACTOR SHALL CONNECT ALL SANITARY SEWER SERVICE INTO NEW SANITARY SEWER LINE. CONNECTION OF LINE SHALL BE MADE UPON REVIEW OF ONSITE ENGINEER REPRESENTING OWNER
3.) NEW SANITARY SEWER LINE SHALL BE INSULATED WHEN EARTH COVER IS LESS THAN 5 FEET WITH 2" RIGID INSULATION
4.) CONTRACTOR SHALL INSTALL THE NEW GRAVITY SEWER AT THE SAME SLOPE AS THE EXISTING SEWER LINE.
5.) CONTRACTOR IS TO MAINTAIN ALL UTILITIES AND THEIR FUNCTIONS UNTIL NEW SANITARY SERVICE LINE IS INSTALLED AND ACCEPTED.
6.) ALL EXISTING SEWER LINES WHICH ARE TO BE ABANDONED IN PLACE SHALL HAVE EACH END PLUGGED AND BE FILLED WITH FLOWABLE FILL.

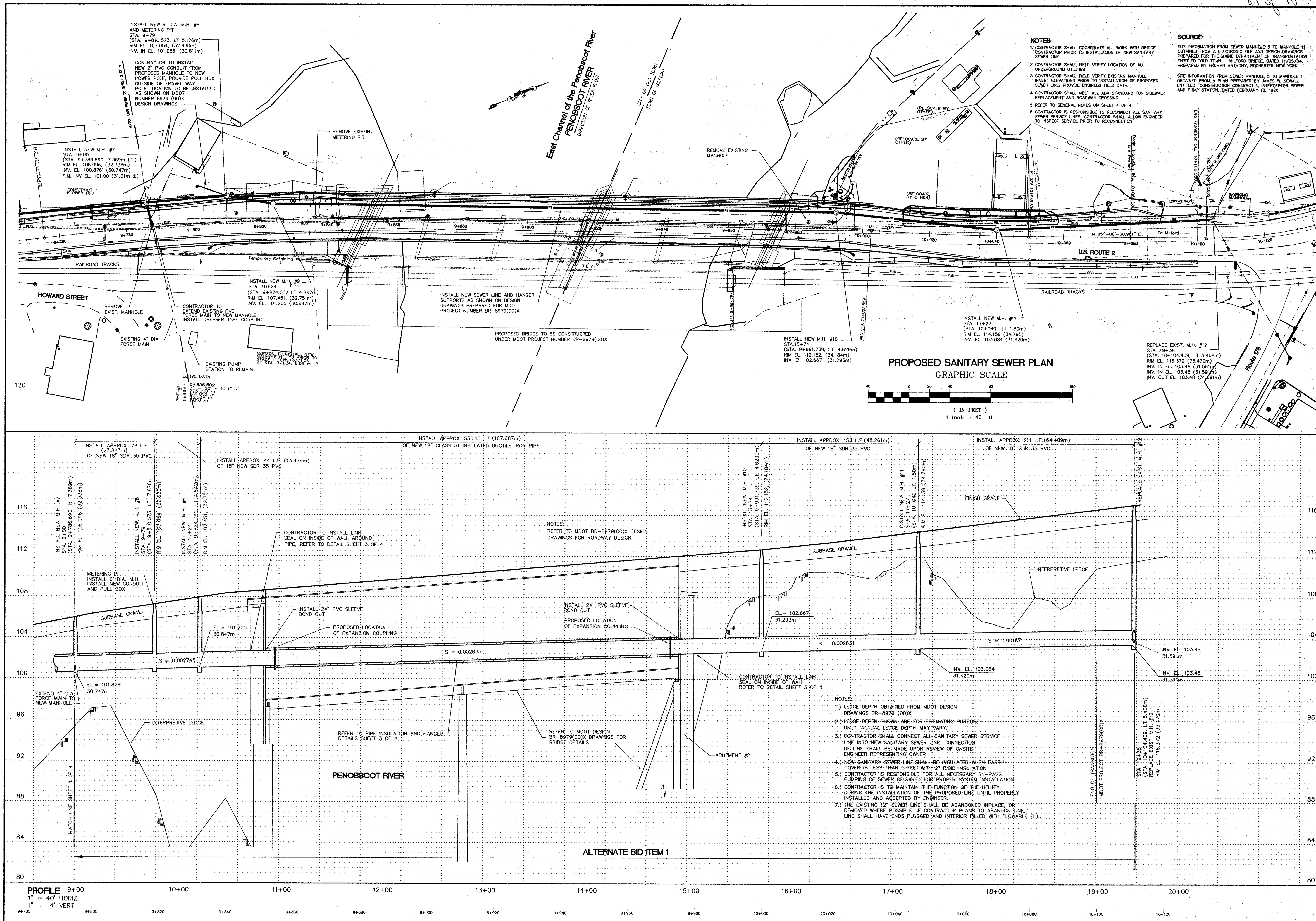
PROFILE
1" = 40' HORIZ.
1" = 4' VERT

C E S INC. 1978
ENGINEERS SURVEYORS
465 So. Main Street P.O. Box 639 Brewer, ME 04412 Tel: 207-989-4824 FAX 207-989-4881
9 Apple Lane, P.O. Box 1509, Southwest Harbor, ME 04679 Tel: 207-244-0062 Fax 207-244-4059
29 Dublin Street, P.O. Box 587, Machias, ME 04654 Tel: 207-255-3270 Fax 207-255-8367
232 Main Street, P.O. Box 506, Fort Fairfield, ME 04742 Tel: 207-472-3008 Fax 207-472-3015

JOB TITLE
MILFORD SEWER TRANSMISSION LINE UPGRADE
MILFORD, MAINE

SHEET TITLE
PLAN and PROFILE

SCALE:	1"=40'
DATE:	1/07/05
DRAWN BY	DC
GRAPHICS CHECKED BY	
DESIGNED BY	
CHECKED BY	
APPROVED BY	
FILE NAME	PLAN/PROFILE
JOB NUMBER	3103.1
DRAWING NUMBER	1 of 4


NOTES:
1. CONTRACTOR SHALL COORDINATE ALL WORK WITH BRIDGE CONTRACTOR PRIOR TO INSTALLATION OF NEW SANITARY SEWER LINE
2. CONTRACTOR SHALL FIELD VERIFY LOCATION OF ALL UNDERGROUND UTILITIES
3. CONTRACTOR SHALL FIELD VERIFY EXISTING MANHOLE INVERT ELEVATIONS PRIOR TO INSTALLATION OF PROPOSED SEWER LINE. PROVIDE ENGINEER FIELD DATA.
4. CONTRACTOR SHALL MEET ALL ADA STANDARD FOR SIDEWALK REPLACEMENT AND ROADWAY CROSSING
5. REFER TO GENERAL NOTES ON SHEET 4 OF 4
6. CONTRACTOR IS RESPONSIBLE TO RECONNECT ALL SANITARY SEWER SERVICE LINES. CONTRACTOR SHALL ALLOW ENGINEER TO INSPECT SERVICE PRIOR TO RECONNECTION
SOURCE:
SITE INFORMATION FROM SEWER MANHOLE 5 TO MANHOLE 11 OBTAINED FROM A ELECTRONIC FILE AND DESIGN DRAWINGS PREPARED FOR THE MAINE DEPARTMENT OF TRANSPORTATION ENTITLED "OLD TOWN – MILFORD BRIDGE, DATED 11/05/04, PREPARED BY ERDMAN ANTHONY, ROCHESTER NEW YORK
SITE INFORMATION FROM SEWER MANHOLE 5 TO MANHOLE 1 OBTAINED FROM A PLAN PREPARED BY JAMES W. SEWALL ENTITLED "CONSTRUCTION CONTRACT 1, INTERCEPTOR SEWER AND PUMP STATION, DATED FEBRUARY 18, 1978.
INSTALL NEW 6' DIA. M.H. #8 AND METERING PIT
STA. 9+79
(STA. 9+810.573, LT 8.176m)
RIM EL. 107.054, (32.630m)
INV. IN EL. 101.086' (30.811m)
CONTRACTOR TO INSTALL NEW 2" PVC CONDUIT FROM PROPOSED MANHOLE TO NEW POWER POLE, PROVIDE PULL BOX OUTSIDE OF TRAVEL WAY POLE LOCATION TO BE INSTALLED AS SHOWN ON MDOT NUMBER 8979 (00)X DESIGN DRAWINGS
INSTALL NEW M.H. #7
STA. 9+00
(STA. 9+786.690, 7.369m LT.)
RIM EL. 106.096, (32.338m)
INV. EL. 100.876' (30.747m)
F.M. INV EL. 101.00 (31.01m ±)
REMOVE EXISTING METERING PIT
East Channel of the Penobscot River
PENOBSCOT RIVER
DIRECTION OF RIVER FLOW
CITY OF OLD TOWN
TOWN OF MILFORD
REMOVE EXISTING MANHOLE
(RELOCATE BY OTHER)
WORKING MANHOLE
U.S. ROUTE 2
RAILROAD TRACKS
To Milford
HOWARD STREET
REMOVE EXIST. MANHOLE
EXISTING 4" DIA FORCE MAIN
CONTRACTOR TO EXTEND EXISTING PVC FORCE MAIN TO NEW MANHOLE. INSTALL DRESSER TYPE COUPLING.
EXISTING PUMP STATION TO REMAIN
INSTALL NEW M.H. #9
STA. 10+24
(STA. 9+824.052 LT 4.842m)
RIM EL. 107.451, (32.751m)
INV. EL. 101.205 (30.847m)
INSTALL NEW SEWER LINE AND HANGER SUPPORTS AS SHOWN ON DESIGN DRAWINGS PREPARED FOR MDOT PROJECT NUMBER BR-8979(00)X
PROPOSED BRIDGE TO BE CONSTRUCTED UNDER MDOT PROJECT NUMBER BR-8979(00)X
Temporary Retaining Wall
INSTALL NEW M.H. #10
STA. 15+74
(STA. 9+991.739, LT, 4.629m)
RIM EL. 112.152, (34.184m)
INV. El. 102.667 (31.293m)
INSTALL NEW M.H. #11
STA. 17+27
(STA. 10+040 LT 1.80m)
RIM EL. 114.156 (34.795)
INV. EL. 103.084 (31.420m)
REPLACE EXIST. M.H. #12
STA. 19+38
(STA. 10+104.409, LT 5.408m)
RIM EL. 116.372 (35.470m)
INV. IN EL. 103.48 (31.591m)
INV. IN EL. 103.48 (31.591m)
INV. OUT EL. 103.48 (31.591m)
Route 178
N 25°-06'-30.961" E
PROPOSED SANITARY SEWER PLAN
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
INSTALL APPROX. 78 L.F. (23.883m) OF NEW 18" SDR 35 PVC
INSTALL APPROX. 44 L.F. (13.479m) OF 18" NEW SDR 35 PVC
INSTALL APPROX. 550.15 L.F. (167.687m) OF NEW 18" CLASS 51 INSULATED DUCTILE IRON PIPE
INSTALL APPROX. 153 L.F. (48.261m) OF NEW 18" SDR 35 PVC
INSTALL APPROX. 211 L.F. (64.409m) OF NEW 18" SDR 35 PVC
NOTES:
REFER TO MDOT BR-8979(00)X DESIGN DRAWINGS FOR ROADWAY DESIGN
CONTRACTOR TO INSTALL LINK SEAL ON INSIDE OF WALL AROUND PIPE, REFER TO DETAIL SHEET 3 OF 4
METERING PIT INSTALL 6' DIA. M.H. INSTALL NEW CONDUIT AND PULL BOX
SUBBASE GRAVEL
FINISH GRADE
INTERPRETIVE LEDGE
INSTALL 24" PVC SLEEVE BOND OUT
PROPOSED LOCATION OF EXPANSION COUPLING
EL.= 101.205 30.847m
EL.= 102.667 31.293m
EL.= 101.878 30.747m
S = 0.002745
S = 0.002635
S = 0.002631
S = 0.00187
INV. EL. 103.084 31.420m
INV. EL. 103.48 31.591m
CONTRACTOR TO INSTALL LINK SEAL ON INSIDE OF WALL REFER TO DETAIL SHEET 3 OF 4
EXTEND 4" DIA. FORCE MAIN TO NEW MANHOLE
REFER TO PIPE INSULATION AND HANGER DETAILS SHEET 3 OF 4
REFER TO MDOT DESIGN BR-8979(00)X DRAWINGS FOR BRIDGE DETAILS
ABUTMENT #2
PENOBSCOT RIVER
MATCH LINE SHEET 1 OF 4
END OF TRANSITION MDOT PROJECT BR-8979(00)X
NOTES:
1.) LEDGE DEPTH OBTAINED FROM MDOT DESIGN DRAWINGS BR-8979 (00)X
2.) LEDGE DEPTH SHOWN ARE FOR ESTIMATING PURPOSES ONLY. ACTUAL LEDGE DEPTH MAY VARY.
3.) CONTRACTOR SHALL CONNECT ALL SANITARY SEWER SERVICE LINE INTO NEW SANITARY SEWER LINE. CONNECTION OF LINE SHALL BE MADE UPON REVIEW OF ONSITE ENGINEER REPRESENTING OWNER
4.) NEW SANITARY SEWER LINE SHALL BE INSULATED WHEN EARTH COVER IS LESS THAN 5 FEET WITH 2" RIGID INSULATION
5.) CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY BY-PASS PUMPING OF SEWER REQUIRED FOR PROPER SYSTEM INSTALLATION
6.) CONTRACTOR IS TO MAINTAIN THE FUNCTION OF THE UTILITY DURING THE INSTALLATION OF THE PROPOSED LINE UNTIL PROPERLY INSTALLED AND ACCEPTED BY ENGINEER.
7.) THE EXISTING 12" SEWER LINE SHALL BE ABANDONED INPLACE, OR REMOVED WHERE POSSIBLE. IF CONTRACTOR PLANS TO ABANDON LINE, LINE SHALL HAVE ENDS PLUGGED AND INTERIOR FILLED WITH FLOWABLE FILL.
ALTERNATE BID ITEM 1
PROFILE
1" = 40' HORIZ.
1" = 4' VERT
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00
19+00
20+00

C E S INC. 1976
ENGINEERS SURVEYORS
465 So. Main Street P.O. Box 639 Brewer, ME 04412 Tel: 207-989-4824 FAX 207-989-4881
9 Apple Lane, P.O. Box 1509, Southwest Harbor, ME 04679 Tel: 207-244-0062 Fax 207-244-4059
29 Dublin Street, P.O. Box 587, Machias, ME 04654 Tel: 207-255-3270 Fax 207-255-8367
232 Main Street, P.O. Box 506, Fort Fairfield, ME 04742 Tel: 207-472-3008 Fax 207-472-3015

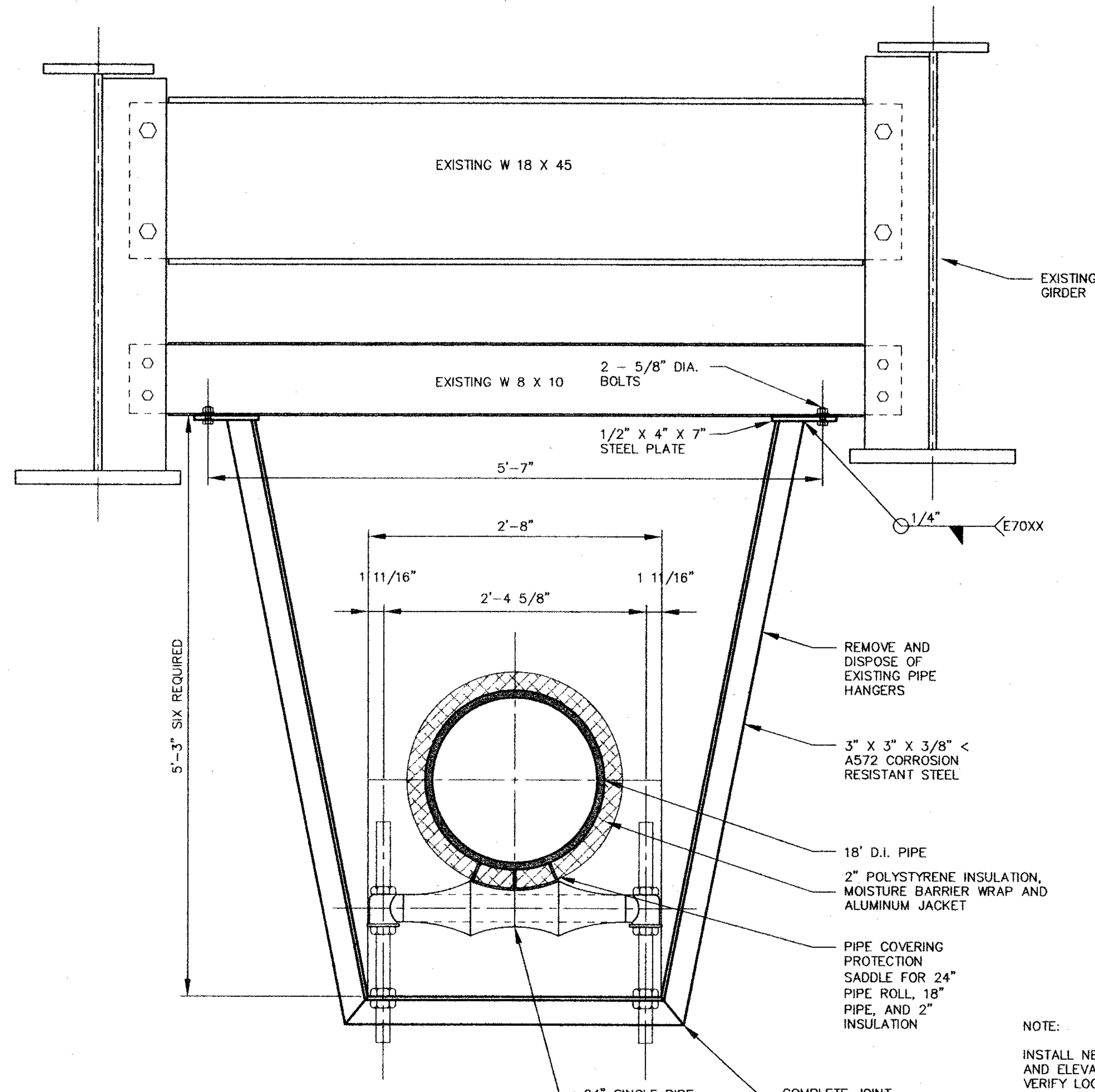
JOB TITLE: MILFORD SEWER TRANSMISSION LINE UPGRADE
MILFORD, MAINE

SHEET TITLE: PLAN and PROFILE

REV.	DESCRIPTION	DATE	CHECKED BY	DRAWN BY

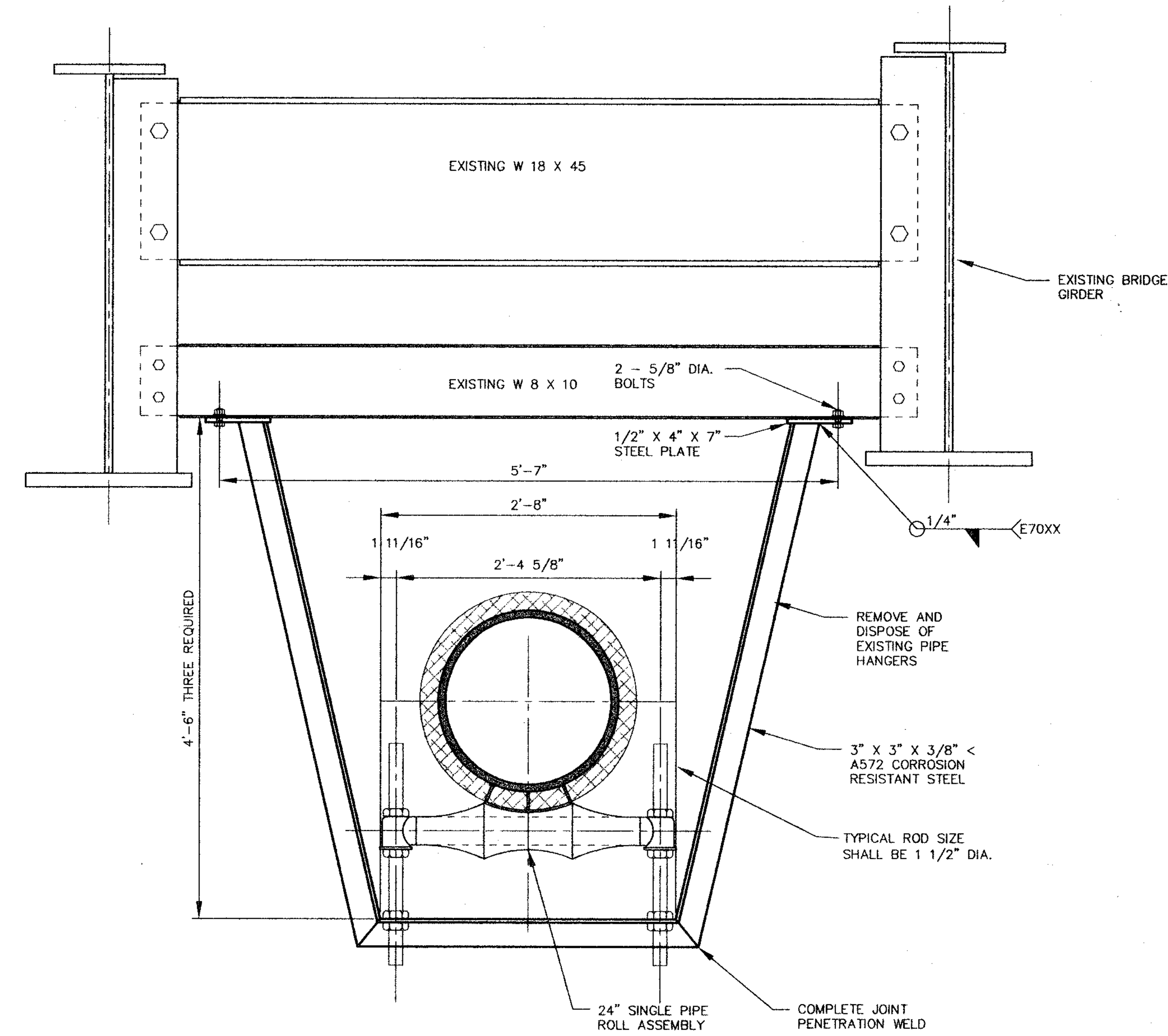
SHAWN S. SMALL

SCALE:	1"=40'
DATE:	1/07/05
DRAWN BY	DC
GRAPHICS CHECKED BY	
DESIGNED BY	
CHECKED BY	
APPROVED BY	
FILE NAME	PLAN/PROFILE
JOB NUMBER	3103.2
DRAWING NUMBER	2 of 4

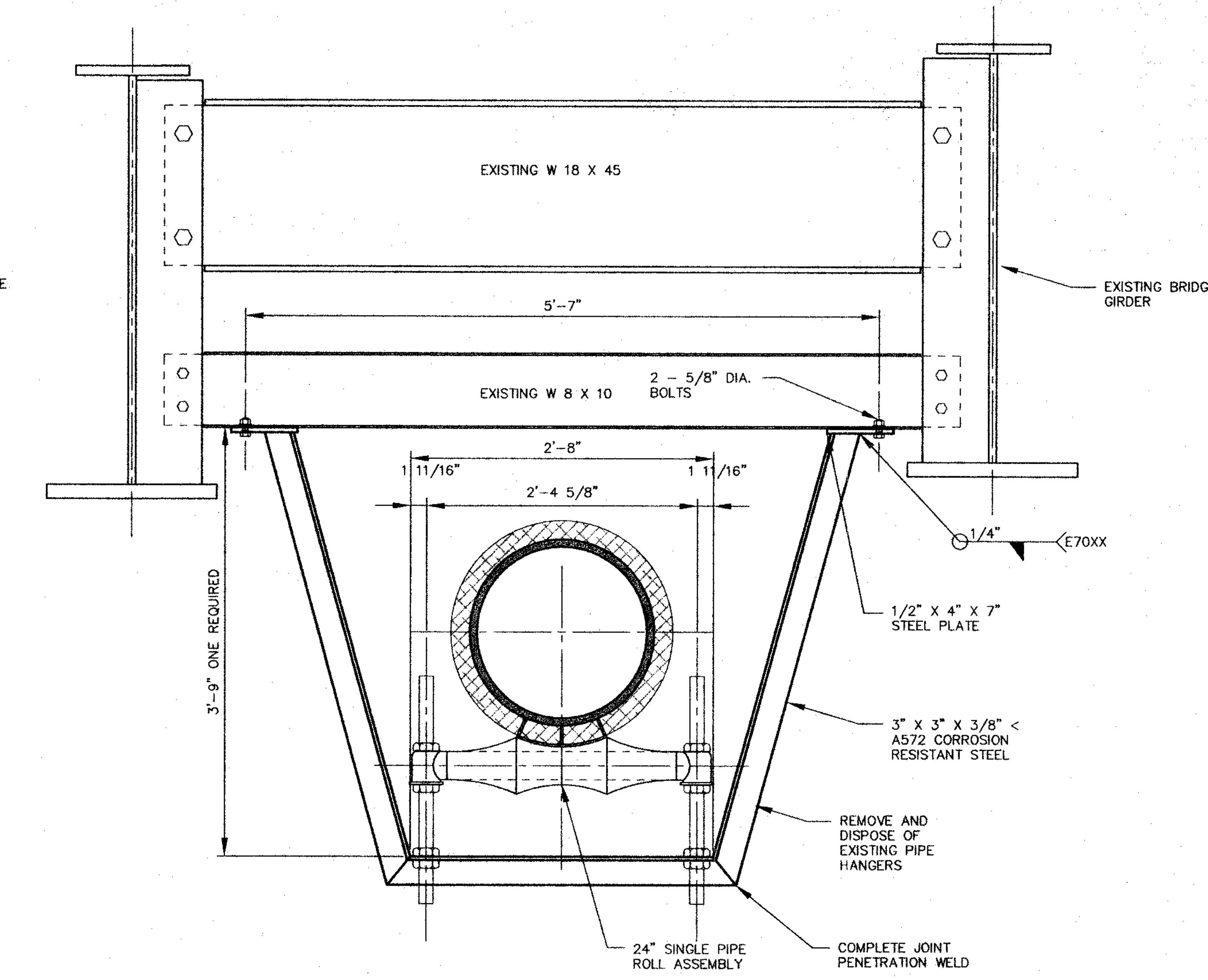


WEST CHANNEL
PIPE HANGER SUPPORT DETAIL A
SCALE: 1" = 1'-0"

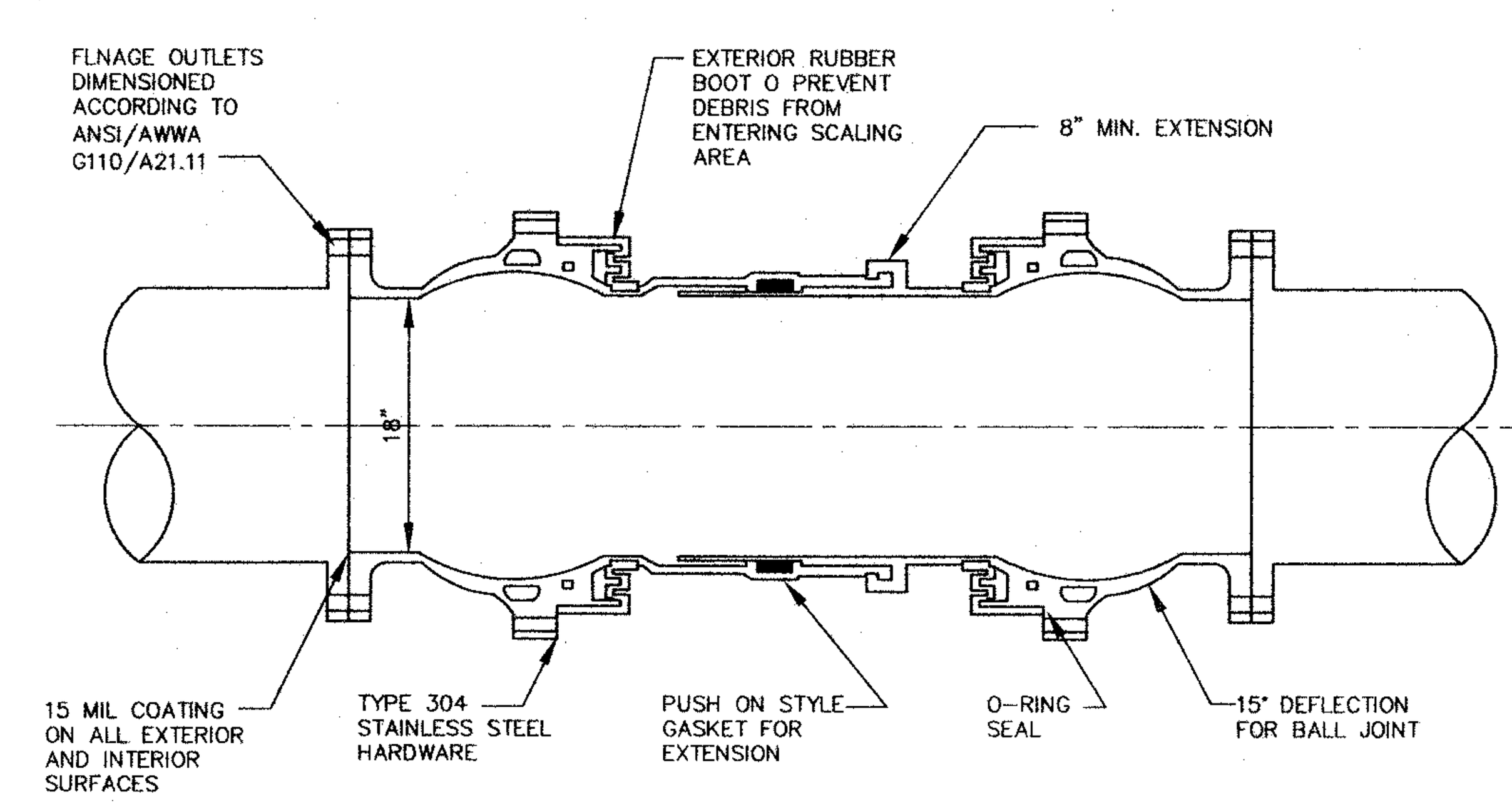
NOTE:
INSTALL NEW HANGERS AT SAME LOCATION AND ELEVATION AS EXISTING HANGERS. VERIFY LOCATION AND ELEVATION PRIOR TO START OF CONSTRUCTION.



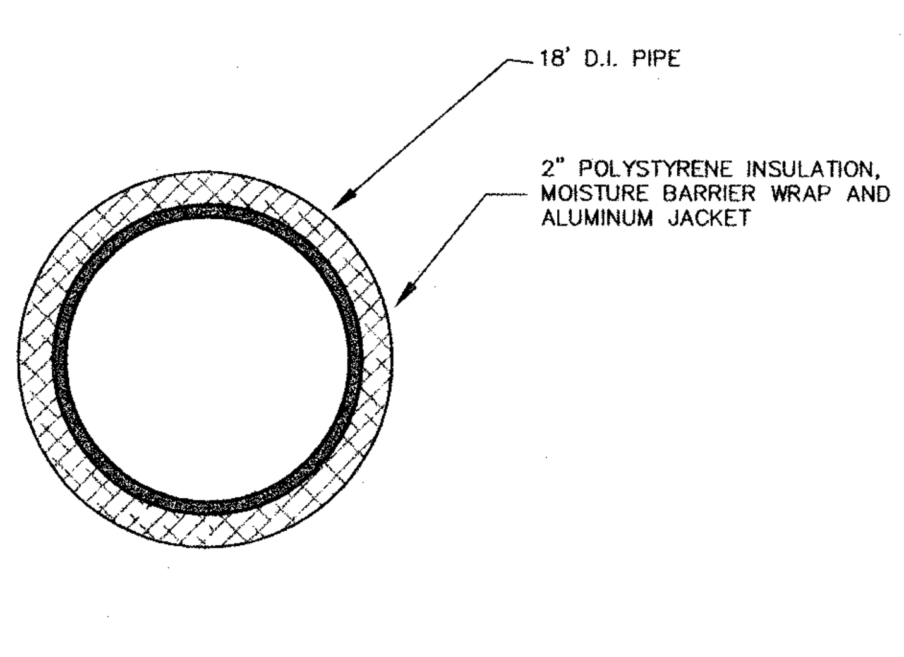
WEST CHANNEL
PIPE HANGER SUPPORT DETAIL B
SCALE: 1" = 1'-0"



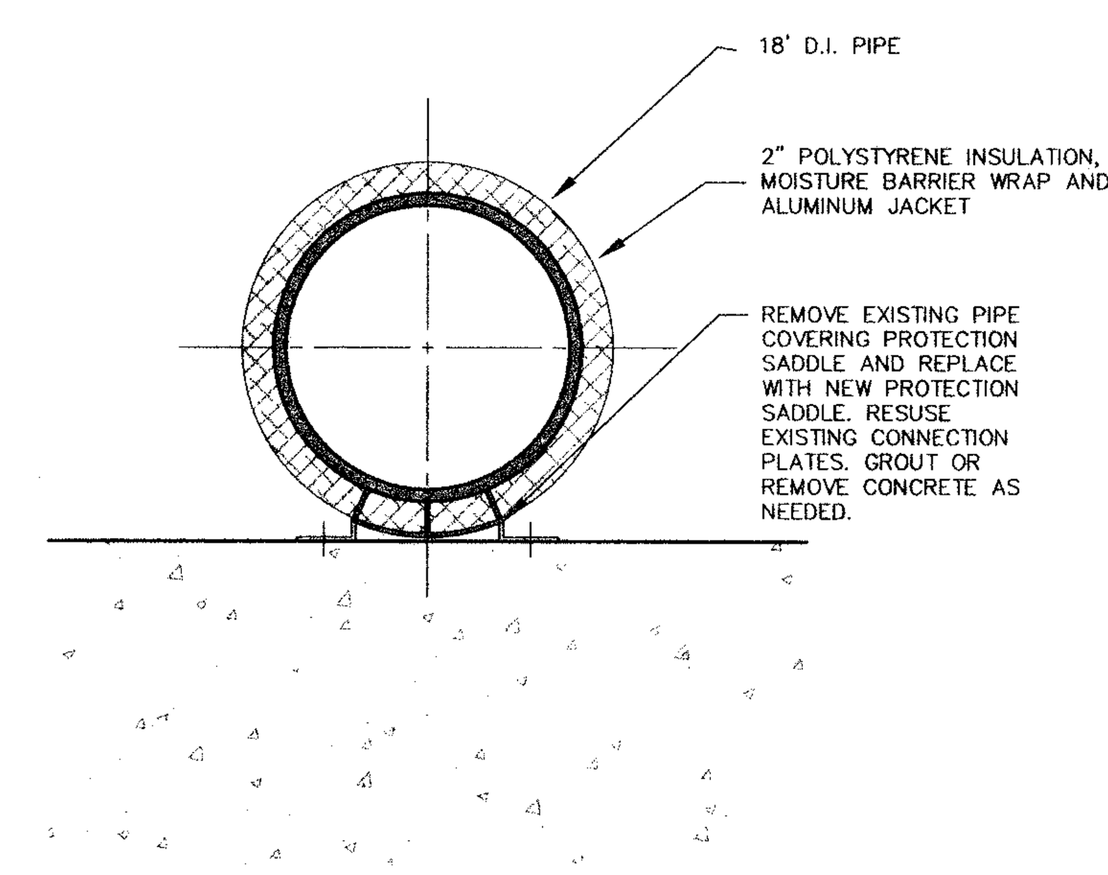
WEST CHANNEL
PIPE HANGER SUPPORT DETAIL C
SCALE: 1" = 1'-0"



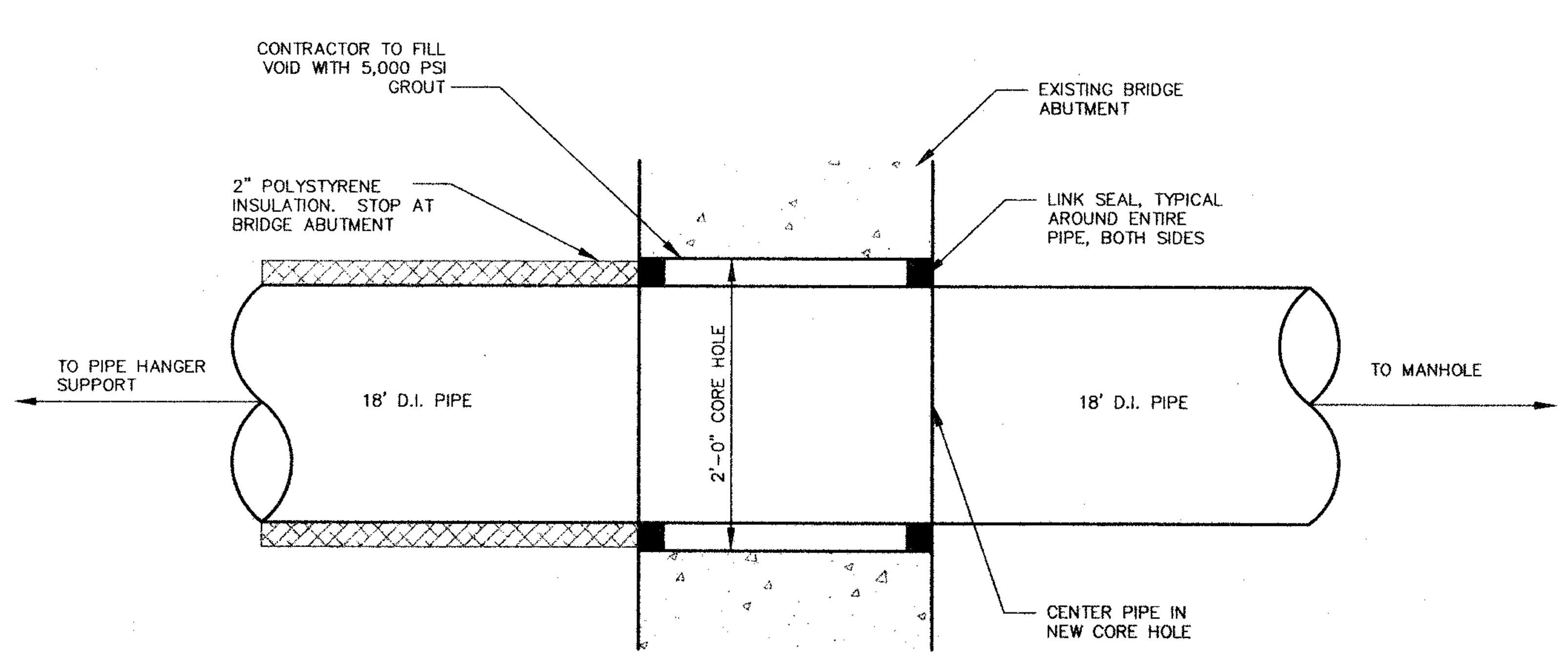
EXPANSION JOINT DETAIL
NTS



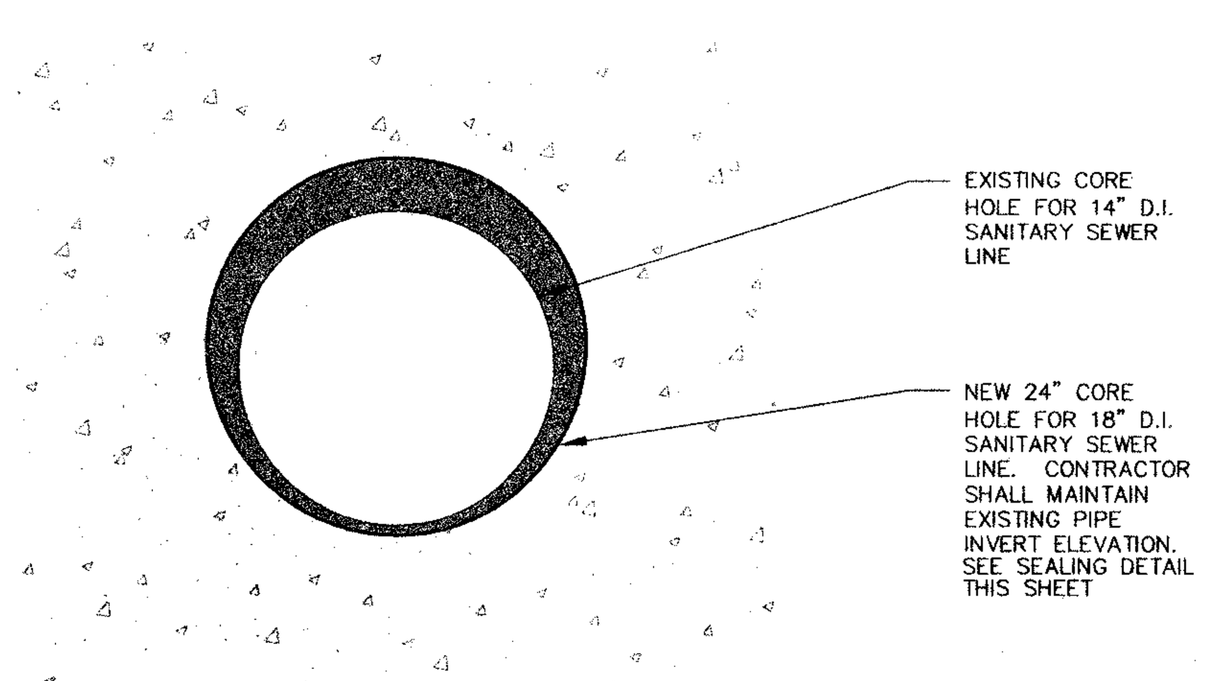
TYPICAL PIPE INSULATION DETAIL FOR BRIDGE CROSSING
NTS



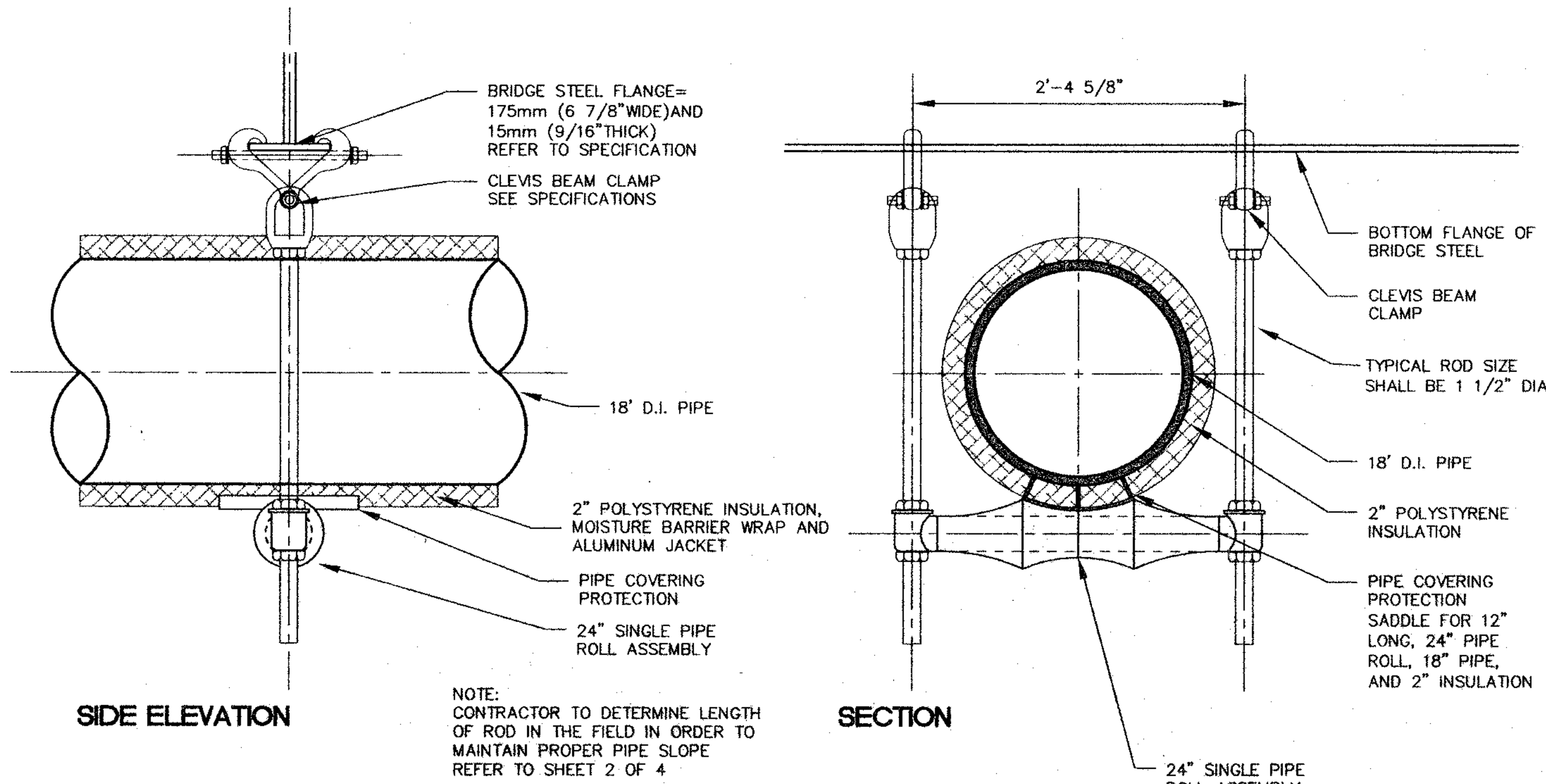
ANCHOR DETAIL AT CENTER PIER
SCALE: 1" = 1'-0"



BRIDGE ABUTMENT CORE HOLE AND SEALING DETAIL
SCALE: 1" = 1'-0"



WEST CHANNEL
BRIDGE ABUTMENT CORING DETAIL
SCALE: 1" = 1'-0"



EAST CHANNEL
PIPE HANGER SUPPORT DETAIL NEW BRIDGE
SCALE: 1" = 1'-0"

CES INC. 1978
ENGINEERS SURVEYORS
465 So. Main Street, P.O. Box 639, Brewer, ME 04412 Tel: 207-989-4824 Fax 207-989-4881
9 Apple Lane, P.O. Box 1509, Southwest Harbor, ME 04679 Tel: 207-244-0062 Fax 207-244-4059
29 Dublin Street, P.O. Box 587, Machias, ME 04654 Tel: 207-255-3270 Fax 207-255-8367
232 Main Street, P.O. Box 506, Fort Fairfield, ME 04742 Tel: 207-472-3008 Fax 207-472-3015

REV.	DESCRIPTION	DATE	CHECKED BY	DRAWN BY
1.	ADDED EXPANSION JOINT DETAIL	2/21/05	PLJ	CS

JOB TITLE
MILFORD SEWER TRANSMISSION LINE UPGRADE
MILFORD MAINE

SHEET TITLE
PIPE HANGER DETAILS

SCALE: AS SHOWN
DATE: 1/7/05
DRAWN BY: CS
GRAPHICS CHECKED BY
DESIGNED BY
CHECKED BY
APPROVED BY
DWG TITLE: PIPE SUPPORT
JOB NUMBER: 3103.2
DRAWING NUMBER: 3 OF 4

EROSION CONTROL NOTES:

1.) ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES, PUBLISHED BY THE C.C.S.W.C.D. AND DATED MARCH, 1991 (HEREINAFTER CALLED 1991 MAINE BMP HANDBOOK).

2.) EROSION CONTROL WILL BE INSPECTED, REPLACED AND/OR REPAIRED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR LOSS OF SERVICEABILITY DUE TO SEDIMENT ACCUMULATION. AT A MINIMUM, ALL EROSION CONTROL DEVICES WILL BE OBSERVED WEEKLY.

3.) DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.

4.) SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY A SUITABLE GROWTH OF GRASS. ONCE A SUITABLE GROWTH OF GRASS HAS BEEN OBTAINED, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BY THE CONTRACTOR. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THEY ARE REMOVED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, SEEDED, AND MULCHED IMMEDIATELY.

5.) ALL DISTURBED AREAS WILL BE SEEDED AND MULCHED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6.) A SUITABLE BINDER SUCH AS CURASOL OR TERRTACK WILL BE USED ON THE HAY MULCH FOR WIND CONTROL.

7.) IF FINAL SEEDING OF DISTURBED AREAS IS NOT COMPLETED BY SEPTEMBER 15th OF THE YEAR OF CONSTRUCTION, THEN ON THAT DATE THESE AREAS WILL BE GRADED AND SEEDED WITH WINTER RYE AT THE RATE OF 112 POUNDS PER ACRE OR 3 POUNDS PER 1000 SQUARE FEET. THE RYE SEEDING WILL BE PRECEDED BY AN APPLICATION OF 3 TONS OF LIME AND 800 LBS. OF 10–20–20 FERTILIZER OR ITS EQUIVALENT. MULCH WILL BE APPLIED AT A RATE OF 90 POUNDS PER 1000 SQUARE FEET.

8.) IF THE RYE SEEDING CANNOT BE COMPLETED BY OCTOBER 1st OR IF THE RYE DOES NOT MAKE ADEQUATE GROWTH BY DECEMBER 1st, THEN ON THOSE DATES, HAY MULCH WILL BE APPLIED AT 150 POUNDS PER 1000 SQUARE FEET.

GENERAL CONSTRUCTION NOTES:

1.) LOCATION OF ALL UTILITIES ARE APPROXIMATE. EXACT LOCATIONS TO BE VERIFIED BY CONTRACTOR IN FIELD. CONTRACTOR IS REQUIRED TO CONTACT DIG SAFE PRIOR TO ANY EXCAVATION.

2.) PROPERTY LINES ARE APPROXIMATE AND SHOWN FOR REFERENCE ONLY.

3.) ELEVATIONS OF MANHOLE, CATCH BASINS FRAMES AND GRATES MAY BE FIELD ADJUSTED PER WRITTEN INSTRUCTION FROM THE ENGINEER.

4.) THE ENGINEER AND AUTHORIZED REPRESENTATIVES OF MDOT SHALL HAVE THE RIGHT AND AUTHORITY TO INSPECT THE QUALITY OF WORK AND MATERIALS IN PROGRESS OR COMPLETED. THE ENGINEER AND MDOT SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIALS WHICH DO NOT CONFORM, IN ITS SOLE OPINION TO THE PLAN OR SPECIFICATIONS.

5.) ALL SIGNING, SIGNALS, AND STRIPPING MATERIALS AND PLACEMENT SHALL CONFORM TO THE MDOT STANDARD SPECIFICATIONS, SUPPLEMENT SPECIFICATIONS, AND STANDARD DETAILS AND WITH FEDERAL HIGHWAY ADMINISTRATIONS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"

6.) ALL DISTURBED SLOPED AREAS SHALL BE LOAMED AND SEEDED. UNLESS OTHER WISE NOTED, SEEDING METHOD NO. 1 SHALL BE UTILIZED ON ALL LAWNS AND DEVELOPED AREAS.

7.) DISPOSAL OF SURPLUS MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, SURPLUS MATERIAL SHALL NOT BE DISPOSED OF ON THE PROJECT SITE. DISPOSAL SHALL BE MADE ONLY AT WASTE AREAS WHICH ARE LICENSED TO ACCEPT SUCH MATERIALS, UNLESS THE MATERIALS IS ACCEPTABLE FOR USE AS FILL IN OTHER AREAS OF THE PROJECT.

8.) EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CFR PART 1926.650. (CONSTRUCTION STANDARDS FOR EXCAVATION)

9.) THE CONTRACTOR SHALL CONTACT DIG SAFE AND APPROPRIATE AUTHORITIES PRIOR TO ANY SUBSURFACE ACTIVITIES.

10.) ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO REMOVE AND/OR RESET SIGNS, MAILBOXES AND POLES SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE PROJECT BID PRICE. DAMAGE TO SIGNS, POLES AND MAILBOXES ETC.. DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR, TO THE SATISFACTION OF MDOT, CITY OF OLD TOWN AND PROJECT ENGINEER AT NO ADDITIONAL COST TO THE PROJECT.

11.) FOUNDATION MATERIALS REQUIRED UNDER CULVERTS, SHALL MEET THE REQUIREMENTS FOR GRANULAR BORROW UNDERWATER BACKFILL.

12.) CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY SITE PERMITS UNLESS PROVIDED BY MDOT. PERMITS FOR AREAS CONSIDERED ALT. #2 SHALL BE THE CONTRACTORS RESPONSIBILITY.

13.) MAINTENANCE OF TRAFFIC SHALL BE PER THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" IN ADDITION.

14.) THE CONTRACTOR SHALL USE THE BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AS A MINIMUM STANDARDS.

15.) DRIVEWAY ACCESSES SHALL BE MAINTAINED AT ALL TIMES.

16.) BEFORE COMMENCEMENT OF WORK THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR REVIEW AND APPROVAL TO MDOT, CITY OF OLD TOWN AND MILFORD.

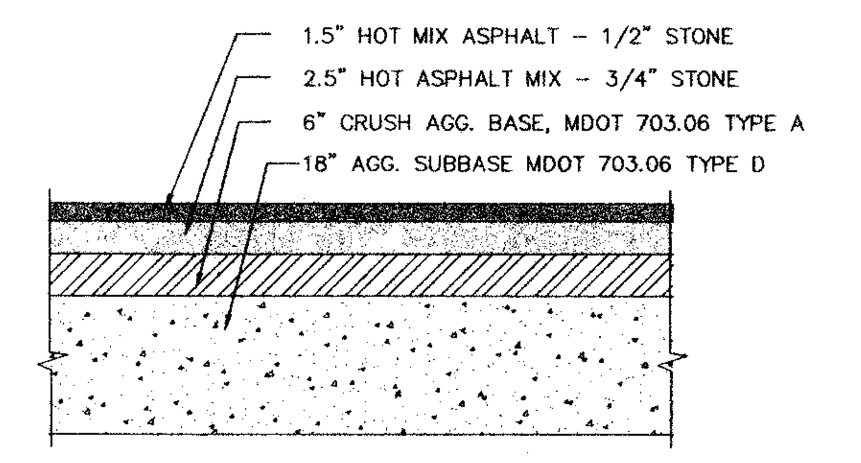
17.) CONTRACTOR IS REQUIRED TO MEET ALL CURRENT STANDARDS FOR ADA DURING CONSTRUCTION

18.) CONTRACTOR IS REQUIRED TO MEET ALL OSHA REGULATIONS DURING CONSTRUCTION ACTIVITIES.

19.) CONTRACTOR IS RESPONSIBLE FOR THE OVERALL SAFETY OF THE SITE.

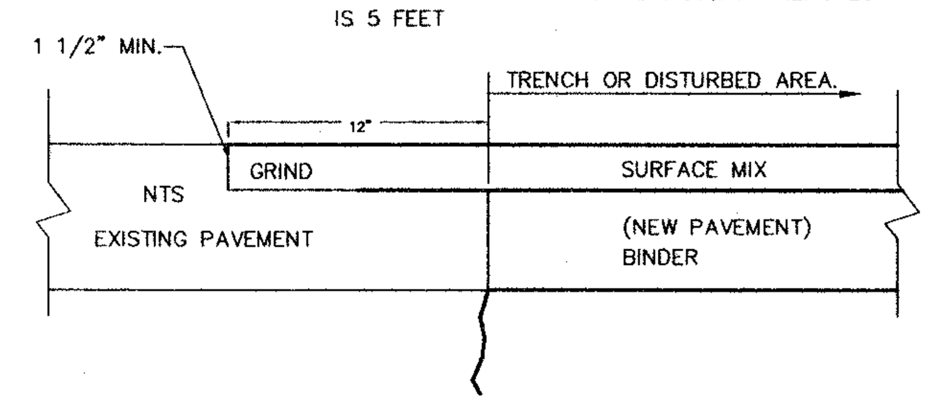
20.) CONTRACTOR SHALL MEET MDOT REQUIREMENTS IF CONFLICTS EXIST BETWEEN THESE SPECIFICATIONS AND DETAILS AND THOSE PROVIDED BY WITHIN THE MDOT CONSTRUCTION DOCUMENTS.

21.) IN AREAS WHERE LEDGE IS TO BE REMOVED IN ORDER TO INSTALL PIPE WITHIN THE TRENCH PAY LIMITS SHALL BE 6" BELOW INVERT AND MAX. 6' WIDE. REMOVAL OF LEDGE BEYOND THESE LIMITS WILL BE CONSIDERED INCIDENTAL TO THE PIPE.

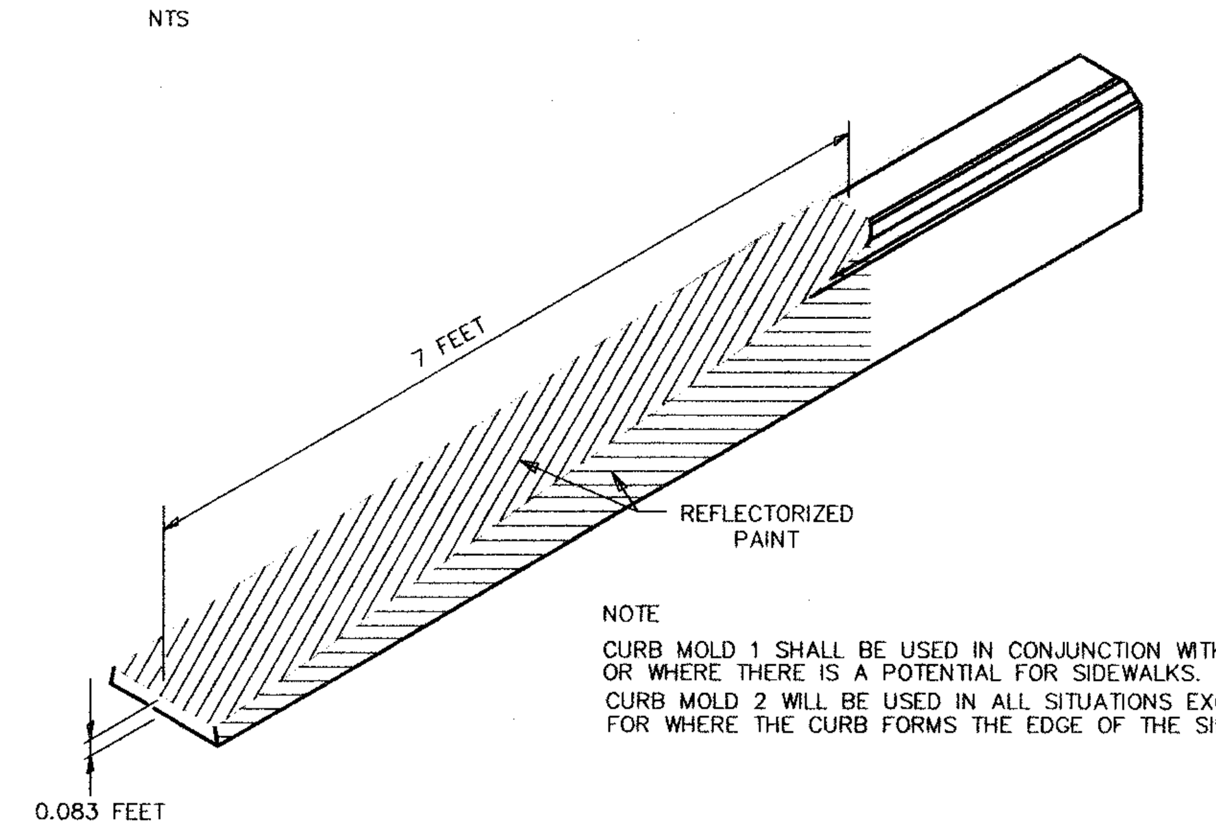


TYPICAL CROSS SECTION (PAVED AREAS)
NTS

NOTE:
ALL ROADWAY TRENCHES WITHIN THE MDOT RIGHT-OF-WAY MUST HAVE GROUND JOINT. GRINDING WIDTH FOR PARALLEL TRENCHES IS MIN. 12" GRINDING WIDTH FOR PERPENDICULAR TRENCHES IS 5 FEET

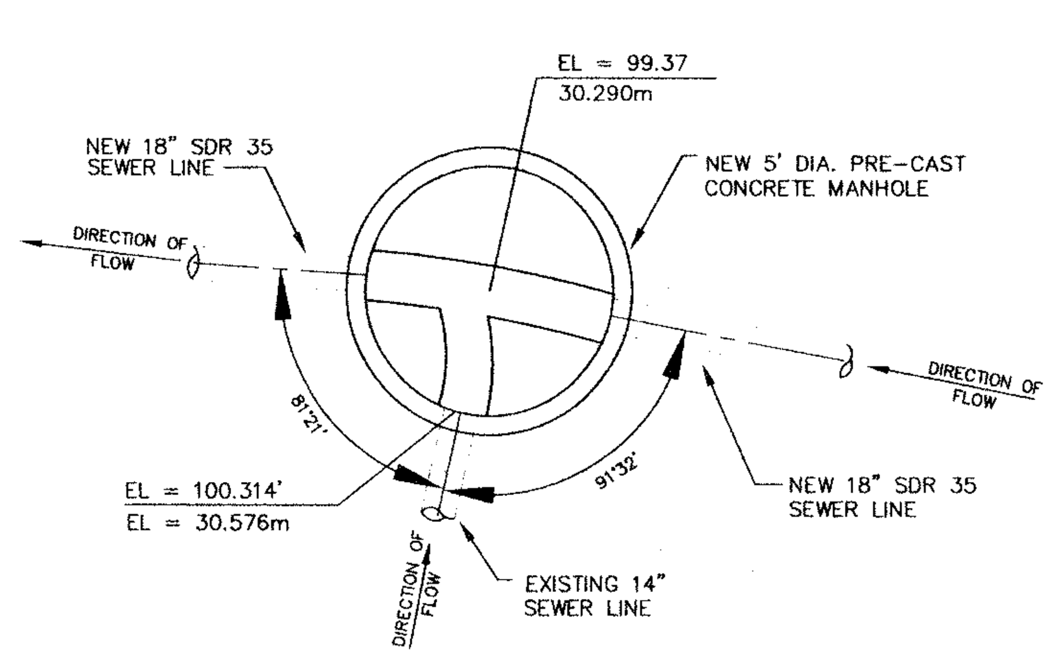


TYPICAL PAVEMENT CUT DETAIL
NTS

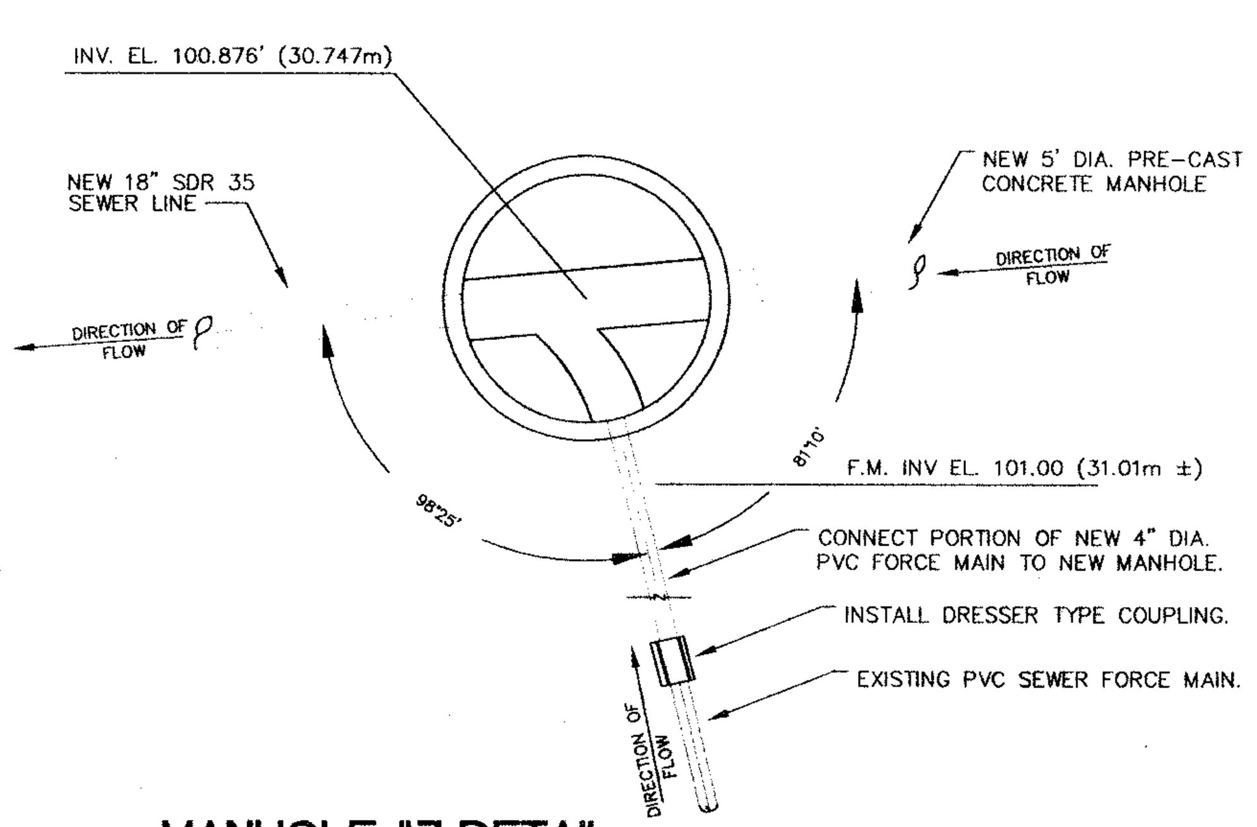


NOTE
CURB MOLD 1 SHALL BE USED IN CONJUNCTION WITH SIDEWALKS OR WHERE THERE IS A POTENTIAL FOR SIDEWALKS. CURB MOLD 2 WILL BE USED IN ALL SITUATIONS EXCEPT FOR WHERE THE CURB FORMS THE EDGE OF THE SIDEWALK.

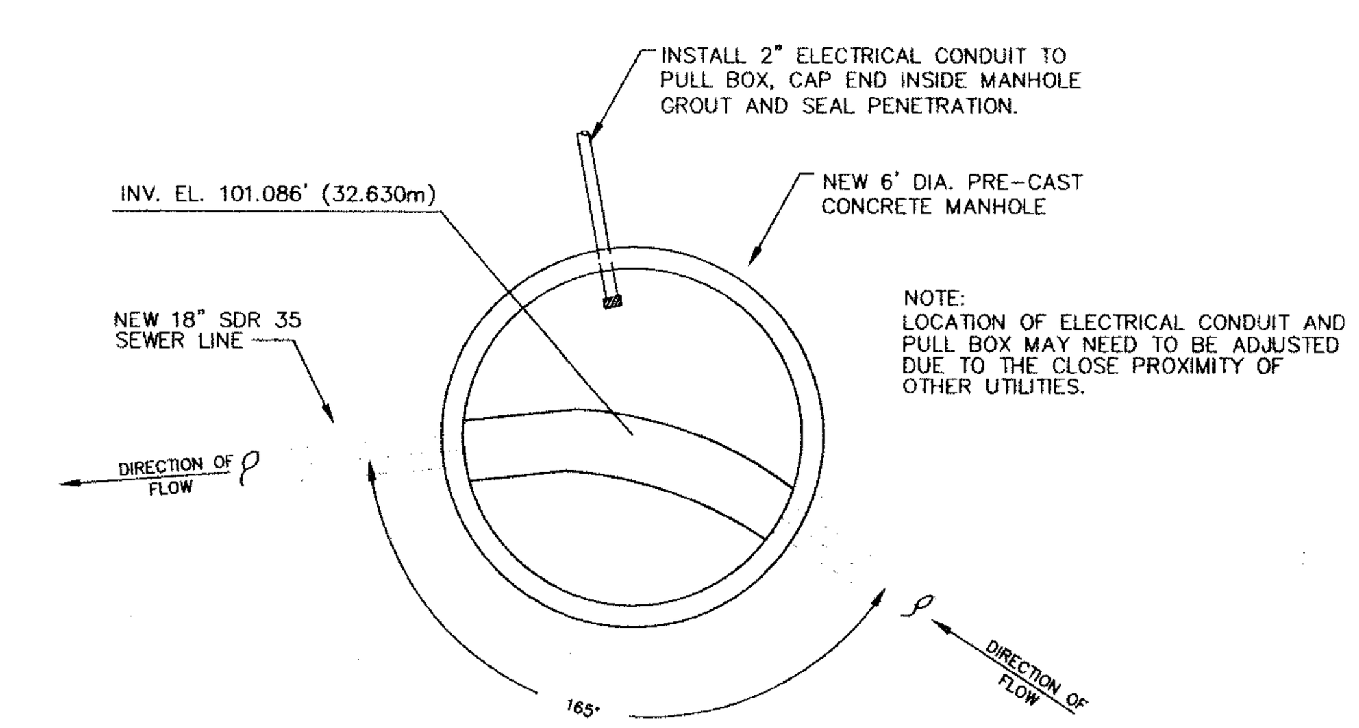
TYPICAL CURB TIP DOWN DETAIL
NTS



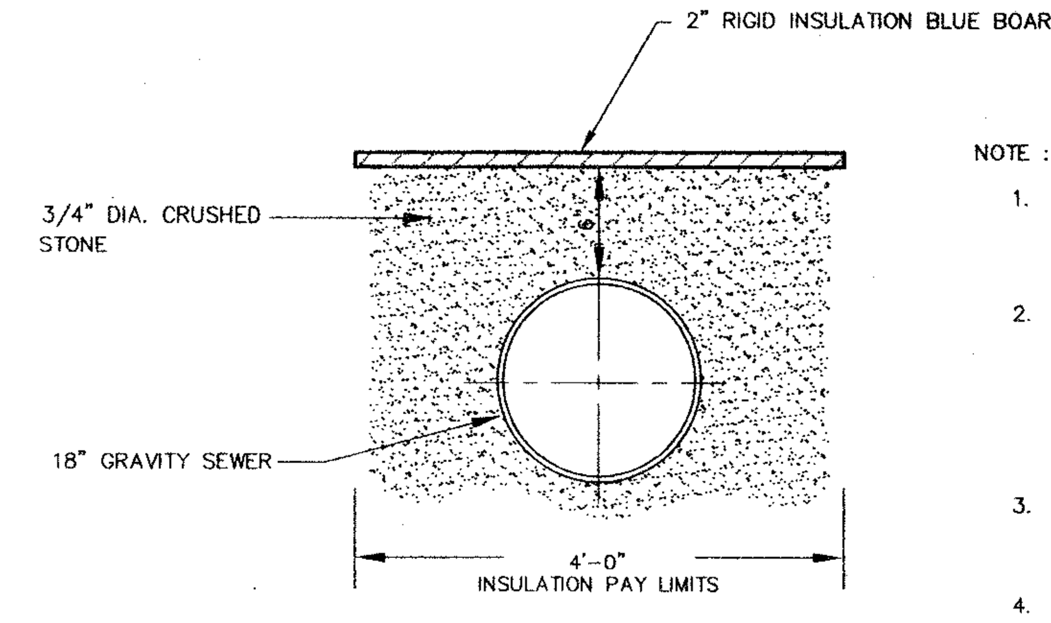
MANHOLE #4 DETAIL
NTS



MANHOLE #7 DETAIL
NTS



MANHOLE #8 DETAIL
NTS

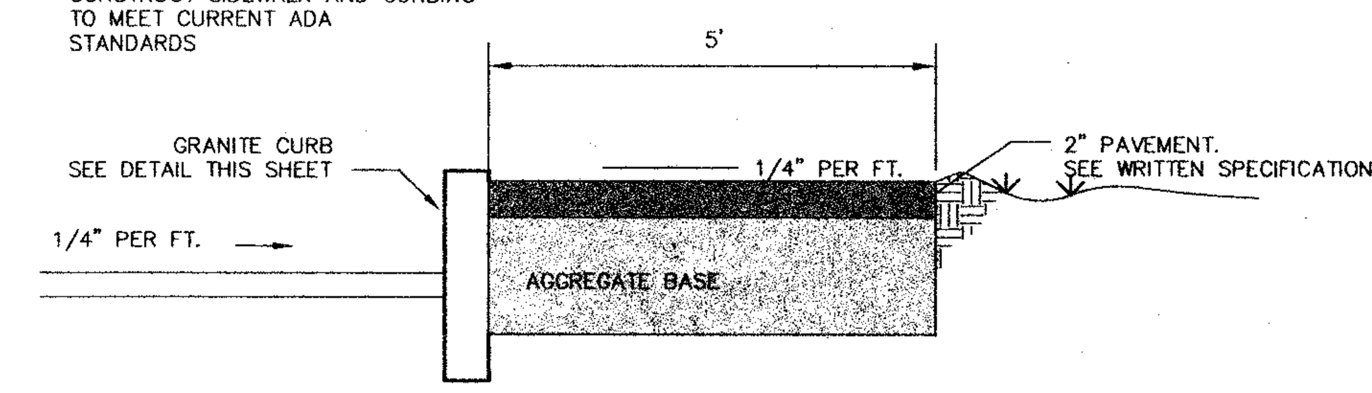


NOTE :

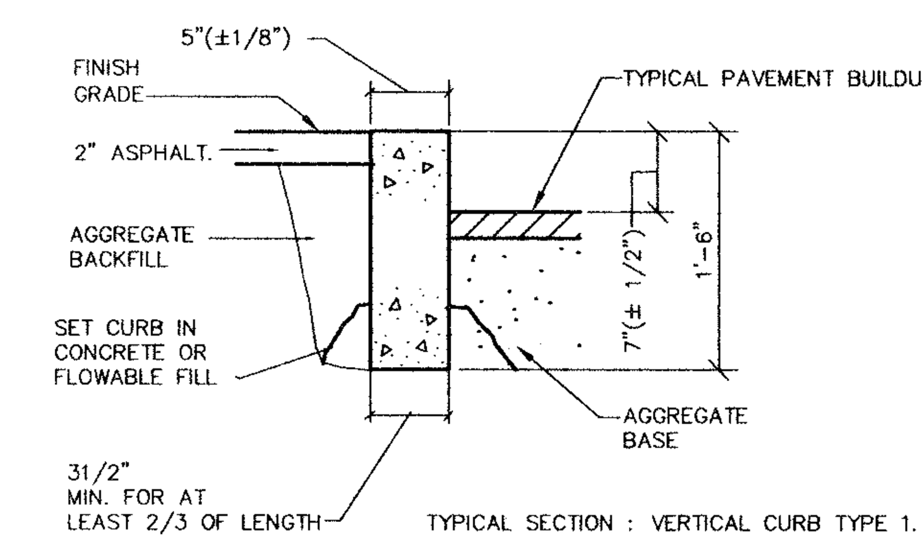
1. 2" RIGID INSULATION BLUE BOARD BY DOW CO. SM. EXTRUDED POLYSTYRENE, (OR APPROVED EQUAL) TO BE USED IF EARTHEN COVER IS LESS THAN 5'–0" OVER PROPOSED SANITARY SEWER PIPE.
2. CONTRACTOR MAY HAVE TO SUPPLY MORE THAN ONE LAYER OF BLUE BOARD INSULATION, IN AREAS THAT HAVE MINIMAL EARTHEN COVER TO MAINTAIN THE INSULATION VALUE OF 5'–0" COVER. 2" BLUE BOARD INSULATION HAS THE INSULATION VALUE OF APPROXIMATELY 1'–6" OF EARTHEN COVER.
3. MAINTAIN A MINIMUM OF 12" OF EARTHEN COVER OVER INSULATION AS A MECHANICAL PROTECTION. LOAM AND SEED AS NECESSARY TO PREVENT EROSION.
4. IF SEWER LINE IS INSTALLED OVER BEDROCK, PLACE 6" OF CRUSHED STONE UNDER PIPING.
5. BOX PIPE IN LOCATION WHERE EARTH COVER IS LESS THAN 3 FEET.

TYPICAL TRENCH PIPE INSULATION DETAIL
NTS

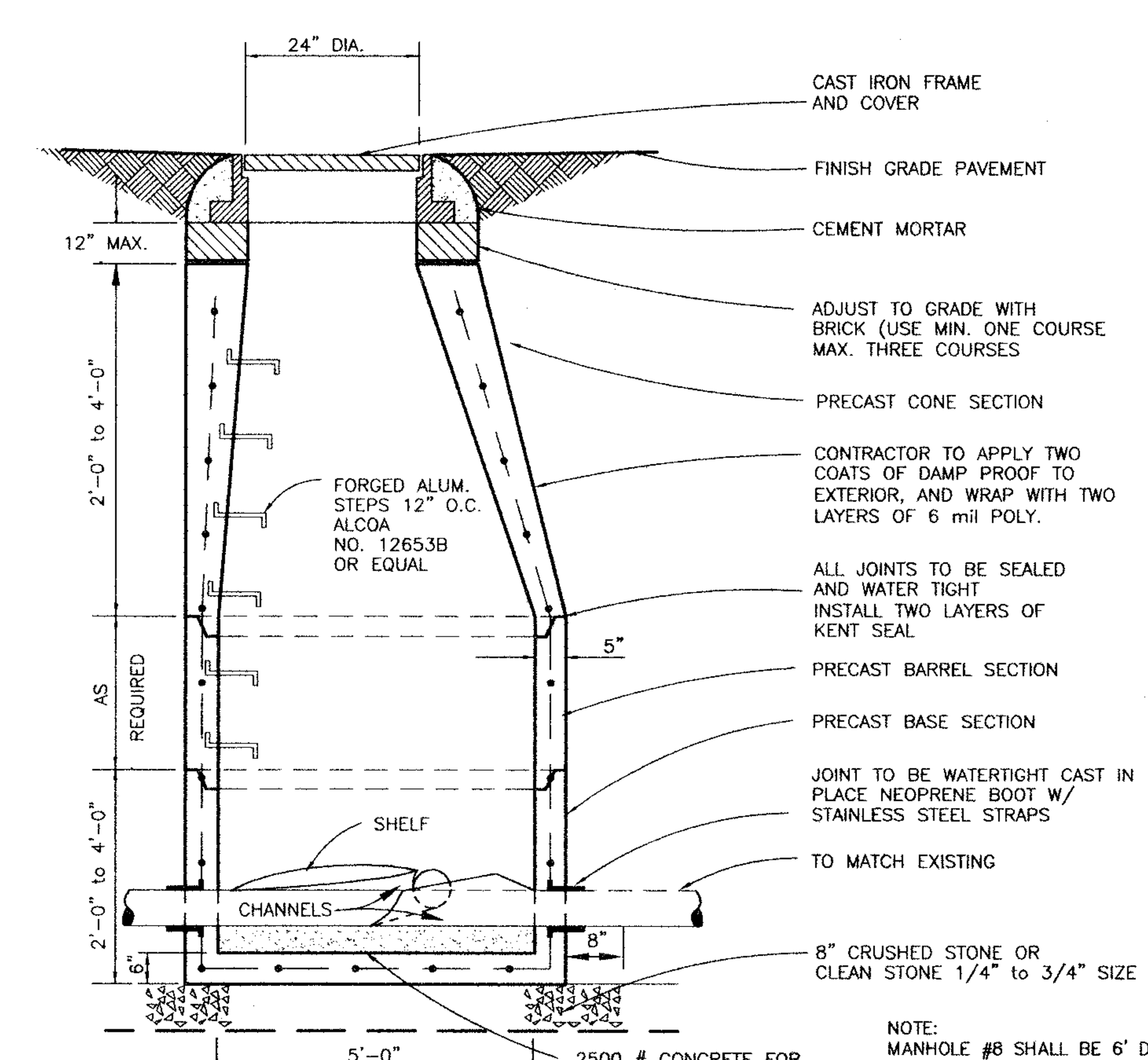
NOTE:
CONSTRUCT SIDEWALK AND CURBING TO MEET CURRENT ADA STANDARDS



TYPICAL SIDEWALK SECTION WITH CURBING
NTS

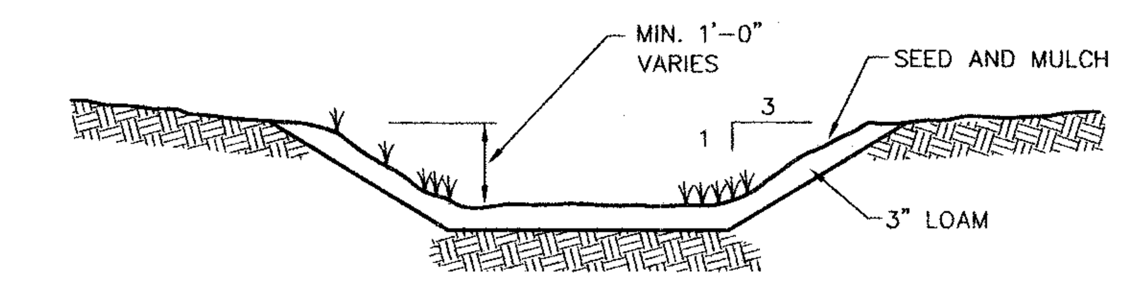


MDOT - SPLIT FACE GRANITE CURB
N.T.S.



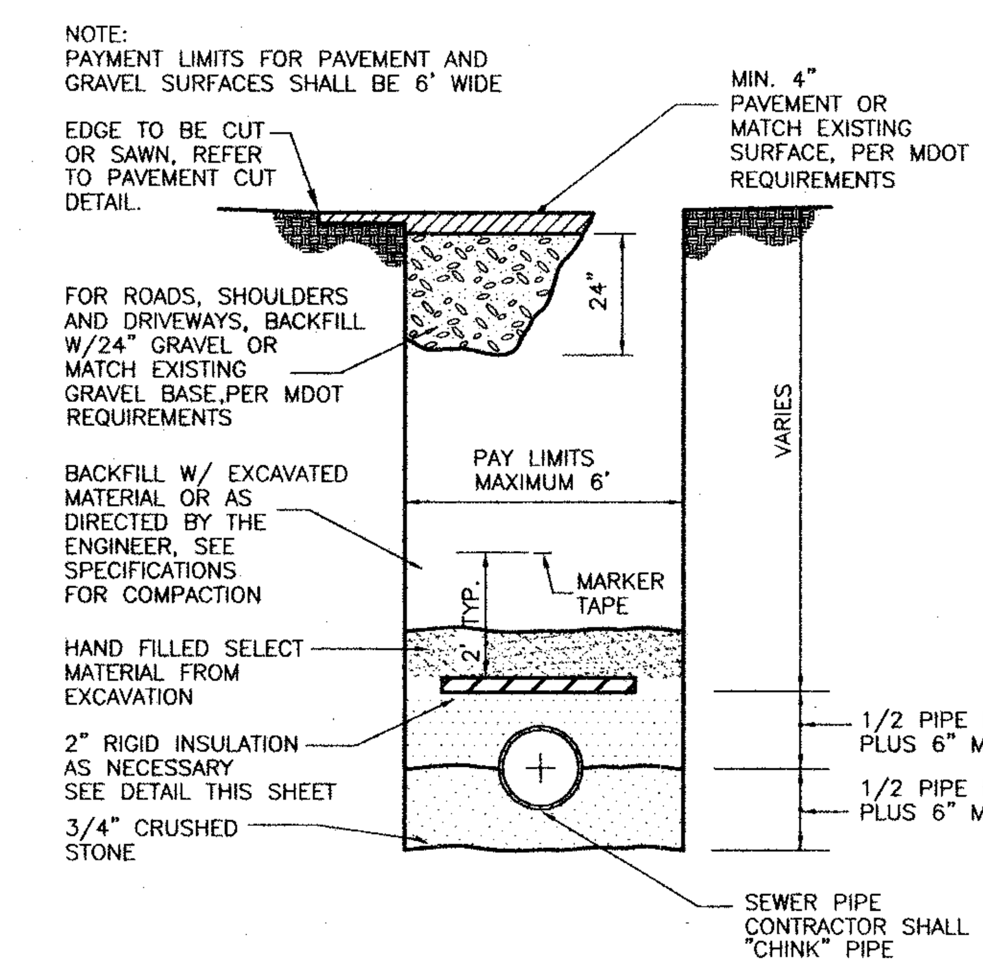
NOTE:
MANHOLE #8 SHALL BE 6' DIAMETER.
ALL 5' DIA. MANHOLE SHALL BE INSTALLED WITH A 24" DIA. COVER, LABELED SEWER.
ALL 6' DIA. MANHOLE SHALL BE INSTALLED WITH A 30" DIA. COVER, LABELED SEWER.

TYPICAL SANITARY SEWER MANHOLE DETAIL
NTS

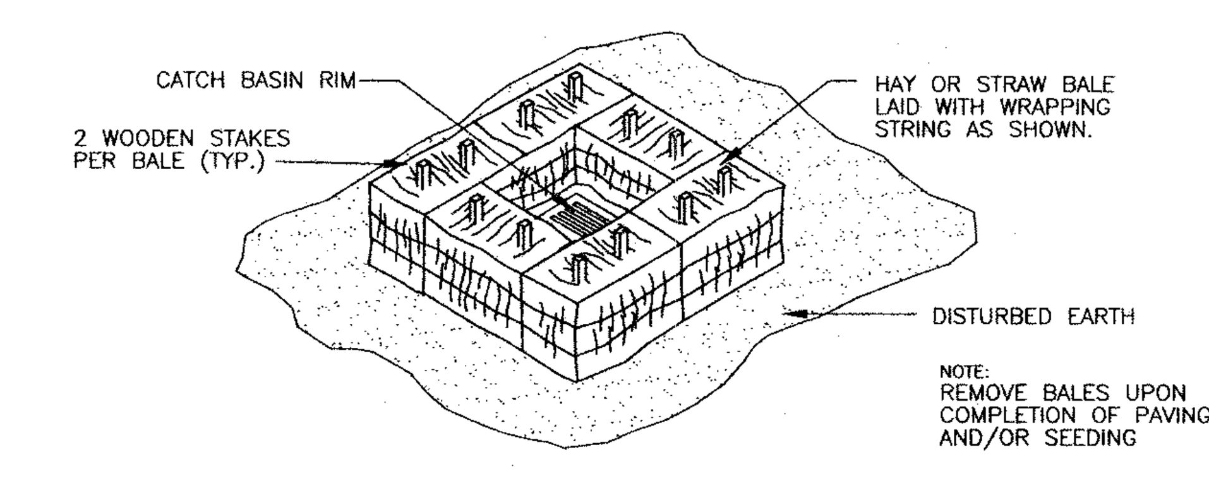


GRASS LINED DITCH DETAIL
NTS

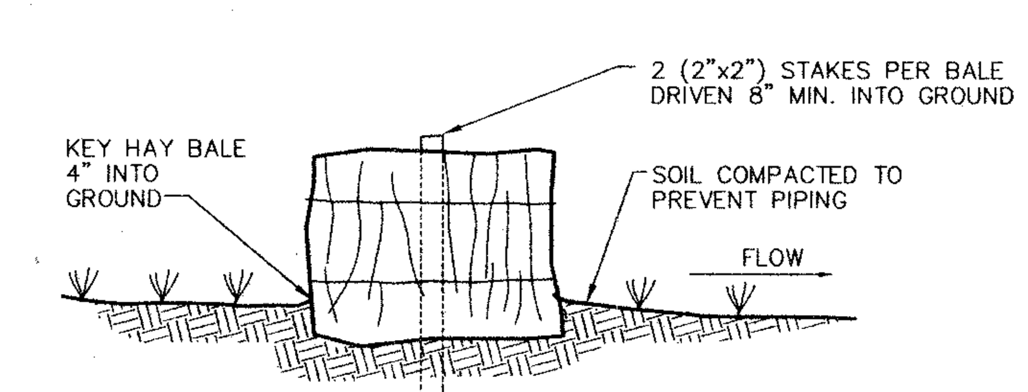
NOTE:
PAYMENT LIMITS FOR PAVEMENT AND GRAVEL SURFACES SHALL BE 6' WIDE



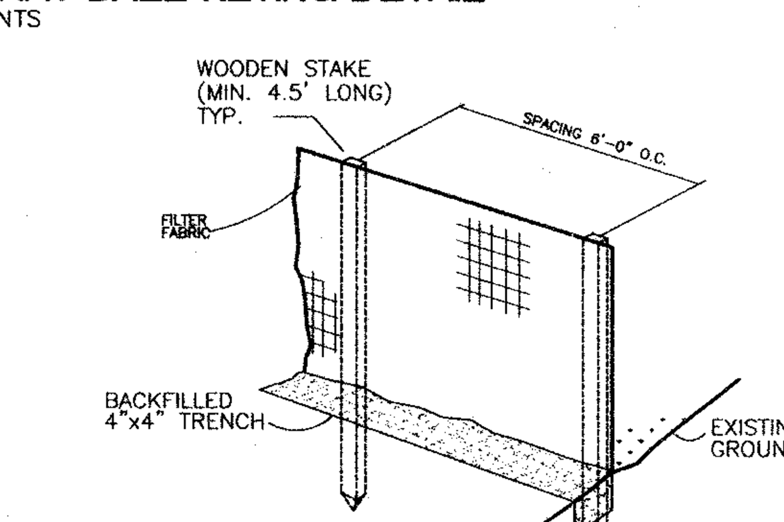
SEWER TYPICAL TRENCH DETAIL
NTS



LOW POINT SEDIMENTATION CONTROL BARRIER
N.T.S.



HAY BALE KEYING DETAIL
NTS



NOTES:
1.) KEY FABRIC IN A 4"x4" TRENCH W/BACKFILL
2.) SILT FENCE SHALL BE A 3' FENCE WITH A MINIMUM GRAB STRENGTH OF 120 LBS.

SILT FENCE DETAIL

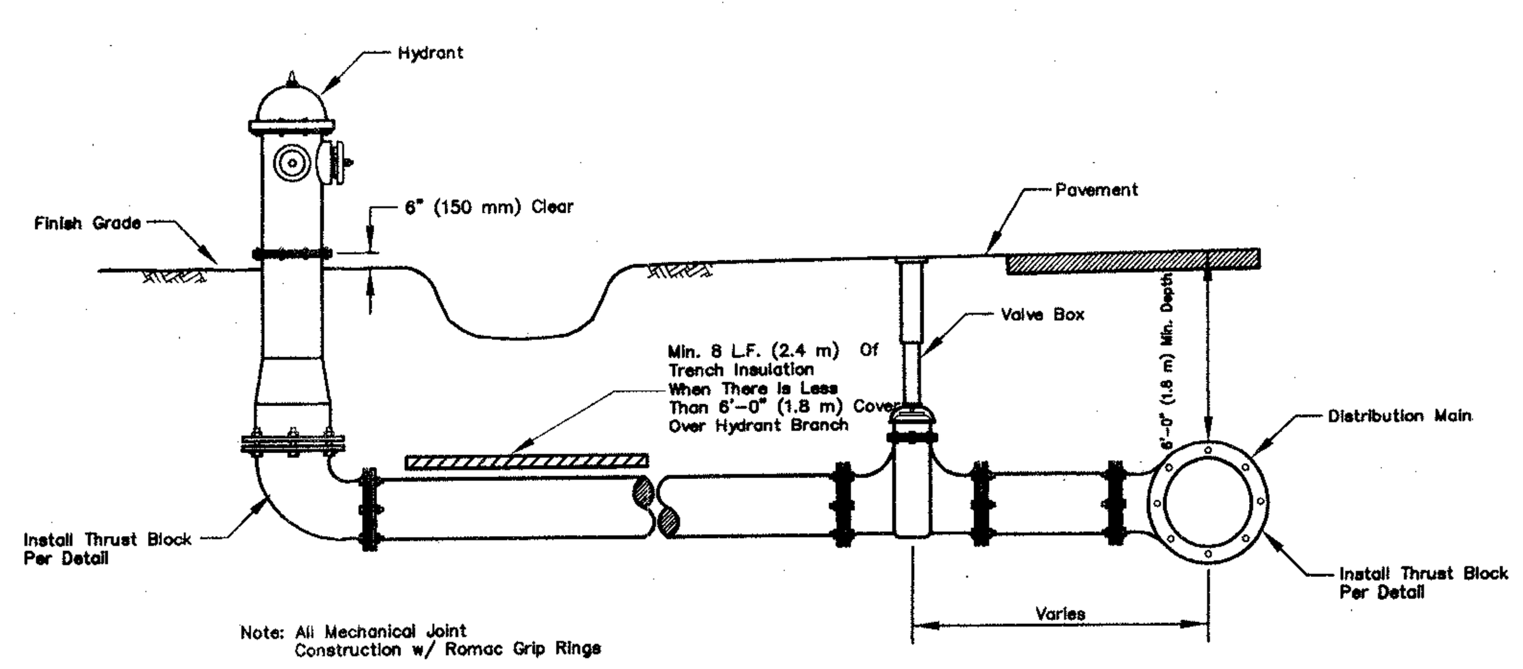
CES INC. 1976
ENGINEERS SURVEYORS
465 So. Main Street, P.O. Box 639, Brewer, ME 04412 Tel: 207-989-4824 Fax 207-989-4881
9 Apple Lane, P.O. Box 1509, Southwest Harbor, ME 04679 Tel: 207-244-0062 Fax 207-244-4059
29 Dublin Street, P.O. Box 587, Machias, ME 04654 Tel: 207-255-3270 Fax 207-255-8367
232 Main Street, P.O. Box 506, Fort Fairfield, ME 04742 Tel: 207-472-3008 Fax 207-472-3015

JOB TITLE
MILFORD SEWER TRANSMISSION LINE UPGRADE
MILFORD, MAINE

SHEET TITLE
SITE DETAILS

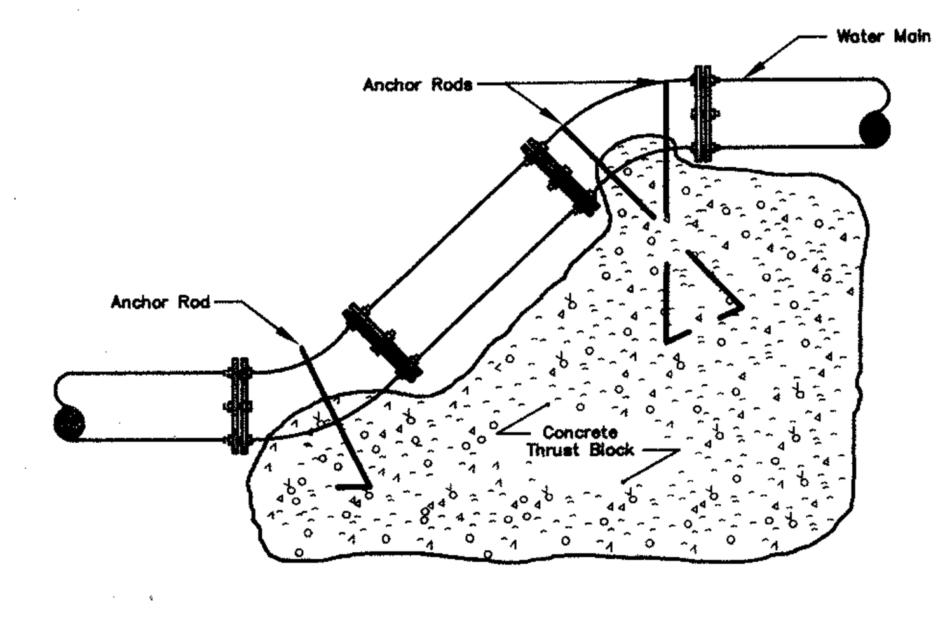
REV. | DESCRIPTION | DATE | CHECKED BY | DRAWN BY

SCALE: SCALE
DATE: DATE
DRAWN BY | GRAPHICS CHECKED BY
DESIGNED BY
CHECKED BY
APPROVED BY
DWG TITLE: DETAILS
JOB NUMBER: JOB# 3103.2
DRAWING NUMBER: 4 OF 4



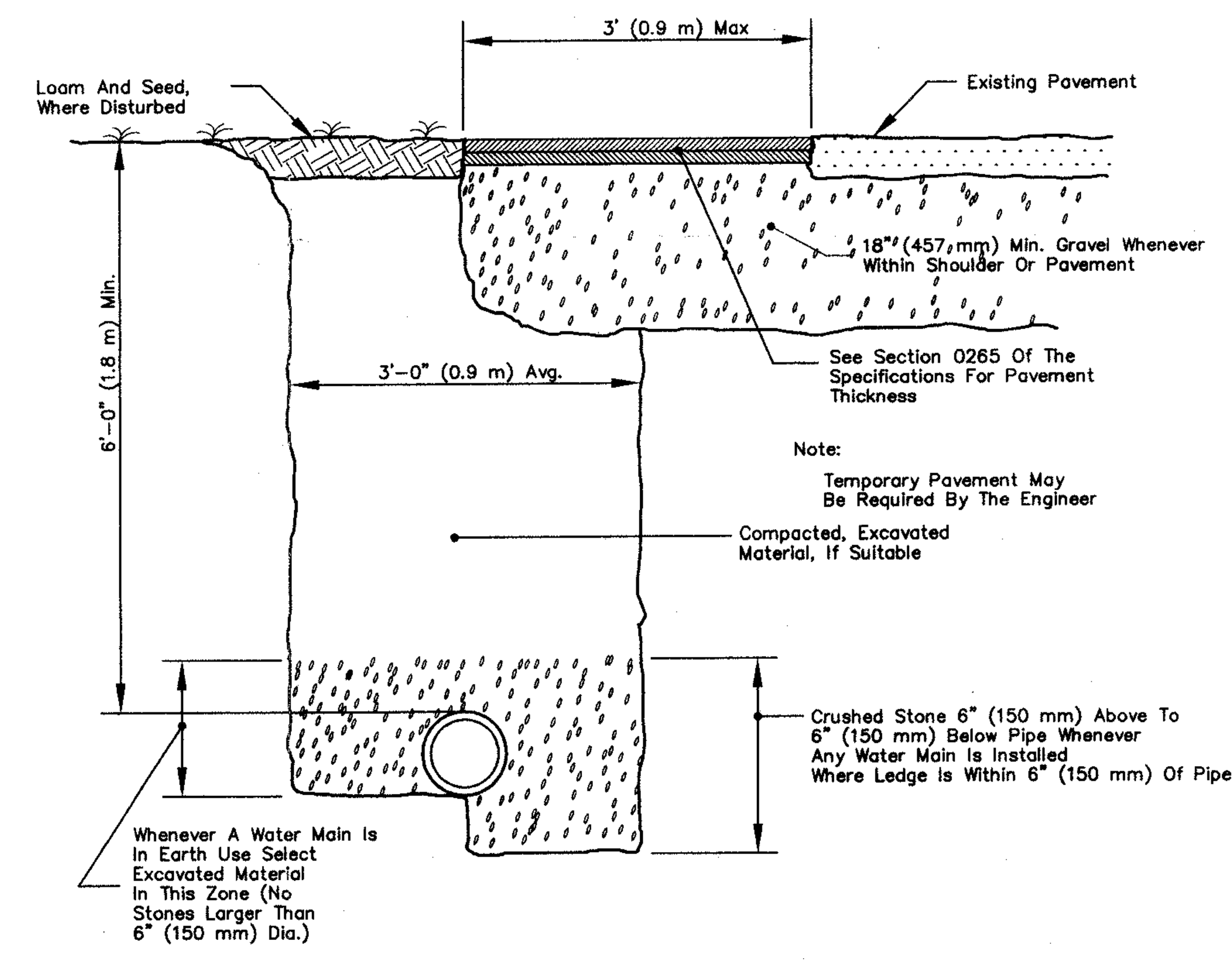
Typical Hydrant Assembly

Not To Scale



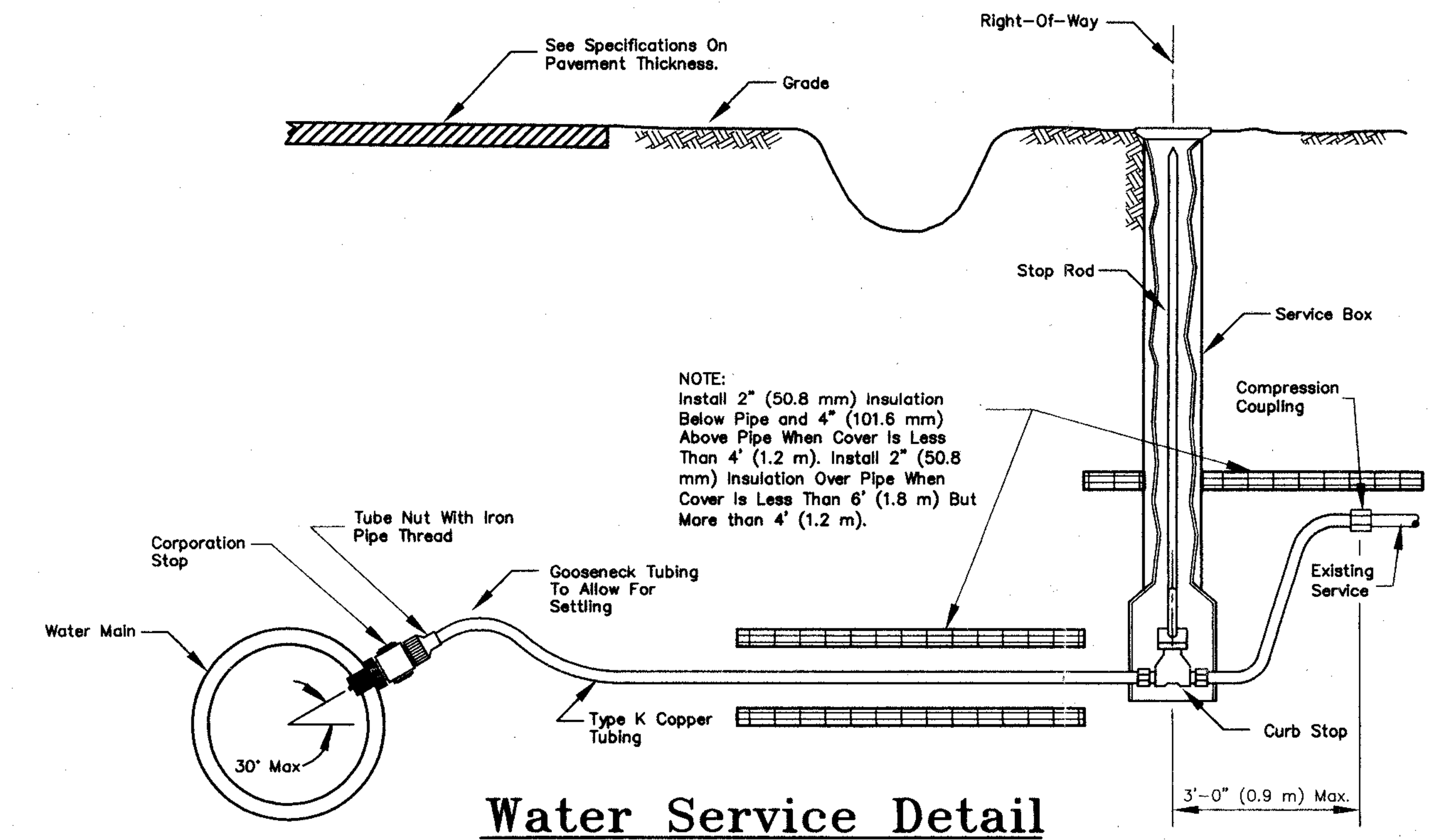
Typical Vertical Change

Not To Scale



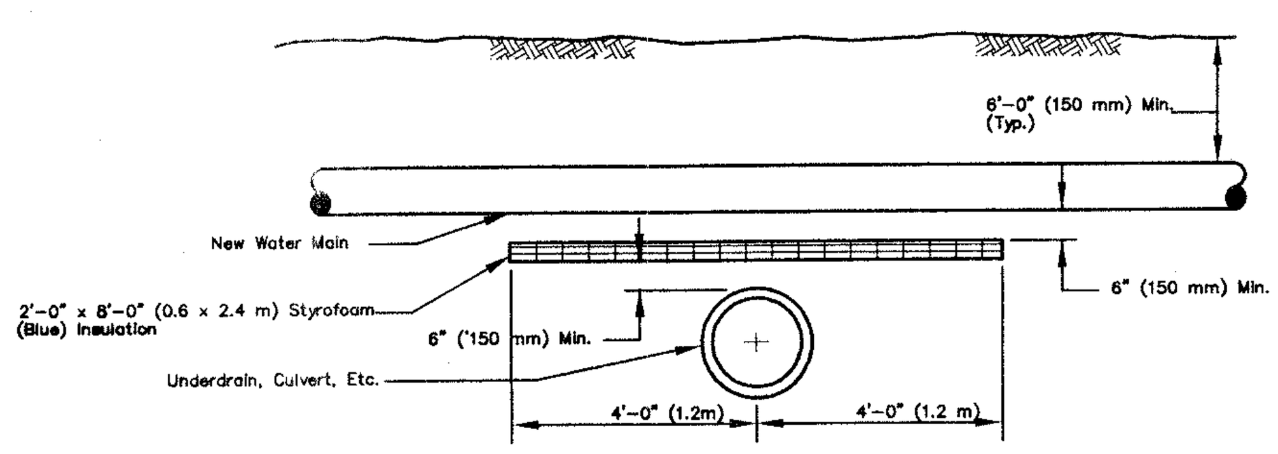
Typical Trench Detail

Not To Scale

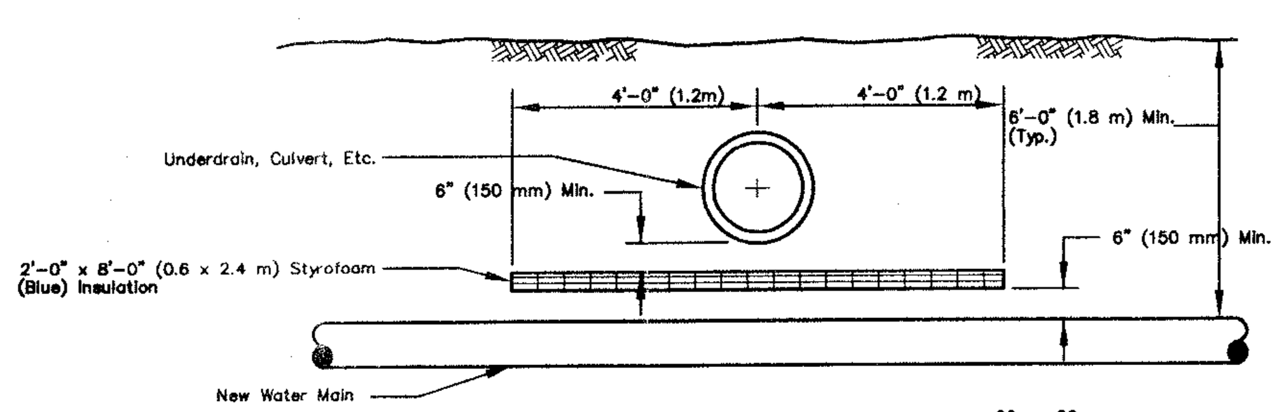


Water Service Detail

Not To Scale



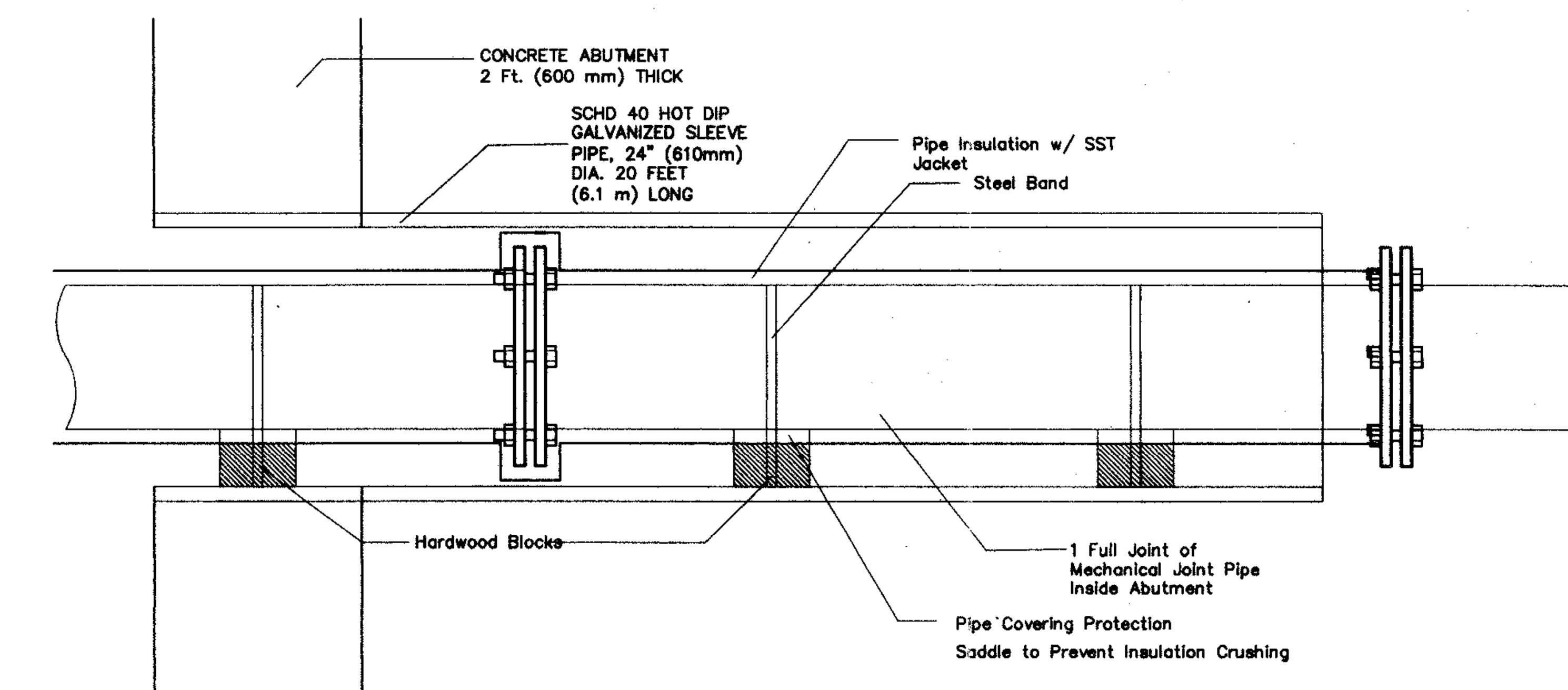
Insulation Detail "B"



Insulation Detail "A"

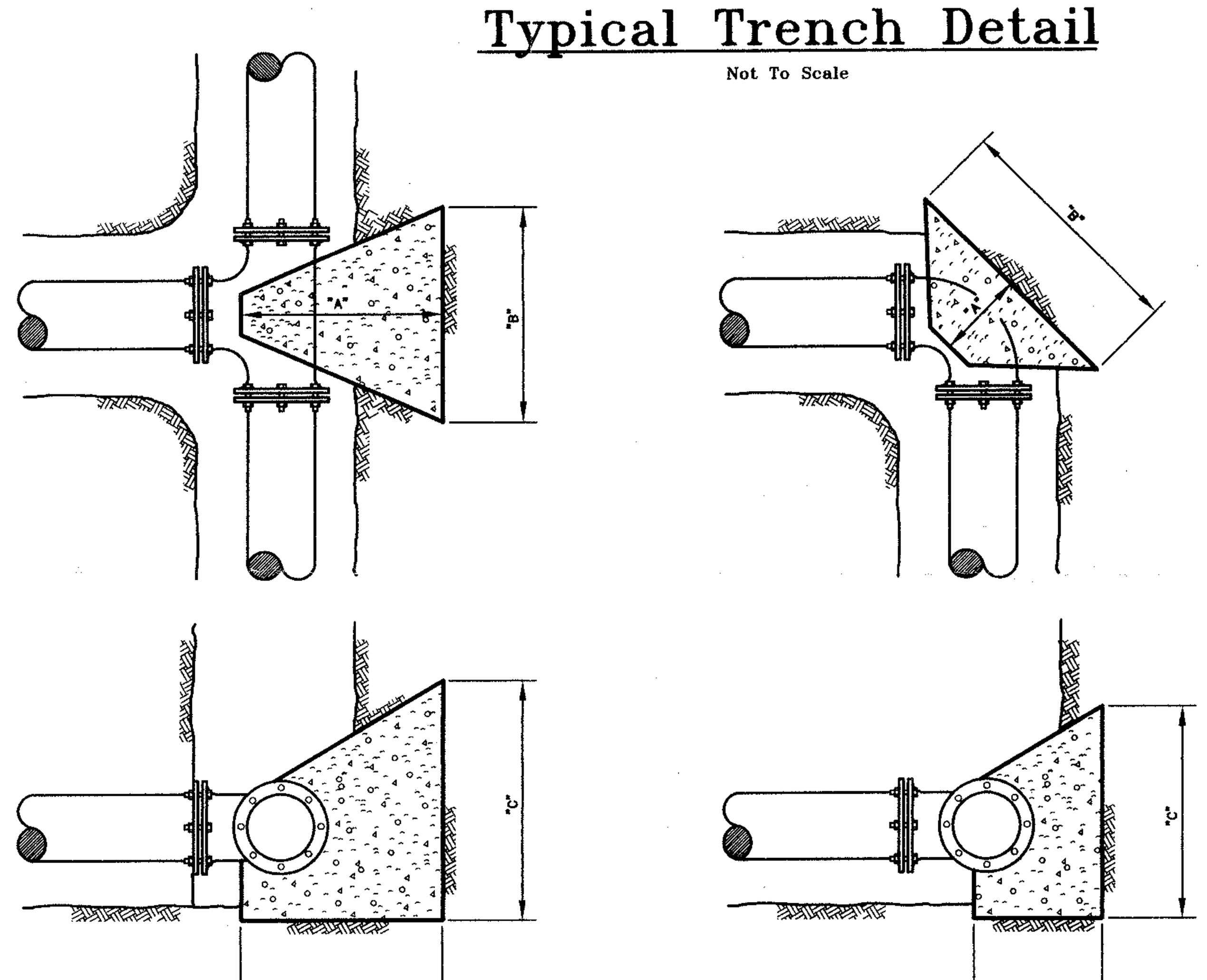
Pipe Insulation Details

Not To Scale



Abutment Sleeve Detail

Not To Scale



TEES

ELLS

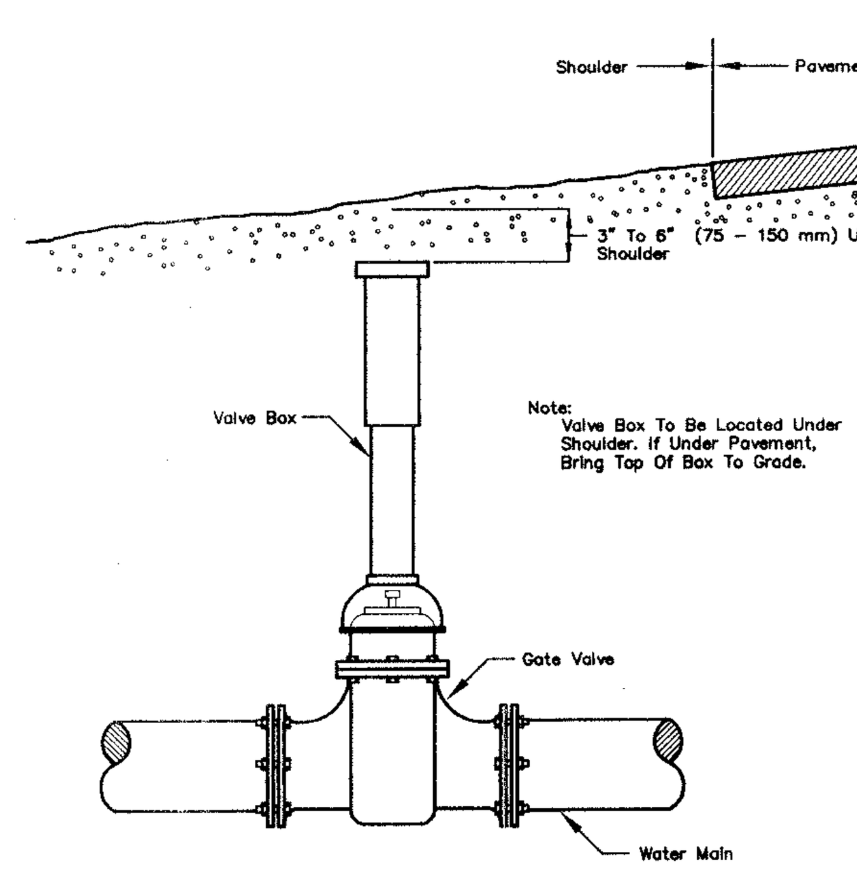
Typical Thrust Blocks

Not To Scale

Note:
Concrete For All Thrust Blocks To Be Minimum 3,000 PSI, 28 Day Strength, Type I Cement, 3/4" (19 mm) Stone

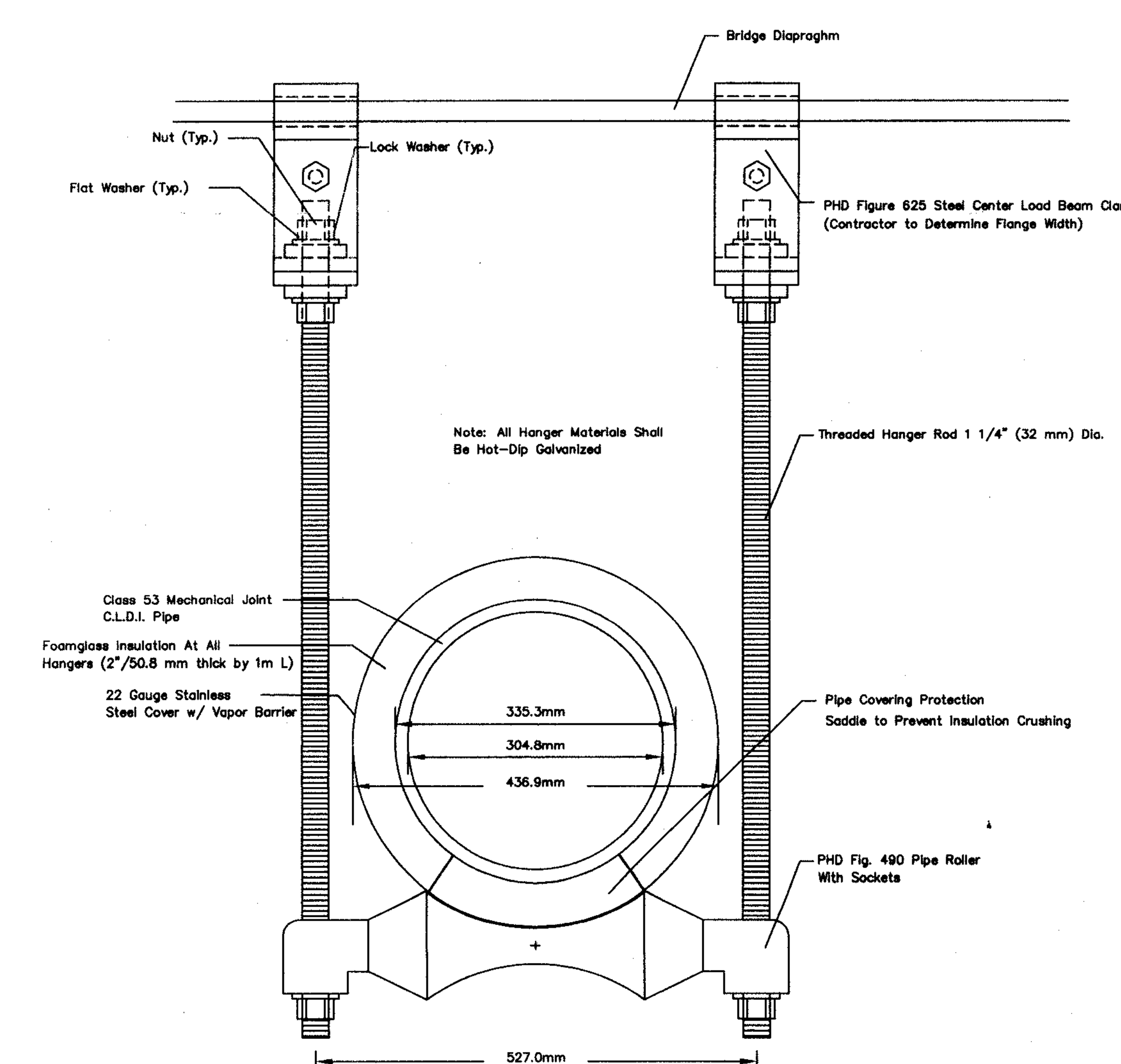
SOIL TYPE	TEES			ELLS		
	A	B	C	A	B	C
SOFT CLAY	381	1219	610	483	1219	610
SAND	381	1219	610	483	610	610
GRAVEL	381	1219	457	483	610	457

Thrust Block Dimensions (mm)



Valve Box Detail

Not To Scale



Pipe Hanger Detail

Not To Scale

No.	Revisions	Date	App'd.
1	REVISED PIPE HANGER PER MDOT	2-18-05	AEH

OLD TOWN – MILFORD BRIDGE

OLD TOWN WATER DISTRICT — OLD TOWN, MAINE

WATER MAIN DETAILS

A.E.Hodsdon CONSULTING ENGINEERS
10 Common St. Waterville, Me. 04901 (207) 873-5164

Sheet No.

Drawn By: BB	Scale: AS NOTED
Checked By: ZSP	Date: 2-18-05
Approved By: AEH	Date: 2-18-05
File No. watermain.dwg	Project No. 35-04