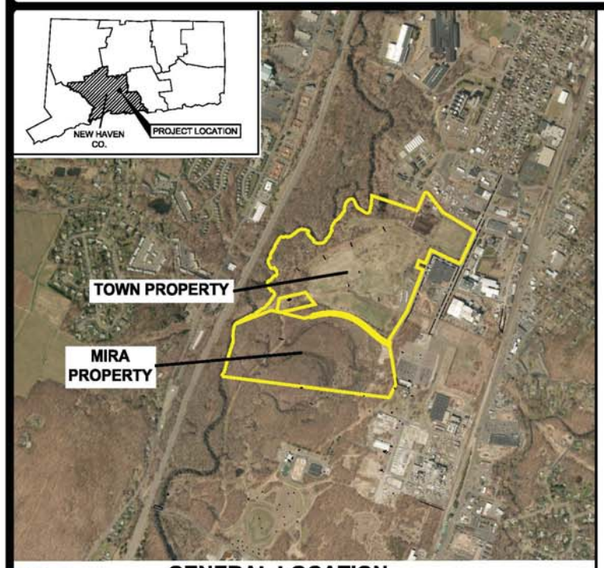
APPENDIX D – PROJECT SITE PLANS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY
WALLINGFORD, CONNECTICUT

160 Federal Street, 3rd Floor
Boston, MA 02110
Phone: (617) 443-7500 Fax: (617) 737-3480
www.tetratech.com

TETRA TECH



GENERAL LOCATION

SCALE IN FEET 0 1000 2000

INDEX TO DRAWINGS	
DRAWING No.	DRAWING TITLE
G-001	COVER SHEET AND INDEX TO DRAWINGS
G-002	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C-101	EXISTING CONDITIONS PLAN
C-102	SOLAR PANEL LAYOUT CONFIGURATION - KEY PLAN
C-103	SOLAR PANEL LAYOUT CONFIGURATION - GENERAL SITE PLAN
C-104	SOLAR PANEL LAYOUT CONFIGURATION - GENERAL SITE PLAN
C-105	SOLAR PANEL LAYOUT CONFIGURATION - GENERAL SITE PLAN
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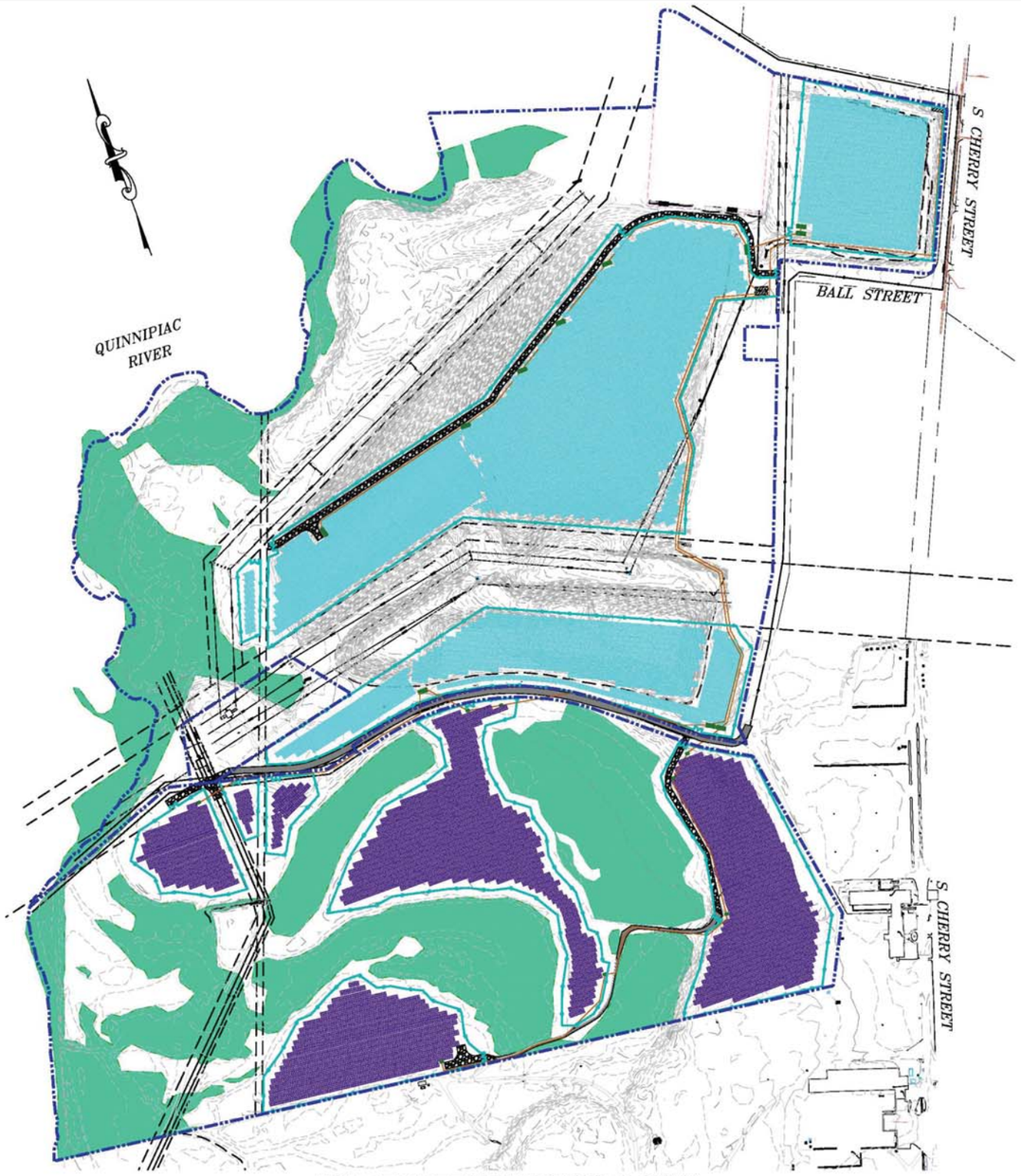
C-113	SOLAR PANEL DETAILS - TYPICAL EXTERIOR RACKING STRUCTURE
C-114	SOLAR PANEL ELECTRICAL DETAILS
C-115	SOLAR PANEL - TRANSFORMER AND INVERTERS - ELECTRICAL DETAILS
C-116	CIVIL CONSTRUCTION DETAILS
C-117	FENCE AND GATE DETAILS
C-118	CONSTRUCTION SPECIFICATIONS



SCALE IN FEET 0 200 400

FOR PERMITTING PURPOSES ONLY
- NOT FOR CONSTRUCTION -

PROJECT LOCATION:
WALLINGFORD, NEW HAVEN COUNTY
CONNECTICUT

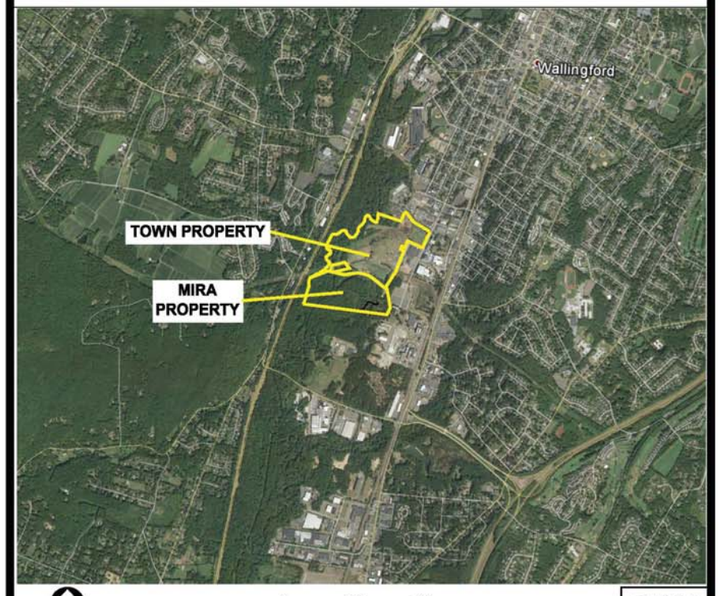
Tt PROJECT No.:
194-9002

PREPARED FOR:
Wallingford Renewable Energy LLC
909 Lake Carolyn Pkwy, Suite 260
Irving, Texas 75039

ISSUED:

REV:
A - JAN. 05, 2018 - ISSUED FOR PERMITTING AND REVIEW

VICINITY MAP:



SCALE IN FEET 0 2000 4000

G-001

CAD FILE: 9002-WRE_G001-REV A.DWG

GENERAL NOTES

NOTES

1. THIS PLAN WAS PREPARED FROM A COMBINATION OF AERIAL PHOTOGRAPHY CONDUCTED BY WSP AND AN ACTUAL ON THE GROUND FIELD SURVEY DONE BY WSP FROM SEPTEMBER THRU OCTOBER 2017.

2. WSP USED TWO SETS OF AERIAL PHOTOGRAPHY FOR THIS MAPPING PROJECT. THE FIRST SET WAS TAKEN FROM THE 2009 FLYOVER FOR CRCOG. THIS DIGITAL PHOTOGRAHY WAS FLOWN AT AN ALTITUDE CAPABLE OF PRODUCING 1" = 40' SCALE MAPPING WITH 2' CONTOURS. WSP ALSO CONDUCTED A NEW FLIGHT IN SEPTEMBER OF 2017 TO CAPTURE THE OPEN AREAS OF THE PROJECT. THIS PHOTOGRAPHY WAS FLOWN AT AN ALTITUDE CAPABLE OF PRODUCING 1" = 40' SCALE MAPPING WITH 1' CONTOURS.

3. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES THE CONNECTICUT STATE PLANE COORDINATE SYSTEM NAD83.

4. THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD88.

5. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON LABELED WITH AN (R) ARE FROM RECORD DOCUMENTS. ADDITIONAL FIELD INVESTIGATION WILL BE REQUIRED BY OTHERS TO DETERMINE THE ACTUAL PIPE SIZE(S) AND TYPE(S).

6. THE WETLAND FLAGS SHOWN HEREON ARE FROM A CAD FILE PROVIDED TO WSP BY OWNER AND HAVE NOT BEEN FIELD VERIFIED BY WSP.

7. FLOOD ZONE CLASSIFICATION

SITE LIES PARTIALLY WITHIN AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN (ZONE C); AND LIES PARTIALLY WITHIN AREAS OF 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE (ZONE X); AND LIES PARTIALLY WITHIN AREAS WITHOUT BASE FLOOD ELEVATIONS (BFE) (ZONE AE) INCLUDING AREAS THOSE AREAS OF REGULATORY FLOODWAY, ALL AS SHOWN ON MAPS NUMBERED 09009C0303J, 09009C0304J, 09009C0311C J, AND 09009C0312J WITH A REVISED DATE OF MAY 16, 2017.

8. THE ADJUSTMENT TO WETLAND DELINEATIONS ARE BASED ON FLAGGING PLACED BY REMA ECOLOGICAL SERVICES, LLC AND COLLECTED BY TETRA TECH, INC USING AN EOS ARROW 100 SUB-METER GLOBAL POSITIONING SYSTEM (GPS).

UTILITY STATEMENTS

THE LOCATION OF THE UTILITIES AS SHOWN HEREON HAVE BEEN COMPILED FROM VISIBLE STRUCTURES AND INFORMATION OBTAINED FROM VARIOUS SOURCES. THE ACTUAL LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES SHALL BE CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE OWNER PRIOR TO ANY CONSTRUCTION. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICES OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED.

PLAN REFERENCES

PLANS RECORDED WITH THE WALLINGFORD TOWN CLERKS LAND RECORDS AS FOLLOWS:
PLAN NO. 197-B
PLAN NO. 772
PLAN NO. 2702
PLAN NO. 2812
PLAN NO. 3055
PLAN NO. 4645
PLAN NO. 4543
PLAN NO. 4723
PLAN NO. 4797
PLAN NO. 5012
PLAN NO. 5120
PLANS PROVIDED BY ALGONQUIN GAS TRANSMISSION CO AS FOLLOWS:
PLAN NO. L-5867
PLAN NO. L-5900
PLAN NO. L-9957-A
PLAN NO. SQ-A-1000
PLAN NO. SQ-A-1001
PLAN NO. SQ-A-1002
PLAN NO. SQ-A-1003
PLAN NO. SQ-A-1004
PLAN NO. SQ-A-1005

LEGEND

EXISTING

- DISK
- HUB AND TACK
- IPF — IRON PIPE FOUND
- IRF — IRON ROD FOUND
- NAIL — NAIL MONUMENT
- CB — CONCRETE BOUND
- METAL COVER
- AC — AIR CONDITIONER
- ROUND CATCH BASIN
- CATCH BASIN
- DOUBLE CATCH BASIN
- CULVERT
- DRAIN MANHOLE
- NO LABEL MANHOLE
- SEWER MANHOLE
- ELECTRIC BOX
- E — ELECTRIC HANDHOLE
- ELECTRIC METER
- ELECTRIC MANHOLE
- GAS METER
- GAS VALVE
- WATER GATE
- ICV• — IRRIGATION CONTROL VALVE
- FIRE HYDRANT
- UTILITY POLE WITH LIGHT AND RISER
- UTILITY POLE WITH RISER
- UTILITY POLE
- UTILITY POLE WITH LIGHT
- GUY — GUY POLE
- PRESSURE INDICATOR VALVE
- PIV
- SWAMP AREA
- DECIDUOUS TREE
- CONIFER TREE
- SHRUB
- SIGN (SINGLE POSTED)
- SIGN (DOUBLE POSTED)
- BOULDER
- POST
- MONITORING WELL
- TREE STUMP
- UNIDENTIFIED STRUCTURE
- LIGHT POLE
- BOLLARD
- HANDICAP PARKING
- FDC — FIRE DEPARTMENT CONNECTION
- FLAG POLE
- TRANSMISSION UTILITY POLE
- VENT
- VALVE
- RIGHT-OF-WAY
- PROPERTY LINE
- EASEMENT
- OBSCURED AREA
- METAL / WIRE FENCE
- CHAIN LINK FENCE
- METAL GUARDRAIL
- EDGE OF WATER
- DRAINAGE DITCH
- W — WATER LINE
- G — GAS LINE
- E — UNDERGROUND ELECTRIC
- OHW — OVERHEAD WIRES
- T — UNDERGROUND TELEPHONE LINE
- D — DRAIN LINE
- S — SEWER LINE
- ST — STEAM LINE
- U — UNKNOWN UTILITY LINE
- C — STEAM COND LINE
- STONE WALL
- TREE LINE
- 102 — INTERMEDIATE CONTOURS
- 100 — INDEX CONTOURS
- SHRUB LINE
- RIP RAP
- DELINEATED WETLAND
- EXISTING ROAD
- SWALE

PROPOSED

- SITE BOUNDARY
- PROPOSED ROAD
- PROPOSED FENCE LINE
- PROPOSED MV ROUTING
- PAD FOR TRANSFORMER, INVERTERS AND SWITCHGEAR
- PAD FOR TRANSFORMER AND INVERTERS
- SOLAR PANELS – DRIVEN PILE
- SOLAR PANELS – BALLAST
- WATERSHED DELINEATION LIMITS
- x DP-# — DISCHARGE POINT
- ANTICIPATED DIRECTION OF STORMWATER RUNOFF
- SF — SF — PROPOSED SILT FENCE
- PROPOSED SILT SOCK
- APPROXIMATE LIMIT OF CLEARING
- PROPOSED TEMPORARY STONE CHECK DAM
- PROPOSED TEMPORARY HAY BALE CHECK DAM
- PROPOSED TEMPORARY SEDIMENT TRAP
- PROPOSED TEMPORARY SEDIMENT BASIN
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE

ABBREVIATIONS

PVC	POLYVINYL CHLORIDE
DI	DUCTILE IRON
CI	CAST IRON
VC	VITRIFIED CLAY
RC	OBSCURED AREA
FFE	FINISHED FLOOR ELEVATION
MTL	METAL
MIRA	MATERIALS INNOVATION AND RECYCLING AUTHORITY
CMP	CORRUGATED METAL PIPE

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TETRA TECH
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Boston, MA 02110
Phone: (617) 443-7500 Fax: (617) 737-3480

PREPARED FOR:
Wallingford Renewable Energy LLC
909 Lake Carolyn Pkwy, Suite 260
Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

GENERAL NOTES, LEGEND AND ABBREVIATIONS

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS, LG

G-002

CAD FILE: 9002-WRE_G002-REV A.DWG

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200 100 0 200 400

SCALE: 1" = 200'

NOTE:
FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS, SEE DRAWING G-002.

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WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

EXISTING CONDITIONS PLAN

Project No,:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM
Checked By:	JS, LG

C-101

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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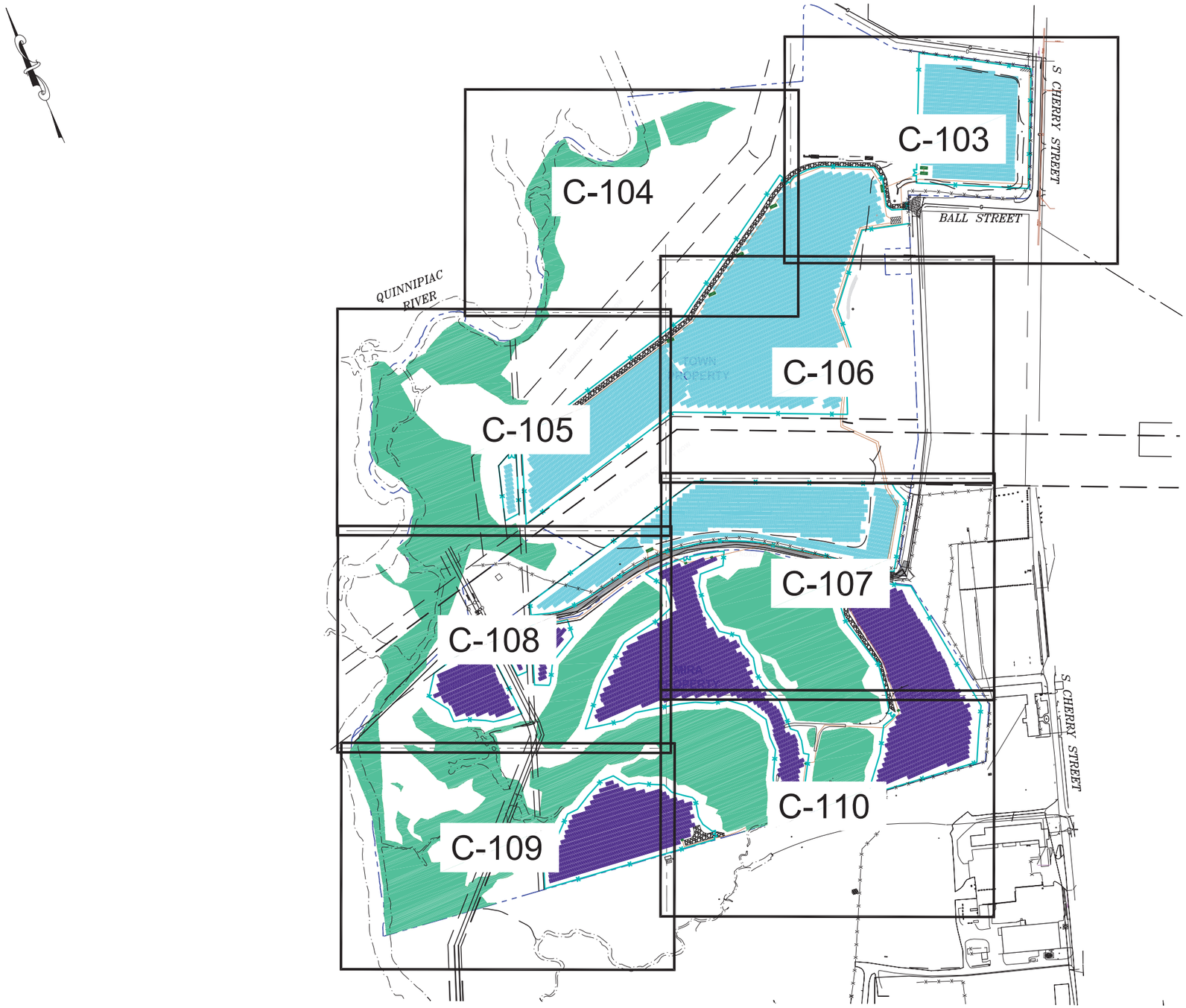

200 100 0 200 400

SCALE: 1" = 200'

NOTE:
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WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION KEY PLAN

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM
Checked By:	JS, LG

C-102

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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PROPOSED SOLAR PANEL FIELD - BALLAST (TYP)
FOR PANEL DETAILS SEE DWG C-113

PROPOSED 7' HIGH FENCE (TYP)
FOR DETAIL SEE DWG C-116

PROPOSED MEDIUM VOLTAGE CABLE (TYP)

PROPOSED PAD FOR TRANSFORMER
AND INVERTERS (TYP)
FOR DETAIL SEE DWG C-114

PROPOSED POI B -
TAP FEEDER 4 - 5 MW

PROPOSED ROAD

PROPOSED POI A -
EXPRESS FEEDER - 10 MW

PROPOSED 24' WIDE DOUBLE SWING GATE
FOR DETAIL, SEE DWG C-116
NOTE: SWING GATE AT THIS LOCATION TO BE
ATTACHED TO EXISTING FENCE

PROPOSED 7' FENCE TO BE TERMINATED AT THIS
POINT WHERE IT INTERSECTS WITH EXISTING FENCE

PROPOSED PAD FOR TRANSFORMER,
INVERTERS AND SWITCHGEAR (TYP)
FOR DETAIL, SEE DWG C-114

MATCH LINE DRAWING C-104

MATCH LINE DRAWING C-106

SITE BOUNDARY

TOWN PROPERTY

DRAINAGE AREA 1
11.94 ACRES

DRAINAGE AREA 2
13.77 ACRES

Y1 = 1.18 Ac

Y2 = 2.28 Ac

Z1 = 1.65 Ac

S CHERRY STREET

BALL STREET

40 20 0 40 80
SCALE: 1" = 40'

NOTE:
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SEE DRAWING G-002.

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A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY; WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION
GENERAL SITE PLAN

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS, LG

C-103

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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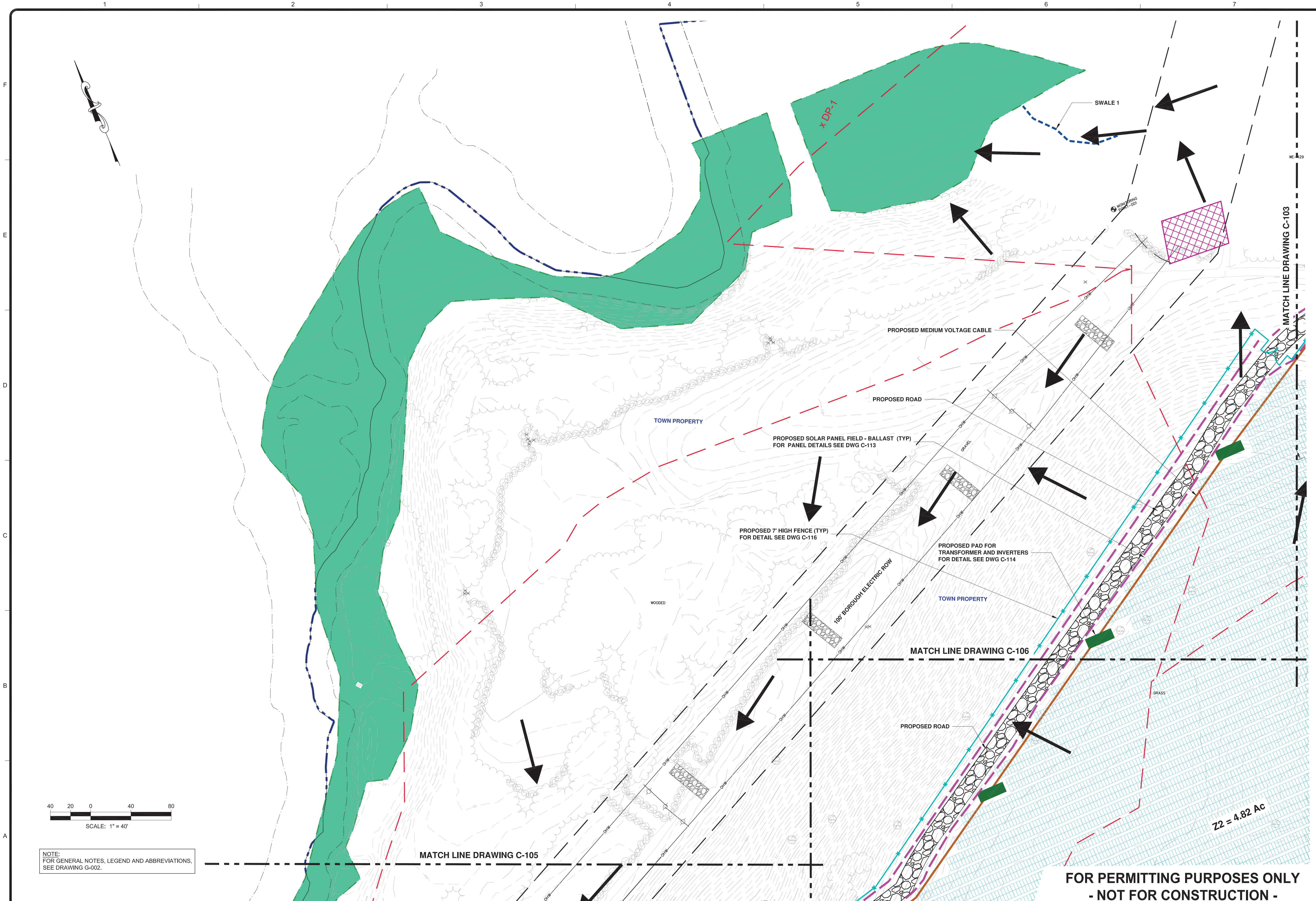

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NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION
GENERAL SITE PLAN

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Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS, LG

C-104

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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MATCH LINE DRAWING C-104

QUINNIPIAC RIVER

PROPOSED MEDIUM VOLTAGE CABLE

100' BOROUGH ELECTRIC ROW

DRAINAGE AREA 3
19.61 ACRES

PROPOSED SOLAR PANEL FIELD - BALLAST (TYP)
FOR PANEL DETAILS SEE DWG C-113

PROPOSED 7' HIGH FENCE (TYP)
FOR DETAIL SEE DWG C-116

PROPOSED ROAD

DP-3

WOODED

TOWN PROPERTY

OHW

GRASS

MATCH LINE DRAWING C-106

QUINNIPIAC RIVER

OBSCURED

20' GULF OIL ROW

Z5 = 0.08 Ac

Z4 = 0.08 Ac

MATCH LINE DRAWING C-108

250' CONN LIGHT & POWER COMPANY ROW

DRAINAGE AREA 4
25.79 ACRES

MATCH LINE
DRAWING C-107

40 20 0 40 80
SCALE: 1" = 40'

NOTE:
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WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION
GENERAL SITE PLAN

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS, LG

C-105

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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MATCH LINE DRAWING C-104

MATCH LINE DRAWING C-103

MATCH LINE DRAWING C-105

MATCH LINE DRAWING C-107

PROPOSED ROAD

Z2 = 4.82 Ac

Z6 = 2.57 Ac

Z3 = 4.33 Ac

PROPOSED 7' HIGH FENCE (TYP)
FOR DETAIL SEE DWG C-116

TRANS POLE
WITH WALL AND
POSTS

PROPOSED SOLAR PANEL FIELD - BALLAST (TYP)
FOR PANEL DETAILS SEE DWG C-113

PROPOSED MEDIUM VOLTAGE CABLES (TYP)

SITE BOUNDARY

SMH
RIM= 60.15
INV.1=49.45
INV.2=49.45

CB
RIM= 57.01
DEPTH=53.31
INV.1=53.71

SWALE 2

PROPOSED TEMPORARY
HAY BALE CHECK DAM
FOR DETAILS SEE DWG C-112

250' CONN LIGHT & POWER COMPANY ROW

TOWN PROPERTY

GRASS

OHW

40 20 0 40 80
SCALE: 1" = 40'

NOTE:
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WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION
GENERAL SITE PLAN

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS, LG

C-106

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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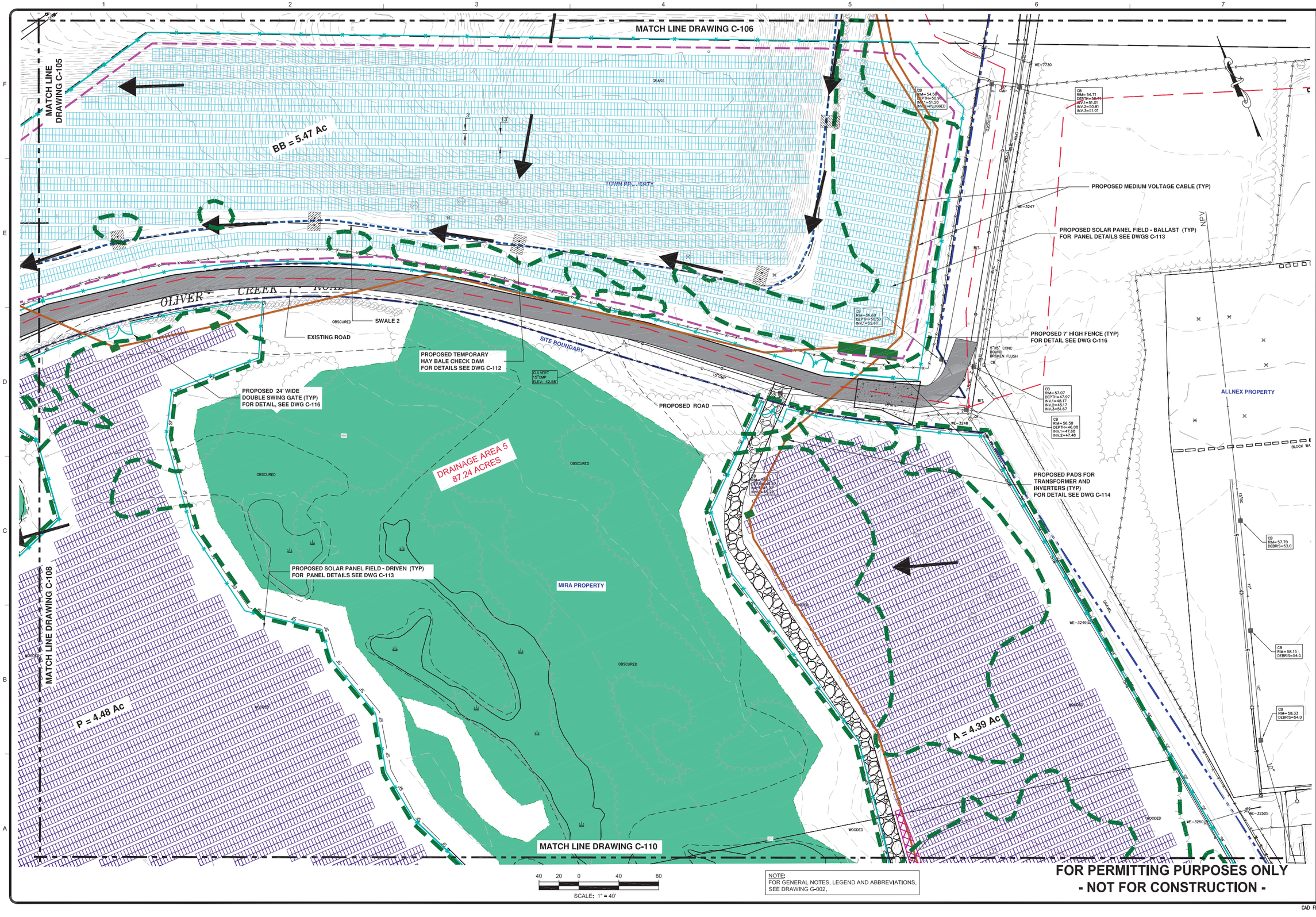

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Drawn By:	FGM, DS
Checked By:	JS, LG

C-107

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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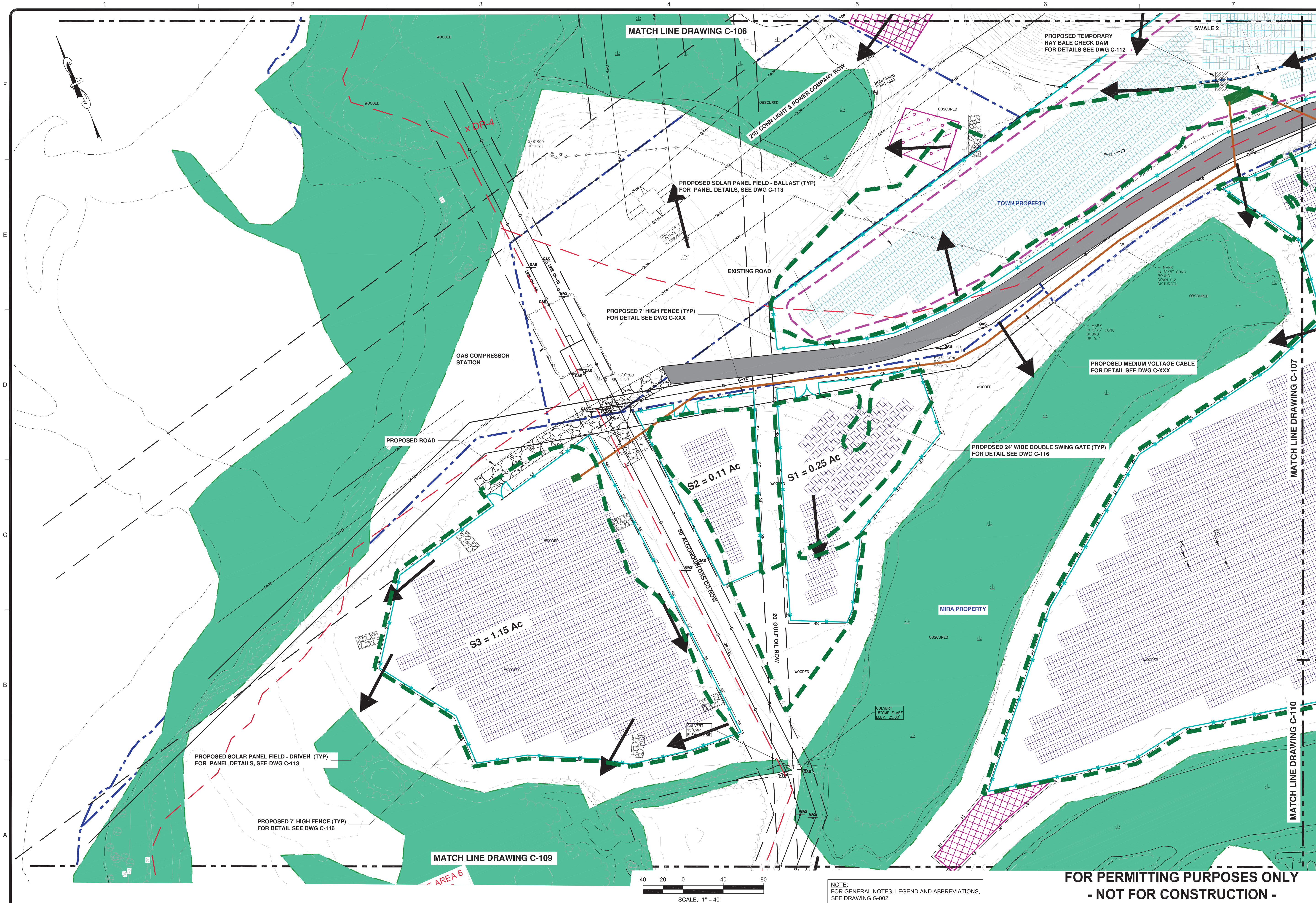

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Checked By:	JS, LG

C-108

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

1/5/2018 1:54:55 PM - D:\CAD-TEMP FILES\PROJECTS_WRE-SOLAR LEASSE AREA\WORKING\PERMIT DRAWINGS_REV A - REVISED SITE_121117\WORKING\9002-WRE_C101-C110-REV A.DWG - MENICHELLI, FOSTER

MATCH LINE DRAWING C-108

DRAINAGE AREA 6
10.25 ACRES

WOODED

GRAVEL

50' ALGONQUIN GAS CO ROW

20' GULF OIL ROW

PROPOSED SOLAR PANEL FIELD - DRIVEN (TYP)
FOR PANEL DETAILS SEE DWG C-113

Q = 2.90 Ac

MATCH LINE DRAWING C-110

DP-6

QUINNIPIAC RIVER

MIRA PROPERTY

GAS

+ MARK
IN 6"X6" CONC
BOUND
FLUSH

LSB

PROPOSED 7' HIGH FENCE (TYP)
FOR DETAIL SEE DWG C-116

ALLNEX PROPERTY

OBSCURED

LIMIT OF WETLAND DELINEATION

40 20 0 40 80
SCALE: 1" = 40'

NOTE:
FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS,
SEE DRAWING G-002.

FOR PERMITTING PURPOSES ONLY
- NOT FOR CONSTRUCTION -

TETRA TECH
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PREPARED FOR:
Wallingford Renewable Energy LLC
909 Lake Carolyn Pkwy, Suite 260
Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION
GENERAL SITE PLAN

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS, LG

C-109

CAD FILE: 9002-WRE_C101-C110-REV A.DWG

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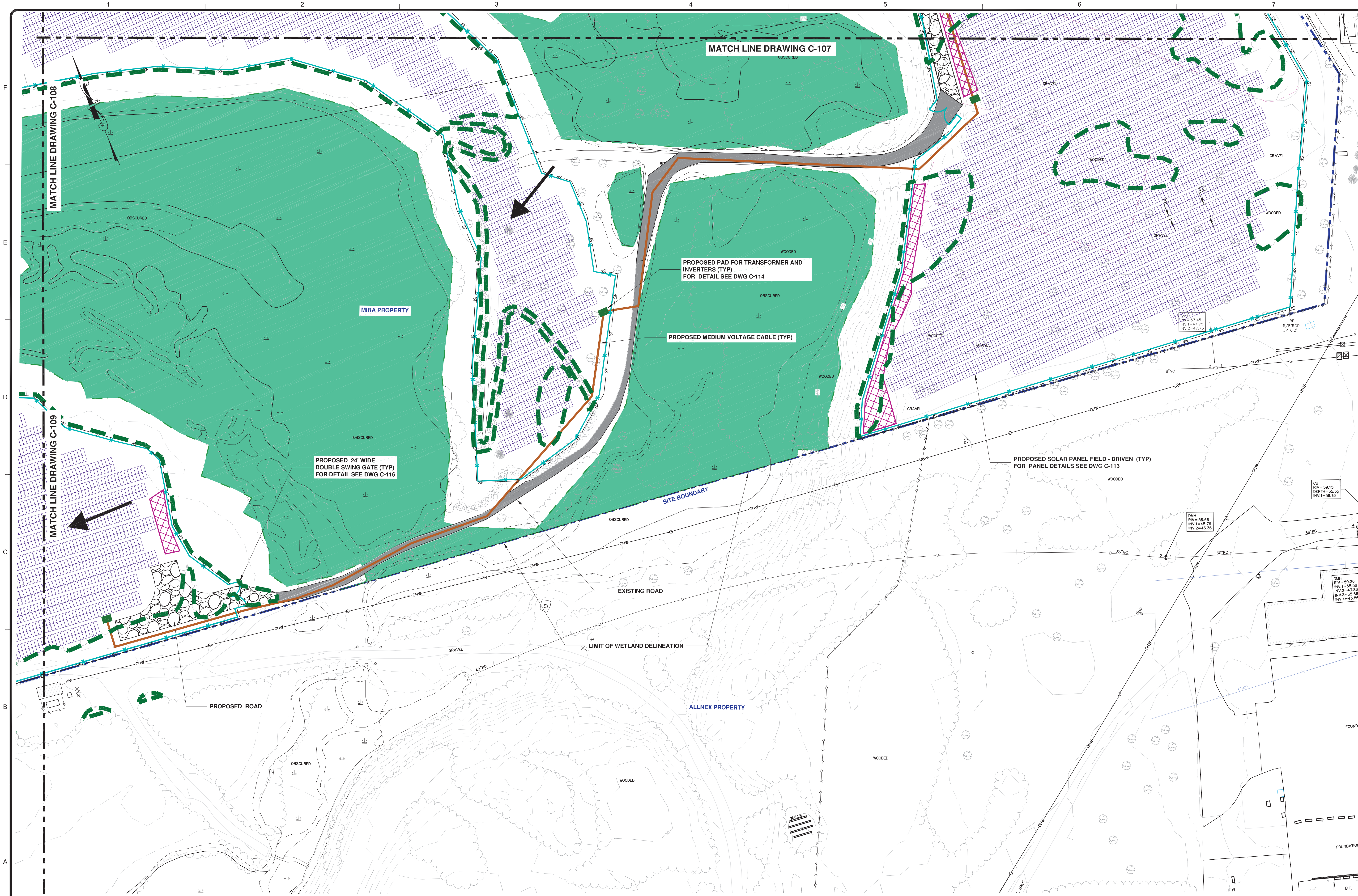

40 20 0 40 80

SCALE: 1" = 40'

NOTE:
FOR GENERAL NOTES, LEGEND AND ABBREVIATIONS, SEE DRAWING G-002.

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NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL LAYOUT CONFIGURATION GENERAL SITE PLAN

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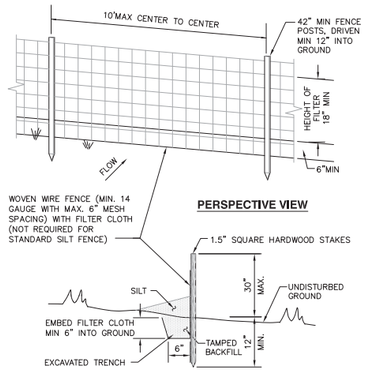


PERSPECTIVE VIEW

SECTION

NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6" MAXIMUM MESH OPENING. FILTER CLOTH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
3. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIALS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE. INSPECT SILT FENCE AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH RAINFALL OF 0.5" OR GREATER.
4. SILT FENCE SHALL BE USED WHERE EROSION COULD OCCUR IN THE FORM OF SHEET EROSION.
5. SILT FENCE SHALL NOT BE USED WHEN A CONCENTRATION OF WATER IS FLOWING TO THE BARRIER AND SOIL CONDITIONS ALLOW FOR PROPER KEYING OF FABRIC, OR OTHER ANCHORAGE, TO PREVENT BLOWOUTS. SILT FENCE NOT TO BE USED IN DRAINAGE WAYS SUPPORTED BY GROUNDWATER FLOWS.
6. THE TYPE OF SILT FENCE SHALL NOT EXCEED THE MAXIMUM SLOPE LENGTH AND WING SPACING REQUIREMENTS SHOWN IN THE FOLLOWING TABLE.

SLOPE STEEPNESS[1]	SLOPE LENGTH AND WING SPACING (FT)
5:1 OR FLATTER	100
3:1 TO 5:1	75
2:1 TO 3:1	50

1. WHERE THE GRADIENT CHANGES THROUGH THE DRAINAGE AREA THE STEEPEST SLOPE SHALL BE USED.

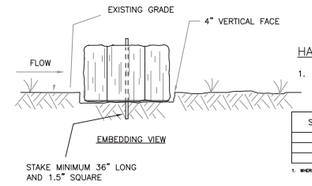
GEOTEXTILE SILT FENCE

DETAIL 1 / -

SCALE: N.T.S.

SYMBOL

—— SF ——



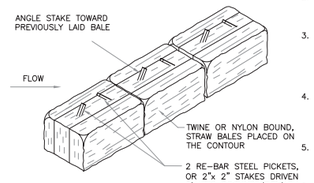
HAY BALE NOTES:

1. CONTRIBUTING DRAINAGE AREA IS LESS THAN 1 ACRE. THE LENGTH OF THE MAXIMUM CONTRIBUTING SLOPE IS:

SLOPE STEEPNESS[1]	SLOPE LENGTH AND WING SPACING (FT)
5:1 OR FLATTER	100
3:1 TO 5:1	75
2:1 TO 3:1	50

1. WHERE THE GRADIENT CHANGES THROUGH THE DRAINAGE AREA THE STEEPEST SLOPE SHALL BE USED.

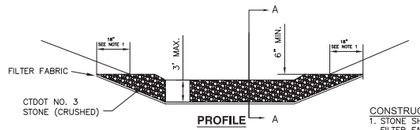
2. BALES SHALL BE MADE OF HAY OR STRAW WITH 40LBS MIN. WEIGHT AND 120LBS MAXIMUM WEIGHT.
3. THE HAY BALE BARRIER SHALL BE CONSTRUCTED SO WATER CANNOT BYPASS THE BARRIER AROUND THE ENDS AND 5'–10' DOWN GRADIENT OF TOE OF SLOPE.
4. INSPECTION SHALL OCCUR AT LEAST ONCE PER WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH GREATER THAN .5" OF PRECIPITATION.
5. THE HAY BALE BARRIER SHALL BE MAINTAINED UNTIL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
6. BALES SHALL BE PLACED IN A SINGLE ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES AND BINDNGS ORIENTED AROUND THE SIDES.
7. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES.
8. BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO STAKES OR RE–BARS DRIVEN THROUGH EACH BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER. STAKES MUST BE LAID AT LEAST 18" INTO THE GROUND.



HAY BALE

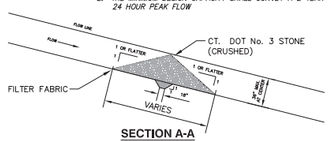
DETAIL 2 / -

SCALE: N.T.S.

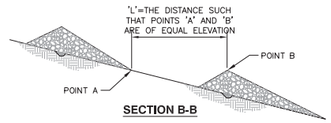


PROFILE

NOTES:
1. *KEY STONE INTO THE DITCH BANKS AND EXTEND INTO THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW FROM FLANKING THE CHECK DAM.*
2. *THE MINIMUM DESIGN CAPACITY SHALL CONVEY A 2 YEAR – 24 HOUR PEAK FLOW*



SECTION A-A



SECTION B-B

STONE CHECK DAM

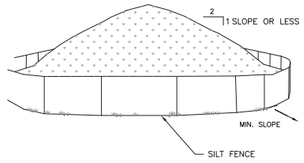
DETAIL 3 / -

SCALE: N.T.S.

SYMBOL

CONSTRUCTION SPECIFICATIONS:

1. STONE SHALL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. SET SPACING OF CHECK DAMS SUCH THAT THE ELEVATIONS OF THE DOWNSTREAM DAM ARE AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAM ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE. CHECK DAMS SHOULD BE NO MORE THAN 20 FEET ABOVE SUCH APPURTENANCES, AND NO LESS THAN 6 FEET ABOVE CULVERT INLETS.
6. FOR TEMPORARY STONE CHECK DAMS, INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH RAINFALL OF 0.5" OR GREATER.



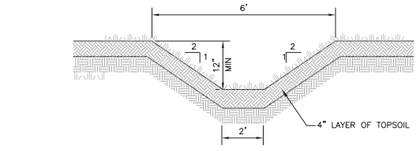
NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE. LOCATE STOCKPILE SO THAT NATURAL DRAINAGE IS NOT OBSTRUCTED.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1V:2H.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING OR HAY BALE BARRIER APPROXIMATELY 10 FEET FROM THE PROPOSED TOE OF THE SLOPE.
4. STOCKPILES NOT TO BE USED WITHIN 30 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY.
5. SEE SPECIFICATIONS FOR INSTALLATION OF SILT FENCE.
6. STOCKPILE HEIGHT SHOULD GENERALLY NOT EXCEED 20 FEET.

TEMPORARY SOIL STOCKPILE

DETAIL 4 / -

SCALE: N.T.S.



SECTION VIEW

NOTES:

1. ALL CONSTRUCTION DITCHES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. LIME TO PH OF 6.5. SWALE SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL. SEED SHALL BE PLACED EARLY SPRING TO LATE AUGUST.
3. SEED MIXTURES:

3.1. MIXTURES	RATE/ACRE (LBS)	RATE/1,000 SQ.FT. (LBS)
WHITE CLOVER	10	0.25
PERENNIAL RYE GRASS	2	0.05
TOTAL	12	0.30
OR		
SMOOTH BROMEGRASS	15	0.35
PERENNIAL RYEGRASS	5	0.10
BIRD'S–FOOT TREFOIL WITH INOCULANT	10	0.25
TOTAL	30	0.79

4. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A STORM BASIN.
5. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON–EROSIVE VELOCITY.
6. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH PROPER FUNCTIONING OF THE SWALE.
7. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
8. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
9. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF SWALE.
10. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW:

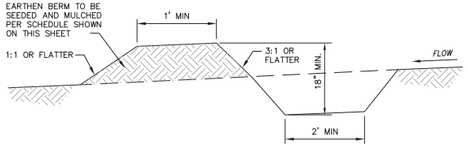
TYPE OF TREATMENT	CHANNEL GRADE	A (< 5 ACRES)	B (5 – 10 ACRES)
1	0.5–3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1 – 5.0%	SEED AND STRAW MULCH	SEED AND COVER WITH RECP, SOD OR LINE WITH PLASTIC OR 2 IN. STONE
3	5.1 – 8.0%	SEED AND COVER WITH RECP, SOD OR LINE WITH PLASTIC OR 2 IN. STONE	LINED WITH 4–8" RIP RAP OR GEOTEXTILE
4	8.1 – 10.0%	LINED WITH 4–8" RIP RAP OR GEOTEXTILE	SITE SPECIFIC DESIGN

12. INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH RAINFALL OF 0.5" OR GREATER

CONSTRUCTION DITCH

DETAIL 5 / -

SCALE: N.T.S.



NOTES:

1. ALL PERIMETER DIKE/SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A STORM BASIN.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON–EROSION VELOCITY.
4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS FOR SEED AND STRAW MULCHING, AND SHALL BE DONE WITHIN 7 CALENDAR DAYS.
6. WEEKLY AND REQUIRED MAINTENANCE MUST BE PROVIDED. INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH RAINFALL OF 0.5" OR GREATER

DIVERSION DIKE

DETAIL 6 / -

SCALE: N.T.S.

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WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

EROSION AND SEDIMENT CONTROL DETAILS

Project No.:	194-9002
Designed By:	KMT
Drawn By:	DS
Checked By:	RH

C-111

CAD FILE: 9002-WRE_C111-REV A.DWG

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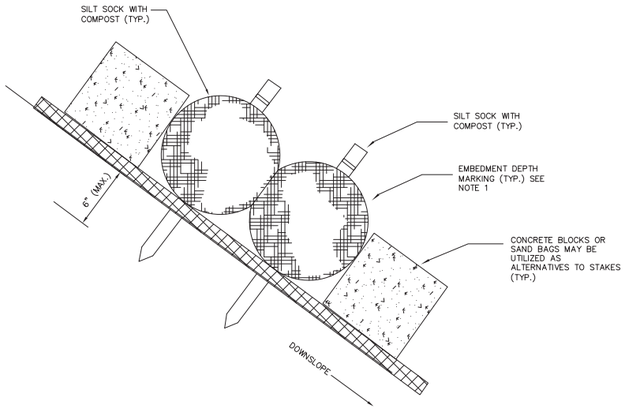


NOTES:

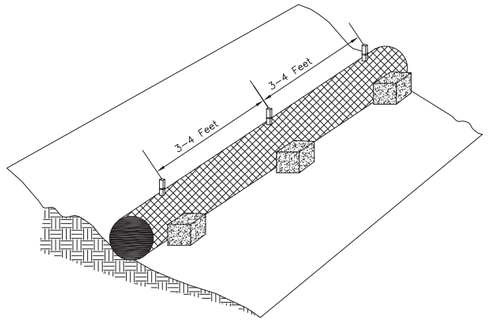
1. SILT SOCKS SHALL BE STAKED ON THE LANDFILL PROVIDED THE STAKES DO NOT EXCEED 6" INTO THE VEGETATIVE SUPPORT LAYER. STAKES SHALL BE CLEARLY MARKED 19" FROM THE TIP OF THE STAKE (6" MAX. EMBEDMENT DEPTH + 12" SOCK) AND SHALL BE CLEARLY VISIBLE.

SILT SOCK STAKE/BLOCK CROSS SECTION

DETAIL 1 / -

SCALE: N.T.S.

SYMBOL —— S ——



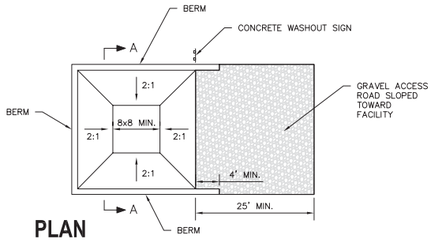
NOTES:

1. SILT SOCK TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

SILT SOCK INSTALLATION DETAIL

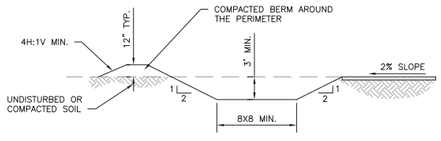
DETAIL 2 / -

SCALE: N.T.S.



PLAN

SCALE: N.T.S.



SECTION "A"

SCALE: N.T.S.

NOTES:

1. LOCATE THE FACILITY A MINIMUM OF 100 FEET FROM DRAINAGE SWALES, STORM DRAIN INLETS, WETLANDS, STREAMS AND OTHER SURFACE WATER.
2. PREVENT SURFACE WATER FROM ENTERING THE STRUCTURE EXCEPT FOR THE ACCESS ROAD.
3. PROVIDE A GRAVEL ACCESS ROAD TO FACILITY THAT IS SLOPED DOWN TO FACILITY.
4. SIGNS SHALL BE PLACED TO DIRECT DRIVERS TO THE FACILITY AFTER THEIR LOAD IS DISCHARGED.
5. ALL WASHOUT FACILITIES SHALL BE LINED TO PREVENT LEACHING OF LIQUIDS INTO THE GROUND. THE LINER SHALL BE PLASTIC SHEETING HAVING A MINIMUM THICKNESS OF 10 MILS WITH NO HOLES OR TEARS, AND ANCHORED BEYOND THE TOP OF THE PIT WITH AN EARTHEN BERM, SAND BAGS, STONE, OR OTHER STRUCTURAL APPURTENANCES EXCEPT AT THE ACCESS POINT.
6. PREFABRICATED WASHOUT FACILITIES CAN BE USED BUT THEY MUST CAPTURE AND CONTAIN CONCRETE WASH AND BE SIMILARLY SIZED AS SHOWN ABOVE AND LOCATED AS NOTED ABOVE.
7. WASH WATER IS ESTIMATED TO BE 7 GALLONS PER CHUTE AND 50 GALLONS PER HOPPER OF A PUMP TRUCK AND/OR DISCHARGING DRUM.

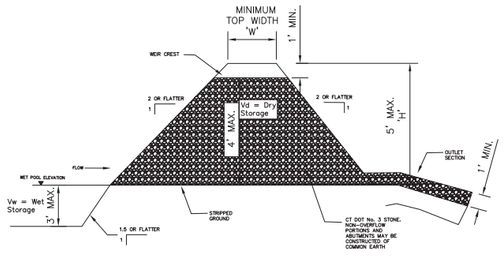
MAINTENANCE:

1. ALL FACILITIES MUST BE INSPECTED DAILY.
2. DAMAGED OR LEAKING FACILITIES SHALL BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.
3. EXCESS ACCUMULATED RAINWATER OVER HARDENED CONCRETE SHALL BE PUMPED TO A STABILIZED AREA, SUCH AS A GRASS FILTER STRIP.
4. ACCUMULATED HARDENED MATERIAL SHALL BE REMOVED WHEN 50% OF THE STORAGE CAPACITY OF THE FACILITY IS FILLED. ANY EXCESS WASH WATER SHALL BE PUMPED INTO A CONTAINMENT VESSEL AND PROPERLY DISPOSED OF OFF-SITE AT A PERMITTED C&D LANDFILL. NO ONSITE DISPOSAL WILL BE ALLOWED.
5. THE PLASTIC LINER SHALL BE REPLACED WITH EACH CLEANING OF THE FACILITY.
6. INSPECT PROJECT SITE AT LEAST ONCE PER WEEK TO ENSURE THAT NO CONCRETE DISCHARGES ARE TAKING PLACE IN NON-DESIGNATED AREAS.

CONCRETE TRUCK WASHOUT AREA

DETAIL 4 / -

SCALE: N.T.S.



NOTES:

1. WEEKLY AND REQUIRED MAINTENANCE MUST BE PROVIDED. INSPECT AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH RAINFALL OF 0.5" OR GREATER.
2. DETERMINE THE TOP WIDTH VS. HEIGHT (AS DISPLAYED IN THE DIAGRAM ABOVE) BY USING THE TABLE AT THE RIGHT.
3. FOR USE BELOW DISTURBED AREAS OF LESS THAN 5 ACRES AND LESS THAN 2 YEARS. TRAPS SHOULD BE CONSTRUCTED PRIOR TO GRADING ACTIVITIES.
4. CONTRACTOR SHOULD ATTEMPT, WHEN POSSIBLE, TO PROVIDE A WATER STORAGE AREA WITH A MINIMUM 2:1 LENGTH TO WIDTH RATIO (AS MEASURED FROM THE POINT OF MAXIMUM RUNOFF INTRODUCTION).
5. OUTLET FROM THE TRAP SHOULD BE CONSTRUCTED SO THAT THERE IS 1 FOOT OF FREE BOARD BETWEEN THE TOP OF THE OUTLET AND THE CREST OF THE EMBANKMENT. THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIP RAP, FACED ON THE UPSTREAM SIDE WITH CT DOT No. 3 STONE. THE TRAP MUST OUTLET ONTO STABILIZED GROUND, A WATERCOURSE, A STABILIZED CHANNEL, OR A STORM DRAIN.

TOP WIDTH VERSUS HEIGHT TABLE

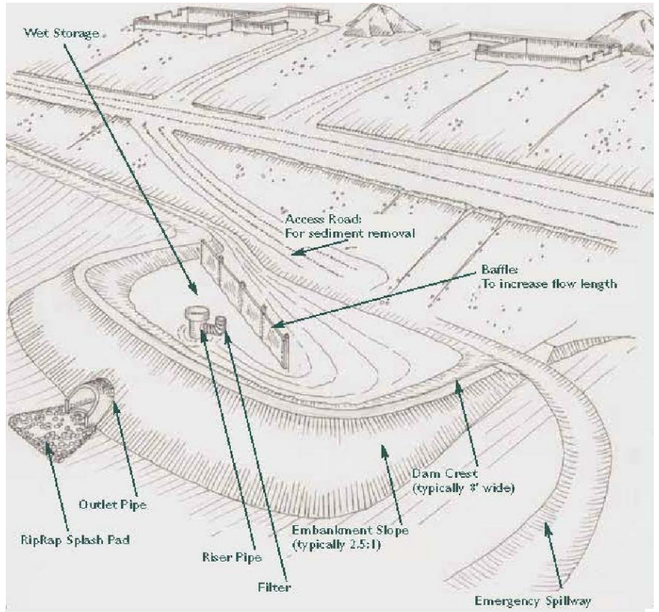
H (FT)	W (FT)
1.5 FT	2.0 FT
2.0 FT	2.0 FT
2.5 FT	2.5 FT
3.0 FT	2.5 FT
3.5 FT	3.0 FT
4.0 FT	3.0 FT
4.5 FT	4.0 FT
5.0 FT	4.5 FT

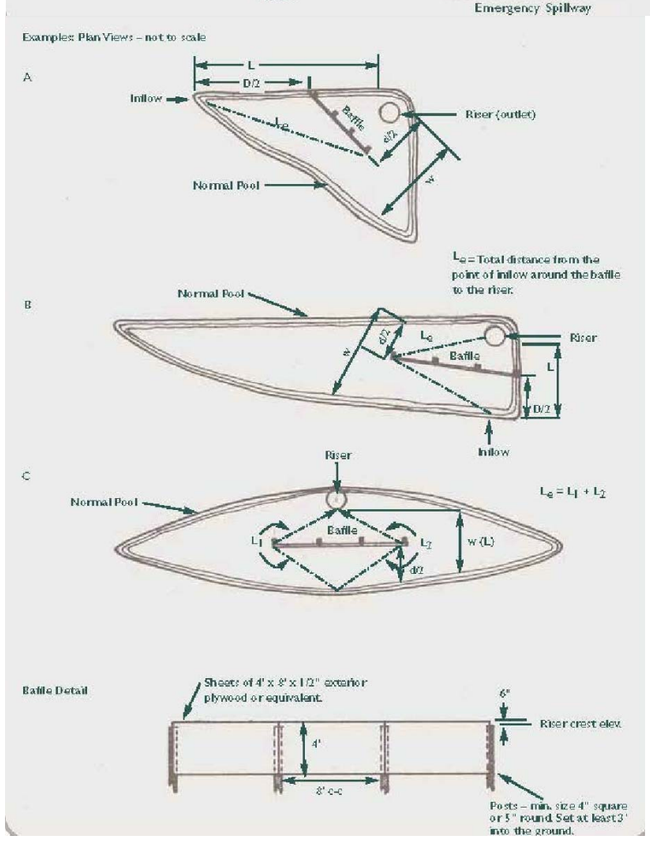
TEMPORARY SEDIMENT TRAP

DETAIL 3 / -

SCALE: N.T.S.

SYMBOL





SYMBOL

TEMPORARY SEDIMENT BASIN DETAIL

DETAIL 5 / -

SCALE: N.T.S.

Table 1

Summary of Drainage Areas and Proposed Erosion and Sediment Control Features

Panel Area ID	Acreage	Erosion Control Measure(s)
A	4.39	Temp. Sediment Trap
BB	5.47	Temp. Sediment Basin
P	4.48	Temp. Sediment Trap
Q	2.90	Temp. Sediment Trap
S1	0.25	Haybales and/or silt fence
S2	0.11	Haybales and/or silt fence
S3	1.15	Stone Check Dam, Haybales
Y1	1.18	Stone Check Dam, Haybales
Y2	2.28	Temp. Sediment Trap
Z1	1.65	Stone Check Dam, Haybales
Z2	4.82	Temp. Sediment Trap
Z3	4.33	Temp. Sediment Trap
Z4	0.08	Haybales and/or silt fence
Z5	0.08	Haybales and/or silt fence
Z6	2.57	Temp. Sediment Trap

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Phone: (617) 443-7500 Fax: (617) 737-3480

PREPARED FOR:
Wallingford Renewable Energy LLC
909 Lake Carolyn Pkwy, Suite 260
Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

EROSION AND SEDIMENT CONTROL DETAILS

Project No.:	194-9002
Designed By:	KMT
Drawn By:	DS
Checked By:	RH

C-112

CAD FILE: 9002-WRE_C112-REV A.DWG

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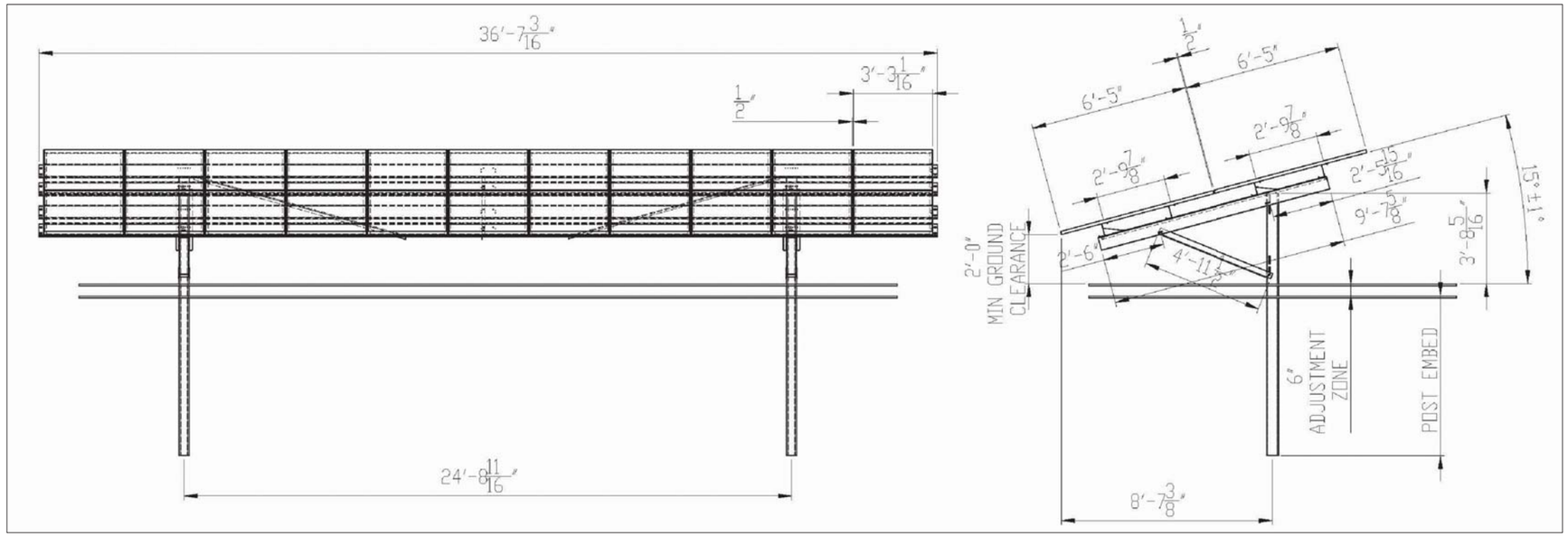

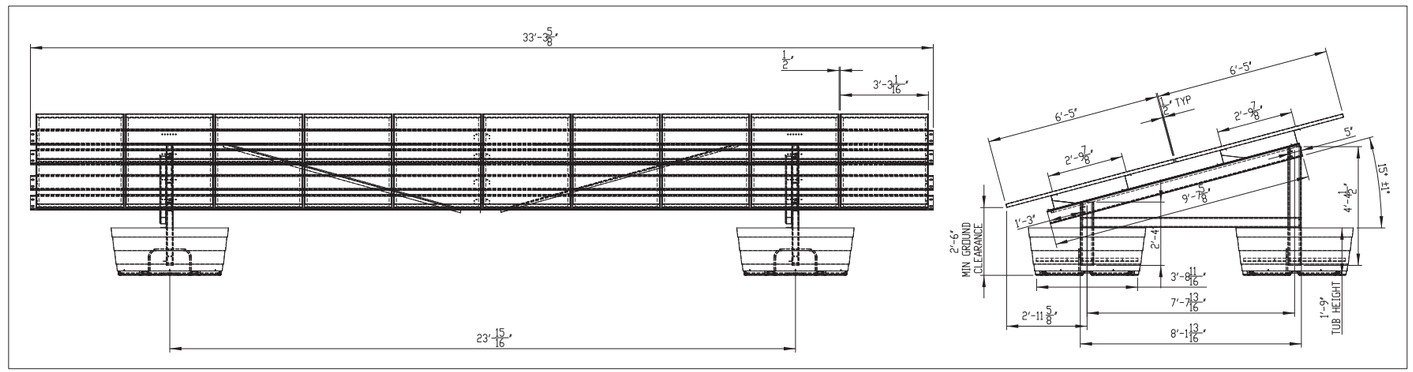

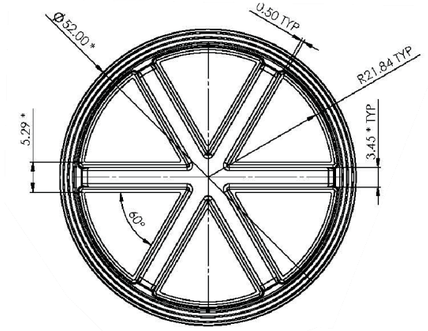

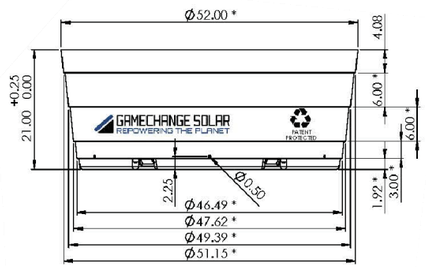

Notes:
1) Cut Lengths are measured from the bottom of the tub; lengths may be specified in 1 inch increments
2) Unspecified feature dimensions shall be per model file; reference solid model for additional part geometry
3) Part thickness shall be 0.08"
4) Tolerances for all dimensions with * are +/- 3/16"

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Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

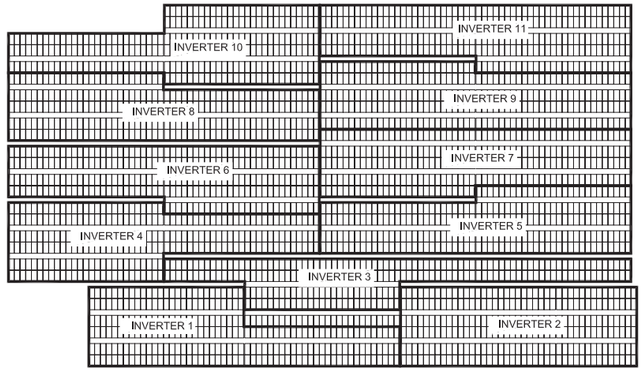
WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL DETAILS
TYPICAL EXTERIOR
RACKING STRUCTURE

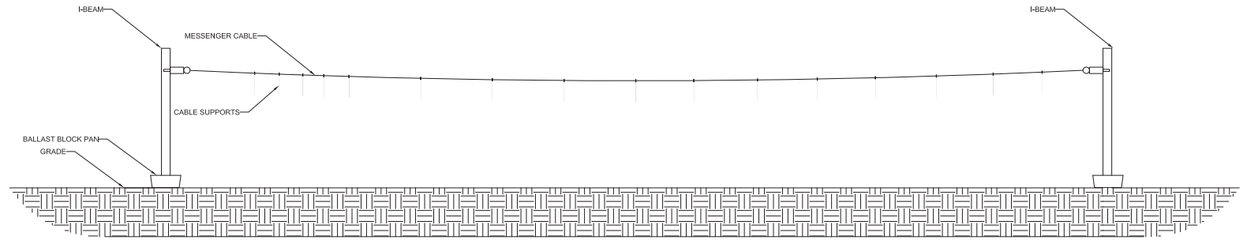
Project No.:	194-9002
Designed By:	JS
Drawn By:	FGM
Checked By:	JS

C-113

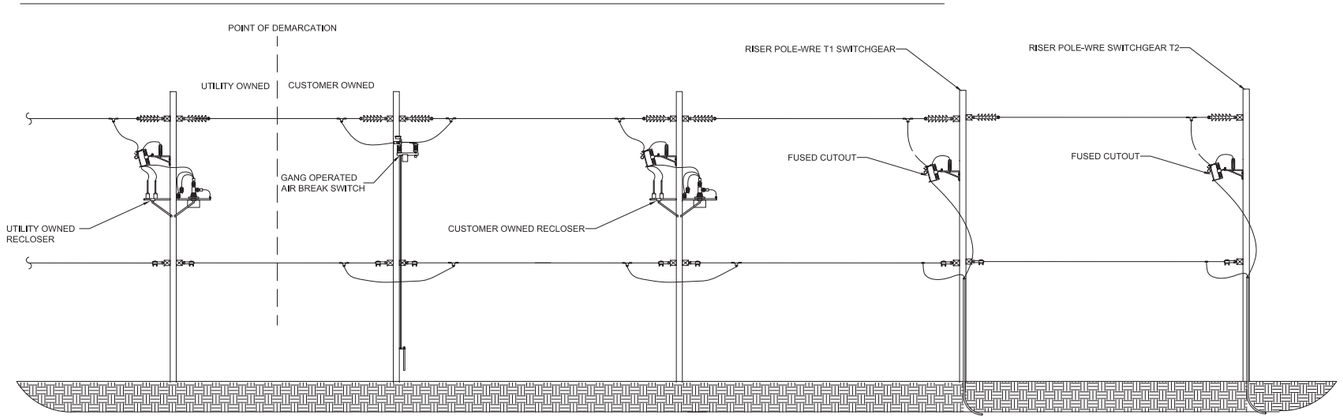
CAD FILE: 9002-WRE_C113-REV A.DWG



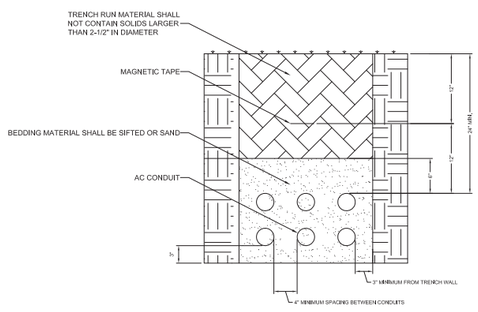
1 — TYPICAL TRANSFORMER/INVERTER BLOCK
SCALE: NTS



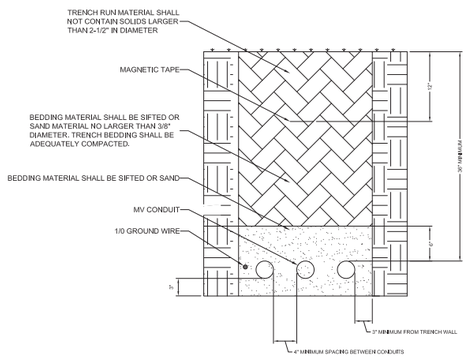
5 — MESSENGER CABLE DETAIL
SCALE: NTS



2 — RISER POLE INTERCONNECTION ELEVATION - INTERSECTION OF PARK STREET AND PENT ROAD CONNECTION
SCALE: NTS



3 — TYPICAL AC TRENCH - MULTIPLE CONDUITS
SCALE: NTS



4 — TYPICAL MEDIUM VOLTAGE AC TRENCH
SCALE: NTS

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Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL ELECTRICAL DETAILS

Project No.:	194-9002
Designed By:	JS
Drawn By:	FGM
Checked By:	JS

C-114

CAD FILE: 9002-WRE_C114-REV A.DWG

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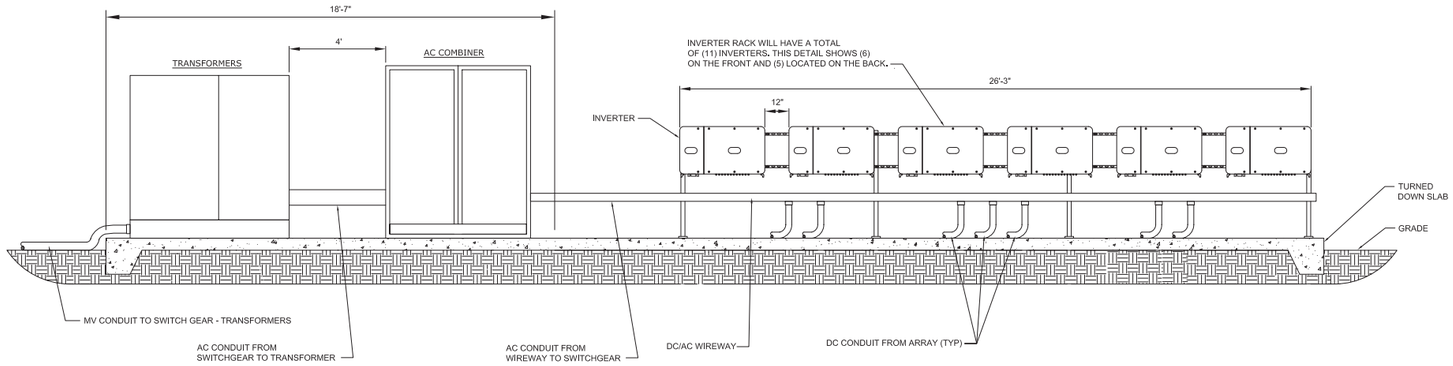
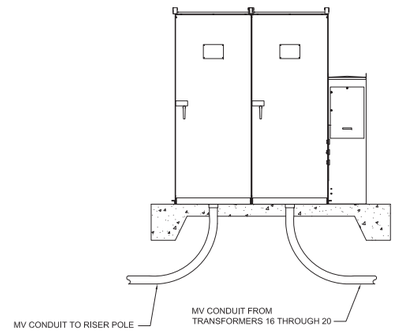


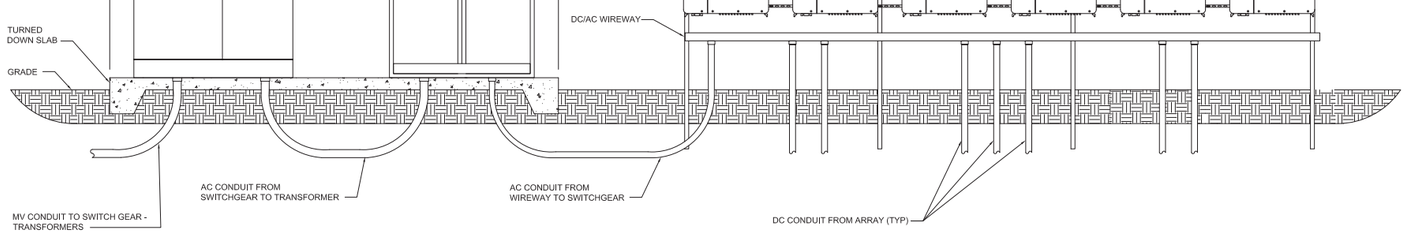
1 / - INVERTER AREA EQUIPMENT ELEVATIONS ON LANDFILL AREAS

SCALE: NTS



2 / - MEDIUM VOLTAGE SWITCHGEAR WRE P - TRANSFORMERS

SCALE: NTS



3 / - INVERTER AREA EQUIPMENT ELEVATIONS ON DRIVEN PILES

SCALE: NTS

NOTES:

1. THE MODULES ARE ANTICIPATED TO BE 390-WATT CRYSTALLINE PV DESIGN, WITH 1,500-VOLT SERIES STRINGS OF UP TO 54 MODULES PER RACK GROUPED TOGETHER AS 4 OR 5 RACKS PER STRING INVERTER.
2. FOUR OR FIVE RACKS CONSISTING OF UP TO 27 SOLAR PANEL MODULES EACH WILL BE WIRED TO A THREE-PHASE STRING INVERTER STRING.
3. INVERTERS WILL BE MOUNTED TO THE RACKING OR AT THE END OF ROWS WITHIN THE ARRAYS, AND 11 INVERTER GROUPINGS WILL BE CONNECTED TO ONE TRANSFORMER TO DEFINE A TYPICAL INVERTER/TRANSFORMER BLOCK.

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Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

SOLAR PANEL
TRANSFORMER AND INVERTERS
ELECTRICAL DETAILS

Project No.:	194-9002
Designed By:	JS
Drawn By:	FGM
Checked By:	JS

C-115

CAD FILE: 9002-WRE_C115-REV A.DWG

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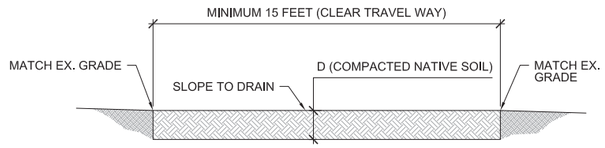
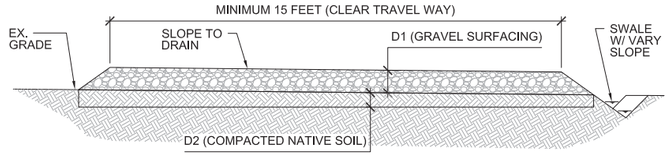
DETAIL NOTE:
1. SCARIFY AND RE-COMPACT NATIVE MATERIAL.
2. DEPTH T.B.D. BASED ON MATERIAL STRENGTH



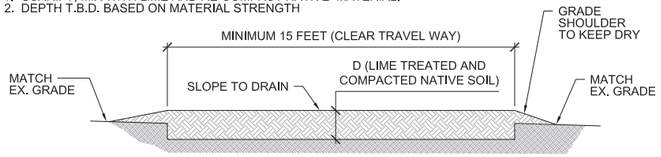
1 - LOW PLASTICITY SOIL ACCESS ROAD
SCALE: NTS

DETAIL NOTE:
1. SCARIFY AND RE-COMPACT NATIVE MATERIAL.
2. DEPTH T.B.D. BASED ON MATERIAL STRENGTH
3. SWALE TO BE DESIGNED BY A NEW YORK STATE PROFESSIONAL ENGINEER AND APPROVED PRIOR CONSTRUCTION OF ROAD.



2 - MODERATE SOIL ACCESS ROAD
SCALE: NTS

DETAIL NOTE:
1. SCARIFY, MIX WITH LIME AND RE-COMPACT NATIVE MATERIAL.
2. DEPTH T.B.D. BASED ON MATERIAL STRENGTH



3 - LIME TREATED ACCESS ROAD
SCALE: NTS

SOIL TYPES

TYPE I: MEDIUM DENSE TO DENSE COARSE MEDIUM GRANULAR SOIL WITHOUT PLASTICITY (CBR>10)

TYPE II: MEDIUM DENSE TO LOOSE GRANULAR SOIL OR STIFF COHESIVE SOIL. LOW PLASTICITY TO MEDIUM PLASTICITY (3<CBR≤10)

TYPE III: FIRM TO SOFT COHESIVE SOIL WITH HIGH PLASTICITY (CBR≤10)

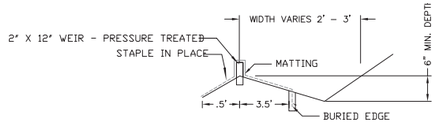
TYPE IV: BEDROCK

	THICKNESS	
SOIL TYPE	EXPOSURE SUB GRADE TO SCARIFY	AGGREGATE SURFACE ROAD THICKNESS
TYPE I	0'-6"	0'-10 1/2"
TYPE II	0'-10"	1'-0"
TYPE III	1'-4" - (*)	1'-4 1/2"
TYPE IV	0'-6" (*)(*)	0'-10 1/2"

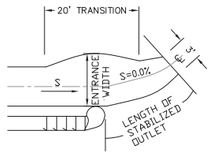
(*) THAT DEEP MUST BE REFILLED WITH COARSE-MEDIUM GRAVEL OR CRUSHED MATERIAL
(*) (*) REMOVE ROCK TO A POINT 6" BELOW SUBBASE LEVEL FOR ENTIRE ROADWAY REGULARIZE THE CUT BOTTOM

NOTES:

1. DETAILS SHOWN ARE CONCEPTUAL ONLY. FINAL LOCATION AND DIMENSIONS OF ROADS AND ASSOCIATED ITEMS SHALL BE DESIGNED BY A CONNECTICUT STATE PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION AND BE IN ACCORDANCE WITH ALL LOCAL AND STATE STANDARDS.



SECTION



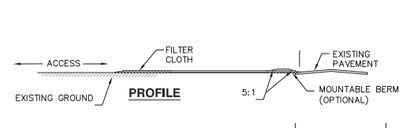
PLAN VIEW

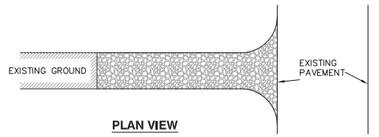
DESIGN FLOW, Q_{10} (CFS)	DEPTH (FT)	WIDTH OF LOWER SIDE SLOPE OF SPREADER (FT)	LENGTH (FT)
0-10	0.5	6	10
10-20	0.6	6	20

CONSTRUCTION SPECIFICATIONS

1. THE MATTING SHOULD BE A MINIMUM OF 4 FEET WIDE EXTENDING 6 INCHES OVER THE LIP AND BURIED 6 INCHES DEEP IN A VERTICAL TRENCH ON THE LOWER EDGE. THE UPPER EDGE SHOULD BUTT AGAINST SMOOTHLY CUT SOD AND BE SECURELY HELD IN PLACE WITH CLOSELY SPACED HEAVY DUTY WIRE STAPLES AT LEAST 12 INCHES IN LENGTH.
2. ENSURE THAT THE LIP IS LEVEL TO UNIFORMLY SPREAD DISCHARGE.
3. THE LIP SHALL BE CONSTRUCTED ON UNDISTURBED SOIL NOT FILL.
4. A 20 FOOT TRANSITION SECTION WILL BE CONSTRUCTED FROM THE DIVERSION CHANNEL TO THE SPREADER TO SMOOTHLY BLEND THE DIFFERENT DIMENSION AND GRADES.
5. THE RUNOFF DISCHARGE SHALL OUTLET ONTO A STABILIZED VEGETATED SLOPE NOT EXCEEDING 5%.
6. SEED AND MULCH THE DISTURBED AREA IMMEDIATELY AFTER CONSTRUCTION.

4 - LEVEL SPREADER DETAIL
SCALE: NTS



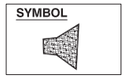


PLAN VIEW

CONSTRUCTION ENTRANCE SPECIFICATIONS:

1. STONE SIZE – CTDOT NO. 3 OR ASTM C-33 NO. 2 OR ASTM C-33 NO. 3.
2. THICKNESS – NOT LESS THAN SIX (6) INCHES.
3. WIDTH – SIXTEEN (16) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
4. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50', WHERE SOILS SUBJECT TO TRACKING CONTAIN LESS THAN 80% SAND, MINIMUM LENGTH SHALL BE 100'.
5. GEOTEXTILE – FIBERS USED IN GEOTEXTILES SHALL CONSIST OF SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85% BY WEIGH POLYPROPYLENES, POLYESTERS, POLYAMIDES, POLYETHYENE, POLYOLEFINS OR POLYVINYLIDENE-CHLORIDES AND SHALL BE SPECIFICALLY INTENDED FOR ROAD STABILIZATION APPLICATIONS.
6. LOCATION – AVOID INSTALLING CONSTRUCTION ENTRANCE ON ORGANIC OR POORLY DRAINED SOILS.
7. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES WILL BE PERMITTED. IF THE GRADE OF THE CONSTRUCTION ENTRANCE EXCEEDS 2% AND IT DRAINS TO THE PAVED SURFACE, CONSTRUCT A WATER BAR AT LEAST 15FT FROM THE ENTRANCE TO DIVERT RUNOFF WATER TO A SETTLING OR FILTERING AREA.
8. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAYS MUST BE REMOVED IMMEDIATELY.
9. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAYS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE THAT CAN HOLD AT LEAST 2 HOURS USAGE WORTH OF WATER.
10. WEEKLY INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

SYMBOL



5 - CONSTRUCTION ENTRANCE DETAIL
SCALE: NTS

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909 Lake Carolyn Pkwy, Suite 260
Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

CIVIL CONSTRUCTIONS DETAILS

Project No.:	194-9002
Designed By:	JS, KMT
Drawn By:	FGM, DS
Checked By:	JS

C-116

CAD FILE: 9002-WRE_C116-REV A.DWG

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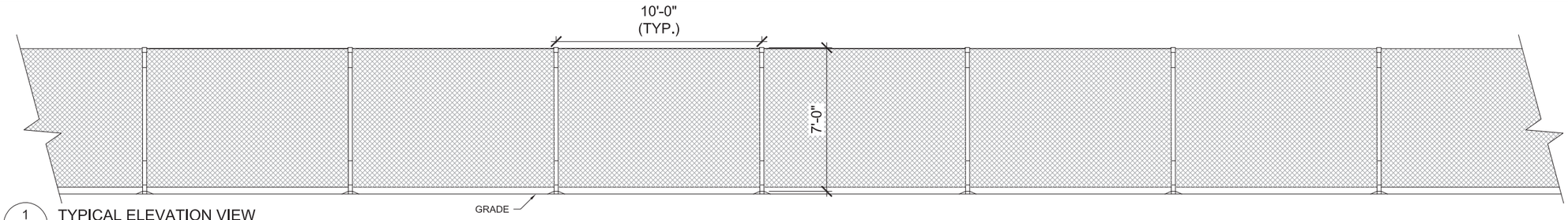
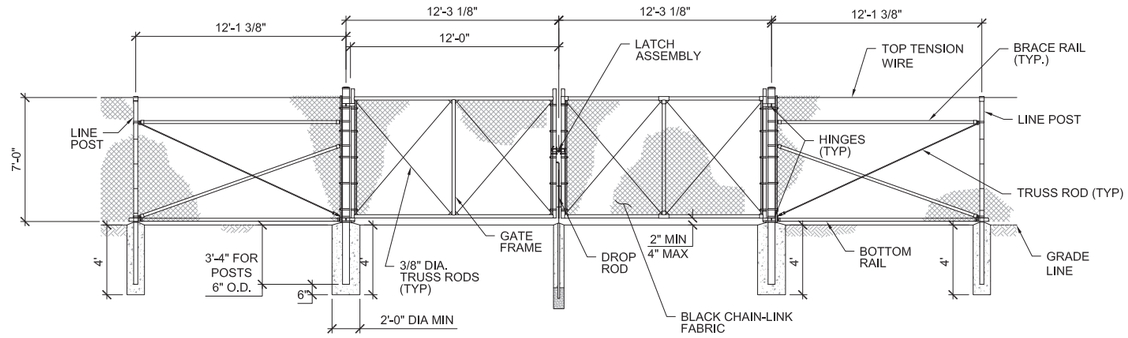
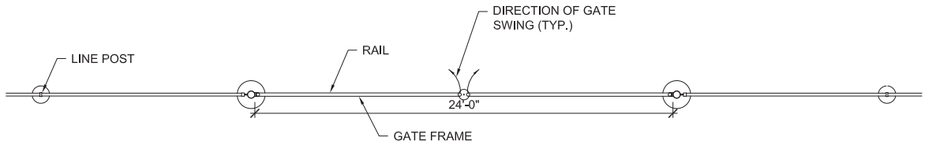


1 / - TYPICAL ELEVATION VIEW
SCALE: 3/8" = 1'-0"

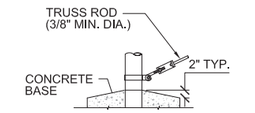


ELEVATION

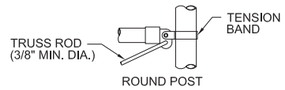


PLAN

2 / - TYPICAL ACCESS GATE
SCALE: 1/4" = 1'-0"



TRUSS ROD AND BAND



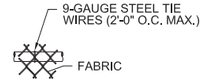
ROUND POST

H-BEAM

BRACE RAIL CLAMP DETAILS

TENSION BAND DETAIL

END OR GATE POST DETAIL

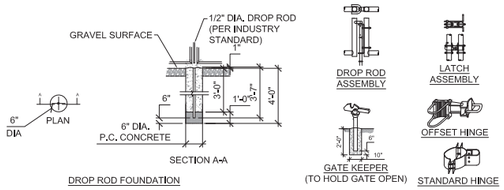


BOTTOM OR BRACE RAIL ATTACHMENT

ROUND POST ATTACHMENT

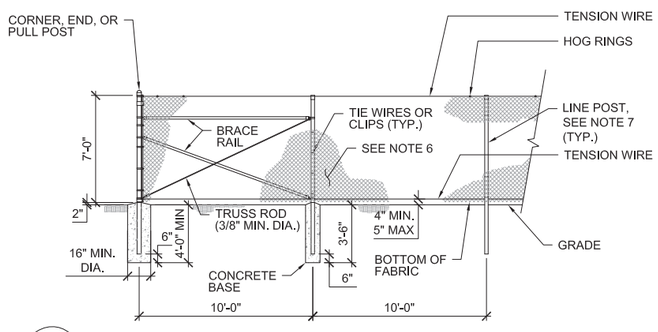
H-BEAM ATTACHMENT

3 / - CHAINLINK FENCE FASTENING DETAIL
SCALE: NTS



DROP ROD FOUNDATION

4 / - ACCESS GATE DETAILS
SCALE: NTS



5 / - PERIMETER FENCE - ELEVATION
SCALE: 1/4" = 1'-0"

SOIL TYPE	EMBEDMENT DEPTH (FT)		
	WIND SPEED (MPH)		
	90	105	120
SOFT CLAY	5.5	6	6.5
STIFF CLAY	4.5	5	5.5
VERY STILL CLAY	4	4.5	5
HARD CLAY	3.5	4	4.5
LOOSE SAND	6	6.5	7
Medium Dense Sand	5.5	6	6.5
Dense Sand	5	6	6.5

SHEET NOTES

1. WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. PLACE CHAIN-LINK FABRIC ON THE OPPOSITE SIDE OF THE SECURE AREA.
2. CONSTRUCT SWING GATES WITH DROP RODS, PADLOCKS, LATCH ASSEMBLY, AND GATE KEEPERS EXCEPT AS NOTED.
3. ALL GATE FRAMES SHALL BE ACCORDING TO STEEL POST SCHEDULE. GATE FRAMES SHALL BE OF WELDED CONSTRUCTION OR SHALL BE ASSEMBLED USING HEAVY FITTINGS. AT THE CONTRACTOR'S OPTION A WELDED HORIZONTAL BRACE MAY BE USED IN LIEU OF TRUSS RODS TO BRACE ALL WELDED GATE FRAMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER RIGID CONSTRUCTION OF ALL GATES SUPPLIED.
4. GATES SHALL BE DESIGNATED AS FOLLOWS:
   - FENCE TYPE - FE5, FE6, ETC.
   - FABRIC WIDTH - INCHES
   - TYPE OPENING - SO (SINGLE) - DO (DOUBLE)
   - HINGE - RA (STANDARD) - HO (OFFSET)
   - OPENING - INCHES (CLEAR OPENING BETWEEN GATE POSTS)
   - EXAMPLES: FE6-120-DO-RA-144, FE5-120-SO-HO-144
6. BLACK COATED CHAIN-LINK FENCE FABRIC SHALL BE 11 GAUGE WITH 2" OPENINGS.
7. LINE POSTS SHALL BE 10 FEET LONG 1-7/8" SCHEDULE 40 GRADE 50 PIPE DIRECTLY DRIVEN 4 FEET INTO NATIVE SOIL.
8. SLATS NOT PERMITTED WITHOUT EOR APPROVAL AND SIGN-OFF.

STEEL POST SCHEDULE	
USE AND SECTION	MINIMUN OUTSIDE DIMMENSIONS
CORNER-END AND PULL POSTS (TUBULAR ROUNDS)	0'-2 3/8"
LINE POST (TUBULAR) ROUND	0'-1 7/8"

FOR PERMITTING PURPOSES ONLY - NOT FOR CONSTRUCTION -

TETRA TECH
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Boston, MA 02110
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PREPARED FOR:
Wallingford Renewable Energy LLC
909 Lake Carolyn Pkwy, Suite 260
Irving, Texas 75039

MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

FENCE AND GATE DETAILS

Project No.:	194-9002
Designed By:	JS, RH
Drawn By:	FGM, DS
Checked By:	JS

C-117

CAD FILE: 9002-WRE_C117-REV A.DWG

1/5/2018 2:34:54 PM - D:\CAD-TEMP FILES\PROJECTS_WRE-SOLAR LEASSE AREA\WORKING\PERMIT DRAWINGS_REV A - REVISED SITE_121117\WORKING\9002-WRE_C117-REV A.DWG - MENCHELLI, FOSTER

EARTHWORK

PRODUCTS:

SOIL MATERIALS: PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS. SATISFACTORY SOILS: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM, OR A COMBINATION OF THESE GROUP SYMBOLS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION, AND OTHER DELETERIOUS MATTER. UNSATISFACTORY SOILS: ASTM D 2487 SOIL CLASSIFICATION GROUPS GC, SC, ML, MH, CL, CH, OL, OH, AND PT, OR A COMBINATION OF THESE GROUP SYMBOLS.

STRUCTURAL FILL: SATISFACTORY SOIL MATERIALS.

UNCLASSIFIED FILL: SATISFACTORY SOIL MATERIALS.

BACKFILL AND FILL: SATISFACTORY SOIL MATERIALS.

SUBBASE MATERIAL: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; WITH AT LEAST 90 PERCENT PASSING A 1–1/2–INCH SIEVE AND NOT MORE THAN 12 PERCENT PASSING A NO. 200 SIEVE.

BEDDING: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D 2940; EXCEPT WITH 100 PERCENT PASSING A 1–INCH SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE.

PEA–GRAVEL: 1/4–INCH CLEAN WASHED GRAVEL (PEA–GRAVEL) WITH LESS THAN 10% FINES (PASSING #200 SIEVE)

COARSE SAND: NATURALLY OR ARTIFICIALLY GRADED IN MIXTURE OF NATURAL OR CRUSHED SAND WITH A MINIMUM PERMEABILITY OF 0.3 CM/SEC AND LESS THAN 5% BY WEIGHT PASSING THE NO. 200 SIEVE.

GEOTEXTILE: PRODUCTS AS NOTES ON THE DETAILS

INSTALLATION:

PREPARATION: PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EARTHWORK OPERATIONS.

EXCAVATE FOR STRUCTURES, PAVEMENTS, AND WALKS TO INDICATED ELEVATIONS AND DIMENSIONS. EXTEND EXCAVATIONS FOR PLACING AND REMOVING CONCRETE FORMWORK, FOR INSTALLING SERVICES AND OTHER CONSTRUCTION, AND FOR INSPECTIONS. TRIM BOTTOMS TO REQUIRED LINES AND GRADES TO LEAVE SOLID BASE TO RECEIVE OTHER WORK.

EXCAVATE UTILITY TRENCHES TO INDICATED GRADIENTS, LINES, DEPTHS, AND INVERT ELEVATIONS OF UNIFORM WIDTHS TO PROVIDE A WORKING CLEARANCE ON EACH SIDE OF PIPE OR CONDUIT. EXCAVATE TRENCH WALLS VERTICALLY FROM TRENCH BOTTOM TO 12 INCHES HIGHER THAN TOP OF PIPE OR CONDUIT. EXCAVATE TRENCHES DEEPER THAN BOTTOM OF PIPE ELEVATION, 6 INCHES DEEPER IN ROCK, 4 INCHES DEEPER ELSEWHERE, TO ALLOW FOR BEDDING COURSE. HAND EXCAVATE FOR BELL OF PIPE. TRENCH WALLS SHALL BE SHORED OR SLOPED IN ACCORDANCE WITH OSHA REGULATIONS.

PROOF ROLL SUBGRADES, BEFORE FILLING OR PLACING AGGREGATE COURSES, WITH HEAVY PNEUMATIC–TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF ROLL WET OR SATURATED SUBGRADES. ALL TOPSOIL AND/OR ORGANIC MATERIAL SHALL BE REMOVED FROM AREAS TO RECEIVE FILL.

RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES. BACKFILL AND FILL SHALL NOT BE PLACED ON FROZEN MATERIAL.

FILL UNAUTHORIZED EXCAVATION UNDER FOUNDATIONS OR WALL FOOTINGS BY EXTENDING BOTTOM ELEVATION OF CONCRETE FOUNDATION OR FOOTING TO EXCAVATION BOTTOM, WITHOUT ALTERING TOP ELEVATION. LEAN CONCRETE FILL MAY BE USED WHEN APPROVED BY ENGINEER. FILL UNAUTHORIZED EXCAVATIONS UNDER OTHER CONSTRUCTION OR UTILITY PIPE AS DIRECTED BY ARCHITECT.

UTILITY TRENCH BACKFILL: PLACE, COMPACT, AND SHAPE BEDDING COURSE TO PROVIDE CONTINUOUS SUPPORT FOR PIPES AND CONDUITS OVER ROCK AND OTHER UNYIELDING BEARING SURFACES AND TO FILL UNAUTHORIZED EXCAVATIONS.

PLACE AND COMPACT INITIAL BACKFILL OF SATISFACTORY SOIL MATERIAL OR SUBBASE MATERIAL, FREE OF PARTICLES LARGER THAN 1.5 INCH, TO A HEIGHT OF 12 INCHES OVER THE UTILITY PIPE OR CONDUIT. PLACE AND COMPACT FINAL BACKFILL OF SATISFACTORY SOIL MATERIAL TO FINAL SUBGRADE.

FILL: PLACE AND COMPACT FILL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS.

COMPACTION: PLACE BACKFILL, STRUCTURAL FILL AND UNCLASSIFIED FILL MATERIALS IN LAYERS NOT MORE THAN 12 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND–OPERATED TAMPERS. COMPACT SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGE OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698: BACKFILL: EACH LAYER SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY.

STANDARD FILL: SCARIFY AND RECOMPACT THE TOP 12 INCHES OF EXISTING SUBGRADE AND EACH LAYER OF FILL MATERIAL AT 95% MAXIMUM DRY DENSITY.

UNCLASSIFIED FILL: SCARIFY AND RECOMPACT THE TOP 12 INCHES OF EXISTING SUBGRADE AND EACH LAYER OF FILL MATERIAL AT 90% MAXIMUM DRY DENSITY.

GRADING: UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE FROM IRREGULAR SURFACE CHANGES. COMPLY WITH COMPACTION REQUIREMENTS AND GRADE TO CROSS SECTIONS, LINES, AND ELEVATIONS INDICATED. GRADE LAWNS, WALKS, AND UNPAVED SUBGRADES TO TOLERANCES OF PLUS OR MINUS 1 INCH AND PAVEMENTS AND AREAS WITHIN BUILDING LINES TO PLUS OR MINUS 1/2 INCH.

SUBBASE AND BASE COURSES: UNDER PAVEMENTS AND WALKS, PLACE SUBBASE COURSE ON PREPARED SUBGRADE. PLACE BASE COURSE MATERIAL OVER SUBBASE. COMPACT TO REQUIRED GRADES, LINES, CROSS SECTIONS, AND THICKNESS TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698.

GEOTEXTILE: SEE PLANS / DETAILS FOR SPECIFIC PRODUCT REQUIREMENTS.

SITE CONCRETE:

THE WORK COVERED BY THIS SPECIFICATION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIALS, PERMITS, AND RELATED MISCELLANEOUS WORK NECESSARY TO COMPLETE THE WORK AS SPECIFIED HEREIN OR AS SHOWN ON THE DRAWINGS. THE CONCRETE WORK UNDER THIS SPECIFICATION SHALL INCLUDE ALL CLEARING AND GRUBBING, PREPARATION OF SUBGRADE, FURNISHING AND PLACING CONCRETE, SHOULDERING, AND CONSTRUCTION OF FILLS AND EMBANKMENTS, UNLESS SUCH ITEMS APPEAR OF THE PROPOSAL TO BE BID SEPARATELY. IT IS THE INTENT OF THESE SPECIFICATIONS THAT A SUB–GRADE OF UNIFORM STABILITY BE OBTAINED BY A SUITABLE CONSTRUCTION METHOD FOR PLACEMENT OF CONCRETE.

PRODUCTS:

WATER: WATER FOR CONCRETE CONSTRUCTION SHALL BE CLEAN AND FREE OF OIL, ACIDS, SALTS, OR OTHER DELETERIOUS MATERIALS.

PORTLAND CEMENT: PORTLAND CEMENT SHALL CONFORM TO ASTM STANDARD SPECIFICATIONS C 150 TYPE I OR TYPE1A LATEST EDITION. HIGH–EARLY STRENGTH PORTLAND SHALL CONFORM TO ASTM STANDARD SPECIFICATION S C 150 TYPE III OR TYPE IIIA. ALL CEMENT POURED UNDER EXTREME HEAT CONDITIONS SHALL USE ASTM STANDARD SPECIFICATIONS C–150 TYPE II.

CONCRETE: UNLESS OTHERWISE NOTES THE CONCRETE MIX SHALL BE CAPABLE OF ACHIEVING A 28–DAY STRENGTH OF 4000 PSI AT 28 DAYS. MIX DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. **AIR–ENTRAINED CONCRETE ONLY. THE AIR CONTENT OF THE CONCRETE SHALL BE 6% PLUS OR MINUS 1% BY VOLUME BASED ON MEASUREMENTS MADE ON CONCRETE IMMEDIATELY AFTER DISCHARGE FROM THE MIXER IN ACCORDANCE WITH ASTM, C–138, C–173 OR C–231.

REINFORCING STEEL: SEE STRUCTURAL PLANS AND DETAILS.
JOINT SEALING MATERIALS: FOR SLABS OR PAVEMENTS EXPOSED TO THE WEATHER, ASPHALT FILLER SHALL BE USED CONFORMING TO THE LATEST REVISION OF AASHTO SPECIFICATION M–18 TYPE A AN APPROVED MASTER FILLER.

INSTALLATION:

BEFORE BEGINNING A RUN OF CONCRETE, ALL WATER SHALL BE REMOVED FROM ALL TRENCHES AND FOUNDATIONS, ALL EQUIPMENT AND FORMS SHALL BE CLEANED AND OILED, AND REINFORCEMENT SHALL BE CLEANED OF ICE OR OTHER FOREIGN COATINGS. CONCRETE SHALL NOT BE PLACED UNTIL ALL REINFORCEMENT IS SECURELY AND PROPERLY FASTENED IN ITS CORRECT POSITION, NO UNTIL ALL SLEEVES, HANGERS, PIPES, CONDUCTS, BOLTS, OR ANY OTHER FIXTURE REQUIRED TO BE EMBEDDED THEREIN HAS BEEN PLACED AND ANCHORED BY THE CONTRACTOR. CONCRETE SHALL NOT BE PLACED UNTIL THE FORMS HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEER, AND PLACED UNDER THE DIRECT SUPERVISION OF THE ENGINEER.

CONCRETE SHALL BE HANDLED FROM THE MIXER TO FORMS AS RAPIDLY AS POSSIBLE BY METHODS, WHICH SHALL PREVENT ANY SEPARATION OR LOSS OF INGREDIENTS WHILE TRANSPORTING THE CONCRETE. CONCRETE SHALL BE HANDLED FROM THE MIXER IN CARTS, BUGGIES, OR CONVEYORS AND SHALL NOT BE DELIVERED BY SPOUT OR TROUGH OR DUMPED WITH A FREE FALL OF MORE THAN 5 FEET. RUNWAY SUPPORTS FOR BUGGIES OR DELIVERY CARTS SHALL NOT BEAR UPON REINFORCING STEEL OR FRESH CONCRETE.

PLACING CONCRETE BEFORE INITIAL SET HAS OCCURRED, AND IN NO EVENT AFTER IT HAS CONTAINED ITS WATER CONTENT FOR MORE THAN ONE HOUR. PLACE ALL CONCRETE ON CLEAN, DAMP SURFACES, FREE FROM WATER, OR UPON PROPERLY CONSOLIDATED FILLS, BUT NEVER UPON SOFT MUD, DRY POROUS EARTH, OR FROZEN GROUND. DEPOSIT CONCRETE CONTINUOUSLY AND AS RAPIDLY AS PRACTICAL UNTIL THE UNIT OF OPERATION IS COMPLETED. CONSOLIDATE ALL CONCRETE BY VIBRATION SO THAT THE CONCRETE IS THOROUGHLY WORKED AROUND THE REINFORCEMENT, AROUND IMBEDDED ITEMS, AND INTO CORNERS OF FORMS, ELIMINATING ALL AIR OR STONE POCKETS WHICH MAY CAUSE HONEY–COMBING, PITTING, OR PLANES OF WEAKNESS.

THE PLACING OF CONCRETE SHALL BE CARRIED ON CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS SHOWN ON THE DRAWINGS.

PROVIDE ADEQUATE PROTECTION AGAINST RAIN, SLEET, AND SNOW BEFORE AND DURING PLACEMENT AND FINISHING OF CONCRETE. PROVIDE ADEQUATE PROTECTIVE MEASURES TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AS SPECIFIED. CURING SHALL BE IN ACCORDANCE WITH ACI 318.

DO NOT PLACE CONCRETE WHEN THE ATMOSPHERIC TEMPERATURE IS BELOW 40 DEGREES F., OR WHEN THE CONCRETE IS LIKELY TO BE SUBJECTED TO FREEZING TEMPERATURES WITHIN 24 HOURS AFTER IT HAS BEEN DEPOSITED UNLESS ADEQUATE TEMPORARY HEATING HAS BEEN PROVIDED. MAINTAIN THE CONCRETE AT A TEMPERATURE NOT LOWER THAN 70 DEGREES F. FOR 3 DAYS OR 50 DEGREES F. FOR 5 DAYS AFTER PLACING, EXCEPT WHEN HIGH–EARLY–STRENGTH CEMENT OR CONCRETE IS USED, THE TEMPERATURE MUST BE MAINTAINED AT NOT LESS THAN 70 DEGREES F. FOR 2 DAYS OR 50 DEGREES F. FOR 3 DAYS. THE METHODS OF HEATING THE MATERIALS AND PROTECTING THE CONCRETE SHALL BE APPROVED BY THE ENGINEER. SALT, CHEMICALS, OR OTHER FOREIGN MATERIALS SHALL NOT BE MIXED WITH THE CONCRETE FOR THE PURPOSE OF PREVENTING FREEZING. FORMS SHALL BE ENCLOSED AND HEATED AT 50 DEGREES F. TO 70 DEGREES F. FOR 2 DAYS BEFORE THE POUR IS MADE.

EXCEPT AS OTHERWISE SPECIFIED, ALL FORMED SURFACES SHALL HAVE AN ORDINARY SURFACE FINISH. THE SURFACES OF ALL CONCRETE MASONRY SHALL BE THOROUGHLY WORKED DURING THE PLACING OF THE CONCRETE. AFTER THE FORMS ARE REMOVED AND POINTING COMPLETED AND AFTER THE CONCRETE HAS HARDENED, ALL FINS AND IRREGULARITIES SHALL BE REMOVED WITH A CARBORUNDUM BRICK. SHOULD DEFECTS APPEAR IN THE FINAL SURFACE SUCH THAT, IN THE JUDGEMENT OF THE ENGINEER, A SATISFACTORY SURFACE HAS NOT BEEN SECURED, THE ENGINEER MAY ORDER THE CONTRACTOR TO RUB FINISH THE SURFACE OF SUCH SECTIONS AS IS NECESSARY TO PRODUCE A FINISHED AND WORKMANLIKE JOB.

IN SLABS, PLATFORMS, OR OTHER EXPOSED SLABS WHERE LONGITUDINAL, TRANSVERSE OR SAWED JOINTS ARE CALLED FOR, THEY SHALL BE PLACED AS SHOWN ON THE PLANS AND CONSTRUCTED AS NOTES ON THE DETAILS.

ANY CONCRETE WORK NOT FORMED AS SHOWN ON THE PLANS OR FOR ANY REASON IS OUT OF ALIGNMENT OR LEVEL OR SHOWS A DEFECTIVE SURFACE SHALL BE CONSIDERED AS NOT CONFORMING WITH THE INTENT OF THESE SPECIFICATIONS AND SHALL BE REMOVED FROM THE JOB BY THE CONTRACTOR AT HIS EXPENSE UNLESS THE ENGINEER GRANTS PERMISSION TO PATCH THE DEFECTIVE AREA.

STEEL REINFORCEMENT:
GENERAL: ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM NEW BILLET STEEL, INTERMEDIATE GRADE, DEFORMED BARS, IN ACCORD WITH STANDARD SPECIFICATIONS ASTM A 15 LATEST EDITION. STEEL REINFORCEMENT SHALL CONSIST OF FURNISHING AND PLACING BAR STEEL OR STEEL FABRIC REINFORCEMENTS AS SHOWN ON THE PLANS AND REQUIRED BY THE CONTRACT.

SHEETS OF MESH OR BAR STEEL REINFORCEMENT SHALL OVERLAP EACH OTHER SUFFICIENTLY TO MAINTAIN A UNIFORM STRENGTH AND SHALL BE SECURELY FASTENED AT THE ENDS AND EDGES. THE EDGE LAP SHALL NOT BE LESS THAN ONE MESH IN WIDTH.

PLACING AND FASTENING. STEEL REINFORCEMENT SHALL BE ACCURATELY PLACED IN THE POSITIONS SHOWN ON THE PLANS AND FIRMLY HELD DURING THE PLACING AND SETTING OF CONCRETE BY MEANS OF SPACER STRIPS, STAYS, METAL CHAIRS, OR OTHER APPROVED DEVICES OR SUPPORTS. BARS SHALL BE SECURELY TIED AT ALL INTERSECTIONS EXCEPT WHERE SPACING IS LESS THAN 1 FOOT IN EACH DIRECTION, WHEN ALTERNATE INTERSECTIONS SHALL BE TIED. THE PLACING AND SECURING OF THE REINFORCEMENT IN ANY UNIT OR SECTION SHALL BE APPROVED BY THE ENGINEER BEFORE ANY CONCRETE IS PLACED IN ANY SUCH UNIT OR SECTION.

REINFORCEMENT IN SLABS PLACED ON EARTH THE REINFORCING SHALL BE SUPPORTED BY MASONRY BLOCKING OF PROPER HEIGHT TO INSURE THAT THE REINFORCING MATERIAL WILL BE PLACED IN THE CENTER OF SUCH SLABS. IN ALL OTHER FLOOR SLABS, THE REINFORCING SHALL BE SPACED AS SHOWN ON THE PLANS. WHERE WIRE MESH IS USED IN FLOOR SLABS, IT SHALL BE 6" BY 6" / #6 X #6 GAUGE WELDED WIRE. ALL MESH SHALL BE LAPPED A MINIMUM OF 6 INCHES.

TESTING:
THREE COMPRESSION TEST CYLINDERS FROM EACH FLOOR, SLAB, WALL, AND FOOTING SHALL BE MADE UNDER THE SUPERVISION OF THE ENGINEER, AND ONE OF EACH PAIR SHALL BE CRUSHED AT 7 DAYS AND THE OTHER AT 28 DAYS. THE THIRD SHALL BE HELD IN RESERVE. THIS WORK SHALL BE DONE AT A LABORATORY APPROVED BY THE ENGINEER AND REPORTS SENT TO THE ENGINEER. ALL WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

SHOP DRAWINGS SHALL BE SUBMITTED OF ALL REINFORCING USED SHOWING THEIR DIMENSIONS, BENDING DETAILS, STIRRUP DETAILS, AND ALL OTHER DETAILS.

PIPING

PRODUCTS:

FOR STORM SEWER DRAINAGE, HIGH–DENSITY POLYETHYLENE PIPE (HDPE) SHALL BE ADS N–12 PIPE OR EQUIVALENT. PIPES AND JOINTS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321.

PRECAST CONCRETE CATCH BASIN: KISTNER PRECAST CONCRETE CATCH BASIN, SHALL COMPLY WITH ASTM C478 AND CONSIST OF PRECAST, REINFORCED CONCRETE, OF DEPTH INDICATED, WITH PROVISION FOR O–RING AND GASKET MATERIAL FOR JOINTS. RISER SECTIONS LENGTHS TO PROVIDE DEPTH INDICATED, WITH SINGLE POUR MONOLITHIC BASE SECTION.

CATCH BASIN FRAME AND GRATE: ASTM A536, GRADE 60–40–18, DUCTILE IRON DESIGNED FOR HEAVY DUTY SERVICE. THE GRATES AND FRAMES SHALL MAKE FIRM, FULL AND EVEN BEARING ON THEIR RESPECTIVE UNDERLYING SURFACES AND SHALL BE NON–ROCKING UNDER THE INFLUENCE OF TRAFFIC OR OTHER LOADS.

INSTALLATION:

PROTECTIVE COATINGS: ONE– OR TWO–COAT, COAL–TAR EPOXY; 15–MIL MINIMUM THICKNESS, UNLESS OTHERWISE INDICATED; FACTORY OR FIELD APPLIED ON ALL MANHOLES, FRAMES, GRATES, AND CATCH BASIN SURFACES.

ARRANGE FOR INSTALLING GREEN WARNING TAPES DIRECTLY OVER PIPING AND AT OUTSIDE EDGES OF UNDERGROUND STRUCTURES. USE WARNING TAPE OR DETECTABLE WARNING TAPE OVER FERROUS PIPING. USE DETECTABLE WARNING TAPE OVER NONFERROUS PIPING AND OVER EDGES OF UNDERGROUND STRUCTURES.

PIPING APPLICATIONS:
FOR SANITARY SEWERS, INCLUDE WATERTIGHT BALL AND SPIGOT JOINTS WITH ELASTOMERIC FIXED IN PLACE GASKETS.

SLEEVE–TYPE PIPE COUPLINGS: USE WHERE REQUIRED TO JOIN PIPING AND NO OTHER APPROPRIATE METHOD IS SPECIFIED. DO NOT USE INSTEAD OF SPECIFIED JOINING METHODS.

GENERAL LOCATIONS AND ARRANGEMENTS: DRAWING PLANS AND DETAILS INDICATE GENERAL LOCATION AND ARRANGEMENT OF UNDERGROUND STORM DRAINAGE AND UNDERGROUND SANITARY SEWER PIPING. LOCATION AND ARRANGEMENT OF PIPING LAYOUT TAKE DESIGN CONSIDERATIONS INTO ACCOUNT. INSTALL PIPING AS INDICATED, TO EXTENT PRACTICAL.

INSTALL PIPING AS SHOWN ON DRAWINGS, VERIFYING GRADES AND FLOW LINES. INSTALL PIPING TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM. INSTALL GASKETS, SEALS, SLEEVES, AND COUPLINGS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS FOR USE OF LUBRICANTS, CEMENTS, AND OTHER INSTALLATION REQUIREMENTS. MAINTAIN SWAB OR DRAG IN LINE, AND PULL PAST EACH JOINT AS IT IS COMPLETED.

PIPE JOINT CONSTRUCTION AND INSTALLATION: JOIN AND INSTALL PIPE AND FITTINGS ACCORDING TO INSTALLATIONS INDICATED.

HDPE PIPE AND FITTINGS: JOIN PIPE, TUBING, AND FITTINGS WITH COUPLINGS FOR SOILTIGHT JOINTS ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL ACCORDING TO ASTM D 2321 AND MANUFACTURER'S WRITTEN INSTRUCTIONS. INSTALL CORRUGATED PIPING ACCORDING TO THE CORRUGATED POLYETHYLENE PIPE ASSOCIATION'S "RECOMMENDED INSTALLATION PRACTICES FOR CORRUGATED POLYETHYLENE PIPE AND FITTINGS." JOIN PIPING MADE OF DIFFERENT MATERIALS OR DIMENSIONS WITH COUPLINGS MADE FOR THIS APPLICATION. USE COUPLINGS THAT ARE COMPATIBLE WITH AND THAT FIT BOTH SYSTEMS' MATERIALS AND DIMENSIONS.

PVC FITTINGS SHALL BE OF THE SAME MANUFACTURE AND SHALL HAVE COMPATIBLE JOINTS AND SHALL MEET ASTM D3034 & D2241 AS APPROPRIATE.

CATCH BASIN AND MANHOLE INSTALLATION: INSTALL COMPLETE WITH APPURTENANCE AND ACCESSORIES INDICATED. SET TOPS OF FRAMES AND COVERS FLUSH WITH FINISHED GEADE INSTALL PRECAST CATCH BASIN SECTION WITH GASKETS ACCORDING TO ASTM C891.

GRATE INSTALLATION: SET FRAMES AND GRATES TO BE FLUSH WITH FINISHED GRADE.

MAKE CONNECTIONS TO EXISTING PIPING AND UNDERGROUND STRUCTURES SO FINISHED WORK COMPLIES AS NEARLY AS PRACTICAL WITH REQUIREMENTS SPECIFIED FOR NEW WORK.

EROSION AND SEDIMENT CONTROL MEASURES:

GENERAL MEASURES:
1. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
2. AS MUCH AS IS PRACTICAL, EXISTING VEGETATION SHALL BE PRESERVED. FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SOILS.
3. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION.
4. PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL POINTS OF ENTRY ONTO THE PROJECT SITE.

PARTICULAR MEASURES
1. STABILIZED CONSTRUCTION ENTRANCE, UTILIZED DURING CONSTRUCTION, SHALL BE MAINTAINED IN A CONDITION THAT SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT–OF–WAYS MUST BE REMOVED IMMEDIATELY. WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAYS. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. PERIODIC INSPECTIONS AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
2. CHECK DAMS: UNTIL SUCH TIME AS FINAL SITE STABILIZATION IS COMPLETED, DITCHES SHALL RECEIVE TREATMENT WITH CHECK DAMS SO AS TO EFFECTIVELY TRAP SEDIMENT AND MINIMIZE ITS RELEASE OFF–SITE. CHECK DAMS SHALL BE CONSTRUCTED WITHIN EACH DITCH BEGINNING AT ITS DOWNSTREAM TERMINUS AND SHOULD BE PLACED AT INTERVALS INDICATED ON THE DRAWINGS.
3. SOIL STOCKPILES: SILT FENCES SHALL BE CONSTRUCTED AROUND ALL STOCKPILES OF FILL, TOPSOIL, AND EXCAVATED OVERBURDEN THAT ARE TO REMAIN EXPOSED FOR PERIODS LESS THAN 7 DAYS. SILT FENCES SHALL BE ANCHORED AND MAINTAINED IN GOOD CONDITION UNTIL SUCH TIME AS SAID STOCKPILES ARE REMOVED AND STOCKPILING AREAS ARE BROUGHT TO FINAL GRADE AND PERMANENTLY STABILIZED. TOPSOIL AND FILL THAT IS TO REMAIN STOCKPILED ON–SITE FOR PERIODS GREATER THAN 7 DAYS SHALL BE STABILIZED BY SEEDING. PRIOR TO THE SEEDING OPERATION, THE STOCKPILED MATERIAL SHALL BE GRADED AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IN NO CASE SHALL ERODIBLE MATERIALS BE STOCKPILED WITHIN 25 FEET OF ANY DITCH, STREAM, OR OTHER SURFACE WATER BODY. STOCKPILES WHICH ARE NOT INTENDED FOR USE WITHIN 30 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY.
4. DUST CONTROL: NO POLYMER APPLICATION SHALL TAKE PLACE WITHOUT WRITTEN APPROVAL FROM THE NYSDEC. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ONE TIME. APPLY MULCH, VEGETATION OR SPRAY WATER OR ADDITIVES TO AREAS WHERE LAND DISTURBANCE HAS OCCURRED TO PREVENT SURFACE AND AIR MOVEMENT OF DUST.

EXECUTION:

1. ANY DISTURBED AREAS INCLUDING STOCKPILES THAT WILL BE LEFT EXPOSED MORE THAN 7 DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL BE STABILIZED WITHIN 7 DAYS AFTER INITIAL DISTURBANCE USING, MULCH, OR EROSION CONTROL MATTING.
2. PERMANENT VEGETATION TO BE ESTABLISHED WITH TOPSOIL AND SEED ON ALL EXPOSED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADING. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
3. ALL LAND DISTURBING ACTIVITIES SHALL BE CONDUCTED IN ACCORDANCE WITH CT STANDARDS AND SPECIFICATIONS.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED IN PROPER WORKING CONDITION DURING THE PERIOD OF CONSTRUCTION. SILT FENCE IS TO BE CLEANED WHEN HALF OF THE FENCE IS BUILT UP BY SEDIMENT.
5. ADDITIONAL EROSION CONTROL MEASURES AND/OR MODIFICATIONS T PROPOSED MEASURES MAY BE NECESSARY DEPENDING ON ACTUAL SITE CONDITIONS.
6. THE PLANS AND DETAILS ARE BASED ON THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL.
7. A RAIN GAUGE SHALL BE KEPT ON–SITE. THE CONTRACTOR SHALL INSPECT ALL E&SC MEASURES AT LEAST ONCE A WEEK AND WITHIN 24 HOURS AFTER ANY STORM EVENT THAT GENERATES A DISCHARGE. REPAIRS SHALL BE MADE TO E&SC MEASURES IMMEDIATELY. RECORD OF INSPECTIONS AND CORRECTIVE ACTIONS SHALL BE KEPT ON–SITE.

EROSION AND SEDIMENT CONTROL MEASURES (CONT.)

8. WEATHER FORECAST SHALL BE MONITORED. THE CONTRACTOR SHALL PREPARE FOR RAIN EVENTS BY RE–EXAMINING ALL EROSION CONTROL MEASURES PRIOR TO THE START OF ANY PRECIPITATION. ANY RE–ENFORCEMENT OR CORRECTIONS SHOULD BE PERFORMED AND DOCUMENTED.
9. MATERIAL STOCKPILES MUST BE LOCATED AT LEAST 50' FROM STORM DRAINS OR WATER COURSES UNLESS NO ALTERNATIVE IS FEASIBLE.
10. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN EROSION CONTROL ONSITE, REGARDLESS OF THE MEASURES REQUIRED. ANY CHANGE IN THE EROSION CONTROL MEASURES AND/OR GRADING SHAL BE CALLED TO THE ATTENTION OF THE ENGINEER AND THE EROSION CONTROL INSPECTOR.
11. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E., STEEP SLOPES AND ROADWAY EMBANKMENTS) SHALL BE STABILIZED.
12. ANY STEEP SLOPES RECEIVING UTILITY INSTALLATION SHALL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E., SLOPES GREATER THAN 1.5:1).
13. AMEND OR REPLACE TOPSOIL IF NECESSARY FOR VEGETATIVE ESTABLISHMENT.
14. REMOVE ANY SEDIMENT THAT MAY WASH OR TRACK OFF OF THE SITE. PAVED ROADS SHALL BE MAINTAINED IN A CLEAN, SWEPT CONDITION DAILY THROUGHOUT OPERATIONS.
15. ACCESS TO SITE SHALL BE RESTRICTED TO AREAS HAVING A STABILIZED CONSTRUCTION ENTRANCE.

PROJECT CONSTRUCTION SEQUENCING NOTES:

1. PRIOR TO COMMENCING CLEARING, GRUBBING, EARTHWORK ACTIVITIES, THAT MAY REQUIRE EROSION CONTROL MEASURES ETC. AT THE SITE, THE CONTRACTOR SHALL FLAG THE WORK LIMITS AND SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (I.E. SILT FENCES, TREE PROTECTION/BARRIER FENCES, STABILIZED CONSTRUCTION ENTRANCES, STORM DRAIN SEDIMENT FILTERS, DRAINAGE DITCH SEDIMENT FILTERS, ETC.) INDICATED ON THE PROJECT DRAWINGS. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THEIR TRIBUTARY AREAS.
2. PRIOR TO COMMENCING CLEARING, GRUBBING AND/OR EARTHWORK ACTIVITIES IN ANY OTHER AREA OF THE SITE, THE CONTRACTOR SHALL INSTALL INLET AND OUTLET PROTECTION MEASURES (RIPRAP OVERFLOW WEIR(S), CULVERT INLET/OUTLET PROTECTION, ETC.) AND SHALL STABILIZE THE AREAS DISTURBED DURING THE CONSTRUCTION OF THE SEDIMENT BASIN.
3. THE CONTRACTOR SHALL INSTALL TEMPORARY DIVERSION MEASURES WITH ASSOCIATED STABILIZATION MEASURES (I.E., VEGETATIVE COVER, DRAINAGE DITCH SEDIMENT FILTERS, STORM DRAIN SEDIMENT FILTERS, ETC.) PRIOR TO CONSTRUCTION.
4. TEMPORARY DIVERSION MEASURES SHALL BE LOCATED IN A MANNER THAT WILL ASSURE THAT THE AREA TRIBUTARY TO EACH DIVERSION DOES NOT EXCEED FIVE (5) ACRES. THESE TEMPORARY DIVERSION MEASURES SHALL BE INSPECTED DAILY AND REPAIRED/STABILIZED AS NECESSARY TO MINIMIZE EROSION.
5. THE CONTRACTOR SHALL COMMENCE SITE CONSTRUCTION ACTIVITIES AS REQUIRED.
6. IMMEDIATELY FOLLOWING COMPLETION OR SUSPENSION OF CONSTRUCTION ACTIVITIES IN ANY PORTION OF THE SITE, PERMANENT VEGETATION SHALL BE ESTABLISHED ON ALL EXPOSED SOILS.
7. SOILS THAT HAVE BEEN DISTURBED AND COMPACTED DUE TO CONSTRUCTION ACTIVITIES SHALL BE RESTORED IN ACCORDANCE WITH THE PROJECT SWCPP (WHICH INCLUDES DE–COMPACTION, COMPOST ADDITION AND TOPSOIL PLACEMENT).
8. UPON ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON ALL DISTURBED AREAS OF THE SITE, THE CONTRACTOR SHALL REMOVE THE CONSTRUCTION FABRIC FROM THE PRIMARY INLET OF THE OUTLET CONTROL STRUCTURE. THIS SHALL ONLY BE DONE WHEN THE PRIMARY OUTLET IS NO LONGER SUBMERGED.
9. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND IMMEDIATELY ESTABLISH PERMANENT VEGETATION ON THE AREAS DISTURBED DURING THEIR REMOVAL.

VEGETATIVE COVER SPECIFICATIONS:

SITE PREPARATION):

1. INSTALL NEEDED WATER AND EROSION CONTROL MEASURES AND BRING AREA TO BE SEEDED TO DESIRED GRADES USING A MINIMUM OF 4 IN. TOPSOIL.
2. PREPARE SEEDBED BY LOOSENING SOIL TO A DEPTH OF 4 TO 6 INCHES.
3. LIME TO PH OF 6.5.
4. FERTILIZE AS PER SOIL TEST, OR, IF FERTILIZER MUST BE APPLIED BEFORE SOIL TEST RESULTS ARE RECEIVED, APPLY 850 LBS. OF 10–10–10 OR EQUIVALENT PER ACRE (7.5 LBS PER 1,000 SQ. FT.).
5. INCORPORATE LIME AND FERTILIZER IN TOP 2–4 INCHES OF TOPSOIL.
6. SMOOTH. REMOVE LARGE STONES, STICKS AND FOREIGN MATTER FROM THE SURFACE.

TEMPORARY VEGETATIVE COVER (DURING CONSTRUCTION):

1. SEED MIX:
SPRING OR SUMMER OR EARLY FALL, SEED WITH BUCKWHEAT (FAGOPYRUM ESCULENTUM) AT A RATE OF 15 LBS. PER ACRE (APPROX. .4 LB./1,000 SQ. FT).

LATE FALL OR EARLY WINTER, SEED WITH WINTER WHEAT (TRITICUM AESTIVUM AT A RATE OF 120 LBS PER ACRE (APPROX. 3 LBS/1,000 SQ. FT.)

PERMANENT VEGETATIVE COVER (AFTER CONSTRUCTION):

1. SEED MIXTURES:
PROVIDE FRESH, CLEAN, NEW–CROP SEED MIXED IN THE PROPORTIONS SPECIFIED FOR SPECIES AND VARIETY, AND CONFORMING TO FEDERAL AND STATE STANDARDS. PROVIDE THE FOLLOWING MIXTURES:

DOT ALL–PURPOSE SEED MIX
AMOUNT BY:

WEIGHT	SPECIES OR VARIETY	LBS/1,000 SQ.FT.	LBS/ACRE
50.0%	SMOOTH BROMEGRASS	0.35	15
16.7%	PERENNIAL RYEGRASS	0.10	5
33.3%	BIRD'S FOOT TREFOIL	0.25	10
100%	TOTAL	0.79	30

2. TIME OF SEEDING: OPTIMUM TIMING OF SEEDING IS EARLY SPRING. MID JUNE THROUGH EARLY AUGUST IS NOT A GOOD TIME TO SEED, BUT MAY FACILITATE COVERING THE LAND WITHOUT ADDITIONAL DISTURBANCE IF CONSTRUCTION IS COMPLETE. PORTIONS OF THE SEEDING MAY FAIL DUE TO DROUGHT AND HEAT. THESE AREAS MAY NEED RESEEDING IN LATE SUMMER OR FALL OR THE FOLLOWING SPRING.

MULCHING

EXECUTION:

1. MULCHING SHALL BE REQUIRED ON ALL SEEDING. MULCH WILL REDUCE EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED IN COMPLIANCE WITH THIS MULCHING REQUIREMENT.
2. SPREAD STRAW OR HAY MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75% TO 95% OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND–SPREAD MULCH, DIVIDE AREA INTO 1,000 SQUARE FOOT SECTIONS AND DISTRIBUTE AT LEAST 90 POUNDS WITHIN EACH SECTION.
3. STRAW OR HAY MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. APPLICATIONS SHALL BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHALL BE UNIFORM IN APPEARANCE.

PRODUCTS:

MULCH MATERIALS SHALL BE WOOD FIBER APPLIED WITH A HYDROMULCH AT 2000 POUNDS PER ACRE, OR IF DRILLING, UNROTTED SMALL GRAIN STRAW OR HAY FREE OF SEEDS, OR SALT HAY APPLIED AT THE RATE OF 2 TONS PER ACRE (90 TO 100 POUNDS PER 1,000 SQUARE FEET).

FOR PERMITTING PURPOSES ONLY
- NOT FOR CONSTRUCTION -

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MARK	DATE	DESCRIPTION	BY
A	01/05/18	ISSUED FOR PERMITTING AND REVIEW	JS

WALLINGFORD RENEWABLE ENERGY
NEW HAVEN COUNTY, WALLINGFORD, CONNECTICUT

CONSTRUCTION SPECIFICATIONS

Project No.:	194-9002
Designed By:	KMT
Drawn By:	DS
Checked By:	RH

C-118

CAD FILE: 9002–WRE_C118–REV A.DWG

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