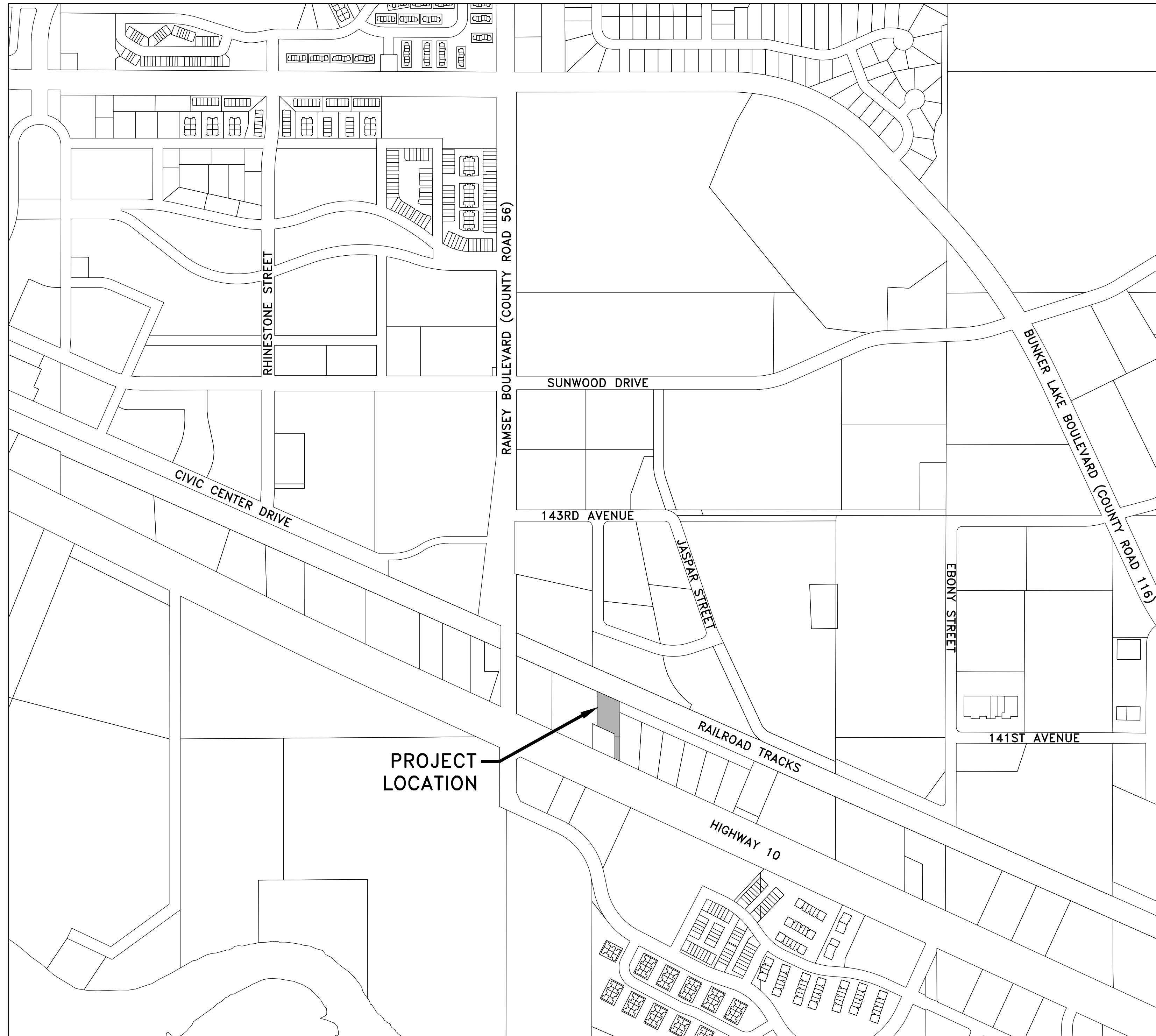


# MOTORS ON 10

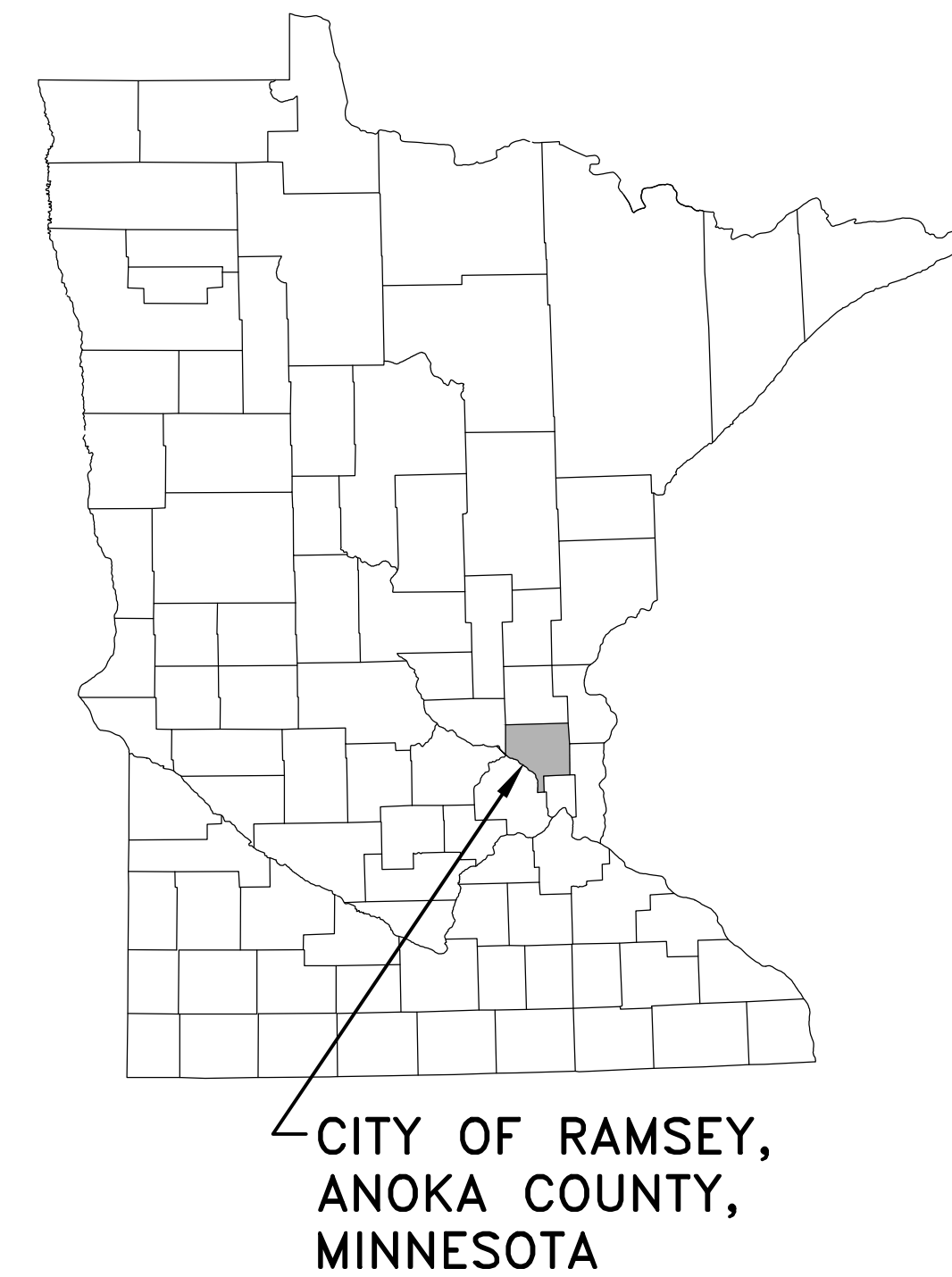
## CONSTRUCTION PLANS FOR SITE GRADING AND PARKING LOT AND MISCELLANEOUS CONSTRUCTION

### CITY OF RAMSEY



**OWNER**  
 STEVE JUNG  
 M&G TRAILER SALES  
 7575 HIGHWAY 10 NW  
 RAMSEY, MN 55303  
 steve@mgtrailer.com  
 763-506-0930

**ENGINEER**  
 HAKANSON ANDERSON  
 3601 THURSTON AVE.  
 ANOKA, MN 55303  
 CRAIG J. JOCHUM, P.E.  
 craigj@haa-inc.com  
 763-427-5860  
 763-427-0520 (FAX)



### GOVERNING SPECIFICATIONS

THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AND "MATERIALS LAB SUPPLEMENTAL SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN FOR SITE WORK.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

#### SHEET INDEX

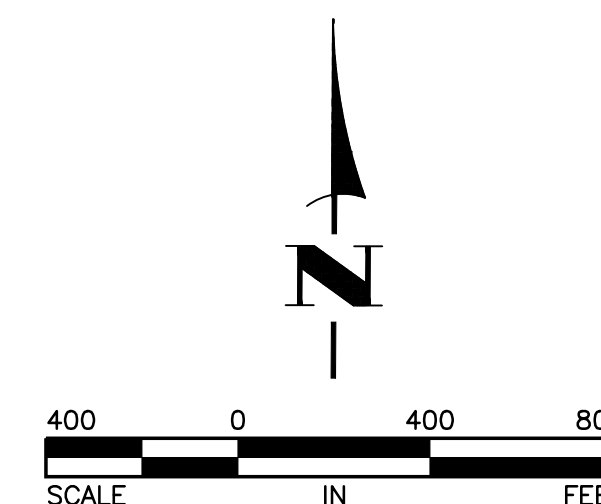
THIS PLAN CONTAINS 6 SHEETS

| SHEET NO. | DESCRIPTION                                |
|-----------|--|
| 1         | TITLE SHEET                                |
| 2         | CONSTRUCTION NOTES AND DETAILS             |
| 3         | EXISTING TOPOGRAPHY AND REMOVALS PLAN      |
| 4         | GRADING, DRAINAGE AND EROSION CONTROL PLAN |
| 5         | RESTORATION PLAN                           |
| 6         | PROPERTY AREA EXHIBIT                      |

PROJECT LOCATION

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

**Hakanson Anderson**  
 Civil Engineers and Land Surveyors  
 3601 Thurston Ave., Anoka, Minnesota 55303  
 763-427-5860 FAX 763-427-0520



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

*Craig J. Jochum* 23461 DATE 7/20/17  
 CRAIG J. JOCHUM, P.E. LIC. NO.  
 HAKANSON ANDERSON  
 DESIGN ENGINEER

| DATE | REVISION |
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**GENERAL CONSTRUCTION AND SOILS NOTES:**

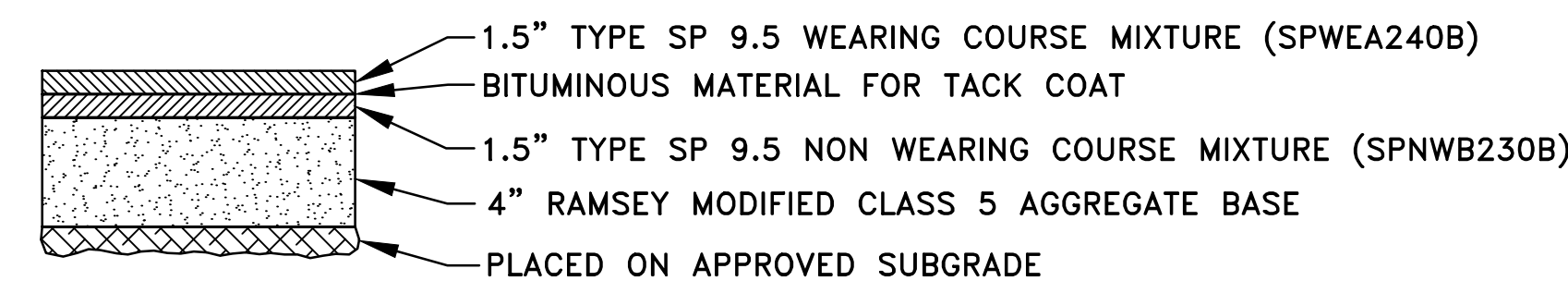
- CONTRACTOR SHALL STRIP THE TOP 3 INCHES OF INPLACE TOPSOIL IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. IN AREAS OF PARKING LOT CONSTRUCTION, THE EXPOSED SAND SHALL BE SURFACE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM D698, IN AT LEAST THE UPPER 3 FEET.
- UNLESS OTHERWISE RECOMMENDED IN THESE PLANS, THE GRADING SUBGRADE SHALL BE CONSTRUCTED OF SUITABLE GRADING MATERIAL. THE FILL SHALL BE PLACED IN 8" TO 10" LOOSE LIFTS, AND COMPACTED TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
- SUITABLE GRADING MATERIAL FOR THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, SILT, DEBRIS, ORGANIC MATERIAL AND OTHER UNSTABLE MATERIAL.
- THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS SOIL OFF SITE.
- DISTURBED AREAS SHALL BE STABILIZED WITHIN 7 DAYS OF ROUGH GRADING. SEE SHEET 5 FOR THE SITE RESTORATION PLAN.
- CONTRACTOR SHALL SWEEP ALL DEBRIS FROM HIGHWAY 10 AS NECESSARY OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
- SLOPES SHALL BE A MAXIMUM OF 4:1.
- PRIOR TO IMPORTING OR EXPORTING MATERIAL FROM THE SITE, CONTRACTOR SHALL CONSTRUCT A ROCK CONSTRUCTION ENTRANCE PER  $\frac{4}{2}$ .

**GENERAL EROSION CONTROL NOTES:**

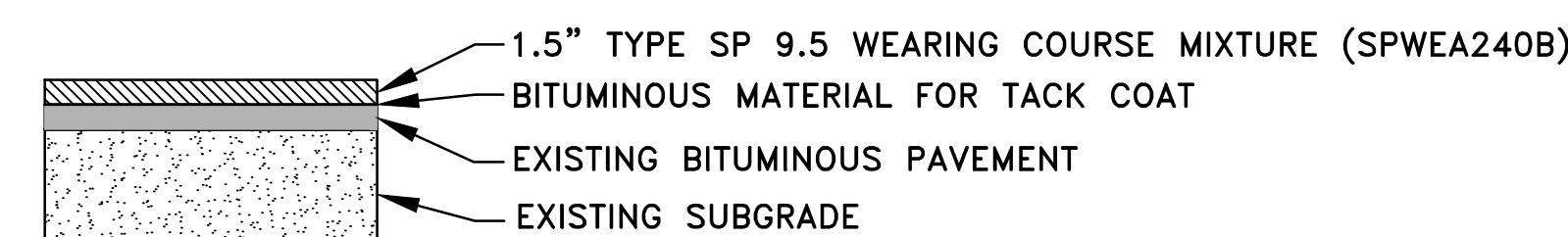
- EROSION CONTROL SHALL CONFORM TO THE MN/DOT EROSION CONTROL HANDBOOK.
- THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL FACILITIES (BMP'S) PRIOR TO GRADING AND REMOVAL ACTIVITIES. BMP'S SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES AND POTENTIAL FOR EROSION HAS PASSED.
- THE CONTRACTOR SHALL SCHEDULE HIS OPERATION TO MINIMIZE THE AMOUNT OF DISTURBED AREA AT ANY GIVEN TIME.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY DISPOSED OF WITHIN THIRTY DAYS OF FINAL STABILIZATION.

**REFERENCE NOTES:**

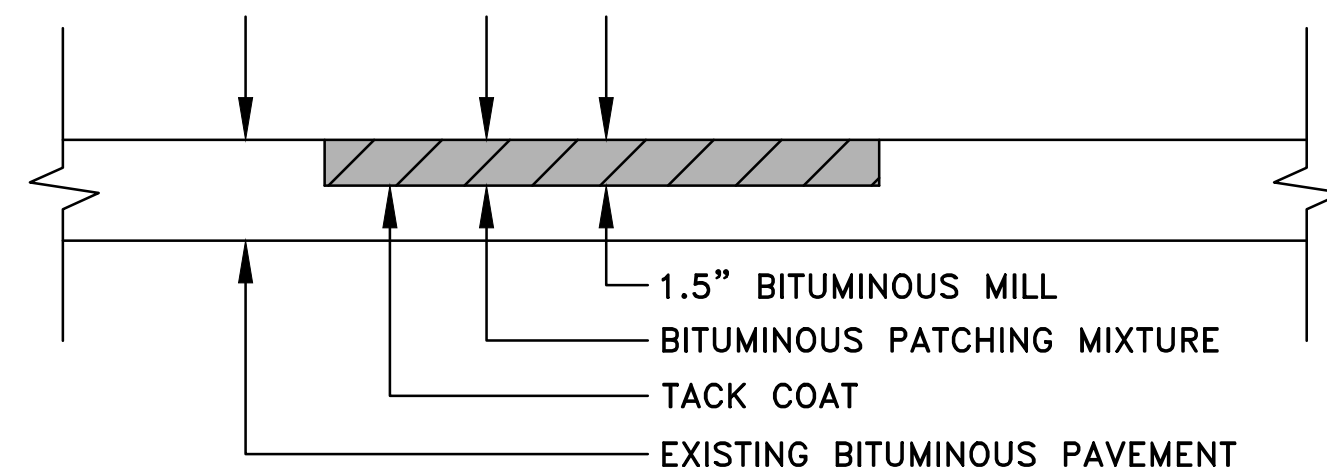
- PAVEMENT SECTION SHALL BE VERIFIED BY GEOTECHNICAL ENGINEER.
- OWNER AND ENGINEER WILL MARK AREAS FOR PATCHING PRIOR TO BITUMINOUS OVERLAY.
- SELECT GRADING MATERIAL SHALL BE ON SITE SUITABLE GRADING MATERIAL WITH A UNIFIED SOIL CLASSIFICATION OF SP OR SP-SM.
- AGGREGATE BACKFILL SHALL MEET THE REQUIREMENTS OF MN/DOT SPEC. 3149.2H.
- PIPE SHALL BE PERFORATED PER AASHTO CLASS 2 PERFORATION PATTERNS. CORRUGATED POLYETHYLENE PIPE (CPP) SHALL MEET THE REQUIREMENTS OF AASHTO M294 AND DESIGN SECTION 18 OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. CONNECTIONS SHALL BE MADE WITH BELL AND SPIGOT JOINTS. CLAMP-ON BANDS WILL NOT BE ALLOWED. PIPE BEDDING SHALL BE PER THE MANUFACTURER'S RECOMMENDATION.



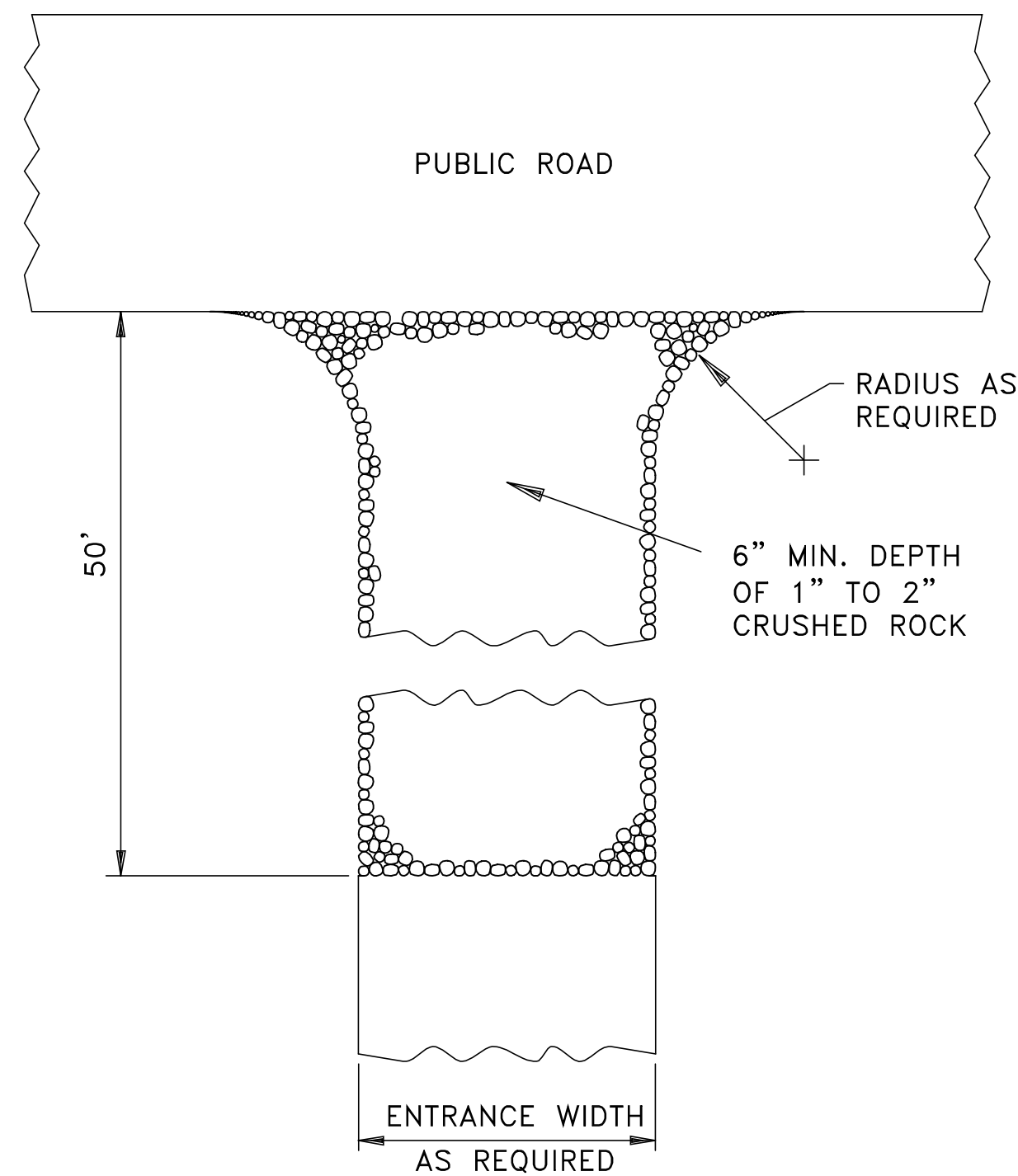
**1**  
**2** BITUMINOUS PAVEMENT SECTION ①  
NO SCALE



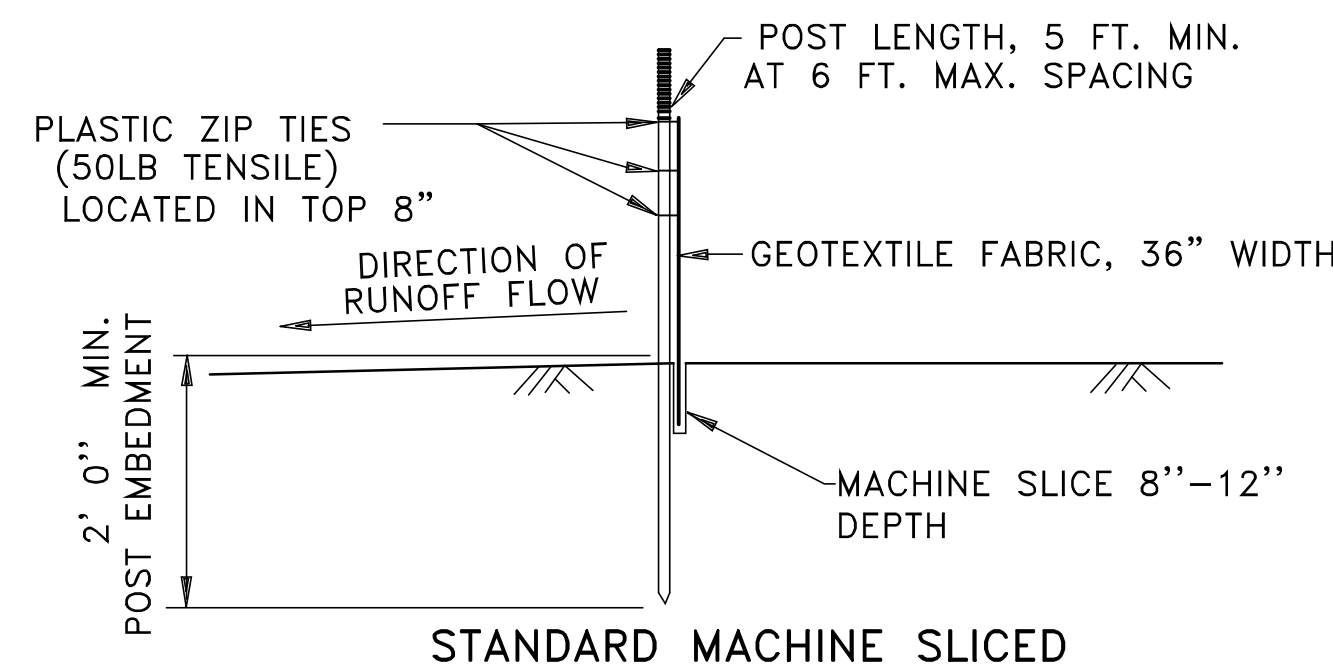
**2**  
**2** BITUMINOUS OVERLAY SECTION  
NO SCALE



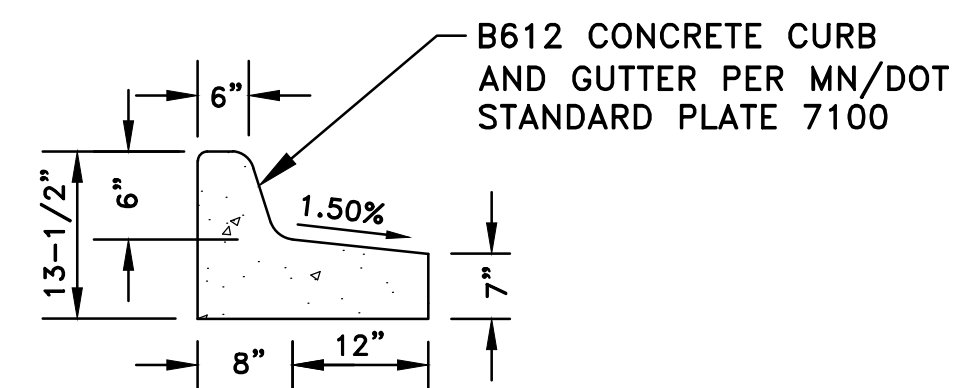
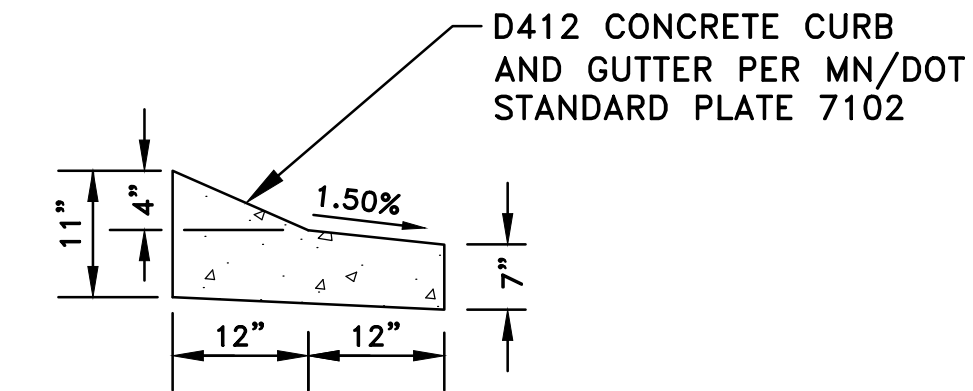
**3**  
**2** BITUMINOUS PATCHING DETAIL ②



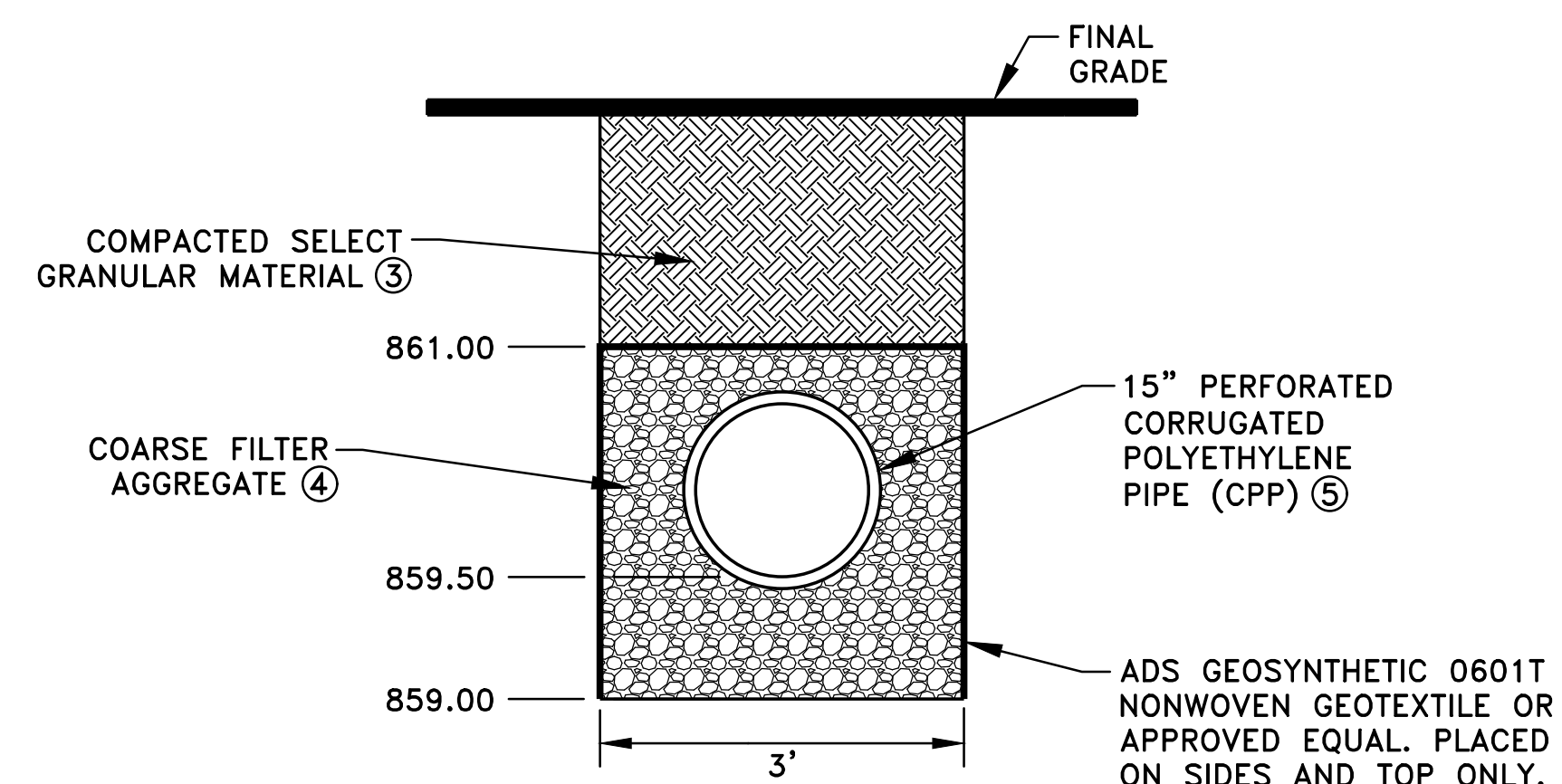
**4**  
**2** ROCK CONSTRUCTION ENTRANCE



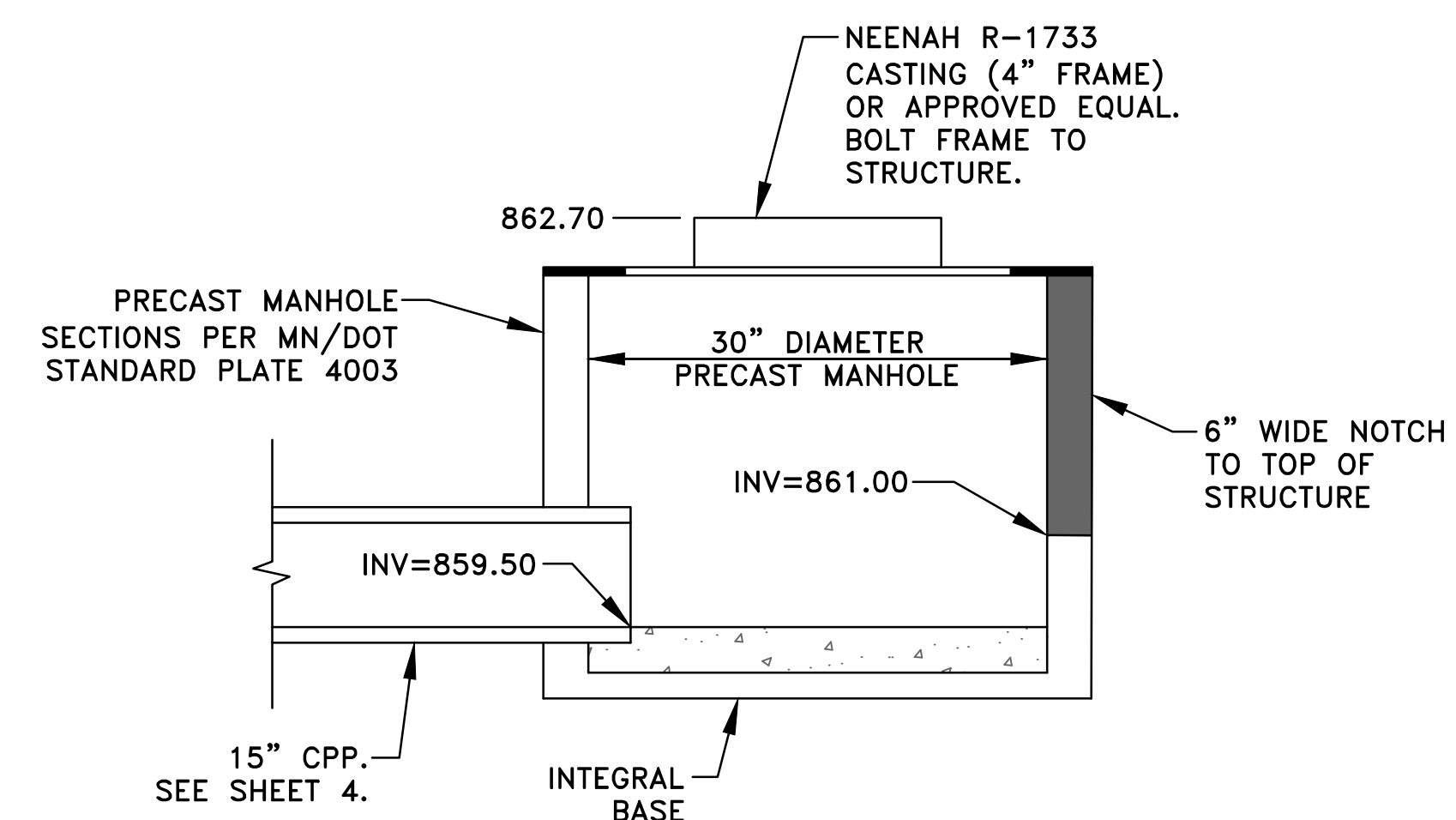
**5**  
**2** SILT FENCE DETAILS



**6**  
**2** TIPOUT CURB DETAILS  
NO SCALE



**7**  
**2** INFILTRATION TRENCH



**8**  
**2** OUTLET CONTROL DETAIL  
NO SCALE

Jul 21, 2017 - 10:35am K:\cad\_eng\PROJECTS\PRIVATE\3990.02.dwg\399002DETAIL.S.dwg

| DATE | REVISION |
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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

*Craig J. Johnson*  
**CRAIG J. JOHNSON, P.E.**  
 Date 7/20/17 Lic. No. 23461

DESIGNED BY: TAE  
 DRAWN BY: TAE  
 CHECKED BY: CJJ



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 Civil Engineers and Land Surveyors  
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 763-427-5860 FAX 763-427-0520  
 www.hakanson-anderson.com

MOTORS ON 10

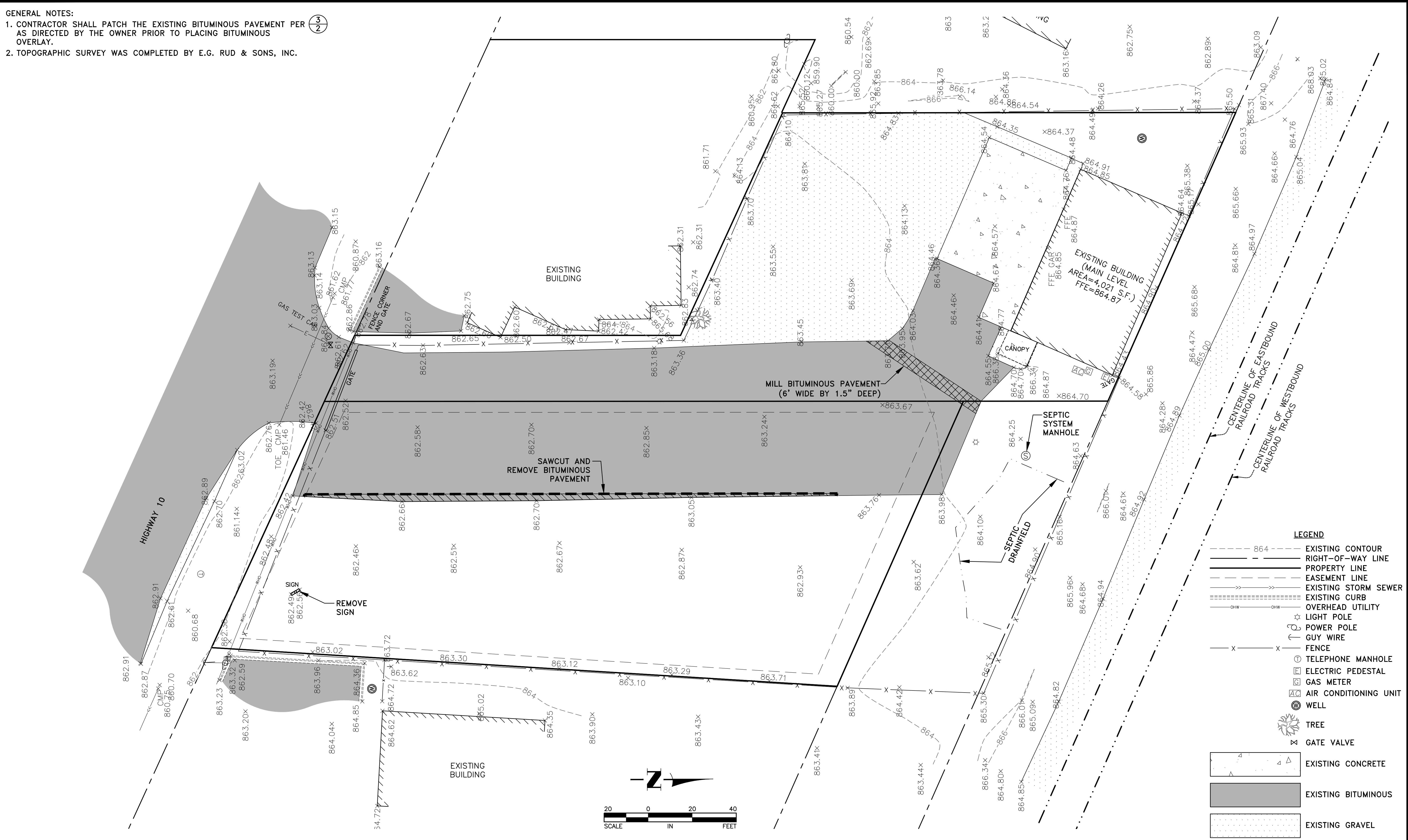
CONSTRUCTION NOTES AND DETAILS

CITY OF RAMSEY, MINNESOTA

SHEET 2 OF 6 SHEETS  
 3990.02

- GENERAL NOTES:
- CONTRACTOR SHALL PATCH THE EXISTING BITUMINOUS PAVEMENT PER AS DIRECTED BY THE OWNER PRIOR TO PLACING BITUMINOUS OVERLAY.
  - TOPOGRAPHIC SURVEY WAS COMPLETED BY E.G. RUD & SONS, INC.

3/2



**LEGEND**

|  |     |                       |
|--|-----|-----------------------|
|  | 864 | EXISTING CONTOUR      |
|  |     | RIGHT-OF-WAY LINE     |
|  |     | PROPERTY LINE         |
|  |     | EASEMENT LINE         |
|  |     | EXISTING STORM SEWER  |
|  |     | EXISTING CURB         |
|  |     | OVERHEAD UTILITY      |
|  |     | LIGHT POLE            |
|  |     | POWER POLE            |
|  |     | GUY WIRE              |
|  |     | FENCE                 |
|  |     | TELEPHONE MANHOLE     |
|  |     | ELECTRIC PEDESTAL     |
|  |     | GAS METER             |
|  |     | AIR CONDITIONING UNIT |
|  |     | WELL                  |
|  |     | TREE                  |
|  |     | GATE VALVE            |
|  |     | EXISTING CONCRETE     |
|  |     | EXISTING BITUMINOUS   |
|  |     | EXISTING GRAVEL       |

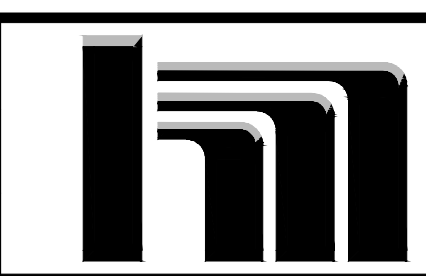
Aug 03, 2017 - 8:21am K:\cad\_eng\PROJECTS\PRIVATE\3990.02\dwg\399002EXISTING.dwg

| DATE   | REVISION                         |
|--------|----------------------------------|
| 8/3/17 | PLAN REVISIONS PER CLIENT REVIEW |
|        |                                  |
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TAE  
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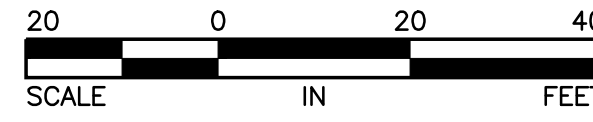
MOTORS ON 10

EXISTING TOPOGRAPHY AND REMOVALS PLAN  
 CITY OF RAMSEY, MINNESOTA

SHEET 3 OF 5 SHEETS  
 3990.02

REFERENCE NOTES:

- ① THE LIMITS OF THE INFILTRATION AREAS ARE DEFINED AS THOSE AREAS SHOWN ON SHEET 5 DENOTED FOR SEED MIX 33-261. CONTRACTOR SHALL REMOVE ALL ORGANIC SOILS IN THE INFILTRATION AREAS AND REPLACE WITH SIMILAR NATIVE SANDS. INFILTRATION AREAS SHALL BE TOP DRESSED WITH 2 INCHES OF ONSITE SANDY TOPSOIL. ONLY LOW PRESSURE EQUIPMENT SHALL BE ALLOWED IN THE INFILTRATION AREAS. COMPACTION SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICAL. CONTRACTOR SHALL SCARIFY THE TOP 18 INCHES OF THE SOIL PRIOR TO PLACING THE TOPSOIL.
- ② RCP/CPP JOINT SHALL BE PER ADS STANDARD DRAWING STD-603 OR STD-604.
- ③ CONSTRUCT STORM SEWER AND INFILTRATION TRENCH PER (7/2).
- ④ CONTRACTOR SHALL CREATE A ONE FOOT DEPRESSION IN THE RIPRAP IN BOTH DIRECTIONS.
- ⑤ STRUCTURE SHALL MEET THE REQUIREMENTS OF MN/DOT STANDARD PLATE 4003.
- ⑥ CONSTRUCT STRUCTURE PER (8/2). DAYLIGHT NOTCH TO DITCH.



HIGHWAY 10

RAILROAD TRACKS

CB #1  
30" DIA. (R-1733) (6)  
RIM=862.70  
INV=859.50

CB/MH #2 (5)  
30" DIA. (R-2573-1)  
RIM=862.00  
(N&S) INV=859.50  
SUMP=857.00

CB/MH #3 (5)  
30" DIA. (R-2573-1)  
RIM=862.20  
(N&S) INV=859.50  
SUMP=857.00

INFILTRATION BASIN (1)  
100-YR  
HWL=862.1

10 CY CLASS II  
RIPRAP OVER TYPE V  
GEOTEXTILE FILTER (4)

14LF (INC. RC APRON)  
15" RCP  
@ 0.00%  
INV=859.50

LEGEND

- >> PROPOSED STORM SEWER
- ⊗ PROPOSED CATCH BASINS
- ▽ PROPOSED CONCRETE APRON
- ⊗ STORM DRAIN INLET PROTECTION DEVICE
- ▨ PROPOSED TIPOUT CURB PER (6/2)
- SILT FENCE PER (5/2)
- ⇒ DRAINAGE ARROW
- PROPOSED BITUMINOUS PAVEMENT PER (1/2)
- ▨ PROPOSED BITUMINOUS OVERLAY PER (2/2)
- ▨ INFILTRATION TRENCH PER (7/2)
- BIT= 908.55 PROPOSED FINAL SPOT ELEVATION (BITUMINOUS)

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| DATE   | REVISION                         |
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| 8/3/17 | PLAN REVISIONS PER CLIENT REVIEW |
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Date 7/20/17 Lic. No. 23461

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DRAWN BY: TAE  
CHECKED BY: CJJ

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MOTORS ON 10



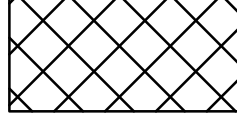
GRADING, DRAINAGE AND  
EROSION CONTROL PLAN  
CITY OF RAMSEY, MINNESOTA

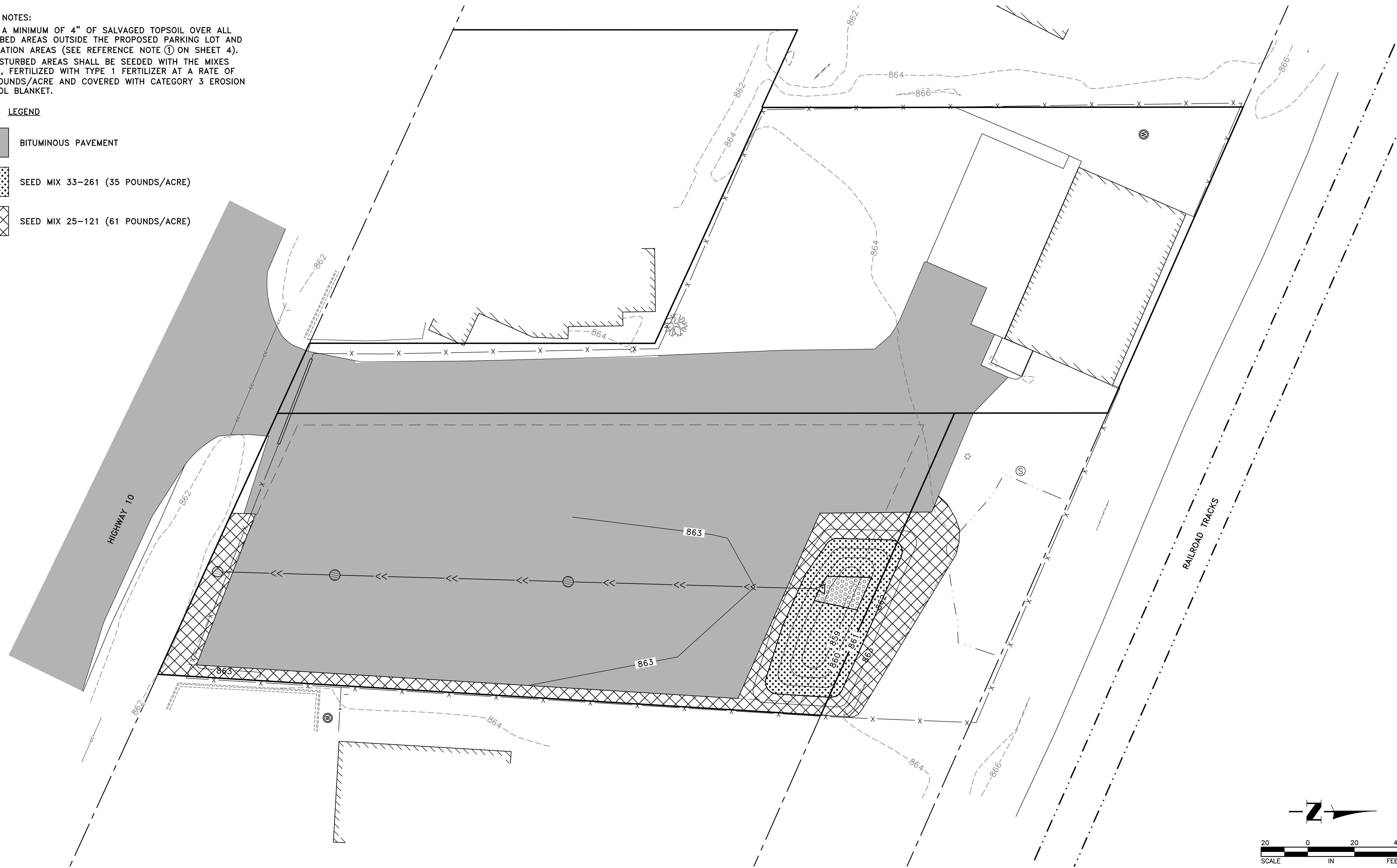
SHEET 4 OF 6  
SHEETS 3990.02

**GENERAL NOTES:**

1. PLACE A MINIMUM OF 4" OF SALVAGED TOPSOIL OVER ALL DISTURBED AREAS OUTSIDE THE PROPOSED PARKING LOT AND INFILTRATION AREAS (SEE REFERENCE NOTE ① ON SHEET 4).
2. ALL DISTURBED AREAS SHALL BE SEEDED WITH THE MIXES SHOWN, FERTILIZED WITH TYPE 1 FERTILIZER AT A RATE OF 300 POUNDS/ACRE AND COVERED WITH CATEGORY 3 EROSION CONTROL BLANKET.

**LEGEND**

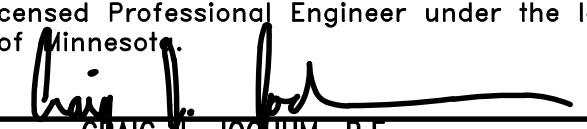
-  BITUMINOUS PAVEMENT
-  SEED MIX 33-261 (35 POUNDS/ACRE)
-  SEED MIX 25-121 (61 POUNDS/ACRE)



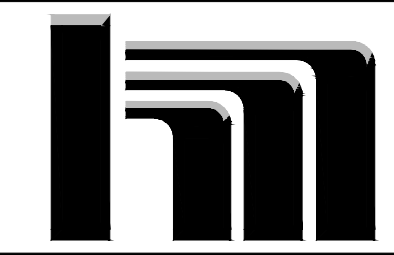
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| DATE   | REVISION                         |
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| 8/3/17 | PLAN REVISIONS PER CLIENT REVIEW |
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DESIGNED BY:  
TAE  
 DRAWN BY:  
TAE  
 CHECKED BY:  
CJJ



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**MOTORS ON 10**

**RESTORATION PLAN**  
 CITY OF RAMSEY, MINNESOTA

SHEET 5 OF 6 SHEETS  
 3990.02

**SUMMARY OF PROPOSED IMPERVIOUS SURFACE AND GREEN SPACE CALCULATIONS**

TOTAL EXISTING AREA 66,638 SF  
 EXISTING IMPERVIOUS AREA 29,036 SF (43.57%)  
 EXISTING GRAVEL AREA 10,343 SF (15.52%)  
 EXISTING GREEN SPACE AREA 27,259 SF (40.91%)

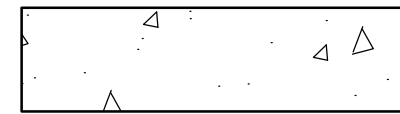

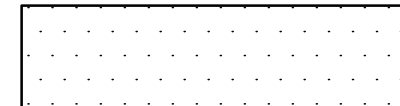
EXISTING IMPERVIOUS PLUS GRAVEL AREA 39,379 SF (59.09%)

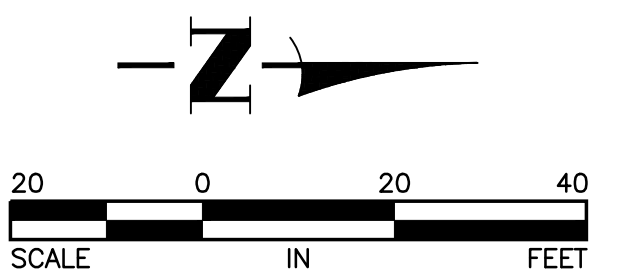
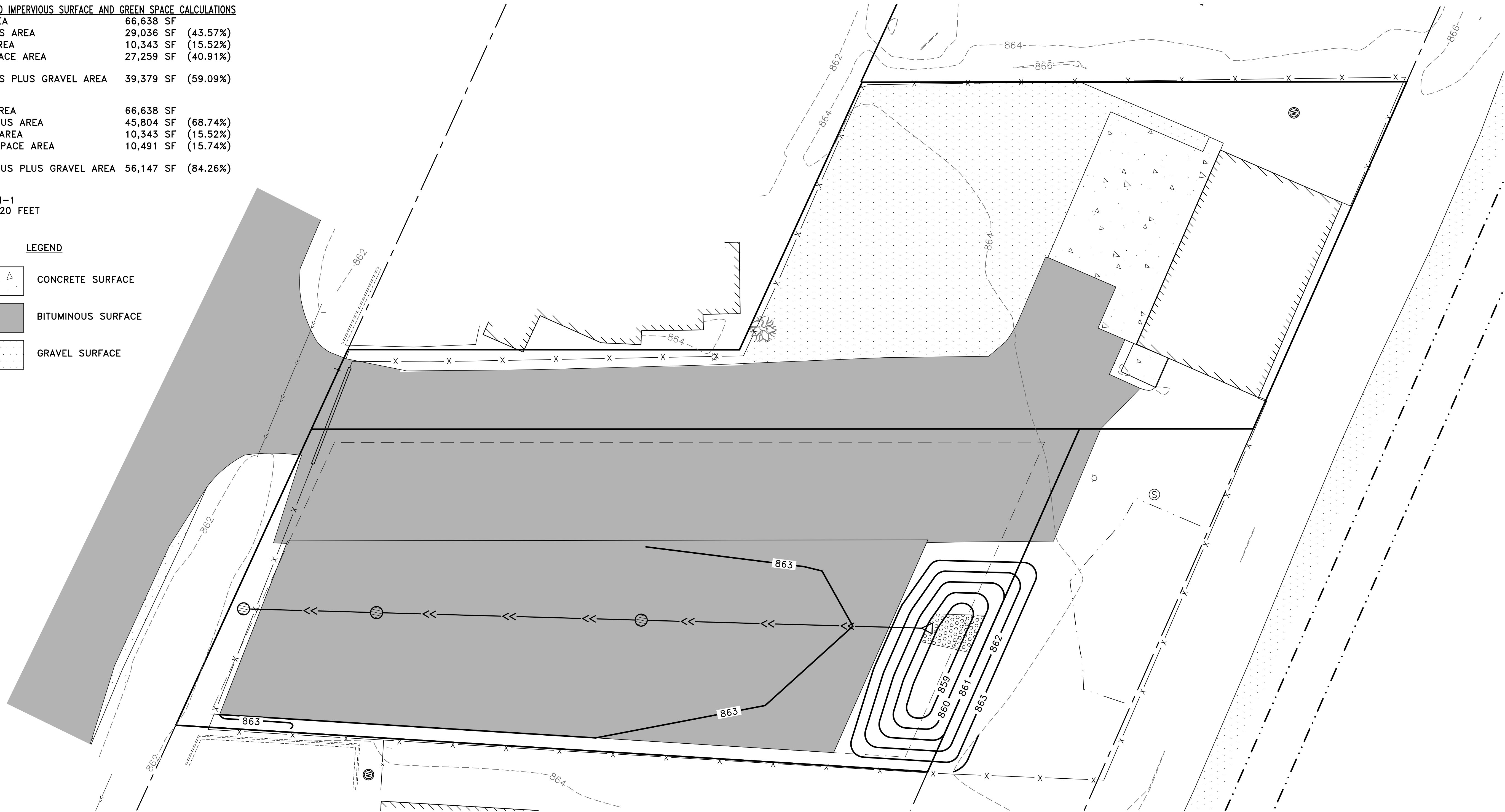
TOTAL PROPOSED AREA 66,638 SF  
 PROPOSED IMPERVIOUS AREA 45,804 SF (68.74%)  
 PROPOSED GRAVEL AREA 10,343 SF (15.52%)  
 PROPOSED GREEN SPACE AREA 10,491 SF (15.74%)

PROPOSED IMPERVIOUS PLUS GRAVEL AREA 56,147 SF (84.26%)

CURRENT ZONING: H-1  
 PARKING SETBACK: 20 FEET

**LEGEND**

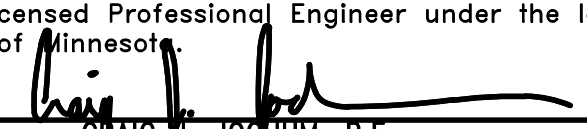
-  CONCRETE SURFACE
-  BITUMINOUS SURFACE
-  GRAVEL SURFACE



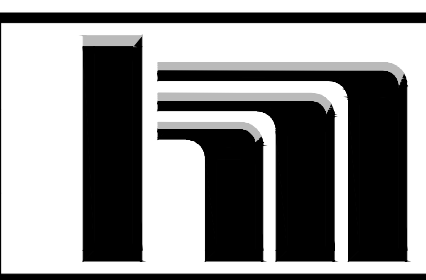
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| DATE   | REVISION                         |
|--------|----------------------------------|
| 8/3/17 | PLAN REVISIONS PER CLIENT REVIEW |
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 Date 7/20/17 Lic. No. 23461

DESIGNED BY:  
TAE  
 DRAWN BY:  
TAE  
 CHECKED BY:  
CJJ



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MOTORS ON 10

PROPERTY AREA EXHIBIT  
 CITY OF RAMSEY, MINNESOTA

SHEET 6 OF 6 SHEETS  
 3990.02