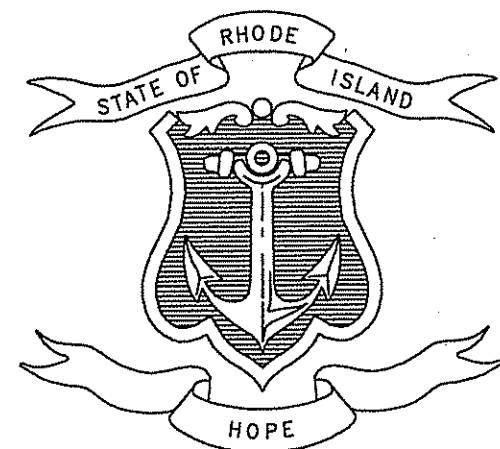


NARRAGANSETT BAY COMMISSION COMBINED SEWER OVERFLOW CONTROL FACILITIES PROGRAM PHASE II

FLOOD ABATEMENT SWALE DIVERSION SITE 049

CONTRACT NO. TBD

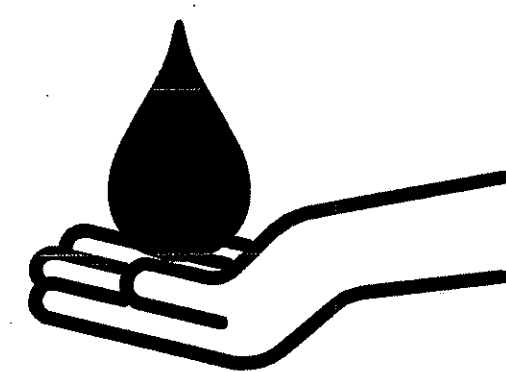


STATE OF RHODE ISLAND

GINA M. RAIMONDO _____ GOVERNOR



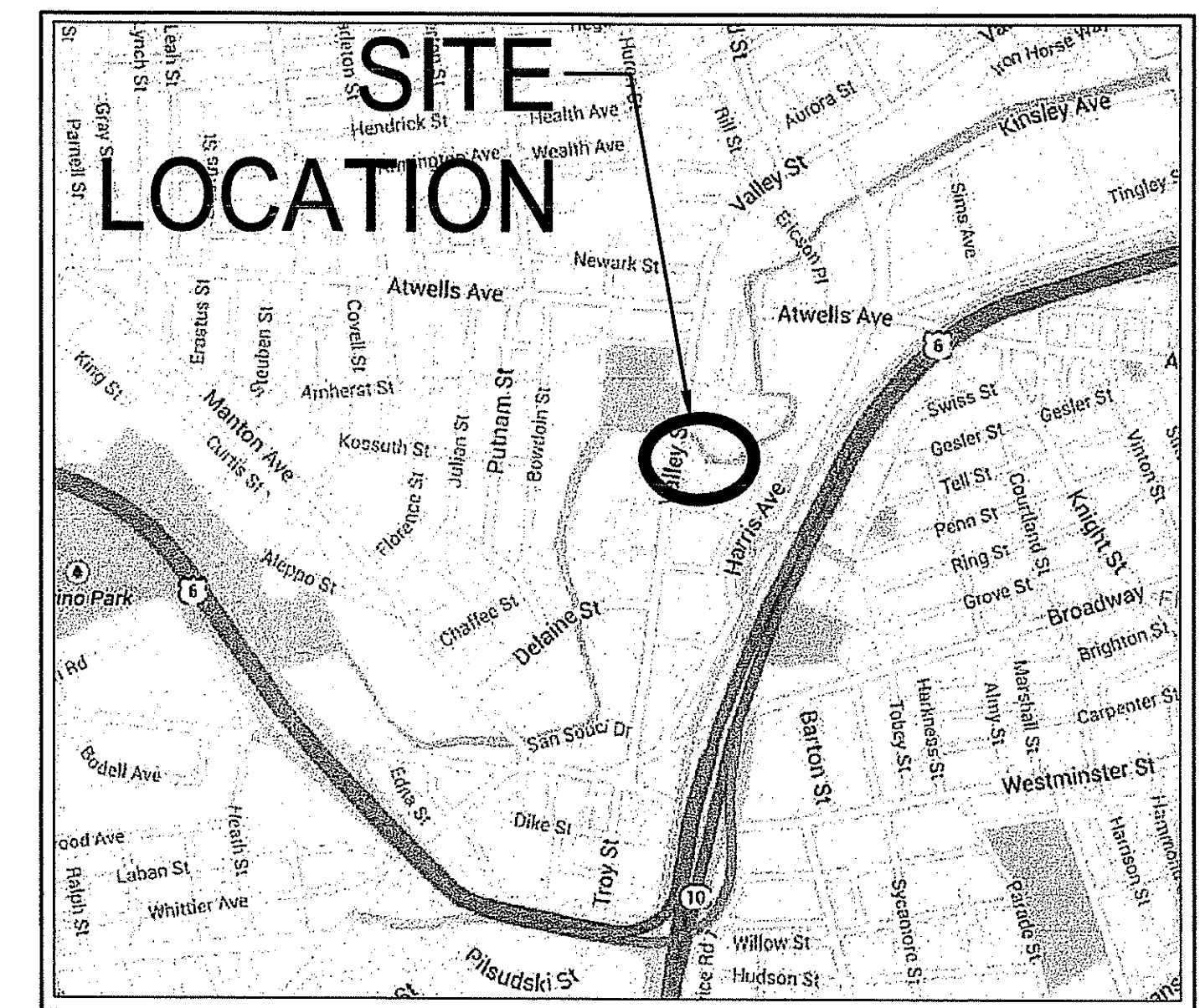
REQUEST FOR PRELIMINARY DETERMINATION
FEBRUARY 2015



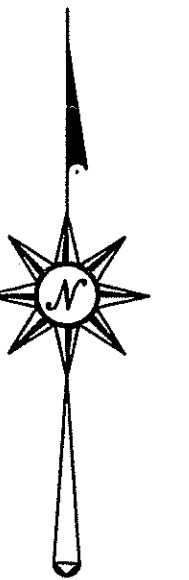
RHODE ISLAND
CLEAN WATER FINANCE AGENCY

JAMES M. HAGERTY _____ CHAIRMAN
WILLIAM SEQUINO, JR. _____ EXECUTIVE DIRECTOR

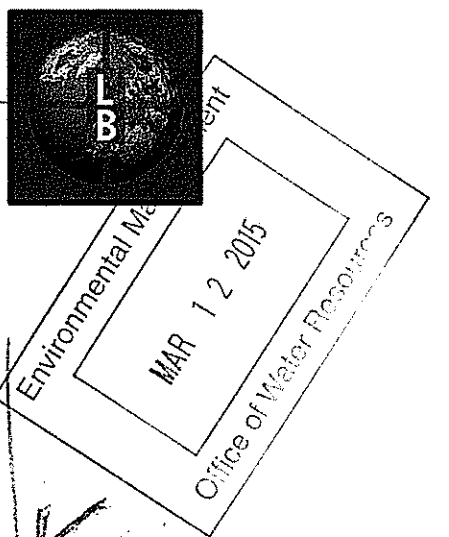
VINCENT J. MESOLELLA JR. _____ CHAIRMAN
RAYMOND J. MARSHALL, P.E. _____ EXECUTIVE DIRECTOR
PAUL E. NORDSTROM, P.E. _____ DIRECTOR OF OPERATIONS AND ENGINEERING
THOMAS G. BRUECKNER, P.E. _____ ENGINEERING MANAGER



LOCUS
Scale: 1" = 1000'



The LOUIS BERGER GROUP, Inc.
PROGRAM MANAGER

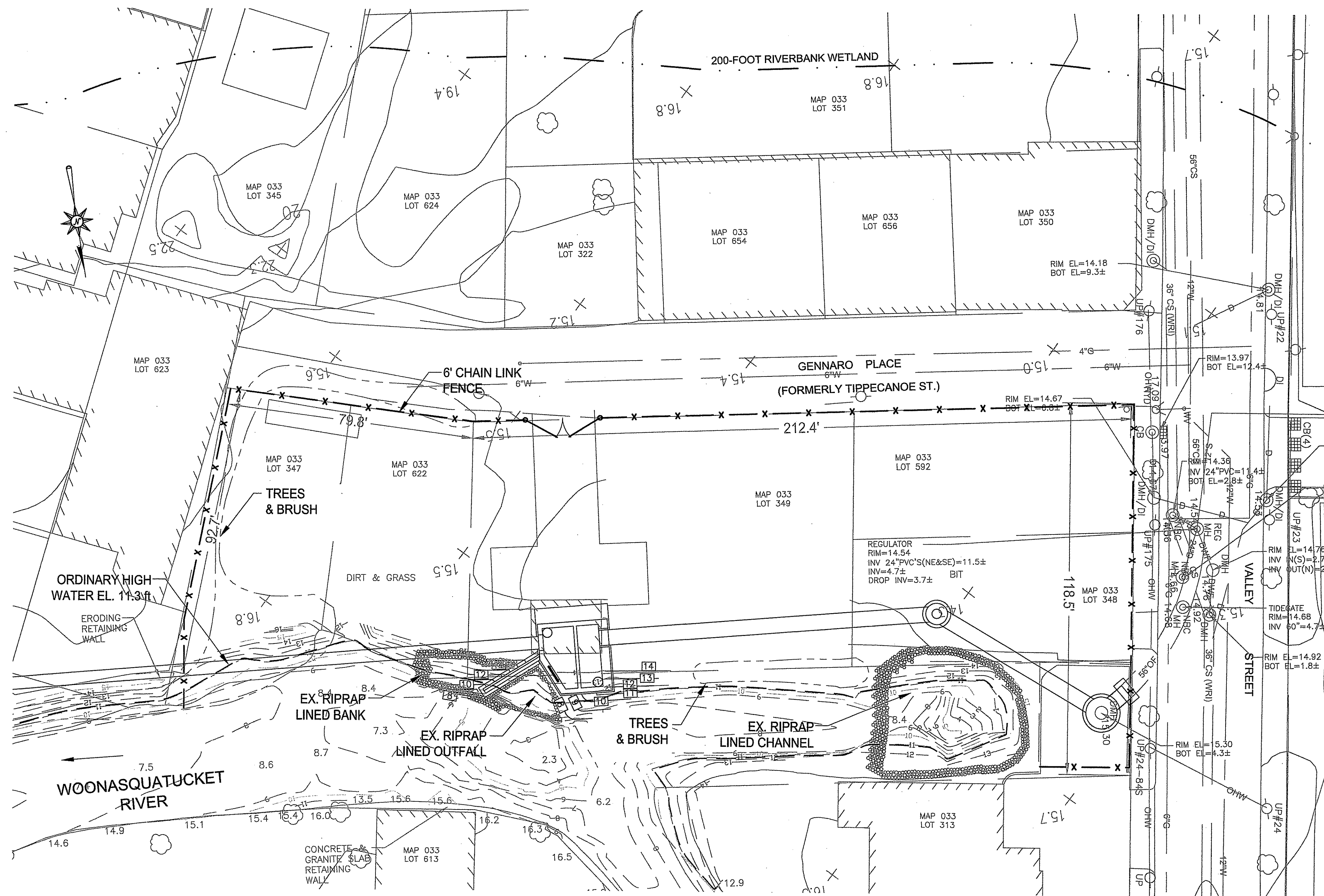


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER AND SALTWATER PROGRAM
APPROVED WITH CONDITIONS
AS SET FORTH IN THE LETTER OF APPROVAL
APR 6 2015 FILE # 15-0044
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Charles A. [Signature]

GENERAL NOTES

1. THE FLOOD ABATEMENT SWALE INCLUDES THE FOLLOWING COMPONENTS; DOUBLE-BARRELL 12" PIPE; CONNECTION TO AND REHABILITATION OF EXISTING CATCH BASIN; DEEP SUMP STORMWATER WITH FRAME AND COVER; GEOTEXTILE AND RIP-RAP REINFORCED SWALE; SIDEWALK REMOVAL AND REPLACEMENT; EROSION AND SEDIMENT CONTROL; AND SITE RESTORATION. EXISTING FACILITIES, INCLUDING BUT NOT LIMITED TO, FENCING AND GATE, ROADS, DIVERSION STRUCTURE, MANHOLES, AND PIPING MUST BE PROTECTED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
2. ALL SURFACE AND NEAR SURFACE WORK SHALL CONFORM TO THE RHODE ISLAND STATE BUILDING CODE AND TO THE CONTRACT DOCUMENTS. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
3. HORIZONTAL CONTROLS ARE BASED ON THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM (NAD83).
4. VERTICAL CONTROLS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).
5. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL STRUCTURES AND PIPING AGAINST FLOODING, FLOTATION AND OTHER DAMAGE DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO ADJACENT AND NEARBY STRUCTURES DURING CONSTRUCTION. ALL DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND APPROVED BY THE ENGINEER.
7. PRIOR TO CLOSING ANY ROADWAY OR SIDEWALK (PARTIALLY OR COMPLETELY), THE ENGINEER, MUNICIPAL POLICE, AND LOCAL FIRE OFFICIALS SHALL BE NOTIFIED. EACH PROPOSED CLOSING SHALL BE REQUESTED AT LEAST 4 WEEKS PRIOR TO CONSTRUCTION.
8. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORD DRAWINGS, AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. CONTRACTOR SHOULD ANTICIPATE THAT THE LOCATION OF UTILITIES SHOWN ON THE DRAWINGS COULD VARY UP TO 3 FEET IN ANY DIRECTION FROM THEIR ACTUAL LOCATION. IT IS POSSIBLE THERE MAY BE OTHER FACILITIES, STRUCTURES, AND UTILITIES, THE EXISTENCE OF WHICH ARE PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. TEST PITS ARE TO BE PERFORMED AT THE CONTRACTOR'S DISCRETION.
9. CONTRACTOR SHALL CALL "DIG SAFE," AT LEAST 72 HOURS (EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS) PRIOR TO ANY EXCAVATION TO OBTAIN ACCURATE UTILITY LOCATIONS.
10. THE ADJUSTMENT OR RELOCATION OF ALL UTILITIES (UNDERGROUND, SURFACE OR OVERHEAD) SHALL BE COORDINATED WITH THE ENGINEER AND EACH UTILITY PRIOR TO UNDERTAKING ANY CONSTRUCTION OPERATIONS.
11. ALL AREAS AND UTILITIES DISTURBED BY THE CONTRACTOR BEYOND LIMITS SHOWN SHALL REQUIRE PRIOR AUTHORIZATION FROM THE ENGINEER AND SHALL BE RESTORED AT NO ADDITIONAL COST TO THE NBC.
12. SEWER, WATER AND OTHER UTILITIES HAVE BEEN SHOWN ON THE SITE PLANS WHERE INFORMATION IS AVAILABLE. ALL SERVICE CONNECTIONS MUST BE MAINTAINED DURING CONSTRUCTION.
13. PIPING WHICH IS EXPOSED DURING EXCAVATION AND THAT IS NOT TO BE RELOCATED, ABANDONED, OR DEMOLISHED SHALL BE SUPPORTED IN PLACE, BRACED, OR OTHERWISE PROTECTED DURING CONSTRUCTION ACTIVITIES.
14. CONTRACTOR SHALL FIELD VERIFY EXISTING STRUCTURE ELEVATIONS AND LOCATIONS, AND EXISTING PIPE INVERT ELEVATIONS AND LOCATIONS PRIOR TO SUBMITTING SHOP DRAWINGS FOR CONNECTING STRUCTURES.
15. CONTRACTOR SHALL BE AWARE THAT THERE ARE OVERHEAD POWER LINES ADJACENT TO THE PROJECT AREA. THE CONTRACTOR SHALL STRICTLY ADHERE TO OSHA STANDARDS AND CLEARANCE REQUIREMENTS FOR WORK ADJACENT TO POWER LINES.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR HEALTH AND SAFETY OF ALL ITS EMPLOYEES, SUBCONTRACTORS, VENDORS, AND VISITORS ON THE PROJECT.
17. ALL PROPERTIES WITHIN THE SITE 049 BOUNDARY (MAP 33; LOTS 347, 348, 349, 592, AND 622) HAVE BEEN TRANSFERRED TO THE NARRAGANSETT BAY COMMISSION.

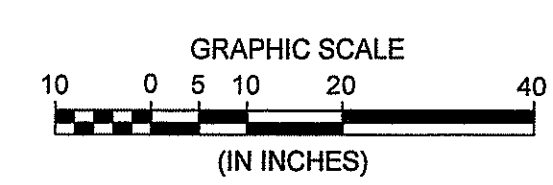


EXISTING CONDITONS

STATE OF RHODE ISLAND
 DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 DIVISION OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SHOWN ON THE LETTER OF APPROVAL
 DATED APR 6 2015 FILE # 15-0044
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE

FEBRUARY 2015

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION



DRAWN BY:
AG

DEPT CHECK:
JR

PROJECT CHECK:
TP

THOMAS W. PAYNE, JR.
 No. 7540
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

REGISTERED PROFESSIONAL ENGINEER
 DATE 3/10/2015

THE NARRAGANSETT BAY COMMISSION
 COMBINED SEWER OVERFLOW
 CONTROL FACILITIES PROGRAM
 The LOUIS BERGER GROUP, Inc.
 PROGRAM MANAGER

CONTRACT No. 303.03C
 FILENAME: C-1 PROP-SWALE 2015-02-17.DWG
 FLOOD ABATEMENT SWALE
 EXISTING CONDITIONS
 DIVERSION SITE 049
 SHEET 2 OF 4

F:\PROJECT\NBC\Phase II\CAD DRAWING FILES CONFORMED FOR NBC 20SEP2013\NBC Contract 303.03C WCSOI - Main Conformed CAD Drawings\Swac-1_PROP-SWALE_2015-02-17.dwg (C-1 Ex Cond) Plotted Mar 03, 2015 at 12:34pm by tpayne

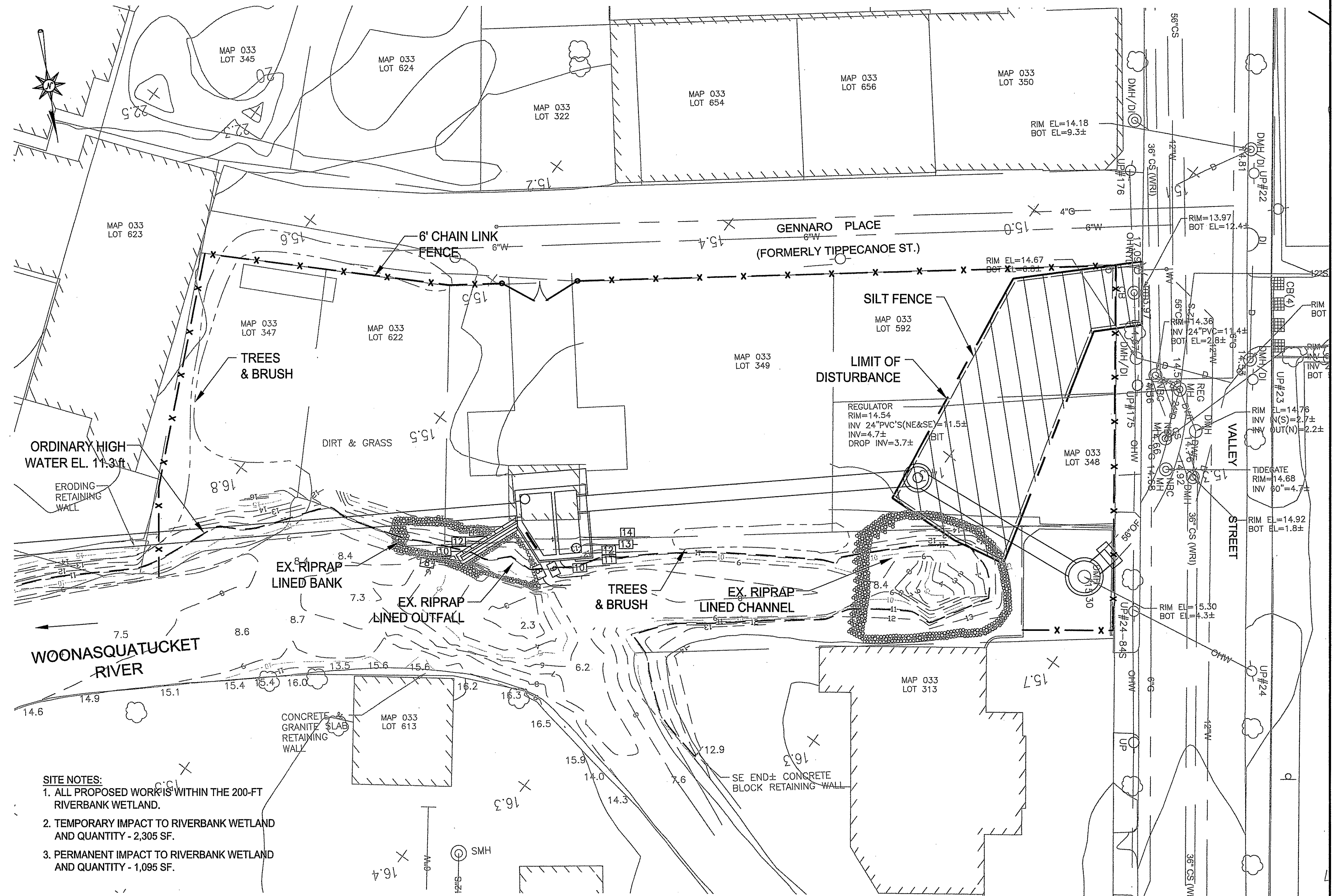
NOTES

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR ACCEPTANCE A GENERAL WORK SCHEDULE AND PLAN WHICH INDICATES PLANNED IMPLEMENTATION OF TEMPORARY AND PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING SHUTDOWN PROCEDURES FOR WINTER AND OTHER WORK INTERRUPTIONS.
2. SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. SEDIMENTATION DEVICES SHALL BE FURNISHED, INSTALLED AND MAINTAINED AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PREVENT THE DISCHARGE AND MIGRATION OF SEDIMENT FROM THE SITE.
3. ALL MITIGATIVE MEASURES, FACILITIES, AND SYSTEMS OF TREATMENT AND CONTROL THAT MAY BE INSTALLED OR USED SHALL BE PROPERLY MAINTAINED TO PREVENT HARM TO THE ADJACENT WETLAND.
4. THE LIMIT OF WORK AREA MUST BE STRICTLY ADHERED TO IN ALL AREAS. THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING AREAS WHICH ARE OUTSIDE OF THE PROJECT AREAS OF DISTURBANCE WHICH ARE IMPACTED BY CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE. SUCH AREAS INCLUDE THOSE WHERE VEHICLES, EQUIPMENT, AND MATERIALS ARE STORED WITH THE PERMISSION OF THE ENGINEER/OWNER.
5. TEMPORARY TREATMENT OF EXPOSED SURFACES SHALL CONSIST OF HAY, STRAW, FIBER MULCH OR PROTECTIVE COVERS SUCH AS A MAT OR FIBER LINING (BURLAP, JUTE MESH, FIBERGLASS NETTING, EXCELSIOR MATTING). THESE TREATMENTS SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY THE ENGINEER.
6. HAY OR STRAW APPLICATIONS SHALL BE IN THE AMOUNT OF 3,000-4,000 LBS./ACRE.
7. ALL SILT FENCE OR TEMPORARY PROTECTION SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND (90% OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED, IF NEEDED, TEMPORARY SEEDING MAY BE USED TO MINIMIZE EROSION.
8. THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREA THAT DOES NOT DEVELOP WITHIN THE PERIOD OF ONE YEAR.
9. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND MAINTAINED PROMPTLY BY THE CONTRACTOR.
10. EROSION CONTROL DEVICES SHALL BE INSPECTED WITHIN 24 HOURS OF RAINFALL EVENTS TOTALING 0.25 INCHES OR MORE WITHIN A 24-HOUR PERIOD.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR SWEEPING ALL STREETS IMPACTED BY TRACKED AND DISPERSED SEDIMENT ON A DAILY BASIS.
12. CONTRACTOR SHALL PROVIDE WHEEL WASHES AT CONSTRUCTION ACCESS/EGRESS POINTS.
13. DURING CONSTRUCTION, CONTRACTOR SHALL MAINTAIN AND CONTROL STORMWATER DRAINAGE AND RUNOFF ASSOCIATED WITH STORM EVENTS THROUGHOUT THE WORK AREA.
14. CONTRACTOR SHALL PROVIDE DUST CONTROL (eg. CALCIUM CHLORIDE, WATER) TO MINIMIZE DUST ON SITE DURING CONSTRUCTION.

SITE RESTORATION NOTES:

1. EXCEPT WHERE NOTED BY PROPOSED CONTOUR LINES, ALL FINAL CONTOUR ELEVATIONS SHALL BE THE SAME AS EXISTING CONTOUR LINE ELEVATIONS.
2. ALL GRASSED AREAS DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE LOAMED AND SEEDED. FINAL SITE RESTORATION SHALL BE EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION AS DETERMINED SOLELY BY THE OWNER/ENGINEER.
3. TOPSOIL SHALL HAVE A MINIMUM DEPTH OF 6 INCHES AFTER SETTLEMENT.
4. NET PLANTING DENSITY SHALL BE EQUAL TO OR EXCEED A SPACING OF 8 FEET ON CENTER (O.C.) FOR SHRUBS AND 10 FEET O.C. FOR SAPPLINGS.
5. THE EXACT LOCATION FOR PLANTINGS WILL BE DESIGNATED ON THE GROUND BY A WETLAND SCIENTIST; MAKING SUCH CHANGES MAY BE REQUIRED TO ADJUST THE PLANTING TO LOCAL CONDITIONS.
6. PLANT AND SEED SURVIVAL IS GENERALLY OPTIMIZED BY SPRING PLANTING. THE 200-FOOT RIVERBANK WETLAND SEEDING MIXTURE SHALL BE APPROVED BY A WETLAND SCIENTIST AND APPLIED AT A RATE OF 5 BULK POUNDS PER 1,000 SQUARE FEET. SEEDING SHALL OCCUR AFTER MARCH 15 AND BEFORE JUNE 1.
7. THE SEEDING AREA SHALL BE LOAMED WITH A MINIMUM OF 6 INCHES AND FIRMED TO FORM A PROPER SEED BED. UNLESS HYDROSEEDING, THE SEEDING AREA SHALL BE DRAGGED WITH A CHAIN OR TINE HARROW AND FIRMED TO ENSURE GOOD SEED-SOIL CONTACT.
8. NITROGEN FERTILIZER SHALL NOT BE APPLIED AT THE TIME OF SEEDING.
9. LIME STONE SHALL BE APPLIED BY BROADCAST, DROP-SEEDED, OR HYDROSEEDING. THE SEED BED SHALL BE MULCHED AT A RATE OF 4,000 POUNDS OF STARW MULCH PER ACRE. IF THE SEED IS PLACED BY HYDROSEEDER, HYDROMULCH SHALL BE USED. THE MULCH SHALL BE BOUND IN PLACE WITH AN APPROVED BINDER.
10. THE DISTURBED AREAS OF THE 200-FOOT RIVERBANK WETLAND SHALL BE PLANTED WITH EQUAL NUMBERS OF WOODY SHRUBS AND SAPPLINGS (SEE NOTE 4 FOR APPROVED SPACING). THE PLANTING PERIOD IS FROM APRIL 1 TO MAY 15.
11. ALL SHRUBS SHALL CONFORM TO THE MATERIAL SPECIFICATION REQUIREMENTS OF THE AMERICAN STANDARD FOR NURSERY STOCK (1986 OR LATER).
12. PLANTING PITS SHALL BE DUG APPROXIMATELY 4 INCHES WIDER THAN THE STOCK SIZE. PRIOR TO PLACEMENT OF THE PLANT IN THE PLANTING PIT, A 21-GRAM FERTILIZER AGRIFORM TABLET (20-10-5 ANALYSIS) SHALL BE PLACED IN THE BOTTOM OF THE PLANTING PIT. BACKFILL MATERIAL SHALL BE THE SAME AS EXCAVATED FOR THE PLANTING PITS.
13. ALL CONTAINERIZED, AND BALLED AND BURLAPPED PLANTINGS SHALL BE MULCHED WITH A 2-INCH LAYER OF BARK MULCH.
14. ALL CURBING DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE RESET, RESTORED, OR REPLACED IN KIND, IF DAMAGED, INCLUDING CEMENT CONCRETE, IN ACCORDANCE WITH THE CITY OF PROVIDENCE AND RIDOT, REGARDLESS OF ITS PROXIMITY TO THE PROJECT, AS DIRECTED BY THE OWNER/ENGINEER.
15. ALL SIDEWALK AND WHEELCHAIR RAMP AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IN CONFORMANCE TO THE AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS AND THE ARCHITECTURAL ACCESS BOARD (AAB) REQUIREMENTS AT THE CONTRACTOR'S EXPENSE.
16. THE CONTRACTOR SHALL REMOVE AND RESET ALL SIGNS DISTURBED DURING CONSTRUCTION, IN CONFORMANCE WITH THE RIDOT STANDARD SPECIFICATIONS AND CONSTRUCTION STANDARDS.
17. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.



SITE NOTES:

1. ALL PROPOSED WORK IS WITHIN THE 200-FT RIVERBANK WETLAND.
2. TEMPORARY IMPACT TO RIVERBANK WETLAND AND QUANTITY - 2,305 SF.
3. PERMANENT IMPACT TO RIVERBANK WETLAND AND QUANTITY - 1,095 SF.

PLANTINGS WITHIN REGULATED AREAS SHALL BE AS FOLLOWS: 200-Foot Riverbank Wetland - Woody Shrub and Sapling Plantings

Botanical Name	Common Name	Size
Cornus florida	Flowering Dogwood	#2
Vaccinium corymbosum	Highbush Blueberry	#2
Acer rubrum	Red Maple	6-7 B/B
Quercus rubra	Red Oak	6-7 B/B

SEED MIX WITHIN REGULATED AREAS SHALL BE AS FOLLOWS:

Conservation Mix	
25%	Perennial Ryegrass
25%	Creeping Red Fescue
25%	Annual Ryegrass
17%	Tall Fescue
1%	Colonial Bentgrass
1%	Red Top
1%	White Clover

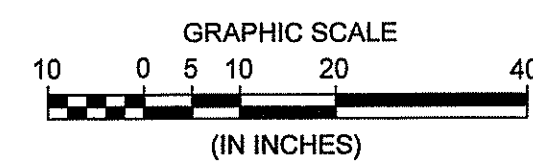
LIMIT OF DISTURBANCE EROSION AND SEDIMENT CONTROL

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
RESTORED WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SHOWN IN THE LETTER OF APPROVAL
DATED APR 6 2015 FILE # 15-0044
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

FEBRUARY 2015

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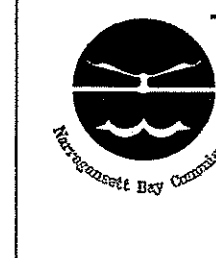
NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION



DRAWN BY:
AG
DEPT CHECK:
JR
PROJECT CHECK:
TP

THOMAS W. PAYNE, JR.
No. 7540
REGISTERED PROFESSIONAL ENGINEER (CIVIL)

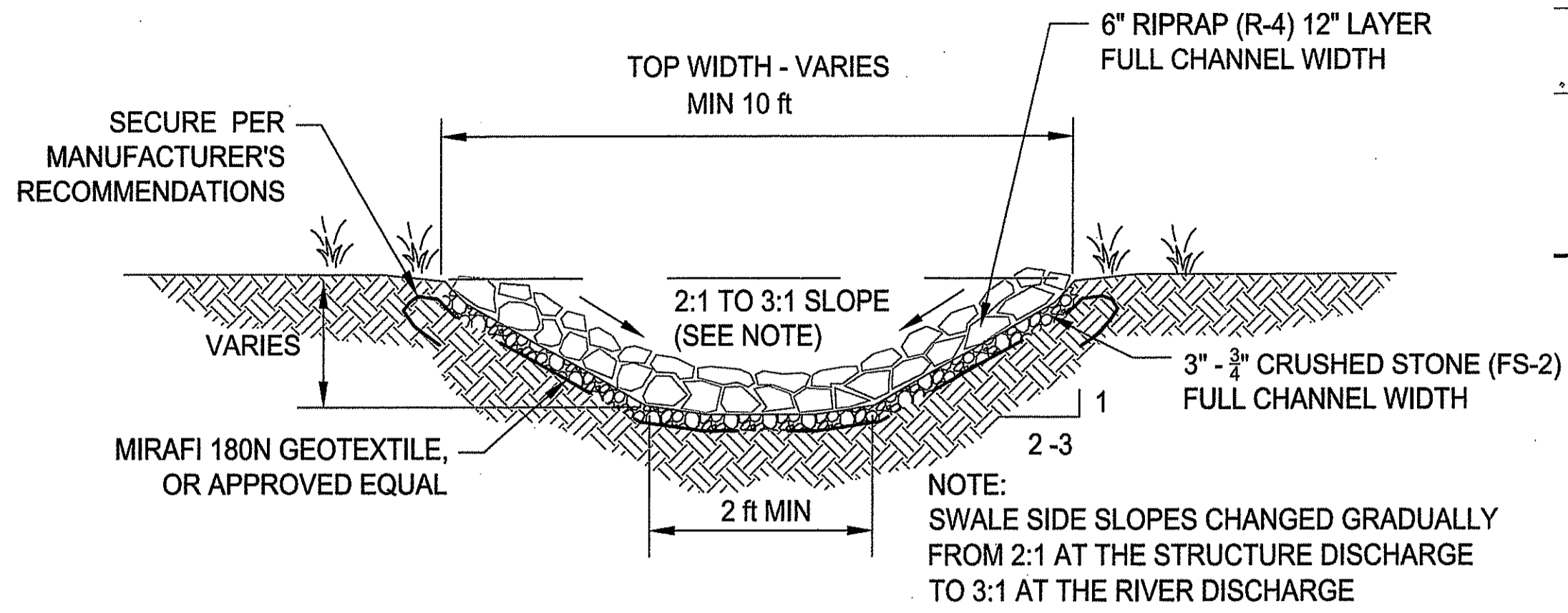
REGISTERED PROFESSIONAL ENGINEER
DATE 3/10/2015



THE NARRAGANSETT BAY COMMISSION
COMBINED SEWER OVERFLOW CONTROL FACILITIES PROGRAM
The LOUIS BERGER GROUP, Inc.
PROGRAM MANAGER

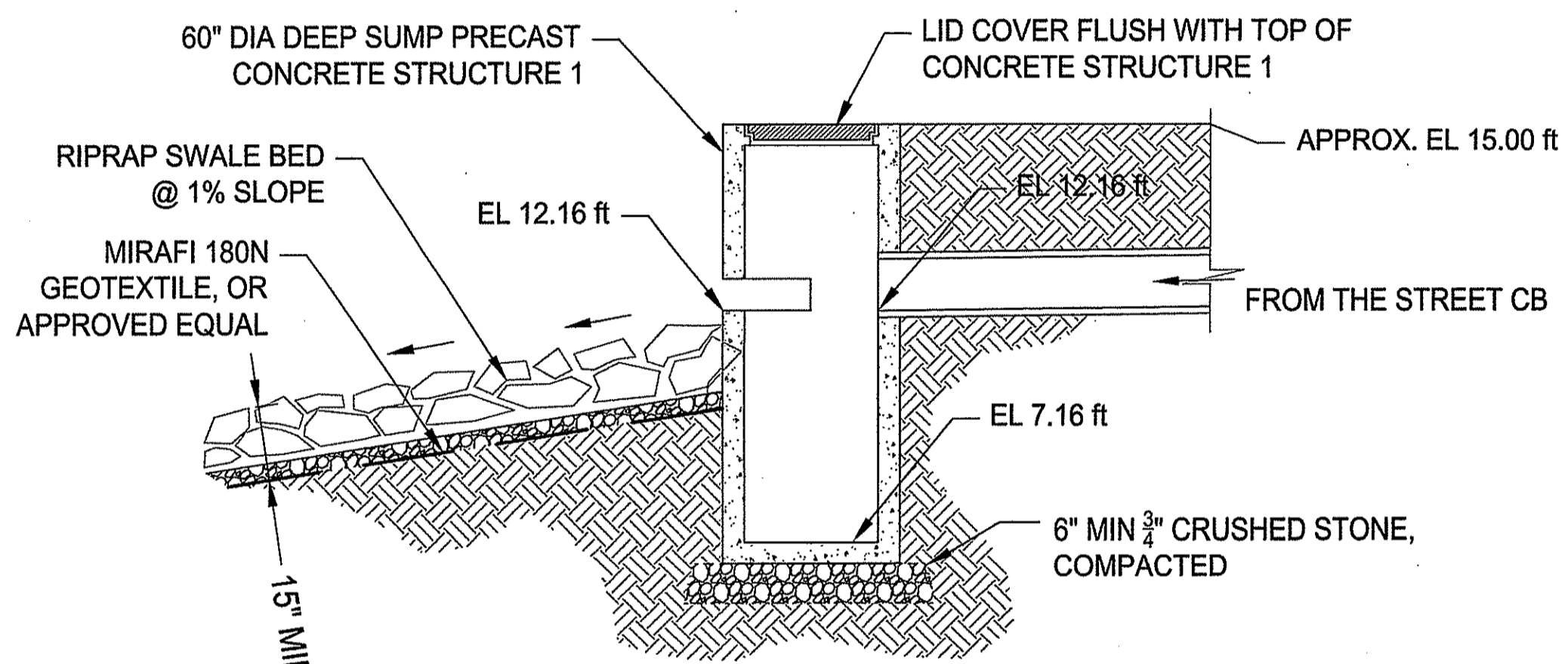
CONTRACT No. 303.03C
FILENAME: C-1_PROP-SWALE_2015-02-17.DWG
FLOOD ABATEMENT SWALE
PROJECT LIMITS
DIVERSION SITE 049
SHEET 3 OF 4

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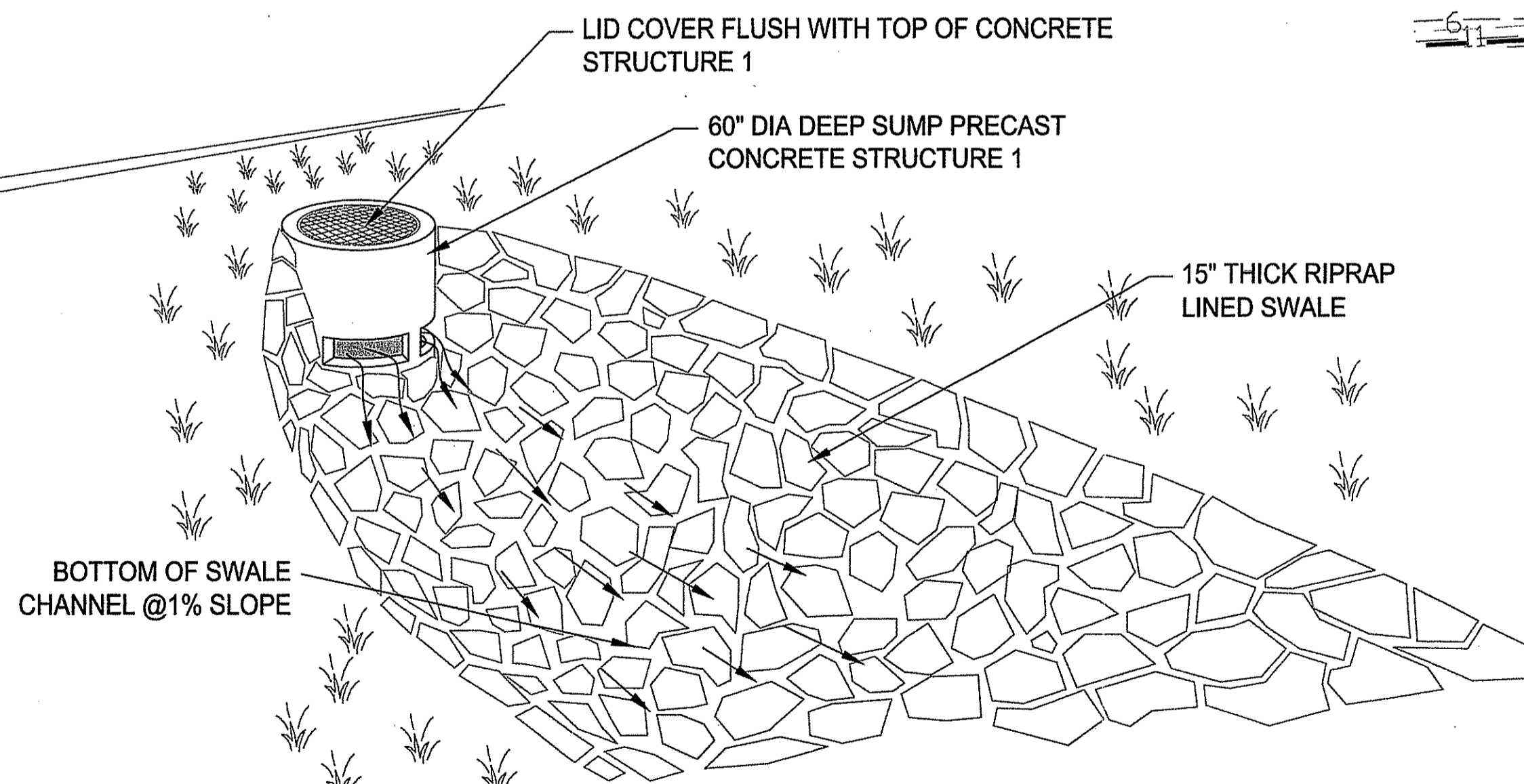
SPILLWAY SWALE SECTION (TYP)

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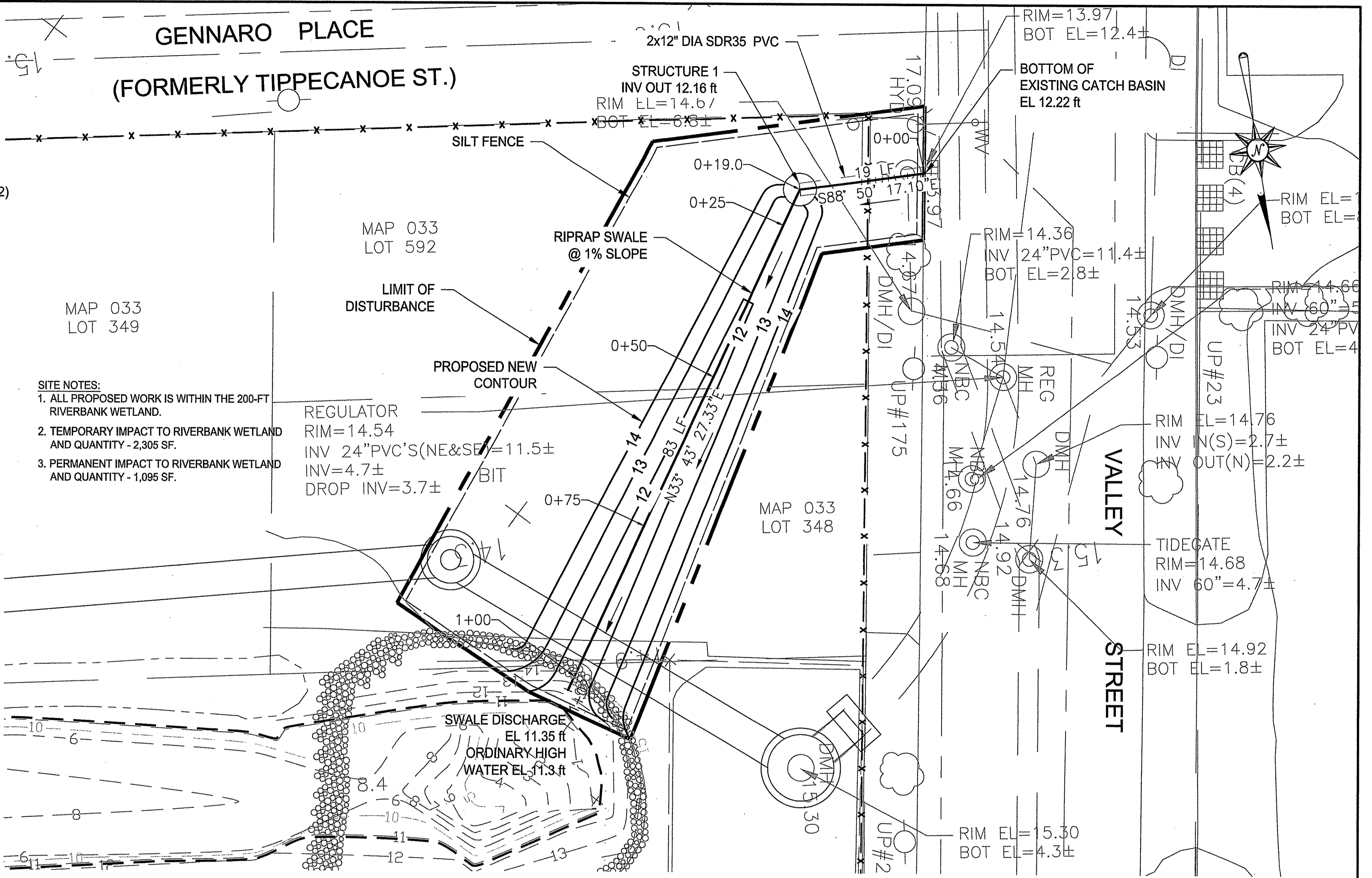


PRECAST CONCRETE STRUCTURE 1

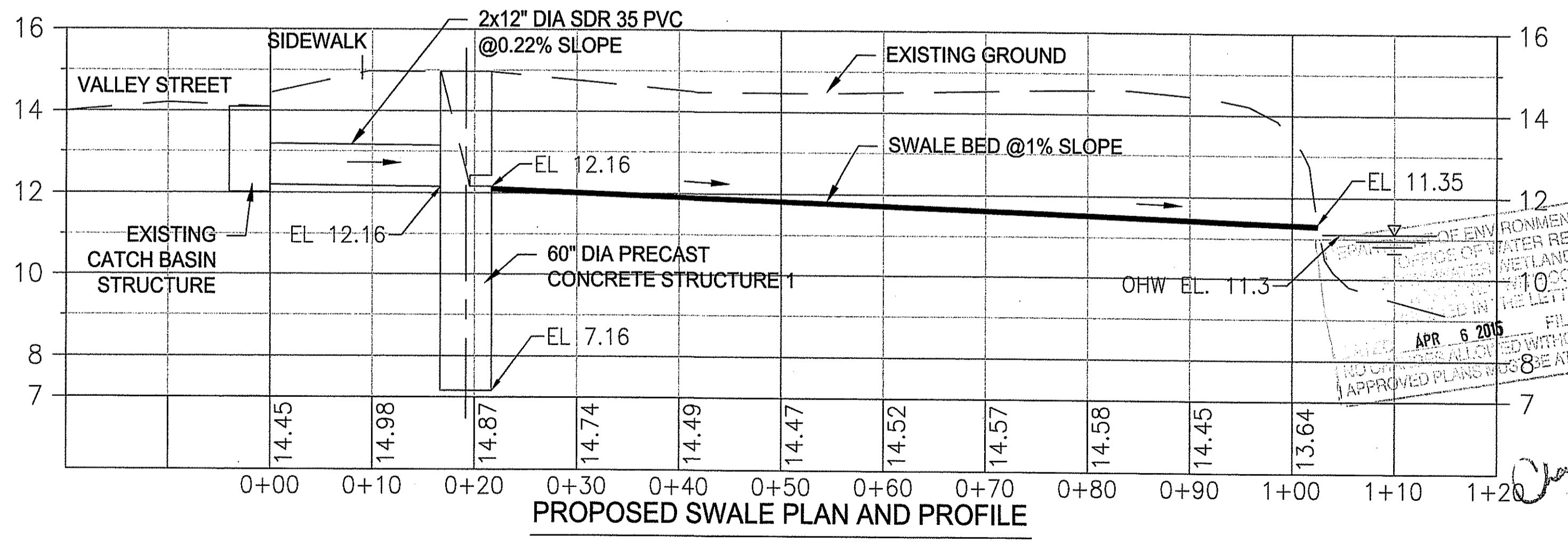
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**GENNARO PLACE
(FORMERLY TIPPECANOE ST.)**

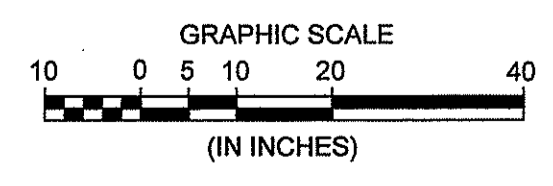


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PROPOSED SWALE PLAN AND PROFILE

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS DESCRIPTION



DRAWN BY: AG
 DEPT CHECK: JR
 PROJECT CHECK: TP

THOMAS W. PAYNE, JR.
 No. 7540
 REGISTERED PROFESSIONAL ENGINEER (CIVIL)

REGISTERED PROFESSIONAL ENGINEER
 DATE 3/10/2015



THE NARRAGANSETT BAY COMMISSION
 COMBINED SEWER OVERFLOW CONTROL FACILITIES PROGRAM
 The LOUIS BERGER GROUP, Inc.
 PROGRAM MANAGER

CONTRACT No. 303.03C
 FILENAME: C-1_PROP-SWALE 2015-02-17.DWG

**FLOOD ABATEMENT SWALE
 PROPOSED CONDITIONS
 DIVERSION SITE 049**

SHEET 4 OF 4

FEBRUARY 2015

APPROVED BY ENVIRONMENTAL MANAGEMENT
 DEPARTMENT OF WATER RESOURCES
 WETLANDS PROGRAM
 CONDITIONS OF APPROVAL
 FILE # 15-0044
 APR 6 2015
 APPROVED PLANS TO BE AT CONSTRUCTION SITE

Environmental Management
 Office of Water Resources
 1/2/2015