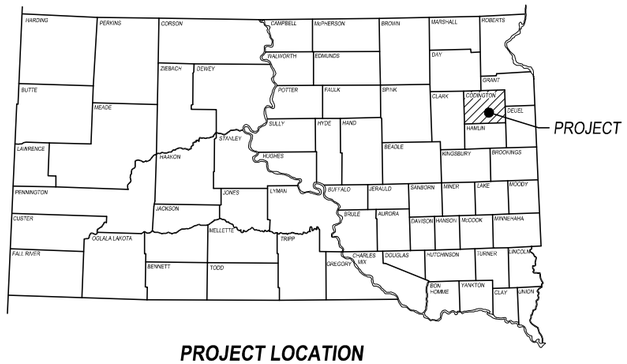


PROJECT LOCATION

WATERTOWN, SOUTH DAKOTA
PLANS FOR PROPOSED

OVERLOOK RIDGE COURT STREET PLANS

SITE GRADING, SANITARY SEWER & WATER, CURB & GUTTER and ASPHALT SURFACING
WILLOW CREEK VILLAGE, WATERTOWN, SOUTH DAKOTA

INDEX OF SHEETS

Sheet No. 1	*Title Sheet*
Sheet No. 2	*Overall Site Layout*
Sheet No. 3-7	*Estimate of Quantities and Notes*
Sheet No. 8-13	*Storm Water Pollution Prevention Plan*
Sheet No. 14	*Typical Grading Section*
Sheet No. 15	*Traffic Control*
Sheet No. 16	*Erosion and Sediment Control*
Sheet No. 17	*Site Grading Plan*
Sheet No. 18-20	*Street Grading Plan and Profile*
Sheet No. 21	*Curb Ramp and Sidewalk Layout*
Sheet No. 22-24	*Utility Plan and Profile*
Sheet No. 25-35	*Standard Plates*
Sheet No. 36-39	*Cross Sections*

CITY OFFICIALS

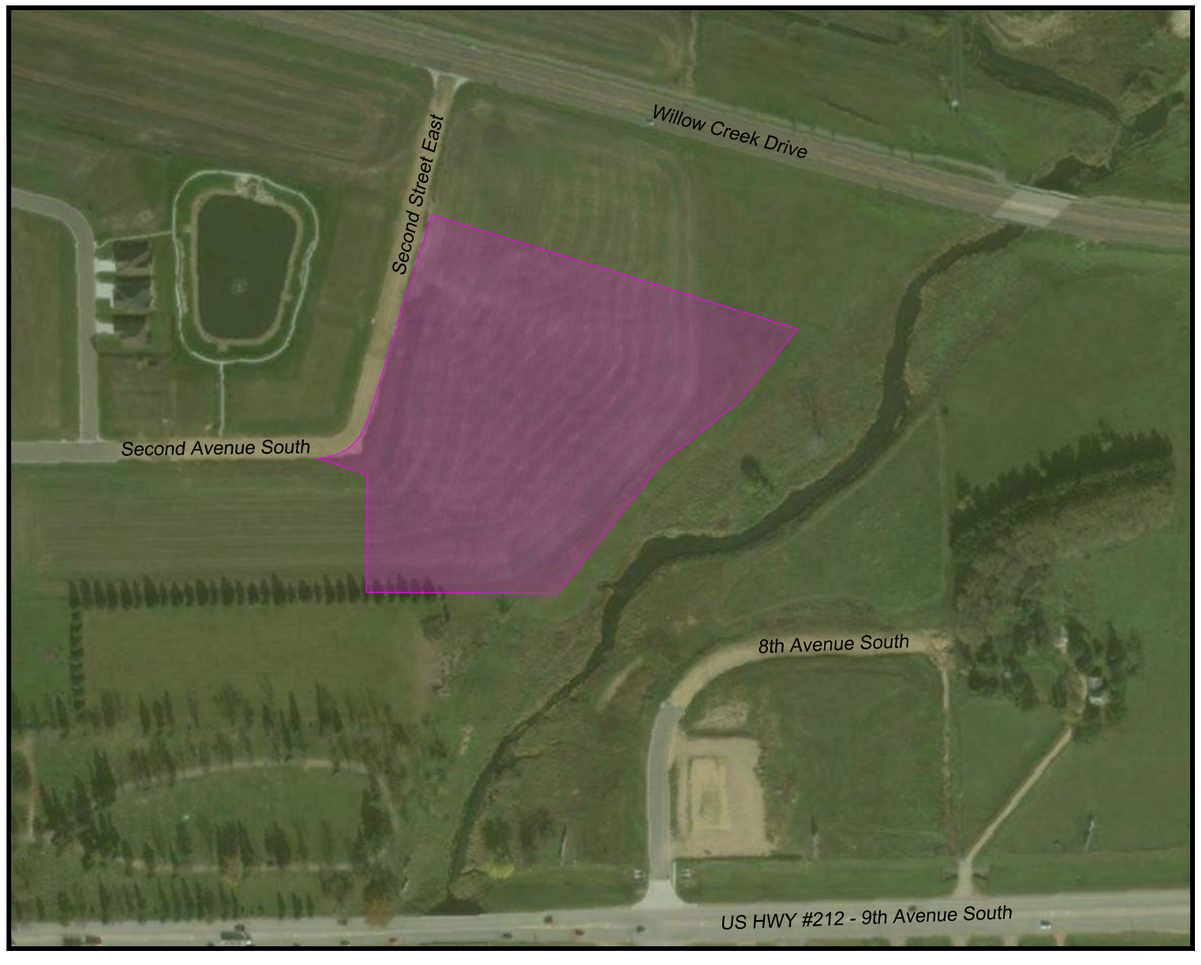
Mayor	*Ried Holien* *23 2nd St NE* *PO Box 910* *Watertown, SD 57201* *Phone: (605) 882-6200* *Fax: (605) 882-5214*
City Council	*Randy Tupper* *Mike Danforth* *Colin Paulson* *Dan Schutte* *Bruce Buhler* *Glen Vilhauer*

OWNER

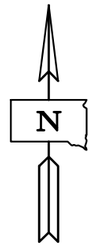
Willow Creek Development, Inc.
Owner's Representative: Ms. Kathy Smith
2301 Research Park Way #222
Brookings, SD 57006
Phone: (605) 610-1024

ENGINEER

IMEG
Shane Waterman, PE
1410 West Russell Street
Sioux Falls, SD 57104
Phone: (605) 331-2602



LOCATION MAP



STORM WATER PERMIT

Major Stream:	*Willow Creek*
Area Disturbed:	*9.2 Acres*
Project Area:	*8.0 Acres*
Latitude:	*N 44°53'34.92"*
Longitude:	*W -97°04'44.33"*

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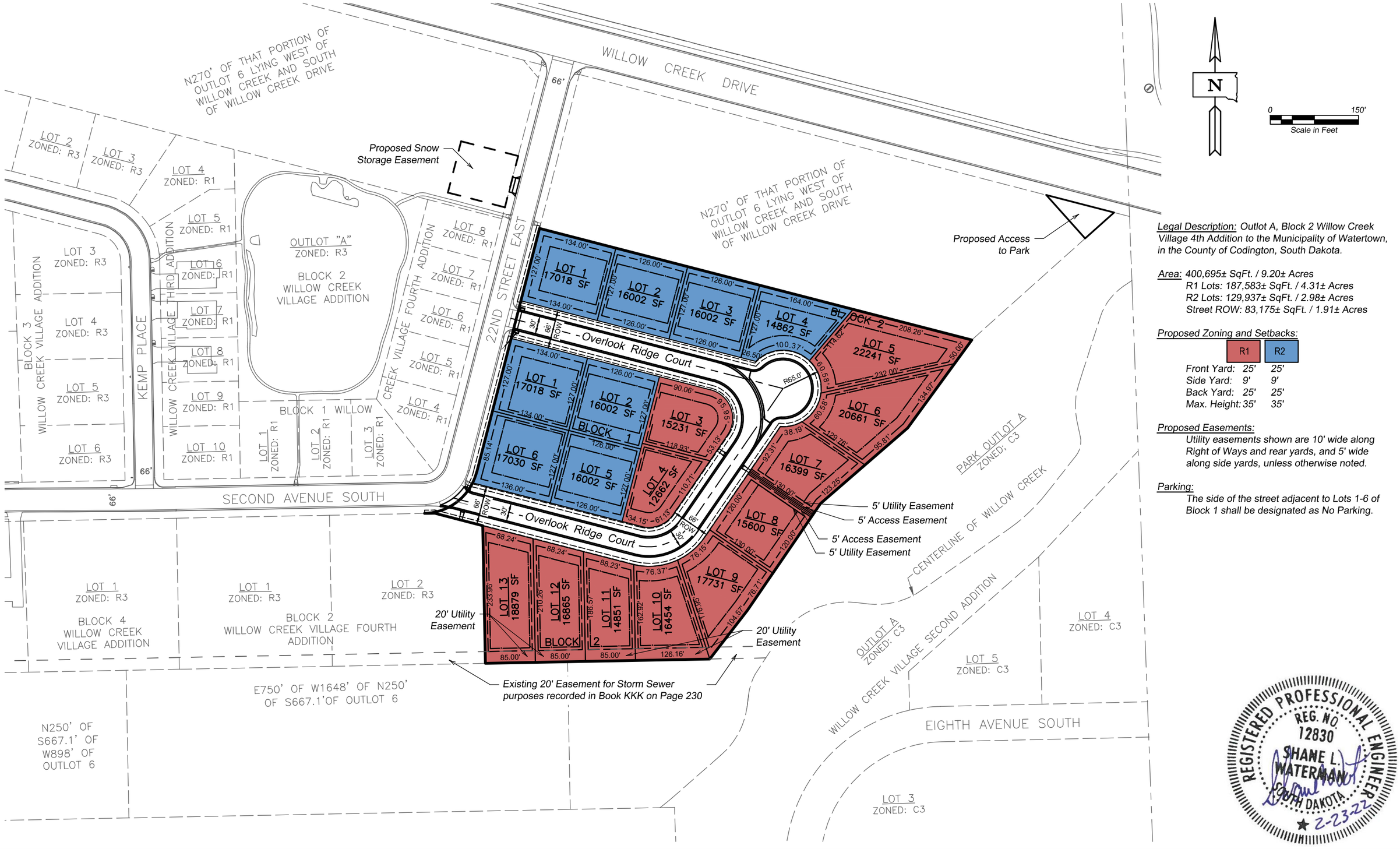
#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

TITLE SHEET

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **1** OF 39



Legal Description: Outlot A, Block 2 Willow Creek Village 4th Addition to the Municipality of Watertown, in the County of Codington, South Dakota.

Area: 400,695± SqFt. / 9.20± Acres
R1 Lots: 187,583± SqFt. / 4.31± Acres
R2 Lots: 129,937± SqFt. / 2.98± Acres
Street ROW: 83,175± SqFt. / 1.91± Acres

Proposed Zoning and Setbacks:

	R1	R2
Front Yard:	25'	25'
Side Yard:	9'	9'
Back Yard:	25'	25'
Max. Height:	35'	35'

Proposed Easements:
Utility easements shown are 10' wide along Right of Ways and rear yards, and 5' wide along side yards, unless otherwise noted.

Parking:
The side of the street adjacent to Lots 1-6 of Block 1 shall be designated as No Parking.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12830
SHANE L. WATERMAN
SOUTH DAKOTA
2-23-22

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1	SNOW STORAGE AREA RELOCATION	4/5/22	JLW

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

OVERALL SITE LAYOUT

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET 2 OF 39

Bid Item	Item Description	Quantity	Unit
1	Mobilization	1	LS
	Excavation		
2	Unclassified Excavation	16,352	CY
3	Contractor Furnish Borrow Material	15,482	CY
4	Placing Topsoil, 6"	5,642	CY
5	Scarify and Recompact Subbase, 12”	5,640	SY
6	Dewatering	1	LS
7	Sediment Basin Filter Berm	0	LF
	Paving		
8	Aggregate Base Course, 12"	3,800	TON
9	Asphalt Concrete Composite, Class E, 4"	1,130	TON
10	Concrete Curb and Gutter, B66	2,360	LF
11	Concrete Valley Gutter, 6”	1,124	SF
12	Concrete Sidewalk, 6”	1,300	SF
13	Granular Cushion	49	TON
14	Detectable Warning Panels	40	SF
	Traffic Control		
15	Traffic Control	1	LS
	Erosion Control		
16	Permanent Seed Mixture	1,220	LB
17	Fertilizing	700	LB
18	Mulching	14	TON
19	Storm Drain Curb Inlet Sediment Trap	4	EA
20	Silt Fence	1,360	LF
	Storm Sewer		
21	24" RCP Storm Sewer Pipe	70	LF
22	4’x6’ Type S Drop Inlet Base	2	EA
23	4’x6’ Type S Drop Inlet Lid	2	EA
24	Connect to Existing Storm Sewer	1	EA
	Sanitary Sewer		
25	8" PVC Sanitary Sewer Pipe	1,024	LF
26	8" PVC Sanitary Sewer Pipe Bedding	1,024	LF
27	48" Sanitary Sewer Manhole	4	EA
28	Manhole Frame and Lid	4	EA
29	8"x4" PVC Service Wye	27	EA
30	4" PVC Cap	27	EA
31	4" Sanitary Sewer Service	1,064	LF
32	Connect to Existing Sanitary Sewer	2	EA
	Water Service		
33	1" Curb Stop with Box	27	EA
34	1" Service Pipe	964	LF
35	Connect to Existing Water Main	2	EA
36	Adjust Valve Box	4	EA

	Work By Municipal Utilities Water Main		
37	6" PVC Water Main	1,200	LF
38	6" PVC Hydrant Leads	30	LF
39	6" Gate Valve and Box	2	EA
40	6" Fire Hydrant	2	EA
41	6"x6" Tee	2	EA
42	6" 90 Degree Bend	0	EA
43	6" 45 Degree Bend	3	EA
44	6" 22 1/2 Degree Bend	2	EA
45	1" Service Saddle and Tap	27	EA

GENERAL NOTES

PROJECT SCOPE

This project consists of installation of sanitary sewer main, manholes, sewer services, storm sewer, storm inlets, water services, grading, drainage, base course, curb and gutter, bituminous paving, seeding, and fertilizing for Overlook Ridge Court for Willow Creek Village- 5th Addition in Watertown, SD.

Miscellaneous Work includes furnishing and installing erosion and sediment control, sidewalks, traffic control, and valve/manhole adjustments. Only a small portion of the public sidewalk is scheduled for construction in the initial work. The majority of the sidewalk will be installed during construction of individual lots.

TECHNICAL SPECIFICATIONS

By this reference, the **“Standard Specification for Roads and Bridges” - 2015 Edition** (including revisions) as prepared by the South Dakota Department of Transportation shall be hereby included in the Contract Documents and will be generally referred to as the **Standard Specifications.**

By this reference, the **“Engineering Design Standards for Public Improvements” - Current Edition** (including revisions) as prepared by the City of Watertown, South Dakota shall be hereby included in the Contract Documents and will be generally referred to as the **City Standards.**

By this reference, the **“Municipal Utilities Water Department Policies” - Current Edition** (including revisions) as prepared by the Watertown Municipal Utilities (WMU) shall be hereby included in the Contract Documents and will be generally referred to as the **WMU Polices**.

Coordination and discrepancies between the above references and the other Contract Documents shall be resolved in favor of the Contract Documents where specifically prepared for this project.

CONSTRUCTION LIMITS

The construction limits shall be within the project boundary or right-of-way and easement areas. Material storage and vehicle and equipment traffic shall be limited to the construction limits. All paved streets adjacent to the project shall be protected from damage and are to be cleaned at the end of each working day.

It shall be the responsibility of the Contractor to coordinate with the property owners relating to access to their property and any subsequent damages.

COORDINATION OF WORK

The Watertown Municipal Utilities will be installing the watermain and related appurtenances as part of the construction of this project as needed. The Contractor shall coordinate the work with the Municipal Utilities Contractor and provide access to the site. The contact for Watertown Municipal Utilities is Wayne Lovelis
(605-882-6233).

The Contractor shall conduct coordination meetings with the subcontractors, utilities, the Engineer, and the public. These meetings shall be held as needed at a location on or near the project. The Contractor shall determine the time and location and as approved by the Engineer. All costs to conduct the coordination meetings shall be incidental to the project.

GRADE STAKES, BENCHMARKS, AND MONUMENTS

All stakes, stones, and monuments now in place and marking lines and corners of boundaries which are likely to be affected by the work herein provided for shall be carefully preserved by the Contractor. In no case shall any excavation be made within five feet (5') of any such stake, stone, or monument until they have been properly reset, witnessed, or otherwise cared for by the Engineer and permission is given to proceed with the work.

All lines, grade stakes, and benchmarks set by the Engineer in connection with the work herein provided for shall be carefully preserved by the Contractor and shall not be disturbed nor moved from the exact position and elevation as set by the Engineer. No excavated material shall be thrown over or against said stakes and, except where necessary to remove the stakes as the work progresses, all stakes shall be carefully preserved in the original position and elevation until the work has passed final inspection and been accepted. Stakes which must be removed as the work progresses shall be so removed only upon the order of the Engineer.

All stakes, stones, monuments, and benchmarks disturbed or removed through carelessness or without proper authority will be reset at the expense of the Contractor.

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EOE

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

PLAN NOTES

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SEQUENCE OF OPERATIONS

The Contractor shall coordinate and schedule their work with the Owner. All subcontractors shall coordinate and schedule their work with the Contractor.

A minimum of 10 inches of base course shall be placed on the street prior to construction of the curb and gutter. The Contractor shall backfill behind the curb and gutter prior to placement of the remaining base course. The gravel will be placed within +/- ¼" of the finish base course elevation for the asphalt contractor to complete finish shaping.

GENERAL MAINTENANCE OF TRAFFIC

Traffic control will mostly be required to keep the public out of the construction limits along 22nd Street E. The bid item "Traffic Control" shall include the installation, maintenance, resetting, and removal of the barricades and road closed signs at each end of Overlook Ridge Court as shown on the plans.

Emergency access to adjacent existing residents must be maintained throughout the project. Traffic on 22nd Street E shall be always maintained.

TIME PROVISIONS

The project shall be substantially completed by the date in the Agreement. Substantially completed includes fully operational utilities, grading and seeding, paved streets, and opened to traffic.

Liquidated damages shall be charged at the amount in the Agreement for each calendar day the work is not substantially completed past the substantial completion date in the Agreement.

CONSTRUCTION SCHEDULE

The Contractor shall prepare a construction schedule for approval to the Engineer that will ensure the completion of the project within the time frame specified. This schedule must be provided to the Engineer for review a minimum of three (3) days prior to the preconstruction meeting. The Notice to Proceed will not be issued until the schedule has been approved by the Owner. The construction schedule shall be in bar or network diagram form and show the start and completion dates for significant items of work in their respective phases. Significant items of work include but are not limited to: erosion control, removals, grading, the installation of water main, sanitary sewer, storm sewer, base course, curb and gutter, paving, and sidewalk. When applicable, the schedule shall include submission dates for shop drawings and dates for manufacturing and installation of materials, supplies, equipment, and testing for various parts of the work.

The construction schedule shall be updated as specified. If it appears the rate of progress is such that the Contract will not be completed within the time frame allowed, the Contractor will be required to provide written documentation as to what measures they will take to complete the Project within the specified time frame or to prosecute work in a satisfactory manner. Failure to submit the schedule will result in the Owner withholding the pay applications until the updated schedule is submitted.

SUBMITTALS

The Contractor shall review all shop drawings and samples prior to submission and shall verify the complete conformance of the submittal with project requirements. Field measurements shall be verified before submittals and any variation from project requirements shall be identified and brought to the attention of the Engineer in writing. The following documents shall be submitted by the Contractor:

1. Construction Schedule(s)
2. Asphalt/Concrete job mix formula
3. Materials Certifications
4. Shop Drawings
5. Dewatering Plan
6. Record Drawings
7. Disinfection Reports
8. Density/Compaction Test Reports
9. SWPPP Inspection Reports
10. Pay Application(s)

The Engineer will assume no responsibility for the correctness, dimensional accuracy, or completeness of the submittals. The Engineer's review will in no way relieve the Contractor of his responsibility to furnish materials and products in compliance with the Contract Documents.

PORTABLE TOILET FACILITIES

The Contractor will be responsible for providing portable toilet facilities for the project at no cost to the Owner.

DRAINAGE

Drainage is the Contractor's responsibility. Contractor shall be aware of existing drainage conditions and facilities and shall provide for drainage during all phases of construction. The Contractor shall not divert or otherwise alter the pre-existing drainage patterns without the explicit permission of the Engineer. Damage caused by improper temporary drainage facilities shall be repaired at the Contractor's expense and to the satisfaction of the Engineer.

UTILITIES

All utilities shall be verified by the Contractor prior to starting work. Any time existing utilities impede the progress of work, the Contractor shall immediately notify the Engineer.

All utilities, whether privately or publicly owned, shall be moved, relocated, and/or replaced as necessary by the respective utility company or companies, except as noted in the plans. These modifications shall take place in advance of construction when applicable or when advised by the Engineer. No payment shall be made to the Contractor unless specified in the contract documents.

The Contractor shall safeguard all utilities and coordinate his efforts to coincide with utility work by others in order to minimize inconvenience to the public and utility companies. When pipe utility installation crosses existing utilities, the Contractor shall be responsible for supporting the utilities in a manner that is acceptable to the owner of the utility. Any damage caused to the utilities due to Contractor carelessness shall be repaired at the Contractor's expense to the satisfaction of the utility owner.

Abandoned utilities (gas lines, telephone lines, etc.) encountered during construction shall be removed and disposed of by the Contractor. Costs associated with this work shall be incidental to the various bid items associated with work adjacent to the abandoned utility.

The Contractor shall be responsible for the coordination of all work associated with the disturbance, removal, or replacement of unidentified metallic natural gas mains or services when encountered. The Contractor shall, in advance and prior to proceeding with the work, coordinate with WMU and all other companies related to the associated work.

Existing utility locations shown on drawings are approximate. There is no guarantee that the utilities shown include all such utilities or that the locations indicated are exact. The Contractor shall be responsible for notifying South Dakota One Call 1-800-781-7474 (811) to have utilities field located prior to excavation. The following utility companies are known to have facilities on the project:

Watertown Municipal Utilities
Wayne Lovelis
901 4th Avenue SW
Watertown, SD 57201
(605) 882-6233

The Contractor shall cooperate with and coordinate his efforts to work with the utility companies and their contractors. Each bidder shall be responsible for determining the effects of utility work on the project work scope and schedule and shall account for all such effects in his bid. No consideration will be given to the Contractor after the bid letting on account of utility work done by others.

PROTECTION OF EXISTING SANITARY SEWER, WATER MAIN, AND STORM SEWER SYSTEMS

For the protection of existing public underground utilities and the surrounding work area, consideration shall be given to isolating portions of the existing water distribution system within the construction limits while maintaining fire protection. During underground utility installation such as, but not limited to, sanitary sewer, water main, storm sewer, sump pump drain, etc., in the proximity of existing water main and/or water services, the existing water main distribution shall be isolated within the work area. Upon receiving notice from the Contractor 24 hours in advance of any work, Watertown Municipal Utilities staff will operate designated water valves, where appropriate, to isolate the work area as much as reasonably possible. The Contractor shall become aware of the location and status (open/closed) of any designated isolation valves(s). Engineer and/or Utility Maintenance staff shall be notified immediately in the event of a water service emergency or interruption. It will be permissible for the Contractor to operate the designated valve(s) in the event of an emergency provided they furnish a valve operating key.

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

PLAN NOTES

PROJ. NO.	210005456
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PROTECTION OF EXISTING SANITARY SEWER, WATER MAIN, AND STORM SEWER SYSTEMS (Continued)

Existing sanitary sewer lines and manholes within the construction limits shall be protected at all times during construction. The upstream ends of existing sanitary sewer lines downstream from new sanitary sewer construction shall be plugged at locations to be approved by the Engineer. Water, stone, dirt, gravel, asphalt, concrete, or any other debris shall not be allowed to enter the City's sanitary sewer system during flushing operations or at any other time. Construction taking place in the vicinity of any existing City sanitary sewer lines or manholes shall not cause any inflow of surface water, ground water, water from damaged water lines, or debris to enter the City's sanitary sewer system. The Contractor shall be responsible for any damages incurred to the City's sanitary sewer system and/or private property and any actions imposed by SDDENR due to spills or overflows.

Existing storm sewer inlets and pipes within the construction limits shall be protected from the entrance of stone, dirt, gravel, asphalt, concrete, or any other debris during construction.

ADJUSTMENT OF MANHOLE CASTINGS AND VALVE BOXES

Under these items of work, the frames and covers on sanitary sewer manholes, storm sewer junction boxes, and water main valve boxes are to be adjusted to the finished surface elevations. The Contractor shall furnish the new manhole frames and covers where shown.

The adjustment of the manhole covers involves adding or removing adjusting rings under the frame. Seat the manhole frames in mortar, at the elevations for the manhole covers to be flush with the top of the finished surface. Adjustment of frame and covers shall be in accordance with detail for manhole casting and cover adjustment. The maximum amount of adjustment with adjusting rings is 14 inches.

WASTE DISPOSAL SITE

All material generated from this project for disposal must be disposed of at a state-permitted solid waste disposal site. Depending on what material is generated and whether it is contaminated or uncontaminated will determine which permitted facility can accept it. Permitted facilities include construction and demolition debris sites, restricted use sites, and regional landfills. Contact SD DENR waste management program to identify locally permitted disposal sites for various categories of contaminated and uncontaminated materials. All costs associated with disposing of waste shall be incidental to the various contract items.

DEWATERING

The Contractor shall include any costs for dewatering in the corresponding bid item(s). There will be no separate payment for dewatering.

If ground water is encountered, the Contractor shall dewater the trench with suitable pumps and equipment. Lowering of the ground water level shall be by means of wells, well points, or other suitable means. The Contractor is responsible for obtaining all required permits.

STORM WATER

The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the SDDANR General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to SDDANR a minimum of 15 days prior to starting work by the Engineer. A letter must be received from SDDANR that acknowledges project coverage under this general permit before project start.

The implementation of the SWPPP (included in these plans) is the responsibility of the Contractor. Inspections and record keeping are the responsibility of the Contractor.

REMOVALS

REMOVAL OF EXISTING ASPHALT PAVEMENT

There is no asphalt pavement scheduled for removal for this project. Any removals, including sawing, shall be incidental to other work.

REMOVAL OF CONCRETE CURB & GUTTER

There is no concrete curb scheduled for removal for this project. Any removals, including sawing, shall be incidental to other work.

GRADING

UNCLASSIFIED EXCAVATION

Excavation, undercut, and construction embankments for grading shall be performed in accordance with Section 120 of the Standard Specifications.

It is estimated the topsoil thickness over the project site is 1 or 2 foot thick. Contractor shall salvage the upper 12" of topsoil for use in the finishing the upper 6" layer of the surface.

This project involves the importation of a significant amount of select borrow material. However, suitable on-site soils shall be used prior to importing select borrow materials. Select borrow material shall be used generally to build up the building pad embankments and shall eb governed by the compaction standards described herein. The roadway unclassified excavation quantity includes the total cut quantity in the tables on the Grading Plan minus the borrow.

Excavate the existing subgrade to provide for the required depth of aggregate base course and asphalt surfacing or aggregate base course and concrete surfacing. Earthwork shall be performed as shown on appropriate cross sections. Refer to the Technical Specifications for measurement and payment information.

All excavations made for underground utilities are incidental to the installation of that utility. All spoil material removed for pipe installation is the property of the Contractor and is to be removed from the project by the Contractor. All spoil material and costs for removing it are incidental to pipe installation costs.

The excess non-topsoil resulting from earthwork activities, if any, shall become the property of the Contractor who shall be responsible for its removal from the site. Topsoil waste shall be disposed of on-site at a location as directed by the Engineer.

Water for compaction of subgrade and embankments shall be provided by the Contractor and used to maintain soil at or near optimum moisture content to obtain required density. Compaction of subgrade and embankments shall be governed by the specified density method. Compaction of embankment shall be no less than 95% of Standard proctor density. Separate payment will not be made for water used for compaction of subgrade. The estimated quantity of water for embankment is assumed to be 10 gallons per cubic yard of "Unclassified Excavation".

A Table for Unclassified Excavation, Embankments, and Topsoil can be found on Plan Sheet No. 15 Site Grading Plan.

SHRINKAGE FACTOR: Embankment +35%

FOUNDATION MATERIAL

The foundation material for trench stabilization for all areas where necessary shall be 3/4 inch to 4 inches crushed angular, well graded material. Larger material may be used if necessary and required to stabilize the bottom of the trench.

No Payment will be made for foundation material unless approved in advance by City or Engineer.

SCARIFY AND RECOMPACT SUBGRADE

The depth of scarification of the subgrade shall be no less than 12 inches. Refer to the Technical Specifications for measurement and payment information. If subgrade stabilization is not necessary, the Engineer may remove the "Scarify & Recompact Subgrade" bid item for those areas.

PLACING TOPSOIL

Prior to starting construction operations, a sufficient volume of topsoil shall be removed from the construction limits to cover the disturbed areas. Refer to the Technical Specifications for measurement and payment information.

Following completion of grading operations, topsoil shall be spread evenly over the disturbed areas to a depth of 4 inches. See Erosion Control plans for locations.

UTILITIES

BEDDING MATERIAL

Granular bedding material for water main, sanitary sewer, and storm sewer will be required at no additional cost to the Owner.

The new sewer line may be used by the Contractor to carry the sanitary flows after the new pipe has passed inspection and testing. Any "temporary" connections to the new sewer are subject to City approval.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12830
SHANE L. WATERMAN
SOUTH DAKOTA
2-23-22

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WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

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SHEET 5 OF 39

SANITARY SEWER

SANITARY SEWER – GENERAL

1. This project consists of approximately 1,160 lineal feet of sanitary sewer.
2. All materials, installation, and testing shall be in accordance with the current City Standards.
3. All costs for furnishing and installing wyes, risers, and caps, etc. shall be incidental to the contract unit price for the corresponding bid items.
4. Contractor's License: The Contractor shall obtain a "South Dakota State Sewer and Water Plumbing Contractor's License" prior to commencing construction.
5. The Contractor shall notify the Engineer upon completion of the sanitary sewer. Inspection of the sanitary sewer will be made by the Engineer with the Contractor and all discrepancies will be noted. Final payment will not be made until all discrepancies have been corrected and the sanitary sewer work has been given full acceptance.

MANHOLE EXTERNAL JOINT SEALS

Manhole external joint seals shall be used on all manhole joints unless otherwise specified. The external joint seal materials shall be compatible with 48-inch diameter RCP manholes and shall be a minimum of 12 inches wide.

MANHOLE EXTERNAL FRAME SEALS

Manhole external frame seals shall be required to be installed on all manholes located in both PCC and Asphalt streets unless otherwise specified. Refer to the Technical Specifications for approved product, measurement, and payment information.

INSTALLATION OF SEWER SERVICE

The locations of the sanitary sewer services are shown on the plans. The services shall be installed with a minimum slope of 1% and shall have a target depth of 8 feet at the property line. The end of the service line shall be capped and watertight. Mark the end of the service line with a marker such as a steel fence post painted green.

WATER

WATER MAIN

This project consists of approximately 1,200 lineal feet of water main, hydrants, gate valves, fittings, and service taps.

The Watertown Municipal Utilities will be installing the watermain and related appurtenances as part of the construction of this project. The Contractor shall coordinate the work with the Municipal Utilities Contractor and provide access to the site. The contact for Watertown Municipal Utilities is Wayne Lovelis
(605-882-6233).

WATER SERVICE LINES

The water services shall be 1" copper terminating at a curb stop with box. All materials and installation shall be in accordance with WMU Policies. WMU will provide the tapping saddles and corp stop for the project. Coordinate the serve taps with WMU (605-882-6233).

STORM SEWER

STORM SEWER – GENERAL

All pipes shall be class 2 unless specified. See Standard Plates 450.01, 450.10, and 450.18 for details.

Reinforced concrete pipe may be either bell and spigot or tongue and groove. The pipe sections shall be adjoined such that the ends are fully entered and the inner surfaces are flush and even.

Lift holes shall either be concealed or plugged with concrete grout.

Watertight joints are required under paved surfaces and where reinforced concrete pipes cross water mains and are separated by 18-inches or less, above or below the water main. The watertight joints shall extend for 10-feet beyond the water main. This measurement is from the sealed concrete joint to the outer most surface of the water main.

Watertight joint seals shall conform to the following requirements:

1. Reinforced Concrete Pipe (Circular): Gasketed pipe shall conform to the requirements of ASTM C443. Non-gasketed concrete pipe shall be sealed with a mastic joint seal conforming to the requirements of ASTM C990 and encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9xW2.9 wire mesh.

Gaskets and seals (Mastic, waterstop, and seal wraps) shall be installed in accordance with the manufacturer's recommendations. If watertight joints are not required, then the joints shall conform to the requirements of ASTM C990 or ASTM C443.

The cost for furnishing and installing all gaskets, mastic joint seal, waterstop seal, seal wrap, concrete collars and for pugging the lift holes shall be incidental to the contract unit price per foot for the corresponding pipe bid item.

DROP INLETS

The drop inlets per each include all labor and materials such as Class M6 concrete, reinforcing steel, frame and grate/lid whether the inlets are cast-in-place or precast.

Drop inlets shall be in accordance with Section 670 of the Standard Specifications. Concrete shall be Class M6 and rebar shall be Grade 60. See Standard Plates for details.

The Contractor has the option of using precast drop inlets in accordance with Section 560 of the Standard Specifications.
In the event the drop inlets are precast off site and delivered to the site prior to discovering any or all obstacles which could result in a change in height required for placement of the drop inlets, the Contractor will be required to modify the precast units to fit actual on site conditions at no cost to the Owner.

SURFACING

AGGREGATE BASE COURSE

A minimum of 12" base course is planned. Base course will extend 2 feet past the back of curb. Aggregate Base Course shall be in accordance with the Technical Specifications.

Contractor will be paid for the actual tonnage of base installed. No payment for missing weight tickets will be made.

Before placement of base course on subgrade areas of the project, the Contractor shall coordinate an on-site review of the subgrade condition by the Contractors, the Engineer, and the Owner. The Contractor shall provide a loaded truck for use in proof-rolling the subgrade. Deficient or unstable areas of the subgrade identified during proof-rolling shall be corrected and re-compacted as necessary by the Contractor prior to approval of placement of the base course.

Payment shall be made on a per ton basis. The Owner will not pay for any items exceeding 5% overage without an official change order.

ASPHALT CONCRETE COMPOSITE

Placement of asphalt concrete shall be by self-propelled pavers. Compaction of the asphalt concrete shall be by methods and equipment satisfactory to the Engineer and shall meet 92% density. Compaction of asphalt concrete shall be by the specified density method.

Asphalt concrete composite shall conform to the SDDOT Specifications for Class E, Asphalt Concrete. The top lift shall conform to Class E-2 for the mineral aggregate specifications. All lower lift(s) shall conform to Class E-1 for the mineral aggregate specifications unless otherwise noted or by direction of the Engineer. The surface course shall not exceed 2" in thickness when laid and compacted. The top of asphalt shall be within ¼ inch of design elevation.

A maximum of 20% (by weight) of Recycled Asphalt Pavement (RAP) will be allowed in the asphalt concrete composite mix. RAP stockpiles containing concrete chunks, grass, dirt, wood, metal, coal tar, or other foreign or environmentally restricted materials shall not be used. No other recycled material will be allowed.

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#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

PLAN NOTES

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

The asphalt cement used in the mixture shall conform to the Specifications. PG 58-28 Asphalt Binder shall be used. Certificates of compliance will be required on the performance graded asphalt binder. The supplier shall furnish a job mix formula for approval prior to asphalt production. All job mix designs shall have a laboratory designation number that can be printed on all weight tickets that correspond to the type of asphalt concrete mix.

The Engineer may accept the mixture based on the certificate of compliance, job mix formula, and visual inspection, or may test the mixture for specification compliance.

Tack coat shall be applied between each lift of asphalt and along existing concrete and asphalt faces and any areas as determined by the Engineer at the rate specified. Payment for this work shall be incidental to the unit price for asphalt.

Intermediate and/or top lifts shall not be placed until the underlying layer has cooled to 175 degrees Fahrenheit. Also, if the Contractor's paving operation is damaging the underlying asphalt, paving shall be suspended until the asphalt can withstand the paving operation or an alternate paving operation which does not cause damage is determined.

Longitudinal Joints:

1. Rolling operations for confined edges, the first pass adjacent to the confined edge, the compaction equipment shall be entirely on the hot mat 6" from the longitudinal joint.
2. Rolling operations for un-confined edges, the compaction equipment shall extend 6" beyond the edge of the mat.
3. Longitudinal joints of succeeding lifts should be offset approximately 6".
4. Longitudinal joints should be on the lane lines in the top lift. A paving plan will be required from the Contractor.

Seasonal Limitations:

1. Asphalt Concrete Composite will not be laid if the underline surface is wet or frozen.
2. Temperature for lower lifts shall be, at minimum, 40 degrees Fahrenheit, with a forecast of holding or rising temperatures.
3. Temperatures for top lift shall be, at minimum, 40 degrees Fahrenheit, with a forecast of holding or rising temperatures.
4. The Engineer may require tarping of loads during cool or windy conditions.

Payment shall be made on a per ton basis. Any asphalt concrete composite delivered to the site without a scale ticket will not be measured for payment. The Owner will not pay for any items exceeding 5% overage without an official change order. No payment will be made for missing weight tickets.

DETECTABLE WARNING PANELS

The Contractor shall supply cast iron detectable warning panels which conform to the City Standards. The Contractor shall submit shop drawings of proposed panels to the Engineer prior to construction for approval. In no case will the stamping of concrete be allowed as a method of creating the domes on the tactile warning panels. The detectable warning panels shall match the existing city colors.

MISCELLANEOUS CONCRETE

Concrete for inlets, curb and gutter, valley gutters, sidewalk, driveway approaches, and outlet structures shall be Class M-6 as detailed in the SDDOT Standards Specifications Section 462.

Concrete shall be cured using a curing compound in accordance with section 821.1 of the 2015 SDDOT Standard Specification for Roads and Bridges. A ½" preformed expansion material shall be placed between the sidewalk and other concrete items (back of curb, driveways, existing sidewalks, etc.). Payment for this item shall be incidental and included in the unit price for the respective bid item.

CONCRETE CURING

All concrete shall be cured in accordance with section 380.3.P.2 of the 2015 SDDOT Standard Specifications for Roads and Bridges except as modified in this note. All concrete shall be cured with a white pigmented linseed oil base emulsion compound when cured using the Impervious Membrane Method. Curing compound material shall be in accordance with section 821.1.D.

Apply liquid curing compound in a fine spray to form a continuous, uniform solid white opaque coverage (equal to a white sheet of typing paper) on the horizontal surface and vertical edges of pavement, curbs and back of curbs immediately after surface moisture has disappeared, but no later than 30 minutes after finishing. Concrete edges exposed by the removal of forms shall also be cured. Apply the curing compound in 2 equal applications, in opposing directions, to ensure a uniform coverage. With the approval of the Engineer, the timing of cure application may be adjusted due to varying weather conditions and concrete mix properties to ensure acceptable macrotexture is achieved. Failure to comply with the provisions may result in a price adjustment or rejection of the concrete.

SUBMITTAL OF RECORD DRAWINGS

The Contractor shall maintain up-to-date records for As-Built drawings throughout the course of the construction project. A copy of those drawings indicating the work completed to date shall be submitted the Engineer with each request for payment. The As-Built drawings must be complete to date, clean, and legible when submitted. Photocopies of the original drawings are accepted for submittal with the payment request. No payment request will be reviewed or acted upon without the submittal of up-to-date As-Built drawings. Prior to approval of the final payment, a complete set of original As-Built drawings shall be submitted to the Engineer. This shall include all new water main, sanitary sewer, installation, and services.

TEMPORARY ROCK CONSTRUCTION ENTRANCE

See sediment and erosion control plan. See standard plate #734.W2.

CONCRETE WASHOUT

Contractor shall provide a concrete washout pit on the project site. See standard plate #734.W35 for details.

TYPE S DROP INLET PROTECTION

Install this sediment control after curb & gutter is in place. Maintain until vegetation has been established on the site. See standard plate #734.W1.1.

HIGH FLOW SILT FENCE

The high flow silt fence fabric provided will be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

http://apps.sd.gov/HC60ApprovedProducts/main.aspx

High flow silt fence will be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

An additional quantity of high flow silt fence has been added to the Estimate of Quantities for temporary sediment control.

EROSION CONTROL

The estimated area requiring erosion control is 8.0 Acres. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, seeding, and mulching will be paid at the unit prices for the contract bid items listed in the "Erosion Control" section of the Bid Tab.

The limits of erosion control work will be determined by the Engineer during construction.

Permanent Seeding

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Permanent Seed Mixture will consist of the following:
Seed mixture shall be Developers Mix by Millborn Seeds with a minimum purity of 98% and minimum germination of 85%. (or approved Equal). Seeding shall be applied at a rate of 174 lbs. per acre.

Fertilizer

Shall be uniform in composition, free flowing, containing 18% available nitrogen and 46% phosphorous. (18-46-0). Furnish fertilizer in new clean containers with name, weight, and guaranteed analysis of contents clearly marked. Fertilizer application rate: 100 lbs/acre.

Mulch

Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable. Mulch application rate: 2 tons per acre.

REGISTERED PROFESSIONAL ENGINEER
REG. NO 12830
SHANE L. WATERMAN
SOUTH DAKOTA
2-23-22

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#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

Storm Water Pollution Prevention Plan (SWPPP)

NARRATIVE

OWNER

Willow Creek Development, Inc.
2301 Research Park Way, Suite 226
Brookings, SD 57006
Project Manager: Kathy Smith
Email Address: kathy@glaciallakescapital.com
Phone Number: (605) 610-1024

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____
Printed Name

Signed: _____
Owner Date

DESIGN ENGINEER

IMEG Corporation
114 1st Avenue NW
Watertown, SD 57201
Registered Engineer: Shane Waterman
Email Address: shane.l.waterman@imegcorp.com
Phone Number: (605) 878-0414

This SWPPP appears to fulfill the technical criteria for erosion control and the requirements of the State of South Dakota and the City of Watertown. I understand that additional erosion and sediment control measures may be needed if unforeseen erosion problems occur or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the **Primary Responsible Party** until such time as the plan is properly completed, modified, or voided.

Signed: _____
Name/Title Date

PRIME CONTRACTOR

The "Department of Agriculture and Natural Resources - Contractor Certification Form" (SD Form – 2110LD) is to be executed by the Prime Contractor or his representative after the award of the contract. Work may not begin on the project until this section is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

NOTICE OF INTENT

A Notice of Intent (NOI) for coverage under the General Permit for Storm Water Discharges Associated with Construction Activities has been submitted to the SD DANR and the permit number is SDR######. A copy of the permit may be downloaded from http://denr.sd.gov/des/sw/IPermits/ConstructionGeneralPermit2010.pdf.

PERMIT AND EROSION CONTROL CONTACT INFORMATION POSTING

The Contractor is required to post and maintain for public viewing a laminated copy of the Department of Agriculture and Natural Resources authorization letter. The authorization letter will be furnished to the Contractor by the City. The Contractor is also required to post and maintain for public viewing an Erosion Control Contact Information Posting (ECCIP) sign. The sign shall include the name and contact information of the Contractor. The letter and ECCIP sign must be posted in a prominent location such as the project's information board or the main entrance of the construction site.

MODIFICATIONS TO THE SWPPP

The Engineer may order changes to the SWPPP and/or the Contractor is responsible to request changes to the SWPPP if unforeseen changes occur, or the SWPPP does not perform as intended, or to improve the effectiveness of the SWPPP, or to comply with the SDDENR permit. The Engineer will evaluate and determine if any Contractor requested changes to the SWPPP should be made. The Contractor is responsible to implement these changes as soon as practical. All approved changes to the SWPPP must be documented by the Engineer.

KEEPING THE SWPPP CURRENT

The Engineer will be responsible to maintain an original copy of the SWPPP. Any modifications to the SWPPP must be documented and made part of the SWPPP. Any modifications must be recorded and a copy submitted to the Contractor for implementation. The SWPPP must be submitted at the end of the project and retained by the Owner for a period of three (3) years from submittal of the Notice of Termination.

RECORD KEEPING

During an inspection by the State, the Contractor will be asked to produce record keeping documents. The Contractor shall maintain proper records **on-site**, which includes the following:

1. The Notice of Intent and SWPPP Permit shall be posted on-site in the job trailer, laminated on a board, placed in a mail box, or other location that can be accessed by State employees during an inspection.
2. The Contractor shall keep copies of all inspection reports with the SWPPP on site. The inspection reports should note significant rainfall events, repairs needed to BMPs, grading activities on site, and spills that occurred on site. The follow-up inspection report should note spills cleaned up and repairs or changes made since the last inspection report. (i.e. If the silt fence needed to be repaired, note in the follow-up inspection that the silt fence was repaired and in good condition.)
3. Contractor shall note when grading activities started and ended and when stabilization BMPs were installed.
4. Contractor shall maintain a log of repairs to describe repair, replacement, and maintenance of BMPs as noted in the maintenance inspection reports.
5. Contractor shall record date, material, and quantity of material spilled as well as efforts to clean up and remove waste and prevent future spills.
6. The Contractor shall track all changes made to the SWPPP due to weather conditions, changing site conditions, and as directed by the State, Engineer, or Owner in the best interests of storm water and pollution management. Contractor shall note updates to the SWPPP, including additions of new BMPs, replacement of failed BMPs, significant changes in the activities, changes in personnel, changes in inspection and maintenance procedures, updates to site maps, etc.
7. Contractor shall record the times and dates of SWPPP training, who attended, and what topic(s) were covered.

INSPECTIONS

The Contractor will be required to perform inspections on the project at the following minimum frequency until the site has reached final stabilization and a Notice of Termination is submitted to the SDDENR:

1. Prior to the removal of any surfacing or topsoil.
2. Once every seven calendar days (minimum). When runoff is unlikely due to winter conditions the inspections may be reduced to once a month.
3. Within 24 hours after every rainfall of ½ inch or greater.
4. After a snow melt that causes erosion.
5. Within 24 hours of a complaint being made to the Contractor or Engineer.

The Engineer reserves the right to perform inspections more frequently than identified and additional inspections will be made if obvious items of non-compliance exist. If the Contractor fails to attend any inspection, it does not relieve them of their responsibility to comply with any corrective or maintenance actions needed.

Items noted as being non-compliant or needing maintenance as a result of the inspections must be corrected as soon as practical. The site shall continue to be considered in non-compliance until the issue has been corrected to the satisfaction of the Engineer. Failure to correct items of non-compliance or those needing maintenance prior to the next inspection will result in price adjustment to the Contract.

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WATERTOWN, SOUTH DAKOTA

SWPPP SHEET

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **8** OF 39

The minimum price adjustment to the Contract will be $100 per day per item per individual location. The Engineer may delay the issuance of the price adjustment(s) if the Engineer has determined all the following apply:

1. The Contractor has made a good faith effort to bring the items into compliance with the Storm Water Pollution Prevention Plan (SWPPP) and the State's General Permit.
2. Compliance was not achieved due to weather conditions outside the Contractor's control and the conditions were severe enough to prevent the Contractor from bringing the item into compliance.
3. The Contractor brought the item into compliance as soon as possible after the weather and site conditions permit.

Any price adjustment or formal enforcement actions taken by the City, State, or Federal governments for the failure to implement the accepted SWPPP is the Contractor's sole responsibility and shall not be a reimbursable expense to the Owner.

NOTICE OF TERMINATION

The Contractor is responsible for complying with the SWPPP until a Notice of Termination (N.O.T.) of coverage under the General Permit has been issued. The N.O.T. will be prepared by the Engineer for submittal to the SDDANR when all storm water discharges covered by the permit are eliminated and final stabilization has been achieved on all portions of the site for which the permittee is responsible. Final stabilization means either or a combination of:

1. All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of 70% of the native cover for unpaved areas and areas not covered by permanent structures has been established, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed; or
2. For construction projects on land used for agricultural purposes, final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to "waters of the state," and areas which are not being returned to their pre-construction agricultural use must meet the final stabilization criteria in (**1**) above.

PROJECT DESCRIPTION

This project consists of installation of water and sewer services, grading, drainage, base course, curb and gutter, bituminous paving, seeding, and fertilizing for Overlook ridge Court of Willow Creek Village- 5th Addition in Watertown, SD.

EXISTING SITE CONDITIONS

The area is currently a grassed surfaced agriculture area which is currently hayed.

ADJACENT AREAS

The adjacent area has already been developed.

AREA AND VOLUME DISTURBED

The project site is 9.2 acres in size, the total surface area to be disturbed is approximately 8 acres. The proposed project is estimated to create 1.15 acres of street and 2.20 acres residential impervious surface.

EROSION/SEDIMENT CONTROL SEQUENCE AND TIME SCHEDULE

The following paragraph(s) are intended to provide a guideline to the Contractor for the installation of initial erosion and sediment control measures and implementation of the erosion control plan during construction. The timeline and sequence are for reference only and may change depending on the Contractor's sequence of operations and must be approved by the Engineer prior to making changes.

Time Schedule:

1. Anticipated start date of construction is May 1, 2022.
2. Install preliminary erosion control measures such as silt fence, silt ditch, inlet protection, and sediment traps prior to beginning grading activities in each phase.
3. Final completion of all phases by October 14, 2022.
4. Place seed mix and sod no more than 14 days after final grading work is complete.
5. Install erosion control measures such as silt fence, mulch, wattles, inlet protection, riprap, and any other measures deemed necessary by the Engineer upon completion of final grading.

PERMANENT STABILIZATION MEASURES

Seed, mulch, and fabric will be used for permanent stabilization of all disturbed areas not paved throughout the project limits.

SPILL PREVENTION

Nonstructural BMPs such as good housekeeping measures can, to some degree, prevent the deposition of pollutants on the urban landscape or remove pollutants at their source. The source of pollutants for assimilation into storm water is the land surface itself, especially the impervious surfaces in the urban area. Thus, it is expected that when nonstructural measures are effectively implemented, they will reduce the amount of pollutants being deposited on land surfaces for eventual contact with storm water and transported to the receiving water system. Therefore, the Contractor should evaluate and determine which appropriate good housekeeping measures listed below could be used.

Operation and Maintenance: To assure that equipment and work-related processes are working well, the following practices should be implemented:

1. Make sure all equipment and vehicles are working properly and preventative maintenance is kept up with on both to reduce the chance of leakage.
2. Routinely inspect equipment and processes for leaks or conditions that could lead to discharges of chemicals or contact of storm water with raw materials, waste materials, or products used on site.
3. Designate contained areas of the site for auto/equipment parking, vehicle refueling, and routine maintenance of equipment. Contractor shall use drip pans, curbing, sand filters, oil/water separators, or other controls to prevent contaminated water runoff.
4. Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
5. Petroleum products will be stored in tightly sealed containers which are clearly labeled.
6. Fertilizers used will be applied only in the amounts specified or recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. Storage will be in an enclosed area. The contents of any partially used bags of fertilizer will be transferred to a sealable container to avoid spills.
7. All paint containers will be tightly sealed and stored when not required for use. Excess paint will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or State and local regulations.
8. Contractor will provide a marked truck washout area on the site that is self-contained and not connected to any storm water outlet of the site. Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water in these areas only. Upon completion of construction washout areas will be properly stabilized.

Material Storage Practices: Improperly storing material on site can lead to the release of materials and chemicals that can cause storm water runoff pollution. Proper storage techniques include the following:

1. Locate material storage areas away from storm drains, ponds, and drainage ways.
2. Isolate and consolidate bulk materials from storm water runoff by providing berms or other means to keep the material from migrating into drainage systems.
3. Only needed products will be stored on-site by the Contractor. Whenever possible, all products will be completely used before properly disposing of the container off-site.
4. Contractor will store materials in an orderly manner in appropriate containers and under cover, if possible.
5. Provide adequate aisle space to facilitate material transfer and ease of access for inspection.
6. Store containers, drums, and bags away from direct traffic routes to prevent accidental spills.
7. Stack containers according to manufacturer's instructions to avoid damaging the containers from improper weight distribution.
8. Store containers on pallets or similar devices to prevent corrosion of containers that results from containers coming in contact with moisture on the ground.
9. When possible, store materials such as salt, hazardous materials, and other materials prone to leaching on a paved surface.
10. Store toxic or hazardous liquids within curbed areas or secondary containers.

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SWPPP SHEET

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **9** OF 39

11. Substitute less toxic or nontoxic materials for toxic materials.
12. Products will be stored in their original containers with the original manufacturer's label.
13. Material safety data will be retained.
14. Manufacturer's recommendations for proper use and disposal will be followed. Generally, substances will not be mixed with one another. Material mixing will be conducted in accordance with manufacturer's recommendations only.
15. Assign responsibility of hazardous material inventory to a limited number of people who are trained to handle such materials.

Good Housekeeping: To reduce the risk of spills or other accidental exposure of material and substances to storm water runoff, the following good housekeeping practices should be implemented:

1. Maintain dry and clean floors and ground surfaces by using brooms, shovels, vacuum cleaners, or cleaning machines rather than wet cleanup methods.
2. Dust generated will be controlled by water if necessary.
3. Vegetated areas not essential to the construction project will be preserved and maintained as noted on the plans.
4. Stabilized entrances should be created to reduce vehicle tracking of sediments off sites. The entrances will be cleaned and maintained as necessary. Any sediment tracked off site or on public roads shall be cleaned at the end of each day.
5. Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any storm water system or storm water treatment system.
6. Cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), mixer washout waters, and other pH modifying materials will be collected on site and managed to prevent contamination of storm water runoff.

Waste Disposal: To assure that equipment and work-related processes are working well, the following practices should be implemented:

1. All liquid waste materials will be collected and stored in a sealed metal container approved by the Engineer.
2. Pick up and deposit all trash and construction debris from the site in an approved covered container. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill.
3. Sanitary waste will be collected from the portable units in a timely manner by a licensed waste management contractor and will be disposed of at a wastewater treatment facility or as required by local regulations.
4. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted in the field office. The Contractor will be responsible to ensure proper waste disposal procedures are followed according to Local and State regulations.
5. To minimize waste, Contractor shall recycle and reuse materials whenever feasible.

Material Inventory Practices: An up-to-date inventory kept on all materials (both hazardous and nonhazardous) present on site will help track how materials are stored and handled onsite and identify which materials and activities pose the most risk to the environment. The following description provides the basic steps in completing a material inventory:

1. Identify all chemical substances present at work site. Perform a walk-through of the site, review purchase orders, list all chemical substances used, and obtain Material Safety Data Sheets (MSDS) for all chemicals.
2. Label all containers. Labels shall provide name and type of substance, stock number, expiration date, health hazards, handling suggestions, and first aid information. This information can also be found on an MSDS.
3. Clearly mark on the hazardous materials inventory which chemicals require special handling, storage, use, and disposal considerations. Decisions on the amounts of hazardous materials that are stored on site shall include an evaluation of any emergency control systems that are in place. All storage areas shall be designed to contain any spills.

Training and Participation: Frequent and proper training in good housekeeping techniques reduces the possibility of chemicals or equipment that will be mishandled. Reducing waste generation is another important pollution prevention technique. The following are ways to get people involved in good housekeeping practices:

1. Provide information sessions on good housekeeping practices in training programs.
2. Discuss good housekeeping at meetings.
3. Publicize pollution prevention concepts through posters or signs.

SPILL PREVENTION AND RESPONSE

In addition to good housekeeping measures, the Contractor should detail what Spill Prevention and Response measures should be used. The following practices are recommended for spill prevention and cleanup:

1. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained by the Contractor of the procedures and the location of the information and cleanup supplies.
2. Materials and equipment necessary for spill cleanup will be kept in a designated area on-site. Equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose. Spill response equipment will be inspected, maintained, and replaced as necessary.
3. All spills will be contained and cleaned up immediately after discovery. The waste materials shall be disposed of properly.
4. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
5. The Contractor will be notified immediately when a spill or the threat of a spill is observed. The Contractor will assess the situation and determine the appropriate response. The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters.
6. The Contractor shall record date, description of the spill, quantity of material spilled as well as a description of what caused it and efforts to clean up and remove the waste. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring and how to clean up the spill if there is another one.
7. If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.

SPILL NOTIFICATION

The Contractor will be responsible for reporting spills of petroleum product or other toxic, hazardous, or regulated substance to the SD DANR immediately **if any one of the following** conditions exists:

1. The discharge threatens or is in a position to threaten the waters of the state (surface water or ground water).
2. The discharge causes an immediate danger to human health or safety.
3. The discharge exceeds 25 gallons.
4. The discharge causes sheen on surface water.
5. The discharge of any substance that exceeds the ground water quality standards of ARSD (Administrative Rules of South Dakota) chapter 74:51:01.
6. The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:51:01.
7. The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
8. The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

To report a release or spill, call DANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call State Radio Communications at 605-773-3231. Reporting the release to DANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases. DANR recommends that spills also be reported to the National Response Center at (800) 424-8802. A spill of hazardous materials should be reported to the DANR at 605-773-3153.

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#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

SWPPP SHEET

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

METHODS OF ENSURING SURFACE WATER QUALITY

The Contractor shall be responsible to ensure no sediment laden waters leave the project without exposure to an erosion or sediment control device.

The only non-storm water discharge allowed by the General Permit for Storm Water Discharges Associated with Construction Activities is uncontaminated ground water or waters, used as a best management practice, to wash vehicles and control dust. It is the responsibility of the Contractor to obtain a General permit to discharge under the South Dakota Surface Water Discharge System for temporary discharge activities in South Dakota (dewatering permit) for all other non-storm water discharges. All monitoring, testing, and other requirements of the dewatering permit are the responsibility of the Contractor.

Pumping (mechanically discharging) sediment laden water including ponded storm water or contaminated trench dewatering into the storm sewer or off the project site is not covered under the General Permit. It is the responsibility of the Contractor to obtain and comply with a dewatering permit for these activities. The Engineer may notify the SDDANR if the Contractor is observed pumping sediment laden water into the storm sewer or off site. Pumping sediment laden water through inlet protection is not allowed as a BMP.

In lieu of pumping sediment laden water the following are some methods the Contractor may use to control sediment laden water.

- The best method is for the Contractor to maintain positive drainage during all phases of the project to prevent water from ponding on the project.
- Treat the sediment laden water onsite through the use of filter bags, deflocculating chemicals, sediment basins, or a portable containment system.
- Pump or discharge the water to other portions of the site. This is allowed if the waters do not leave the project limits.

No payment will be made to the Contractor to comply with a dewatering permit unless otherwise specified and it will be considered incidental to the various bid items.

NON-STORM WATER DISCHARGES

It is expected that the following non-storm water discharges will occur from the site during the construction period:

1. Discharges from water line flushing's
2. Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred)
3. Uncontaminated groundwater (associated with dewatering activities)
4. Waters used to wash vehicles without detergent
5. Water used to control dust
6. External building wash waters without detergents
7. Uncontaminated air conditioner or compressor condensate
8. Foundation or footing drains without contamination from solvents or other materials
9. Landscape irrigation

AGENCY COORDINATION

Are wetlands an issue? Yes or (No)

MODIFICATIONS OF EROSION AND SEDIMENT CONTROL DEVICES TO PREVENT PROPERTY DAMAGE

The Contractor is responsible to maintain drainage. In the event that an erosion or sediment control device is obstructing drainage and damage to property is possible, the Contractor may temporarily modify or remove the device to facilitate drainage. An example is inlet protection in a sump location surrounded by buildings. If a device is removed for this purpose, the Contractor shall immediately notify the Engineer to discuss and implement alternatives to comply with the SWPPP and General Permit.

SOIL SURFACE STABILIZATION PRACTICES

After construction begins, soil surface stabilization shall be applied within 14 days to all disturbed areas that may not be at final grade but will remain dormant (undisturbed) for periods longer than 21 calendar days. Within 14 days after final grade is reached on any portion of the site, permanent or temporary soil surface stabilization shall be applied to disturbed areas and soil stockpiles. The following table lists the amount of time various erosion control measures are applicable.

Maximum Time Limits of Land Exposures for Selection of Erosion Controls

Erosion Control Method	Maximum Allowable Period of Exposure (Months)
Surface Roughening	**1**
Mulching	**12**
Temporary Revegetation	**12 – 24**
Permanent Revegetation	**24 Or More**
Soil Stockpile Revegetation	**2**
Early Application of Road Base	**1**

MAINTENANCE

The Contractor is responsible for maintaining and repairing all temporary erosion control, sediment control, and permanent erosion control measures until the Notice of Termination is filed. No payment will be made to the Contractor for maintaining or repairing these items unless otherwise specified. General maintenance requirements are listed but are not all inclusive and additional measures may need to be taken to comply with the General Permit and SWPPP.

1. Silt fence will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
2. Sediment build-up will be removed from silt fence when it has reached one-third the height of the fence.
3. Sediment basins and traps will be checked and sediment removed when depth reaches approximately 50 percent of the structure's capacity and at the conclusion of the construction.
4. Check dams will be inspected for stability and sediment will be removed when depth reaches half the height of the dam.
5. All seeded areas will be inspected for bare spots, washouts, and healthy growth free of significant weed infestations.
6. A maintenance inspection report will be made after each inspection. A copy of the report forms to be completed by the inspector is attached. Contractor shall make copies for reuse.
7. All controls will be maintained in good working order by Contractor. Necessary repairs will be initiated by Contractor within 24 hours of site inspection. A log of repairs shall be maintained to describe repair, replacement, and maintenance of BMPs as noted in the maintenance inspection reports.
8. The Contractor will be responsible for inspections, maintenance and repair activities, and completing out the inspection and maintenance report.

REMOVAL OF TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES

The Contractor is responsible to remove all temporary erosion control and sediment control devices when the site reaches final stabilization. No payment will be made to the Contractor for removing these items unless otherwise specified. The Engineer may order specific temporary erosion control and sediment control devices to remain in place past final stabilization. The Contractor will not be responsible to remove these items.

TEMPORARY EROSION CONTROL MEASURES

INSTALLATION OF TEMPORARY EROSION CONTROL MEASURES

The Contractor shall not begin the removal of surfacing or topsoil within the applicable work area until all applicable temporary erosion control measures are placed. Temporary erosion control measures shall be installed as necessary as construction progresses and these temporary erosion control devices shall be installed within 24 hours at locations identified on the SWPPP.

SEDIMENT CONTROL MEASURES

INSTALLATION OF SEDIMENT CONTROL MEASURES

The Contractor shall not begin the removal of surfacing or topsoil within the applicable work area until all applicable sediment control measures are placed. Sediment control measures shall be installed as necessary as construction progresses and these sediment control devices shall be installed within 24 hours at locations identified on the SWPPP.

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

SWPPP SHEET

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SILT FENCE

Maintenance Requirements: Areas of damage including water damage, fabric tears, and failures shall be repaired. When accumulated sediment reaches one half of the height of the fence, new silt fence shall be installed. When site conditions require that silt fence be cleaned and mucked out, rather than replaced, care must be taken to ensure the existing silt fence is not damaged.

Mucking silt fence is the removal of muck trapped by the silt fence as described above. Removed muck should be spread out and stabilized within the projects limits or at an alternate location approved by the Engineer.

Repair Silt Fence shall consist of repairing silt fence to meet installation requirements specified in the plans.

STREET SWEEPING

Construction Requirements: Street sweeping is required during construction and before final completion of work to keep streets adjacent to and within the project area clean. The minimum equipment to be used for street sweeping shall be a skid loader with a pick up broom attachment or Engineer approved equal. No rotary broom without the pickup broom attachment/containment system will be acceptable to perform this work.

Maintenance: Sweeping shall be performed as needed to remove tracked mud from the roadway. Daily sweeping may be necessary if project conditions warrant. Measurement and payment shall be incidental to the Project.

INLET PROTECTION

Maintenance Requirements: Accumulated sediment should be removed and disposed of on site. Device should be cleaned or replaced if standing water is evident 48 hours after a rain event. Damaged devices must be repaired.

Measurement: Inlet protection will be measured per each type installed. Additional measurement will be made when a different type of inlet protection is installed at each location. No additional measurement will be made when the same type of inlet protection is removed and reinstalled at the same location.

CONCRETE WASHOUT AREA

Construction Requirements: A concrete washout area shall be installed on the project site at a location approved by the Engineer if concrete trucks deliver concrete to the site. No washout area is necessary if all concrete trucks are going to wash out at approved site constructed by the concrete supplier.

Maintenance Requirements: The concrete washout area must be kept in a condition to maintain the capacity for all wasted concrete and washout water on the project. Measurement and payment shall be incidental to the Project.

PERMANENT EROSION CONTROL MEASURES

INSTALLATION OF PERMANENT EROSION CONTROL MEASURES

This work shall be done as soon as possible after finish grading and topsoil placement is completed, and if practical, prior to seeding, fertilizing, and mulching of adjacent areas. At a minimum, the work must be completed within the timeframes listed within the Soil Surface Stabilization Practices notes.

Weed Control: Prior to seeding/sodding, legumes and noxious weeds shall be inoculated in accordance with the manufacturer's recommendation. A certification of the inoculation shall be furnished to the Engineer. The Contractor will need prior authorization from the Engineer to commence seeding/sodding. If prior authorization is not obtained, there will be a minimum price deduction of 25% of the appropriate bid items. The Contractor should assume that a minimum of one (1) weed control application will be required. More weed control applications may be required depending on site conditions. The number of applications will be at the discretion of the Engineer. This work shall be incidental to the seeding/sodding bid item.

After seeding has taken place, the Contractor shall be responsible for controlling the weeds for the newly seeded areas, including the Contractor staging areas, until a uniform perennial, vegetative cover, with a density of 70% of the native grasses, has been established as determined by the Engineer. If areas are seeded in late fall, this requirement shall remain in effect until the following spring. All costs associated with weed control including, but not limited to, hand pulling, butting, or spraying shall be considered incidental to the seeding bid items. No separate measurement or payment shall be made for weed control.

After sodding has taken place, the Contractor will be responsible for controlling the weeds for the newly sodded areas until the warranty period has expired. All costs associated with weed control shall be considered incidental to the sodding bid item. No separate measurement or payment shall be made for weed control.

Seedbed Preparation: The initial preparation of the newly graded area for seeding shall be performed in accordance with the Standard Specifications. The Contractor will need prior authorization from the Engineer to commence seeding. If prior authorization is not obtained, the appropriate bid item will be subject to a minimum price deduction of 25%.

Seed Testing: Seed shall be tested within 9 months prior to planting, exclusive of the calendar month in which the test was completed. Testing shall be performed in accordance with SD Standard Specification for Roads and Bridges Section 730.2C. The certified test report shall be furnished to the Engineer prior to the start of the seeding operations. If prior documentation is not received and authorization has not been given, there will be a minimum price deduction of 25% of the seeding bid items.

Labeling: Each bag of seed delivered to the project shall bear a tag which conforms to the SD Standard Specifications for Roads and Bridges Section 730.2D. There will be no payment for the seed in bags without the proper labeling.

TOPSOIL

Topsoil will be placed over all disturbed areas to a depth of 6 inches. The placement of the topsoil shall be completed within 5 days of final grading or the topsoil will be subject to a minimum price deduction of 25% of the topsoil bid item. Soil stabilization shall be in accordance with the SWPPP.

Topsoil shall be screened and pulverized and meet the requirements of the following table:

TOPSOIL REQUIREMENTS

	Minimum	Maximum
Material Passing #10 Sieve	95%	-
Clay	5%	25%
Silt	10%	70%
Sand and Gravel	10%	60%
Organic Matter (as determined by weight)	4%	15%
pH (ASTM D 5268)	6.0	7.0

The topsoil provided shall be smooth, uniform, and free of stones 1 inch or larger in any dimension, roots and other extraneous or undesirable material harmful to plant growth. The Contractor shall submit to the Engineer the prospective source for the topsoil at least 1 month prior to time of placement to allow adequate time for inspecting, testing and approving the source. Texture shall be determined by the method described in AASHTO T 88.

SEEDING AND FERTILIZING

Construction Requirements: Seeding and fertilizing shall comply with the Standard Specifications. If the seasonal limitations for seeding as specified in section 730 interfere with the timeframe listed within the Soil Surface Stabilization Practices section, then an alternate temporary soil stabilization practice must be used. Payment will be made to the Contractor for these alternate practices if caused by the conditions and sequencing of the plans and/or specifications and not the result of the Contractor's negligence.

The areas to be seeded are shown on the plan sheets and are generally all disturbed areas within the construction limits.

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#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

SWPPP SHEET

PROJ. NO.	210005456
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CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET 12 OF 39

Seed Mixes: Per specification.

Seed shall have a minimum purity of 98% and a minimum germination of 85%. Seed shall be delivered to the project in bags with seed tags attached. See plan notes on Labeling. Seed shall be applied at the rate of 300 lbs/acre using a press drill or slit seeder in all areas where possible. Hand seeding will be kept to a minimum and only done when site conditions prohibit the use of a drill or slit seeder.

All of the above seeding mixes and rates are based on drill seeding followed by crimped hay or straw mulch. These rates shall be doubled if seed is broadcast and shall be increased by 50 percent if the seeding is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching shall be done as a separate operation. All seed shall be drilled in with an approved drill and incorporated to the top ¼" +/- of topsoil. Small areas not accessible with a drill may be broadcast and dragged or raked in.

Maintenance: Bare spots or locations of erosion shall be re-seeded and maintained by the Contractor for an additional 4 weeks and the area has met the vegetative cover with a density of 70% of the native cover for unpaved areas. This additional material and labor shall be at no additional cost to the owner.

Fertilizer Type: A starter fertilizer with a minimum guaranteed analysis of 18-46-0, 11-52-0, or an Engineer approved alternate fertilizer shall be applied to all areas designated for permanent seeding and/or sodding. The application rate shall be 100 pounds per acre.

Fertilizer shall be delivered to the site in bags, each fully labeled, conforming to the specifications and bearing the name and warranty of the producer. Appropriate documentation shall be given to the Engineer for approval prior to application.

MULCH

Following permanent seeding, grass hay or straw mulch conforming to the Standard Specifications shall be applied at the rate of 2 tons per acre at locations shown on the erosion control plan sheets.

Maintenance: Look for small areas of erosion or where the mulch has washed away which typically occurs after a heavy rain. All areas of failure should be repaired.

HYDROMULCHING

Hydro mulch shall be virgin wood cellulose fiber made from whole wood fibers and applied at a rate of 2,000 lbs/acre. The fiber mulch shall be applied in accordance with the Standard Specifications. It shall be dyed an appropriate color to allow visual metering of its application. The fiber mulch material shall be supplied to the project in packages marked by the manufacturer. Appropriate documentation shall be given to the Engineer for prior approval before application. If prior approval has not been given, the appropriate bid item will be subject to a minimum price deduction of 25%.

Maintenance: Bare spots or locations of erosion should be re-seeded at no additional cost to the Owner.

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OVERLOOK RIDGE COURT STREET PLANS
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SWPPP SHEET

PROJ. NO.	210005456
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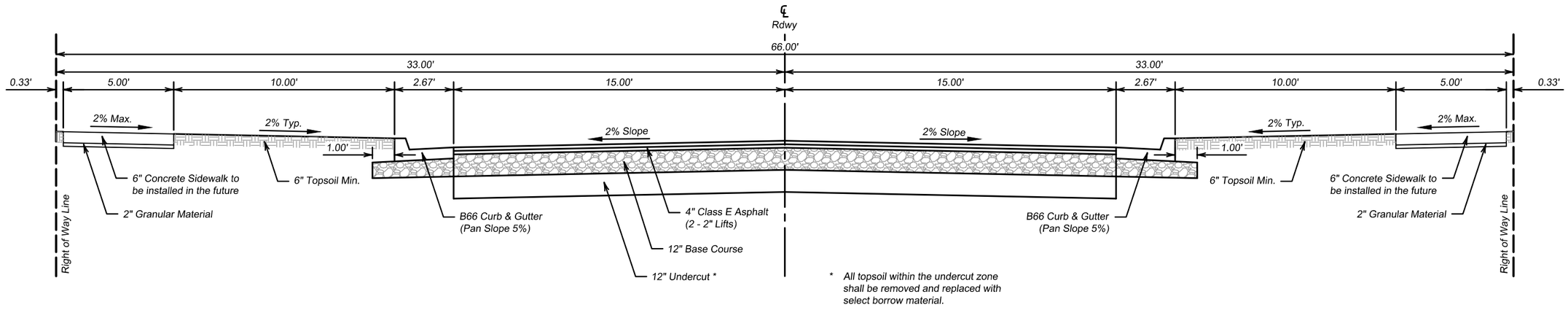
DATE:	FEBRUARY 2022

SHEET
13
OF 39



* *All topsoil within the undercut zone shall be removed and replaced with select borrow material.*

OVERLOOK RIDGE COURT TYPICAL SECTION

The ADA ramps and 12' sidewalk between Lots 7 & 8 of Block2 are included in this contract. The construction of the remainder of the walks will be deferred to individual property owners as the lots are developed.

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

TYPICAL SECTION

PROJ. NO.	210005456
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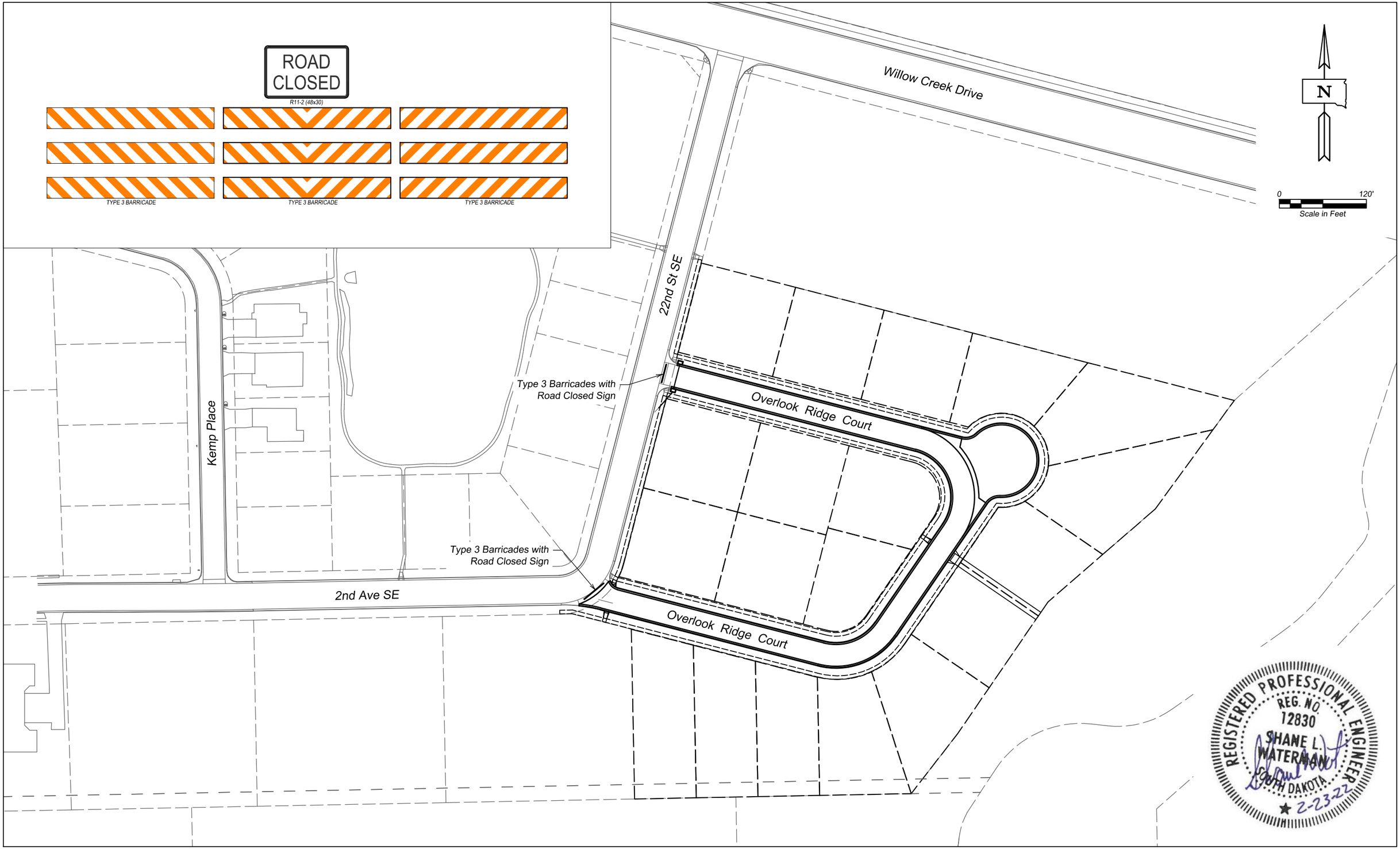
DATE:	FEBRUARY 2022

SHEET **14** OF 39



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OVERLOOK RIDGE COURT STREET PLANS
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WATERTOWN, SOUTH DAKOTA

TRAFFIC CONTROL

PROJ. NO.	210005456
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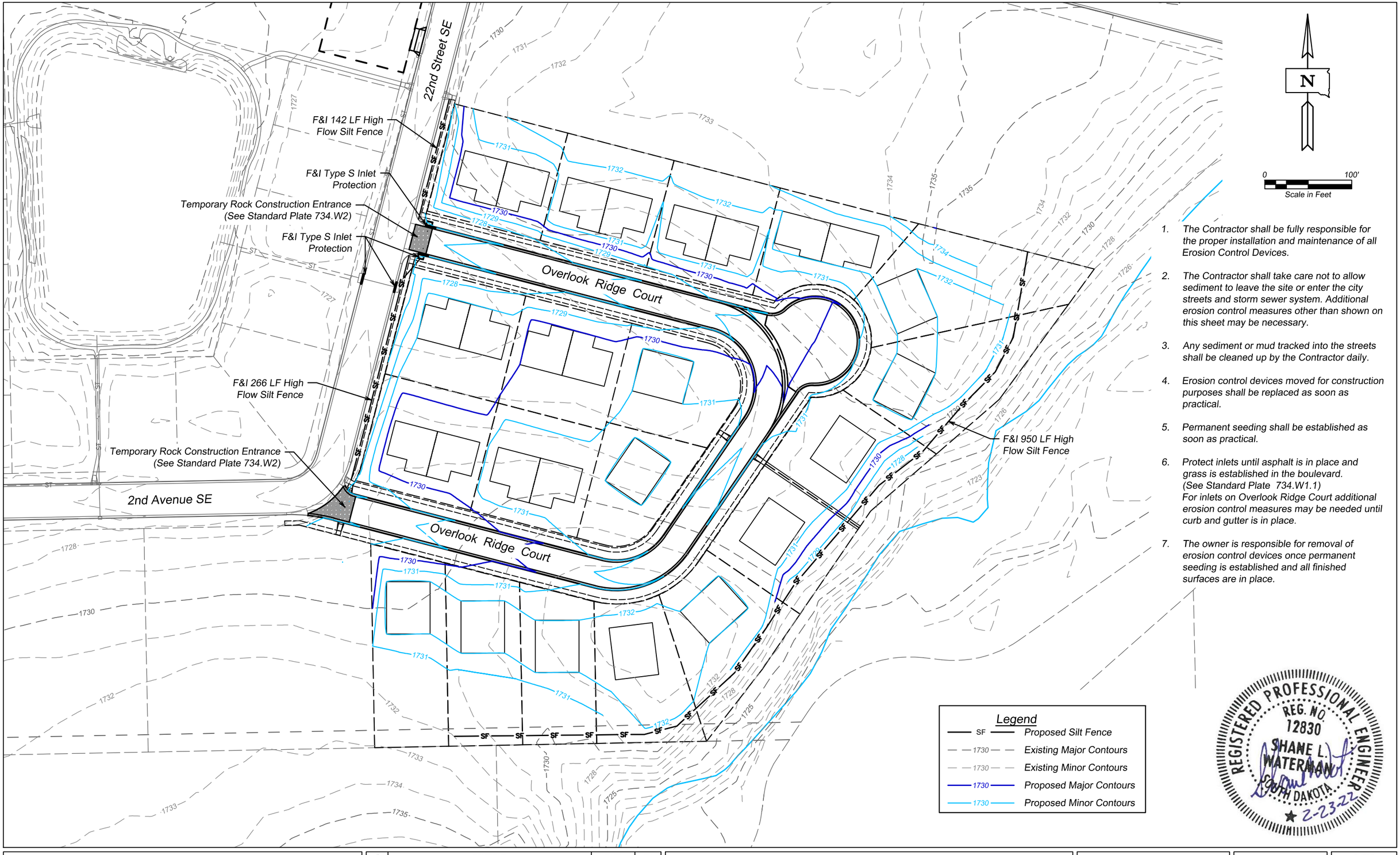
DATE:	FEBRUARY 2022

SHEET
15
OF 39



1. *The Contractor shall be fully responsible for the proper installation and maintenance of all Erosion Control Devices.*
2. *The Contractor shall take care not to allow sediment to leave the site or enter the city streets and storm sewer system. Additional erosion control measures other than shown on this sheet may be necessary.*
3. *Any sediment or mud tracked into the streets shall be cleaned up by the Contractor daily.*
4. *Erosion control devices moved for construction purposes shall be replaced as soon as practical.*
5. *Permanent seeding shall be established as soon as practical.*
6. *Protect inlets until asphalt is in place and grass is established in the boulevard. (See Standard Plate 734.W1.1) For inlets on Overlook Ridge Court additional erosion control measures may be needed until curb and gutter is in place.*
7. *The owner is responsible for removal of erosion control devices once permanent seeding is established and all finished surfaces are in place.*

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#	REVISIONS	DATE	BY
1	SNOW STORAGE AREA RELOCATION	4/5/22	JLW

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

EROSION CONTROL

PROJ. NO.	210005456
DRAWN BY:	JLW
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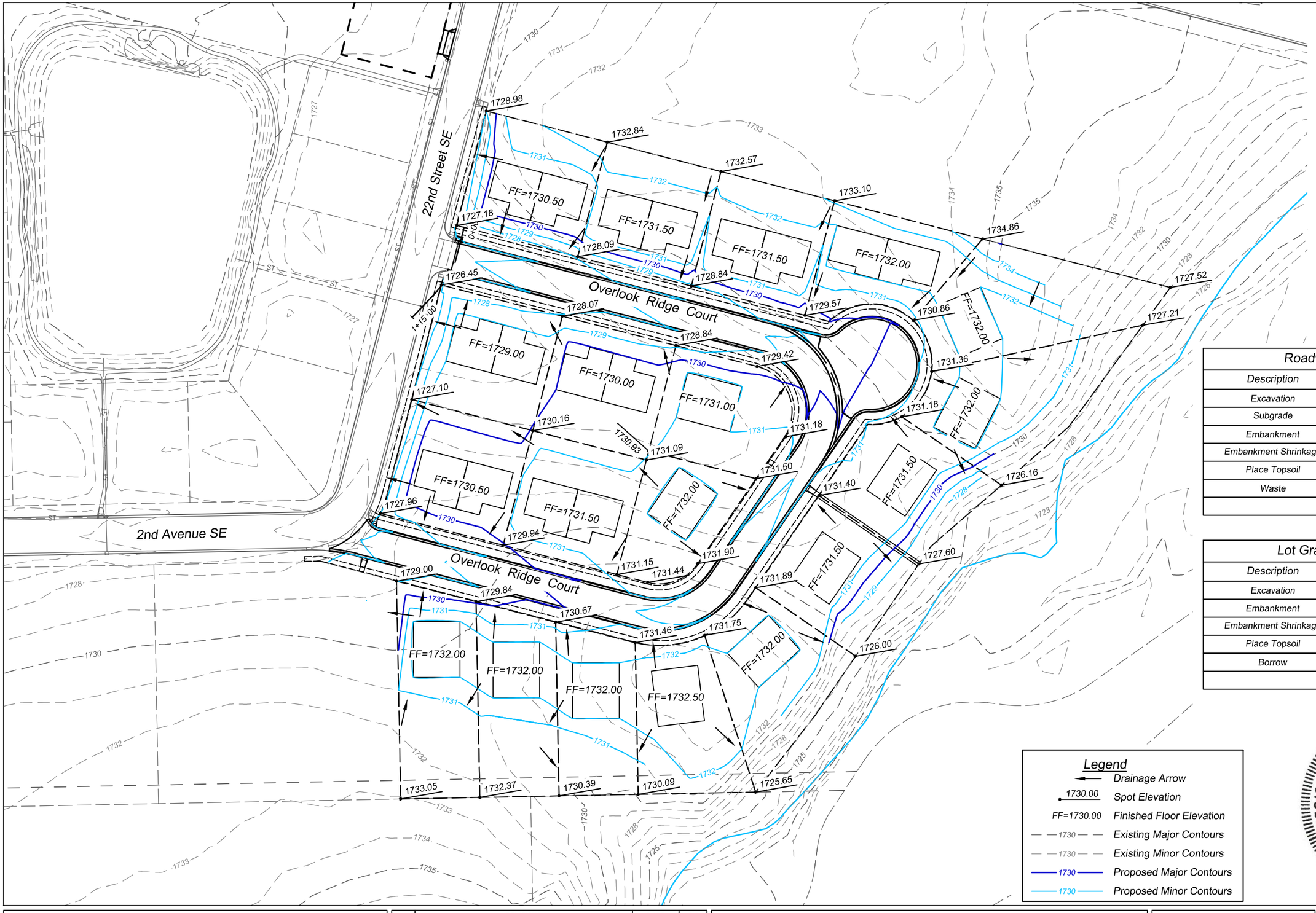
DATE:	FEBRUARY 2022

SHEET 16 OF 39



Roadway Earthwork		
Description	Cut (cu/yd)	Fill (cu/yd)
Excavation	3272	
Subgrade	2503	
Embankment		3624
Embankment Shrinkage		1268
Place Topsoil		660
Waste		223
	5775	5775

Lot Grading Earthwork		
Description	Cut (cu/yd)	Fill (cu/yd)
Excavation	10577	
Embankment		15778
Embankment Shrinkage		5522
Place Topsoil		4982
Borrow	15705	
	26282	26282

Legend

- Drainage Arrow
- 1730.00 Spot Elevation
- FF=1730.00 Finished Floor Elevation
- 1730 Existing Major Contours
- 1730 Existing Minor Contours
- 1730 Proposed Major Contours
- 1730 Proposed Minor Contours

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
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SITE GRADING PLAN

PROJ. NO.	210005456
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SHEET 17 OF 39

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2-23-22

Sta. 0+51.26 - 24.53' Lt
Match Existing Elev.
Tie into Existing C&G
using dowel bars
Begin 15' Rad C&G

Sta. 0+63.86 - 17.67' Lt
End 15' Rad C&G
Begin Str C&G

Sta. 3+57.33 - 17.67' Lt
End Str C&G
Begin 65.33' Rad C&G

Sta. 4+58.79 - 17.67' Lt
End 65.33' Rad C&G
Begin Str C&G

22nd St SE

2nd Ave SE

Overlook Ridge Court

S 75°31'50" E

0+00 1+00 2+00 3+00

FF=1730.50 FF=1731.50

CL Curve Data
PI: 4+08.06
Δ: 70°02'43"
R: 83.00'
L: 101.46'

1730 1731

SW=1727.97 SW=1729.91 SW=1731.11 SW=1731.41

TC=1727.77 TC=1728.36 TC=1731.14 TC=1731.41

Future 5' Sidewalk

-0.96% -0.61% -0.40%

1727.81 1728.26 1731.04 1731.31 1731.41 1731.50 1731.60 1731.75 1731.90

4+00

SW=1731.89 SW=1731.60 SW=1731.88

TC=1731.60

FF=1732.00

SW=1728.99 SW=1729.80 SW=1730.65 SW=1731.45

Future 5' Sidewalk

1730 1731 1732

FF=1732.00 FF=1732.00 FF=1732.00 FF=1732.50

Sta. 0+18.01 - 19.90' Rt
Match Existing Elev
Tie into Existing C&G
using dowel bars
Begin 200' Rad C&G

Sta. 0+47.80 - 17.67' Rt
End 200' Rad C&G
Begin Str C&G

Sta. 3+57.33 - 17.67' Rt
End Str C&G
Begin 100.67' Rad C&G

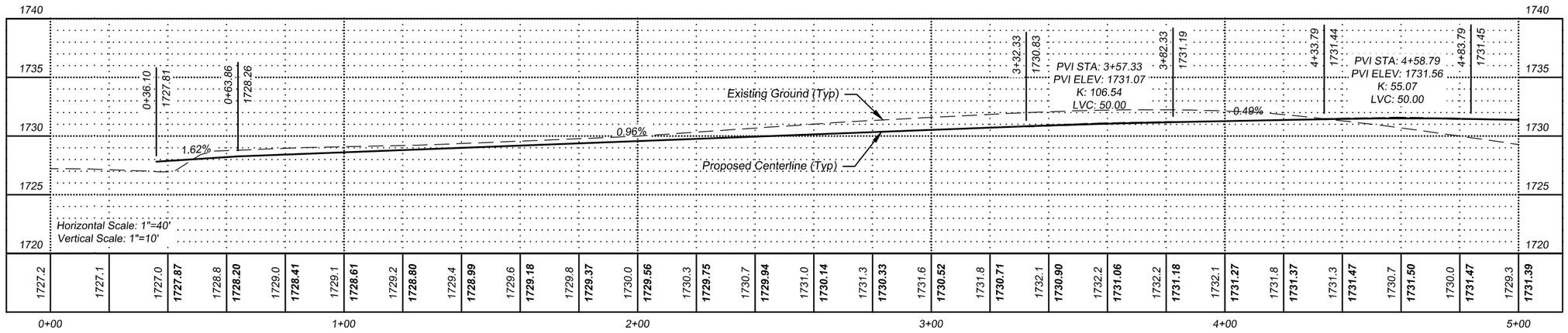
Sta. 4+58.79 - 17.67' Rt
End 100.67' Rad C&G
Begin Str C&G

N

0 40'
Scale in Feet

Legend

←	Drainage Arrow	TC=1730.00	Top of Curb Elevation
1730.00	Spot Elevation	SW=1730.00	Sidewalk Elevation
FF=1730.00	Finished Floor Elevation		



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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

STREET PLAN & PROFILE

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **18** OF 39

Sta. 4+58.79 - 17.67' Lt
End 65.33' Rad C&G
Begin Str C&G

Sta. 6+22.63 - 17.67' Lt
End Str C&G
Begin 65.33' Rad C&G

Sta. 7+81.91 - 17.67' Lt
End 65.33' Rad C&G
Begin Str C&G

Sta. 7+81.91 - 17.67' Rt
Str C&G

Sta. 7+75.20 - 18.00' Rt
End 6' Valley Gutter
101' Rad at CL

Sta. 7+38.61 - 33.12' Rt
End 20.00' Rad C&G
Begin Str C&G

Sta. 7+32.36 - 50.14' Rt
End 51.33' Rad C&G
Begin 20.00' Rad C&G

CL Curve Data
PI: 4+08.06
Δ: 70°02'43"
R: 83.00'
L: 101.46'

CL Curve Data
PI: 7+02.07
Δ: 109°57'17"
R: 83.00'
L: 159.28'

Overlook Ridge Court
N 34°25'27" E
Future 5' Sidewalk
Future 5' Sidewalk

FF=1732.00
FF=1732.50
FF=1731.50

Sta. 4+58.79 - 17.67' Rt
End 100.67' Rad C&G
Begin Str C&G

Sta. 6+29.34 - 18.00' Rt
Begin 6' Valley Gutter
101' Rad at CL

Sta. 6+65.93 - 33.12' Rt
End Str C&G
Begin 20.00' Rad C&G

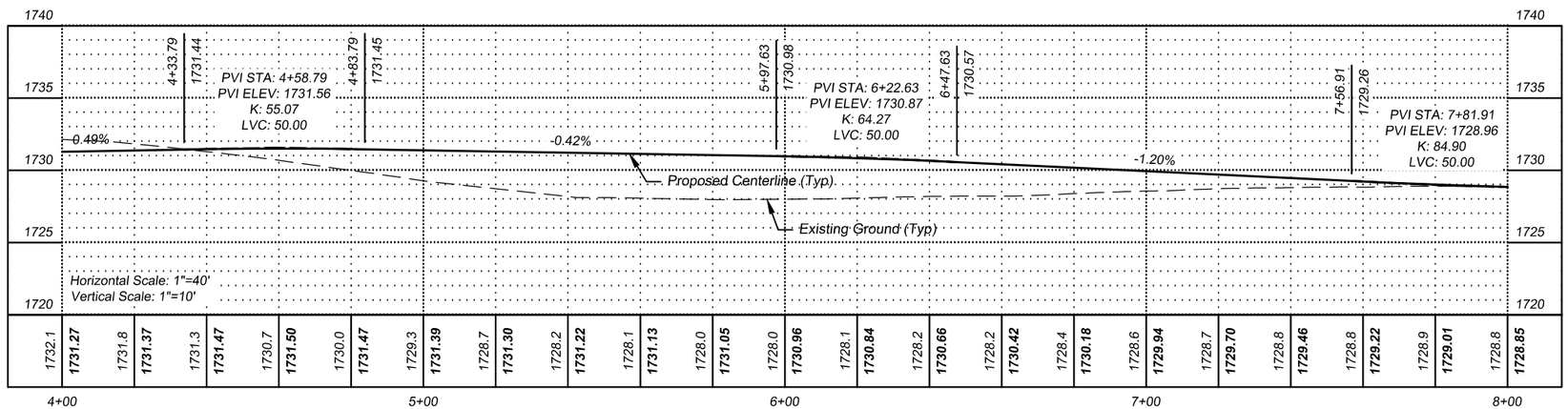
Sta. 6+72.18 - 50.14' Rt
End 20.00' Rad C&G
Begin 51.33' Rad C&G

Sta. 6+92.01 - 108.66' Rt
High Point of Cul-de-sac

0 40'
Scale in Feet

Legend

←	Drainage Arrow
1730.00	Spot Elevation
FF=1730.00	Finished Floor Elevation
TC=1730.00	Top of Curb Elevation
SW=1730.00	Sidewalk Elevation



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2-23-22

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#	REVISIONS	DATE	BY
1	SNOW STORAGE AREA RELOCATION	4/5/22	JLW

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

STREET PLAN & PROFILE

PROJ. NO. 210005456
DRAWN BY: JLW
CHECKED BY: SLW
DATE: FEBRUARY 2022

SHEET 19 OF 39

Sta. 7+81.91 - 17.67' Lt
End 65.33' Rad C&G
Begin Str C&G

Sta. 11+29.31 - 17.67' Lt
End Str C&G
Match Existing Elev.
Tie into Existing C&G
using dowel bars

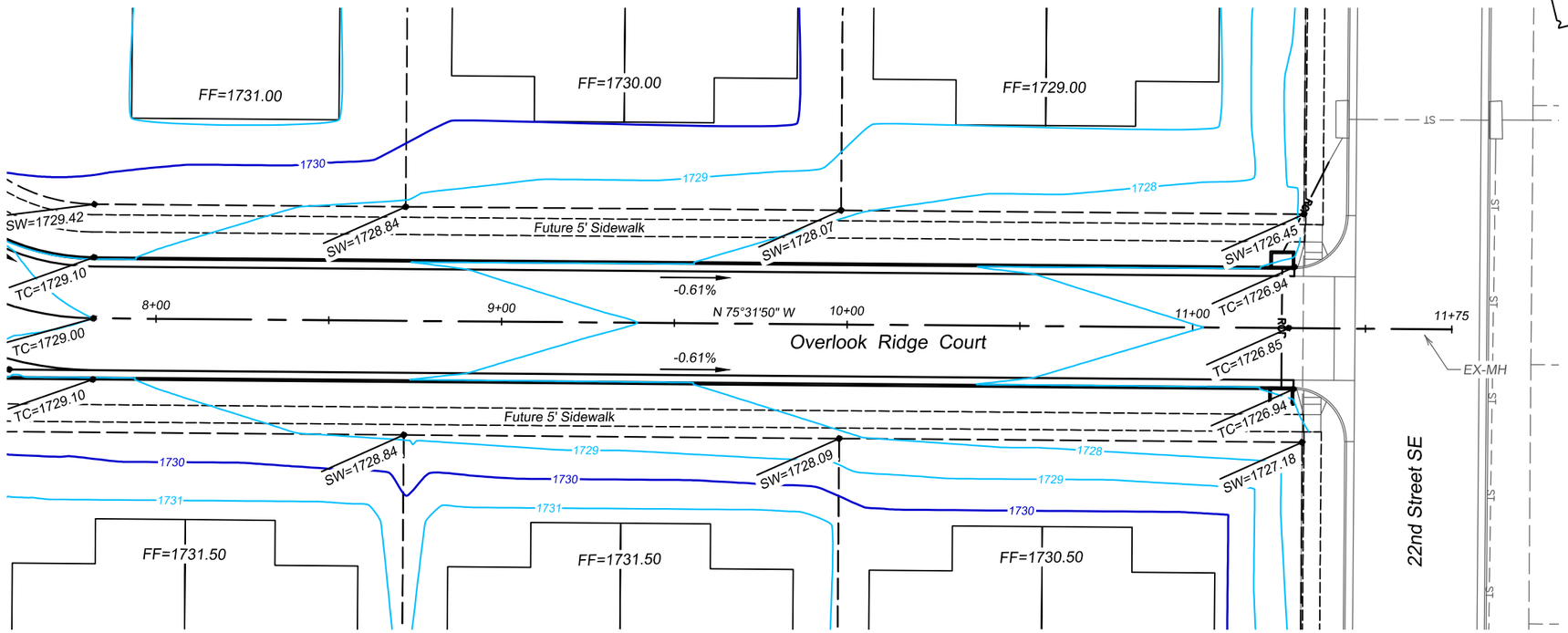
0 40'
Scale in Feet

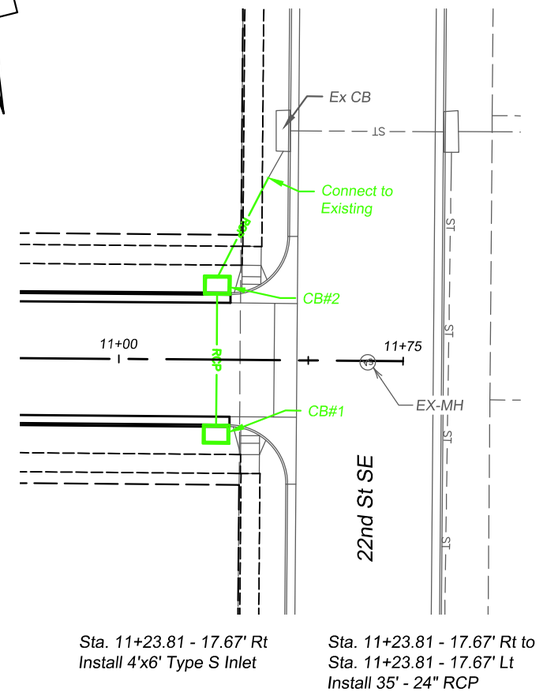
N

Sta. 11+23.81 - 19.17' Lt
Install 4'x6' Type S Inlet

Sta. 11+23.81 - 20.67' Lt to
Sta. 11+39.05 - 48.13'Lt
Install 32' - 24" RCP

Sta. 11+39.05 - 20.67' Lt
Connect to Existing 24" RCP





Sta. 11+23.81 - 17.67' Rt
Install 4'x6' Type S Inlet

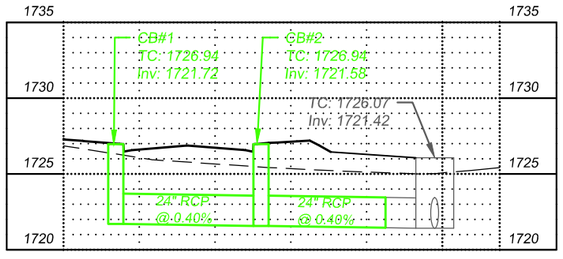
Sta. 11+23.81 - 17.67' Rt to
Sta. 11+23.81 - 17.67' Lt
Install 35' - 24" RCP

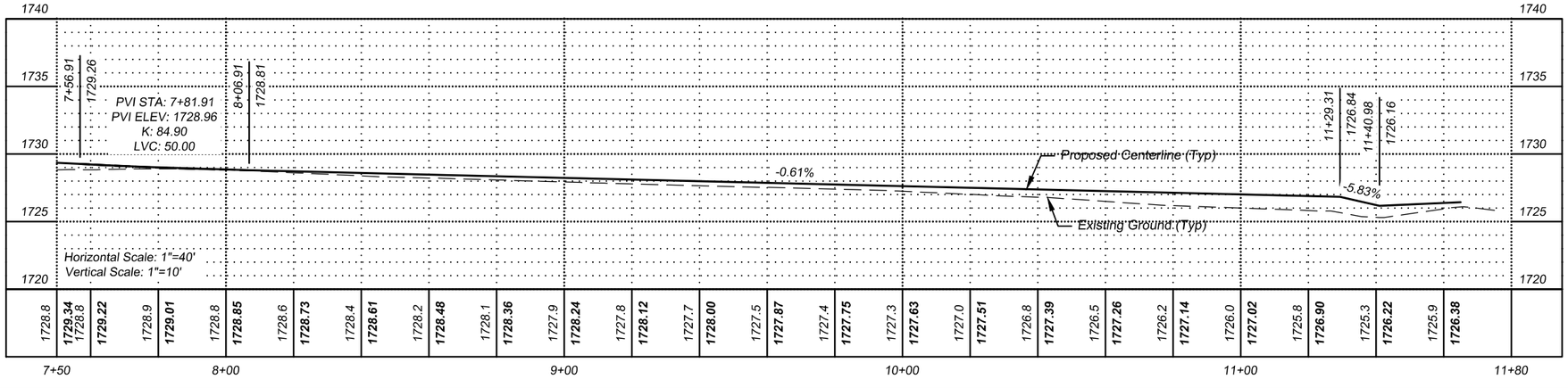
Sta. 7+81.91 - 17.67' Rt
Str C&G

Legend

←	Drainage Arrow	TC=1730.00	Top of Curb Elevation
1730.00	Spot Elevation	SW=1730.00	Sidewalk Elevation
FF=1730.00	Finished Floor Elevation		

Sta. 11+29.31 - 17.67' Rt
End Str C&G
Match Existing Elev.
Tie into Existing C&G
using dowel bars





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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

STREET PLAN & PROFILE

PROJ. NO.	210005456
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SHEET **20** OF 39

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
2-23-22

1 Sta. 0+54.38 - 21.04' Lt
Begin Ramp Slope
TC=1727.96 (Theor)

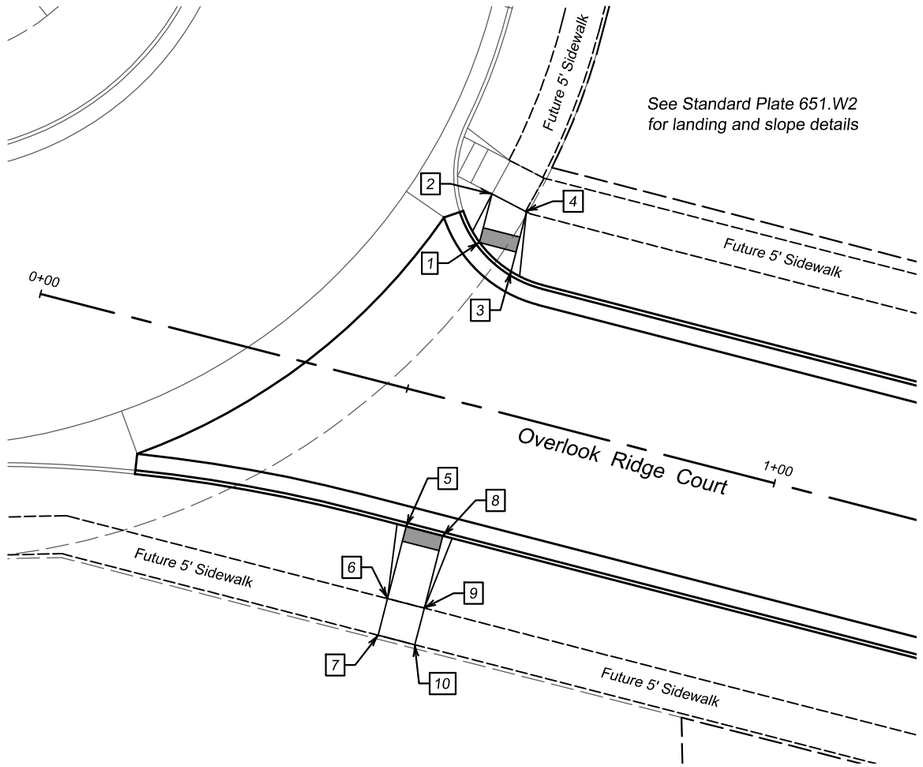
2 Sta. 0+54.38 - 27.66' Lt
End Ramp Slope
SW=1727.65 (Match Ex)

3 Sta. 0+59.38 - 18.35' Lt
Begin Ramp Slope
TC=1728.18 (Theor)

4 Sta. 0+59.38 - 26.54' Lt
End Ramp Slope
SW=1727.75 (Match Ex)

N

0 20'
Scale in Feet



See Standard Plate 651.W2
for landing and slope details

5 Sta. 0+54.38 - 17.67' Rt
Begin Ramp Slope
TC=1728.24 (Theor)

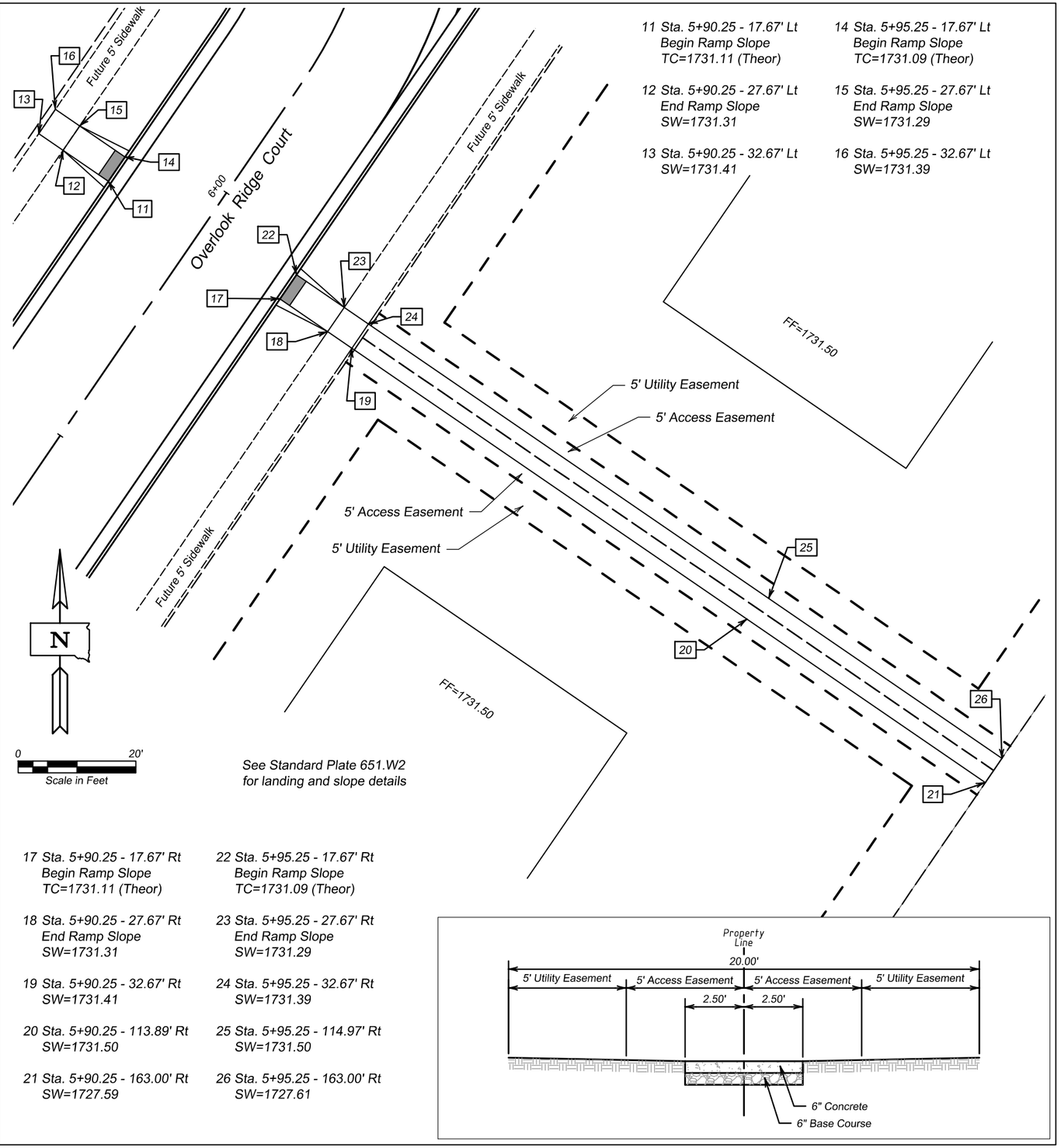
6 Sta. 0+54.38 - 27.67' Rt
End Ramp Slope
SW=1728.44

7 Sta. 0+54.38 - 32.67' Rt
SW=1728.54

8 Sta. 0+59.38 - 17.67' Rt
Begin Ramp Slope
TC=1728.30 (Theor)

9 Sta. 0+59.38 - 27.67' Rt
End Ramp Slope
SW=1728.50

10 Sta. 0+59.38 - 32.67' Rt
SW=1728.60



11 Sta. 5+90.25 - 17.67' Lt
Begin Ramp Slope
TC=1731.11 (Theor)

12 Sta. 5+90.25 - 27.67' Lt
End Ramp Slope
SW=1731.31

13 Sta. 5+90.25 - 32.67' Lt
SW=1731.41

14 Sta. 5+95.25 - 17.67' Lt
Begin Ramp Slope
TC=1731.09 (Theor)

15 Sta. 5+95.25 - 27.67' Lt
End Ramp Slope
SW=1731.29

16 Sta. 5+95.25 - 32.67' Lt
SW=1731.39

N

0 20'
Scale in Feet

See Standard Plate 651.W2
for landing and slope details

17 Sta. 5+90.25 - 17.67' Rt
Begin Ramp Slope
TC=1731.11 (Theor)

18 Sta. 5+90.25 - 27.67' Rt
End Ramp Slope
SW=1731.31

19 Sta. 5+90.25 - 32.67' Rt
SW=1731.41

20 Sta. 5+90.25 - 113.89' Rt
SW=1731.50

21 Sta. 5+90.25 - 163.00' Rt
SW=1727.59

22 Sta. 5+95.25 - 17.67' Rt
Begin Ramp Slope
TC=1731.09 (Theor)

23 Sta. 5+95.25 - 27.67' Rt
End Ramp Slope
SW=1731.29

24 Sta. 5+95.25 - 32.67' Rt
SW=1731.39

25 Sta. 5+95.25 - 114.97' Rt
SW=1731.50

26 Sta. 5+95.25 - 163.00' Rt
SW=1727.61

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

CURB RAMP LAYOUT

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET 21 OF 39

Sta. 0+61.87 - 5.40' Lt
Remove Existing Cap
Connect to Existing
8" PVC Sanitary Sewer

F&I 8"x4" Service Wye &
4" Sewer Service
Sta. 1+20 - 5.4' Lt to 33' Lt
Sta. 1+40 - 5.4' Lt to 33' Lt

F&I 1" Water Service
Sta. 1+25 - 4.6' Rt to 33' Lt
Sta. 1+35 - 4.6' Rt to 33' Lt

Sta. 0+61.87 - 5.40' Lt to
Sta. 3+59.70 - 5.40' Lt
F&I 298 LF 8" PVC Sanitary Sewer

F&I 8"x4" Service Wye &
4" Sewer Service
Sta. 2+50 - 5.4' Lt to 33' Lt
Sta. 2+70 - 5.4' Lt to 33' Lt

F&I 1" Water Service
Sta. 2+55 - 4.6' Rt to 33' Lt
Sta. 2+65 - 4.6' Rt to 33' Lt

Target depth of water service lines at ROW is 6.5'

Target depth of sewer service lines at ROW is 8.0'

18" minimum cover to be maintained between service lines

22nd Street SE

2nd Avenue SE

Ex-MH

Connect to Existing

Connect to Existing

Overlook Ridge Court

Future 5' Sidewalk

Future 5' Sidewalk

0+00

1+00

2+00

3+00

4+00

MH-3

MH-4

22.5° Bend

45° Bend

0 40'
Scale in Feet

N

Sta. 4+42.32 - 6.78' Rt
F&I 22.5° Bend

Sta. 4+12.91 - 4.93' Rt to
Sta. 4+42.32 - 6.78' Rt
F&I 32 LF 6" Water Main

Sta. 4+12.91 - 4.93' Rt
F&I 6"x6"x6" Tee

Sta. 4+12.91 - 4.93' Rt to
Sta. 4+14.30 - 19.67' Rt
F&I 15 LF 6" Water Main

Sta. 4+14.30 - 19.67' Rt
F&I Fire Hydrant with
Gate Valve and Box

F&I 1" Water Service
Sta. 1+40 - 4.6' Rt to 33' Rt

F&I 8"x4" Service Wye &
4" Sewer Service
Sta. 1+45 - 5.4' Lt to 33' Rt

F&I 1" Water Service
Sta. 2+25 - 4.6' Rt to 33' Rt

F&I 8"x4" Service Wye &
4" Sewer Service
Sta. 2+30 - 5.4' Lt to 33' Rt

F&I 1" Water Service
Sta. 3+15 - 4.6' Rt to 33' Rt

F&I 8"x4" Service Wye &
4" Sewer Service
Sta. 3+20 - 5.4' Lt to 33' Rt

F&I 1" Water Service
Sta. 3+66.5 - 5.1' Rt to Sta. 3+81.5 - 33' Rt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 3+50 - 5.4' Lt to Sta. 3+77.4 - 33' Rt

Sta. 0+61.87 - 4.60' Rt
Remove Existing Cap
Connect to Existing
6" PVC Water Main

Sta. 0+61.87 - 4.60' Rt to
Sta. 3+89.39 - 11.57' Rt
F&I 332 LF 6" PVC Water Main

Sta. 3+89.39 - 11.57' Rt
F&I 22.5° Bend

Sta. 3+89.39 - 11.57' Rt tp
Sta. 4+12.91 - 4.93' Rt
F&I 26 LF 6" PVC Water Main

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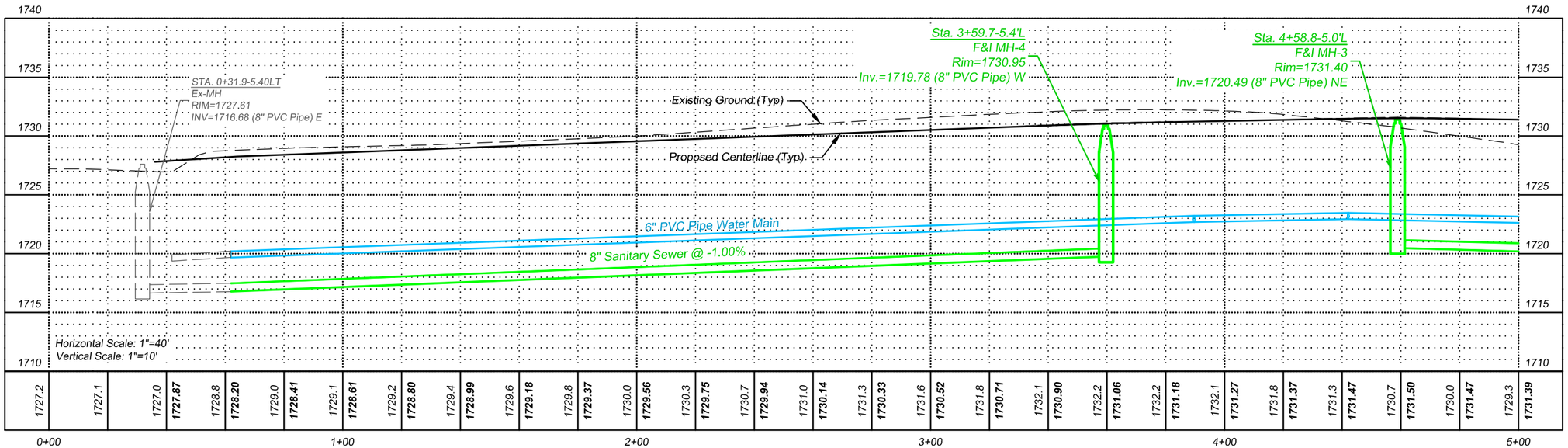

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#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

UTILITY PLAN & PROFILE

PROJ. NO.	210005456
DRAWN BY:	JLW
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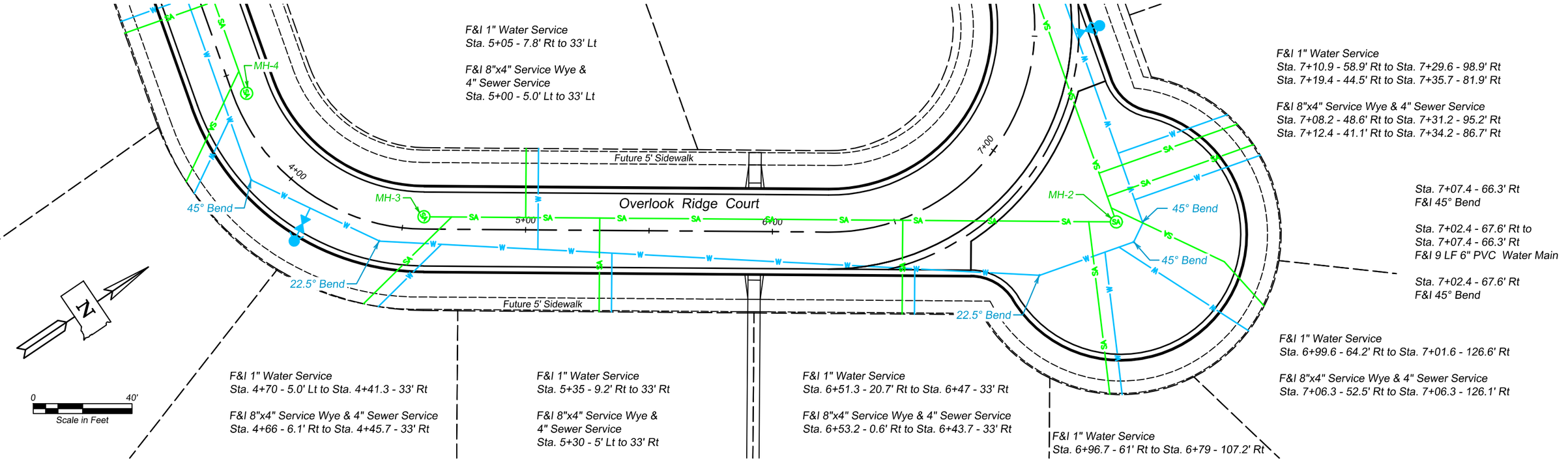
DATE:	FEBRUARY 2022

SHEET **22** OF 39

Sta. 4+58.8 - 5' Lt to Sta. 7+04.1 - 57.3' Rt
F&I 281 LF 8" PVC Sanitary Sewer



Target depth of water service lines at ROW is 6.5'

Target depth of sewer service lines at ROW is 8.0'

18" minimum cover to be maintained between service lines

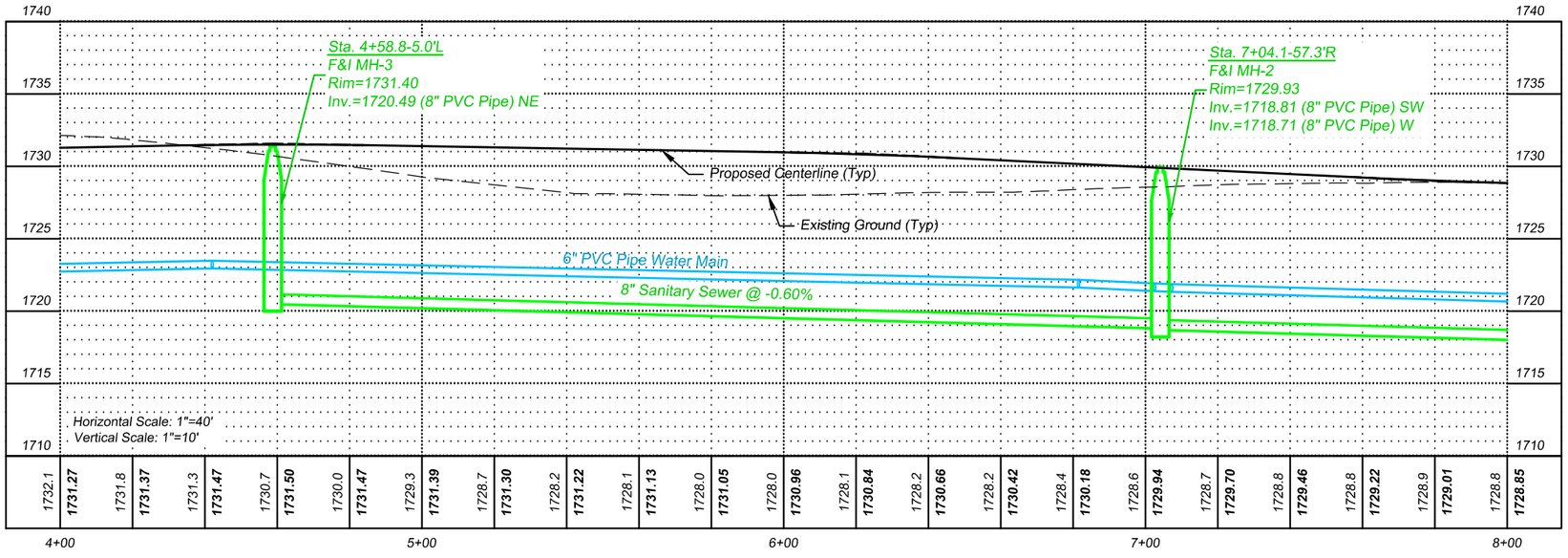
Sta. 4+42.3 - 6.8' Rt
F&I 22.5° Bend

Sta. 4+42.3 - 6.8' Rt to Sta. 6+81.4 - 48.4' Rt
F&I 268 LF 6" PVC Water Main

Sta. 6+81.4 - 48.4' Rt
F&I 22.5° Bend

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 7+00.2 - 48.2' Rt to Sta. 6+72.3 - 104' Rt

Sta. 6+81.4 - 48.4' Rt to Sta. 7+02.4 - 67.5' Rt
F&I 41 LF 6" PVC Water Main



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1	SNOW STORAGE AREA RELOCATION	4/5/22	JLW

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

UTILITY PLAN & PROFILE

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DATE:	FEBRUARY 2022

SHEET
23
OF 39

Target depth of water service lines at ROW is 6.5'

Target depth of sewer service lines at ROW is 8.0'

18" minimum cover to be maintained between service lines

Sta. 7+04.1 - 57.3' Rt to Sta. 8+97.7 - 0' Rt
F&I 229 LF 8" PVC Sanitary Sewer

Sta. 8+97.7 - 0' Rt to Sta. 11+13.8 - 0.8' Rt
F&I 216 LF 8" PVC Sanitary Sewer

Sta. 11+13.8 - 0.8' Rt
Remove Existing Cap
Connect to Existing
8" PVC Sanitary Sewer

F&I 1" Water Service
Sta. 8+24 - 10.1' Rt to 33' Lt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 8+29 - 0' Lt to 33' Lt

F&I 1" Water Service
Sta. 9+20 - 10.2' Rt to 33' Lt
Sta. 9+50 - 10.2' Rt to 33' Lt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 9+25 - 0' Lt to 33' Lt
Sta. 9+45 - 0.1' Lt to 33' Lt

F&I 1" Water Service
Sta. 10+50 - 10.3' Rt to 33' Lt
Sta. 10+80 - 10.4' Rt to 33' Lt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 10+55 - 0.3' Rt to 33' Lt
Sta. 10+75 - 0.4' Rt to 33' Lt

22.5° Bend
45° Bend
45° Bend
MH-2
MH-1
7+00
8+00
9+00
10+00
11+00
11+75
Connect to Existing
Future 5' Sidewalk
Overlook Ridge Court
Future 5' Sidewalk
Connect to Existing
EX-MH
22nd Street SE

F&I 1" Water Service
Sta. 7+99 - 10.1' Rt to 33' Rt
Sta. 8+19 - 10.1' Rt to 33' Rt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 8+04 - 0' Rt to 33' Rt
Sta. 8+14 - 0' Rt to 33' Rt

F&I 1" Water Service
Sta. 9+25 - 10.2' Rt to 33' Rt
Sta. 9+45 - 10.2' Rt to 33' Rt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 9+30 - 0' Rt to 33' Rt
Sta. 9+40 - 0' Rt to 33' Rt

F&I 1" Water Service
Sta. 10+55 - 10.3' Rt to 33' Rt
Sta. 10+75 - 10.4' Rt to 33' Rt

F&I 8"x4" Service Wye & 4" Sewer Service
Sta. 10+60 - 0.3' Rt to 33' Rt
Sta. 10+65 - 0.4' Rt to 33' Rt

Sta. 7+07.4 - 66.3' Rt
F&I 45° Bend

Sta. 7+07.4 - 66.3' Rt to
Sta. 7+51.3 - 16.8' Rt
F&I 81 LF 6" PVC Water Main

Sta. 7+51.3 - 16.8' Rt
F&I 6"x6"x6" Tee

Sta. 7+51.3 - 16.8' Rt to
Sta. 7+54.1 - 26.3' Rt
F&I 10 LF 6" PVC Water Main

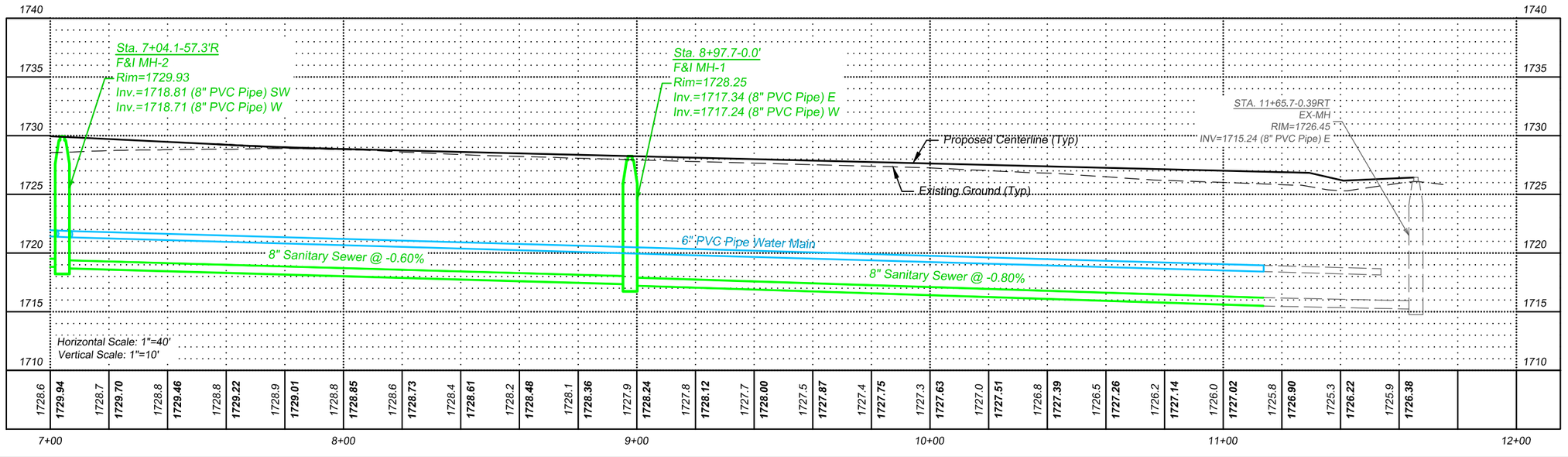
Sta. 7+54.1 - 26.3' Rt
F&I Fire Hydrant

Sta. 7+51.3 - 16.8' Rt to Sta. 11+13.8 - 10.4' Rt
F&I 368 LF 6" PVC Water Main

Sta. 11+13.8 - 10.4' Rt
Remove Existing Cap
Connect to Existing
6" PVC Water Main

0 40'
Scale in Feet

N



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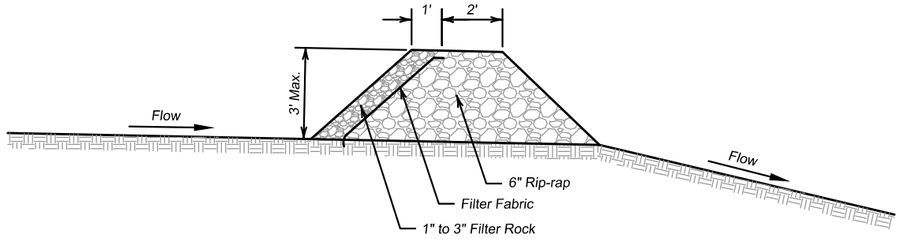
OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

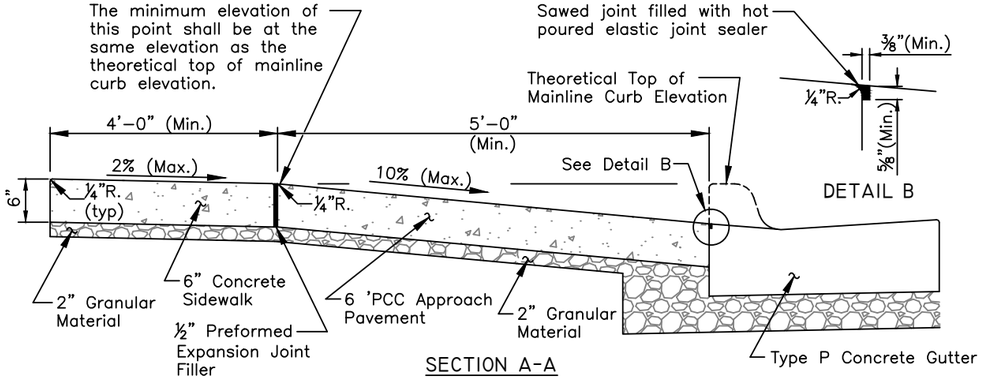
UTILITY PLAN & PROFILE

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **24** OF 39

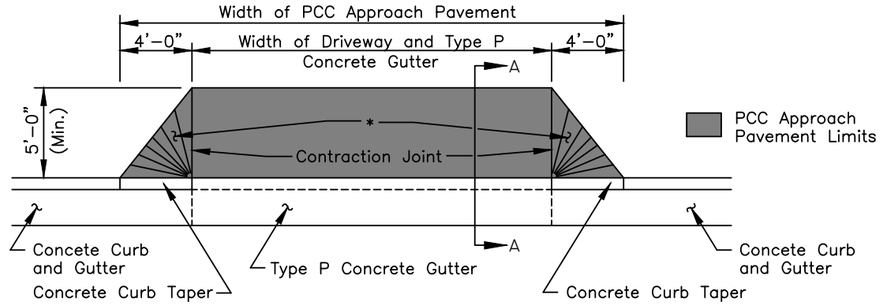


SEDIMENT BASIN FILTER
TYPICAL SECTION



SECTION A-A

* Within these areas, the surface of the PCC approach pavement shall be sloped transistionally as approved by the Engineer.



PLAN VIEW

GENERAL NOTES:

The concrete for the PCC approach pavement and adjacent driveway shall comply with the requirements of the Standard Specificaitons for class M6 concrete unless otherwise stated in the plans.

Contraction joints in the PCC approach pavement shall be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be as least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View shall be spaced as follows:

One joint at the center of the approach for driveways 16' to 24' wide.
Two joints spaced at equal intervals for driveways greater than 24' to 40' wide.

All costs for furnishing and placing the PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, and materials including the earthen backfill shall be incidental to the contract unit price per square yard for the corresponding PCC approach Pavement bid item.

All costs for excavation required for placing the PCC approach pavement and granular material shall be incidental to the contract unit price per cubic yard for "Unclassified Excavation". All costs for furnishing and placing the granular material shall be incidental to the contract unit price per ton for the corresponding granular material bid item.

May 17, 2011

SPECIFICATION REFERENCE NO. 380	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT PCC APPROACH PAVEMENT	PLATE NUMBER 380.WI

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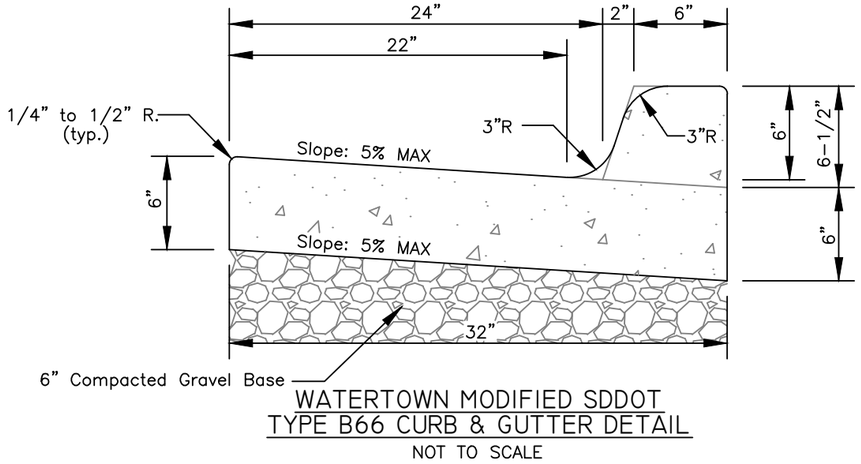
OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

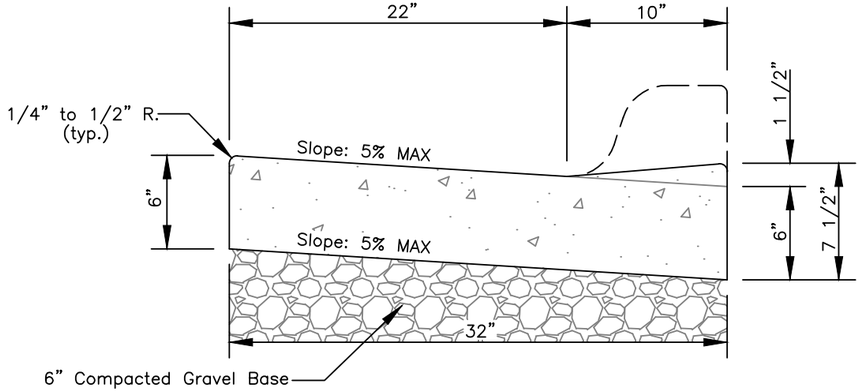
STANDARD PLATES

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET 25 OF 39



WATERTOWN MODIFIED SDDOT
TYPE B66 CURB & GUTTER DETAIL
NOT TO SCALE



WATERTOWN MODIFIED SDDOT
TYPE P6 GUTTER DETAIL
NOT TO SCALE

General Notes:

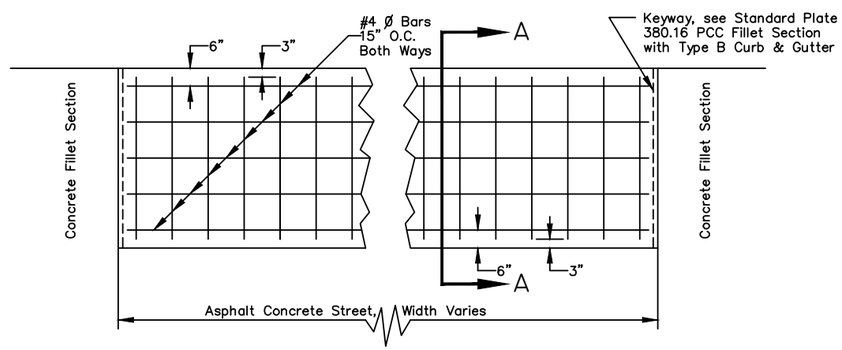
1/2" preformed expansion joint filler shall be placed transversally in the Type–B curb & gutter (or Type–P gutter) as follows:

- At each junction of radius return curb & gutter with curb & gutter which is parallel to the project centerline.
- At each junction with existing concrete curb & gutter or existing curb & gutter.
- At each junction with existing or proposed sidewalk. The expansion joint filler shall be placed longitudinally along the back face of the curb to the depth of the sidewalk.
- At each junction with existing or proposed concrete approach pavement. The expansion joint filler shall be placed longitudinally along the back face of the curb to the depth of the concrete approach pavement.

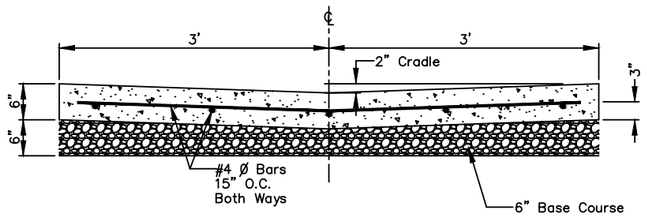
Weakened plane joints shall be constructed at intervals of 10 feet. The joints shall be constructed to a minimum depth of one inch by scaring with a tool which will leave the corners rounded and insure the free movement of the joint.

April 4, 2010

SPECIFICATION REFERENCE NO. 650	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT WATERTOWN MODIFIED SDDOT B66 C&G AND P6 GUTTER	PLATE NUMBER 650.W1



TYPICAL REINFORCED
CONCRETE DRAINWAY
NOT TO SCALE



SECTION A-A
NOT TO SCALE

GENERAL NOTES:

CLASS M6 CONCRETE SHALL BE USED IN CONSTRUCTION OF THE VALLEY GUTTERS.

ALL REBAR SHALL BE TIED TOGETHER WITH STANDARD REBAR TIES.

ALL REBAR SHALL CONFORM TO A.S.T.M. A615 GRADE 60 AND HAVE A MINIMUM OF 3" CLEAR COVER.

May 19, 2011

SPECIFICATION REFERENCE NO. 650	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT CONCRETE VALLEY GUTTER	PLATE NUMBER 650.W3

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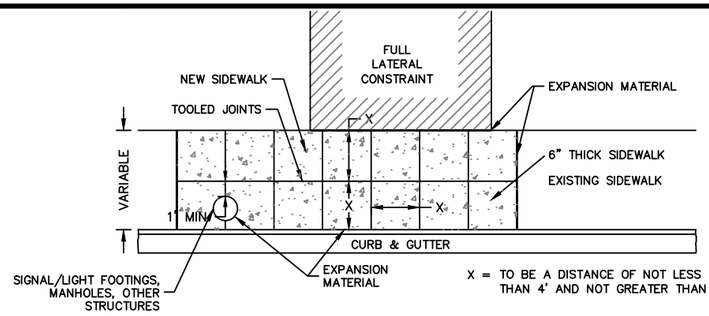
#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

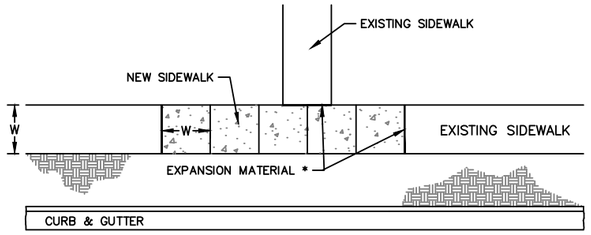
STANDARD PLATES

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **26** OF 39



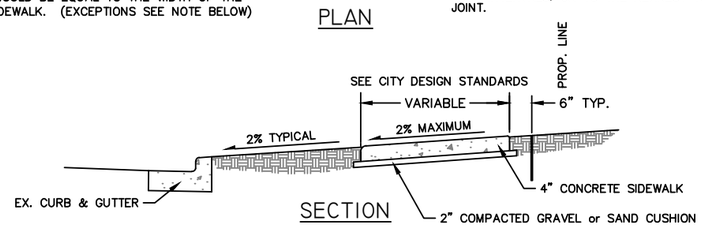
X = TO BE A DISTANCE OF NOT LESS THAN 4' AND NOT GREATER THAN 8'



W = THE WIDTH OF THE SIDEWALK JOINT SPACING SHOULD BE EQUAL TO THE WIDTH OF THE SIDEWALK. (EXCEPTIONS SEE NOTE BELOW)

EXPANSION JOINTS SHALL BE PLACED AT 50 FOOT INTERVALS, OR TO THE NEAREST TOOLED JOINT.

PLAN



SECTION

NOTES:

LOCATION OF SIDEWALK FROM CURB LINE WILL VARY, HOWEVER, IN MOST INSTANCES THE SIDEWALK WILL BE LOCATED 4" OFF THE PROPERTY LINE. VERIFY SIDEWALK LOCATIONS WITH THE CITY ENGINEERS OFFICE BEFORE PROCEEDING.

ALL SIDEWALKS SHALL HAVE A 4' MINIMUM WIDE PATH WHICH WILL SERVE AS THE PEDESTRIAN ACCESS ROUTE. THIS PEDESTRIAN ACCESS ROUTE SHALL BE CLEAR OF ALL OBSTRUCTIONS SUCH AS LIGHT POLES, SIGNAL POLES, METER POSTS, ETC. ADDITIONALLY, THE MAXIMUM CROSS SLOPE ON THE PEDESTRIAN ACCESS ROUTE IS 2%. POSITIVE DRAINAGE MUST BE MAINTAINED ON ALL SIDEWALKS.

SIDEWALK PLACED DIRECTLY BEHIND THE CURB AND GUTTER SHALL BE A MINIMUM OF 6" IN DEPTH.

ISOLATION JOINTS SHALL EITHER INTERSECT STRUCTURES OR BE A MINIMUM ONE FOOT CLEAR OF STRUCTURE.

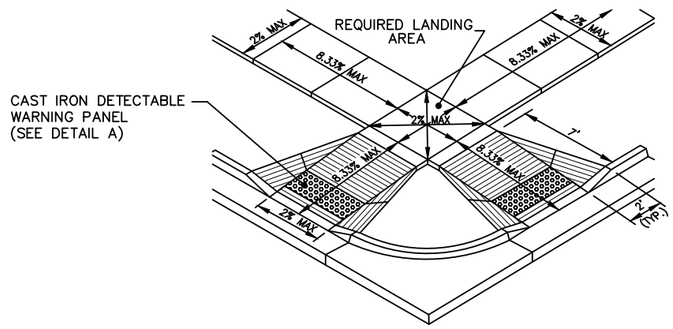
CONTRACTION JOINTS SHALL BE FORMED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK. WHEN THE DISTANCE DOES NOT WORK OUT TO AN EVEN NUMBER OF SPACES, THE DISTANCE BETWEEN JOINTS SHOULD BE ADJUSTED SO THAT ALL THE JOINTS LOOK UNIFORM.

THE SUBGRADE ON WHICH THE CONCRETE IS TO BE LAID SHALL BE COMPACTED AND OF THE PROPER DEPTH TO OBTAIN THE DESIRED THICKNESS. THE GRADE SHALL BE FREE OF VEGETATION, BRICK, ASPHALT, BROKEN CONCRETE, AND ANY OTHER ITEM THAT MAY BE DETRIMENTAL TO THE NEW CONCRETE.

January 26, 2011

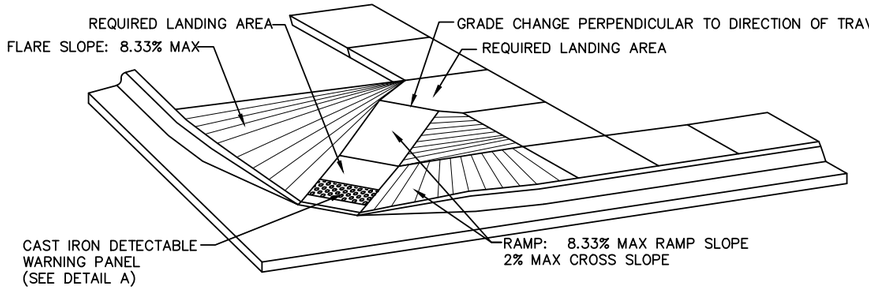
SPECIFICATION REFERENCE NO. 651	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT SIDEWALK LAYOUT DETAILS	PLATE NUMBER 651.W1

THE FOLLOWING PERSPECTIVE VIEWS ARE ILLUSTRATIONS OF DIFFERENT TYPES OF INSTALLATIONS INCORPORATING THE MANDATORY REQUIREMENTS.



* 2% = 1/4" per Foot
* 8.33% = 1" per Foot
* These Slopes are MAXIMUM and can be Less.

PERSPECTIVE VIEW - BOULEVARD SIDEWALK RAMP



PERSPECTIVE VIEW - BOULEVARD AND CURBSIDE COMBO SIDEWALK RAMP

February 25, 2016
March 4, 2015
February 24, 2012

SPECIFICATION REFERENCE NO. 651	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT SIDEWALK RAMPS AND DETECTABLE WARNING PANELS	PLATE NUMBER 651.W2 Sheet 1 of 3

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#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

STANDARD PLATES

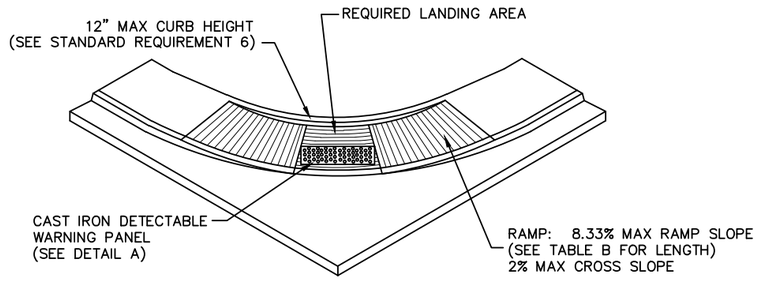
PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET 27 OF 39

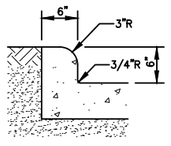
TABLE B

FOR CURBSIDE SIDEWALK ONLY

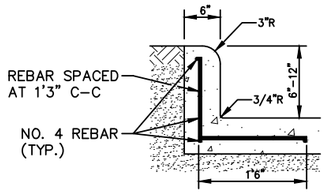
	RAMP LENGTH 8.33% MAX SLOPE	
STREET GRADE	LOW SIDE	HIGH SIDE
1%	6'-0"	7'-2"
2%	6'-0"	8'-4"
3%	6'-0"	10'-0"
4%	6'-0"	12'-6"
5% +	6'-0"	15'-0"



PERSPECTIVE VIEW - CURBSIDE SIDEWALK RAMP



6" CURB DETAIL



6"-12" CURB DETAIL

CURB DETAIL NOTES:

1) SIDEWALK SHALL BE A MINIMUM OF 4" THICK WHEN CURB HEIGHT IS LESS THAN 6".
2) SIDEWALK SHALL BE A MINIMUM OF 6" THICK WHEN CURB HEIGHT IS GREATER THAN 6".
3) ALL REINFORCING STEEL SHALL HAVE A MINIMUM OF 2" CLEAR COVER.
4) THE REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
5) ALL COSTS INCURRED FOR FURNISHING & INSTALLING THE REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE BID FOR THE CORRESPONDING CONCRETE SIDEWALK BID ITEM; NO SEPARATE PAYMENT WILL BE MADE.

February 25, 2016
March 4, 2015
February 24, 2012

SPECIFICATION REFERENCE NO. 651	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT SIDEWALK RAMPS AND DETECTABLE WARNING PANELS	PLATE NUMBER 651.W2 Sheet 2 of 3

STANDARD REQUIREMENTS

1) ALL RAMPS ARE REQUIRED TO HAVE A LANDING AREA WITH NO MORE THAN A 2% SLOPE IN ANY DIRECTION. THE LANDING AREA SHALL BE A MINIMUM OF 4' BY 4'. TYPICALLY, THE LANDING AREA SHALL BE LOCATED WHERE A PEDESTRIAN MAKES A TURNING MOVEMENT TO LINE UP WITH THE CURB OPENING. FOR EXAMPLE, THE LANDING AREA SHALL BE LOCATED WHERE 2 BOULEVARD SIDEWALKS JOIN AND CONNECT TO THE RAMP. THE LANDING AREA ON A CURB SIDE SIDEWALK SHALL BE LOCATED AT THE CURB OPENING. IT MAY BE NECESSARY TO HAVE MULTIPLE LANDING AREAS WHEN COMBINING BOULEVARD AND CURBSIDE SIDEWALKS. GRADE CHANGES FROM THE CONNECTING SIDEWALK OR RAMP TO THE LANDING AREA MUST BE PERPENDICULAR TO THE DIRECTION OF TRAVEL.

2) ALL RAMPS HAVE A MAXIMUM RUNNING SLOPE OF 8.33% (1" PER FOOT) WITH THE FOLLOWING EXCEPTION: ON BACK OF CURB SIDEWALKS, THE CURB RAMP LENGTH MAY NEED TO BE EXTENDED ACCORDING TO TABLE B TO ACHIEVE THE MAXIMUM SLOPE OF 8.33% THE CURB RAMP LENGTH WILL BE LIMITED TO A MAXIMUM LENGTH OF 15'.

3) ALL SIDEWALKS AND RAMPS HAVE A MAXIMUM CROSS SLOPE OF 2% (1/4" PER FOOT).

4) INSTALL CAST IRON DETECTABLE WARNING PANELS IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS. THE CITY ENGINEER'S OFFICE HAS AN APPROVED LIST OF MANUFACTURES ON FILE. SEE DETAIL A AND TABLE A FOR DETECTABLE WARNING PANEL SIZE AND LOCATION. DETECTABLE WARNING PANELS SHALL BE NATURAL OR BRICK RED COLOR EXCEPT IN LOCATIONS WHERE THE ADJOINING CONCRETE SIDEWALK IS RED OR DARK IN COLOR. AT THESE LOCATIONS THE DETECTABLE WARNING PANEL SHALL BE A CONTRASTING COLOR APPROVED BY THE CITY ENGINEER. THE SIDEWALK DEPTH SHALL BE A MINIMUM OF 6" FOR A 2' AREA ADJACENT TO THE DETECTABLE WARNING PANEL.

5) OBSTRUCTIONS SUCH AS SIGNAL POLES, LIGHT POLES, TRAFFIC CONTROLLER CABINETS, ETC. CAN NOT BE LOCATED IN THE LANDING AREA OR THE RAMP SLOPE. ALL SIDEWALKS SHALL HAVE A 4' MINIMUM WIDTH FREE OF OBSTRUCTIONS TO ACCOMMODATE PEDESTRIAN TRAVEL.

6) DEPENDING ON ADJOINING GRADES AND EXISTING CONDITIONS A CURB WITH A MAXIMUM HEIGHT OF 12" MAY NEED TO BE INSTALLED ON THE BACK OF THE LANDING AREA AND CONNECTING SIDEWALK. THIS CURB MAY ALSO NEED TO BE INSTALLED TO ENSURE STREET DRAINAGE DOES NOT OVERFLOW THE AREA BEHIND THE LANDING AREA AND RAMP.

GENERAL NOTES

THE CONTRACTOR MUST HAVE AN ELECTRONIC LEVEL ON SITE TO ENSURE THE SPECIFIED SLOPES ARE MAINTAINED.

CARE SHALL BE TAKEN TO ENSURE THE SURFACE OF THE DETECTABLE WARNING PANEL IS CLEAN AND FREE OF CURING COMPOUND AND CONCRETE RESIDUE.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

JOINTS SHALL BE TOOLED INTO THE CONCRETE ADJACENT TO THE DETECTABLE WARNING PANELS TO ALLEVIATE POSSIBLE CORNER CRACKING (SEE DETAIL A).

THERE WILL BE NO SEPARATE PAYMENT FOR THE SIDEWALK LANDING AREA OR RAMP. THE SIDEWALK LANDING AREA AND RAMP, INCLUDING THE DETECTABLE WARNING PANEL AREA, SHALL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR THE CORRESPONDING CONCRETE SIDEWALK BID ITEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE ADDITIONAL CONCRETE DEPTH ADJACENT TO THE DETECTABLE WARNING PANEL.

THE DETECTABLE WARNING PANEL SHALL BE MEASURED TO THE NEAREST SQUARE FOOT. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR THE DETECTABLE WARNING PANELS. PAYMENT SHALL INCLUDE ALL COSTS FOR MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE DETECTABLE WARNING PANELS.

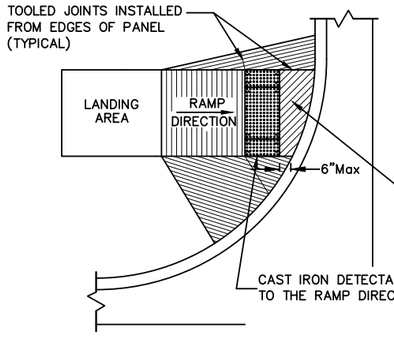


TABLE A

NEW OR IN PLACE SIDEWALK	RAMP OPENING	DETECTABLE WARNING PANEL DIMENSIONS
4'	4'	2' x 4'
5'	5'	2' x 5'
6'	6'	2' x 6'

DETAIL A

NOTE: Design Parameters Permit a MAXIMUM Grade of 8.33% for a Distance of 30' before a level landing must be Installed.

February 25, 2016
March 4, 2015
February 24, 2012

SPECIFICATION REFERENCE NO. 651	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT SIDEWALK RAMPS AND DETECTABLE WARNING PANELS	PLATE NUMBER 651.W2 Sheet 3 of 3

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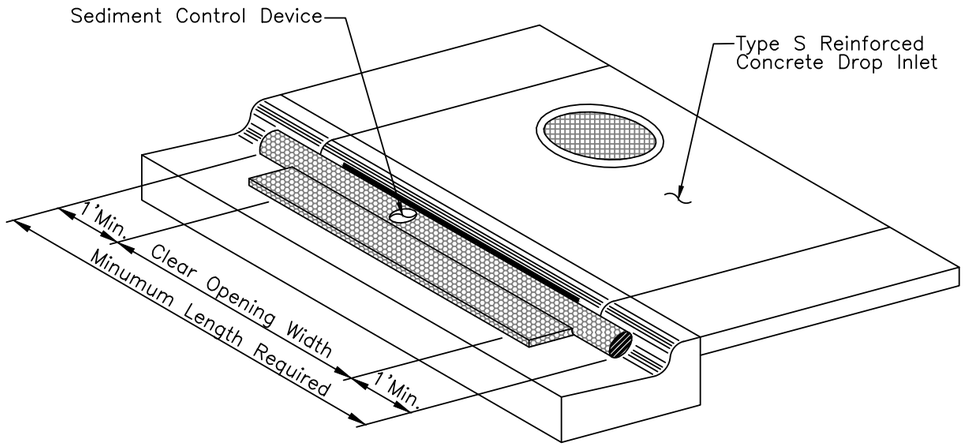
OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

STANDARD PLATES

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET 28 OF 39



ISOMETRIC VIEW

Not to Scale

GENERAL NOTES

The type of sediment control device shown is for illustrative purposes only.

The type of sediment control device used shall be one of the types as specified in the plans.

The sediment, control device shall be placed at the drop inlets according to the manufactures' installation instructions.

The sediment control at inlet for type S reinforced concrete drop inlet shall be placed at locations stated in the plans or at locations determined by the Engineer.

The Contractor shall Inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing the device, removing accumulated sediment, and resetting the device.

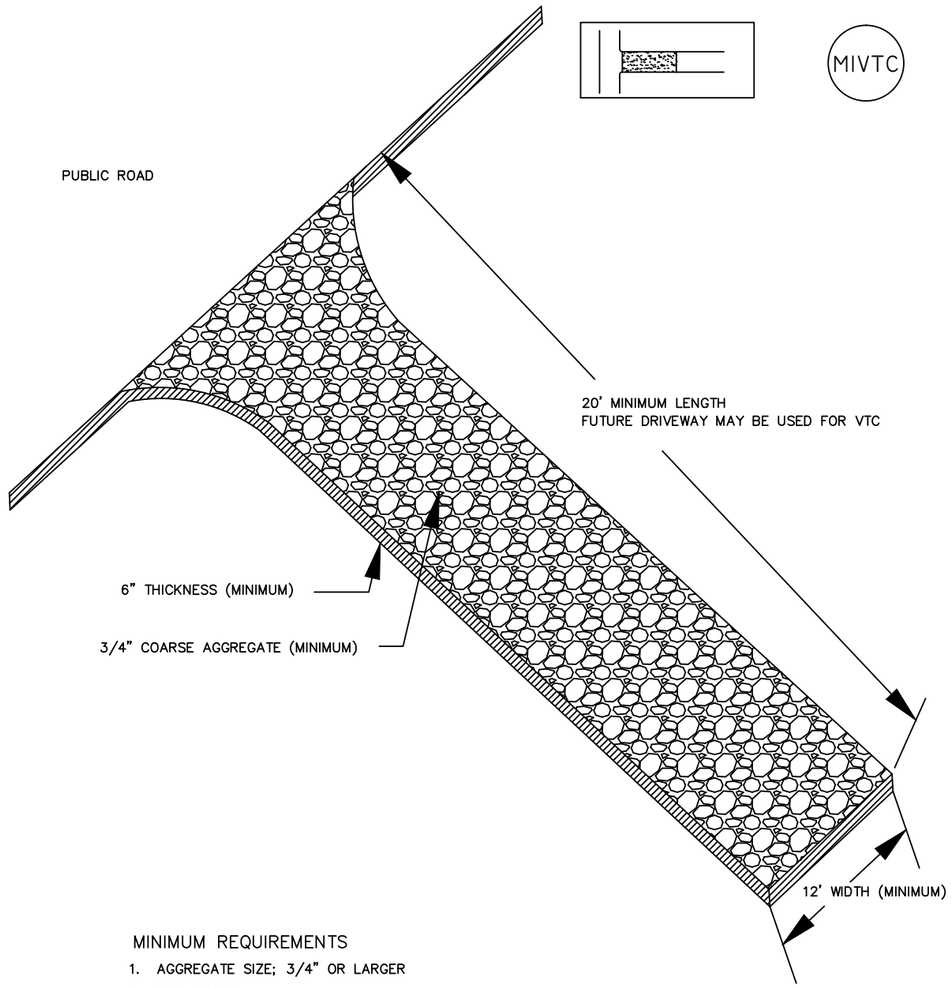
The removed sediment shall be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and resetting the sediment control device at the drop inlet including labor, equipment, and materials shall be incedental to the contract unit price Each for "Inlet Protection"

January 26, 2011

SPECIFICATION REFERENCE NO. 734	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT TYPE S REINFORCED DROP INLET PROTECTION	PLATE NUMBER 734.WI.1

MINOR IMPACT CONSTRUCTION SITE, VEHICLE TRACKING CONTROL



MINIMUM REQUIREMENTS

1. AGGREGATE SIZE; 3/4" OR LARGER
2. PAD DESIGN;
   A. THICKNESS: 6" MINIMUM
   B. WIDTH: 12' MINIMUM
   C. LENGTH: 20' MINIMUM
3. BMP MUST BE IN PLACE AND OPERATIONAL PRIOR TO ANY VEHICLES LEAVING A SITE THAT HAVE BEEN OPERATED IN AN AREA OF UNSTABILIZED SOILS.

August 2010

SPECIFICATION REFERENCE NO. 734	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT MINOR IMPACT CONSTRUCTION SITE VEHICLE TRACKING CONTROL	PLATE NUMBER 734.W2

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STANDARD PLATES

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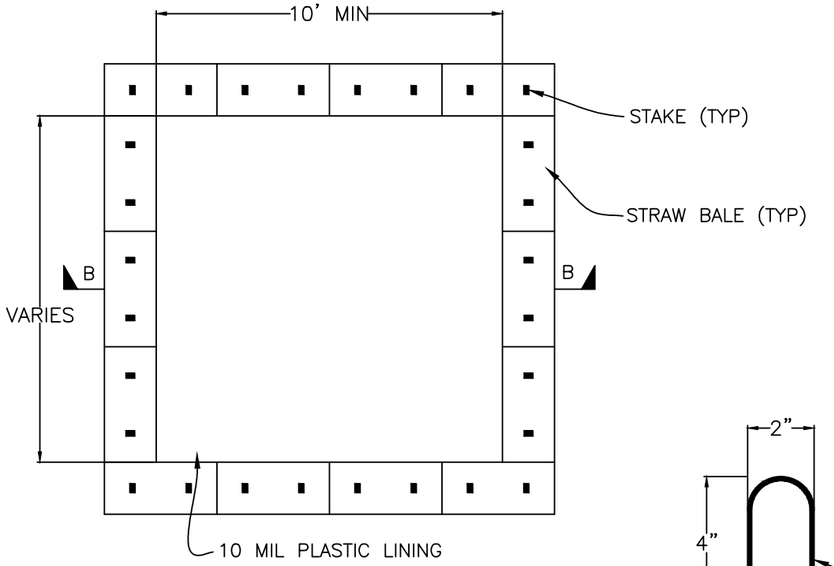
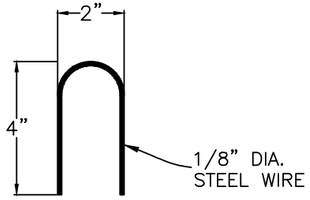
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

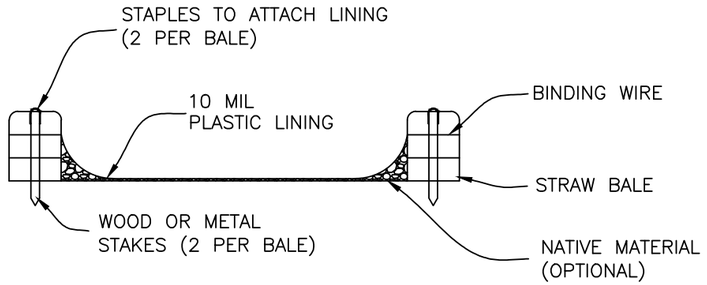
SHEET 29 OF 39



PLAN



STAPLE DETAIL

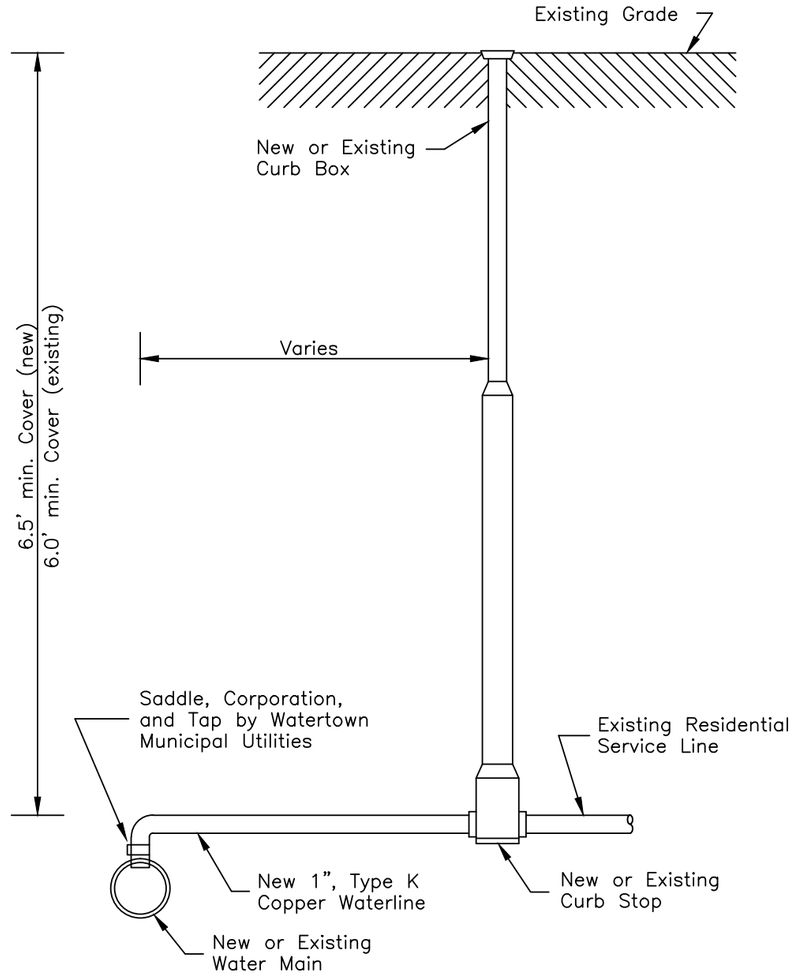


SECTION B-B

GENERAL NOTES:
1. A concrete washout must be installed prior to pouring concrete. Actual layout shall be determined in the field.
2. Concrete washouts may be placed on city property as approved by the City Engineer.

January 26, 2011

SPECIFICATION REFERENCE NO. 734	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT CONCRETE WASHOUT DETAIL	PLATE NUMBER 734.W35



WATER SERVICE CONNECTION DETAIL

Not to Scale

July 6, 2011

SPECIFICATION REFERENCE NO. 900	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT WATER SERVICE CONNECTION	PLATE NUMBER 900.WI

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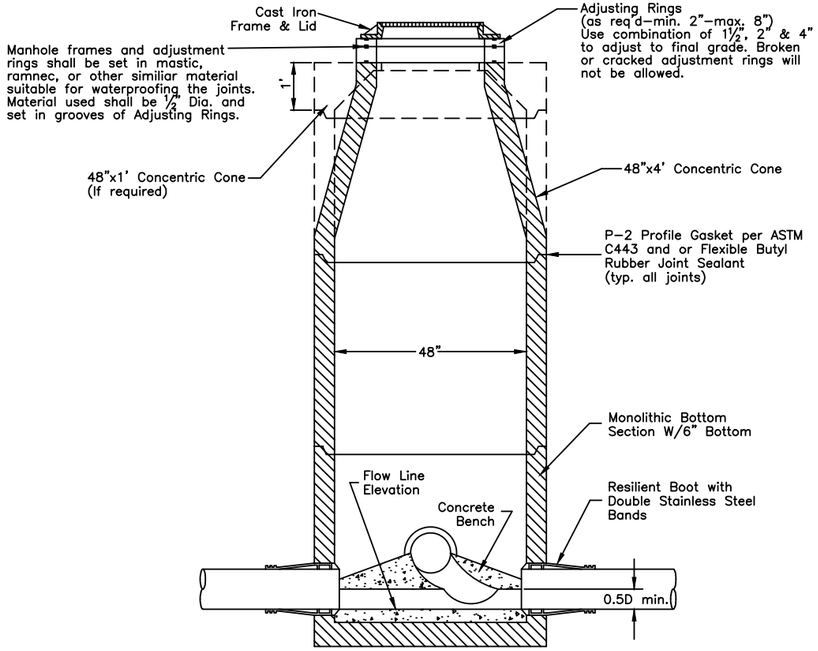
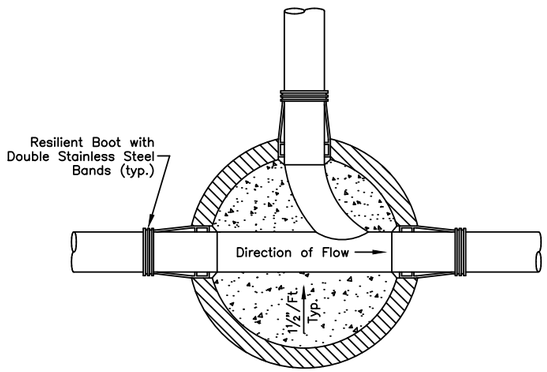
DATE:	FEBRUARY 2022

SHEET **30** OF 39



MANHOLE SECTION

NO SCALE

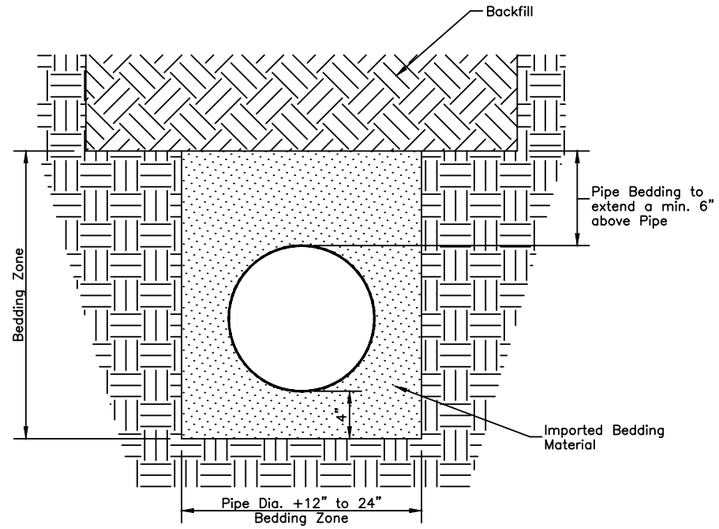


STANDARD PRECAST MANHOLE

Not to Scale

Mar 23, 2018
Jan 18, 2017
Jan 10, 2012
May 17, 2011

SPECIFICATION REFERENCE NO. 950	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT SANITARY SEWER MANHOLE	PLATE NUMBER 950.WI



TYPICAL BEDDING SECTION FOR SANITARY SEWER PIPE

Not to Scale

May 17, 2011

SPECIFICATION REFERENCE NO. 950	WATERTOWN SOUTH DAKOTA'S RISING STAR	CITY OF WATERTOWN ENGINEERING DEPARTMENT SANITARY SEWER TYPICAL BEDDING DETAIL	PLATE NUMBER 950.W2

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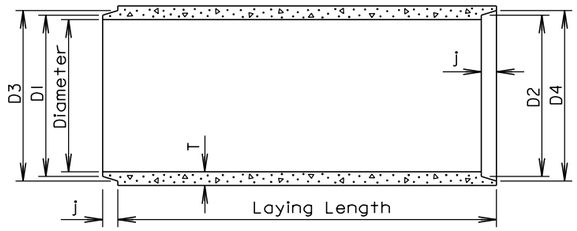
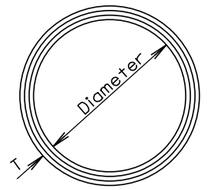
SHEET **31** OF 39

TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24" Dia. or less and ±1% or 3/8" whichever is more for 27" Dia. or greater.
Diameters at joints: ± 3/16" for 30" Dia. or less and ± 1/4" for 36" or greater.
Length of joint (j): ± 1/4".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than 1/2".



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

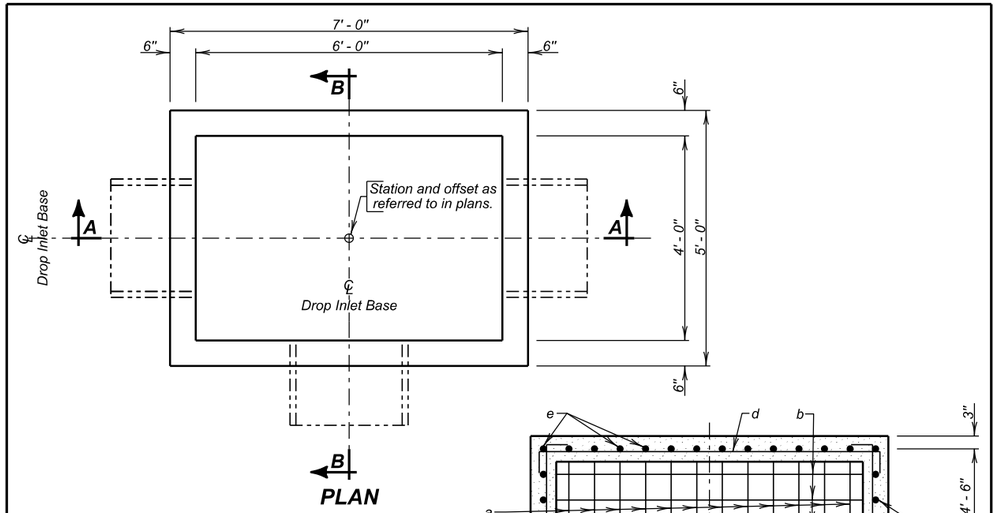
Construction of R. C. P. shall conform to the requirements of Section 990 of the Specifications.

Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1 3/4	13 1/4	13 5/8	13 7/8	14 1/4
15	127	2 1/4	2	16 1/2	16 7/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 7/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 3/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 7/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 7/8	58 3/8	59 3/8	59 7/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 7/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

June 26, 2015

Published Date: 1st Qtr. 2022	SDDOT	REINFORCED CONCRETE PIPE	PLATE NUMBER 450.01
			Sheet 1 of 1



SPECIFICATIONS:

1. Design Specifications: AASHTO LRFD Bridge Design Specifications 2012 Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

1. Design Live Load: HL-93 loading. No construction loading in excess of legal load was considered.
2. Base is intended for use with a Precast Concrete Type S Drop Inlet Lid, Standard Plate 670.38. Base may be precast. If precast base used, and details differ from that shown, the precast base must be on the current approved list. The current approved list is available through proper channels from the SDDOT Office of Bridge Design.
3. To qualify for addition to the approved list, submit a checked design, by South Dakota Registered Professional Engineers and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
4. ✳ Reduce total quantities of concrete by the amount of concrete displaced by the pipe. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.
5. Inlets shown may be modified by the addition or omission of connecting pipes as shown on the layouts. Connecting pipes shall not enter the inlet through the corners.
6. Maximum R.C.P. diameter shall not exceed 36 inches (30 inches for R.C. Arch) on the 4-foot wide side and shall not exceed 54 inches (48 inches for R.C. Arch) on the 6-foot wide side of the Drop Inlet.
7. Reinforcing steel shall conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipe(s) through the inlet wall.
8. Use 1 inch clear cover on all reinforcing steel unless otherwise noted.
9. The dimension of H is in feet. Maximum H is 8 feet.

June 26, 2015

Published Date: 1st Qtr. 2022	SDDOT	4' X 6' TYPE S DROP INLET BASE	PLATE NUMBER 670.30
			Sheet 1 of 2

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OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

STANDARD PLATES

PROJ. NO.	210005456
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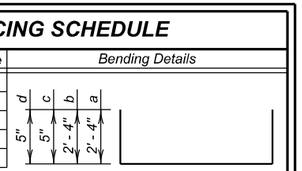
SHEET 32 OF 39

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
	30	3 ½	0.14
	36	4	0.20
	42	4 ½	0.26
	48	5	0.34
	54	5 ½	0.43
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09
	30	4	0.14
	36	4 ½	0.19
	42	4 ½	0.24
	48	5	0.32

REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a	14	5	9' - 6"	17	
b	10	5	11' - 6"	17	
c	2H	4	5' - 6"	17	
d	2H	4	7' - 6"	17	
e	44	4	H - 2"	Str.	



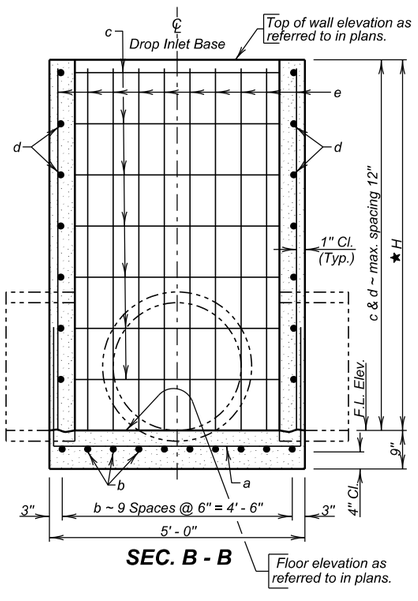
a	4' - 10"
b	6' - 10"
c	4' - 8"
d	6' - 8"

NOTE:
All dimensions are out to out of bars

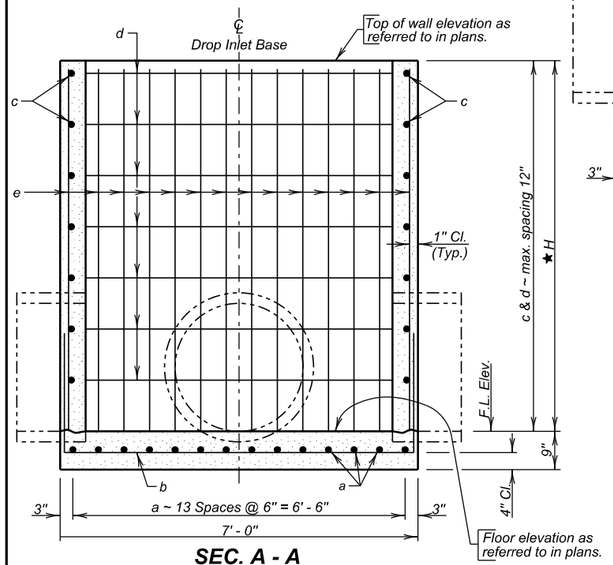
Type 17

ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
✳ Class M6 Concrete	Cu.Yd.	0.97	0.41H
Reinforcing Steel	Lb.	253.77	46.76H



SEC. B - B



SEC. A - A

★ Maximum H is 8' - 0"

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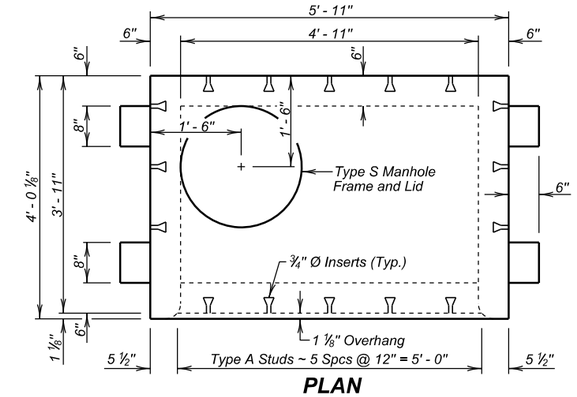
Published Date: 1st Qtr. 2022

SDDOT

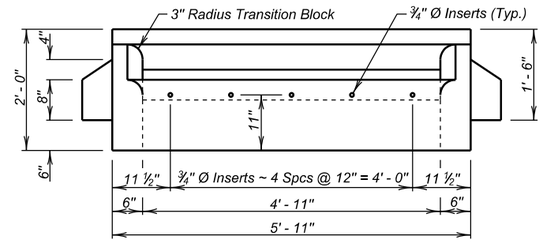
4' X 6' TYPE S DROP INLET BASE

PLATE NUMBER 670.30

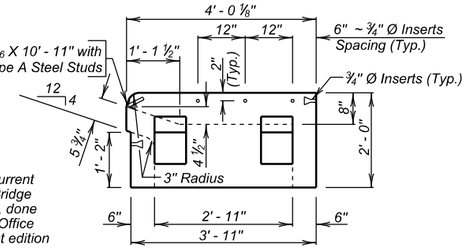
Sheet 2 of 2



PLAN



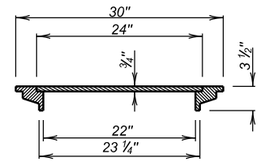
ELEVATION



SIDE VIEW
(With Sidewalk Inserts)

GENERAL NOTES:

1. The Precast Concrete Type S Drop Inlet Lid and the shims shall be on the current approved list available through proper channels from the SDDOT Office of Bridge Design. To qualify for addition to the approved list, submit a checked design, done by South Dakota Registered Professional Engineers, and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
2. Design Live Load shall be HL - 93.
3. Concrete mix shall be as per fabricators design, however, minimum compressive strength shall not be less than 4500 psi. Type II Cement is required.
4. The Type S Manhole Frame and Lid shall conform to AASHTO M105, Class 30.
5. Structural Steel shall conform to ASTM A36. The ¾ inch diameter Headed Type A Steel Studs shall comform to Section 7 of the current edition of AWS DI. I Structural Steel Welding Code.
6. The ¾ inch diameter Concrete Inserts shall be galvanized or made of a corrosion resistant material. Provide ¾ inch diameter x 1' - 6" long dowels conforming to ASTM A615, Gr. 60 threaded to fit Inserts with each lid.
7. All costs associated with furnishing and installing the Precast Concrete Type S Drop Inlet Lid including the type S manhole frame and lid, shims, inserts, and dowels shall be included in the contract unit price per each for " 4' x 6' Precast Concrete Type S Drop Inlet Lid ".



TYPICAL SECTION THROUGH TYPE S MANHOLE FRAME AND LID
(Weight 140 Lbs.)

December 23, 2012

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4' X 6' PRECAST CONCRETE TYPE S DROP INLET LID

PLATE NUMBER 670.38

Sheet 1 of 1

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STANDARD PLATES

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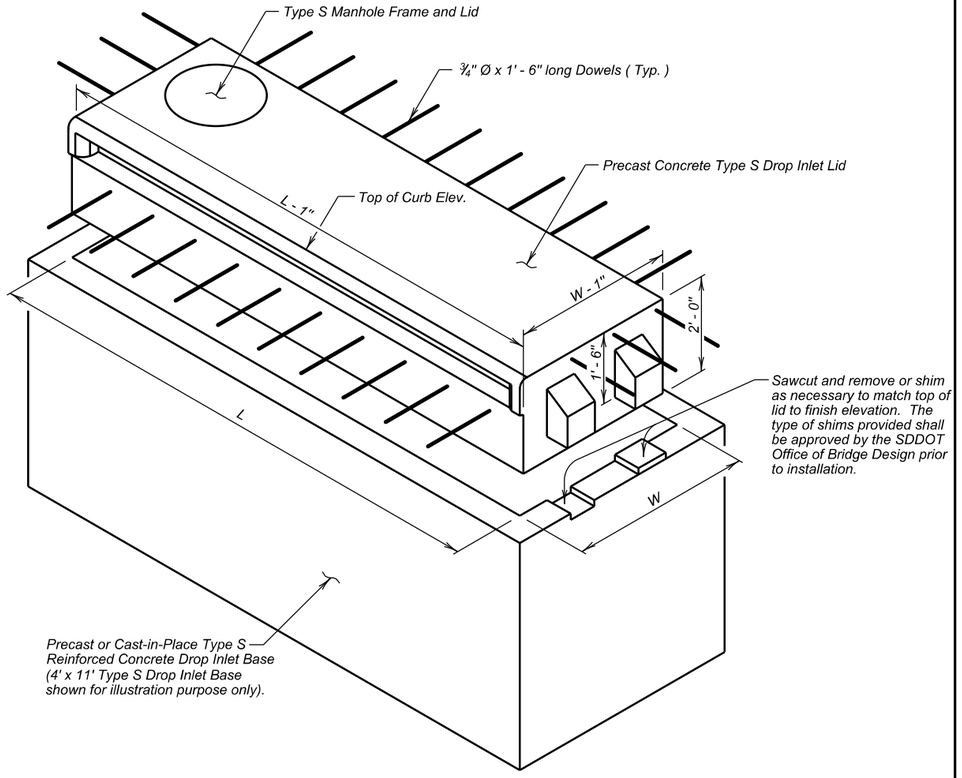
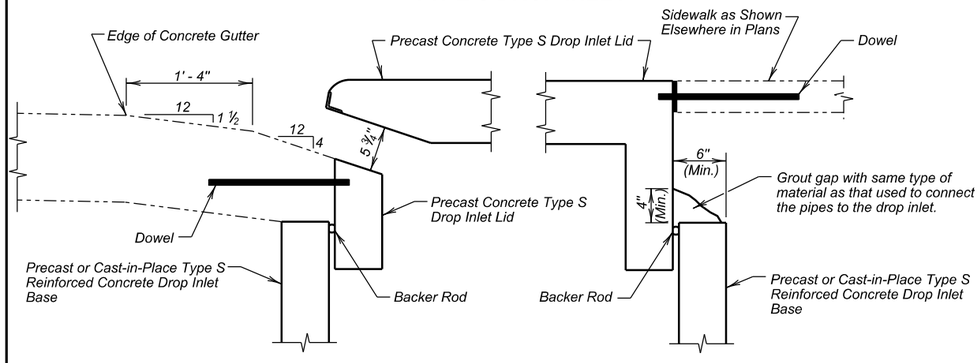
SHEET 33 OF 39



TYPE S DROP INLET

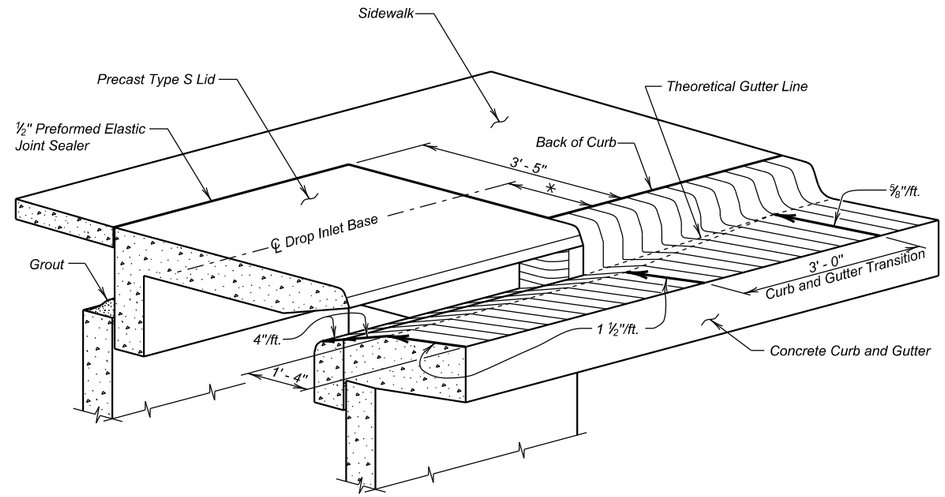


CONCRETE GUTTER DETAIL

GROUTING DETAIL
(Sides and Back, Adjacent to Sidewalk)

December 23, 2012

Published Date: 1st Qtr. 2022	SDDOT	INSTALLATION DETAILS FOR PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.45 Sheet 1 of 2



CURB AND GUTTER TRANSITION DETAILS

Drop Inlet Base Unit Size	* Distance
4' x 6'	1' - 5 ½"
4' x 11'	1' - 5 ½"
7' x 11'	2' - 11 ½"

GENERAL NOTES:

1. Dowels shall be used to anchor the precast concrete Type S drop inlet lid to the concrete gutter. See Standard Plate 670.38 or 670.40 as applicable. If there is sidewalk adjacent dowels shall be used to anchor the precast concrete Type S drop inlet lid to the sidewalk. If there is sidewalk adjacent to the drop inlet, the precast lid shall match the finish elevations and cross slopes of the sidewalk.
2. The sidewalk shall be steel reinforced when the sidewalk adjoins the precast lid. Refer to Standard Plate 651.70 for reinforced concrete sidewalk details.

December 23, 2012

Published Date: 1st Qtr. 2022	SDDOT	INSTALLATION DETAILS FOR PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.45 Sheet 2 of 2

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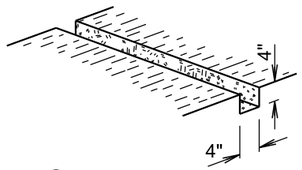
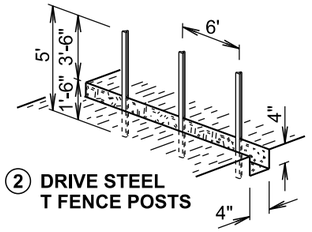
SHEET 34 OF 39

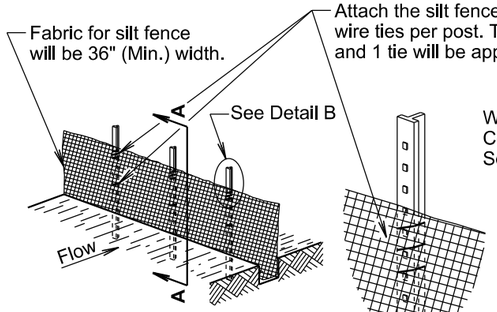
MANUAL HIGH FLOW SILT FENCE INSTALLATION



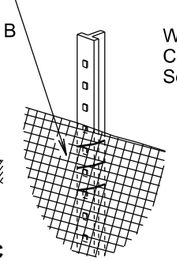
① EXCAVATE TRENCH



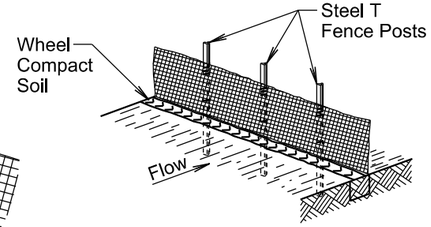
② DRIVE STEEL T FENCE POSTS



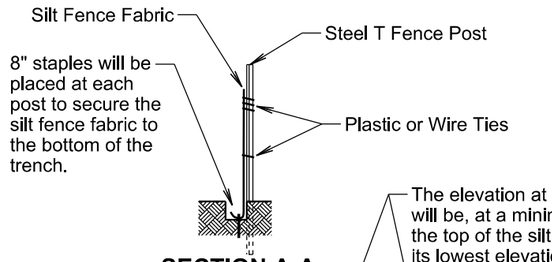
③ ATTACH SILT FENCE FABRIC



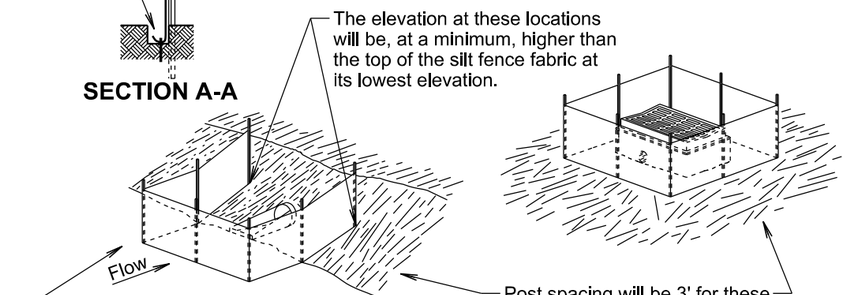
DETAIL B



④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



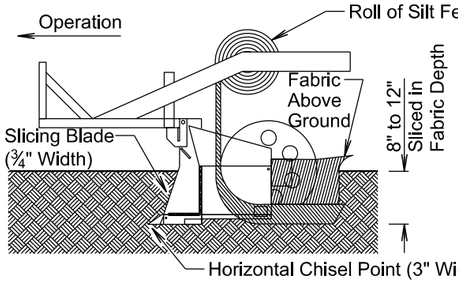
SECTION A-A



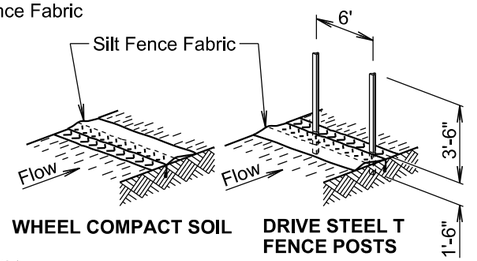
February 14, 2020

Published Date: 1st Qtr. 2022	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



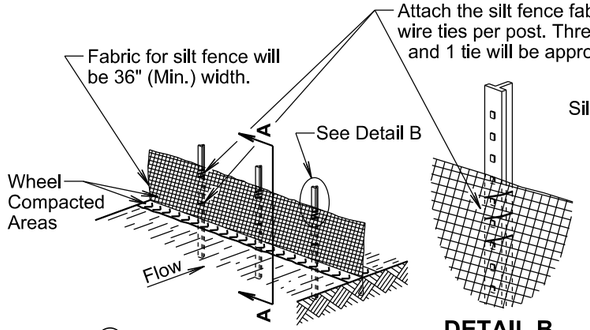
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



WHEEL COMPACT SOIL

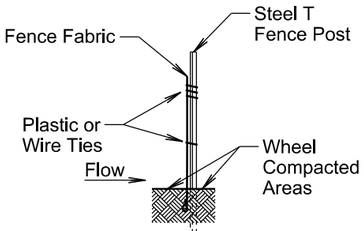
DRIVE STEEL T FENCE POSTS

② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.

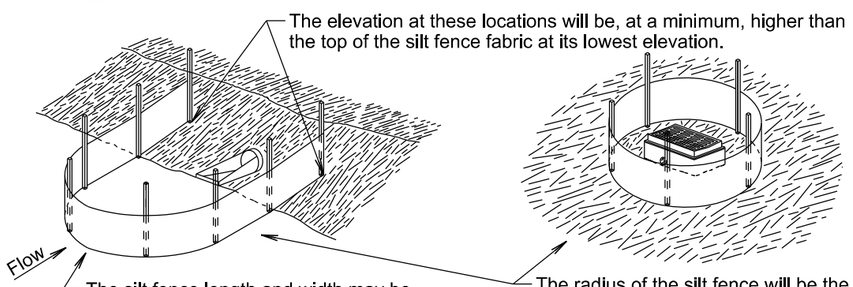


③ ATTACH SILT FENCE FABRIC

DETAIL B



SECTION A-A



GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

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Published Date: 1st Qtr. 2022	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

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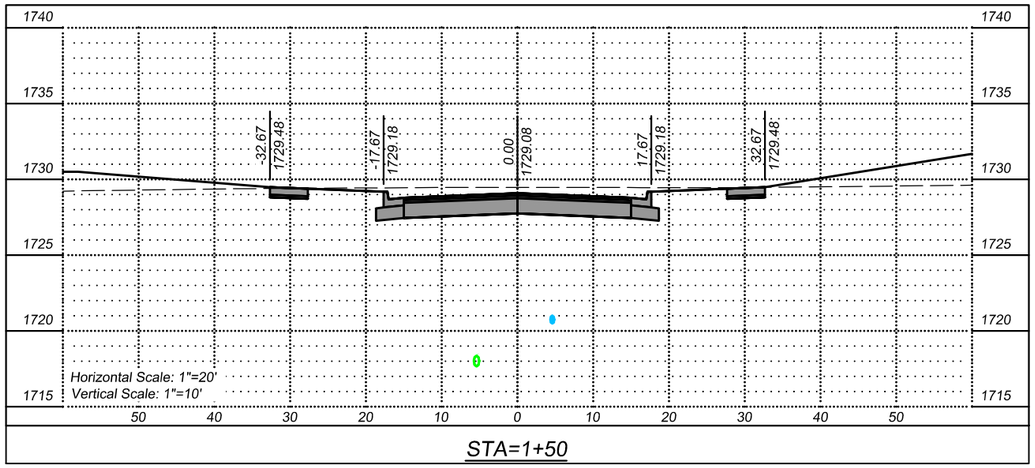
SHEET 35 OF 39



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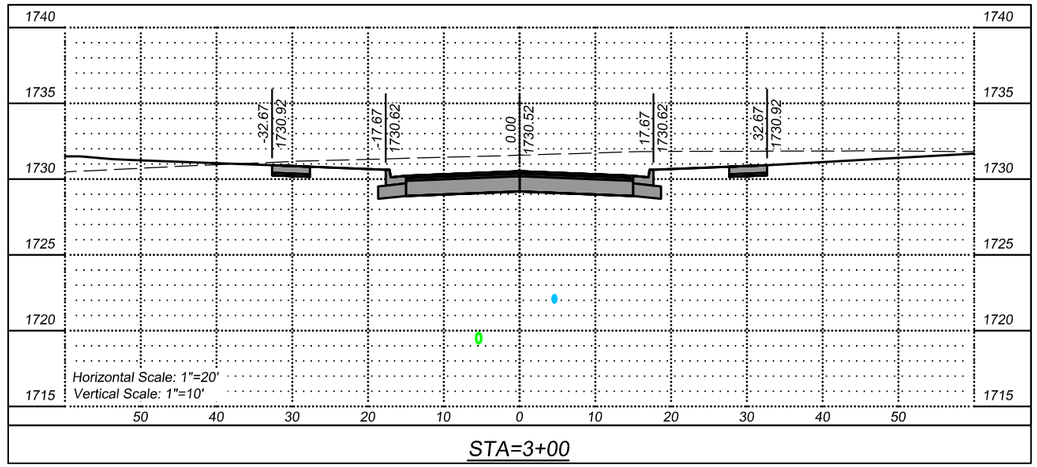

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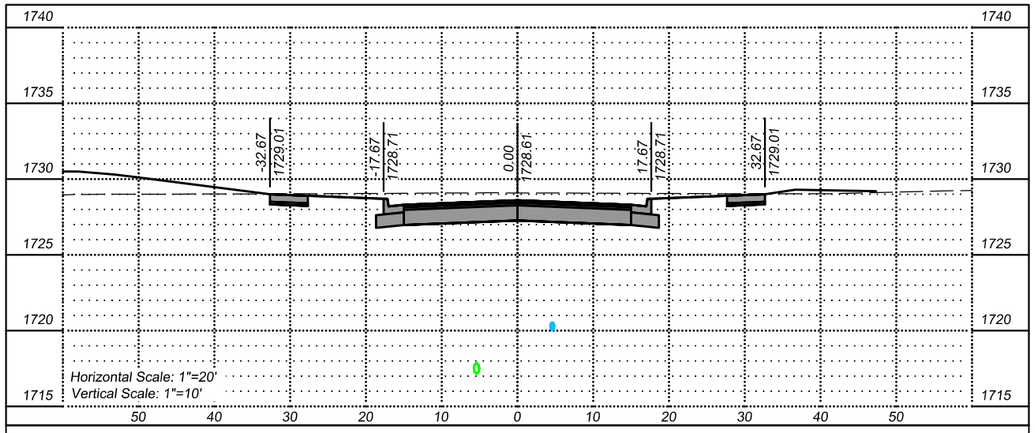

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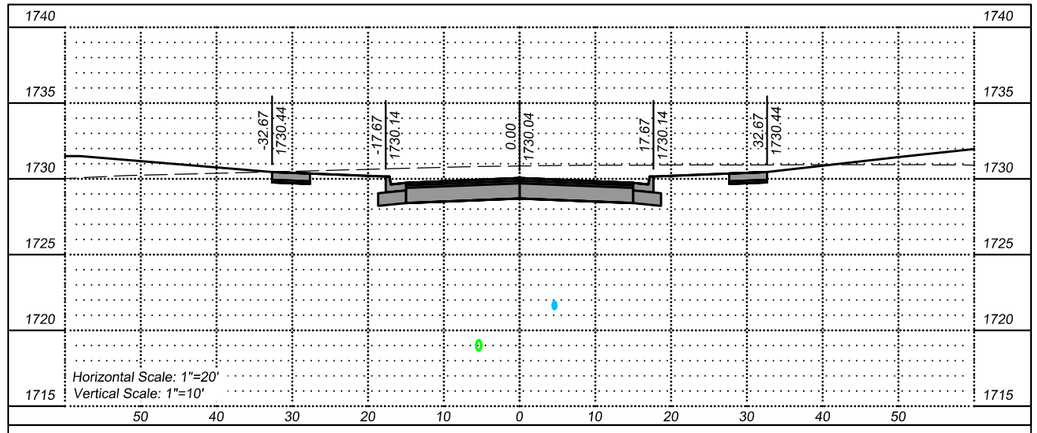

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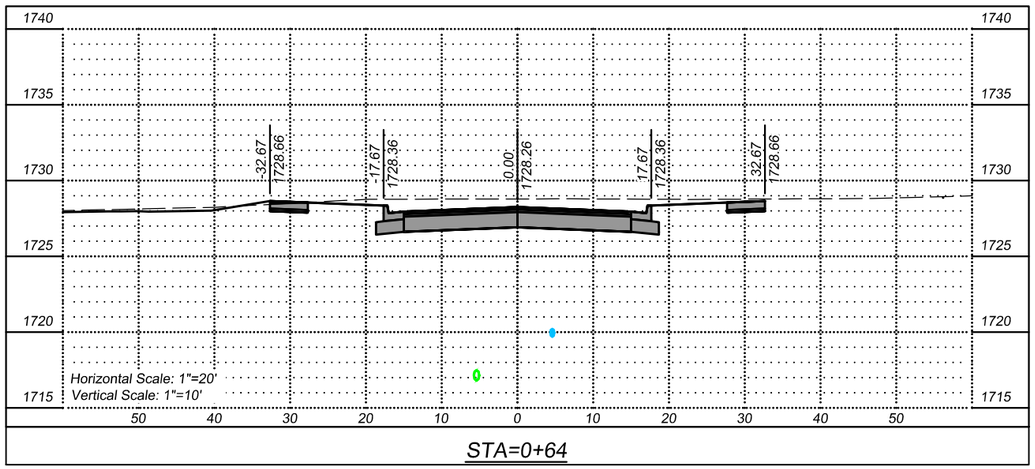

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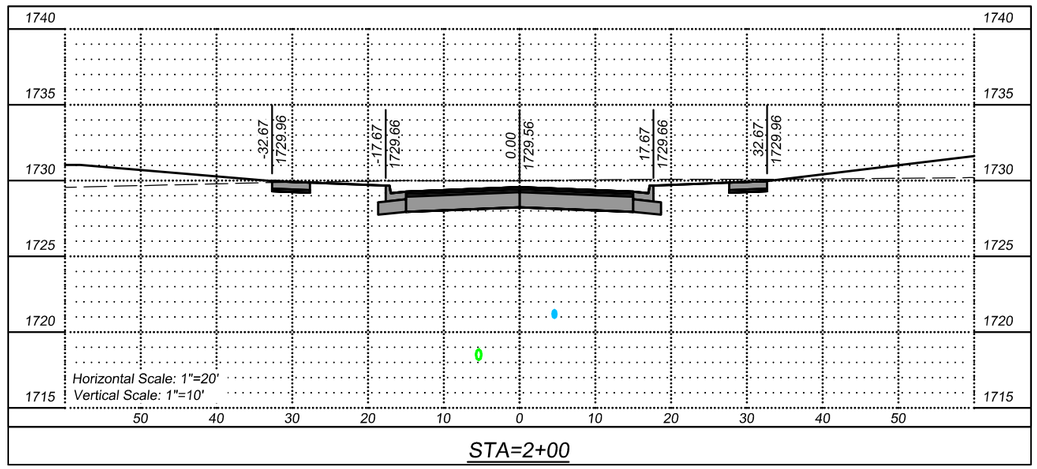

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CROSS SECTIONS

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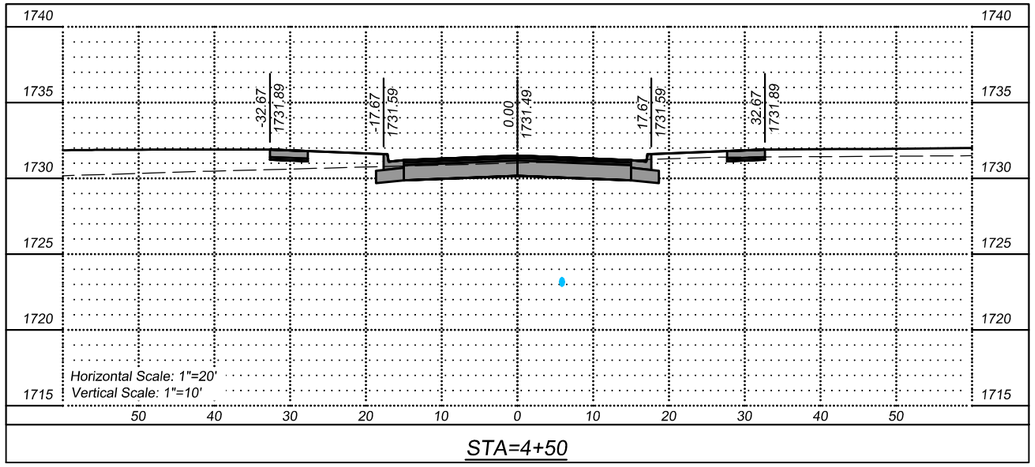
DATE:	FEBRUARY 2022

SHEET **36** OF 39



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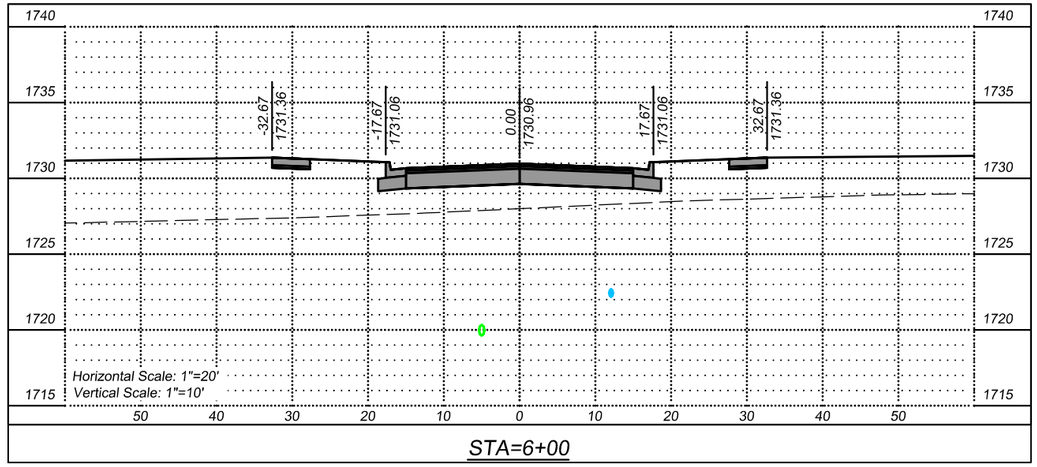

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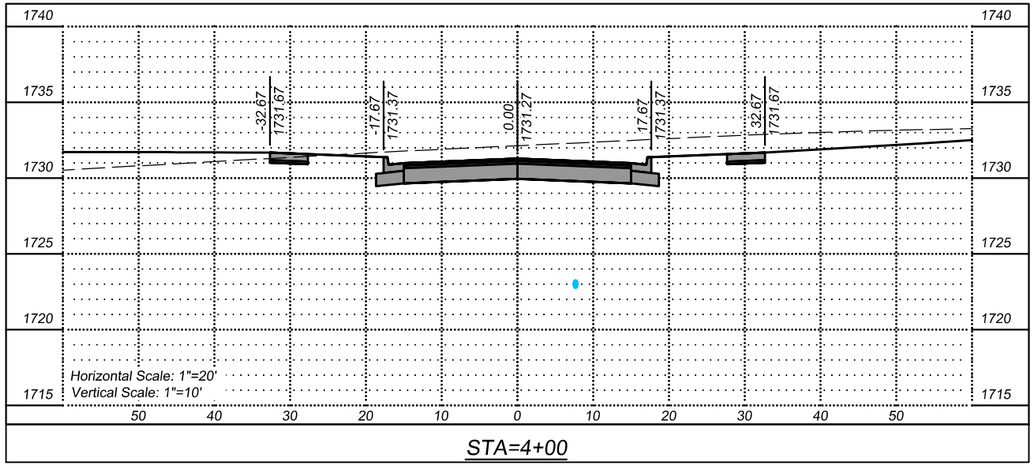

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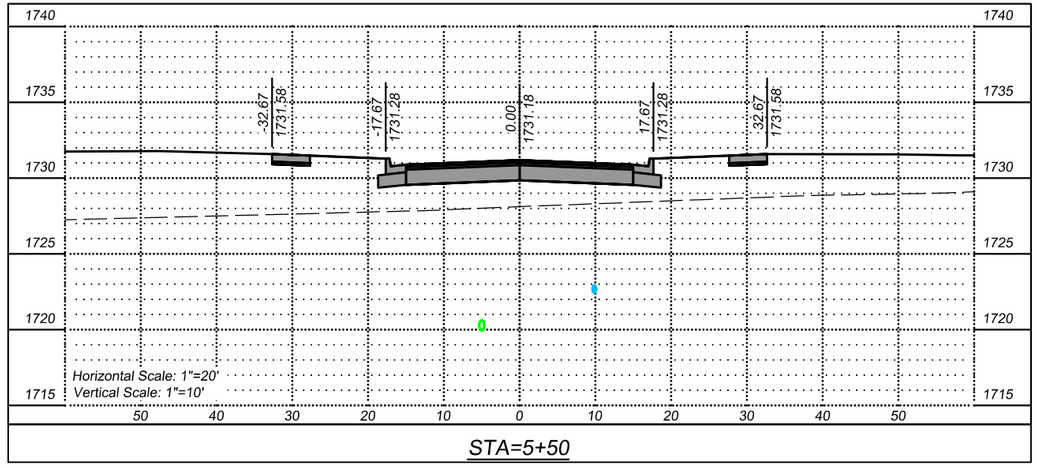

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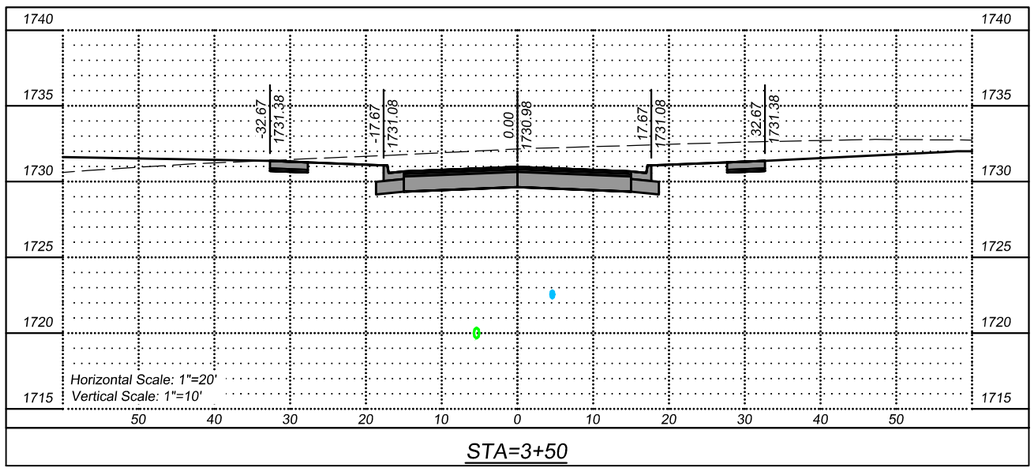

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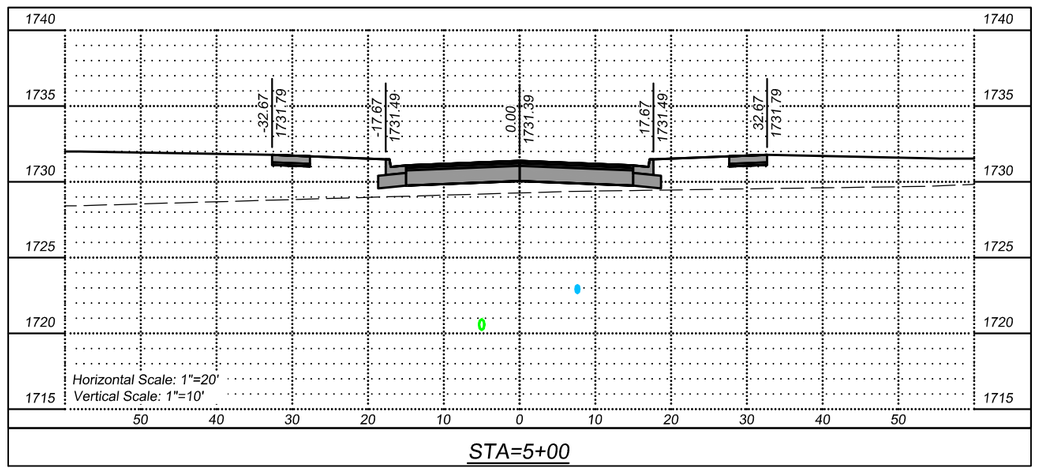

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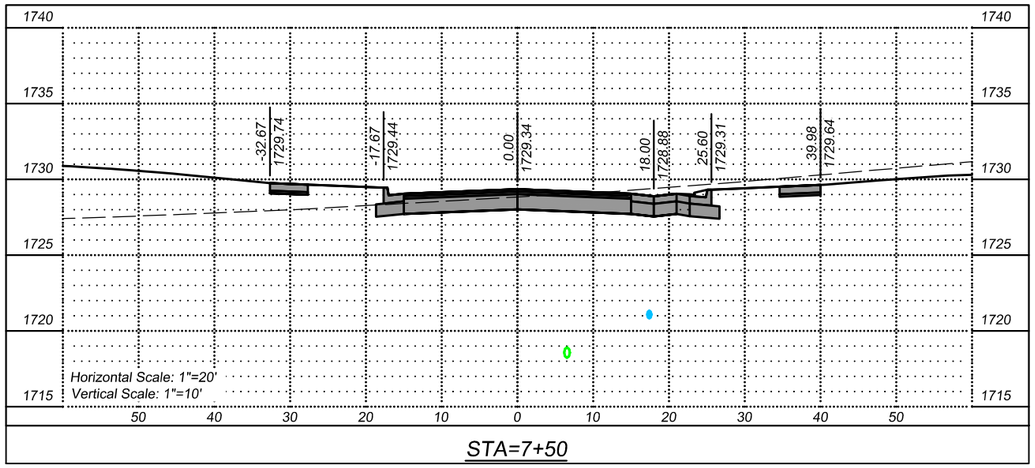
SHEET
37
OF 39



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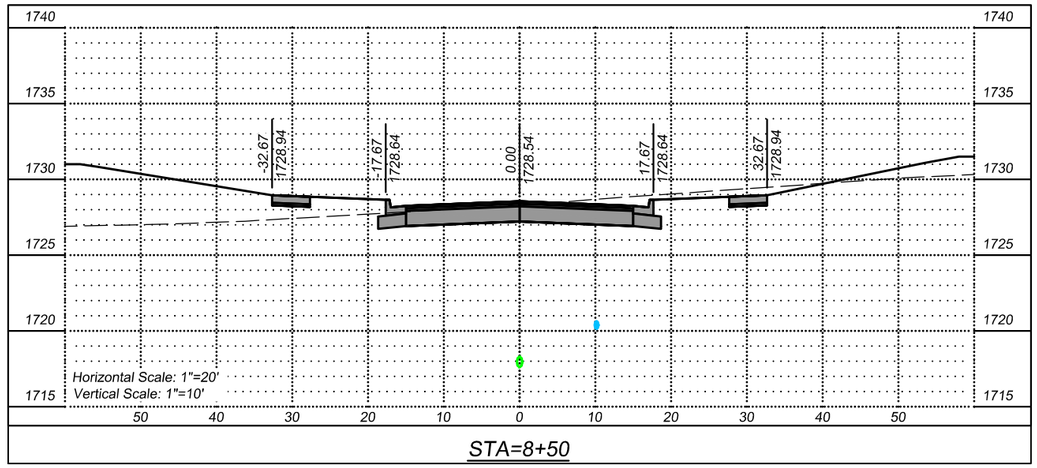

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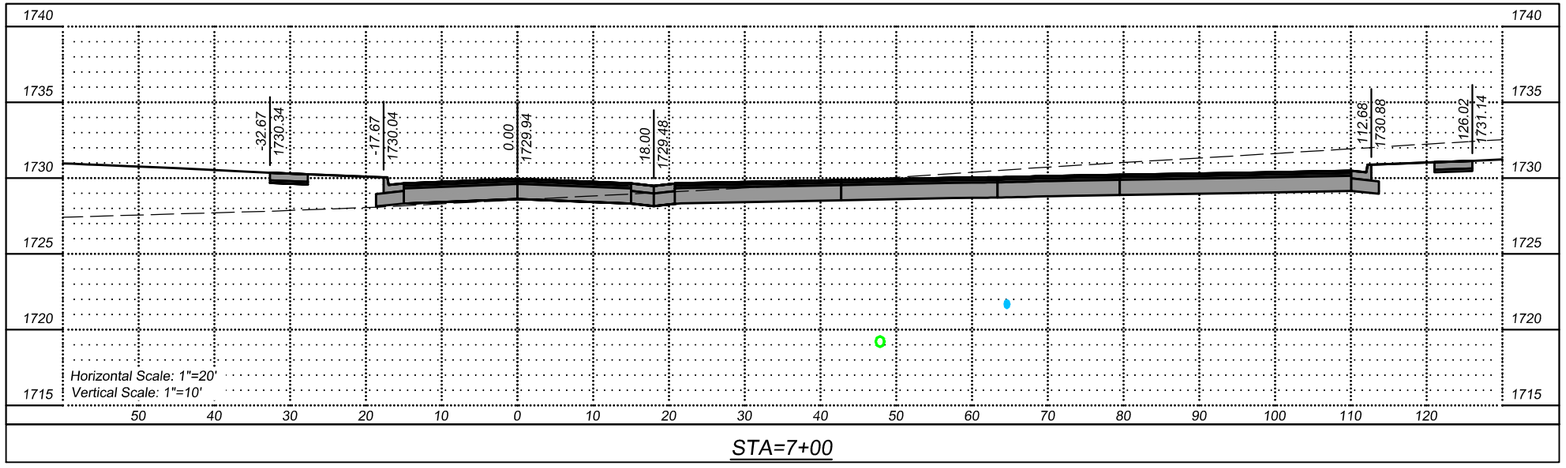

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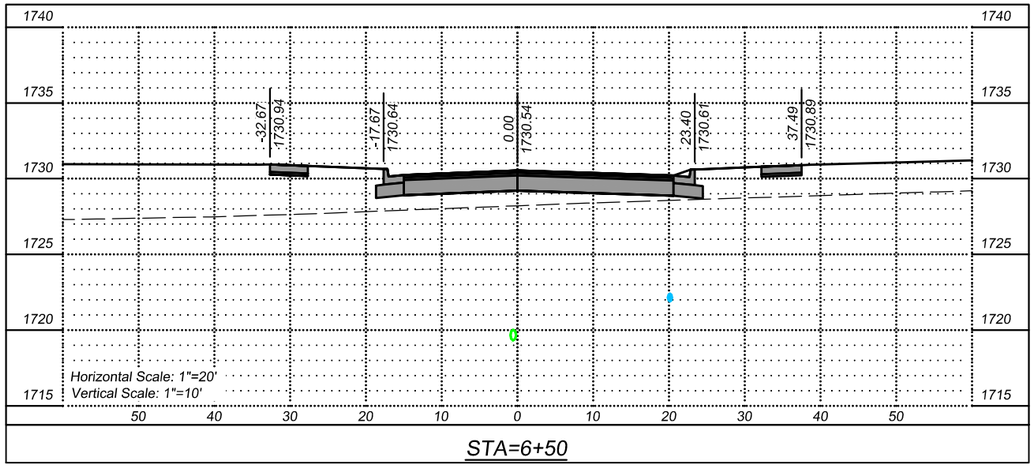

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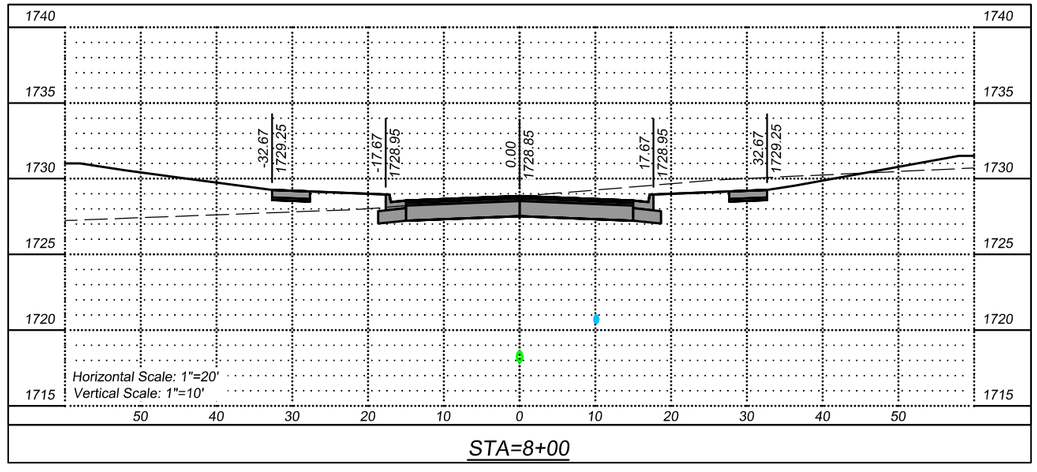

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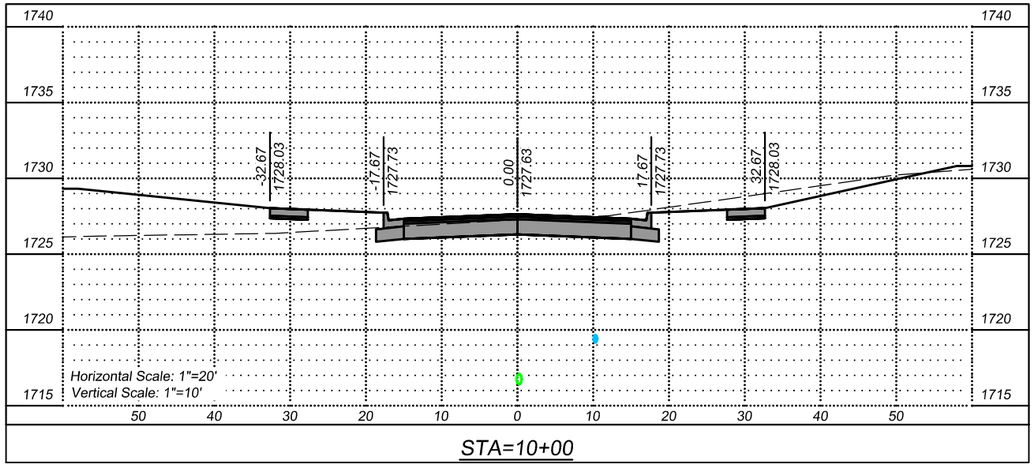
#	REVISIONS	DATE	BY

OVERLOOK RIDGE COURT STREET PLANS
WILLOW CREEK VILLAGE
WATERTOWN, SOUTH DAKOTA

CROSS SECTIONS

PROJ. NO.	210005456
DRAWN BY:	JLW
CHECKED BY:	SLW
DATE:	FEBRUARY 2022

SHEET **38** OF 39



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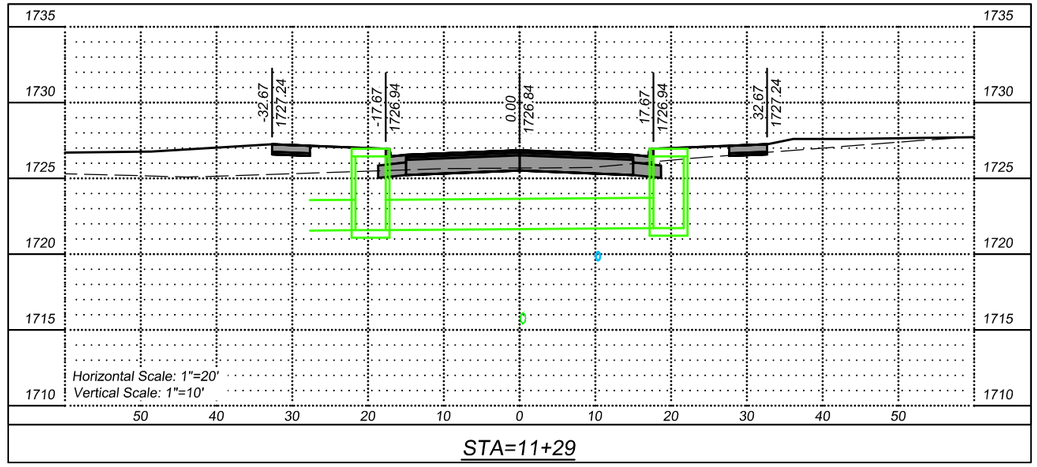

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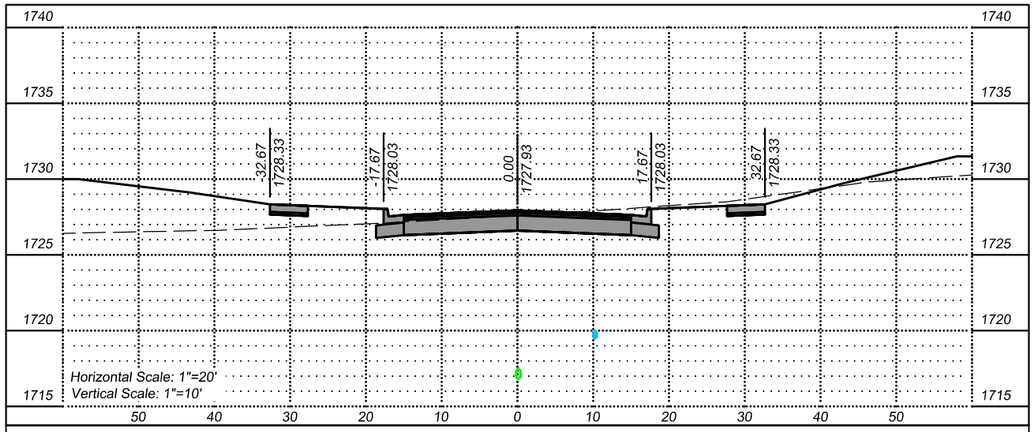

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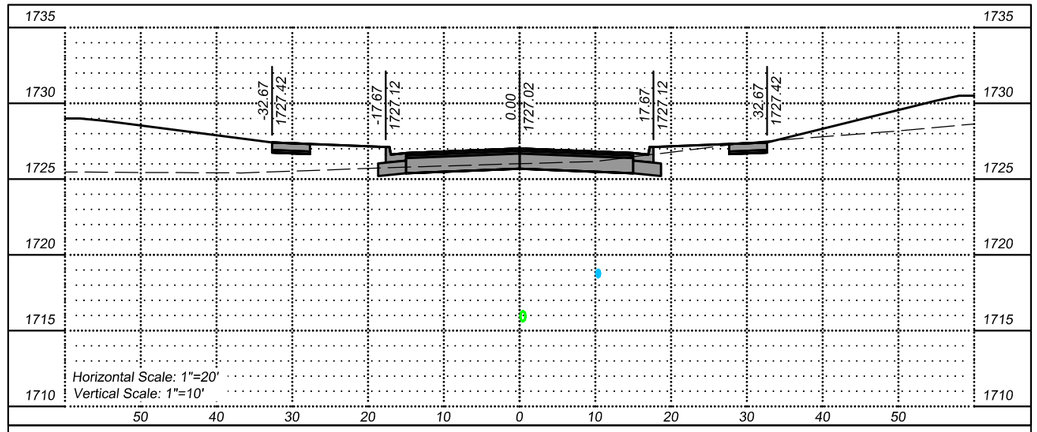

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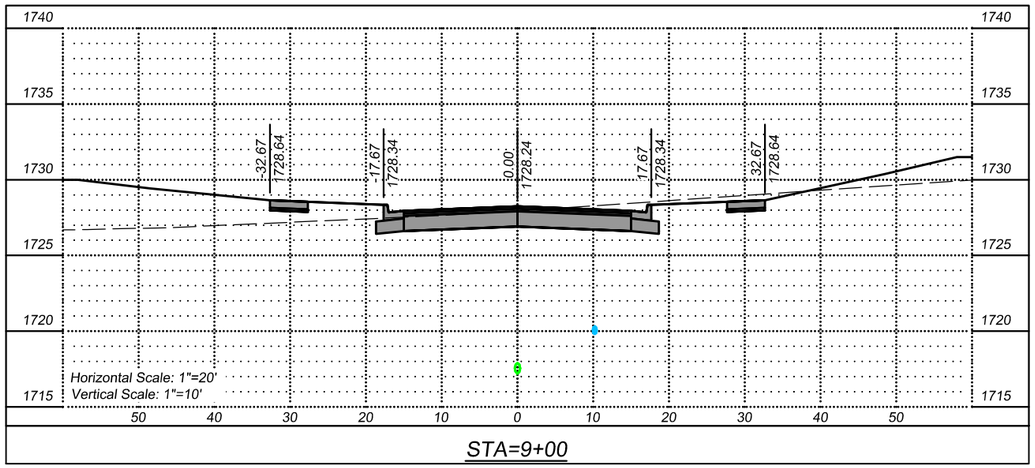

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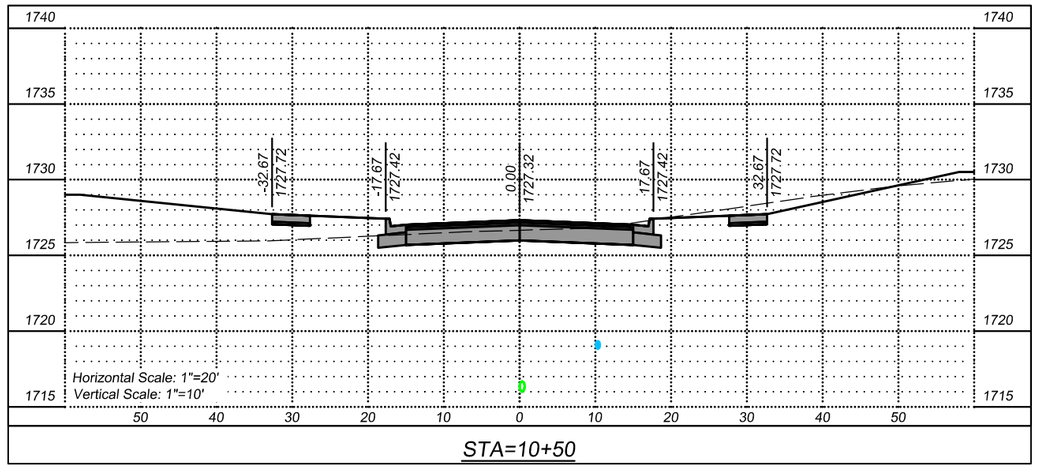

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SHEET **39** OF 39