# TOWN OF GRAY

## GRAY TOWN COUNCIL WORKSHOP

## AGENDA • DECEMBER 21, 2021

| | | |
|---|---|---|
| **Gray Town Council Workshop** | **Online via Zoom https://us06web.zoom.us/j/85476368359** | **6:00 PM** |

**CALL to ORDER**

Roll Call

**WORKSHOP 6:00-6:55 PM**

Proposed Commercial Solar Array - Tee 'Em Up Property 30 MINS

Weight Limit - Short Shaker Road 15 MINS

Remote/Hybrid Meeting status 10 MINS

**ADJOURNMENT**

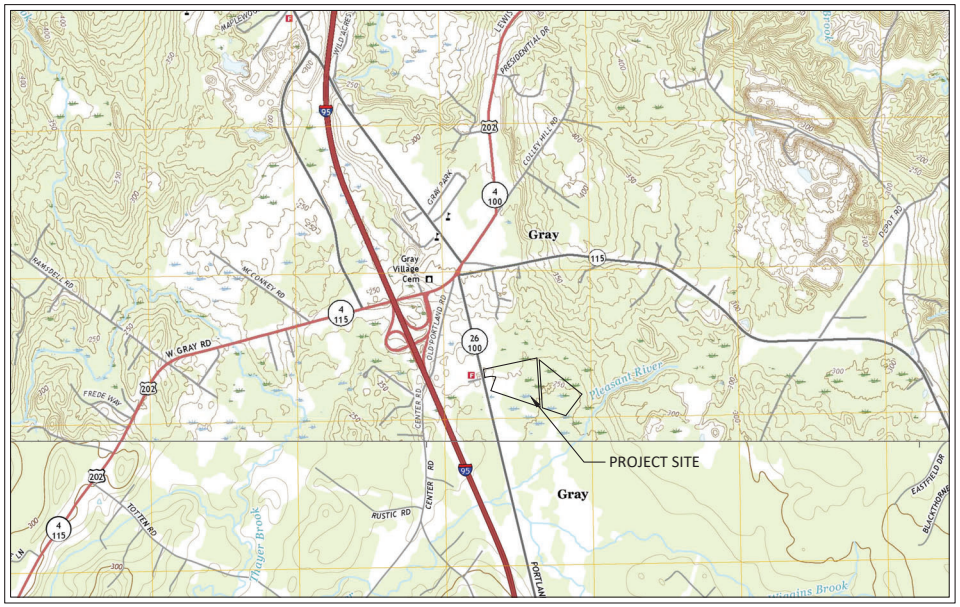
** The Town of Gray is an equal opportunity employer and complies with all applicable equal access to public accommodations law. If you are planning to attend a Town Council or Town committee or board meeting and need assistance with a physical disability, please contact the Town Manager's office at least 48 hours in advance of the meeting to have the Town assist you. 657-3339. TTY 657-3931.*

# PORTLAND ROAD SOLAR FARM

PORTLAND ROAD
GRAY, MAINE

CONSULTANTS

| | |
|---|---|
| CIVIL ENGINEER | DM ROMA CONSULTING ENGINEERS |
| LAND SURVEYOR | WAYNE T. WOOD & COMPANY |
| SITE EVALUATOR & WETLAND SCIENTIST | MARK CENCI GEOLOGIC, INC. |




PROJECT VICINITY MAP

ISSUED FOR MAJOR SITE PLAN REVIEW - NOT FOR CONSTRUCTION

OCTOBER 26, 2021


PREPARED BY:

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506


APPLICANT:
CLEAN SOLAR GRAY, LLC.
PO BOX 235
CUMBERLAND, MAINE 04021

PORTLAND ROAD SOLAR FARM
DRAWING SHEET INDEX


| PAGE NO. | DESCRIPTION |
|---|---|
| 1 | TITLE SHEET |
| 2 | SITE PLAN |
| 3 | PLAN & PROFILE |
| 4 | DETAILS |

## GENERAL NOTES:

1. THE OWNER OF RECORD OF THE PROPERTY IS TEE EM UP INC. BY DEED RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 12792 PAGE 299.
2. TOTAL AREA OF THE PARCEL IS APPROXIMATELY 34.4± ACRES.
3. PARCEL TAX MAP REFERENCE: TOWN OF GRAY ASSESSORS MAP 43, LOT 404-176.
4. PLAN REFERENCES:
   A) GRAY MEADOWS BUSINESS PARK, 45 PORTLAND ROAD, GRAY MAINE-PRELIMINARY SUBDIVISION PLAN PREPARED FOR TEE EM UP, INC. AS PREPARED BY TERRADYN CONSULTANTS, LLC DATED JUNE 25, 2018 AND REVISED THROUGH JULY 10, 2018.
   B) PLAN OF LAND ON ROUTE 100 IN GRAY, MAINE FOR MIKE COBB AS PREPARED BY WAYNE WOOD & COMPANY.
5. HORIZONTAL DATUM: MAINE STATE PLANE, WEST ZONE, NAD83, U.S. FEET.
6. BOUNDARY SHOWN HEREON IS BASED ON PLAN REFERENCE 4A.
7. TOPOGRAPHIC CONTOURS SHOWN HEREON ARE BASED ON PLAN REFERENCE 4A.
8. THE PROPERTY IS LOCATED IN THE COMMERCIAL, RURAL RESIDENTIAL AND AGRICULTURAL ZONING DISTRICTS.
9. SPACE AND BULK REQUIREMENTS: C DISTRICT

| | |
|---|---|
| MIN LOT SIZE: | 40,000 SF |
| MIN STREET FRONTAGE: | 200 FT |
| MIN FRONT YARD: | 10 FT |
| MIN SIDE YARD: | 15 FT |
| MIN REAR YARD: | 20 FT |
| MAX BUILDING HEIGHT: | 35 FT |
| MAX IMPERVIOUS SURFACE: | 65% |
| MAX LOT COVERAGE: | 50% |

10. PERFORMANCE STANDARDS: COMMERCIAL SOLAR ENERGY SYSTEMS OVERLAY DISTRICT

| | |
|---|---|
| MIN PROPERTY LINE SETBACK: | 25 FT |
| MAX PANEL HEIGHT: | 15 FT |

11. WETLAND DELINEATION PERFORMED BY MARK CENCI GEOLOGIC, INC. IN THE FALL OF 2014 THROUGH THE SPRING OF 2015 PER PLAN REFERENCE 4A. BASED ON THE PROPOSED DEVELOPMENT, APPROXIMATELY 16,136 SF OF WETLANDS WILL BE IMPACTED. THE PROJECT IS SUBJECT TO MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION NATURAL RESOURCES PROTECTION ACT TIER 2 WETLAND ALTERATION PERMIT _____.
12. BASED ON THE EXHIBIT A OF THE PROPERTY DEED, AREAS OF THE SITE WERE RESTRICTED WITHIN A PRESERVATION AREA AND SHOWN ON EXHIBIT A OF THE DEED. THE APPROXIMATE LIMITS OF THESE PRESERVATION AREAS ARE SHOWN HEREON. APPROXIMATELY 40,156 SF OF THESE AREAS WILL BE WITHIN THE PROPOSED CLEARING LIMITS. UPON APPROVAL OF THE TOWN OF GRAY PLANNING BOARD, A CORRECTIVE EXHIBIT A WILL BE INCLUDED IN THE WARRANTY DEED AT THE TIME OF THE SALE OF THE PROPERTY.

## CURVE TABLE

| CURVE # | LENGTH | RADIUS | DELTA | CHORD BRNG | CHORD LENGTH |
|---|---|---|---|---|---|
| C1 | 15.64' | 10.00' | 89° 35' 12" | S48° 15' 26"W | 14.09' |
| C2 | 138.27' | 270.00' | 29° 20' 31" | N72° 16' 42"W | 136.76' |

**PROJECT DESIGN INFORMATION:**
2.00 MW AC
DC/AC=1.40
450W BIFACIAL SOLAR MODULES
6,216 MODULES
TILT = 25 DEGREES
PITCH = 26 FT
LIMIT OF DISTURBANCE = 8.93 AC.
IMPERVIOUS AREA = 0.47 AC.
FENCED AREA = 7.55 AC.

## LEGEND

| EXISTING | | PROPOSED |
|---|---|---|
| | PROPERTY LINE/R.O.W. | |
| | ABUTTER PROPERTY LINE | |
| | SETBACK | |
| | EASEMENT LINE | |
| | GRANITE MONUMENT | |
| | IRON PIN/DRILL HOLE | |
| | CENTERLINE | |
| | BUILDING | |
| | EDGE OF PAVEMENT/CURB | |
| | EDGE OF GRAVEL | |
| | EDGE OF WETLANDS | |
| 200 201 | CONTOUR LINE | 200 201 |
| | TREELINE | |
| | CULVERT/STORMDRAIN | |
| W | WATER MAIN | |
| | WATER VALVE | |
| | HYDRANT | |
| | UTILITY POLE | |
| OHU | OVERHEAD UTILITIES | OHU |
| UGU | UNDERGROUND UTILITIES | UGU |
| | RIPRAP | |
| | SILT FENCE | SF |

APPROVED - GRAY PLANNING BOARD:

CHAIRPERSON DATE

PERMITTING PLAN

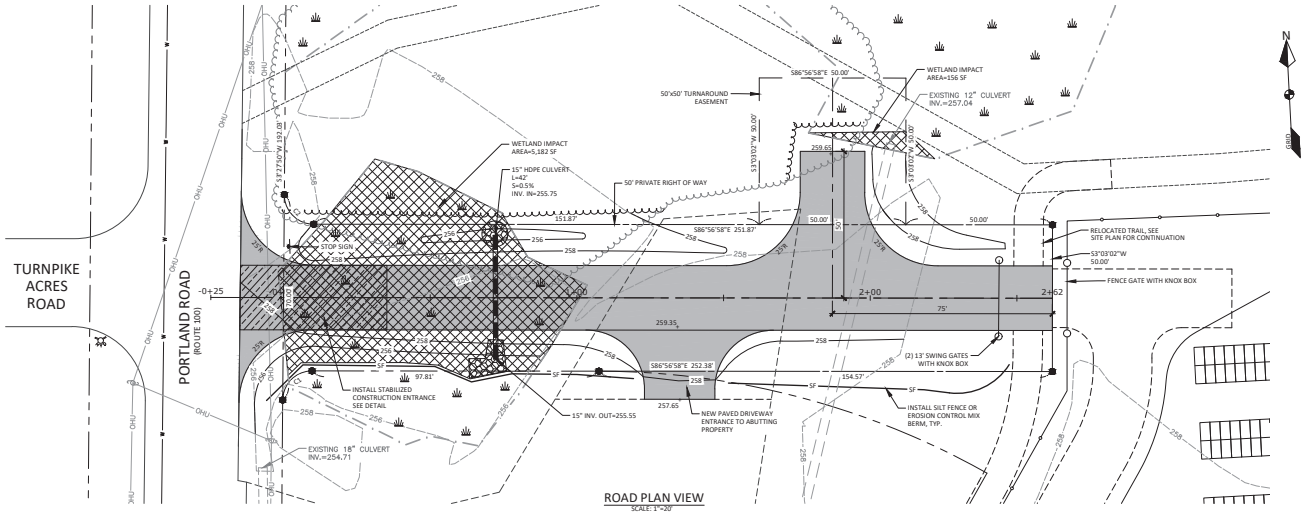
STATE OF MAINE — JAYSON R. HASKELL No. 13002 — REGISTERED PROFESSIONAL ENGINEER — 10-26-2021

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

| REV | DATE | BY | DESCRIPTION |
|---|---|---|---|
| A | 10-26-21 | HM | ISSUED FOR MAJOR SITE PLAN REVIEW |

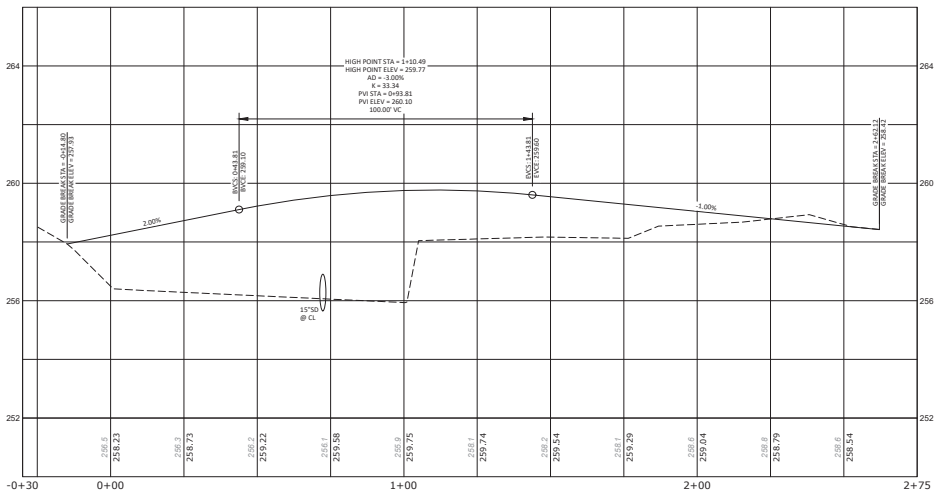
SITE PLAN
PORTLAND ROAD SOLAR FARM
PORTLAND ROAD
GRAY, MAINE
FOR:
CLEAN SOLAR GRAY, LLC
PO BOX 30
CUMBERLAND, MAINE 04021

| | |
|---|---|
| 21005 | JOB NUMBER: |
| 1" = 60' | SCALE: |
| 10-26-2021 | DATE: |
| SHEET 2 OF 4 | |
| S-1 | |




ROAD PLAN VIEW
SCALE: 1"=20'

GRAPHIC SCALE
1" = 20'




ROAD PROFILE
SCALE: HORIZ.: 1"=20'
VERT.: 1"=2'

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9. WETLAND DELINEATION PERFORMED BY MARK CENCI GEOLOGIC, INC. IN THE FALL OF 2014 THROUGH THE SPRING OF 2015 PER PLAN REFERENCE 4A.
10. THE ROADWAY IS TO REMAIN A PRIVATE ROAD TO BE MAINTAINED BY THE DEVELOPER OR LOT OWNERS AND SHALL NOT BE ACCEPTED OR MAINTAINED BY THE TOWN EXCEPT FOR ROADS THAT MEET REQUIREMENTS FOR WINTER MAINTENANCE UNDER A PUBLIC EASEMENT.

## CURVE TABLE

| CURVE # | LENGTH | RADIUS | DELTA | CHORD BRNG | CHORD LENGTH |
|---|---|---|---|---|---|
| C1 | 15.64' | 10.00' | 89° 35' 12" | S48° 15' 26"W | 14.09' |
| C2 | 15.78' | 10.00' | 90° 24' 48" | S41° 44' 34"E | 14.19' |

## LEGEND

| EXISTING | | PROPOSED |
|---|---|---|
| | PROPERTY LINE/R.O.W. | |
| | ABUTTER PROPERTY LINE | |
| | EASEMENT LINE | |
| | GRANITE MONUMENT | |
| | IRON PIN/DRILL HOLE | |
| | CENTERLINE | |
| | EDGE OF PAVEMENT/CURB | |
| | EDGE OF GRAVEL | |
| | EDGE OF CONCRETE | |
| | SIGN | |
| | EDGE OF WETLANDS | |
| 200 | CONTOUR LINE | 200 / 201 |
| | TREELINE | |
| | CULVERT/STORMDRAIN | |
| | WATER MAIN | |
| | WATER VALVE | |
| | HYDRANT | |
| | UTILITY POLE | |
| OHU | OVERHEAD UTILITIES | OHU |
| UGU | UNDERGROUND UTILITIES | UGU |
| | RIPRAP | |
| | SILT FENCE | SF |

APPROVED - GRAY PLANNING BOARD:

CHAIRPERSON DATE

STATE OF MAINE
_____ COUNTY SS. REGISTRY OF DEEDS
RECEIVED _____, 20____
AT _____h _____m _____M
AND RECORDED IN
PLAN BOOK _____ PAGE _____
ATTEST: _____
REGISTER

STATE OF MAINE — JAYSON R. HASKELL No. 13002 — PROFESSIONAL ENGINEER — 10-26-2021

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

| REV | DATE | BY | DESCRIPTION |
|---|---|---|---|
| A | 10-26-21 | HH | ISSUED FOR MAJOR SITE PLAN REVIEW |

PRIVATE WAY PLAN

PORTLAND ROAD SOLAR FARM
PORTLAND ROAD
GRAY, MAINE

FOR:
CLEAN SOLAR GRAY, LLC
PO BOX 36
CUMBERLAND, MAINE 04021

21005 JOB NUMBER:
AS NOTED SCALE:
10-26-2021 DATE:
SHEET 3 OF 4
PW-1

## EROSION AND SEDIMENTATION CONTROL NOTES:

EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY.

IN ORDER TO EFFECTIVELY PREVENT AND CONTROL EROSION RELATED TO SOIL DISTURBANCE, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) SHALL BE EMPLOYED:

**1. POLLUTION PREVENTION**

MINIMIZE DISTURBED AREAS AND PROTECT NATURAL DOWNGRADIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION. MINIMIZE THE DISTURBANCE OF STEEP SLOPES. CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOW RATES AND VOLUME, TO MINIMIZE EROSION AT OUTLETS. THE DISCHARGE MAY NOT RESULT IN EROSION OF ANY OPEN DRAINAGE CHANNELS, SWALES, STREAM CHANNELS OR STREAM BANKS, UPLAND, OR COASTAL OR FRESHWATER WETLANDS OFF THE PROJECT SITE.

WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

**2. TEMPORARY SOIL STABILIZATION BMPS**

TEMPORARY MULCHING SHALL BE APPLIED IMMEDIATELY TO ANY AREAS THAT HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED. ANY DISTURBED SOIL WITHIN 75' OF A STREAM, WATER BODY OR WETLAND MUST RECEIVE TEMPORARY MULCH WITHIN 48 HOURS FOLLOWING DISTURBANCE AND BEFORE ANY STORM EVENT. ALL OTHER AREAS SHALL RECEIVE TEMPORARY MULCH WITHIN 7 DAYS OF DISTURBANCE. AREAS WHICH CANNOT BE SEEDED DURING THE GROWING SEASON SHALL BE MULCHED FOR OVER-WINTER PROTECTION. THE FOLLOWING ARE ACCEPTABLE TEMPORARY MULCHING METHODS:

HAY OR STRAW MULCHES NEED TO BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 POUNDS) PER 1000 SQ FT OR 1.5 TO 2 TONS (90-100 BALES) PER ACRE TO COVER 75-90% OF THE GROUND SURFACE. HAY OR STRAW CAN BE DRIVEN INTO THE GROUND WITH TRACKED EQUIPMENT IF SLOPES ARE LESS THAN 3%, OR CAN BE ANCHORED WITH JUTE, WOOD FIBER OR PLASTIC NETTING ON STEEPER SLOPES.

EROSION CONTROL MIX MUST CONSIST PRIMARILY OF ORGANIC MATERIAL AND WILL INCLUDE ANY OF THE FOLLOWING: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK OR OTHER ACCEPTABLE PRODUCTS BASED ON A SIMILAR RAW SOURCE. WOOD OR BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS ARE NOT ACCEPTABLE. EROSION CONTROL MIX CAN BE USED AS A STAND-ALONE REINFORCEMENT ON SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR LESS AND DRAINING IN SHEET FLOW. IT CAN BE PLACED WITH A HYDRAULIC BUCKET, WITH A PNEUMATIC BLOWER OR BY HAND, AND MUST PROVIDE 100% SOIL COVERAGE.

EROSION CONTROL MIX SHALL MEET THE FOLLOWING SPECIFICATIONS:
- -ORGANIC MATTER CONTENT SHALL BE BETWEEN 50-100%, DRY WEIGHT BASIS.
- -MINERAL PORTION OF THE MIX SHALL BE NATURALLY OCCURRING AND WITH NO LARGER ROCKS (>4")
- -ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED
- -LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX
- -IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING
- -THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS

WHEN USED AS MULCH, THE THICKNESS OF THE EROSION CONTROL MIX IS BASED UPON THE FOLLOWING:

| LENGTH OF SLOPE | 3:1 SLOPE OR LESS | BETWEEN 2:1 AND 3:1 SLOPE |
|---|---|---|
| LESS THAN 20 FT | 2.0 IN. | 4.0 IN. |
| BETWEEN 20 - 60 FT | 3.0 IN. | 5.0 IN. |
| BETWEEN 60 - 100 FT | 4.0 IN. | 6.0 IN. |

CHEMICAL MULCHES AND SOIL BINDERS MAY BE USED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL CONSULT WITH THE MANUFACTURER TO DETERMINE ADEQUATE APPLICATION RATES AND METHODS.

TEMPORARY MULCH SHALL BE INSPECTED FOLLOWING ANY SIGNIFICANT RAINFALL EVENT (GREATER THAN 0.5 INCH RAINFALL, TYP.). IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. EROSION CONTROL MATS AND MULCH ANCHORING MUST BE INSPECTED AFTER RAINFALL EVENTS FOR DISLOCATION OR FAILURE, AND REPAIRED IMMEDIATELY. INSPECTIONS SHALL TAKE PLACE UNTIL 95% OF THE SOIL SURFACE IS COVERED WITH PERMANENT VEGETATION. WHERE MULCH IS USED WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE, AND REPAIR AS NEEDED.

TEMPORARY VEGETATION SHALL BE ESTABLISHED ON SOILS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 30 DAYS. IF TEMPORARY VEGETATION CANNOT BE ESTABLISHED PRIOR TO OCTOBER 15, TEMPORARY MULCH SHALL BE APPLIED THROUGH THE WINTER AND TEMPORARY VEGETATION SHALL BE PLANTED AT THE BEGINNING OF THE GROWING SEASON THE FOLLOWING YEAR. TO PREPARE THE SEEDBED, THE CONTRACTOR SHALL APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OF 10-10-10 (N-P2O5-K20) OR EQUIVALENT AND LIMESTONE AT A RATE OF 3 TONS PER ACRE, IF NECESSARY. LOOSEN SOIL TO A DEPTH OF 2 INCHES IN AREAS THAT HAVE BEEN COMPACTED BY CONSTRUCTION ACTIVITIES. GRASS SEED SHALL BE SELECTED BASED UPON THE TIME OF YEAR THE PLANTING WILL TAKE PLACE AS SUMMARIZED IN THE FOLLOWING TABLE:

| SEED | LB. PER ACRE | RECOMMENDED SEEDING DATES |
|---|---|---|
| WINTER RYE | 112 | 8/15 - 10/1 |
| OATS | 80 | 4/1 - 7/1 8/15 - 9/15 |
| ANNUAL RYEGRASS | 40 | 4/1 - 7/1 |

TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED TO MAINTAIN AT LEAST 95% VEGETATIVE COVER OF SOIL SURFACE. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES SHALL BE USED IN THE INTERIM SUCH AS TEMPORARY MULCH, FILTER BARRIERS, ETC.

**3. SEDIMENT BARRIER BMPS**

PRIOR TO CONSTRUCTION TEMPORARY SEDIMENT BARRIERS SHALL BE INSTALLED AT THE DOWNGRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA . SEDIMENT BARRIERS INCLUDE ANY OF THE FOLLOWING:

FILTER BARRIER FENCE, ALSO CALLED SILT FENCE, SHALL BE INSTALLED WHERE SHOWN ON THE PLANS AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. THE FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL PROVIDE A MINIMUM OF 6 MONTHS USABLE CONSTRUCTION LIFE INCLUDING PROTECTION AGAINST ULTRA-VIOLET LIGHT. THE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES INSTALLED AND POST SPACING SHALL NOT EXCEED 8 FEET. JOINTS IN THE FENCE SHALL BE AVOIDED TO THE EXTENT POSSIBLE, AND IF NECESSARY SHALL BE SPLICED TOGETHER AT A SUPPORT POST WITH A MINIMUM 6 INCH OVERLAP . A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP, AND THE BOTTOM 6-8 INCHES OF FABRIC SHALL BE "TOED-IN" TO THE TRENCH AND COMPACTED. THE TRENCH SHOULD BE UPHILL OF THE FABRIC PRIOR TO BURIAL.

EROSION CONTROL MIX BERMS ARE LINEAR BARRIERS COMPOSED OF EROSION CONTROL MIX AS SPECIFIED ABOVE. THE BERM MUST BE A MINIMUM OF 12 INCHES TALL AND 24 INCHES WIDE AT THE BASE IF UPHILL SLOPES ARE LESS THAN 5%. STEEPER SLOPES OR SLOPES GREATER THAN 20 FEET LONG MAY REQUIRE A LARGER WIDTH BERM. EROSION CONTROL MIX BERMS SHALL BE PROHIBITED AT THE BASE OF A LONG OR STEEP SLOPE (8% OR GREATER) WITHOUT THE ADDITIONAL SUPPORT OF A FILTER FENCE INSTALLED ON THE DOWNHILL SIDE OF THE BERM.

SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER SHOULD BE PREVENTED FROM RUNNING ONTO THE STOCKPILE. SEDIMENT BARRIERS SHALL BE INSPECTED AFTER ANY SIGNIFICANT RAINFALL EVENT (GREATER THAN 0.5 INCH RAINFALL) AND REPAIRED IMMEDIATELY IF THERE IS ANY EVIDENCE OF EROSION OR SEDIMENTATION BELOW THE BARRIERS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR EDGES OF THE BARRIER, OR IF LARGE VOLUMES OF WATER ARE IMPOUNDED BEHIND THE BARRIER, IT MAY BE NECESSARY TO REMOVE THE BARRIER WITH A TEMPORARY STONE CHECK DAM. SEDIMENT SHALL BE REMOVED ONCE IT REACHES HALF THE BARRIER HEIGHT. AFTER THE BARRIER IS REMOVED, ANY REMAINING SILT SHALL EITHER BE REMOVED OR GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

TEMPORARY EROSION CONTROL MEASURES ARE REMOVED ONCE THE SITE IS PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

**4. STORM DRAIN INLET PROTECTION**

STORM DRAIN INLETS THAT ARE MADE OPERATIONAL BEFORE THEIR DRAINAGE AREA IS STABILIZED SHALL BE PROTECTED WITH A FILTER UNTIL THE DRAINAGE AREA IS EITHER PAVED OR STABILIZED WITH 95% VEGETATIVE GROWTH. THE FOLLOWING ARE ACCEPTABLE BMPS ASSOCIATED WITH STORM DRAIN INLET PROTECTION:

MANUFACTURED SEDIMENT FILTERS ARE THE PREFERRED METHOD FOR PROTECTING CATCH BASIN INLETS IN PAVED OR GRAVEL ROADWAYS. THE FILTERS TYPICALLY CONSIST OF A FABRIC OR OTHER PERVIOUS MATERIAL THAT IS PLACED ABOVE OR BELOW THE GRATE THAT TRAPS SEDIMENT ON THE SURFACE AND ALLOWS WATER TO FLOW THROUGH THE GRATE. CONSIDERATIONS SUCH AS WEATHER CONDITIONS, SLOPES, TRIBUTARY WATERSHED AREA AND EXPECTED SEDIMENT ACCUMULATION SHOULD BE FACTORED INTO MAKING A DECISION ON ANY PARTICULAR PRODUCT, AND THE MANUFACTURER'S RECOMMENDATIONS ON INSTALLATION AND MAINTENANCE SHALL BE STRICTLY ADHERED TO.

**5. STABILIZED CONSTRUCTION ENTRANCE/EXIT**

TO REDUCE THE TRACKING OF SEDIMENT ONTO ROADWAYS, A STABILIZED CONSTRUCTION EXIT SHALL BE INSTALLED AT ALL POINTS OF EGRESS WHERE VEHICLES MAY TRAVEL FROM THE PROJECT SITE TO A PUBLIC ROAD OR OTHER PAVED AREA. THE STONE PAD SHALL CONSIST OF A MINIMUM 6-INCH DEPTH OF 2-3 INCH CRUSHED STONE, AND SHALL BE PLACED ON A GEOTEXTILE FABRIC. THE PAD SHALL EXTEND AT LEAST 50 FEET INTO THE PROJECT SITE AND BE A MINIMUM OF 10 FEET WIDE. THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, AND THE CONTRACTOR SHALL SWEEP PAVEMENT AT EXITS THAT HAVE EXPERIENCED ANY MUD-TRACKING PRIOR TO THE NEXT STORM EVENT. MAINTAIN THE PAD UNTIL ALL DISTURBED AREAS ARE STABILIZED.

**6. DUST CONTROL**

THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST ON THE PROJECT SITE AND ON ADJACENT ROADWAYS. EXPOSED SOIL SURFACES SHALL BE MOISTENED PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST. GRAVEL SURFACES SHALL EITHER BE TREATED WITH APPLICATION OF CALCIUM CHLORIDE OR COVERED WITH CRUSHED STONE IF DUST CONTROL BECOMES DIFFICULT WITH NORMAL WATER APPLICATIONS.

**7. LAND GRADING AND SLOPE PREPARATION**

GRADING SHALL BE PLANNED SO AS TO MINIMIZE THE LENGTH OF TIME BETWEEN INITIAL SOIL EXPOSURE AND FINAL GRADING. ON LARGE PROJECTS THIS SHOULD BE ACCOMPLISHED BY PHASING THE OPERATION AND COMPLETING THE FIRST PHASE UP TO FINAL GRADING AND SEEDING BEFORE STARTING THE NEXT PHASE. ANY EXPOSED AREA THAT WILL NOT BE FINISH GRADED WITHIN 7 DAYS SHALL BE TREATED WITH MULCH OR PLANTED WITH TEMPORARY VEGETATION. PROVISIONS SHALL BE MADE TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR TO STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASS SHALL NOT BE STEEPER THAN 2:1. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIALS. AREAS SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES. ALL FILLS SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 8 INCHES IN THICKNESS. FILL MATERIAL SHALL BE FREE OF STUMPS, BUILDING DEBRIS AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY LIFTS. FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILL SLOPES OR STRUCTURAL FILLS. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED APPROPRIATELY. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.

**8. TOPSOIL**

IF POSSIBLE, TOPSOIL SHALL BE STOCKPILED ON THE PROJECT SITE AND REUSED. HIGH QUALITY TOPSOIL SHALL BE FRIABLE AND LOAMY (LOAM, SANDY LOAM, SILT LOAM, SANDY CLAY LOAM, CLAY LOAM), AND SHALL BE FREE OF DEBRIS, TRASH, STUMPS, ROCKS, ROOTS AND NOXIOUS WEEDS. AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY SCARIFYING TO A DEPTH OF AT LEAST 2 INCHES TO ENSURE BONDING WITH SUBSOIL. THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED TO A MINIMUM COMPACTED DEPTH OF 4 INCHES. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. IT IS NECESSARY TO COMPACT THE TOPSOIL ENOUGH TO ENSURE GOOD CONTACT WITH THE UNDERLYING SOIL, BUT UNDUE COMPACTION IS TO BE AVOIDED.

**9. PERMANENT SOIL STABILIZATION**

IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS 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, MOISTURE, AND SOIL 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 SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE FOOT/BIKE TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RESTABILIZED 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.

SEEDED AREAS: TO PREPARE THE SEEDBED, APPLY 10-20-20 FERTILIZER AT A RATE OF 600 POUNDS PER ACRE AND GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE. WORK THE FERTILIZER AND LIMESTONE INTO THE TOPSOIL TO A DEPTH OF 4 INCHES AND REMOVE ANY STONES, ROOTS OR OTHER VISIBLE DEBRIS. SELECT A SEED MIXTURE THAT IS APPROPRIATE FOR THE SOIL TYPE AND MOISTURE CONTENT AS FOUND AT THE SITE, AND FOR THE AMOUNT OF SUN EXPOSURE AND FOR LEVEL OF USE. REFER TO THE USDA SOIL CONSERVATION SERVICE OR THE LOCAL SOIL AND WATER CONSERVATION DISTRICT FOR APPROPRIATE SEED MIXTURES. APPLY SEED UNIFORMLY IN ACCORDANCE WITH SUPPLIER RECOMMENDATIONS AND IMMEDIATELY COVER WITH MULCH AS DESCRIBED IN THE TEMPORARY MULCHING SECTION OF THIS PLAN.

HYDROSEEDING SHALL BE DONE IN ACCORDANCE WITH SUPPLIERS RECOMMENDATIONS. FOR SEEDED AREAS TO BE PERMANENTLY STABILIZED, 90% OF THE DISTURBED SOIL SHALL BE COVERED WITH MATURE HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

SOD STRIPS SHALL BE LAID AT RIGHT ANGLES TO DIRECTION OF SLOPE OR FLOW OF WATER STARTING AT LOWEST ELEVATION. JOINTS SHALL BE STAGGERED, AND ALL STRIPS SHALL BE ROLLED OR TAMPED INTO PLACE. ON SLOPES, SOD SHALL BE ANCHORED WITH STAPLES, WIRE OR PINS. IRRIGATE SODDED AREA IMMEDIATELY AFTER INSTALLATION. FOR SODDED AREAS TO BE PERMANENTLY STABILIZED, THE ROOTS OF THE SOD MUST BE COMPLETELY BOUND INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

PERMANENT MULCH IS A LONG TERM COVER THAT PROVIDES A GOOD BUFFER AROUND DISTURBED AREAS. THE EROSION CONTROL MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS OR COMPOSTED BARK. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS OR BARK CHIPS ARE NOT ACCEPTABLE. THE EROSION CONTROL MIX SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS AND MATERIAL TOXIC TO PLANT GROWTH.

RIPRAP STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNEVEN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. THE DEPTH OF STONE SHALL BE A MINIMUM OF 2.2 TIMES THE MAXIMUM STONE DIAMETER. A GRAVEL OR GEOTEXTILE FILTER BLANKET SHALL BE PLACED BETWEEN THE RIPRAP AND UNDERLYING SOIL SURFACE. GRAVEL FILTER BLANKETS SHALL MEET MDOT TYPE-C UNDERDRAIN MATERIAL SPECIFICATIONS AND BE AT LEAST 6 INCHES THICK. GEOTEXTILE BLANKETS SHALL BE SPECIFIED BASED ON SITE CONDITIONS. RIPRAP SLOPES SHALL BE TOED INTO THE BASE OF THE EMBANKMENT BY EXCAVATING A TRENCH AT THE BOTTOM OF THE SLOPE AND INSTALLING A STABLE BASE OF RIPRAP TO GRADE.

DITCHES, CHANNELS AND SWALES ARE CONSIDERED PERMANENTLY STABILIZED WHEN THE CHANNEL HAS 90% COVER OF HEALTHY VEGETATION WITH A WELL-GRADED RIPRAP LINING, EROSION CONTROL BLANKET, OR WITH ANOTHER NON-ERODIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE BANKS, OR DOWNCUTTING OF THE CHANNEL.

**10. STORMWATER CHANNELS**

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 BANKS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.

## WINTER EROSION AND SEDIMENTATION CONTROL NOTES:

THE WINTER CONSTRUCTION PERIOD TYPICALLY BEGINS IN EARLY NOVEMBER AND ENDS IN MID APRIL. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE OR RIPRAP BY NOVEMBER 15 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS TO OCCUR DURING THE FOLLOWING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AN AREA SHALL BE CONSIDERED DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN THE ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. A COVER OF EROSION CONTROL MIX IS THE PREFERRED TEMPORARY MULCH DURING WINTER CONDITIONS.

1. NATURAL RESOURCE PROTECTION

ANY AREAS WITHIN 75 FEET FROM ANY REGULATED NATURAL RESOURCES 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 (FOR EXAMPLE, SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY REGULATED NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE REGULATED 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.

2. 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.

3. MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE (TWICE THE NORMAL ACCEPTED RATE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCHES THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. SNOW MUST BE REMOVED DOWN TO A ONE-INCH DEPTH PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERTY 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 THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4. 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 DONE WITHIN 24 HOURS OF STACKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL (0.5 INCH RAINFALL OR GREATER) OR SNOWFALL. SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRADIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER SHOULD BE PREVENTED FROM RUNNING ONTO THE STOCKPILE. ANY SOIL STOCKPILE WILL NOT BE PLACED WITHIN 100 FEET FROM ANY REGULATED NATURAL RESOURCE.

5. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES, DISTURBED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE DISTURBED AREA OR AREAS 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. IF DORMANT SEEDING IS USED, ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS PER 1,000 S.F. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 90%) IN THE SPRING SHALL BE REVEGETATED.

6. OVER-WINTER STABILIZATION OF DITCHES AND CHANNELS

ALL STONE-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED BY NOVEMBER 1. ALL GRASS-LINED DITCHES AND CHANNELS MUST BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. IF A GRASS-LINED DITCH OR CHANNEL IS STABILIZED BY SEPTEMBER 1, THEN EITHER A SOD LINING SHALL BE INSTALLED PRIOR TO OCTOBER 1 OR THE DITCH MUST BE LINED WITH STONE RIPRAP BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE PRIOR TO NOVEMBER 1.

7. OVER-WINTER STABILIZATION OF DISTURBED SLOPES

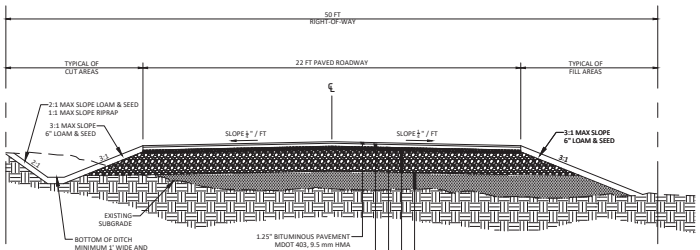
ALL STONE-COVERED SLOPES MUST BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15. ALL SLOPES TO BE VEGETATED MUST BE SEEDED AND MULCHED BY SEPTEMBER 1. ALL AREAS HAVING A GRADE STEEPER THAN 8% SHALL BE CONSIDERED A SLOPE. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1, THEN THE SLOPE SHALL EITHER BE STABILIZED WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS BY OCTOBER 1, SOD BY OCTOBER 1, OR EROSION CONTROL MIX BY NOVEMBER 1 OR STONE RIPRAP BY NOVEMBER 15. SEE APPLICABLE SECTIONS UNDER EROSION AND SEDIMENTATION CONTROL NOTES FOR PROPER INSTALLATION METHODS.

8. OVER-WINTER 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 THE AREA SHALL EITHER BE STABILIZED WITH TEMPORARY VEGETATION BY OCTOBER 1, SOD BY OCTOBER 1, OR MULCH BY NOVEMBER 15. SEE APPLICABLE SECTIONS UNDER EROSION AND SEDIMENTATION CONTROL NOTES FOR PROPER INSTALLATION METHODS.

9. MAINTENANCE

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AFTER EACH RAINFALL, SNOW STORM, PERIOD OF THAWING AND RUNOFF AND AT LAST ONCE A WEEK, 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 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.



# APPLICATION SUBMISSION

**OF**

## COMMERCIAL SOLAR ENERGY SYSTEM OVERLAY DISTRICT
## MAJOR SITE PLAN APPLICATION
## PRIVATE WAY APPROVAL

**TO**

## TOWN OF GRAY
## 24 MAIN STREET
## GRAY, MAINE 04039

**FOR**

## 2.0MW PORTLAND ROAD SOLAR FARM
## PORTLAND ROAD
## GRAY, MAINE

**PREPARED FOR**

## CLEANTAP ENERGY, LLC
## DBA CLEAN SOLAR GRAY, LLC & KINGS PINES, LLC
## P.O. BOX 235
## CUMBERLAND, MAINE 04021

**PREPARED BY**

DM ROMA
CONSULTING ENGINEERS
**P.O. BOX 1116**
**WINDHAM, MAINE 04062**

**OCTOBER 26, 2021**

DM ROMA
CONSULTING ENGINEERS

October 26, 2021

Town of Gray Planning Board
c/o Kristen Muszynksi Town Planner
Henry Pennell Municipal Complex
24 Main St, Gray, ME 04039

**Re: Town of Gray Major Site Plan**
**Portland Road Solar Farm, Gray, Maine**
**Clean Solar Gray, LLC – Applicants**

Dear Ms. Muszynski:

On behalf of the applicant Cleantap Energy, LLC (dba Clean Solar Gray, LLC and Kings Pines, LLC), DM Roma Consulting Engineers has prepared the enclosed Major Site Plan submission for the proposed a proposed solar farm off Portland Road in Gray. The approximately 34.4± acre parcel, currently owned by Tee Em Up, LLC, is identified as Lot 404-176 on the Town of Gray Assessor's Map 43 and is currently developed as a driving range with undeveloped woodland outside of the development limits. The parcel is bisected by a 50-foot corridor owned by the Narrow Gauge Railroad. The portion of the lot with frontage on Portland Road will be the area of development with no proposed development on the rear portion of the property. The front parcel is primarily located within the Commercial Zoning District with portions of the lot within the Limited Commercial Zone.

The applicant is proposing to construct a 2.0MW solar farm on the property. Clean Solar Gray, LLC is intending to purchase the property from Tee Em Up, LLC and has a purchase option agreement in place under Kings Pines, LLC. The development will consist of the solar panels, inversion equipment, overhead and underground transmission lines, utility poles, access drives and security fencing. There are no buildings included in the site layout. The equipment required for this development will make little noise outside of the fenced enclosure. Within the enclosure, the ground surface will remain meadow with the exception of the gravel access drives and equipment pads.

The utilities within the enclosure will be constructed underground, and extending overhead from the sites utility poles and making the final connection to the electrical grid prior to entering the substation. This will be the point of interconnection into the existing electrical grid. The applicant and Central Maine Power Company have an interconnection agreement to allow the solar farm's power to enter the power grid.

There is potential for the construction of a commercial building with associated parking lot in the future. For coordination purposes, these locations have been added to the design plans for

future consideration. The commercial building and parking lot are not part of this application submission.

Town Submissions

- *Town Council* - The project will require that the Gray Town Council to approve the project site for inclusion within the Commercial Solar Energy System Overlay District (CSESOD). It is the intent of this submission to be provided to the Town Council for review and approval at the next scheduled Town Council Meeting.

- *Private Way Approval* – The original parcel had approximately 450 linear feet of road frontage based on permitting plans prepared by Terradyn Consultants, LLC and Standard Boundary survey prepared by Wayne Wood & Company. In 2019, a portion of the lot was conveyed to Bell Management, LLC, resulting in a total lot frontage for the remaining parcel of 192.03 feet. The required road frontage for a lot in the Commercial Zoning District is 200 feet, indicating that this property is non-conforming. To provide the lot with the required road frontage, a private road has been proposed extending from Portland Road, directly across the street from Turnpike Acres Road. A Private Way Plan has been included in the design plan set for Planning Board review and approval.

- *Major Site Plan Approval* – The project will also require Major Site Plan approval from the Planning Board since the solar farm is a conditional use. The required items have been included with this submission.

Enclosed with this submission is the supporting documentation and the design plans for your review. Upon your review of the submission, please do not hesitate to contact me if you have any questions or require any additional information.

Sincerely,

DM ROMA CONSULTING ENGINEERS

Jayson Haskell

Jayson Haskell
Project Manager

Cc: Clean Solar Gray, LLC, Applicant

**PORTLAND ROAD SOLAR FARM**
**GRAY, MAINE**

**MAJOR SITE PLAN APPLICATION**

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## SECTION 1

# TOWN APPLICATIONS AND CHECKLIST

# PLANNING BOARD/STAFF REVIEW COMMITTEE APPLICATION
# TOWN OF GRAY MAINE

| PROPERTY TO BE DEVELOPED | | | |
|---|---|---|---|
| Property Location/Address | 45 Portland Road | Property Map/Lot | 043 . 404 . 176 . 000 |
| Zoning District | COMMERCIAL & RRA | Lot Acreage | 34.4± |
| Owner Name | TEE EM UP, INC. | Tax Sheet | 4957 (PROP. ACCT #) |
| Owner Address | PO BOX 1176M, GRAY 04039-1176 | Owner Phone | |
| **APPLICANT** | | | |
| Name (IF different than owner) | CLEANTAP ENERGY, LLC DBA CLEAN SOLAR GRAY, LLC & KINGS PINES, LLC | Contact Phone Number | 207.312.4323 |
| Mailing Address | PO Box 235 | Alternate Phone Number | |
| Mailing City/State/Zip | CUMBERLAND, ME 04021 | Fax Number | |
| Email Address | SCHRISTIE@CLEANTAPENERGY.COM | | |
| **AGENT/CONSULTANT** | | | |
| Name | JAYSON HASKELL - DM ROMA CONSULTING ENGINEERS | Contact Phone Number | 207.229.3295 |
| Mailing Address | PO BOX 1116 | Alternate Phone Number | |
| Mailing City/State/Zip | WINDHAM, ME 04062 | Fax Number | |
| Email Address | JAYSON@DMROMA.COM | | |

## PROJECT

The undersigned requests that the Town of Gray Planning Board consider the following application for:

☐ **Subdivision**
- Sketch Plan Review
- Preliminary Plan Review (Major)
- Final Plan Review (Major)
- Minor

☒ **Site Plan Review**
- × Pre-Application Conference
- Minor
- × Major

☐ **Shoreland Zoning Permit**

☐ **Other (specify)**
- × Conditional Use
- Amendment
- Extension
- Workshop
- × Contract Zone Request

Commercial Solar Energy Systems Overlay District Rezone Request

**Project Description / Comments:**

The intent of the project is to develop the site for use as a 2.0 MW Solar Farm. The project will the include the creation and proposed improvements of a 50' private road to provide frontage and access to an existing site and the proposed solar installation.

**Applicant Signature** _____ **Date** 10/26/21

# SITE PLAN REVIEW CHECKLIST
# TOWN OF GRAY MAINE

**For Office Use Only**
Date Received: _____
Received by: _____

## APPLICANT/PROJECT

| Name | Portland Road Solar Farm | Date | 10-26-2021 |
|---|---|---|---|

This checklist has been prepared to assist applicants in developing their applications. It should be used as a guide in assembling the information necessary for a complete application. The checklist, however, does not substitute for the requirements of Article 10 of the Zoning Ordinance. The Planning Board will also use the checklist to ensure your application is complete. Indicate if the information has been submitted or if a waiver is requested. If you feel that information is not applicable to your project, please indicate in the second column. The perimeter survey, subdivision plan and engineering plans may be contained on the same drawing. Detailed engineering drawings such as road profiles, drainage swales and erosion/sedimentation plans, however, may best be presented on a separate sheet or sheets.
**This checklist does not address the standards that the site plan must meet.**

## SITE PLAN REVIEW SUBMISSION REQUIREMENTS

| | Submitted by Applicant | Not Applicable | Applicant Request to be Waived | Reviewed by Planner/ Engineer | Waived by Planning Board |
|---|---|---|---|---|---|
| **402.10.10.A SITE INVENTORY PLAN** | | | | | |
| **A.1** Owner name(s), address(es), phone number(s) | ✔ | | | | |
| **A.2** Consultant name(s) & address(es) | ✔ | | | | |
| **A.3** Evidence of right, title, or interest in property | ✔ | | | | |
| **A.4** Fourteen (14) copies of accurate scale inventory plan showing: | ✔ | | | | |
| a. The name of the development, north arrow, date and scale. | ✔ | | | | |
| b. The boundaries of the parcel and existing zoning. | ✔ | | | | |
| c. The relationship of the site to the surrounding area . | ✔ | | | | |
| d. The topography of the site at an appropriate contour interval depending on the nature of the use and character of the site. | ✔ | | | | |
| e. The major natural features of the site and within five hundred (500) feet of the site, including wetlands, streams, ponds, floodplains, groundwater aquifers, significant wildlife habitats and fisheries or other important natural features (if none, so state). | ✔ | | | | |
| f. Existing buildings, structures, or other improvements on the site (if none, so state). | ✔ | | | | |
| g. Existing restrictions or easements on the site (if none, so state). | ✔ | | | | |
| h. The location and size of existing utilities or improvements servicing the site (if none, so state). | ✔ | | | | |
| i. Mapping of all wetlands and/or potential vernal pools on site regardless of size. | ✔ | | | | |
| j. A Class B high intensity soil survey if any portion of the site is located in a resource protection district or has wetlands covering more than ten (10%) percent of the site. | | ✔ | | | |
| k. A Class D medium intensity soil survey if vernal pools and/or significant wetlands are not present. | ✔ | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **402.10.10.B SITE ANALYSIS PLAN** | | | | | |
| **B.1** Fourteen (14) copies of a site analysis plan identifying: | ✔ | | | | |
| a. Portions of the site that are unsuitable for development or use; | ✔ | | | | |
| b. Portions of the site that are unsuitable for on- site sewage disposal; | ✔ | | | | |
| c. Areas of the site that have environmental limitations that must be addressed in the development plan; | ✔ | | | | |
| d. Areas that may be subject to off-site conflicts or concerns; and which areas are well suited to the proposed use. | ✔ | | | | |
| **B.2** Fourteen (14) copies of site description narrative | ✔ | | | | |
| **B.3** Submission requirement waiver requests, if any | ✔ | | | | |
| **402.10.10.C APPLICATION SUBMISSION REQUIREMENTS** | | | | | |
| **C.1** Signed/Executed Application | ✔ | | | | |
| **C.2** Evidence of payment of the application fee and technical review escrow. | ✔ | | | | |
| **C.3** Fourteen (14) copies of written materials and maps/drawings | ✔ | | | | |
| **C.4** Report/Maps/Drawings: General Information | ✔ | | | | |
| a. Owner contact information | ✔ | | | | |
| b. Setback, yard, and buffer locations | ✔ | | | | |
| c. Abutter contact information | ✔ | | | | |
| d. Map: general site location | ✔ | | | | |
| e. Contiguous property boundaries | ✔ | | | | |
| f. Map/Lot Number | ✔ | | | | |
| g. Deed/proof of ownership/interest in property | ✔ | | | | |
| h. Plan preparer name, registration #, seal | ✔ | | | | |
| i. Evidence of technical & financial means | ✔ | | | | |
| **C.5** Reports/Maps/Drawings: Existing Conditions | ✔ | | | | |
| a. Zoning Classification | ✔ | | | | |
| b. Property lines bearings & length | ✔ | | | | |
| c. Location of utilities (water, sewer, electric, etc.) | ✔ | | | | |
| d. Street name(s), location(s), width(s) | ✔ | | | | |
| e. Building location(s), dimensions, and photo(s) | ✔ | | | | |
| f. Driveway location(s), dimensions | ✔ | | | | |
| g. Location of intersecting roads/driveways | ✔ | | | | |
| h. Location of important or unique natural site features | ✔ | | | | |
| i. Direction of surface water drainage | ✔ | | | | |
| j. Sign location(s), front view(s), dimensions | ✔ | | | | |
| k. Easement location, dimensions, documents | ✔ | | | | |

| | | | | | |
|---|---|---|---|---|---|
| l. Fire hydrant or fire protection water supply location | ✔ | | | | |
| **C.6** Reports/Maps/Drawings: Proposed Development | ✔ | | | | |
| a. Water/Sewage estimated demands/provisions | | ✔ | | | |
| b. Direction of proposed surface water drainage | ✔ | | | | |
| c. Solid waste disposal provisions | ✔ | | | | |
| d. Driveway/parking plans/provisions | ✔ | | | | |
| e. Proposed landscaping & buffering | ✔ | | | | |
| f. Proposed building/building expansion plans | | ✔ | | | |
| g. Proposed sign plans | | ✔ | | | |
| h. Proposed exterior lighting | | ✔ | | | |
| i. Location of utilities & fire protection systems | ✔ | | | | |
| j. General description of proposed use/activity | ✔ | | | | |
| k. Traffic estimates | ✔ | | | | |
| l. Stormwater, erosion & sedimentation control, and water quality management provisions | ✔ | | | | |
| **C.7** Reports/Maps/Drawings: Site Plan | ✔ | | | | |
| **402.10.10.D ADDITIONAL REQUIREMENTS FOR MAJOR DEVELOPMENTS** | | | | | |
| **D.1** Proposed development narrative | ✔ | | | | |
| **D.2** Grading plan | ✔ | | | | |
| **D.3** Stormwater drainage & erosion control program | ✔ | | | | |
| **D.4** Groundwater impact analysis | | ✔ | | | |
| **D.5** Plan preparer name/registration number/seal | ✔ | | | | |
| **D.6** Utility plan | ✔ | | | | |
| **D.7** Planting schedule | | ✔ | | | |
| **D.8** Traffic impact analysis | | ✔ | | | |
| **D.9** Gray Water District statement of supply adequacy | | ✔ | | | |
| **D.10** Estimated cost of development/proof of financial capacity | ✔ | | | | |
| **402.10.10.E WAIVER OF SUBMISSION REQUIREMENTS [WRITE IN WAIVER REQUESTS]** | | | | | |
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## SECTION 2

# MAJOR SITE PLAN NARRATIVE

# Town of Gray
# Major Site Plan Submission Narrative

Project Description

The applicant is proposing to construct a 2.0MW solar farm on the property. Cleantap Energy, LLC dba Clean Solar Gray, LLC and King Pine, LLC is intending to purchase the property from Tee Em Up, LLC and has a purchase option agreement in place. The development will consist of the solar panels, inversion equipment, overhead and underground transmission lines, utility poles, access drives and security fencing. There are no buildings included in the site layout. The equipment required for this development will make little noise outside of the fenced enclosure. Within the enclosure, the ground surface will remain meadow with the exception of the gravel access drives and equipment pads.

The utilities within the enclosure will be constructed underground, and extending overhead from the sites utility poles and making the final connection to the electrical grid prior to entering the substation. This will be the point of interconnection into the existing electrical grid. The applicant and Central Maine Power Company have an interconnection agreement to allow the solar farm's power to enter the power grid.

Natural Resources

A wetland delineation was performed by Mark Cenci Geologic, Inc. in Fall 2014 through Spring 2015 as part of a previous site development proposal for the current land owner. Included within this submission is the Beginning with Habitats map for review.

Soils

Based on the Medium Intensity Soils Survey for Cumberland County, provided by the NRCS, the soils on the property are identified as Lamoine silt loam and Scantic silt loam. A copy of this mapping is included in this submission.

Right, Title or Interest

The property is currently owned by Tee Em Up by deed recorded in the Cumberland County Registry of Deeds Book 12792 Page 299. The applicant, under King Pine, LLC, has a contract with the land owner to purchase the property. The purchase agreement and current deed have been included in the submission.

Financial and Technical Capacity

The proposed project will cost approximately $3.5 million. Included within Section 9 of this submission is the cost estimate calculation and a letter from Camden Nation Bank verifying that Cleantap Energy, LLC has the financial means to complete the project.

Cleantap Energy, LLC develops projects ranging from 2MW to 100MW. The applicant has experience in the design and permitting for several commercial solar farms throughout the state, including experience in residential solar projects.

Existing Easements and Deed Restrictions

The existing parcel is encumbered by a 100-foot Central Maine Power Company corridor which is located along the southern property boundary. In addition, the current property deed has preservation area restrictions. Within the deed is an exhibit indicating these preservation areas, which have been overlaid on the design plans. Two areas previously indicated as preservation areas will need to be disturbed as part of the installation of solar panels and security fencing. The intent is to remove these areas from the deed restriction with a corrective deed recorded in the registry of deeds with an updated exhibit upon Planning Board approval.

Stormwater

The project site is currently developed as a driving range. The post development condition will include the panels, but the ground will remain meadow. As part of the design of the private way, a drainage culvert was required to maintain existing drainage patterns. The sizing calculations for this culvert have been included in this submission for review.

Erosion and Sedimentation Control

The project site will incorporate several erosion control measures during and post construction of the solar farm. These best management practices are outlined within the plan set.

Solid Waste Provisions

We do not anticipate a significant amount of demolition debris associated with the project. Any construction debris will be handled by a contracted disposal company. During construction, there will be little to no solid waste generation. Upon decommissioning of the facility, all equipment and associated materials will be handled by a contracted disposal company and recycled to the extent practicable.

Landscaping and Buffering

Screening trees have been proposed along the northern and western portions of the site, within view of Portland Road and the abutting properties. The remaining site will be screened by existing stands of trees.

Traffic

Once construction is complete, no employees will be onsite with the exception of semi-annual mowing, infrequent panel adjustments and potential snow removal.

ATV/Snowmobile Trail Relocation

An existing ATV/Snowmobile trail is located along the northern property boundary, adjacent to the previous driving range net poles. The design of the site incorporated avoidance of the existing trail alignment, proposing to install the security fence along the existing trail, but based on the proposed development, and potential commercial building construction, a portion of the trail will need to be relocated. The applicant has discussed the relocation with Jon Powers, representative of the GNG ATV Club. Since it is not ideal for the proposed private road to be the entrance to the trail, an alternative location was proposed along the rear of the adjacent property owned by Bell Management, LLC.

The applicant has discussed the relocation with Bell Management, LLC and the Allstate Office and they were agreeable to the design. The proposed relocated trail has been shown on the design plans.

## SECTION 3

# COMMERCIAL SOLAR ENERGY SYSTEMS OVERLAY DISTRICT NARRATIVE

# Town of Gray Zoning Ordinance
# Sec. 402.8.10 – Commercial Solar Energy Systems Overlay District
# Performance Standards

*402.8.10.B Dimensional Requirements.*

*1. All components of ground-mounted solar energy system installations shall not exceed fifteen (15) feet in height when oriented at maximum tilt.*

**The ground mounted panels will be approximately 11 feet tall at the design tilt.**

*402.8.10.C Setback for Gound-Mounted Solar Energy Systems.*

*1. Notwithstanding any contrary provisions of Table 402.5.4.B, setbacks for ground- mounted solar panels and arrays less than 15 feet in height shall be: twenty-five (25) feet from any lot line. Setbacks for all other structures associated with the use shall be those established by Table 402.5.4.B for the underlying zoning district.*

**The proposed design maintains a 25 foot minimum setback from all property lines.**

*402.8.10.D Lot Coverage-Calculating Medium or Large-Scale Solar Energy System Installation Surface Area and Maximum Disturbed Area*

*1. Lot coverage and surface area square footage for medium or large-scale groundmounted solar energy systems shall be calculated by measuring the total area of the solar array/collector at maximum tilt to the vertical that occupies a given space or mounting surface as depicted in Figure 402.8.10.D.1 below:*

**Within the Commercial Zoning District, the allowable lot coverage is 65%. Based on the calculation specified in this section of the ordinance, the proposed lot coverage is approximately 8.8% (132,000 sf / 1,500,360 sf).**

*2. The developed area for medium and large-scale ground-mounted solar energy system installations shall be at least ten (10) acres and shall not exceed twenty (20) acres.*

**The total disturbed area is approximately 8.93 acres. Since the project will not significantly alter the grades and drainage patterns of the existing golf driving range, the area of the panel installation will not be considered "developed area" as defined by the Maine Department of Environmental Protection. There will be approximately 0.47 acre of new developed area consisting of the private road, gravel access road and posts related to the panel racking screws.**

*402.8.10.E Impervious Surface – Calculating Impervious Surfaces for Medium or Large-Scale Solar Energy System Installations.*

*1. Calculations relating to the impervious surface shall include only the foundation or base supporting the solar panel arrays of the solar energy installation as established in footnote D in Table 402.5.4.A in this ordinance.*

**As previously indicated, the total proposed impervious surface is 0.47 acres.**

*402.8.10.F. Standards for Medium and Large-Scale Ground-Mounted Solar Energy Systems.*

*1. All solar energy system installations shall be installed in compliance with the photovoltaic standards of the latest edition of the National Fire Protection Association Fire Prevention Code (NFPA) and National Electric Code (NEC), and International Building Code (IBC).*

**It is the intent of the applicant to install the solar array per the necessary building codes indicated above.**

*2. Prior to operation, electrical connections must be inspected and approved by the Code Enforcement Officer or his/her designee, or the State electrical inspector as applicable. The applicant shall be responsible for Town-incurred costs to hire qualified professionals for a third-party inspection for any and all components Chapter 402 Gray Zoning Ordinance deemed necessary by the Town CEO.*

**The applicant understands the requirement.**

*3. Any connection to the public utility grid must be inspected and approved by the appropriate public utility unless waived by the public utility.*

**The applicant has been in coordination with Central Maine Power Company related to the connection to their existing grid. A final review and approval is required by CMP prior to construction.**

*4. A solar energy system shall be maintained as necessary to ensure that it is operating safely and as designed and approved until decommissioned.*

**The applicant intends to maintain the solar array as required to operate at the maximum capacity to maximize the power generated by the system. A preliminary O&M plan has been included with this submission.**

*5. Utility Connections - Reasonable efforts, as determined by the Planning Board with input from qualified professionals at the applicant's expense, shall be made to place all utility lines from the solar energy system underground. Electrical transformers for utility interconnections may be above ground if required by the utility provider.*

**The design incorporates underground electrical cables throughout the fenced enclosure. Once the electrical cables leave the fenced area, they will continue overhead into the grid. This will provide for a significant decrease in wetland impact associated with excavating for the underground trench.**

*6. Safety -The applicant for Site Plan Review of the solar energy system shall provide a copy of the site plan review application to the Fire Chief or his/her designee, and the Fire Chief shall provide written comment on the fire safety of the proposed system to the Planning Board.*

**A copy of this submission will be sent to the Fire Chief for review and comment.**

*7. Visual Impact - Reasonable efforts, as determined by the Planning Board, shall be made to minimize visual impacts by preserving natural vegetation, screening of abutting properties, and protecting scenic resources.*

**Screening trees have been proposed along the northern and western portions of the site, within view of Portland Road and the abutting properties. The remaining site will be screened by existing stands of trees.**

*8. Glare - Solar panel placement shall be prioritized to minimize or negate any solar glare onto nearby properties, public gathering places or roadways, without unduly impacting the functionality or efficiency of the solar energy system.*

**With the use of the screening trees, existing stands of trees and the distance from the public right of way, we don't anticipate there to be significant glare concerns to the surrounding areas.**

*9. Natural Resources – Reasonable efforts, as determined by the Planning Board, shall be made to protect wetlands, watersheds, working agricultural lands, surface waters, slopes greater than twenty percent (20%) as well as High Value Undeveloped Habitat Blocks, High Value Plant and Animal Habitats and Focus Areas of Ecological Significance as mapped by the Maine Department of Inland Fisheries and Wildlife's Beginning with Habitat Program.*

**The design utilizes, to the extent practicable, the entire existing development associated with the existing driving range. To achieve an acceptable number of solar panels to make the project viable, there are indirect impacts to the wetlands along the outer reaches of the solar farm. A Natural Resources Protection Act wetland alteration permit will be submitted to the MDEP and a copy provided to the Town upon submission.**

**Included with this submission is a copy of the Beginning with Habitats Map for review. As indicated on the map, there are portions of the site that are mapped as Inland Wading Bird and Waterfowl Habitat. These portions of the site are currently part of the developed driving range. We don't anticipate that the installation of the solar panels to be a significant negative effect to the habitat.**

*10. Operations and Maintenance Plan - The Site Plan applicant shall provide (and maintain upon Site Plan approval) an operations and maintenance plan, which shall include measures for maintaining safe access to the installation as well as other general procedures for operational maintenance of the installation.*

**An Operations and Maintenance Plan has been included with this submission for review.**

*11. Signage- Signs in the Commercial Solar Energy Systems Overlay District shall comply with all applicable standards in this section and Chapter 406 Sign Ordinance except that the Planning Board shall have the authority to allow one freestanding sign per frontage up to 60 square feet per sign identifying the nature of the project. A minimum of one sign shall be required to identify the owner and provide a 24-hour emergency contact phone number in a location approved by the Planning Board with input from Public Safety. Chapter 402 Gray Zoning Ordinance*

**There is no proposed signage, with the exception to the Stop Sign at the entrance, for the project.**

*12. Emergency Services- The owner or operator of a solar energy system shall provide a copy of the project summary, electrical schematic, and Site Plan to the Fire Chief. Upon request, the owner or operator shall cooperate with the Fire Department in developing an emergency response plan. All means of shutting down the system shall be clearly marked on the plan. The owner or operator shall identify a responsible person to the Code Enforcement Officer and the Fire Chief for public inquiries throughout the life of the installation and shall promptly notify the Town when such contact information changes.*

**The applicant understands the requirement and will coordinate with the Fire Chief once construction drawings are complete.**

*13. Installation Conditions - The owner or operator of a solar energy system shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, vegetation control, and the integrity of security measures including Knox box and keys. Site access shall be maintained to a level acceptable to the Fire Chief. The owner or operator shall be responsible for the cost of maintaining any private access road or driveway to the site and to the system.*

**The applicant understands this requirement and will coordinate with the Fire Chief prior to a final Operations and Maintenance Plan is in place for the facility.**

*14. Performance Guarantee – The solar energy system Site Plan applicant shall demonstrate compliance with the performance guarantee requirements of 402.8.10 and 402.10.17.*

**The applicant understands these requirements and will coordinate with the Town on any required performance guarantees needed to be in place prior to construction.**

*15. In the event of a change of ownership and/or operator of the Commercial Solar Energy System, the new owner/operator is required to obtain approval of the Staff Review Committee or appropriate entity before commencing operations to ensure they are apprised of the applicable standards under which the use is permitted.*

**Understood.**

*402.8.10.G. Removal of Medium and Large-Scale Solar Energy Systems.*

*1. Any medium or large-scale solar energy system that has reached the end of its useful life or has been abandoned shall be removed. The owner or operator shall physically remove the installation no more than one hundred and eighty (180) days after the date of the discontinued operations. The owner or operator shall notify the Code Enforcement Officer by certified mail, return receipt requested, of the proposed date of the discontinued operations and plans for removal.*

*2. Decommissioning shall consist of:*

*a. Physical removal of all solar energy systems, structures, equipment, security barriers and transmission lines from the site.*

*b. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations; and*

*c. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Code Enforcement Officer shall have the authority to allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation provided compliance to all applicable codes and ordinances. Chapter 402 Gray Zoning Ordinance*

**A Decommissioning Plan has been prepared and included in this submission for review and approval.**

*F. Abandonment Guarantee of Medium and Large-Scale Solar Energy Systems.*

*1. Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, a medium or large-scale solar energy system shall be considered abandoned if it fails to generate electricity for more than one (1) year without first obtaining the written consent of the Code Enforcement Officer. Determination of abandonment shall be made by the Code Enforcement Officer.*

*2. At the time of approval, the applicant for a medium or large-scale ground-mounted solar energy system shall submit to the Town a performance guarantee to be approved by the Town, in the amount of 150% of the estimated demolition cost of the system, such cost to be determined by the Town Planner or duly designated person with input as needed from the Town Engineer, at the applicant's expense. The performance guarantee must be kept in effect throughout the lifetime of the system; any proposed replacements must be reviewed and approved by the Town. The owner may apply to the Town Planner for the release of the guarantee at such time that it or its assigns remove the system and associated abandoned structures, and such completed removal is found to be satisfactory by the Code Enforcement Officer, in consultation with the Town Planner.*

*3. If the owner or operator of the medium or large-scale solar energy system fails to remove the installation in accordance with the requirements of this section within one hundred and eighty (180) days of the abandonment of the proposed date of decommissioning, the Town shall use reasonable effort to notify the party that the Town intends to use the performance guarantee and any and all legal or available means necessary to cause an abandoned, hazardous, or decommissioned solar energy system to be removed.*

**The applicant understands these requirements and actions of the Town.**

## SECTION 4

# PRIVATE WAY NARRATIVE

# Town of Gray
# Private Way Submission Narrative

The original parcel had approximately 450 linear feet of road frontage based on permitting plans prepared by Terradyn Consultants, LLC and Standard Boundary survey prepared by Wayne Wood & Company. In 2019, a portion of the lot was conveyed to Bell Management, LLC, resulting in a total lot frontage for the remaining parcel of 192.03 feet. The required road frontage for a lot in the Commercial Zoning District is 200 feet, indicating that this property is non-conforming. To provide the lot with the required road frontage, a private road has been proposed extending from Portland Road, directly across the street from Turnpike Acres Road.

The approximately 275-foot roadway has been located within a 50 foot wide private right of way and has been designed to resemble the Rural Public Easement Street, but with paved shoulders, providing a full 22 feet of pavement width. In addition, a hammerhead turnaround has been designed for emergency vehicle turnaround. As indicated on the Site Plan, there is potential for the construction of a commercial building and associated parking lot. This future structure is intended to utilize the private road for access.

As part of the road design, a drainage culvert was required to maintain the existing drainage patterns. A stormwater model was prepared utilizing HydroCAD. This analysis included the potential construction of a commercial building (assumed half of a 9,000 square foot building). The results of the model indicated that a 15” culvert would adequately convey the peak flow from the tributary watershed. The analysis and watershed map have been included in the submission for review.

The intent is for the developer to own and maintain the road, no road association will be created as part of the project.

## SECTION 5

# RIGHT, TITLE OR INTEREST

# CONTRACT
# FOR THE SALE OF REAL ESTATE

Date: **September 8, 2021**

RECEIVED OF: **King Pines, LLC** whose mailing address is, **P.O. Box 235, Cumberland, ME 04021**, hereinafter called the Purchaser, the sum of [redacted] as earnest money deposit and in part payment of the purchase price of the following described real estate, situated in the municipality of **Gray**, County of **Cumberland**, State of Maine and located at 45 Portland Road being **part of** the property owned by the Seller at the above address, and described at said County's Registry of Deeds in Book **12792**, Page **299** and further described as: **a 35 +/- acre land parcel further described by the Town of Gray's Assessor Office as Map 43 Lot 404-176, and not to include a parcel previously sold and deeded as Book 35634, Page 108,** upon the terms and conditions indicated below:

1. PERSONAL PROPERTY: The following items of personal property are included in this sale (if applicable): **Seller agrees to share with Purchaser any/all engineering work that has been done on this site.**
2. PURCHASE PRICE: The TOTAL purchase price being [redacted] to be paid as follows: [redacted]
3. EARNEST MONEY/ACCEPTANCE: **Colliers International - Maine** shall hold said earnest money in a non-interest bearing account and act as Escrow Agent until closing; this offer shall be valid until **September 15, 2021** at 5:00 **PM**; and, in the event of the Seller's non-acceptance, this earnest money shall be returned promptly to the Purchaser.
4. TITLE: That a deed, conveying the premises in fee simple with good and marketable title in accordance with Standards of Title adopted by the Maine Bar Association shall be delivered to Purchaser and this transaction shall be closed and Purchaser shall pay the Purchase Price as provided herein and execute all necessary papers for the completion of the purchase on or before **January 28, 2022**. If Seller is unable to convey title to the premises in accordance with the provisions of this paragraph 5 below, then the Seller shall have a reasonable time period, not to exceed thirty (30) days from the time the Seller receives written notice of the defect, unless otherwise agreed to by both parties, to remedy the title, after which time, if such defect is not corrected so that there is merchantable title, the Purchaser may, within fifteen (15) days thereafter, at Purchaser's option, withdraw said earnest money and neither party shall have any further obligation hereunder, or Purchaser may, at Purchaser's option, close notwithstanding such uncured defects as may then exist. If the Purchaser does not withdraw the earnest money and declare the contract void within the period set forth above, the Purchaser shall have waived the right to object to title. The Seller hereby agrees to make a good-faith effort to cure any title defect during such period.
5. DEED: That the property shall be conveyed by a Maine Short Form Deeds Act insurable **Quitclaim Deed with Covenant**, and shall be subject to all encumbrances (other than liens and mortgages), except covenants, conditions, easements and restrictions of record that materially and negatively impair the current use of the premises and usual public utilities servicing the premises and shall be subject to applicable land use and building laws and regulations.
6. POSSESSION /OCCUPANCY: Possession/occupancy of premises shall be given to Purchaser immediately at closing, subject to any leases, unless otherwise agreed by both parties in writing.
7. ~~LEASES/TENANT SECURITY DEPOSITS: Seller agrees to transfer at closing to Purchaser all Seller's rights under the current leases to the property and all security deposits held by Seller pursuant to said leases.~~



Seen and agreed to: WB

Purchaser Seller

8. RISK OF LOSS: Until the transfer of title, the risk of loss or damage to said premises by fire or otherwise is assumed by the Seller unless otherwise agreed in writing. Said premises shall at closing be in substantially the same condition as at present, excepting reasonable use and wear. If the premises are materially damaged or destroyed prior to closing, Purchaser may either terminate this Agreement and be refunded the earnest money deposit, or close this transaction and accept the premises in their as-is condition together with an assignment of the Seller's right to any insurance proceeds relating thereto.

9. PRORATIONS: The following items shall be prorated as of the date of closing:
   a. Real Estate Taxes based on the municipality's tax year. Seller is responsible for any unpaid taxes for prior years.
   b. Fuel
   c. **N/A**
   d. Rents, estimated monthly common area maintenance charges, estimated monthly property tax payments, and all other additional rents received by Seller pursuant to leases of the property.
   e. Metered utilities, such as water and sewer, shall be paid by Seller through the date of closing.
   f. Purchaser and Seller shall each pay one-half of the transfer tax as required by the State of Maine.

10. INSPECTIONS: Purchaser is advised to seek information from professionals regarding any specific issue of concern. Purchaser acknowledges receipt of property disclosure form attached hereto. Neither Seller nor the Licensees identified below make any representations or warranties regarding the condition, permitted use or value of Seller's real or personal property. Purchaser's obligation to close under this Contract is conditioned upon Purchaser's satisfaction with its investigations of the property, which may without limitation include survey, environmental assessment, engineering studies, wetlands or soil studies, zoning compliance or feasibility, and code compliance, all within **One Hundred Twenty (120) days** of Effective Date.
    All investigations will be done by professionals chosen and paid for by Purchaser. If the result of any investigation is unsatisfactory to Purchaser in Purchaser's sole discretion, Purchaser may declare this Contract null and void by notifying Seller in writing within the specified number of days set forth above and the earnest money shall be returned to Purchaser. If Purchaser does not notify Seller that Purchaser's investigation(s) is unsatisfactory within the time period set forth above, this contingency is waived by Purchaser. In the absence of any investigation(s) mentioned above, Purchaser is relying completely upon Purchaser's own opinion as to the condition of the property. Purchaser agrees to repair any damage to the property caused by Purchaser's investigations, and Purchaser agrees to indemnify and hold Seller harmless for any claims, damages, losses or costs, including without limitation reasonable attorneys' fees incurred or suffered by Seller as a result of Purchaser's investigations of the property.

11. FINANCING: This contract is subject to both parties executing a mutually agreeable Owner Finance Agreement prior to closing. The terms of that agreement shall be as follows: [redacted]

    Purchaser shall provide draft of Owner Finance Agreement to Seller within **Thirty (30) days** of the effective date of this contract.

12. AGENCY DISCLOSURE: The Purchaser and Seller acknowledge that they have been informed that the Listing Licensee is acting as a **Seller's** agent in this transaction and is representing the **Seller**.



Seen and agreed to: WB SMC

Purchaser Seller

13. DEFAULT: If Purchaser fails to perform any of the terms of this Contract or is otherwise in default of any of its obligations, Seller shall have the option of either retaining the earnest money as full and complete liquidated damages or employing all available legal and equitable remedies. Should Seller elect to retain the earnest money, this Contract shall terminate and neither party shall be under any further obligation hereunder. In the event of an undisputed default by either party, the Escrow Agent may return the earnest money to Purchaser or Seller with written notice to both parties pursuant to Maine Real Estate regulations. If a dispute arises between Purchaser and Seller as to the existence of a default hereunder and said dispute is not resolved by the parties within thirty (30) days, Escrow Agent may elect to file an action in interpleader and deposit the earnest money in the court to resolve said dispute, or otherwise disburse the earnest money pursuant to Maine Real Estate Commission regulations. Purchaser and Seller, jointly and severally, shall indemnify Escrow Agent for all costs, losses, expenses, and damages, including reasonable attorneys' fees, incurred by Escrow Agent in connection with said action and/or in connection with any dispute relating to this Contract and/or Deposit.

14. MEDIATION: Any dispute or claim arising out of or relating to this Contract or the premises addressed in this Contract shall be submitted to mediation in accordance with the Maine Residential Real Estate Mediation Rules of the Maine Association of Dispute Resolution Professionals or its successor organization. This clause shall survive the closing of this transaction.

15. PRIOR STATEMENTS: Any verbal presentations, statements and agreements are not valid unless contained herein. This Contract completely expresses the obligations of the parties. This is a Maine contract and shall be construed according to the laws of Maine.

16. HEIRS/ASSIGNS: This Contract is assignable ☒ Yes ☐ No. This Contract shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns (if assignment is allowed by the terms of this Contract), of the respective parties.

17. COUNTERPARTS: This Contract may be signed on any number of identical counterparts, including telefacsimilie copies, with the same binding effect as if the signatures were on one instrument. Original or telefacsimilied signatures are binding.

18. BINDING CONTRACT: This Contract is a binding contract when signed by both the Seller and the Purchaser and when that fact has been communicated to all parties or to their agents. The Effective Date of the Contract is noted below.

19. ~~REVIEW OF LEASES AND INCOME AND EXPENSE INFORMATION: The Seller shall provide the Purchaser with copies of all leases and income & expense information regarding the subject property within _____ (_____) days of the effective date of this contract. Purchaser(s) shall have _____ (_____) days from such delivery to review leases and income & expense information regarding the property. If the result of the review is unsatisfactory to the Purchaser, Purchaser may declare the Contract null and void by notifying the Seller in writing within the specified number of days set forth above, and any earnest money shall be returned to the Purchaser. If the Purchaser does not notify the Seller that the review is unsatisfactory within the time period set forth above, this contingency is waived by the Purchaser.~~

20. Seller and Purchaser acknowledge receipt of the Maine Real Estate Commission Disclosure of Agency Relationship Form (Form #3), *if the property is, or has a component of, one to four residential dwelling units.*

21. ADDENDA: This Contract has addenda containing additional terms and conditions: YES ☐ NO ☒



Seen and agreed to: WB Purchaser _____ Seller

22. EFFECTIVE DATE: This Contract is a binding contract when signed by both the Seller and Purchaser and when that fact has been communicated to all parties or to their agents. Seller or Transaction Broker is given permission by the parties to complete the Effective Date blank below with the date of the last signature of the parties, and that date shall be the Effective Date for purposes under this contract, and if that blank is not completed, then the Effective Date shall be the date of the last signature of the parties.

**A COPY OF THIS CONTRACT IS TO BE RECEIVED BY ALL PARTIES AND, BY SIGNATURE, RECEIPT OF A COPY IS HEREBY ACKNOWLEDGED. IF NOT FULLY UNDERSTOOD CONSULT AN ATTORNEY.**

**Seller(s) acknowledges that the laws of the State of Maine provide that every buyer of real property located in Maine must withhold a withholding tax equal to 2 1/2% of the consideration unless the Seller(s) furnishes to the Buyer(s) a certificate by the Seller(s) stating, under penalty of perjury, that Seller(s) is/are a resident of Maine or the transfer is otherwise exempt from withholding.**

*Purchaser* — *Date* 9/9/21

President
*Name/Title*

84-3100521
*Soc. Sec. # or Tax I.D. #*

Kings Pines, LLC

The Seller accepts the offer and agrees to deliver the above-mentioned property at the price and upon the terms and conditions set forth above and agrees to pay the Broker the commission for services herein according to the Listing Agreement or if there is no Listing Agreement the sum of: 6% obligation to pay said commission or sum shall survive the closing of this transaction. Seller agrees that Broker may apply any deposit(s) received in connection with the sale of the Property toward commissions due and payable under this Agreement. If the earnest money is forfeited by Purchaser, it shall be evenly distributed between the Licensees and the Seller, provided, however, that Broker's portion shall not exceed the full amount of the commission specified. In the event the Seller defaults on its obligations hereunder, Colliers International shall be entitled to costs of collection, including reasonable attorneys' fees.

Signed this _____ day of _____, _____.

The Listing Licensee is **Michael Cobb II** of **Colliers International - Maine**

---

*Seller* — *Date* 9/9/2021

Michael Cobb, President
*Name/Title*

01-0505371
*Soc. Sec. # or Tax I.D. #*

Offer reviewed and refused on _____, _____.

_____, Seller

BK12792PG299

63789

**WARRANTY DEED**
(Statutory Short Form)

MAINE REAL ESTATE TAX PAID

**GRAY PLAZA, INC.**, a Maine corporation with a principal place of business in Gray, Cumberland County, Maine, for consideration paid, grants to **TEE'EM UP**, a Maine corporation with a principal place of business in Gray, Cumberland County, Maine, whose mailing address is: 19 Main Street, Gray, ME 04039, with **WARRANTY COVENANTS**, a certain lot or parcel of land, located on the east side of Route 100 in the Town of Gray, Cumberland County, Maine, more particularly bounded and described as follows:

**BEGINNING** at an iron pipe found on the assumed east sideline of Route 100 at the southwest corner of lot conveyed to Gray Plaza, Inc. by Hansen Farms, Inc. by deed dated May 27, 1969 and recorded in Cumberland County Registry of Deeds in Book 3087, Page 137, and by deed from H. Victor Udall dated July 15, 1969 and recorded in Cumberland County Registry of Deeds in Book 3094, Page 226 and said point being the northwest corner of land now or formerly of Henry Gagnon (Book 3208, Page 197);

thence, South 58°32'05" East, 1,858.25 feet along Gagnon and crossing a 100 foot wide Central Maine Power Company right of way recorded in Book 2302, Page 63 and a 50 foot wide former Portland-Gray-Lewiston Interurban Railroad - now Central Maine Power Company right of way to an iron pipe found;

thence, North 49°41'45" East, 600 feet along Kenneth Sawyer (Book 2192, Page 152) and crossing aforesaid 100 foot wide Central Maine Power Company right of way to a point;

thence, North 38°43' West±, 1,289± feet across Grantor and crossing aforesaid 50 foot wide Central Maine Power Company right of way to a point on the west side thereof;

thence, North 88°49' West±, 1,209 feet across Grantor to the assumed east sideline of Route 100;

thence, South 3°27'50" West, 450 feet along the assumed sideline of Route 100 to the **POINT OF BEGINNING.**

Containing 1,594,200 s.f.± or 36.60 acres.

**EXCEPTING** from the above conveyance the 100 foot wide strip belonging to the Central Maine Power Company per Cumberland County Registry of Deeds Book 2302, Page 63 and the 50 foot wide strip belonging to Central Maine Power Company - formerly the Interurban.

Bearings refer to the magnetic north observed in 1974.

**SUBJECT, HOWEVER,** to the **RESTRICTION** that no disturbance of vegetation or construction activities shall occur in the Preservation Area as so depicted on Exhibit A attached hereto. Any future alteration in, on or over the Preservation Area must be reviewed and approved by the Maine Department of Environmental Protection.

Meaning and intending to convey a portion and a portion only of the premises conveyed by Deed of Hansen Farms, Inc. to Gray Plaza, Inc., dated May 27, 1969, recorded in the Cumberland County Registry of Deeds in Book 3087, Page 137, and by Deed of H. Victor Udall to Gray Plaza, Inc., dated July 15, 1969, recorded in said Registry in Book 3094, Page 226.

Also conveying all rights, easements, privileges and appurtenances belonging to the premises hereinabove described.

WITNESS my hand and seal on October 17, 1996.

GRAY PLAZA, INC.

Mary B Devine
Witness

By: Philip A Cook
Its:
Printed Name:

STATE OF MAINE
Cumberland, ss.

October 17, 1996

Personally appeared, before me, the above-named Philip A. Cook, President of Gray Plaza, Inc., and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Gray Plaza, Inc.

Mary B Devine
~~Notary Public~~/Attorney

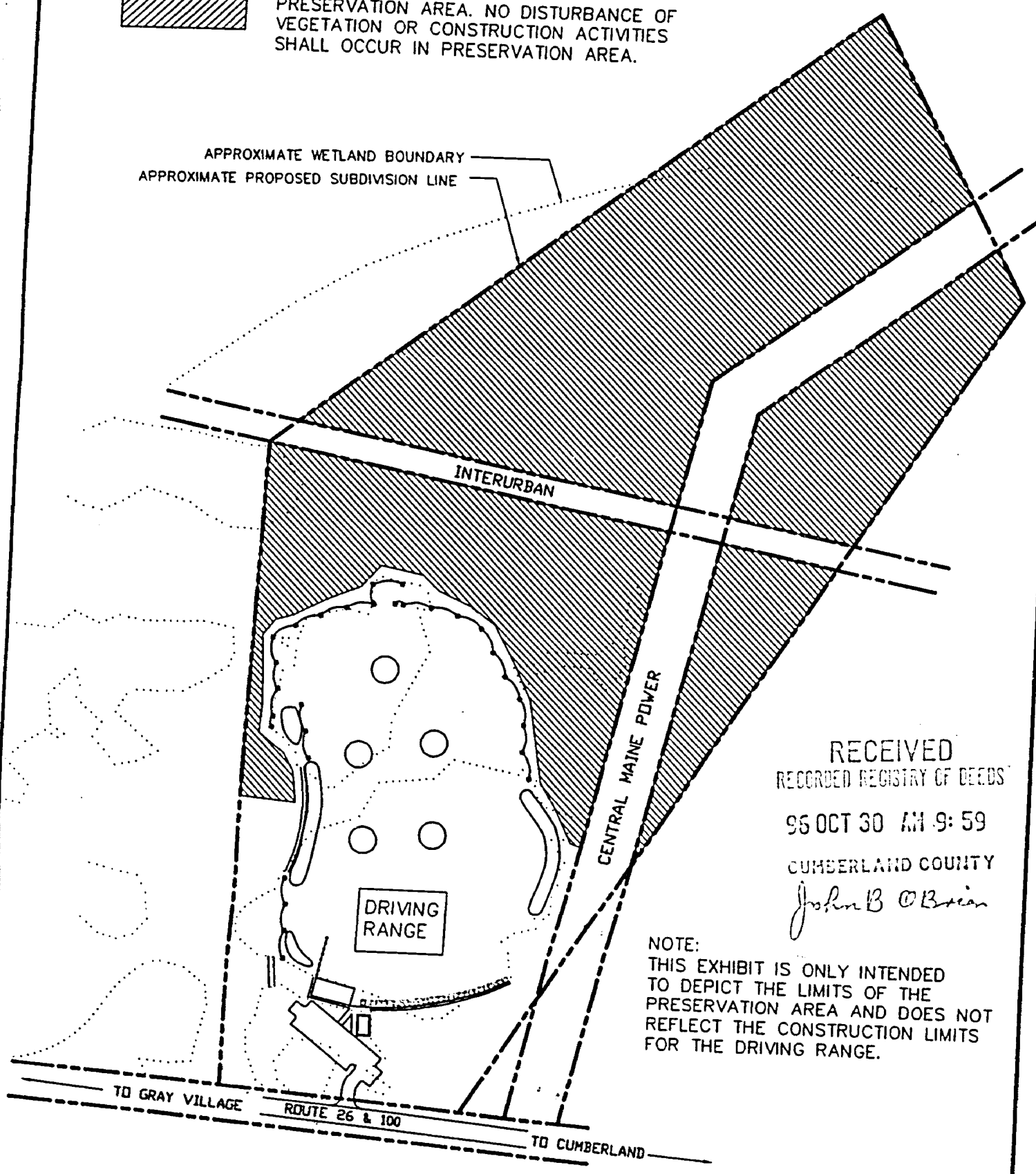
MARY B. DEVINE
Print Name

f\ljz\grayplaz.inc\wd

BK12792PG301

BK12792 Pg 301

PRESERVATION AREA. NO DISTURBANCE OF VEGETATION OR CONSTRUCTION ACTIVITIES SHALL OCCUR IN PRESERVATION AREA.




RECEIVED
RECORDED REGISTRY OF DEEDS
96 OCT 30 AM 9:59
CUMBERLAND COUNTY
John B O'Brien

NOTE:
THIS EXHIBIT IS ONLY INTENDED TO DEPICT THE LIMITS OF THE PRESERVATION AREA AND DOES NOT REFLECT THE CONSTRUCTION LIMITS FOR THE DRIVING RANGE.

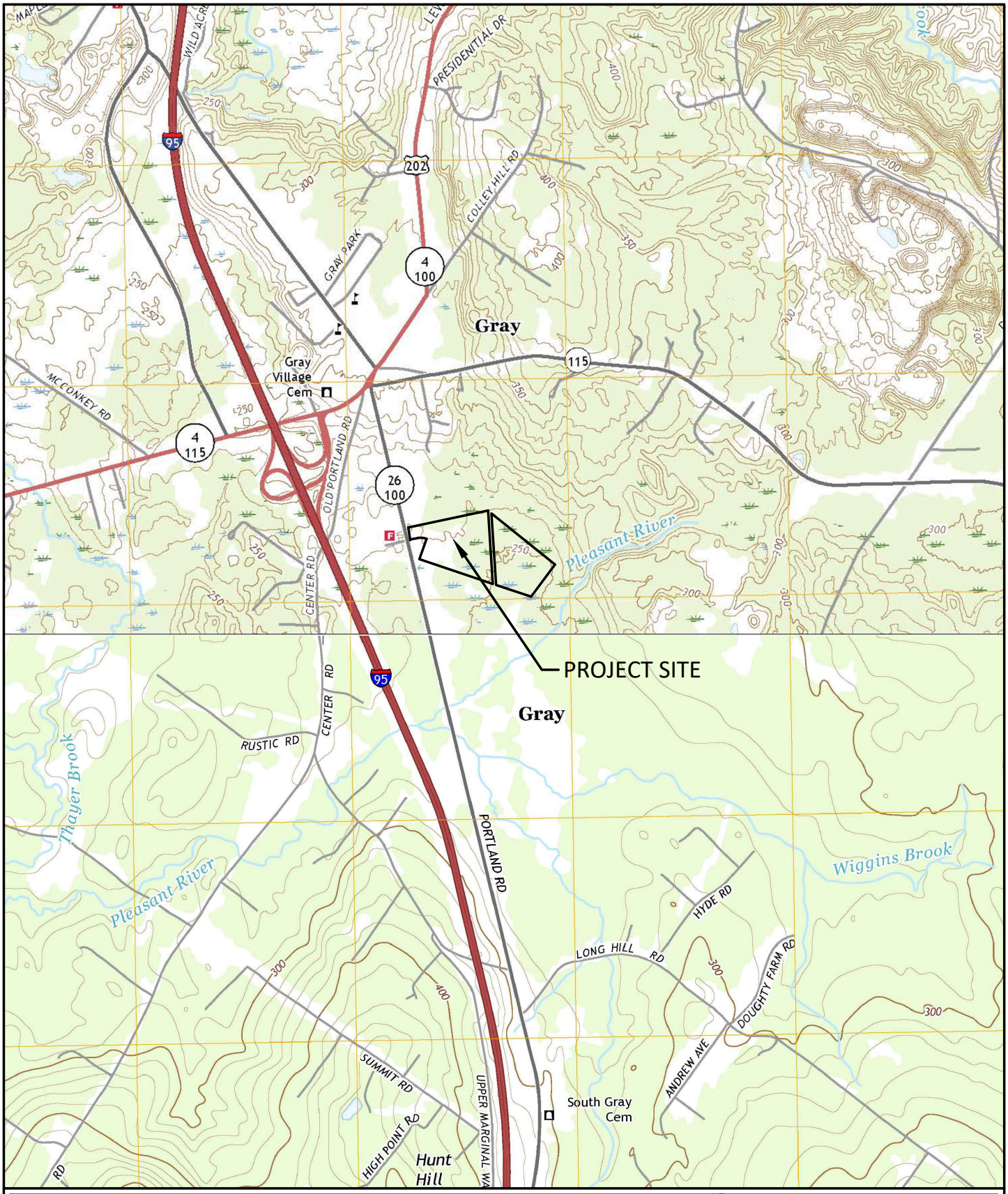
SCALE 1"=250'

DH

| | | | |
|---|---|---|---|
| Designed AMP | Date 10/09/96 | EXHIBIT |
| Drawn ENW | Scale 1" = 250' | A |
| Checked | Job No. 1194 | |

## SECTION 6

# SITE LOCATION MAP




# SITE LOCATION MAP

PORTLAND ROAD SOLAR FARM
GRAY, MAINE

FOR:
CLEANTAP ENERGY, LLC

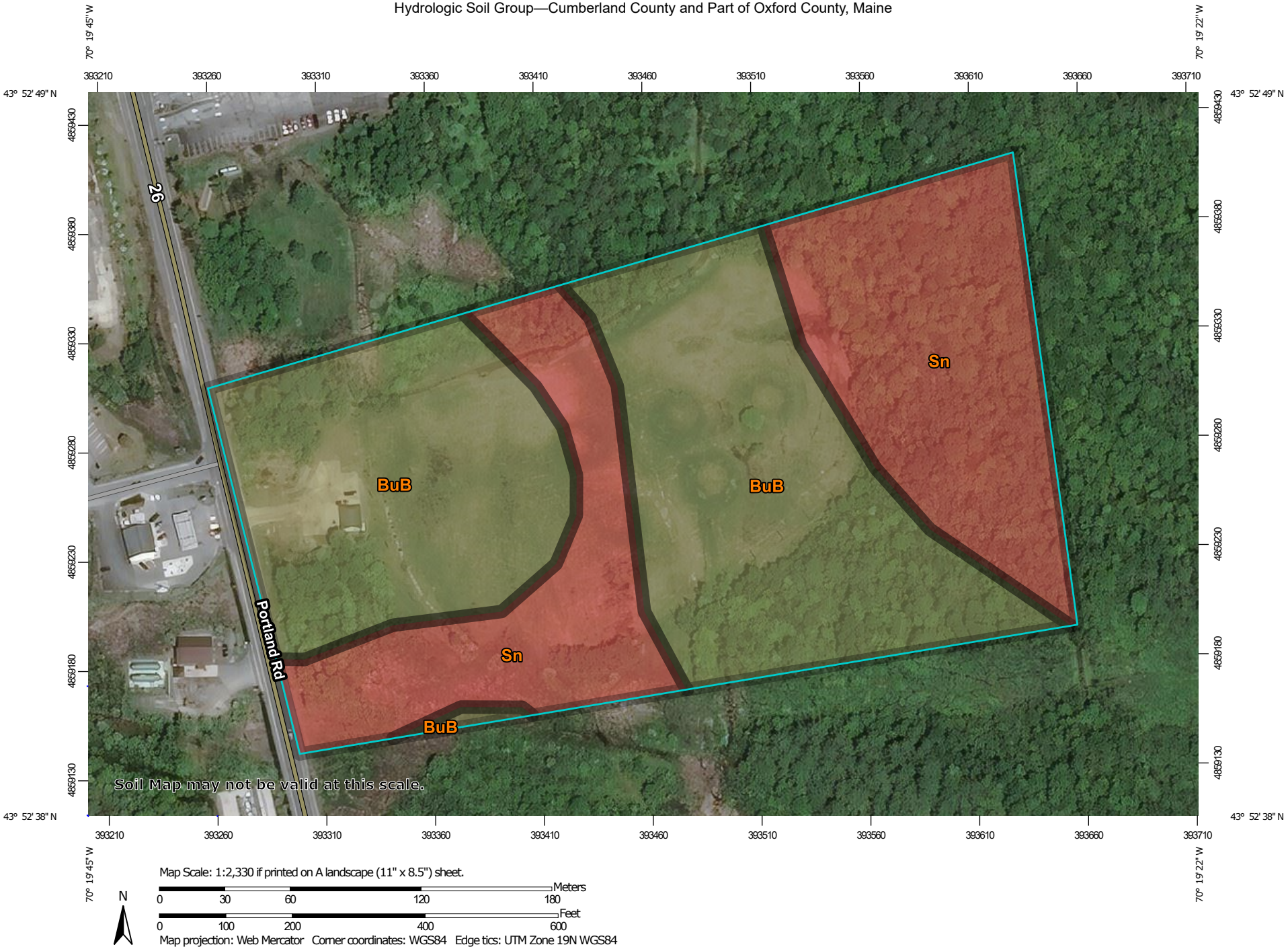
USGS QUADRANGLE
GRAY
CUMBERLAND CENTER

SCALE: 1"=2,000'
DATE: 10-27-2021
JOB NUMBER: 21005

DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

## SECTION 7

# SOILS MAP




Map Scale: 1:2,330 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 30 60 120 180

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

## MAP LEGEND

**Area of Interest (AOI)**

Area of Interest (AOI)

**Soils**

**Soil Rating Polygons**

A
A/D
B
B/D
C
C/D
D
Not rated or not available

**Soil Rating Lines**

A
A/D
B
B/D
C
C/D
D
Not rated or not available

**Soil Rating Points**

A
A/D
B
B/D
C
C/D
D
Not rated or not available

**Water Features**

Streams and Canals

**Transportation**

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

**Background**

Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 18, Aug 31, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 7, 2019—Jul 2, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

# Hydrologic Soil Group

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|---|---|---|---|---|
| BuB | Lamoine silt loam, 3 to 8 percent slopes | C/D | 10.5 | 58.3% |
| Sn | Scantic silt loam, 0 to 3 percent slopes | D | 7.5 | 41.7% |
| **Totals for Area of Interest** | | | **18.0** | **100.0%** |

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

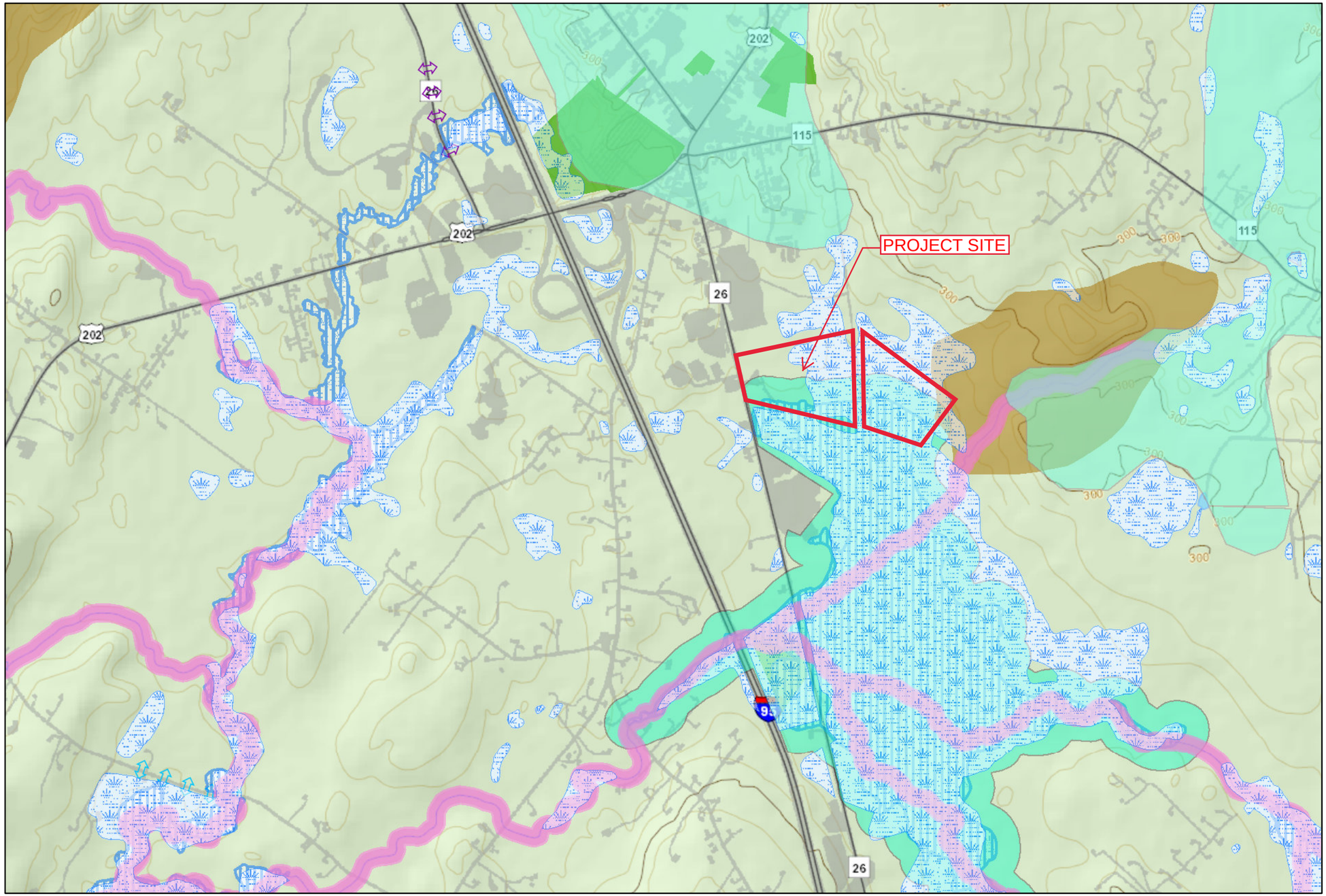
*Aggregation Method:* Dominant Condition

*Component Percent Cutoff: None Specified*

*Tie-break Rule:* Higher

## SECTION 8

# BEGINNING WITH HABITAT MAPPING & FEMA FLOOD PLAIN MAPPING




BEGINNING WITH HABITAT

# Legend

- City/Township
- 1
- 2
- Watershed Divide (HUC 12)
- Watershed Divide (HUC 10)
- Watershed Divide (HUC 8)
- Watershed Divide (HUC 6)
- Wetlands
- Great Ponds
- Stream_Buffers_75ft
- Shellfish Beds
- Public Water Supply Wells
- Source Protection
- Aquifers
- ETSC Animal Habitat Buffers
- Rare Plants and Natural Communities
- Natural Communities
- Wild Brook Trout Habitat
- Atlantic Salmon Rearing Habitat
- Atlantic Salmon Spawning Habitat
- Roseate Tern, Piping Plover or Least Tern Nesting Areas
- Deer Wintering
- Inland Wading Bird and Waterfowl Habitat
- Wildlife Wetlands
- Seabird Nesting Island
- Shorebird Habitat
- Tidal Wading Bird and Waterfowl Habitat
- Significant Vernal Pools
- Less than 2000 Vehicles/Day
- More than 2000 Vehicles/Day
- Less than 2000 Vehicles/Day
- More than 2000 Vehicles/Day
- Undeveloped Habitat Blocks
- Highway Bridge Connectors
- Maine Conserved Lands
- Federal
- Municipal
- Water Dist., etc.
- Private
- State
- Conserved Lands Easements
- Focus

State of Maine

The Nature Conservancy
Protecting nature. Preserving life.™

Maine Audubon

Maine Coast Heritage Trust
A Statewide Land Conservation Organization

SWOAM
Small Woodland Owners Association of Maine

MaineDOT

Maine Endangered and Nongame Wildlife Fund

0 0.225 0.45 0.9 1.35 mi

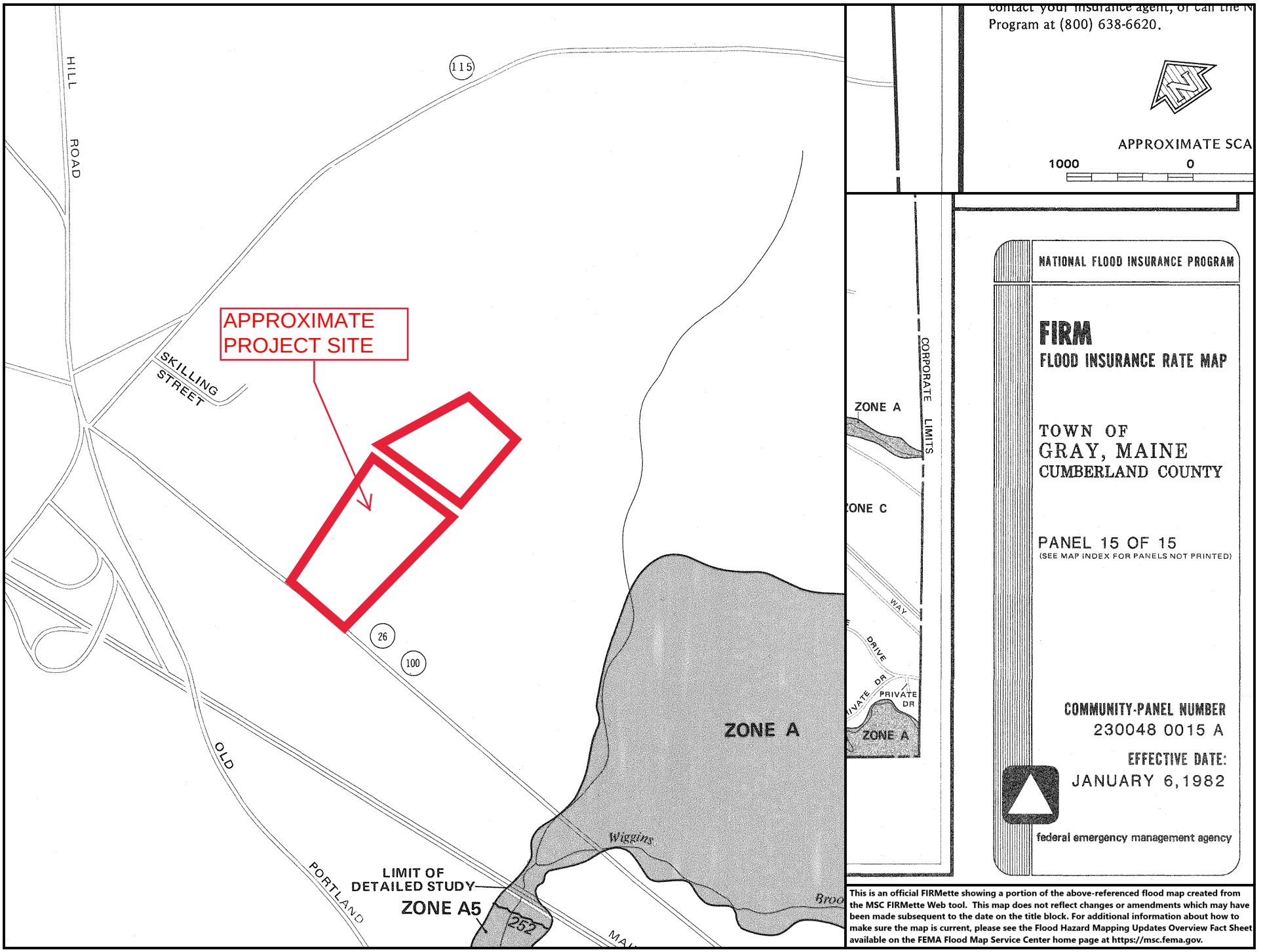
N W E S

Supported in part by Maine Outdoor Heritage Fund lottery ticket sales

***Map Prepared by Maine Department of Inland Fisheries & Wildlife***
October 2021

Supported in part by Loon Conservation Plate funds

MAINE LOONS THANX
A NATURAL TREASURE




This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

## SECTION 9

# COST ESTIMATE & FINANCIAL CAPACITY

DM ROMA
CONSULTING ENGINEERS
PO Box 1116, Windham, ME 04062

| | |
|---|---|
| Job Number | 21005 |
| Calculated by | JRH |
| Date | 9/2/2021 |

**Portland Road Solar Farm, Gray**

*Cost Estimate*

| Item | Cost |
|---|---|
| Panels and Equipment | $1,960,000.00 |
| Labor | $1,120,000.00 |
| Interconnection Fee with CMP | $280,000.00 |
| Permitting | $140,000.00 |
| **Total** | **$3,500,000.00** |

Camden NATIONAL BANK

October 26, 2021

To whom it may concern:

This letter is to confirm that Cleantap Energy, LLC has the financial means to complete the project in Gray, ME.

Thank you,

Michael Pietroski

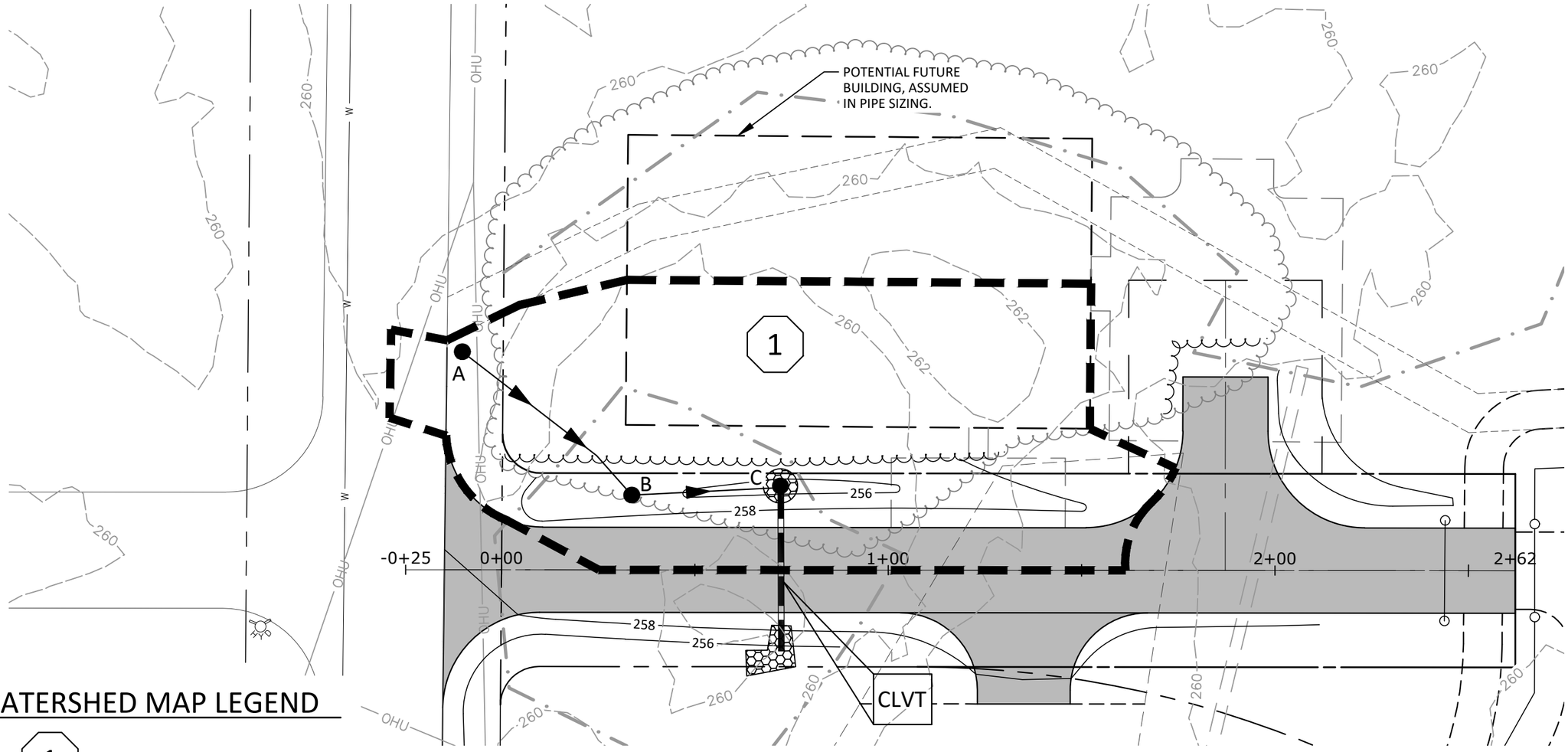
Michael Pietroski | Vice President
Banking Center Manager III
178 Court St.
Auburn, ME 04210
207-344-6842 (p)
207-230-5349 (f)
www.CamdenNational.com

Apply today for a Home Equity Line of Credit!

Camden NATIONAL BANK

## SECTION 10

# CULVERT SIZING CALCULATIONS




## WATERSHED MAP LEGEND

- 1 — WATERSHED NO.
- SP1 — REACH/STUDY POINT
- P1 — POND
- WATERSHED BOUNDARY
- A → B — TIME OF CONCENTRATION
- REACH PATH
- SOIL BOUNDARY


DM ROMA
CONSULTING ENGINEERS
P.O. BOX 1116
WINDHAM, ME 04062
(207) 310 - 0506

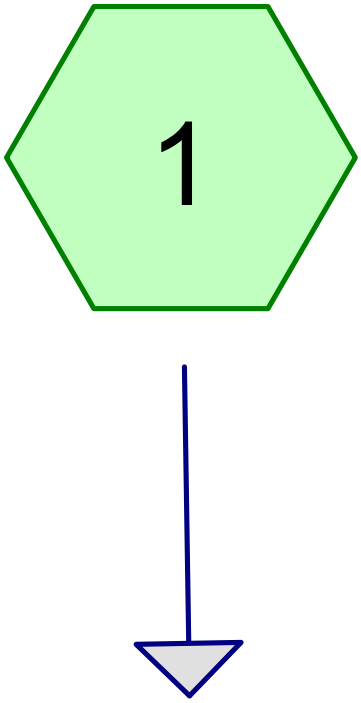

| REV | DATE | BY | DESCRIPTION |
|---|---|---|---|
| A | 10-26-21 | JRH | ISSUED FOR PERMITTING |

# WATERSHED MAP

PORTLAND ROAD SOLAR FARM
GRAY, MAINE

FOR:
CLEANTAP ENERGY, LLC
PO BOX 235
CUMBERLAND, MAINE 04021

| | |
|---|---|
| 1" = 30' | SCALE: |
| 10-26-2021 | DATE: |
| SHEET 1 OF 1 | |
| WM-1 | |




Culvert (Sta. 0+75)

Subcat Reach Pond Link

**Routing Diagram for 21005-Pipe Sizing**
Prepared by DM Roma Consulting Engineers, Printed 10/25/2021
HydroCAD® 10.00-26 s/n 09237 © 2020 HydroCAD Software Solutions LLC

Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment 1:** Runoff Area=12,501 sf 51.84% Impervious Runoff Depth>4.54"
Flow Length=93' Slope=0.0100 '/' Tc=8.2 min CN=89 Runoff=1.35 cfs 0.109 af

**Reach CLVT: Culvert (Sta. 0+75)** Avg. Flow Depth=0.47' Max Vel=3.17 fps Inflow=1.35 cfs 0.109 af
15.0" Round Pipe n=0.013 L=42.0' S=0.0048 '/' Capacity=4.46 cfs Outflow=1.33 cfs 0.109 af

## Summary for Subcatchment 1:

Runoff = 1.35 cfs @ 12.11 hrs, Volume= 0.109 af, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.80"

| | Area (sf) | CN | Description |
|---|---|---|---|
| * | 1,635 | 98 | Proposed Road |
| * | 4,500 | 98 | Assumed Potential Future Building |
| * | 346 | 98 | Existing Road |
| | 6,020 | 80 | >75% Grass cover, Good, HSG D |
| | 12,501 | 89 | Weighted Average |
| | 6,020 | | 48.16% Pervious Area |
| | 6,481 | | 51.84% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 8.1 | 55 | 0.0100 | 0.11 | | **Sheet Flow, A to B** Grass: Short n= 0.150 P2= 3.10" |
| 0.1 | 38 | 0.0100 | 6.31 | 88.35 | **Trap/Vee/Rect Channel Flow, B to C** Bot.W=2.00' D=2.00' Z= 2.0 & 3.0 '/' Top.W=12.00' n= 0.025 |
| 8.2 | 93 | Total | | | |

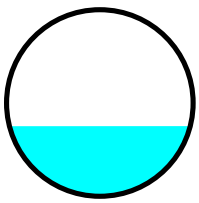
## Summary for Reach CLVT: Culvert (Sta. 0+75)

Inflow Area = 0.287 ac, 51.84% Impervious, Inflow Depth > 4.54" for 25-Year event
Inflow = 1.35 cfs @ 12.11 hrs, Volume= 0.109 af
Outflow = 1.33 cfs @ 12.12 hrs, Volume= 0.109 af, Atten= 1%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.17 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.11 fps, Avg. Travel Time= 0.6 min

Peak Storage= 18 cf @ 12.12 hrs
Average Depth at Peak Storage= 0.47'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 4.46 cfs

15.0" Round Pipe
n= 0.013
Length= 42.0' Slope= 0.0048 '/'
Inlet Invert= 255.75', Outlet Invert= 255.55'



## SECTION 11

# OPERATIONS & MAINTENANCE PLAN

## Cleantap Energy, LLC

# Preliminary Operations and Maintenance Plan

**Prepared for:**
**Town of Gray**
**on behalf of Cleantap Energy, LLC**
**19 Maine St, Suite 2 Gray, ME 04039**

**October 2021**



**Cleantap Energy, LLC**
19 Main St, Suite 2 | Gray, ME, 04021

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3. Solar Technology ..... 3-4
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7. Safety ..... 7-8
8. Training ..... 8



**Cleantap Energy, LLC**
19 Main St, Suite 2 | Gray, ME, 04021

## 1. Overview

An Operations and Maintenance Plan (O&M Plan) is a project specific plan that is created and defined around solar project equipment, original equipment manufacturer (OEM) requirements, environmental conditions and permitting restrictions. This preliminary plan will be used as a foundation for a final plan once all variables are determined and the design has been finalized.

The final O&M Plan will be implemented at the time of the scheduled Commercial Operation Date (COD). Cleantap Energy employees will be held to this Plan during their daily operational duties and tasks.

The objective of this plan is to optimize plant performance by adhering to OEM suggested maintenance practices while following internal processes and procedures. It is intended to be used as a guide in achieving results through the utilization of known best operational, safety, and environmental practices.

## 2. O&M Strategy

Cleantap Energy is a world leader in energy production with over 50 MW's of installed capacity across the USA and Canada. Cleantap Energy has developed its reputation as a well-known business leader by setting an example for others to follow through the establishment of a strong cultural mindset that emphasizes safety, environmental awareness, and pride of ownership.

Further, Cleantap Energy continues to expand upon its energy assets and remain competitive in the renewable market by constantly adapting to the changing energy landscape. For example, Cleantap Energy takes pride in being at the forefront of new and emerging technologies to ensure it continues to provide efficient and effective operations.
Due to it's experienced staff, Cleantap Energy maintains a high level of competitiveness within the market through a robust training program, quality management during the hiring process, a company culture built around trust, understanding, and the foundational principles of ACTT=R (Accountability, Challenge, Transparency & Teamwork = Results).

Clean Solar Gray is a wholly owned subsidiary of Cleantap Energy and retains this same culture in all business practices. Clean Solar Gray, the subject of this O&M Plan, is formally being proposed by Clean Solar Gray

## 3. Solar Technology

Equipment selection for a proposed photovoltaic site is based on several factors, including, but not limited to, community/ good neighbor stipulations, environmental conditions, grid conditions, reliability, and equipment performance and efficiency. The Clean Solar Gray Project will select the best equipment for the site based on the foregoing factors and the technology available at the time of development. However, Clean Solar Gray will continue to seek out newer technologies that drive better site reliability and performance while diminishing impact to the environment and, if able, will incorporate those technologies into the project design.

Typical OEM Agreements for major PV equipment account for serial defects that contribute to poor performance. Where defects are identified, the OEM is responsible for submitting and implementing a permanent solution while under the warranty period. Clean Solar Gray engineers work directly with the OEM on implementing engineering strategies that boost performance and reliability on operating assets with older technology.

Cleantap Energy will provide periodic preventative maintenance to the following solar plant equipment, per manufacturer recommendations and based on in-house knowledge at other similar solar sites:

- PV Modules
- Inverters
- Fixed Tilt racking systems
- MV (medium voltage) Transformers
- Substation equipment and other overhead lines at the substation and POI (point of interconnect)

**4. Maintenance Schedules**

The Plant Manager is responsible for all aspects of routine maintenance to ensure the continued life and service of the solar facility's equipment and its safe operation. Preventative Maintenance (PM) requirements and schedules are determined by the OEM. Routine PM Schedules are typically completed on an annual basis and are scheduled to be completed during low production periods, after sundown or before sunrise.



**Cleantap Energy, LLC**
19 Main St, Suite 2 | Gray, ME, 04021

Clean Solar Gray: October 2021

## Clean Solar Gray Maintenance Plan

| | Activity | Frequency | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Visual Inspections** | | | | | | | | | | | | | |
| | Tracker Components (5% /Year) | Annual | | | | | | | | | | X | | |
| | PV Modules and Mounting (5% /Year) | Annual | | | | | | | | | | X | | |
| | DC Electrical(5% /Year) | Annual | | | | | | | | | | X | | |
| | Communications Equipment | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| | O&M Building HVAC | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| | General Grounds | Annual | | | | | | | | | | X | | |
| | **Electrical Maintenance** | | | | | | | | | | | | | |
| P | **Inverter Components** | | | | | | | | | | | | | |
| r | Clean and Inspect | Semi Annual | | | | X | X | | | | | | | |
| e | OEM Annual Maintenance | Annual | | | | | | | | | | X | X | |
| v | **Module** | | | | | | | | | | | | | |
| e | Cleaning | Twice a Year | | | | | | x | | | x | | | |
| n | **HV/MV Maintenance** | | | | | | | | | | | | | |
| t | **MV Transformers** | | | | | | | | | | | | | |
| i | Visual Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| v | Oil Sample & Analysis | Annual | | | | | | | | | | X | | |
| e | **Grounding System** | | | | | | | | | | | | | |
| | Visual Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| | Resistance (5Year) | 5 year | | | | | | | | | | | | |
| M | **Substation** | | | | | | | | | | | | | |
| | Visual Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| a | Battery Maintenance | Quarterly/Annual | | | Q | | | Q | | | Q | | | A |
| i | HVAC | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| n | Fence and Gates Integrity | Monthly/Annual | X | X | X | X | X | X | X | X | X | A | X | X |
| t | Security Integrity | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| e | **Main Power Transformer** | | | | | | | | | | | | | |
| n | Visual Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| a | Oil Sample & Analysis | Annual | | | | | | | | | | X | | |
| n | Thermography | Annual | | | | | | | | | | X | | |
| c | **Disconnect Switches** | | | | | | | | | | | | | |
| e | Visual Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| | Thermography | Annual | | | | | | | | | | X | | |
| | **Insulators** | | | | | | | | | | | | | |
| | Clean and Inspect (Based on site conditions) | 3 year | | | | | | | | | | | | |
| | **General Grounds** | | | | | | | | | | | | | |
| | Gates Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| | Signage Inspection | Monthly | X | X | X | X | X | X | X | X | X | X | X | X |
| | **System Testing** | | | | | | | | | | | | | |
| | **Communications Equipment** | | | | | | | | | | | | | |
| | Pyranometer Calibration | 2 Years | | | | | | | | | | | | |
| | Datalogger | 2 Years | | | | | | | | | | | | |
| | Reference Cell | 2 Years | | | | | | | | | | | | |
| | Software Maintenance/Upgrades | As required | | | | | | | | | | | | |



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**5. Balance of Plant (BOP)**

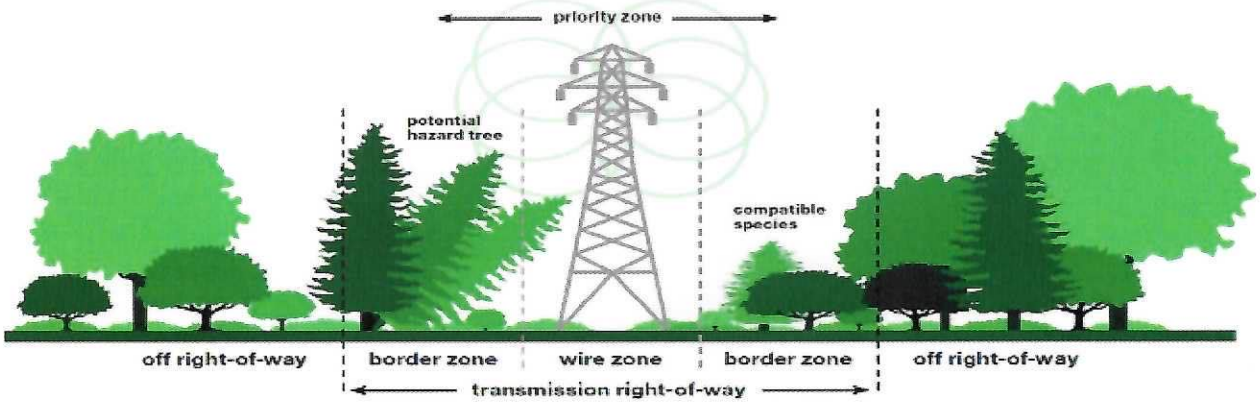
Typical BOP items include collector and substation inspections, maintenance, and repairs, along with road and vegetation maintenance activities.

The Plant Manager is responsible for all aspects of routine inspection, maintenance, and repairs of the plant to ensure the continued life and service of the solar facility's equipment and material condition. This is further enforced by formal inspections, to include monthly, quarterly, and annual inspections of the collector system and balance of plant equipment.

Typical inspection activities include, but are not limited to, the following: access road suitability (road repairs may be needed after adverse weather events); and substation inspection (leaks; vegetation; and collector and applicable transmission line inspections that determine whether lines are clear of tree branches or other debris).

As per set guidelines, the substation transformers, relays, and all associated equipment receive a formal inspection and maintenance on a scheduled basis. All maintenance is documented and stored for the life of the plant.

Road maintenance and vegetation control generally take place on a semi-annual schedule or when needed. Specific activities would include grubbing and clearing vegetation for access roads. A major area of focus is monitoring vegetation around conductors. The figure below depicts an example of clearance maintenance distances.



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**Clean Solar Gray: October 2021**

Vegetation Clearance Distance - 230kV and Greater = 8 ft, Less Than 230kV = 4 ft

The table below highlights typical vegetative management activities that will take place twice per year.

| **Mohawk Solar Semi-Annual Services: Vegetation Management** | |
|---|---|
| Monitoring | Site Assessment |
| | Overhead collector system |
| | Substation; switchyard |
| | Access roads |
| Annual Reporting | Reporting on state of site; corrective action plan |
| Mowing / Trimming | Tractor/Mower/Operator |
| | Tree trimming |
| | Weed Whipping |
| Herbicide Application | Herbicides will be used along access roads and at substations and switchyards only if mechanical methods are ineffective. |

## 6. Site Monitoring

• **Performance and Reliability** - All sites are monitored 24/7 by a rotating scheduled staff at our state-of-the-art National Control Center (NCC) located in Buffalo, NY. Staff responsibilities include site performance monitoring, resets, grid monitoring and balancing along with technician call-outs. They ensure the plants readiness to run.

• **Environmental** – Cleantap Energy conducts routine monitoring of avian activities inside and outside of the site boundaries and has adopted the standards as outlined under the recommendations of Avian Power Line Interaction Committee (APLIC).

In addition to avian inspections, all Cleantap Energy sites conduct monthly inspections of all hazardous and non-hazardous chemicals as outlined in the Environmental, Health and Safety Manual along with submitting reports as outlined in a Spill Prevention, Control, and Countermeasures Plan (SPCC).

• **Security** – All sites that have been equipped with video monitoring equipment are monitored 24/7 from our security personnel located at our corporate office. All sites having an alarm system are monitored remotely by an independent contractor which directly contacts the local authorities when needed.

## 7. Safety

Cleantap Energy has developed a robust written safety program. This program consists of a number of policies, procedures and plans which make up the Environmental Health and Safety Manual (EHS Manual). Copies of the EHS Manual are maintained electronically as well as in hard copy at each Cleantap Energy electric generation plant.

The programs within the manual are updated from time to time when needed following a Management of Change review and approval by Cleantap Energy Senior Management. Aypa employees at electric generation plants receive training on the various programs within the manual initially after they are hired and periodically thereafter.



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The initial training is documented in the Basic Operations Department Qualification standard and logged into a computer-based training tracking software program. The periodic training is conducted as outlined in the EHS & Training Matrix and this training is also logged into the computer-based training tracking software program.

The EHS Manual also describes a number of inspections and audits which are performed periodically to ensure that employees at Cleantap Energy electric generation plants are executing their work in accordance with the manual.

## 8. Training

Cleantap Energy has a well-defined systematic approach to the training that is needed by each employee. Cleantap Energy utilizes training software to assign (based upon an employee's position), track, and document training that employees receive. The status of fleet training is reported each month to the fleet as well as management.

Training is grouped into several categories including Safety Training and training for qualifications. Generally, the training for qualifications is a one-time training and the safety training is recurring. Cleantap Energy developed a comprehensive training matrix, which describes the periodic requirements associated with training and assessments that employees must accomplish.

General categories listed in the matrix are: 1) PV Qualification training, 2) Electrical Qualification training, 3) EHS Manual program training, and 4) other safety training which includes various videos and other required trainings that may not be specifically addressed in the EHS Manual.

The Training Department has also developed training presentations, classes, and videos. The periodicity of the recurring training is shown on the EHS and Training matrix. Hours spent training for qualifications can vary greatly depending on an employee's knowledge-level when hired.

## SECTION 12

# DECOMMISSIONING PLAN

# Decommissioning Plan

## Overview

The Portland Road Solar Project (Cleantap Energy, LLC) will be responsible for decommissioning the Project within 180 days from the date of the discontinued operation. Decommissioning activities include the removal of solar panels, racking, foundations, electrical and connection equipment, utility poles, security barriers, and fencing. All waste from decommissioning will be transported by licensed haulers and recycled or disposed of following all local, state, and federal regulations. Restoration of the site will be done to minimize erosion and runoff.

## Process

Final decommissioning plans will be prepared by a qualified engineer before decommissioning. The typical decommissioning process includes the following tasks in general chronological order:

| Decommissioning Tasks |
|---|
| 1. Remove Racking Wiring |
| 2. Remove Panels |
| 3. Dismantle Racks |
| 4. Remove Electrical Equipment |
| 5. Breakup and Remove Concrete Pads or Ballasts |
| 6. Remove Racks |
| 7. Remove Cable |
| 8. Remove Ground Screws and Power Poles |
| 9. Remove Fence |
| 10. Grading |
| 11. Seed Disturbed Areas |
| 12. Truck to Recycling Area |

## Equipment Removal and Site Restoration

All wiring will be removed from the racking except for underground wiring at depths greater than two feet, which will be abandoned in place. All electrical equipment, including inverters,

transformers, and switchgear will be unmounted from its foundation and transported to the appropriate facility for recycling or reuse.

After removing wiring and cables, solar panels will be removed from their racking system and transported to the appropriate recycling facility. Above ground racking will be removed using tools and small machinery. Racking posts driven into the ground will either be pulled from the ground or cut off at a depth of two feet below ground and abandoned in place. All racking will be recycled at the appropriate facility.

Site restoration will be performed after removal of equipment. Racking posts that are pulled from the ground are expected to create only minimal disturbance. Where reasonably necessary restoration will include regrading, mulching, and seeding to establish vegetation and prevent soil loss and erosion. Seeding will be done with a conservation mix to any disturbed areas.

## Estimated Cost

The total estimated cost of decommissioning is $73,000. A table of costs broken out by task can be seen below in Table 1.

**Table 1. Decommissioning Costs**

| Task | Estimated Cost |
|---|---|
| Remove Racking Wiring | $ 3,500 |
| Remove Panels | $ 3,500 |
| Dismantle Racks | $ 14,000 |
| Remove Electrical Equipment | $ 2,000 |
| Breakup and Remove Concrete Pads or Ballasts | $ 1,600 |
| Remove Racks | $ 8,500 |
| Remove Cable | $ 23,000 |
| Remove Ground Screws and Power Poles | $ 5,200 |
| Remove Fence | $ 4,200 |
| Grading | $ 1,000 |
| Seed Disturbed Areas | $ 3,000 |
| Truck to Recycling Area | $ 3,500 |
| **Total** | **$73,000** |

## MaineDOT Policy on Truck Restrictions

## on State and State Aid Highways

Acting on the recommendation of Carl A. Croce, Director, Bureau of Planning, and Bruce Ibarguen, Engineer of Traffic, the Commissioner approved the creation of a Department policy on July 13, 2005 that reaffirms State Rule 17-229, Chapter 104, entitled: Travel on State and State Aid Highways. This policy retains the concept that the MaineDOT has sole jurisdiction over restriction of commercial vehicles on state roads, and that municipalities may not prohibit commercial vehicles on state roads whether they are inside "urban compact" areas or not. However, this policy allows time-of-day restrictions of commercial vehicles, in very narrow circumstances, as long as there is substantial agreement between all affected parties, including neighborhoods, trucking firms, municipalities and other stakeholders.

## Department Policy

Simply stated, no restrictions can be put on State or State Aid Highways whether these roads are in rural areas or "urban compact" areas, unless specifically restricted by the MaineDOT Commissioner.

This is affirmed in State Rule 17-229- 104:
*"It is the goal of the State of Maine, Department of Transportation that Maine's public highways be safe and efficient and contribute to the economic growth of the State and the well-being of its people. MaineDOT will make good faith efforts to have Maine's public highway network meet the social, economic, and environmental needs of the public. In addition, public highways are intended for the overall general use of the traveling public and for business, recreation, and overall access to areas across the State. Therefore, MaineDOT recognizes that there is an affirmative right for all individuals and entities, public and private, domestic or commercial, to travel on all State or State Aid highways in Maine. This right shall exist until the Commissioner of MDOT suspends or otherwise restricts any such traffic on any highway under MaineDOT jurisdiction."*
However, there are growing issues relative to through commercial truck traffic on State and State Aid highways passing through residential areas. In certain cases, municipal officials are requesting some type of relief for homeowners who have chosen to live along these busy corridors. Because the requests usually respond to neither a severe safety issue nor the structural condition of a road or bridge, there is an option for municipalities to request time-of-day through truck restrictions on certain State roads from the MaineDOT. The following steps must be taken:

- The municipality must make a written request to the Department. Requests from an individual or groups of individuals will be referred back to the municipality.

- The request must be made following substantial public process and buy-in by all affected parties. Municipalities shall be encouraged to conduct neighborhood/stakeholder meetings before submitting a request.
- The request must not significantly affect traffic in municipalities other than the municipality which made the request.
- There is a reasonable alternate route for all traffic affected by the posting, as documented in part by the buy-in of affected commercial interests.
- The alternate routes do not create severe safety or congestion concerns.
- The municipality has passed a municipal traffic ordinance as described in Title 30A § 3009.

These restrictions may apply to all through commercial traffic over 26,001 pounds. It is understood that heavier local traffic (as opposed to through traffic), such as moving vans or fuel delivery trucks, should be allowed. However, because enforcement issues are largely local, and because the affected homeowners are entirely local, there is no statewide interest arising from this local choice of 26,001 pounds so a municipality may increase it if desired.

## Basis for Authority

- 23 § 1 -- State Highway Law -- General Provisions
- 23 § 52 -- State Highway Law -- DOT -- General Powers and Duties
- 23 § 53 -- State Highway Law -- DOT -- Classification of Highways
- 23 § 1351 -- State Highway Law--Protection of Highways --Installation of signals, devices & signs
- 29A § 2395 -- Motor Vehicles -- Ways requiring special protection
- 30A § 3009 -- Municipalities & Counties -- Authority of municipal officers to enact ordinances
- 30A § 3001 -- Municipalities & Counties -- Ordinances -- Ordinance Power
- State of Maine Rule 17-229-104 -- Travel on State and State Aid Highways
    - This Rule is a brief statement affirming the basic right of all highway users to travel on all State and State Aid highways in Maine.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0016

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

March 9, 2021

Ms Sandy Carder
Chair, Town Council
Town of Gray
24 Main Street
Gray, Maine 04039

Dear Ms. Carder,

Commissioner Van Note received your most recent letter and asked that I reply to you on his behalf.

As noted in Commissioner Van Note's last letter, we understand that the town's primary request has been twofold; 1. To restrict trucks on the one mile of Shaker Road from the Village to its northerly intersection, and 2. To remove the designation of Route "26" from that section of Shaker Road.

In your most recent letter, the town proposes to remove the Route 26 designation from Shaker Road and add it to Route 26A/115/202. This proposal is not possible due to route numbering protocols and MUTCD standards. An "A" or "B" or "Business" route is an alternate to the main route number. These routes branch off the main route at one location and rejoin at a point further up the road. As noted before, any change in route numbering will create the need for many DOT roadside and large overhead Turnpike signs to be changed.

Regarding the town's desire to pursue a weight limit on Shaker Road, we understand the town held a virtual meeting on September 29th of last year to begin this discussion with residents. MaineDOT's time-of-day policy also requires that companies that use this roadway must also be allowed to weigh in with an opinion. Such companies should include Grover Excavating, Agren Appliance, CN Brown, Casella, Shaw Bros., Storey Bros., Hannaford, Oakhurst, Hood, and Coleman Concrete, as well as any others that are known frequent users of this route.

There are a few other options that the town could consider. These include designating and signing a "TRUCK ROUTE" through the area that does not include Shaker Road. This would require the use of MUTCD-compliant "TRUCK ROUTE" signs. In addition, talking to local truckers who regularly utilize Shaker Road and asking them to avoid the route when possible. Another suggestion would be to not stripe Shaker Road with a passing zone centerline.

As stated before, using the data and the professional opinions of our engineers, we conclude that there are no data-driven reasons why any route numbers ought to be changed or trucks restricted from Shaker Road. The Department is still willing to consider the town's two requests under the stated conditions within the Commissioner's letter.

Please feel free to contact me should you have questions, or wish to discuss this matter further. We remain willing to engage to come to a conclusion that works for everyone.

Best regards,

Meghan M. Russo
Manager of Legislative and Constituent Services, MaineDOT