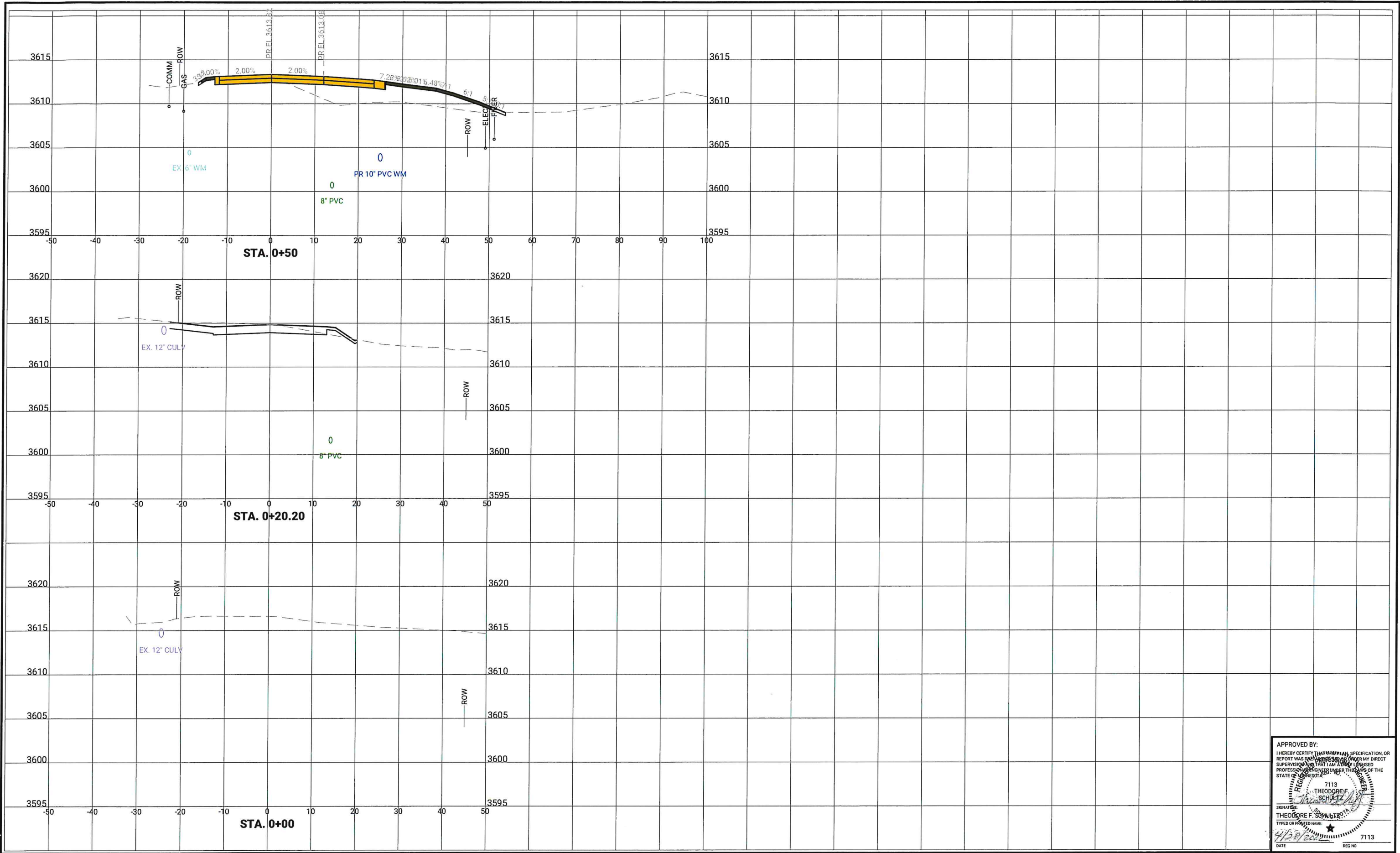




CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:27:46 AM

NO	DATE	BY	REVISION DESCRIPTION
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PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

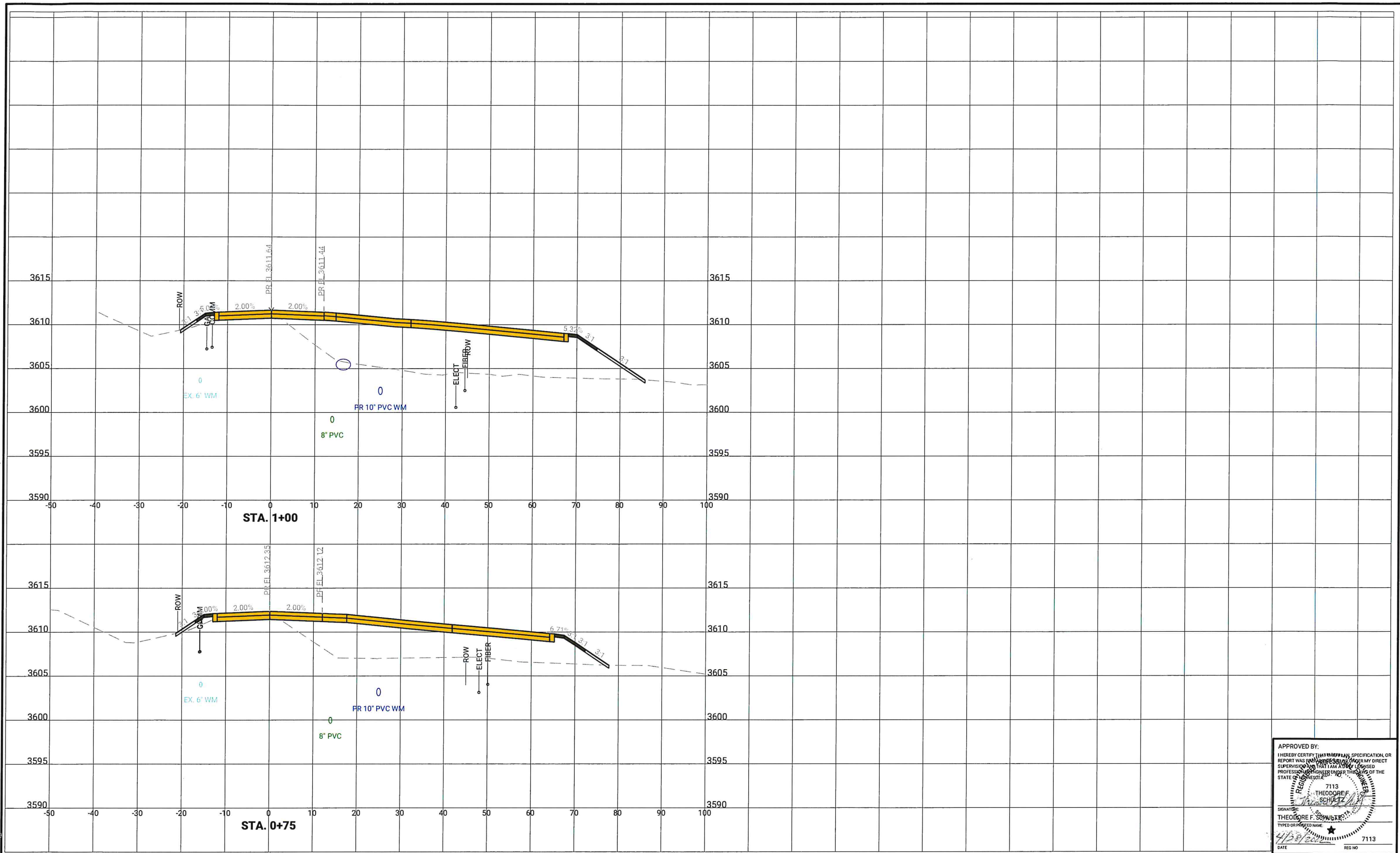
PINE GLENN RD
CROSS SECTIONS

SHEET NO.
C3.01

APPROVED BY:
I HEREBY CERTIFY THAT THE DESIGN, SPECIFICATION, OR
REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF MINNESOTA

7113
THEODORE F. SCHUBERT
THEODORE F. SCHUBERT
TYPED OR PRINTED NAME
4/28/2022
DATE

7113
REG NO



CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:27:56 AM

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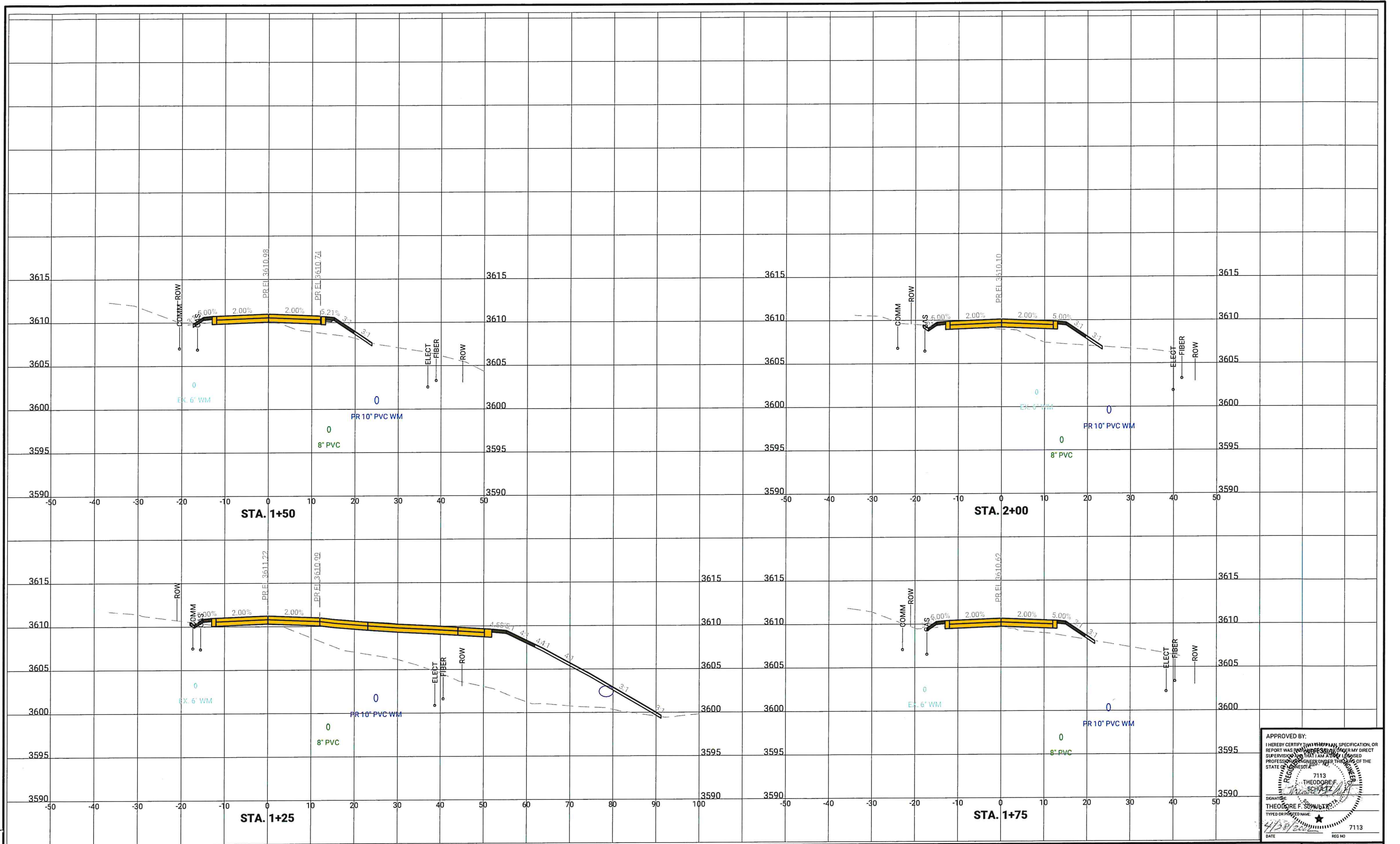


PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

APPROVED BY:
I HEREBY CERTIFY THAT THE DESIGN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTHERN NEBRASKA.

7113
THEODORE F. SCHULTZ
SIGNATURE
TYPED OR PRINTED NAME
4/28/2022
DATE
7113
REG NO



APPROVED BY:
I HEREBY CERTIFY THAT THE PLAN, SPECIFICATION, OR
REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
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STATE OF NEBRASKA.
7113
THEODORE F. SCHULTZ
SIGNATURE
THEODORE F. SCHULTZ
TYPED OR PRINTED NAME
DATE 4/28/2022 REG NO 7113

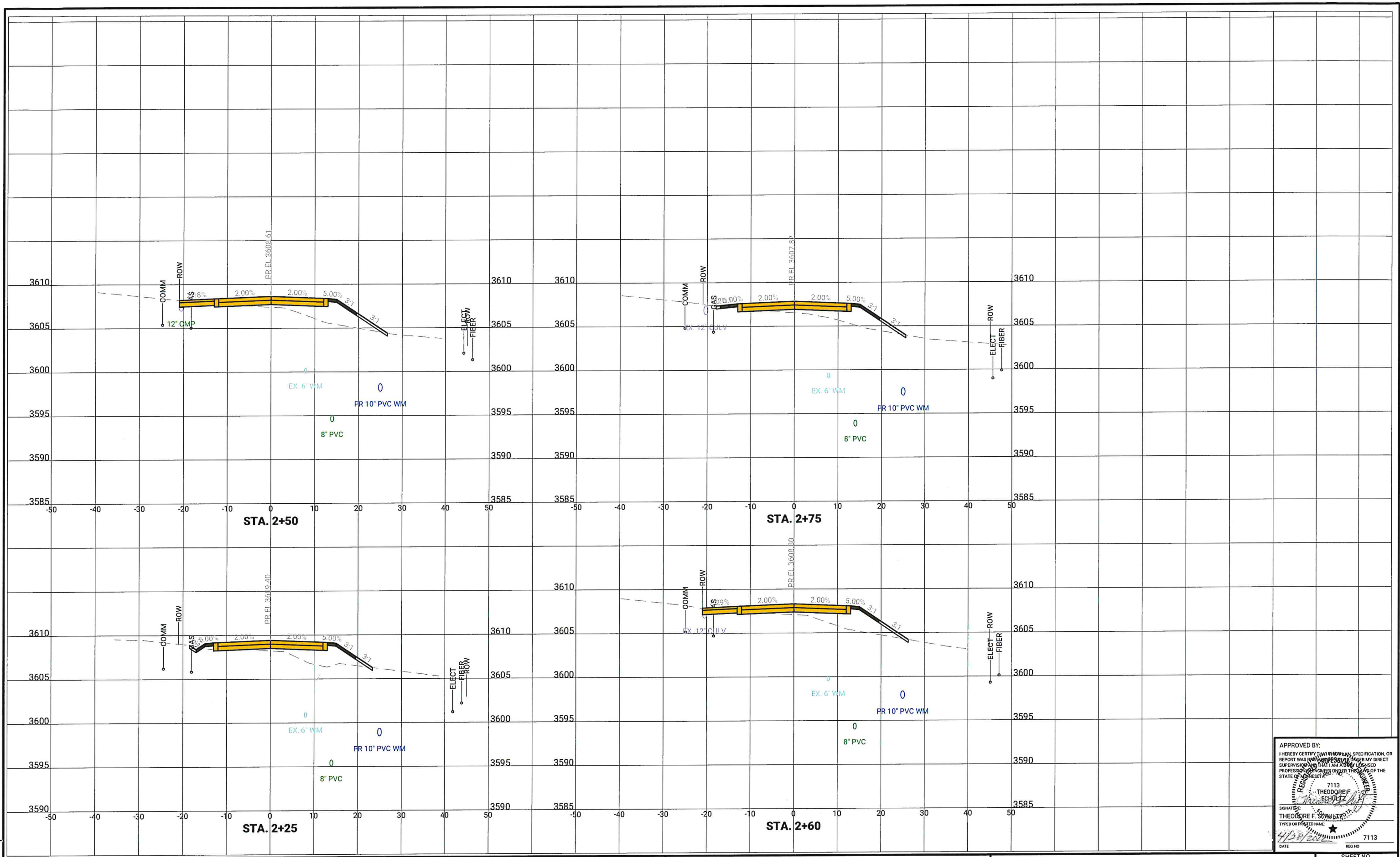
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DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:28:07 AM

NO	DATE	BY	REVISION DESCRIPTION
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4			



PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS
C3.03



CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:28:16 AM

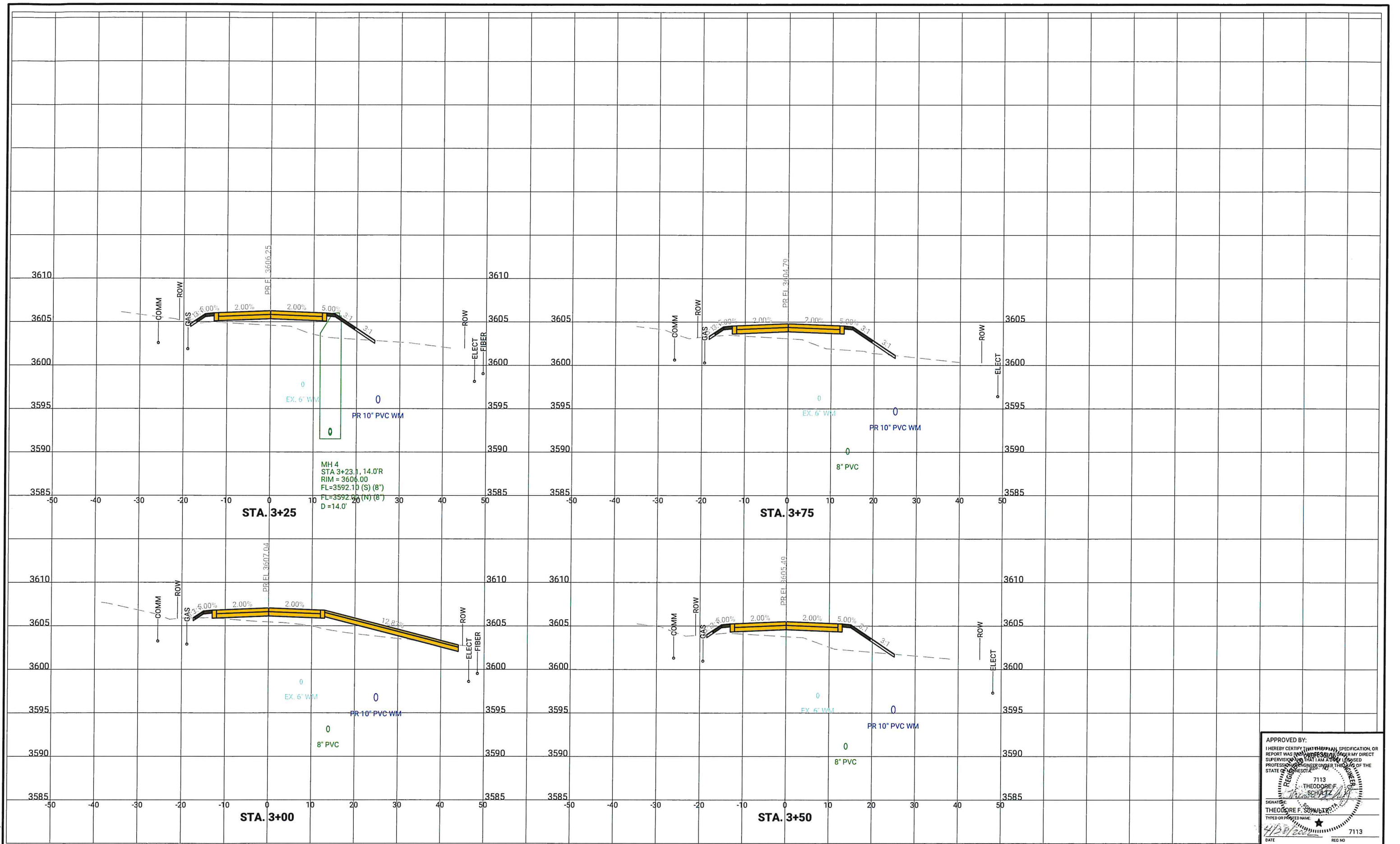
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PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

APPROVED BY:
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REPORT WAS PREPARED BY OR UNDER MY DIRECT
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PROFESSIONAL ENGINEER UNDER THE laws OF THE
STATE OF SOUTHERN DAKOTA
7113
THEODORE F. SCHULTZ
DATE: 4/28/2022
SHEET NO.
C3.04



CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:28:26 AM

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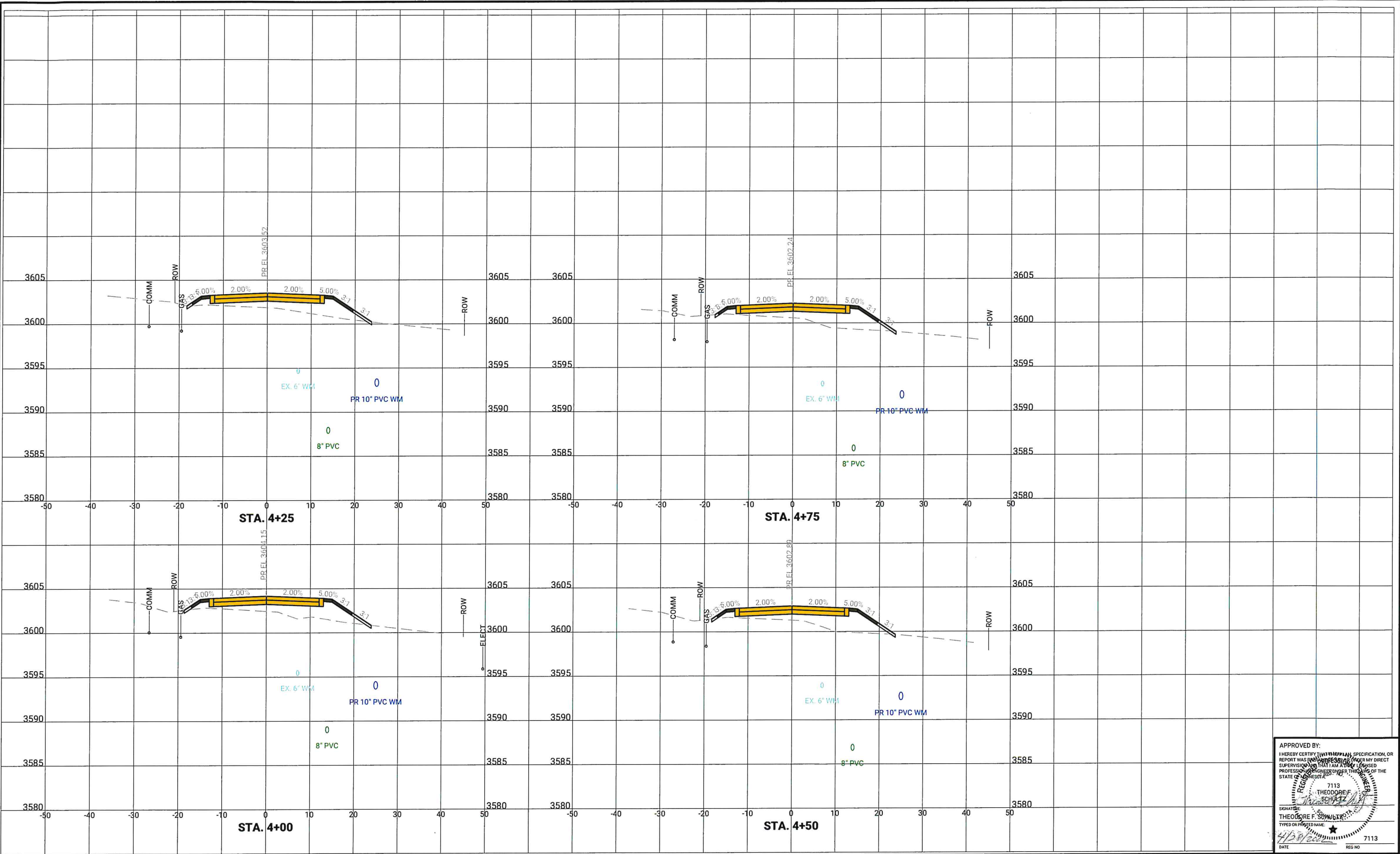


PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

SHEET NO.
C3.05

APPROVED BY:
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7113 THEODORE F. SCHULTZ
SIGNATURE: [Signature]
TYPED OR PRINTED NAME: THEODORE F. SCHULTZ
DATE: 4/28/2022 REG NO: 7113



CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:28:36 AM

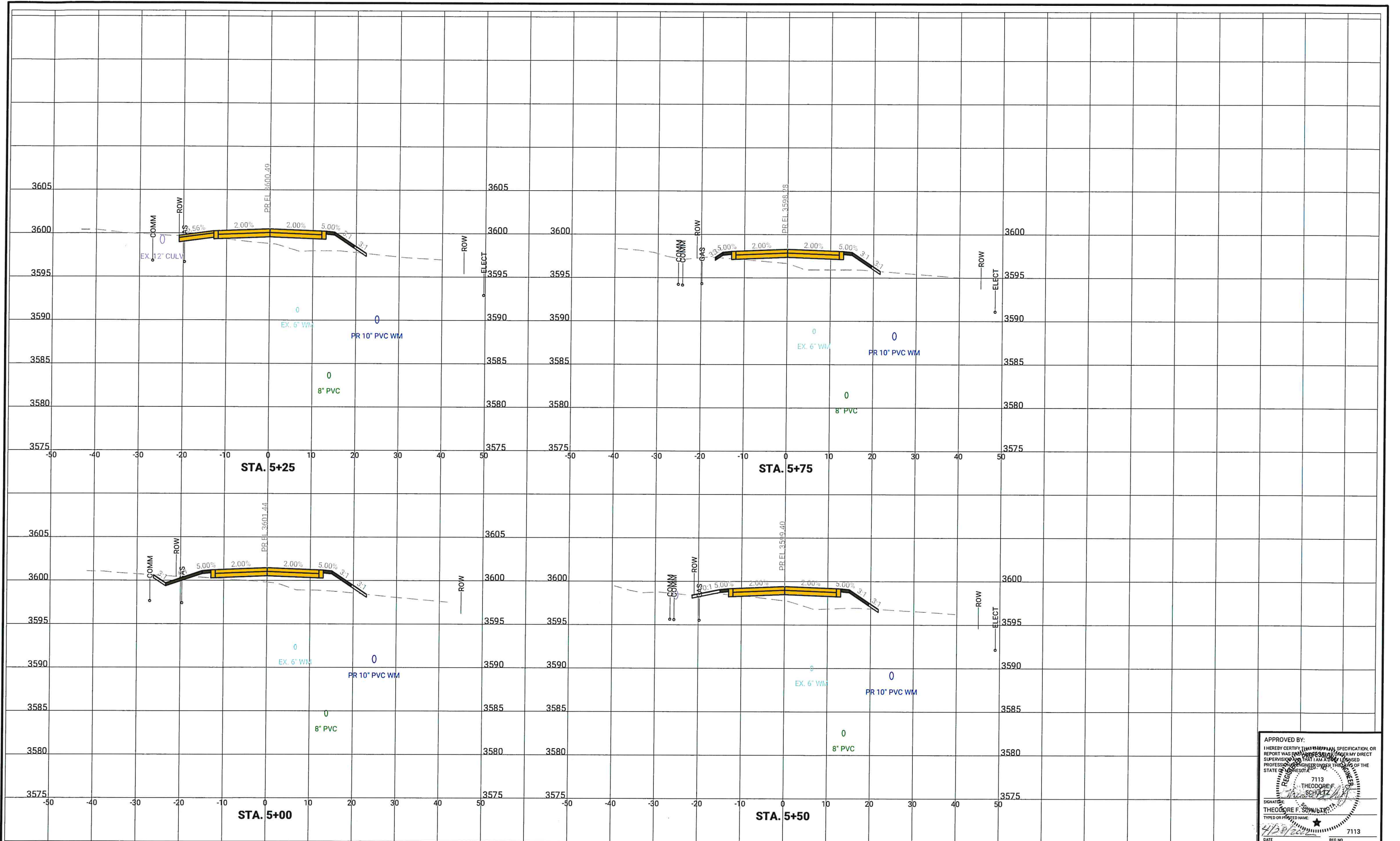
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PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

APPROVED BY:
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7113
THEODORE F. SCHUBERT
DATE: 4/28/2022
REG NO: 7113

SHEET NO.
C3.06



CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:28:46 AM

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PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

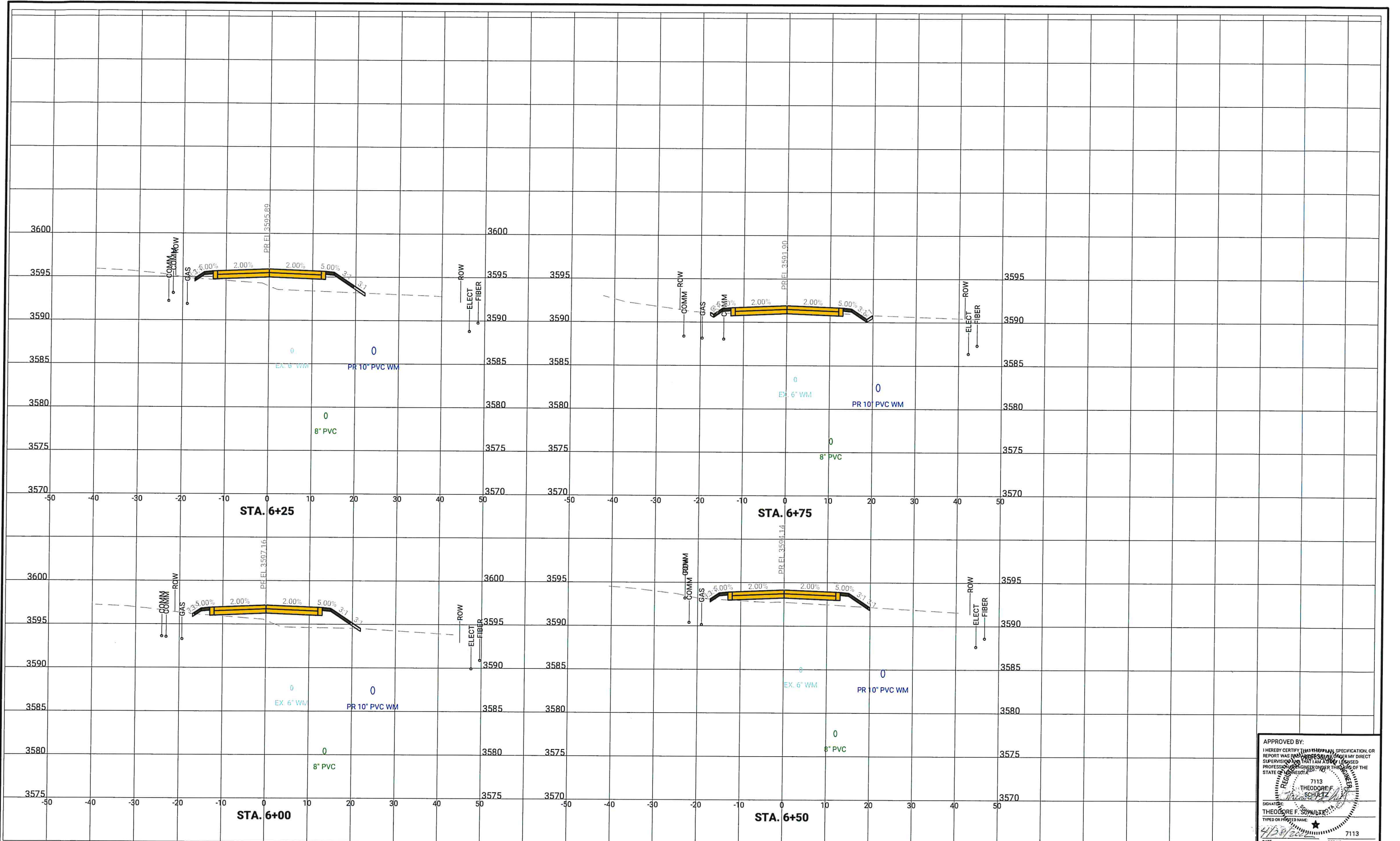
APPROVED BY:
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REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A duly LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF SOUTHERN DAKOTA

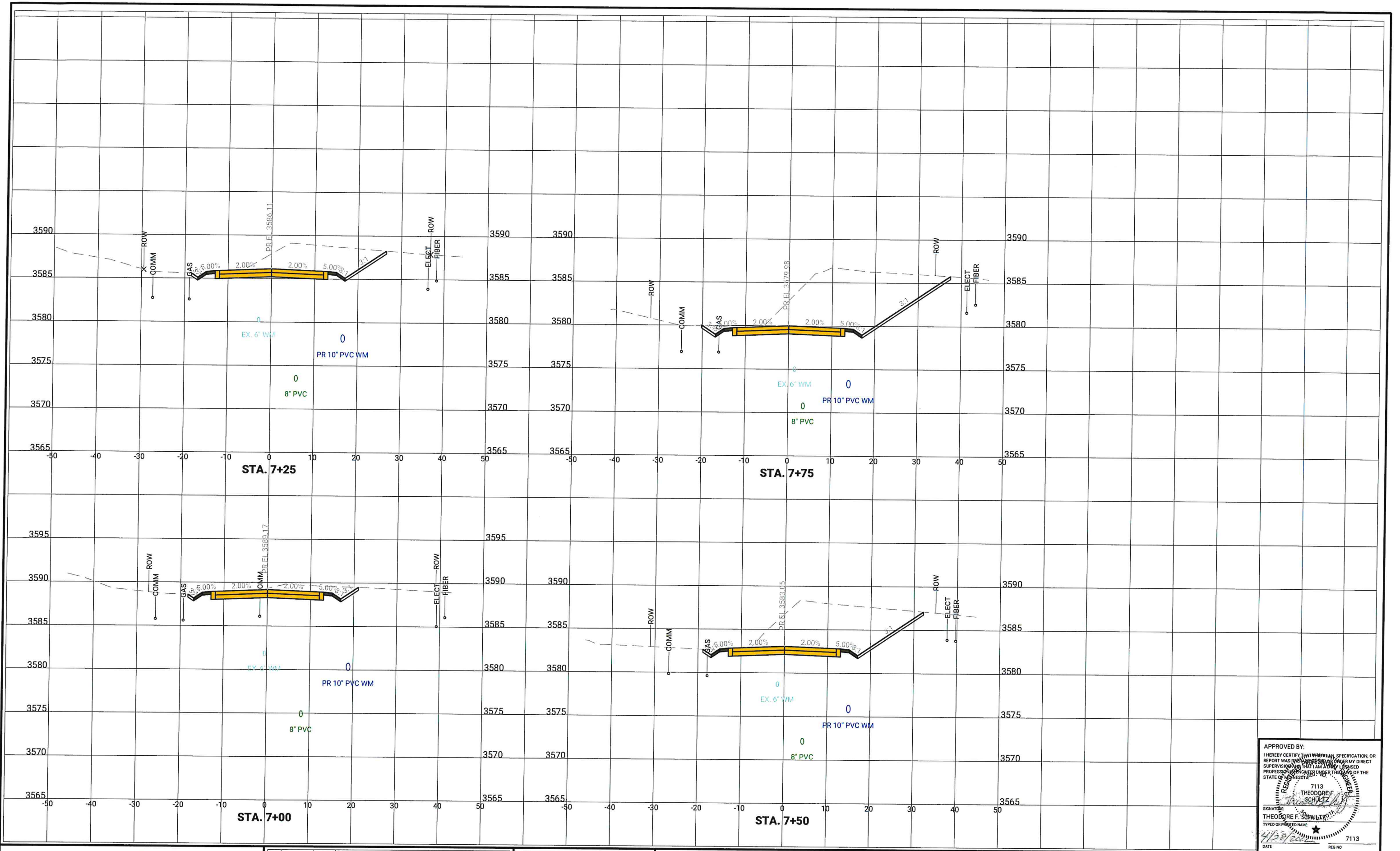
7113
THEODORE F. SCHULTZ
SCHULTZ

THEODORE F. SCHULTZ
TYPED OR PRINTED NAME
4/28/2022
DATE

7113
REG NO

SHEET NO.
C3.07





CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:29:06 AM

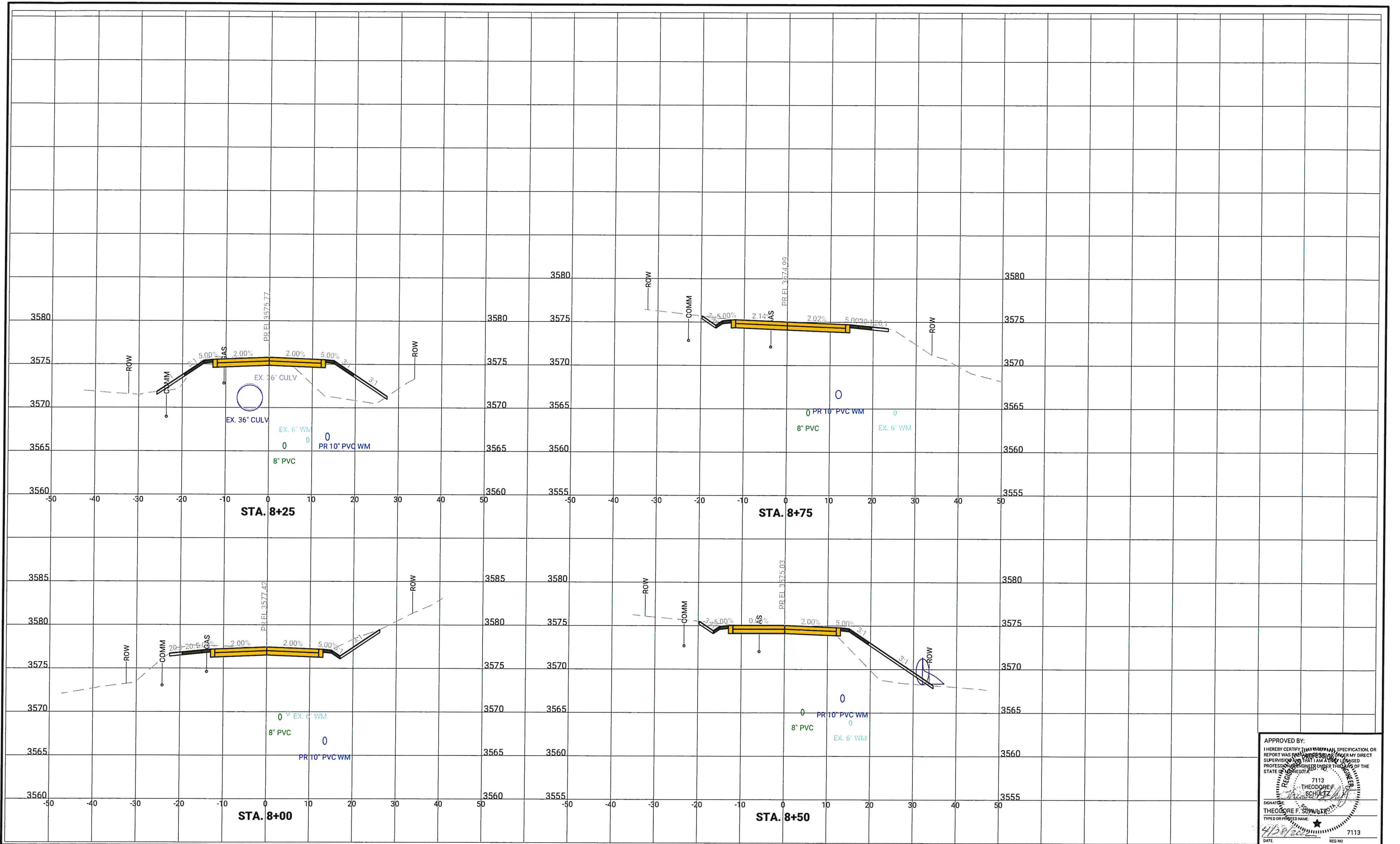
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PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

APPROVED BY:
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REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A duly LICENSED
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF SOUTHERN DISTRICT
7113
THEODORE F. SCHULTZ
SIGNATURE:
TYPED OR PRINTED NAME: THEODORE F. SCHULTZ
DATE: 4/20/2022
REG NO: 7113



APPROVED BY:
I HEREBY CERTIFY THAT THE PLAN, SPECIFICATION, OR
REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
SUPERVISION AND THAT I AM A duly LICENSED
PROFESSIONAL ENGINEER UNDER THE SEAL OF THE
STATE OF SOUTH DAKOTA.
7113
THEODORE F. SCHULTZ
TYPED OR PRINTED NAME
4/20/2022
DATE
REG NO
7113

CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:29:16 AM

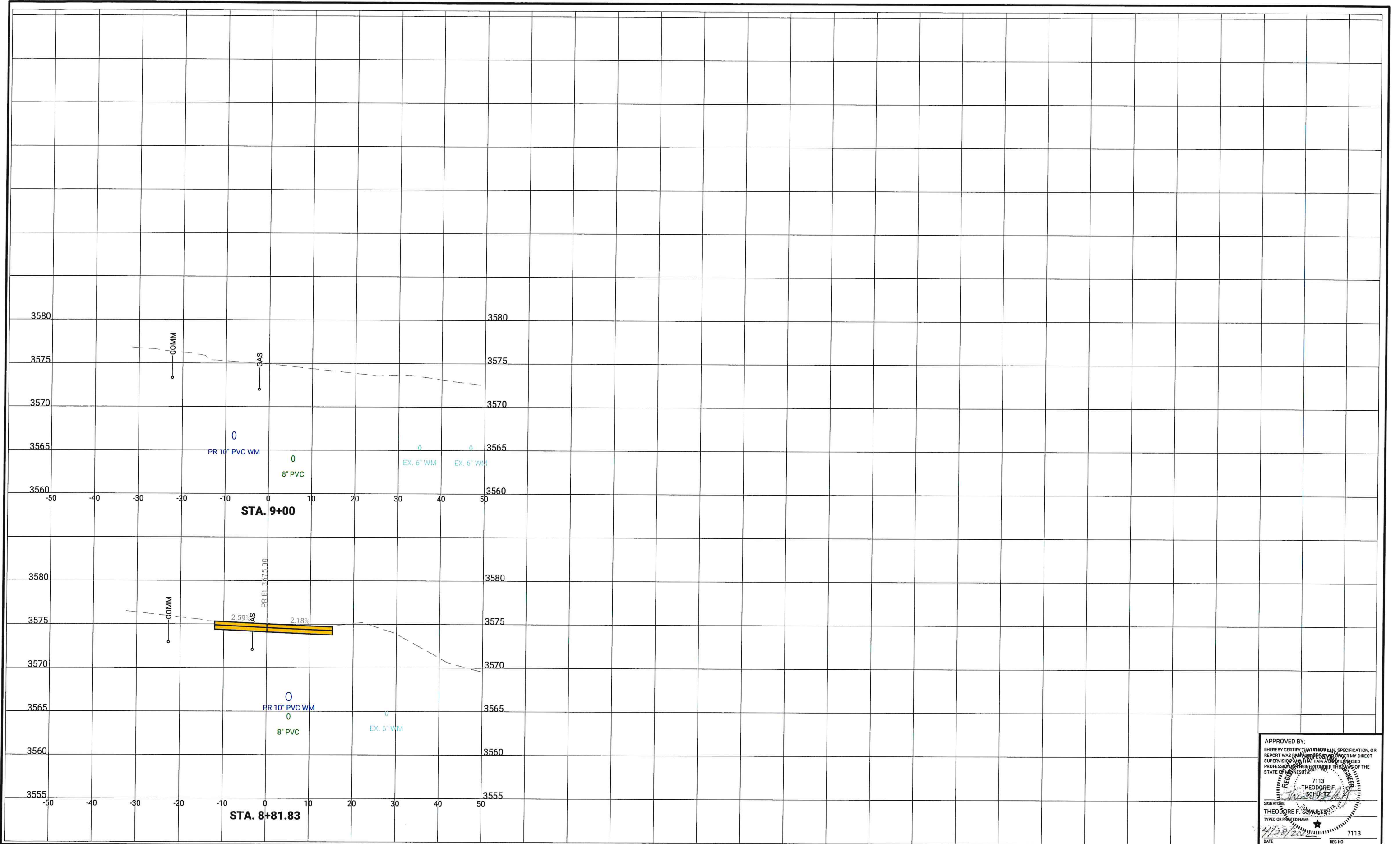
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PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

SHEET NO.
C3.10



APPROVED BY:
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REPORT WAS PREPARED BY ME OR UNDER MY DIRECT
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PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF NEBRASKA.
7113
THEODORE F. SCHULTZ
SIGNATURE
THEODORE F. SCHULTZ
TYPED OR PRINTED NAME
4/28/2022
DATE
7113
REG. NO.

CLIENT PROJECT NO:	PINE GLENN	FOTH PROJECT NO:	21S100.00
DESIGNED BY:	KRM	CHECKED BY:	TFS
LETTING DATE:		CAD DATE:	5/2/2022
		DRAWN BY:	MLH
			8:29:26 AM

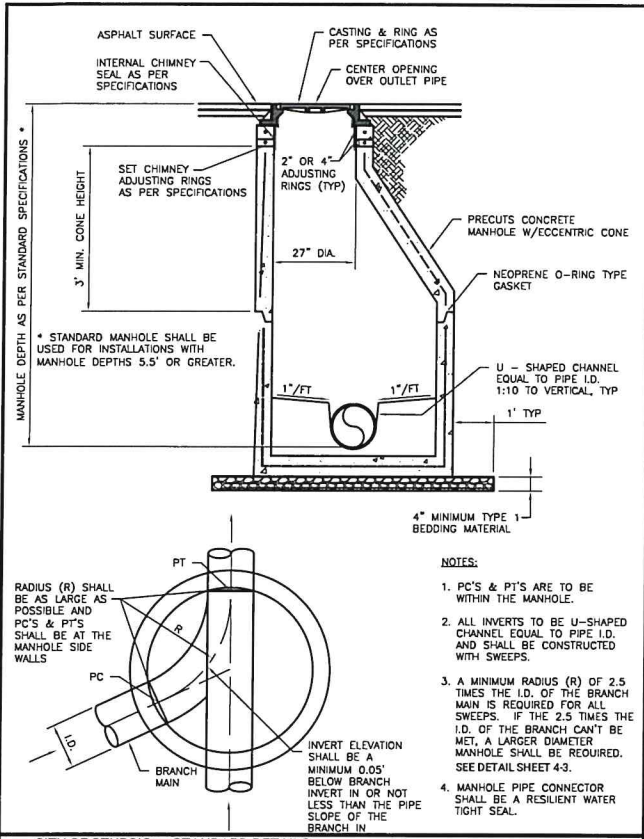
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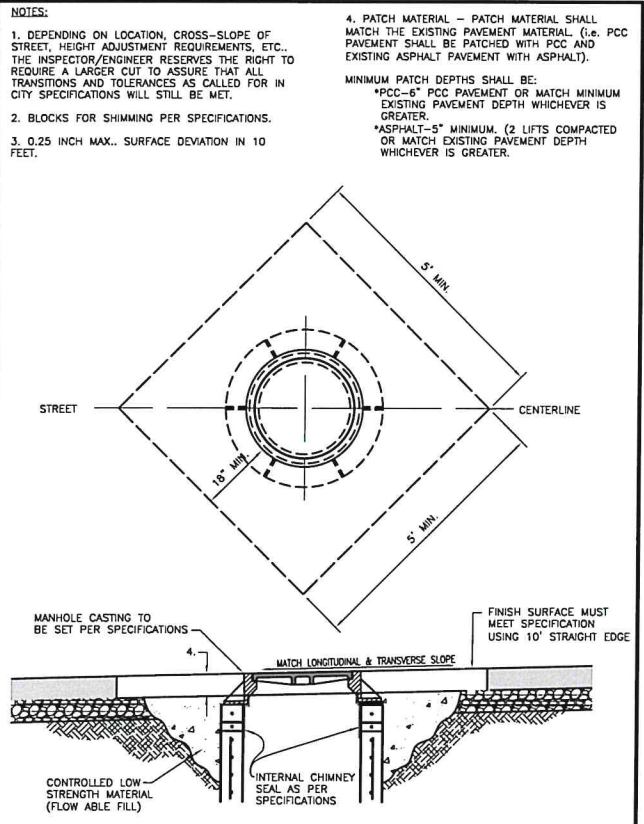
PINE GLENN STREET AND UTILITY IMPROVEMENTS
STURGIS, SOUTH DAKOTA

PINE GLENN RD
CROSS SECTIONS

SHEET NO.
C3.11



CITY OF STURGIS STANDARD DETAILS
STANDARD MANHOLE DETAIL WITH MONOLITHIC BASE (48" & 60")
 DATE: DEC 2016
 4-1

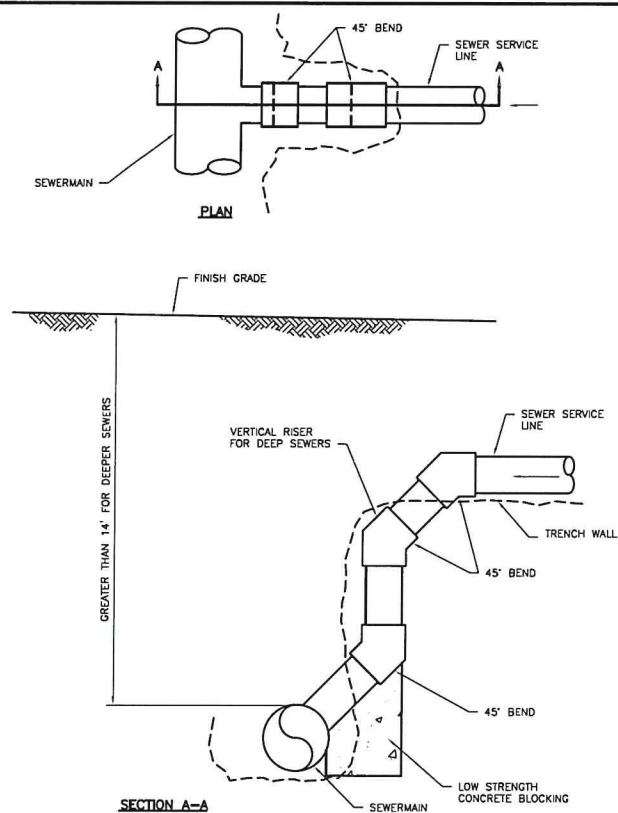


CITY OF STURGIS STANDARD DETAILS
MANHOLE ADJUSTMENT AND PATCH DETAIL
 DATE: DEC 2016
 4-7

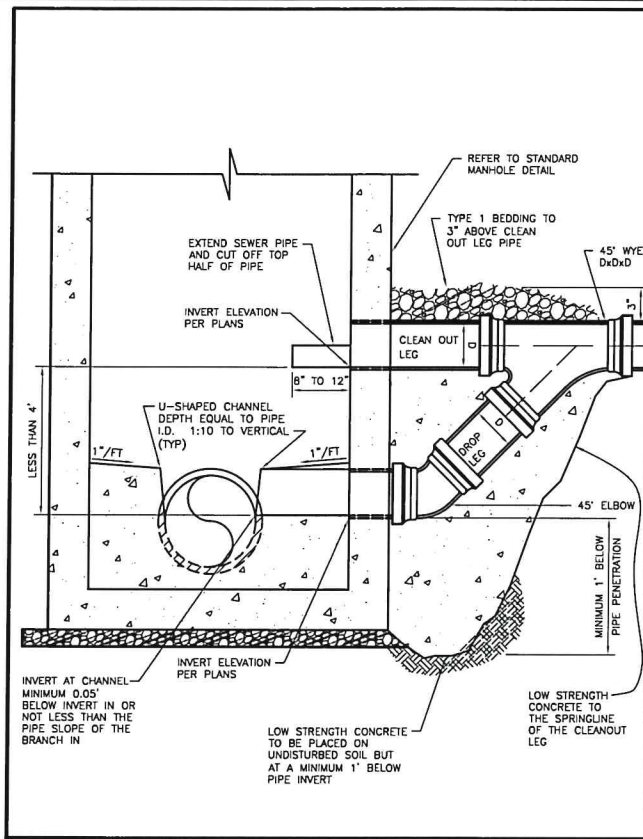
OUTLET PIPE DIA. INCHES	INLET PIPE DIA. INCHES	MIN. ANGLE "A" IN DEGREES				
		48" DIA.	60" DIA.	72" DIA.	84" DIA.	96" DIA.
8	8	80	75	75	75	75
10	8	81	75	75	75	75
10	10	94	80	75	75	75
12	8	81	75	75	75	75
12	10	94	81	75	75	75
12	12	104	91	80	75	75
15	8	83	75	75	75	75
15	10	95	81	75	75	75
15	12	106	92	81	75	75
15	15	117	104	94	84	77

NOTE:
 "A" ANGLES LESS THAN 90° REQUIRE THE DESIGN ENGINEER TO SUBMIT A WRITTEN REQUEST AND JUSTIFICATION FOR A DESIGN EXCEPTION, AND OBTAIN CITY APPROVAL. IN NO CASE SHALL THE "A" ANGLE BE LESS THAN 75°.

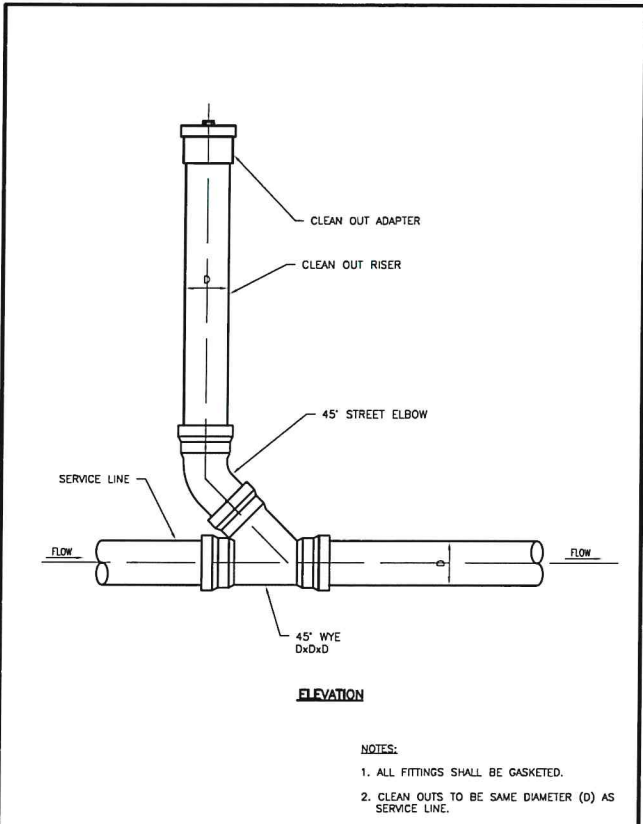
CITY OF STURGIS STANDARD DETAILS
MINIMUM INVERT ANGLES FOR SANITARY MANHOLES
 DATE: DEC 2016
 4-3



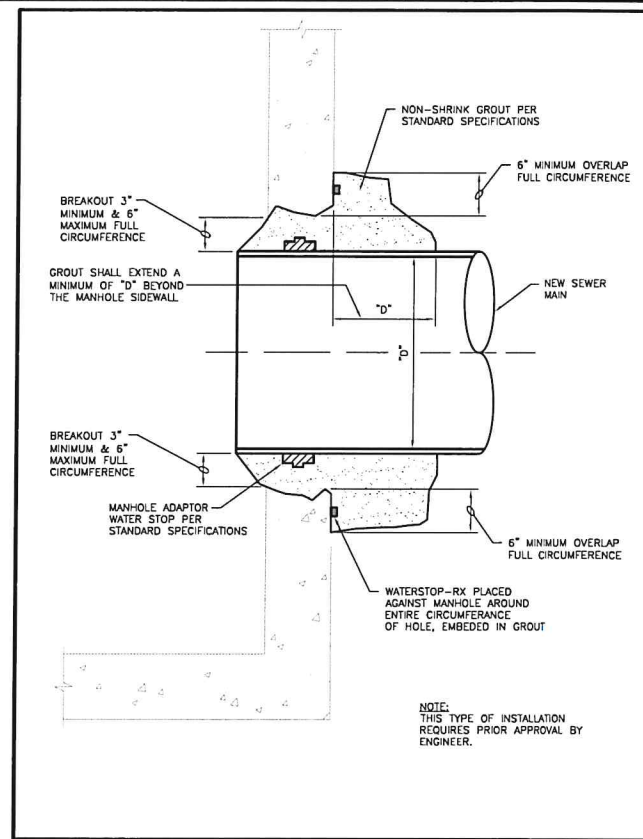
CITY OF STURGIS STANDARD DETAILS
DEEP SANITARY SERVICE CONNECTION
 DATE: DEC 2016
 4-8



CITY OF STURGIS STANDARD DETAILS
STANDARD DROP MANHOLE DETAIL FOR INVERT CHANGES LESS THAN 4'
 DATE: DEC 2016
 4-4



CITY OF STURGIS STANDARD DETAILS
SANITARY SEWER SERVICE CLEAN OUT DETAIL
 DATE: DEC 2016
 4-9



CITY OF STURGIS STANDARD DETAILS
PIPE CONNECTION TO EXISTING MANHOLE (GROUTED CONNECTION)
 DATE: DEC 2016
 4-6

APPROVED BY:
 I HEREBY CERTIFY THAT THE DESIGN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
 7113
 THEODORE F. SCHULTZ
 TYPED OR PRINTED NAME
 DATE: 4/25/2022 REG NO: 7113

CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
 DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
 LETTING DATE: CAD DATE: 5/2/2022 8:29:44 AM

NO	DATE	BY	REVISION DESCRIPTION
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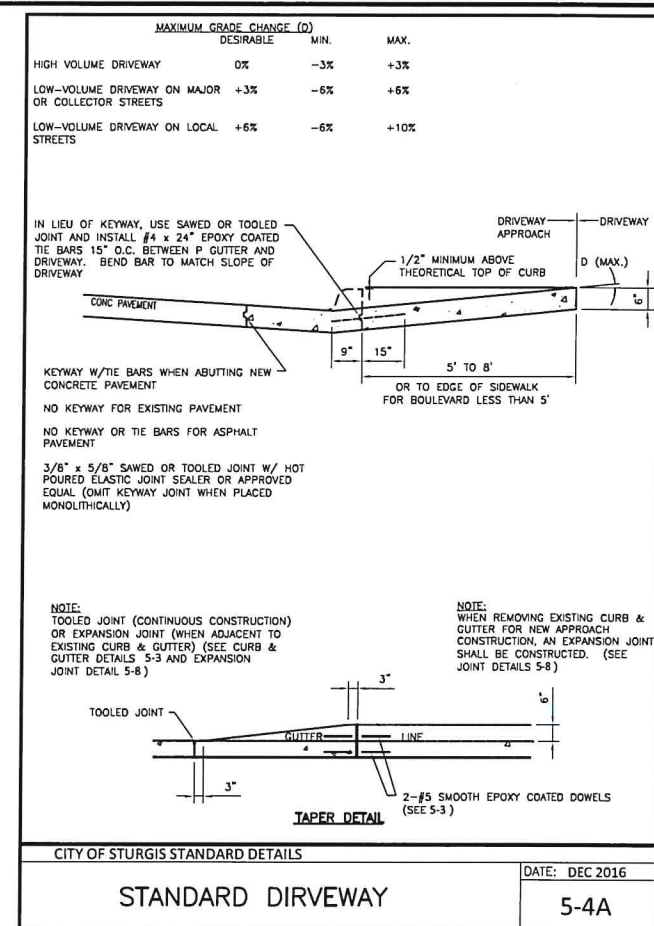
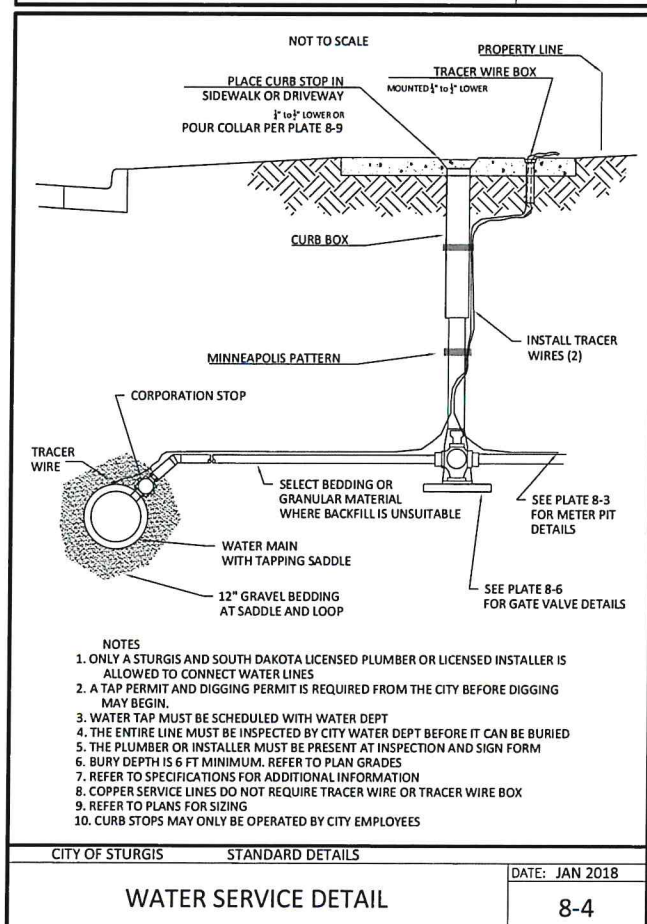
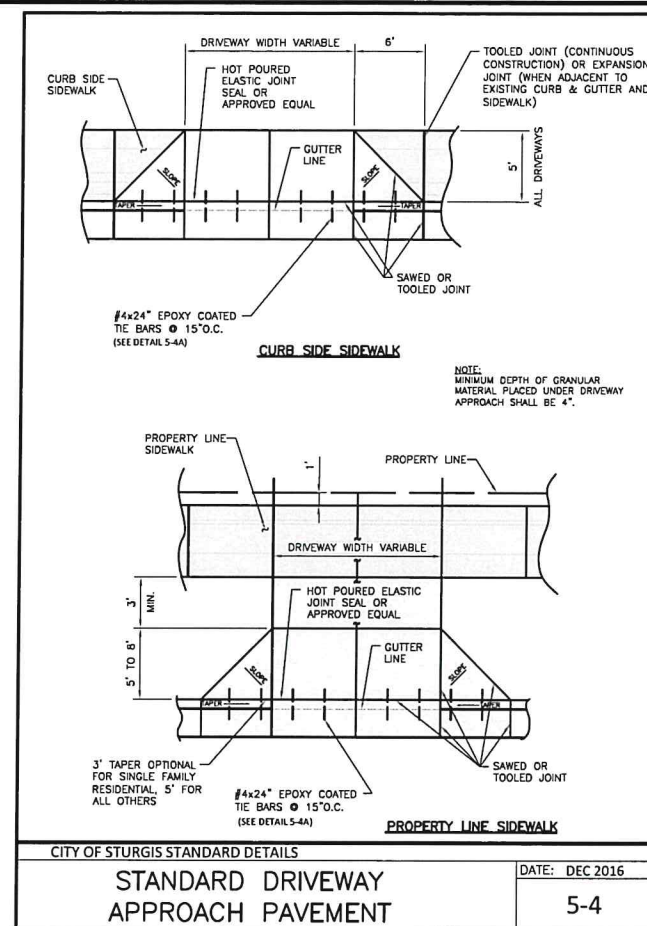
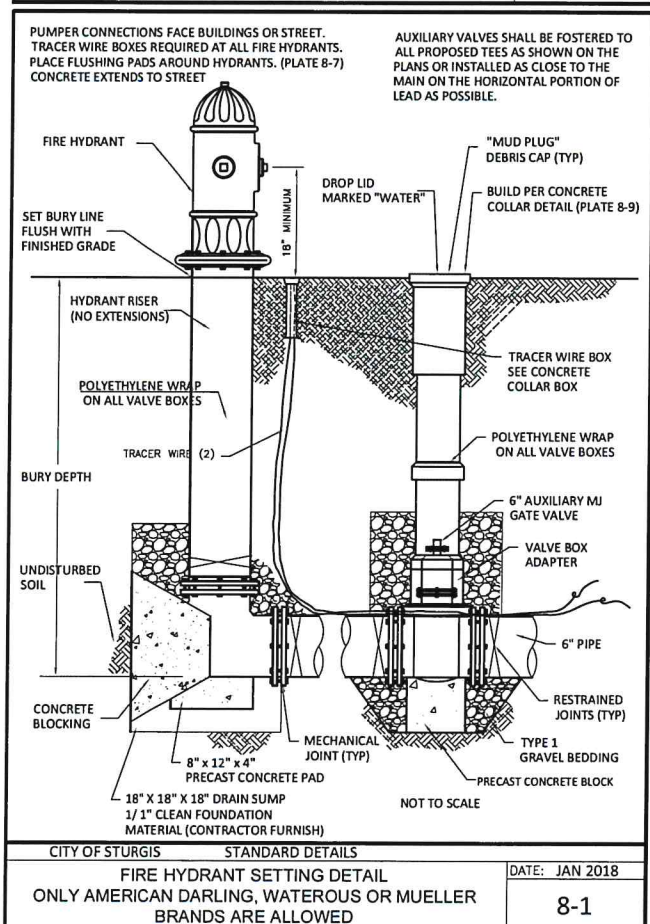
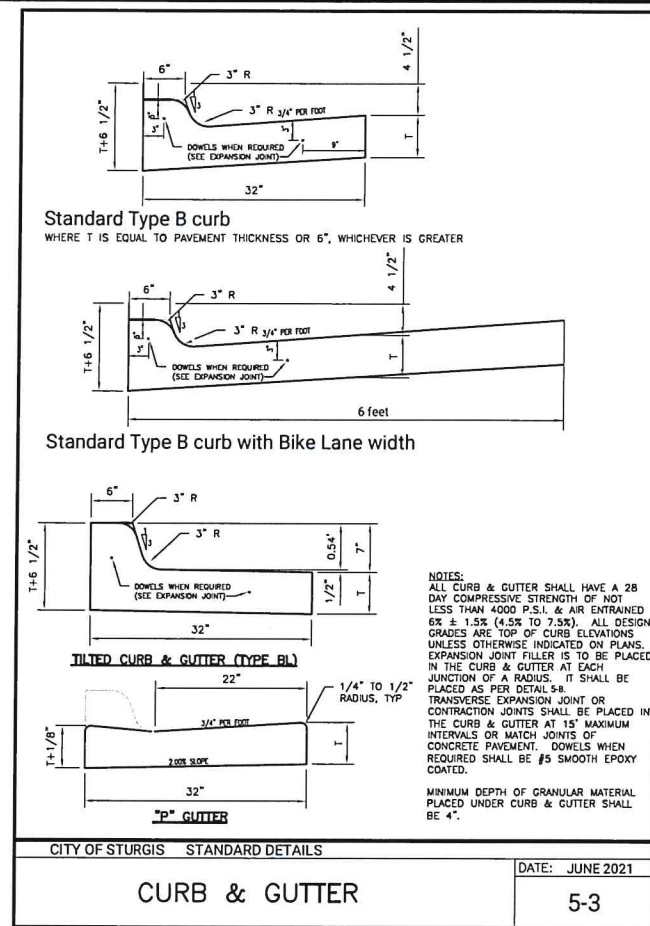
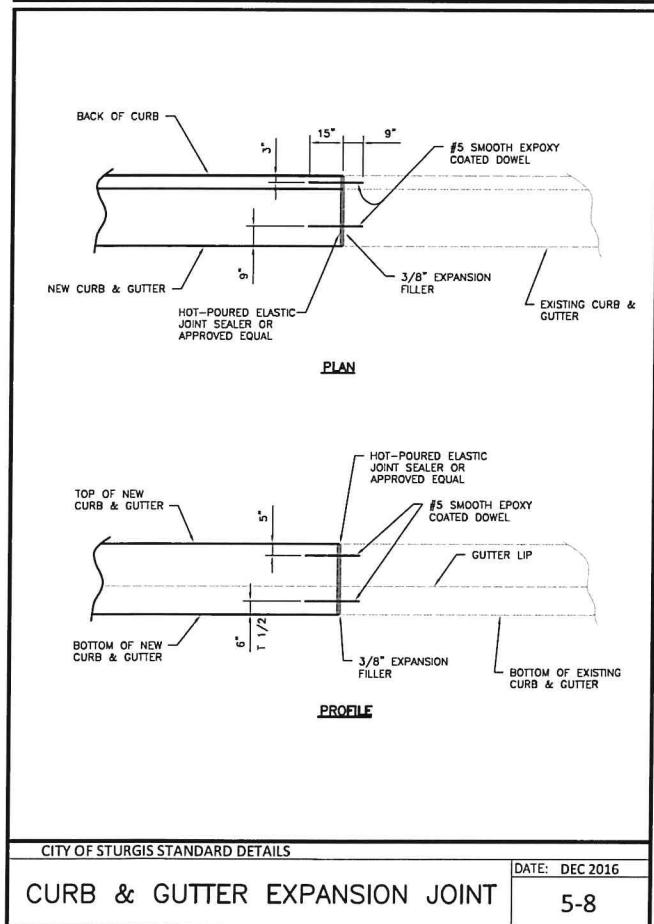
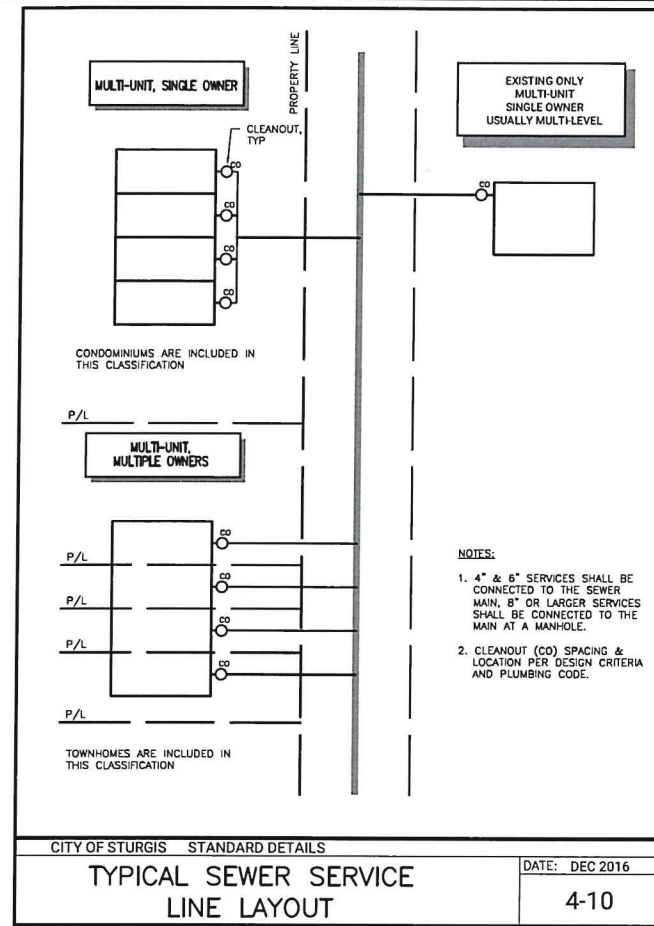


PINE GLENN STREET AND UTILITY IMPROVEMENTS

STURGIS, SOUTH DAKOTA

TYPICAL DETAILS
 DETAILS

SHEET NO.
 C5.01



CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00
DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH
LETTING DATE: CAD DATE: 5/2/2022 8:29:49 AM

NO	DATE	BY	REVISION DESCRIPTION
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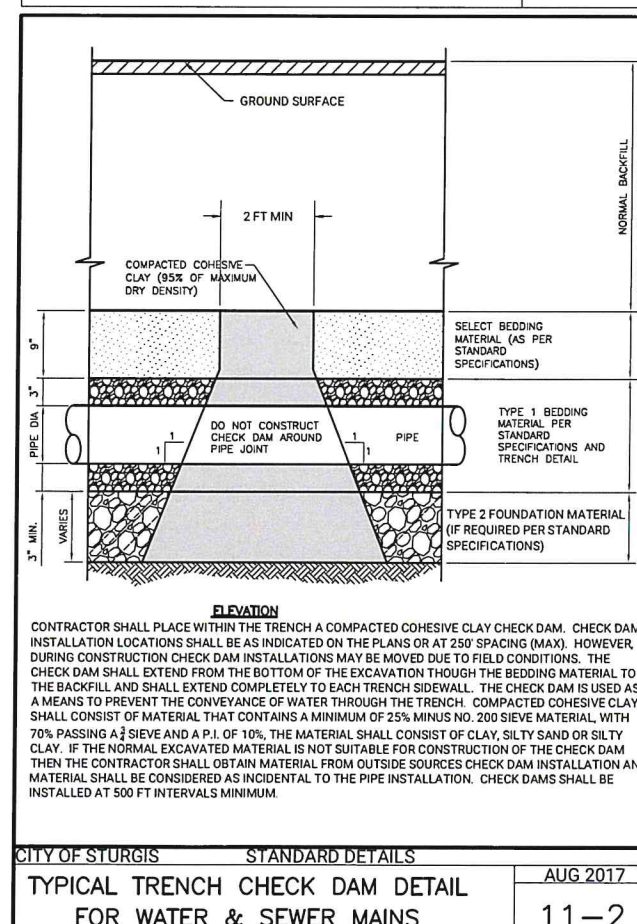
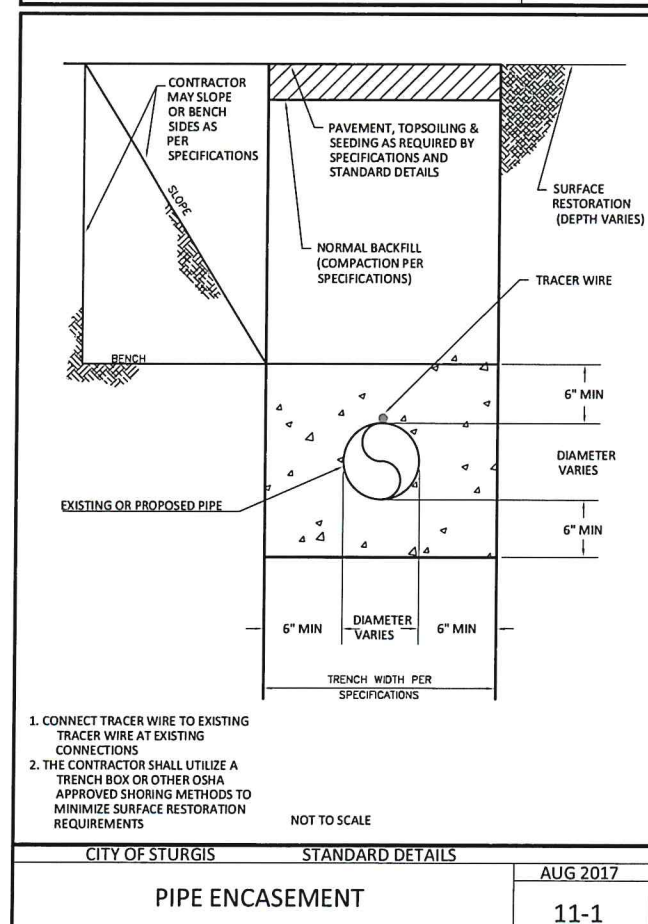
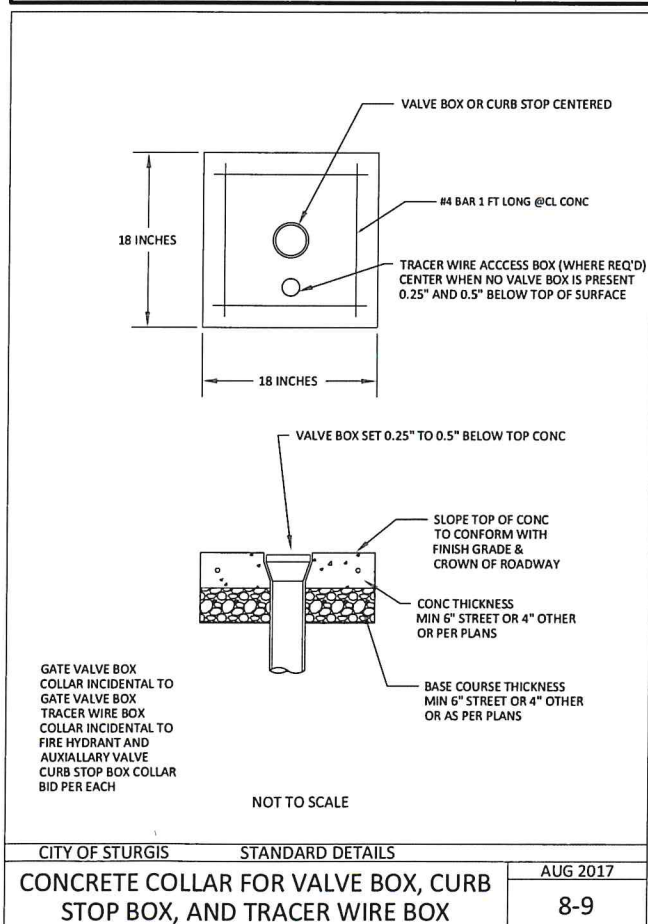
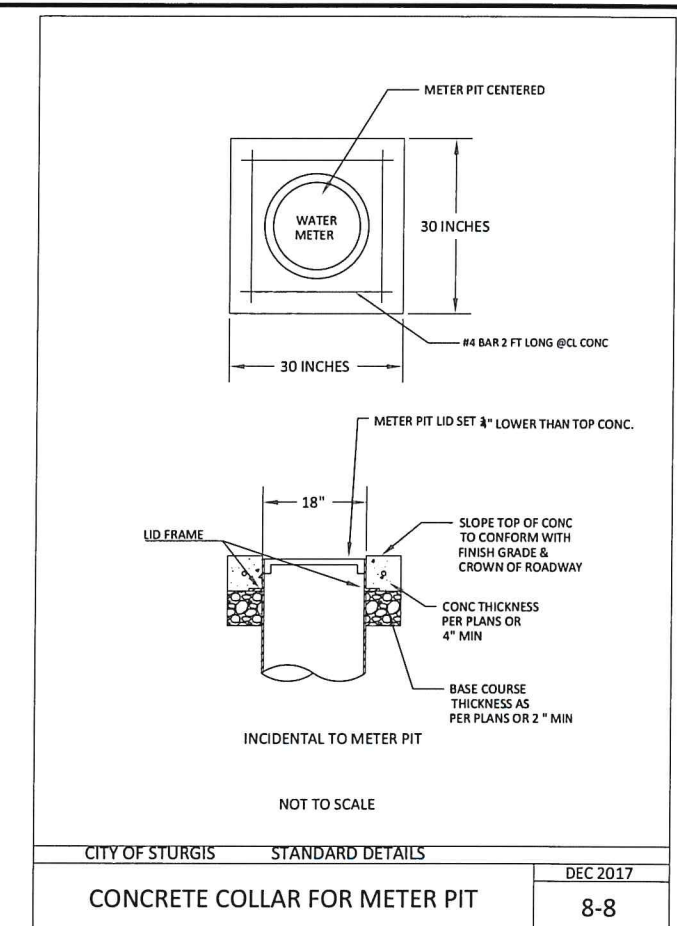
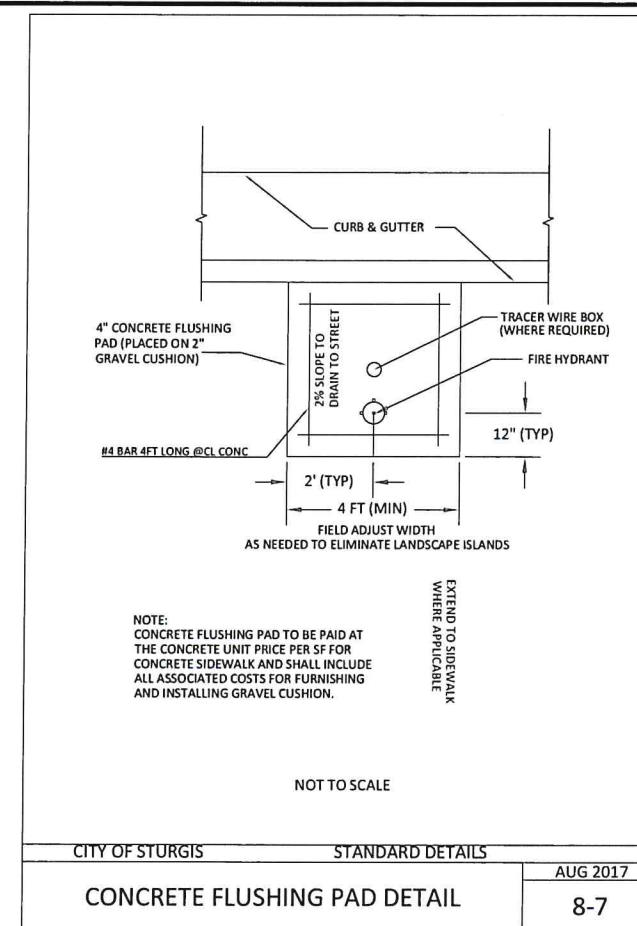
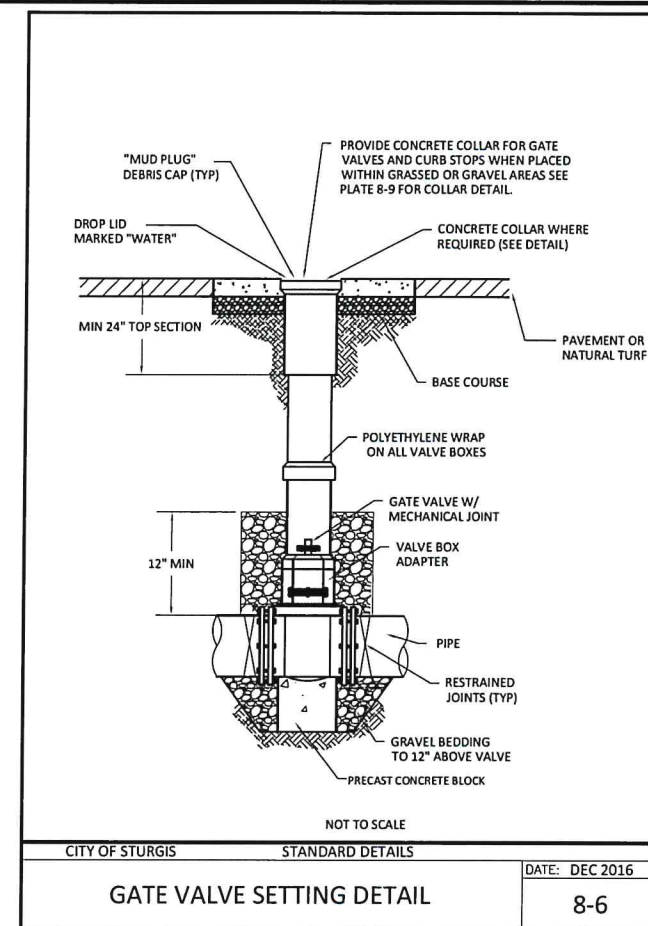
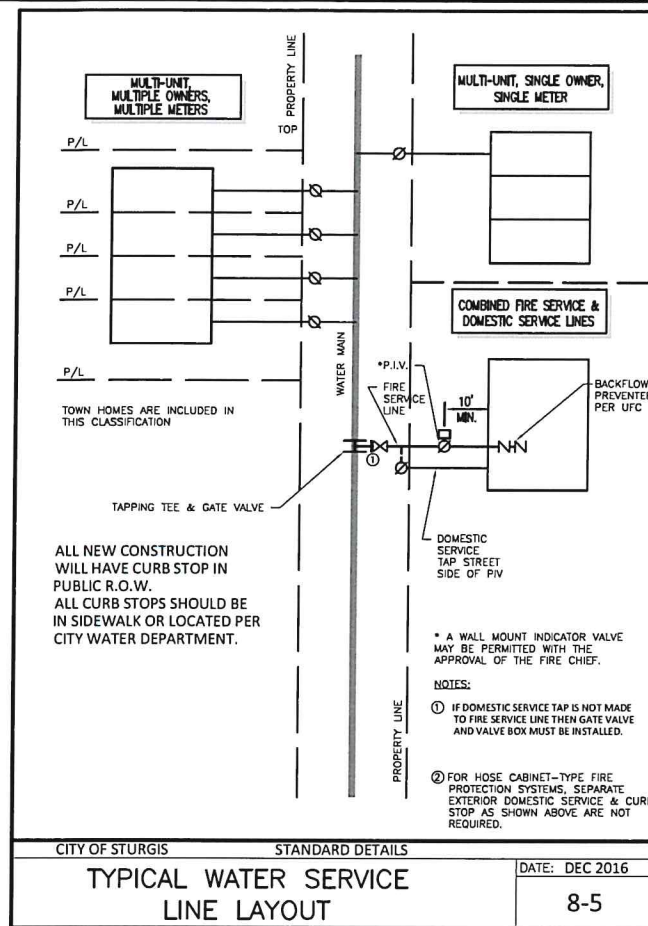
PINE GLENN STREET AND UTILITY IMPROVEMENTS

STURGIS, SOUTH DAKOTA

TYPICAL DETAILS
DETAILS

APPROVED BY:
I HEREBY CERTIFY THAT THE PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY OR UNDER MY DIRECT SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.
7113
THEODORE F. SCHULTZ
DATE: 4/25/2022 REG NO: 7113

SHEET NO.
C5.02



APPROVED BY:

I HEREBY CERTIFY THAT THE ABOVE SPECIFICATION, OR
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PROFESSIONAL ENGINEER UNDER THE LAWS OF THE
STATE OF MISSISSIPPI

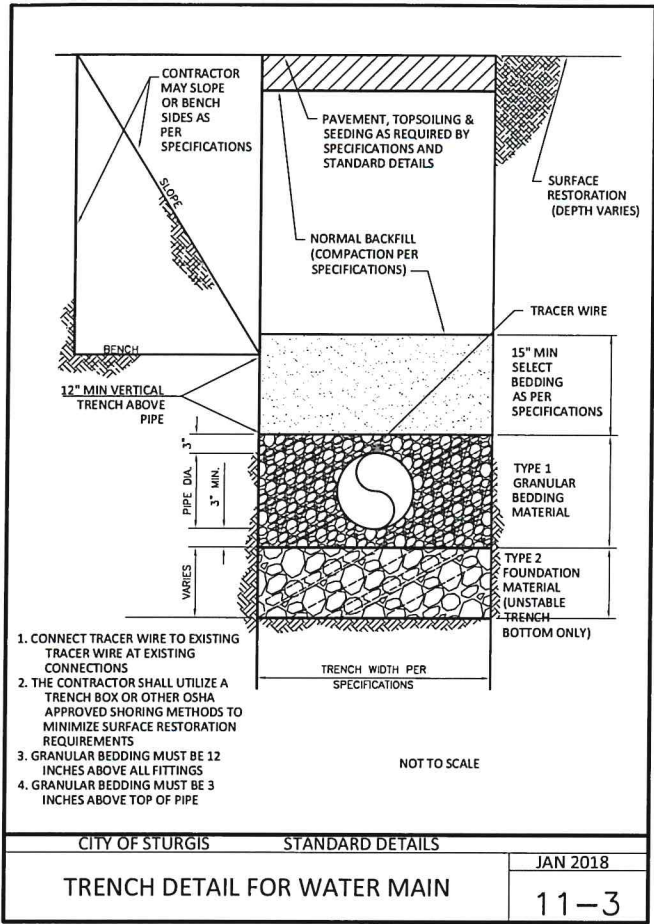
7113
THEODORE F. SCHULTZ

SIGNATURE _____

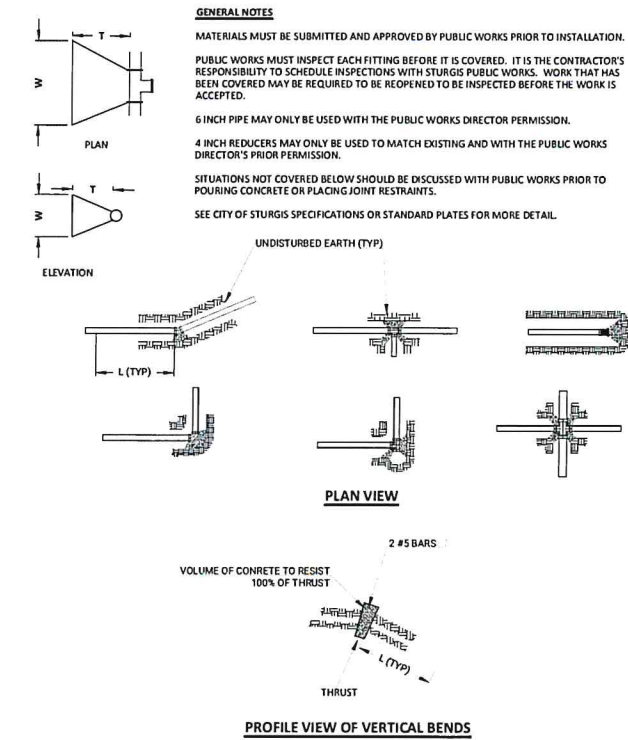
7113
THEODORE F. SCHULTZ

TYPED OR PRINTED NAME _____

7113



THRUST BLOCK TABLES



THRUST BLOCKS

PUBLIC WORKS MUST INSPECT EACH FITTING AND THRUST BLOCK BEFORE IT IS COVERED.

WRAP PIPE FITTING WITH POLYETHYLENE WRAPPING PRIOR TO POURING THRUST BLOCK.

CONCRETE FOR THRUST BLOCKS SHALL BE 3000 PSI

THRUST BLOCKS TABLES ARE BASED ON 150 PSI WATER MAIN AND 2000 PSF SOIL BEARING CAPACITY WITH A FACTOR OF SAFETY OF 2.

MECHANICAL JOINT RESTRAINTS FOR PVC PIPE

PUBLIC WORKS MUST INSPECT EACH JOINT RESTRAINT BEFORE IT IS COVERED.

MECHANICALLY RESTRAINED JOINTS REQUIRED ON ALL FITTINGS INCLUDING VALVES, VERTICAL AND HORIZONTAL BENDS, LOWERINGS, REDUCERS, TEES, CROSSES, PLUGS.

CONCRETE THRUST BLOCK RESTRAINT NOT ALLOWED UNLESS REQUIRED FOR EXISTING CONNECTIONS.

JOINT RESTRAINT TABLES ON PVC WATER MAINS

CLIENT PROJECT NO: PINE GLENN FOTH PROJECT NO: 21S100.00

DESIGNED BY: KRM CHECKED BY: TFS DRAWN BY: MLH

LETTING DATE: CAD DATE: 5/2/2022 8:29:58 AM

NO	DATE	BY	REVISION DESCRIPTION
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PINE GLENN STREET AND UTILITY IMPROVEMENTS

STURGIS, SOUTH DAKOTA

TYPICAL DETAILS
DETAILS



SHEET NO.

C5.04