

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION

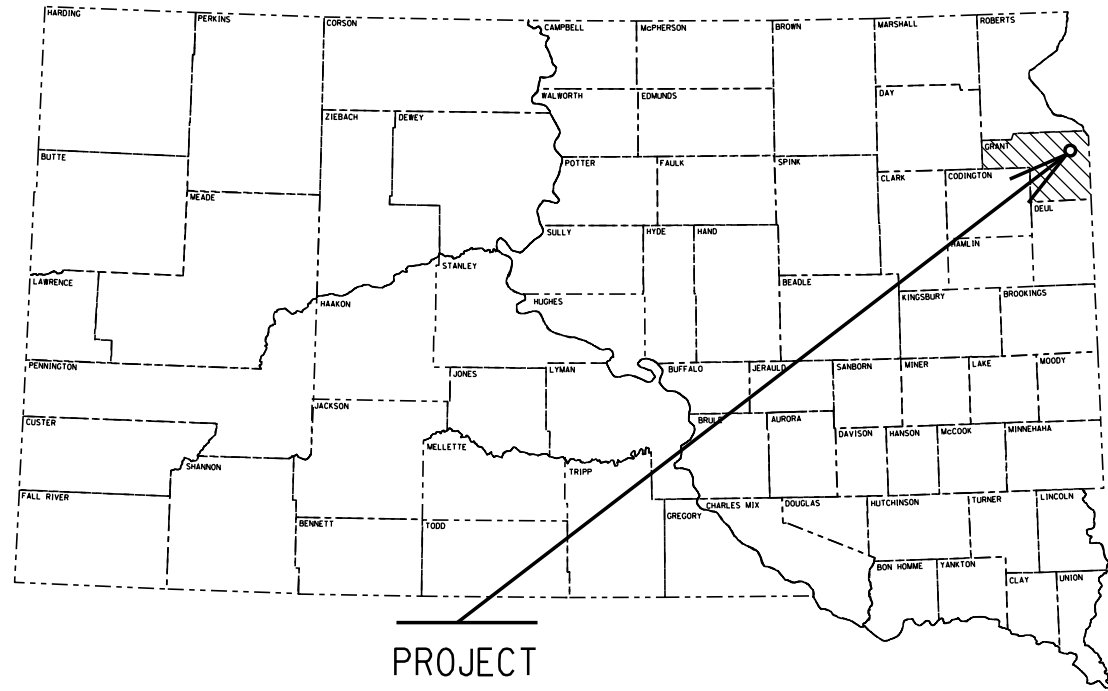
PLANS FOR PROPOSED  
**WIP 410A343**  
**GRANT COUNTY**

60' X 80' STORAGE BUILDING  
PCN i36n

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A343	1	5
Plotting Date: 08/29/2013			

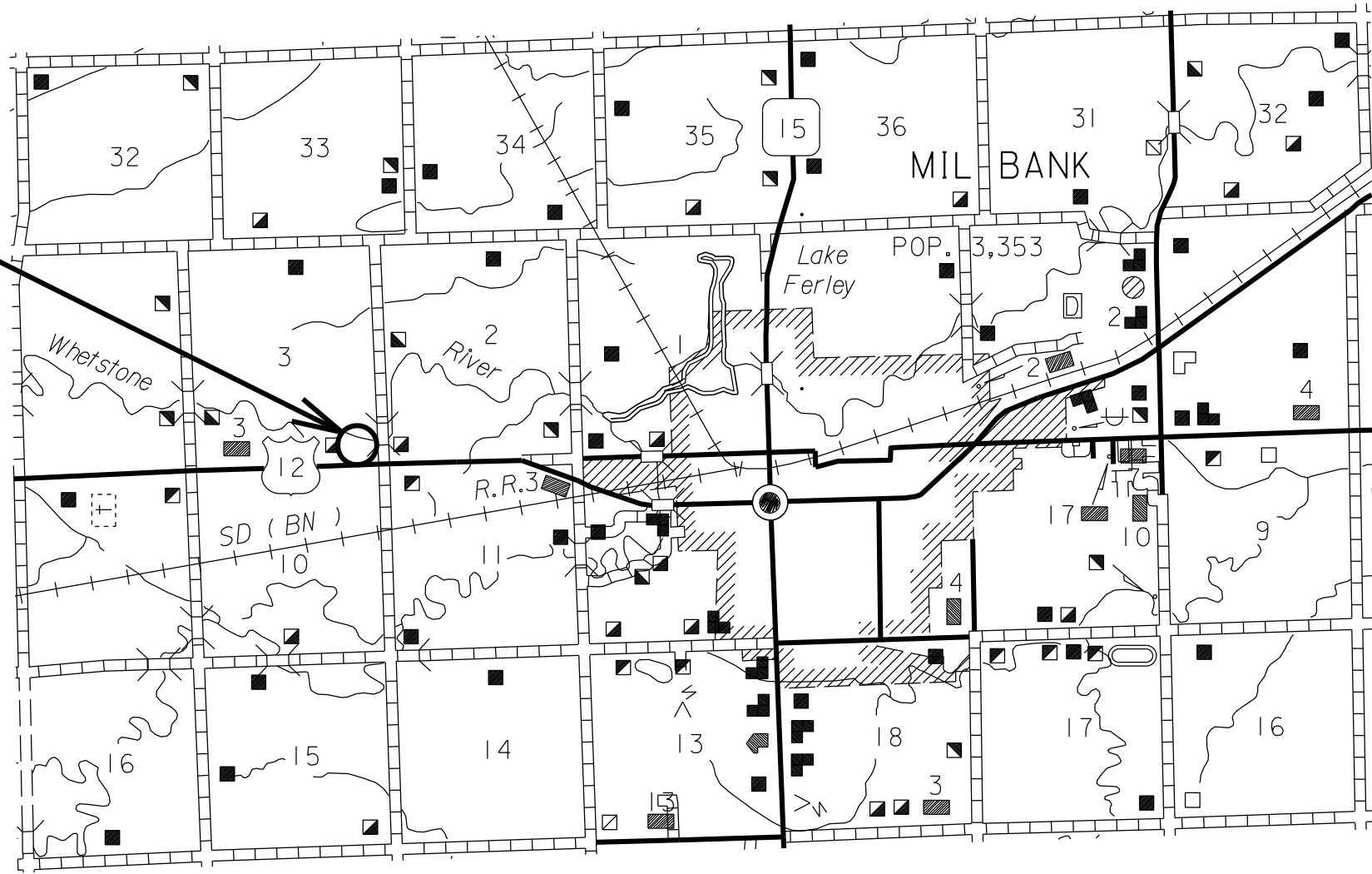
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- Sheet 1 Title Sheet and Layout Map
- Sheet 2-3 Plan Notes
- Sheet 4-5 Building Detail Drawings



PROJECT

Project Location



R 49 W

T 120 N

PLOT SCALE - 1" = 4400'

PLOTTED FROM - TRAB17882

PLOT NAME - 1

FILE - ... \PRJ\GRNT136N\TITLE SHEET.DGN

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A343	2	5

### SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

### PERMITS AND LICENSES

The Contractor shall obtain all necessary State and/or County and/or City Permits and/or Licenses in accordance with Section 7.2 of the Standard Specifications.

### SCOPE OF WORK

This project consists of building a 60' wide by 80' long wood framed metal covered building atop a concrete wall foundation. The buildings intended use is to store deicing salt. The concrete wall foundation shall support the wood columns. The building shall contain one 3' wide steel walk in entry door. The building shall contain a 24' wide by 16' high opening on the east end. The 24' wide by 16' high opening shall be designed to allow for installation of an overhead door.

### GENERAL CONSTRUCTION NOTES

The Contractor shall notify Ronald Sherman, Watertown Area Engineer, 605-882-5166 at least two weeks prior to starting work to allow for site work to be completed.

Storage areas for materials will be provided within close proximity to the building. Exact location will be discussed in greater detail at the Preconstruction meeting. The Contractor must keep the storage area in a neat and tidy condition. No material may be stored in front of buildings or otherwise interfere with normal operations of the SDDOT.

The Contractor shall protect the parking lot from damaged during construction activities. The Contractor shall be responsible for any repairs required, at no cost to the State.

Once work starts on this project, work shall proceed in a continuous manor until the project is complete.

Work hours and access to the site will be discussed at the Preconstruction meeting.

The Contractor shall be responsible for backfilling any excavation required to construct the building foundation and walls. The SDDOT shall be responsible for placing any asphalt concrete surfacing inside the building.

Concrete sidewall of the building shall be constructed with a 3" steel conduit opening to allow future electrical service line to enter building. Location of conduit shall be in the southeast corner of building as directed by the Engineer. Steel conduit shall be located 18" below grade and the ends of the conduit shall extend 1' on each side of the concrete sidewall. The ends of the conduit shall be capped with a threaded cap.

### BUILDING DESIGN

A. The wood frame building structural design shall conform to the requirements of International Building Code (IBC), 2012 Edition. Structural Design shall be provided by the Building Manufacturer and submitted plans shall be signed and sealed by an Engineer Licensed in the state of South Dakota.

1. DEAD LOAD of all building structural components furnished by Building Manufacturer.
2. Ground Snow Load (pg) = 50 lbs
3. WIND
  - Wind Speed (3 second gust) = 105 mph
  - Wind Exposure Classification = C
4. Collateral/Mechanical Dead Load = 0.0
  - on the frames & purlins. This load is to be added to the bid Dead Load.
5. Frost Depth = 40 inches

B Building design shall comply with the following design requirements.

1. Design of wood members shall be in accordance with formulas published in the latest Edition of the "National Design Specification for Wood Construction".
2. Trusses shall conform to Truss Plate Institute's 2007 Edition of the "National Design Standard for Metal Plate Connected Wood Truss Construction".

### MATERIALS AND FABRICATION

The roof framing shall be designed with the uses of wood trusses. All lumber used in the design of the trusses must be kiln dried and graded in accordance with the current grading rules. Design stresses allowed are those listed in the current additions of respective lumber association's grading rules. The design of wood members must be in accordance with the formulas published in the 2012 edition of the "National Design Specification for Wood Construction". Light metal toothed connector plates and joint design must conform to the specifications as set out in the 2007 edition of Truss Plate Institute's "National Design Standard for Metal Plate Connected Wood Truss Construction". Connector plates shall be fabricated from ASTM 446, Grade A, No. 18 and No. 20 gauge steel sheets galvanized with G90 coating.

### MINIMUM REQUIREMENTS

#### Reinforcing Steel for Concrete:

- ASTM A615 Grade 60.
- #4 Epoxy Coated Reinforcing Bar.
- One row spaced @ 2' center to center, both horizontally and vertically in the foundation walls.
- Three rows spaced 9" center to center and tied at 4' spacing in the footings.

#### Steel for Sides, Roof, & Trim:

- Colored.
- 29 gauge thickness.
- All steel to be screwed.
- Minimum 80,000 psi tensile strength.
- 40 year paint warranty.
- Color coated thickness 0.015 mils.
- Base steel 0.0145 mils.
- 0.0015 mill thickness.
- Grade E steel.
- Paint thickness 0.0015 mils.
- 9 ounces galv. per sq. ft.

#### Concrete

- 4,000 psi Concrete.
- Coarse aggregate shall be crushed ledge rock.

#### Lumber

- Structural building columns shall be pressure preservative treated.
- Outer plies of the columns shall be continuous and not have any splices.
- Pressure preservative treated skirt (splash) boards- minimum #2 grade lumber.
- Dry dimensional (no Green) framing lumber- minimum Standard or #2 Graded (no utility or #3).
- Lumber to be treated in accordance with the American Wood Preservers Association Standard, latest edition.

#### Trusses

- Engineered pre-fabricated roof trusses (double trusses for interior clear-spans) or rafters.
- Truss plates shall be galvanized.

#### Connectors

- All specialty nails, bolts and hangers.
- Powder coated color matched screws to attach steel roofing and siding.

#### Overhead Door

- Steel door assembly with rabbeted meeting rails to form weathertight joints and provide full-width interlocking structural rigidity.
- Panel Thickness: 2 inches.
- Exterior Surface: Ribbed.
- Section Material: 20 gauge, galvanized steel.
- Center and End Stiles: 16 gauge steel.
- Non-Insulated double strength glass, 24 inch by 7 inch windows. 2 or 3 windows in the doo.
- Manual Operation: Pull rope.
- Color: White inside and out.

#### Walk in Door

- Door shall be a heavy duty door designed for commercial application.
- Galvanized steel construction with insulated core.

#### Miscellaneous

- 80' Clear Polycarbonate Ridge Light.
- 80' x 36" White Polycarbonate eave lights, both sidewalls.
- 80' Continuous Vented Ridge.

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**WARRANTIES**

The building vendor shall agree to repair, or at its discretion, to replace free of charge the building framework, roofing, or side panels if directly damaged by snow loads for a period of fifteen (15) years. For a period of five (5) years the building vendor shall repair, or at its discretion replace, free of charge, the building framework, roofing, or side panels if directly damaged by wind loads, unless damage is caused by flying or falling objects. The building vendor shall repair, free of charge, any roof leaks due to defects in material or workmanship for a period of five (5) years. Any other building parts that are defective in materials or workmanship shall be repaired, or replaced at the vendor's discretion, for a period of one (1) year. The paint system on the roofing, walls and trim shall be warrantied for 40 years against fading and chalking.

**EXPLANATION OF BID**

The submission of a bid is conclusive evidence that the Contractor has investigated and is satisfied as to the conditions to be encountered; the character, quality and scope of the proposed work; the quality and quantity of the materials to be furnished. The Technical Specification of the bid documents are intended as a minimum standard for certain portions or the work. If no technical Specification is referenced, then the Contractor shall provide, as a minimum, those items required by codes, standards and regulations of the industry associated with the work being performed. Unless all bids are rejected, the State will accept the lowest responsive and responsible bid. The Bid for this project shall include:

1. Providing to the Owner three (3) complete sets of design documents for the project including:
  - A. Footing/Foundation Plan including details for required reinforcing steel based on the loading/reaction requirements of the building.
  - B. Building Plans based on the Owners suggested floor plan and including details for all wall, roof, eaves, trim and moldings, flashings, fasteners, etc. The building shall be of wood frame type. In addition to plans, furnish design calculations and letter of design certification signed by a registered professional engineer licensed in the State of South Dakota.
  - C. Standard Specifications for the proposed building which augments the specifications found in the bid documents. The specifications found in the bid documents shall be a minimum standard. The building shall have a minimum dimension of 60'W x 80'L, measured from outside of framing to outside of framing. Minimum building height shall be 16' door opening with 18' minimum height sidewalls.
  - D. Building Plans shall include the method of attachment of the building columns to the concrete foundation sidewalls.
  - E. Provide Owner with choice of manufacturers standard building colors from which the Owner will determine final building color choice.

2. Successful bidder shall allow for a ten (10) working day review and comment period by the South Dakota Department of Transportation to review items called for under Item #1 above.
3. The contract price shall include all labor, material and equipment necessary to construct the Storage Shed as described herein. Include all concrete work associated with perimeter building footings/foundations.

**COMPLETION DATE**

This building project has an overall completion date of December 13, 2013. There shall be an interim completion date of October 25, 2013 for the completion of all concrete work required for the building.

Failure to complete all the concrete work by the interim completion date of October 25, 2013 shall result in liquidated damages of \$250 per calendar day.

Failure to complete the building project by the overall completion date of December 13, 2013 shall result in liquidated damages as per Section 8.7 of the Standard Specifications.

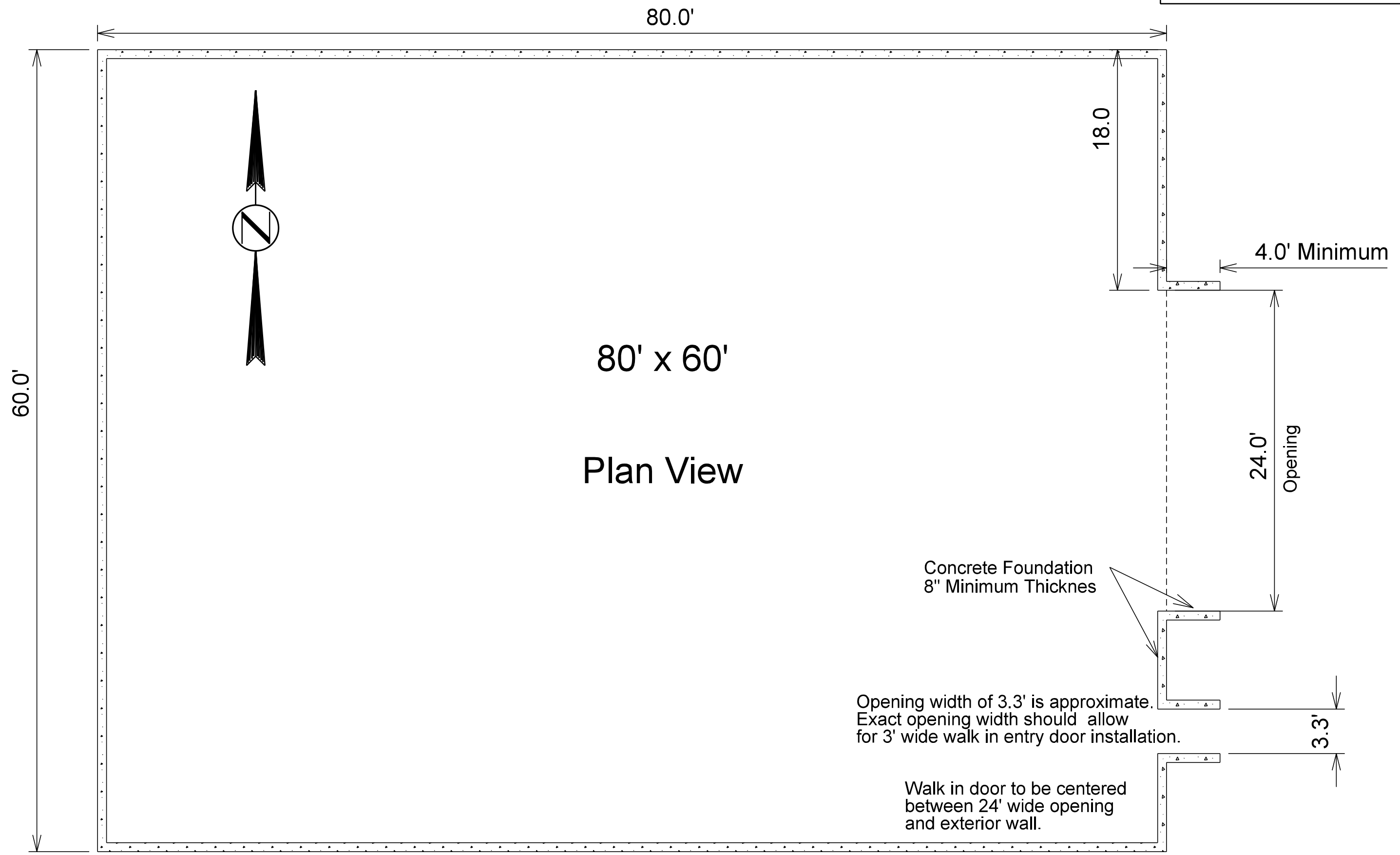
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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PLOT SCALE - 1:7

PLOT NAME - 2

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Floor



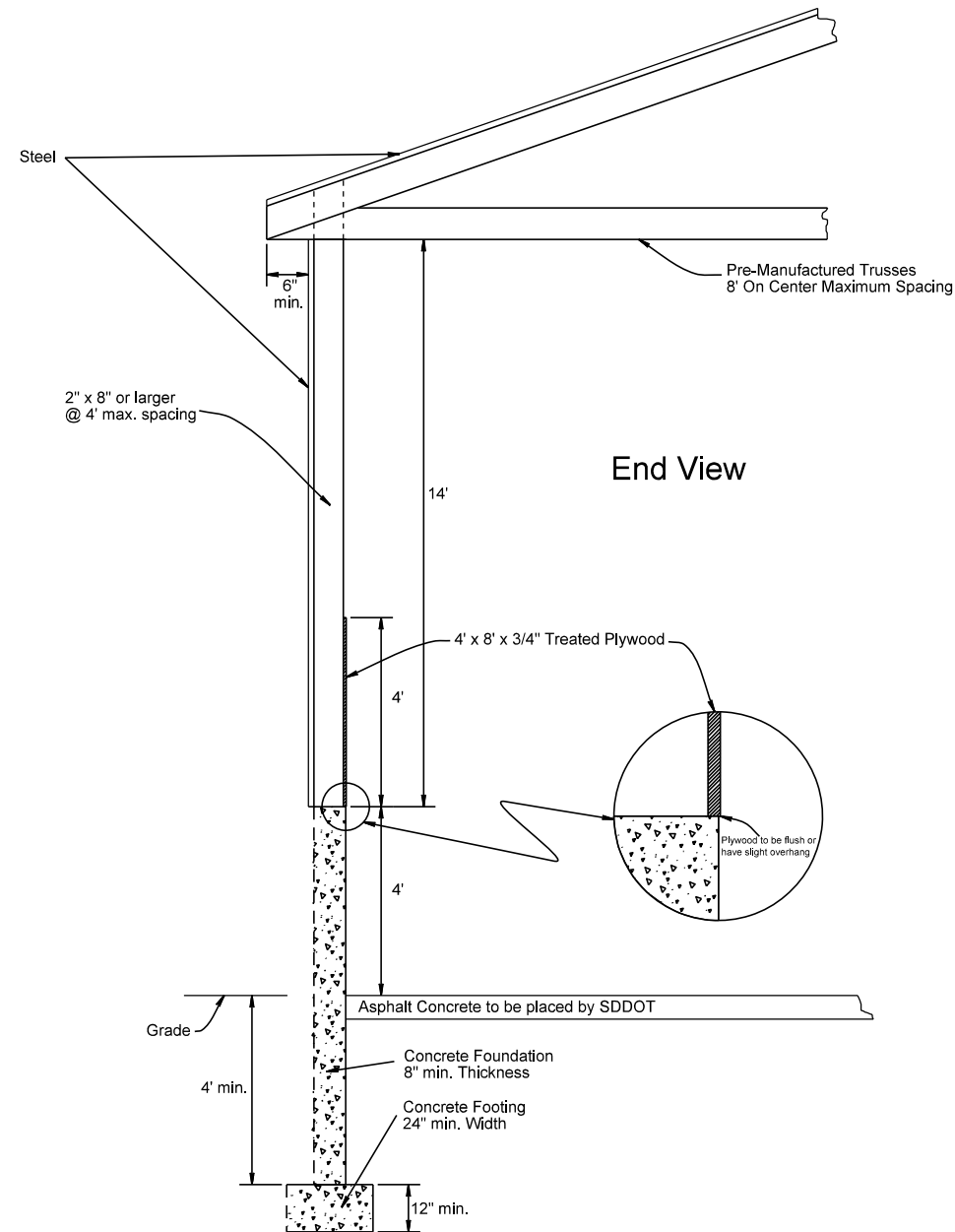
80' x 60'  
Plan View

Concrete Foundation  
8" Minimum Thicknes

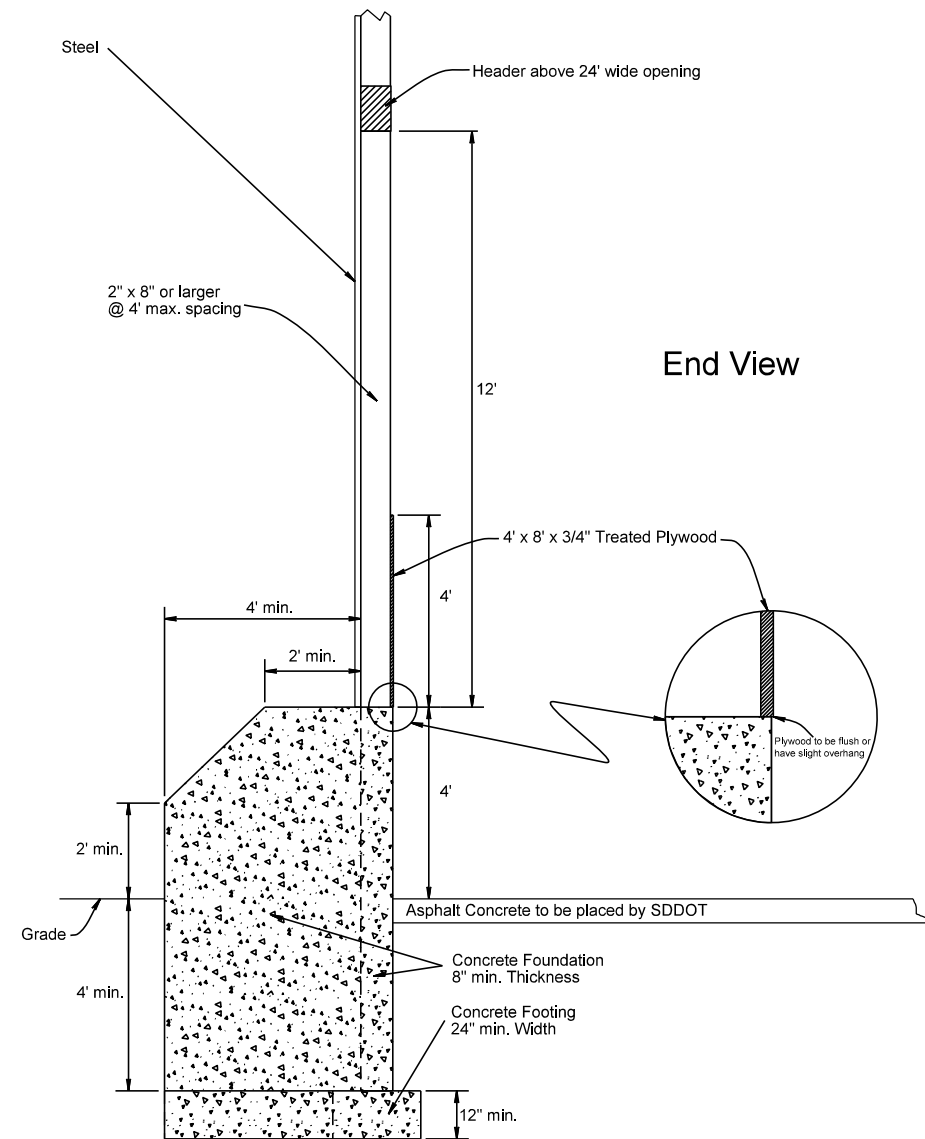
Opening width of 3.3' is approximate.  
Exact opening width should allow  
for 3' wide walk in entry door installation.

Walk in door to be centered  
between 24' wide opening  
and exterior wall.

Grade Elevation and building location to be provided by the SDDOT. The Contractor shall be responsible for staking the building so that the building is square.



**SIDE WALL SECTION**



Opening to be framed such that an overhead door can be installed at a later date.

**OPEN END SECTION**