



**MANDAN ARCHITECTURAL REVIEW
COMMISSION
AGENDA
FEBRUARY 25, 2025
VETERAN'S CONFERENCE ROOM
CITY HALL, 205 SECOND AVENUE NW
1:00 PM
WWW.CITYOFMANDAN.COM**

The public may access the Zoom meeting online at:

Join Zoom Meeting

<https://us06web.zoom.us/j/84865995311?pwd=8faQoNHgaMKwhzw3RD4HP8bv7aMNyl.1>

Meeting ID: 848 6599 5311

Dial: +1 312 626 6799

Passcode: 168422

A. ROLL CALL

B. MINUTES

1. MARC December 10, 2024 Minutes

C. OLD BUSINESS

D. NEW BUSINESS

1. Selection of Board Chairs
2. MDU Training Facility

E. OTHER BUSINESS

F. UNFINISHED BUSINESS

G. ADJOURN

MARC Members

Victoria Vayda-Hammond - Vice President
Jordan Singer - Building Official
Jarek Wigness - City Engineer
Mitch Bitz - Fire Chief

Support Staff (City of Mandan)

Brittany Thomas - Permit Technician
Andrew Stromme - Planner
Madison Cermak - Business Development

Mandan Architectural Review Commission
Agenda]
February 25, 2025
Page 2 of 2

Shane Weltikol - Resident Kendra Rennich - Resident Kari Nardello - Resident Matthew Bradley - Resident Ryan Welder - Resident
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Please note: If any commission member would like additional information, please feel free to contact the Building Inspections Department at 667-3230 prior to the meeting.



December 10th MARC Meeting Minutes

Meeting roll call members, Lee Pierce, Victoria Vayda-Hammond, Shane Wetikol, Riley McAdoo-Roesler, Jordan Singer.

Meeting Minutes

Vayda-Hammond motioned approval for the November 26th MARC meeting.

McAdoo-Roesler second the motion. Unanimous approval

New Business

A inquiry was made for an addition for Abra Auto Body located at 3729 Memorial Highway.

A new design for the business, and they want to end a back end to the building, add to the North end, with a middle building connected to it. The project will be about 6,000 square feet. The front of the building they will square off the store front. A whole new look to the store front will be made. Metal panels, and overhead doors facing the street.

The main layout will be refreshing the front entrance, add the addition, and add a drive lane for Abra to work with their techs. This was brought forth to ensure compliance with the Gateway Overlay District.

The board was in favor of the project and asked for 3 architectural elements to comply with the Gateway Overlay district, to include a front awning that was not indicated on the drawing.

No action was taken by the board at this time.

In other business, Singer talked about changes to the code of ordinances in the sections that deal with MARC.

No action was taken by the board for this business item.

For the meeting adjourn, Singer once again thanked Chair Pierce and Member Caldwell for their service.



ARCHITECTURAL REVIEW COMMISSION APPLICATION

Applications need to be submitted to the Building Inspections Department no later than 12 p.m. (noon) on the Wednesday prior to the scheduled meeting at which consideration is desired. Digital submittals will be accepted. If paper copies are submitted a copy of the following information is required. They shall be no larger than 11 x 17 and need to have complete sets, drawn to scale. Incomplete applications will not be accepted. If you have any question call the Building Inspections department at 701-667-3230.

1. Description of Proposed Activity: MDU Electric Training Facility
MDU Electric Training Facility
2. Name of Owner: Montana Dakota Utilities
Mailing Address: PO Box 5650, Bismarck, ND 58506
Phone (Cell) 701-527-9893 (Office) 701-222-7850
3. Name of Architect if applicable: ILSE Inc. - Abe Ulmer
Mailing Address: 4215 Old Red Trail NW, Mandan, ND 58554
Phone (Cell) 701-220-0968 Office) 701-663-5184
4. Name of Contractor: Northwest Contracting
Mailing Address: 2840 Valley Forge St, Bismarck, ND 58503
Phone (Cell) 701-214-0452 (Office) 701-255-7727
5. Parcel Address: 2086 37th Street
6. Legal Description:
Lot 1 Block 1 Addition MDU Addition
Section 10 Township 139 Range 81
7. Zoning: To be determined
8. Special Purpose District: _____
9. Existing Land Use: Vacant
10. Lot Size (Sq Ft) 490,485sf
Existing Bldg Area (Sq Ft) 0
Proposed Bldg Area (Sq Ft) 13,584 sf
11. Estimated Cost of Project: \$ 3,297,800.00
➤ Is this project receiving incentives from the City of Mandan? Yes ___ No X
If you are receiving incentives please indicate which programs have been applied for.

I understand the procedures for Architectural Review and have received the checklist (see attached sheet) to be followed for approval as set forth in Chapter 111-1 of the Mandan City Code.

Approvals are subject to compliance with Federal, State and Local regulations.

Applicant: [Signature] Date: 2/19/2025
Authorized Representative

Revised (9-20)



ARCHITECTURAL REVIEW COMMISSION APPLICATION INSTRUCTIONS

1. Give a brief description of you project.
2. The contact information for the owner of the property.
3. If an Architect is used provide the contact information for the Architect.
4. The contact information for the general contractor that will be performing the work for your project.
5. The address of the parcel (lot) the work is being performed on.
6. Provide the Legal Description for the Parcel (lot).
7. The current zoning of the parcel (lot).
8. Indicate if the Parcel (lot) is located in the Downtown Core, Down Town Fringe, Gateway overlay district, or Memorial Highway overlay district. (see maps provided).
9. Describe what the parcel (lot) is currently being used for.
10. Give an exact lot size, building size, and proposed size of an addition or project size.
12. Cost for the project to include all dirt work, concrete, construction, electrical, plumbing, HVAC, landscaping, utilities, and any other costs associated with the project.
 - If this project is receiving any public funds from the city of Mandan please indicate which programs are being taken advantage of.

If you have additional question or need clarification on any of the items listed on the application please contact the Building Inspections office at 701-667-3230 and we will provide guidance on the completion of this form.



CHECK LIST FOR ARCHITECTURAL REVIEW COMMISSION APPLICATION

Applications need to be submitted to the Building Inspections Department no later than 12 p.m. (noon) on the Wednesday prior to the scheduled meeting at which consideration is desired. Digital submittals will be accepted. If paper copies are submitted ten (10) copies of the following information are required. Eight (8) copies shall be no larger than 11 x 17 and two copies shall be complete sets, drawn to scale. Incomplete applications will not be accepted. If you have any question call the Building Inspections department at 701-667-3230.

A. Plot Plan - Drawn to Scale

- ☒ 1. Boundaries-Indicate North Arrow
- ☒ 2. Road(s) fronted upon
- ☒ 3. Utility lines or easements-existing and planned
- ☒ 4. Major topographic features-existing and planned-drainage
- ☒ 5. Landscaping and major vegetative cover-existing and planned
- ☒ 6. Location of structure(s) on site; existing and proposed
 - a. Includes dimensions
 - b. Includes set back distances
 - c. Includes exterior security and area lighting, fire hydrants (must indicate if 350 feet or less from proposed project), etc.
 - d. Dumpsters and screen walls
- ☒ 7. Vehicular and pedestrian plans.
 - a. Parking. Include number of spaces including handicapped parking, location, hard surfacing, etc.
- ☒ 8. Signage

B. Photos and/or Samples of Proposed Building Exterior, Including Exterior Colors

C. Elevation Architectural Plans to Scale

- ☒ 1. Elevation drawings to include ALL sides.

D. Two Copies of the Storm Water Management Systems. This must be certified by an engineer. If not applicable, submit in writing why you think it should not affect the existing system.

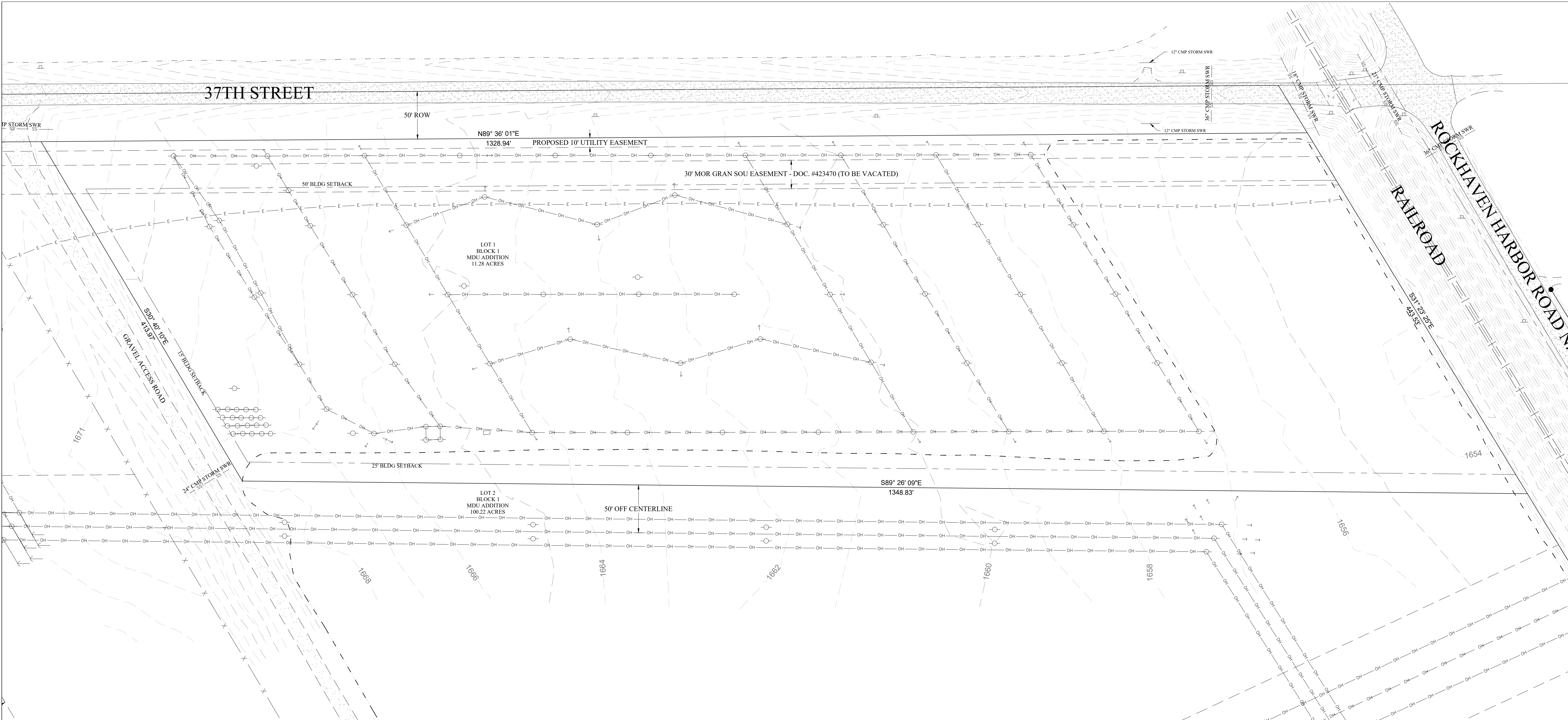
E. The owner, whenever possible, and the contractor or a representative needs to be present at the scheduled meeting.

Note: If your project is for exterior improvements to a building with no additions, driveway, sidewalk, landscaping, or grading to the lot only the information in sections B and C are required. Incomplete applications will not be accepted.

The Architectural Review Board has a regularly scheduled meeting every 2nd and 4th Tuesday at 1 p.m. in City Hall. Applications may be accepted and/or scheduled up to the prior Wednesday at 12 p.m. (noon).







SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

LEGEND

	EXISTING GUY WIRE		EXISTING CONTOUR
	EXISTING POWER POLE		EXISTING BUILDING
	EXISTING ELECTRIC BOX		EXISTING ASPHALT
	EXISTING SIGN		EXISTING GRAVEL
	EXISTING TV/TELEPHONE PEDESTAL		EXISTING CONCRETE
	EXISTING STORM SEWER		
	EXISTING WATERMAIN		
	EXISTING FENCELINE		
	EXISTING UNDERGROUND ELECTRIC		
	EXISTING OVERHEAD POWER		
	EXISTING RAILROAD TRACKS		
	NON-ACCESS LINE		
	EXISTING EDGE OF CROPLAND		

GENERAL NOTES:

SPECIFICATIONS: All work shall conform to the Project Manual and Specifications as supplemented by or modified by the following plan notes. All work in the Morton County Right of Way shall conform to the Morton County Construction Specifications and Details.

PERMITS: The Contractor is required to obtain all permits that may be required prior to construction. The Contractor will also be required to complete and file a Notice of Intent (NOI) with the North Dakota Dept. of Health division of water quality. The Contractor shall also notify the Morton County prior to working within the City ROW.
-An approach permit will be required through Morton County Highway Department to construct the proposed approach.

CONTRACTOR PARKING STAGING AREA: The Contractor shall not use private property to park vehicles, store materials, or use as a staging area without written permission from the owner of that property. Any damages to private property shall be repaired to the satisfaction of the owner by and at the Contractor's expense.

BENCHMARK: Benchmarks and survey Control points for this project are shown on the plans or will be set by the Engineer. Care shall be taken as to not cover, remove, damage, obscure, move or destroy set benchmarks, lath, hubs, property pins, or other survey monuments. Any damaged or destroyed control points shall be replaced at the Contractor's expense.

SURVEYING: The Contractor shall be responsible for all layout surveying and staking needed for construction activities. Project construction staking shall be provided by the Contractor. Any damaged or destroyed survey points will be replaced by the Engineer at the Contractors expense. Electronic files and control point information will be available through the Engineer for use of grading contractors utilizing GPS equipment.

PROTECTION OF EXISTING UTILITIES: The Contractor is advised that existing utilities are shown in their approximate location and have been taken from information supplied by North Dakota One Call and documents of record. The contractor shall exercise care in construction operations to ensure that existing utilities, pavement, trees, shrubs, grasses, seeded areas, fences, signs, conduits, private irrigation systems, and other site improvements located on or around the construction limits are not disturbed. The Contractor is responsible for locating and protecting all existing utilities. The Contractor shall be responsible for repairing any damage to existing utilities caused by the construction process. Any discrepancies shall immediately be brought to the attention of the Architect/Engineer.

LEGAL: _____ ZONING: _____
2086 37TH STREET
LOT 1 OF BLOCK 1,
MDU ADDITION
Lot Area: 11.28 ACRES (+/-)
OWNER: _____
MONTANA DAKOTA UTILITIES
PO BOX 5650
BISMARCK, ND 58506

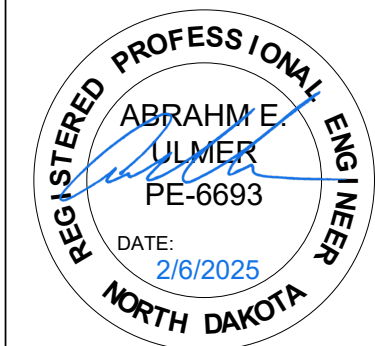
MX - MIXED INDUSTRIAL DISTRICT
SETBACKS: _____
FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
CONTRACTOR IS RESPONSIBLE FOR
VERIFYING LOCATION OF ALL UTILITIES
PRIOR TO EXCAVATION

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

Independent Land Surveying
& Engineering Inc.
4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PROJ # 24084



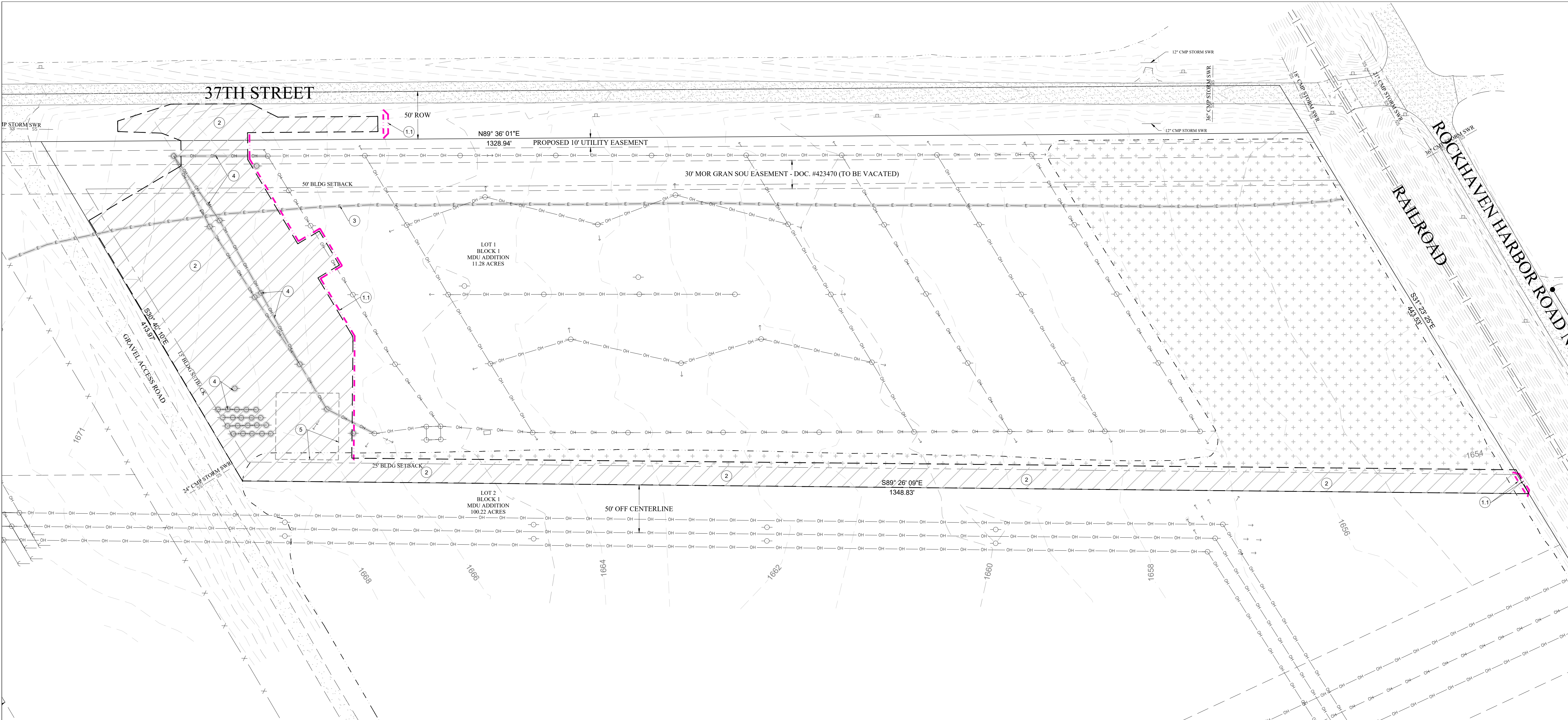
EXISTING
CONDITIONS

SHEET

C100

REVISIONS

REV#	DESCRIPTION	BY	DATE



SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

LEGEND

- CONSTRUCTION LIMITS
- TOPSOIL REMOVAL
- SEED CROPLAND INTO GRASS
- POWER POLE REMOVAL
- OVERHEAD LINE REMOVAL
- MGS ELECTRIC LINE TO BE RELOCATED
- PROPOSED EROSION CONTROL

GENERAL NOTES:

CONSTRUCTION LIMITS: The Contractor shall make all effort to minimize the disturbed areas, especially outside the construction limits. The construction limits of the project are limited to the areas shown on the plans to be disturbed. All areas disturbed outside the construction limits shall be restored to the original condition and seeded at the contractors expense.

EROSION CONTROL:

- Erosion control measures shall be installed prior to any construction activities.
- Projects disturbing one or more acres shall have a NDPDES permit to discharge storm water runoff. If the project is an acre or more the Contractor will also be required to complete and file a Notice of Intent (NOI) with the North Dakota Dept. of Environmental Quality. No land disturbing activities shall occur until a NDPDES permit has been issued by the NDDEQ. The Contractor shall check with the local officials to be sure all local storm water management considerations are addressed.
- Best management practices shall be utilized for all erosion control. All surface water shall not leave the site without passing through Best Management Practice erosion control measures.
- The BMP's shall be inspected daily by the permittee/contractor and maintained as necessary to ensure their continued functioning.
- The Contractor shall prevent the erosion of exposed soil surfaces and trapping sediments being transported, and erosion and sedimentation into existing storm sewer and adjacent properties will be minimized.
- De-watering of storm water on site and of trenches due to ground water shall be the Contractors responsibility. There shall be no standing water on site.
- Mud tracking onto adjacent streets shall be kept to a minimum. The Contractor shall be responsible for cleaning any mud or debris tracked from the construction site onto adjacent streets. The Contractor shall remove all soil and sediment tracked or deposited off-site on pavement areas. Soil removal shall be accomplished by shoveling or sweeping on a daily basis. Street washing will not be allowed.
- The BMP's shown on the plans are the minimum requirements for the anticipated site conditions. As construction progresses and unexpected or seasonal conditions dictate, the permittee/contractor shall anticipate that more BMP's may be necessary to ensure erosion and sediment control on site.
- All temporary erosion and sediment control measures shall be properly disposed of within thirty (30) days after final site stabilization is achieved or after the temporary measures are no longer needed.

TOPSOIL REMOVAL: Existing Topsoil shall be removed to its full depth and stockpiled onsite for reuse. Removal of Topsoil is based on 6" depth assumed in dirtwork calculations.

TESTING: Testing shall be conducted according to project specifications. The Contractor shall provide at its expense the necessary testing and inspection services required by the plans and specifications. The Contractor shall employ an accredited independent testing laboratories certified through the American Association of State Highway and Transportation Officials (AASHTO). All site grading and compaction testing shall be to 95% density with a moisture content between +3% to -3% optimum moisture as per ASTM D698. The Contractor shall be responsible for scheduling tests according to specifications and shall supply test results to the project Engineer/Architect, and to the Owner.

GENERAL NOTES CONTINUED:

EXCESS MATERIAL: Any surplus dirt material to be utilized shall be placed prior to placement of the topsoil and to the same density and moisture requirements as specified. This embankment of extra material shall be considered incidental to project. All areas to receive fill shall be cleared and grubbed, topsoil removed and stockpiled, and scarified and compacted prior to placing excess material for embankment.

TRAFFIC CONTROL: Contractor shall be responsible for traffic control during construction. the Contractor shall furnish and install traffic control measures prior to any construction work. Every effort shall be made to minimize the disruption of traffic during construction activities.

CLEANUP: All trash on site from construction activities shall be disposed of off site by the Contractor. This shall be considered incidental to the project. Prior to final inspection the Contractor shall sweep and clean the construction site and streets of all debris.

PROPOSED SEPTIC AREA: Contractor shall minimize traffic within the proposed septic area. No traffic will be allowed within the proposed septic area except traffic for septic drain field construction. This includes no stockpiling of dirt or construction building materials.

CALL OUTS:

- INSTALL EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION
- INSTALL 9" FIBER ROLLS
- REMOVE & STOCKPILE TOPSOIL WITHIN CONSTRUCTION LIMITS
- UTILITY RELOCATION BY OTHERS:
- COORDINATE & VERIFY WORK WITH UTILITY COMPANY (MOR-GRAN-SOU ELEC)
- POWER POLE & OVERHEAD LINE REMOVALS - BY OWNER
- MINIMIZE CONSTRUCTION TRAFFIC WITHIN PROPOSED SEPTIC DRAIN FIELD AREA

Spec No.	Misc. Items & Pavement Items	Quantity
1	Stripping & Stockpiling Topsoil	2.27 ACRE
2	Straw Wattles, 9 Inch	550 LF
3	Rock Construction Entrance	1 EA

LEGAL: _____ ZONING: _____

2086 37TH STREET
LOT 1 OF BLOCK 1,
MDU ADDITION
Lot Area: 11.28 ACRES (+/-)

OWNER: _____

MONTANA DAKOTA UTILITIES
PO BOX 5650
BISMARCK, ND 58506

MX - MIXED INDUSTRIAL DISTRICT

SETBACKS: _____

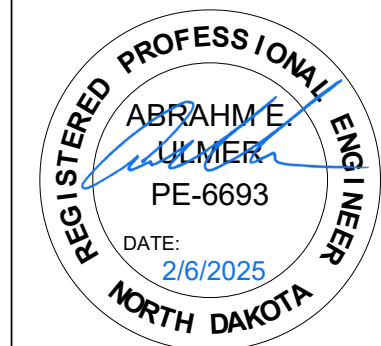
FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
CONTRACTOR IS RESPONSIBLE FOR
VERIFYING LOCATION OF ALL UTILITIES
PRIOR TO EXCAVATION

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

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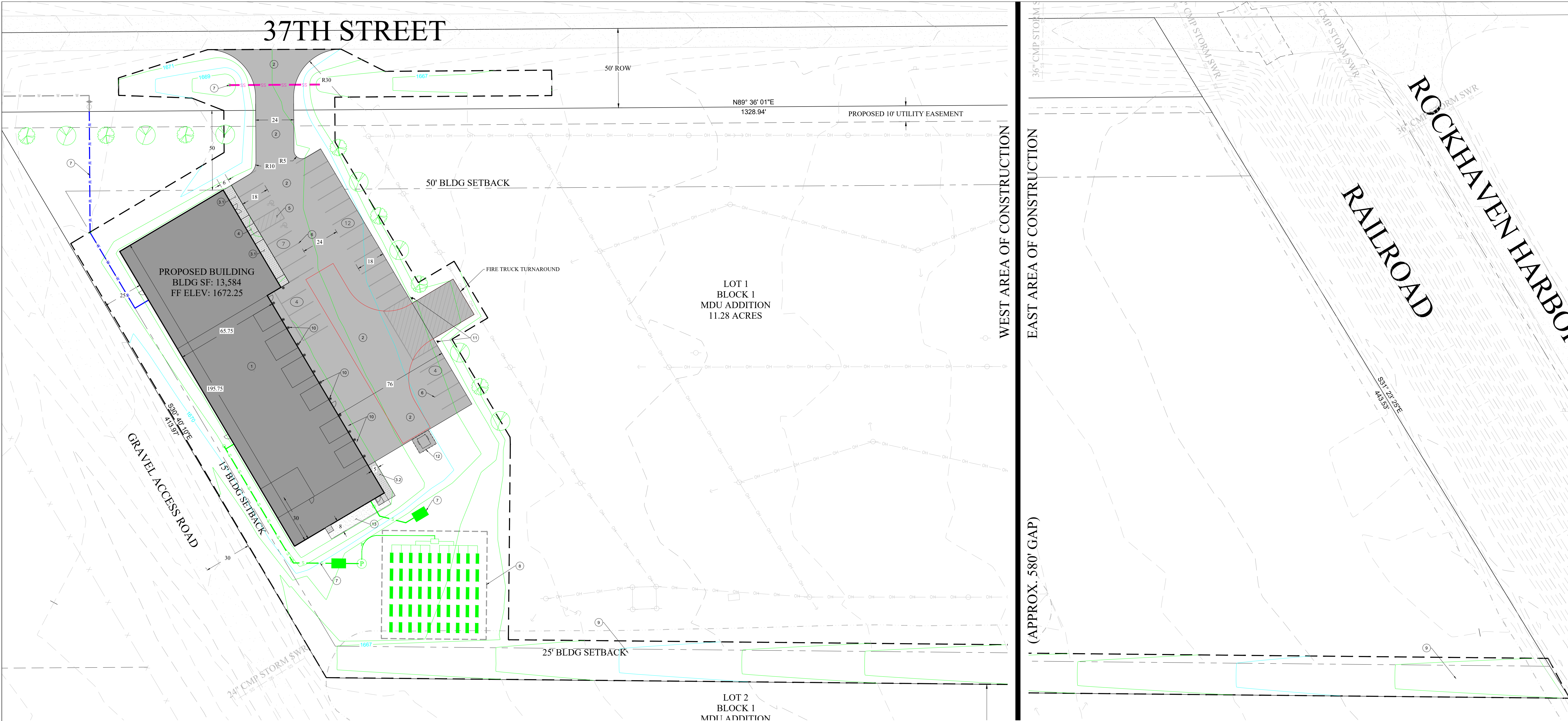
REMOVALS

SHEET

C200

REVISIONS

REV#	DESCRIPTION	BY	DATE



SCALE: 1" = 30'

SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

LEGEND

- PROPOSED CONCRETE PAVEMENT
- PROPOSED SANITARY CLEANOUT
- PROPOSED SANITARY SEWER SERVICE
- PROPOSED WATER SERVICE
- PROPOSED CURB STOP
- PROPOSED STORM SEWER
- PARKING STALL COUNT
- PROPOSED CONTOUR
- CONSTRUCTION LIMITS
- PROPOSED BOLLARD
- PROPOSED TREES/VEGETATION

GENERAL NOTES:

SPECIFICATIONS: All work shall conform to the Project Manual and Specifications as supplemented by or modified by the following plan notes. All work in the Morton County Right of Way shall conform to the Morton County Construction Specifications and Details.

PERMITS: The Contractor is required to obtain all permits that may be required prior to construction. The Contractor will also be required to complete and file a Notice of Intent (NOI) with the North Dakota Dept. of Health division of water quality. The Contractor shall also notify Morton County prior to working within the County ROW.

BENCHMARK: Benchmarks and survey Control points for this project will be established by the Engineer. Care shall be taken as to not cover, remove, damage, obscure, move or destroy set benchmarks, lath, hubs, property pins, or other survey monuments. Any damaged or destroyed control points will be replaced by the Engineer at the Contractor's expense.

SURVEYING: The Contractor shall be responsible for all layout surveying and staking needed for dirt work construction activities. The Engineer shall supply an electronic file and a minimum of 5 control monuments at the site for the use of the site grading Contractor in laying out the work. Care shall be taken as to not cover, remove, damage, obscure, move or destroy set survey monuments.

PROPOSED CONTOURS: The final contours shown on the plans represent the finished surface to the topsoil, pavement, surfacing, storm sewers, etc. The Contractor is to make allowances as required to account for topsoil and pavement surfacing when completing the site grading.

HAUL ROAD RESTRICTIONS: The Contractor shall contact the appropriate State, County, Township, or City officials to determine if there are any "No Haul Routes" prior to preparing a bid for this project.

PAVEMENT MARKING/STRIPING: Contractor to stripe entire parking lot after pavement operations are complete as per layout on plan sheets. All paint shall meet the NDDOT specifications. Stripes shall be 4" wide yellow paint. Blue Striping and symbols shall be installed at handicap stalls, along with access aisle diagonal painted with blue lines spaced at 2' on center. All paint shall be applied at 110 SF/GAL.

AGGREGATE BASE: All new aggregate base shall be Class 5 Gravel per NDDOT specifications or approved equal. Gravel shall be installed to the thickness as shown on plan details (see sheet C801), and compacted to 95% Standard Proctor density with a moisture content between +3% to -3% optimum moisture as per ASTM D698.

TOPSOIL: The existing topsoil within the construction limits shall be removed, salvaged, and replaced. Removal of topsoil is based upon a 6" assumed depth. Topsoil shall be removed to its full depth in areas that receive pavement or building. Upon completion of the construction area, the topsoil shall be spread evenly over areas to be seeded. Excess topsoil may be placed as fill on areas of the site. see unclassified excavation plan note on this sheet.

GENERAL NOTES CONTINUED:

CONCRETE: All Concrete in the city Right of Way shall be in accordance with he City of Mandan Construction Specifications.

- All Concrete shall have 28 day strength of 4,000 psi, with a maximum allowable slump of 4 inches, and air entrainment content between 5% to 7%. The Contractor shall provide a mix design to be approved by the Engineer.
- All Concrete placed next to the building and/or structures shall have 3" expansion material installed and sealed.
- Thickened edge sidewalk shall have continuous reinforcement of #4 grade deformed bars tied together at 24" on center to be tied together and placed at the vertical center of the concrete slab.
- Parking Lot concrete shall be 5" concrete reinforced with Macro Fiber.
- Drive Lane concrete shall be 6" concrete reinforced with Macro Fiber.
- Macro Fiber reinforcement shall be used where called out in the plans. Macro fiber reinforcement shall meet the standards of ASTM C1116/C1116M, Type III fiber reinforced concrete, & ASTM D7508. Concrete shall have 4#/s Macro Fiber per Cubic Yard of Concrete Mix.
- Concrete joints shall be a maximum of 10'x10', and a concrete jointing plan shall be required by the Contractor and approved prior to implementation.
- All Construction joints shall be formed with a keyway or tied together with 18" tie bars drilled 1/2 length into existing concrete every 24".
- Concrete Construction joints shall be saw cut 1/3 the concrete depth, 1/4" wide, cleaned, and sealed with caulking and backer rod. Backer rod shall meet the requirements of ASTM D 5249 type 1. Joint Sealant shall be a cold applied joint sealant specifically manufactured for exterior pavements. Sealant shall be a one part silicone, or electronic sealant complying with ASTM C920. Sealant shall be white or gray to match concrete color, with a low modulus and be capable of withstanding repeated joint movement without losing adhesion to the concrete without cohesion failure. Joints shall be clean and free of debris per manufactures instructions.
- Curing Compounds shall conform to ASTM C309- Type 2 white pigmented. Curing Compound coverage shall be per manufactures recommendations.
- Concrete tests shall be done per the following: Minimum one test per day or one test per 50 Cubic Yards of concrete poured for parking lot pavement or sidewalks.

UNCLASSIFIED EXCAVATION: This item shall consist of excavating, hauling, placement, disposal, and compaction of embankment material in conformity with the dimensions and typical sections shown on the plans and with the lines and grades established by the Engineer. Unclassified Excavation has been calculated by the method of average end areas with an assumption of 6" existing topsoil removed. Embankment of material shall be considered incidental to the excavation.

- Dirt Calculations included 6" topsoil removal, 5' over-excavation over entire building area, and footing over-excavation of 5' tall by 8.66' width below the perimeter footings. Total calculated dirt cut volume is 2,586 CY and total dirt fill volume is 2,255 CY. These calculations assumed no shrinkage.
- Alternate Building Addition over-excavation area was not included in dirtwork calculations.
- Excess topsoil quantity is estimated at approx. 550 CY. This excess topsoil shall be placed as fill in the proposed septic area.

WASTE: All material removed which is not designated to be salvaged shall become the property of the Contractor. Cost to transport and dispose of this material shall be considered incidental to material removed. Waste material quantity depends on actual shrinkage percentage encountered during construction.

CALL-OUTS:

- PROPOSED BUILDING
- INSTALL CONCRETE - 6" MACRO-REINFORCED CONCRETE
- INSTALL CONCRETE SIDEWALK
- INSTALL THICKENED EDGE CONCRETE SIDEWALK
- INSTALL 4" THICK CONCRETE SIDEWALK
- INSTALL CURB RAMP
- ADA ACCESSIBLE PARKING STALLS- PROVIDE APPROPRIATE SIGNAGE & PAVEMENT MARKINGS
- TYPICAL STRIPING
- PROPOSED UTILITIES - SEE PLAN SHEET C400 & C501
- MINIMIZE CONSTRUCTION TRAFFIC WITHIN PROPOSED SEPTIC DRAIN FIELD AREA
- PROPOSED DRAINAGE DITCH - SEE DETAIL - SEE PLAN SHEET C800
- PROPOSED BOLLARD (13 TOTAL)
- PROPOSED NO PARKING FIRE SIGNS (12x18) R7-1R & R7-1L
- PROPOSED DUMPSTER ENCLOSURE - 6' TALL METAL SIDING
- PROPOSED 6" CRUSHED CONCRETE SURFACING

APPROXIMATE QUANTITIES		
Item No.	Misc. Items & Pavement Items	Quantity
1	Subgrade Preparation	1,804 SY
2	Aggregate Base 6"	640 TON
3	6" Concrete (Macro)	10,790 SF
4	Thickened Edge Sidewalk	428 SF
5	4" Concrete Sidewalk	144 SF
6	Crushed Concrete	12 Ton
7	Bollards	13 EA

LEGAL: 2086 37TH STREET
LOT 1 OF BLOCK 1,
MDU ADDITION
Lot Area: 11.28 ACRES (+/-)

OWNER: MONTANA DAKOTA UTILITIES
PO BOX 5650
BISMARCK, ND 58506

ZONING: MX - MIXED INDUSTRIAL DISTRICT

SETBACKS:

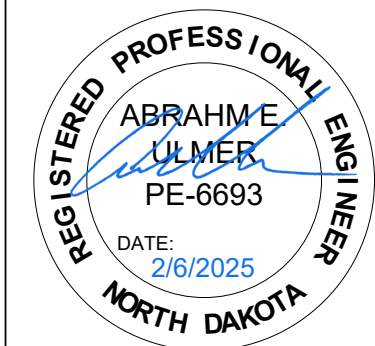
FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
CONTRACTOR IS RESPONSIBLE FOR
VERIFYING LOCATION OF ALL UTILITIES
PRIOR TO EXCAVATION

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

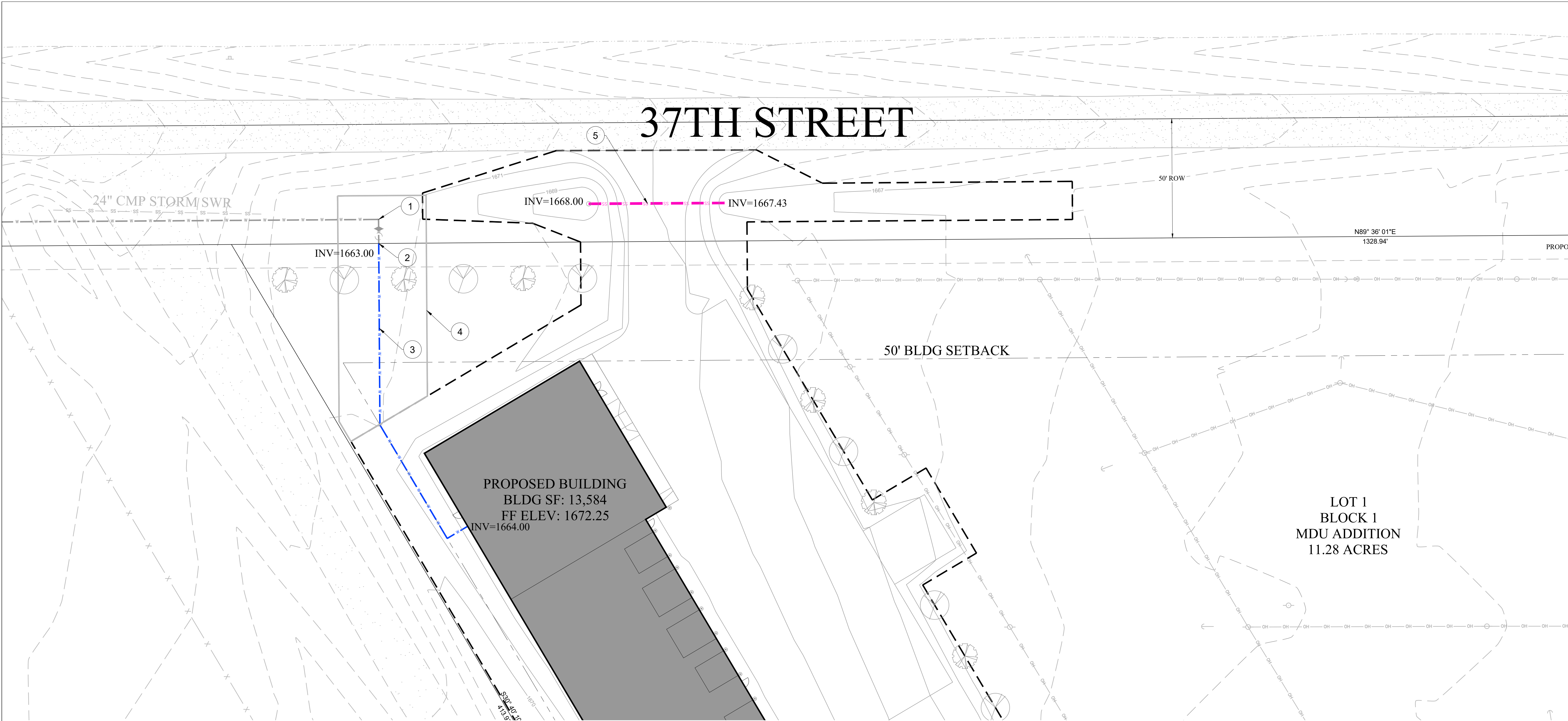
Independent Land Surveying
& Engineering Inc.
4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PROJ # 24084



PROPOSED CONDITIONS

SHEET

C300



SCALE: 1" = 20'

SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

LEGEND	
	PROPOSED SANITARY CLEANOUT
	PROPOSED SANITARY SEWER SERVICE
	PROPOSED WATER SERVICE
	PROPOSED CURB STOP
	PROPOSED STORM SEWER
	PROPOSED CONTOUR
	CONSTRUCTION LIMITS

GENERAL NOTES:

- WATER SERVICE:
- Contractor shall coordinate water service hookup with Missouri West Water.
 - Materials, Construction Method, Pressure Testing, and Bacterial Testing shall comply with Missouri West Water Construction Specifications, unless noted otherwise.
 - Missouri West Water is contracted to bring water to the site. Contractor shall connect to existing water main at locations shown on the plan. Contractor shall coordinate water service connection with Missouri West Water.
 - Contractor shall remove, replace topsoil, and seed disturbed areas outside the construction limits necessary for water service construction.
 - The Contractor shall furnish all labor, equipment, tools, and material necessary to install 2-inch water service pipe at locations shown on the plan. Water Service pipe shall be Poly pipe per Missouri West Water Specifications.
 - Water service shall be installed with a minimum of 8.0' of cover.
 - A pressure test shall be performed by the contractor under the supervision of Missouri West Water and/or Engineer to meet requirements.
 - Disinfection of water piping shall conform to applicable ND State Dept. of Health requirements and Missouri West Water Standards for disinfecting water lines to carry safe, treated water.
 - All plan footages are approximate, exact lengths to be determined by the Contractor in the field.

STORM SEWER:

- 24" CMP Storm culverts shall be Gage 16 Corrugated Metal Storm Pipe with a zinc coating weight of 2 ounces per square foot and shall conform to the requirements of AASHTO M36.
- All Flared End Sections shall be Corrugated Metal
- All plan footages are approximate, exact lengths to be determined by the Contractor in the field.

SUBGRADE PREPARATION & TRENCHING DENSITY REQUIREMENTS: Areas to receive Fill, Gravel Base, Pavement, and the bottom of fill areas shall be scarified to a minimum depth of 6 inches specified and compacted. Contractor shall be required to manipulate substandard areas by working the soil until the specified density and uniform moisture content are achieved. Fill material shall be placed in lifts not exceeding eight inches loose thickness. All fill material shall be compacted to 95% density with a moisture content between +3% to -3% optimum moisture as per ASTM D698. Testing frequency shall be one passing test for every 5000 SF of area for every lift of fill material. Trench backfill shall have a testing frequency of one test per every 300 lineal foot of compacted utility trench for every 2 vertical foot of backfill. No testing shall be required over the proposed sanitary sewer and septic drain field.

UTILITY ADJUSTMENTS:

- Contractor shall adjust all sanitary clean out castings, valve boxes, manhole castings, and inlet castings to final grade prior to pavement or landscape placement. See sheet C800 for adjustment details.

- CALL OUTS:
- WATER SERVICE:
- MISSOURI WEST WATER SERVICE TO BE INSTALLED BY OTHERS. CURB STOP AND 1" METER PIT WILL BE INSTALLED BY MWWS
 - CONNECT TO WATER STUB INSTALLED BY OTHERS INSTALL 1" x 2" FITTING
 - INSTALL 142 LF 2" WATER SERVICE PIPE
 - REMOVE & REPLACE TOPSOIL AND SEED AS NEEDED
- STORM SEWER:
- INSTALL 50 LF 24" CMP STORM SEWER @ 1.00% & 24" FLARED END SECTIONS (57' TOTAL)

APPROXIMATE QUANTITIES		
Spec No.	Watermain Items	Quantity
1	2" Water Service Pipe	142 LF
Spec No.	Storm Sewer Items	Quantity
1	24" CMP Storm Sewer Pipe	50 LF
2	24" CMP Flared End Section	2 EA

LEGAL: 2086 37TH STREET LOT 1 OF BLOCK 1, MDU ADDITION Lot Area: 11.28 ACRES (+/-)

OWNER: MONTANA DAKOTA UTILITIES PO BOX 5650 BISMARCK, ND 58506

ZONING: MX - MIXED INDUSTRIAL DISTRICT

SETBACKS:

FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
CONTRACTOR IS RESPONSIBLE FOR
VERIFYING LOCATION OF ALL UTILITIES
PRIOR TO EXCAVATION

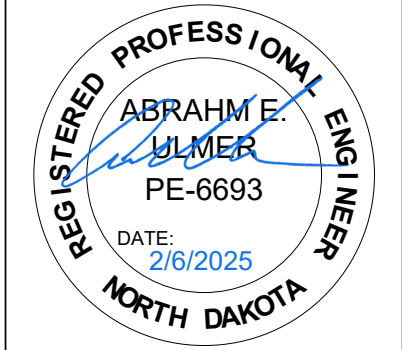
REVISIONS		DATE
REV#	DESCRIPTION	BY

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

Independent Land Surveying & Engineering Inc.

4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PROJ # 24084



PROPOSED UTILITIES

SHEET

C400



SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

- LEGEND**
- PROPOSED SANITARY CLEANOUT
 - PROPOSED SANITARY SEWER SERVICE
 - PROPOSED SEPTIC TANK
 - PROPOSED DRAIN FIELD
 - PROPOSED PUMP CHAMBER
 - PROPOSED DISTRIBUTION BOX
 - CONSTRUCTION LIMITS

GENERAL NOTES:

SEPTIC DESIGN:

- Septic Construction shall meet the requirements of Western Plains Public Health "Requirements for on-site sewage treatment systems" as adopted April, 2017, & Chapter 62-03.1-03 of the North Dakota Century Code.
- The Contractor is required to obtain all permits that may be required prior to construction of the Septic System.
- Septic system shall be installed in its entirety to meet the following design.
 - Soil Percolation Rate: 90 Min/Inch
 - Soil Loading Rate: 4.20 SF/GAL/DAY
 - Max Daily Flow: Design 360 Gallons per Day
 - Septic Tank: 1,200 gallon tank (working capacity)
 - Effluent Absorption: Minimum 500 LF of 34" chambers (36" wide trench). (110' max length per run)
- Proposed drain field layout is shown in general. Contractor shall determine final layout as necessary to be approved by owner and regulating authority.
- Chambers shall be Infiltrator Quick 5 Standard Chamber with 60" effective length or approved equal.
- Chambers shall be installed with a maximum length of 110' per run, 6' center to center per detail, and max 48" depth.
- Chambers shall be installed level and along the contour. Sidewalls shall be as vertical as practical and not intentionally sloped. The bottom and sides of the soil treatment area shall be excavated in such a manner as to leave the soil in a natural, un-smearred, and un-compacted state.
- Soils test performed by Prairie Soil Consultants shows redox at 52" depth. The bottom of the chambers shall be a minimum of 24" above this evidence of redox concentrations at 28" depth from original ground elevation.
- Soil Correction: The soils report shows a layer of bad soils to a depth of 40" depth. This soil shall be removed to the 40" depth and replaced with clean sand up to the invert of the chambers.
- Clean Sand shall be a soil texture composed by weight of at least 25% of very coarse, coarse, and medium sand varying in size from 2.0 to 0.25 mm, less than 50% of fine or very fine sand ranging in size between 0.25 and 0.50 mm, and no more than 10% of particles smaller than 0.05 mm.
- Each chamber shall have a 4" inspection pipe located at the end opposite where sewage effluent enters the drain field.
- An effluent filter shall be installed on the outlet of the septic tank prior to entering the pumping chamber.
- Septic tank shall be a minimum of 10' away from the building.
- Distribution device shall be a minimum of 20' away from the building.
- Septic Tank shall be a minimum of 5' away from distribution device.
- Treatment area shall be a minimum of 5' away from distribution device and a minimum 10' away from property lines.
- Backfill trenches to be crowned above finished grade to allow for settling.
- Divert surface runoff water to flow away from the system.
- Topsoil shall be placed and seeded over entire leach field area.
- If vegetation is not established before winter, cover with hay or straw to prevent freezing.

UTILITY ADJUSTMENTS:

- Contractor shall adjust all sanitary clean out castings, valve boxes, manhole castings, and inlet castings to final grade prior to pavement or landscape placement. See sheet C800 for adjustment details.

GENERAL NOTES CONTINUED:

PUMPING CHAMBER & PUMP:

- Pumping Station shall be a design build by the Contractor to be complete and operational. Pumping Station requirements shall meet North Dakota Sewer and Water Service Code, Chapter 62-03.1-03-11. Pumps and Pump Systems.
- Pumping chamber shall be watertight and constructed of corrosion-resistant material.
- The working capacity of the pumping chamber must equal 25% of the daily sewage flow. Total capacity of the pumping chamber must equal or exceed daily sewage flow (minimum 360 gallons).
- The pump shall discharge at least 10 gallons per minute but no more than 45 gallons per minute.
- The pump shall be constructed and fitted with sound, durable, and corrosion resistant materials.
- The pump shall have sufficient dynamic head for both the elevation difference and friction loss.
- A mechanical warning system shall be installed to warn of pump failure.
- The quantity of sewage effluent for each pump cycle shall be no greater than 25% of the design daily flow and at least 4 times the volume of the distribution pipes plus the volume of the supply pipe.
- Outlet piping must be one and one-fourth inch in diameter or greater. The pipe must be laid below the frostline or uniformly graded to drain back to the pump chamber. Volume of drain back should not exceed ten percent of the working capacity of the pump chamber. If piping is set to drain back, any check valves on the pump should be removed and a 1/4" drain hole drilled on the low point of the outlet pipe.
- Piping connection to the pump must be a union or quick disconnect coupling near the top of the pump chamber.
- 500 gallon holding tank for floor drain waist shall be design build to include sump pump, wiring, and outlet piping. A hose bib connection shall be supplied for hose connection.

SANITARY SEWER SERVICE:

- Materials, Construction Method, and Testing shall comply with City of Mandan Construction Specifications, unless noted otherwise.
- 6" PVC Sanitary Service Gravity Pipe shall have 4' min. cover. If 4' cover is not feasible, the Contractor shall install 2" Insulation board above pipe 8' wide, centered above the sewer pipe. see detail on C800.
- Insulation Board Shall have a thermal conductivity of not more than 0.28 BTU per hour per square foot per degree Fahrenheit per inch of thickness as tested in accordance with ASTM C177. The insulation shall not absorb moisture to an extent greater than 2.5 percent by volume as tested in accordance with ASTM D2842. The density of the insulation shall be between 0.9 and 1.3 pounds per cubic feet per ASTM D1622. The insulation shall be specifically designed for protection of underground utilities and shall be installed in accordance with the manufacturers recommendations.
- All plan footages are approximate, exact lengths to be determined by the Contractor in the field.

SUBGRADE PREPARATION & TRENCHING DENSITY REQUIREMENTS: Areas to receive Fill, Gravel Base, Pavement, and the bottom of fill areas shall be scarified to a minimum depth of 6 inches specified and compacted. Contractor shall be required to manipulate substandard areas by working the soil until the specified density and uniform moisture content are achieved. Fill material shall be placed in lifts not exceeding eight inches loose thickness. All fill material shall be compacted to 95% density with a moisture content between +3% to -3% optimum moisture as per ASTM D698. Testing frequency shall be one passing test for every 5000 SF of area for every lift of fill material. Trench backfill shall have a testing frequency of one test per every 300 lineal foot of compacted utility trench for every 2 vertical foot of backfill. No testing shall be required over the proposed sanitary sewer and septic drain field.

DF #	LF 34" CHAMBER	SF AREA	SLR = GPD/SF	GALLONS PER DAY	INVERT CHAMBER	INVERT 4" PIPE	INSPECTION PORT
C1	50	150	0.24	36	1664.67	1665.34	YES
C2	50	150	0.24	36	1664.67	1665.34	YES
C3	50	150	0.24	36	1664.67	1665.34	YES
C4	50	150	0.24	36	1664.67	1665.34	YES
C5	50	150	0.24	36	1664.67	1665.34	YES
C6	50	150	0.24	36	1664.17	1664.84	YES
C7	50	150	0.24	36	1664.17	1664.84	YES
C8	50	150	0.24	36	1664.17	1664.84	YES
C9	50	150	0.24	36	1664.17	1664.84	YES
C10	50	150	0.24	36	1664.17	1664.84	YES
TOTAL	500	1500	0.24	360	-	-	10 TOTAL

CALL OUTS:

SANITARY SEWER:

- INSTALL 6 LF 6" PVC SAN SERVICE PIPE @ 1.00% MINIMUM & 6"x6" WYE & 45° BEND
- INSTALL 115 LF 6" PVC SAN SERVICE PIPE @ 1.00% MINIMUM, 45° BEND, & INSTALL 6" CLEANOUTS WITH CASTINGS
- INSTALL 1,200 GALLON SEPTIC TANK
- INSTALL 10 LF 4" PVC SAN SERVICE PIPE @ 2.00% MINIMUM SLOPE
- INSTALL PUMP TANK & PUMP STATION
- INSTALL 60 LF 2" SANITARY FORCEMAIN PIPE
- INSTALL DISTRIBUTION BOX
- INSTALL 4" PIPE MANIFOLDS (TO BE INSTALLED LEVEL)
- INSTALL DRAIN FIELD (TOTAL 500 LF OF 34" CHAMBERS)

FLOOR DRAIN WASTE PIPING:

- INSTALL 34 LF 6" PVC SAN SERVICE PIPE @ 1.00% MINIMUM & INSTALL 6" CLEANOUT WITH CASTING
- INSTALL 500 GALLON STORAGE TANK, SUMP PUMP, & OUTLET PIPING

APPROXIMATE QUANTITIES			
Spec No.	Sanitary Sewer	Quantity	
1	6" PVC San. Sewer Pipe	159	LF
2	6" Cleanout with Casting	3	EA
3	1,200 Gal. Septic Tank	1	EA
4	500 Gal. Pump Tank & Pumps	1	LS
5	2" San. Foremain Pipe	60	LF
6	PVC San Sewer Pipe (Manifolds)	132	LF
7	Distribution Box	1	EA
8	34" Chambers	500	LF
9	500 Gallon Holding Tank & Pump 1	1	LS

LEGAL: 2086 37TH STREET LOT 1 OF BLOCK 1, MDU ADDITION Lot Area: 11.28 ACRES (+/-)

OWNER: MONTANA DAKOTA UTILITIES PO BOX 5650 BISMARCK, ND 58506

ZONING: MX - MIXED INDUSTRIAL DISTRICT

SETBACKS:

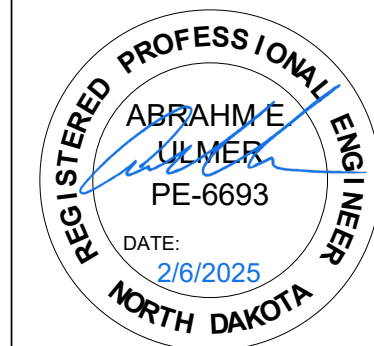
FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
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PRIOR TO EXCAVATION

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

Independent Land Surveying & Engineering Inc.
4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PRO # 24084



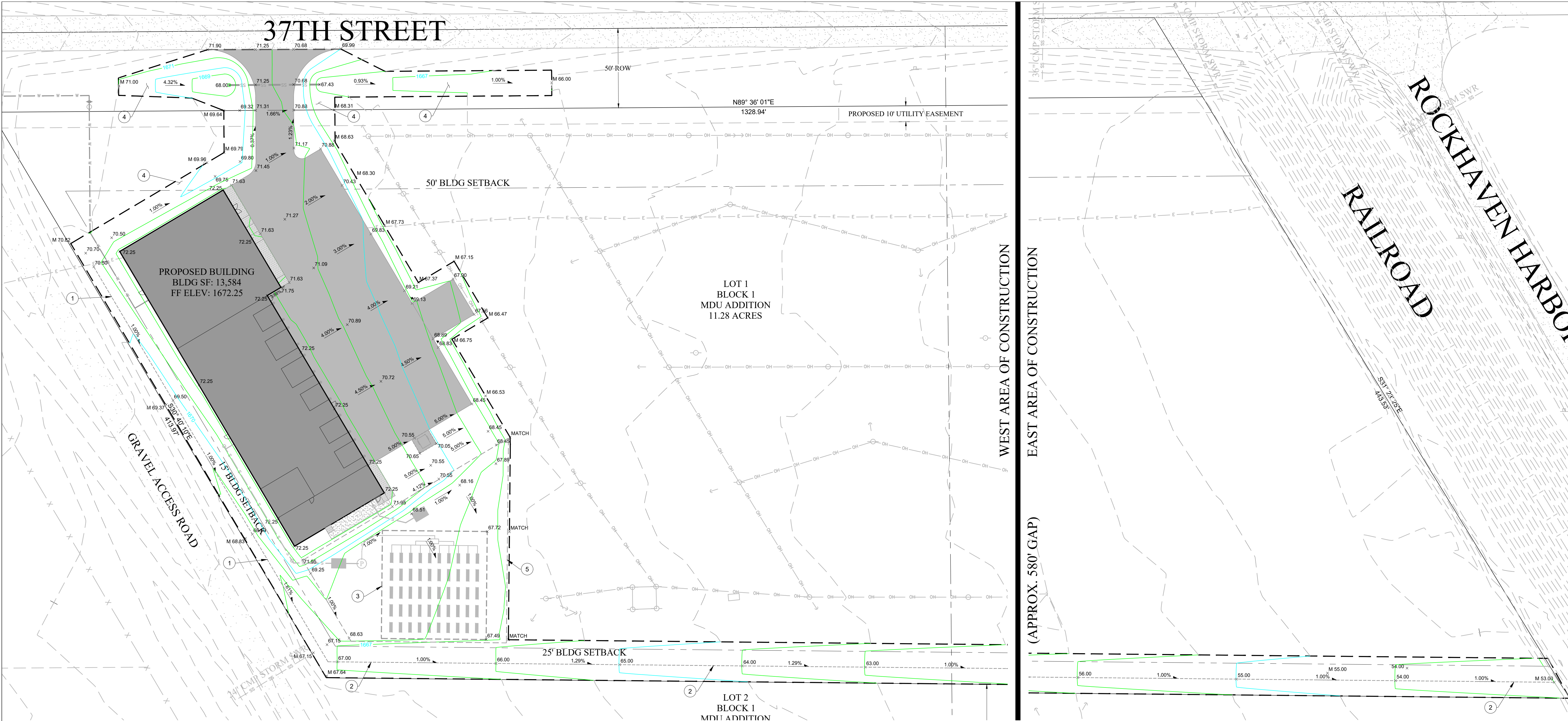
PROPOSED UTILITIES

SHEET

C500

REVISIONS

REV#	DESCRIPTION	BY	DATE



SCALE: 1" = 30'

SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

- LEGEND
- PROPOSED CONTOUR
 - EXISTING CONTOUR
 - DRAINAGE SLOPE
 - SPOT ELEVATION (FLOW LINE ELEV.)
 - CONSTRUCTION LIMITS
- * ALL ELEVATIONS ARE FLOW LINE
UNLESS OTHERWISE NOTED.

GENERAL NOTES:

PROPOSED CONTOURS: The final contours and control point elevations shown on the drawings represent the finished surface to the topsoil, pavement, surfacing, storm sewers, etc. The Contractor is to make allowances as required to account for topsoil and pavement surfacing when completing the site grading. See plan sheet C801 for typical sections.

CONSTRUCTION LIMITS: The contractor shall make all effort to minimize the disturbed areas. The Construction limits of the project are limited to the areas shown on the plans to be disturbed. All areas disturbed outside of the construction limits shall be restored to the original condition and seeded at the Contractors expense.

WATER: The Contractor is to make all arrangements and pay for water usage, rental, and/or hookup for water meter from the contractors water supply source. All costs to load, haul, and apply the water required for compaction will be considered incidental to the project. Water shall be used for compaction and for use as a dust palliative during construction.

TESTING: The Contractor shall provide at its expense the necessary testing and inspection services required by the plans and specifications. The Contractor shall employ an accredited independent testing laboratory certified through the American Association of State Highway and Transportation Officials (AASHTO). The Contractor shall be responsible for scheduling tests according to specifications and shall supply test results to the Owner, Architect, and Project Engineer.

-Density testing shall be to 95% density with a moisture content between +3% to -3% optimum moisture as per ASTM D698.

-Testing Frequency shall be as follows: Dirtwork 1 passing test per 5000 square feet per lift of fill placed.

SUBGRADE PREPARATION & TRENCHING DENSITY REQUIREMENTS: Areas to receive Fill, Gravel Base, Pavement, and the bottom of fill areas shall be scarified to a minimum depth of 6 inches specified and compacted. Contractor shall be required to manipulate substandard areas by working the soil until the specified density and uniform moisture content are achieved. Fill material shall be placed in lifts not exceeding eight inches loose thickness. All fill material shall be compacted to 95% density with a moisture content between +3% to -3% optimum moisture as per ASTM D698. Testing frequency shall be one passing test for every 5000 SF of area for every lift of fill material. Trench backfill shall have a testing frequency of one test per every 300 lineal foot of compacted utility trench for every 2 vertical foot of backfill. No testing shall be required over the proposed sanitary sewer and septic drain field.

EXCESS MATERIAL: Any surplus topsoil and dirt material shall become the contractors property and removed offsite by the contractor.

GRADING TOLERANCE: Subgrade embankment shall have the surface built to true lines, grades, and cross section shown on the plans, or as directed by the Engineer.

-In those areas upon which aggregate base or pavement base is to be placed, the top of the subgrade be of such smoothness that it will not vary more than 0.05' from true grade as established by grade hubs.

-In landscape areas outside of pavement limits, the surface shall be of such smoothness that it will not vary more than 0.10' from true grade established by grade hubs.

-Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials, and reshaping and recompacting to required density.

GENERAL NOTES CONTINUED:

HAUL ROAD RESTRICTIONS: The Contractor shall contact the appropriate State, County, Township, or City officials to determine if there are any "No Haul Routes" prior to preparing a bid for this project.

PROPOSED SEPTIC AREA: Contractor shall minimize traffic within the proposed septic area. No stockpiling of dirt or construction building materials shall be allowed within the proposed septic area. No traffic will be allowed within the proposed septic area except traffic for septic drain field construction.

-Excess topsoil shall be placed over the proposed septic area. Contractor shall not remove the existing topsoil within this area, but shall scarify the upper 4" of topsoil prior to placement of topsoil fill.

-Contractor shall utilize a track machine for construction within the proposed septic area to reduce load transfer to the underlying soils for both topsoil fill placement and drainfield construction.

UNCLASSIFIED EXCAVATION: This item shall consist of excavating, hauling, placement, disposal, and compaction of embankment material in conformity with the dimensions and typical sections shown on the plans and with the lines and grades established by the Engineer. Unclassified Excavation has been calculated by the method of average end areas with an assumption of 6" existing topsoil removed. Embankment of material shall be considered incidental to the excavation.

-Dirt Calculations included 6" topsoil removal, 5' over-excavation over entire building area, and footing over-excavation of 5' tall by 8.66' width below the perimeter footings, and 5' over-excavation under the Fire Suppression room and footings. Total calculated dirt cut volume is 3,031 CY and total dirt fill volume is 2,547 CY. These calculations assumed no shrinkage.

-Excess topsoil quantity is estimated at approx. 550 CY. This excess topsoil shall be placed as fill in the proposed septic area.

WASTE: All material removed which is not designated to be salvaged shall become the property of the Contractor. Cost to transport and dispose of this material shall be considered incidental to material removed. Waste material quantity depends on actual shrinkage percentage encountered during construction.

- CALL OUTS:
- CONSTRUCT DRAINAGE SWALE
 - CONSTRUCT DRAINAGE DITCH-SEE DETAIL ON C800
 - MINIMIZE CONSTRUCTION TRAFFIC WITHIN PROPOSED SEPTIC DRAIN FIELD AREA
 - SHAPE AREA FOR POSITIVE DRAINAGE
 - PLACE EXTRA TOPSOIL AS FILL WITHIN THIS AREA

APPROXIMATE QUANTITIES		
Item No.	Misc. Items & Pavement Items	Quantity
1	Subgrade Preparation	1,804 SY
2	Aggregate Base 6"	600 TON
3	Unclassified Excavation	3,031 CY

LEGAL: _____ ZONING: _____

2086 37TH STREET
LOT 1 OF BLOCK 1,
MDU ADDITION
Lot Area: 11.28 ACRES (+/-)

OWNER: _____

MONTANA DAKOTA UTILITIES
PO BOX 5650
BISMARCK, ND 58506

MX - MIXED INDUSTRIAL DISTRICT

SETBACKS: _____

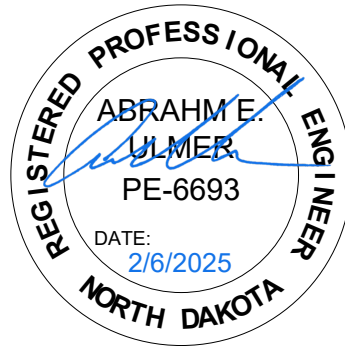
FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
CONTRACTOR IS RESPONSIBLE FOR
VERIFYING LOCATION OF ALL UTILITIES
PRIOR TO EXCAVATION

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

Independent Land Surveying
& Engineering Inc.
4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PROJ # 24084



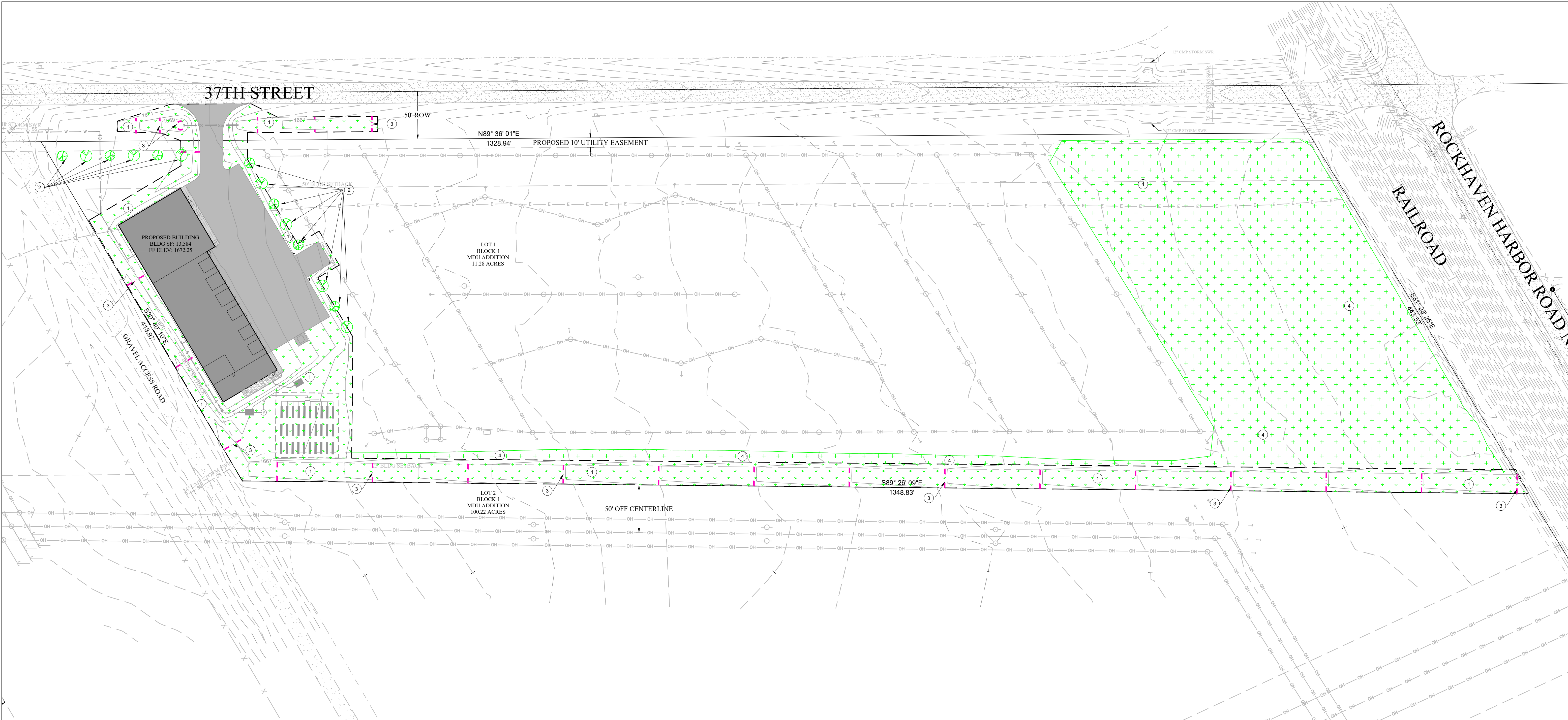
PROPOSED
GRADING

SHEET

C600

REVISIONS

REV#	DESCRIPTION	BY	DATE



050100

SCALE: 1" = 50'

SURVEY INFO: VERT. DATUM: NAVD88
HORIZ DATUM: 1983 STATE PLANE, ND SOUTH (3302)

LEGEND

LITTLE LEAF LINDEN
H=35', S=30'
Tilia cordata
SIZE=1.5" CALIPER,
QUANTITY=7

CRIMSON SPIRE OAK
H=45', S=15'
Quercus x bimundorum 'Crimschmidt'
SIZE=1.5" CALIPER,
QUANTITY=7

PROPOSED TOPSOIL/SEEDING/HYDROMULCH

PROPOSED SEEDING AREAS

POST CONSTRUCTION EROSION CONTROL

GENERAL NOTES:

LANDSCAPE AREAS:

- Contractor shall obtain all necessary permits for planting work within Morton County Right of Way.
- All landscape plantings are to be watered by the landscape contractor the same day that planting occurs, and continue watering until irrigation system is fully operational, or until final acceptance of the project.
- All plant materials shall be guaranteed one (1) full year upon total completion and acceptance by owner.

TOPSOIL & SEEDING:

- 6 Inch thick topsoil shall be installed in all disturbed areas that do not receive concrete or asphalt.
- Topsoil shall be clean, free of stones, weeds, and other undesirable debris.
- After spreading, any large still clods and hard lumps shall be broken with a pulverizer or by other effective means.
- Topsoil in all areas shall be shaped for positive drainage, and have a smooth uniform appearance.
- Fertilizer shall be a 10-10-10 mixture applied at a rate of 4 lbs per 1000 square feet. Fertilize soil during the seeding process using an appropriate application process.
- Seeding shall be performed only during the seasons when satisfactory results can be expected.
- Seed shall be drill seeded to a depth of $\frac{1}{4}$ " to $\frac{1}{2}$ " depth, at a rate of 200 lbs per acre.
- Seed mix shall be 50% Fairway Crested, 30% Sheep Fescue, and 20% Perennial Ryegrass or approved equal. When dormant seeding in late fall, 20 pounds of oats or rye seed per acre shall be added to the mixture as a nurse crop. All seed shall be free of all prohibited noxious weeds. Seed which has become wet, moldy, or otherwise damaged shall not be acceptable.
- Hydro-mulch shall be utilized in areas where called out. Hydro-mulch shall be a wood cellulose fiber mulch that has not been treated with any germination or growth inhibitive substances. The mulch shall be treated with a tack and fiber to enhance seed and mulch placement and adherence to the soil. Hydro Mulch shall be applied at a rate of 2,000 lbs per acre.

TREE PLANTING:

- All Planted Trees shall have 4" thick organic wood mulch placed around the tree in a muttle ring that conforms to the detail provided.
- Organic Wood Mulch shall be a shredded hardwood bark mulch. No filter fabric or edging around trees located outside shrub beds.
- All Planted Trees shall have 20 gallon Tree Watering Bags furnished and installed. Tree water bags shall be Treegator original watering bags or approved equal.

CALL OUTS:

1. PLACE TOPSOIL, SEED, & HYDROMULCH
2. TREE PLANTING - TYPICAL
3. INSTALL POST CONSTRUCTION EROSION CONTROL- INSTALL 9" FIBER ROLLS (TYPICAL)
4. SEED CROP AREA INTO GRASS - NO MULCH

APPROXIMATE QUANTITIES		
Item No.	Misc. Items & Pavement Items	Quantity
1	Place Topsoil, Seed, & Hydromulch	1.50 ACRE
2	Seed Cropland into Grass	2.41 ACRE
3	Straw Wattles, 9-Inch	480 LF
4	Trees	14 EA

LEGAL: _____ ZONING: _____

2086 37TH STREET
LOT 1 OF BLOCK 1,
MDU ADDITION
Lot Area: 11.28 ACRES (+/-)

OWNER: _____

MONTANA DAKOTA UTILITIES
PO BOX 5650
BISMARCK, ND 58506

MX - MIXED INDUSTRIAL DISTRICT

SETBACKS: _____

FRONT: 50'
SIDE: 15'
REAR: 25'

CAUTION
CONTRACTOR IS RESPONSIBLE FOR
VERIFYING LOCATION OF ALL UTILITIES
PRIOR TO EXCAVATION

REVISIONS		DATE
DESCRIPTION	BY	
REV#		

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

Independent Land Surveying & Engineering Inc.

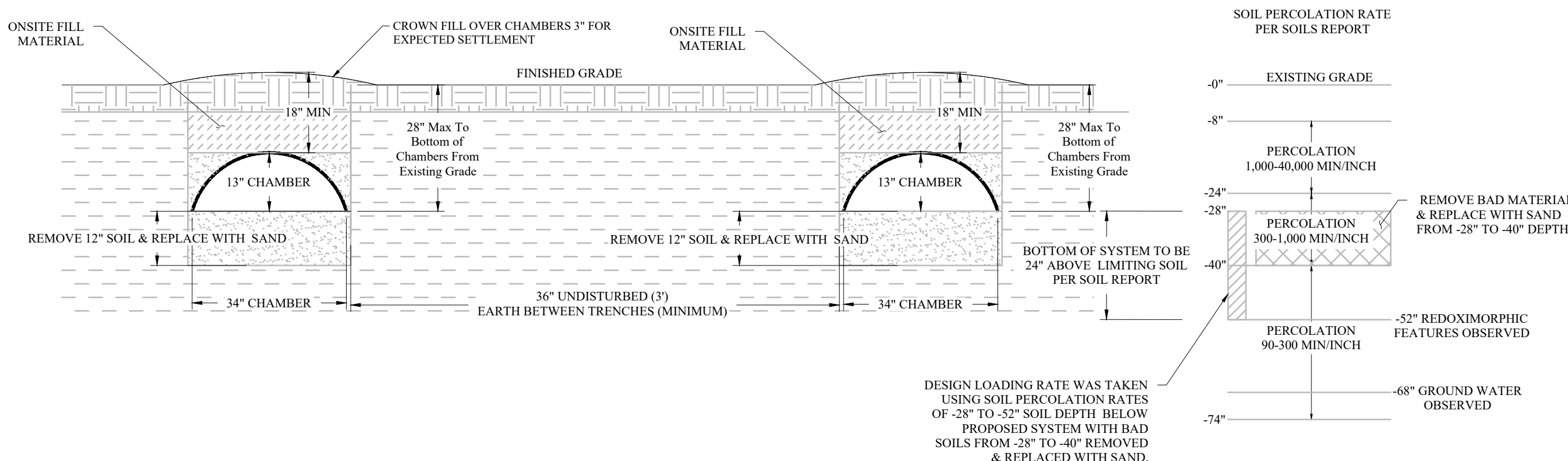
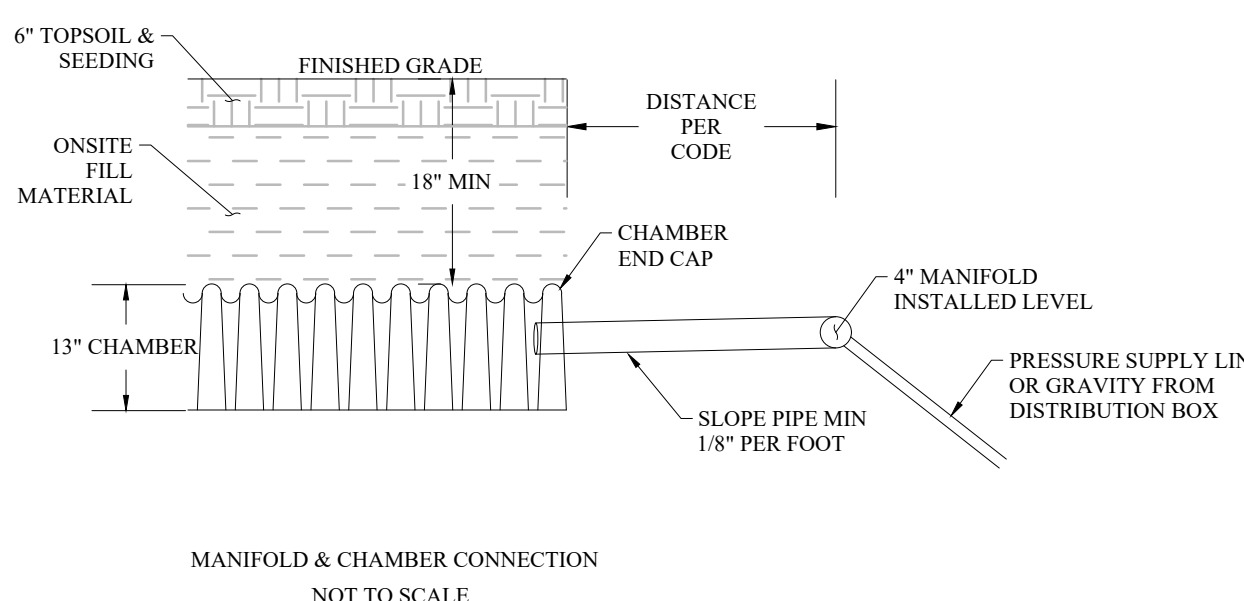
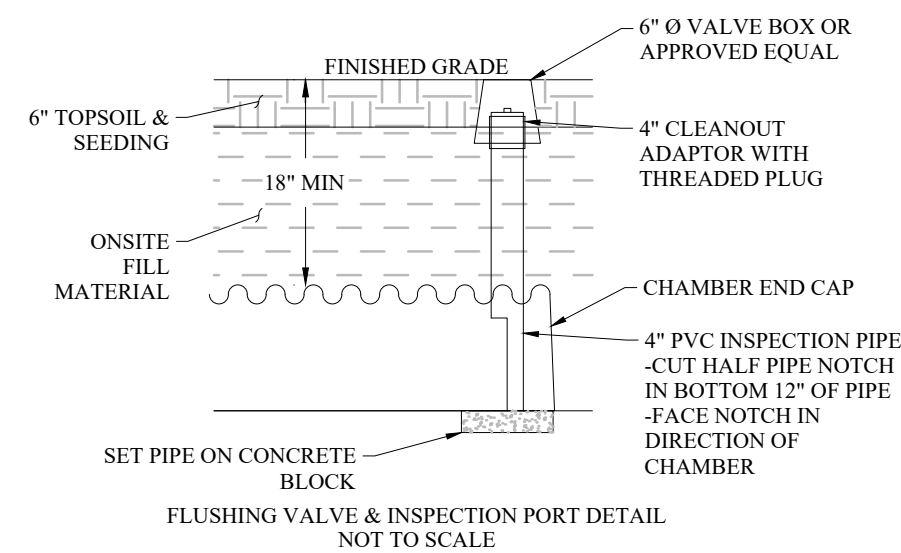
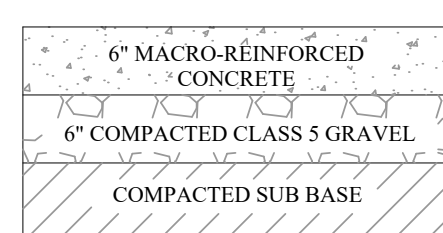
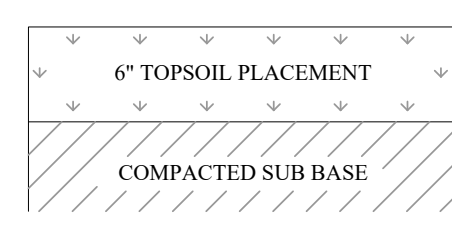
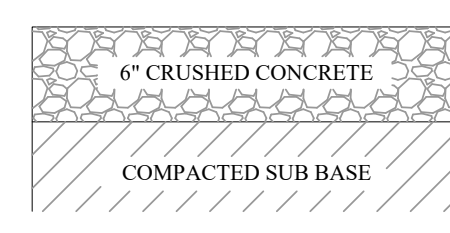
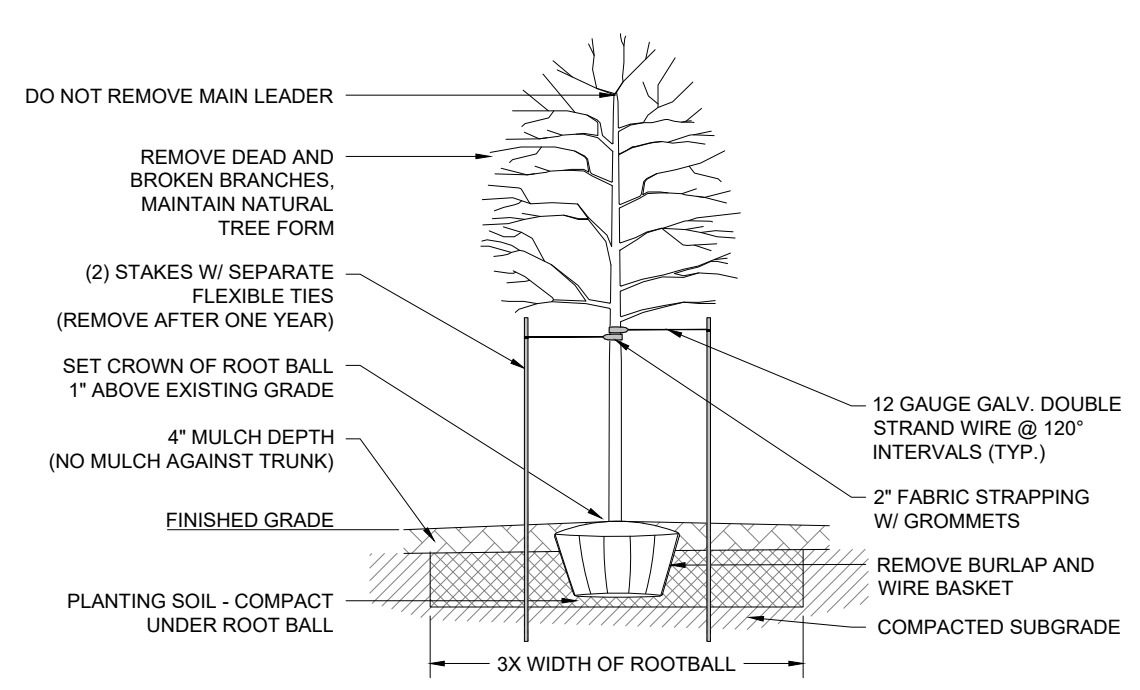
4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PROJ # 24084

PROPOSED LANDSCAPING

SHEET

C700

Page 15 of 17

									<table><tr><th>REV#</th><th>DESCRIPTION</th><th>BY</th><th>DATE</th></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>			REV#	DESCRIPTION	BY	DATE																																				
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19 TREE PLANTING DETAIL																																																			

MDU ELECTRIC TRAINING FACILITY

2086 37TH STREET
MANDAN, NORTH DAKOTA
LOT 1, BLOCK 1, MDU ADDITION

Independent Land Surveying & Engineering Inc.

4215 OLD RED TRAIL NW, Mandan, ND 58554
Phone: 701-663-5184 PROJ # 24084

REGISTERED PROFESSIONAL ENGINEER

ABRAHME ULMER
PE-6693

DATE: 2/6/2025
NORTH DAKOTA

DETAILS

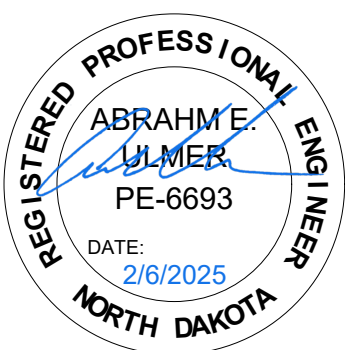
SHEET

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