

State of Illinois
Department of Natural Resources
Office of Mines and Minerals
Division of Abandoned Mined Lands Reclamation

Funded by the
United States Department of Interior
Federal Office of Surface Mining

Madison #9 Sinkholes & Madison C.C. Brush Mine
Reclamation Project
AML-GWmE-1401
Williamson County
1LR

SCHEDULE OF DRAWINGS:

1. Cover Sheet
2. Summary of Quantities/General Notes
3. Madison #9 Sinkholes - Existing & Proposed Conditions
4. Madison C.C. Brush Mine - Existing & Proposed Conditions
- 5-6. Madison C.C. Brush Mine - Cross Sections
7. Details

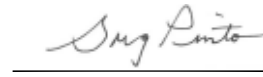
CONTRACT NO. M1401

Prepared By IDNR Staff


Approved for Bidding:

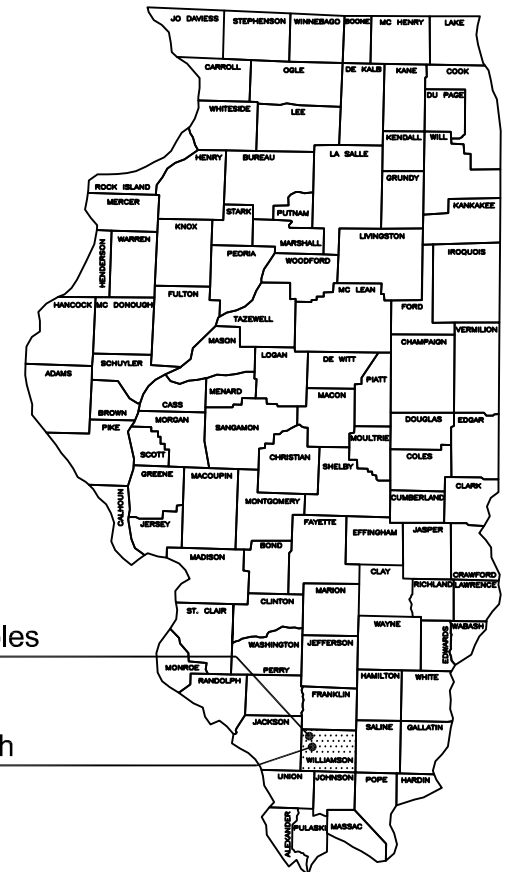

James Haflinger, Acting Director
Office of Mines and Minerals

Approved By:


Greg Pinto, Acting Manager
AMLR Division

Approved By:


Olga Moya Aranzubia, P.E.
IL Licensed Professional Engineer
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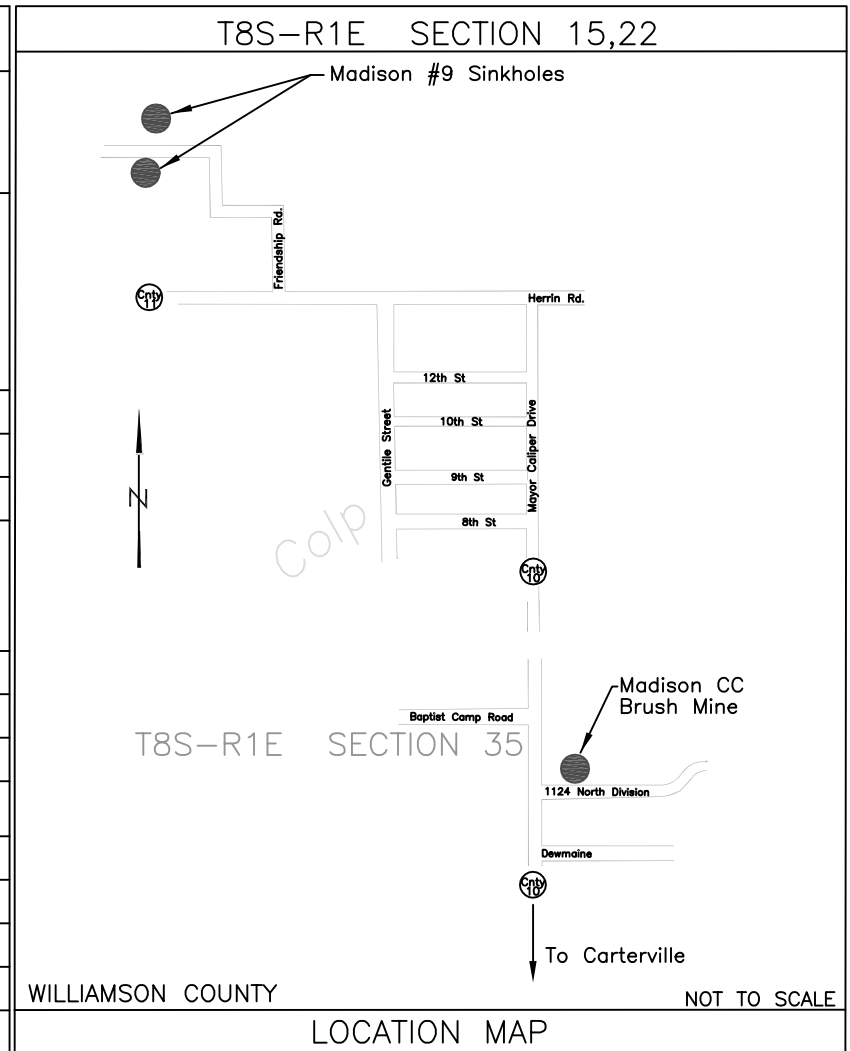
Madison #9 Sinkholes
Williamson County

Madison C.C. Brush
Williamson County

Certified Copy



| Summary of Quantities | | | | | | | | |
|-----------------------|----|--|----------|----------------------|-------------------------|---------|-------|---|
| Item No. | # | Item | Section | Quantity | | | Unit | Rates/Remarks |
| | | | | Madison #9 Sinkholes | Madison C.C. Brush Mine | Total | | |
| NRM20110 | 1 | SPECIAL CLEARING | 201 | 0.5 | 0.5 | 1 | L SUM | COMPACTION IN ACCORDANCE WITH SECTION 205 OF THE SPECIAL PROVISIONS |
| NRM20210 | 2 | EARTH EXCAVATION | 202 | - | 11,932 | 11,932 | CU YD | |
| NRM20230 | 3 | MINE REFUSE EXCAVATION | 202 | - | 18,658 | 18,658 | CU YD | |
| NRM20480 | 4 | FURNISHED EXCAVATION | 204 | 615 | 9,767 | 10,382 | CU YD | |
| NRM21510 | 5 | SPECIAL EXCAVATION | 215 | 1,653 | 900 | 2,553 | CY YD | |
| NRM21621 | 6 | CA-FILL | 216 | 190 | 95 | 285 | TON | CA-1 |
| NRM21644 | 7 | ROCK FILL, RR-4 | 216 | 1,425 | 712.5 | 2,137.5 | TON | |
| NRM25040 | 8 | NITROGEN FERTILIZER NUTRIENT | 250 | 80 | 820 | 900 | POUND | SEE SCHEDULE BELOW |
| NRM25050 | 9 | PHOSPHOROUS FERTILIZER NUTRIENT | 250 | 120 | 615 | 735 | POUND | |
| NRM25060 | 10 | POTASSIUM FERTILIZER NUTRIENT | 250 | 280 | 1,435 | 1,715 | POUND | |
| NRM25070 | 11 | AGRICULTURAL GROUND LIMESTONE | 250 | 4.0 | 20.5 | 24.5 | TON | 5.0 TON / ACRE |
| NRM25090 | 12 | SEEDING | 250 | 0.8 | 4.1 | 4.9 | ACRE | |
| 25100115 | 13 | MULCH, METHOD 2, PROCEDURE 1 | IDOT 251 | 0.8 | 4.1 | 4.9 | ACRE | 2.0 TON / ACRE |
| D2012202 | 14 | EVERGREEN, PINUS STROBUS, 2" CALIPER, BALLED & BURLAPPED | IDOT 253 | - | 30 | 30 | EACH | EASTERN WHITE PINE |
| NRM25510 | 15 | MINE REFUSE TREATMENT - LIMESTONE | 255 | - | 6.0 | 6.0 | TON | 6.0 TON / ACRE |
| NRM28040 | 16 | PERIMETER EROSION BARRIER | 280 | - | 930 | 930 | FOOT | SEC 280.04 (b) |
| 40200800 | 17 | AGGREGATE SURFACE COURSE, TYPE B | IDOT 402 | - | 36.8 | 36.8 | TON | CA-6, 3 INCHES THICK |
| NRM50101 | 18 | REMOVAL OF EXISTING STRUCTURES | 501 | | 1 | 1 | L SUM | |
| NRM66610 | 19 | MINE OPENING MARKER | 666 | - | 1 | 1 | EACH | |
| NRM67110 | 20 | MOBILIZATION (MAX 6% OF BID) | 671 | 0.5 | 0.5 | 1 | L SUM | |



State of Illinois
Department of Natural Resources

Madison #9 Sinkholes
Madison C.C. Brush Mine
AML-GWmE-1401
Williamson County

GENERAL NOTES

Unless otherwise noted on the plans, all disturbed areas within the construction limits will be amended with agricultural ground limestone, fertilizer nutrients, seeded, and mulched at the required rates specified in the plans.

The contractor is responsible for visiting the site and familiarizing himself with the existing conditions and the proposed reclamation work prior to submitting a bid.

The contractor shall provide and pay for all field engineering services to execute the project as specified in the Field Engineering section of the Special Provisions.

The contractor is responsible for locating and protecting all existing utility lines pertaining to the work.

Unless noted on the plans, all onsite access roads may be used for construction and must be maintained during construction and restored to original or better condition at the completion of work by the contractor. Access roads to the site as designated in the plans are to be maintained to the satisfaction of the engineer.

The construction limits will be staked by the contractor prior to construction. The contractor is responsible for the repair and or restitution at his own expense for all damaged done to any area outside the construction limits.

Application rates specified in the plans are shown in the Summary of Quantities-Rates/Remarks column.

CONSTRUCTION NOTES

BURIAL/REMOVAL OF MATERIAL - Concrete and masonry debris designated for burial by the engineer shall be buried at least three feet below proposed final grade. Onsite organic debris and trash shall be disposed of in an engineer approved offsite landfill in accordance with Sections 201 and 501 of the Special Provisions.

TREE REMOVAL - Trees removed shall be disposed of per Section 201 and 202 of the Special Provisions.

ACID WATER TREATMENT - If acid mine drainage treatment is determined necessary by the engineer, and not otherwise specified in the plans, any water treatment will be paid for in accordance with Article 109.04 of the Standard Specifications.

EROSION CONTROL - The contractor shall schedule his operations and take such precautions that may be necessary to prevent or minimize erosion. Failure to comply with this requirement shall cause the contractor to be fully responsible for repairing any eroded areas and cleaning up areas or drainage structures that have become silted in or damaged.

AGRICULTURAL GROUND LIMESTONE-Immediately prior to seed bed preparation, fertilizer nutrients and agricultural ground limestone shall be uniformly spread at the rates specified in the plans.

MULCHING - Within 24 hours from the time seeding has been performed, the seeded area shall be given a covering of mulch at the rates specified in the plans. The mulch is to be anchored into the soil in accordance with the requirements for method 2, procedure 1 of Article 251.03 of the Standard Specifications. If Excelsior or Special Excelsior Blanket is to be used, the blanket shall be placed the same day that the areas are seeded.

MINE REFUSE TREATMENT- After mine refuse has been graded to the subgrade shown in the plans, agricultural ground limestone shall be uniformly spread at the rate specified in the plans. A 3 inch layer of soil shall then be spread over the mine refuse treatment area and blended to a depth of 6 inches with an industrial offset disc approved by the Engineer. Treated areas shall then be covered with 33 inches of soil.

Schedule of Seeding, Fertilizer Nutrients, Mulch and Mowing

| ITEM (unit) | INITIAL APPLICATION SEPT. 30 - NOV. 15 2014 | | SECOND APPLICATION JAN. 1 - MARCH 15 2015 | | TOTAL QUANTITY |
|--|---|-------------------------|---|-------------------------|----------------|
| | Madison #9 Sinkholes | Madison C.C. Brush Mine | Madison #9 Sinkholes | Madison C.C. Brush Mine | |
| SEEDING (acres) | 0.8 | 4.1 | | | 4.9 |
| AGRICULTURAL GROUND LIMESTONE (tons) | 4.0 5.0 T/A | 20.5 5.0 T/A | | | 24.5 |
| NITROGEN FERTILIZER NUTRIENT (pounds) | 80 100 Lb./A | 410 100 Lb./A | | 410 100 Lb./A | 900 |
| PHOSPHOROUS FERTILIZER NUTRIENT (pounds) | 120 150 Lb./A | 615 150 Lb./A | | | 735 |
| POTASSIUM FERTILIZER NUTRIENT (pounds) | 280 350 Lb./A | 1,435 350 Lb./A | | | 1,715 |
| MULCH, METHOD 2 PROCEDURE 1 (acres) | 0.8 2 T/A | 4.1 2 T/A | | | 4.9 |

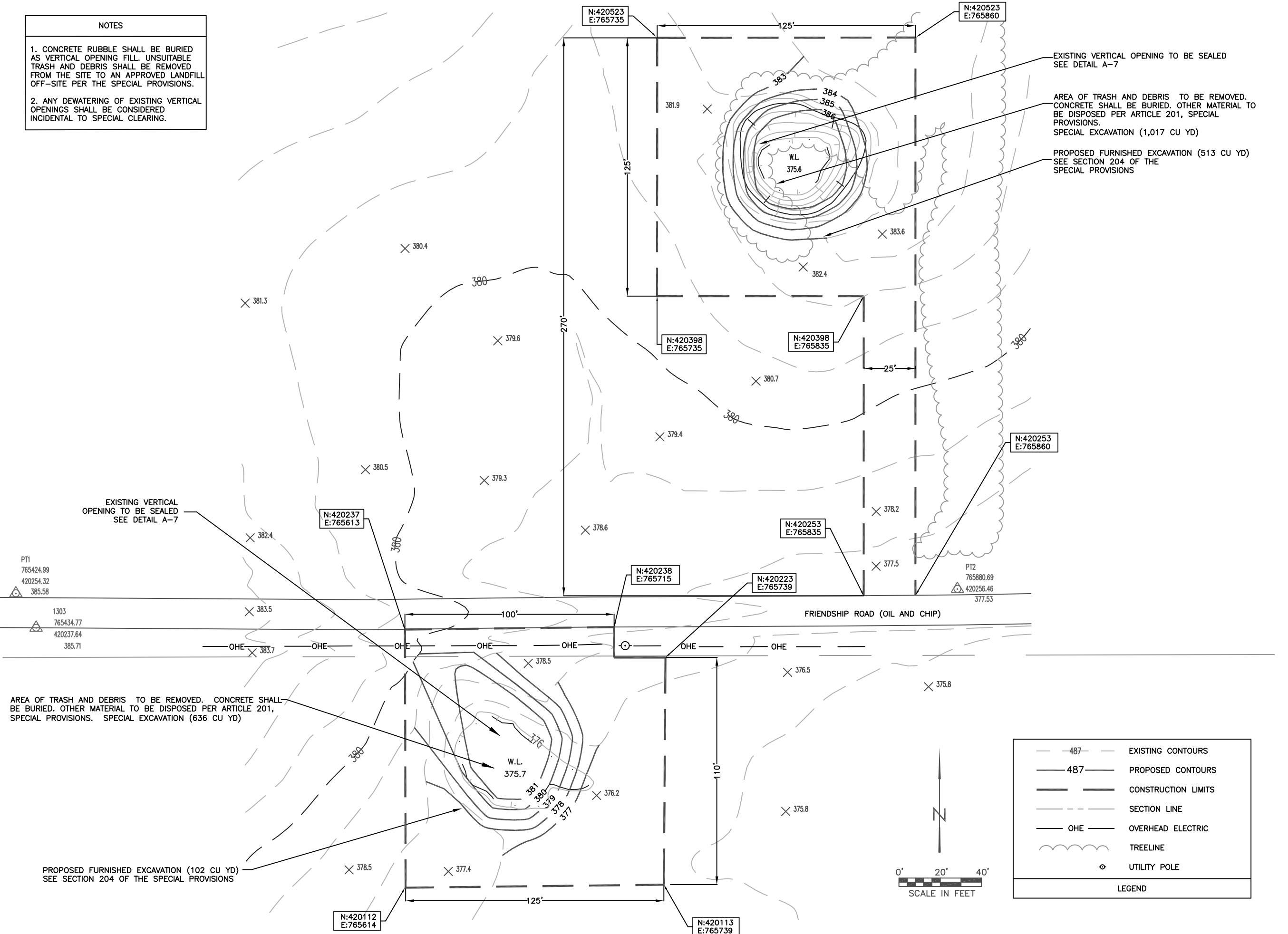
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Checked By: _____

**Summary of Quantities/
General Notes**
Sheet 2 of 7

NOTES

1. CONCRETE RUBBLE SHALL BE BURIED AS VERTICAL OPENING FILL. UNSUITABLE TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE TO AN APPROVED LANDFILL OFF-SITE PER THE SPECIAL PROVISIONS.
2. ANY DEWATERING OF EXISTING VERTICAL OPENINGS SHALL BE CONSIDERED INCIDENTAL TO SPECIAL CLEARING.

- EXISTING VERTICAL OPENING TO BE SEALED SEE DETAIL A-7
- AREA OF TRASH AND DEBRIS TO BE REMOVED. CONCRETE SHALL BE BURIED. OTHER MATERIAL TO BE DISPOSED PER ARTICLE 201, SPECIAL PROVISIONS. SPECIAL EXCAVATION (1,017 CU YD)
- PROPOSED FURNISHED EXCAVATION (513 CU YD) SEE SECTION 204 OF THE SPECIAL PROVISIONS



PT1
765424.99
420254.32
385.58

1303
765434.77
420237.64
385.71

PT2
765880.69
420256.46
377.53

AREA OF TRASH AND DEBRIS TO BE REMOVED. CONCRETE SHALL BE BURIED. OTHER MATERIAL TO BE DISPOSED PER ARTICLE 201, SPECIAL PROVISIONS. SPECIAL EXCAVATION (636 CU YD)

PROPOSED FURNISHED EXCAVATION (102 CU YD) SEE SECTION 204 OF THE SPECIAL PROVISIONS

| | |
|--------|---------------------|
| | EXISTING CONTOURS |
| | PROPOSED CONTOURS |
| | CONSTRUCTION LIMITS |
| | SECTION LINE |
| | OVERHEAD ELECTRIC |
| | TREELINE |
| | UTILITY POLE |
| LEGEND | |

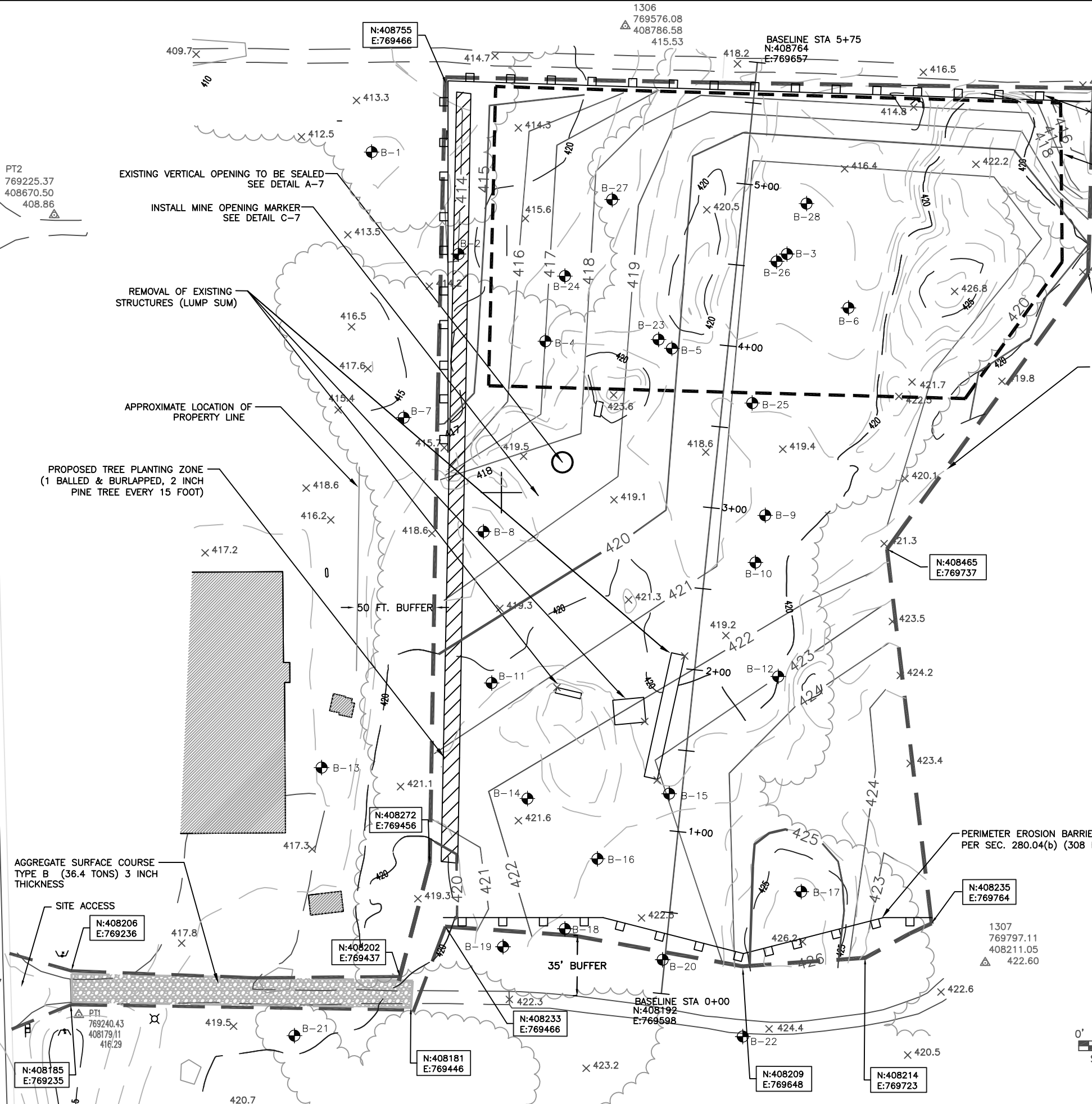
State of Illinois
Department of Natural Resources

Madison #9 Sinkholes
Madison C.C. Brush Mine
AML-GWmE-1401
Williamson County

Drawn By: AW
Checked By: _____
Date: 05/14/2014

Madison #9 Sinkholes
Existing and Proposed Conditions
Sheet 3 of 7

COUNTY ROAD 10 (OIL AND CHIP)



PT2
769225.37
408670.50
408.86

AGGREGATE SURFACE COURSE
TYPE B (36.4 TONS) 3 INCH
THICKNESS

PROPOSED TREE PLANTING ZONE
(1 BALLED & BURLAPPED, 2 INCH
PINE TREE EVERY 15 FOOT)

REMOVAL OF EXISTING
STRUCTURES (LUMP SUM)

INSTALL MINE OPENING MARKER
SEE DETAIL C-7

EXISTING VERTICAL OPENING TO BE SEALED
SEE DETAIL A-7

APPROXIMATE LOCATION OF
PROPERTY LINE

50 FT. BUFFER

35' BUFFER

SITE ACCESS

N:408185
E:769235

N:408206
E:769236

N:408202
E:769437

PT1
769240.43
408179.11
416.29

N:408181
E:769446

N:408233
E:769466

N:408209
E:769648

N:408214
E:769723

N:408272
E:769456

N:408465
E:769737

N:408635
E:769860

N:408748
E:769864

N:408755
E:769466

1306
769576.08
408786.58
415.53

BASELINE STA 5+75
N:408764
E:769657

1307
769797.11
408211.05
422.60

BASELINE STA 0+00
N:408192
E:769598

PERIMETER EROSION BARRIER
PER SEC. 280.04(b) (308 FOOT)

PERIMETER EROSION BARRIER
PER SEC. 280.04(b) (622 FOOT)

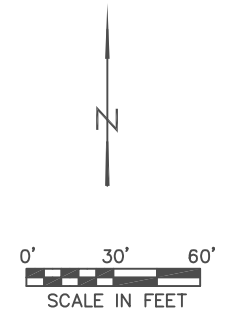
REFUSE DISPOSAL AREA & AREA
OF EARTH EXCAVATION

CONSTRUCTION LIMITS AND LIMITS OF MINE REFUSE
EXCAVATION. REFUSE TO BE BURIED ON-SITE,
COMPACTION IN ACCORDANCE WITH SECTION 205.

NOTES

1. CONCRETE RUBBLE SHALL BE BURIED AS VERTICAL OPENING FILL. UNSUITABLE TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE TO AN APPROVED LANDFILL OFF-SITE PER THE SPECIAL PROVISIONS.
2. ALL DISTURBED AREAS ARE TO BE SEEDED PER THE SPECIAL PROVISIONS.
3. ANY DEWATERING OF EXISTING VERTICAL OPENINGS SHALL BE CONSIDERED INCIDENTAL TO SPECIAL CLEARING.

| | |
|--------|-------------------------|
| | EARTH EXCAVATION LIMITS |
| | EXISTING CONTOURS |
| | PROPOSED CONTOURS |
| | CONSTRUCTION LIMITS |
| | SECTION LINE |
| | TREELINE |
| | SOIL BORING LOCATION |
| LEGEND | |



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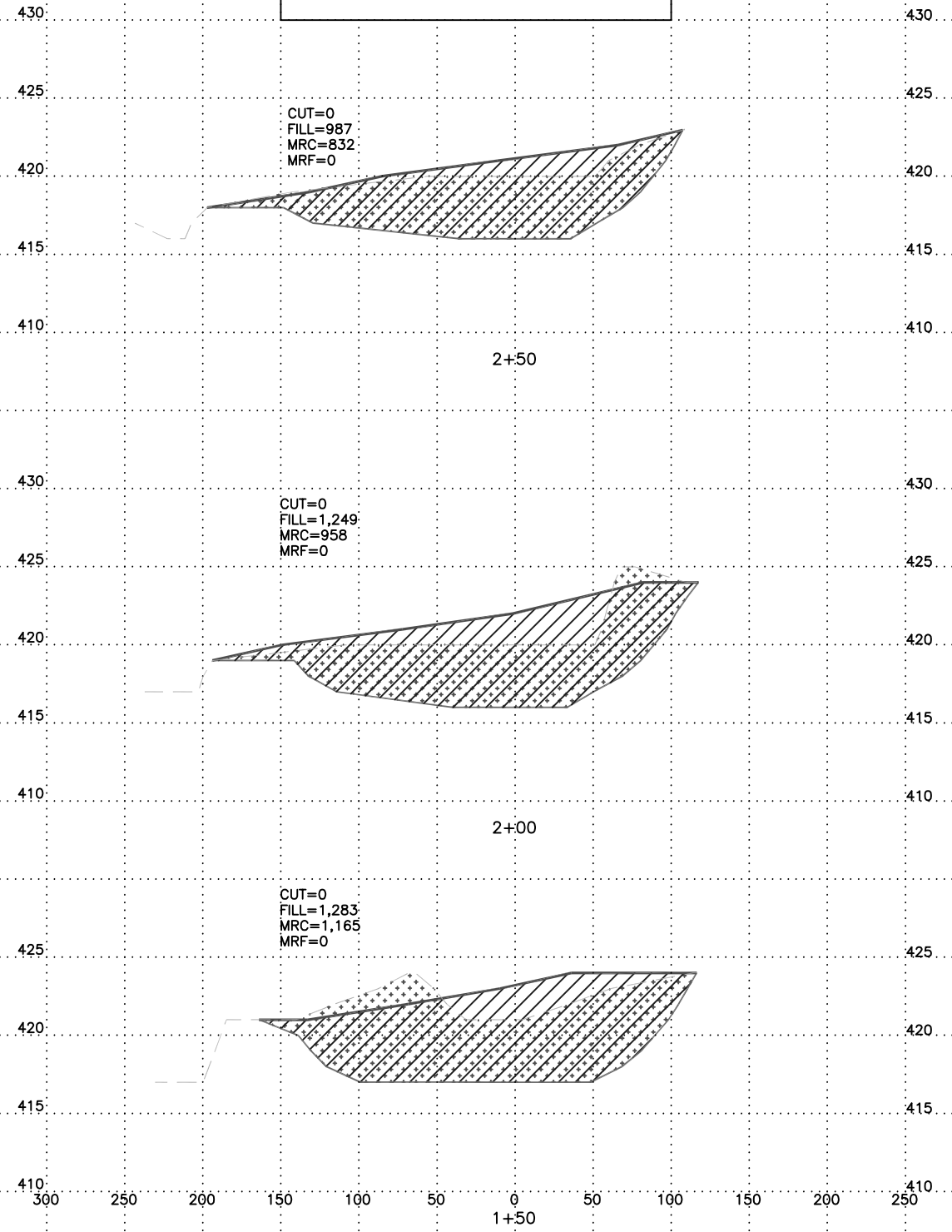
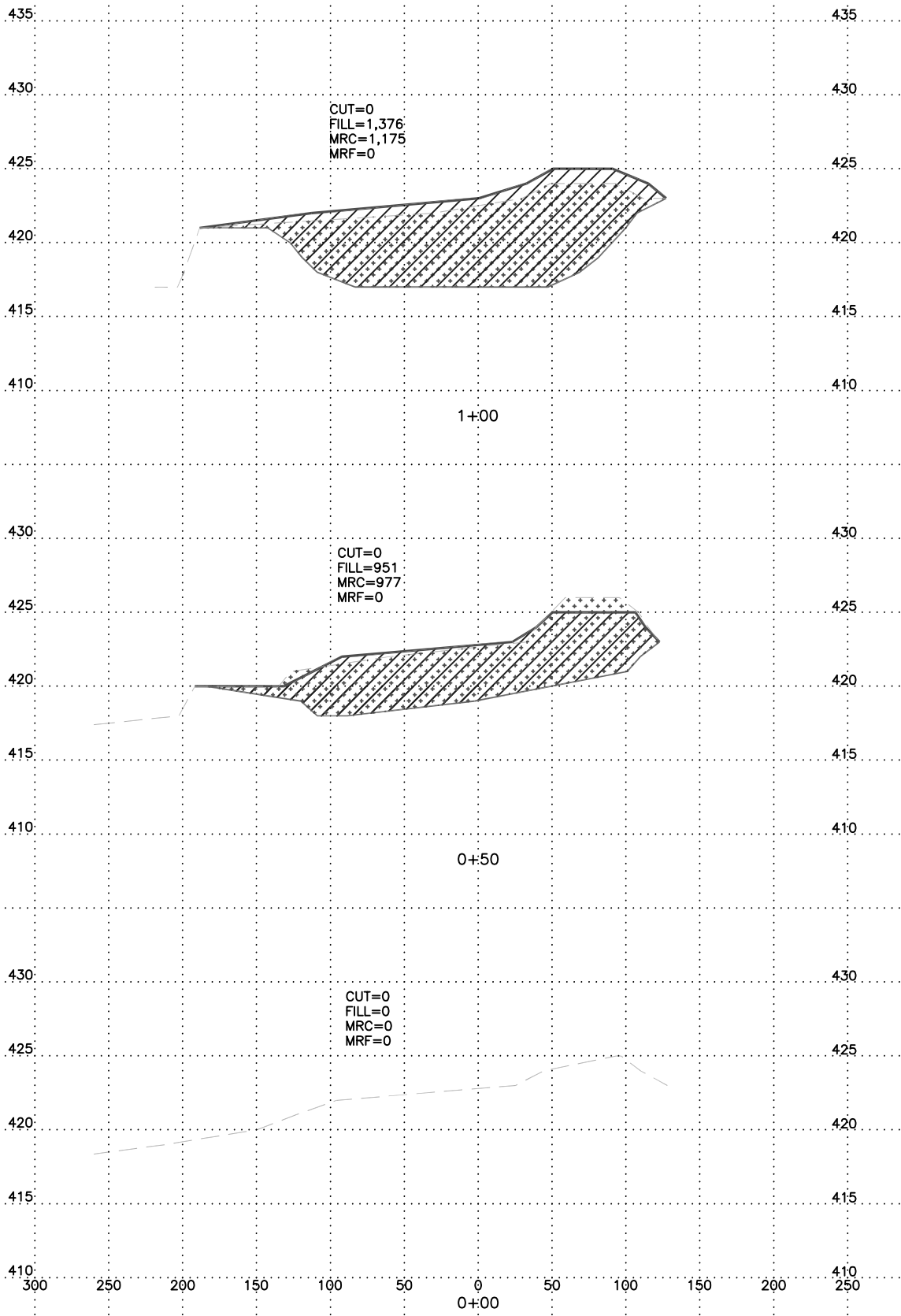
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





Madison C.C. Brush Mine
Existing and Proposed Conditions
Sheet 4 of 7

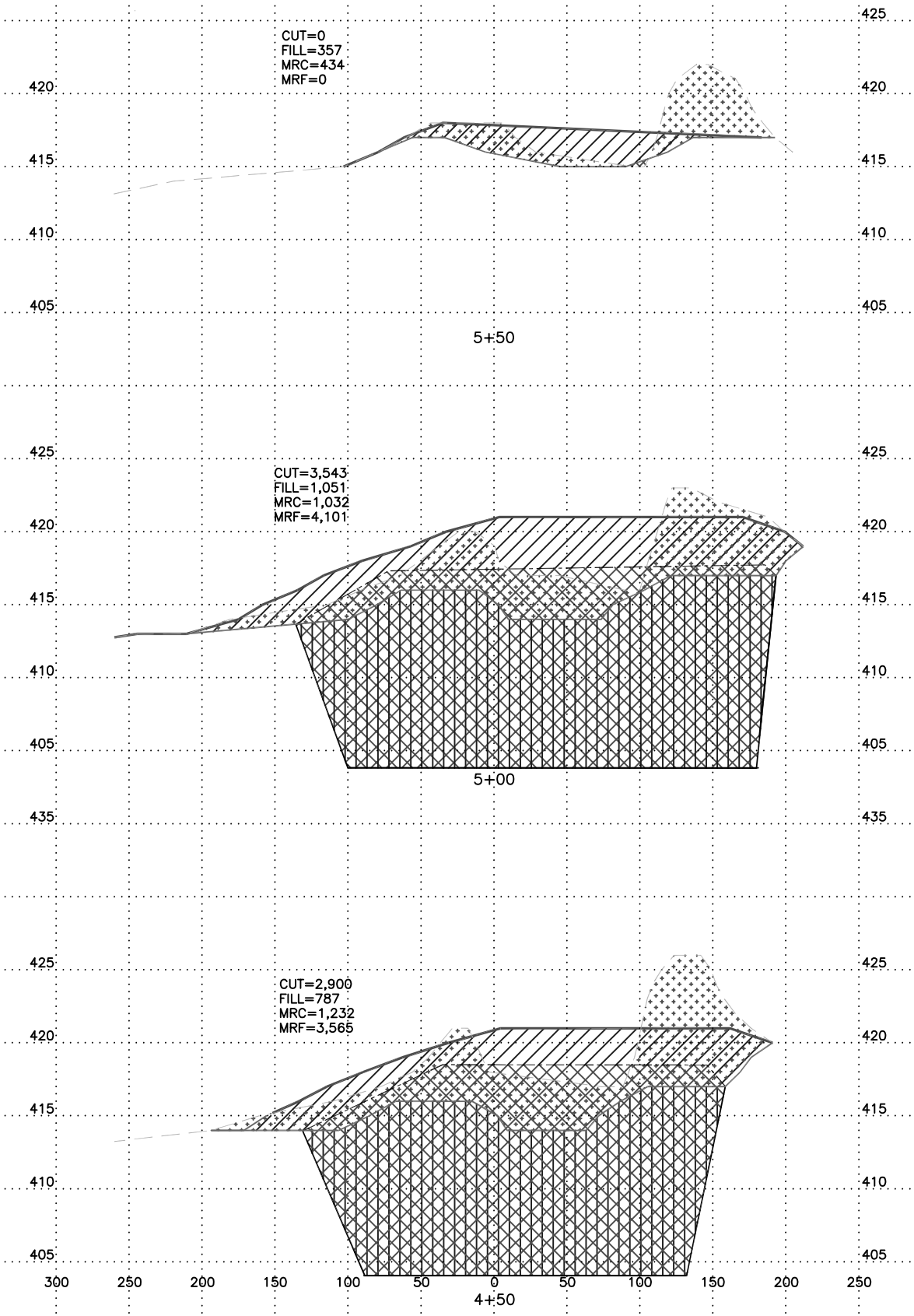
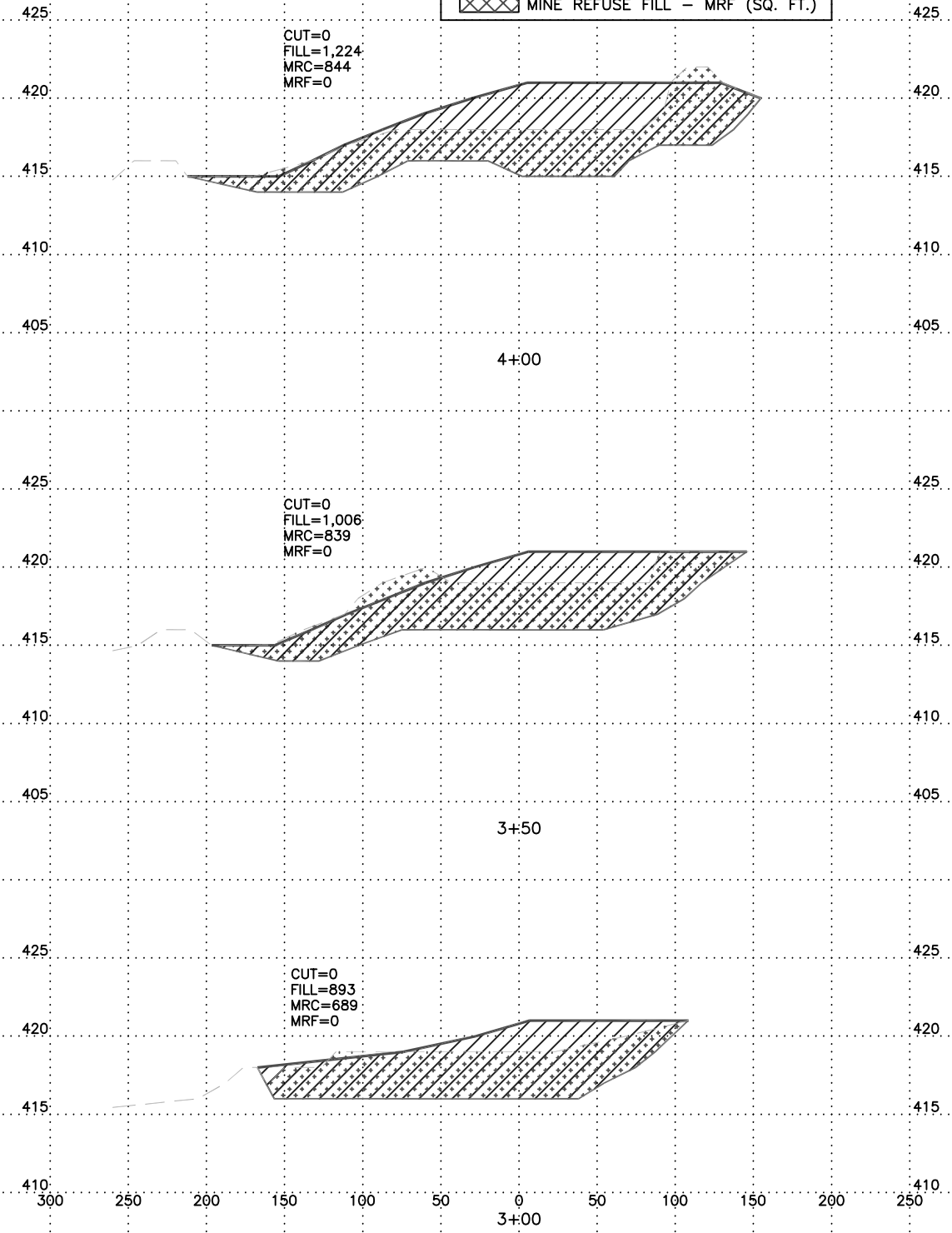
LEGEND

- EXISTING GRADE
- PROPOSED SUB-GRADE
- PROPOSED GRADE
- ▨ EARTH CUT – CUT (SQ. FT.)
- ▩ EARTH FILL – FILL (SQ. FT.)
- ▤ MINE REFUSE CUT – MRC (SQ. FT.)
- ▥ MINE REFUSE FILL – MRF (SQ. FT.)



Horizontal Scale 50'
 Vertical Scale 5'

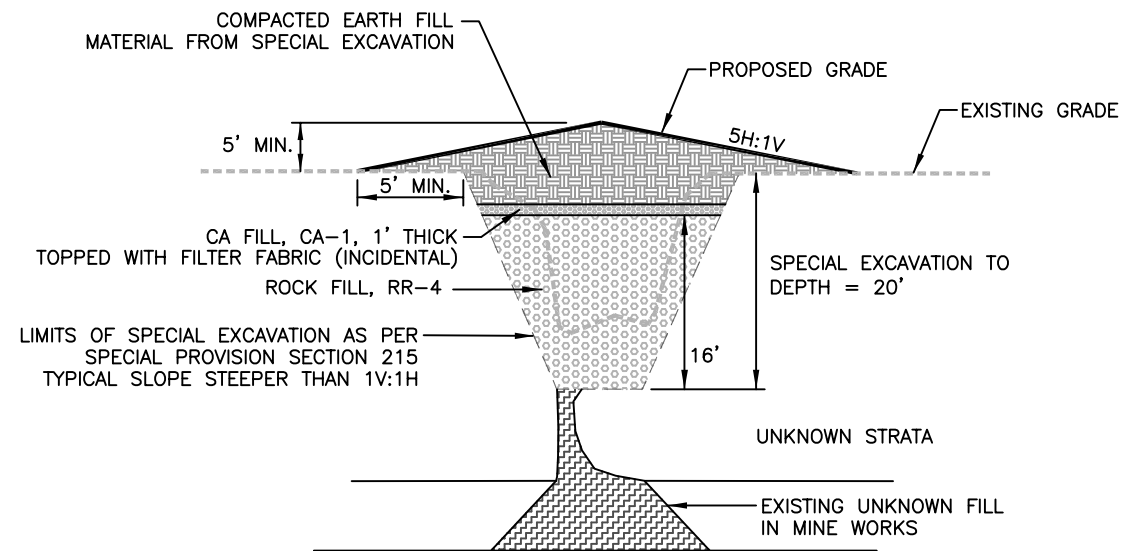
| LEGEND | |
|---|----------------------------------|
|  | EXISTING GRADE |
|  | PROPOSED SUB-GRADE |
|  | MINE REFUSE TREATMENT-LIMESTONE |
|  | PROPOSED GRADE |
|  | EARTH CUT - CUT (SQ. FT.) |
|  | EARTH FILL - FILL (SQ. FT.) |
|  | MINE REFUSE CUT - MRC (SQ. FT.) |
|  | MINE REFUSE FILL - MRF (SQ. FT.) |



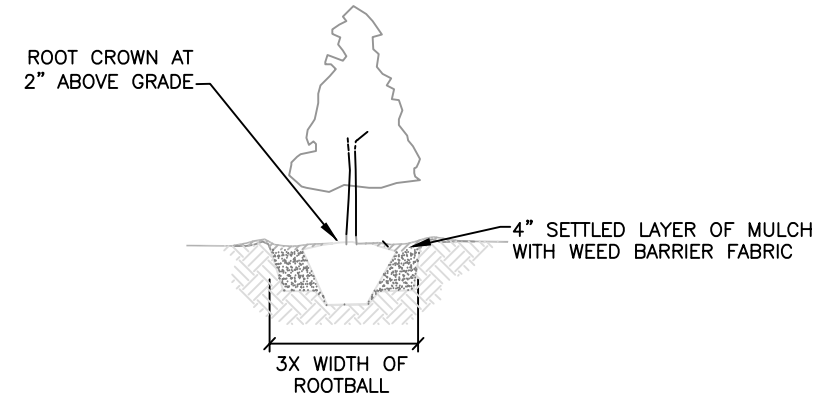
Horizontal Scale 50
Vertical Scale 5

NOTES:

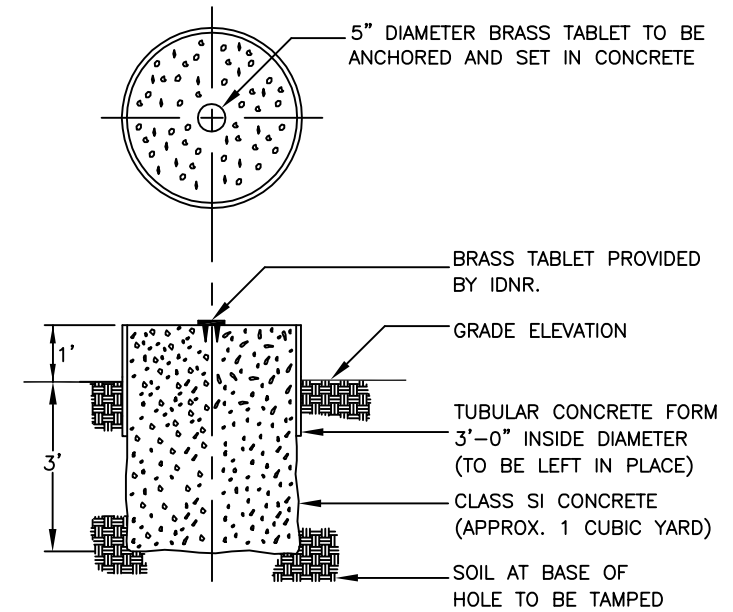
1. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING IN THE VERTICAL OPENING AREAS DUE TO THE UNKNOWN CONDITION OF THE OPENINGS AND THE UNKNOWN STABILITY OF THE SURROUNDING AREAS.
2. BASED UPON CONDITIONS ENCOUNTERED AS THE SPECIAL EXCAVATION PROCESS IS COMPLETED, THE ENGINEER RESERVES THE RIGHT TO INCREASE OR DECREASE THE VOLUME OF SPECIAL EXCAVATION AND BACKFILLING OF MATERIALS, AND THE ENGINEER RESERVES THE RIGHT TO ALTER THE METHOD OF BACKFILLING.
3. THE DIMENSIONS OF MADISON C.C. BRUSH VERTICAL OPENING IS ESTIMATED ESTIMATED TO BE 10' X 10'.
4. AFTER THE ROCK FILL, RR-4, HAS BEEN PLACED, THE CONTRACTOR SHALL SECURE THE AREA WITH TEMPORARY FENCING FOR A THREE DAY PERIOD TO ALLOW FOR SETTLEMENT BEFORE PROCEEDING WITH THE BACKFILLING. THE TEMPORARY FENCING SHALL BE INCIDENTAL TO THE ROCK FILL, RR-4.



A
7 VERTICAL OPENING FILLING DETAIL IN UNKNOWN STRATA
NOT TO SCALE, TYPICAL SECTION



B
7 EVERGREEN TREE PLANTING
NOT TO SCALE



C
7 MINE OPENING MARKER DETAIL
NOT TO SCALE

EXACT LOCATION TO BE DETERMINED BY THE ENGINEER