

**GRADING NOTES**

- MKEC ENGINEERING CONSULTANTS, INC. HAS PREPARED THESE PLANS IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
- A MIN. 6 INCH LAYER OF TOPSOIL SHALL BE STRIPPED IN ALL AREAS OF CUT AND FILL. THE CONTRACTOR SHALL STOCKPILE AND RE-SPREAD SUFFICIENT TOPSOIL ON ALL DISTURBED AREAS TO BE SODDED, SEEDED, AND LANDSCAPED. STOCKPILE LOCATION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE.
- THE FINISHED GRADE INDICATES THE SURFACE ELEVATION AFTER THE LAYER OF TOPSOIL HAS BEEN PLACED. IN CASES WHERE GRADING IS DIRECTED UNDER TREE DRIP LINES, NO TOPSOIL STRIPPING SHALL BE PERFORMED WITHIN THESE AREAS.
- THIS IS DESIGN GRADING. ALL GRADES SHALL BE CONTOURED SMOOTHLY WITH GENTLE ROUNDING/SHAPING OF ALL AFFECTED LAND SURFACES. ABRUPT TRANSITIONS AT THE TOP OF SLOPES WHERE PROPOSED GRADES MEET EXISTING ARE NOT ACCEPTABLE. SURVEY STAKES ARE FOR GENERAL GRADING PURPOSES ONLY. NOT ALL SLOPES ARE CONSTANT AND THEREFORE THE GRADING PLANS SHALL BE REFERRED TO FOR FINAL GRADE SHAPING. THE GRADING SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE ADDITION OF THE TOPSOIL LAYER.
- ALL BERM GRADE SHAPING SHALL BE PERFORMED BY A TRACK DOZER NOT A BLADE/ MAINTAINER.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.
- ALL DISTURBED AREAS TO RECEIVE EITHER TEMPORARY OR PERMANENT SEEDING. SEE EROSION CONTROL/SEEDING NOTES.

**EROSION CONTROL NOTES**

- EROSION CONTROL IS TO MEET ALL FEDERAL, STATE, COUNTY & LOCAL CODE STANDARDS.
- CONTRACTOR SHALL MAINTAIN ALL EXISTING EROSION CONTROL DEVICES ON SITE THROUGHOUT CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE AND PRESERVE EROSION PROTECTION THROUGHOUT PROJECT CONSTRUCTION. THE PLAN PROVIDED HERE IS FOR FINAL PROTECTION, VARIOUS PHASES OF THIS PLAN SHALL BE IMPLEMENTED OR MODIFIED TO CONTROL EROSION. MODIFICATIONS OF THE PLAN SHALL BE APPROVED BY THE OWNERS REPRESENTATIVE.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND IMPLEMENTING ALL EROSION CONTROL. COST IS SUBSIDIARY TO CHECK DAMS AND STABILIZED CONSTRUCTION ENTRANCE.

**SEEDING NOTES**

- SEEDING AREAS SHALL BE PREPARED FOR PLANTING WITH COMMON AGRICULTURAL TECHNIQUES. ALL RESERVE AREAS SHALL BE FINE GRADED USING SMALL EQUIPMENT. REMOVE EXISTING GRASS, VEGETATION, AND TURF. DO NOT MIX INTO SURFACE SOIL. LOOSEN SOIL TO A DEPTH OF AT LEAST 6". GRADE AREAS TO A SMOOTH UNIFORM SURFACE PLANE. ROLL, RAKE, AND REMOVE RIDGES AND FILL DEPRESSIONS. THE SURFACE SHALL BE FREE FROM STICKS, SMALL STONES, AND OTHER EXTRANEIOUS MATERIALS. APPROVE WITH OWNER'S REPRESENTATIVE BEFORE PLANTING.
- THE CONTRACTOR SHALL SEED AND FERTILIZE ALL DISTURBED AREAS AS FOLLOWS:

PERMANENT SEED:  
PRAIRIE 3 PLUS

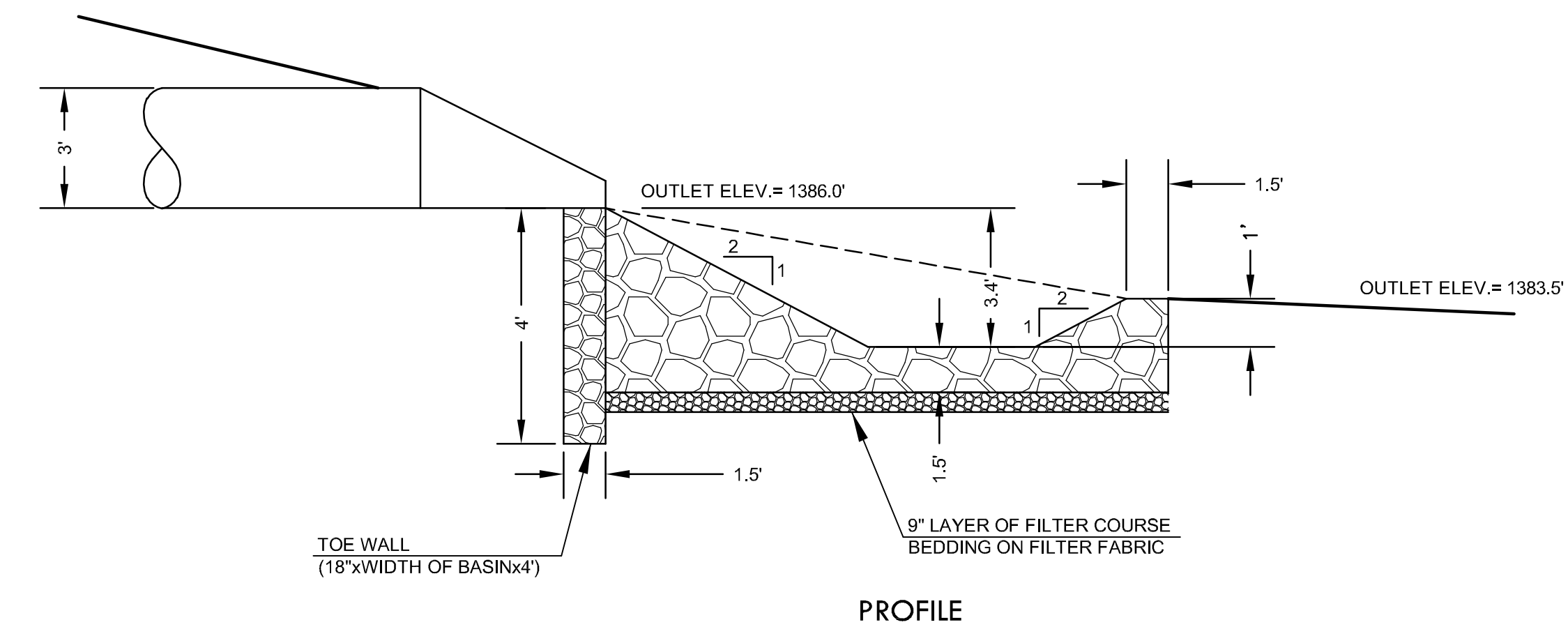
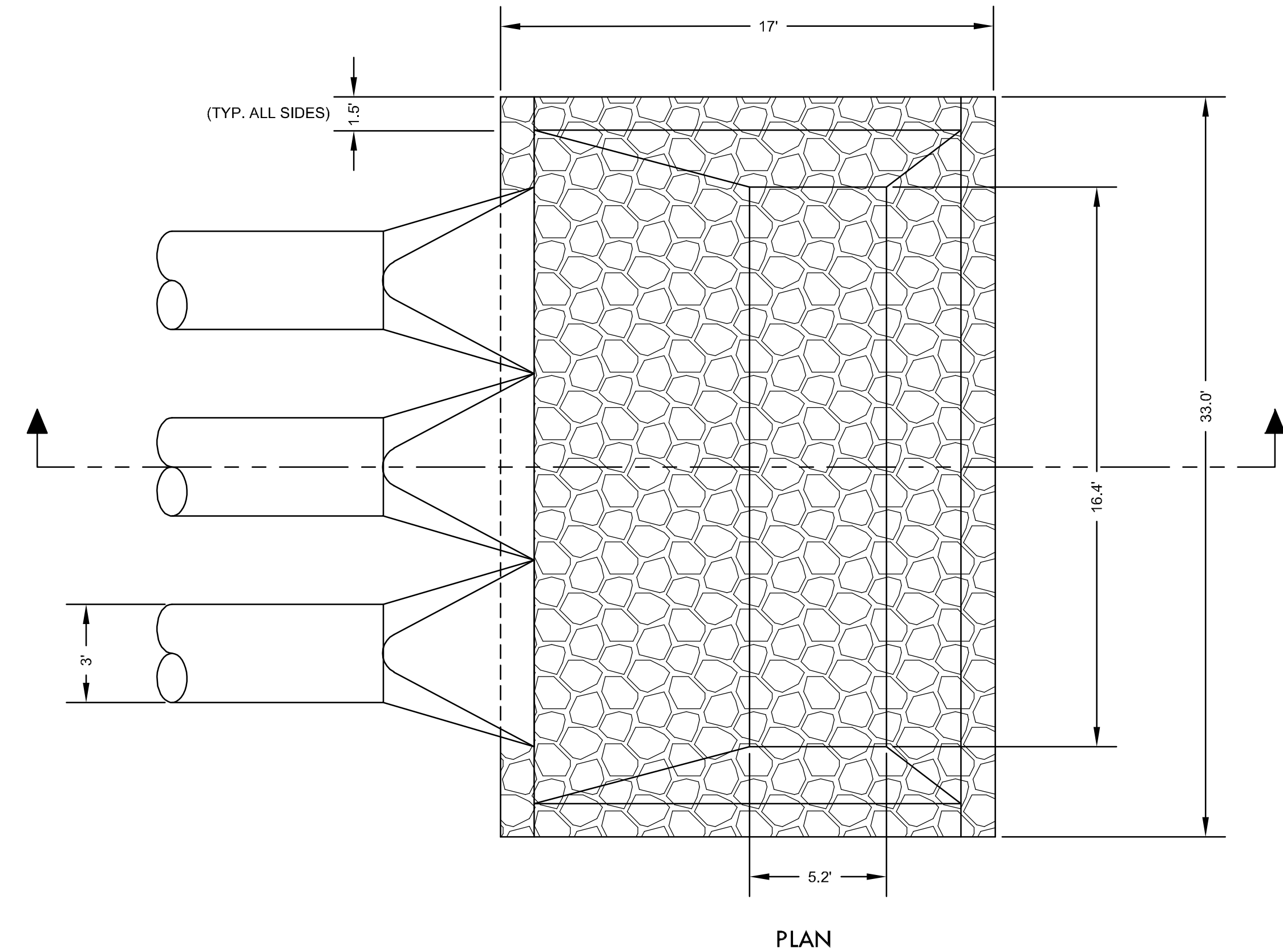
| COMMON NAME   |
|---|
| BLUE GRAMA  |
| BUFFALO GRASS   |
| SIDE OATS GRAMA   |
| LITTLE BLUESTEM   |
| SEED 15 PLS (pure live seed) POUNDS PER ACRE AND<br>SEED ANNUAL RYE 100 POUNDS PER ACRE |

MIX IS AVAILABLE THROUGH STOCK'S SEED FARM OR APPROVED EQUAL.

- ALL SEED SHALL BE DISTRIBUTED WITH AN ACCEPTABLE DRILL INTENDED FOR SUCH OPERATIONS, OR OTHER EQUIPMENT APPROVED BY THE OWNER'S REPRESENTATIVE. SEEDING DEPTH SHALL BE 1/4".
- BROADCASTING WILL BE ALLOWED IN INACCESSIBLE AREAS TO THE DRILL ONLY AFTER GROUND IS DISTURBED TO CREATE A SUITABLE SEEDBED. SEEDING DEPTH SHALL BE 1/4".
- ALL SEEDED AREAS SHALL BE IMMEDIATELY MULCHED W/ CLEAN PRAIRIE HAY AT 2 TONS/ACRE. ANCHOR MULCH BY CRIMPING INTO TOPSOIL WITH SUITABLE MECHANICAL EQUIPMENT.
- SUBMIT SEED TICKETS TO OWNER'S REPRESENTATIVE PRIOR TO PLANTING. TICKETS SHALL CONTAIN BOTANICAL AND COMMON NAME, PERCENTAGE BY WEIGHT OF EACH SPECIES, AND PERCENTAGE OF PURITY, GERMINATION, AND WEED SEED. INCLUDE THE YEAR OF PRODUCTION AND DATE OF PACKAGING.
- THE PREFERRED SEEDING TIME IS BETWEEN MAY AND JUNE OR MID OCTOBER THROUGH DECEMBER, BUT MAY BE COMPLETED AT ANY TIME WITH THE APPROVAL OF THE ENGINEER UPON AGREED CONDITIONS.
- SEEDING SHALL NOT BE COMPLETED DURING PERIODS OF RAIN, SEVERE DROUGHT, HIGH WINDS, EXCESSIVE MOISTURE, FROZEN GROUND, OR OTHER CONDITIONS THAT PRECLUDE SATISFACTORY RESULTS.
- ANY WASHOUT THAT OCCURS SHALL BE RE-GRADED AND RE-SEEDED AT THE CONTRACTOR'S EXPENSE UNTIL A GOOD SOD IS ESTABLISHED.
- ALL SEEDED AREAS SHALL BE GUARANTEED FOR NOT LESS THAN 1 (ONE) FULL YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE.
- ALL DISTURBED AREAS INCLUDING HAUL ROADS SHALL BE RE-SEEDED. COST SUBSIDIARY TO HE PROJECT.

**CRIMPING NOTES**

- ONCE TOPSOIL HAS BEEN PLACED, DISC/SCARIFY SOIL PRIOR TO SPREADING PRAIRIE HAY.
- AFTER SEED HAS BEEN PLACED, SPREAD PRAIRIE HAY AND IMMEDIATELY CRIMP INTO TOPSOIL WITH SUITABLE MECHANICAL EQUIPMENT.



**HEAVY STONE RIP-RAP SUMP DETAIL**  
NOT TO SCALE

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**GRADING DETAILS & NOTES**

|             |             |         |
|-------------|-------------|---------|
| PROJECT NO. | 468-84745   |         |
| DATE        | AUGUST 2014 |         |
| SCALE       | AS SHOWN    |         |
| DESIGNED    | DRAWN       | CHECKED |
| SLF         | KKL         | GJA     |



| NO. | REVISION | DATE |
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SHEET NO.