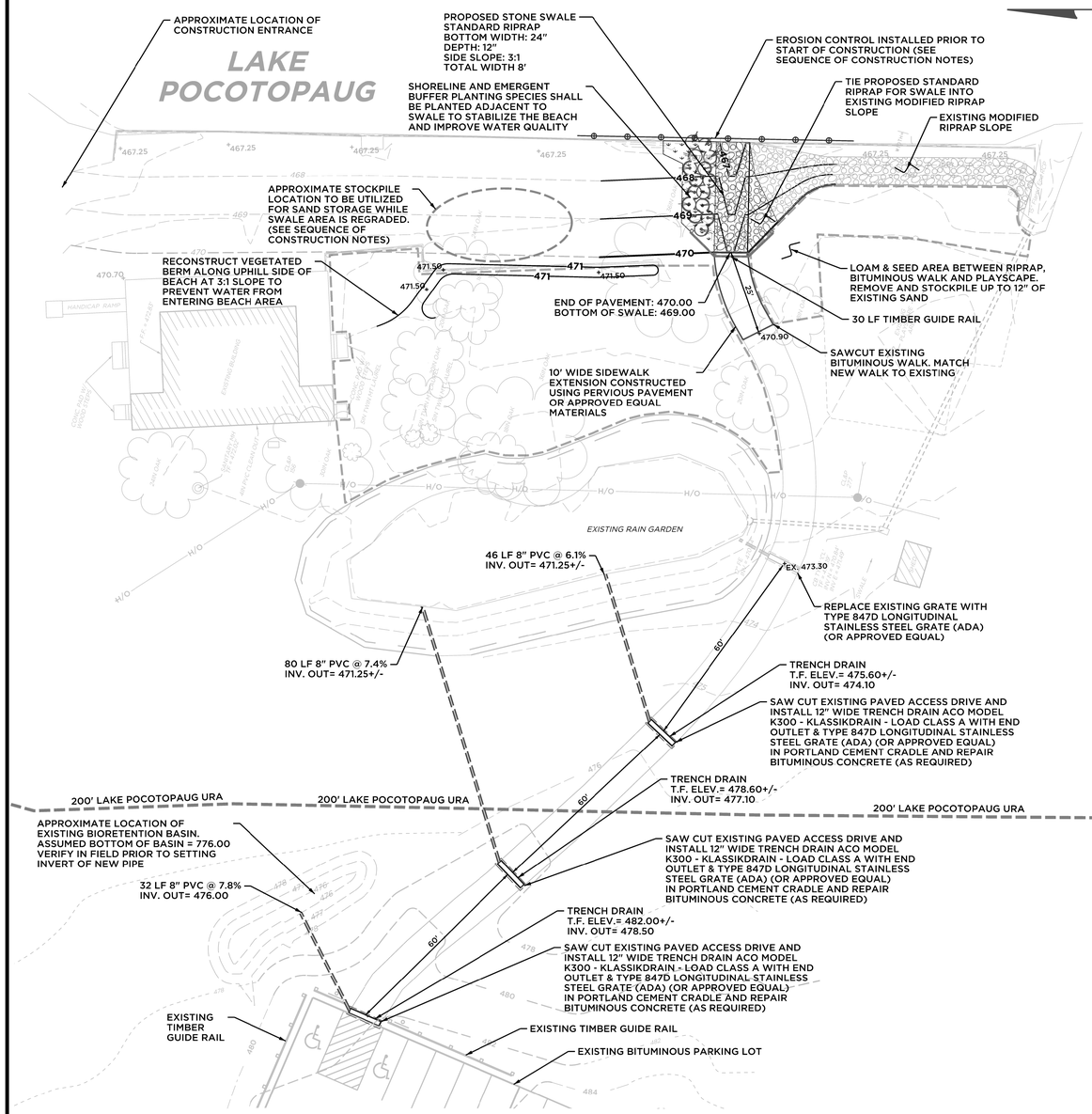
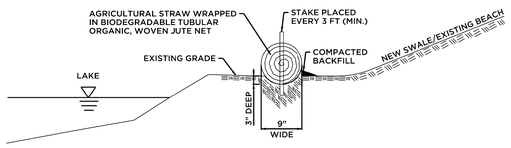
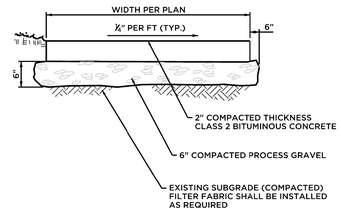




LAKE PROTECTION - FILTRATION ROLL

NOT TO SCALE



BITUMINOUS CONCRETE WALKWAY DETAIL

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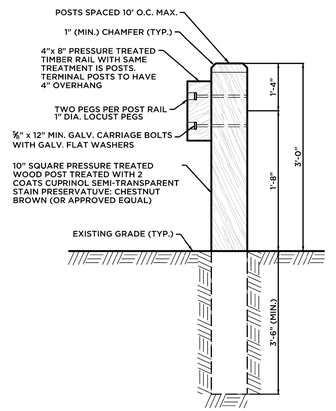

TIMBER GUIDE RAIL

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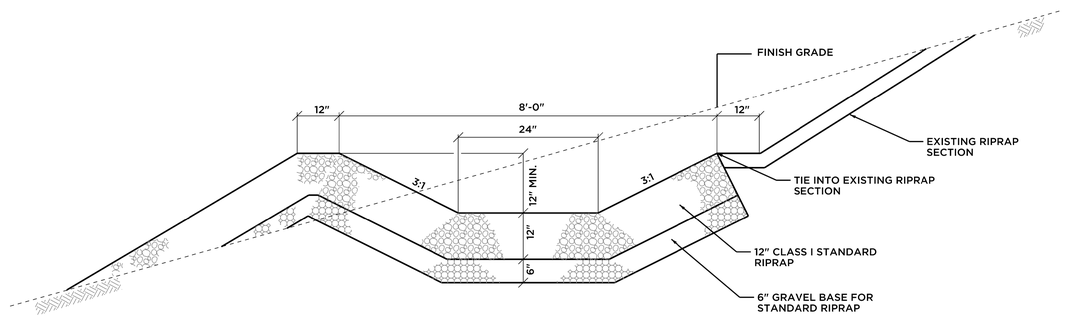

RIPRAP SWALE SECTION

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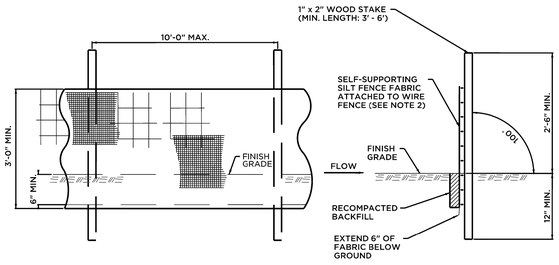


ELEVATION **SECTION**

NOTES:

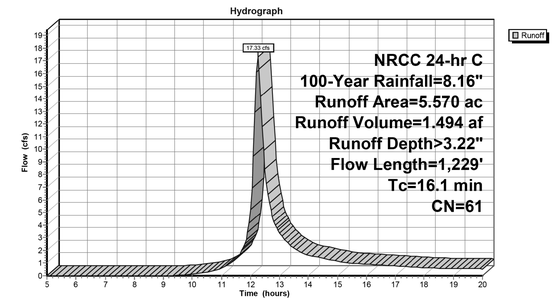
1. INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
2. SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.5 # STEEL/L.F.). THE MINIMUM POST LENGTH SHALL BE 5'-0".
3. SILT FENCE FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN PROPYLENE, NYLON, POLYESTER OR POLYETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.

SILT FENCE

NOT TO SCALE

Full Flow Velocity:

BASED ON A DRAINAGE ANALYSIS USING A HYDROCAD MODEL AND EXISTING SURVEY, THE WORST CASE SCENERIO WILL CAUSE 17.33 CFS TO ENTER THE SWALE WITH A 100 YEAR STORM. FLOW WAS ROUNDED UP TO 20 CFS FOR ALL CALCULATIONS.



Stable Rock Size

For swale slopes between 2% and 10%: $d_{50} = [q\,(S)^{1.5}/4.75(10)^{3}]^{1/1.89}$

d_{50} = Particle size for which 50 % of the sample is finer, inch
S = Bed slope, ft/ft
q = Unit discharge, $ft^3/s/ft$
(Total discharge ÷ Bottom width)

Bottom Width = 2ft	
q = 10 cfs/ft	20 CFS/ 2FT
S = 0.095 ft/ft	Based on existing slopes of area of proposed swale
d50 = 8.85 in.	

Swale Velocities

$n = 0.047(d_{50} \cdot S)^{0.147}$

d50 = 8.85 in.
S = 0.095 ft/ft
n = 0.046

Depth:

$z = [n(q)/1.486(S)^{0.50}]^{3/5}$
S = Bed slope, (ft/ft)
z = Flow depth, (ft)
q = Unit discharge, $(ft^3/s/ft)$ (Total discharge ÷ Bottom width)
n = Manning's coefficient of roughness (see formula under velocities)

S = 0.033 ft/ft
q = 12.5 cfs/ft
n = 0.035
z = 1.00 ft

SWALE SIZING CALCULATIONS

SCALE: 1"=20'

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PROJ. MANAGER	KRG
OFFICE REVIEW	KRG
REVISIONS	
05/25/22	

SEARS PARK BEACH RESTORATION
PREPARED FOR
THE TOWN OF EAST HAMPTON
SITE IMPROVEMENT & GRADING PLAN
68 NORTH MAIN STREET EAST HAMPTON, CT

PROJECT	DATE	SHEET NO.	OF
3129.008	5/18/22	1	2

SCALE: 1"=20'

EROSION & SEDIMENT CONTROL NOTES:

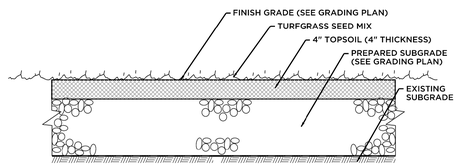
1. CONSTRUCTION WILL COMMENCE IN THE SUMMER OF 2022 AND WILL BE COMPLETED IN THE FALL OF 2022, WEATHER PERMITTING.
2. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE TOWN PRIOR TO CONSTRUCTION.
3. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", DATED 2002, AS AMENDED AND THE TOWN OF EAST HAMPTON REGULATIONS.
4. ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED OR REPLACED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD AS NECESSARY OR AS REQUIRED BY THE ENGINEER OR THE TOWN OF EAST HAMPTON.
5. SEDIMENT REMOVED FROM ANY CONTROL STRUCTURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
6. ADDITIONAL EROSION CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD IF DEEMED NECESSARY OR REQUIRED BY THE ENGINEER OR THE TOWN OF EAST HAMPTON.
7. THE CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING ALL EROSION AND SEDIMENTATION CONTROL DEVICES AS SHOWN ON THESE PLANS OR AS ORDERED BY THE ENGINEER.
8. ALL DISTURBED AREAS ARE TO BE RAKED, SEEDED AND FERTILIZED PER "TURF ESTABLISHMENT" SPECIFICATION IN CTDOT 818, AT THE COMPLETION OF PROJECT.
9. AREAS TO BE LOAMED AND SEEDED ARE TO RECEIVE A MINIMUM 4" OF TOPSOIL OR ROLLED GRAVEL.
10. THE FOLLOWING DATES FOR SEEDING SHALL BE USED:

    SPRING: APRIL 15 TO JUNE 15
    FALL: AUGUST 15 TO SEPTEMBER 15

11. THE FOLLOWING GRASS SEED MIXTURES SHALL BE APPLIED AT A RATE NO LESS THAN 100LBS PER ACRE:

SPECIES	PROPORTION BY WEIGHT (POUNDS)
CREEPING RED FESCUE (FESTUCA REBRA)	50
K-31 TALL FESCUE (FESTUCA ARUNDINACEA VAR. KENTUCKY 31)	20
PERENNEAL RYEGRASS (LOLIUM PERENNE)	25
ALSIKE CLOVER (TRIFOLIUM HYBRIDUM)	5

12. TEMPORARY GRASS SEEDING, IF NECESSARY, SHALL BE PERENNIAL RYE GRASS (LOLIUM PERENNE) APPLIED AT A RATE OF 100 LBS. PER ACRE.



TURF ESTABLISHMENT

NOT TO SCALE

GENERAL CONSTRUCTION NOTES:

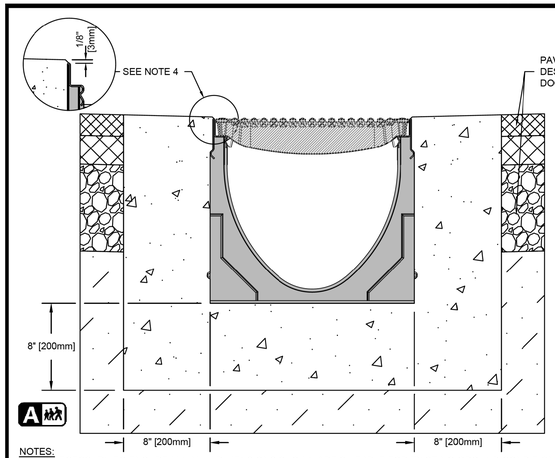
1. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS REQUIRED BY THE TOWN OF EAST HAMPTON PRIOR TO THE START OF WORK.
2. THE CONTRACTOR SHALL CONFORM TO ALL REQUIREMENTS OF ALL LOCAL AGENCIES OF THE TOWN OF EAST HAMPTON
3. ALL WORK TO BE COMPLETED WITHIN THE BEACH EXTENTS TO BE PERFORMED DURING A PERIOD OF DRY WEATHER AND LOW WATER CONDITIONS WITHIN LAKE POCOTOPAUG.
4. THE CONTRACTOR SHALL MONITOR SHORELINE CONDITIONS ADJACENT TO ACTIVE WORK AREAS FOR SOIL EROSION AND SEDIMENTATION AND CONTACT THE TOWN OF EAST HAMPTON IF AREAS OF CONCERN ARE NOTICED.
5. WHERE PORTIONS OF THE EXISTING BEACH HAVE BEEN ERODED, EXISTING SAND THAT HAS BEEN REMOVED AND STOCKPILED SHALL BE USED TO REPLACE THE ERODED SAND. NO IMPORTATION OF SAND IS PROPOSED AS PART OF THIS PROJECT.

SEQUENCE OF CONSTRUCTION:

1. COORDINATE AND COMPLETE A PRE-CONSTRUCTION MEETING WITH TOWN OF EAST HAMPTON. RESPONSIBLE PARTIES SHALL BE IDENTIFIED AND EMERGENCY PHONE NUMBERS PROVIDED.
2. INSTALL EROSION CONTROL MEASURES AT LOCATIONS INDICATED ON PLANS AND REMOVE AND STOCKPILE ALL MATERIALS TO BE REUSED SUCH AS SPLIT RAIL FENCING, PICNIC TABLES & ETC.
3. THE CONTRACTOR SHALL ACCESS THE SITE FROM THE BOAT LAUNCH SIDE OF THE CONCESSION STAND AS SHOWN ON THE PLANS, OR AS MAY BE AGREED UPON WITH TOWN STAFF.
4. START REMOVING THE EXISTING SAND FROM THE NEW SWALE AREA AND AREAS TO BE LOAMED AND SEEDED AS DEFINED ON THE PLANS AND STOCKPILE THE MATERIAL TO BE REUSED WITHIN THE MATERIAL STOCKPILE LOCATIONS, DEPICTED ON THE PLANS.
5. UPON COMPLETION OF SAND REMOVAL THE CONTRACTOR SHALL PREPARE THE SUBGRADE.
6. UPON COMPLETION OF SUBGRADE PREPARATION THE CONTRACTOR SHALL REQUEST APPROVAL FROM THE TOWN OF EAST HAMPTON TO DISPERSE THE STOCKPILED SAND ONTO ANY AREA OF THE BEACH THAT HAS BEEN ERODED AND MAY NEED RESTORATION. ALL STOCKPILED SAND DISPERSED ONTO THE BEACH SHALL BE KEPT ON THE BEACH. SAND SHALL ONLY BE PLACED UP TO THE HIGH WATER LINE AND NOT IN THE WATER.
7. THE CONTRACTOR SHALL NOTIFY THE TOWN OF EAST HAMPTON PRIOR TO THE START OF RIPRAP INSTALLATION FOR THE NEW SWALE WHICH SHALL BE PERFORMED DURING DRY WEATHER CONDITIONS AND DURING A PERIOD OF LOW WATER CONDITIONS.
8. LOAM & SEED AREAS AS DEPICTED ON THE PLANS. TAKE CARE TO MAINTAIN THE LIMITS OF THE EXISTING PLAYSCAPE DURING THE CONSTRUCTION ACTIVITIES WITHIN THIS AREA.
9. BASED UPON THE CONTRACT AGREEMENT, THE CONTRACTOR AND TOWN STAFF SHALL AGREE ON A SCHEDULE TO INSTALL DRAINAGE IMPROVEMENTS DEPICTED BASED UPON CONSTRUCTION SEQUENCE AND WEATHER CONDITIONS.
10. RESTORE ALL CONSTRUCTION RELATED DISTURBANCES TO THE SITE INCLUDING BUT NOT LIMITED TO RESTORING PLAYSCAPE MULCH, TOPSOIL AND SEEDING LAWN AREAS, RESTORATION OF RAIN GARDEN SURFACE TREATMENTS & FENCING AND ALL OTHER ITEMS STOCKPILED DURING CONSTRUCTION.
11. REMOVE EROSION AND SEDIMENTATION CONTROLS WHEN PERMANENT VEGETATIVE COVER IS ESTABLISHED.

DESCRIPTION OF WORK

1. THE SCOPE OF THIS PROJECT IS TO REMEDIATE AND PREVENT FUTURE BEACH EROSION BY INSTALLING ADDITIONAL TRENCH DRAINS ACROSS THE PAVED PATHWAY AND A STONE LINED DIVERSION SWALE TO DIRECT STORMWATER RUNOFF FROM THE EXISTING PAVED PATHWAY INTO THE LAKE.
2. THIS PROJECT ALSO INCLUDES:
    - ESTABLISHING ADDITIONAL LAWN AREAS ADJACENT TO THE EXISTING PLAYSCAPE.
    - CREATING A PLANTED BUFFER OF SHORELINE AND EMERGENT PLANT SPECIES BETWEEN THE EXISTING BEACH AND PROPOSED SWALE TO REDUCE BEACH EROSION AND PROMOTE WATER QUALITY.
    - RECONSTRUCTING A VEGETATED BERM ON THE HIGH-SIDE OF THE BEACH TO DIVERT STORMWATER FLOW AWAY FROM THE SAND.
3. APPROXIMATELY 20,000 S.F. OF CONSTRUCTION ACTIVITIES ARE WITHIN THE 200 FOOT LAKE POCOTOPAUG UPLAND REVIEW AREA.
4. EROSION CONTROL MEASURES WILL BE INSTALLED PRIOR TO THE START OF WORK AND WILL REMAIN IN PLACE UNTIL SUCH TIME AS THE SWALE HAS BEEN COMPLETED AND ALL DISTURBED AREAS HAVE BEEN ESTABLISHED WITH TOPSOIL AND SEED.



NOTES:
1. IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. *ENGINEERING ADVICE MAY BE REQUIRED.*
2. MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
3. EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. *ENGINEERING ADVICE MAY BE REQUIRED.*
4. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
5. CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
6. REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.

SPECIFICATION CLAUSE

K300 KLASSIKDRAIN 'DRAINLOK' LOAD CLASS A

GENERAL
THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE K300 CHANNEL SYSTEM WITH GALVANIZED STEEL EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

MATERIALS
CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN GALVANIZED STEEL EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:

COMPRESSIVE STRENGTH:	14,000 PSI
FLEXURAL STRENGTH:	4,000 PSI
TENSILE STRENGTH:	1,500 PSI
WATER ABSORPTION:	0.07%
FROST PROOF	YES
DILUTE ACID AND ALKALI RESISTANT	YES
B117 SALT SPRAY TEST COMPLIANT	YES

THE SYSTEM SHALL BE 12" (300mm) NOMINAL INTERNAL WIDTH WITH A 14.2" (390mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "V" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING 'DRAINLOK' BOLTLESS LOCKING SYSTEM. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

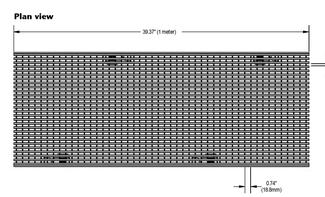
K3D-A-EAP ACO DATE: 08/18/16	K300 - KLASSIKDRAIN - LOAD CLASS: A Exposed Asphalt Pavement INSTALLATION DRAWING - ACO DRAIN	**ACO Polymer Products, Inc.** 825 W. Beechcraft St. Casa Grande, AZ 85122 Tel: 520-421-9988 Fax: 520-421-9899 9470 Pinecone Dr. Mentor, OH 44060 Tel: 440-639-7230 Fax: 440-639-7235 4211 Pleasant Rd. Fort Mill, SC 29708 Tel: 440-639-7230 Fax: 803-802-1063

Arizona Tel: 888-490-9552 e-mail: sales@acousa.com Ohio Tel: 800-543-4764 www.acousa.com South Carolina Tel: 800-543-4764

ACO DRAIN

Type 847D/848D Longitudinal stainless steel grade (ADA)

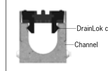
Plan view



Side elevation

Description	Part No.	Length inches (mm)	Width inches (mm)	Weight lbs.
DrainLok grate				
Type 847D Stainless steel longitudinal grate	**142223**	39.37 (1000)	13.31 (338)	28.6
Type 848D Stainless steel longitudinal grate	**142224**	19.69 (500)	13.31 (338)	14.5

'DrainLok' locking mechanism



ACO DrainLok™ is a patented, boltless locking system that removes the need for bolts and bars and improves the hydraulic capacity of the channel. The DrainLok™ mechanism simply clips into the channel edge rail for rapid installation. ACO DrainLok™ grates are fitted with an anti-shunt mechanism that restricts unwanted grate movement when installed, improving durability and longevity of the system.

ACO Specification Information

ACO Polymer Products, Inc.
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Mentor, OH 44060
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Toll free: (800) 543-4764
Fax: (440) 639-7235

West Sales Office
825 W. Beechcraft St.
Casa Grande, AZ 85122
Tel: (520) 421-9988
Toll Free: (888) 490-9552
Fax: (520) 421-9899

Southeast Sales Office
4211 Pleasant Road
Fort Mill, SC 29708
Toll free: (800) 543-4764
Fax: (803) 802-1063

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info@ACODrain.us
www.ACODrain.us

SPEC INFO

August 2017 www.ACODrain.us

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REVISIONS	
SCALE:	1"=20'

SEARS PARK BEACH RESTORATION

PREPARED FOR
THE TOWN OF EAST HAMPTON

NOTES AND DETAILS

68 NORTH MAIN STREET EAST HAMPTON, CT

PROJECT	DATE	SHEET NO.	OF
3129.008	5/18/22	2	2