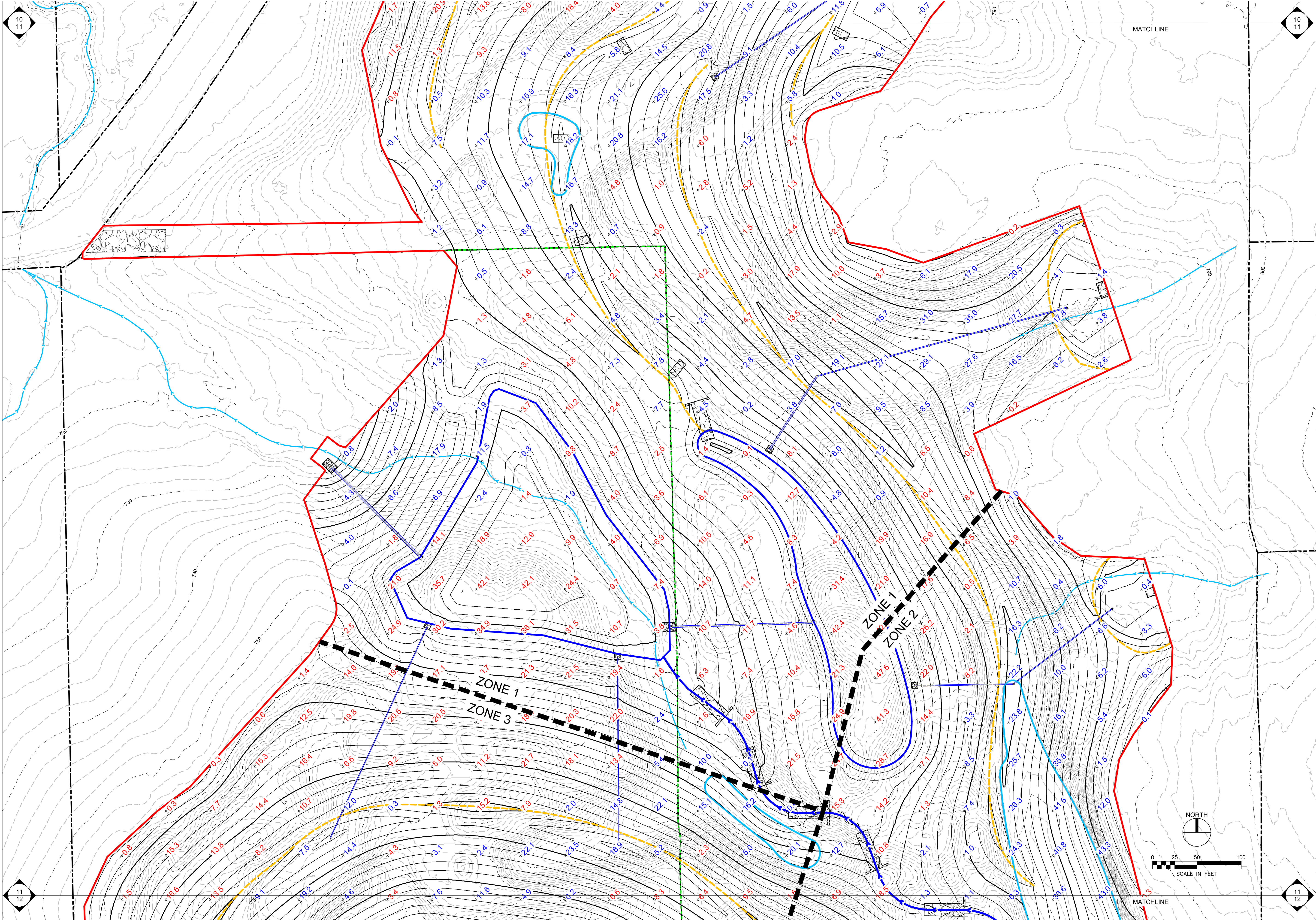
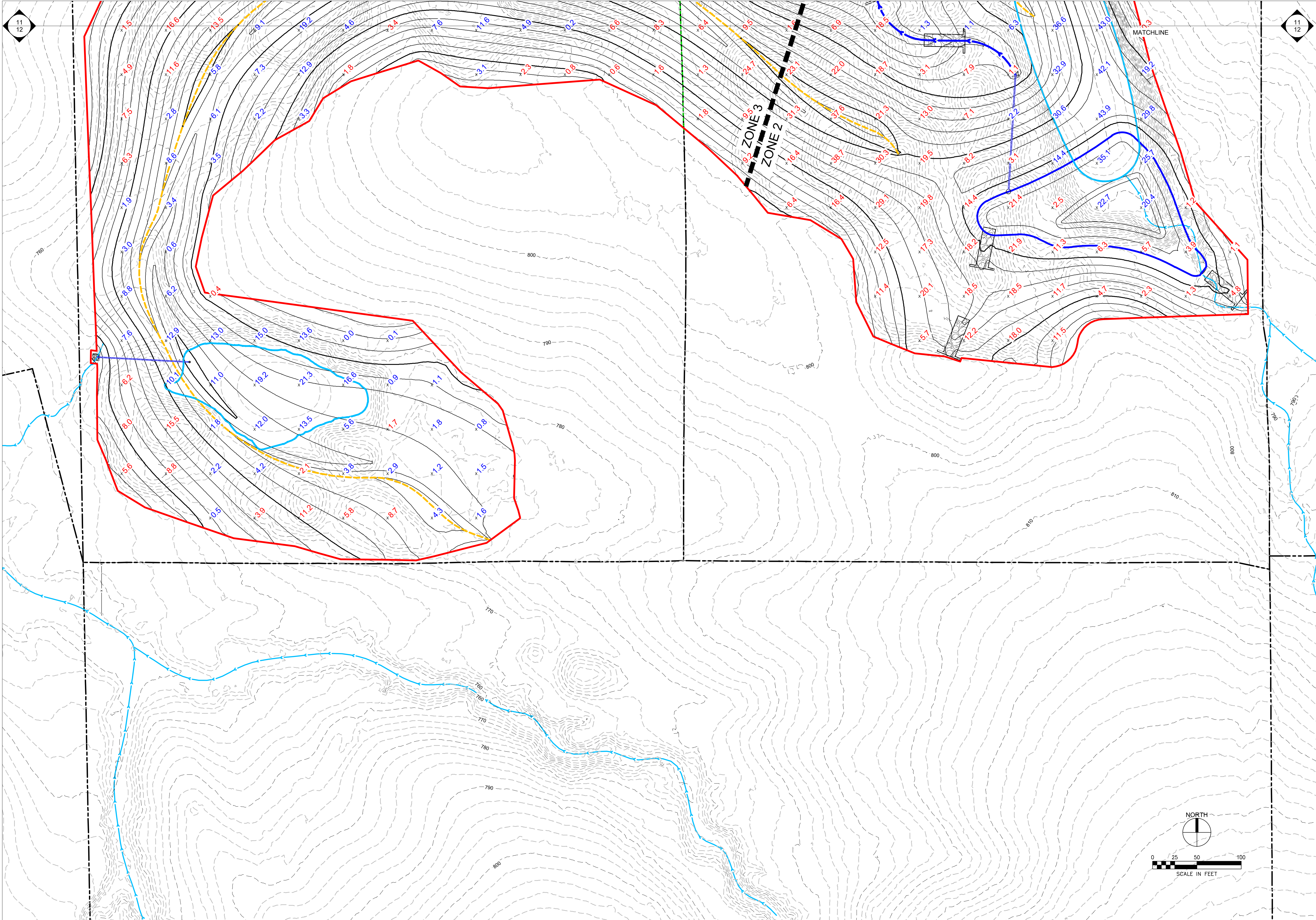




|                                      |  |               |                                                                                                                                                                                                                                                                                                                            |                   |              |                                |
|--------------------------------------|--|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|--------------------------------|
| DESIGN BY: MMO                       |  | DRAWN BY: GHK | CHKD. BY: LTM                                                                                                                                                                                                                                                                                                              | ISSUED: 8/13/2026 | REVISED: --- | S-H PROJECT NUMBER: 2142303680 |
| PAUL TODD<br>AML RECLAMATION PROJECT |  |               | <br>IOWA DEPARTMENT OF AGRICULTURE<br>AND LAND STEWARDSHIP<br>DIVISION OF SOIL CONSERVATION<br>AND WATER QUALITY<br>HOOVER STATE OFFICE BUILDING<br>1305 E. WALNUT STREET DES MOINES, IA 50319<br>(515) 281-5321                      |                   |              |                                |
| SHEET<br>11 OF 24                    |  |               | <br>SHIVE-HATTERY<br>ARCHITECTURE+ENGINEERING<br>4125 Westown Parkway, Suite 100   West Des Moines, Iowa 50266<br>515.223.8104   fax: 515.223.0022   shive-hattery.com<br>Iowa   Illinois   Missouri   Illinois Firm Number: 184-000214 |                   |              |                                |



|                                      |  |               |  |               |  |                                |  |                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
|--------------------------------------|--|---------------|--|---------------|--|--------------------------------|--|----------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SHEET<br>12 OF 24                    |  |               |  |               |  | S-H PROJECT NUMBER: 2142303680 |  |                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| DESIGN BY: MMO                       |  | DRAWN BY: GHK |  | CHKD. BY: LTM |  | ISSUED: 8/13/2026              |  | REVISED: ----- |  | <div><p>IOWA DEPARTMENT OF AGRICULTURE<br/>AND LAND STEWARDSHIP<br/>DIVISION OF SOIL CONSERVATION<br/>AND WATER QUALITY<br/>HOOVER STATE OFFICE BUILDING<br/>1305 E. WALNUT STREET DES MOINES, IA 50319<br/>(515) 281-5321</p></div> <div><p><b>SHIVEHATTERY</b><br/>ARCHITECTURE+ENGINEERING<br/>4125 Westown Parkway, Suite 100   West Des Moines, Iowa 50266<br/>515.223.8104   fax: 515.223.0022   shivehattery.com<br/>Iowa   Illinois   Missouri   Illinois Firm Number: 184-000214</p></div> |  |
| PAUL TODD<br>AML RECLAMATION PROJECT |  |               |  |               |  |                                |  |                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| CUT-FILL PLAN                        |  |               |  |               |  |                                |  |                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |

| PIPES |             |               |          |                      |                        |        |       |
|-------|-------------|---------------|----------|----------------------|------------------------|--------|-------|
| NO.   | LENGTH (FT) | DIAMETER (IN) | MATERIAL | UPSTREAM INVERT (FT) | DOWNSTREAM INVERT (FT) | SLOPE  | NOTES |
| P1    | 82          | 8             | HDPE     | 748.00               | 741.25                 | 8.34%  | DL    |
| P2    | 255         | 12            | HDPE     | 775.00               | 773.50                 | 0.59%  | DL    |
| P3    | 143         | 24            | PPHP     | 737.00               | 724.00                 | 9.15%  | ASC   |
| P4    | 160         | 18            | PPHP     | 749.00               | 742.00                 | 4.38%  | ASC   |
| P5    | 293         | 12            | HDPE     | 776.00               | 763.00                 | 4.45%  |       |
| P6    | 99          | 18            | HDPE     | 763.00               | 754.50                 | 8.63%  | DL    |
| P7    | 263         | 8             | HDPE     | 769.50               | 742.00                 | 10.53% | DL    |
| P8    | 216         | 8             | HDPE     | 769.50               | 742.00                 | 12.86% | DL    |
| P9    | 142         | 10            | HDPE     | 782.00               | 764.00                 | 12.85% |       |
| P10   | 113         | 12            | HDPE     | 764.00               | 754.50                 | 8.50%  | DL    |
| P11   | 132         | 12            | PPHP     | 774.00               | 767.00                 | 5.30%  | ASC   |
| P12   | 106         | 12            | HDPE     | 765.00               | 755.50                 | 9.07%  | DL    |

NOTE:  
ASC = 5'X5' ANTI-SEEPAGE COLLAR - SEE DETAIL  
DL = DAYLIGHT - SEE DETAIL

| RISER INTAKES |           |               |                      |                 |       |
|---------------|-----------|---------------|----------------------|-----------------|-------|
| NO.           | SIZE (IN) | RIM ELEVATION | TERRACE FL ELEVATION | INVERT ELEV OUT | NOTES |
| R1            | 10        | 755.00        | 752.00               | 748.00          | MR    |
| R2            | 18        | 782.00        | 779.00               | 775.00          | MR    |
| R3            | 48        | 741.00        | -                    | 737.00          | CR    |
| R4            | 48        | 753.50        | -                    | 749.00          | CR    |
| R5            | 18        | 783.00        | 780.00               | 776.00          | MR    |
| R6            | 24        | 770.00        | 767.00               | 763.00          | MR    |
| R7            | 10        | 776.50        | 773.50               | 769.50          | MR    |
| R8            | 10        | 776.50        | 773.50               | 769.50          | MR    |
| R9            | 12        | 789.00        | 786.00               | 782.00          | MR    |
| R10           | 18        | 771.00        | 768.00               | 764.00          | MR    |
| R11           | 48        | 778.00        | -                    | 774.00          | CR    |
| R12           | 18        | 772.00        | 769.00               | 765.00          | MR    |

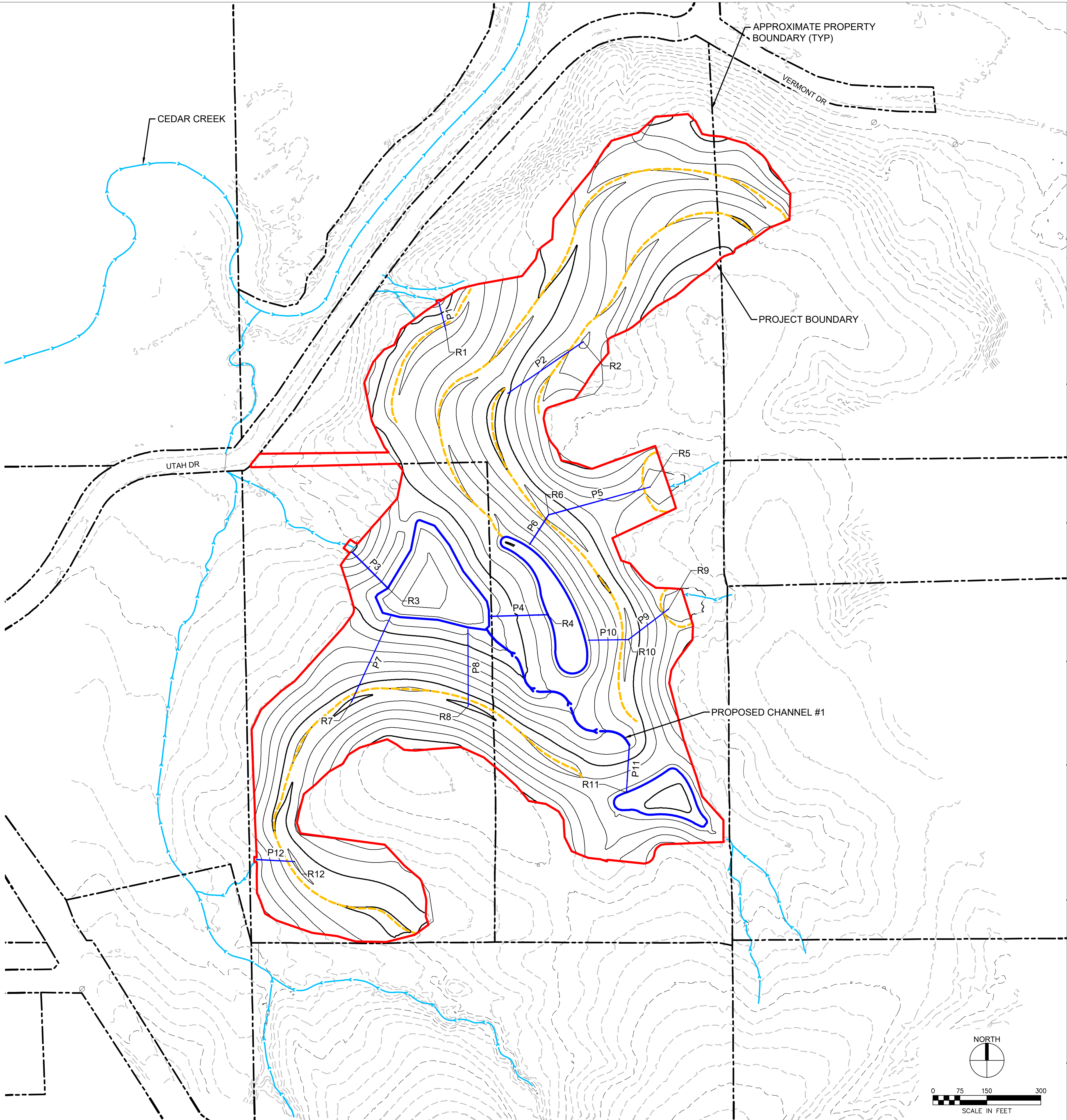
NOTE:  
MR = METAL RISER - SEE DETAIL  
CR = CONCRETE RISER WITH TRASH RACK - SEE DETAIL

| PIPE SUMMARY   |        |
|----------------|--------|
| TYPE           | TOTAL  |
| 8" HDPE        | 501 LF |
| 10" HDPE       | 142 LF |
| 12" HDPE       | 707 LF |
| 18" HDPE       | 79 LF  |
| 12" PPHP       | 132 LF |
| 18" PPHP       | 160 LF |
| 24" PPHP       | 143 LF |
| 8" PVC OUTLET  | 3      |
| 12" PVC OUTLET | 3      |
| 18" PVC OUTLET | 1      |

| RISER SUMMARY |       |
|---------------|-------|
| TYPE          | TOTAL |
| 10" CMP       | 3     |
| 12" CMP       | 1     |
| 18" CMP       | 4     |
| 24" CMP       | 1     |
| 48" CONCRETE  | 3     |

| CHANNEL   |                   |            |             |
|-----------|-------------------|------------|-------------|
| CHANNEL # | BOTTOM WIDTH (FT) | DEPTH (FT) | SIDE SLOPES |
| 1         | 4                 | 1.2        | 5:1         |

NOTES:  
1. SEE DETAILS, PIPE PROFILES, AND GRADING PLANS FOR ADDITIONAL INFORMATION.  
2. PIPE LENGTHS FOR PIPES LISTED WITH "DL" IN THE NOTES COLUMN INCLUDE A 20' OUTLET SECTION  
3. NO PVC OUTLET SECTION REQUIRED FOR PPHP PIPES.



DESIGN BY:MMO

DRAWN BY:GHK

CHKD. BY:LTM

ISSUED:8/13/2026

REVISED:----

S-H PROJECT NUMBER:2142303680

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AML RECLAMATION PROJECT

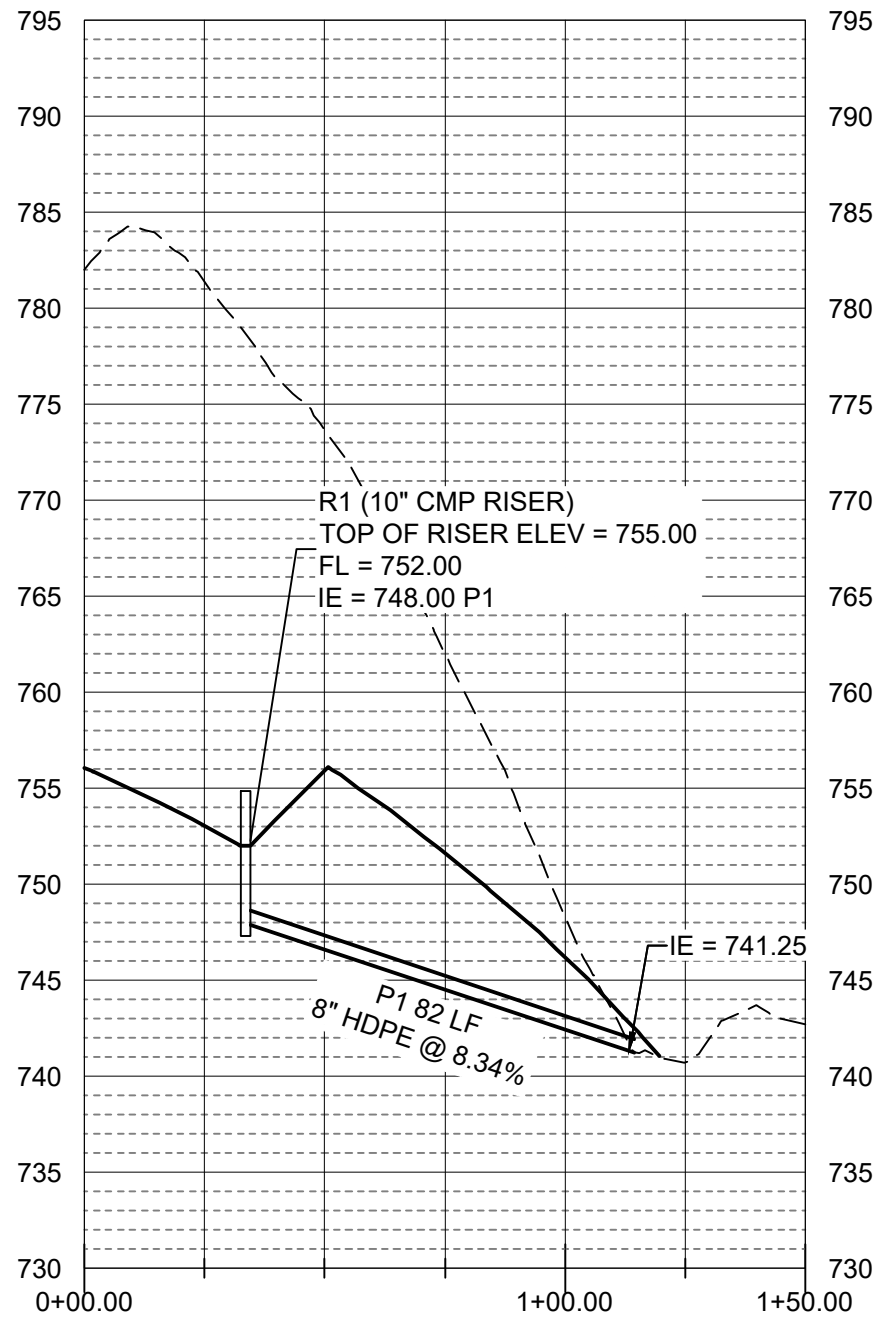
DRAINAGE PLAN

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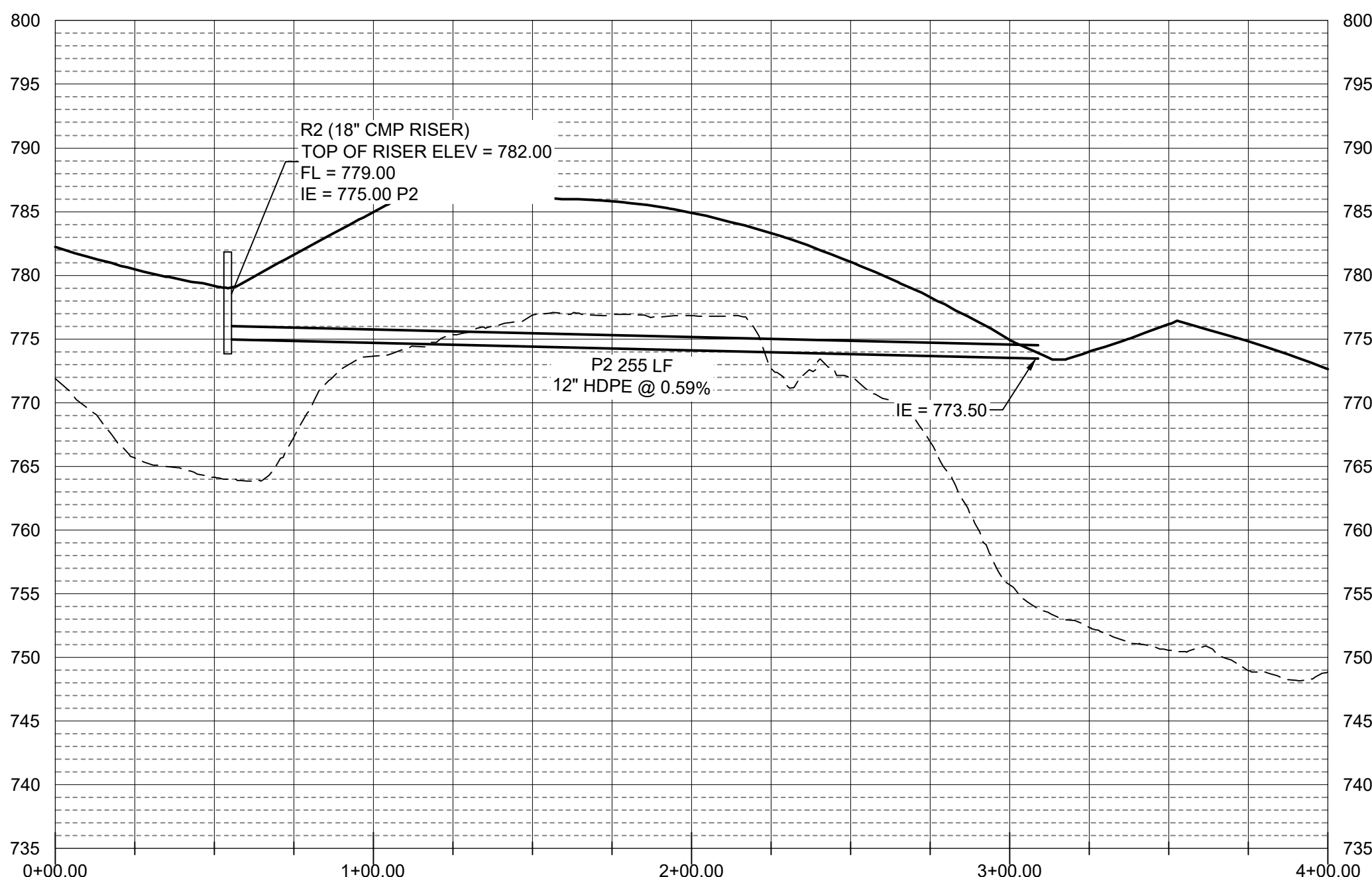
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HOOVER STATE OFFICE BUILDING  
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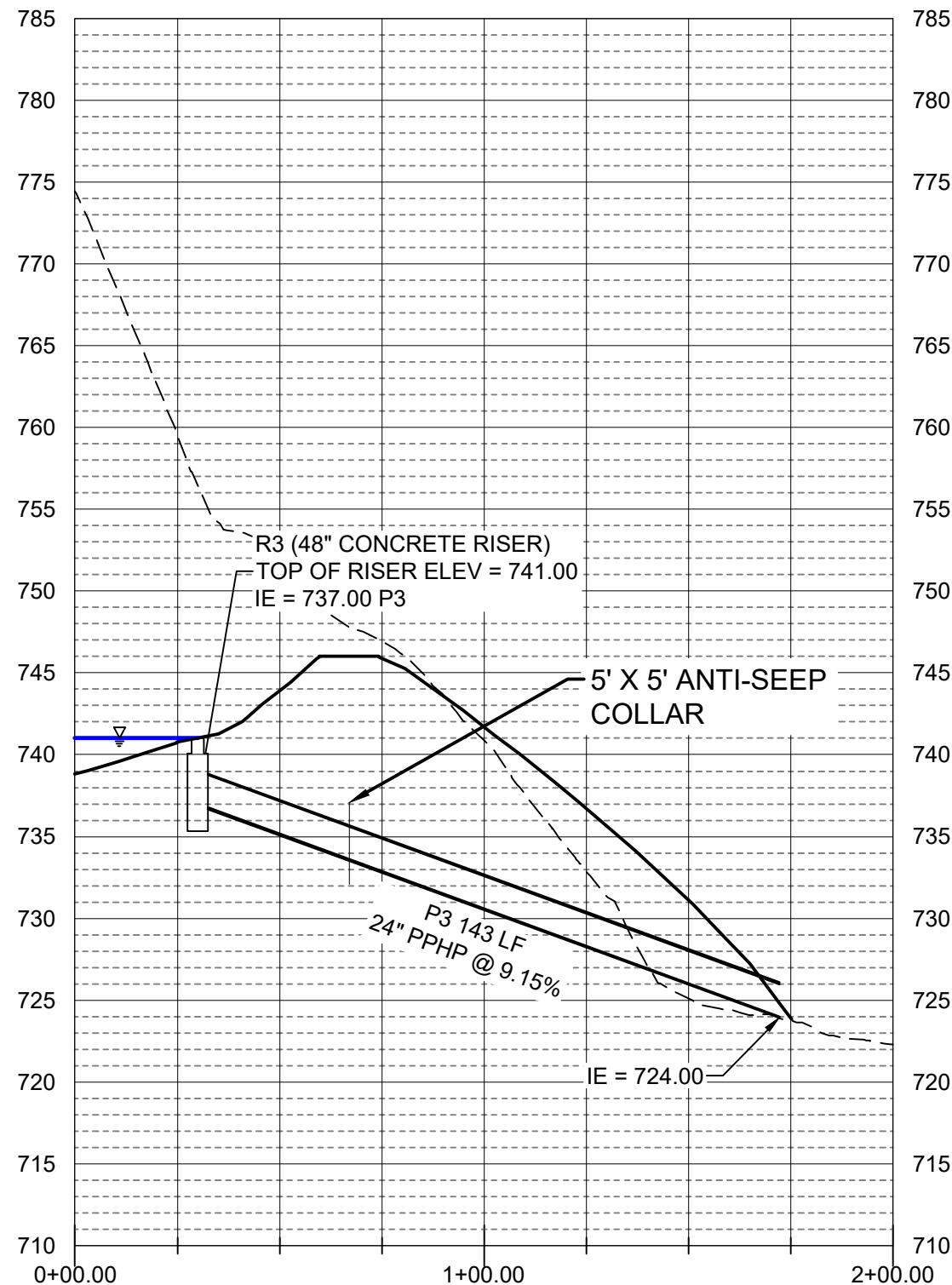
SHEET  
13 OF 24



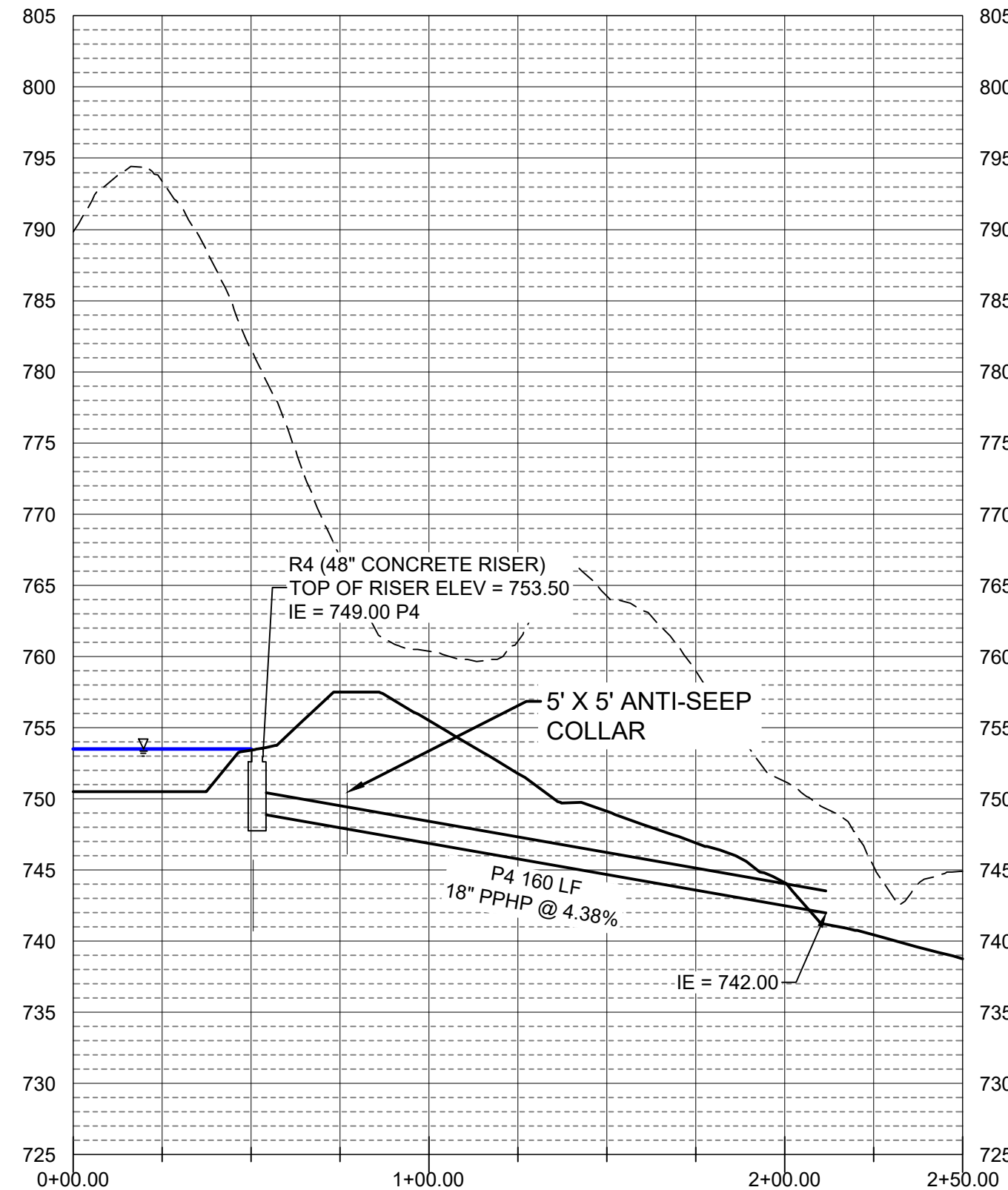
P1 PROFILE



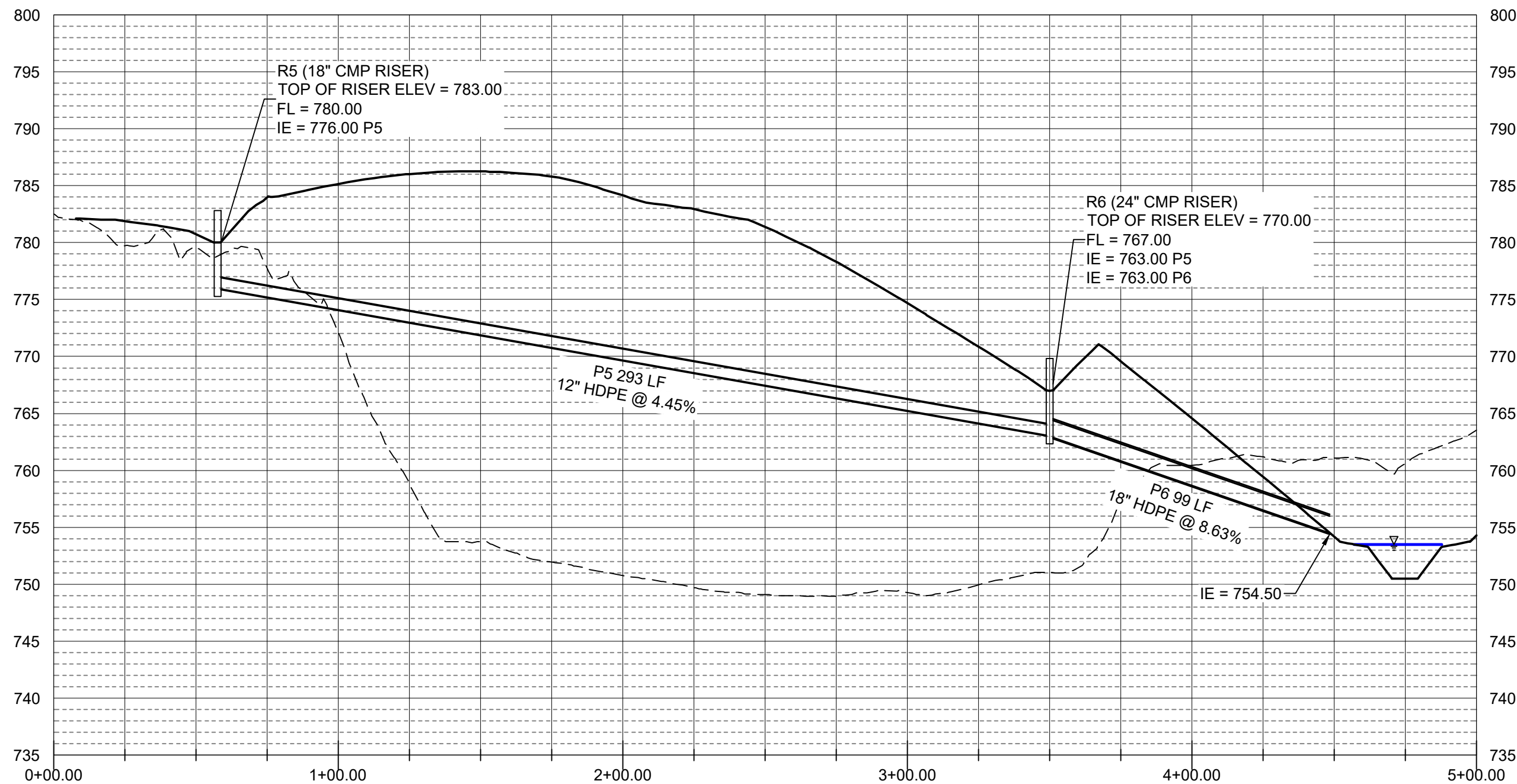
P2 PROFILE



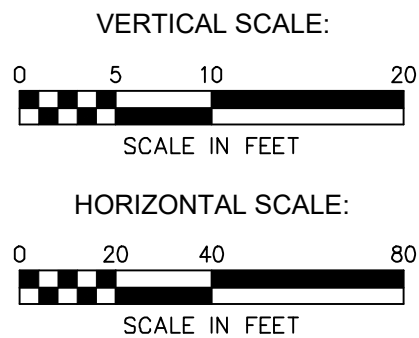
P3 PROFILE



P4 PROFILE



P5-6 PROFILE



### HDPE PIPE COVER INFORMATION

| SIZE (IN) | MIN (FT) | MAX (FT) |
|-----------|----------|----------|
| 8"        | 1        | 11       |
| 10"       | 1        | 11       |
| 12"       | 1        | 11       |
| 15"       | 1        | 11       |

### PPHP PIPE COVER INFORMATION

| SIZE (IN) | MIN (FT) | MAX (FT) |
|-----------|----------|----------|
| 12"       | 1        | 16       |
| 18"       | 1        | 16       |
| 24"       | 1        | 11       |

#### NOTES:

- MINIMUM PIPE SLOPE = 1.0%
- WHERE PIPES ARE SHOWN TO OUTLET BELOW GRADE, CREATE 4' WIDE SWALE FROM PIPE OUTLET TO FLOWLINE OF NEAREST CHANNEL OR NORMAL WATER LEVEL OF NEAREST WETLAND.

S-H PROJECT NUMBER: 2142303680

REVISED: ---

ISSUED: 8/13/2026

CHKD. BY: LTM

GHK

DRAWN BY:

DESIGN BY: MMO

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PAUL TODD  
AML RECLAMATION PROJECT

PIPE PROFILES

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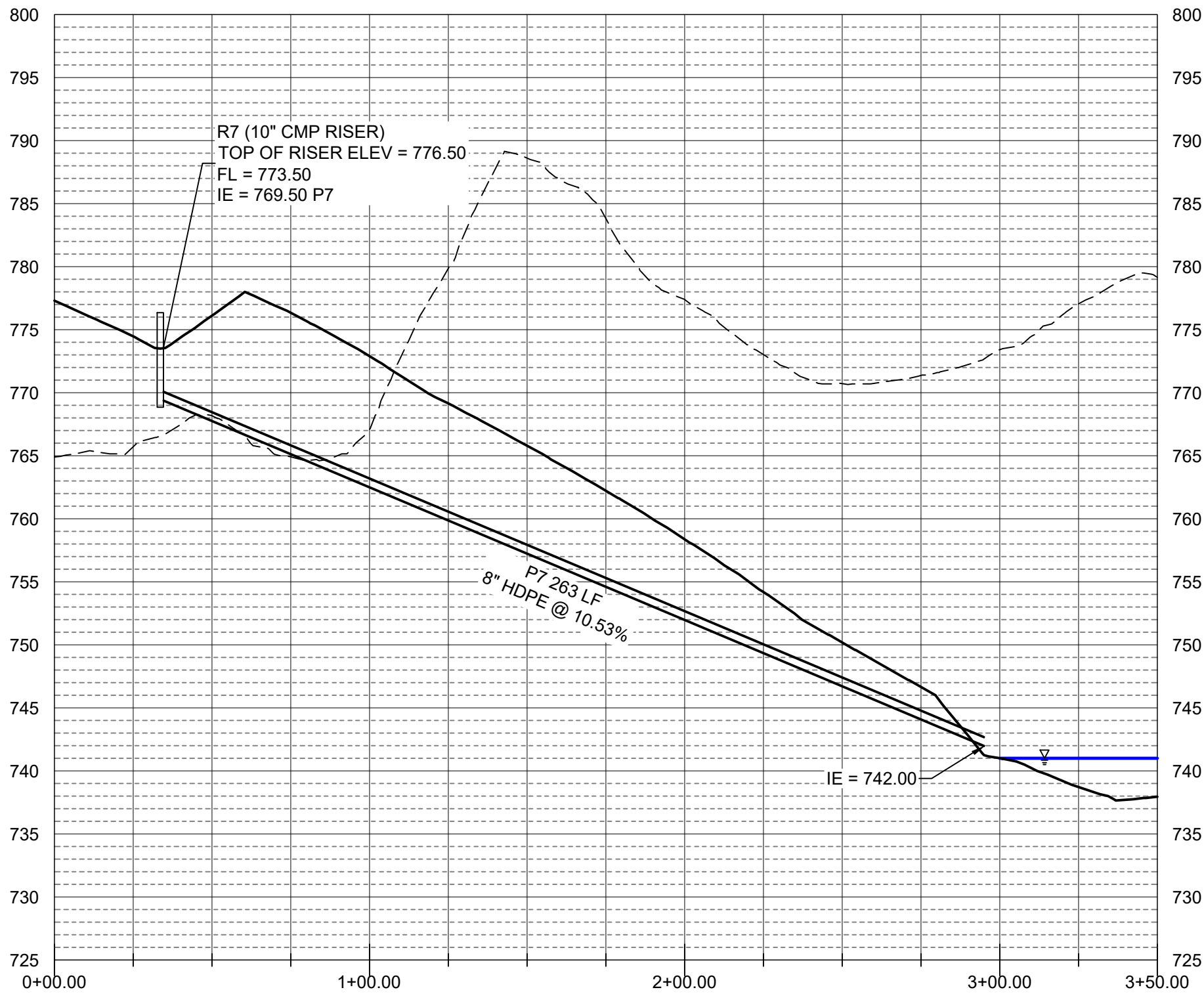
ARCHITECTURE+ENGINEERING

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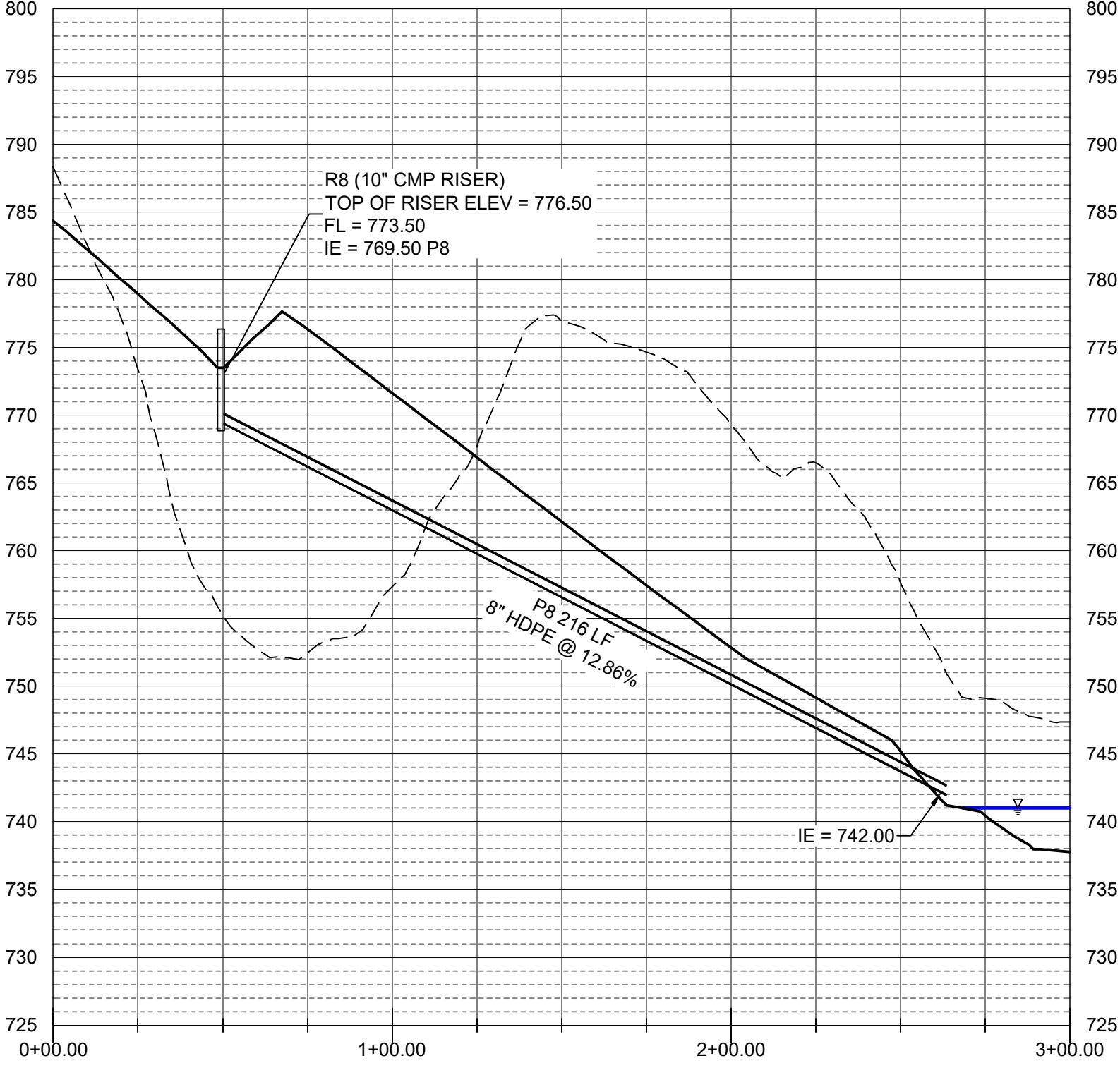
Iowa | Illinois | Missouri | Illinois Firm Number: 184-000214

SHEET

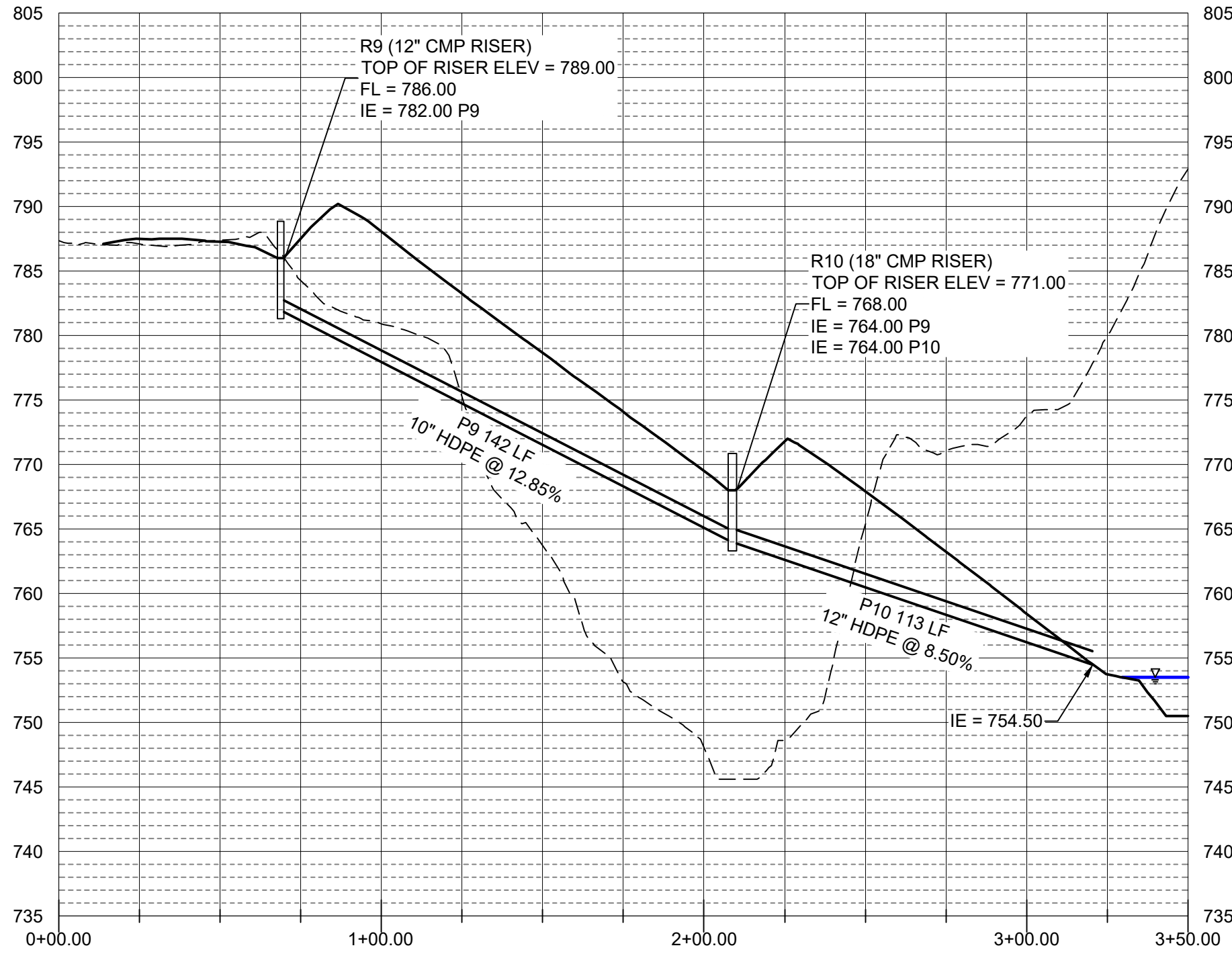
14 OF 24



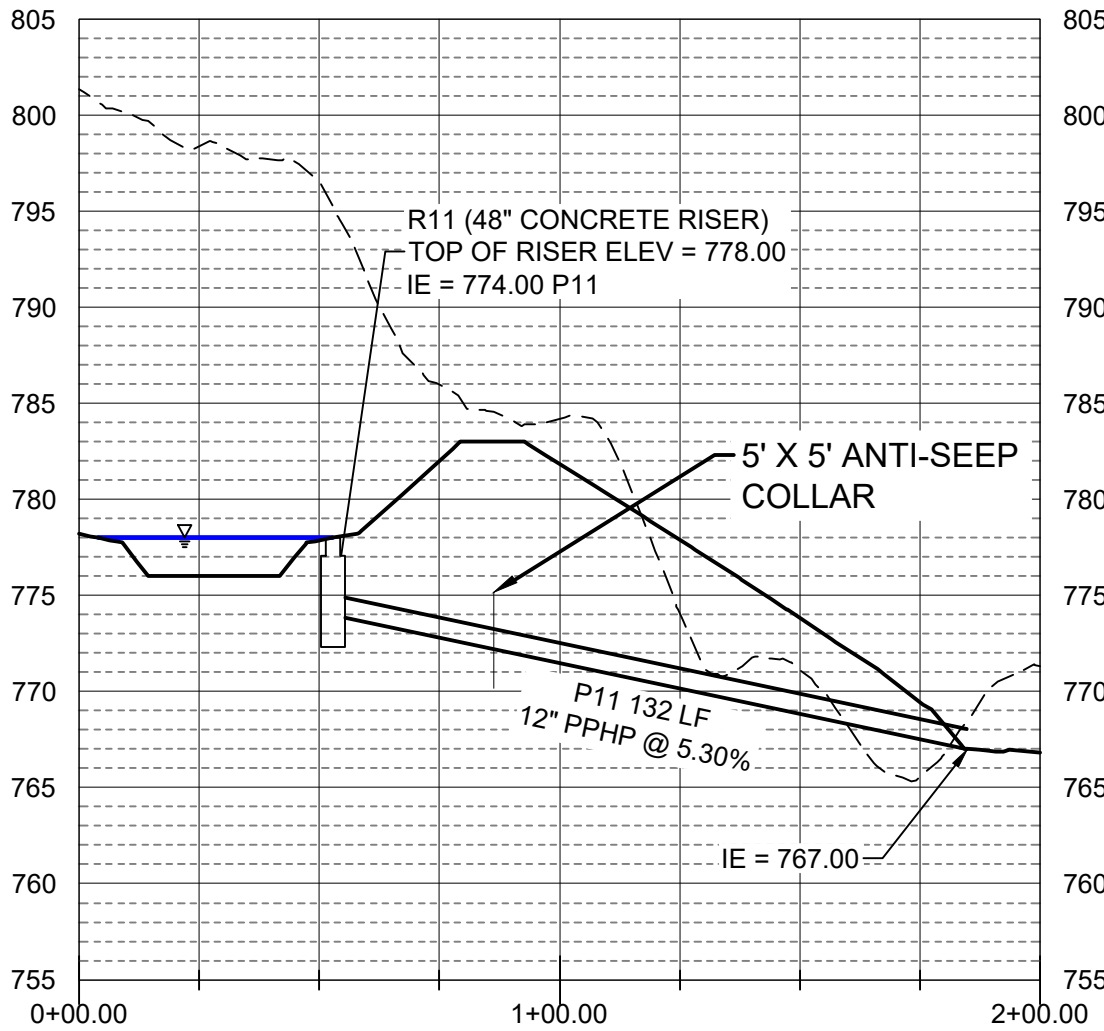
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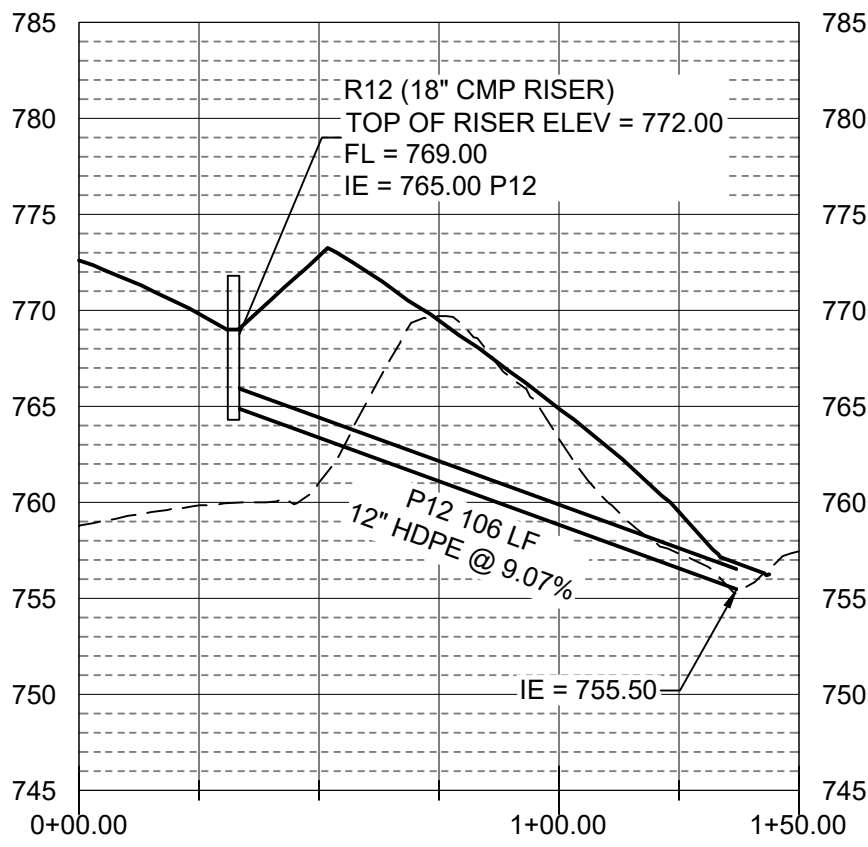
P8 PROFILE



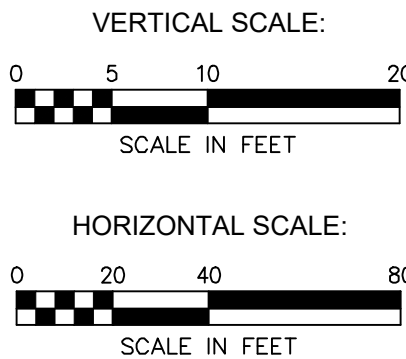
P9-10 PROFILE



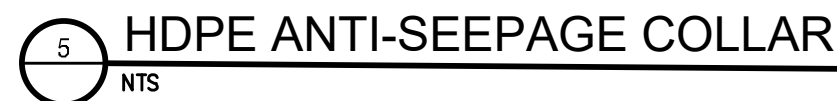
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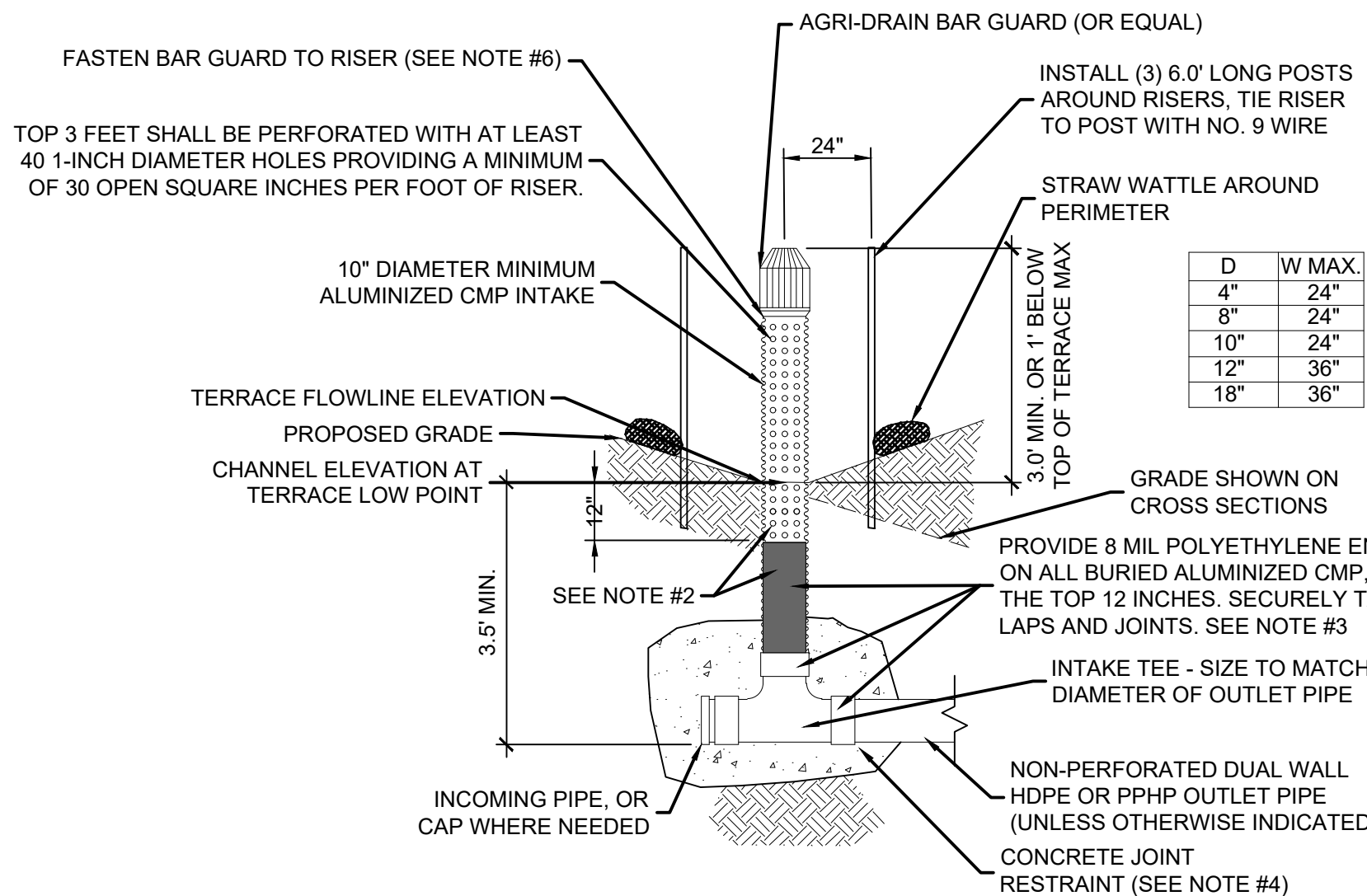


P12 PROFILE

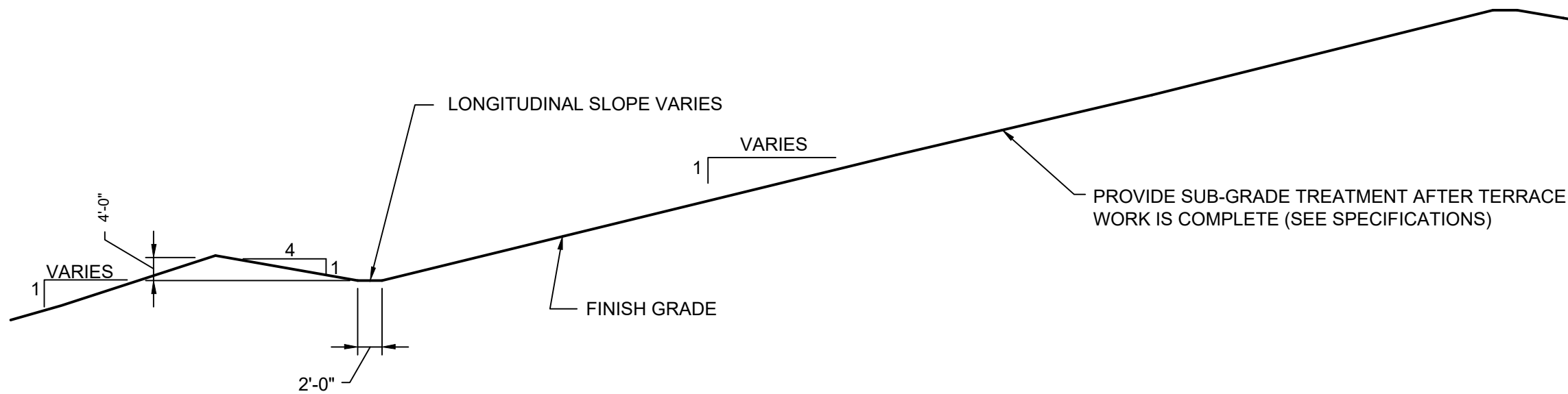
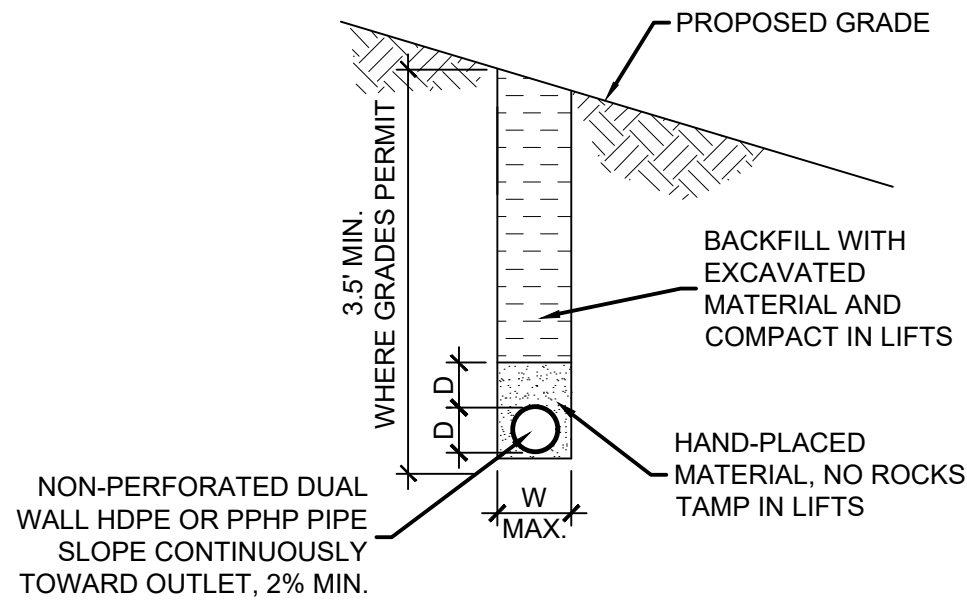


|                                      |               |               |                                                                                                                                                                                                              |              |                                |
|--------------------------------------|---------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------|
| DESIGN BY: MMO                       | DRAWN BY: GHK | CHKD. BY: LTM | ISSUED: 8/13/2026                                                                                                                                                                                            | REVISED: --- | S-H PROJECT NUMBER: 2142303680 |
| PAUL TODD<br>AML RECLAMATION PROJECT |               |               | IOWA DEPARTMENT OF AGRICULTURE<br>AND LAND STEWARDSHIP<br>DIVISION OF SOIL CONSERVATION<br>AND WATER QUALITY<br>HOOVER STATE OFFICE BUILDING<br>1305 E. WALNUT STREET DES MOINES, IA 50319<br>(515) 281-5321 |              |                                |
|                                      |               |               |                                                                                                                                                                                                              |              |                                |
| SHEET<br>15 OF 24                    |               |               |                                                                                                                                                                                                              |              |                                |

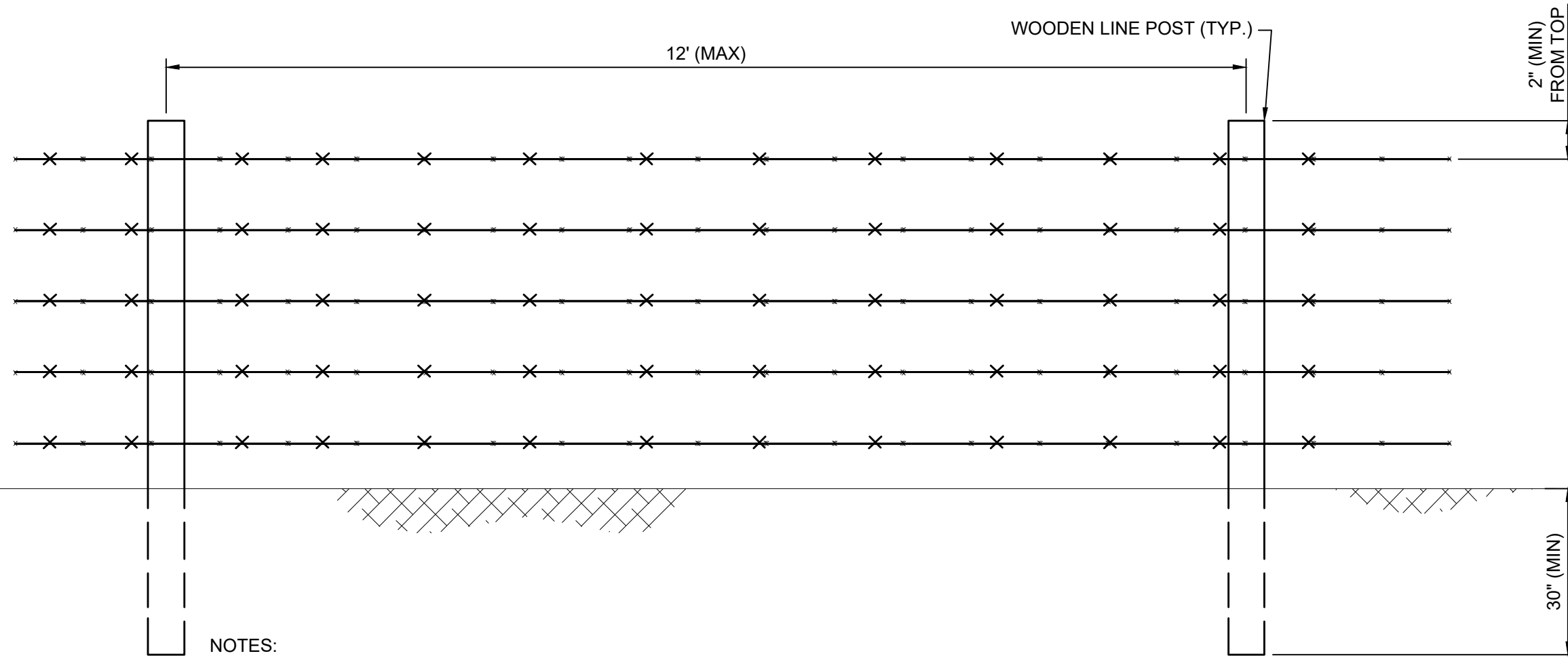
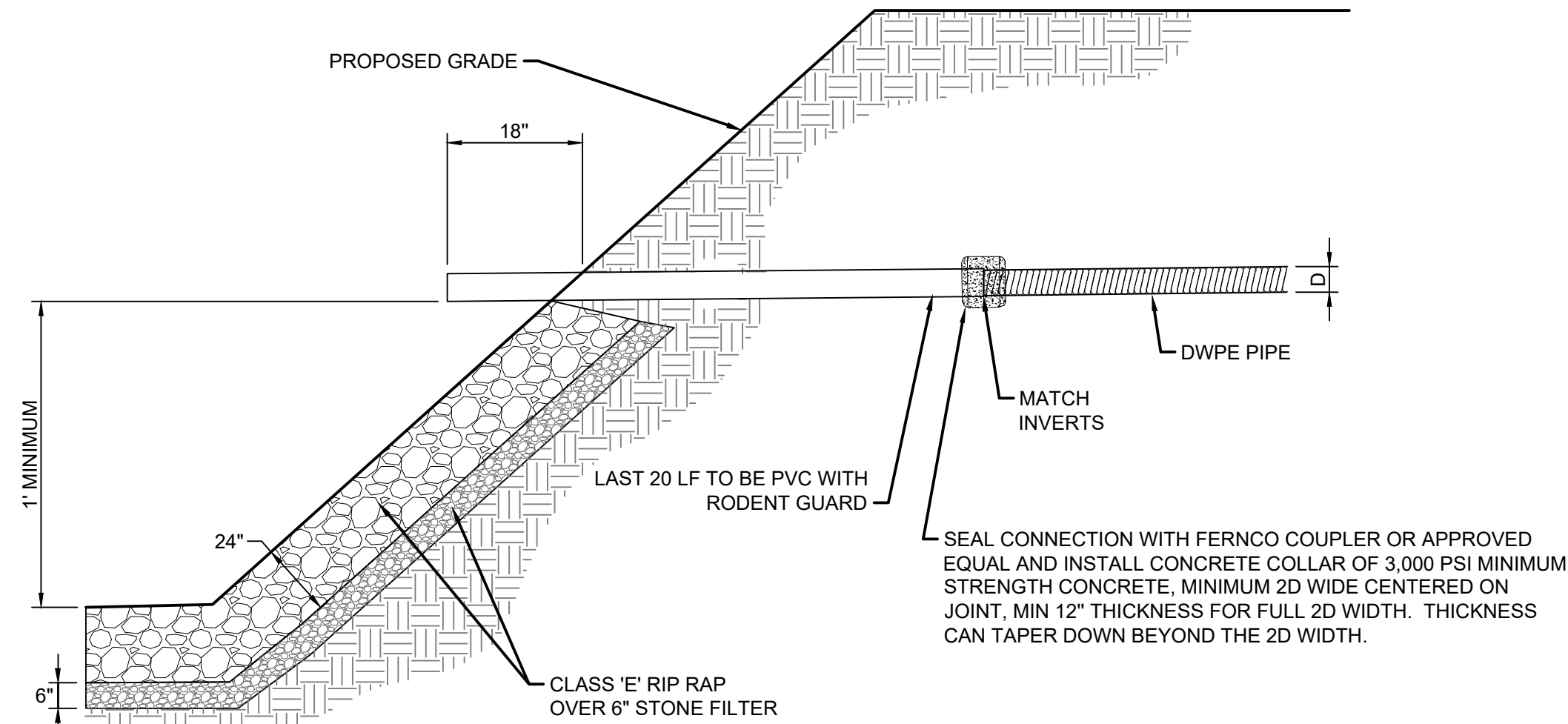
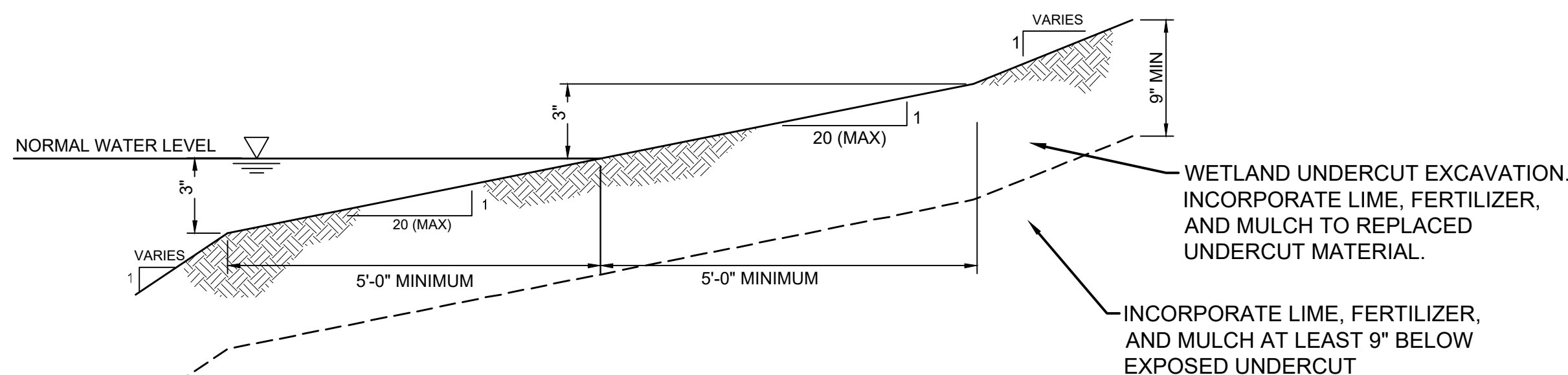




- NOTES:
1. CMP RISER PIPE SHALL BE ALUMINIZED AND MEET ASTM A742 & A929 STANDARDS.
  2. PERFORATED MID-SECTION BELOW GROUND IS RECOMMENDED: TAPE OVER ALL PRE-FABRICATED HOLES WITH TILE TAPE EXCEPT TOP 12" IMMEDIATELY BELOW GRADE.
  3. WRAP 8 MIL POLYETHYLENE ENCASMENT ON ALL BURIED ALUMINIZED CMP, EXCLUDING THE TOP 12 INCHES. SECURELY TAPE ALL LAPS AND JOINTS. OVERLAP SEAMS A MINIMUM 12 INCHES AND TAPE SECURELY WITH TILE TAPE.
  4. IF APPROVED BY THE ENGINEER, AGRI-DRAIN (OR EQUAL) PIPE STRAPS MAY BE USED IN LIEU OF CONCRETE TO RESTRAIN ALL CONNECTIONS OF THE RISER AND TEE ASSEMBLY.
  5. IF PIPE STRAPS ARE USED ALL METAL "D" RINGS SHALL BE COVERED WITH TILING TAPE.
  6. FASTEN BAR GUARD TO RISER WITH THREE (3) SELF-TAPPING SCREWS OR THREE (3) STAINLESS STEEL ZIP TIES EQUALLY SPACED ABOUT RISER.



- NOTES:
1. EXISTING SLOPES STEEPER THAN 5' HORIZONTAL TO 1' VERTICAL SHALL BE BENCHED PRIOR TO PLACING FILL.
  2. BENCHING SHOWN IN DETAIL IS TYPICAL. FIELD CONDITIONS MAY REQUIRE THAT ALTERNATE VERTICAL AND HORIZONTAL DIMENSIONS FOR BENCHES BE USED.
  3. CONTACT THE ENGINEER PRIOR TO ANY BENCHING ACTIVITY.



- NOTES:
1. BARBED WIRE SHALL BE GALVANIZED STEEL WITH A 4-POINT PATTERN OF ROUND BARBS SPACED 5 INCHES ON CENTER MEETING THE REQUIREMENTS OF IDOT SECTION 4154.04.
  2. POSTS SHALL BE WOOD PRESSURE TREATED FOR GROUND CONTACT MEETING THE REQUIREMENTS OF IDOT SECTION 4154.07.

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PAUL TODD  
AML RECLAMATION PROJECT

PROJECT DETAILS

S-H PROJECT NUMBER: 2142303680

REVISED: ---

ISSUED: 8/13/2026

CHKD. BY: LTM

GHK

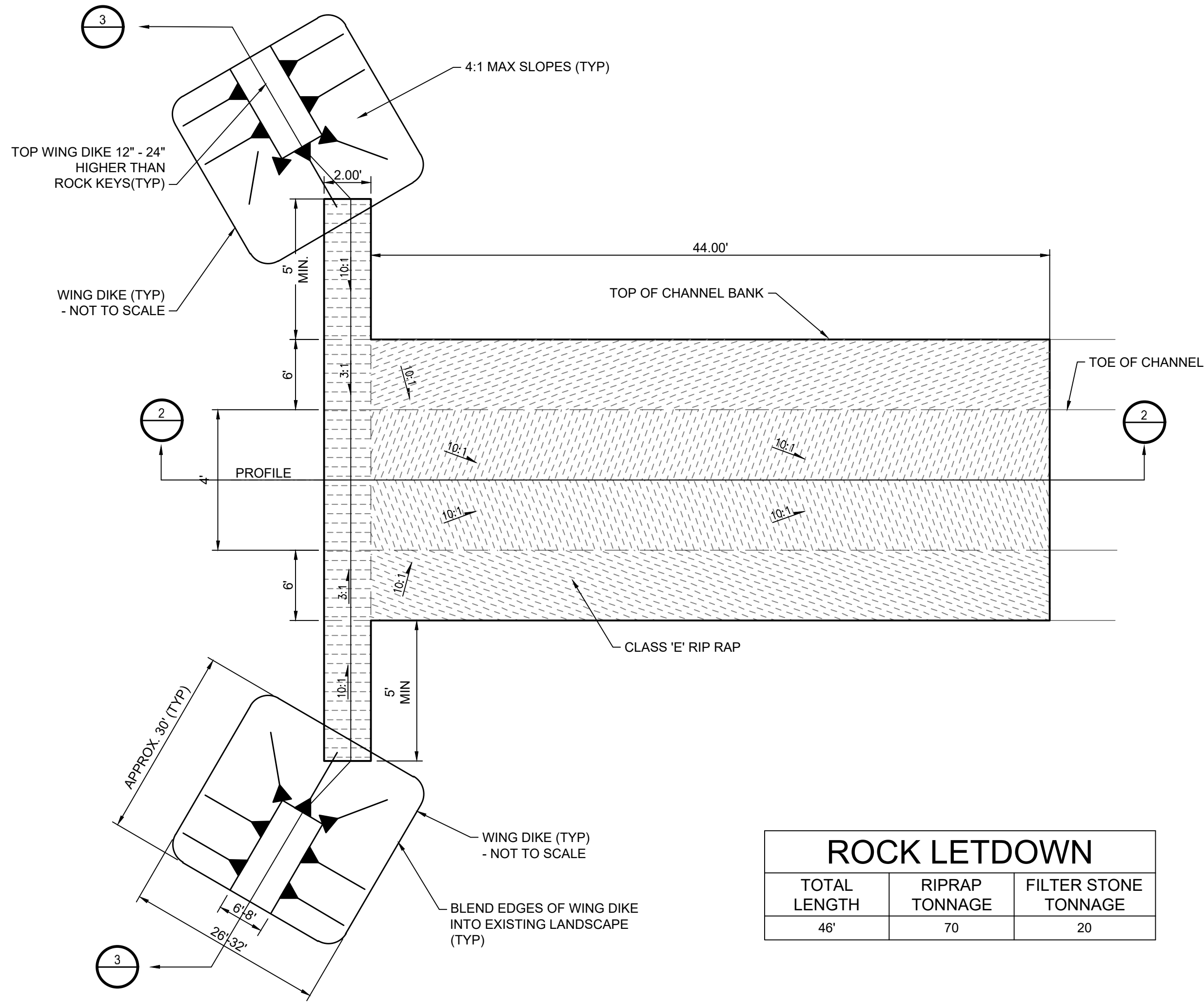
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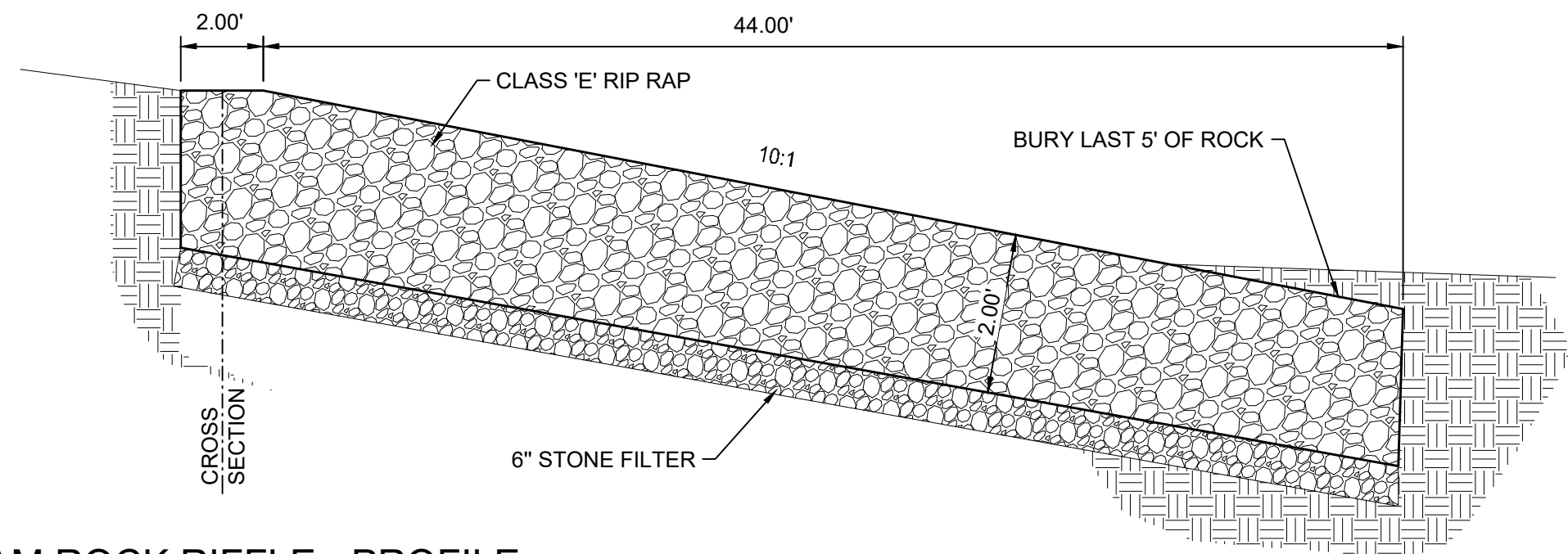
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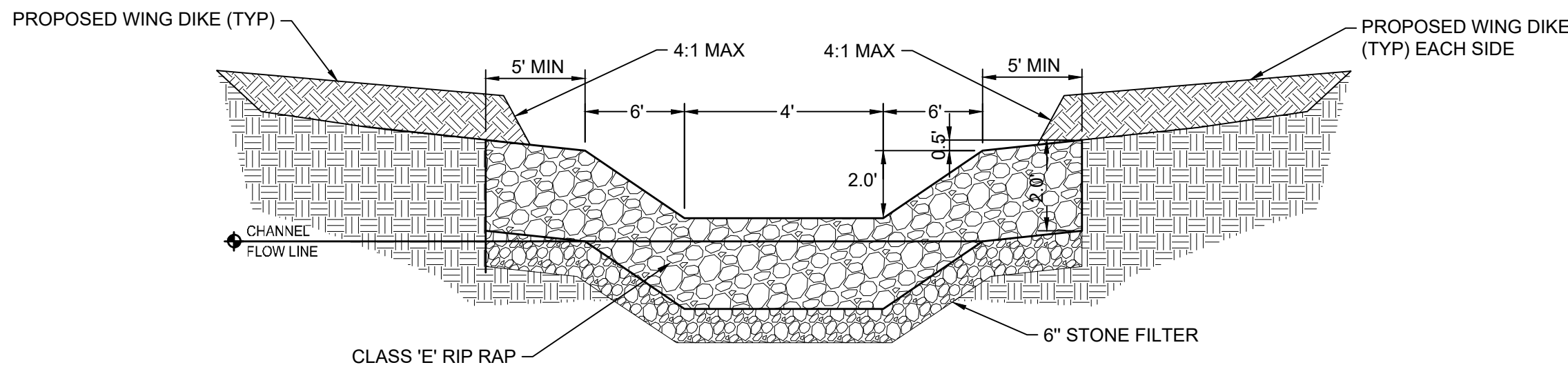
17 OF 24



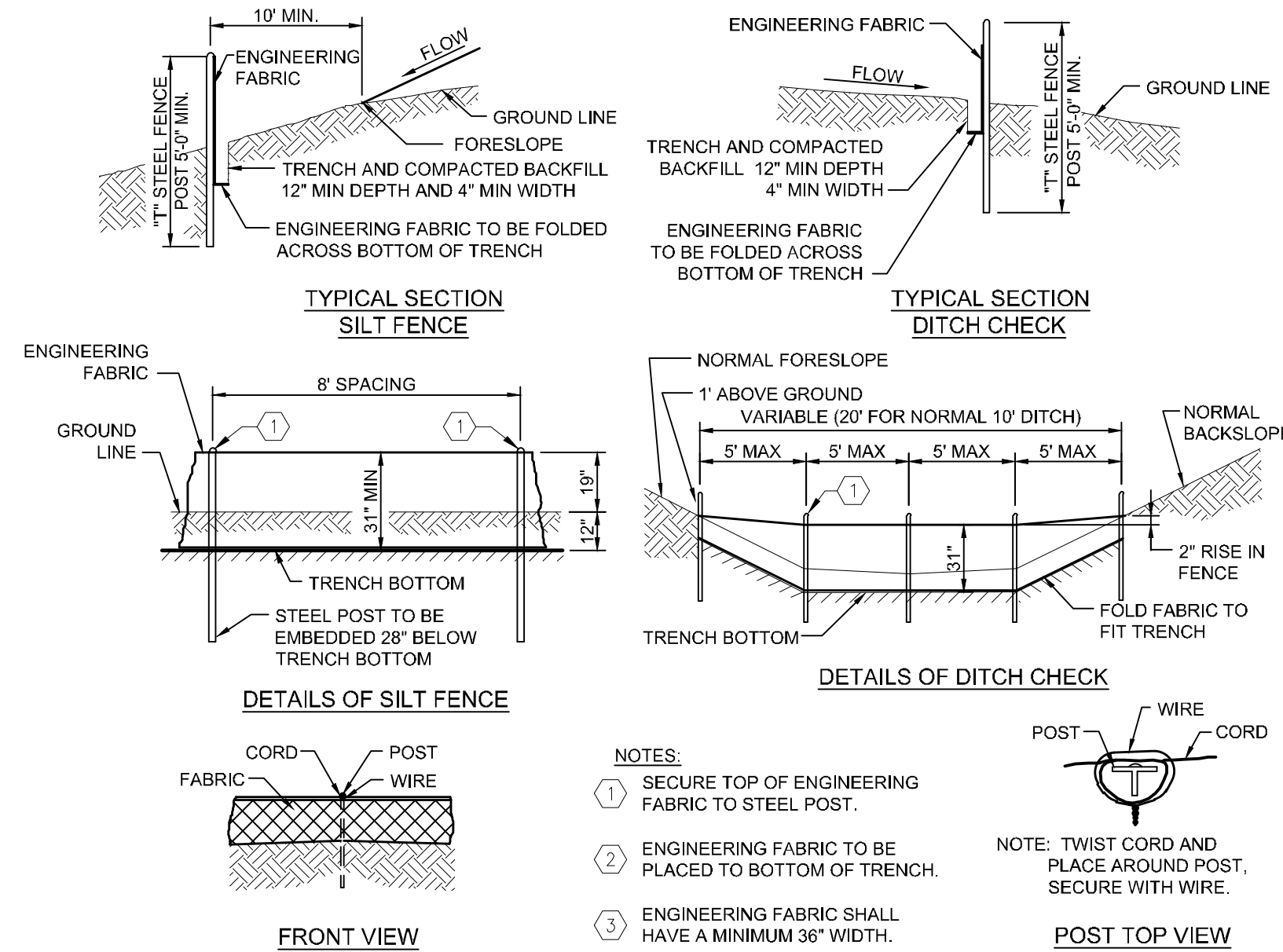
1 46' STREAM ROCK RIFFLE - PLAN  
NTS



2 46' STREAM ROCK RIFFLE - PROFILE  
NTS



3 46' STREAM ROCK RIFFLE - CROSS SECTION  
NTS



4 SILT FENCE  
NTS

S-H PROJECT NUMBER: 2142303680

REVISED: ---

ISSUED: 8/13/2026

CHKD. BY: LTM

GHK

DRAWN BY:

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AML RECLAMATION PROJECT

PROJECT DETAILS

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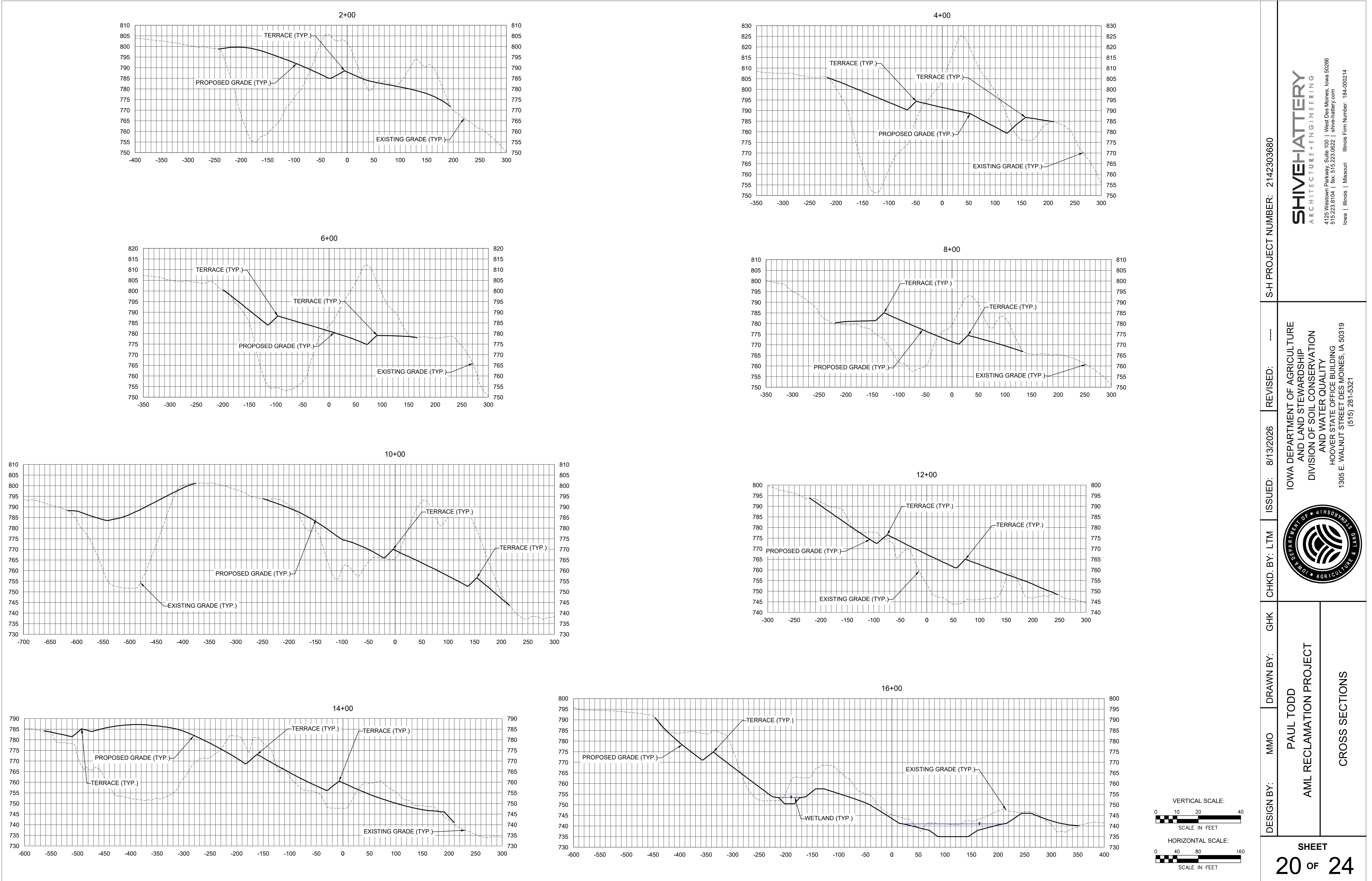
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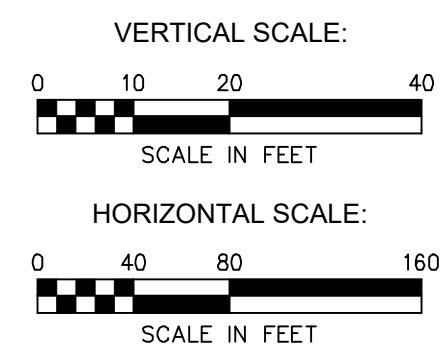
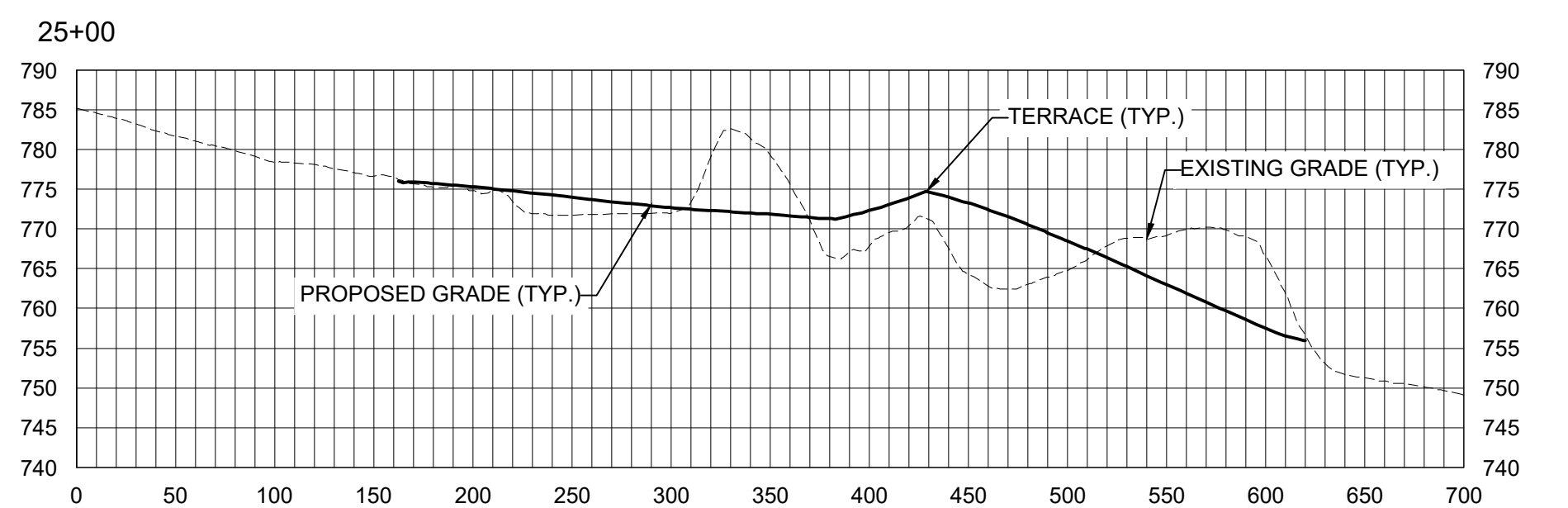
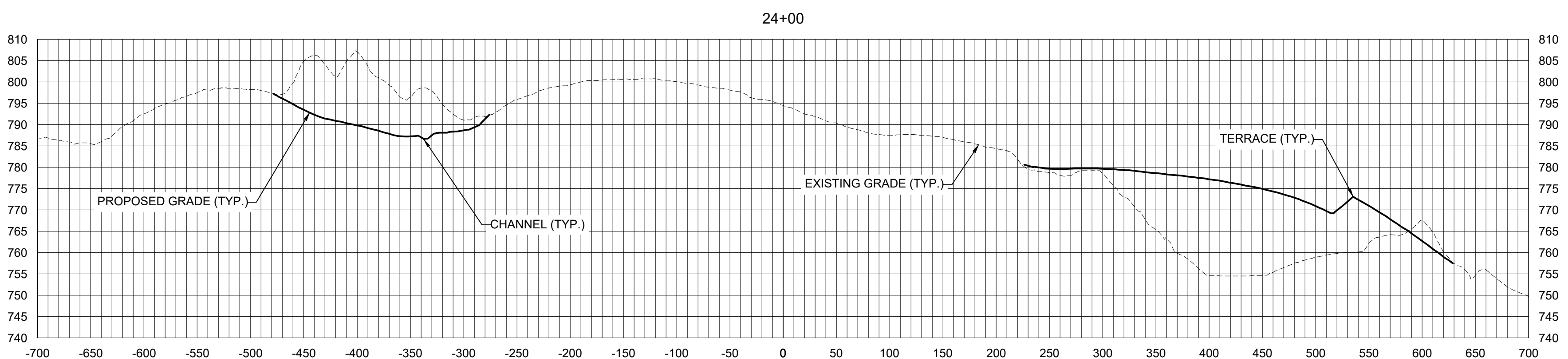
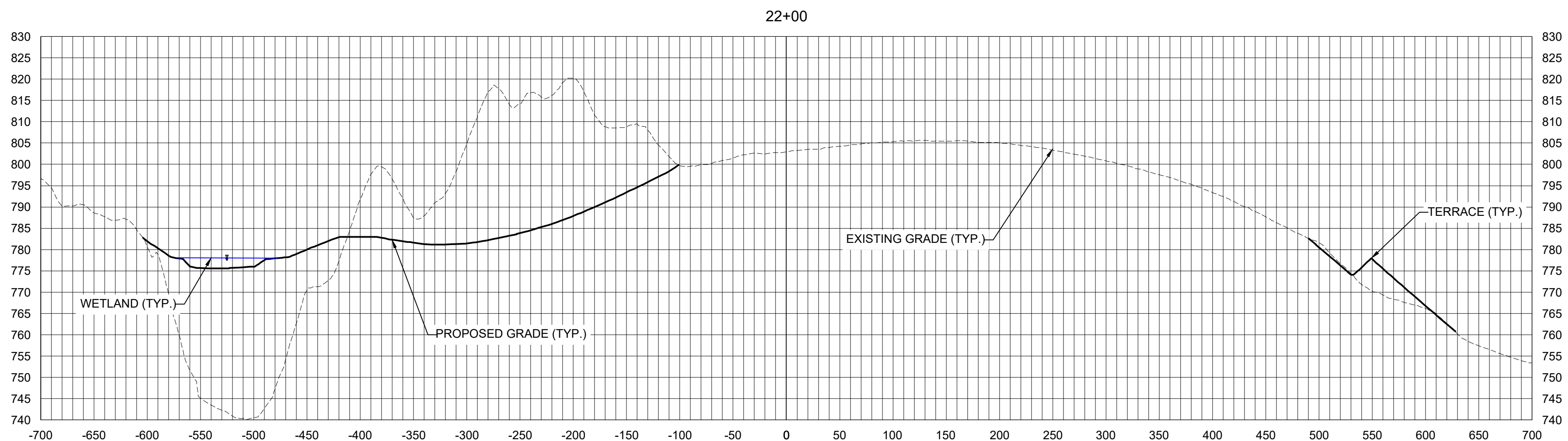
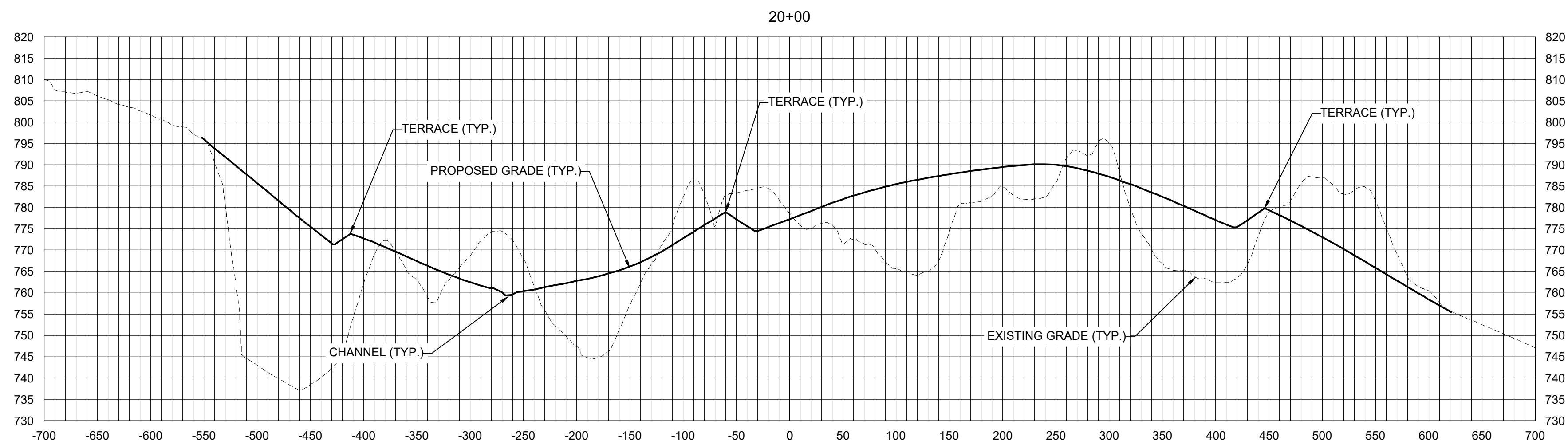
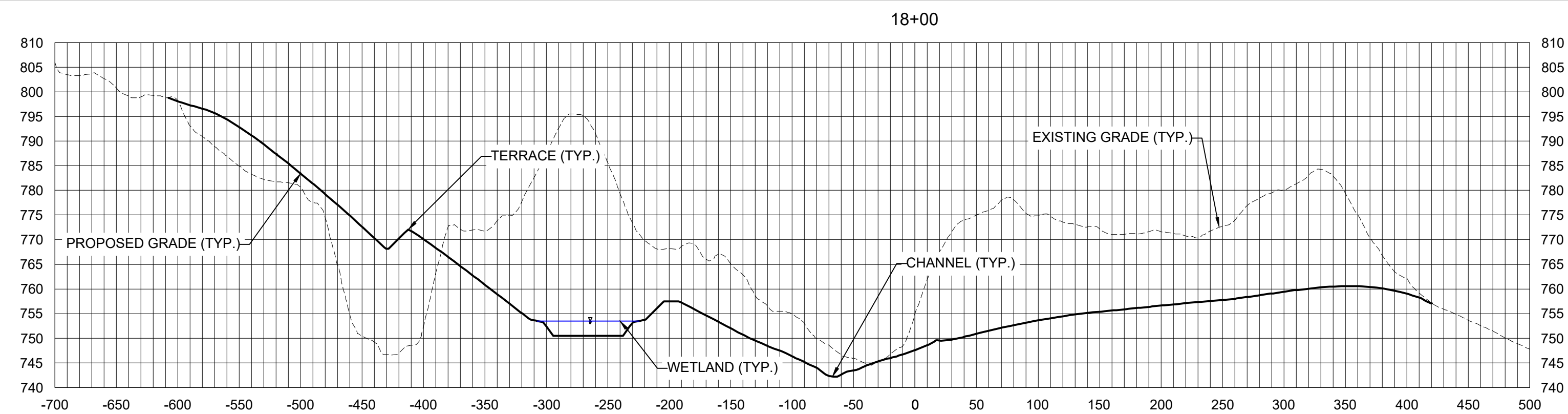
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SHEET

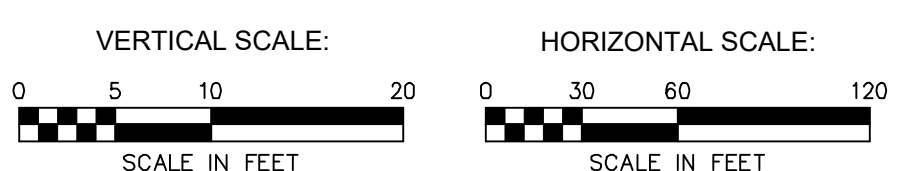
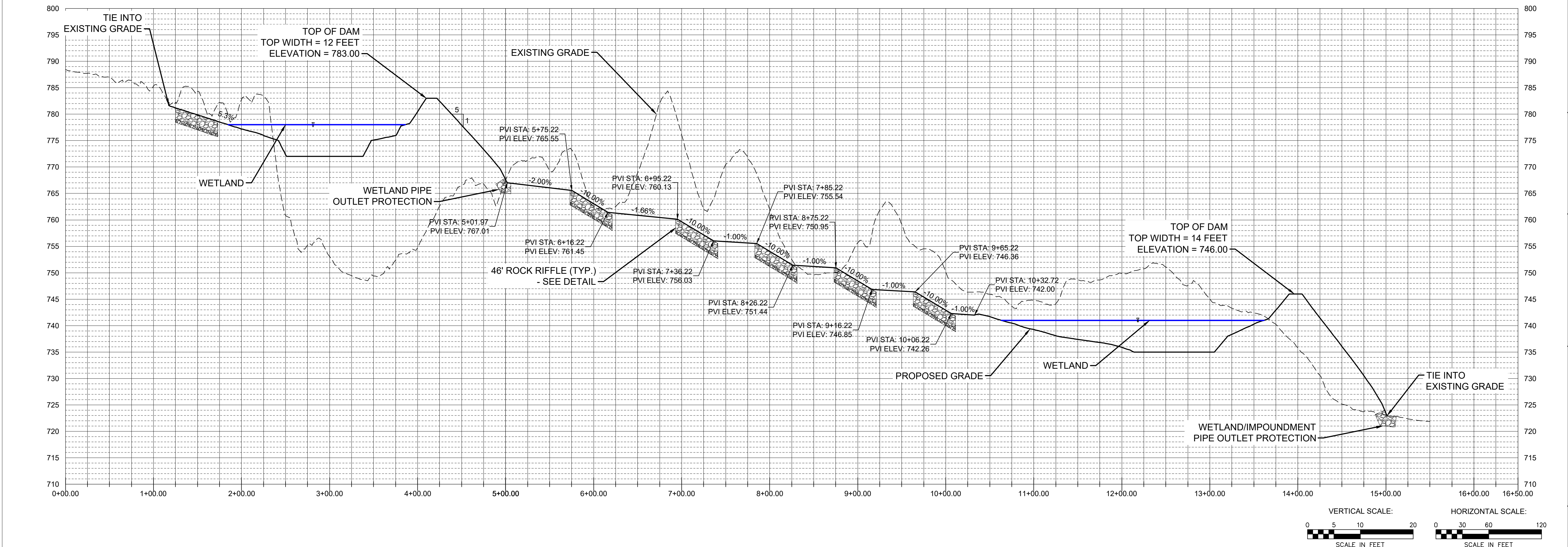
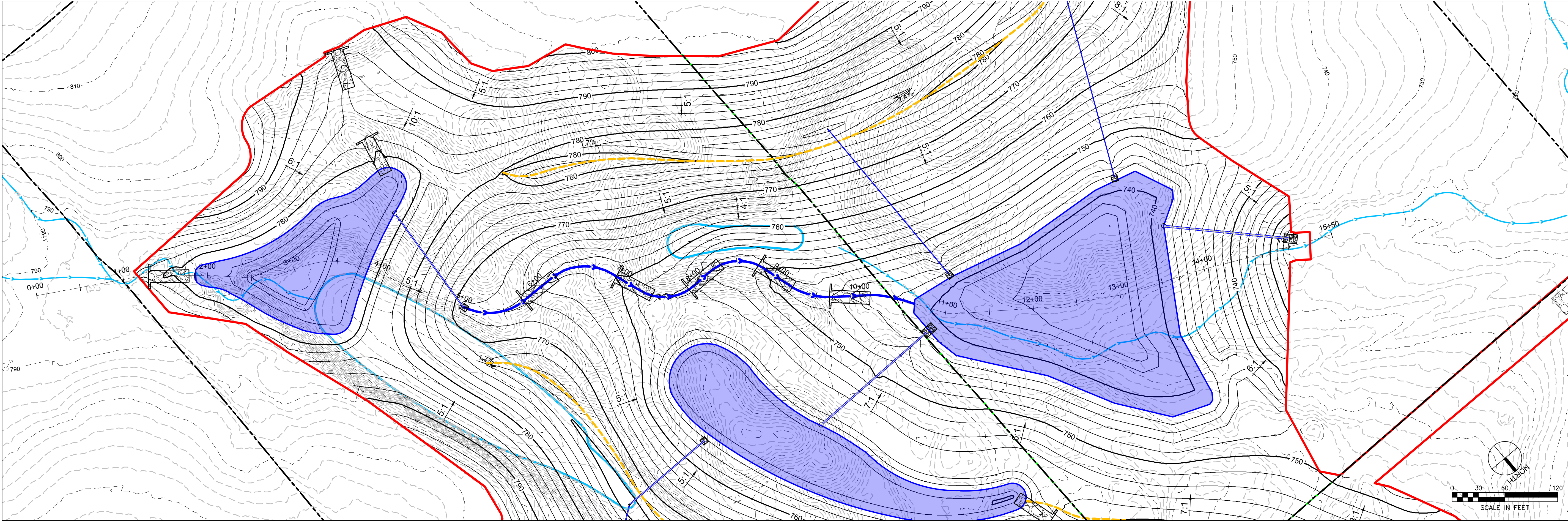
18 OF 24







|                                      |     |           |     |                                                                                                                                                                                                                                                                                                                                |                   |               |                                |
|--------------------------------------|-----|-----------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|--------------------------------|
| DESIGN BY:                           | MMO | DRAWN BY: | GHK | CHKD. BY: LTM                                                                                                                                                                                                                                                                                                                  | ISSUED: 8/13/2026 | REVISED: ---- | S-H PROJECT NUMBER: 2142303680 |
| PAUL TODD<br>AML RECLAMATION PROJECT |     |           |     |  IOWA DEPARTMENT OF AGRICULTURE<br>AND LAND STEWARDSHIP<br>DIVISION OF SOIL CONSERVATION<br>AND WATER QUALITY<br>HOOVER STATE OFFICE BUILDING<br>1305 E. WALNUT STREET DES MOINES, IA 50319<br>(515) 281-5321                             |                   |               |                                |
| CROSS SECTIONS                       |     |           |     |  SHIVE-HATTERY<br>ARCHITECTURE + ENGINEERING<br>4125 Westown Parkway, Suite 100   West Des Moines, Iowa 50266<br>515.223.8104   fax. 515.223.0622   shive-hattery.com<br>Iowa   Illinois   Missouri      Illinois Firm Number: 184-000214 |                   |               |                                |



|                                      |               |               |                   |                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                   |  |
|--------------------------------------|---------------|---------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| S-H PROJECT NUMBER: 2142303680       |               | REVISED: ---  |                   | IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP<br>DIVISION OF SOIL CONSERVATION AND WATER QUALITY<br>HOOVER STATE OFFICE BUILDING<br>1305 E. WALNUT STREET DES MOINES, IA 50319<br>(515) 281-5321 |  | SHIVEHATTERY<br>ARCHITECTURE+ENGINEERING<br>4105 Westown Parkway, Suite 100   West Des Moines, Iowa 50266<br>515.223.6104   fax: 515.223.6022   shivehattery.com<br>Iowa   Illinois   Missouri   Illinois Firm Number: 184-000214 |  |
| DESIGN BY: MMO                       | DRAWN BY: GHK | CHKD. BY: LTM | ISSUED: 8/13/2026 |                                                                                                                   |  |                                                                                                                                                                                                                                   |  |
| PAUL TODD<br>AML RECLAMATION PROJECT |               |               |                   |                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                   |  |
| STREAM PLAN AND PROFILE              |               |               |                   | SHEET<br>22 OF 24                                                                                                                                                                                      |  |                                                                                                                                                                                                                                   |  |

# STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

REFER TO: CONTENTS OF THE POLLUTION PREVENTION PLAN IN PART IV. D. OF IOWA NPDES GENERAL PERMIT NO. 2 -- EFFECTIVE MARCH 1, 2023 THROUGH FEBRUARY 29, 2028.

## 1. SITE DESCRIPTION

### A. DESCRIBE NATURE OF CONSTRUCTION ACTIVITY:

- THE PROJECT CONSISTS OF RECLAIMING THE AML SITES DISTURBED BY PAST COAL MINING ACTIVITIES. THE MAIN OBJECTIVE OF THE AML RECLAMATION IS TO MITIGATE PRIORITY FEATURES THAT PRESENT A DANGER TO THE HEALTH AND SAFETY OF THE GENERAL PUBLIC.
- THE MAJOR PHASES OF THE PROJECT ARE TEMPORARY EROSION CONTROL; ROUGH GRADING; LIME TREATMENT OF SURFACE SOILS, FERTILIZING, MULCHING, PERMANENT SEEDING INCLUDING INSTALLATION OF PERMANENT EROSION CONTROL PRACTICES LIKE (engineer to name typical practices used).
- END USE OF SITE IS: WILDLIFE HABITAT AND/OR RECREATIONAL USE
- THE ESTIMATED PROJECT TIMELINE IS: OCTOBER 2026 TO DECEMBER 2027

### B. ESTIMATE THE TOTAL AREA OF THE SITE AND THE AREA EXPECTED TO BE DISTURBED BY EXCAVATION, GRADING OR OTHER ACTIVITIES:

- 35.8 ACRES DISTURBED BY MASS GRADING AND CONSTRUCTION ACCESS.

### C. ESTIMATE THE SOIL RUNOFF COEFFICIENT OF THE SITE AFTER CONSTRUCTION IS COMPLETED, AND DESCRIBE THE WATER QUALITY OF ANY EXISTING DISCHARGE FROM THE SITE.

- THE RATIONAL RUNOFF COEFFICIENT FOLLOWING THE ESTABLISHMENT OF FINAL VEGETATION IS ESTIMATED TO BE ABOUT 0.45 TO 0.55. THIS IS ROUGHLY EQUIVALENT TO AN SCS CURVE NUMBER OF 78 WHICH IS TYPICAL FOR PASTURE-GRASS VEGETATION.
- THE WATER QUALITY BEING DISCHARGED FROM THE SITE, AT PRESENT, IS IMPAIRED WITH ACIDIC PH AND HIGH DISSOLVED IRON CONCENTRATIONS WHICH ARE DERIVED FROM THE WATER'S CONTACT WITH BARE MINE SPOIL MATERIAL ON THE SITE. THIS POOR WATER QUALITY IS OFTEN INDICATED BY RUST-COLORED PRECIPITANT IN THE RECEIVING WATERS.

### D. PROVIDE A SITE MAP SATISFYING REQUIREMENTS DESCRIBED IN PART IV. D.1.A.D.:

- SEE BMP PLAN SHEET 24 FOR CONTROLS THAT WILL BE IMPLEMENTED. FOR CONTROLS DURING AND IMMEDIATELY FOLLOWING CLEARING.

### E. PROVIDE NAME OF THE RECEIVING WATER(S) AND THE ULTIMATE RECEIVING WATERS(S).

- THE RECEIVING WATER IS AN UNNAMED TRIBUTARY AND OVERLAND FLOW TO CEDAR CREEK.

## 2. CONTROLS -- A.(1) STABILIZATION PRACTICES:

DESCRIBE TEMPORARY & PERMANENT STABILIZATION PRACTICES WITH SEQUENCE FOR IMPLEMENTATION.

- UNLESS PRECLUDED BY SNOW COVER OR FROZEN SITE CONDITIONS, AREAS TO BE GRADED AND LEFT UNDISTURBED FOR 14 OR MORE CALENDAR DAYS WILL BE ROUGH DISKED ON THE CONTOUR TO INCREASE SURFACE ROUGHNESS. ROUGH DISKING WILL BE USED EXCLUSIVELY PRIOR TO SEEDING THE FINAL VEGETATION. ROUGH DISKING IS USUALLY CONCURRENT WITH INCORPORATION OF AG LIME AND MULCH FOR THE WORK OF SUBGRADE PREPARATION.
- ONCE ALL GRADING IS COMPLETE, AND THE SOIL PH ADJUSTMENT IS ACCOMPLISHED, A PERMANENT SEEDING MIX CONSISTING OF WARM AND COOL SEASON GRASSES WILL BE PLANTED WITH AN APPROPRIATE COVER CROP OF OATS, WINTER WHEAT.
- APPROXIMATELY 2 TONS OF STRAW MULCH PER ACRE WILL BE SPREAD ACROSS THE SEEDED SOIL AND TUCKED IN WITH A TUCKING MACHINE TO PROVIDE PROTECTION FROM RAIN DROPLET IMPACT WHILE THE SEEDING BECOMES ESTABLISHED.
- THE SEEDING TYPICALLY GERMINATES WITHIN 14 DAYS & LATER PROVIDES AT LEAST 70% VEGETATIVE COVER.

### A.(2) STRUCTURAL PRACTICES DESCRIBE EROSION AND SEDIMENT CONTROL PRACTICES THAT WILL USED ON THE SITE:

#### EROSION CONTROL PRACTICES

- ROUGH DISKING AS DESCRIBED IN "STABILIZING PRACTICES" ABOVE WILL BE USED AS NECESSARY TO REDUCE SURFACE RUNOFF VELOCITIES AND INCREASE INFILTRATION.
- TERRACES WILL BE USED TO REDUCE SLOPE LENGTHS AND DETAIN/RETAIN STORM WATER RUNOFF. TERRACES WILL BE DRAINED WITH PERFORATED PLASTIC RISERS AND CONCRETE OPEN-SIDED INTAKES.
- AT TILE DRAINAGE OUTLETS RIPRAP AND LOG APRON POOLS WILL BE USED TO ABSORB ENERGY OF FLOWING STORM DRAINAGE.

### A.(2) STRUCTURAL PRACTICES CONT'D:

#### DESCRIBE EROSION AND SEDIMENT CONTROL PRACTICES THAT WILL USED ON THE SITE:

##### SEDIMENT CONTROL PRACTICES:

- STRAW WATTLES OR FILTER SOCK OR SHALLOW DITCHES ACTING AS SEDIMENT TRAPS WILL BE USED ALONG THE PERIMETERS OF THE AS NECESSARY TO PREVENT MIGRATION OF SEDIMENT INTO THOSE WATERS OUTSIDE THE PROJECT BOUNDARY. PROPOSED WATERBODIES WITHIN THE PROJECT BOUNDARY MAY INCLUDE STORAGE VOLUME BELOW THE NORMAL POOL ELEVATION FOR SOME ACCUMULATED SEDIMENT.
- SILT FENCE DITCH CHECKS, FABRIC CHECKS, FILTER SOCK CHECKS OR SHALLOW TRENCHES WILL BE INSTALLED IN DRAINAGE WAYS AS NECESSARY TO TRAP SEDIMENT TRANSPORTED FROM THE SITE'S SLOPES DURING CONSTRUCTION. IN CONCENTRATED DRAINAGES RIPRAP WILL BE INCLUDED TO SLOW FLOW VELOCITIES AND TRAP TRANSPORTED SEDIMENTS.
- THREE WETLAND BASINS WILL BE CONSTRUCTED AT THE CENTER OF THE SITE AS SHOWN ON THE PLANS. AS THESE PROPOSED WATER BODIES ARE CONSTRUCTED THEY WILL BEGIN TO RETAIN SEDIMENT ERODED FROM THE UPLAND SLOPES. THE WETLAND BASINS WILL BE CLEANED OUT JUST PRIOR TO PROJECT COMPLETION AND IT WILL BE CONVERTED INTO A PERMANENT WETLAND. SEDIMENT CLEANED OUT WILL BE RE-SPREAD ONTO THE LANDSCAPE. PRIOR TO CONSTRUCTION OF THE WETLANDS A TEMPORARY PRACTICES INDICATED IN ITEM 2 ABOVE WILL BE INSTALLED.
- ALL PROPOSED PERMANENT WETLANDS HAVE OUTLETS PROTECTED FROM EROSION WITH PRECAST CONCRETE RISERS CONNECTED TO PIPES THAT OUTLET INTO A RIPRAP APRON POOL OR OTHER STABLE LOCATION.

### A.(2)(a). DESCRIBE PRACTICES WHICH PROVIDE AT LEAST 3600 CUBIC FEET OF STORAGE PER [DISTURBED] ACRE FOR COMMON DRAINAGE LOCATIONS SERVING MORE THAN TEN (10) ACRES OF DISTURBED AREA:

THE GRADING LIMITS FOR THE PAUL TODD AML SITE CONTAINS 35.8 ACRES OF DISTURBED AREA IN WHOLE. OF THAT AREA, 24.6 ACRES ARE SITUATED UPHILL, OF THE PROPOSED WETLAND BASINS. PER THE DESIGN DRAWINGS, THE PLANNED WETLAND BASINS PROVIDE 315,000 CUBIC FEET OF SEDIMENT STORAGE IN TOTAL. THIS IS EQUIVALENT TO 12,800 CUBIC FEET OF SEDIMENT STORAGE PER DISTURBED ACRE.

### A.(2)(b). DESCRIBE PRACTICES WHICH ARE USED TO RETAIN SEDIMENT ON SITE FOR COMMON DRAINAGE LOCATIONS SERVING TEN (10) OR FEWER ACRES OF DISTURBED AREA:

DRAINAGE LOCATIONS SERVING 10 OR FEWER ACRES WILL BE PROTECTED FROM SEDIMENTATION BY SILT FENCES OR STRAW WATTLES, FABRIC CHECKS, RIPRAP CHECKS OR SMALL SEDIMENT CATCHMENTS TO ARREST OR SEDIMENT MOVEMENT FROM THE SITE.

### A.(2)(c). SURFACE WATER WITHDRAWAL, SURFACE WATER BUFFERS, STORM WATER DISCHARGE INTO VEGETATED AREAS, & TOPSOIL PRESERVATION:

#### i. DESCRIBE OUTLETS THAT WITHDRAW WATER FROM SURFACE OF BASINS:

CMP (OR EQUAL) INTAKES ARE USED TO DRAIN DRY DETENTION BASINS AND TERRACES. CONCRETE CIRCULAR STRUCTURES WITH OPEN RIM INLETS ARE USED TO WITHDRAW WATER FROM CONSTRUCTED WETLANDS.

#### ii. DESCRIBE NATURAL BUFFERS AROUND SURFACE WATERS:

TO THE EXTENT PRACTICABLE A BUFFER OF VARYING WIDTH CONSISTING OF TREES AND UNDERSTORY VEGETATION WAS LEFT UNDISTURBED BETWEEN THE PROJECT BOUNDARY AND THE NEAREST STREAM CHANNEL.

#### iii. REDIRECTION OF STORM WATER DISCHARGES TO AND THROUGH VEGETATED AREAS FOR INCREASED SEDIMENT REMOVAL AND OPPORTUNITY FOR INFILTRATION TO THE SOIL.

WHERE PRACTICABLE OFFSITE AND ONSITE RUNOFF FLOWS ARE DIRECTED INTO TERRACES, DETENTION BASINS OR CONSTRUCTED WETLANDS.

#### iv. TOPSOIL PRESERVATION:

THE SITE IS AN ABANDONED COAL MINE RECLAMATION PROJECT; NO TOPSOIL EXISTS PRIOR TO RECLAMATION-RELATED CONSTRUCTION ACTIVITIES. THEREFORE, THE TOPSOIL PRESERVATION REQUIREMENT WILL NOT BE MET. THE SITE CONSISTS OF MINE SPOIL MATERIAL CLASSIFIED AS MINE PITS AND DUMPS - SOIL TYPE 502 ON USDA SOIL SURVEY MAPS. AFTER FINAL GRADE IS ACHIEVED, AGRICULTURAL LIME WILL BE APPLIED AT A RATE TO BE DETERMINED BY SOIL TESTS. THE AGRICULTURAL LIME, ALONG WITH 5 TONS OF MULCH WILL BE INCORPORATED INTO THE UPPER ONE (1) FOOT OF THE MINE SPOIL TO PRODUCE A GROWING MEDIUM AS OUTLINED IN PROJECT SPECIFICATION 02400. AFTER A PERIOD OF TIME TO ALLOW FOR NEUTRALIZATION AND MULCH DECOMPOSITION, THE SITE WILL BE PREPARED FOR SEEDING. AGRICULTURAL LIME, FERTILIZER, SEED AND CRIMPED MULCH WILL BE APPLIED AS OUTLINED IN PROJECT SPECIFICATION 02700.

### B.(1). DESCRIBE POST-CONSTRUCTION PRACTICES THAT WILL ATTENUATE PEAK RUNOFF FLOWS AND REDUCE SUSPENED SOLIDS IN WATER FLOWS:

PROPOSED WETLAND WATER BODIES ARE ANTICIPATED TO ATTENUATE PEAK RUNOFF FLOWS AND PROVIDE OPPORTUNITY FOR SETTLEMENT OF SUSPENDED SOLID PRIOR TO RUNOFF EXITING THE PROJECT BOUNDARIES. SEE PLAN SHEETS.

### B.(2). DESCRIBE TYPE AND LOCATION OF VELOCITY DISSIPATION DEVICES:

RIPRAP APRON POOLS ARE DESIGNED TO BE PLACED AT THE OUTLET OF THE TERRACE DRAIN PIPES TO ABSORB ENERGY AND REDUCE THE VELOCITY OF FLOW EXITING BURIED PIPE CONDUITS.

### C.(1). WASTE DISPOSAL -- DESCRIBE HOW BUILDING MATERIALS WASTE WILL BE ADDRESSED ON THE SITE:

THIS PROJECT IS PRIMARILY A GRADING AND DRAINAGE PROJECT. BUILDING MATERIALS WASTES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, CARDBOARD PACKAGING, PIECES OF WOOD, PLASTIC SHRINK WRAP, STEEL BANDS USED FOR PACKAGING, PIECES OF UNUSED PLASTIC PIPE OR FITTINGS, AND PORTLAND CEMENT CONCRETE WASHOUT RESIDUE. ALL CONSTRUCTION WASTES WILL BE DISPOSED OFFSITE.

### C.(2). TRACKING OF SEDIMENTS -- DESCRIBE HOW VEHICLE TRACKING OF SEDIMENTS TO OFFSITE AREAS WILL BE MINIMIZED:

- TRACKING OF SEDIMENTS OFFSITE WILL BE REDUCED BY AVOIDING VEHICLE TRAVEL ACROSS THE SITE SURFACE SOILS WHEN THEY ARE WET.
- A GRAVELED ENTRANCE WILL BE INSTALLED USING 3" NOMINAL MACADAM STONE. THE INSTALLATION WILL FUNCTION TO AID IN CLEANING OFF THE TIRES OF VEHICLES LEAVING THE SITE.
- IF "a" CANNOT BE ACCOMPLISHED, AND "b" PROVES INEFFECTIVE, THEN MUD FROM VEHICLE TIRES WILL BE MANUALLY CLEANED OFF, TO THE EXTENT PRACTICABLE, BEFORE THE VEHICLE LEAVES THE SITE.

### C.(3). COMPLIANCE WITH STATE OR LOCAL SANITARY WASTE DISPOSAL REGULATIONS:

POLLUTION FROM HUMAN SANITARY WASTE WILL BE PREVENTED WITH THE USE OF A PORTABLE TOILET INSTALLED ON THE SITE. THE PORTABLE TOILET WILL BE SUPPLIED AND MAINTAINED BY THE CONTRACTOR. ON TIMELY INTERVALS, HUMAN SANITARY WASTE FROM THE PORTABLE TOILET WILL BE COLLECTED AND DISPOSED OFFSITE BY A QUALIFIED PROFESSIONAL SERVICES COMPANY RETAINED BY THE CONTRACTOR. PORTABLE TOILET FACILITIES MUST BE ANCHORED TO THE SOIL SURFACE TO RESIST OVERTURNING BY WIND OR VANDALISM.

### 3. MAINTENANCE -- DESCRIBE MAINTENANCE AND PROTECTIVE MEASURES TO KEEP CONTROLS AND PRACTICES IN WORKING ORDER:

TO THE EXTENT PRACTICABLE, THE EFFORTS WILL BE MADE TO AVOID TRAFFIC OVER OR DAMAGE TO INSTALLED PRACTICES AND CONTROLS. IF DAMAGED, REPAIRS OR REPLACEMENTS TO BMP'S WILL BE MADE AS SOON AS POSSIBLE OR WITHIN SEVEN (7) DAYS FOLLOWING INSPECTION.

### 4. INSPECTIONS, REVISIONS & REPAIRS -- NOTE SPECIAL CONSIDERATIONS OR PROCEDURES, IF ANY, FOR ROUTINE WEEKLY INSPECTIONS:

PER CONTRACT DOCUMENTS, IDALS-DSCWQ IN PARTNERSHIP WITH PATHFINDERS RC&D WILL PERFORM AND DOCUMENT ALL WEEKLY INSPECTIONS FOR THIS SWPPP IN ACCORDANCE WITH PART IV.D.4.C. ELECTRONIC COPIES OF WEEKLY INSPECTIONS REPORTS WILL BE AVAILABLE UPON REQUEST. REQUIRED REVISIONS OR REPAIRS WILL BE MADE WITHIN SEVEN (7) DAYS FOLLOWING INSPECTION.

### 5. NON-STORMWATER DISCHARGES -- DESCRIBE PRACTICES TO PREVENT NON-STORMWATER POLLUTION:

LESS THAN 1000 GALLONS OF DIESEL FUEL AND/OR LUBRICATING OILS ARE EXPECTED TO BE ON SITE AT ANY ONE TIME. THEREFORE, RISK OF GROSS POLLUTION TO RECEIVING WATERS IS MINIMAL. IF FUEL OR OIL SPILLS OCCUR, LIQUID POLLUTANTS WILL BE CONTAINED USING SMALL BERMS MADE FROM SITE SOILS TO PREVENT TRAVEL OF POLLUTANTS TO RECEIVING WATERS. SUFFICIENT TIME WILL BE GIVEN FOR THE POLLUTANTS IN IT TO VOLATILIZE IN THE CONTAMINATED SOIL AND/OR CONTAMINATED SOIL WILL BE DISPOSED OFF-SITE.

### 6. ADDITIONAL REQUIREMENTS FOR STORM WATER DISCHARGE FROM INDUSTRIAL ACTIVITIES OTHER THAN CONSTRUCTION:

THERE ARE NO ADDITIONAL REQUIREMENTS BECAUSE THIS SWPPP IS FOR A "CONSTRUCTION ONLY" SITE WHERE THERE IS NO INDUSTRIAL SOURCE, OTHER THAN CONSTRUCTION, THAT IS GENERATING THE DISCHARGE.

### 7. IMPLEMENTATION OF CONTROLS:

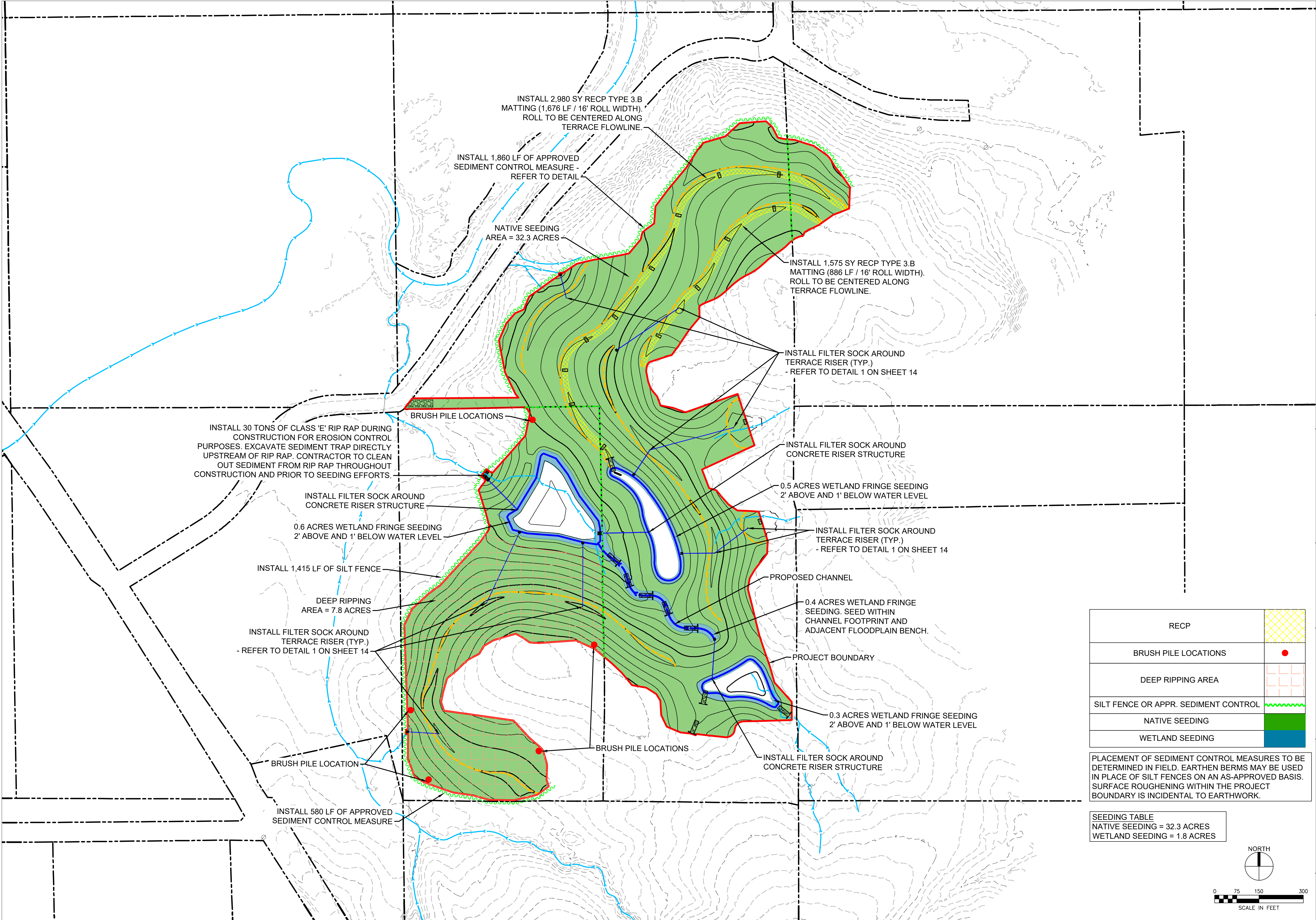
THE GENERAL CONTRACTOR IDENTIFIED ON THE CONTRACT, WILL BE ULTIMATELY RESPONSIBLE FOR ALL ASPECTS OF THE PROJECT. THESE INCLUDE GRADING, PIPE INSTALLATION, AND INSTALLATION OF BMPS. AN EROSION CONTROL OR SEEDING SUBCONTRACTOR MAY BE RESPONSIBLE IN SOME SITUATIONS.

VERSION: 01-23-2025

|                |               |               |                   |               |                                |                                                                                                                                                                                                                                                                              |
|----------------|---------------|---------------|-------------------|---------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DESIGN BY: MMO | DRAWN BY: GHK | CHKD. BY: ##M | ISSUED: 8/13/2026 | REVISED: ---- | S-H PROJECT NUMBER: 2142303680 | <div>SHIVEHATTERY</div> <div>ARCHITECTURE+ENGINEERING</div> <div>4125 Westown Parkway, Suite 100   West Des Moines, Iowa 50266</div> <div>515.223.6104   fax: 515.223.6022   shivehattery.com</div> <div>Iowa   Illinois   Missouri   Illinois Firm Number: 184-000214</div> |
|                |               |               |                   |               |                                |                                                                                                                                                                                                                                                                              |

|                                      |             |                                                                                                                                                                                                                                                   |
|--------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PAUL TODD<br>AML RECLAMATION PROJECT | SWPPP NOTES | <div>IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP</div> <div>DIVISION OF SOIL CONSERVATION AND WATER QUALITY</div> <div>HOOVER STATE OFFICE BUILDING</div> <div>1305 E. WALNUT STREET DES MOINES, IA 50319</div> <div>(515) 281-5321</div> |
|                                      |             |                                                                                                                                                                                                                                                   |

|       |    |
|-------|----|
| SHEET |    |
| 23    | 24 |



INSTALL 30 TONS OF CLASS 'E' RIP RAP DURING CONSTRUCTION FOR EROSION CONTROL PURPOSES. EXCAVATE SEDIMENT TRAP DIRECTLY UPSTREAM OF RIP RAP. CONTRACTOR TO CLEAN OUT SEDIMENT FROM RIP RAP THROUGHOUT CONSTRUCTION AND PRIOR TO SEEDING EFFORTS.

INSTALL FILTER SOCK AROUND CONCRETE RISER STRUCTURE

0.6 ACRES WETLAND FRINGE SEEDING 2' ABOVE AND 1' BELOW WATER LEVEL

INSTALL 1,415 LF OF SILT FENCE

DEEP RIPPING AREA = 7.8 ACRES

INSTALL FILTER SOCK AROUND TERRACE RISER (TYP.) - REFER TO DETAIL 1 ON SHEET 14

BRUSH PILE LOCATION

INSTALL 580 LF OF APPROVED SEDIMENT CONTROL MEASURE

INSTALL 1,860 LF OF APPROVED SEDIMENT CONTROL MEASURE - REFER TO DETAIL

NATIVE SEEDING AREA = 32.3 ACRES

INSTALL 2,980 SY RECP TYPE 3.B MATTING (1,676 LF / 16' ROLL WIDTH). ROLL TO BE CENTERED ALONG TERRACE FLOWLINE.

INSTALL 1,575 SY RECP TYPE 3.B MATTING (886 LF / 16' ROLL WIDTH). ROLL TO BE CENTERED ALONG TERRACE FLOWLINE.

INSTALL FILTER SOCK AROUND TERRACE RISER (TYP.) - REFER TO DETAIL 1 ON SHEET 14

INSTALL FILTER SOCK AROUND CONCRETE RISER STRUCTURE

0.5 ACRES WETLAND FRINGE SEEDING 2' ABOVE AND 1' BELOW WATER LEVEL

INSTALL FILTER SOCK AROUND TERRACE RISER (TYP.) - REFER TO DETAIL 1 ON SHEET 14

PROPOSED CHANNEL

0.4 ACRES WETLAND FRINGE SEEDING. SEED WITHIN CHANNEL FOOTPRINT AND ADJACENT FLOODPLAIN BENCH.

PROJECT BOUNDARY

0.3 ACRES WETLAND FRINGE SEEDING 2' ABOVE AND 1' BELOW WATER LEVEL

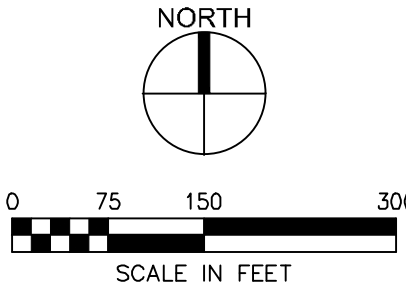
INSTALL FILTER SOCK AROUND CONCRETE RISER STRUCTURE

BRUSH PILE LOCATIONS

|                                      |  |
|--------------------------------------|--|
| RECP                                 |  |
| BRUSH PILE LOCATIONS                 |  |
| DEEP RIPPING AREA                    |  |
| SILT FENCE OR APPR. SEDIMENT CONTROL |  |
| NATIVE SEEDING                       |  |
| WETLAND SEEDING                      |  |

PLACEMENT OF SEDIMENT CONTROL MEASURES TO BE DETERMINED IN FIELD. EARTHEN BERMS MAY BE USED IN PLACE OF SILT FENCES ON AN AS-APPROVED BASIS. SURFACE ROUGHENING WITHIN THE PROJECT BOUNDARY IS INCIDENTAL TO EARTHWORK.

SEEDING TABLE  
NATIVE SEEDING = 32.3 ACRES  
WETLAND SEEDING = 1.8 ACRES



S-H PROJECT NUMBER: 2142303680

REVISED: ---

ISSUED: 8/13/2026

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GHK

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MMO

DESIGN BY:

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PAUL TODD  
AML RECLAMATION PROJECT

SWPPP & SEEDING PLAN