

Readington Middle School
Detention Basin Retrofit
Block 48 Lot 20
Readington Township
Hunterdon County, New Jersey 08889

Table of Quantities for Readington Middle School Detention Basin Retrofit

Prepared: 11/6/2017
Prepared By: EPD
Checked By: AEM

PRELIMINARIES

Rate shall include all work and materials covered under Sections: 015526 Traffic Control, 015623 Temporary Facilities and Controls, 015719 Environmental Protection, 017133 Mobilization & Demobilization, 017300 Execution, 01770 Closout Procedures.

LINE NO.	ITEM	Unit	# of Units
1	Mobilization/Demobilization	L.S.	1
2	Construction Layout	L.S.	1
3	Soil Testing	L.S.	1
4	Traffic Control	L.S.	1

GENERAL CONSTRUCTION

Rate shall include all work and materials covered under Sections: 055000 Metal Fabrications, 312000 Earth Moving

LINE NO.	ITEM	Unit	# of Units
5	Trash Rack Acquisition and Installation	L.S.	1
6	Grading (Cut & Fill)	S.Y.	990
		C.Y.	110
7	Spoil Material Disposal	C.Y.	15

PLANTING

Rate shall include all work and materials covered under Sections: 329200 Turf and Grasses, 329300 Plants

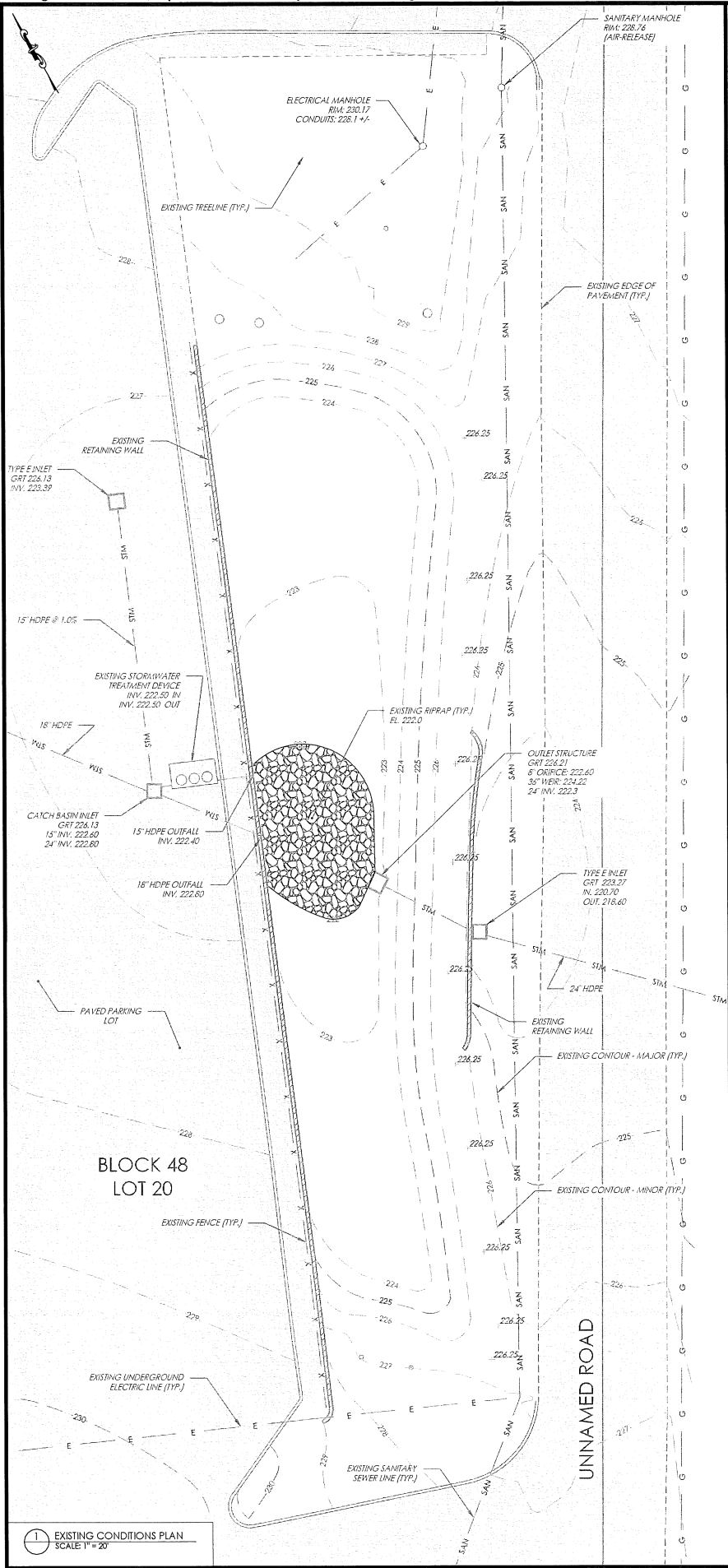
LINE NO.	ITEM	Unit	# of Units
8	"No Mow" Signs	Ea.	6
9	Herbicide Application	L.S.	1
10	Basin Tilling	S.Y.	990
11	Compost Material & Placement at 6-inch Depth	S.Y.	990
		C.Y.	165
12	Andropogon Glomeratus Bushy Bluestem	Ea.	50
13	Asclepias Incarnata Swamp Milkweed	Ea.	50
14	Eupatorium Perfoliatum Boneset	Ea.	50
15	Pycnanthemum Tenuifolium Slender Mountainmint	Ea.	50
16	Schoenoplectus Cyperinus Woolgrass	Ea.	50
17	Symphotrichum Novae-Angliae New England Aster	Ea.	50
18	Agrostis Scabra Rough Bentgrass	Ea.	100
19	Asclepias Syriaca Common Milkweed	Ea.	100
20	Asclepias Tuberosa Butterfly Weed	Ea.	150
21	Coreopsis Lanceolata Lanceleaf Tickseed	Ea.	100
22	Echinacea Purpurea Purple Coneflower	Ea.	150
23	Eupatorium Coelestinum Blue Mistflower	Ea.	150
24	Liatris Spicata Dense Blazing Star	Ea.	150
25	Monarda Fistulosa Wild Bergamot	Ea.	100
26	Panicum Virgatum Switchgrass	Ea.	150
27	Rudbeckia Hirta Black-Eyed Susan	Ea.	150
28	Schizachyrium Scoparium Little Bluestem	Ea.	250
29	Solidago Graminifolia Grassleaf Goldenrod	Ea.	150

30	Basin Seed Mix Upland (Including Mulch Binder)	S.F.	14,850
31	Basin Seed Mix Wet (Including Mulch Binder)	S.F.	2,975

SOIL EROSION AND SEDIMENT CONTROL

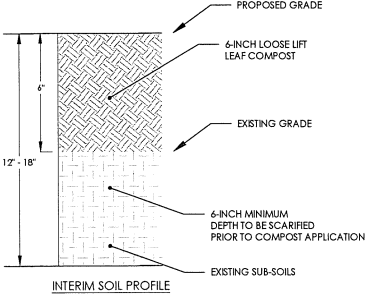
Rate shall include all work and materials covered under Sections: 312500 Soil Erosion and Sediment Control, 312319 Dewatering

LINE NO.	ITEM	Unit	# of Units
31	Construction Entrance and Site Access	L.S.	1
32	Silt Fence	L.F.	130
33	High Visibility Safety Fence	L.F.	455
34	Tree Protection (as necessary)	L.S.	1
35	Straw Bale Barrier (2 String Bale 36"x18"x14")	L.F.	45
36	Conduit Outlet Protection - Riprap (D50 = 4-inches)	C.Y.	35
37	Dewatering/Water Control	L.S.	1
38	Dust Control	L.S.	1
39	Site Restoration	L.S.	1



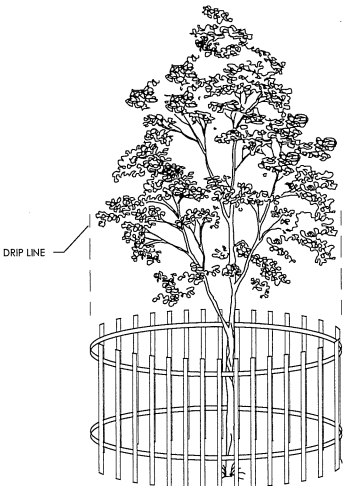
SOIL AMENDMENT NOTES:

1. SOIL AMENDMENT SEQUENCE:
CONTRACTOR TO MARK OUT AND PROTECT ALL UTILITIES WITHIN THE AREA OF PROPOSED SOIL AMENDMENTS.
1.1. EXISTING GRADE SHALL BE SCARIFIED, DISCED OR TILLED TO A MINIMUM DEPTH OF 4 INCHES.
1.2. LEAF COMPOST SHALL BE SPREAD IN A THREE (3) TO SIX (6) INCH LAYER ON EXISTING GRADE.
1.3. DEEP TILLING / SPADING SHALL BE COMPLETED TO A DEPTH OF TWELVE (12) TO EIGHTEEN (18) INCHES.
2. FINAL SOIL PROFILE SHALL BE A HOMOGENEOUS MIXTURE OF LEAF COMPOST AND EXISTING SOILS TO A MINIMUM DEPTH OF 12-INCHES AT PROPOSED GRADE THROUGHOUT THE SOIL AMENDMENT AREA.
3. LEAF COMPOST SHALL BE MADE EXCLUSIVELY OF FALLEN DECIDUOUS LEAVES WITH LESS THAN 5% DRY WEIGHT OF WOODY OR GREEN YARD DEBRIS MATERIALS. THE USE OF LEAF MULCH, COMPOSTED WOOD YARD DEBRIS, BIOSOLIDS, MUSHROOM COMPOST OR COMPOSTED ANIMAL MANURES IS NOT ACCEPTABLE. THE COMPOST SHALL BE MATURED (I.E., COMPOSTED FOR A PERIOD OF AT LEAST ONE (1) YEAR) AND EXHIBIT NO FURTHER DECOMPOSITION AND BE FREE OF WEED SEED STOCK. VISUAL APPEARANCE OF LEAF MATTER IN THE COMPOST IS NOT ACCEPTABLE.
4. NO MACHINERY (RUBBER TIRE OR TRACK) SHALL BE USED ON THE SOIL AMENDMENT AREA FOLLOWING THE DEEP TILLING / SPADING.



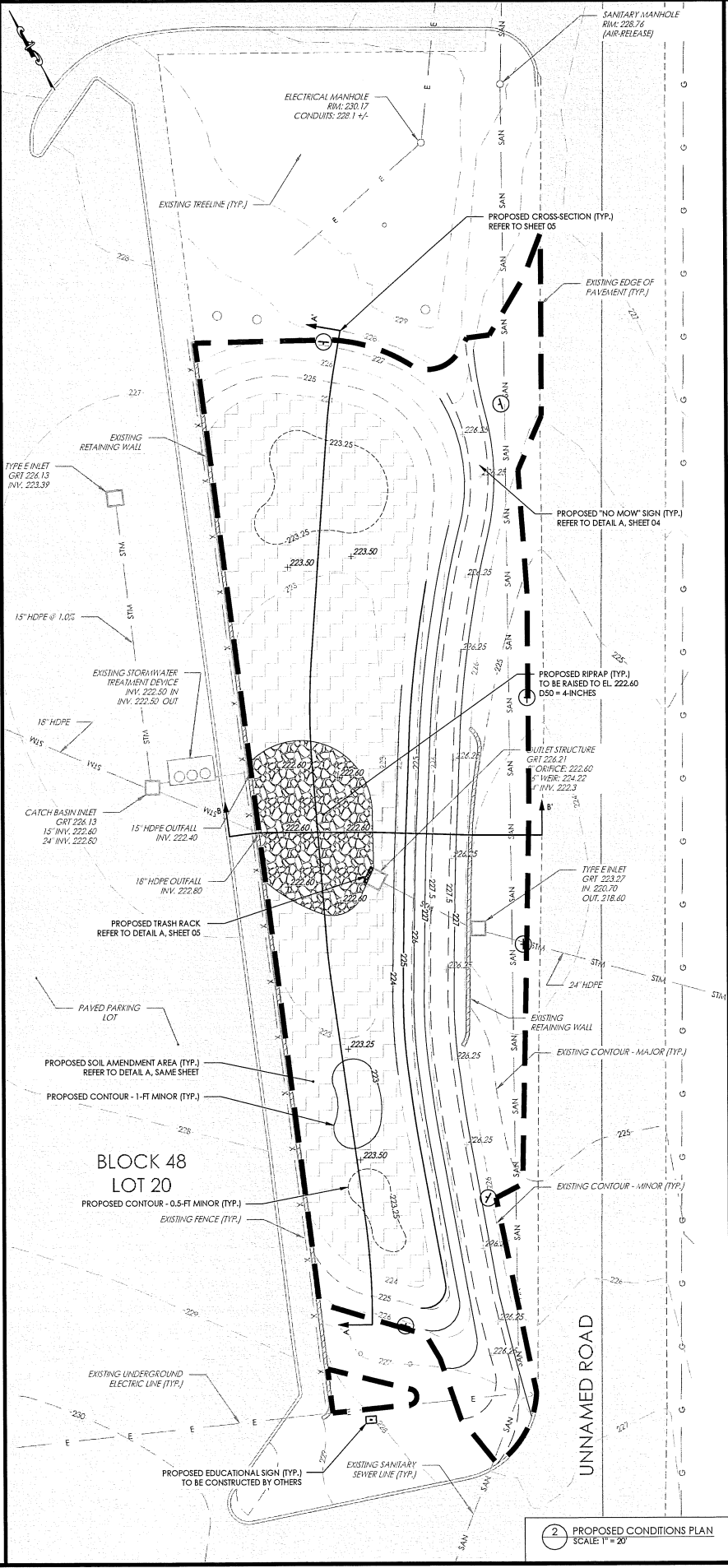
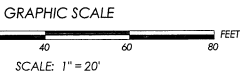
NOTES:

1. TO PREVENT GENERAL MECHANICAL DAMAGE TO TREES INSTALL TREE PROTECTION AS INDICATED IN DETAIL.
2. BOX TREES WITHIN 25 FEET OF CONSTRUCTION SITE TO PREVENT MECHANICAL INJURY. FENCING OR OTHER BARRIER SHOULD BE INSTALLED AT THE DRIP LINE OF THE TREE BRANCHES OR BEYOND. TREE ROOT SYSTEMS COMMONLY EXTEND WELL BEYOND THE DRIP LINE.
3. BOARDS WILL NOT BE NAILED TO TREES DURING CONSTRUCTION.
4. FEEDER ROOTS SHOULD NOT BE CUT IN AN AREA INSIDE THE DRIP LINE OF THE TREE BRANCHES.
5. DAMAGED TRUNKS OR EXPOSED ROOTS SHOULD HAVE DAMAGED BARK REMOVED IMMEDIATELY AND NO PAINT SHALL BE APPLIED. EXPOSED ROOTS SHOULD BE COVERED WITH TORSOL IMMEDIATELY AFTER EXCAVATION IS COMPLETE. ROOTS SHALL BE PRUNED TO GIVE A CLEAN, SHARP SURFACE AMENABLE TO HEALING. ROOTS EXPOSED DURING HOT WEATHER SHOULD BE IRRIGATED TO PREVENT PERMANENT TREE INJURY. CARE FOR SERIOUS INJURY SHOULD BE PRESCRIBED BY A PROFESSIONAL FORESTER OR CERTIFIED TREE EXPERT.



LEGEND

- | | | | | | |
|-----|------------------------------------|-----|--------|-----|------------------------------|
| --- | LIMIT OF DISTURBANCE | --- | W | --- | EXISTING WATER LINE |
| --- | PROPERTY BOUNDARY | --- | G | --- | EXISTING GAS LINE |
| --- | EXISTING EDGE OF PAVEMENT | --- | | --- | EXISTING TREELINE |
| --- | EXISTING CONTOUR - MAJOR | --- | 226.25 | --- | EXISTING SPOT ELEVATION |
| --- | EXISTING CONTOUR - MINOR | --- | 223.25 | --- | PROPOSED SPOT ELEVATION |
| --- | PROPOSED CONTOUR - 1-FT MINOR | --- | | --- | EXISTING RIPRAP |
| --- | PROPOSED CONTOUR - 1-FT MAJOR | --- | | --- | EXISTING PAVEMENT |
| --- | PROPOSED CONTOUR - SUB-FOOT MINOR | --- | | --- | PROPOSED RIPRAP |
| X | EXISTING FENCE | --- | | --- | PROPOSED SOIL AMENDMENT AREA |
| --- | CHU | --- | | --- | PROPOSED 'NO MOW' SIGN |
| --- | EXISTING OVERHEAD UTILITY | --- | | --- | PROPOSED EDUCATIONAL SIGN |
| --- | EXISTING UNDERGROUND ELECTRIC LINE | --- | | --- | |
| --- | EXISTING STORM SEWER LINE | --- | | --- | |
| --- | EXISTING SANITARY SEWER LINE | --- | | --- | |



CALL BEFORE YOU DIG!
NEW JERSEY LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE - STOP CALL
NEW JERSEY ONE CALL SYSTEM, INC.
REFERENCE NEW JERSEY TITLE 48, CHPT. 2, ARTICLE 9
1-800-272-1000

PROJECT NOTES

1. TOPOGRAPHIC SURVEY COMPLETED BY EDWARDS ENGINEERING GROUP, INC. BASEMAP ADAPTED FROM SSP ARCHITECTURAL PLAN ENTITLED "PAVING AND EXTERIOR STAIR REPLACEMENT AT READINGTON MIDDLE SCHOOL" SSP PROJECT NO. 15-8287.
- 1.1. THE HORIZONTAL DATUM IS NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD83 (2011) (EPOCH: 2010) US SURVEY FEET, ESTABLISHED BY STATIC GPS OBSERVATIONS AND OPUS RS.
- 1.2. THE VERTICAL DATUM IS BASED UPON NAVD83 STATIC GPS OBSERVATIONS AND SUBMITTING DATA TO OPUS RS FOR POST PROCESSING AND ORTHOMETRIC HEIGHTS.
2. PRINCETON HYDRO VERIFIED IN FEBRUARY 2014 THAT NO WETLANDS ARE PRESENT WITHIN ANY OF THE DISTURBED AREAS DENOTED ON THE PLAN.

DATE	DESCRIPTION
REVISIONS	
STATE OF NEW JERSEY CERTIFICATE OF AUTHORIZATION NO.: 24GA27976800	
MARY L. PAIST-GOLDMAN Professional Engineer NJ Lic. No. GE-45798	
DATE	

PRINCETON HYDRO, LLC **PH**

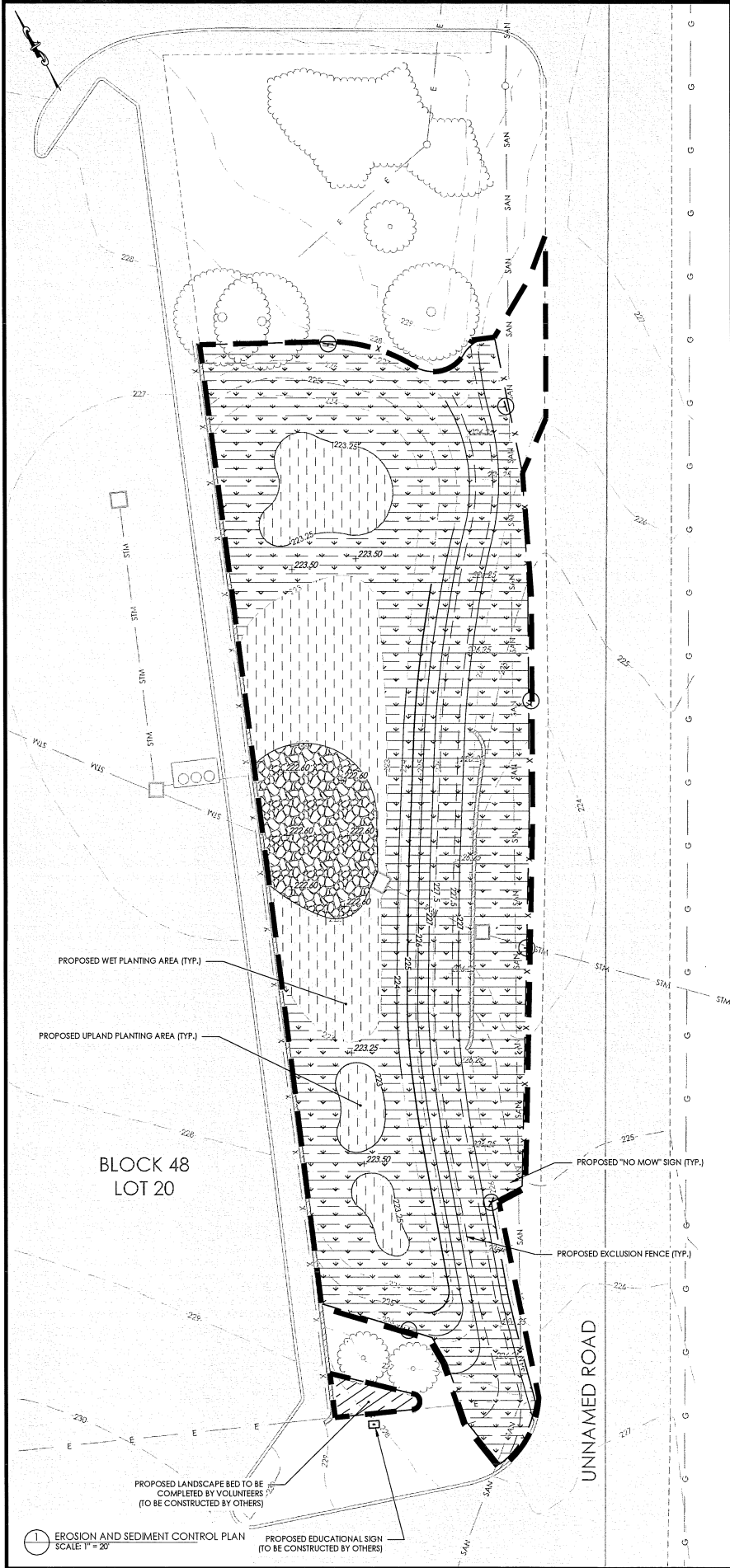
SCIENTISTS AND ENGINEERS
1108 OLD YORK ROAD, SUITE 1
P.O. BOX 720
RINGOES, NEW JERSEY 08551
PHONE: 908.237.5660
FAX: 908.237.5666
WWW.PRINCETONHYDRO.COM

PROJECT NAME/LOCATION:
READINGTON MIDDLE SCHOOL
DETENTION BASIN RETROFIT
BLOCK 48 LOT 20
READINGTON TOWNSHIP, HUNTERDON
COUNTY, NEW JERSEY 08889

DRAWING NAME:
**EXISTING & PROPOSED
CONDITIONS PLAN**

DATE:	10/06/2017
PROJECT NO.:	0160.100
SCALE:	1" = 20'
DRAWN BY:	EPD
CHECKED BY:	AEM

SHEET NO.
2 OF **6**



PLANT SCHEDULE

BASIN SEED MIX WET: 0.05 AC				
SEEDING IS TO OCCUR OVER ENTIRE WETLAND AREA AT A RATE OF 15 POUNDS PER ACRE.				
BOTANICAL NAME:	SPECIES NAME:	APPROXIMATE RATE (LBS PURE LIVE SEED/ACRE)	INDICATOR STATUS:	QUANTITY:
ANDROPOGON GLOMERATUS	BUSHY BLUESTEM	4	FACW	27.0%
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	5	FACW	33.0%
EUTROCIUM FISTULOSUM	JOE-PYE WEED	1	FACW	7.0%
JUNCUS EFFLUS	SOFT RUSH	2	FACW	13.0%
PANICUM RIGIDULUM	REDTOP PANICGRASS	0.5	FACW	3.0%
PYCNANTHEMUM TENUIFOLIUM	SLENDER MOUNTAINMINT	0.16	OBL	1.0%
IRIS VERSICOLOR	BLUEFLAG IRIS	0.34	OBL	2.0%
SCIRPUS VALIDUS	SOFTSEED BULLRUSH	0.5	FACW	3.0%
SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	0.5	FACW	3.0%
VERBENA HASTATA	BLUE VERVAIN	0.5	FACW	3.0%

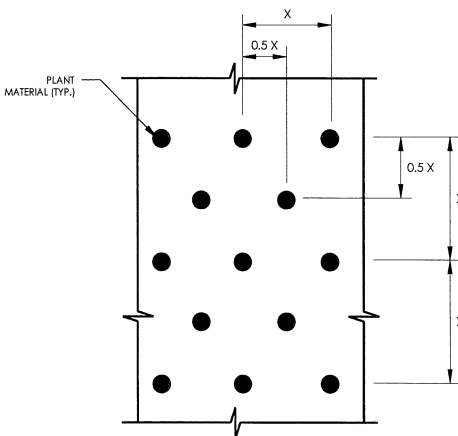
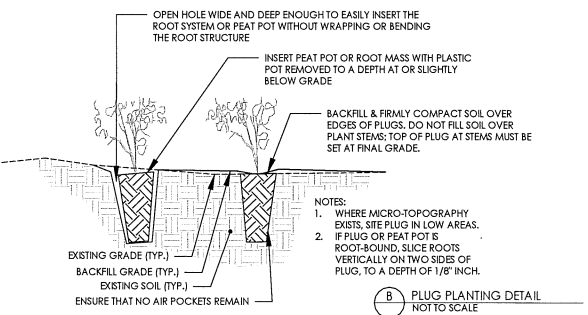
BASIN HERB WET: 0.05 AC				
TO BE PLANTED APPROXIMATELY THREE FEET ON CENTER, IN MIXED SPECIES, PLUGS ARE NOT TO BE PLANTED IN LARGE, SINGLE SPECIES				
BOTANICAL NAME:	SPECIES NAME:	PLANTING TYPE:	INDICATOR STATUS:	QUANTITY
ANDROPOGON GLOMERATUS	BUSHY BLUESTEM	2" PLUG	FACW	100
ASCLEPIAS INCARNATA	SWAMP MILKWEED	2" PLUG	OBL	50
EUPATORIUM PERFOOLIATUM	BONASET	2" PLUG	FACW	100
PYCNANTHEMUM TENUIFOLIUM	SLENDER MOUNTAINMINT	2" PLUG	FACW	100
SCHOENOPLECTUS CYPERINUS	WOOLGRASS	2" PLUG	FACW	50
SYMPHYOTRICHUM NOVAE-ANGLIAE	NEW ENGLAND ASTER	2" PLUG	FACW	100

BASIN SEED MIX UPLAND: 0.34 AC				
SEEDING IS TO OCCUR OVER ENTIRE WETLAND AREA AT A RATE OF 15 POUNDS PER ACRE.				
BOTANICAL NAME:	SPECIES NAME:	APPROXIMATE RATE (LBS PURE LIVE SEED/ACRE)	INDICATOR STATUS:	QUANTITY:
AGROSTIS PERENNANS	AUTUMN BENTGRASS	0.35	FACU	2.34%
ASCLEPIAS SYRIACA	COMMON MILKWEED	0.75	UPL	5.00%
ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	0.75	UPL	5.00%
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	1.25	FACU	8.33%
ECHINACEA PURPUREA	PURPLE CONEFLOWER	1.25	FACU	8.33%
ELYMUS VIRGINICUS	VIRGINIA WILDRYE	2.70	FACW	18.00%
LIATRIS SPICATA	DENSE BLAZING STAR	0.75	FAC	5.00%
MONARDA FISTULOSA	WILD BERGAMOT	0.45	FACU	3.00%
PANICUM VIRGATUM	SWITCHGRASS	1.25	FAC	8.33%
PENSTEMON DIGITALIS	TALL WHITE BEARDTONGUE	1.00	FAC	6.67%
RUDBECKIA HIRTA	BLACK-EYED SUSAN	1.00	FACU	6.67%
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	3.00	FACU	20.00%
SOLIDAGO JUNCEA	EARLY GOLDENROD	0.50	-	3.33%

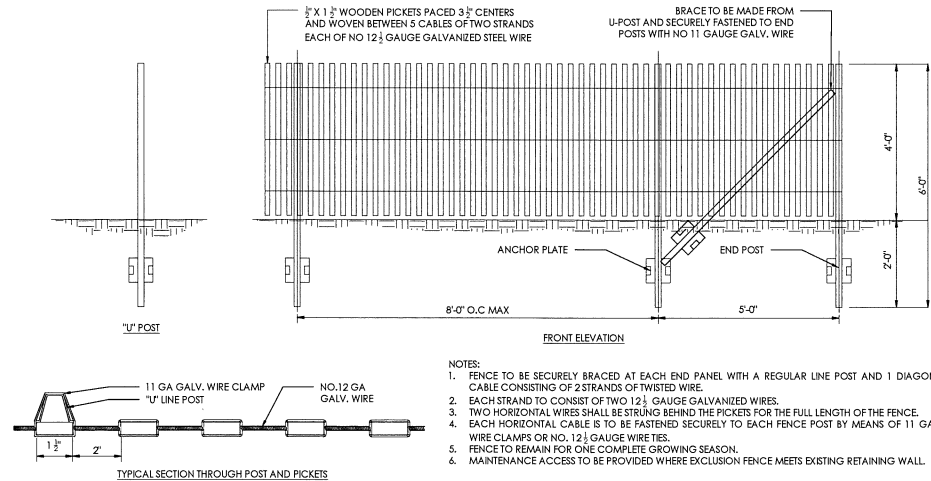
BASIN HERB UPLAND: 0.34 AC				
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BOTANICAL NAME:	SPECIES NAME:	PLANTING TYPE:	INDICATOR STATUS:	QUANTITY:
AGROSTIS SCABRA	ROUGH BENTGRASS	2" PLUG	FAC	100
ASCLEPIAS SYRIACA	COMMON MILKWEED	2" PLUG	UPL	150
ASCLEPIAS TUBEROSA	BUTTERFLY WEED	2" PLUG	UPL	150
COREOPSIS LANCEOLATA	LANCELEAF COREOPSIS	2" PLUG	FACU	100
ECHINACEA PURPUREA	PURPLE CONEFLOWER	2" PLUG	FACU	150
EUPATORIUM COELESTINUM	BLUE MISTFLOWER	2" PLUG	FAC	200
LIATRIS SPICATA	DENSE BLAZING STAR	2" PLUG	FAC	150
MONARDA FISTULOSA	WILD BERGAMOT	2" PLUG	FACU	100
PANICUM VIRGATUM	SWITCHGRASS	2" PLUG	FAC	150
RUDBECKIA HIRTA	BLACK-EYED SUSAN	2" PLUG	FACU	150
SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	2" PLUG	FACU	250
SOLIDAGO GRAMINIFOLIA	GRASSLEAF GOLDENROD	2" PLUG	FAC	150

SEEDING AND SOIL PREPARATION NOTES

- ALL PLANTING OUTSIDE OF THE SOIL AMENDMENT AREA, DEPICTED ON THE PROPOSED CONDITIONS PLAN, SHALL PROCEED AS FOLLOWS:
 - EXISTING VEGETATION SHALL BE SPRAYED WITH A POST-EMERGENT HERBICIDE WHICH TARGETS THE EXISTING GRASSES AND IS CERTIFIED BY NJDEP FOR SAFE USE IN AT AQUATIC SITES.
 - SEEDING SHALL BE COMPLETED WITH A SLIT SEEDER OR EQUIVALENT WHICH LIMITS DISTURBANCE TO EXISTING SOILS WHILE PROVIDING OPTIMAL SEED-SOIL CONTACT. SEEDING SHALL NOT COMMENCE UNTIL EXISTING GRASSES HAVE BEEN ERADICATED.
 - PLUGS SHALL BE INSTALLED.
- ALL PLANTING WITHIN THE SOIL AMENDMENT AREA SHALL BE TILLED TO APPROXIMATELY SIX (6) INCHES IN DEPTH PRIOR TO SEEDING ACTIVITIES TO ALLOW FOR OPTIMAL SEED-SOIL CONTACT.
- LIGUID MULCH BINDER OR WOOD-FIBER MULCH SHALL BE APPLIED TO ALL AREAS WHICH RECEIVE SEED.

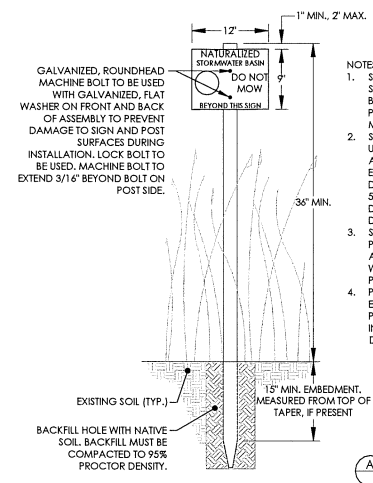
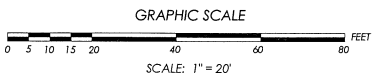
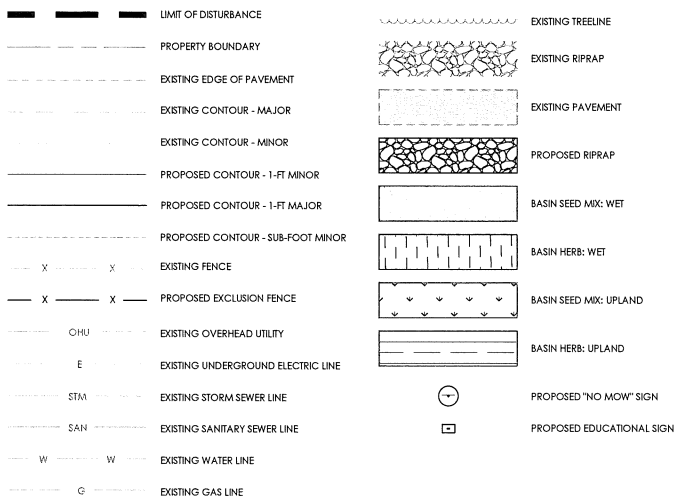


C PLANT MATERIAL SPACING DETAIL
NOT TO SCALE



D ANIMAL EXCLUSION FENCE
NOT TO SCALE

LEGEND



- NOTES:
- SIGNAGE DESIGN TO BE SUPPLIED IN DIGITAL FORMAT BY DESIGN ENGINEER FOR PROFESSIONAL SIGN MANUFACTURE.
 - SIGN TO BE MANUFACTURED USING 0.080 PAINTED ALUMINUM WITH ROUNDED EDGES, OVERLAD WITH DIGITAL PRINTED GRAPHIC ON 5 YEAR CAST VINYL USING DIGITAL IMAGE PROVIDED BY DESIGN ENGINEER.
 - SIGN POST TO BE 2\"/>
 - POST HOLE MUST BE EXCAVATED FOR POST BURIAL. POST IS NOT TO BE DRIVEN INTO GROUND, TO PREVENT DAMAGE TO TOP OF POST.

A NO MOW SIGN DETAIL
NOT TO SCALE

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REFERENCE NEW JERSEY TITLE 48, CHPT. 2, ARTICLE 9
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DATE	DESCRIPTION
REVISIONS	

STATE OF NEW JERSEY CERTIFICATE OF AUTHORIZATION
NO.: 24GAZ7976800

MARY L. PAIST-GOLDMAN
Professional Engineer
NJ Lic. No. GE-45798

DATE



SCIENTISTS AND ENGINEERS
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P.O. BOX 720
RINGOES, NEW JERSEY 08551
PHONE: 908.237.5660
FAX: 908.237.5666
WWW.PRINCETONHYDRO.COM

PROJECT NAME/LOCATION:
READINGTON MIDDLE SCHOOL
DETENTION BASIN RETROFIT
BLOCK 48 LOT 20
READINGTON TOWNSHIP, HUNTERDON
COUNTY, NEW JERSEY 08889

DRAWING NAME:

PLANTING PLAN

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SCALE:	1" = 20'
DRAWN BY:	EPD
CHECKED BY:	AEM

SHEET NO.

4

OF

6