BID SET No. _____

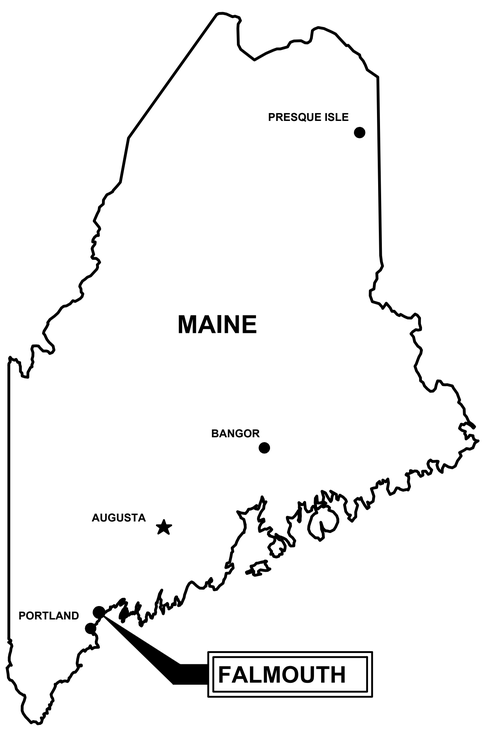
TOWN OF FALMOUTH

CONTRACT DRAWINGS FOR

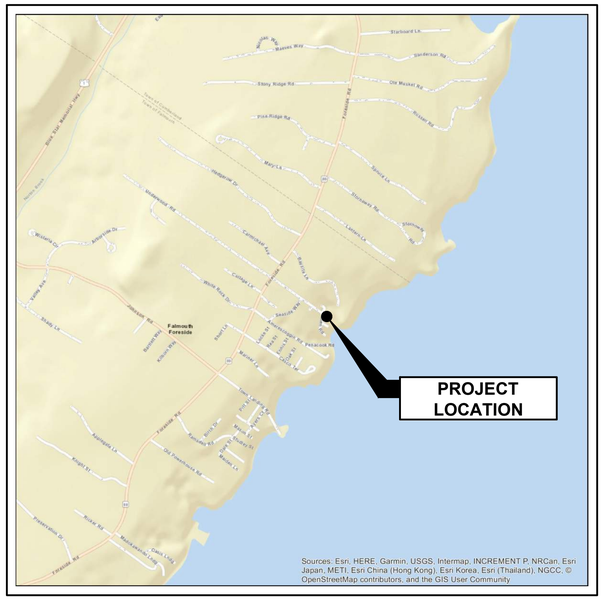
UNDERWOOD ROAD DRAINAGE IMPROVEMENTS

FALMOUTH, MAINE

SEPTEMBER 2020



DRAWING INDEX



LOCATION PLAN

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STATE OF MAINE
JAIME C. WALLACE
15444
LICENSED PROFESSIONAL ENGINEER
9-23-2020

FOR REVIEW _____

FOR BIDDING 9-23-2020

WP PROJECT No. 13042A

GENERAL NOTES

1. THE CONTRACTOR IS REFERRED TO SECTION 01050 OF THE SPECIFICATIONS REGARDING COORDINATION WITH OTHERS, INCLUDING RESPONSIBILITIES AND RELATED COSTS.

2. BELOW GRADE UTILITY INFORMATION IS BASED ON INFORMATION PROVIDED BY EACH UTILITY. LOCATION OF PUBLIC UTILITIES SHOWN IS ONLY APPROXIMATE AND MAY NOT BE COMPLETE. PRIVATE UNDERGROUND UTILITIES SUCH AS, BUT NOT LIMITED TO, SEWER LINES, WATER LINES AND BURIED ELECTRICAL SERVICE ENTRANCES ARE NOT SHOWN. THE CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING UTILITIES IN THE FIELD WITH THE RESPECTIVE UTILITY COMPANY REPRESENTATIVE PRIOR TO COMMENCING WORK. REFER TO SPECIFICATION SECTION 01050. ADDITIONAL TEST PITS, BEYOND THOSE SHOWN, MAY BE REQUIRED. UTILITY CONTACTS ARE AS FOLLOWS:

ELECTRIC:

CENTRAL MAINE POWER CO.
162 CANCO ROAD
SOUTH PORTLAND, MAINE 04103
TEL. (800) 750-4000

STORM DRAINS:

TOWN OF FALMOUTH PUBLIC WORKS DEPT
101 WOODS ROAD
FALMOUTH, MAINE 04105

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PORTLAND, MAINE 04102
TEL. (207) 774-5961 X3052

TELEPHONE:

FAIRPOINT
45 FOREST AVENUE
PORTLAND, MAINE 04101
TEL. (866) 984-2001

DIG SAFE:

TEL. (888) 344-7233

SANITARY SEWER:

TOWN OF FALMOUTH WASTEWATER DEPT
96 CLEARWATER DRIVE
FALMOUTH, MAINE 04105
TEL. (207) 781-4462

CABLE TELEVISION:

SPECTRUM
364 MAINE MALL ROAD SPACE W 100
SOUTH PORTLAND, MAINE 04106
TEL. (888) 406-7063

GAS:

SUMMIT NATURAL GAS
442 CIVIC CENTER DRIVE
AUGUSTA, MAINE 04330
TEL. (207) 621-8100

3. ALL EXISTING SEWER, STORM DRAIN, FORCE MAIN, WATER, AND GAS LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. ANY EXISTING ACTIVE PIPES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER, EXCEPT WHEN IN DIRECT CONFLICT WITH THE NEW SEWER.

4. THE CONTRACTOR MAY ENCOUNTER ASBESTOS CEMENT PIPE DURING EXECUTION OF THE WORK. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE PROVISIONS OF OSHA AND ALL OTHER FEDERAL, STATE AND LOCAL REGULATIONS WHEN HANDLING, REMOVING AND DISPOSING OF ASBESTOS CEMENT PIPES. A BID ITEM HAS BEEN INCLUDED IN THE BID FORM TO ESTABLISH A UNIT PRICE FOR THE REMOVAL AND DISPOSAL OF ASBESTOS CEMENT PIPE.

5. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURES CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY.

6. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT, RESETTING OR RELOCATING IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTIFICATION TO THE UTILITY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.

7. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSIONS AND STATIONING SHALL PREVAIL. TOPOGRAPHY BASED ON LIDAR DATA.

8. THE OWNER HAS OBTAINED THE PERMITS LISTED IN THE SUPPLEMENTARY OR SPECIAL CONDITIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH PERMIT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL OBTAINED PERMITS ARE AVAILABLE FOR REVIEW FROM THE TOWN OF FALMOUTH. ALL OTHER PERMITS ARE THE RESPONSIBILITY OF THE CONTRACTOR.

9. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RIGHTS OF WAY AND EASEMENTS. THE CONTRACTOR SHALL VERIFY THAT THE NECESSARY EASEMENTS HAVE BEEN SECURED BY THE OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE FAMILIAR WITH THE APPLICABLE PROVISIONS OF EACH EASEMENT AS THEY APPLY TO THE WORK PRIOR TO BIDDING AND ABIDE BY THOSE PROVISIONS DURING CONSTRUCTION. COPIES OF ALL RIGHTS-OF-WAY AND EASEMENTS ARE AVAILABLE FOR REVIEW FROM THE TOWN OF FALMOUTH.

10. CONTRACTOR SHALL MINIMIZE CLEARING OPERATIONS. CLEARING AND GRUBBING SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02110. CLEARING LIMITS SHALL BE AS INDICATED ON THE DRAWINGS, BUT AT ALL TIMES WITHIN EXISTING ROAD RIGHTS-OF-WAY AND EASEMENTS. ALL GRUBBINGS AND EXCESS EXCAVATED MATERIAL ARE THE PROPERTY OF THE CONTRACTOR AND WILL BE DISPOSED OF AT A SITE PROVIDED BY THE CONTRACTOR IN COMPLIANCE WITH ALL STATE AND LOCAL LAWS.

11. COMPACTION TESTS SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF SUBSTANTIAL COMPLETION OF THE PROJECT WILL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

12. CONTRACTOR SHALL CONTROL DUST TO A TOLERABLE LIMIT AS OUTLINED IN SPECIFICATION SECTION 01562. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH AND DEBRIS ON PUBLIC STREETS OUTSIDE THE PROJECT AREA. STREETS OPENED TO THE PUBLIC SHALL BE KEPT SWEPT AND FREE OF DEBRIS.

13. ALL VEGETATED AREAS ABOVE MEAN HIGH WATER ELEVATION THAT ARE EXCAVATED, FILLED OR OTHERWISE DISTURBED BY THE CONTRACTOR AND ARE NOT TO BE PAVED OR FILLED WITH RIPRAP SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED AT NO ADDITIONAL EXPENSE TO THE OWNER.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING ALL EXISTING PROPERTY MONUMENTATION THAT IS DISTURBED BY HIS OPERATIONS AT NO EXPENSE TO THE OWNER. THIS WORK IS TO BE DONE BY A LAND SURVEYOR REGISTERED IN THE STATE OF MAINE.

15. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

16. THE CONTRACTOR SHALL NOT HAVE ANY RIGHT OF PROPERTY IN ANY MATERIALS TAKEN FROM ANY EXCAVATION. SUITABLE EXCAVATED MATERIAL MAY BE INCORPORATED IN THE PROJECT, WITH EXCESS MATERIAL DISPOSED OF AT A LOCATION PROVIDED BY THE CONTRACTOR. THESE PROVISIONS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO PROPERLY DISPOSE OF AND REPLACE ANY MATERIAL DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING. THE CONTRACTOR SHALL DISPOSE OF UNSUITABLE AND EXCESS MATERIAL IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE CONTRACT DOCUMENTS.

SITE GRADING NOTES

1. ALL AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4 INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LANDSCAPING/LOAM AND SEED.

2. THE CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING, AND AS SHOWN ON THE DRAWINGS. EROSION CONTROL MEASURES SHOWN ON THE DRAWINGS ARE A MINIMUM, CONTRACTOR SHALL TAKE ALL OTHER NECESSARY MEASURES. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270 AND EROSION CONTROL DETAILS DRAWING.

3. ALL MANHOLES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

4. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY HIS CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

SURVEY NOTES

1. HORIZONTAL COORDINATE SYSTEM: ASSUMED NAD83 MAINE STATE PLANE, WEST ZONE, U.S. FOOT.

2. VERTICAL DATUM: NAVD88 DATUM

3. TOPOGRAPHIC SURVEY COMPLETED BY WRIGHT-PIERCE ON OCTOBER 14, 2014.

4. LOW TIDE OBSERVATION WAS TAKEN AT 10:03AM AND RECORDED AS 1.13' (MLW)

5. PROPERTY LINE INFORMATION IS APPROXIMATE (BASED ON TAX MAPPING AND ADJUSTED TO CORRESPOND TO MONUMENTATION FOUND).

CIVIL ABBREVIATIONS

&	AND
Ø, DIA	DIAMETER
#, NO	NUMBER
APP'D	APPROVED
BLDG	BUILDING
CB	CATCH BASIN
CEN	CENTER
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CY	CUBIC YARD
DEMO	DEMOLITION
DMH	DRAIN MANHOLE
DI	DUCTILE IRON
DR	DRAIN
DWG	DRAWING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
FM	FORCE MAIN
FT	FEET
G	GAS
HYD	HYDRANT
IN	INCH
INF	INFLUENT
INV	INVERT
LBS	POUNDS
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MW	MONITORING WELL
N	NORTH
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N/A	NOT AVAILABLE/APPLICABLE
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
PC	PERFORATED CLAY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PS	PRIMARY SLUDGE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REQ'D	REQUIRED
S	SLOPE, SEWER
SD	STORM DRAIN
SF	SQUARE FEET
SMH	SANITARY SEWER MANHOLE
SQ	SQUARE
STA	STATION
T, XFMR	TRANSFORMER
TBM	TEMPORARY BENCH MARK
THK	THICKNESS
TOS	TOP OF STRUCTURE
TYP	TYPICAL
UD	UNDERDRAIN
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
VC	VITRIFIED CLAY
W/	WITH
W	POTABLE WATER

LEGEND

EXISTING		PROPOSED
	PROPERTY/ROW LINE	
	SETBACK LINE	
	EASEMENT LINE	
	CENTERLINE	
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF CONCRETE	
122	CONTOUR	123
	BUILDING	
	STONEWALL	
	TREELINE	
	CHAIN LINK FENCE	
	STOCKADE FENCE	
	BARB WIRE FENCE	
	RETAINING WALL	
	GUARDRAIL	
8" S	SEWER	8"S
4" FM	SEWER FORCE MAIN	4"FM
4" G	GAS	4"G
8" W	WATER	8"W
15" SD	STORM DRAIN	15"SD
6" UD	UNDERDRAIN	6"UD
12" CMP	CULVERT	12" CMP
UGE	UNDERGROUND ELECTRIC	UGE
OHE	OVERHEAD ELECTRIC	OHE
UGT	UNDERGROUND TELEPHONE	
CATV	UNDERGROUND CABLE TV	
	IRON PIPE/REBAR	
	DRILLHOLE	
	MONUMENT	
	SURVEY CONTROL POINT	
124.6	SPOT ELEVATION	134.5
SMH	SEWER MANHOLE	SMH
DMH	DRAINAGE MANHOLE	DMH
CB CB CB	CATCH BASIN	CB CB
EMH	ELECTRIC MANHOLE	EMH
TMH	TELEPHONE MANHOLE	TMH
	SHUTOFF VALVE	
	WATER SERVICE SHUTOFF	
	YARD HYDRANT	
	HYDRANT	
	GAS SERVICE SHUTOFF	
	GAS GATE VALVE	
	UTILITY POLE	
	UTILITY POLE W/ GUY	
	UTILITY POLE W/ LIGHT	
	LIGHT POLE	
	BOLLARD	
	FLAGPOLE	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	SHRUB	
	WETLAND FLAG	
	EDGE OF WATER	
	STREAM	
	EDGE OF WETLANDS	
	FLOODPLAIN	
	WETLANDS	
	DRAINAGE FLOW	
	DRAINAGE SWALE	
	PAVEMENT MARKINGS	
	SIGN	
MB	MAILBOX	
	TEMPORARY BENCH MARK	
TP	TEST PIT	
B	TEST BORING	
P	TEST PROBE	
MW	MONITORING WELL	
	LIMIT OF WORK	
	SILT FENCE	
	RIPRAP	
	RAILROAD	
	MATCHLINE	
	ROCK OUTCROP	

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
3			
4			

DESIGNED BY: J.WAL
CAD COORD: M.LAP
CAD: M.LAP
CHECKED BY: J.WAL
DATE: 9-23-2020
APPROVED BY: R.WIN
DATE: 9-23-2020
PROJECT NO: 13042

STATE OF MAINE JAIME C. WALLACE 15444 LICENSED PROFESSIONAL ENGINEER

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TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

GENERAL NOTES, LEGEND AND ABBREVIATIONS

DRAWING
C-1

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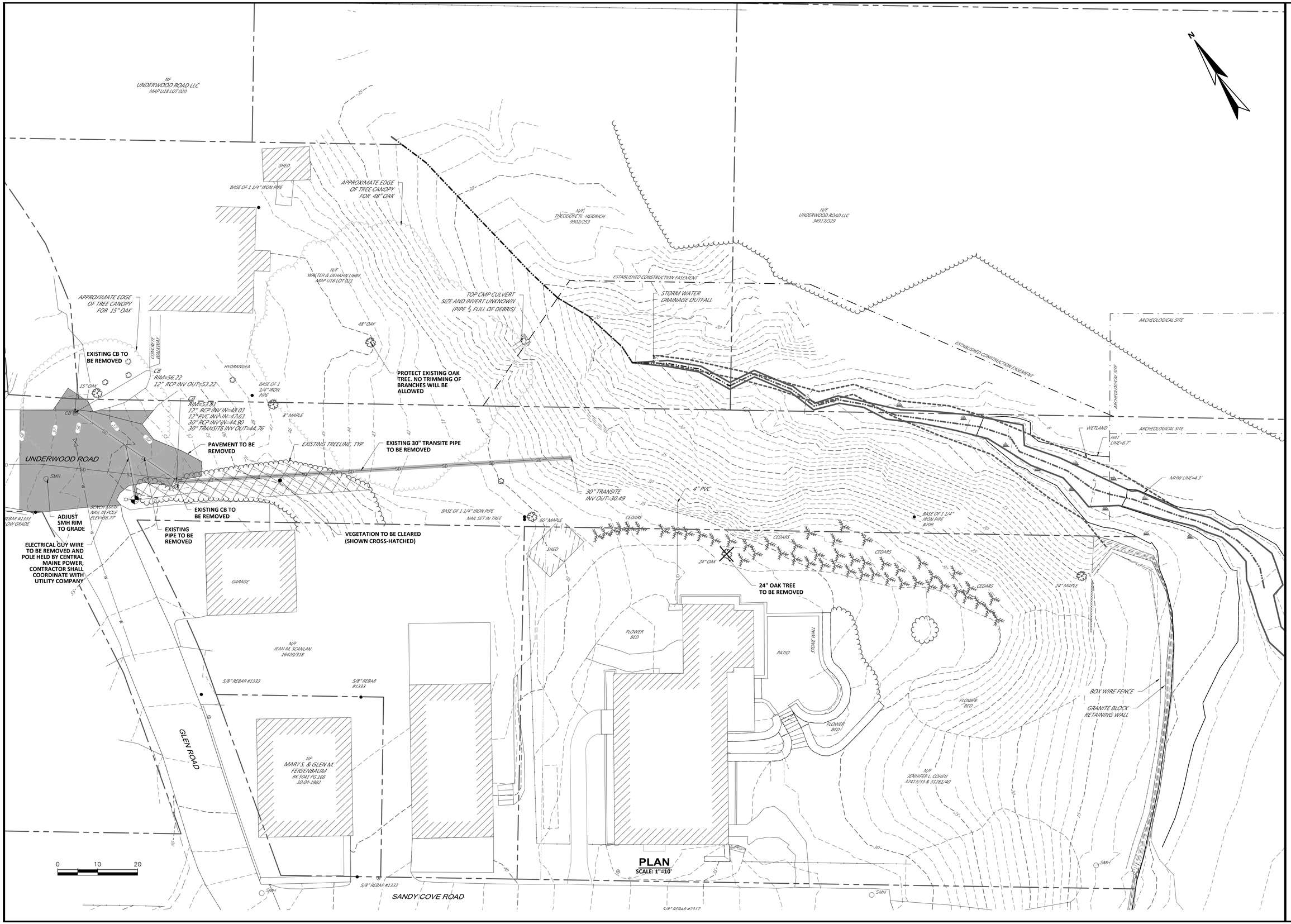

PLAN
SCALE: 1"=10'

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
3			
4			

DESIGNED BY: J.WAL
CAD COORD: M.LAP
CAD: M.LAP
CHECKED BY: J.WAL
DATE: 9-23-2020
APPROVED BY: R.WIN
DATE: 9-23-2020
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STATE OF MAINE
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TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING
C-2

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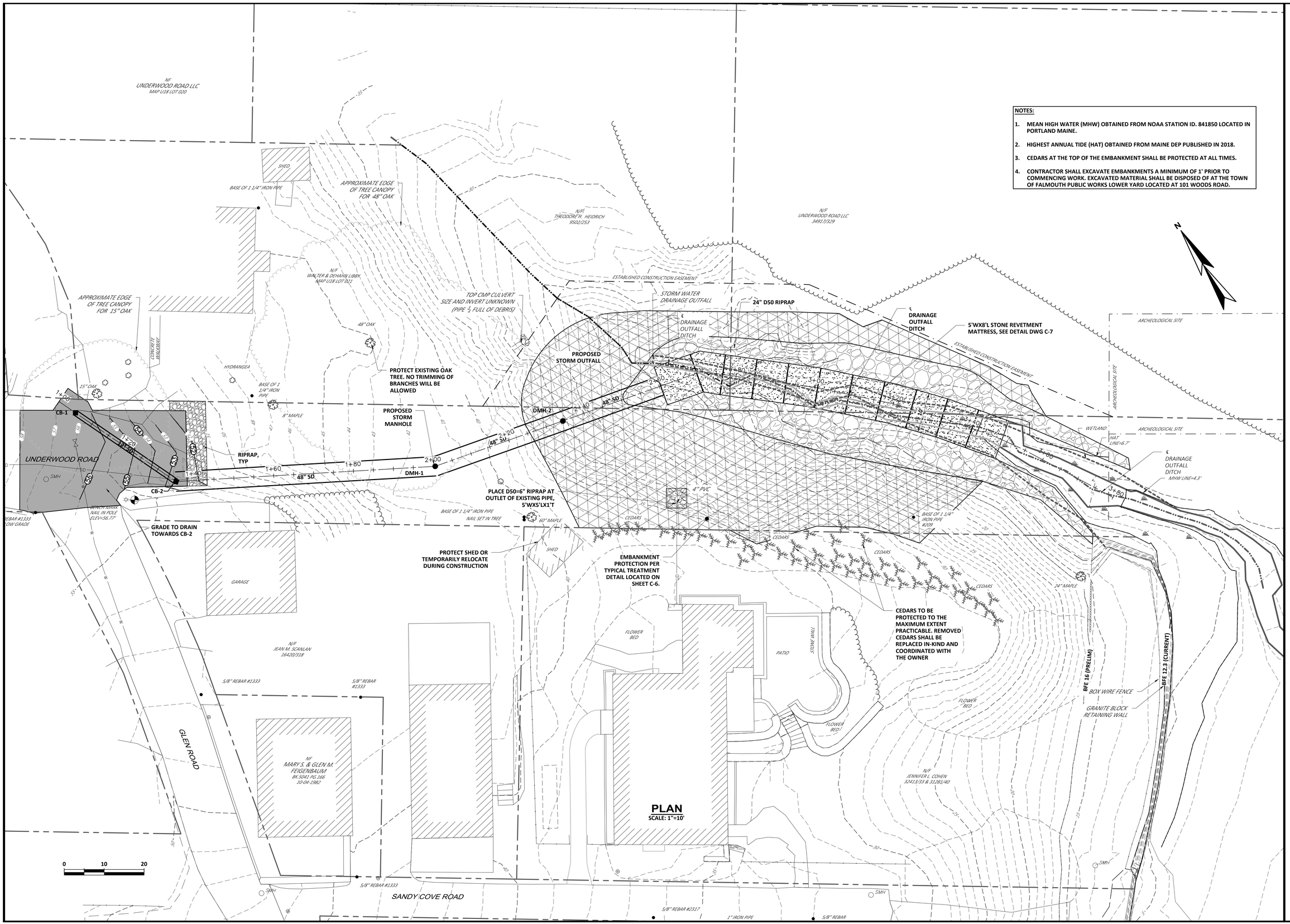

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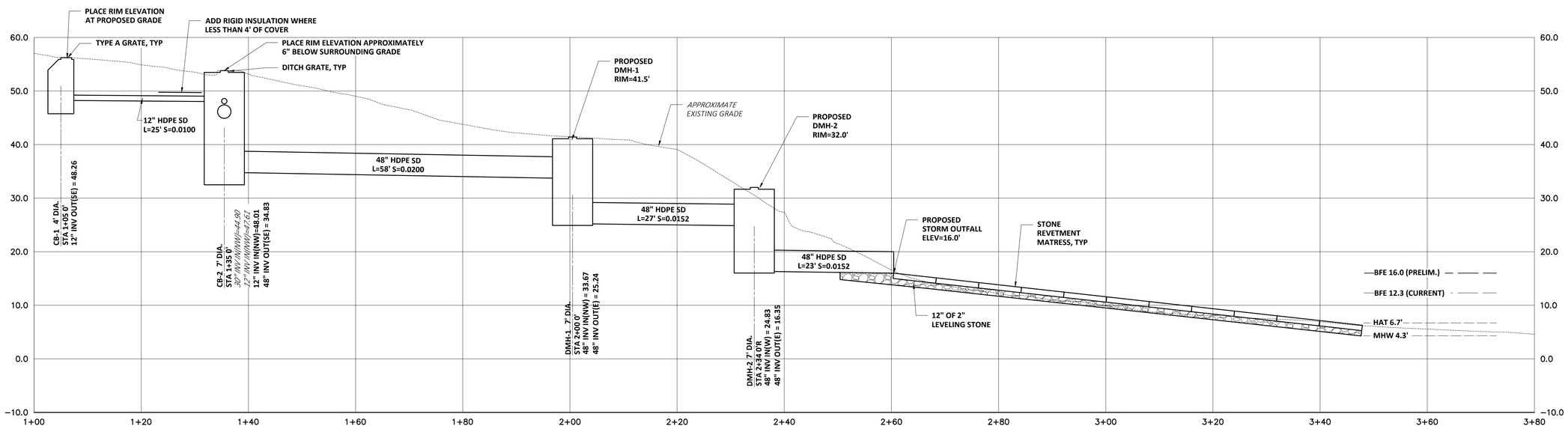
TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

SITE LAYOUT PLAN

DRAWING
C-3



OUTFALL PROFILE

SCALE
VERT: 1"=10'
HORIZ: 1"=10'

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
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4			
5			

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TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

PROFILES

DRAWING
C-4

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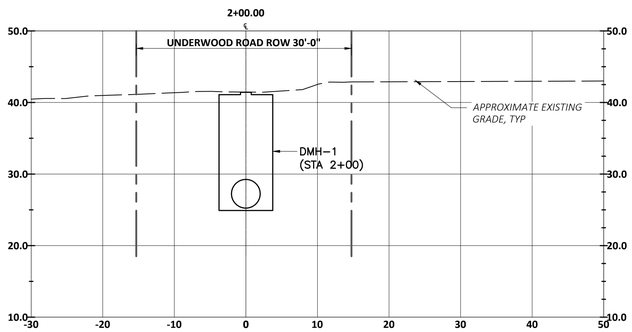

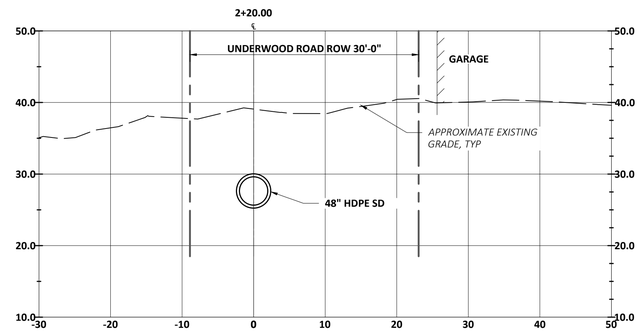

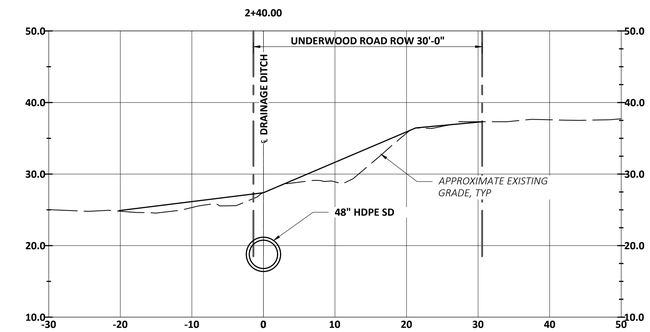

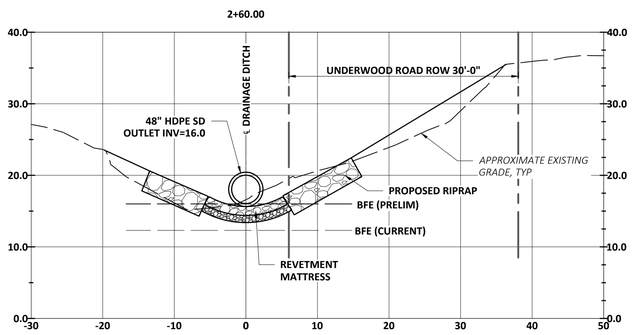

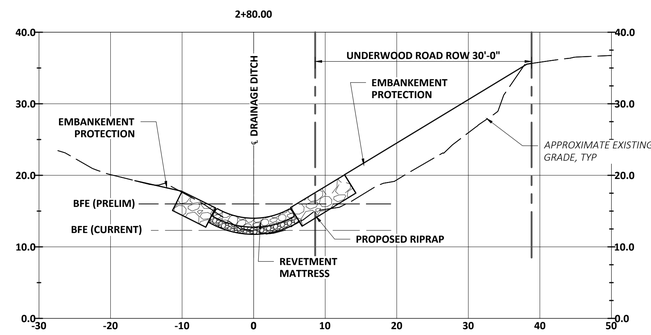

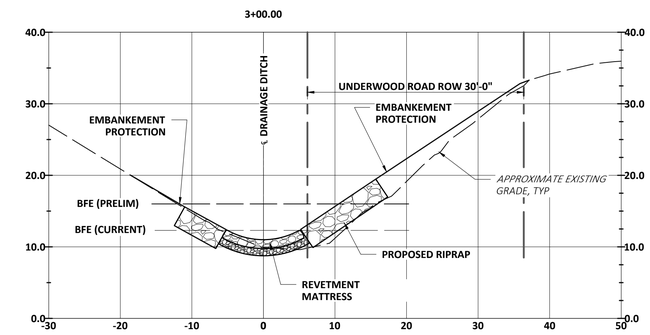

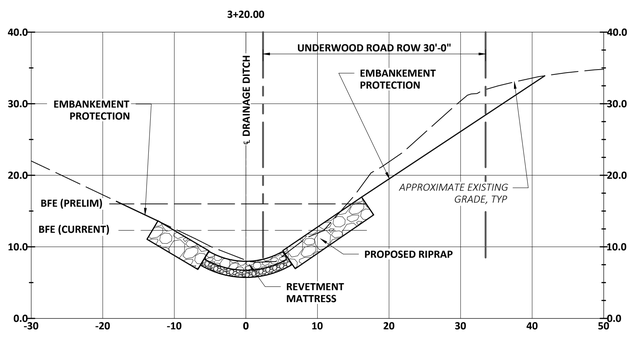

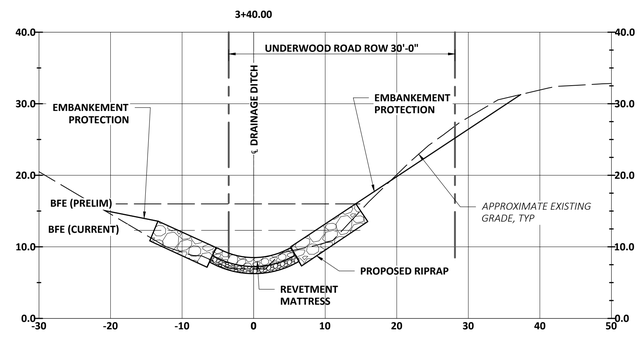

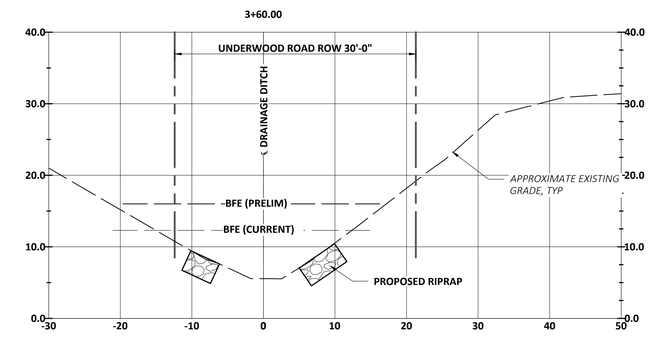

X-SECTIONS

SCALE: 1"=10'-0"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
3			
4			

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CAD COORD: M.LAP
CAD: M.LAP
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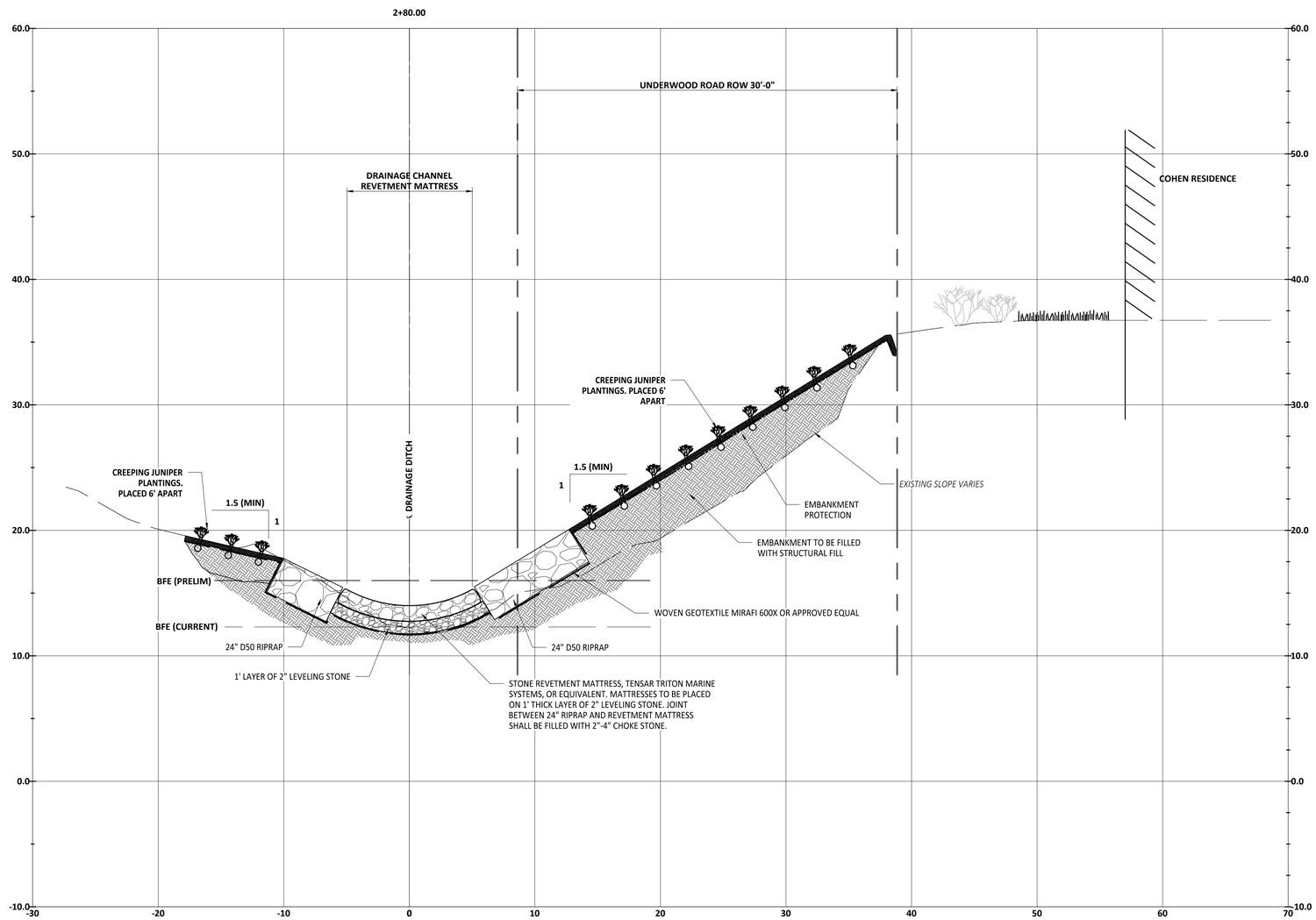
TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

SECTIONS

DRAWING
C-5



EMBANKMENT PROTECTION TYPICAL SECTION

0 2.5 5 7.5 15

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
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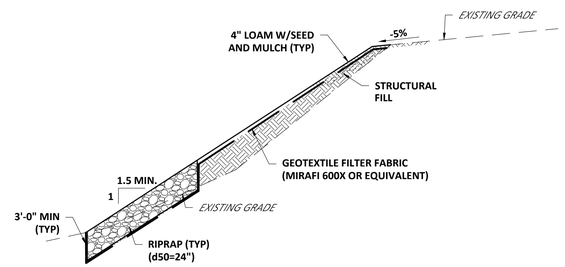
TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

DETAILS I

DRAWING
C-6

LAST SAVED BY: MATT.LAPIERRE 9/21/2020 4:45 PM

G:\DWGS\ME\FALMOUTH\13042-UNDERWOOD ROAD\13042A-FD\CIV\13042ADETAILS.DWG | 13042adetails | 1:10.12564677 | — | 9/22/2020 8:19:55 AM | MATT.LAPIERRE

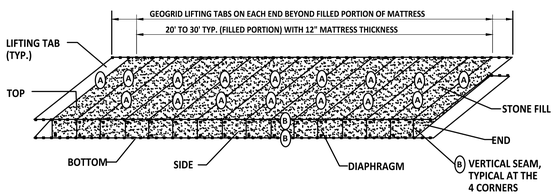


RIPRAP SLOPE PROTECTION

SCALE: NTS

NOTES:

1. PLACE RIPRAP AT 1.5:1(HORIZONTAL:VERTICAL) SLOPE MAXIMUM.
2. TOE OF SLOPE RIPRAP SHOULD BE KEYED INTO THE EXISTING GROUND SURFACE A MINIMUM OF 3'-0".
3. A NON-WOVEN GEOTEXTILE FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) SHOULD BE INSTALLED OVER SUBGRADE PRIOR TO PLACING RIPRAP. THE FILTER FABRIC SHOULD OVERLAP THE TOP OF THE RIPRAP.
4. WHERE REQUIRED, GRANULAR BORROW SHOULD BE PLACED IN 12" THICK LIFTS AND COMPACTED TO 92% OF IT'S MAXIMUM DRY DENSITY PER ASTM D-698 (STANDARD PROCTOR).



A INDICATES BODKIN CONNECTION USING 3/8" DIAMETER HDPE BODKIN ROD

B INDICATES BRAIDED SEAM USING 3/16" DIAMETER HIGH UV HDPE BRAID

NOTES:

ENDS, TOP, BOTTOM, SIDES AND ANY EXTRA LENGTH USED FOR LIFTING OR ANCHORING PURPOSES SHALL BE COMPOSED OF TENSAR UXTRITON 200 GEOGRID.

INTERNAL DIAPHRAGMS SHALL BE COMPOSED OF TENSAR UXTRITON 100 GEOGRID.

NOMINAL WIDTH OF UNITS: 5FT (FILLED), 4.3 FT (UNFILLED).

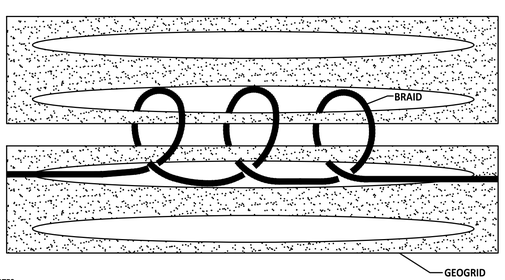
TYPICAL THICKNESS (FILLED): 12 INCHES; OPTIONAL THICKNESS: 18 INCHES OR 24 INCHES.

PLASTIC CABLES TIES MAY BE USED TO SECURE BODKIN CONNECTORS IN POSITION PRIOR TO TENSIONING OR FILLING OF MATTRESS UNITS.

MATTRESS STONE FILL SHALL BE D50 = 4" RIPRAP. NO STONES LARGER THAN 6" OR SMALLER THAN 2" SHALL BE USED AS STONE FILL.

REVETMENT MATTRESS DETAIL

SCALE: NTS



NOTES:

ALL CUT ENDS OF BRAID MATERIAL SHALL BE KNOTTED WITHIN 1/2" TO 2" OF THE END TO PREVENT RAVELING OF BRAID.

AT ALL ENDS OF ALL BRAIDED SEAMS THE BRAID SHALL BE SECURELY KNOTTED TO THE GEOGRID.

AT ALL ENDS OF ALL PIECES OF BRAID MATERIAL USED, THE BRAID SHALL BE KNOTTED TO SPLICE IT TO THE NEXT PIECE OF BRAID, OR TO SECURE IT TO THE GEOGRID. EACH BRAIDED SEAM SHALL BE CONTINUOUS, WITH SECURELY KNOTTED SPLICES ALLOWED. THE BRAID SHALL BE SECURELY KNOTTED TO THE GEOGRID AT A SPACING NOT TO EXCEED 6 FT ALONG ANY SEAM.

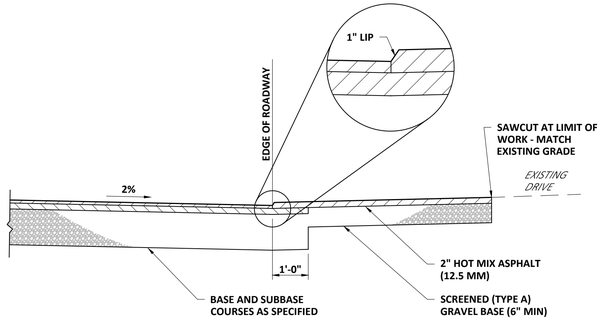
THE BRAID SHALL BE STITCHED THROUGH EACH PAIR OF APERTURES ALONG THE SEAM AT LEAST ONCE, AND THE MINIMUM NUMBER OF STITCHES PER FOOT ALONG THE SEAM SHALL BE SIX (6). THE SPACING OF STITCHES ALONG EACH SEAM SHALL BE REASONABLY UNIFORM.

ALL KNOTS SHALL BE TIED IN A MANNER TO PREVENT SLIPPING AND CINCHING.

THE WRAPS ALONG THE SEAM SHALL BE SUFFICIENTLY TIGHT TO CLOSE THE GAP BETWEEN THE ADJACENT PIECES OF GEOGRID, BUT SHALL NOT BE OVER-TIGHTENED SUCH THAT THE GEOGRID BINDS ALONG THE SEAM.

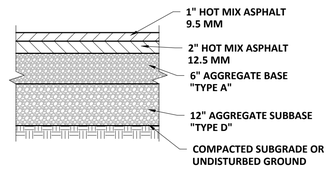
REVETMENT MATTRESS CONNECTION DETAIL

SCALE: NTS



TYPICAL DRIVE SECTION

SCALE: NTS



PAVEMENT SECTION

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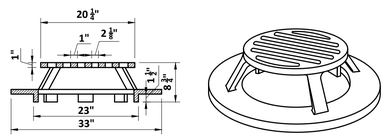
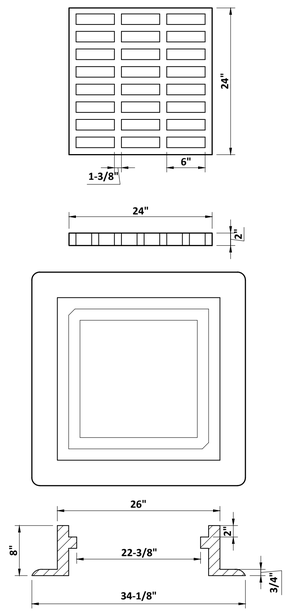


NOTE:

1. USE NEENAH R-4341-A OR EQUIVALENT GRATE.
2. USE NEENAH R-1924 OR EQUIVALENT FRAME.

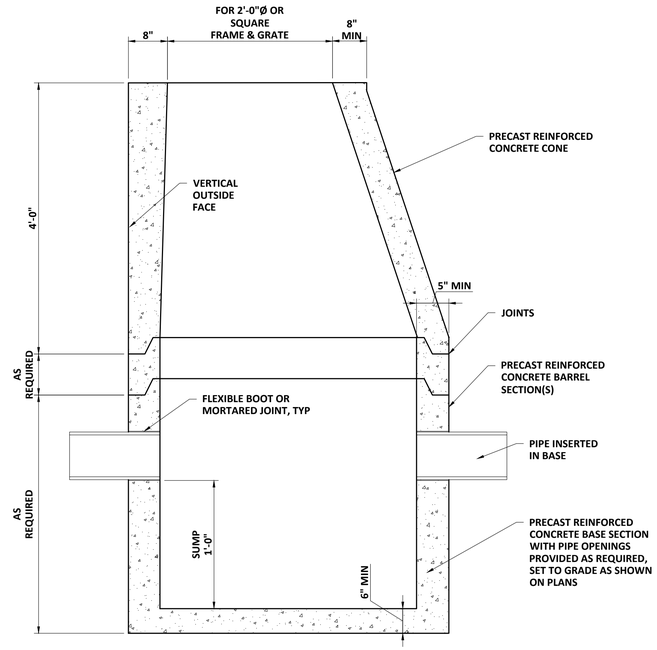
DITCH GRATE

SCALE: NTS



FRAME AND COVER FOR TYPE "A" CATCH BASIN

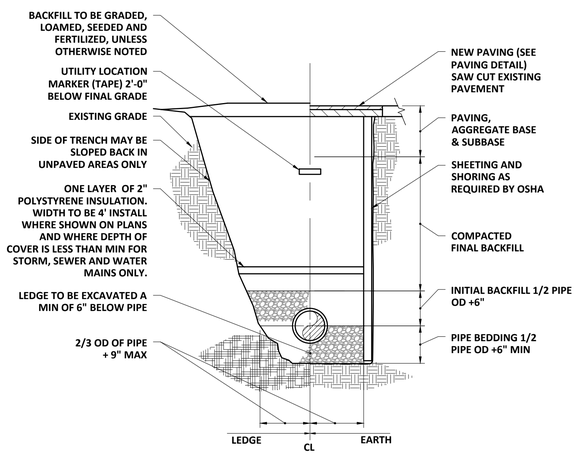
SCALE: NTS



NOTE:
USE FLAT SLAB TOP CATCH BASIN WHERE REQUIRED TO MATCH GRADE

CATCH BASIN

SCALE: NTS

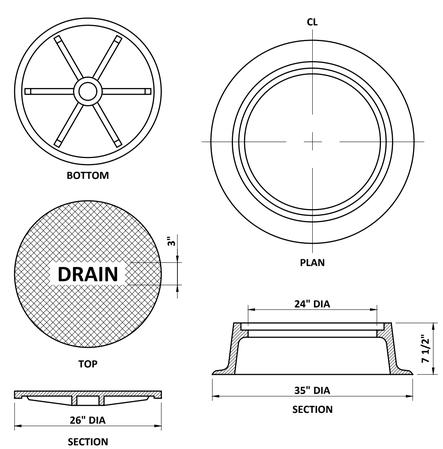


NOTES:

1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.
3. SEE SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.

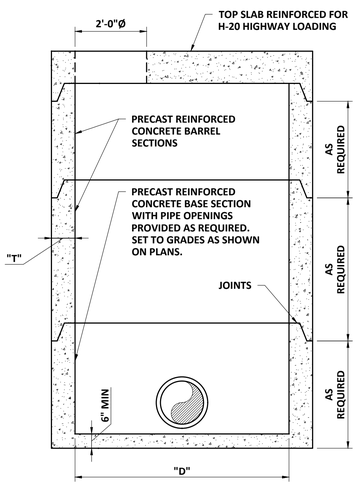
PIPE TRENCH

SCALE: "NTS"



DRAIN MANHOLE STANDARD COVER AND FRAME

SCALE: NTS



DIAMETER ("D")	MAX PIPE DIAMETER STRAIGHT THRU TO 45° DEFLECTION	MINIMUM WALL THICKNESS ("T")
48"	UP TO 30" O.D.	5"
60"	UP TO 44" O.D.	6"
72"	UP TO 51" O.D.	7"
96"	UP TO 72" O.D.	9"

FLAT SLAB TOP DRAIN MANHOLE

SCALE: "NTS"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
3			
4			
5			
6			
7			
8			

DESIGNED BY: J.WAL
CAD COORD: M.LAP
CAD: M.LAP
CHECKED BY: J.WAL
DATE: 9-23-2020
APPROVED BY: R.WIN
DATE: 9-23-2020
PROJECT NO: 13042

STATE OF MAINE JAIME C. WALLACE 15444 LICENSED PROFESSIONAL ENGINEER

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TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

DETAILS II

DRAWING
C-7

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION IN DEVELOPING AREAS IN ACCORDANCE WITH OCTOBER 2016 REVISION TO THE 2003 MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPS) MANUAL FOR DESIGNERS AND ENGINEERS.

THE PROPOSED LOCATIONS OF SILTATION AND EROSION CONTROL STRUCTURES ARE SHOWN ON THE SITE PLAN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH 2014 REVISION TO THE 2003 MAINE EROSION AND SEDIMENT CONTROL FIELD GUIDE FOR CONTRACTORS. ALL TEMPORARY MEASURES SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED.
2. IN AREAS ADJACENT TO NATURAL RESOURCES, LOCATIONS TO BE VEGETATED IN THEIR FINISH CONDITION SHALL BE STABILIZED WITH MULCH WITHIN 7 DAYS OF DISTURBANCE.
3. AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR UP TO ONE YEAR SHALL BE STABILIZED WITH MULCH WITHIN 7 DAYS OF DISTURBANCE
4. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNTREATED OR UNVEGETATED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL AREAS TO BE VEGETATED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
5. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPGRADIENT DRAINAGE AREAS.
6. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #5.
7. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSURE. IF REPAIRS ARE IDENTIFIED, THEY SHALL BEGIN NO LATER THAN THE END OF THE FOLLOWING WORK DAY AND BE COMPLETE WITHIN 7 DAYS FROM INSPECTION. SEDIMENT DEPOSITS MUST BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED.
8. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2 TO 1) UNLESS STABILIZED WITH RIPRAP OR OTHER STRUCTURAL MEANS. NO SLOPES IN EXCESS OF 1.5H:1V SHALL BE ALLOWED.
9. IF FINAL SEEDING AND SODDING IS NOT EXPECTED PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY ANNUAL RYEGRASS SEEDING AND MULCHING ON ROUGH GRADED SUBSOIL TO PROTECT THE SITE AND DELAY PERMANENT LOAMING, FINE GRADING, AND SEEDING OR SODDING UNTIL SPRING.
10. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINISH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
11. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
12. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED.
13. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
14. EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
15. EXPOSED AREA SHOULD BE LIMITED SUCH THAT THE AREA CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
16. STABILIZATION SCHEDULE BEFORE WINTER:

    SEPTEMBER 15 — ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. SLOPES 3:1 OR GREATER TO BE STABILIZED WITH EROSION CONTROL MATTING AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND MULCHED.

    OCTOBER 1 — ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR EROSION CONTROL BLANKET.

    NOVEMBER 15 — ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED. SLOPES THAT ARE COVERED WITH RIPRAP MUST BE CONSTRUCTED BY THAT DATE.

    DECEMBER 1 — ALL DISTURBED AREAS WHERE THE GROWTH OF VEGETATION FAILS TO BE AT LEAST THREE INCHES TALL OR AT LEAST 75% OF THE DISTURBED SOIL IS COVERED BY VEGETATION, MUST BE PROTECTED FOR OVER-WINTER.

17. SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADIENT OF STOCKPILES, AND STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO THE STOCKPILES.
18. CONTRACTOR SHALL MAINTAIN ALL STABILIZED CONSTRUCTION ENTRANCES UNTIL ALL DISTURBED AREAS ARE STABILIZED.
19. MULCH MAY REQUIRE ANCHORING TO ENSURE THAT MULCH REMAINS IN-PLACE. MULCH NETTING, CRIMPING, OR PUNCHING ARE ACCEPTABLE METHODS. MULCH NETTING SHALL BE TENAX RADIX EROSION CONTROL NETS OR APPROVED EQUAL, AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER REQUIREMENTS.
20. SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS AND EQUIPMENT ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
21. GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
22. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
23. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.
24. AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
    - A. DISCHARGES FROM FIREFIGHTING ACTIVITY;
    - B. FIRE HYDRANT FLUSHINGS;
    - C. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
    - D. DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS;
    - E. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
    - F. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
    - G. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
    - H. UNCONTAMINATED GROUNDWATER OR SPRING WATER;
    - I. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
    - J. UNCONTAMINATED EXCAVATION DEWATERING;
    - K. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
    - L. LANDSCAPE IRRIGATION.
25. UNAUTHORIZED NON-STORMWATER DISCHARGES: THE MAINEDEP'S APPROVAL UNDER THIS CHAPTER DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON_STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH APPENDIX C (6). SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
    - A. WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
    - B. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
    - C. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
    - D. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

EROSION CONTROL - WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15.
2. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
3. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
4. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MUST BE STABILIZED WITH MULCH. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
5. THE APPLICATION OF MULCH TO FINE GRADED AREAS WILL BE STABILIZED AS FOLLOWS:
    - A. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION, CHEMICAL TACK OR WOOD CELLULOSE FIBER.
    - B. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GRATER THAN 8%. THIS SHALL BE IN ADDITION TO EROSION CONTROL MATTING-DITCHES DETAIL.
    - C. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
8. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
9. DURING WINTER CONSTRUCTION PERIODS ALL SNOW SHALL BE REMOVED FROM AREAS OF MULCHING PRIOR TO PLACEMENT.
10. THE INSPECTION FREQUENCY FOR WINTER CONSTRUCTION SHALL BE AFTER EACH RAINFALL, SNOWSTORM, OR THAWING, AND AT LEAST ONCE A WEEK.

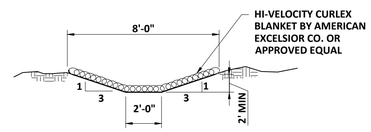
EROSION CONTROL - WETLAND NOTES

1. WETLANDS AND SURFACE WATERS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
2. IF THE WORK INCLUDES CROSSING OF WETLANDS AND/OR STREAMS, THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS WORKING IN THESE AREAS.
3. ANY WETLAND CROSSING WORK SHALL BE COMPLETED BETWEEN THE PERIOD OF MAY 1 AND SEPTEMBER 30.
4. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION WITHIN OR ADJACENT TO WETLAND AREAS. ALL TEMPORARY MEASURES SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED.
5. WETLAND VEGETATIVE LAYERS SHALL BE REMOVED AND SALVAGED FOR RESTORATION OF THE DISTURBED AREAS.
6. STORAGE AREAS FOR WETLAND MATERIALS SHALL BE PROPERLY PROTECTED AGAINST EROSION.
7. SEEDING OF THE DISTURBED AREAS WITHIN WETLAND AREAS SHALL UTILIZE MIXTURES APPROPRIATE FOR WETLAND AREAS AS OUTLINED IN THE SPECIFICATIONS.

INSPECTIONS

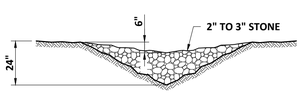
REGULAR INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MADE AT LEAST WEEKLY AND PRIOR TO AND FOLLOWING STORM EVENTS. MINIMUM INSPECTIONS SHALL BE MADE AS LISTED IN THE TABLE BELOW. SEE INSPECTIONS, MAINTENANCE AND HOUSEKEEPING PLAN FOR ADDITIONAL INFORMATION.

INSPECTED ITEM	EXAMPLE REPAIR INDICATORS
MULCHED SURFACES	THIN MULCH OR INADEQUATE APPLICATION. WIND MOVEMENT
SEEDED SURFACES	POOR SEED GERMINATION. LOSS OF MULCH. DEVELOPMENT OF RIVULETS.
SEDIMENT BARRIER	SEDIMENT BUILD-UP TO ONE HALF THE HEIGHT OF THE BARRIER. UNDERMINING OF THE BARRIER. SUPPORTING STAKES LOOSE, TOPPLED OR UNMARKED. BREAKS IN BARRIER.
PERIMETER DIVERSION	DISCHARGE IS TO STABILIZED AREA. EROSION OR BREAKS IN BARRIER. SUPPORTING STAKES LOOSE, TOPPLED OR UNMARKED.
CATCH BASIN PROTECTION	SEDIMENT BUILD-UP AND STRUCTURE BLOCKAGES. SLOW FLOW/PONDING WATER. BREAKS IN FABRIC OR VOIDS IN BARRIER.
DEWATERING FILTER	BREAKS IN FABRIC OR SUPPORTING STRUCTURE. SLOW FLOW, INDICATING HIGH SEDIMENT BUILD-UP.
CONSTRUCTION ENTRANCE	SEDIMENTATION OF ROADWAYS. OFF-SITE DUST COMPLAINTS.



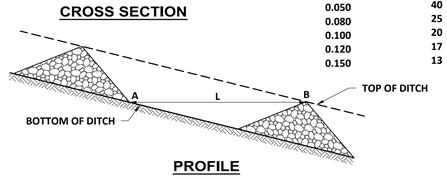
NOTE:
1. PROVIDE FOR ALL DRAINAGE SWALES. ADDITIONAL REQUIREMENTS MAY APPLY. SEE EROSION CONTROL - WINTER CONSTRUCTION NOTE 7.

EROSION CONTROL MATTING - DITCHES
SCALE: "NTS"



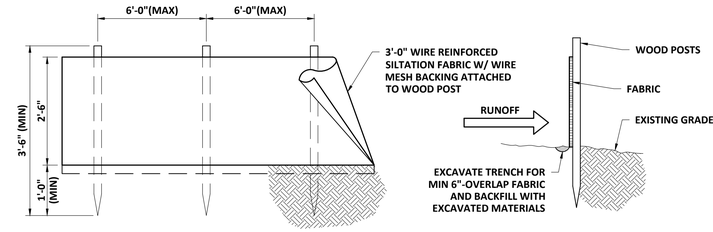
CROSS SECTION

DITCH SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.050	40
0.080	25
0.100	20
0.120	17
0.150	13

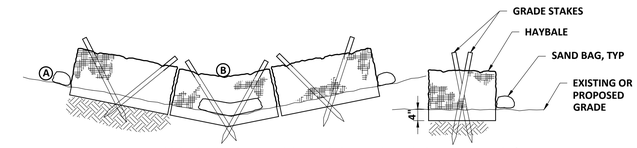


PROFILE

STONE CHECK DAM DETAIL
SCALE: NTS

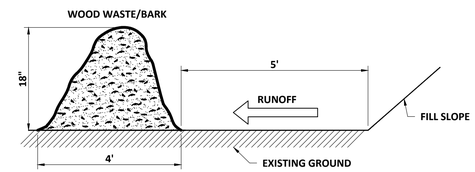


SILT FENCE INSTALLATION DETAIL
SCALE: NTS



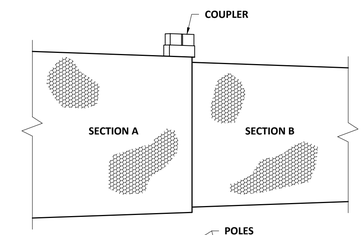
EROSION CHECK TO BE BALES OF HAY SECURED TO THE GROUND WITH TWO 4' LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT (A) AT LEAST 6 INCHES ABOVE OVERFLOW AT (B)

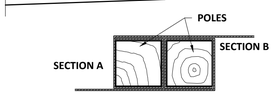
HAY BALE CHECK DAM
SCALE: "NTS"



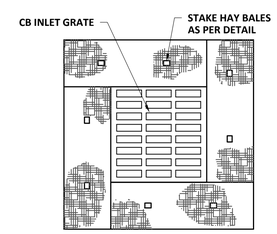
NOTES:
1. EROSION CONTROL MIX SHOULD CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH SUCH AS FLY ASH OR YARD SCRAPING. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
    - A. THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 80% AND 100%, DRY WEIGHT BASIS.
    - B. PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 6" SCREEN AND 70% TO 85% PASSING A 0.75" SCREEN.
    - C. THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
    - D. SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
    - E. THE PH SHOULD BE BETWEEN 5.0 AND 8.0.
2. DO NOT USE ECM BERM AT BASE OF SLOPES 8% OR GREATER.

EROSION CONTROL MULCH BERM
SCALE: "NTS"



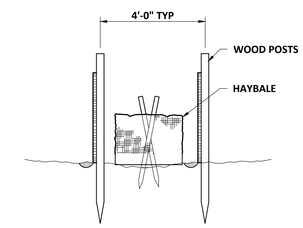


JOINING SILT FENCE SECTIONS
SCALE: "NTS"

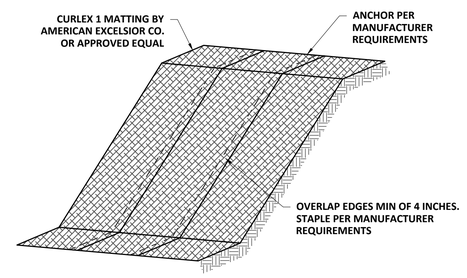


NOTE:
EMBED HAYBALES MINIMUM OF 4".

HAY BALE CB INLET PROTECTION
SCALE: "NTS"

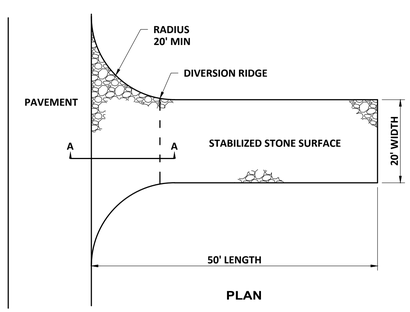


COMBINATION SILT FENCE AND HAY BALE BARRIER
SCALE: NTS

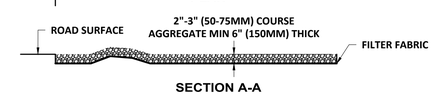


NOTE:
INSTALL ON SLOPES 3:1 OR GREATER

EROSION CONTROL MATTING - SLOPES
SCALE: "NTS"



PLAN



SECTION A-A

(TEMPORARY, TO BE REMOVED PRIOR TO FINAL SITE PAVING)

STABILIZED CONSTRUCTION ENTRANCE
SCALE: "NTS"

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
3			
4			
5			
6			

DESIGNED BY: J.WAL
CAD COORD: M.LAP
CAD: M.LAP
CHECKED BY: J.WAL
DATE: 9-23-2020
APPROVED BY: R.WIN
DATE: 9-23-2020
PROJECT NO: 13042

STATE OF MAINE — JAIME C. WALLACE — 15444 — LICENSED PROFESSIONAL ENGINEER

WRIGHT-PIERCE
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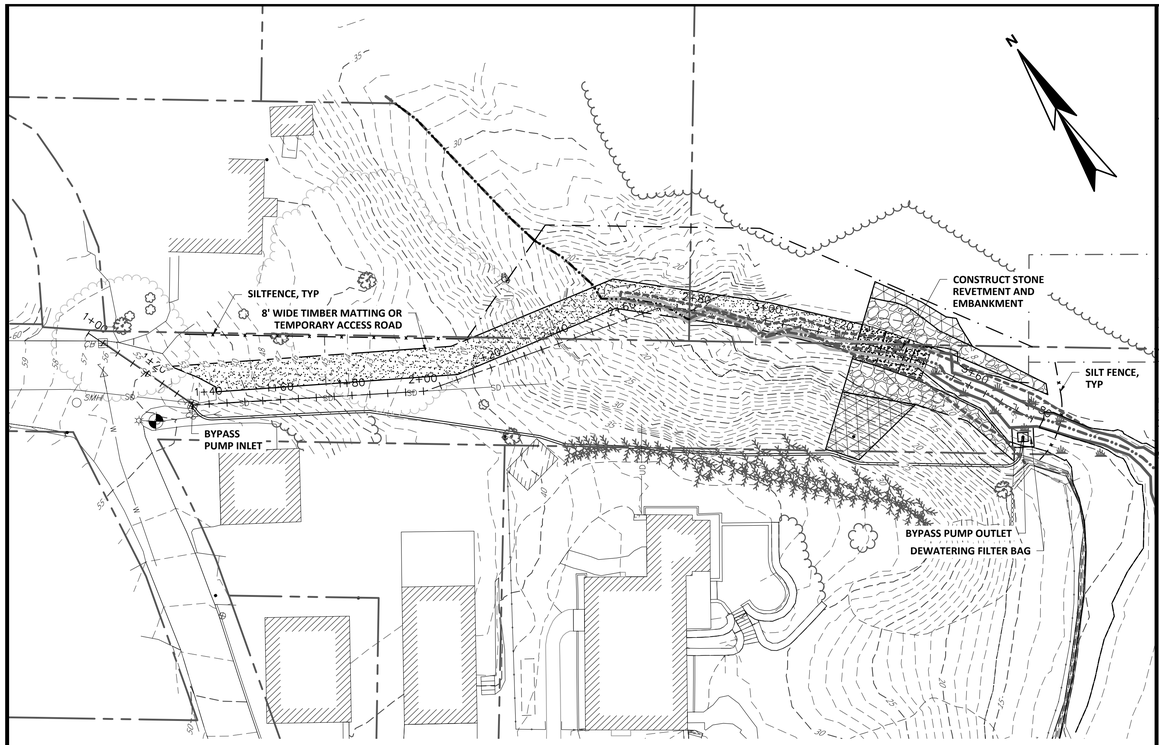
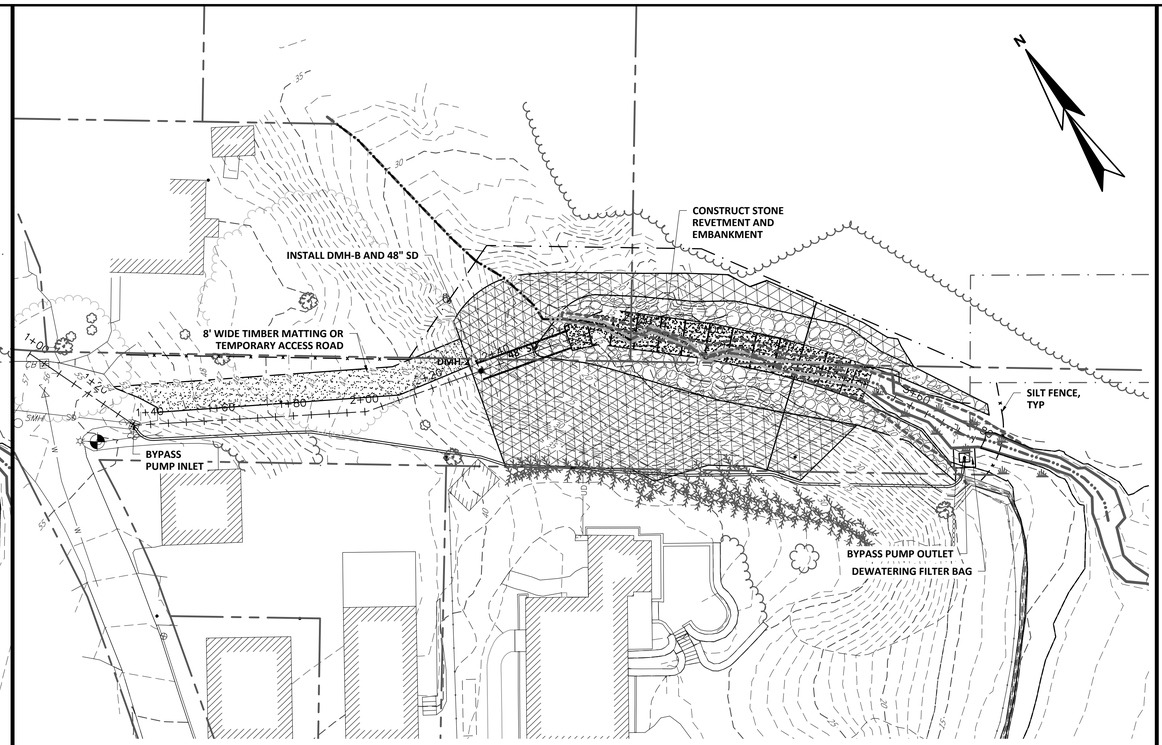
TOWN OF FALMOUTH
UNDERWOOD ROAD
DRAINAGE IMPROVEMENTS
FALMOUTH, MAINE

EROSION CONTROL NOTES AND DETAILS

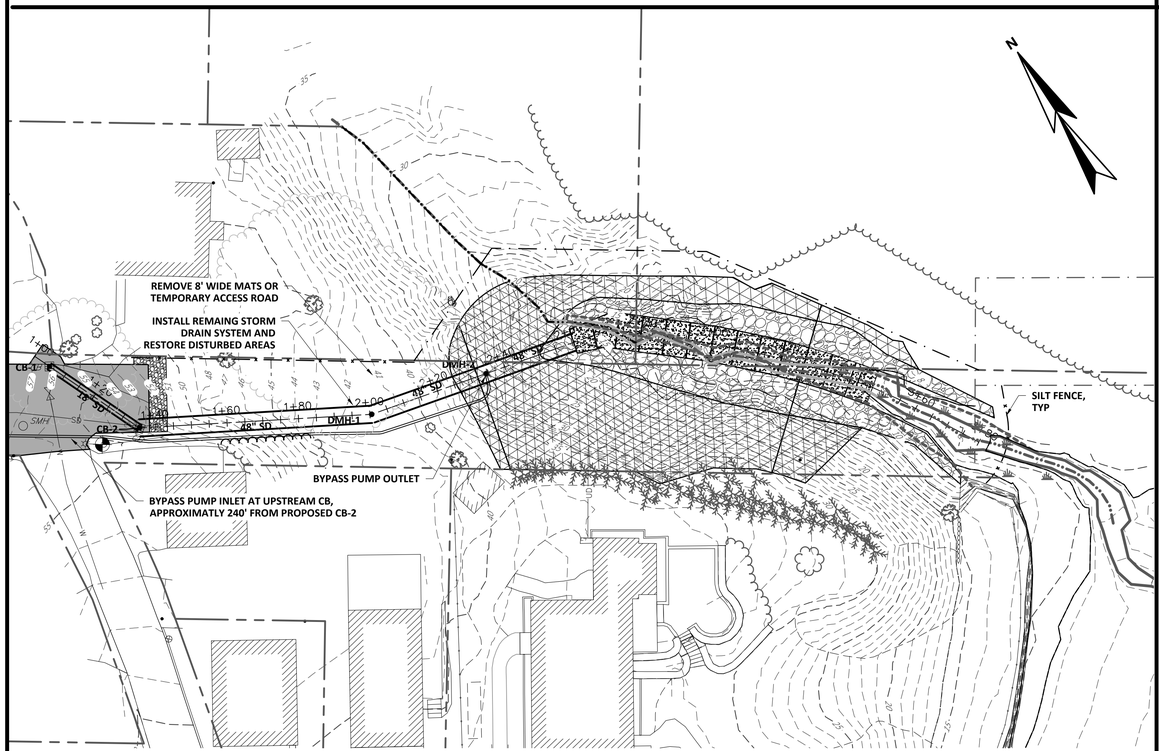
DRAWING
C-8



PHASE 1



PHASE 2



PHASE 3

SUGGESTED CONSTRUCTION PHASING:

PHASE 1

- INSTALL ALL EROSION AND SEDIMENTATION CONTROLS AS SHOWN ON THE PLANS AND ANY ADDITIONAL AREAS THE OWNER AND/OR OWNER'S REPRESENTATIVE DEEMS NECESSARY.
- MOBILIZE EQUIPMENT AND RECEIVE MATERIALS.
- INSTALL BYPASS PUMP IN CB-2 AND ROUTE TO HAY BALE SEDIMENT BASIN ON DOWNSTREAM END OF PROPOSED REVETMENT MATTRESS.
- INSTALL TEMPORARY ROADWAY USING 8' TIMBER MATS.
- REMOVE AND PROPERLY DISPOSE OF INVASIVE SPECIES PLANTINGS PER THE PROJECT PLANS AND SPECIFICATIONS.
- EXCAVATE FOR REVETMENT MATTRESS, LEVELING STONE, AND 24" RIPRAP.
- INSTALL EMBANKMENT PROTECTION PER TYPICAL TREATMENT SECTION AS SHOWN ON DRAWING C-6.
- INSTALL REVETMENT MATTRESS, LEVELING STONE, AND 24" RIPRAP AS SHOWN ON THE PLANS.
- CONTINUE INSTALLATION OF REVETMENT MATTRESS, 24" RIPRAP, LEVELING STONE, AND EMBANKMENT PROTECTION TO OUTLET OF PROPOSED 48" OUTFALL
- REMOVE TEMPORARY ROADWAY AS WORK PROGRESSES UP THE DRAINAGE DITCH.

PHASE 2

- INSTALL PROPOSED 48" STORM DRAIN FROM THE OUTLET OF THE PROPOSED STORM DRAIN TO DMH-2. REMOVE THE EXISTING CONCRETE HEADWALL.
- INSTALL RIP RAP APRON AT THE OUTLET OF THE EXISTING CULVERTS AS SHOWN ON THE PLANS.
- INSTALL REMAINING EMBANKMENT PROTECTION ALONG EMBANKMENT AS SHOWN ON THE PLANS.

PHASE 3

- MOVE BYPASS PUMP FROM CB-2 TO CB UPSTREAM FROM PROJECT AREA. ROUTE BYPASS PUMP OUTLET INTO DMH-2.
- INSTALL STORM DRAIN AND STRUCTURES FROM DMH-2 TO DMH-1.
- REMOVE AND DISPOSE OF EXISTING 30" TRANSITE PIPE.
- INSTALL STORM DRAIN AND STRUCTURES FROM DMH-1 TO CB-1. REMOVE TRANSITE PIPE DURING INSTALLATION OF THE STORM DRAIN AND STRUCTURES.
- RESTORE AREA WITH LOAM AND SEED.

PHASE 4

- PAVE THE END OF UNDERWOOD ROAD AS SHOWN ON THE PROJECT PLAN SET.
- REMOVE ALL UN-USED MATERIALS AND CONSTRUCTION EQUIPMENT.
- LOAM AND RESEED ALL REMAINING AREAS.
- ONCE SITE HAS BECOME PERMANENTLY STABILIZED, AS DETERMINED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE, REMOVE ALL REMAINING TEMPORARY EROSION CONTROL MEASURES.
- DEMOBILIZE ALL EQUIPMENT.

NO	SUBMISSIONS/REVISIONS	APP'D	DATE
	ISSUED FOR BID	R.WIN	9-20
1			
2			
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SUGGESTED CONSTRUCTION PHASING PLAN

DRAWING
C-9