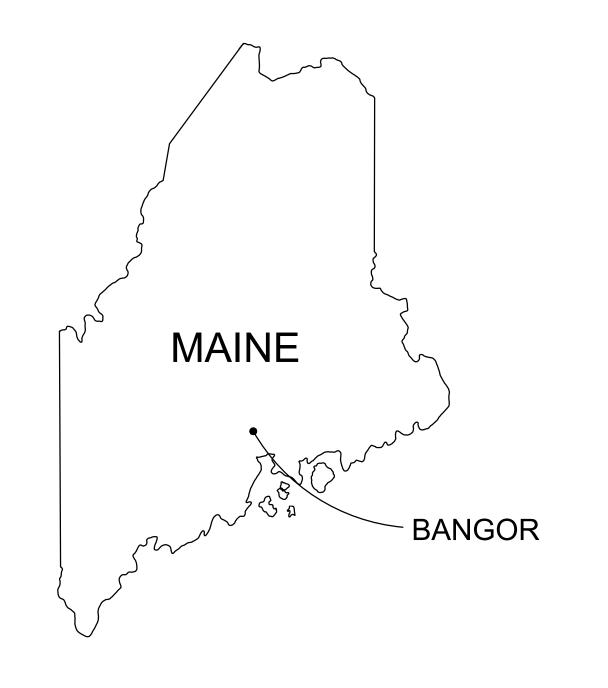
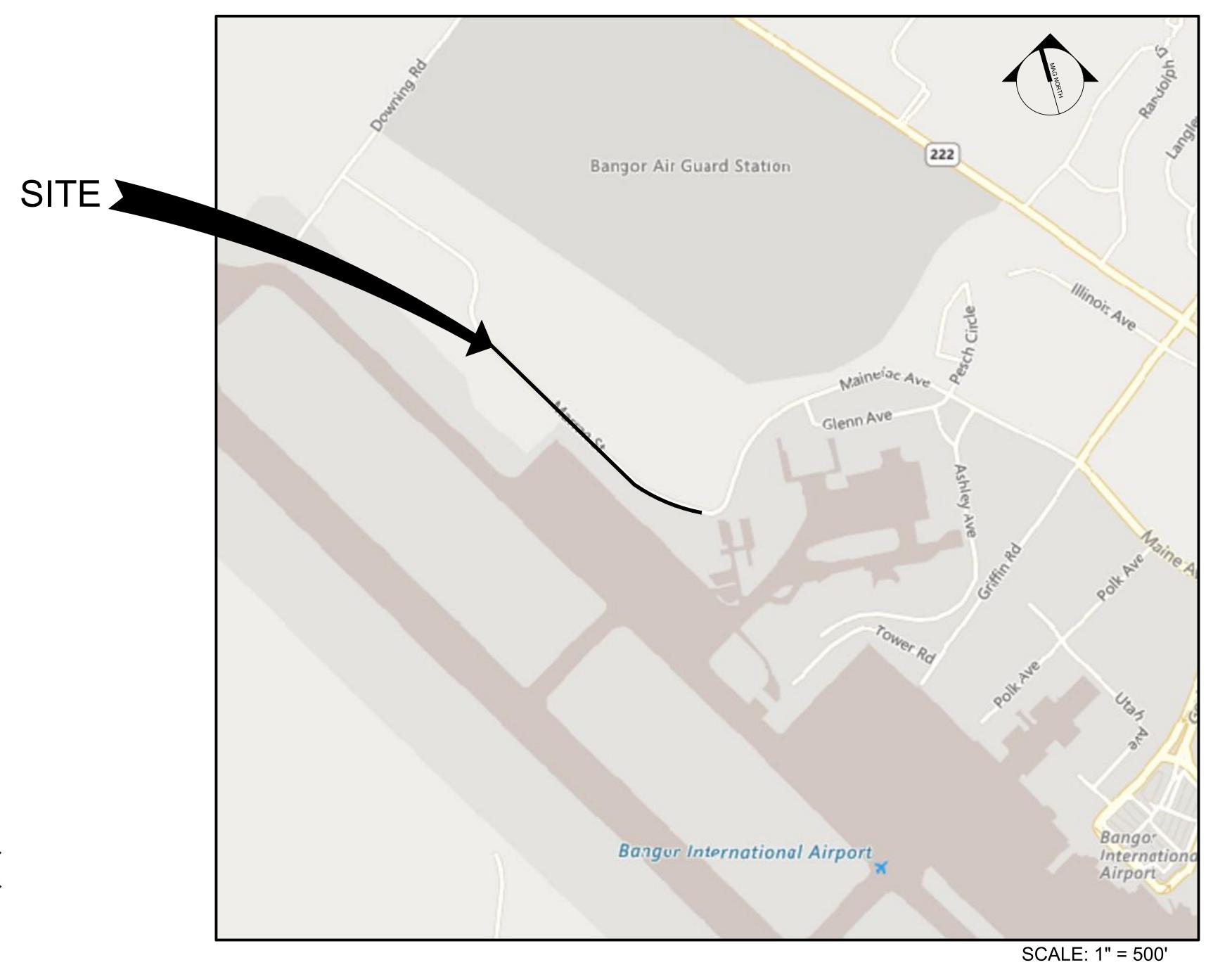
MAINE AIR NATIONAL GUARD MARRAN STREET IMPROVEMENTS

BANGOR, MAINE





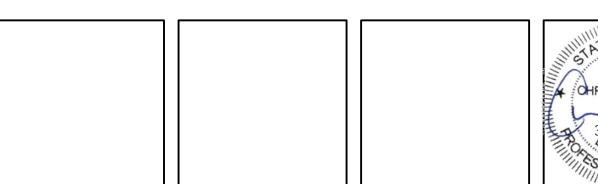
INDEX

SHEET

COVER SHEET GENERAL NOTES & ABBREVIATIONS C001

SITE LAYOUT PLAN EROSION AND SEDIMENTATION CONTROL NOTES CP101 C501 C502

SITE DETAILS



MEANG PROJECT No.	BGS PROJECT No.	PROJECT No.	SHEET No.
FKNN182216	FKNN182216 3750		GI001

Worc BANGOR, MAINE 04401 (207)947-4511 WBRCINC.COM

GENERAL CONSTRUCTION NOTES

- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES WITHIN THE CONFINES OF THE PROPERTY BOUNDARIES AND SECURED EASEMENTS, ANY CONSTRUCTION ACTIVITY, INCLUDING MATERIAL STORAGE, ETC., TAKING PLACE ON PROPERTY NOT OWNED BY THE BY THE CLIENT SHALL BE WITH THE EXPRESS WRITTEN PERMISSION OF THE OWNER.
- DO NOT PARK, IMPEDE ACCESS TO, OR STORE EQUIPMENT ON ADJACENT LOTS UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY TOWN AND/OR LANDOWNER.
- CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE, AND LOCAL CODES.
- ALL VEHICLES AND EQUIPMENT MUST BE INSPECTED FOR FOREIGN OBJECT DEBRIS BEFORE GRANTED ENTRY TO FLIGHTLINE AREAS. CONSTRUCTION ACTIVITIES MUST BE FOLLOWED BY INSPECTION AND REMOVAL OF ALL DEBRIS.
- RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, GATES, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
- HOURS FOR THE PROJECT WILL BE MONDAY THROUGH FRIDAY, FROM 0600 TO 1600, UNLESS OTHERWISE AUTHORIZED BY THE OWNER.
- CONTRACTOR TO PROVIDE OWNER AND ARCHITECT WITH A WORK PLAN OUTLINING THE WORK SCHEDULE. TRAFFIC CONTROL PLAN. AND WORK AREA BARRICADING PLAN TO BE APPROVED BY THE OWNER AND ARCHITECT PRIOR TO CONSTRUCTION.
- 10. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING PRE-CONSTRUCTION PHOTOGRAPHS OF THE PROJECT AREA. COST SHALL BE INCIDENTAL TO THE PROJECT. CONTRACTOR SHALL PROVIDE A COPY OF THE PHOTOGRAPHS TO THE OWNER AND ARCHITECT PRIOR TO MOBILIZATION.
- 11. CONTRACTOR SHALL NOTIFY THE OWNER AND ARCHITECT IN WRITING OF ANY CONDITION OR OCCURRENCE THAT REPRESENTS A CHANGE IN PROJECT SCOPE. VERBAL NOTIFICATION IS REQUIRED PRIOR TO PROCEEDING WITH THE WORK OF THE PROJECT AND WRITTEN NOTIFICATION DESCRIBING THE CHANGE IN PROJECT SCOPE MUST BE PROVIDED AS SOON AS POSSIBLE. REQUESTS FOR FEE ADJUSTMENTS WILL NOT BE CONSIDERED UNLESS PROPER NOTICE IS GIVEN.
- 12. ANY WORK PERFORMED WITHOUT WRITTEN APPROVAL OF THE OWNER AND/OR ARCHITECT IS SUBJECT TO NOT BEING REIMBURSED OR REMOVAL AT CONTRACTOR'S EXPENSE
- 13. CONTRACTOR SHALL SUPERVISE AND INSPECT THE WORK OF THIS PROJECT IN AN EFFICIENT AND COMPETENT MANNER. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO COMPLETE THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE WORK IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. A REPRESENTATIVE OF THE GENERAL CONTRACTOR SHALL BE PRESENT DURING ALL PHASES OF THE WORK.
- 14. ANY WORK PERFORMED AND/OR MATERIAL NOT IN CONFORMANCE WITH THE PLANS AND SPECIFICATION IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

LANDSCAPE AND SITE RESTORATION NOTES:

- 4" LOAM AND SEED SHALL BE PLACED OVER ALL DISTURBED AREAS NOT SHOWN AS LANDSCAPED, PAVED, OR OTHERWISE STABILIZED.
- WHENEVER POSSIBLE, EXISTING PLANTINGS SHALL BE PRESERVED BY WHATEVER METHOD NECESSARY INCLUDING TRANSPLANTING AND/OR TEMPORARY RELOCATION.

SURVEY NOTES

- EXISTING CONDITIONS BASED ON FILE NAMED "MEANG AS-BUILT BANGOR GAS" AS PROVIDED THE OWNER
- 2. TOPOGRAPHY SHOWN ON PLANS OBTAINED FROM THE NATIONAL OCEANIC AND ATMOSPHERIC DATA ACCESS VIEWER.
- THE LOCATIONS OF ALL PROPERTY LINES AND RIGHT OF WAYS ARE APPROXIMATE (SHOWN FOR REFERENCE ONLY), UNLESS NOTED OTHERWISE. PROPERTY LINES AND RIGHT OF WAYS SHOWN ARE NOT INTENDED TO REPRESENT LEGAL BOUNDARIES.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING TOPOGRAPHY AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

LAYOUT NOTES

- TEMPORARY BENCHMARKS (TBM'S) ARE GENERALLY SPIKES DRIVEN INTO THE BASE OF UTILITY POLES OR HYDRANT VALVE NUTS UNLESS OTHERWISE NOTED.
- LAYOUT OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY THE ARCHITECT. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADE AND LAYOUT CONTROL. LAYOUT SHALL BE PERFORMED WITH SURVEY EQUIPMENT AND OVERSEEN BY A LICENSED SURVEYOR.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING GRADES, UTILITY LOCATIONS, AND SITE FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE OWNER/ARCHITECT OF CONDITIONS VARYING FROM THOSE SHOWN ON THE DRAWING SHEET PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL EMPLOY A REGISTERED LAND SURVEYOR IN THE LAYOUT OF BUILDING, DRIVES, AND SITE ELEMENTS.

REMOVAL NOTES

IF UNEXPECTED HAZARDOUS WASTE OF MATERIALS CONTAINING HAZARDOUS WASTE ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY CEASE WORK AND CONTACT THE OWNER, ARCHITECT, CONTRACTING OFFICER, AND MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION (MDEP). WHEN A MDEP APPROVED ACTION PLAN IS DETERMINED, WORK SHALL CONTINUE AND ALL HAZARDOUS WASTE AND MATERIALS CONTAINING HAZARDOUS WASTE SHALL BE DISPOSED OF IN COMPLIANCE WITH THE APPROVED ACTION PLAN AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.

- 2. THE OWNER HAS THE FIRST RIGHT OF REFUSAL FOR ANY DEMOLITION MATERIALS, SURPLUS SOILS AND GRAVELS FROM EXCAVATION, AND UTILITY INFRASTRUCTURE.
- ALL MATERIALS SCHEDULED FOR REMOVAL SHALL BE DISPOSED OF IN A LEGAL MANNER OFFSITE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- DISPOSAL OF SURPLUS SOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SURPLUS MATERIAL SHALL NOT BE DISPOSED OF ON THE PROJECT SITE UNLESS OTHERWISE INDICATED ON THE PLANS. DISPOSAL SHALL BE MADE ONLY AT WASTE AREAS WHICH ARE LICENSED TO ACCEPT SUCH MATERIALS, UNLESS THE MATERIAL IS ACCEPTABLE FOR USE AS FILL IN OTHER AREAS OF THE PROJECT.
- REMOVE ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED MARKINGS.
- EXISTING FACILITIES AND IMPROVEMENTS (I.E. TREES, LIGHT POLES, SIGNS, ETC.) SHALL BE REMOVED AND REPLACED OR PROTECTED AS REQUIRED DURING CONSTRUCTION. THE ASSOCIATED COSTS ARE INCIDENTAL TO THE PROJECT.
- WHERE PAVEMENT UNDER THIS CONTRACT JOINS AN EXISTING PAVEMENT OR CONCRETE, THE EXISTING PAVEMENT OR CONCRETE SHALL BE SAW CUT ALONG A SMOOTH LINE TO A VERTICAL JOINT. BROKEN EDGES SHALL BE REPAIRED PRIOR TO FINAL STABILIZATION. FINISH JOINTS BETWEEN NEW PAVEMENT OR CONCRETE TO EXISTING SURFACE SHALL BE PER PLAN.

GRADING NOTES

- RESTORE ALL AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL CONDITION (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON PLANS AT NO ADDITIONAL COST TO THE OWNER.
- ALL FINISH SURFACES SHALL BE INSTALLED TO PROMOTE POSITIVE DRAINAGE AT A MINIMUM SLOPE OF 1%. NO PONDING SHALL OCCUR AT NEW CULVERT INLETS, CATCH BASIN LOCATIONS, LAWNS OR PAVED
- THE CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY COVERS, GRATES, FRAMES, AND BOXES TO MATCH NEW ELEVATIONS ON THE DRAWINGS, FIELD ADJUSTED TO FINISHED GRADES.
- DRIVEWAY APRONS SHALL BE PAVED TO MATCH PROPOSED ROADWAY. APRON DIMENSIONS SHALL BE APPROVED BEFORE PAVING. APRON AREAS SHOWN ON THE PLANS ARE APPROXIMATE.
- WALKWAYS, SIDEWALKS, AND CROSSWALKS SHALL NOT EXCEED 2% CROSS-SLOPE.

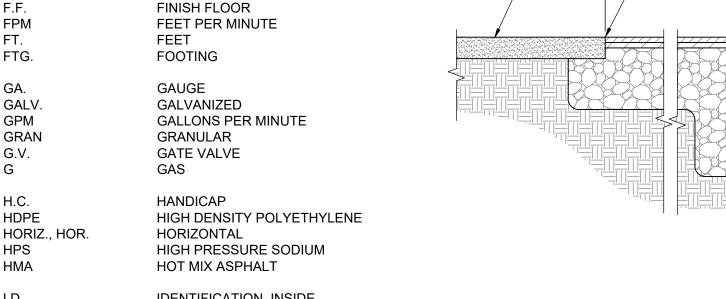
UTILITY NOTES

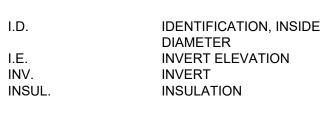
- UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR.THE CONTRACTOR SHALL CONTACT UTILITIES WITHIN THE PROJECT CORRIDOR AND OBTAIN A DIG SAFE STAKE-OUT (TELEPHONE NUMBER 800-225-4977) PRIOR TO COMMENCING CONSTRUCTION. DAMAGE TO UNDERGROUND UTILITIES FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
- THE LOCATION, TYPE, AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS, AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IT IS WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY PIPE SIZES PRIOR TO MOBILIZATION AND PRIOR TO ORDERING NEW STRUCTURES, PIPES, DUCTS, OR CONDUITS.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH UTILITY COMPANIES, DIG SAFE, AND EMERGENCY SERVICES WHERE APPLICABLE. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK TO ALLOW SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF ALL BURIED UTILITIES.
- THE OWNER REQUIRES THAT UPON COMPLETION OF CONSTRUCTION. A COMPLETE SET OF "AS-BUILT" DRAWINGS THAT REFLECT ANY AND ALL MODIFICATIONS WITHIN THE LIMITS OF WORK INCLUDING MODIFICATIONS TO THE WATER SYSTEM AND THE SANITARY AND STORM SEWER SYSTEMS WITHIN THE PROJECT LIMITS BE SUBMITTED TO THE MUNICIPALITY AND MUNICIPAL WATER DISTRICT. THESE DRAWINGS SHALL BE SUBMITTED IN BOTH DIGITAL (CAD) DRAWING AND HARD COPY FORMAT.
- ALL UTILITY FACILITIES, INCLUDING VALVES AND POLES, SHALL BE OPERATED AND ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS OTHERWISE INDICATED.
- STORM DRAINS AND SEWERS SHALL BE CLEANED BY THE CONTRACTOR PRIOR TO SUBSTANTIAL COMPLETION.
- ALL WATER VALVES, CATCH BASINS, AND SEWER MANHOLE COVERS TO BE FLUSH WITH FINISHED ELEVATION. COST OF ADJUSTMENTS INCIDENTAL TO THE PROJECT.

MEANG GENERAL NOTES

- ACCESS TO THE BANGOR AIR NATIONAL GUARD BASE SHALL BE 0600 TO 1600 UNLESS COORDINATED AHEAD OF TIME WITH THE OWNER.
- CONTRACTOR EMPLOYEES ACCESSING THE BASE ARE REQUIRED TO SUBMIT A COMPLETED FORM 4 (MEANG BACKGROUND CHECK) A MINIMUM OF 72 HOURS BEFORE BASE ACCESS.
- SWEEPING OF THE PROJECT AREA IS REQUIRED THROUGHOUT THE PROJECT AND THE FREQUENCY IS DEPENDENT ON CONSTRUCTION OPERATIONS. SWEEPING TO BE DONE AS OFTEN AS REQUIRED BY THE
- COORDINATE ALL DELIVERIES WITH THE OWNER INCLUDING DATE, TIME,
- DELIVERY DRIVERS REQUIRING FREQUENT ACCESS MUST HAVE APPROVED BACKGROUND CHECKS. DRIVERS MAKING SINGLE DELIVERY MAY BE ESCORTED WITHOUT A BACKGROUND CHECK WITH OWNER PERMISSION.

SITE ABBREVIATIONS DIAMETER ACP ASBESTOS CEMENT PIPE ADD. ALT. ADDITIVE ALTERNATE BID ITEM AERIAL ELECTRIC ARCH. ARCHITECTURAL BOTTOM OF CURB B.C. BITUMINOUS BLDG. BUILDING BOT. BOTTOM BW **BOTTOM OF WALL** CENTERLINE CB CATCH BASIN C.I. CAST IRON, CONTRACTOR INST'D. C.I.P. CAST IN PLACE CMP CORRUGATED METAL PIPE, CENTER C.O. CLEANOUT CONC. CONCRETE CPP CORRUGATED PLASTIC PIPE CTV CABLE TELEVISION CFS CUBIC FEET PER SECOND D.I. DITCH INVERT, DUCTILE IRON DTL. DETAIL DIAMETER DIA. DIM. DIMENSION DMH DRAIN MANHOLE, DROP MANHOLE DN DOWN DWG DRAWING **EDGE OF PAVEMENT** E.L. ELEV **ELEVATION** EQ. **EQUAL EXIST** EXISTING EXP. **EXPANSION** FD **FOOTING DRAIN** F.G. FINISH GRADE F.H. FIRE HYDRANT FINISH FINISH FLOOR FPM FEET PER MINUTE FEET FTG. FOOTING GA. GAUGE GALV. GALVANIZED GPM GALLONS PER MINUTE GRAN





G.V.

H.C.

HPS

HMA

BS.	POUNDS
ED	LIGHT EMITTING DIODI
E	LINEAR FEET
PS	LOW PRESSURE SODI

LENGTH

MAS	MASONRY
MATL.	MATERIAL
MAX.	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MISC.	MISCELLANEOUS
N	NORTH, NEW UTIL
NIIO	NOT IN CONTRACT

N	NORTH, NEW UTILITY
N.I.C.	NOT IN CONTRACT
NFD	NEW FOUNDATION DRAIN
NFM	NEW FORCE MAIN
NGAS	NATURAL GAS
NOM.	NOMINAL
NO.	NUMBER
NRD	NEW ROOF DRAIN
NSS	NEW SANITARY SEWER
NSD	NEW STORM DRAIN
NTS	NOT TO SCALE
NUE	NEW UNDERGROUND ELECTRIC
NUD	NEW UNDERDRAIN
NUP	NEW UNDERGROUND PRIMARY
NUS	NEW UNDERGROUND SECONDARY

NEW WATER LINE

REINFORCED CONCRETE PIPE

OC OS/OI OHE OHU OHW	ON CENTER OWNER SUPPLIED/OWNER INST'D OVERHEAD ELECTRIC OVERHEAD UTILITY OVERHEAD WIRE
PVMT. PERF. PB PI P & I PRELIM PSF PSI P.A. PT PVC	PAVEMENT PERFORATED PULL BOX POINT OF INTERSECTION PROVIDE AND INSTALL PRELIMINARY POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH POINT OF TANGENT POINT POLYVINYL CHLORIDE
R	RADIUS

REQU	REQUIRED
S	SEWER
SS	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SIM.	SIMILAR
SMH	SEWER MANHOLE
SPECS	SPECIFICATIONS

SQUARE

STATION

STYROFOAM

SQUARE FEET

RCP

SQ.

S.F.

STA.

STYRO

WALK CURB TRAVEL WAY T.C.

SPOT ELEVATION REFERENCE INDEX

TEMPORARY BENCH MARK

UNDERGROUND ELECTRIC

UNDERGROUND PRIMARY

UNDERGROUND UTILITY

WELDED WIRE FABRIC

UNDERGROUND SECONDARY

WATER SHUTOFF (CURB STOP OR

WATER SHUT OFF / GATE VALVE

TELEPHONE

TOP OF WALL

TEMPORARY

TELEVISION

TOP OF SLAB

THICK

TYPICAL

VERTICAL

WATER

WITHOUT

GATE VALVE)

WITH

TOP OF CURB

TBM

TEL

T.O.W.

T.C.

TEMP.

THK.

TV

TYP

T.S.

UGE

UGS

UGP

UGU

W/O

WSO

W.W.F.

WV

VERT., VER

TYPICAL PATTERNS

•	
	BITUMINOUS PAVEMENT SECTION
	TOPSOIL, LOAM AND SEED, SOD
	GRANULAR FILL MATERIAL
	COARSE AGGREGATE
	UNDISTURBED NATIVE SOIL
	CONCRETE SECTION
	RIGID INSULATION

MULCH BED

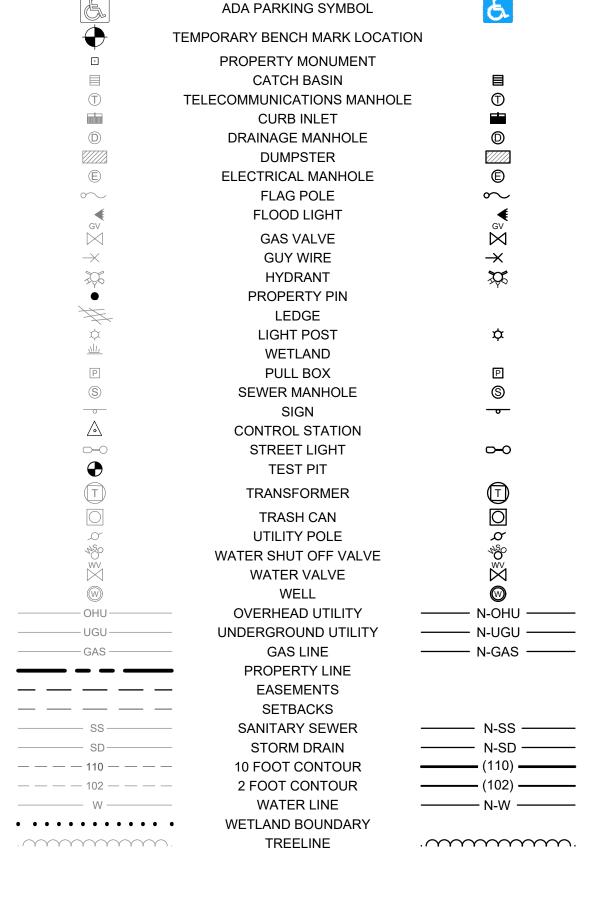
ANNOTATION SYMBOLS



SECTION



DETAIL CALL OUT (DETAIL NUMBER/SHEET NUMBER)



LEGEND

PROPOSED

EXISTING

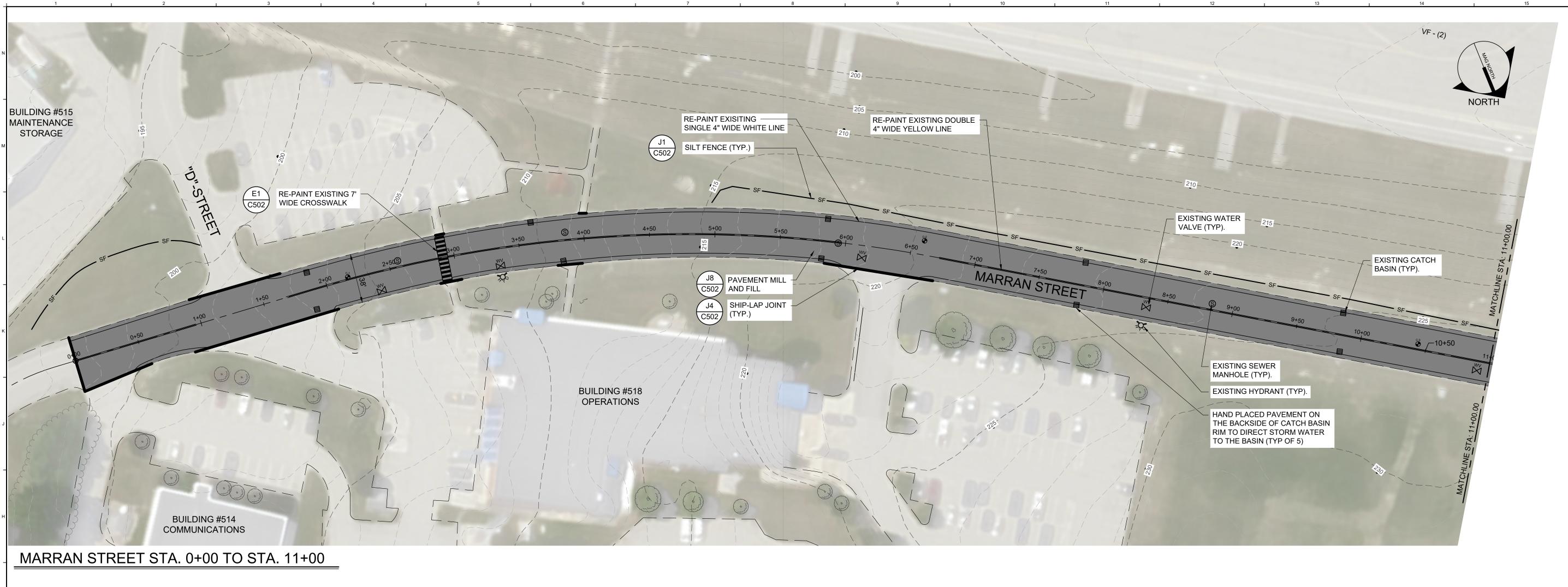
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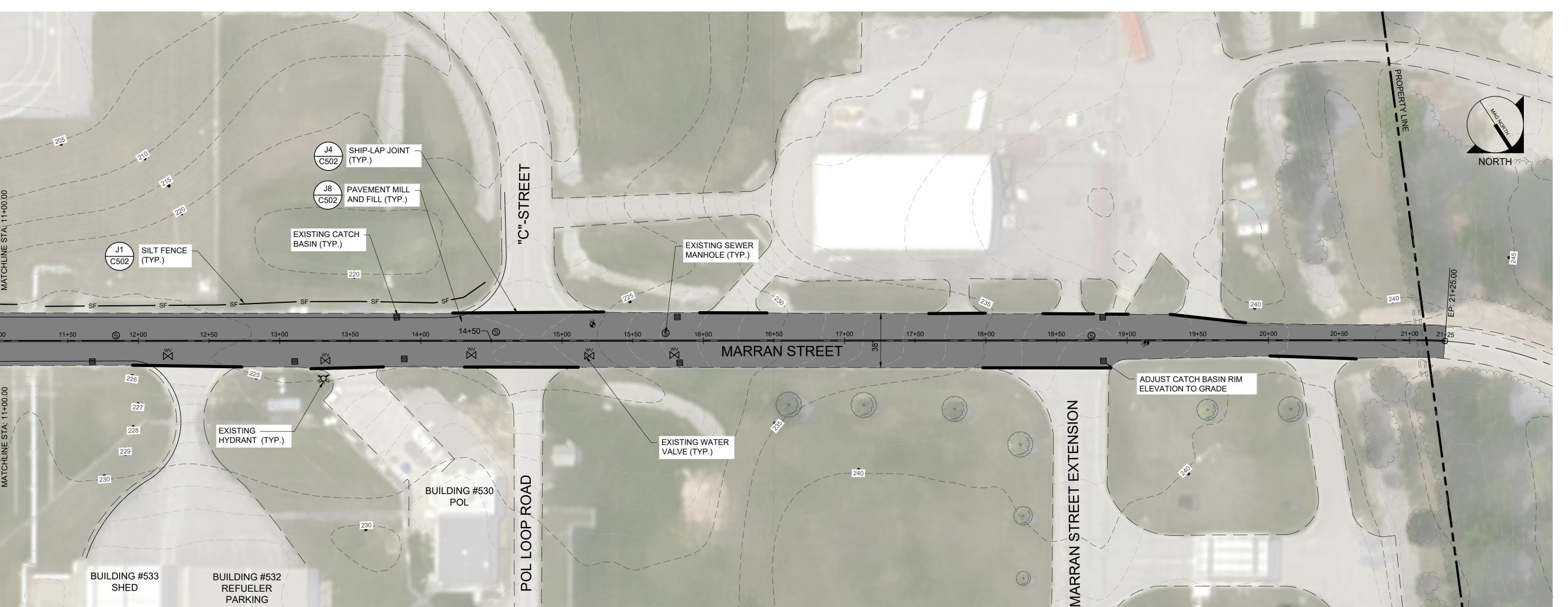


MARRAN STREET **IMPROVEMENTS** MEANG, BANGOR, MAINE

GENERAL NOTES AND ABBREVIATIONS

10057.006 MEANG PROJECT NO. NO SCALE FKNN182216 C001 BGS PROJECT No. 3750





MARRAN STREET STA. 11+00 TO STA. 21+25

- LAYOUT NOTES:

 1. LAYOUT INFORMATION BASED ON LIDAR DATA FROM NOAA DATA ACCESS VIEWER, 2021 USGS LIDAR, MIDCOAST MAINE. AERIAL IMAGRY FROM NOAA DATA ACCESS VIEWER, 2021 USDA NAIP 4-BAND 8 BIT IMAGERY, MAINE.
- 2. TEST BORINGS LOCATIONS PROVIDED BY S.W. COLE AND INCLUDED IN EXPLORATIONS AND DATA REPORT
- 24-1902, DATED NOV. 7, 2024. 3. BUILDING NAMES AND NUMBERS REFERENCE BASE MAP PROVIDED BY MAINE AIR NATIONAL GUARD DATED
- 9 NOV. 09 AND REVISED 6 DEC. 16. 4. UTILITY LOCATIONS ARE PROVIDED FOR REFERENCE
- ONLY. FIELD VERIFY TYPE, QUANTITY AND LOCATIONS PRIOR TO CONSTRUCTION.

EXISTING	LEGEND	PROPOS
785 787 787 787 787 787 787 787 787	LIMITS OF WETLAND	
Ø	UTILITY POLE	Ø
\bigcirc — \bigcirc	STREET LIGHTING	⊳ -0
*	BUILDING LIGHTING	告
⊕ WV	WATER SHUTOFF / GATE VALVE	$\stackrel{WV}{\bowtie}$
T	TRANSFORMER PAD	\Box
	DUMPSTER	
(D)	DRIANAGE MANHOLE	(
S	SEWER MANHOLE	S
	CATCH BASIN	
+0+ 356	FIRE HYDRANT	**
	SIGN FENCING	o
• • • •	P.T. GUARD RAIL	• • •
	PAVEMENT	
	SIDEWALK	
	VERT. SLIPFORM CONC. CURB	
	GRANITE CURB	
	HOT MIX ASPHALT CURB	
	PRECAST CONC. WHEEL STOP	
	GEO BLOCK RETAINING WALL	
	CIP CONCRETE RETAINING WALL	Facility of Salari
	WOOD CHIP PLAY AREA	
	COARSE AGGREGATE	000
	CENTERLINE	
	CONTROL PT.	
	PROPERTY SETBACK	
	PROPERTY LINE	

)	ISSUED FOR BIDDING		31 JUL
ΕV	REV		DAT
		OHRISTOPHI MICHAUL No. 1267 31 JUL 20 CENSE	RIL

ABUTTING PROPERTY LINE

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MARRAN STREET **IMPROVEMENTS**

MEANG, BANGOR, MAINE

SITE LAYOUT PLAN

	SILLI IIILL.		
	PROJECT No.:	10057.006	GRAPHIC SCALE:
MEANG PROJECT NO.	SCALE:	1"=40'	
FKNN182216	PIC/PM:	RAF	SHEET No.:
BGS PROJECT No.	DRAWN BY:	DLM	CP101
3750	A/E OF RECORD:	СТМ	0. 101

EROSION CONTROL NOTES

PURSUANT TO 38 MRSA § 420-C ALL EROSION AND SEDIMENTATION CONTROL MEASURES ARE DESIGNED ACCORDING TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (MDEP'S) MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL (LATEST EDITION). SEDIMENT CONTROL MEASURES MUST BE IN PLACE BEFORE ACTIVITY BEGINS. MEASURES MUST REMAIN IN PLACE AND FUNCTIONAL UNTIL THE SITE IS PERMANENTLY STABILIZED AS DEFINED

- BELOW.

 1. <u>CONTRACTOR'S RESPONSIBILITY</u>. CONTRACTOR WILL BE RESPONSIBLE FOR FOLLOWING PROCEDURES FOUND IN THE
- MDEP'S "MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS" (LATEST EDITION).

 2. POLLUTION PREVENTION. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWN-GRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, UPLAND, OR COASTAL OR FRESHWATER WETLANDS. MINIMIZE DISTURBED AREAS THROUGH PHASING. IF WORK WITHIN AN AREA IS NOT ANTICIPATED TO BEGIN WITHIN TWO WEEKS TIME, LEAVE THE AREA IN ITS NATURALLY EXISTING COVER IF PRACTICABLE.
- 3. <u>SEDIMENT BARRIERS</u>. PRIOR TO CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE EDGE OF ANY DOWN-GRADIENT DISTURBED AREA AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. MAINTAIN THE SEDIMENT BARRIERS UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SEDIMENT BARRIERS WILL BE INSPECTED, REPLACED AND/OR REPAIRED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOWMELT OR LOSS OF SERVICEABILITY DUE TO SEDIMENT ACCUMULATION. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE CONSTRUCTION SITE.
- 4. TEMPORARY STABILIZATION. STABILIZE WITH MULCH OR OTHER NON-ERODABLE COVER ANY EXPOSED SOILS THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
- 5. REMOVAL OF TEMPORARY SEDIMENT CONTROL MEASURES. REMOVE ANY TEMPORARY SEDIMENT CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE. REMOVE SILT FENCE BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL TO AVOID ADDITIONAL SOIL DISTURBANCE.
- 6. PERMANENT STABILIZATION. PERMANENTLY STABILIZE ALL DISTURBED AREAS THAT WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR THAT HAVE BEEN BROUGHT TO FINAL GRADE BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT MULCH, OR RIPRAP, OR ROAD SUB-BASE. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, SOIL AND MOISTURE CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED. IF NECESSARY, AREAS MUST BE SEEDED AND MULCHED AGAIN IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE.
 A. SEEDED AREAS. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
- B. SODDED AREAS. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
- C. PERMANENT MULCH. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
- D. RIPRAP. FOR AREAS STABILIZED WITH RIPRAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIPRAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIPRAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
- E. AGRICULTURAL USE. FOR CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL PURPOSES (E.G., PIPELINES ACROSS CROP LAND), PERMANENT STABILIZATION MAY BE ACCOMPLISHED BY RETURNING THE DISTURBED LAND TO AGRICULTURAL USE.
- F. PAVED AREAS. FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.
- G. DITCHES, CHANNELS, AND SWALES. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIPRAP LINING, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS, OR DOWN-CUTTING OF THE CHANNEL.
- 7. WINTER CONSTRUCTION. "WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS. SPECIFICATIONS:
- A. NATURAL RESOURCE PROTECTION. ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES. IF NOT STABILIZED WITH A MINIMUM OF 75 % MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH AN EROSION CONTROL COVER. DURING WINTER CONSTRUCTION, A DOUBLE ROW OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS. SEDIMENT BARRIERS DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES. MULCHING ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1.000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4-INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY. B. SOIL STOCKPILING. STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. THIS WILL BE
- C. SEEDING. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS 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 LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75 % CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL

STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH MULCHED) WITHIN 100 FEET FROM ANY NATURAL

RESOURCES.

- D. OVERWINTER STABILIZATION OF DITCHES AND CHANNELS. ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A DITCH OR CHANNEL IS NOT GRASS-LINED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE DITCH FOR LATE FALL AND WINTER. INSTALL A SOD LINING IN THE DITCH: A DITCH MUST BE LINED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES: PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING SOD AT THE BASE OF THE DITCH WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD FROM SLOUGHING DURING FLOW CONDITIONS. INSTALL A STONE LINING IN THE DITCH: A DITCH MUST BE LINED WITH STONE RIPRAP BY NOVEMBER 15. A LICENSED PROFESSIONAL ENGINEER MUST BE HIRED TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THECONTRACTOR WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL
- E. OVERWINTER STABILIZATION OF DISTURBED SLOPES. ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. AND ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% TO BE A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE DISTURBED SLOPE MUST BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1, THEN THE CONTRACTOR WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP AS DESCRIBED IN THE FOLLOWING STANDARDS. STABILIZE THE SOIL WITH SOD -- THE DISTURBED SLOPE MUST BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SODAND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE
- 5. STABILIZE THE SOIL WITH EROSION CONTROL MIX. EROSION CONTROL MIX MUST BE PROPERLY INSTALLED BY NOVEMBER 15. THE CONTRACTOR WILL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. STABILIZE THE SOIL WITH STONE.

- G. RIPRAP. PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE DEVELOPMENT'S OWNER WILL HIRE A LICENSED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.
- H. OVERWINTER STABILIZATION OF DISTURBED SOILS. BY SEPTEMBER 15, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% MUST BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS MUST BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER
- a. STABILIZE THE SOIL WITH TEMPORARY VEGETATION. BY OCTOBER 1, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1, THEN MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED BELOW.
- b. STABILIZE THE SOIL WITH SOD. STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- c. STABILIZE THE SOIL WITH MULCH. BY NOVEMBER 15, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.
- I. MAINTENANCE. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL, IN THE SPRING, INSPECT AND REPAIR ANY DAMAGES AND/OR BARE SPOTS. AN ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 85 TO 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.
- BASIC STABILIZATION SCHEDULE BEFORE WINTER. SEPTEMBER 15 ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED. ALL SLOPES MUST BE STABILIZED, SEEDED AND MULCHED. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE STABILIZED WITH MULCH OR AN EROSION CONTROL BLANKET. OCTOBER 1 IF THE SLOPE IS STABILIZED WITH AN EROSION CONTROL BLANKET AND SEEDED. ALL DISTURBED AREAS TO BE PROTECTED WITH AN ANNUAL GRASS MUST BE SEEDED AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND MULCHED. 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.

NOTE: THE DATES GIVEN ARE FOR PROJECTS IN SOUTH-CENTRAL MAINE. ADJUST THE DATES GIVEN BASED ON THE PROJECT'S LOCATION WITHIN THE STATE - REDUCING TIMES UP TO THREE WEEKS FOR PROJECTS IN NORTHERN MAINE AND EXTENDING TIMES UP TO TWO WEEKS FOR PROJECT'S ON THE COAST AND IN EXTREME SOUTHERN MAINE

- 8. STORMWATER CHANNELS. DITCHES, SWALES, AND OTHER OPEN STORMWATER CHANNELS MUST BE CONSTRUCTED AND STABILIZED USING MEASURES THAT ACHIEVE LONG-TERM EROSION CONTROL. EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTION'S GRADING, SHAPING, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL, PROPERLY SPACED CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.
- 9. <u>ROADS</u>. GRAVEL AND PAVED ROADS MUST BE CONSTRUCTED WITH CROWNS OR OTHER MEASURES, SUCH AS WATER BARS, TO ENSURE THAT STORMWATER IS DELIVERED IMMEDIATELY TO ADJACENT STABLE DITCHES, VEGETATED BUFFER AREAS, CATCH BASIN INLETS, OR STREET GUTTERS.
- 10. <u>CULVERTS</u>. CULVERT INLETS MUST BE PROTECTED WITH APPROPRIATE MATERIALS AND PROTECTION MUST EXTEND AT LEAST AS HIGH AS THE EXPECTED MAXIMUM ELEVATION OF STORAGE BEHIND THE CULVERT. CULVERT OUTLETS MUST INCORPORATE MEASURES, SUCH AS APRONS OR PLUNGE POOLS, TO PREVENT SCOUR OF THE CHANNEL.
- 11. PARKING AREAS. PARKING AREAS MUST BE CONSTRUCTED TO ENSURE RUNOFF IS DELIVERED TO ADJACENT SWALES, CATCH BASINS, CURB GUTTERS, OR BUFFER AREAS WITHOUT ERODING AREAS DOWNSLOPE. THE PARKING AREA'S SUBBASE COMPACTION AND GRADING MUST BE DONE TO ENSURE RUNOFF IS EVENLY DISTRIBUTED TO ADJACENT BUFFERS OR SIDE SLOPES. CATCH BASINS MUST BE LOCATED AND SET TO PROVIDE ENOUGH STORAGE DEPTH AT THE INLET TO ALLOW INFLOW OF PEAK RUNOFF RATES WITHOUT BY-PASS OF RUNOFF TO OTHER AREAS.

INSPECTION AND MAINTENANCE PLAN:

- DURING CONSTRUCTION. THE FOLLOWING STANDARDS MUST BE MET DURING CONSTRUCTION:

 A. INSPECTION AND CORRECTIVE ACTION. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL
 MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES
 ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND AFTER A STORM
- ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND AFTER A STORM EVENT, AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.
- B. MAINTENANCE. MAINTAIN ALL MEASURES IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED. IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE MAINTAINED OR MODIFIED, ADDITIONAL BMPS ARE NECESSARY, OR OTHER CORRECTIVE ACTION IS NEEDED, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL).
- C. DOCUMENTATION. KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPS THAT NEED MAINTENANCE, BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPS, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN. THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.

HOUSEKEEPING PLAN:

- 1. <u>SPILL PREVENTION</u>. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM BEING DISCHARGED FROM MATERIALS ON SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
- 2. <u>GROUNDWATER PROTECTION</u>. 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
- 3. <u>FUGITIVE SEDIMENT AND DUST</u>. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL
- NOTE: AN EXAMPLE OF THE USE OF BMPS TO CONTROL FUGITIVE SEDIMENT AND DUST IS AS FOLLOWS. OPERATIONS DURING WET MONTHS THAT EXPERIENCE TRACKING OF MUD OFF THE SITE ONTO PUBLIC ROADS SHOULD PROVIDE FOR SWEEPING OF ROAD AREAS AT LEAST ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. WHERE CHRONIC MUD TRACKING OCCURS, A STABILIZED CONSTRUCTION ENTRANCE SHOULD BE PROVIDED. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN THE ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED.
- NOTE: DEWATERING A STREAM WITHOUT A PERMIT FROM THE DEPARTMENT VIOLATES STATE WATER QUALITY
- STANDARDS AND THE NATURAL RESOURCES PROTECTION ACT.

 4. <u>DEBRIS AND OTHER MATERIALS</u>. LITTER, CONSTRUCTION DEBRIS, AND CHEMICALS EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
- NOTE: TO PREVENT THESE MATERIALS FROM BECOMING A SOURCE OF POLLUTANTS, CONSTRUCTION AND POST-CONSTRUCTION ACTIVITIES RELATED TO A PROJECT MAY BE REQUIRED TO COMPLY WITH APPLICABLE PROVISION OF RULES RELATED TO SOLID, UNIVERSAL, AND HAZARDOUS WASTE, INCLUDING, BUT NOT LIMITED TO, THE MAINE SOLID WASTE AND HAZARDOUS WASTE MANAGEMENT RULES; MAINE HAZARDOUS WASTE MANAGEMENT RULES; MAINE OIL CONVEYANCE AND STORAGE RULES; AND MAINE PESTICIDE REQUIREMENTS.
- 5. TRENCH OR FOUNDATION DE-WATERING. TRENCH DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFERDAMS, 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 MUST BE REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, AND 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

0 ISSUED FOR BIDDING

REV REV

OHRISTOPHER
MICHAUD
NO. 12674
31 JUL 202

DATE



MARRAN STREET
IMPROVEMENTS
MEANG, BANGOR, MAINE

EROSION AND SEDIMENT CONTROL NOTES

MEANG PROJECT NO.:

SCALE:

NO SCALE

FKNN182216

PIC/PM:

BGS PROJECT No.

DRAWN BY:

3750

AF OF RECORD:

SCALE:

NO SCALE:

NO SCALE:

SHEET No.:

C501

