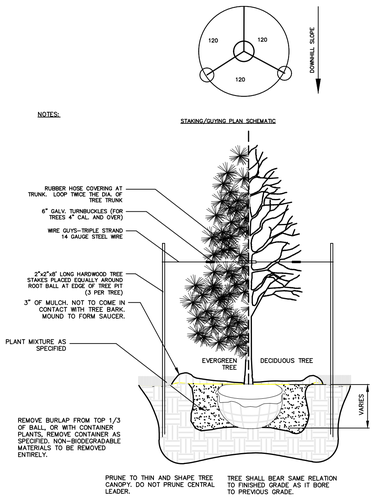
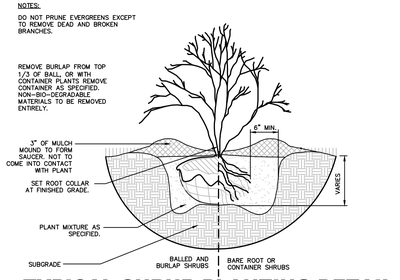
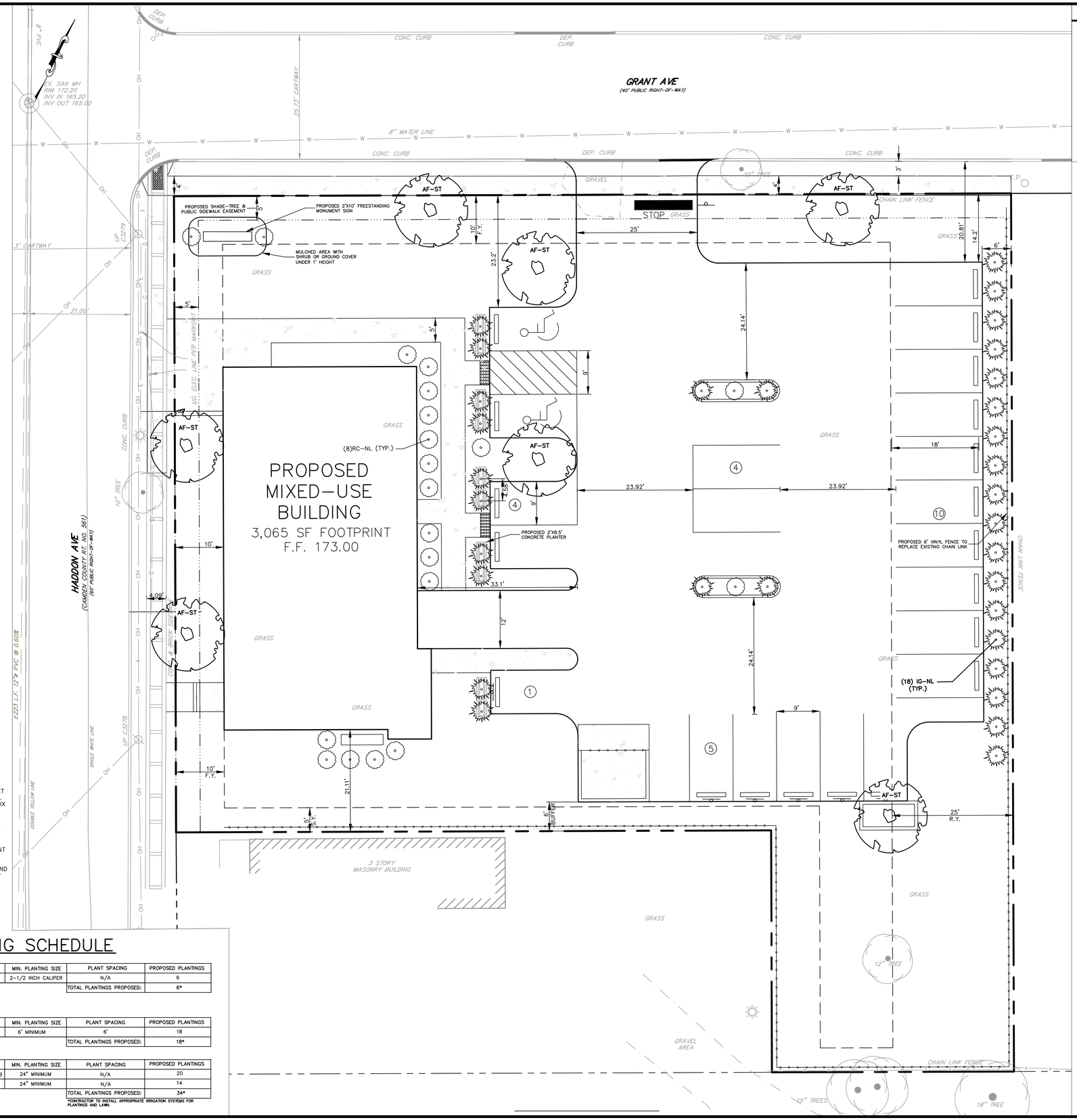


TYPICAL TREE PLANTING DETAIL



TYPICAL SHRUB PLANTING DETAIL



LANDSCAPING REQUIREMENTS

BUFFER STRIP PLANTING REQUIREMENTS
REQUIREMENTS FOR BUFFER STRIP AREAS ARE PER SECTION 340–92 OF THE BERLIN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE = WITHIN REQUIRED BUFFER AREAS, A SOLID AND CONTINUOUS LANDSCAPE SCREEN SHALL BE PLANTED AND MAINTAINED. SAID LANDSCAPING SHALL CONSIST OF MASSED EVERGREEN OR A COMBINATION OF EVERGREEN AND DECIDUOUS TREES IN TWO ROWS OF AT LEAST SIX FEET IN HEIGHT, SO AS TO CONTINUALLY RESTRICT A CLEAR VIEW BEYOND SAID BUFFER STRIP. THE MINIMUM REQUIRED TO SATISFY THIS CHAPTER WILL BE ONE TREE PLANTED EVERY SIX FEET WITH A MINIMUM OF TWO ROWS WITH STAGGERED CENTERS. IN THE CENTRAL BUSINESS DISTRICT MIXED USES AND NONRESIDENTIAL USES WITH THE SIDE OR REAR OF THE LOT LOCATED ALONG THE STREET, WITH THE EXCEPTION OF HADDON AVENUE, SHALL HAVE A SIX–FOOT–WIDE BUFFER, CONSISTING OF VINYL/OPAQUE FENCE AND SHRUBBERY.

STREET TREE PLANTING REQUIREMENTS
MINIMUM PLANTING REQUIREMENTS PER SECTION 6 OF THE CAMDEN COUNTY DEVELOPMENT REGULATIONS = STREET TREES, WHICH SHALL BE PLANTED ALONG ALL COUNTY ROADS, ARE SUBJECTTO REVIEW AND APPROVAL BY THE CAMDEN COUNTY DEVELOPMENT REVIEW COMMITTEE. ALL SHADE TREES SHALL BE MINIMUM OF 2 – 2.5 INCH CALIPER, BALLED AND BURLAPPED, AND CONFORM TO THE AMERICAN STANDARD OF NURSERY STOCK (CURRENT EDITION).

PROPOSED PLANTING SCHEDULE

STREET TREE PLANTINGS – PROPOSED (ORDINANCE REQUIREMENT MET)

PROPOSED PLANT SPECIES	BOTANICAL NAME	TYPE	MIN. PLANTING SIZE	PLANT SPACING	PROPOSED PLANTINGS
AF – FREEMAN MAPLE(ST)	ACER X. FREEMANI 'ARMSTRONG'	DECIDUOUS	2–1/2 INCH CALIPER	N/A	6
				TOTAL PLANTINGS PROPOSED:	6*

PLANTING REQUIREMENTS (BUFFER AREA) – PROPOSED (ORDINANCE REQUIREMENT MET)

PROPOSED PLANT SPECIES	BOTANICAL NAME	TYPE	MIN. PLANTING SIZE	PLANT SPACING	PROPOSED PLANTINGS
IG – INKBERRY (NL)	ILEX GLABRA	EVERGREEN SHRUB	6' MINIMUM	6'	18
				TOTAL PLANTINGS PROPOSED:	18*

PLANTING REQUIREMENTS (NET LAND AREA) – PROPOSED

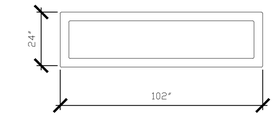
PROPOSED PLANT SPECIES	BOTANICAL NAME	TYPE	MIN. PLANTING SIZE	PLANT SPACING	PROPOSED PLANTINGS
RC – LAVANDER RHODODENDRON (NL)	RHODODENDRON CATAWBIENSE	FLOWERING EVERGREEN SHRUB	24" MINIMUM	N/A	20
IG – INKBERRY (NL)	ILEX GLABRA	EVERGREEN SHRUB	24" MINIMUM	N/A	14
				TOTAL PLANTINGS PROPOSED:	34*

*CONTRACTOR TO INSTALL APPROPRIATE IRRIGATION SYSTEMS FOR PLANTINGS AND LAWN.

LEGEND

SHRUBS:

DECIDUOUS TREES:



KORNEGAY DESIGN LLC
212 South 10th Street
Phoenix, AZ 85034
Toll free 877.252.6323

SQUARE SERIES

CONCRETE PLANTER DETAIL

0 10 20 Feet

ENGINEERS CERTIFICATION
JOSHUA D. HOAGLAND 24GD05658500

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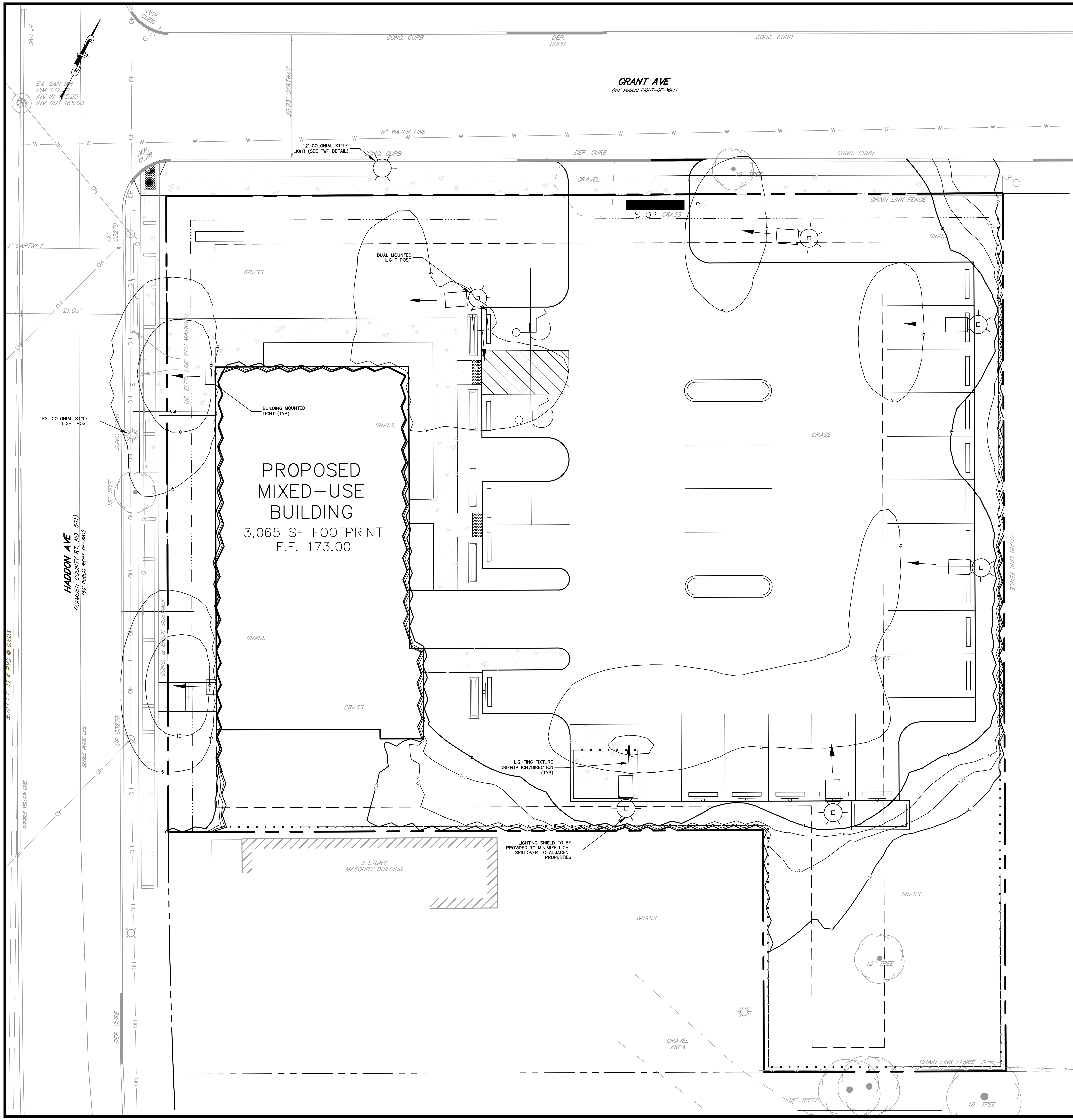
CIVIL ENGINEERING & LAND DEVELOPMENT | SURVEY

LANDSCAPING PLAN
PREPARED AS PART OF THE PREAPPLICATION FOR
MY ANGELO'S PIZZA LD
SALVATORE CUSUMANO
SITE SITUATE IN
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

PROJECT MANAGER	JH
DRAWING FILE NAME	ZLAN
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	1" = 10'
PROJECT NUMBER	3824
SHEET NUMBER	2.00 OF 16

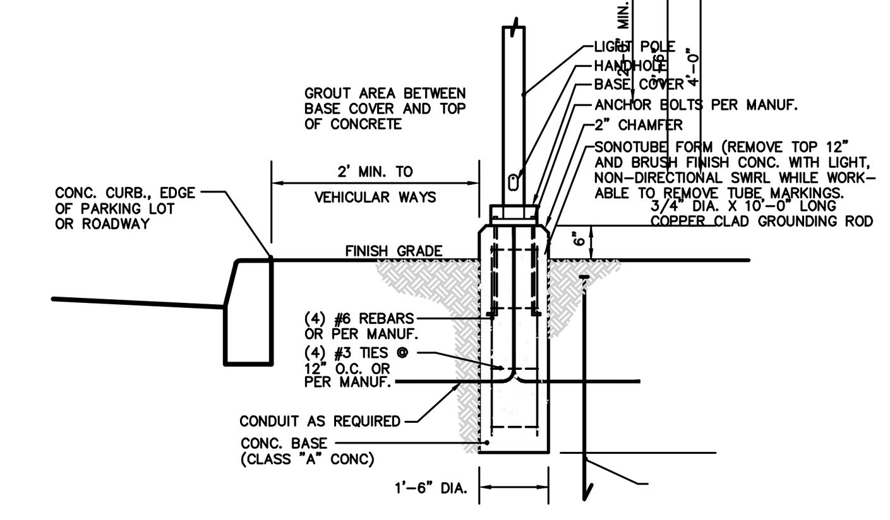


LIGHTING NOTES

1. ALL FREESTANDING LIGHTS SHALL BE POLE MOUNTED UNLESS NOTED OTHERWISE ON PLAN. POLE MOUNTED LIGHTS ARE TO BE 15 FEET TALL.
2. ALL BUILDING MOUNTED LIGHTS ARE TO BE MOUNTED AT 15 FEET.
3. POLE MOUNTED LIGHTS ARE TO BE LITHONIA LIGHTING MODEL RSX2 LED AREA LUMINAIRE P2 40K AFR EGS OR APPROVED ALTERNATIVE.
4. BUILDING MOUNTED LIGHTS ARE TO BE LITHONIA LIGHTING MODEL WDGE4 LED ARCHITECTURAL WALL SCONCE P1 70CRI R2 30K OR APPROVED ALTERNATIVE.
5. COLONIAL STYLE LIGHTS ARE TO BE LITHONIA LIGHTING MODEL RADEAN POST-TOP P1 40K PATH OR APPROVED ALTERNATIVE.
6. ALL LIGHTS ARE TO BE DIRECTED TOWARD THE PARKING AREAS DIRECTLY AT THE GROUND, UNLESS OTHERWISE NOTED.
7. ALL LIGHT POLES, BASES, MOUNTS, AND FIXTURE SHALL BE BLACK IN COLOR.

LEGEND

- TYPICAL 15' STREET LIGHT (APPROX. LOC.)
- TYPICAL BUILDING MOUNTED LIGHT (APPROX. LOC.)
- 0.0–0.1 FOOTCANDLE OF ILLUMINANCE
- 0.1–0.25 FOOTCANDLE OF ILLUMINANCE
- 0.1–0.5 FOOTCANDLE OF ILLUMINANCE
- 0.5–1.0 FOOTCANDLE OF ILLUMINANCE
- 1.0–5.0 FOOTCANDLE OF ILLUMINANCE
- 5.0–10.0 FOOTCANDLE OF ILLUMINANCE



LIGHT STANDARD ANCHORING DETAIL

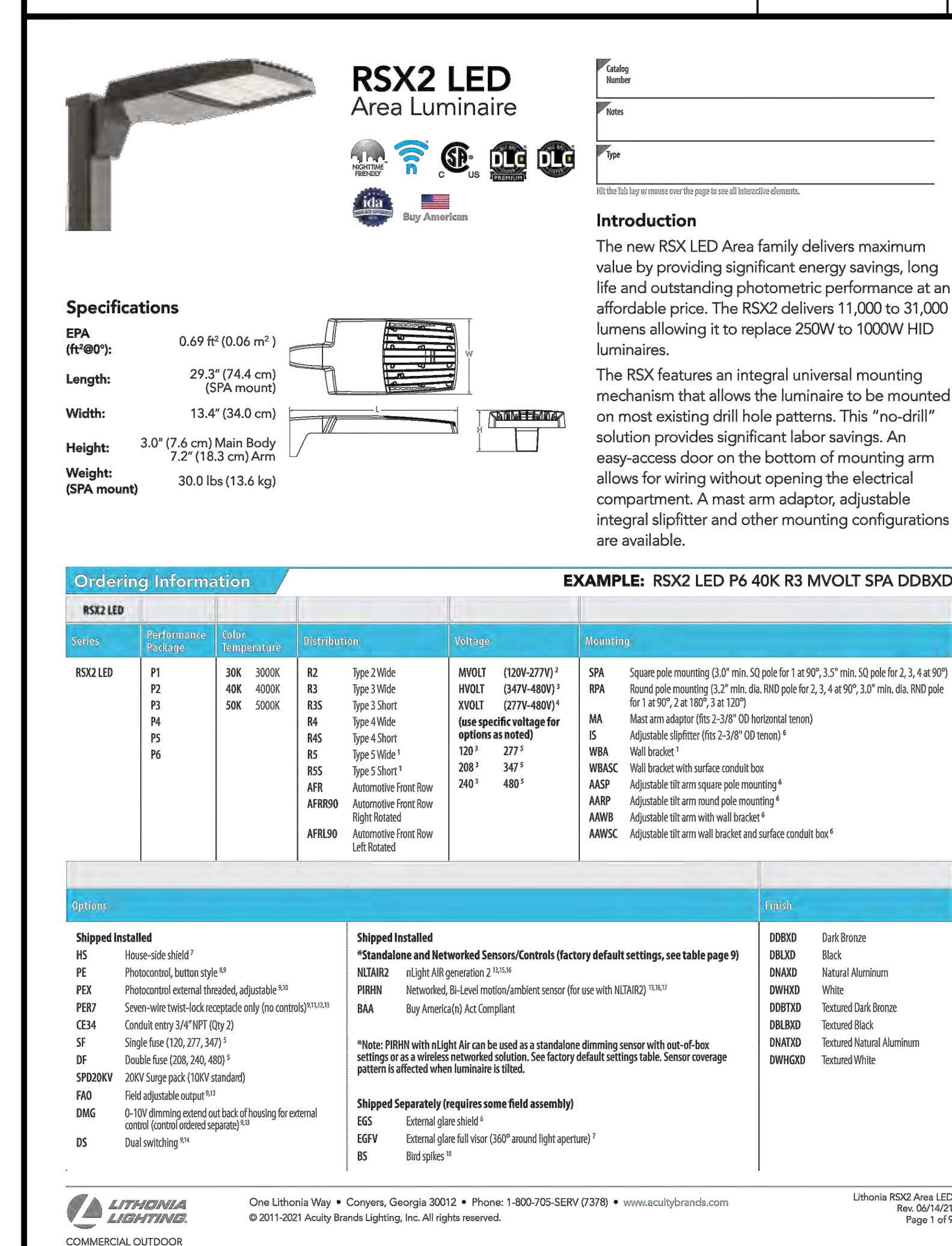
N.T.S.

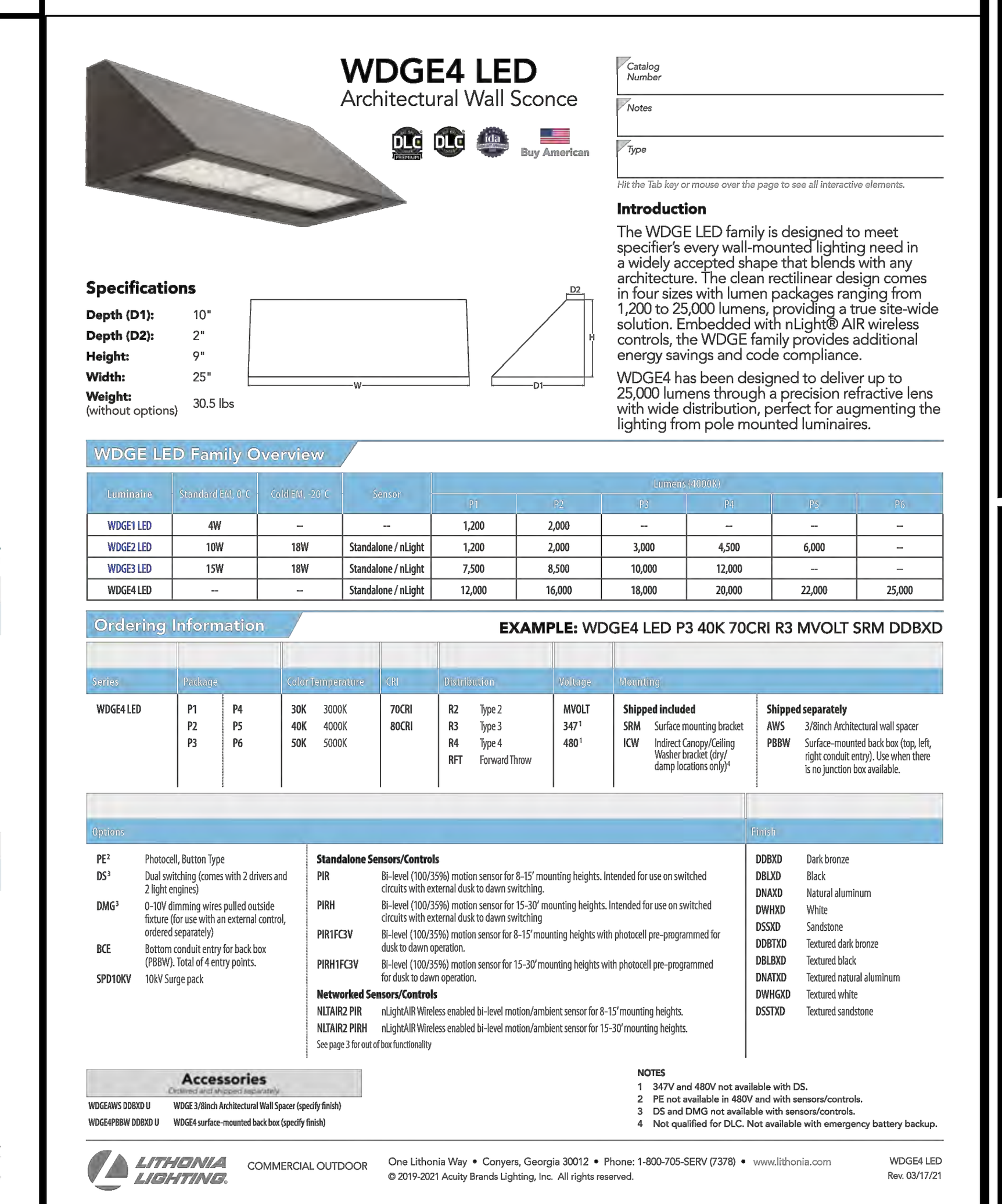
BERLIN TOWNSHIP STREET LIGHT DETAIL

1. HALOPHANE GRANVILLE LED PREMIER 3 WITH PRISMATIC ACORN, PK40 PKG.,4,000K, TYPE 4 OPTICS, MODERN STYLE SWING OPEN DESIGN, BLACK HOUSING WITH BRONZE RIBS AND DECORATIVE BAND, PAWN FINIAL, AUTO-SENSING VOLTAGE, FIELD ADJUSTABLE OUTPUT, DLL PHOTOCONTROL

2. HALOPHANE WADSWORTH , 12' HIGH 5" DIAMETER BLACK, STRAIGHT, FLUTED ALUMINUM POLE, F5J SHAFT

3. HALOPHANE BLACK, CAST ALUMINUM CLAMSHELL BASE, C24CSB OR WADSWORTH BOLTED ONTO REINFORCED CONCRETE FOUNDATION WITH EMBEDDED ANCHOR BOLTS





ENGINEERS CERTIFICATION

JOSHUA D. HOAGLAND
24GE05658500

0 10 20 Feet

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LIGHTING PLAN
PREPARED AS PART OF THE
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PROJECT NUMBER	3824
SHEET NUMBER	2.01 OF 16

CAMDEN COUNTY SOIL EROSION AND SEDIMENT CONTROL NOTES

TO ENSURE ADEQUATE FUNCTION OF THE TEMPORARY CONTROLS, A MAINTENANCE PROGRAM SHALL BE INITIATED WHICH INCLUDES THE FOLLOWING AT A MINIMUM. ALSO, ALL MAINTENANCE DURING CONSTRUCTION AND PRIOR TO FINAL STABILIZATION OF THE SITE SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR HIS CONTRACTOR.

1. ALL APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATION AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
2. SOIL EROSION AND SEDIMENT CONTROL PRACTICES ON THIS PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.
3. APPLICABLE EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
4. THE CONTRACTOR SHALL PERFORM ALL WORK, FURNISH ALL MATERIALS AND INSTALL ALL MEASURES REQUIRED TO REASONABLY CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS AND PREVENT EXCESSIVE FLOW OF SEDIMENT FROM THE CONSTRUCTION SITE.
5. ANY DISTURBED AREA THAT IS TO BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION IN ACCORDANCE WITH THE NEW JERSEY STANDARDS AND THEIR RATES SHOULD BE INCLUDED IN THE NARRATIVE. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
6. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO PROVIDE CONFIRMATION OF LIME, FERTILIZER AND SEED APPLICATION AND RATES OF APPLICATION AT THE REQUEST OF THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT.
7. ALL CRITICAL AREAS SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE NEW JERSEY STANDARDS IMMEDIATELY FOLLOWING ROUGH GRADING.
8. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
9. ALL SEDIMENTATION STRUCTURES WILL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
10. A CRUSHED STONE, TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ACCESS EXISTS. THE STABILIZED PAD WILL BE INSTALLED ACCORDING TO THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS.
11. ALL DRIVEWAYS MUST BE STABILIZED WITH 2 ½" CRUSHED STONE OR SUBBASE PRIOR TO INDIVIDUAL LOT CONSTRUCTION.
12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
13. ALL CATCH BASIN INLETS WILL BE PROTECTED ACCORDING TO THE CERTIFIED PLAN.
14. ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
15. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTER AREA. THE SEDIMENT FILTER SHOULD BE COMPOSED OF A SUITABLE SEDIMENT FILTER FABRIC. (SEE DETAIL) THE BASIN MUST BE DEWATERED TO NORMAL POOL WITHIN 10 DAYS OF THE DESIGN STORM.
16. NJSA 4:24-39, ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE ALL PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES. ALL SITE WORK FOR THE PROJECT MUST BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE AS A PREREQUISITE TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.
17. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATION COVER.
18. OFFSITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE EROSION CONTROL INSPECTOR.
19. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
20. THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 72 HOURS PRIOR TO ANY LAND DISTURBANCE.
21. ANY CONVEYANCE OF THIS PROJECT PRIOR TO ITS COMPLETION WILL TRANSFER FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CERTIFIED PLAN TO ANY SUBSEQUENT OWNERS.
22. IMMEDIATELY AFTER THE COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, THE STOCKPILE MUST BE STABILIZED ACCORDING TO THE STANDARD FOR TEMPORARY VEGETATIVE COVER. STABILIZE TOPSOIL PILE WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING. ALL SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF A FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITY AND THE BASE MUST BE PROTECTED WITH A SEDIMENT BARRIER.
23. ANY CHANGES TO THE SITE PLAN WILL REQUIRE THE SUBMISSION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN TO THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT. THE REVISED PLAN MUST BE IN ACCORDANCE WITH THE CURRENT NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
24. METHODS FOR THE MANAGEMENT OF HIGH ACID PRODUCING SOILS SHALL BE IN ACCORDANCE WITH THE STANDARDS. HIGH ACID PRODUCING SOILS ARE THOSE FOUND TO CONTAIN IRON SULFIDES OR HAVE A pH OF 4 OR LESS.
25. TEMPORARY AND PERMANENT SEEDING MEASURES MUST BE APPLIED ACCORDING TO THE NEW JERSEY STANDARDS, AND MULCHED WITH SALT HAY OR EQUIVALENT AND ANCHORED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS (I.E. PEG AND TWINE, MULCH NETTING OR LIQUID MULCH BINDER).
26. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
27. DUST IS TO BE CONTROLLED BY AN APPROVED METHOD ACCORDING TO THE NEW JERSEY STANDARDS AND MAY INCLUDE WATERING WITH A SOLUTION OF CALCIUM CHLORIDE AND WATER.
28. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS ON THE PROPOSED SITE.
29. USE STAGED CONSTRUCTION METHODS TO MINIMIZE EXPOSED SURFACES, WHERE APPLICABLE.
30. ALL VEGETATIVE MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH AMERICAN STANDARDS FOR NURSERY STOCK OF THE AMERICAN ASSOCIATION OF THE NURSERYMEN AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS.

GRADING STANDARDS:

TAKEN FROM THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, JULY 2017.

THE GRADING PLAN AND INSTALLATION SHALL BE BASED UPON ADEQUATE TOPOGRAPHIC SURVEYS AND INVESTIGATIONS. THE PLAN IS TO SHOW THE LOCATION, SLOPE, CUT, FILL AND FINISH ELEVATION OF THE SURFACES TO BE GRADED. THE PLAN SHOULD ALSO INCLUDE AUXILIARY PRACTICES FOR SAFE DISPOSAL OF RUNOFF WATER, SLOPE STABILIZATION, EROSION CONTROL AND DRAINAGE. FACILITIES SUCH AS WATERWAYS, DITCHES, DIVERSIONS, GRADE STABILIZATION STRUCTURES, RETAINING WALLS AND SUBSURFACE DRAINS SHOULD BE INCLUDED WHERE NECESSARY. EROSION CONTROL MEASURES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE STANDARD CONTAINED HEREIN.

THE DEVELOPMENT AND ESTABLISHMENT OF THE PLAN SHALL INCLUDE THE FOLLOWING:
1. THE CUT FACE OF EARTH EXCAVATIONS AND FILLS SHALL BE NO STEEPER THAN THE SAFE ANGLE OF REPOSE FOR THE MATERIALS ENCOUNTERED AND FLAT ENOUGH FOR PROPER MAINTENANCE.
2. THE PERMANENTLY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR OTHERWISE PROTECTED FROM EROSION.
3. PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE WATER TO STORM DRAINS OR SUITABLE WATER COURSES AND TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.
4. SUBSURFACE DRAINAGE IS TO BE PROVIDED IN AREAS HAVING A HIGH WATER TABLE, TO INTERCEPT SEEPAGE THAT WOULD ADVERSELY AFFECT SLOPE STABILITY, BUILDING FOUNDATIONS OR CREATE UNDESIRABLE WETNESS. SEE STANDARD FOR SUBSURFACE DRAINAGE, PG. 32-1.
5. ADJOINING PROPERTY SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS.
6. FILL SHALL NOT BE PLACED ADJACENT TO THE BANK OF A STREAM OR CHANNEL, UNLESS PROVISIONS ARE MADE TO PROTECT THE HYDRAULIC, BIOLOGICAL, AESTHETIC AND OTHER ENVIRONMENTAL FUNCTIONS OF THE STREAM.

SOIL COMPACTION TESTING REQUIREMENTS:
1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. AREAS OF THE SITE WHICH ARE SUBJECT TO COMPACTION TESTING AND/OR MITIGATION ARE GRAPHICALLY DENOTED ON THE CERTIFIED SOIL EROSION CONTROL PLAN.
3. COMPACTION TESTING LOCATIONS ARE DENOTED ON THE PLAN. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT.THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
4. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS:
A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION:
PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.

RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

RECYCLING STATEMENT

ALTHOUGH THERE ARE NO KNOWN PROJECT WASTES FOR THIS SITE, INDIVIDUALS RESPONSIBLE FOR EARTH DISTURBANCE ACTIVITIES MUST ENSURE THAT PROPER MECHANISMS ARE IN PLACE TO CONTROL WASTE MATERIALS. CONSTRUCTION WASTES INCLUDE, BUT ARE NOT LIMITED TO, EXCESS SOIL MATERIALS, CONCRETE WASH WATER, SANITARY WASTES, ETC. THAT COULD ADVERSELY IMPACT WATER QUALITY. MEASURES SHOULD BE PLANNED AND IMPLEMENTED FOR HOUSEKEEPING, MATERIALS MANAGEMENT, AND LITTER CONTROL. WHEREVER POSSIBLE, RECYCLING OF EXCESS MATERIALS IS PREFERRED, RATHER THAN DISPOSAL.

ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 7 NJ ADMINISTATIVE CODE CHAPTER 26. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, OR DISCHARGED ON THE SITE.

ALL OFF SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE CONSERVATION DISTRICT OR DEP FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

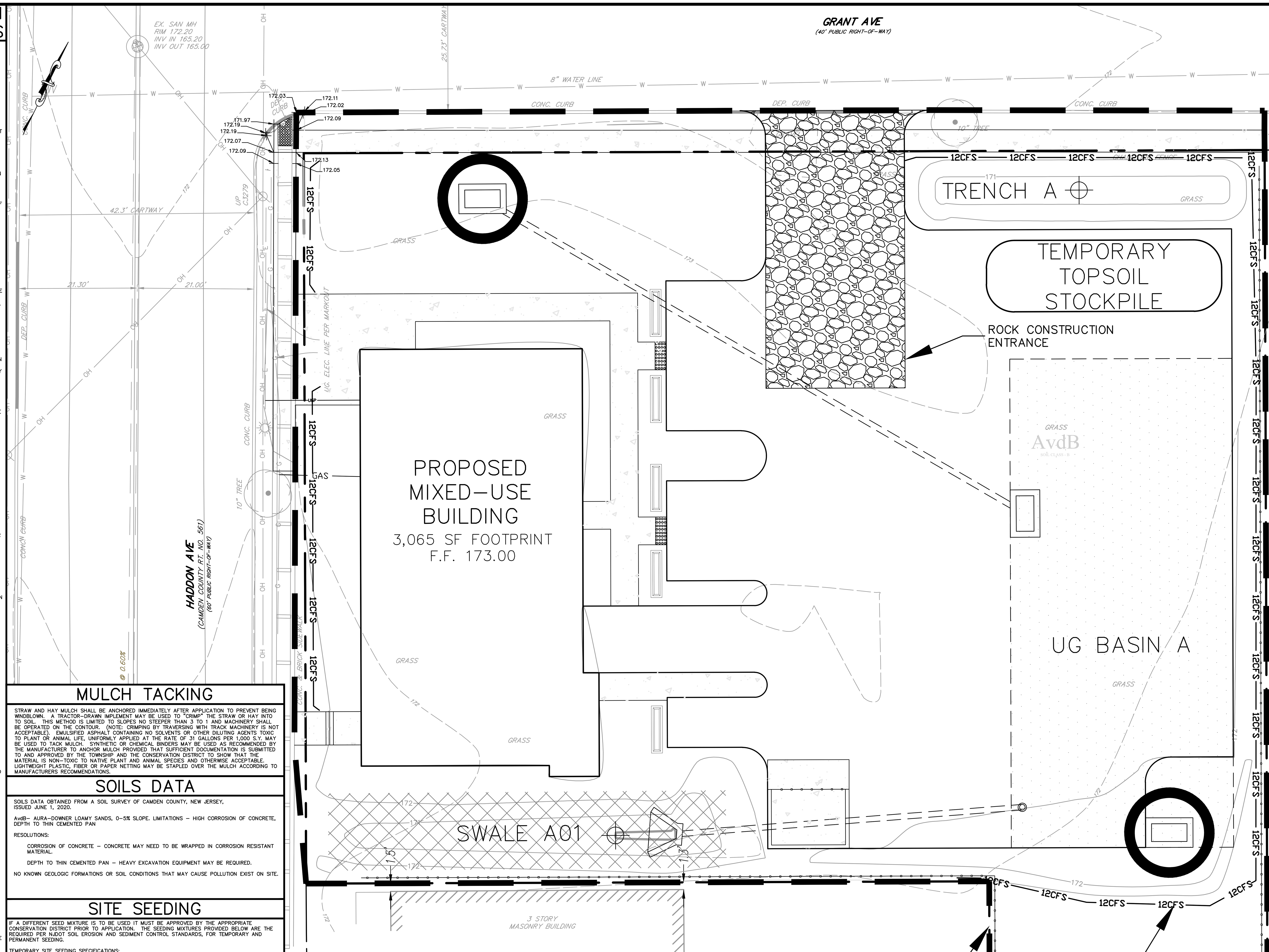
NJAC SWQS CLASSIFICATION

THE STORMWATER DRAINAGE FROM THIS SITE DISCHARGES TO UNT OF GREAT EGG HARBOR RIVER. BASED ON N.J.A.C. 7:9B – SURFACE WATER QUALITY STANDARDS, UNT OF GREAT EGG HARBOR RIVER IS DESIGNATED AS FW2-NT WHICH IS A NONTROUT FRESHWATERS.

NEW JERSEY ONE CALL SYSTEM, INC. 1-800-272-1000 STOP-CALL BEFORE YOU DIG!

THE UNDERGROUND FACILITY PROTECTION ACT
SITE SERIAL NO. 203232600

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-272-1000, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.



MULCH TACKING

STRAW AND HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO TO SOIL. THIS METHOD IS LIMITED TO SLOPES NO STEEPER THAN 3 TO 1 AND MACHINERY SHALL BE OPERATED ON THE CONTOUR. (NOTE: CRIMPING BY TRAVERSING WITH TRACK MACHINERY IS NOT ACCEPTABLE). EMULSIFIED ASPHALT CONTAINING NO SOLVENTS OR OTHER DILUTING AGENTS TOXIC TO PLANT OR ANIMAL LIFE, UNIFORMLY APPLIED AT THE RATE OF 31 GALLONS PER 1,000 S.Y. MAY BE USED TO TACK MULCH. SYNTHETIC OR CHEMICAL BINDERS MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED THAT SUFFICIENT DOCUMENTATION IS SUBMITTED TO AND APPROVED BY THE TOWNSHIP AND THE CONSERVATION DISTRICT TO SHOW THAT THE MATERIAL IS NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES AND OTHERWISE ACCEPTABLE. LIGHTWEIGHT PLASTIC, FIBER OR PAPER NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURERS RECOMMENDATIONS.

SOILS DATA

SOILS DATA OBTAINED FROM A SOIL SURVEY OF CAMDEN COUNTY, NEW JERSEY, ISSUED JUNE 1, 2020.

AvdB– AURA-DOWNER LOAMY SANDS, 0-5% SLOPE. LIMITATIONS – HIGH CORROSION OF CONCRETE, DEPTH TO THIN CEMENTED PAN

RESOLUTIONS:

CORROSION OF CONCRETE – CONCRETE MAY NEED TO BE WRAPPED IN CORROSION RESISTANT MATERIAL.

DEPTH TO THIN CEMENTED PAN – HEAVY EXCAVATION EQUIPMENT MAY BE REQUIRED.

NO KNOWN GEOLOGIC FORMATIONS OR SOIL CONDITIONS THAT MAY CAUSE POLLUTION EXIST ON SITE.

SITE SEEDING

IF A DIFFERENT SEED MIXTURE IS TO BE USED IT MUST BE APPROVED BY THE APPROPRIATE CONSERVATION DISTRICT PRIOR TO APPLICATION. THE SEEDING MIXTURES PROVIDED BELOW ARE THE REQUIRED PER NJDOT SOIL EROSION AND SEDIMENT CONTROL STANDARDS, FOR TEMPORARY AND PERMANENT SEEDING.

TEMPORARY SITE SEEDING SPECIFICATIONS:

SEED MIXTURE:

NJDOT CERTIFIED TYPE F SEED MIXTURE

BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
LOLIUM PERENNE	PERENNIAL RYEGRASS	100.0%

SEED AT 100 BULK POUNDS PER ACRE.

ADDITIVES:

ADDITIVE	APPLICATION RATE (PER ACRE)
FERTILIZER* (10-20-10)	300 POUNDS
LIME	3 TONS
MULCH (HAY OR STRAW)	3 TONS

PERMANENT SITE SEEDING SPECIFICATIONS:

GENERAL SITE PREPARATION:

ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:

CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA, BROADCAST SEED INTO TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP ¼ INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

SEED MIXTURE:

NJDOT CERTIFIED TYPE A-3 SEED MIXTURE

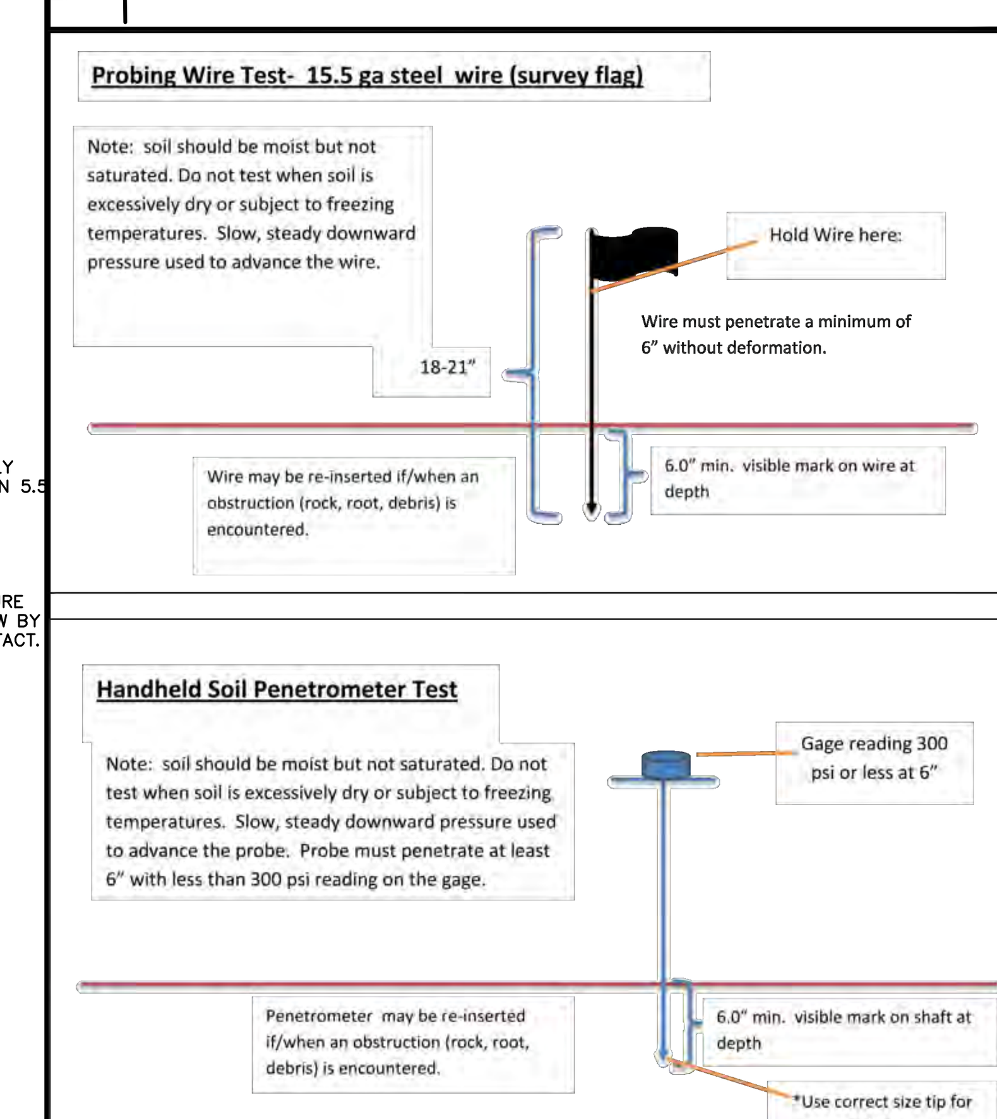
BOTANICAL NAME	COMMON NAME	PERCENT (%) OF MIX BY WEIGHT
FESTUCA ARUNDINACEA	TALL FESCUE	60.0%
FESTUCA RUBRA SUBSP. COMMUTATA	CHEWINGS FESCUE	20.0%
POA PRATENSIS	KENTUCKY BLUEGRASS	10.0%
LOLIUM PERENNE	PERENNIAL RYEGRASS	10.0%

SEED AT 200 POUNDS PER ACRE

ADDITIVES:

ADDITIVE	APPLICATION RATE (PER ACRE)
FERTILIZER* (10-20-10 OR 5-20-10)	300 POUNDS
LIME	3 TONS
MULCH (HAY OR STRAW)	3 TONS

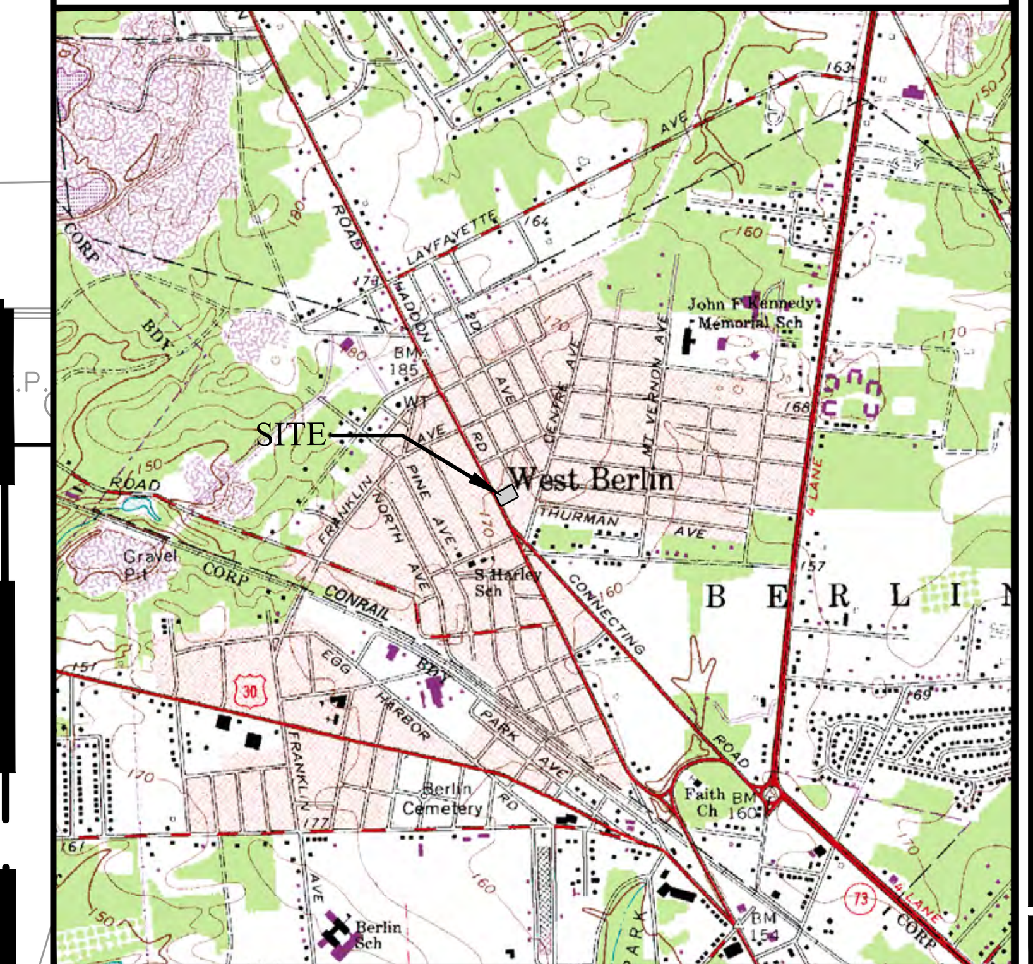
*FERTILIZER TO COMPLY WITH THE N.J. FERTILIZER ACT, P.L. 210, CHAPTER 110.



LEGEND

SYMBOL	DESCRIPTION
—12CFS—12CFS—	12" COMPOST FILTER SOCK
(heavy dashed line)	LIMIT OF DISTURBANCE
(rounded rectangle)	TOPSOIL STOCKPILE AREA
(circled inlet)	INLET FILTER IN LAWN AREA
(stone pattern)	ROCK CONSTRUCTION ENTRANCE
SWALE A1	SWALE
⌖	RECOMMENDED SOIL COMPACTION TEST LOCATION (APPROX. 2 TESTS/ACRE)

SITE LOCATION MAP 1"=2000'



CONSTRUCTION SEQUENCE

IN ORDER TO KEEP EROSION AND SEDIMENT POLLUTION DURING CONSTRUCTION TO AN ABSOLUTE MINIMUM, ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING STAGING OF EARTHMOVING ACTIVITIES. EACH STAGE SHALL BE COMPLETED BEFORE A SUBSEQUENT STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. AT LEAST SEVEN (7) DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE CAMDEM COUNTY SOIL CONSERVATION DISTRICT TO AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST THREE DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITY, ALL CONTRACTORS INVOLVED IN THAT ACTIVITY SHALL NOTIFY THE NEW JERSEY ONE-CALL SYSTEM INC. 1-800-272-1000 TO DETERMINE ANY UNDERGROUND UTILITIES LOCATIONS.

1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT OR DEP PRIOR TO IMPLEMENTATION.
2. THE LIMIT OF DISTURBANCE, STREAMS, AND WETLANDS SHOULD BE MARKED PRIOR TO DISTURBANCE ACTIVITIES.
3. ROUGH GRADE PROPOSED ENTERANCE AT ITS INTERSECTION WITH GRANT AVE AND INSTALL ROCK CONSTRUCTION ENTRANCE IN ACCORDANCE WITH DETAIL TO SERVE AS ACCESS TO SITE.
4. PLACE COMPOST FILTER SOCK AS DEPICTED ON THE PLANS, AND DOWNSTREAM OF ALL EXCAVATED AREAS OR TOPSOIL STOCKPILING AREAS.
5. UPON INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPS AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
6. CLEAR AND GRUB AREA(S) REQUIRED FOR BMP CONSTRUCTION. EXCAVATE AND INSTALL ALL UTILITIES THAT WILL CONFLICT WITH THE BASIN BERM PRIOR TO THE CONSTRUCTION OF THE BERM ITSELF. CONSTRUCT AND STABILIZE BMPs AS SHOWN ON THE PLANS, INCLUDING OUTLET STRUCTURES, OUTLET PIPING, AND SPILLWAYS. DEPOSIT OR BORROW FILL AS NECESSARY FOR CONSTRUCTION FROM AREAS IN CLOSE PROXIMITY TO BMP LOCATIONS. STABILIZE FILL OR BORROW AREAS IMMEDIATELY UPON COMPLETION OF BMP CONSTRUCTION. DISTURBED AREAS OF SPILLWAY SHALL BE LINED WITH NORTH AMERICAN GREEN P300 OR EQUIVALENT GEOTEXTILE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE BASIN IMMEDIATELY UPON CONSTRUCTION. STABILIZATION SHALL CONSIST OF BOTH SEEDING AND MULCHING PER THE SEEDING REQUIREMENTS, OR BY INSTALLATION OF EROSION CONTROL MATTING (NORTH AMERICAN GREEN S-75, OR APPROVED EQUAL). IF EROSION OCCURS WITHIN OR ON THE BASIN BERM, THEY SHALL BE STABILIZED IMMEDIATELY WITH EROSION CONTROL MATTING (NORTH AMERICAN GREEN S-75 OR APPROVED EQUAL). THE BMP AND ASSOCIATED OUTLET WORKS AND PROTECTION SHALL BE CONSTRUCTED, STABILIZED AND FUNCTIONAL PRIOR TO ROUGH GRADING OF THE ROADWAY, PARKING AREA OR ANY OTHER UPSLOPE DISTURBANCE. ANY ACCUMULATED SEDIMENT WITHIN THE BMP SHALL BE REMOVED AFTER EACH RUN-OFF EVENT AND AT WEEKLY INTERVALS. ALL DESIGNATED UPLAND IMPROVEMENTS THAT ARE TO BE MANAGED BY THE BMP MUST BE DIRECTED TO THAT FACILITY DURING CONSTRUCTION.
7. INSTALL BMPs ONE AT A TIME ION THE ORDER LISTED BELOW, ONLY DISTURBING AREA NECCESSARY FOR BMP INSTALLATION:

   7.1. SWALE A01
   7.2. UG BASIN A

   *THIS IS A CRITICAL STAGE OF PCSM CONSTRUCTION, DURING WHICH A REGISTERED PE OR THEIR DESIGNEE MUST BE ONSITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.

   7.3. TRENCH A
8. CLEAR AND GRUB REMAINDER OF DISTURBED AREAS ON SITE. STRIP TOPSOIL WITHIN AREAS OF PROPOSED EARTHWORK AND STOCKPILE ACCORDING TO PLANS. BEGIN BULK EXCAVATION ACTIVITIES FOR PROPOSED PARKING AREAS AND BUILDING AREAS AND STABILIZE.
9. BEGIN CONSTRUCTION OF STORM SEWER STRUCTURES AND PIPING, INCLUDING ENDWALLS AND RIP-RAP APRONS. STONE INLET FILTERS SHALL BE PLACED AROUND ALL INLETS THAT DO NOT DRAIN TO A SEDIMENT CONTROL FACILITY AND ALL LAWN INLETS.
10. BEGIN CONSTRUCTION OF PROPOSED BUILDING (EXCAVATION OF BASEMENTS, ETC.). IF ROADWAY IS NOT STABILIZED, ACCESS TO THE CONSTRUCTED BUILDING SHALL BE STABILIZED FOR CONSTRUCTION VEHICLE ACCESS.
11. INSTALL REMAINDER OF UNDERGROUND UTILITIES. REFER TO UTILITY LINE EXCAVATION MEASURES. FINISH GRADE, SEED AND MULCH EACH AREA OF DISTURBANCE IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
12. CONSTRUCT ALL AGGREGATE BASE COURSE AND BITUMINOUS BINDER COURSES ON INTERNAL PARKING AREAS.
13. REMOVE TEMPORARY CONTROL MEASURES AFTER UNIFORM EROSION RESISTANT PERENNIAL VEGETATION HAS BEEN ESTABLISHED, MINIMUM OF UNIFORM COVERAGE OR A DENSITY OF 70% ACROSS THE DISTURBED AREA, TO THE POINT WHERE THE SURFACE SOIL IS CAPABLE OF RESISTING EROSION DURING RUNOFF EVENTS AND STABILIZATION OF THE SITE IS COMPLETE TO THE SATISFACTION OF THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT. AREAS DISTURBED DURING THE REMOVAL OF THE CONTROLS MUST BE STABILIZED. THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT AND BERLIN TOWNSHIP SHALL BE NOTIFIED PRIOR TO REMOVAL OF ANY EROSION CONTROLS.
14. WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THIS PERMIT, INCLUDING THE PERMANENT STABILIZATION OF THE SITE AND PROPER INSTALLATION OF PCSM BMPS IN ACCORDANCE WITH THE APPROVED PCSM PLAN, OR UPON SUBMISSION OF THE NOT IF SOONER, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.

FILL MATERIAL NOTES

IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE ON-SITE CONTRACTOR.

CLEAN FILL IS DEFINED AS: UNCONTAMINATED, NON-WATER SOLUBLE, NON-DECOMPOSABLE, INERT, SOLID MATERIAL. THE TERM INCLUDES SOIL, ROCK, STONE, DREDGED MATERIAL, USED ASPHALT, AND BRICK, BLOCK OR CONCRETE FROM CONSTRUCTION AND DEMOLITION ACTIVITIES THAT IS SEPARATE FROM OTHER WASTE AND IS RECOGNIZABLE AS SUCH. THE TERM DOES NOT INCLUDE MATERIALS PLACED IN OR ON THE WATERS OF THE COMMONWEALTH UNLESS OTHERWISE AUTHORIZED. (THE TERM "USED ASPHALT" DOES NOT INCLUDE MILLED ASPHALT OR ASPHALT THAT HAS BEEN PROCESSED FOR RE-USE).

CLEAN FILL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE: FILL MATERIALS AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE STILL QUALIFIES AS CLEAN FILL PROVIDED THE TESTING REVEALS THAT THE FILL MATERIAL CONTAINS CONCENTRATIONS OF REGULATED SUBSTANCES THAT ARE BELOW THE RESIDENTIAL LIMITS FOUND IN THE DEPARTMENT'S POLICY FOR MANAGEMENT OF FILL.

ANY PERSON PLACING CLEAN FILL THAT HAS BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE MUST USE THE APPROPRIATE FORM TO CERTIFY THE ORIGIN OF THE FILL MATERIAL AND THE RESULTS OF THE ANALYTICAL TESTING TO QUALIFY THE MATERIAL AS CLEAN FILL. THE APPROPRIATE FORM MUST BE RETAINED BY THE OWNER OF THE PROPERTY RECEIVING THE FILL.

ENVIRONMENTAL DUE DILIGENCE: THE APPLICANT MUST PERFORM ENVIRONMENTAL DUE DILIGENCE TO DETERMINE IF THE FILL MATERIALS ASSOCIATED WITH THE PROJECT QUALIFY AS CLEAN FILL. ENVIRONMENTAL DUE DILIGENCE IS DEFINED AS: INVESTIGATIVE TECHNIQUES, INCLUDING, BUT NOT LIMITED TO, VISUAL PROPERTY INSPECTIONS, ELECTRONIC DATA BASE SEARCHES, REVIEW OF PROPERTY OWNERSHIP, REVIEW OF PROPERTY USE HISTORY, SANBORN MAPS, ENVIRONMENTAL QUESTIONNAIRES, TRANSACTION SCREENS, ANALYTICAL TESTING, ENVIRONMENTAL ASSESSMENTS OR AUDITS. ANALYTICAL TESTING IS NOT A REQUIRED PART OF DUE DILIGENCE UNLESS VISUAL INSPECTION AND/OR REVIEW OF THE PAST LAND USE OF THE PROPERTY INDICATES THAT THE FILL MAY HAVE BEEN SUBJECTED TO A SPILL OR RELEASE OF REGULATED SUBSTANCE. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH THE DEPARTMENT'S POLICY FOR MANAGEMENT OF FILL.

FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS.

MATERIAL NOTES:
1. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
2. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
3. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
4. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.

ENGINEERS CERTIFICATION
JOSHUA D. HOAGLAND 24GE05658500

Feet 0 10 20

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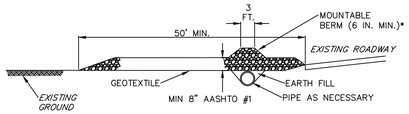
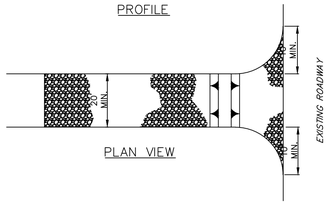
EROSION & SEDIMENTATION CONTROL PLAN
PREPARED AS PART OF THE
MY ANGELO'S PIZZA LD
PREPARED FOR
SALVATORE CUSUMANO
SITE SITUATE IN
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

PROJECT MANAGER	JH
DRAWING FILE NAME	ZES
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	1" = 10'
PROJECT NUMBER	3824
SHEET NUMBER	3.00 OF 16



PROFILE



PLAN VIEW

* MOUNTABLE BERM USED TO PROVIDE PROPER COVER FOR PIPE

NOTES:

REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.

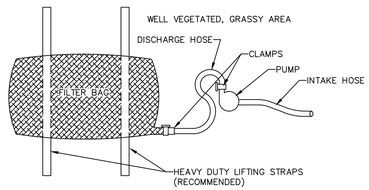
RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.

MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

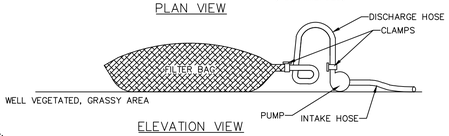
MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK. WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

STANDARD CONSTRUCTION DETAIL #3-1
ROCK CONSTRUCTION ENTRANCE

NOT TO SCALE



PLAN VIEW



ELEVATION VIEW

NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

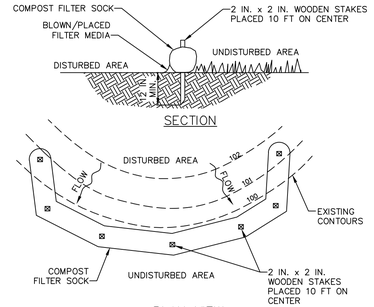
THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16
PUMPED WATER FILTER BAG

NOT TO SCALE



SECTION

PLAN VIEW

NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

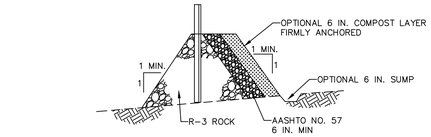
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

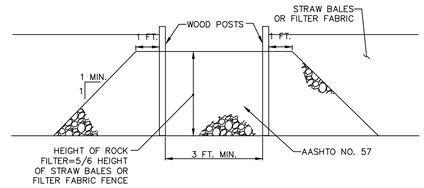
UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK

NOT TO SCALE



OUTLET CROSS-SECTION



UP-SLOPE FACE

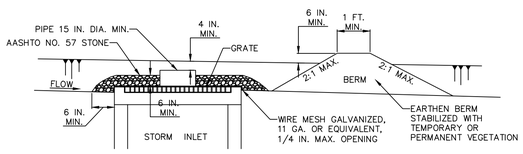
NOTES:

A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.

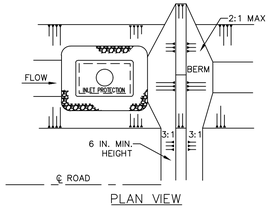
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4-6
ROCK FILTER OUTLET

NOT TO SCALE



SECTION VIEW



PLAN VIEW

NOTES:

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS NOT LOCATED AT A LOW POINT.

ROLLED EARTHEN BERM IN ROADWAY SHALL BE PROVIDED AND MAINTAINED IMMEDIATELY DOWN GRADIENT OF THE PROTECTED INLET UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNEL SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR TO REMAIN PERMANENTLY.

STONE INLET PROTECTION AND BERM FOR A TYPE M INLET CAN BE USED IN ONE ACRE MAXIMUM DRAINAGE AREA WITH 15 IN. OVERFLOW PIPE AND 4 IN. HEAD. A PERFORATED PLATE WELDED TO A METAL RISER MAY NOT BE SUBSTITUTED FOR THE WIRE MESH. A SLOTTED PLATE WELDED TO THE RISER MAY BE USED IN CONJUNCTION WITH THE WIRE MESH IF CALCULATIONS ARE PROVIDED TO SHOW SUFFICIENT CAPACITY OF THE INLET TO ACCEPT THE PEAK RUNOFF FOR A 2-YEAR STORM EVENT FROM THE TRIBUTARY DRAINAGE AREA. TOP OF PIPE SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADWAY IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. EARTHEN BERM SHALL BE ROLLED.

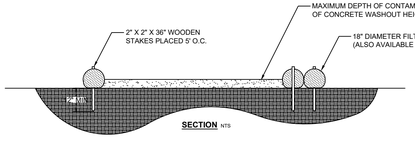
SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE HEIGHT OF THE STONE. DAMAGED OR CLOGGED INSTALLATIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

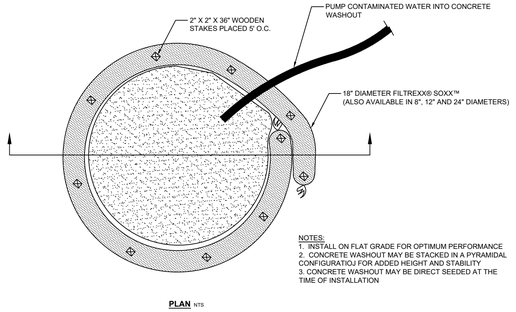
FOR SYSTEMS DISCHARGING TO HQ OR EV SURFACE WATER, A 6 IN. THICK COMPOST LAYER SHALL BE SECURELY ANCHORED ON OUTSIDE AND OVER TOP OF STONE. COMPOST SHALL MEET THE STANDARDS IN TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-20
STONE INLET PROTECTION AND BERM - TYPE M INLET

NOT TO SCALE

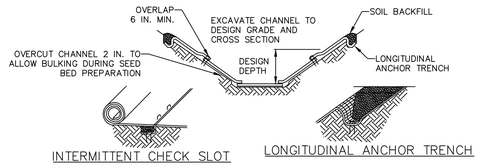




NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. CONCRETE WASHOUT MAY BE STACKED IN A PYRAMIDAL CONFIGURATIOU FOR ADDED HEIGHT AND STABILITY
3. CONCRETE WASHOUT MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION

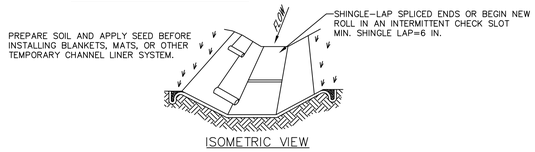
FILTREXX® CONCRETE WASHOUT

NTS

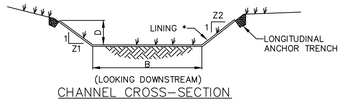


INTERMITTENT CHECK SLOT

LONGITUDINAL ANCHOR TRENCH



ISOMETRIC VIEW



CHANNEL CROSS-SECTION

* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1 (FT)	Z2 (FT)	LINING *
A01	1	1	13	3	3	S75

NOTES:

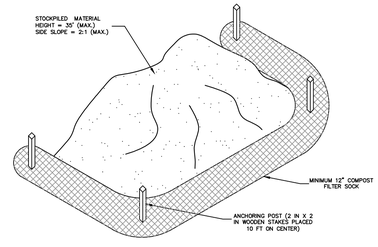
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION.
SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

STANDARD CONSTRUCTION DETAIL #6-1
VEGETATED CHANNEL

NOT TO SCALE



STOCKPILE CONTROL

N.T.S.

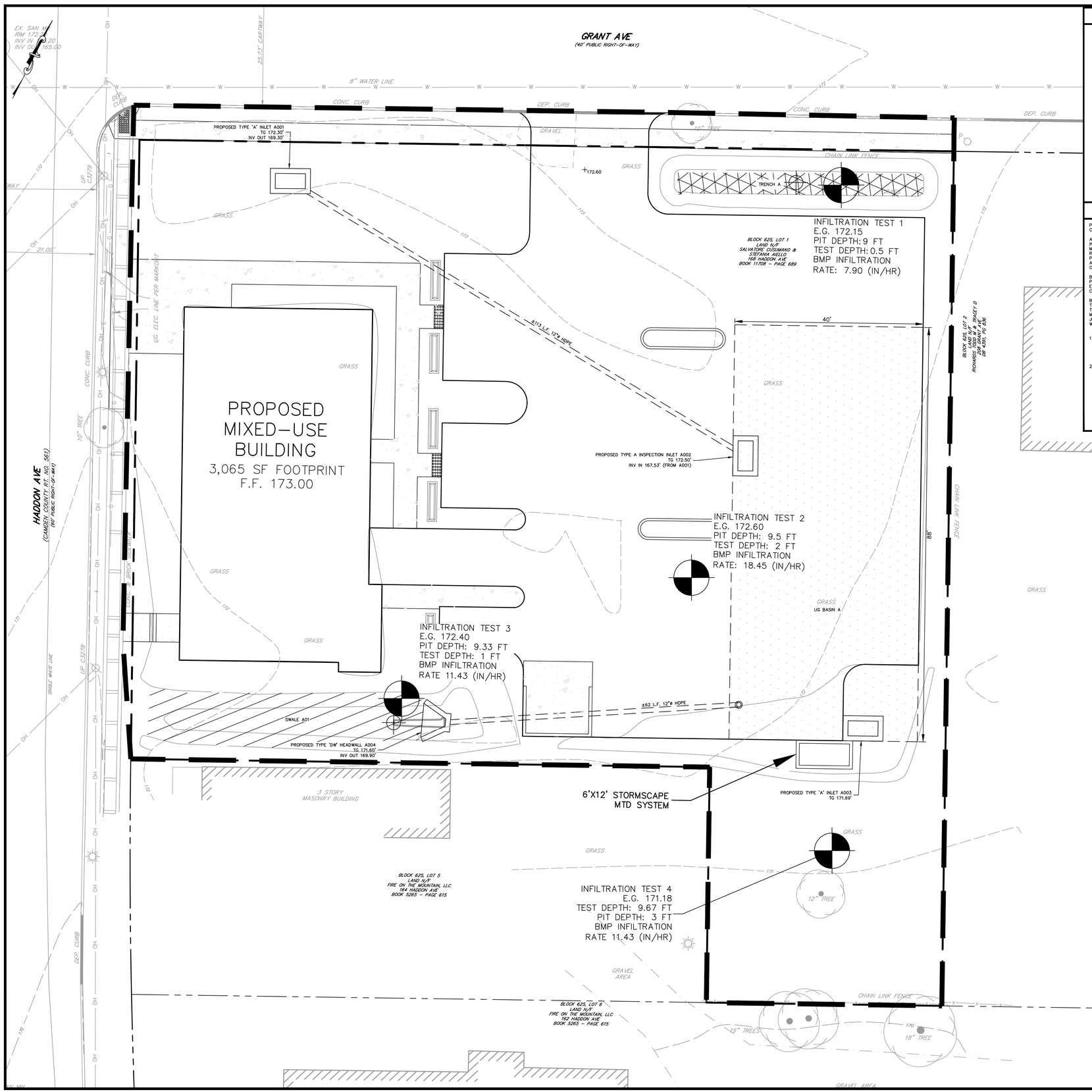
The Crossroads GROUP, LLC
www.thecrossroadsgroupllc.com
769 Sibley Street
Hamburg, PA 19526
Phone: 484-490-3055
Fax: 484-490-3742
Email: info@thecrossroadsgraphic.com
2014 ESC/SEDIMENT & EROSION CONTROL & SITE SURVEY & AS-BUILT

ENGINEERS CERTIFICATION

JOSHUA D. HOAGLAND 24GE05658500

E&S DETAILS
PREPARED AS PART OF THE
MY ANGELO'S PIZZA LD
PREPARED FOR
SITE ESTIMATE
SALVATORE CUSUMANO
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

PROJECT MANAGER	JH
DRAWING FILE NAME	ZDET
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	N.T.S.
PROJECT NUMBER	3824
SHEET NUMBER	3.01 OF 16



LEGEND

- BMP-INFILTRATION BASIN/TRENCH
- BMP-UNDERGROUND BASIN
- BMP-SWALE
- INFILTRATION TEST # BMP INFILTRATION RATE ##.## (IN/HR)

CONSTRUCTION STAGING

PRIOR TO ANY WORK, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT OF THE DATE OF THE PRE-CONSTRUCTION MEETING.

AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENTATION CONTROL PLAN PREPARER, AND A REPRESENTATIVE OF THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE NEW JERSEY ONE CALL SYSTEM INC. AT 1-800-272-1000 FOR BURIED UTILITIES LOCATION.

BEFORE IMPLEMENTING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED EAS CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT.

BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE OPERATOR MUST ASSURE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT, AND WHICH IS BEING IMPLEMENTED AND MAINTAINED ACCORDING TO THE STANDARDS FOR SOIL EROSION AND SDIMENT CONTROL IN NEW JERSEY. THE OPERATOR SHALL ALSO NOTIFY THE CAMDEN COUNTY SOIL CONSERVATION DISTRICT IN WRITING OF ALL RECEIVING SPOIL OR BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.

1. CLEAR AREAS DESIGNATED FOR THE PROPOSED INFILTRATION BASIN/TRENCH. ONLY CLEAR TO THE EXTENT NECESSARY FOR INFILTRATION BASIN CONSTRUCTION. PROPOSED INFILTRATION BASIN/TRENCH MUST REMAIN UNDISTURBED BY HEAVY MACHINERY. ANY ASSOCIATED EXCAVATION MUST BE OUTSIDE THE DELINEATED AREA AS SHOWN ON THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN.

2. INFILTRATION TRENCH SHALL BE CONSTRUCTED AS FOLLOWS:
   A. INSTALL COMPOST FILTER SOCK DOWNSLOPE OF THE TOPSOIL STOCKPILES AND TEMPORARILY SEED AND MULCH THE STOCKPILES AFTER STRIPPING OPERATIONS ARE COMPLETED.
   B. EXCAVATE INFILTRATION TRENCH AREA AND PLACE COMPACTED EMBANKMENT FILL, AND LINE INSIDE/OUTSIDE OF INFILTRATION BASIN/TRENCH WITH EROSION CONTROL LINING. *THIS IS A CRITICAL STAGE OF PCSM CONSTRUCTION, DURING WHICH A REGISTERED PE OR THEIR DESIGNEE MUST BE ONSITE TO OBSERVE CONSTRUCTION FOR CONFORMANCE WITH DESIGN DETAILS. CRITICAL STAGE INSPECTION DOES NOT INCLUDE VERIFICATION OF ENVIRONMENTAL STUDIES, TESTING OR DELINEATIONS.
   C. SPREAD EXCESS TOPSOIL AND PERMANENTLY SEED AND MULCH THE INSIDE/OUTSIDE SLOPES.

GENERAL NOTES

1. REFERENCE THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE FOR ALL BMP CALCULATIONS, AS LAST REVISED.
2. ALL BMP CALCULATIONS, LAYOUT AND DESIGN ARE BASED ON CURRENT (PRE CONSTRUCTION) FIELD CONDITIONS, AS OBSERVED DURING THE FIELD TESTING. REFER TO THE PERMEABILITY TESTING REPORT DATED APRIL 10, 2021 PREPARED BY PENN'S TRAIL ENVIRONMENTAL, LLC FOR INFILTRATION TESTING RESULTS.
3. AREA(S) OF BMP(S) SHALL BE LIMITED TO LIGHT EQUIPMENT AND LOW IMPACT CONSTRUCTION ACCESS (OR AS EXPLICITLY DEFINED WITHIN THE POST CONSTRUCTION STORMWATER MANAGEMENT NARRATIVE), TO BE MONITORED BY THE SITE CONTRACTOR AT ALL TIMES. ANY CHANGES TO THESE CONDITIONS WILL IMPACT THE DESIGN OF THE BMP(S) AND SHOULD BE REPORTED TO THE OWNER/APPLICANT FOR FURTHER REVIEW. NO PROVISIONS WITHIN THESE PLANS DEFINE OR GUARANTEE SITE MONITORING DURING CONSTRUCTION AND/OR POST CONSTRUCTION. ALL MONITORING AND/OR TESTING DURING AND AFTER CONSTRUCTION WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.
4. ANY BMP ADJUSTMENTS OR MODIFICATIONS DURING CONSTRUCTION SHALL BE APPROVED BY THE OWNER/APPLICANT AND THOSE HAVING JURISDICTION, PRIOR TO MAKING FIELD CHANGES. PLAN REVISIONS WILL BE THE SOLE RESPONSIBILITY OF THE OWNER/APPLICANT, OR THEIR ASSIGNED REPRESENTATIVE.

MAINTENANCE NOTES

POST CONSTRUCTION STORMWATER MANAGEMENT:

A. BEST MANAGEMENT PRACTICES (BMP)

THE BMP'S SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER IN PERPETUITY. THE MAINTENANCE WILL BE CONDUCTED ON A SHORT TERM AND LONG TERM SCHEDULE BY THE OWNER.

STORMWATER QUALITY HAS BEEN ADDRESSED WITH SEVERAL DEVICES. NATURALIZED SWALES, CONTAINING HIGH GRASSES, ARE UTILIZED TO CONVEY RUN-OFF TO THE STORMWATER MANAGEMENT AREA TO HELP IMPROVE WATER QUALITY PRIOR TO REACHING THE BASIN. A NATURALIZED BASIN HAS BEEN UTILIZED TO HELP TREAT THE COLLECTED RUN-OFF PRIOR TO DISCHARGING TO THE EXISTING WETLANDS.

B. MAINTENANCE

SHORT TERM MAINTENANCE:

A. INSPECT BMP'S AFTER MAJOR STORM EVENTS FOR DAMAGE AND/OR EROSION ACTIVITY - REPAIR EROSION WITH THE APPROPRIATE MEASURES IMMEDIATELY.

B. INSPECT TRENCH ON A MONTHLY BASIS DURING THE GROWING SEASON FOR THE FIRST TWO YEARS TO EVALUATE PLANT ESTABLISHMENT AND MORTALITY - REPLACE DEAD PLANTS WITH SAME OR LIKE PLANTS ABLE TO ESTABLISH IN THE CULTURAL CONDITIONS PRESENT. IF NECESSARY, REPLACE PLANTS WITH A DIFFERENT SPECIES SUITABLE TO ANY MICROCLIMATIC EFFECTS THAT MIGHT DEVELOP.

C. DURING THE FIRST YEAR, WHENEVER THE SEEDED AREA OF THE TRENCH REACHES 12 TO 18 INCHES TALL IT SHOULD BE MOWED TO NO LESS THAN EIGHT INCHES BY ROTARY MOWER OR LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED.

D. WHILE VEGETATION IS BEING ESTABLISHED IN TRENCH PRUNING MAY BE REQUIRED.

LONG TERM MAINTENANCE:

A. EVERY YEAR FOR THE TRENCH - MOW HERBACEOUS PLANTS TO THE GROUND IN EARLY SPRING.

B. EVERY YEAR FOR THE TRENCH - REMOVE ANY INVASIVE PLANTS THAT HAVE ESTABLISHED.

C. EVERY FIVE YEARS FOR THE TRENCH - REMOVE ANY SEDIMENT BUILD-UP THAT HAS OCCURRED ON THE BASIN BOTTOM.

D. EVERY YEAR FOR THE VEGETATED SWALE AREAS - INSPECT SWALE IMMEDIATELY AFTER SPRING MELT, REMOVE RESIDUALS, AND REPLACE DAMAGED VEGETATION. MOW AND TRIM VEGETATION TO ENSURE PROPER SWALE OPERATION. MOW ONLY WHEN SWALE IS DRY TO AVOID RUTTING. PRIOR TO MOWING INSPECT THE SWALE FOR LITTER AND REMOVE. INSPECT THE SWALE FOR UNIFORMITY IN CROSS SECTION AND LONGITUDINAL SLOPE. CORRECT AS NEEDED. INSPECT VEGETATION ON SIDE SLOPES FOR EROSION, CORRECT AS NEEDED.

UNDERGROUND BASIN MAINTENANCE:

A. INSPECT ALL UPSTREAM CATCH BASINS AND INLETS SHOULD BE INSPECTED AND CLEANED AT LEAST TWO (2) TIMES A YEAR.

B. FOR SUBSURFACE INFILTRATION BASINS IN LAWN AREAS, THE OVERLYING VEGETATION SHOULD BE MAINTAINED IN GOOD CONDITION AND ANY BARE SPOTS RE-VEGETATED AS SOON AS POSSIBLE.

C. FOR SUBSURFACE INFILTRATION BASINS IN LAWN AREAS, VEHICLES SHOULD BE PROHIBITED FROM DRIVING OVER OR PARKING ON THE BASIN AREA.

D. FOR SUBSURFACE INFILTRATION BASINS IN PAVED AREAS, THE OVERLYING PAVING SHOULD BE KEPT IN GOOD CONDITION.

E. IF THE PAVED SURFACE IS INTENDED TO BE USED AS PARKING OR A DRIVEWAY THE BASIN SHOULD BE INSTALLED DEEP ENOUGH TO PREVENT DAMAGE TO THE INDIVIDUAL PIPES (TYPICALLY 18 INCHES OF COVER BETWEEN THE TOP OF PIPE AND THE BOTTOM OF THE SUBBASE).

BASIN SEEDING NOTES

SEED SHALL BE INSTALLED AS SOON AS PERMANENT BASIN CONSTRUCTION IS COMPLETE.

SITE PREPARATION:

ELIMINATE ANY WEED GROWTH PRIOR TO SEED INSTALLATION USING AN APPROPRIATE HERBICIDE TO CONTROL UNDESIRABLE VEGETATION. SUPPLEMENT TOPSOIL WITH LEAF COMPOST MIXED THOROUGHLY INTO THE TOP 8 INCHES OF SOIL. FOR OPTIMAL SEED ESTABLISHMENT, SOIL PH SHALL BE BETWEEN 5.5 AND 6.5.

SEEDING APPLICATION:

CAREFULLY PROPORTIONING SEED FOR THE ENTIRE AREA, BROADCAST SEED IN TWO SEPARATE APPLICATIONS BY APPLYING SEED AT HALF THE SUGGESTED RATE FOR EACH APPLICATION TO ENSURE EVEN AND ADEQUATE COVERAGE. AFTER THE FULL RATE OF SEEDING HAS BEEN ACHIEVED, FOLLOW BY ROLLING OR TRACKING SEED INTO THE TOP ¼ INCH OF SOIL TO ACHIEVE GOOD SEED TO SOIL CONTACT. DO NOT ROLL OR TRACK THE SEED IF SOIL IS WET. COVER WITH A LIGHT LAYER OF SALT HAY.

MAINTENANCE:

DURING THE FIRST YEAR, WHENEVER THE VEGETATION REACHES 12 TO 18 INCHES TALL, IT SHOULD BE MOWED TO NO LESS THAN 8 INCHES BY ROTARY MOWER OR WEED EATER/LINE TRIMMER TO PREVENT WEEDS FROM GOING TO SEED. DO NOT MOW WITH A LAWN MOWER. THEREAFTER, THE SEEDED AREA SHOULD BE MOWN TO THE GROUND ONCE ANNUALLY IN EARLY SPRING.

INFILTRATION TRENCH
TRENCH SIDE SLOPE SEED MIX

THE FOLLOWING SEED MIX IS TO BE INSTALLED IN AREAS ON THE PLAN NOTED AS BASIN SIDE SLOPE SEED MIX.

BOTANICAL NAME	PERCENT (%) OF MIX BY WEIGHT
PANICUM VIRGATUM	25.0
PANICUM CLANDESTINUM	24.0
CAREX VULPINOIDEA	22.0
ELYMUS VIRGINICUS	21.0
AGROSTIS PERENNIANS	6.0
JUNCUS EFFUSUS	1.0
PANICUM RIGIDULUM	1.0

THE ABOVE SEED MIX SHALL BE INSTALLED AT THE RATE OF 20 LBS/ ACRE, OR ½ LBS TO ¾ LBS PER 1000 SQ. FT.

SEED MIX IS AVAILABLE FROM ERNST CONSERVATION SEEDS, MEADVILLE, PA, 1-800-373-3321, WWW.ERNSTSEED.COM.

THE UNDERGROUND FACILITY PROTECTION ACT
SITE SERIAL NO. 202323600

LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM UTILITY COMPANY RECORDS AND/OR ABOVE GROUND INSPECTION OF THE SITE. COMPLETENESS OR ACCURACY OF TYPE, SIZE, DEPTH OR HORIZONTAL LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES CANNOT BE GUARANTEED. CONTRACTORS MUST VERIFY LOCATIONS OF UNDERGROUND UTILITIES BY NOTIFYING FACILITY OWNERS THROUGH THE ONE-CALL SYSTEM, 1-800-272-1000, NO LESS THAN 3, NOR MORE THAN 10 DAYS PRIOR TO EXCAVATION OR DEMOLITION WORK.

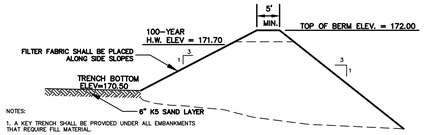
ENGINEERS CERTIFICATION

JOSHUA D. HIGHLAND
24GE05658500

the Crossroads GROUP, LLC
www.thecrossroadsgroupllc.com
765 State Street
Hamburg, PA 19526
Phone: 484-660-3055
Fax: 484-660-3742
Email: info@thecrossroadsgroupllc.com
CIVIL ENGINEERING | LAND DEVELOPMENT | SITE SURVEY

POST CONSTRUCTION STMWTR MANAGEMENT PLAN
PREPARED AS PART OF THE
MY ANGELO'S PIZZA LD
PREPARED FOR
SALVATORE CUSUMANO
SITE SITUATE IN
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

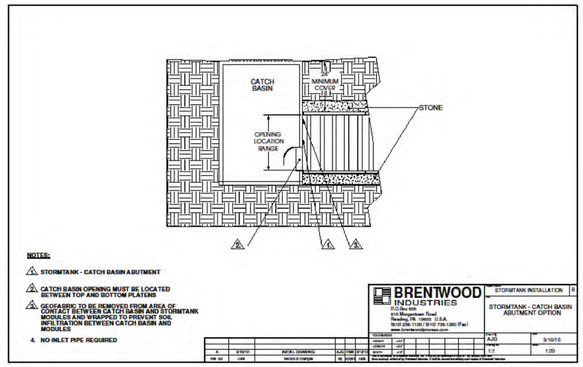
PROJECT MANAGER	JH
DRAWING FILE NAME	ZPCSMP
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	1" = 10'
PROJECT NUMBER	3824
SHEET NUMBER	4.00 OF 16

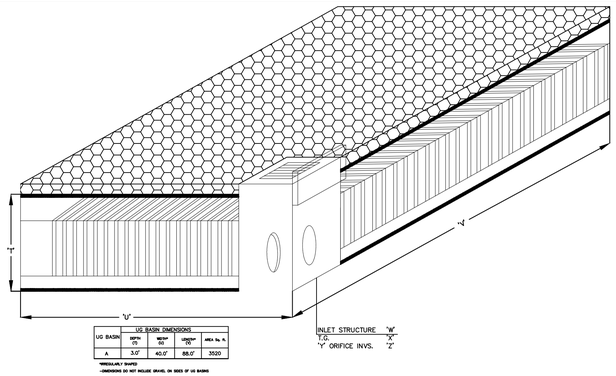


NOTES:

1. A KEY TRENCH SHALL BE PROVIDED UNDER ALL EMBANKMENTS THAT REQUIRE FILL MATERIAL.
2. CONSTRUCTION OF THE EMBANKMENTS MUST BE IN 8" LIFTS AND COMPACTED TO A DENSITY NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557.
3. TO ENSURE PERMEABILITY RATE (MIN. 20 IN/HR) IS MAINTAINED, A 6" INCH LAYER OF #3 SAND SHALL BE CONSTRUCTED ALONG TRENCH BOTTOM. FILTER FABRIC IS REQUIRED ALONG ALL SIDE SLOPES OF THE INFILTRATION TRENCH TO PREVENT MIGRATION OF FINE PARTICLES FORM THE SURROUNDING SOILS. NO FABRIC SHALL BE USED ALONG TRENCH BOTTOM.
4. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE SUITABILITY OF SOIL FOR BERM/BASIN CONSTRUCTION, AND MUST NOTIFY THE DESIGN ENGINEER IF HE DEEMS THE SOIL UNSUITABLE.

TRENCH A - SECTION
N.T.S.



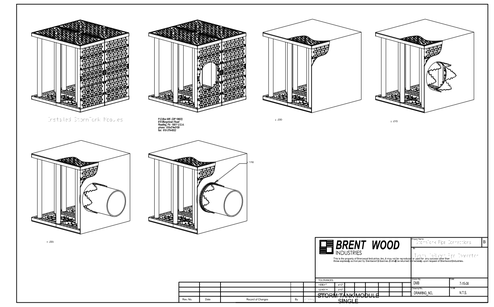


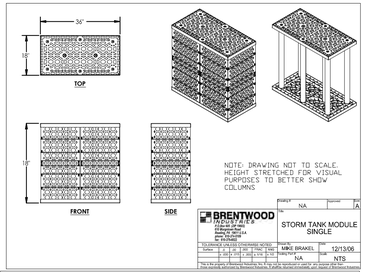
UG BASIN	WIDTH "W"	LENGTH "L"	AREA Sq. ft
A	34'	40.0'	88.0'	3520

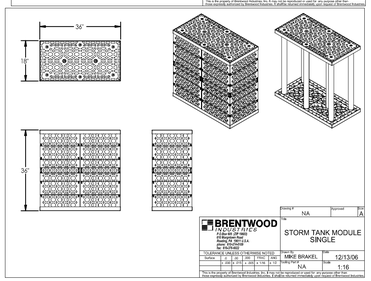
*REGULARLY SHAPED
-DIMENSIONS DO NOT INCLUDE GRAVEL ON SIDES OF UG BASINS

UG WATER QUALITY STORAGE AREA/PARKING LOT DETAIL

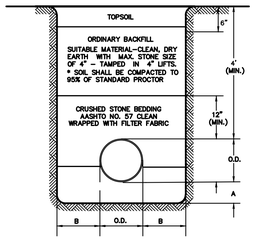
NOTE: (1) REFER TO SITE CONSTRUCTION DETAIL FOR PARKING ISLE PAVING DETAIL AS NOTED ON THE CONST. IMPROVEMENT PLANS
(2) ORIFICE(S) AS NOTED ABOVE SHALL BE INSTALLED FACING UG DETENTION CHAMBERS, PLEASE REFER TO DETAIL
(3) UG DETENTION FACILITY TO BE INSTALLED PER DETAIL
(4) ALL INLET STRUCTURES SHOWN HEREON ARE TYPE 'C' INLET STRUCTURES



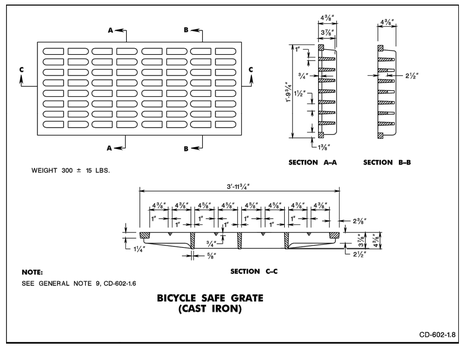


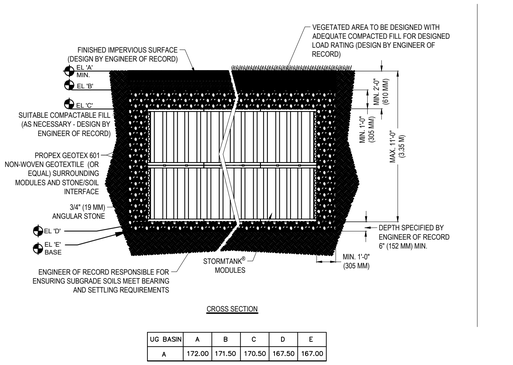


PIPE SIZE	(A)	(B)
8" – 16"	6"	6"
18" – 48"	8"	8"
54" – 84"	10"	12"



TRENCH RESTORATION DETAIL OUTSIDE PUBLIC RIGHT-OF-WAY (STORM SEWER)



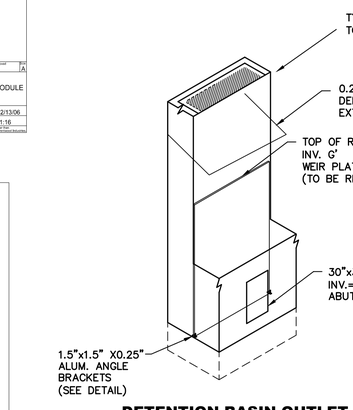


CROSS SECTION

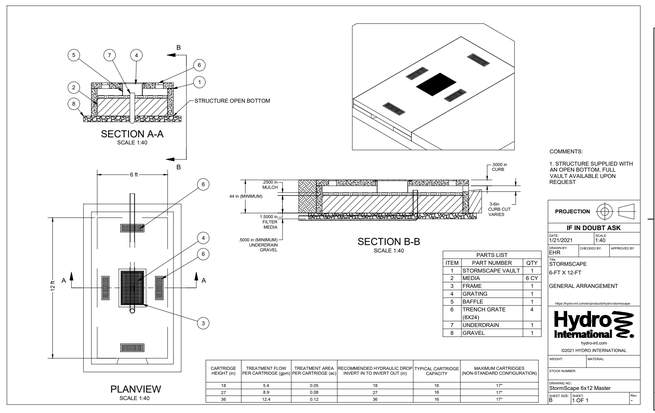
UG BASIN	A	B	C	D	E
A	172.00	171.50	170.50	167.50	167.00

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTORS NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 4907-022.

STORMTANK MODULE
DOUBLE-STACK INFILTRATION BASIN CROSS-SECTION DETAIL



DETENTION BASIN OUTLET STRUCTURE DETAIL



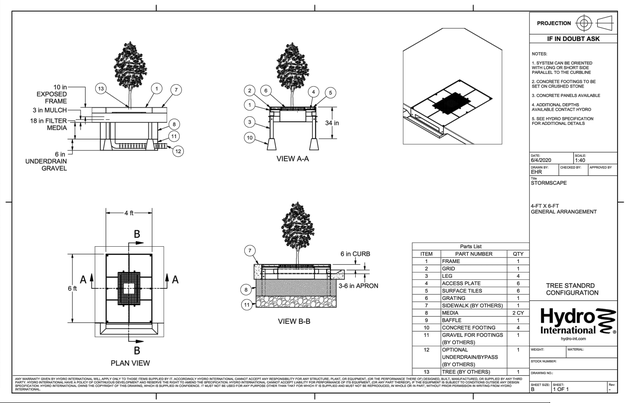
ITEM	PART NUMBER	QTY
1	STORMSCAPE VAULT	1
2	MEDIA	6 CY
3	FRAME	1
4	GRATING	1
5	BAFFLE	1
6	TRENCH GRATE (8X24)	4
7	UNDERDRAIN	1
8	GRAVEL	1

CARTRIDGE HEIGHT (in)	TREATMENT FLOW PER CARTRIDGE (gpm)	TREATMENT AREA PER CARTRIDGE (sf)	RECOMMENDED HYDRAULIC DROP: INVERT IN TO INVERT OUT (in)	TYPICAL CARTRIDGE CAPACITY	MAXIMUM CARTRIDGES (NON-STANDARD CONFIGURATION)
18	5.4	0.05	18	18	17*
27	8.3	0.08	27	15	17*
36	12.4	0.12	36	18	17*

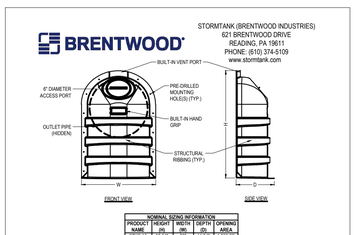
COMMENTS:
1. STRUCTURE SUPPLIED WITH AN OPEN BOTTOM, FULL VAULT AVAILABLE UPON REQUEST

PROJECTION
IF IN DOUBT ASK
DATE 1/21/2021 SCALE 1:40
DRAWN BY DWB CHECKED BY APPROVED BY
STORMSCAPE
6-FT X 12-FT
GENERAL ARRANGEMENT
Hydro International
hydro-int.com
©2021 HYDRO INTERNATIONAL
WEIGHT MATERIAL
STOCK NUMBER
DRAWING NO. StormScape 6x12 Master
SHEET SIZE B SHEET 1 OF 1 Rev

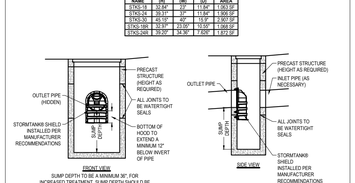
ANY WARRANTY GIVEN BY HYDRO INTERNATIONAL WILL APPLY ONLY TO THOSE ITEMS SUPPLIED BY IT. ACCORDINGLY HYDRO INTERNATIONAL CANNOT ACCEPT ANY RESPONSIBILITY FOR ANY STRUCTURE, PLANT, OR EQUIPMENT, OR THE PERFORMANCE THEREOF, DESIGNED, BUILT, MANUFACTURED, OR SUPPLIED BY ANY THIRD PARTY, WHETHER OR NOT SUCH THIRD PARTY HAS BEEN APPROVED BY HYDRO INTERNATIONAL. ANY DESIGN, DRAWING, OR SPECIFICATION PROVIDED BY HYDRO INTERNATIONAL IN RESPECT OF ANY APPLICATION HYDRO INTERNATIONAL OWNS THE COPYRIGHT OF THE DRAWING WHICH IS SUPPLIED IN CONFIDENCE. IT MUST NOT BE USED FOR ANY PURPOSE OTHER THAN THAT FOR WHICH IT IS SUPPLIED AND MUST NOT BE REPRODUCED, IN WHOLE OR IN PART, WITHOUT PRIOR PERMISSION IN WRITING FROM HYDRO INTERNATIONAL.



Parts List		
ITEM	PART NUMBER	QTY
1	FRAME	1
2	GRID	1
3	LEG	4
4	ACCESS PLATE	6
5	SURFACE TILES	6
6	GRATING	1
7	SIDEWALK (BY OTHERS)	1
8	MEDIA	2 CY
9	BAFFLE	1
10	CONCRETE FOOTING	4
11	GRAVEL FOR FOOTINGS (BY OTHERS)	1
12	OPTIONAL UNDERDRAIN/BYPASS (BY OTHERS)	1
13	TREE (BY OTHERS)	1



NOMINAL SIZING INFORMATION				
PRODUCT NAME	HEIGHT (H)	WIDTH (W)	DEPTH (D)	OPENING AREA
STAC-18	33.84"	27"	11.00"	1.503 SF
STAC-24	39.31"	27"	11.00"	1.906 SF
STAC-30	45.19"	40"	13.9"	2.907 SF
STAC-36S	32.97"	21.05"	13.05"	1.048 SF
STAC-36B	39.25"	34.56"	17.625"	1.872 SF



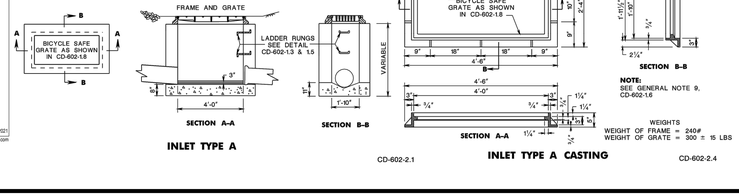
SUMP DEPTH TO BE A MINIMUM 36", FOR INCREASED TREATMENT, SUMP DEPTH SHOULD BE 2.5X THE OUTLET PIPE DIAMETER.

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 4907-019.

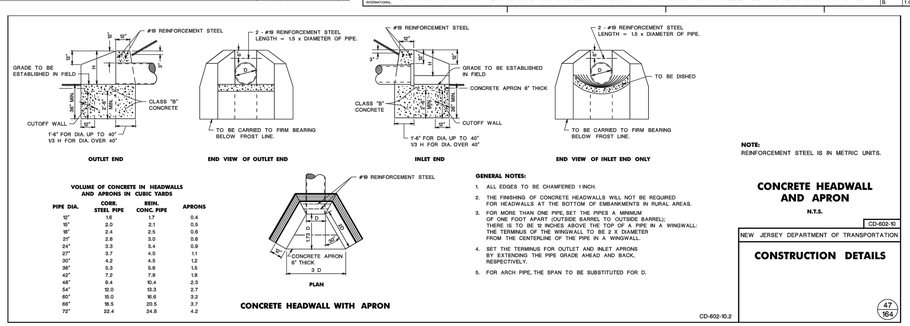
STORMTANK SHIELD
DETAIL

ZDET REVISION DATE 05/08/2021

CADdetails.com



CD-602-2.1 CD-602-2.4



PIPE DIA.	CORR. STEEL PIPE	REIN. CONC. PIPE	APRONS
12"	1.6	1.7	0.4
15"	2.0	2.1	0.5
18"	2.4	2.5	0.6
21"	2.8	3.0	0.8
24"	3.3	3.4	0.9
27"	3.7	4.0	1.1
30"	4.2	4.5	1.2
36"	5.3	5.6	1.5
42"	7.2	7.9	1.9
48"	9.4	10.4	2.3
54"	12.0	13.3	2.7
60"	15.0	16.6	3.2
66"	18.5	20.5	3.7
72"	22.4	24.8	4.2

GENERAL NOTES:
1. ALL EDGES TO BE CHAMFERED 1 INCH.
2. THE FINISHING OF CONCRETE HEADWALLS WILL NOT BE REQUIRED FOR HEADWALLS AT THE BOTTOM OF EMBANKMENTS IN RURAL AREAS.
3. FOR MORE THAN ONE PIPE, SET THE PIPES A MINIMUM OF ONE FOOT APART (OUTSIDE BARREL TO OUTSIDE BARREL). THERE IS TO BE 12 INCHES ABOVE THE TOP OF A PIPE IN A WINGWALL: THE TERMINUS OF THE WINGWALL TO BE 2 X DIAMETER FROM THE CENTERLINE OF THE PIPE IN A WINGWALL.
4. SET THE TERMINUS FOR OUTLET AND INLET APRONS BY EXTENDING THE PIPE GRADE AHEAD AND BACK, RESPECTIVELY.
5. FOR ARCH PIPE, THE SPAN TO BE SUBSTITUTED FOR D.

NOTE:
REINFORCEMENT STEEL IS IN METRIC UNITS.

CONCRETE HEADWALL AND APRON
N.T.S.
CD-602-10

NEW JERSEY DEPARTMENT OF TRANSPORTATION

CONSTRUCTION DETAILS

47
164

CD-602-10.2

ENGINEERS CERTIFICATION
JOSHUA D. HIGHLAND 24GD05658500

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CIVIL ENGINEERING & LAND DEVELOPMENT & SURVEY

PCSM DETAILS
PREPARED AS PART OF THE
MY ANGELO'S PIZZA LD
PERMIT PLANS
SALVATORE CUSUMANO
SITE STRUCTURE
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

PROJECT MANAGER	JH
DRAWING FILE NAME	ZDET
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	N.T.S.
PROJECT NUMBER	3824
SHEET NUMBER	4.01 OF 16

GRANT AVE
(40' PUBLIC RIGHT-OF-WAY)

HADDON AVE
(COMDEN COUNTY-RT. NO. 561)
(66' PUBLIC RIGHT-OF-WAY)

PRE-DEVELOPMENT DRAINAGE SHED 1
(0.17 Ac.)

PRE-DEVELOPMENT DRAINAGE SHED 2
(0.05 Ac.)

PRE-DEVELOPMENT DRAINAGE SHED 3
(0.12 Ac.)

PRE-DEVELOPMENT DRAINAGE SHED 4
(0.16 Ac.)

PRE-DEVELOPMENT DRAINAGE SHED 5
(0.07 Ac.)

DESIGN POINT 1

DESIGN POINT 2

DESIGN POINT 3

DESIGN POINT 4

DESIGN POINT 5

BLOCK 625, LOT 1
LAND N/F
SALVATORE CUSUMANO &
STEFANIA AIELLO
168 HADDON AVE
BOOK 11708 – PAGE 689

BLOCK 625, LOT 2
LAND N/F
RICHARD T. DIMATTEO, TRACEY D
258 GRANT AVE
DB 10251 PG 656

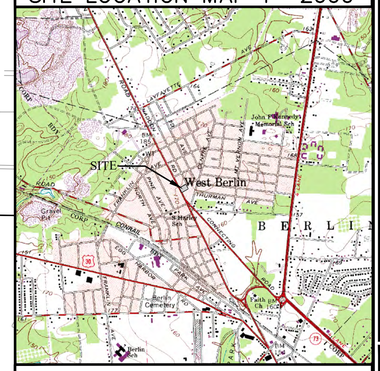
BLOCK 625, LOT 5
LAND N/F
FIRE ON THE MOUNTAIN, LLC
164 HADDON AVE
BOOK 5265 – PAGE 615

BLOCK 625, LOT 6
LAND N/F
FIRE ON THE MOUNTAIN, LLC
162 HADDON AVE
BOOK 5265 – PAGE 615

3 STORY MASONRY BUILDING

1 STORY MASONRY BUILDING

SITE LOCATION MAP 1"=2000'



LEGEND

PRE-DEVELOPMENT DRAINAGE SHED 1 (XX.XX Ac.)	SHED DELINEATION TEXT
	DRAINAGE AREA LINE
	Tc PATHS
A	Tc PATH DELINEATION
DESIGN POINT	DESIGN POINT NOTATION

ENGINEERS CERTIFICATION
JOSHUA D. HOAGLAND
24GE05565500

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Plaximos, PA 17860
Phone: 570-672-2317
4044 ENGINEERING & LAND SURVEYING & SITE SURVEY & ACT 115/2004

PRE-DEVELOPMENT DRAINAGE SHEDS
PREPARED AS PART OF THE
MY ANGELO'S PIZZA LD
PREPARED FOR
SALVATORE CUSUMANO
SITE SITUATE IN
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

PROJECT MANAGER	JH
DRAWING FILE NAME	XSHEDS
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	1" = 10'
PROJECT NUMBER	3824
SHEET NUMBER	5.00 OF 16

GRANT AVE
(40' PUBLIC RIGHT-OF-WAY)

HADDON AVE
(CAMDEN COUNTY RT. NO. 561)
(60' PUBLIC RIGHT-OF-WAY)

EX. SAN MH
RIM 172.20
INV IN 165.20
INV OUT 165.00

25.73' CARTWAY

8" WATER LINE

42.3' CARTWAY

21.30'

21.00'

A001
0.11 AC.

A003
0.24 AC.

A002
0.02 AC.

SWALE A01/A003
0.09 AC.

POST DEVELOPMENT
DRAINAGE SHED 1
(0.02 Ac.)

POST DEVELOPMENT
DRAINAGE SHED 2
TRENCH A
(0.02 Ac.)

POST DEVELOPMENT
DRAINAGE SHED 3
UG BASIN A
(0.46 Ac.)

POST DEVELOPMENT
DRAINAGE SHED 3
BYPASS
(0.01 Ac.)

POST DEVELOPMENT
DRAINAGE SHED 5
(0.06 Ac.)

TC & SHED AREA STOPPED AT
PROPERTY LINE AS DOWNSTREAM
DOES NOT CHANGE

DESIGN POINT 1

DESIGN POINT 2

DESIGN POINT 3

DESIGN POINT 4

DESIGN POINT 5

1 STORY
MASONRY BUILDING

3 STORY
MASONRY BUILDING

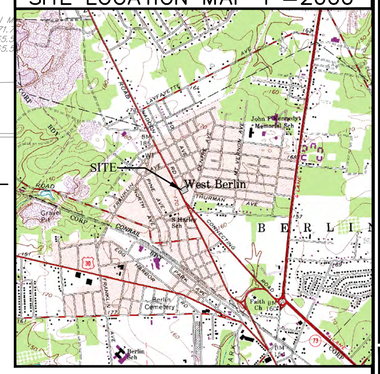
4223 L.F. 12"ø PVC @ 0.60%

SINGLE WHITE LINE

DOUBLE YELLOW LINE

SINGLE WHITE LINE

SITE LOCATION MAP 1"=2000'



LEGEND

POST-DEVELOPMENT DRAINAGE SHED 1 (XX.XX Ac.)	SHED DELINEATION TEXT
	DRAINAGE AREA
	Tc PATHS
A	Tc PATH DELINEATION
DESIGN POINT	DESIGN POINT NOTATION
	INLET DRAINAGE AREA
A001 0.## AC.	INLET DELINEATION TEXT

ENGINEERS CERTIFICATION
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24GE05565500

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NJ PE & PLS SURVEY & PA PE LICENSE

POST-DEVELOPMENT DRAINAGE SHEDS
PREPARED AS PART OF THE
PREPARED FOR
MY ANGELO'S PIZZA LD
SITE ESTIMATE
SALVATORE CUSUMANO
BERLIN TOWNSHIP, CAMDEN COUNTY, NEW JERSEY

PROJECT MANAGER	JH
DRAWING FILE NAME	ZSHEDS
PLAN ORIGINATION DATE	2-16-21
PLAN LAST REVISED	8-5-21
PLAN SCALE	1"=10'
PROJECT NUMBER	3824
SHEET NUMBER	5.01 OF 16