MINNESOTA STATE UNIVERSITY, MANKATO

CONSTRUCTION PLANS FOR

LOT 2 RECONSTRUCTION

JULY, 2013

MAP LEGEND

PROJECT LOCATION

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY MINNESOTA STATE ONE CALL, 800-654-4432 OR 811 FOR FREE UTILITY LOCATIONS.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF MINNESOTA BUREAU OF GROUNDWATER ENGINEERING. FOR INFORMATION CONCERNING THE EXISTING SUBSURFACE UTILITY DATA.

SIGNATURES:

[Signatures]

BOLTON & MENK, INC.
Consulting Engineers & Surveyors

MINNESOTA STATE UNIVERSITY, MANKATO

LOT 2 RECONSTRUCTION

PROJECT DATE: JUNE 30, 2013

HORIZONTAL: MINNESOTA COORDINATES SYSTEM 2000

VERTICAL: NAVD 88

ENGINEER:

[Name and Title]
**COARSE FILTER AGGREGATE**

0.5" R

LOT 2 RECONSTRUCTION

8"

NOT TO SCALE

PIECE OF FABRIC

FRONT, BACK AND BOTTOM

TO BE MADE FROM SINGLE MONOFILAMENT CONFORMING TO SPEC. 3886, TABLE 3886-1

GEOTEXTILE FABRIC, TYPE WOVEN

INLET SPECIFICATIONS AS PER AND WIDTH TO MATCH THE PLAN DIMENSION LENGTH

**CONCRETE CURB & GUTTER**

NOT TO SCALE

**INLET PROTECTION**

GEOTEXTILE BAG

NOT TO SCALE

NOTE: DETAILS ARE NOT TO SCALE

BE

IF ADDITIONAL AGGREGATE MATERIAL IS NEEDED, IT SHALL BE AGGREGATE BASE, CL 7 OR CL 5 (100% CRUSHED LIMESTONE)

8" CONCRETE DRIVEWAY PAVEMENT (2531) (INCIDENTAL)

3" AGGREGATE BASE, CL 5 OR CL 7* (2211) (INCIDENTAL)

SUBGRADE PREPARATION (2112) (INCIDENTAL)

2.5" TYPE MV NON-WEARING COURSE (MVNW35035B) (2350)

BITUMINOUS TACK COAT (2357)

2.5" TYPE MV WEARING COURSE (MVWE35035B) (2350)

PLACE 12" AGGREGATE BASE, CL 7* (2211)

SUBGRADE PREPARATION (2112) (INCIDENTAL)

6" FIBERMESH REINFORCED CONCRETE WALK

SUBGRADE PREPARATION

6" AGGREGATE BASE, CL 7 (3311) (INCIDENTAL)

CONCRETE WALK

NOT TO SCALE

FLAP POCKET

USE REBAR OR STEEL RED FOR REINFORCEMENT

FOR HOLES, USE STEEL OBJECTS ONCE CURB IS PLACED, EXTEND 2" BEHIND GRATE WIDTH

FOR HOLES, USE STEEL OBJECTS ONCE CURB IS PLACED, EXTEND 2" BEHIND GRATE WIDTH

ON BOTH SIDES, LENGTH VARIES, SECURE TO GRATE WITH WIRE OR PLASTIC TIES

USE REBAR OR STEEL RED FOR REINFORCEMENT

FRONT, BACK AND BOTTOM TO BE MADE FROM SINGLE PIECE OF FABRIC

FLAP POCKET

MINIMUM DOUBLE STITCHED SEAMS ALONG SIDE PANELS


ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY

THE FLOWLINE WHEN MEASURED ON A LEVEL PLANE

DO NOT INSTALL PROTECTION IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF CURB TO THE TOP OF CURB

INSTALLATION NOTES:

NOT TO SCALE

OPENING IN WALL

PERFORATED WALL

FRAMES

TOP VIEW

DETAILS

ADDITIONAL AGGREGATE MATERIAL IS NEEDED, IT SHALL BE AGGREGATE BASE, CL 7 OR CL 5 (100% CRUSHED LIMESTONE)

AGGREGATE BASE, CL. 5 (100% CRUSHED LIMESTONE)

CONCRETE CURB & GUTTER

MOUNTABLE

NOT TO SCALE

MINNESOTA STATE UNIVERSITY, MANKATO

DATE

7/2/2013

DESIGNED

N. HUETTL

DRAWN

D. SARFF

REV.

BOLTON & MENK, INC.

CONSULTING ENGINEERS & SURVEYORS

MINNESOTA STATE UNIVERSITY, MANKATO

LOT 2 RECONSTRUCTION

DETAILS

NOTE: DETAILS ARE NOT TO SCALE
NOT TO SCALE

**STORM SEWER STRUCTURE**

**DESIGNATION:**
- **DESIGN DIAMETER - STANDARD PLATE #:**
  - **DESIGN 4020**
- **CASTING AS SPECIFIED**
- **GRAGE**
- **STEPS AS SPECIFIED**
- **TOP BARS NOT SHOWN**
- **SECTIONS:**
  - **SECTION A-A**

**NOTES:**
1. **AASHTO HS 25 LOADING MAX**
2. **FILL HEIGHT 15'**
3. **THE # 4020 SHALL BE PERMANENTLY MARKED ON THE TOP COVER**
4. **EQUIVALENT STEEL AREAS IN WIRE MESH MAY BE USED**
5. **REINFORCEMENT PER SPEC 3301, GRADE 60 A SINGLE HOOP OF 8ga STEEL WIRE**

**STORM SEWER PIPE**

**CASTING AS SPECIFIED**

**CONCRETE DRIVEWAY APRON**

**RCP PIPE CLASS C BEDDING**

**PERFORATED PVC UNDERDRain**

**COMPACTED BIDRILL MATERIAL FROM EXCAVATION**

**SUBGRADE**

**CONCRETE DRIVEWAY APRON (SEE TYPICAL SECTION)**

**CONTRACTION JOINT (TYP)**

**TAPER COUPE TO MATCH CONCRETE APRON**

**RC PIPE CLASSES AS SPECIFIED**

**BOLTON & MENCH, INC.**

**MINNESOTA STATE UNIVERSITY, MANKATO**

**LOT 2 RECONSTRUCTION**

**DETAILS**

**NOTES:**
1. **AASHTO HS 25 LOADING MAX**
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4. **EQUIVALENT STEEL AREAS IN WIRE MESH MAY BE USED**
5. **REINFORCEMENT PER SPEC 3301, GRADE 60 A SINGLE HOOP OF 8ga STEEL WIRE**
NOTES:

1. EXISTING CONDITIONS, AS SHOWN, ARE THE ANTICIPATED EXISTING CONDITIONS AFTER THE DEMOLITION OF GAGE TOWERS.

2. THE GAGE TOWER DEMOLITION CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF THE EXISTING UNDERGROUND AND SURFACE IMPROVEMENTS, EXCEPT AS SHOWN.

3. THE GAGE TOWER DEMOLITION CONTRACTOR IS RESPONSIBLE FOR GRADING OF THE SITE TO THE APPROXIMATE PARKING LOT SUBGRADE ELEVATIONS AS SHOWN.

4. VERIFY ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO CONSTRUCTION.

5. PROTECT ALL REMAINING TREES FROM DAMAGE DURING CONSTRUCTION EXCEPT AS INDICATED OR DIRECTED BY THE OWNER OR ENGINEER.

6. PROTECT ALL SURFACE AND UNDERGROUND IMPROVEMENTS NOT MARKED OR DESIGNATED FOR REMOVAL.

7. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A 2' GRAVEL CUSHION OVER THE TOP OF THE TUNNEL AT THE PARKING LOT ENTRANCE.
NOTES


2. SHOWN ARE THE EROSION AND SEDIMENT CONTROL BMPs MOST LIKELY TO BE INPLACE AS PART OF THE DEMOLITION CONTRACT. ACTUAL BMPs MAY VARY DEPENDING ON THE CONTRACTOR’S OPERATIONS.

3. THE PARKING LOT CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR THE MAINTENANCE AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL BMPs INSTALLED ON THE PROJECT SITE AT THE TIME OF THE PERMIT TRANSFER.

4. SEED (MRK 260, CT), FERTILIZE (10-10-10, TYPE 1), HYDROMULCH (TYPE 8) ON ALL DISTURBED AREAS.

5. SEEDING AND HYDROMULCHING SHALL BE PERFORMED AS SEPARATE OPERATIONS. SEED MAY BE PLACED USING DROP SEEDING AND CULTIPACK OR HYDROMULCHING.

6. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A 2’ GRADES CROSSOVER OVER THE TOP OF THE TUNNEL AT THE PARKING LOT ENTRANCE.

LEGEND

TREE PROTECTION FENCE (BY DEMO CONTRACTOR)
SILT FENCE (BY DEMO CONTRACTOR)
INLET PROTECTION (BY DEMO CONTRACTOR)
ROCK CONSTRUCTION ENTRANCE (BY DEMO CONTRACTOR)
INLET PROTECTION

STADIUM ROAD
ELLI S AVENUE

MINNESOTA STATE UNIVERSITY, MANKATO
LOT 2 RECONSTRUCTION
EROSION & SEDIMENT CONTROL PLAN

BOLTON & MENK, INC.
Consulting Engineers & Surveyors

Sheet 6 of 9

BM=1001.18
TOP NUT HYDRANT NE CORNER STADIUM RD & ELLIS AV
BM=1000.56
TOP NUT HYDRANT NE CORNER LOT 1

1. REVIEW SET
2. FEET
3. HORIZ.
4. SCALE
5. DATE
6. LIC. NO.
7. DESIGNED
8. DRAWN
9. CHECKED
10. D. SARFF
11. N. HUETTL
12. N. HUETTL
13. EROSION & SEDIMENT CONTROL PLAN
14. MINNESOTA STATE UNIVERSITY, MANKATO
15. LOT 2 RECONSTRUCTION
16. NATHAN J. HUETTL, P.E.
17. 7/2/2013
18. 42774
19. WILLMAR, MN  CHASKA, MN  RAMSEY, MN  MAPLEWOOD, MN
20. MANKATO, MN  FAIRMONT, MN  SLEEPY EYE, MN  BAXTER, MN  ROCHESTER, MN  AMES, IA  SPENCER, IA
21. 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.
22. Bolton & Menk, Inc. 2013, All Rights Reserved
23. H:\MSU\M18106067\C3D\106067 ESC.dwg

NOTES


2. SHOWN ARE THE EROSION AND SEDIMENT CONTROL BMPs MOST LIKELY TO BE INPLACE AS PART OF THE DEMOLITION CONTRACT. ACTUAL BMPs MAY VARY DEPENDING ON THE CONTRACTOR’S OPERATIONS.

3. THE PARKING LOT CONTRACTOR WILL ASSUME ALL RESPONSIBILITY FOR THE MAINTENANCE AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL BMPs INSTALLED ON THE PROJECT SITE AT THE TIME OF THE PERMIT TRANSFER.

4. SEED (MRK 260, CT), FERTILIZE (10-10-10, TYPE 1), HYDROMULCH (TYPE 8) ON ALL DISTURBED AREAS.

5. SEEDING AND HYDROMULCHING SHALL BE PERFORMED AS SEPARATE OPERATIONS. SEED MAY BE PLACED USING DROP SEEDING AND CULTIPACK OR HYDROMULCHING.

6. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A 2’ GRADES CROSSOVER OVER THE TOP OF THE TUNNEL AT THE PARKING LOT ENTRANCE.
1. Verify locations and elevations of all existing utilities. Notify engineer immediately to resolve any discrepancies.

2. The parking lot contractor shall place aggregate base, CL. 7, from stockpile to construct the parking lot. Additional aggregate base, if necessary, shall be aggregate base, CL. 5 (100% crushed limestone). Excess aggregate base, if any, shall become the property of the contractor and properly disposed of.

3. Salvaged topsoil from the demolition and site grading will be stockpiled as indicated on the plans by the demolition contractor. The parking lot contractor shall stockpile salvaged topsoil in stockpiles in the vicinity of the pad, and at no more than 50 feet from the perimeter of the lot. Salvaged topsoil shall be graded out on-site to generally extend the berm as directed by the engineer. If there remains excess topsoil, it shall become property of the contractor and properly disposed of.

4. All parking lot striping shall be 4" wide yellow striping.

5. All curb base are dimensioned to the back of curb.

6. All curb openings are dimensioned to the face of curb. For mountable curb & gutter, the face of curb is 10" from the back of curb.

7. All pipe connections to structures shall be fully encased in a poured concrete "doghouse".

8. All curb and gutter 6' mountable curb & gutter except as noted.

9. The contractor shall construct and maintain a 2' gravel cushion over the top of the tunnel at the parking lot entrance.

10. Install 6 EA sign post sleeves (furnished by owner) at a location to be determined by the owner.
NOTES

1. PROPOSED CONTOURS SHOWN REPRESENT FINISHED GROUND ELEVATIONS.

2. EXISTING CONTOURS SHOWN REPRESENT THE PLANNED EXISTING GROUND AT THE COMPLETION OF THE GAGE TOWERS DEMOLITION CONTRACT.

3. ALL SPOT ELEVATIONS SHOWN ARE AT THE TOP BACK OF CURB UNLESS OTHERWISE NOTED.

4. ALL CURB AND GUTTER IS MOUNTABLE CURB & GUTTER EXCEPT AS NOTED.

5. SALVAGED TOPSOIL FROM THE DEMOLITION AND SITE GRADING WILL BE STOCKPILED AS INDICATED ON THE PLANS (BY DEMO CONTRACTOR). THE PARKING LOT CONTRACTOR SHALL USE THE SALVAGED TOPSOIL FOR BACKFILLING CURBS IN THE ISLANDS AND AROUND THE PERIMETER OF THE LOT. EXCESS TOPSOIL, IF ANY, SHALL BE GRADED OUT ON SITE TO GENERALLY EXTEND THE BERM AS DIRECTED BY THE ENGINEER. IF THERE REMAINS EXCESS TOPSOIL, IT SHALL BECOME PROPERTY OF THE CONTRACTOR AND PROPERLY DISPOSED OF.

LEGEND

LOO
PROPOSED MAJOR CONTOUR

999
PROPOSED MINOR CONTOUR

EXISTING MAJOR CONTOUR

EXISTING MINOR CONTOUR

PROPOSED GRADE AND FLOW DIRECTION

1.00%

PROPOSED SPOT ELEVATION

BM=1000.56

TOP NUT HYDRANT NE CORNER LOT 1

BM=1001.18

TOP NUT HYDRANT NE CORNER STADIUM RD & ELLIS AVE

CONSTRUCT 10' CURB

TAPERS FOR DRIVEWAY

CONSTRUCT PED RAMP

CONSTRUCT PED RAMP

MINNESOTA STATE UNIVERSITY, MANKATO
LOT 2 RECONSTRUCTION

GRADING PLAN

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MINNESOTA STATE UNIVERSITY, MANKATO
LOT 2 RECONSTRUCTION

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MINNESOTA STATE UNIVERSITY, MANKATO
LOT 2 RECONSTRUCTION

GRADING PLAN
1. LOCATION OF EXISTING UNDERGROUND ELECTRICAL VAULT CONTAINING EXISTING 120/208V, 3-PHASE ELECTRICAL PANEL TO BE USED TO SERVE LOT #2 ELECTRICAL NEEDS. THERE ARE (4) 1" PVC CONDUITS STUBBED OUT 10'-0" PAST VAULT FROM THIS PANEL.

2. INSTALL A MILLERBERND #11A864250 25' SELF WEATHERING POLE ON MILLERBERND #490A29 SCREW IN BASE. INSTALL RACEWAYS AS SHOWN ON PLAN FOR OWNER INSTALLED SECURITY VIDEO CAMERA.

3. REMOVE AND DISPOSE OF EXISTING DAMAGED CODE BLUE PHONE CONCRETE BASE AND INSTALL A MILLERBERND #490A27 SCREW IN BASE. REINSTALL EXISTING CODE BLUE PHONE TO THIS NEW BASE AND EXTEND EXISTING POWER AND VOICE RACEWAYS AND 120V CONDUCTORS TO NEW ADJACENT PHONE LOCATION. 120V IS SERVED FROM TUNNEL. OWNER WILL EXTEND AND CONNECT VOICE CONDUCTORS.

4. NEW CODE BLUE PHONE LOCATION. INSTALL A MILLERBERND #490A27 SCREW IN BASE AND INSTALL OWNER PROVIDED PHONE UNIT. INSTALL VOICE AND 120V RACEWAY AS SHOWN. INSTALL 120V TO THIS NEW PHONE, OWNER WILL INSTALL VOICE CONDUCTORS.

5. IN-GRADE JUNCTION BOX, SIZE AS REQUIRED.

6. E.C. TO PROVIDE AND INSTALL PHOTO CELL ON FIRST LIGHT POLE AND LIGHTING CONTACTOR IN VAULT TO CONTROL SITE LIGHTING. SEE DETAIL THIS SHEET.