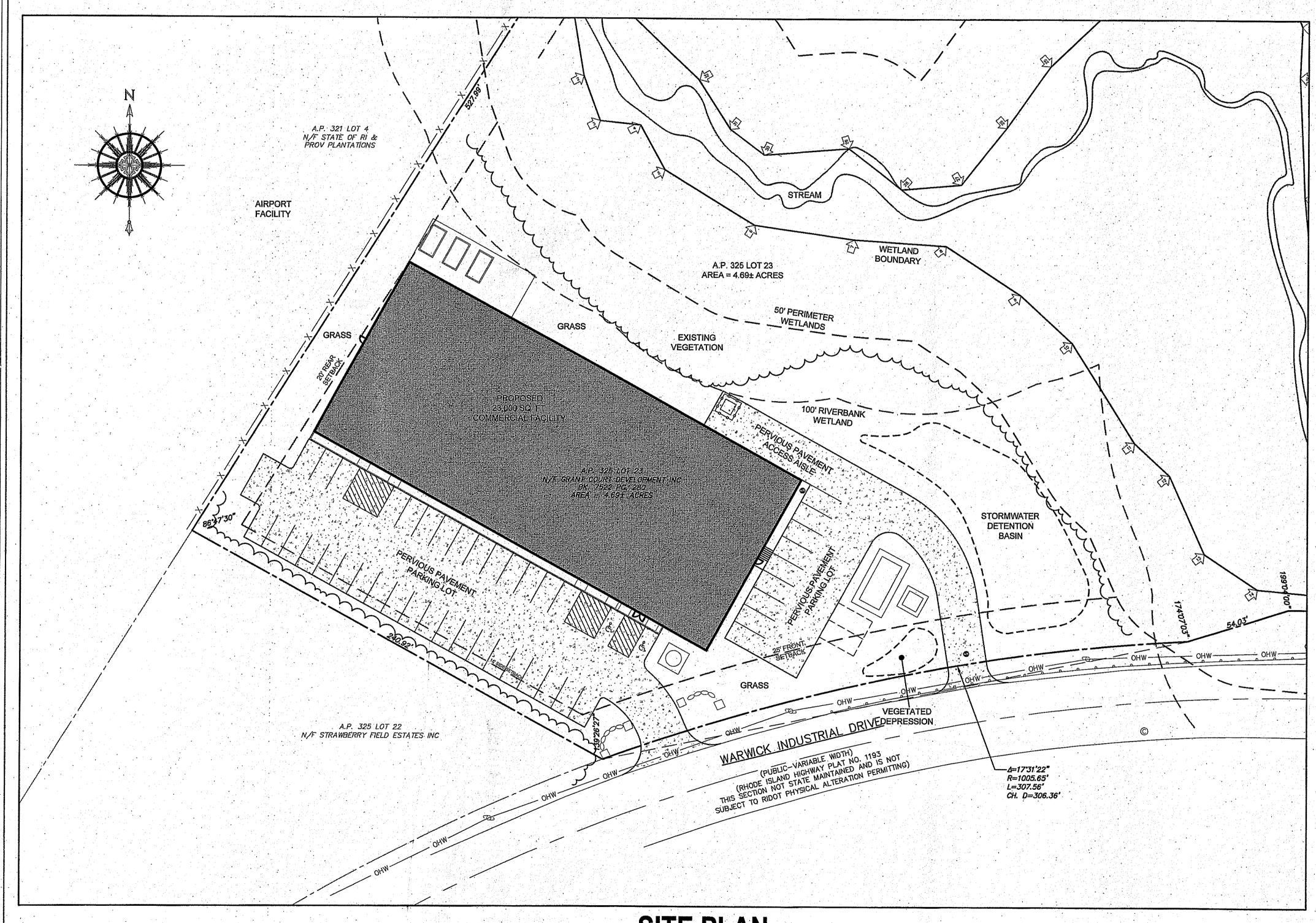
# PROPOSED FACILITY

# ASSESSOR'S PLAT 325 LOT 23 WARWICK INDUSTRIAL DRIVE WARWICK, RHODE ISLAND

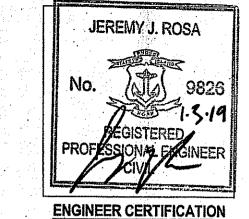


SITE PLAN

CIVIL ENGINEER:







OCSB HOLDINGS, LLC C/O SCALI & ASSOCIATES, P.C. 190 LIBERTY ROAD, UNIT 1 CRYSTAL LAKE, ILLINOIS 60014

# DECEMBER 26, 2018 PERMIT SET

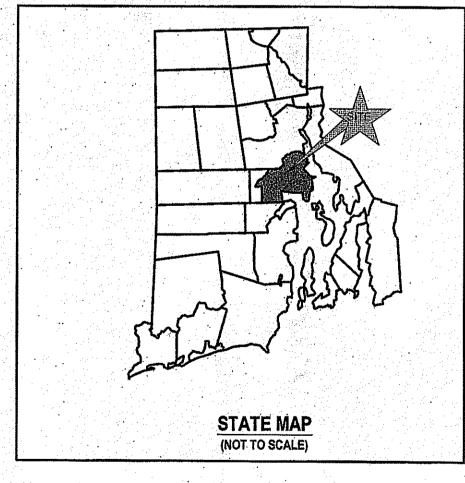
## **PLAN INDEX**

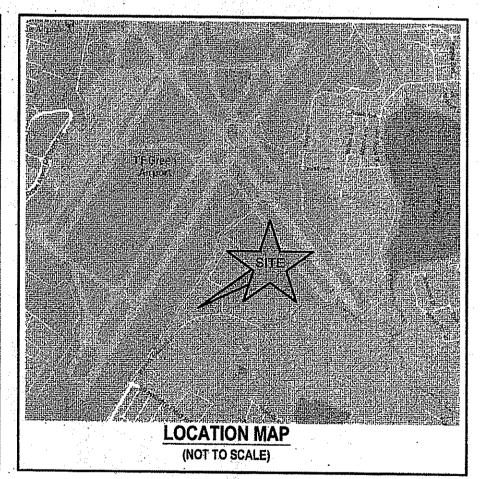
SITE/CIVIL ENGINEERING PLANS

TITLE SHEET **EXISTING CONDITIONS** PROPOSED LAYOUT PLAN AND UTILITY PLAN PROPOSED GRADING, DRAINAGE AND SESC PROPOSED DETAILS

SHEET 1 SHEET 2 SHEET 3

SHEET 4 SHEET 5 SHEETS 6-7





#### SHEMISSION AND DEVISION SHAMADA

AGENCY OR REVISION SUMMARY	DATE:	COMMENTS:
CITY OF WARWICK RIDEM CITY OF WARWICK FAA RIDEM	SEPT 2018 OCT 2018 NOV 2018 NOV 2018 JAN 2019	MASTER PLAN APPROVAL RIPDES AND WETLANDS PRELIMINARY SUBMISSION NOTICE OF PROPOSED CONSTRUCTION RESPONSE TO COMMENTS  LOF ENVIRONMENTAL MANAGEMENT
	OF FRES	TOF ENVIRONMENTAL MANAGEMENT TOF ENVIRONMENTAL MANAGEMENT TOE OF WATER RESOURCES TWATER WETLANDS PROGRAM PROVED WITH CONDITIONS PROVED WITH CONDITIONS FIED IN THE LETTER OF APPROVAL FIED IN THE LETTER OF APPROVAL FIED IN THE LETTER OF APPROVAL

#### **GENERAL NOTES**

- 1. EXISTING CONDITIONS ALONG WARWICK INDUSTRIAL DRIVE ARE THE RESULTS OF A FIELD SURVEY BY NORTHEAST ENGINEERS & CONSULTANTS, INC. IN
- 2. PROPERTY LINE BASED ON WETLAND & BUILDING ENVELOPE SURVEY OF LAND PREPARED FOR WARWICK INDUSTRIAL DRIVE, WARWICK, RI BY JOHN A
- ELEVATION BASE NAVD 1988 OBTAINED FROM GPS OBSERVATION.
- 4. PROPERTY AND ABUTTING PROPERTIES ARE ZONED LI (LIGHT INDUSTRIAL).

MINIMUM LOT AREA:	6,000 SF
MINIMUM FRONTAGE:	60 FT
MINIMUM LOT WIDTH:	60 FT
MINIMUM FRONT YARD:	25 FT
MINIMUM SIDE YARD:	15 FT
MINIMUM REAR YARD:	20 FT

NORTH ARROW REFERENCES GRID NORTH.

MAXIMUM HEIGHT:

- WETLAND EDGE DELINEATED BY GEORGE GIFFORD AND LOCATED BY NESC. EDGE VERIFICATION BY RIDEM FILE NO. 17-0213.
- 7. T.F. GREEN AIRPORT SIGHT LINE SCALED FROM PLAN TITLED, "ATCT LINE OF SIGHT OBSTRUCTION ANALYSIS" PREPARED BY STANTEC, DATED NOVEMBER
- 8. SOIL EVALUATION PERFORMED BY NATURAL RESOURCE SERVICES, A LICENSED CLASS IV EVALUATOR, ON JANUARY 11, 2018. SOIL TYPE IN THE VICINITY OF DISTURBANCE IS "HKA" (HINCKLEY) THE USDA NATURAL RESOURCES CONSERVATION SERVICE SOIL SURVEY. THIS IS A HYDROLOGIC TYPE A SOIL (VERY
- 9. PROPERTY IS LOCATED WITH IN A FEMA ZONE "X" PER FEMA FIRM 44003C0133H, MAP EFFECTIVE SEPTEMBER 18, 2013.
- THE CONTRACTOR SHALL VERIFY THE PROPOSED LAYOUT AND DETAILS WITH THEIR RELATIONSHIP TO THE EXISTING SITE SURVEY, CONTRACTOR SHALL ALSO VERIFY ALL DIMENSIONS, SITE CONDITIONS AND MATERIAL SPECIFICATIONS AND SHALL NOTIFY THE OWNER AND ENGINEER OF ANY ERRORS. OMISSIONS OR DISCREPANCIES BEFORE COMMENCING WORK.
- THE UNDERGROUND UTILITIES KNOWN TO EXIST BY THE ENGINEER FROM HIS SEARCH OF RECORDS ARE INDICATED ON THE PLANS. CONTRACTOR SHALL VERIFY THE LOCATIONS AND DEPTHS OF THE FACILITIES AND EXERCISE PROPER CARE IN EXCAVATING IN THE AREA. ALL DAMAGED PORTIONS SHALL BE REPLACED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE AFFECTED UTILITY COMPANY AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY. PERSONAL INJURY RESULTING FROM CONTACT WITH EXISTING UTILITIES SHALL BE THE CONTRACTOR'S RESPONSIBILITY. WHEREVER CONNECTION OF NEW UTILITIES TO EXISTING UTILITIES ARE SHOWN ON THE PLANS, THE CONTRACTOR SHALL EXPOSE THE EXISTING LINES AT THE PROPOSED CONNECTIONS TO VERIFY THEIR LOCATIONS AND DEPTHS PRIOR TO EXCAVATION FOR NEW LINES. (PLEASE CALL DIG SAFE PRIOR TO CONSTRUCTION AT 1-888-DIG-SAFE AND ALL LOCAL UTILITY COMPANIES.)
- THE CONTRACTOR SHALL NOTIFY ALL AGENCIES TO VERIFY THE ACTUAL LOCATIONS OF ALL UTILITIES IN THE PROJECT AREA PRIOR TO EXCAVATING.
- THE CONTRACTOR SHALL RESTORE TO THEIR ORIGINAL CONDITION OR BETTER, ALL IMPROVEMENTS DAMAGED AS A RESULT OF THE CONSTRUCTION, INCLUDING PAVEMENTS, EMBANKMENTS, CURBS, SIGNS, LANDSCAPING, STRUCTURES, UTILITIES, WALLS, FENCES, ETC. UNLESS PROVIDED FOR SPECIFICALLY IN THE PROPOSAL.
- 14. CONTRACTOR SHALL EXERCISE EXTREME CAUTION TO PRESERVE STREET MONUMENTS.
- 15. STREET MONUMENTS THAT ARE DISTURBED SHALL BE RESTORED UNDER THE LICENSED LAND SURVEYOR'S DIRECTION. ANY NEW DATA SUCH AS ELEVATIONS SHALL BE CERTIFIED BY THE SURVEYOR, AND SUBMITTED TO THE TOWN OF MIDDLETOWN OR THE CITY OF NEWPORT AS APPROPRIATE.
- 16. DEVIATIONS OR CHANGES FROM THESE PLANS WILL NOT BE ALLOWED UNLESS APPROVED BY THE PROJECT ENGINEER, APPROPRIATE AGENCY AND
- RELOCATION OF ANY UTILITIES SHALL BE AT THE OWNERS EXPENSE AND BE COMPLETED WITH THE UTILITY WORK. THE OWNER SHALL BE NOTIFIED AS TO THE RELOCATION REQUIRED PRIOR TO THE START OF CONSTRUCTION.
- 18. AN APPROVED SET OF PLANS AND ALL APPLICABLE PERMITS MUST BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES
- 19. CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT TO BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEERS HARMLESS FROM ANY AND ALL LIABILITY, REAL AND ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM "THE SOLE NEGLIGENCE OF THE OWNER OR PROJECT ENGINEER."
- 20. ALL TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES LATEST EDITION INCLUDING ALL REVISIONS.
- 21. THE PROPOSED DEVELOPMENT DOES NOT LIE IN ANY OF THE FOLLOWING AREAS:

#### - NATURAL HERITAGE AREAS (RIDEM) - SPECIAL AREA MANAGEMENT PLAN (CRMC)

- GROUNDWATER AQUIFERS. STATE DESIGNATED "GROUNDWATER RESERVOIRS", RECHARGE AREAS, OR WELLHEAD PROTECTION AREAS - STATE, REGIONAL OR LOCAL GREENWAYS, OR GREENSPACE PRIORITIES

#### **GRADING NOTES**

- ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SURFACE WATERS FROM DAMAGING THE CUT FACE OF AN EXCAVATION OR THE SLOPED SURFACES OF A FILL. FURTHERMORE, ADEQUATE PROVISIONS SHALL BE MADE TO PREVENT SEDIMENT RUNOFF FROM LEAVING THE SITE.
- ALL GRADED AREAS SHALL BE SODDED OR PLANTED IMMEDIATELY AFTER THE GRUBBING WORK HAS BEEN COMPLETED.
- 3. THE CITY SHALL BE INFORMED OF THE LOCATION OF THE DISPOSAL SITE, IF ANY, FOR THE PROJECT.
- NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANY TIME WITHOUT PRIOR NOTICE TO THE MUNICIPALITY, PROVIDED SUCH GRADING WORK IS ALSO IN CONFORMANCE WITH ALL COMMUNITY NOISE CONTROL STANDARDS.
- 5. THE LIMITS OF DISTURBANCE SHALL BE DELINEATED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE DEPARTMENT OF ENVIRONMENTAL
- WHERE APPLICABLE AND FEASIBLE THE MEASURES TO CONTROL EROSION AND OTHER POLLUTANTS SHALL BE IN PLACE BEFORE GRADING WORK IS
- TEMPORARY EROSION CONTROLS SHALL NOT BE REMOVED BEFORE PERMANENT EROSION CONTROLS ARE IN-PLACE AND ESTABLISHED.
- IF THE GRADING WORK INVOLVES CONTAMINATED SOIL, THEN ALL GRADING WORK SHALL BE DONE IN CONFORMANCE WITH APPLICABLE STATE AND
- 10. NONCOMPLIANCE TO ANY OF THE ABOVE REQUIREMENTS SHALL MEAN IMMEDIATE SUSPENSION OF ALL WORK, AND REMEDIAL WORK SHALL COMMENCE IMMEDIATELY. ALL COSTS INCURRED SHALL BE BILLED TO THE VIOLATOR. FURTHERMORE, VIOLATORS SHALL BE SUBJECTED TO ADMINISTRATIVE, CIVIL

#### **UTILITY NOTES**

- 1. THE LOCATION OF PROPOSED ELECTRICAL CONNECTION TO THE EXISTING OVERHEAD SERVICE IN WARWICK INDUSTRIAL DRIVE IS PRELIMINARY. FINAL DESIGN OF THE ELECTRICAL SERVICE IS SUBJECT TO DESIGN REVIEW AND APPROVAL OF NATIONAL GRID.
- 2. THE PROPOSED DOMESTIC WATER AND FIRE CONNECTIONS TO THE MAIN IN WARWICK INDUSTRIAL DRIVE ARE PRELIMINARY AND REQUIRE APPROVAL FROM WARWICK WATER DIVISION.
- 3. NEW ELECTRIC, TELEPHONE AND CABLE SERVICES SHALL BE INSTALLED UNDERGROUND.
- 4. THE PROPOSED SEWER CONNECTION SHALL BE 6 INCH DIAMETER. CONNECTION TO THE EXISTING SEWER MANHOLE IN THE RIGHT OF WAY SHALL BE PERFORMED IN CONFORMANCE WITH WARWICK DPW REQUIREMENTS.
- 5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASSUMPTIONS. DEDUCTIONS. OR CONCLUSIONS HE/SHE MAY MAKE OR DERIVE FROM THE SUBSURFACE INFORMATION OR DATA FURNISHED ON THE PLANS. THE CONTRACTOR MUST SATISFY HIMSELF/HERSELF THROUGH HIS/HER OWN INVESTIGATIONS AS TO WHAT SUBSURFACE CONDITIONS ARE TO BE ENCOUNTERED.
- 6. IF THE CONTRACTOR ELECTS NOT TO EXPOSE AND VERIFY ALL EXISTING UNDERGROUND UTILITIES AND STRUCTURES AT CROSSINGS PRIOR TO PIPELINE EXCAVATION, HE/SHE FORFEITS HIS/HER RIGHTS FOR ANY CLAIMS FOR COMPENSATION CAUSED BY ANY CONFLICTS WITH EXISTING UTILITIES AND
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL EFFLUENT ASSOCIATED WITH THE CONSTRUCTION ACTIVITY AND THE DISINFECTION AND HYDROTESTING OPERATIONS TO SAFEGUARD PUBLIC HEALTH AND SAFETY IN ACCORDANCE WITH APPLICABLE DEPARTMENT OF HEALTH REQUIREMENTS. ALL PERMITS AND LICENSES FOR CONSTRUCTION WATER DISPOSAL, INCLUDING ALL APPLICATIONS, CHARGES, FEES, AND TAXES, ARE THE RESPONSIBILITY OF THE CONTRACTOR.

#### DRAINAGE NOTES

- 1. ALL DRAIN PIPES SHALL BE PVC UNLESS OTHERWISE NOTED ON THE DRAINAGE AND GRADING PLAN.
- 2. ALL STRUCTURE ROOF RUNOFF SHALL BE COLLECTED AND ROUTED TO THE COLLECTION DRAINS AS SHOWN ON THE SITE PLAN. ROOF DOWNSPOUT LOCATIONS SHALL BE COORDINATED WITH THE PROJECT ARCHITECT.

#### SOIL EROSION AND SEDIMENT CONTROL NOTES

#### 1. CONSTRUCTION SEQUENCE:

- A. DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
- B. ALL CONSTRUCTION VEHICLES SHALL ENTER AND LEAVE THE SITE VIA A STABILIZED GRAVEL ACCESS POINT.
- C. INSTALL SILT FENCES AND STRAW BALES AS INDICATED ON THE DRAWINGS TO CONTROL EROSION AND PREVENT SEDIMENT CONTAMINATION OF DOWNSTREAM AREAS PRIOR TO ANY EARTH MOVING ACTIVITIES.
- D. REMOVE VEGETATION ONLY WHERE NECESSARY. ANY STUMPS TO BE GROUND OR DISPOSED OF OFF SITE.
- E. ROUGH GRADE SITE AND BUILDING AREA. EXCAVATE FOR PERVIOUS PAVEMENT SYSTEM. AS THERE ARE MINIMAL AREAS OF THE SITE AVAILABLE FOR SOIL STOCKPILING, ALL EXCAVATED MATERIAL MAY BE RELOCATED OFF-SITE.
- F. CONSTRUCT FACILITY FOUNDATION.
- G. EXCAVATE DETENTION BASIN AREA.
- H. BEGIN STRUCTURE CONSTRUCTION AND INSTALL UTILITY CONNECTIONS
- I. EXCAVATE VEGETATED DEPRESSION.
- J. INSTALL ROOFTOP COLLECTION SYSTEM.
- K. INSTALL PERVIOUS PAVEMENT STONE LAYERS AND PLACE GRAVEL BASE FOR STANDARD PAVEMENT AREAS.
- L. PLACE LOAM AND PLANTING MATERIAL INTO VEGETATED DEPRESSION AND DETENTION BASIN. ESTABLISH A VEGETATIVE GROWTH
- M. INSTALL PERVIOUS PAVEMENT LAYERS AND CURBING.
- N. ENSURE THAT ROOFTOP DRAINAGE SYSTEMS FUNCTION AS NOTED ON DRAINAGE PLAN.
- O. INSTALL PLANTINGS. PLANT GRASSES IN ALL UNPAVED AREAS.
- P. MAINTAIN SITE IN ACCORDANCE WITH THE MAINTENANCE NOTES.

#### 2. NOTES:

- A. DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED. AS NOTED. ONLY THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME.
- B. NO PERVIOUS PAVEMENT OR INFILTRATION AREAS ARE TO BE USED FOR STOCKPILES OR STORAGE OF MATERIALS OR EQUIPMENT.
- C. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE STABILIZED WITHIN FOURTEEN DAYS IN ACCORDANCE WITH TEMPORARY MEASURES IN THE VEGETATIVE PRACTICE NOTES.
- D. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOP SOIL TO REMOVE VEGETATION, ROOTS, AND ANY OTHER OBJECTIONABLE
- E. ALL FILL SHALL BE COMPACTED TO 95% MAX. DENSITY TO REDUCE EROSION, SLIPPAGE, SETTLEMENT SUBSIDENCE, OR OTHER RELATED PROBLEMS.
- F. FILL INTENDED TO SUPPORT BUILDING STRUCTURES AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES AND SPECIFICATIONS.
- G. ALL FILL SHALL BE PLACED AND COMPACTED TO 95% MAX. DENSITY IN LAYERS NOT TO EXCEED 12" IN THICKNESS FILLS. H. FILL MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- I. FROZEN, SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.
- J. FILL SHALL NOT BE PLACED ON A FROZEN FOUNDATION SUBGRADE.
- K. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
- L. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 14 DAYS OF FINISH GRADING IN ACCORDANCE WITH THE VEGETATIVE PRACTICE NOTES.
- M. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE UPSLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED AND VEGETATED AREAS HAVE RECEIVED TWO MOWINGS.

#### 3. VEGETATIVE PRACTICE:

#### PERMANENT MEASURES:

- A. SLOPES SHALL NOT BE STEEPER THAN 1 VERTICAL TO 3 HORIZONTAL UNLESS OTHERWISE SPECIFIED.
- B. LOAM AND SEED REQUIREMENTS ARE SPECIFIED IN RIDOT L.01 & L.02. C. A MINIMUM OF 4 INCHES OF LOAM SHALL BE INSTALLED. THE LOAM SHALL BE GRADED TO A SMOOTH CONDITION AND STONES AND OTHER OBJECTS

#### TEMPORARY MEASURES (FOR TEMPORARY PROTECTION OF DISTURBED AREAS)

D. LIMESTONE AND FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE: LIMESTONE: 3 TONS/ACRE

LARGER THAN 2 INCHES SHALL BE REMOVED.

- FERTILIZER: (10-10-10): 600 LBS/ACRE E. SEED SHALL BE APPLIED AT THE FOLLOWING RATE:
- WINTER RYE: 100 LB/ACRE F. STRAW MULCH SHALL BE APPLIED AT THE RATE OF 1.5 TONS/ACRE.

#### 4. MAINTENANCE

- DURING THE PERIOD OF CONSTRUCTION AND/OR UNTIL LONG TERM VEGETATION IS ESTABLISHED, THE EROSION CONTROL MEASURES SHALL BE
- A. AT A MINIMUM THE SILT FENCING, STRAW BALES OR FILTER SOCK BARRIERS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK AND / OR IMMEDIATELY FOLLOWING A SIGNIFICANT RAINFALL OR SNOWMELT. SEDIMENT TRAPPED BEHIND THE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH
- B. EROSION CONTROL BLANKETS SHALL BE INSPECTED ON A WEEKLY BASIS.
- C. IF INSTALLED, THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO PAVING. DURING CONSTRUCTION THE ENTRANCE SHALL BE INSPECTED WEEKLY, AND RE-ESTABLISHED AS NECESSARY
- F. SEEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE ESTABLISHMENT OF A VEGETATIVE GROWTH THAT MEETS THE APPROVAL OF THE CITY ENGINEER.

#### PUBLIC HEALTH SAFETY AND CONVENIENCE NOTES

- CONTRACTOR SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS REQUIRED FOR THE PROTECTION OF PUBLIC HEALTH, SAFETY AND ENVIRONMENTAL QUALITY.
- THE CONTRACTOR AT HIS/HER EXPENSE, SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM RUBBISH, DUST, NOISE, EROSION, ETC. THE WORK SHALL BE DONE IN CONFORMANCE WITH THE AIR AND WATER POLLUTION CONTROL STANDARDS AND REGULATIONS OF ALL APPLICABLE FEDERAL, STATE AND LOCAL AGENCIES.
- NO CONTRACTOR SHALL PERFORM ANY CONSTRUCTION OPERATION SO AS TO CAUSE FALLING ROCKS, SILT OR DEBRIS IN ANY FORM TO FALL, SLIDE OR FLOW ONTO ADJOINING PROPERTIES, STREETS OR NATURAL WATERCOURSES. SHOULD SUCH VIOLATIONS OCCUR, THE CONTRACTOR MAY BE CITED AND THE CONTRACTOR SHALL IMMEDIATELY MAKE ALL REMEDIAL ACTIONS AS NECESSARY.
- THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION, CONVENIENCE AND SAFETY OF THE PUBLIC.

#### STORMWATER MAINTENANCE NOTES

#### 1. PERVIOUS PAVEMENT MAINTENANCE:

- a. VACUUM POROUS PAVEMENT A MINIMUM OF 2-4 TIMES PER YEAR, ESPECIALLY AFTER WINTER AND FALL SEASONS WHEN DEBRIS ACCUMULATION AND DEPOSITION IS GREATEST, IF PONDING WATER IS OBSERVED DURING PRECIPITATION, CLEANING IS
- b. POROUS PAVEMENT SHOULD BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY, SHOULD PAVEMENT SURFACE FAIL TO DRAIN, THE OWNER SHOULD CONSULT A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE CAUSE OF THE FAILURE AND THE BEST COURSE OF ACTION TO CORRECT THE ISSUE.
- c. SAND APPLICATION SHOULD BE LIMITED SINCE ITS USE WILL INCREASE THE NEED FOR VACUUMING
- d. APPLY DE-ICING TREATMENTS DURING AND AFTER STORMS AS NECESSARY TO CONTROL COMPACT SNOW AND ICE, PLOWING IS NOT RECOMMENDED. AS THE EXPOSED PAVEMENT SURFACE IS LIMITED, HAND SHOVELING IS PREFERRED. THIS WILL EXTEND THE SERVICE LIFE OF THE PAVEMENT SURFACE,
- e. APPLY ANTI-ICING TREATMENTS PRIOR TO STORMS.
- f. WHERE POSSIBLE, AREAS OF PERVIOUS PAVEMENT SHALL NOT BE SHADED BY LANDSCAPING.

#### 2. DETENTION BASIN MAINTENANCE:

- a GRASSES AND/OR SPECIFIED VEGETATION SHALL BE PLANTED AROUND AND WITHIN THE DETENTION BASIN IMMEDIATELY
- FOLLOWING CONSTRUCTION TO STABILIZE SLOPES AND PREVENT EROSION. b. THE DETENTION BASIN SHOULD BE INSPECTED FOLLOWING AT LEAST THE FIRST TWO PRECIPITATION EVENTS OF AT LEAST 1.0 INCH
- TO ENSURE THAT THE SYSTEM IS FUNCTIONING PROPERLY. THEREAFTER, THE BASIN SHOULD BE INSPECTED AT LEAST ANNUALLY AND AFTER STORM EVENTS OF GREATER THAN OR EQUAL THE 1-YEAR, 24-HOUR TYPE III PRECIPITATION EVENT (2.8 INCHES).
- c. THE FOLLOWING SHALL BE COMPLETED ON AN ANNUAL BASIS: I. THE SLOPES OF THE BASIN SHOULD BE INSPECTED FOR EROSION AND GULLYING.

WHEN INFILTRATION CAPACITY DIMINISHES SUBSTANTIALLY.

- III. REINFORCE ANY EXISTING RIPRAP IF IT IS FOUND TO BE DEFICIENT, EROSION IS PRESENT AT THE INLET PIPES, OR ANY EXISTING RIPRAP HAS BEEN COMPROMISED
- iii. ANY AREAS WITHIN THE EXTENTS OF THE BASIN THAT ARE SUBJECT TO EROSION OR GULLYING SHALL BE REPLENISHED WITH THE ORIGINAL DESIGN MATERIAL AND RE-VEGETATED ACCORDING TO DESIGN DRAWINGS. SLOPE PROTECTION MATERIAL SHALL BE PLACED IN AREAS PRONE TO EROSION, EMBANKMENT STABILITY SHOULD BE INSPECTED FOR SEEPAGE AND BURROWING ANIMALS
- THREE TIMES PER GROWING SEASON. REMOVE ANY INVASIVE VEGETATION WITHIN THE EXTENTS OF THE BASIN. ANY INVASIVE VEGETATION ENCROACHING UPON THE PERIMETER OF THE BASIN SHOULD BE PRUNED OR REMOVED IF IT IS PROHIBITING ACCESS TO THE BASIN, COMPROMISING SIGHT VISIBILITY, AND/OR COMPROMISING THE ORIGINAL DESIGN INTENT. V. SILT/SEDIMENT SHOULD BE REMOVED FROM THE DETENTION BASIN ANNUALLY, WHEN ACCUMULATION EXCEEDS 1 INCH, OR

W. MOW THE GRASS AROUND THE PERIMETER OF THE BASIN, SEED BARE AREAS, AND REMOVE LITTER AND DEBRIS AT LEAST

d. THE FOLLOWING SHALL ALSO BE COMPLETED AS NECESSARY: I. IF THE SURFACE OF THE DETENTION BASIN BECOMES CLOGGED TO THE POINT THAT THE STANDING WATER IS OBSERVED ON THE SURFACE 48 HOURS AFTER PRECIPITATION EVENTS, THE SURFACE SHALL BE ROTO-TILLED OR CULTIVATED TO BREAK UP ANY HARD-PACKED SEDIMENT AND THEN REVEGETATED

#### 3. CONVEYANCE STRUCTURE MAINTENANCE:

PROPER FUNCTION OF THE STRUCTURE.

- a. ALL INLET / OUTFLOW PIPES ARE TO BE INSPECTED AT LEAST THREE TIMES IN THE FIRST SIX MONTHS OF OPERATION. EVIDENCE OF CLOGGING SHALL BE REPORTED TO THE PROJECT ENGINEER AND REMEDIED IMMEDIATELY.
- b. CONVEYANCE PIPES SHOULD BE INSPECTED BIANNUALLY: ANY STRUCTURAL FAULTS SHOULD BE REPAIRED AS NECESSARY FOR
- c.ROOF RUNOFF STRUCTURES SUCH AS GUTTERS AND DOWNSPOUTS SHOULD BE CLEAN AND FREE OF OBSTRUCTIONS THAT REDUCE FLOW. A REGISTERED PROFESSIONAL ENGINEER SHOULD BE CONSULTED IF NECESSARY TO DETERMINE WHETHER A STRUCTURE

4. MAINTENANCE OF THE STORMWATER SYSTEM DURING CONSTRUCTION OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

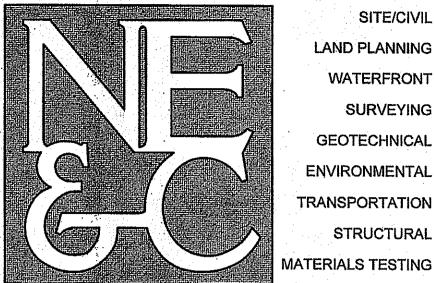
5. UPON COMPLETION OF THE CONSTRUCTION, MAINTENANCE OF THE STORMWATER SYSTEM SHALL BECOME THE RESPONSIBILITY OF

ASPHALT PAVEMENT

#### **ABBREVIATIONS**

DJ	ADJACENT
P	ASSESSOR'S PLAT
CCESS	ACCESSIBLE
RCH	ARCHITECT
C	BOTTOM OF CURB
<b>H</b>	BORING HOLE
$\boldsymbol{r}$	BITUMINOUS
LR	CLEARANCE
MP	CORRUGATED METAL PIPE
MU	CONCRETE MASONRY UNIT
ONC	CONCRETE
ONN	CONNECT
OTG	CLEAN OUT TO GRADE
<b>F</b> . The Control of t	CUBIC FOOT
EMO	DEMOLISH
	DRAIN INLET
IA .	DIAMETER
MH	DRAIN MANHOLE
	DROP PIPE
S	DOWN SPOUT
WG	DRAWING
	ELECTRIC
LEV/EL	ELEVATION
MH	ELECTRIC MANHOLE
OP	EDGE OF PAVEMENT
Q .	EQUAL
XIST	EXISTING
XP	EXPANSION
FE	FINISH FLOOR ELEVATION
G	FINISHED GRADE
Ĥ	FIRE HYDRANT
T	FEET
	GAS
<b>AL</b>	GALLON
V	GATE VALVE
V	INVERT
	JOINT
	LENGTH
AND	LANDSCAPE
TS	NOT TO SCALE
AX	MAXIMUM
ECH	"MECHANICAL
IN	MINIMUM
AV'T	PAVEMENT
VC	POLYVYNILCHLORIDE
	RADIUS
C	REINFORCED CONCRETE
ECONN	RECONNECT
IHB	RHODE ISLAND HIGHWAY BOUND
IDOT	RHODE ISLAND DEPARTMENT OF TRANSPORTATION
OW	RIGHT OF WAY
	SLOPE, SEWER
<b>F</b> or the second of the second	SQUARE FEET
<b>HT</b>	SHEET
MH	SEWER MANHOLE
TA	STATION
TRUCT	STRUCTURAL
<b>C</b>	TOP OF CURB
OP	TOP OF SURFACE
<b>GT</b>	UNDERGROUND TELEPHONE
<b>YP</b>	TYPICAL
	WATER
	WITH
<b>WM</b>	WELDED WIRE MESH
and the first of the second of	

#### NORTHEAST ENGINEERS & CONSULTANTS, INC.



SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING GEOTECHNICAL ENVIRONMENTAL

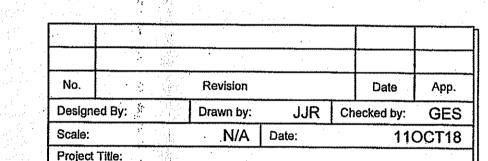
TRANSPORTATION

STRUCTURAL

A KNOWLEDGE CORPORATION

55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF WATER RESOURCES FRESMWATER WETLANDS PROCRAM APPROVED WITH COMESTICE AS SPECIFIED IN THE LETTER OF APPROVAL DATED JAN 2 5 2019 FILE # [8-02-9] NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL APPROVED FLANS MUST BE AT CONSTRUCTION SITE



### PROPOSED FACILITY A.P. 325 LOT 23

WARWICK INDUSTRIAL DRIVE WARWICK RHODE ISLAND

OSCB HOLDINGS, LLC

CRYSTAL LAKE, ILLINOIS 60014

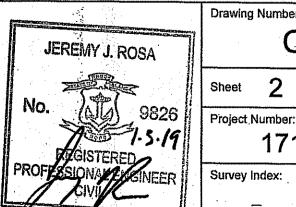
PERMITTING

C/O SCALI & ASSOCIATES, P.C. 190 LIBERTY ROAD, UNIT 1

Client/Owner:

Issued for:

Drawing Title:

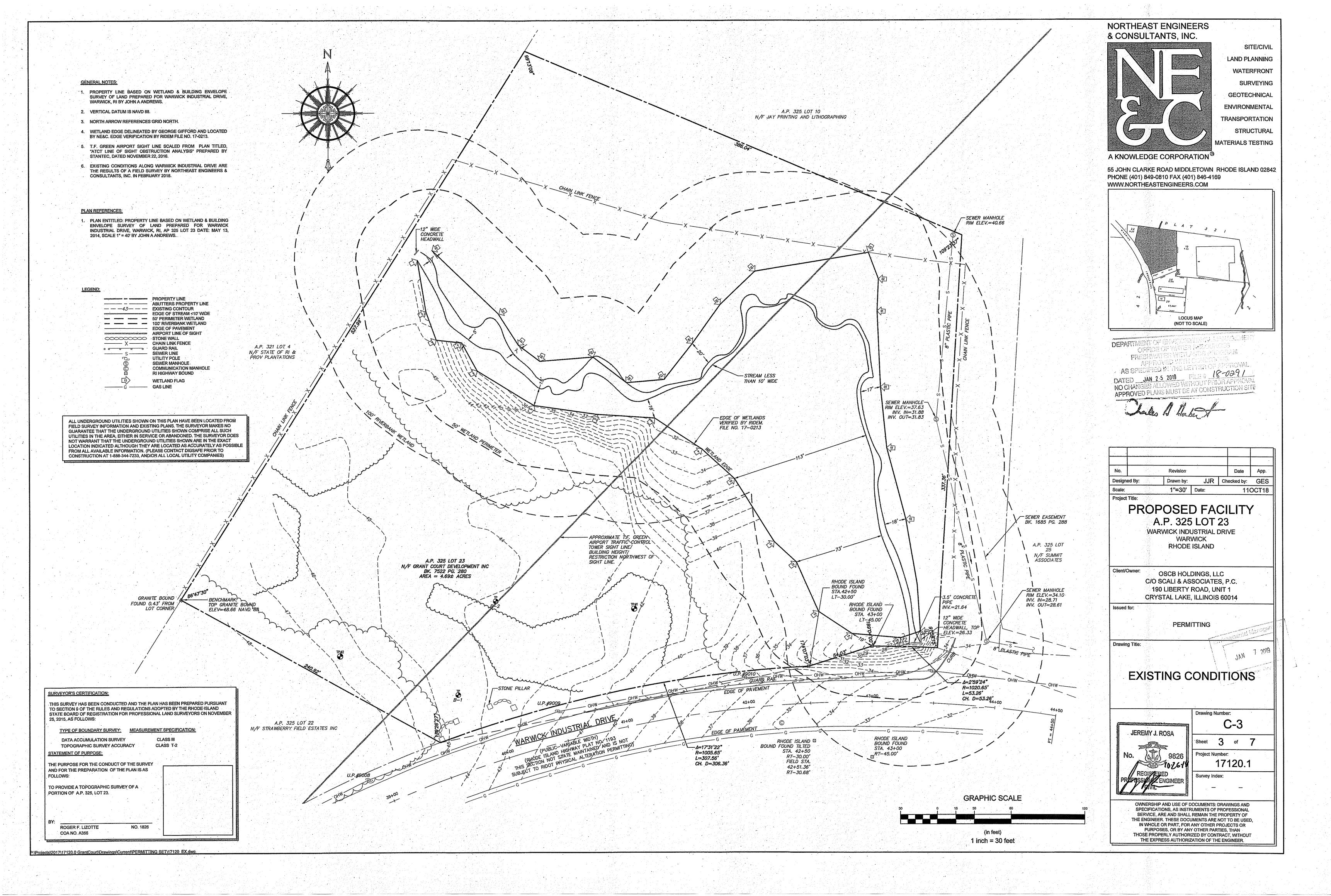


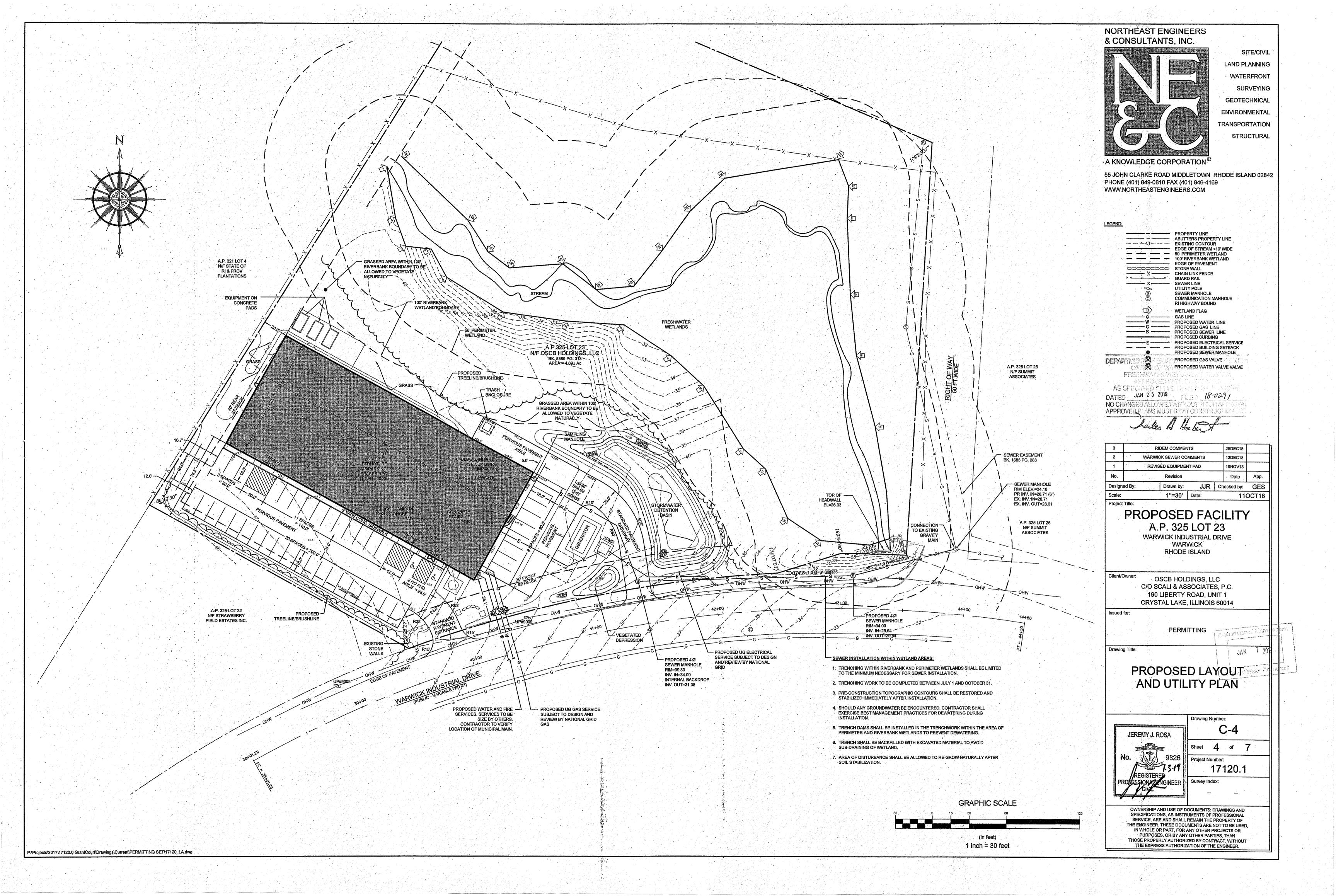
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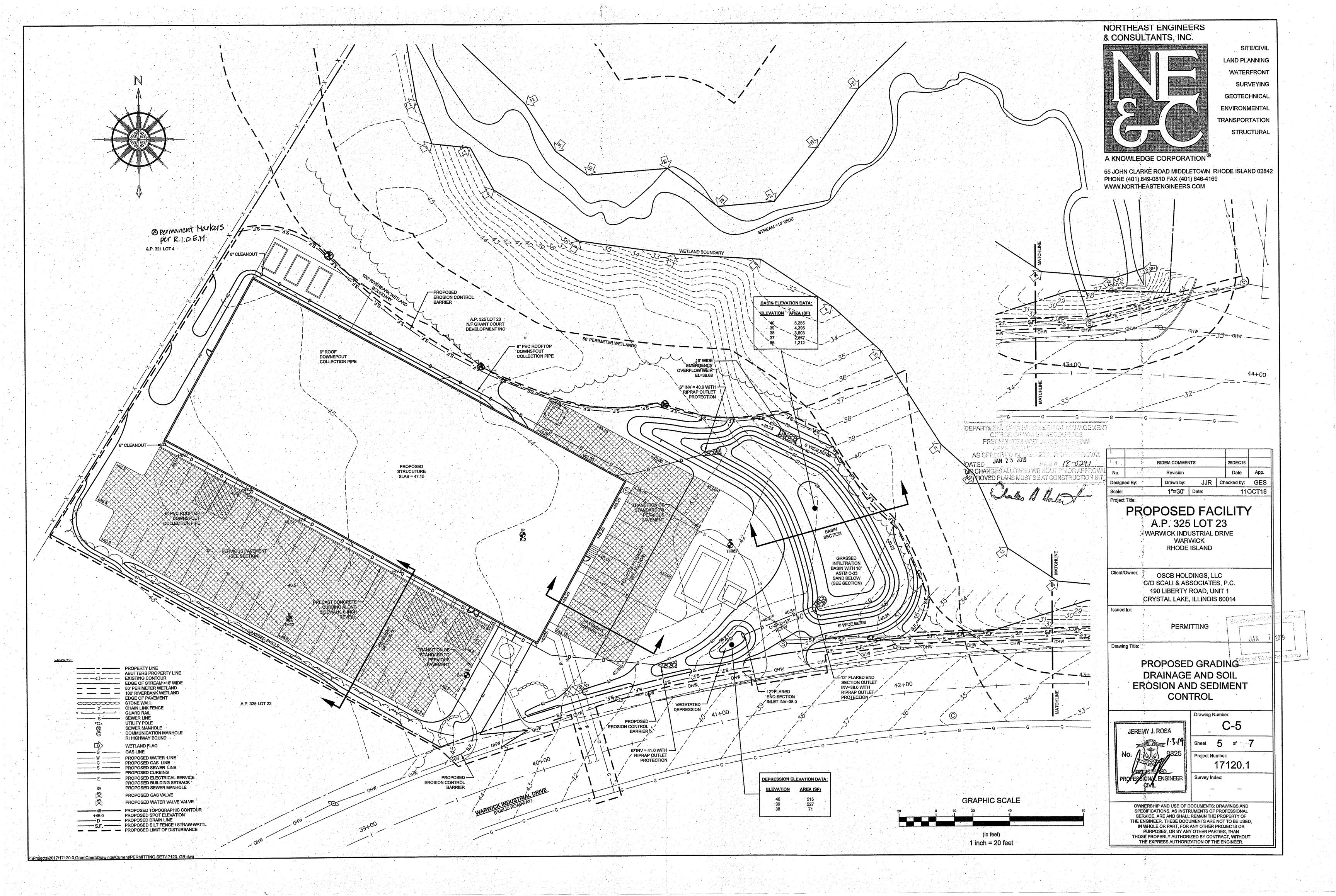
17120. Survey Index:

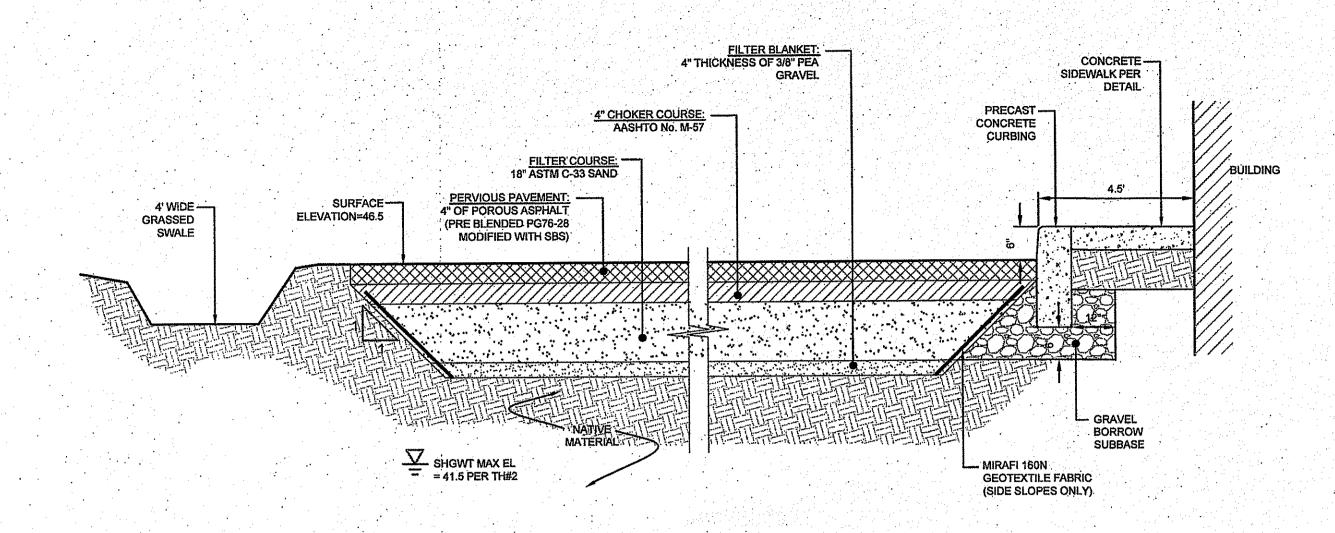
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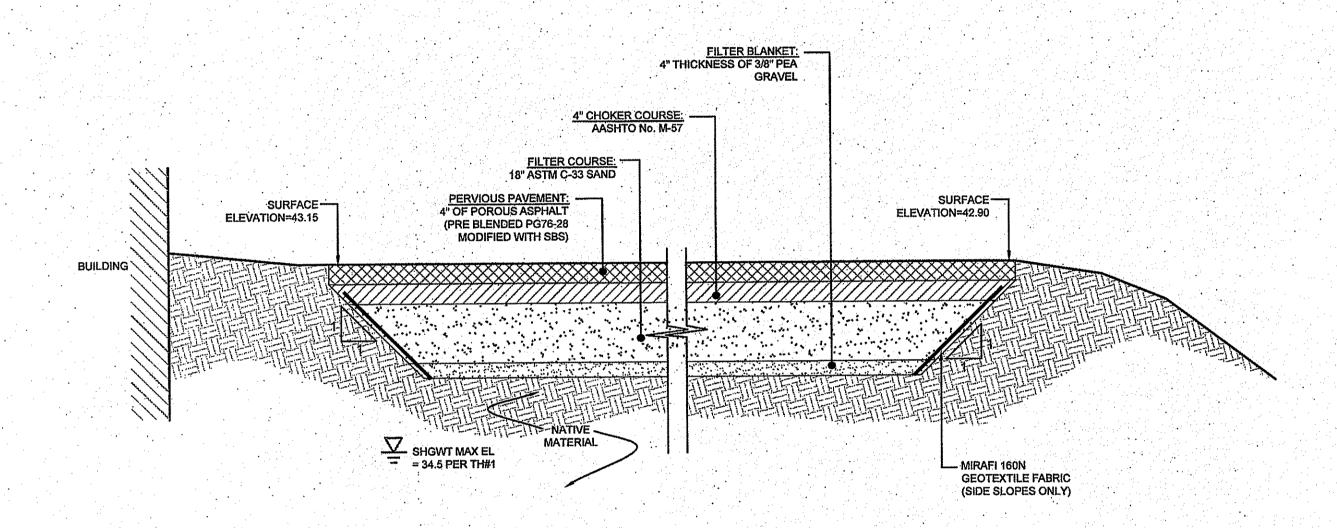




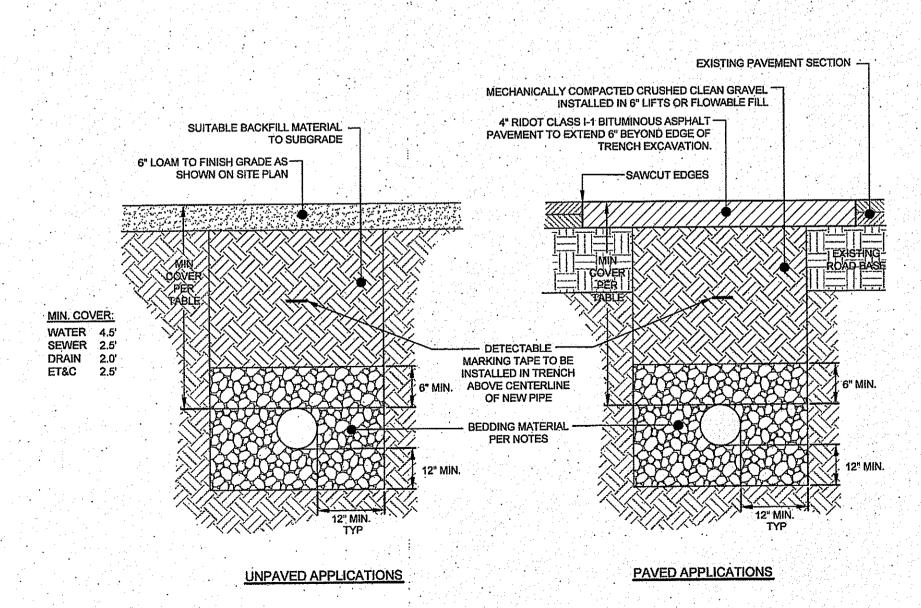




#### PERVIOUS PAVEMENT SECTION "A" SCALE: NOT TO SCALE



PERVIOUS PAVEMENT SECTION "B" SCALE: NOT TO SCALE



UTILITY TRENCH DETAIL SCALE:NOT TO SCALE

1. UNSUITABLE MATERIAL SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 12-INCHES BELOW THE DESIGN INVERT ELEVATION.

2. TRENCH PROTECTION SHALL BE REQUIRED IN ACCORDANCE WITH OSHA REGULATIONS, AND AS OTHERWISE REQUIRED TO PROTECT UTILITIES, ROADWAYS, AND ADJACENT STRUCTURES.

3. SEWER AND DRAIN PIPES SHALL BE LAID BEGINNING AT THE DOWNSTREAM END OF THE PIPE LINE. 4. ALL PVC SEWER PIPES SHALL BE IPEX RING-TITE SDR 35, OR SIMILAR APPROVED.

5. ALL DRAIN PIPES SHALL BE PVC SCH40 UNLESS OTHERWISE INDICATED.

6. ALL SEWER PIPE AND GASKETS SHALL CONFORM TO ASTM 3034 AND ASTM F679.

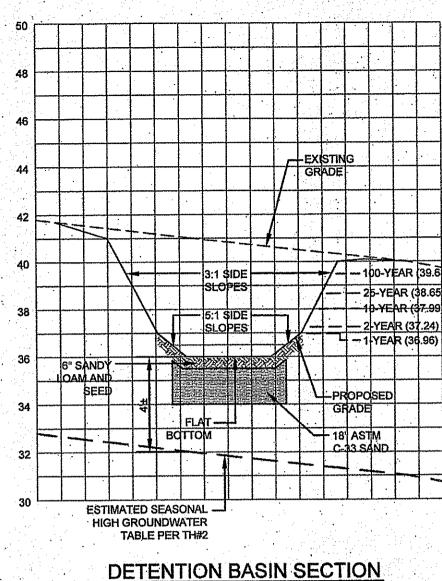
7. BACKFILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED 12" IN HEIGHT WHEN INSTALLED UNDER LANDSCAPED AREAS ONLY, INSTALLATIONS UNDER PAVEMENT REQUIRE BACKFILL MATERIAL TO BE PLACED IN LAYERS NOT TO EXCEED 6" IN HEIGHT. THESE LAYERS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY (AASHTO T180). SUITABLE BACKFILL SHALL BE FREE OF LOAM, CLAY, ORGANIC MATTER AND PARTICLES LARGER THAN 2 INCHES IN DIAMETER.

8. SEWER AND DRAINAGE PIPE TRENCHES SHALL BE BEDDED WITH CRUSHED STONE OR SCREENED GRAVEL, THESE MATERIALS MUST CONFORM TO RIDOT STANDARD M.01.09 TYPE II MATERIAL.

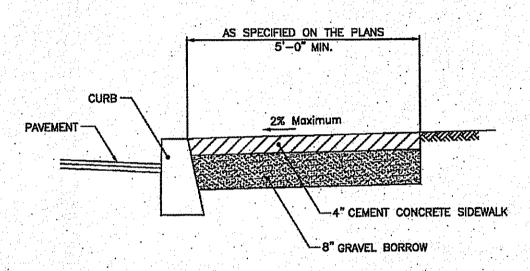
9. WATER PIPE TRENCHES MUST BE BEDDED WITH SAND CONTAINING NO PARTICLES LARGER THAT 3/8". THIS MATERIAL MUST CONFORM TO AASHTO M6 REQUIREMENTS.

10. UTILITY INSTALLATIONS SHALL CONFORM TO ALL REQUIREMENTS OF THE CITY OF WARWICK PUBLIC WORKS DEPARTMENT RULES AND REGULATIONS.

11. WHEN TRENCH EXCAVATION IS ADJACENT TO OR UNDER EXISTING STRUCTURES OR FACILITIES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY SHEETING AND BRACING THE EXCAVATION AND STABILIZING THE EXISTING GROUND TO RENDER IT SAFE AND SECURE FROM POSSIBLE SLIDES, CAVE-INS AND SETTLEMENT AND FOR PROPERLY SUPPORTING EXISTING STRUCTURES AND FACILITIES WITH BEAMS, STRUTS OR UNDERPINNING TO FULLY



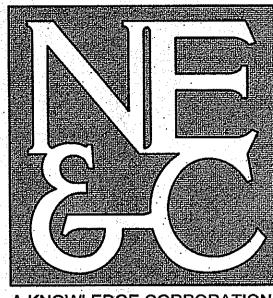
HORIZONTAL SCALE: 1=20' VERTICAL SCALE: 1=4



1. SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS. 2. FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.

**CEMENT CONCRETE SIDEWALK (RIDOT 43.1.0)** 

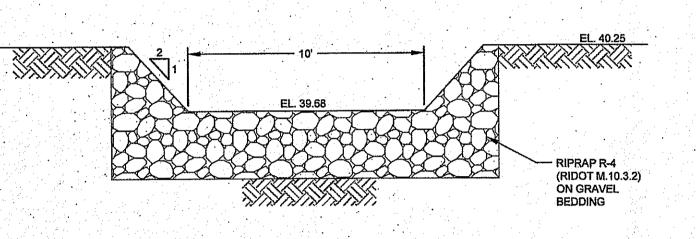


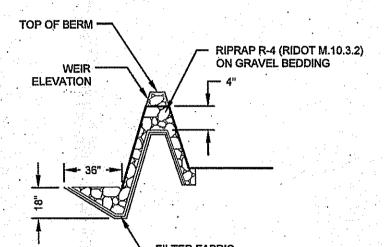


SITE/CIVIL LAND PLANNING WATERFRONT SURVEYING **GEOTECHNICAL ENVIRONMENTAL TRANSPORTATION** STRUCTURAL

A KNOWLEDGE CORPORATION

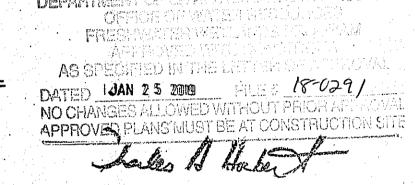
55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

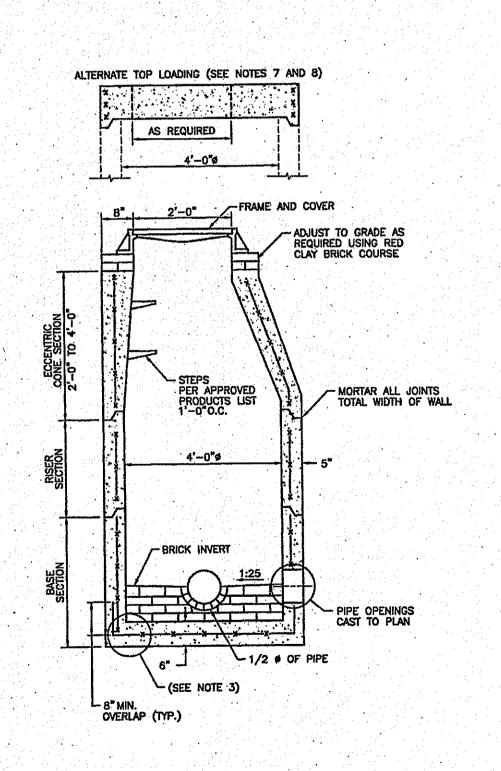


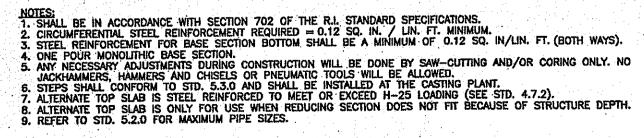


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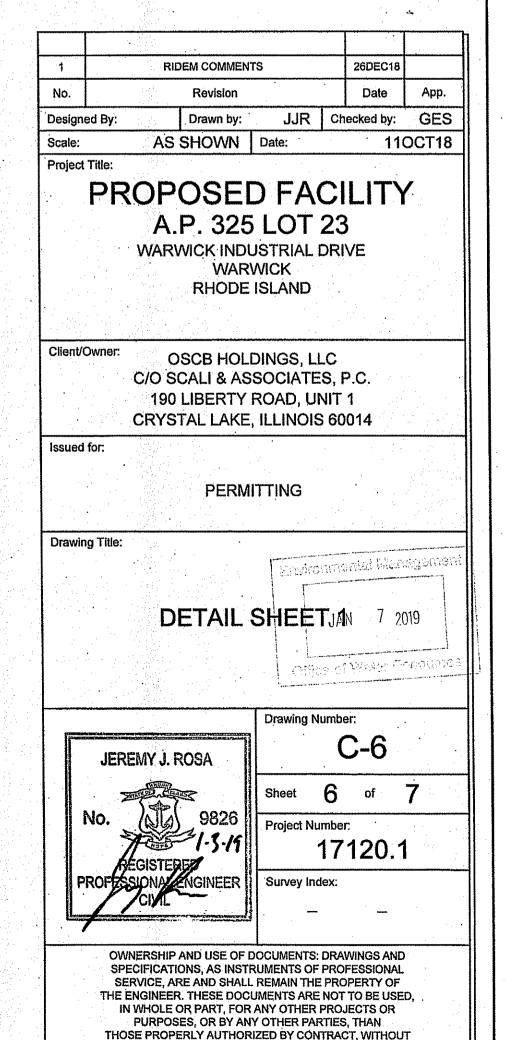
STONE WEIR DETAIL SCALE: NOT TO SCALE





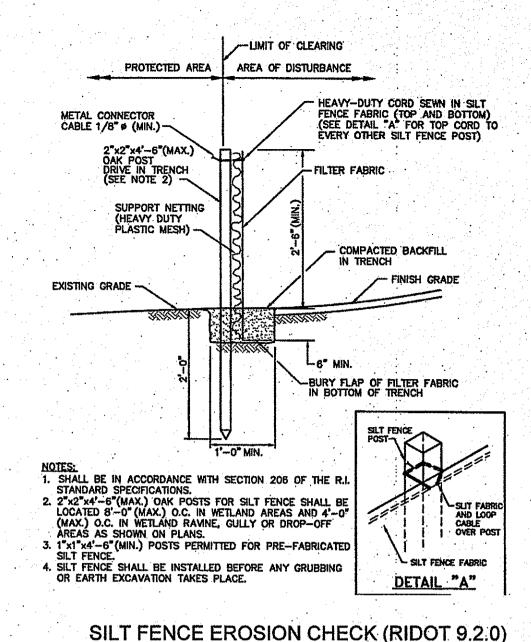


PRECAST 4'-0" ROUND SEWER MANHOLE (RIDOT 4.2.0)



THE EXPRESS AUTHORIZATION OF THE ENGINEER.

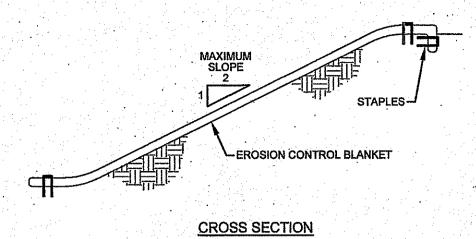
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CONSTRUCTION ENTRANCE CRUSHED STONE -

SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

STONE CONSTRUCTION ACCESS (RIDOT 9.9.0)



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER,

2. ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE

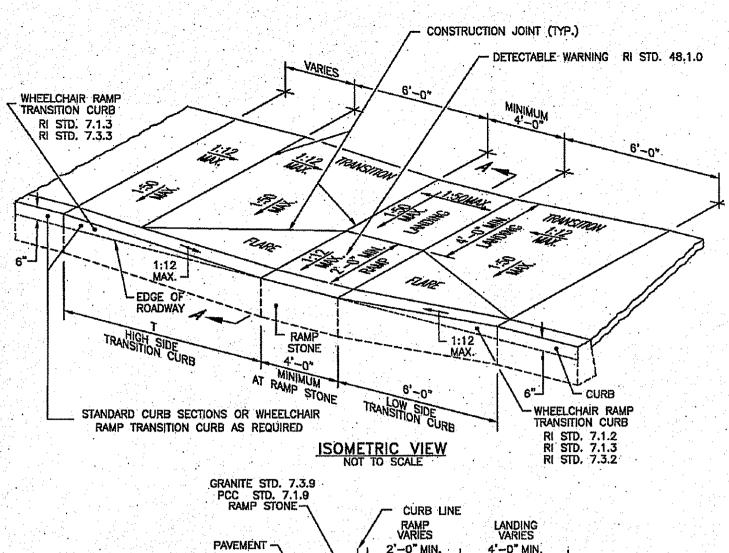
3. ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.

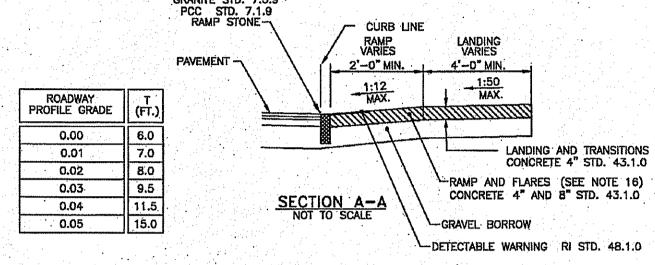
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.

5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.

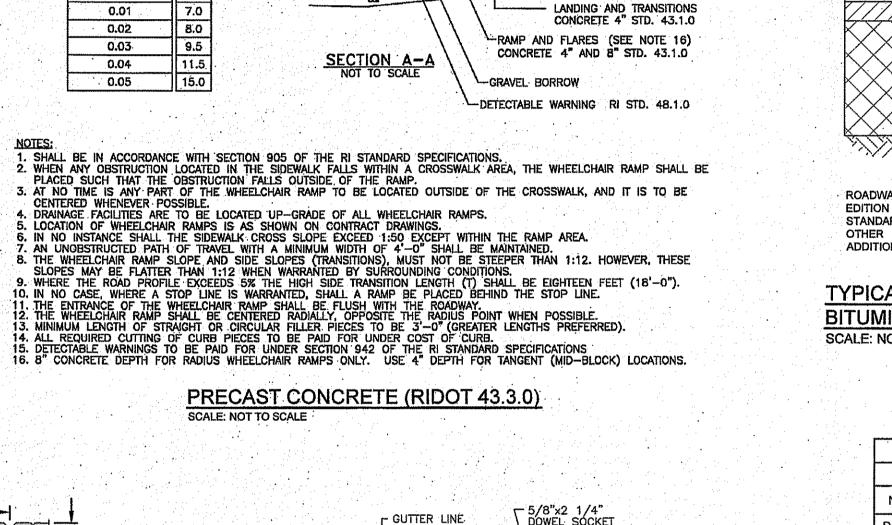
> **EROSION CONTROL BLANKET** SCALE: NOT TO SCALE

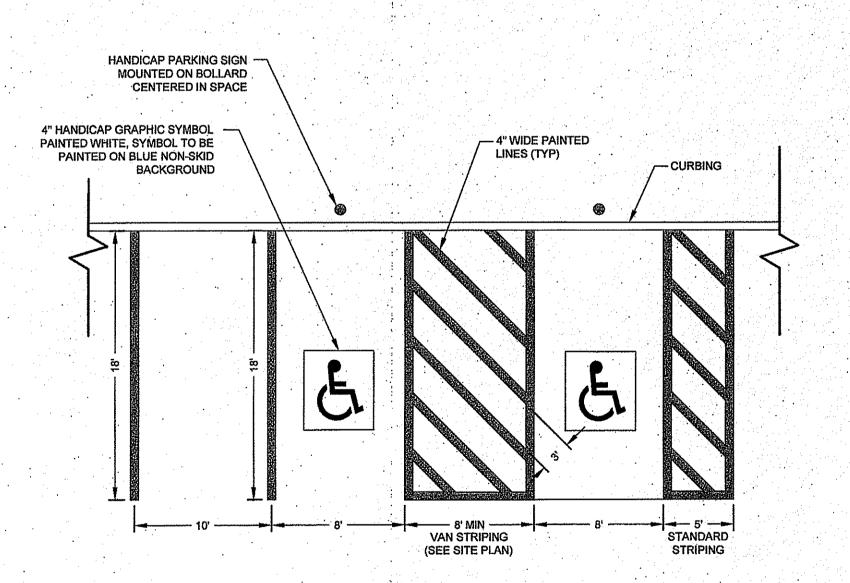
> > -- CEDAR FENCE OR

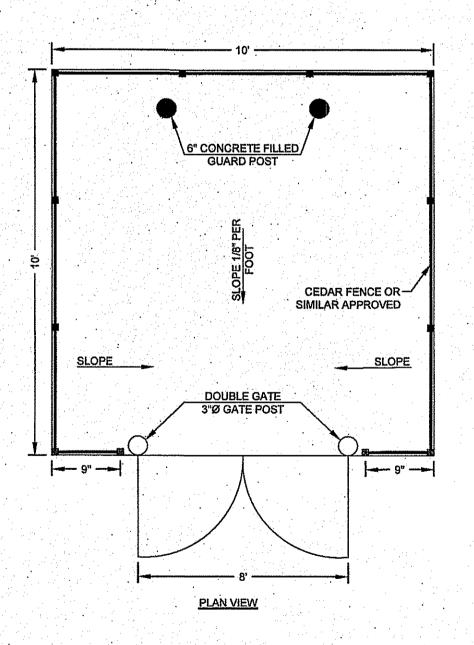


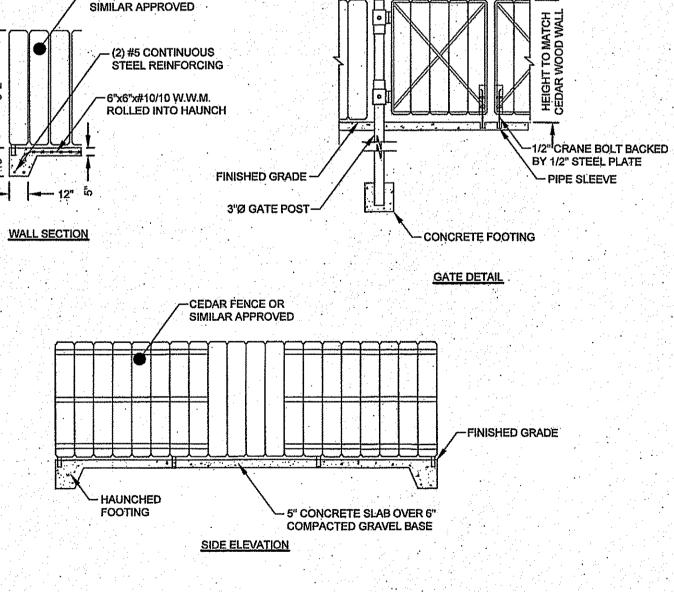


## PRECAST CONCRETE (RIDOT 43.3.0)

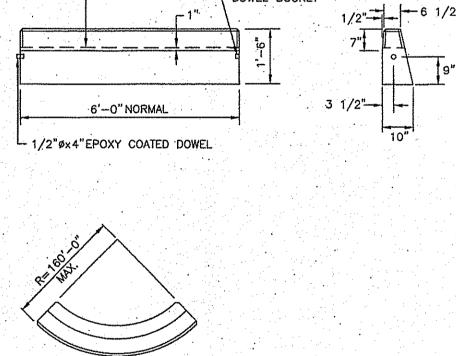








TYPICAL TRASH ENCLOSURE ARCHITECT MAY PROVIDE ALTERNATE DESIGN SCALE: NOT TO SCALE



CIRCULAR CURB

NOTES:

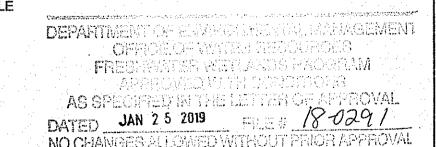
1. SHALL BE IN ACCORDANCE WITH SECTION 906 OF THE R.I. STANDARD SPECIFICATIONS.

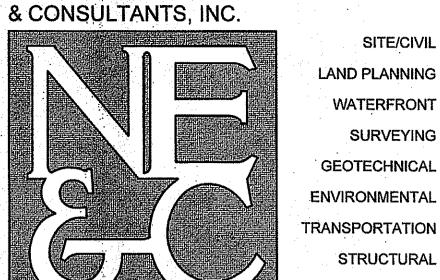
2. MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0".

3. EXPOSED SURFACES TO HAVE A SPONGE FLOAT FINISH. 4. CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

5. EXPOSED EDGES TO HAVE A 3/4" CHAMFER.

#### PRECAST CONCRETE CURB (RIDOT STD 7.1.0) SCALE: NOT TO SCALE



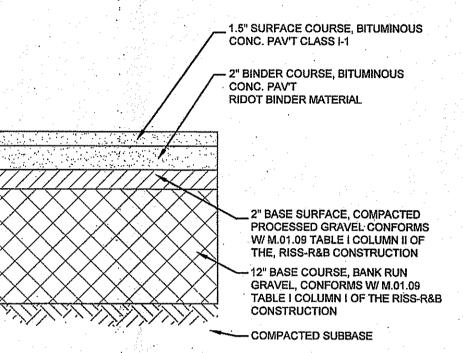


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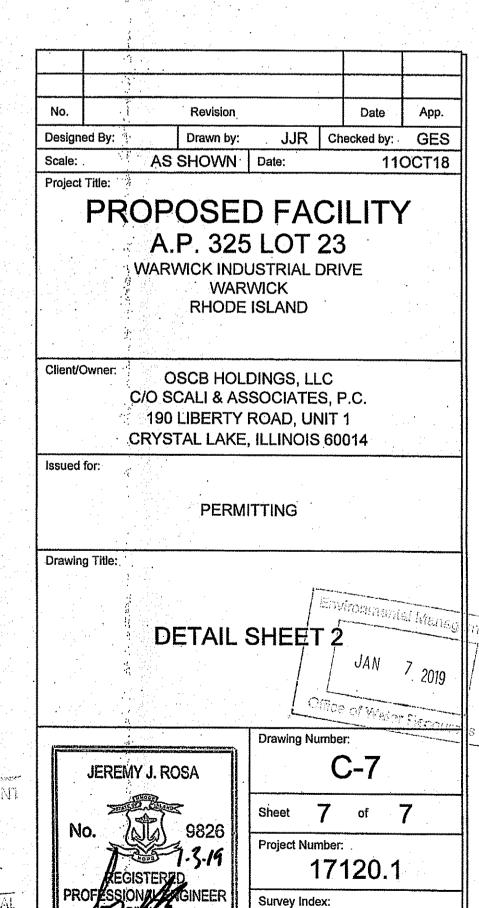
55 JOHN CLARKE ROAD MIDDLETOWN RHODE ISLAND 02842 PHONE (401) 849-0810 FAX (401) 846-4169 WWW.NORTHEASTENGINEERS.COM

SITE/CIVIL



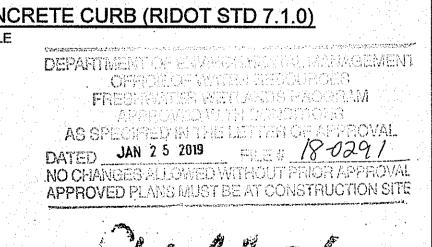
ROADWAY CONSTRUCTION TO CONFORM TO THE MOST RECENT EDITION OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE DESIGN AND OTHER SPECIFICATIONS, AND ALL RELATED ADDENDUMS AND

TYPICAL (NON PERVIOUS) **BITUMINOUS PAVEMENT SECTION** SCALE: NOT TO SCALE



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