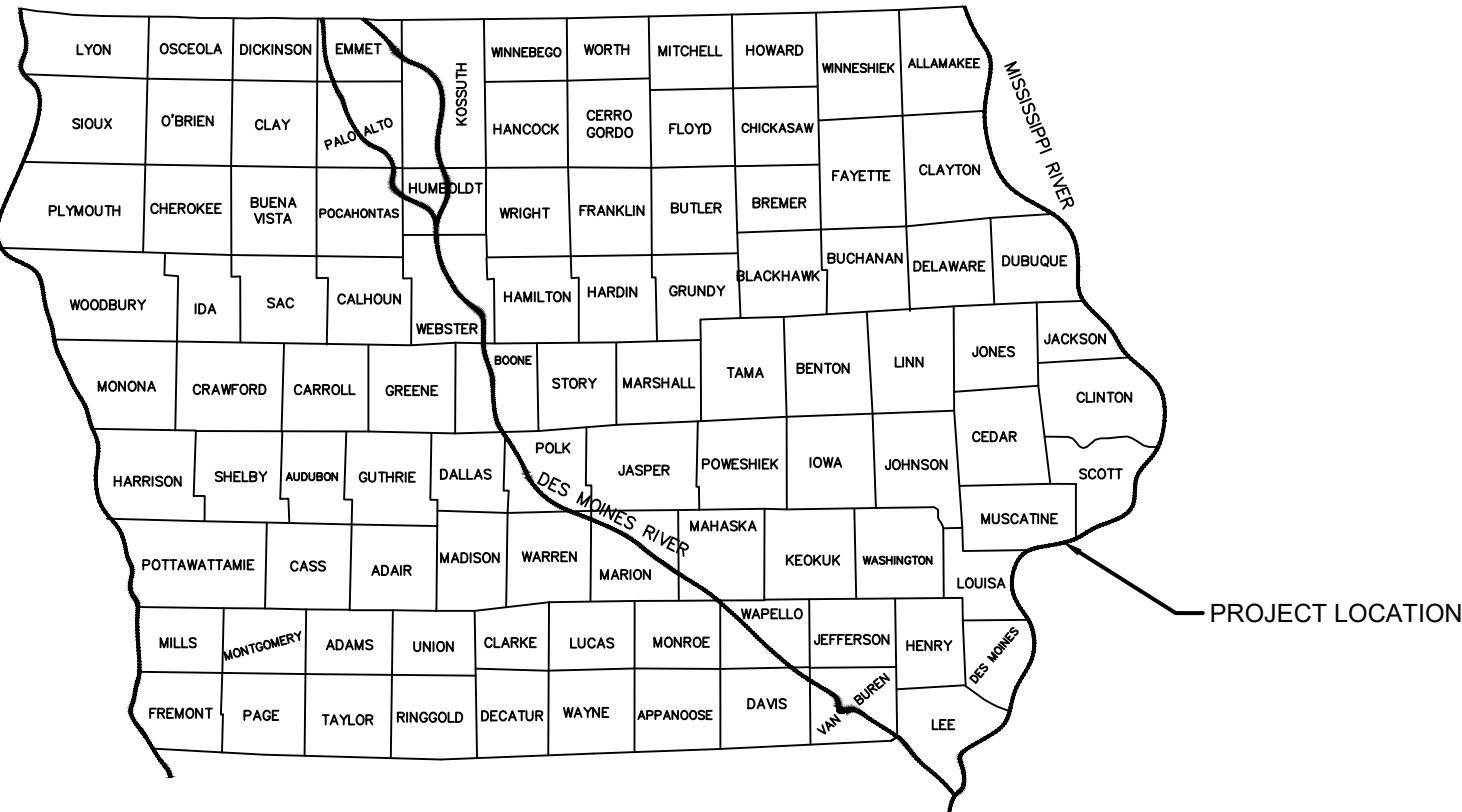


# PLANT SANITARY SEWER SYSTEM BAYER CROPSCIENCE LP MUSCATINE, IA

JULY, 2025

CONTRACT: FILL PLACEMENT



LOCATION MAP

**INDEX OF SHEETS**

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MARK C. BROSS  
LICENSED PROFESSIONAL ENGINEER  
STATE OF IOWA No. 21162  
LICENSE EXPIRES 12/31/2025

DATE

**SITE NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING THE LOCATION OF ALL PROPOSED IMPROVEMENTS, INCLUDING ROUGH AND FINISHED ELEVATIONS AND ALL OTHER PROPOSED IMPROVEMENTS INDICATED ON THE DRAWINGS. THESE SITE PLANS PROVIDE THE GENERAL SIZE AND LOCATION OF THE PROPOSED BUILDING. REFER TO THE ARCHITECTURAL AND/OR STRUCTURAL PLANS FOR THE ACTUAL BUILDING SIZE AND DIMENSIONS. THE BUILDING SHALL NOT BE CONSTRUCTED FROM THESE SITE PLANS OR DIGITAL FILES THAT ARE EXPORTED FROM THESE PLANS.
2. REMOVE ALL STRUCTURES, FOUNDATIONS, WALLS, PAVEMENTS, AND ALL OTHER ITEMS IN CONFLICT WITH PROPOSED IMPROVEMENTS IN ACCORDANCE WITH THE SPECIFICATIONS.
3. THE LOCATION OF EXISTING UTILITIES IN CONSTRUCTION AREAS SHALL BE FIELD VERIFIED BY THE CONTRACTOR BY CONTACTING IOWA ONE CALL AT 1-800-292-8989 OR THE INDIVIDUAL UTILITIES NOT PARTICIPATING IN THE ONE CALL SYSTEM. EXISTING UTILITIES TO REMAIN SHALL BE PROTECTED. ANY REPAIR OR RELOCATION REQUIRED, AS A RESULT OF DAMAGE BY CONSTRUCTION ACTIVITIES SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PAY UTILITY PERMIT AND/OR INSPECTION FEES.
4. UTILITY TRENCHES WITHIN PAVEMENT AREAS SHALL BE BACKFILLED WITH APPROVED COMPACTED GRANULAR BACKFILL.
5. ALL PLUMBING SHALL BE IN ACCORDANCE WITH THE PLUMBING CODE, CURRENT VERSION.
6. ALL ELECTRIC SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE, CURRENT VERSION.
7. TOPSOIL SHALL BE STRIPPED TO A DEPTH OF 6 INCHES WITHIN ALL PROPOSED BUILDING AND PAVEMENT AREAS AND STOCKPILED ON SITE FOR USE IN LANDSCAPE AREAS (COORDINATE WITH OWNER). IF ACCEPTABLE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE IT TO A DEPTH OF 6 INCHES.
8. TOPSOIL SHALL BE LOAMY IN NATURE, FREE FROM HARD CLOUDS, STIFF CLAY, SOD, STONES, ROOTS, STICKS, AND OTHER DEBRIS OVER 1 INCH IN SIZE. TOPSOIL SHALL BE FREE OF TOXIC MATERIALS AND SHALL HAVE A pH RANGE BETWEEN 5.5 AND 7.0.
9. ALL EXCESS MATERIALS NOT USED FOR CONSTRUCTION OF THE PROJECT SHALL BE DISPOSED OFF SITE BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
10. PROPOSED CONTOURS ARE INTENDED TO PROVIDE A MIN. 1% SLOPE IN PAVEMENT AREAS AND 2% IN TURFED AREAS. CONTRACTORS SHALL BE RESPONSIBLE FOR PROVIDING A SMOOTH UNIFORM DRAINING SURFACE THAT DOES NOT CREATE PONDING WATER OR SHARP BREAKS. CONTOURS OR ELEVATIONS THAT WILL NOT PROVIDE SUCH SURFACE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY. IF THERE IS A CONFLICT BETWEEN SPOT ELEVATIONS AND CONTOURS, THE CONTOURS SHALL GOVERN.
11. ADJUST ALL REMAINING UTILITY FRAMES, GRATES, AND COVERS TO PROPOSED GRADES AND ELEVATIONS.
12. EROSION CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, THE DETAILS IN THESE PLANS, AND THE IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (CURRENT EDITION).
13. THE EROSION CONTROL SHOWN ON THIS SET OF PLANS SHALL BE CONSIDERED THE MINIMUM ACCEPTABLE FOR THIS PROJECT. THERE MAY BE ADDITIONAL EROSION CONTROL REQUIRED DUE TO THE VARIOUS CONSTRUCTION TECHNIQUES, WHICH MAY BE USED. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AND MAINTAINING ALL THE RUNOFF FROM THE SITE, IN A MANNER WHICH KEEPS ALL SILT ON SITE.
14. AN N.P.D.E.S. CONSTRUCTION PERMIT WILL NOT BE REQUIRED.
15. ALL DIMENSIONS ARE TO FACE OF CURB, EDGE OF BUILDING, OR PROPERTY LINES UNLESS OTHERWISE NOTED. ALL RADII ARE TO FACE OF CURB.
16. GRASS, CONCRETE, PAVEMENT, OR MULCH. THE CONTRACTOR SHALL COORDINATE SUBGRADE ELEVATIONS TO ALLOW FOR PAVEMENT, CONCRETE OR MULCH DEPTHS.
17. ALL DISTURBED AREAS NOT WITHIN PAVEMENT & LANDSCAPE AREAS SHALL BE SEEDED PER THE SPECIFICATIONS. THE AREAS INDICATED TO BE SEEDED ON THIS PLAN ARE ESTIMATED DISTURBED AREAS. DISTURBED AREAS OUTSIDE OF THOSE INDICATED SHALL BE SEEDED REGARDLESS OF THE LIMITS INDICATED.

**UTILITY NOTES**

1. THE LOCATION OF EXISTING UTILITIES IN CONSTRUCTION AREAS SHALL BE FIELD VERIFIED BY THE CONTRACTOR BY CONTACTING THE IOWA ONE CALL SYSTEM, INC. OR THE INDIVIDUAL UTILITIES NOT PARTICIPATING IN THIS SYSTEM. EXISTING UTILITIES TO REMAIN SHALL BE PROTECTED. ANY REPAIR OR RELOCATION REQUIRED, AS A RESULT OF DAMAGE BY CONSTRUCTION ACTIVITIES SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PAY UTILITY PERMIT AND/OR INSPECTION FEES.
2. UTILITY TRENCHES WITHIN PAVEMENT AREAS SHALL BE BACKFILLED WITH APPROVED COMPACTED GRANULAR BACKFILL PER SUDAS.
3. ALL ELECTRIC SHALL BE IN ACCORDANCE WITH THE 2005-NATIONAL ELECTRIC CODE (INTERNATIONAL ELECTRICAL CODE SERIES), 2005-INTERNATIONAL CODE COUNCIL ELECTRICAL CODE, (ADMINISTRATIVE PROVISIONS)
4. ADJUST ALL VALVES, MANHOLES, CASTINGS, GAS VENTS, ETC., TO MATCH THE NEW SURFACE. ADJUSTMENT SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO THE CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. REPAIR ANY DAMAGE TO SAID STRUCTURES AND APPURTENANCES THAT OCCUR DURING CONSTRUCTION.
5. THE DRAWINGS INDICATE THE BEST KNOWLEDGE OF THE OWNER AND ENGINEER/ARCHITECT ON THE GENERAL LOCATION AND NATURE OF THE EXISTING AND OR PROPOSED UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION. EXPLORATORY EXCAVATIONS AT THE SITE TO DETERMINE INSITU LOCATIONS WERE NOT CONDUCTED. QUALITY LEVEL C IN ACCORDANCE WITH C/ASCE 38-02, STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA, WAS UTILIZED. REGARDLESS OF THE LEVEL OF INVESTIGATION, THE UTILITIES SHOWN SHOULD NOT BE CONSIDERED A WARRANTY OR GUARANTEE OF ACTUAL PRESENCE OR LOCATION AND THE CONTRACTOR REMAINS RESPONSIBLE FOR THE LOCATION, VERIFICATION, AND PROPER NOTIFICATION OF POTENTIAL UTILITIES

**QUALITY LEVELS: QUALITY LEVEL C**

QUALITY LEVEL A - PROVIDES THE HIGHEST LEVEL OF ACCURACY. BY LOCATING OR POTHOLING UTILITIES IN ADDITION TO QUALITY LEVELS B, C, AND D TASKS. THE LOCATED UTILITY INFRASTRUCTURE IS SURVEYED AND MAPPED TO DEVELOP PLAN AND PROFILE INFORMATION.

QUALITY LEVEL B - INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND RECORDING THE INFORMATION THROUGH A SURVEY METHOD. IN ADDITION TO QUALITY LEVEL C AND D TASKS.

**QUALITY LEVEL C - INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. IN ADDITION TO QUALITY LEVEL D TASKS.**

QUALITY LEVEL D - INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS, THAT MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICE MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASE, CONSTRUCTION PLANS, ETC. DATABASES, CONSTRUCTION PLANS, ETC.

**GENERAL NOTES**

1. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
2. ANY DISCREPANCIES BETWEEN SPECIFICATIONS, DRAWINGS, AND/OR SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
3. ALL AREAS DESIGNATED TO REMAIN UNDISTURBED SHALL BE PROTECTED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION.
4. THE CONTRACTOR SHALL PROVIDE AND IMPLEMENT NECESSARY MEASURES TO ASSURE SAFETY AT THE CONSTRUCTION SITE.
5. THE CONTRACTOR SHALL VERIFY THAT ALL APPLICABLE LOCAL, STATE, & FEDERAL CODES ARE FOLLOWED. ALL APPLICABLE LOCAL AND STATE NOTIFICATIONS AND PERMITS SHALL BE ACQUIRED PRIOR TO CONSTRUCTION, INCLUDING ALL NECESSARY UTILITY CONNECTION PERMITS FROM THE RESPECTIVE UTILITIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND SERVICES REQUIRED DURING CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL REFERENCE POINTS, BENCHMARKS, MONUMENTS, STAKES, AND PROPERTY CORNERS DURING CONSTRUCTION. REPLACEMENT OF LOST REFERENCE POINTS SHALL BE AT THE CONTRACTOR'S EXPENSE.

**ABBREVIATIONS**

|     |                          |
|-----|--------------------------|
| FL  | FLOWLINE ELEVATION       |
| TC  | TOP OF CURB ELEVATION    |
| GL  | GUTTER LINE ELEVATION    |
| TG  | TOP OF GRATE ELEVATION   |
| STA | STATION                  |
| FES | FLARED END SECTION       |
| SWI | STORM WATER INLET        |
| FFE | FINISH FLOOR ELEVATION   |
| HP  | HIGH POINT               |
| LP  | LOW POINT                |
| TW  | TOP OF WALL ELEVATION    |
| BW  | BOTTOM OF WALL ELEVATION |
| DS  | DOWNSPOUT                |
| FF  | FINISHED FLOOR ELEVATION |
| EL  | ELEVATION                |

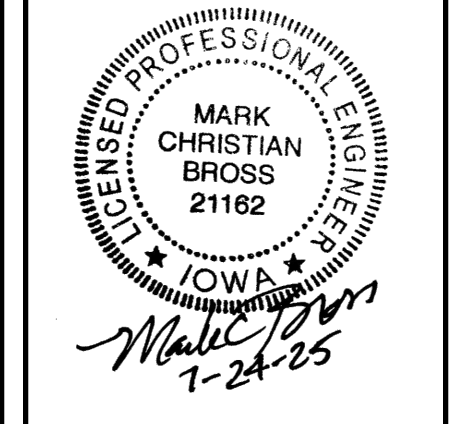
**LEGEND**

| EXISTING | PROPOSED |                       |
|----------|----------|-----------------------|
|          |          | PROPERTY LINE         |
|          |          | LOT LINE              |
|          |          | RIGHT OF WAY LINE     |
|          |          | CENTERLINE            |
|          |          | EASEMENT              |
|          |          | BUILDING SETBACK      |
|          |          | CONSTRUCTION LIMITS   |
|          |          | FENCE LINE            |
|          |          | CHAIN LINK FENCE      |
|          |          | FENCE W/ SQUARE POSTS |
|          |          | STREAM                |
|          |          | STRUCTURE             |
|          |          | PAVEMENT MARKINGS     |
|          |          | EDGE OF PAVEMENT      |
|          |          | CURB AND GUTTER       |
|          |          | WATER LINE            |
|          |          | FIRE PROTECTION       |
|          |          | GAS LINE              |
|          |          | OVERHEAD ELECTRIC     |
|          |          | UNDERGROUND ELECTRIC  |
|          |          | OVERHEAD TELEPHONE    |
|          |          | UNDERGROUND TELEPHONE |
|          |          | CABLE TELEVISION      |
|          |          | FIBER OPTIC           |
|          |          | COMMUNICATION LINE    |
|          |          | STORM SEWER           |
|          |          | SANITARY SEWER        |
|          |          | FORCE MAIN            |
|          |          | COMBINED SEWER        |
|          |          | SIGN                  |
|          |          | MANHOLE               |
|          |          | STORM WATER INLET     |
|          |          | CATCH BASIN           |
|          |          | CLEANOUT              |
|          |          | WATER VALVE           |
|          |          | FIRE HYDRANT          |
|          |          | POST INDICATOR VALVE  |
|          |          | WATER METER           |
|          |          | GAS VALVE             |
|          |          | GAS METER             |
|          |          | TELEPHONE PEDESTAL    |
|          |          | CABLE TV PEDESTAL     |
|          |          | ELECTRIC METER        |
|          |          | UTILITY POLE          |
|          |          | LIGHT STANDARD        |
|          |          | LIGHT POLE            |
|          |          | SURVEY MARKER         |
|          |          | SUMMIT / HIGH POINT   |
|          |          | CONTOURS              |
|          |          | INDEX CONTOURS        |
|          |          | DIRECTION OF DRAINAGE |
|          |          | SPOT ELEVATION        |
|          |          | DECIDUOUS SHRUB       |
|          |          | DECIDUOUS TREE        |
|          |          | CONIFEROUS SHRUB      |
|          |          | CONIFEROUS TREE       |

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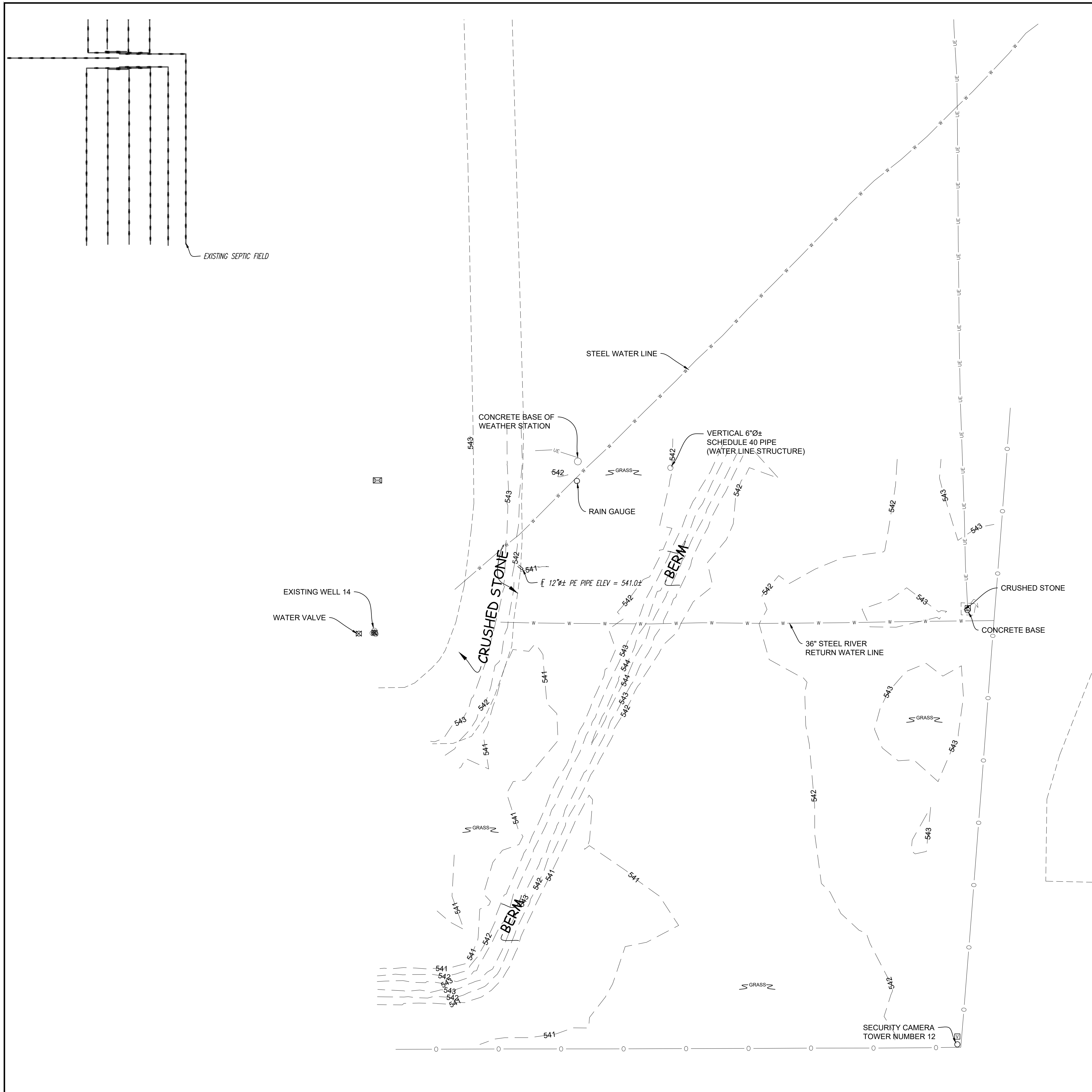


**PLANT SANITARY SEWER DESIGN**  
 BAYER CROPSCIENCE LP - BP MUSCATINE  
 2500 WIGGINS RD  
 MUSCATINE IA 52761-9138

|   |            |
|---|------------|
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| Full sized plans have been prepared using standard scales. Reduced size plans may not conform to standard scales. |            |
| DESIGNED  | DRAWN      |
| FIELD   | FIELD BOOK |
| CHECKED   | CHECK DATE |
| SHEET TITLE   |            |
| GENERAL NOTES AND LEGEND  |            |
| PROJECT NO. 07250 017_21-2224   |            |
| DRAWING ISSUED DATE: 06/27/2024   |            |
| SHEET   |            |
| <b>C001</b>   |            |

**IOWA ONE CALL**  
 1-800-292-8989  
 www.iowaonecall.com

— NOTE —  
 UTILITY INFORMATION IS FOR THE CONVENIENCE OF THE CONTRACTOR. BEFORE CONSTRUCTION BEGINS THE CONTRACTOR SHALL CONTACT IOWA ONE CALL AT 1-800-292-8989 AND INDIVIDUAL UTILITY COMPANIES NOT INCLUDED IN THIS SYSTEM, FOR THE PRESENCE AND LOCATION OF UTILITIES.



**DEMOLITION LEGEND**

 REMOVALS BY CONTRACTOR

**DEMOLITION NOTES**

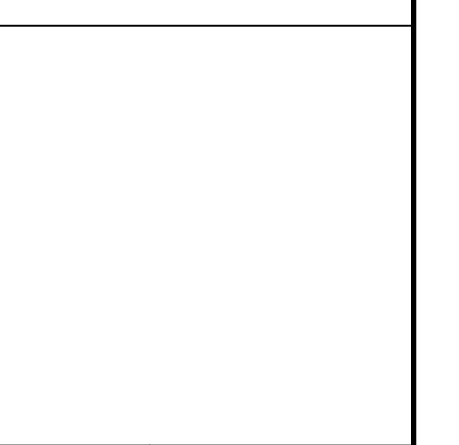
1. ALL REMOVALS SHALL BE COORDINATED WITH THE PHASING OF THE SITE AS COORDINATED WITH THE OWNER.
2. REMOVE ALL EXISTING PAVEMENTS, WALLS, UTILITIES, LANDSCAPING, AND ALL OTHER EXISTING SITE FEATURES IN CONFLICT WITH PROPOSED IMPROVEMENTS.
3. COORDINATE UTILITY REMOVALS AND/OR RELOCATIONS WITH THE RESPECTIVE UTILITY COMPANIES AND/OR THE OWNER.
4. DEMOLITION SHALL INCLUDE REMOVAL AND PROPER DISPOSAL OF MATERIALS.
5. CONTRACTOR SHALL PAY ALL PERMIT AND DISPOSAL FEES.
6. SAFETY BARRIERS AND CONSTRUCTION FENCING SHALL BE INSTALLED AROUND WORK AREAS.

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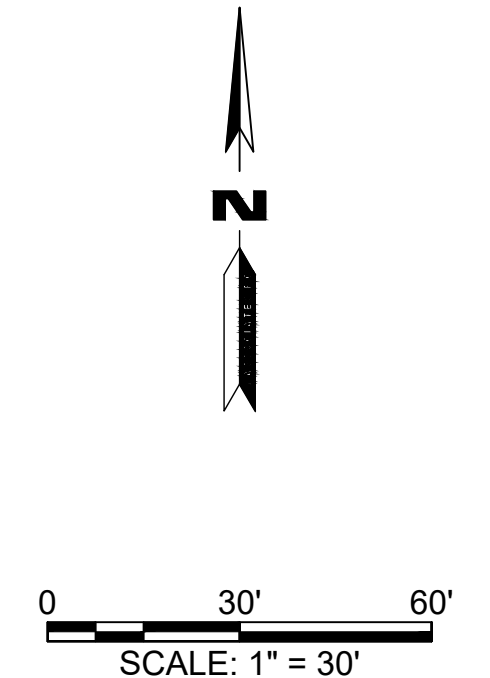
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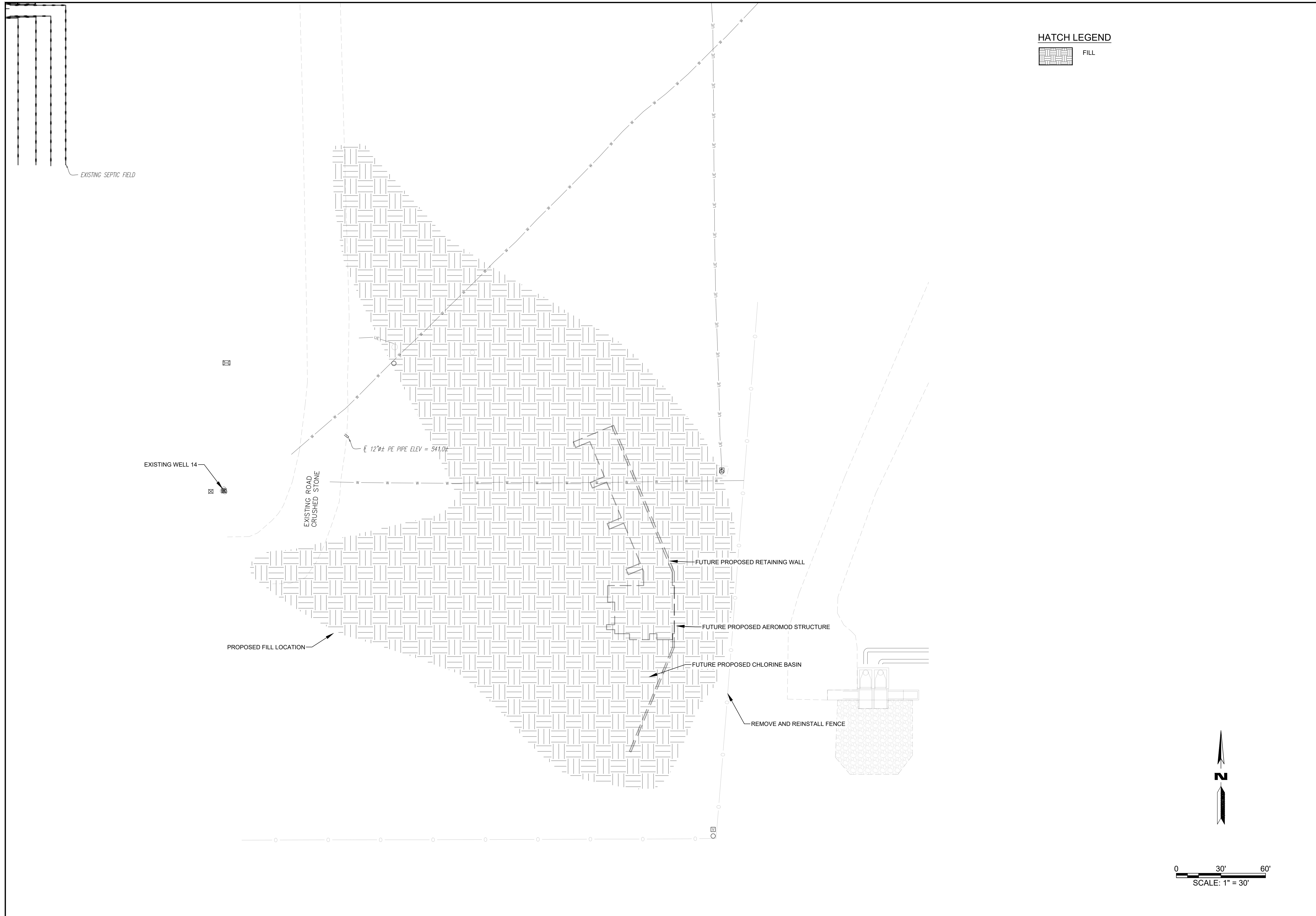
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| DESIGNED | DRAWN      |
| FIELD    | FIELD BOOK |
| CHECKED  | CHECK DATE |

SHEET TITLE  
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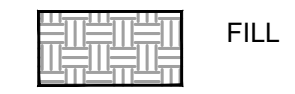
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 SHEET

**CD001**





HATCH LEGEND

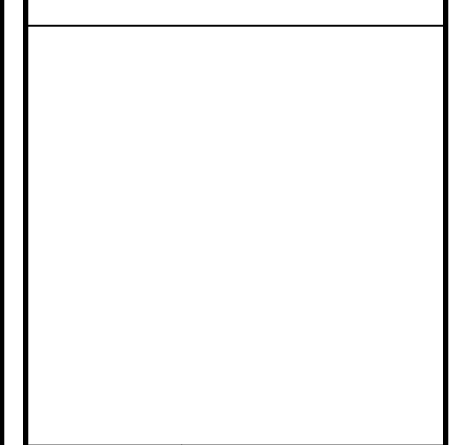


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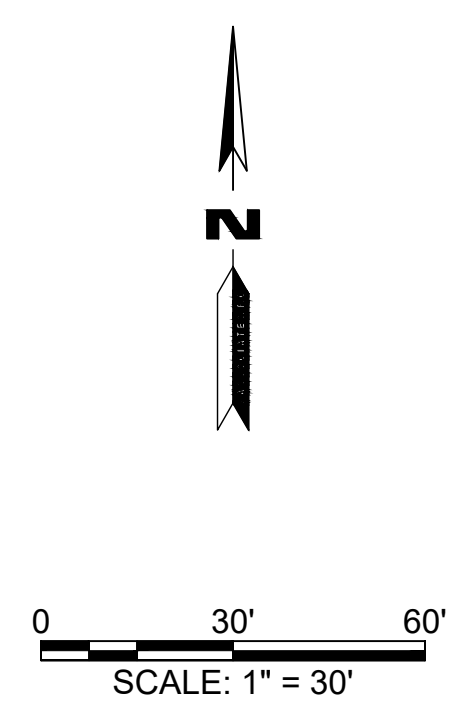
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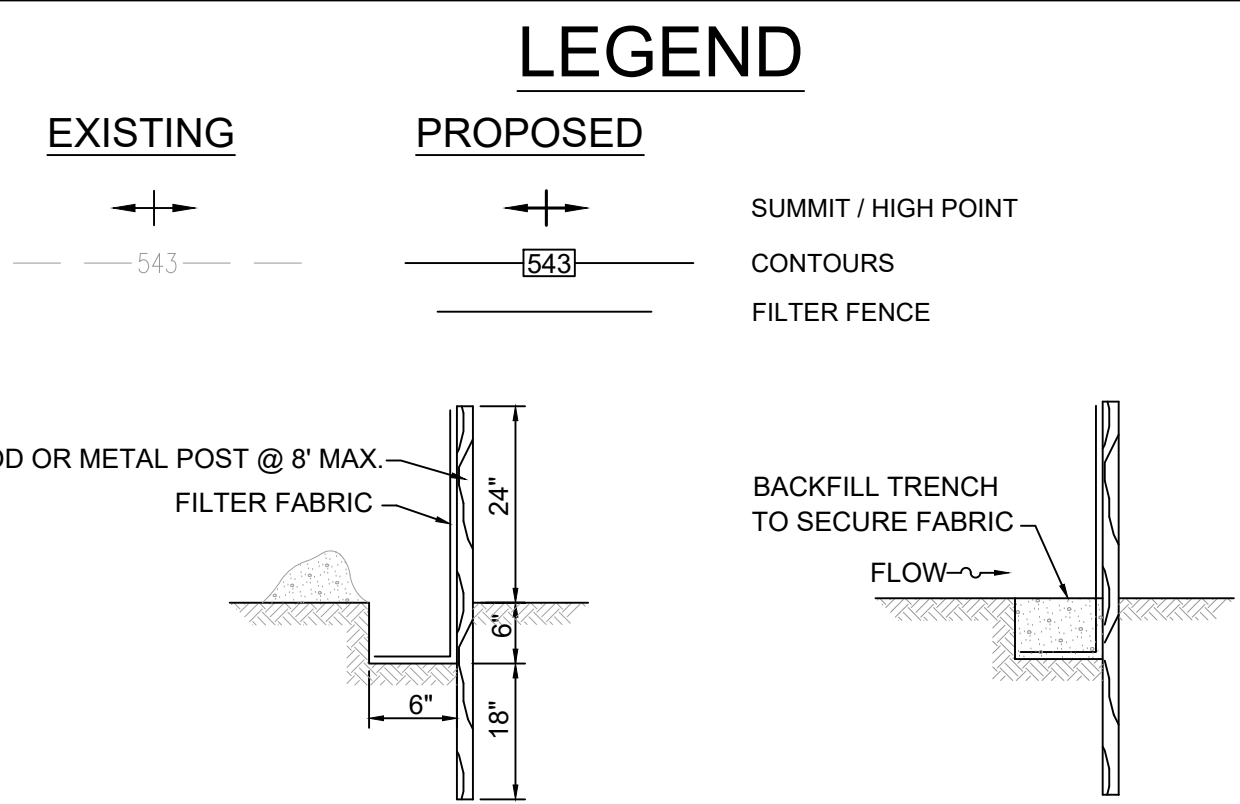
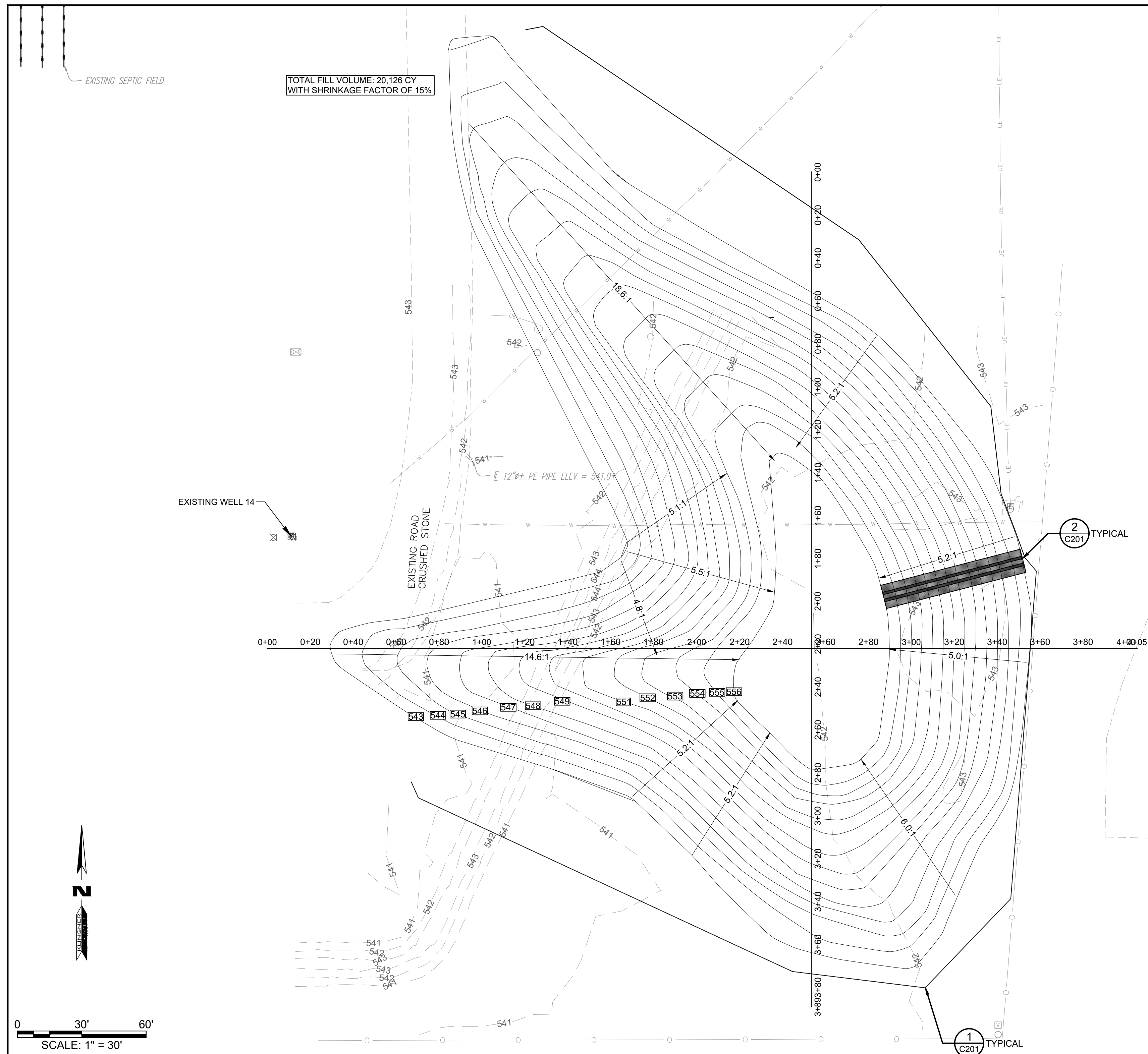
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| FIELD    | FIELD BOOK |
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SHEET TITLE  
**SITE PLAN**

PROJECT NO.  
 07250 017\_21-2224  
 DRAWING ISSUED DATE:  
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 SHEET

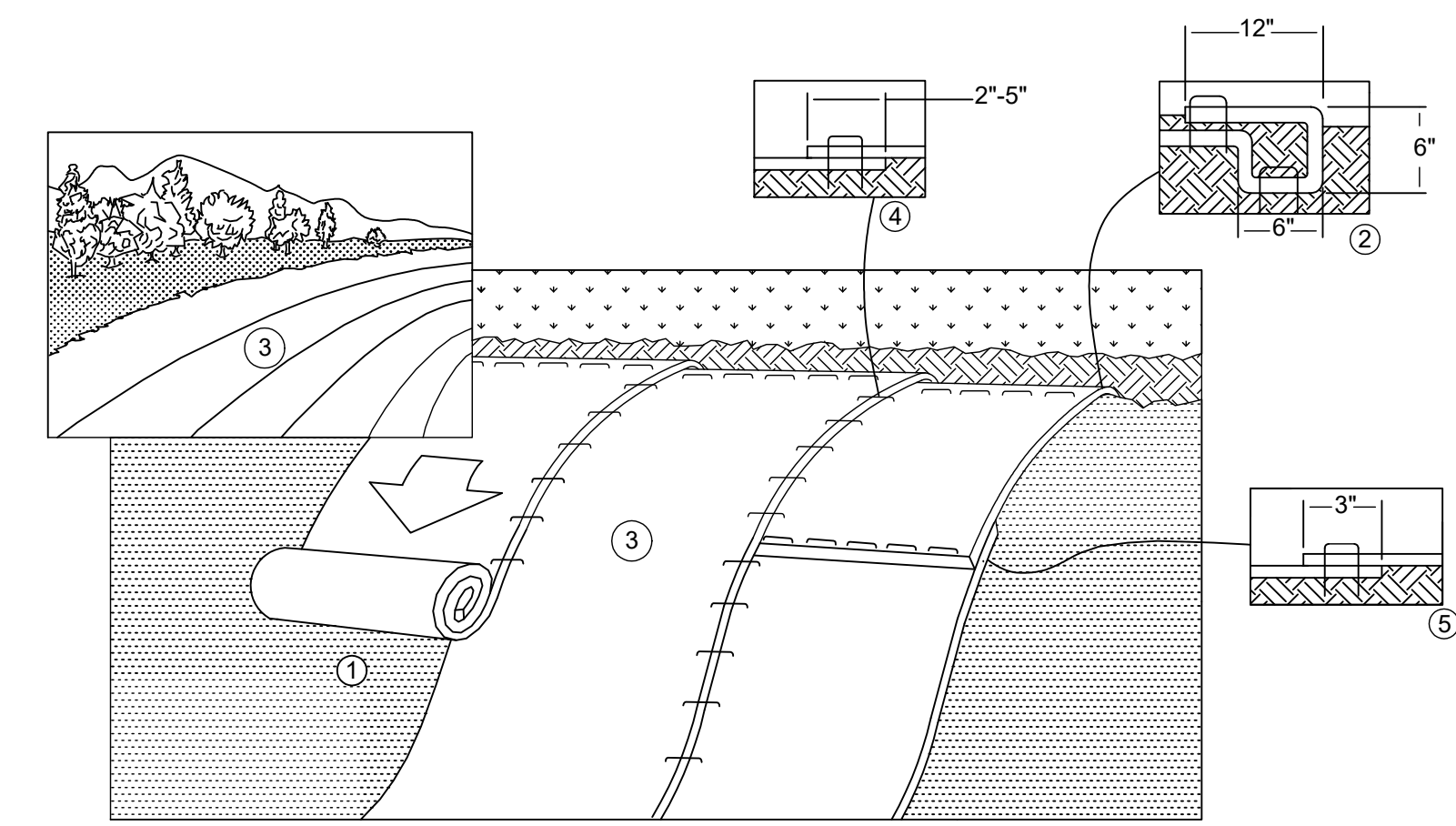
**C101**





### 1 FILTER FENCE AND POST INSTALLATION

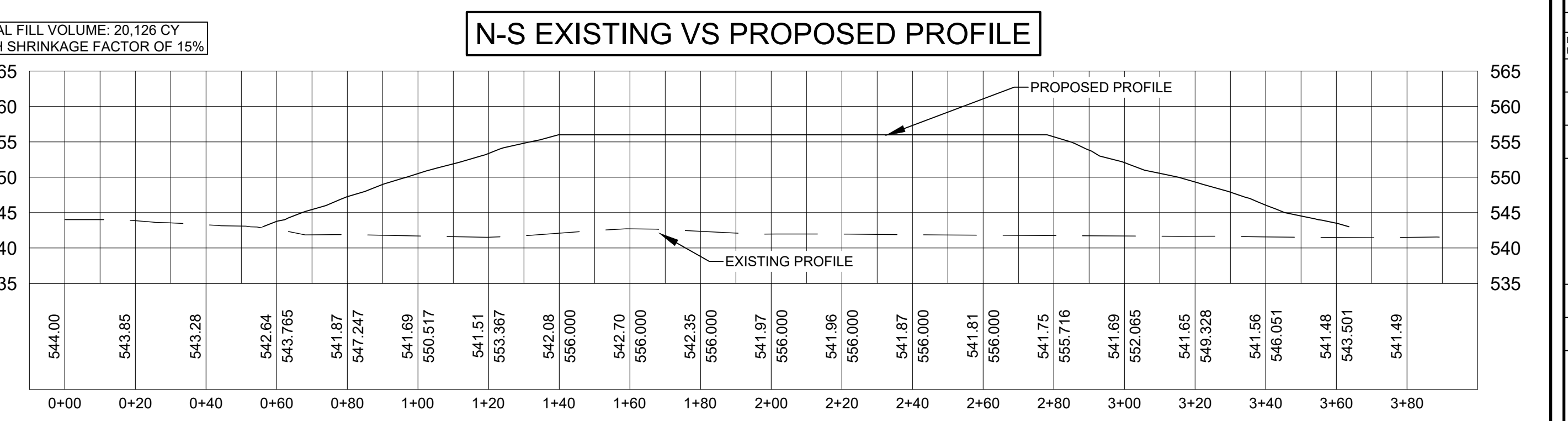
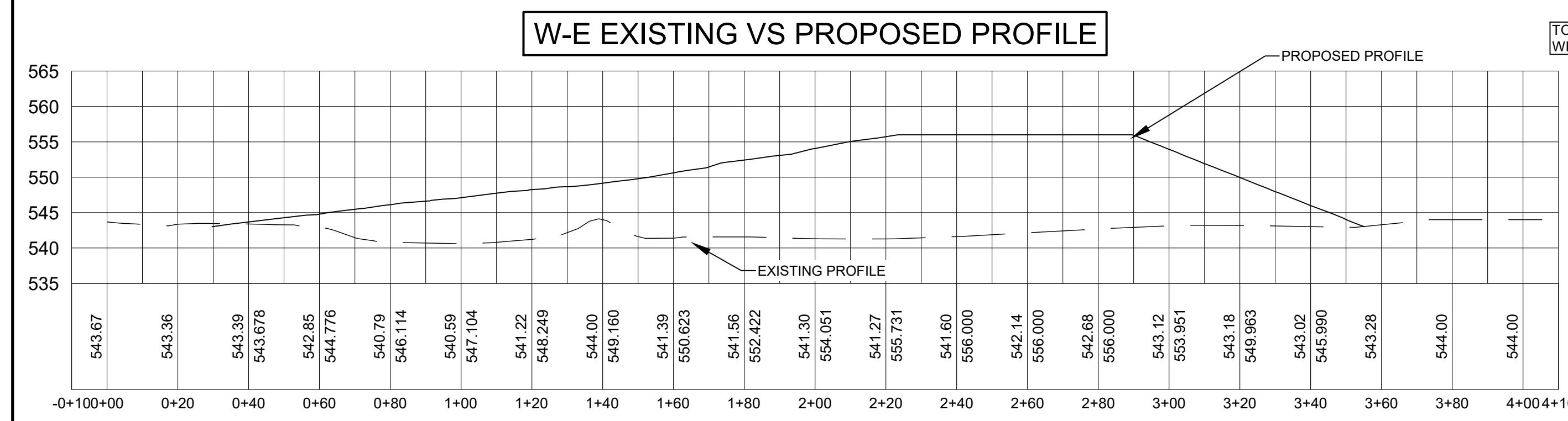
N.T.S.



- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. SEEDING WILL BE COMPLETED BY THE CONTRACTOR. COORDINATE PROPER TIMING FOR THE SEEDING AND EROSION BLANKET INSTALLATION.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
- ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROXIMATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROXIMATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" - 54" OVERLAP DEPENDING ON RECP'S TYPE.
- CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.  
NOTE:  
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.
- EROSION CONTROL BLANKET SHALL BE USED ON ALL SLOPES 4:1 AND STEEPER.

### 2 EROSION CONTROL BLANKET INSTALLATION DETAILS

N.T.S.



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**REVISION HISTORY**

| MARK | DESCRIPTION                              | DATE    | APPR           |
|------|--|---------|----------------|
| 1    | ADDED FILTER FENCE AND POST INSTALLATION | 1-24-25 | MARK CHRISTIAN |

**MARK CHRISTIAN**  
 LICENSED PROFESSIONAL ENGINEER  
 IOWA  
 21162  
 1-24-25

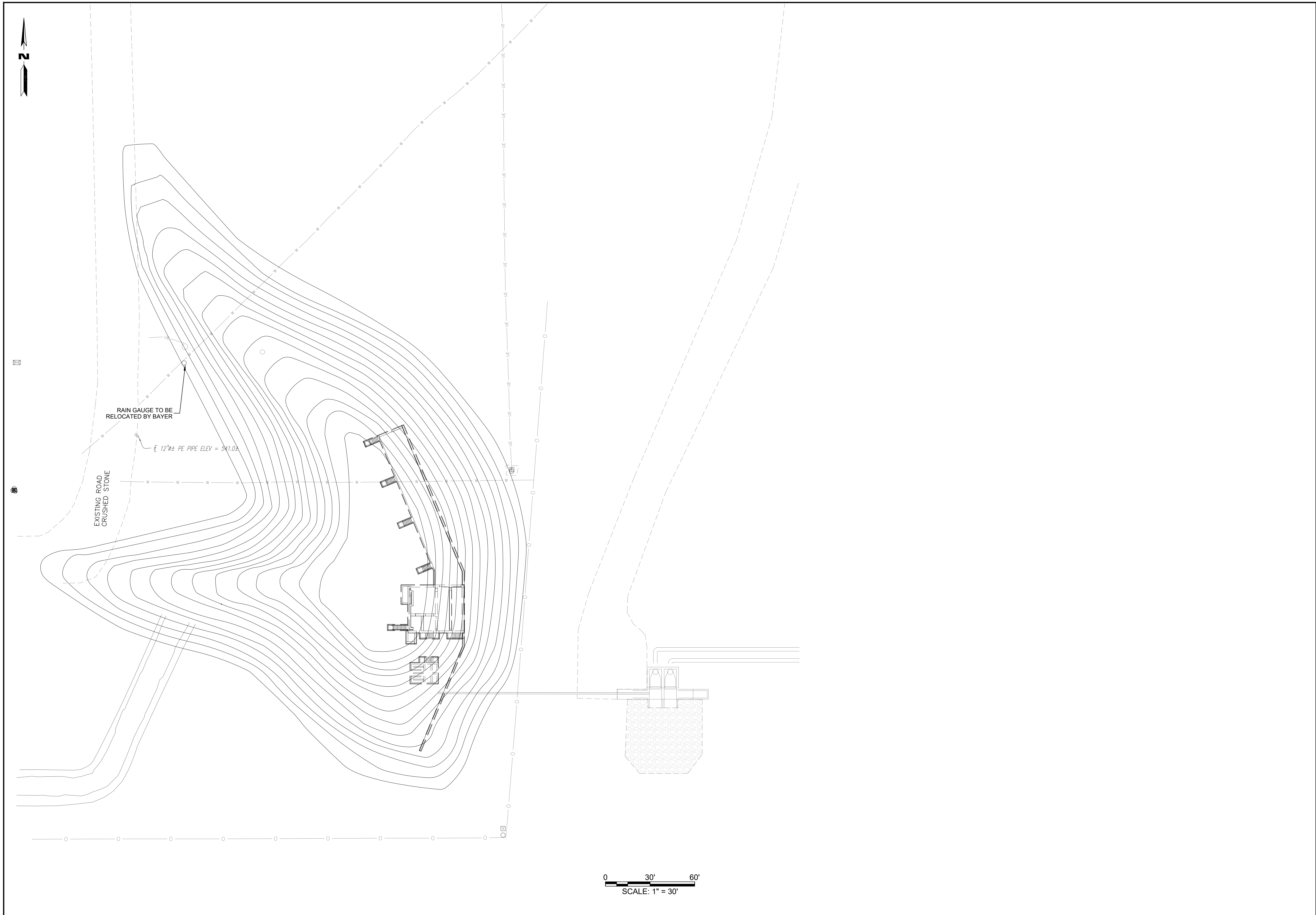
**PLANT SANITARY SEWER DESIGN**  
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**2500 WIGGINS RD**  
**MUSCATINE IA 52761-9138**

Non-Reduced Sheet Size: 22" x 34"  
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|          |            |
|----------|------------|
| DESIGNED | DRAWN      |
| FIELD    | FIELD BOOK |
| CHECKED  | CHECK DATE |

SHEET TITLE  
**GRADING & EROSION CONTROL PLAN**

PROJECT NO.  
 07250 017 21-2224  
 DRAWING ISSUED DATE:  
 06/27/2024  
 SHEET  
**C201**

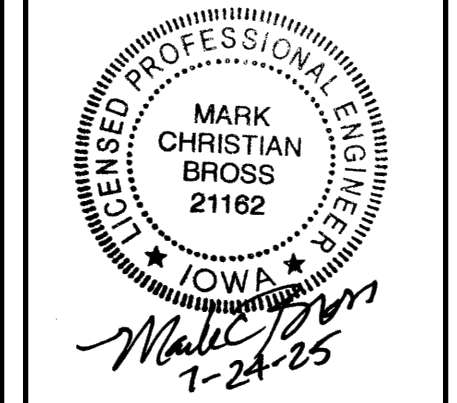


0 30' 60'  
SCALE: 1" = 30'

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REVISION HISTORY



**PLANT SANITARY SEWER DESIGN**  
BAYER CROPSOURCE LP - BP MUSCATINE  
2500 WIGGINS RD  
MUSCATINE IA 52761-9138

Non-Reduced Sheet Size: 22" x 34"  
Full sized plans have been prepared using standard scales.  
Reduced size plans may not conform to standard scales.

|          |            |
|----------|------------|
| DESIGNED | DRAWN      |
| FIELD    | FIELD BOOK |
| CHECKED  | CHECK DATE |

SHEET TITLE

**SITE UTILITY PLAN**

PROJECT NO.  
07250 017 21-2224  
DRAWING ISSUED DATE:  
06/27/2024

SHEET  
**C301**