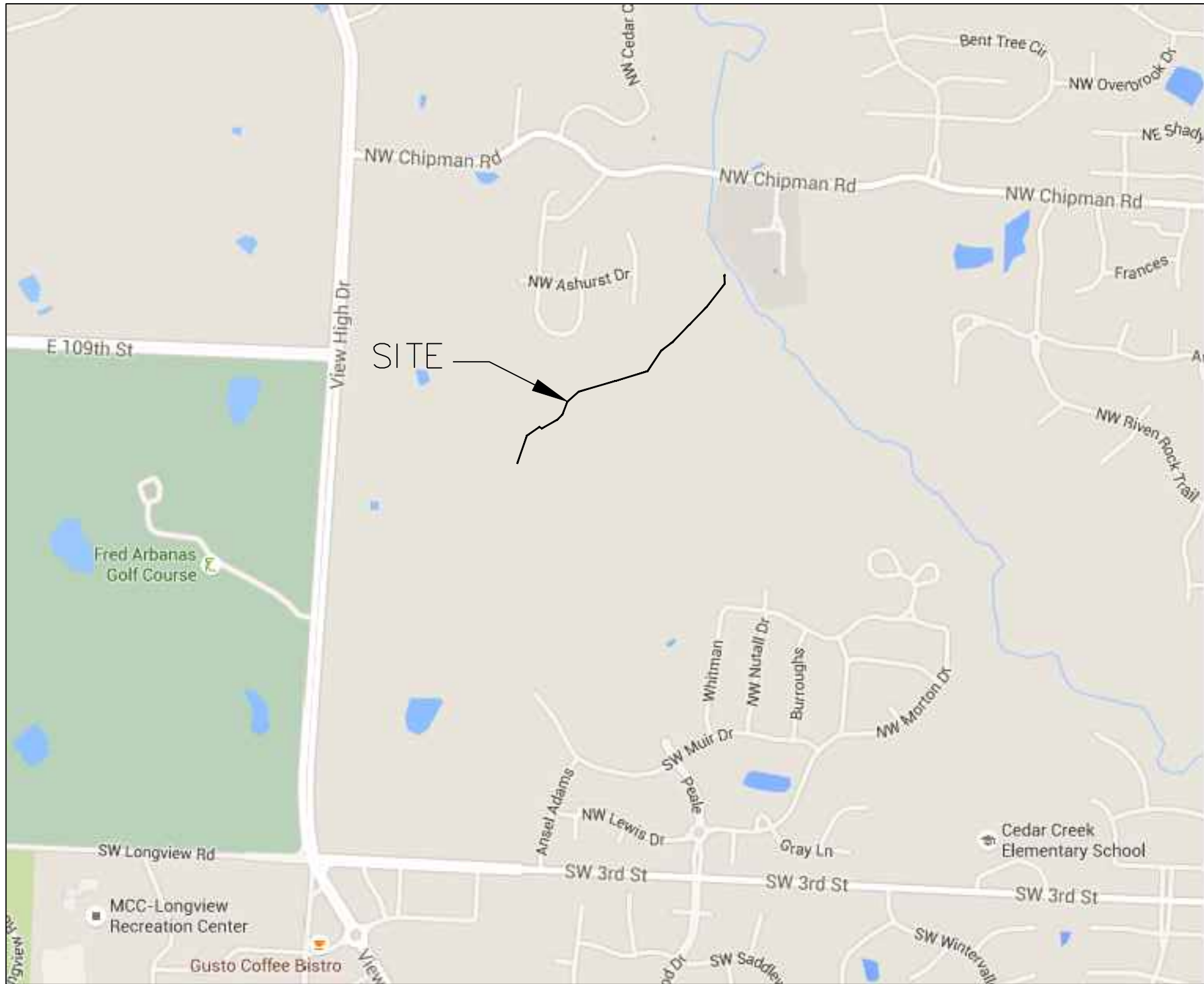
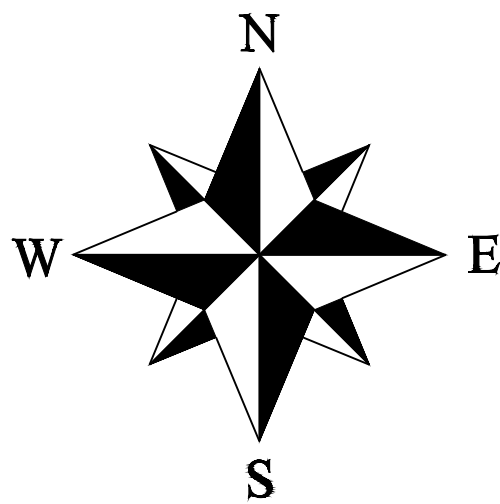


VIEW HIGH PROJECT
OFF-SITE SANITARY SEWER CONSTRUCTION PLANS
PART OF THE NW 1/4, SECTION 03-T.47-R.32
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



SITE LOCATION MAP

GENERAL NOTE:
1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.

UTILITY COMPANIES:

THE FOLLOWING LIST OF UTILITY COMPANIES IS PROVIDED FOR INFORMATION ONLY. WE DO NOT OFFER ANY GUARANTEE OR WARRANTY THAT THIS LIST IS COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES THAT MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION AND VERIFYING THE ACTUAL LOCATION OF EACH UTILITY LINE. THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH PROPOSED IMPROVEMENTS.

KCP&L ~ 298-1196
MISSOURI GAS ENERGY ~ 756-5261
SOUTHWESTERN BELL TELEPHONE ~ 761-5011
COMCAST CABLE ~ 795-1100
WILLIAMS PIPELINE ~ 422-6300
CITY OF LEE'S SUMMIT PUBLIC WORKS ~ 969-1800
CITY OF LEE'S SUMMIT PUBLIC WORKS INSPECTIONS ~ 969-1800
CITY OF LEE'S SUMMIT WATER UTILITIES ~ 969-1900
MISSOURI ONE CALL (DIG RITE) ~ 1-800-344-7483

INDEX OF SHEETS:

- C.001 ~ COVER SHEET
- C.050 ~ ESC PHASE 1 - Pre Clearing Plan
- C.051 ~ ESC PHASE 2 - Inactive Area Stabilization Plan
- C.052 ~ ESC PHASE 3 - Final Restoration Plan
- C.200 ~ STREAM RESTORATION PLAN
- C.201 ~ ENCASEMENT SPOT GRADES
- C.202 ~ CROSS SECTION PLAN
- C.203 ~ CROSS SECTION PROFILE
- C.204 ~ CROSS SECTION PROFILE
- C.205 ~ CROSS SECTION PROFILE
- C.206 ~ CROSS SECTION PROFILE
- C.401 ~ SANITARY SEWER GENERAL LAYOUT
- C.402 ~ SANITARY LINE PLAN & PROFILE
- C.403 ~ SANITARY LINE PLAN & PROFILE
- C.404 ~ SANITARY LINE PLAN & PROFILE
- C.405 ~ SANITARY DETAILS
- C.406 ~ STREAM BANK RESTORTATION DETAILS
- C.407 ~ STREAM BANK RESTORTATION DETAILS

LEGEND:

- B/L ~ BUILDING SET-BACK
- C/A ~ COMMON AREA
- D/E ~ DRAINAGE EASEMENT
- FND. ~ FOUND
- L/E ~ LANDSCAPE EASEMENT
- L.N.A. ~ LIMITS OF NO ACCESS
- R/W ~ RIGHT OF WAY
- SAN ~ SANITARY SEWER LINE
- S/W ~ SIDEWALK
- U/E ~ UTILITY EASEMENT
- W ~ WATER LINE
- ST ~ STORM SEWER LINE

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED AND THESE PLANS PREPARED IN ACCORDANCE WITH THE CURRENT DESIGN CRITERIA OF THE CITY OF LEE'S SUMMIT, MISSOURI AND THE STATE OF MISSOURI. I FURTHER CERTIFY THAT THESE PLANS WERE DESIGNED IN ACCORDANCE TO AASHTO STANDARDS.

CITY OF LEE'S SUMMIT, MISSOURI

APPROVED: DATE: _____

BY: _____
CITY ENGINEER

CONSTRUCTION AND DESIGN NOTES:

SANITARY SEWERS:

- SANITARY SEWER PIPE SHALL BE POLY VINYL CHLORIDE (PVC), SDR-26, UNLESS NOTED OTHERWISE IN THESE PLANS.
- HOUSE SEWER LATERALS SHALL BE 4 INCH PVC, SDR-26. LATERALS SHALL BE CONSTRUCTED USING A TOP ORIENTED "WYE" AT THE SEWER STATION SHOWN IN THESE PLANS. LATERALS SHALL BE LAID AT A GRADE OF 2.0% FROM THE SEWER MAIN TO THE STREET RIGHT-OF-WAY LINE OR EASEMENT LINE AS REPRESENTED BY THE LATERAL LENGTH SHOWN IN THESE PLANS. THE ELEVATION SHOWN FOR THE END OF THE LATERAL IN THESE PLANS IS APPROXIMATE. THE ACTUAL ELEVATION SHALL BE DETERMINED BY THE FLOW LINE ELEVATION OF THE SEWER MAIN, THE FITTINGS AND GRADE OF THE SEWER LATERAL.
- THE CONTRACTOR SHALL MAINTAIN A LOG OF THE "AS BUILT" STATION AND LENGTH OF EACH HOUSE LATERAL AND SHALL PROVIDE ENGINEERING SOLUTIONS, L.L.C. WITH A COPY OF SAID LOG UPON COMPLETION OF SEWER CONSTRUCTION.
- ALL MANHOLES INSTALLED IN THE STREET RIGHT-OF-WAY SHALL BE FINISHED 1/2" PER FOOT ABOVE THE NEAREST ADJACENT BACK OF CURB
- FILL AREAS SHALL HAVE 3 FEET OF COMPACTED FILL IN PLACE PRIOR TO TRENCHING
- A TRENCH CHECK CONSISTING OF FLOWABLE FILL MUST BE INSTALLED ON EVERY PRIVATE LATERAL.

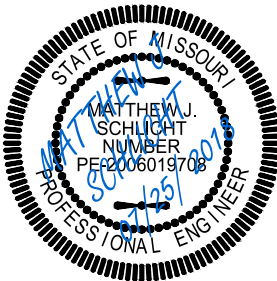
"AS-BUILT"

900.10
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View High Project
Lee's Summit, Jackson County, Missouri

Project: View High Drive
Issue Date: October, 2016

Cover Sheet
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri

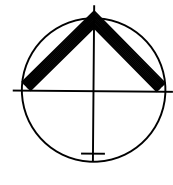


Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25526

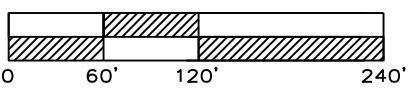
REVISIONS

7/2/18 ~ As-Built





North



0 60' 120' 240'

PRE CLEARING PLAN

SCALE: 1" = 120'

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

 SILT FENCE PROTECTION
TO BE MAINTAINED BY CONTRACTOR

LEGEND			
PHASE 1 SILT FENCE	— SF-1 —	— SF-1 —	
PHASE 2 SILT FENCE	— SF-2 —	— SF-2 —	

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 511.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

ENGINEERING SOLUTIONS

ENGINEERING & SURVEYING

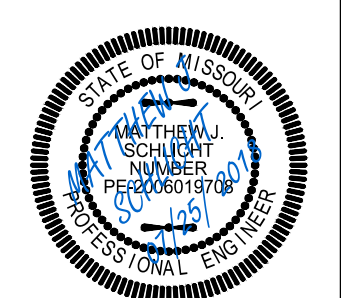
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849

Professional Registration
Missouri
Engineering 2005002188-D
Surveying 200500019-D
Kansas
Engineering E-1895
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October, 2016

Pre-Clearing Plan
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25526

REVISIONS
7/2/18 - As-Built

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EROSION CONTROL DESCRIPTION:

1.) SILT FENCE SHALL BE PLACED AT THE PERIMETER OF THE GRADING AND AT INTERMEDIATE AREAS THROUGHOUT THE SITE AS SHOWN ON THE PLAN. INLET SEDIMENT TRAPS SHALL BE PLACED SURROUNDING ALL STORM INLETS

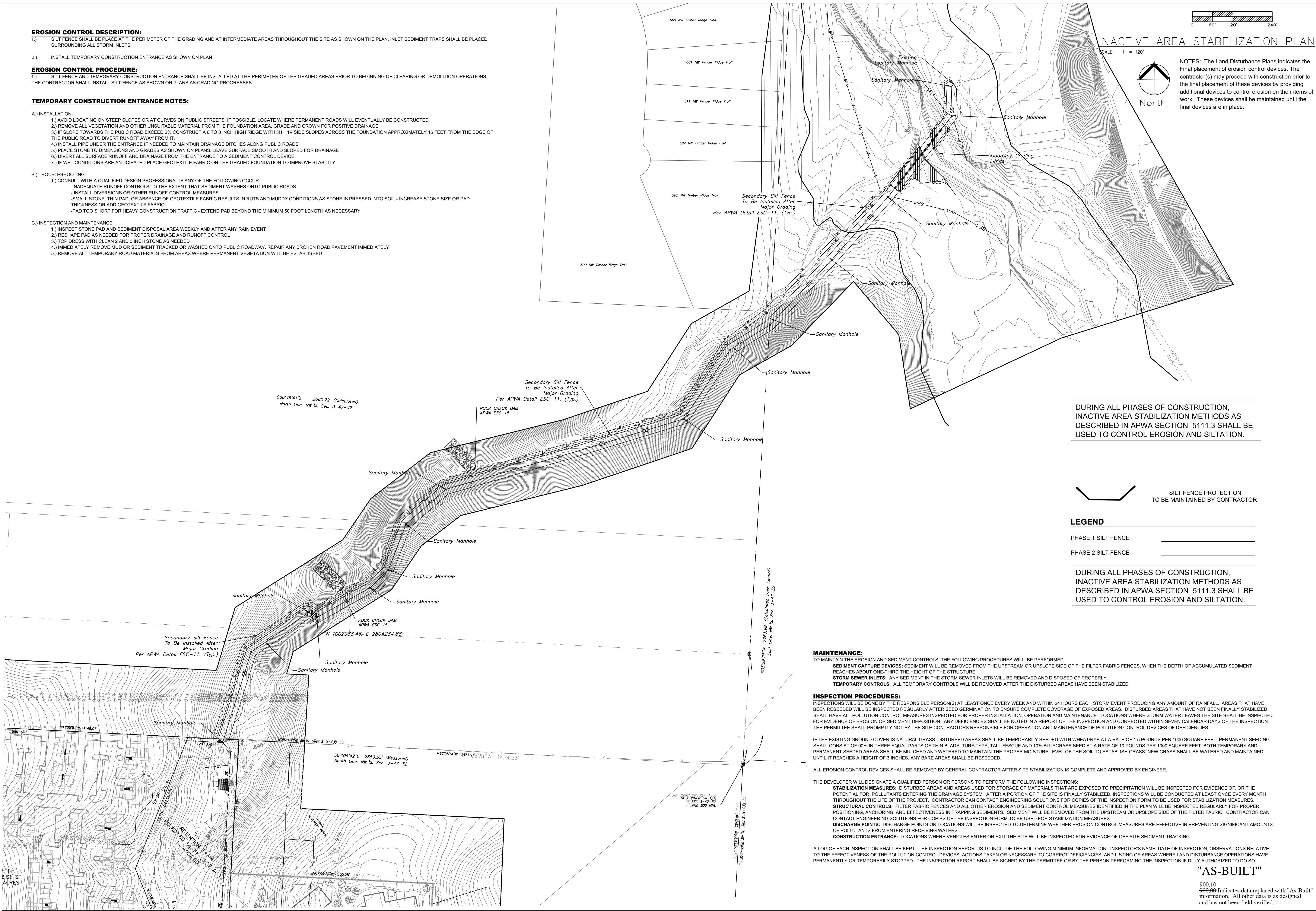
2.) INSTALL TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON PLAN

EROSION CONTROL PROCEDURE:

1.) SILT FENCE AND TEMPORARY CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE PERIMETER OF THE GRADED AREAS PRIOR TO BEGINNING OF CLEARING OR DEMOLITION OPERATIONS. THE CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON PLANS AS GRADING PROGRESSES.

TEMPORARY CONSTRUCTION ENTRANCE NOTES:

- A.) INSTALLATION
- 1.) AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC STREETS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED
 - 2.) REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE AND CROWN FOR POSITIVE DRAINAGE
 - 3.) IF SLOPE TOWARDS THE PUBIC ROAD EXCEED 2% CONSTRUCT A 6 TO 8 INCH HIGH RIDGE WITH 3H : 1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
 - 4.) INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS
 - 5.) PLACE STONE TO DIMENSIONS AND GRADES AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE
 - 6.) DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE
 - 7.) IF WET CONDITIONS ARE ANTICIPATED PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY
- B.) TROUBLESHOOTING
- 1.) CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
 - INADEQUATE RUNOFF CONTROLS TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROADS
 - INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES
 - SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL - INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC
 - PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC - EXTEND PAD BEYOND THE MINIMUM 50 FOOT LENGTH AS NECESSARY
- C.) INSPECTION AND MAINTENANCE
- 1.) INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER ANY RAIN EVENT
 - 2.) RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL
 - 3.) TOP DRESS WITH CLEAN 2 AND 3 INCH STONE AS NEEDED
 - 4.) IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADWAY. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY
 - 5.) REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED



DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

SILT FENCE PROTECTION TO BE MAINTAINED BY CONTRACTOR

LEGEND

PHASE 1 SILT FENCE

PHASE 2 SILT FENCE

DURING ALL PHASES OF CONSTRUCTION, INACTIVE AREA STABILIZATION METHODS AS DESCRIBED IN APWA SECTION 5111.3 SHALL BE USED TO CONTROL EROSION AND SILTATION.

MAINTENANCE:

TO MAINTAIN THE EROSION AND SEDIMENT CONTROLS, THE FOLLOWING PROCEDURES WILL BE PERFORMED:

SEDIMENT CAPTURE DEVICES: SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC FENCES, WHEN THE DEPTH OF ACCUMULATED SEDIMENT REACHES ABOUT ONE-THIRD THE HEIGHT OF THE STRUCTURE.

STORM SEWER INLETS: ANY SEDIMENT IN THE STORM SEWER INLETS WILL BE REMOVED AND DISPOSED OF PROPERLY.

TEMPORARY CONTROLS: ALL TEMPORARY CONTROLS WILL BE REMOVED AFTER THE DISTURBED AREAS HAVE BEEN STABILIZED.

INSPECTION PROCEDURES:

INSPECTIONS WILL BE DONE BY THE RESPONSIBLE PERSON(S) AT LEAST ONCE EVERY WEEK AND WITHIN 24 HOURS EACH STORM EVENT PRODUCING ANY AMOUNT OF RAINFALL. AREAS THAT HAVE BEEN RESEEDED WILL BE INSPECTED REGULARLY AFTER SEED GERMINATION TO ENSURE COMPLETE COVERAGE OF EXPOSED AREAS. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED SHALL HAVE ALL POLLUTION CONTROL MEASURES INSPECTED FOR PROPER INSTALLATION, OPERATION AND MAINTENANCE. LOCATIONS WHERE STORM WATER LEAVES THE SITE SHALL BE INSPECTED FOR EVIDENCE OF EROSION OR SEDIMENT DEPOSITION. ANY DEFICIENCIES SHALL BE NOTED IN A REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE INSPECTION. THE PERMITTEE SHALL PROMPTLY NOTIFY THE SITE CONTRACTORS RESPONSIBLE FOR OPERATION AND MAINTENANCE OF POLLUTION CONTROL DEVICES OF DEFICIENCIES.

IF THE EXISTING GROUND COVER IS NATURAL GRASS, DISTURBED AREAS SHALL BE TEMPORARILY SEEDED WITH WHEAT/RYE AT A RATE OF 1.5 POUNDS PER 1000 SQUARE FEET. PERMANENT SEEDING SHALL CONSIST OF 90% IN THREE EQUAL PARTS OF THIN BLADE, TURF-TYPE, TALL FESCUE AND 10% BLUEGRASS SEED AT A RATE OF 10 POUNDS PER 1000 SQUARE FEET. BOTH TEMPORARY AND PERMANENT SEEDED AREAS SHALL BE MULCHED AND WATERED TO MAINTAIN THE PROPER MOISTURE LEVEL OF THE SOIL TO ESTABLISH GRASS. NEW GRASS SHALL BE WATERED AND MAINTAINED UNTIL IT REACHES A HEIGHT OF 3 INCHES. ANY BARE AREAS SHALL BE RESEEDED.

ALL EROSION CONTROL DEVICES SHALL BE REMOVED BY GENERAL CONTRACTOR AFTER SITE STABILIZATION IS COMPLETE AND APPROVED BY ENGINEER.

THE DEVELOPER WILL DESIGNATE A QUALIFIED PERSON OR PERSONS TO PERFORM THE FOLLOWING INSPECTIONS:

STABILIZATION MEASURES: DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION WILL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. AFTER A PORTION OF THE SITE IS FINALLY STABILIZED, INSPECTIONS WILL BE CONDUCTED AT LEAST ONCE EVERY MONTH THROUGHOUT THE LIFE OF THE PROJECT. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.

STRUCTURAL CONTROLS: FILTER FABRIC FENCES AND ALL OTHER EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN WILL BE INSPECTED REGULARLY FOR PROPER POSITIONING, ANCHORING, AND EFFECTIVENESS IN TRAPPING SEDIMENTS. SEDIMENT WILL BE REMOVED FROM THE UPSTREAM OR UPSLOPE SIDE OF THE FILTER FABRIC. CONTRACTOR CAN CONTACT ENGINEERING SOLUTIONS FOR COPIES OF THE INSPECTION FORM TO BE USED FOR STABILIZATION MEASURES.

DISCHARGE POINTS: DISCHARGE POINTS OR LOCATIONS WILL BE INSPECTED TO DETERMINE WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT AMOUNTS OF POLLUTANTS FROM ENTERING RECEIVING WATERS.

CONSTRUCTION ENTRANCE: LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE WILL BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING.

A LOG OF EACH INSPECTION SHALL BE KEPT. THE INSPECTION REPORT IS TO INCLUDE THE FOLLOWING MINIMUM INFORMATION: INSPECTOR'S NAME, DATE OF INSPECTION, OBSERVATIONS RELATIVE TO THE EFFECTIVENESS OF THE POLLUTION CONTROL DEVICES, ACTIONS TAKEN OR NECESSARY TO CORRECT DEFICIENCIES, AND LISTING OF AREAS WHERE LAND DISTURBANCE OPERATIONS HAVE PERMANENTLY OR TEMPORARILY STOPPED. THE INSPECTION REPORT SHALL BE SIGNED BY THE PERMITTEE OR BY THE PERSON PERFORMING THE INSPECTION IF DULY AUTHORIZED TO DO SO.

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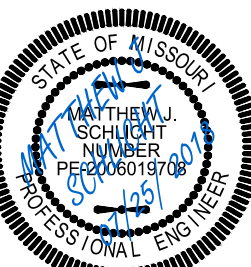


Professional Registration
Missouri
Engineering 2005002188-D
Surveying 200500319-D
Kansas
Engineering E-1695
Surveying LS-219
Oklahoma
Engineering 0254
Nebraska
Engineering CA2821

View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October 2016

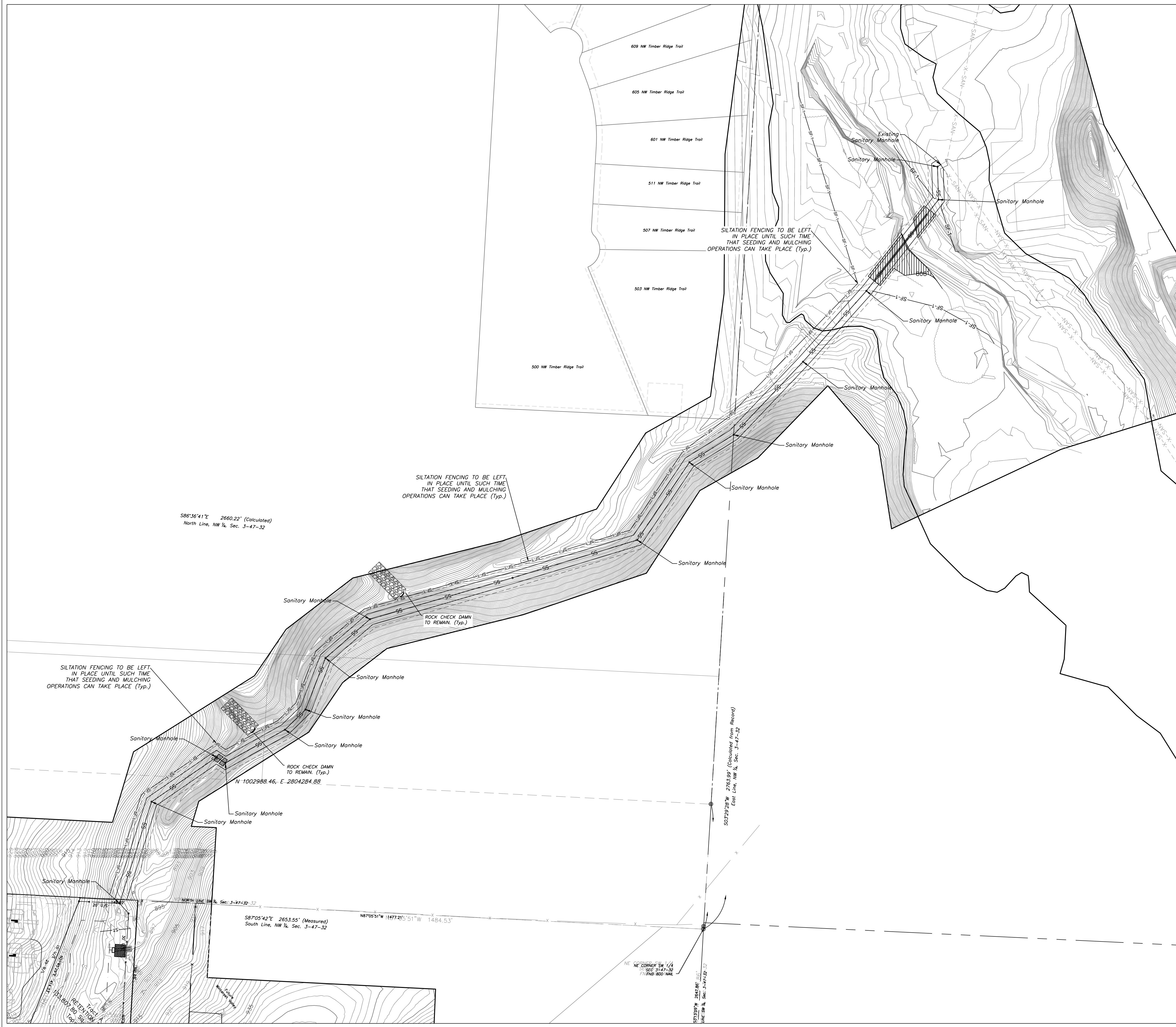
Inactive Stabilization Area Plan
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25526

REVISIONS

7/2/18 As-Built



0 60' 120' 240'

FINAL RESTORATION PLAN

SCALE: 1" = 120'

NOTES: The Land Disturbance Plans indicates the Final placement of erosion control devices. The contractor(s) may proceed with construction prior to the final placement of these devices by providing additional devices to control erosion on their items of work. These devices shall be maintained until the final devices are in place.

SEED AND MULCH NOTES:

All areas disturbed by construction activities shall be seeded and mulched. Seeding shall be done before the proposed seedbed becomes eroded, crusted over, or dried out and shall not be done when the ground is frozen, or covered with snow. The seed shall comply with the requirements of the Missouri Seed Law and the Federal Seed Act. Also, it shall contain no seed of any plant on the Federal Noxious Weed List. Other weed seeds shall not exceed one percent by weight of mix

Seed and Fertilizer Rate:

Mix I - Rye Grass / Blue Grass	100 lbs. per Acre
Mix II - Tall Fescue / Blue Grass	195 lbs. per Acre
Lime	2000 lbs per Acre (50 lbs. per 1000 sq. ft.)
Fertilizer	800 to 1200 lbs per Acre (25 lbs per 1000 sq. ft.)

During the dates December 15th through May 31 ALL lime fertilizer, seed and mulch shall be applied to finished slopes of disturbed areas. During the months of June, July, October and November 1st through December 15th, lime fertilizer, seed and mulch shall be applied at the following rates:

Lime - 100% of specified quantity
Fertilizer - 75% of the specified quantity
Seed - 50% of the specified quantity
Mulch - 100% of the specified quantity

Mulch shall be Vegetative type, cereal straw from stalks of oats, rye, or barley, or approved equal. The straw shall be free of prohibited weed seed and relatively free of all other noxious and undesirable seed. Mulch shall be applied at the rate of 2 tons per acre, (70 to 90 lbs per 1000 sq. ft.). Mulch shall be embedded by a mulch anchoring tool or disk type roller having flat serrated disks spaced not more than 10 inches apart and cleaning scrapers shall be provided

ENGINEERING SOLUTIONS

ENGINEERING & SURVEYING

50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849

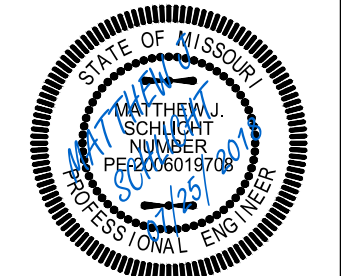
Professional Registration

Missouri	Engineering 2005002188-D
Surveying	200500019-D
Kansas	Engineering E-1695
Surveying	LS-219
Oklahoma	Engineering 6254
Nebraska	Engineering CA2821

View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October 2016

Final Restoration Plan
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri

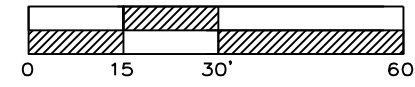


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KS PE 19071
OK PE 25526

REVISIONS
7/2/18 - As-Built

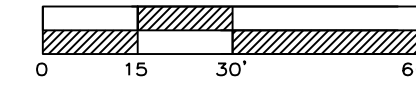
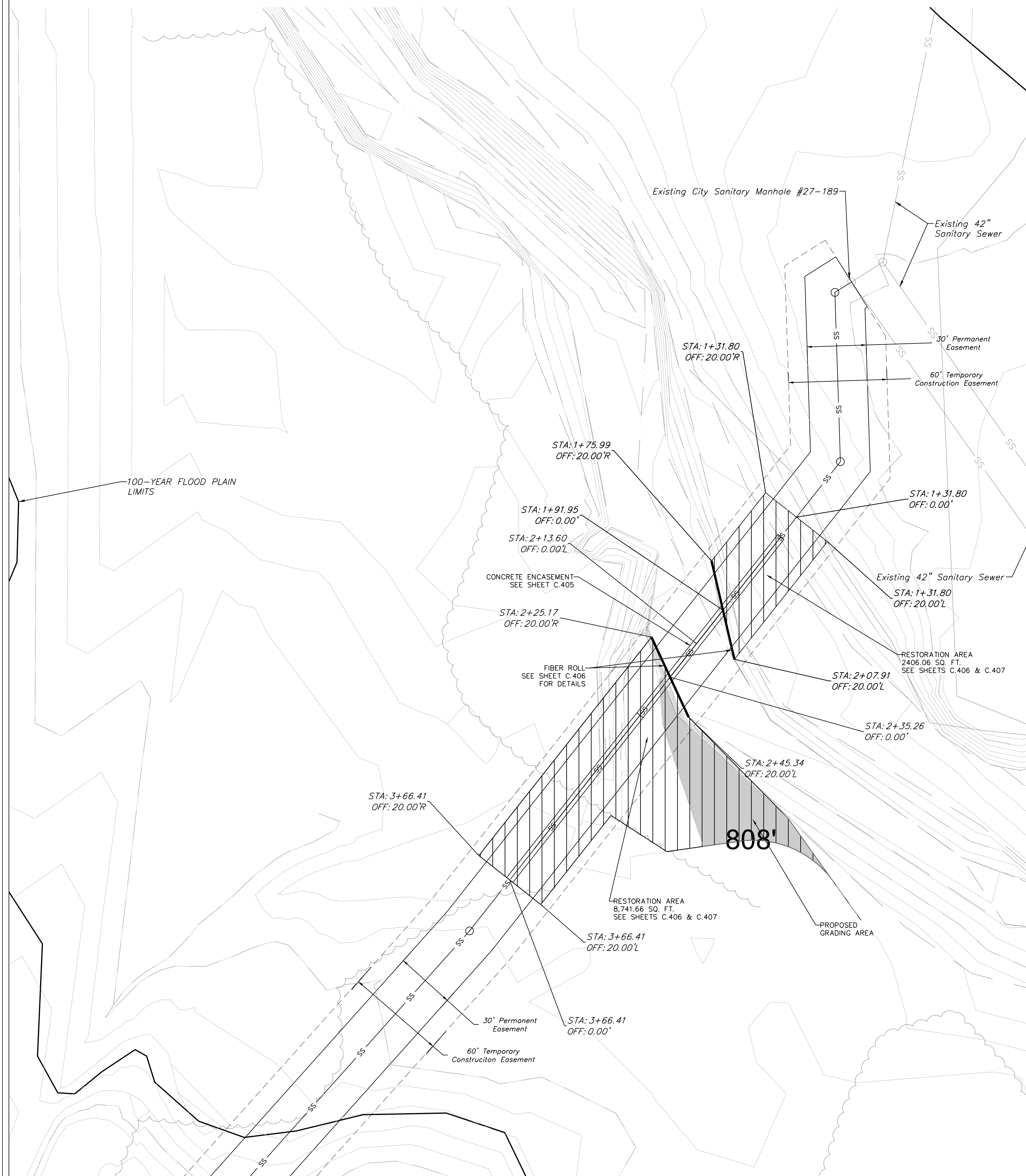
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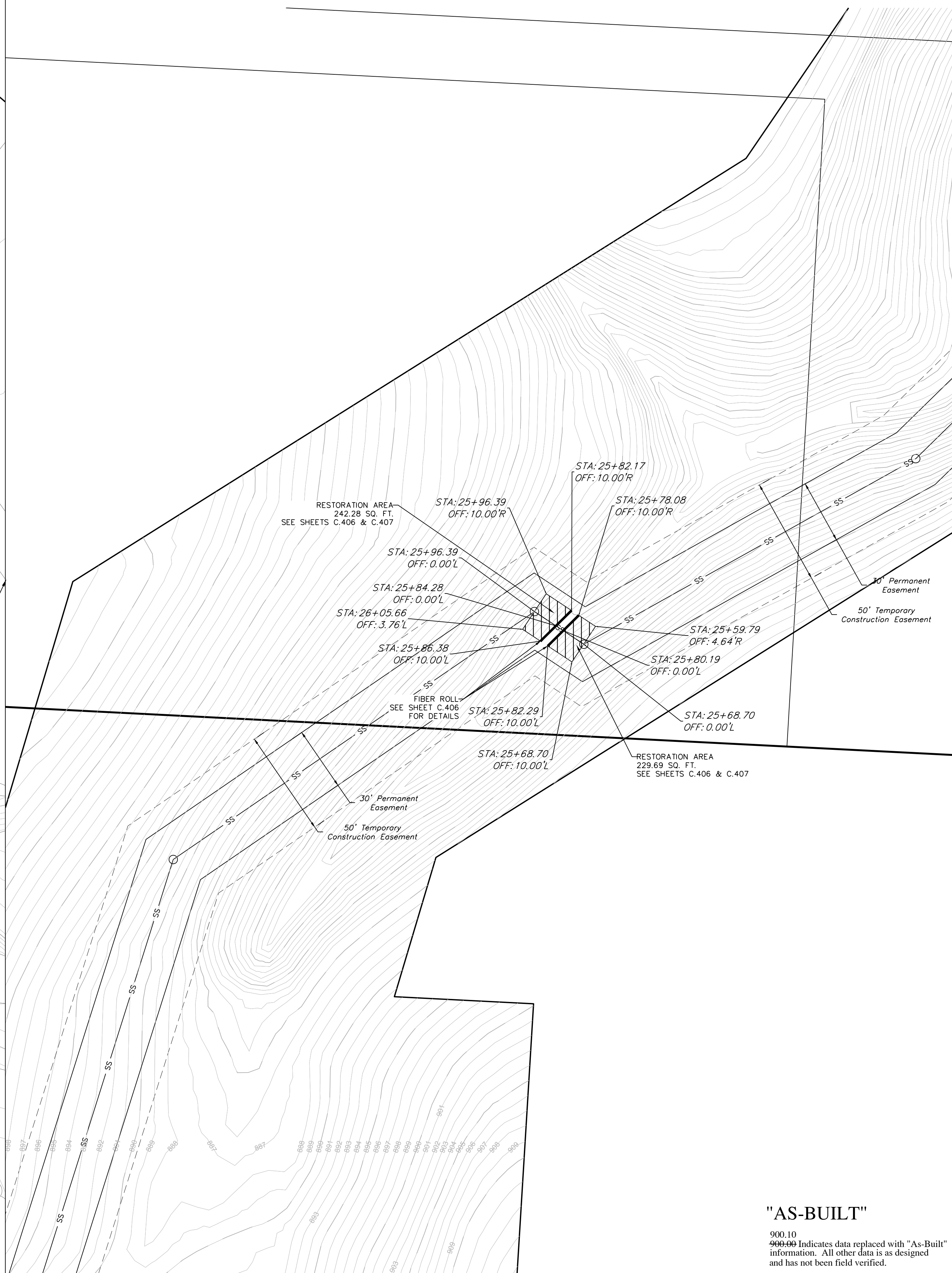
STREAM RESTORATION PLAN STA: 2+13.60

SCALE: 1" = 30'



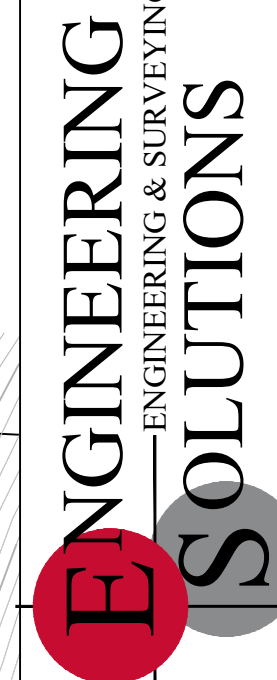
STREAM RESTORATION PLAN STA: 25+66.30

SCALE: 1" = 30'



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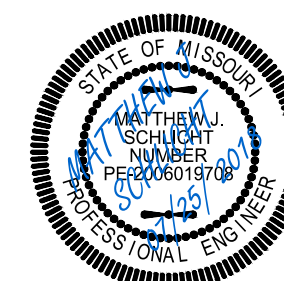


Professional Registration
Missouri
Engineering 2005002188-D
Surveying 200500019-D
Kansas
Engineering E-1895
Surveying LS-219
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Near Park
October, 2016

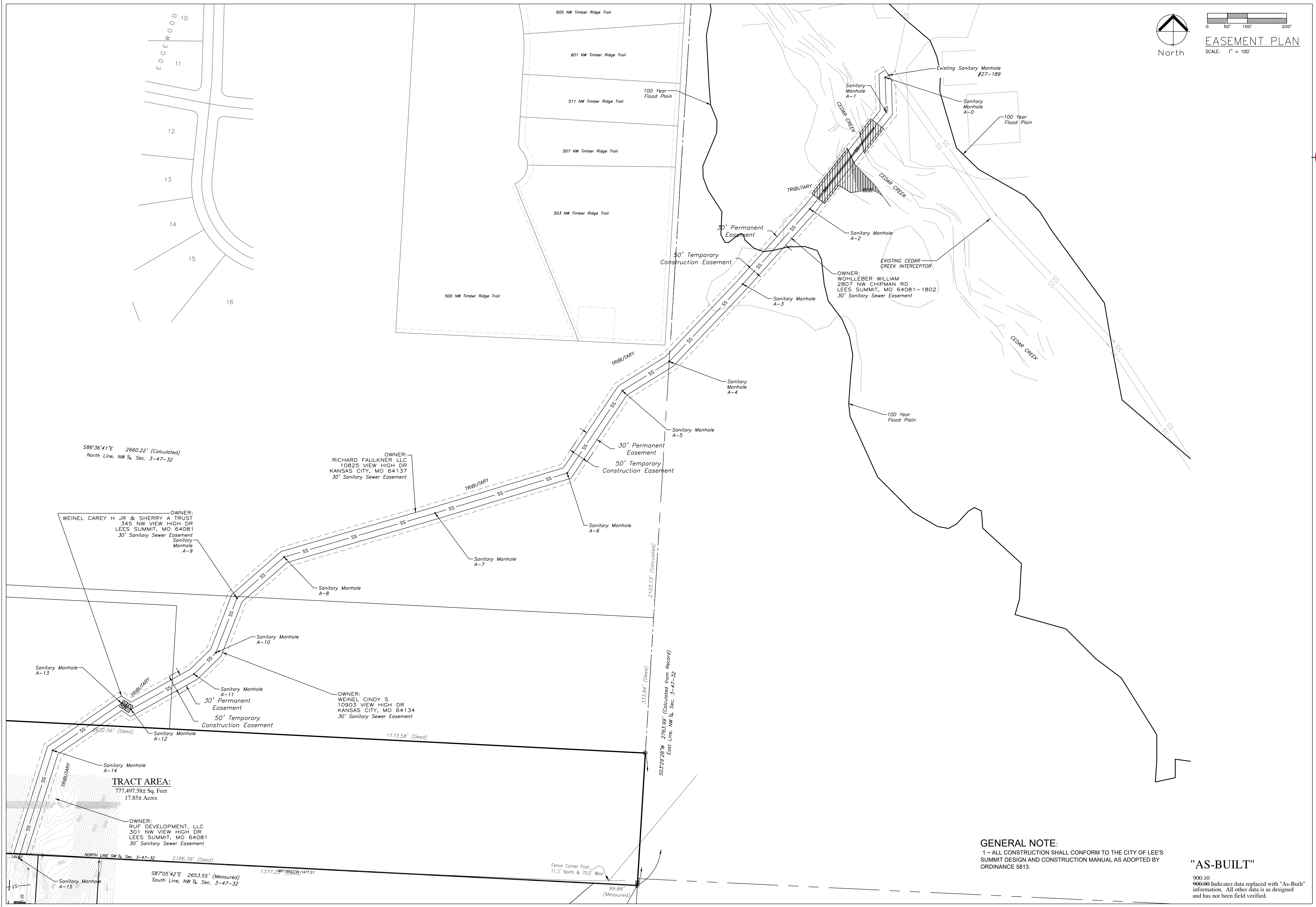
Stream Restoration Plan
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25526

REVISIONS
7/2/18 - As-Built

C. 200



North

0 50' 100' 200'

EASEMENT PLAN

SCALE: 1" = 100'



Professional Registration

Missouri
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Surveying 200500019-D

Kansas
Engineering E-1895
Surveying LS-218

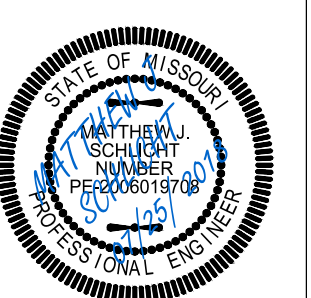
Oklahoma
Engineering 6254

Nebraska
Engineering CA2821

View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October 2016

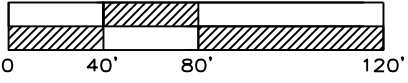
Easement Plan
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

7/2/18 - As-Built



CROSS SECTION PLAN
SCALE: 1" = 80'

"AS-BUILT"

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Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

7/2/18 - As-Built

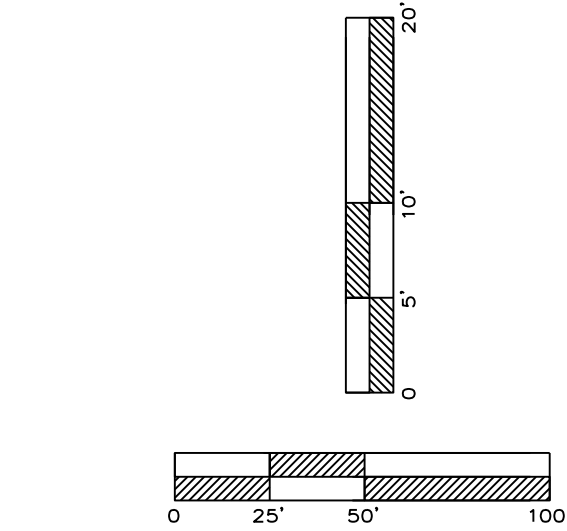
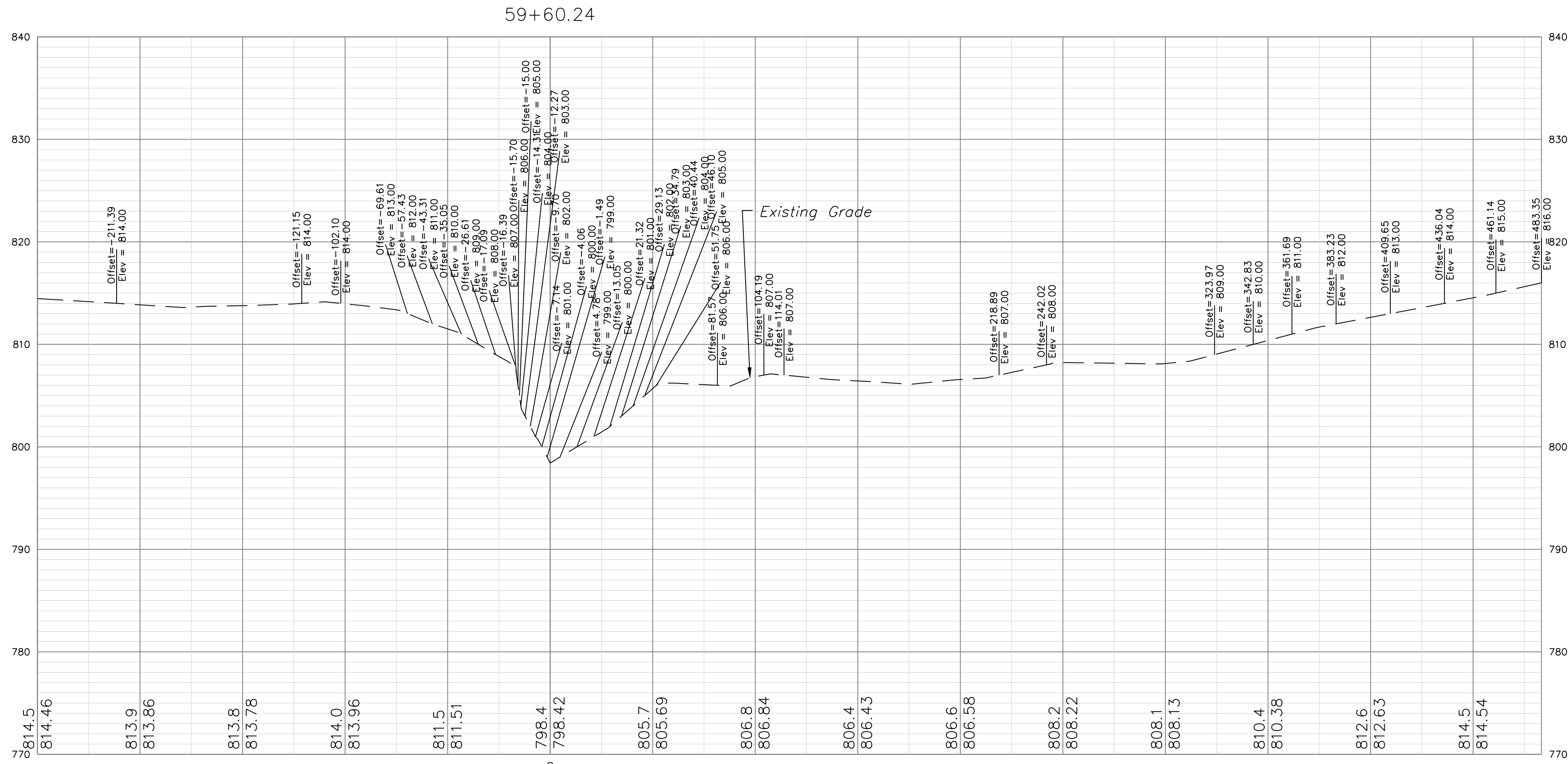
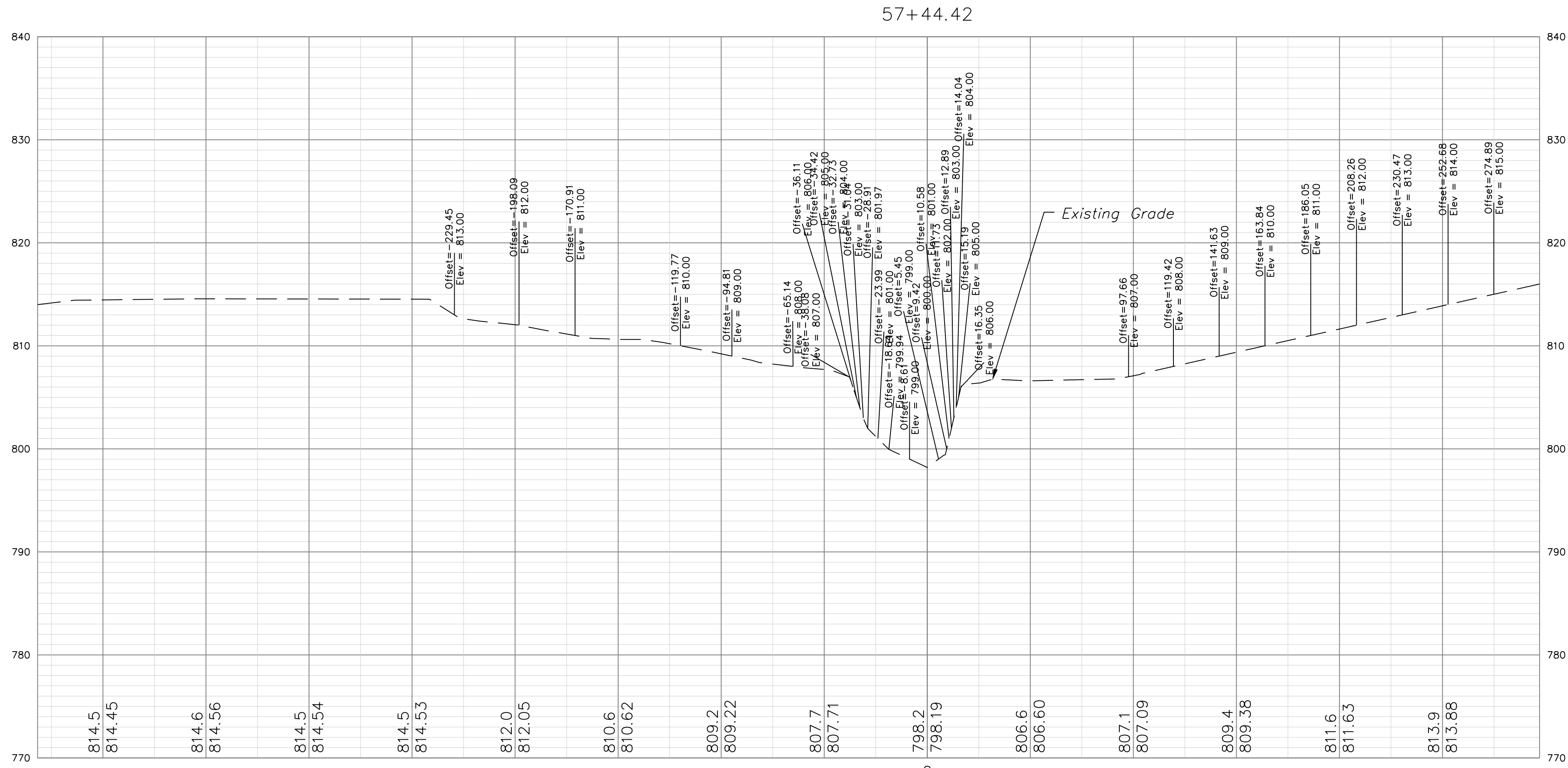
Cross Section Plan
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October, 2016

View High Project
Lee's Summit, Jackson County, Missouri

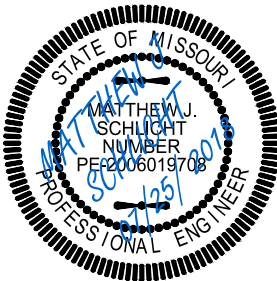
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SOLUTIONS
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849



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KS PE 19071
OK PE 25526

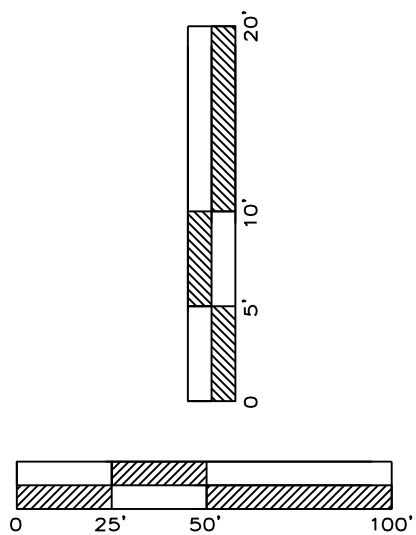
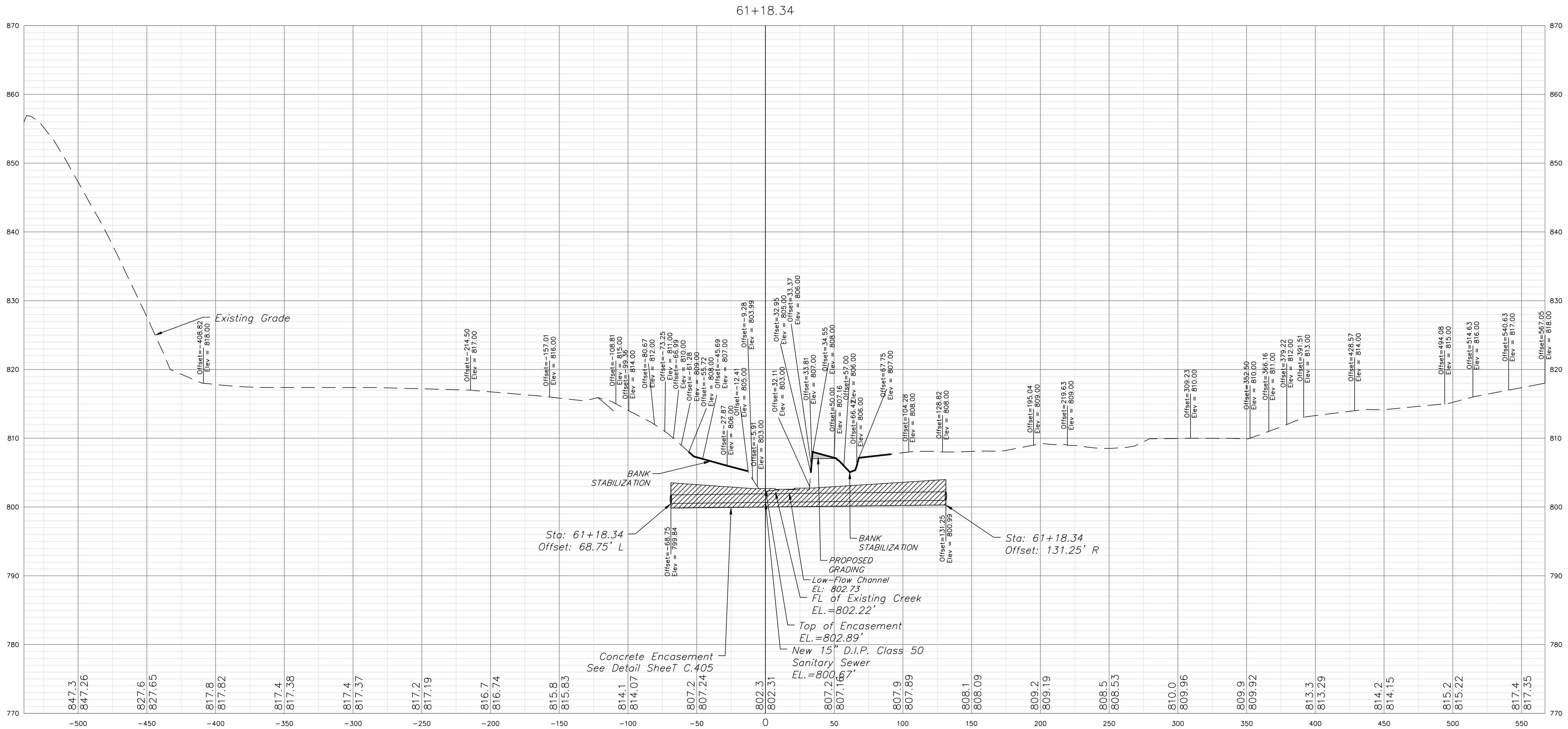
REVISIONS
7/2/18 - As-Built

Cross Sections
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October, 2016

View High Project
Lee's Summit, Jackson County, Missouri

Professional Registration
Missouri
Engineering 2005002188-D
Surveying 200500319-D
Kansas
Engineering E-1895
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821



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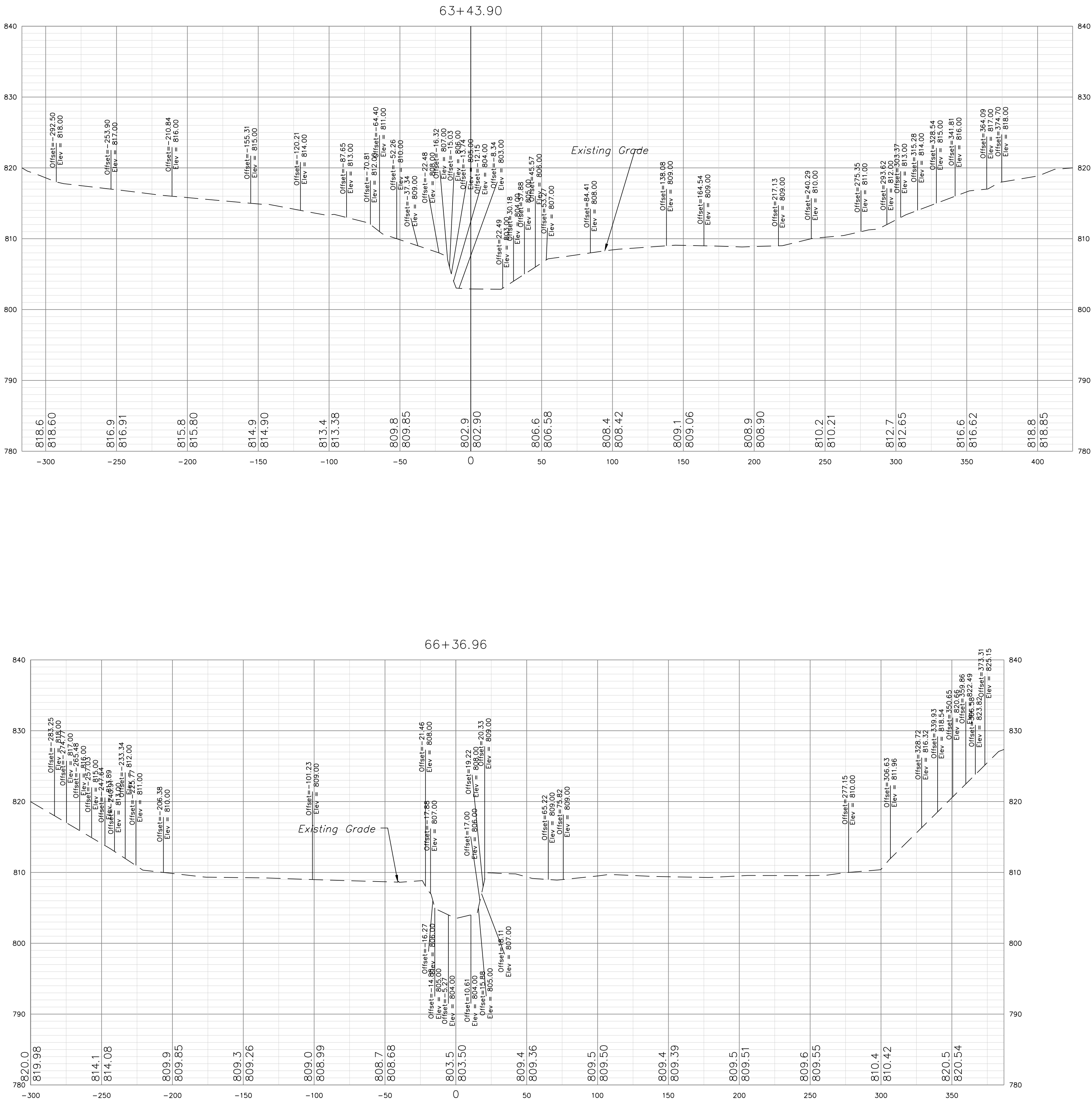
View High Project
Lee's Summit, Jackson County, Missouri

Professional Registration
Missouri
Engineering 2005002185-D
Surveying 200500019-D
Kansas
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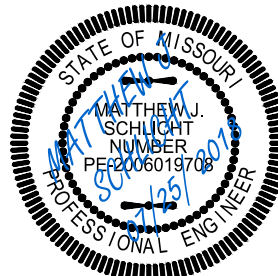
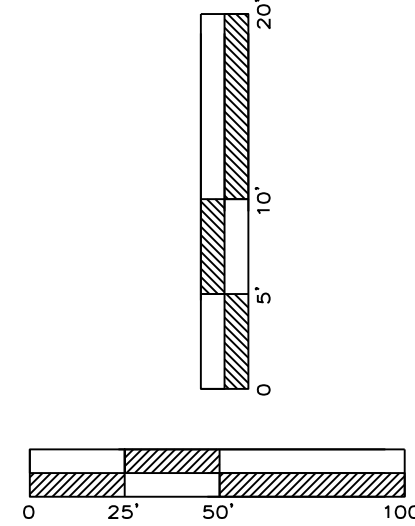
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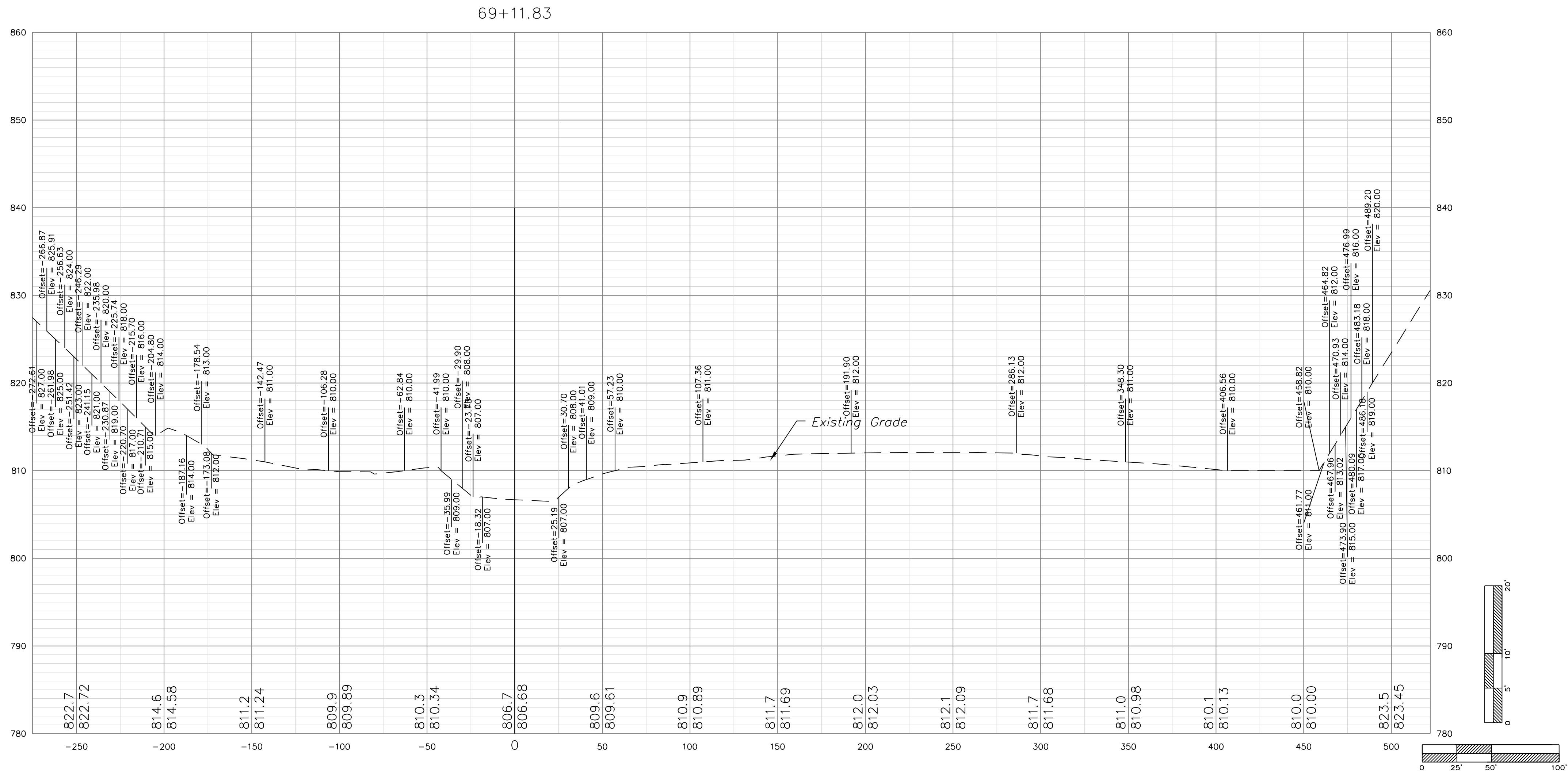
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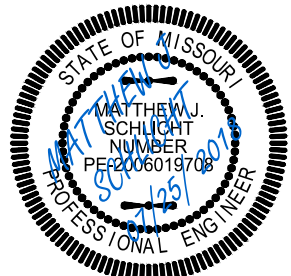
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7/2/18 - As-Built

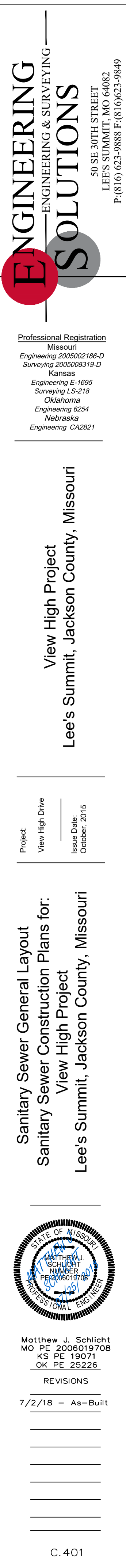
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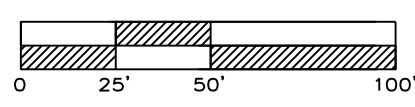
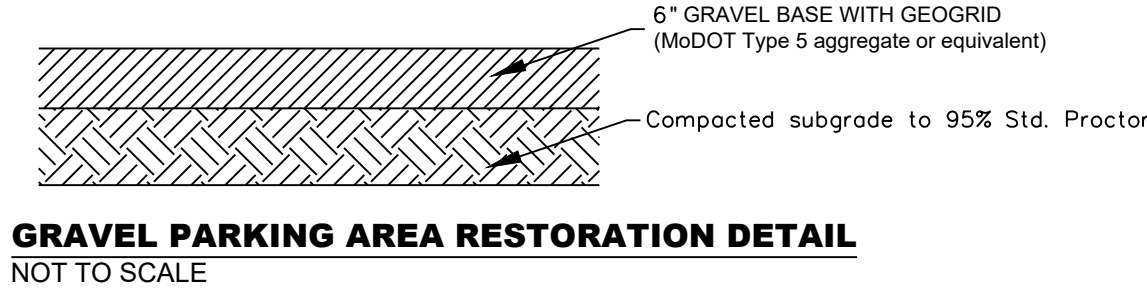


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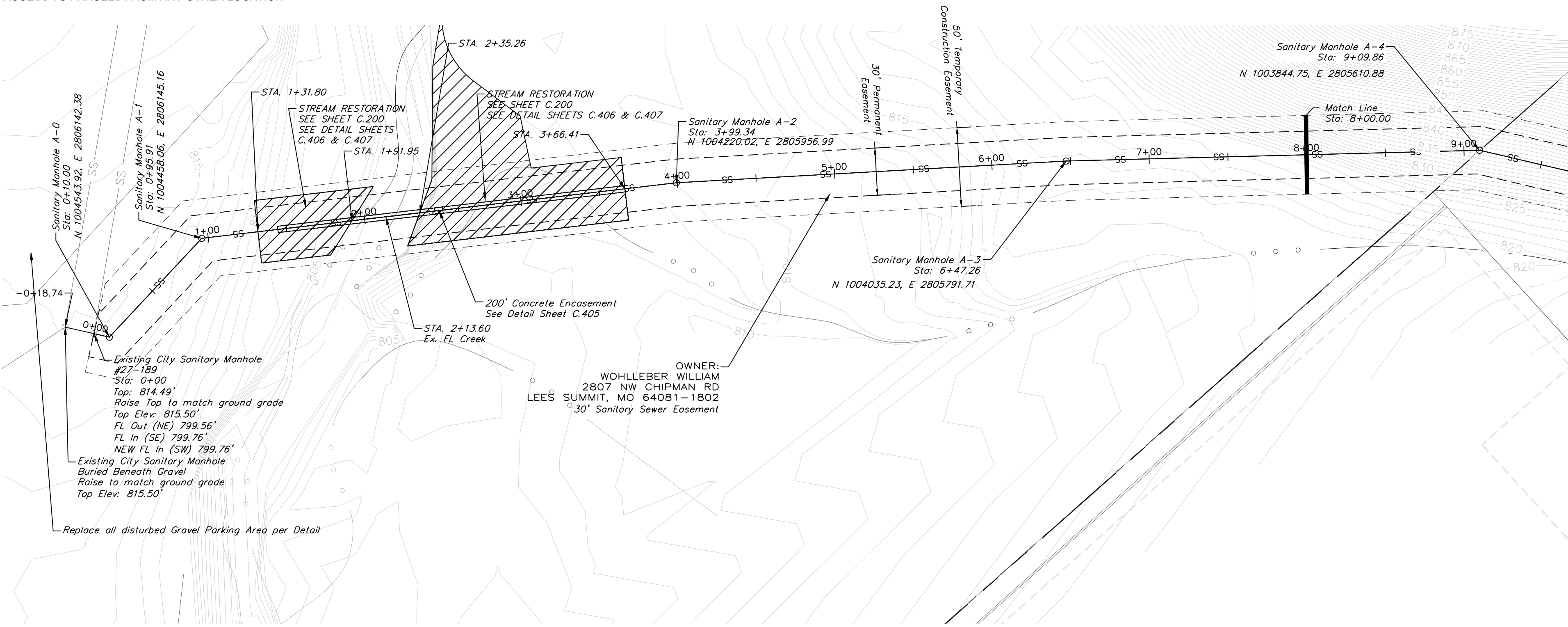
2 ~ INSTALL CONSTRUCTION FENCING ALONG THE TEMPORARY CONSTRUCTION EASEMENT AND/OR AT THE REQUEST OF THE PROPERTY OWNER

3 ~ SITE ACCESS IS SOLELY FROM THE EASEMENTS. NO DIRECT ACCESS TO PARCELS FROM ANY OTHER LOCATION

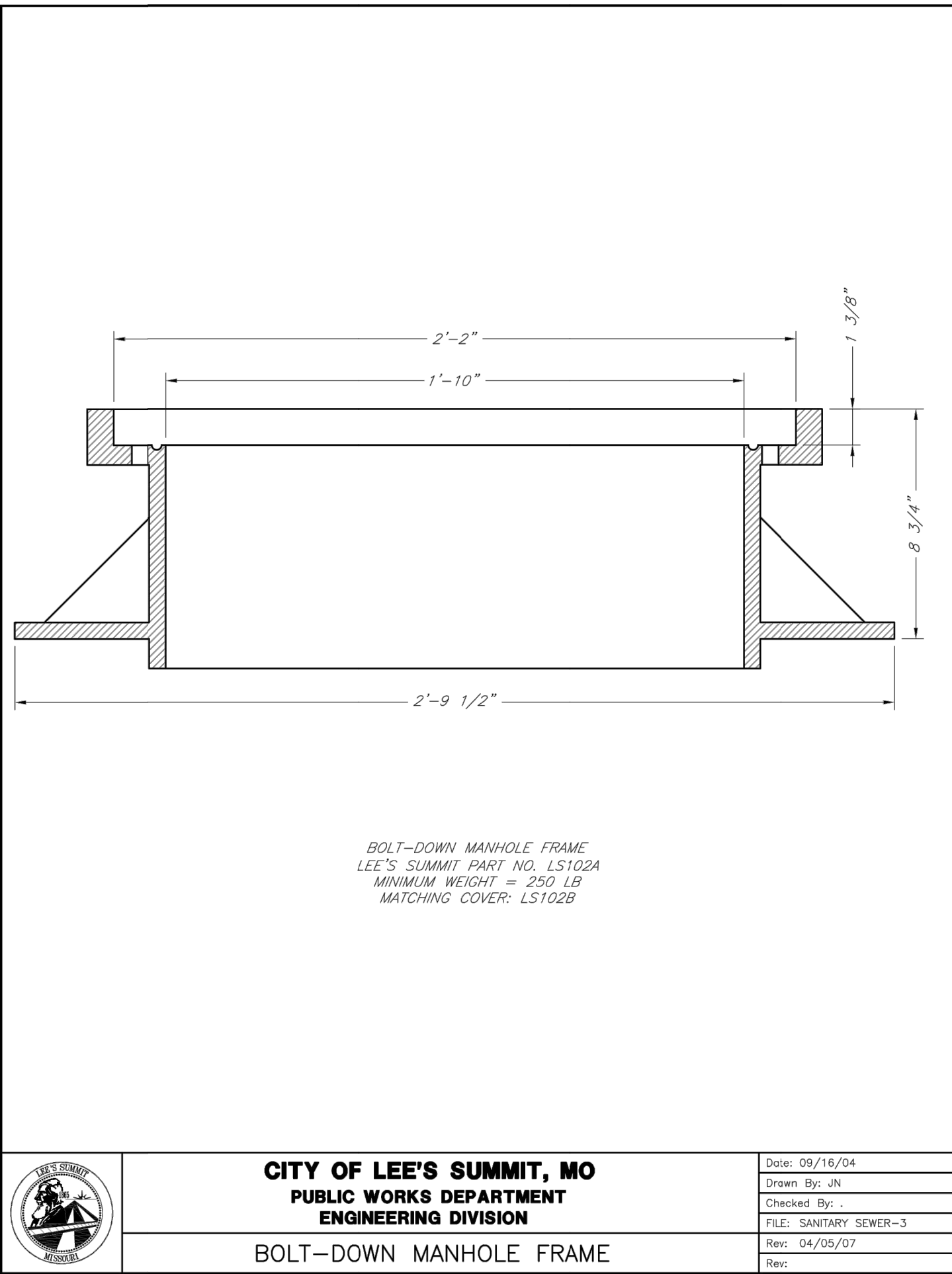
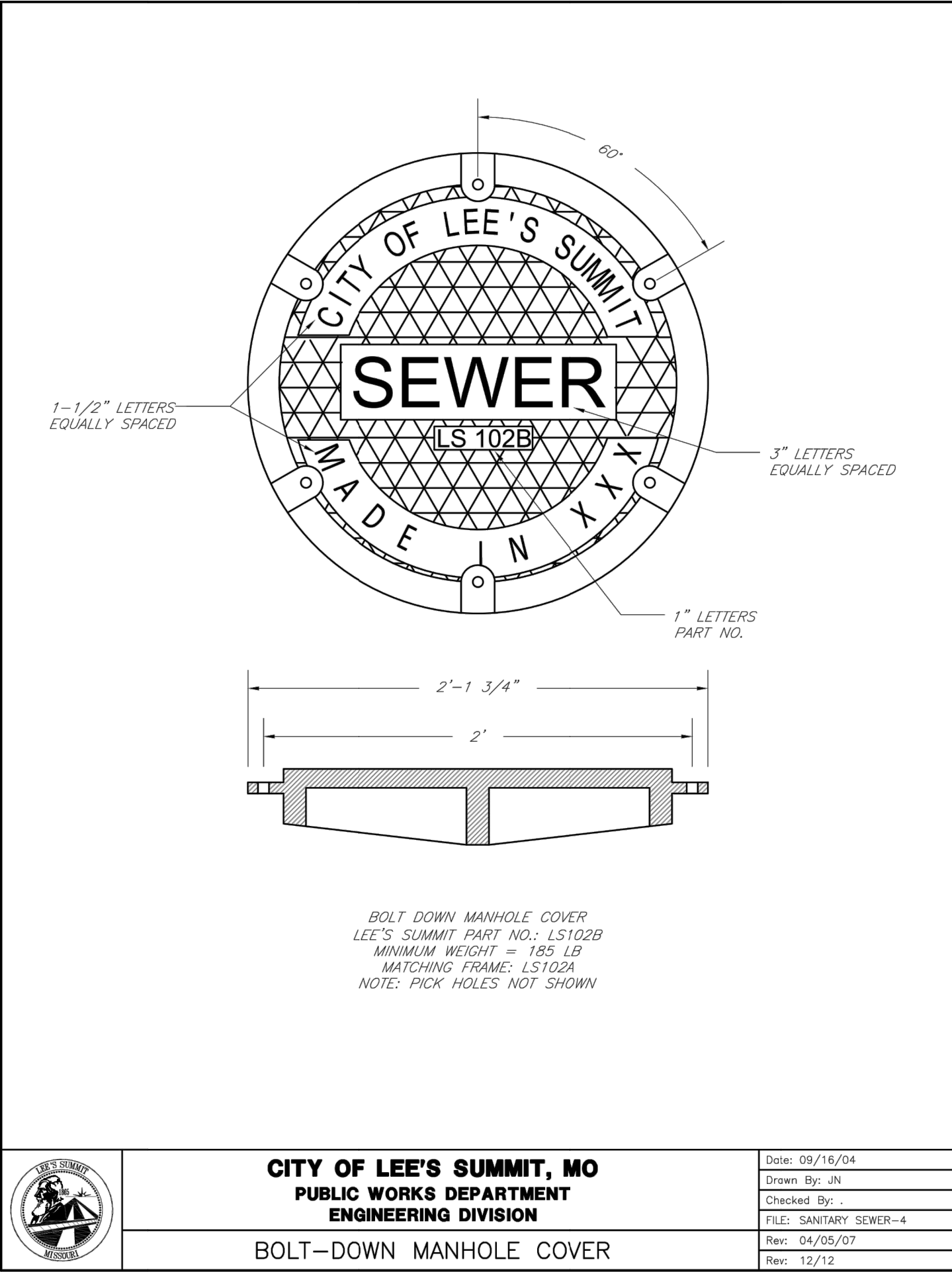
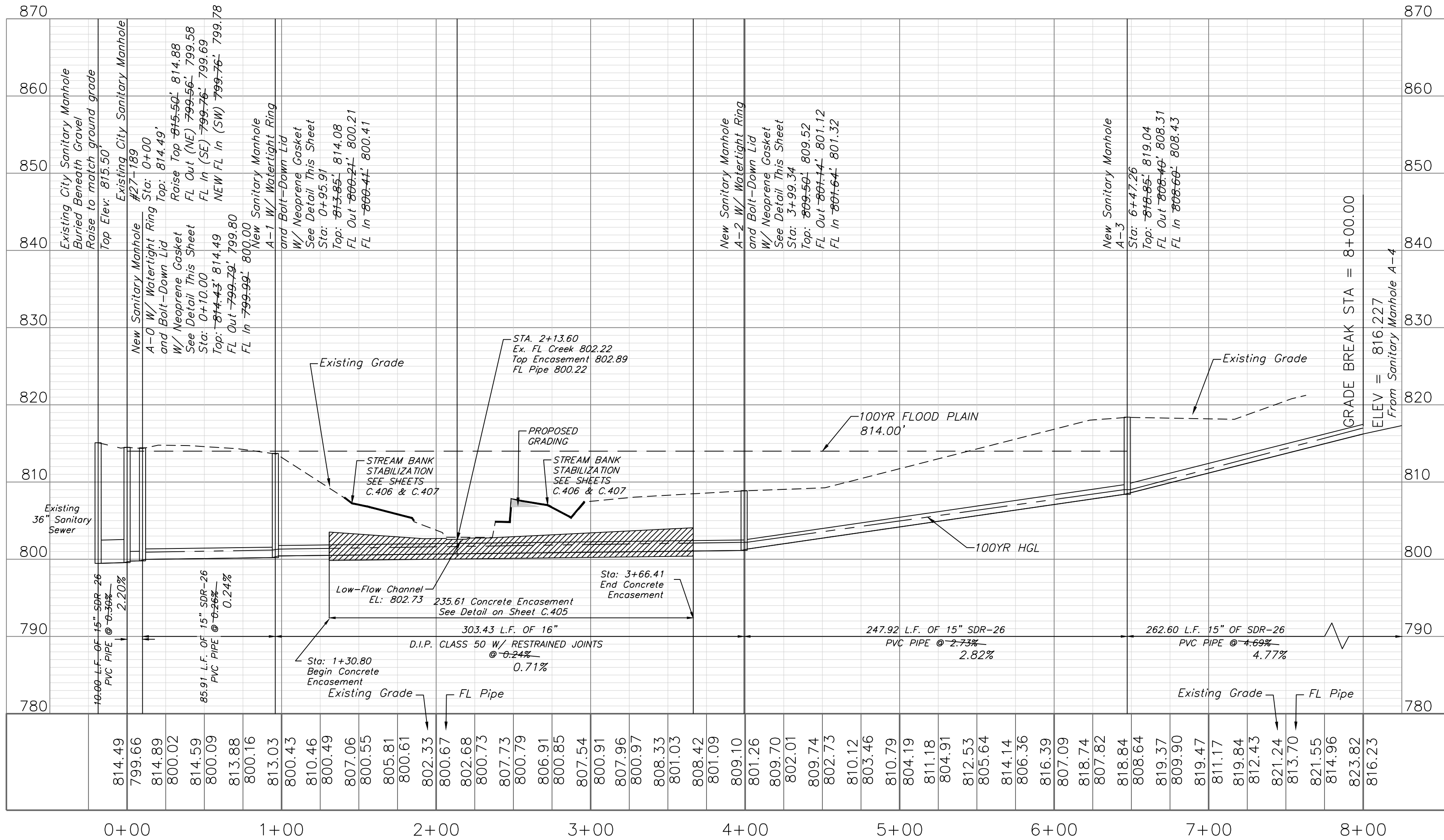


SANITARY PLAN & PROFILE

SCALE: 1" = 50'



SANITARY LINE A



"AS-BUILT"

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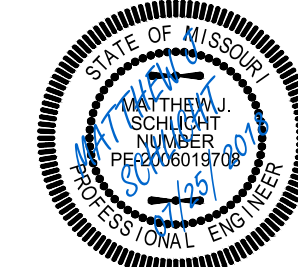


Professional Registration
Missouri
Engineering 2005002188-D
Surveying 200500819-D
Kansas
Engineering E-1895
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

View High Project
Lee's Summit, Jackson County, Missouri

Project:
View High Drive
Issue Date:
October 2016

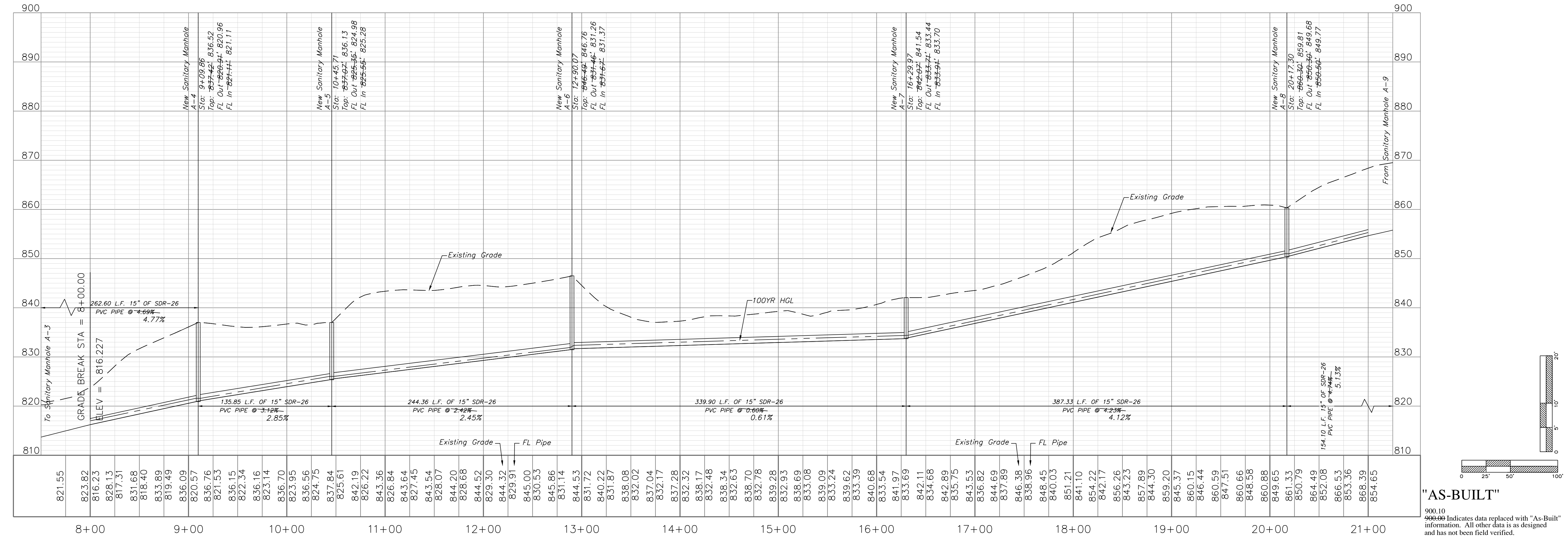
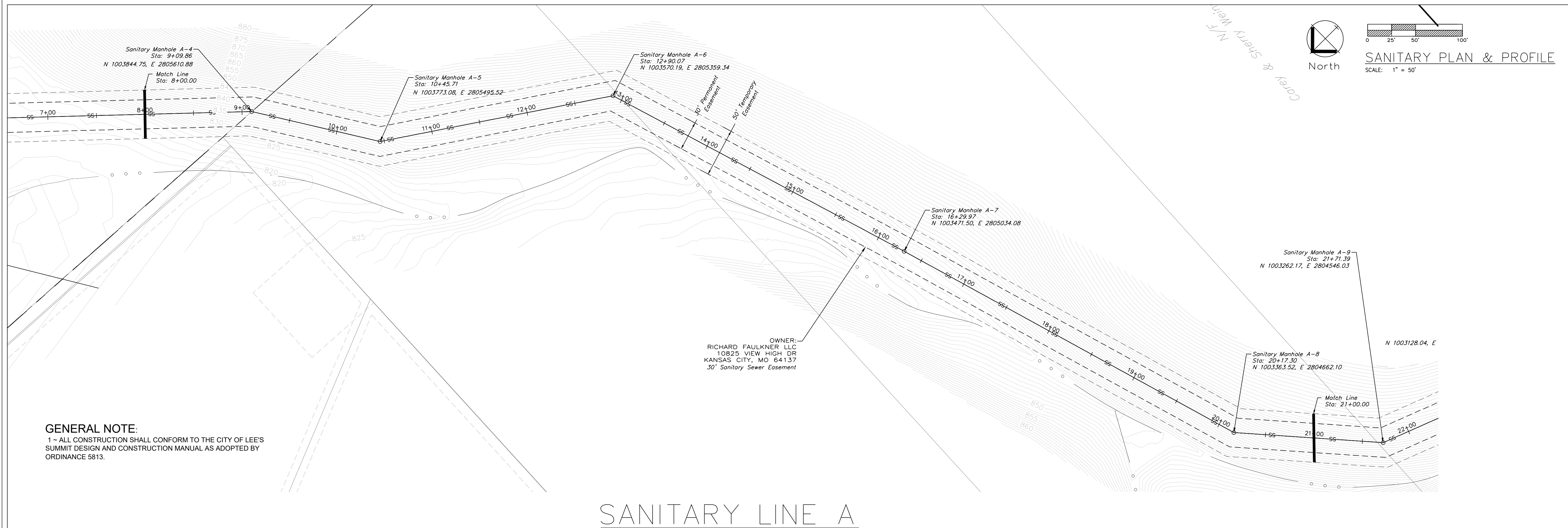
Sanitary Plan and Profile
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 190071
OK PE 255226

REVISIONS

7/2/18 - As-Built



ENGINEERING SOLUTIONS
ENGINEERING & SURVEYING
50 SE 30TH STREET
LEE'S SUMMIT, MO 64082
P: (816) 623-9888 F: (816) 623-9849

Professional Registration
Missouri
Engineering 2005002185-D
Surveying 200500319-D
Kansas
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Sanitary Plan and Profile
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Lee's Summit, Jackson County, Missouri

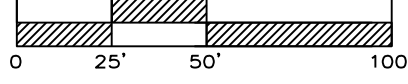
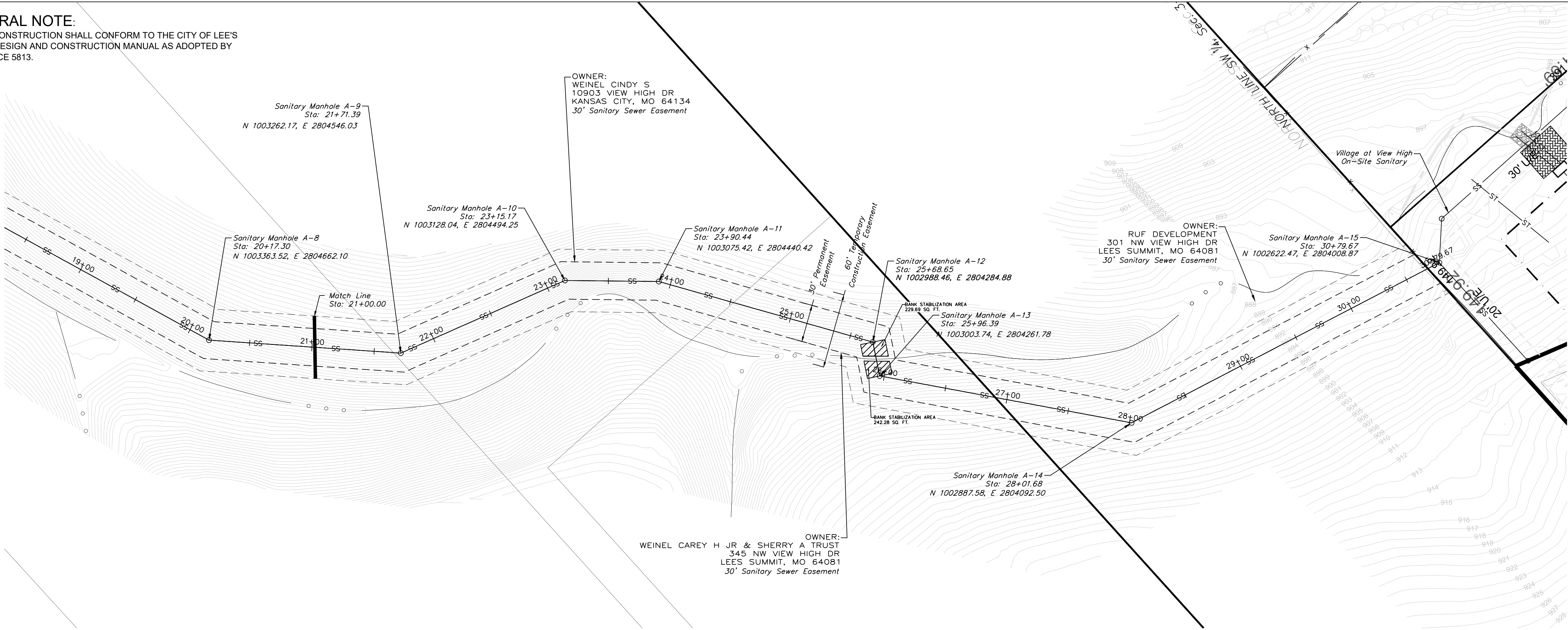
Project:
View High Drive
Issue Date:
October, 2016

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25526
Professional Engineer

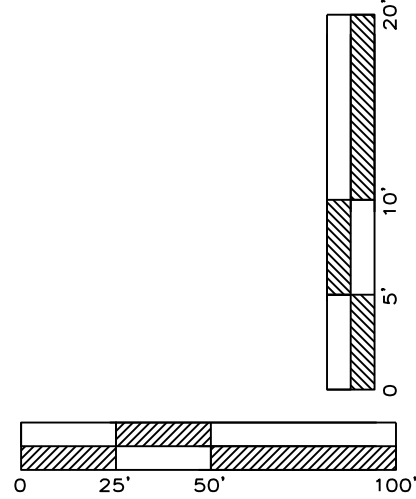
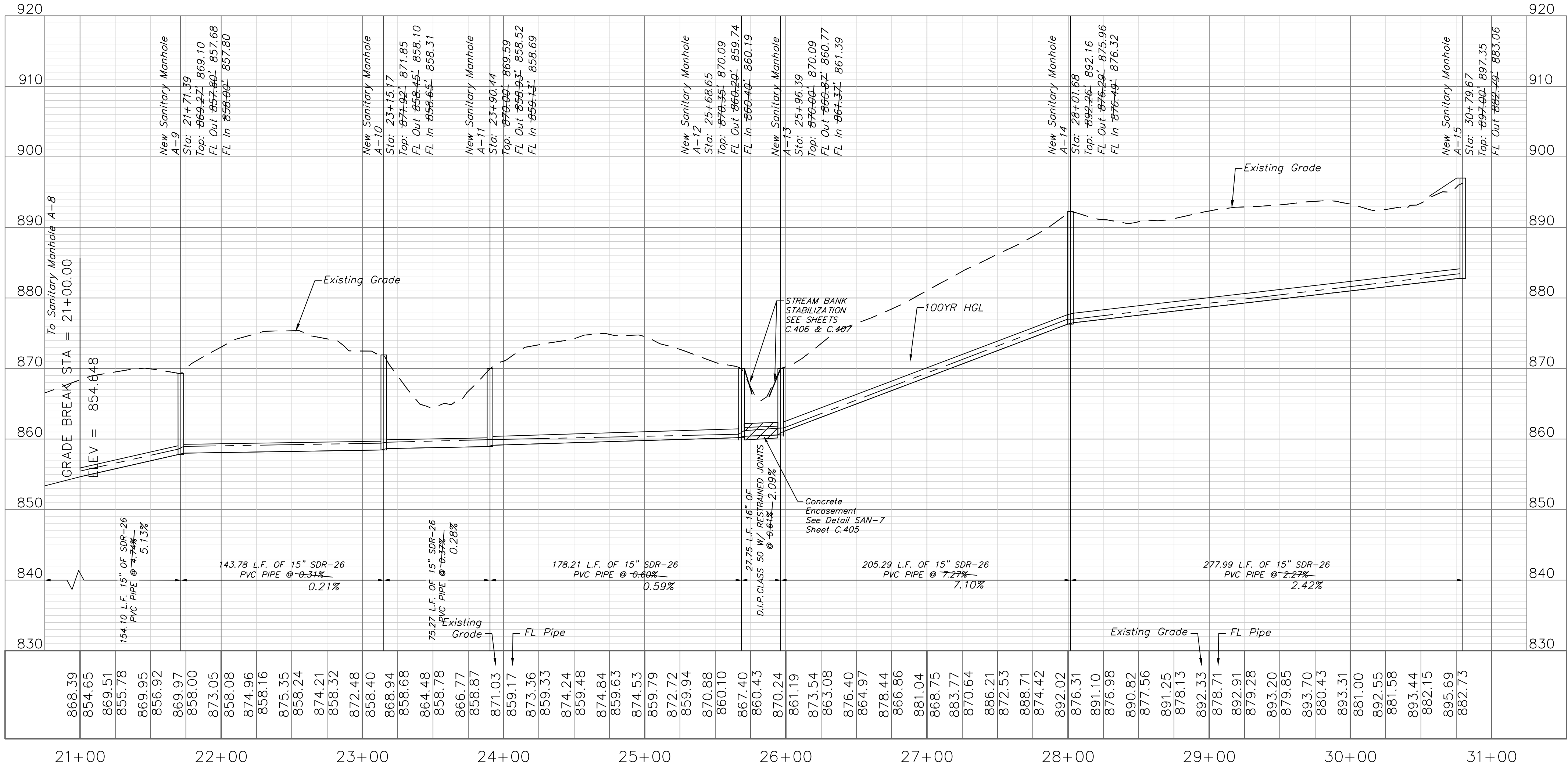
REVISIONS
7/2/18 - As-Built

C. 403

GENERAL NOTE:
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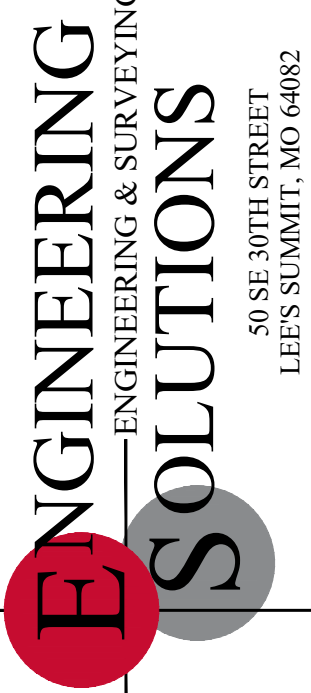


SANITARY PLAN & PROFILE
SCALE: 1" = 50'



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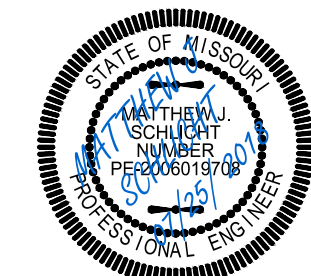


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View High Project
Lee's Summit, Jackson County, Missouri

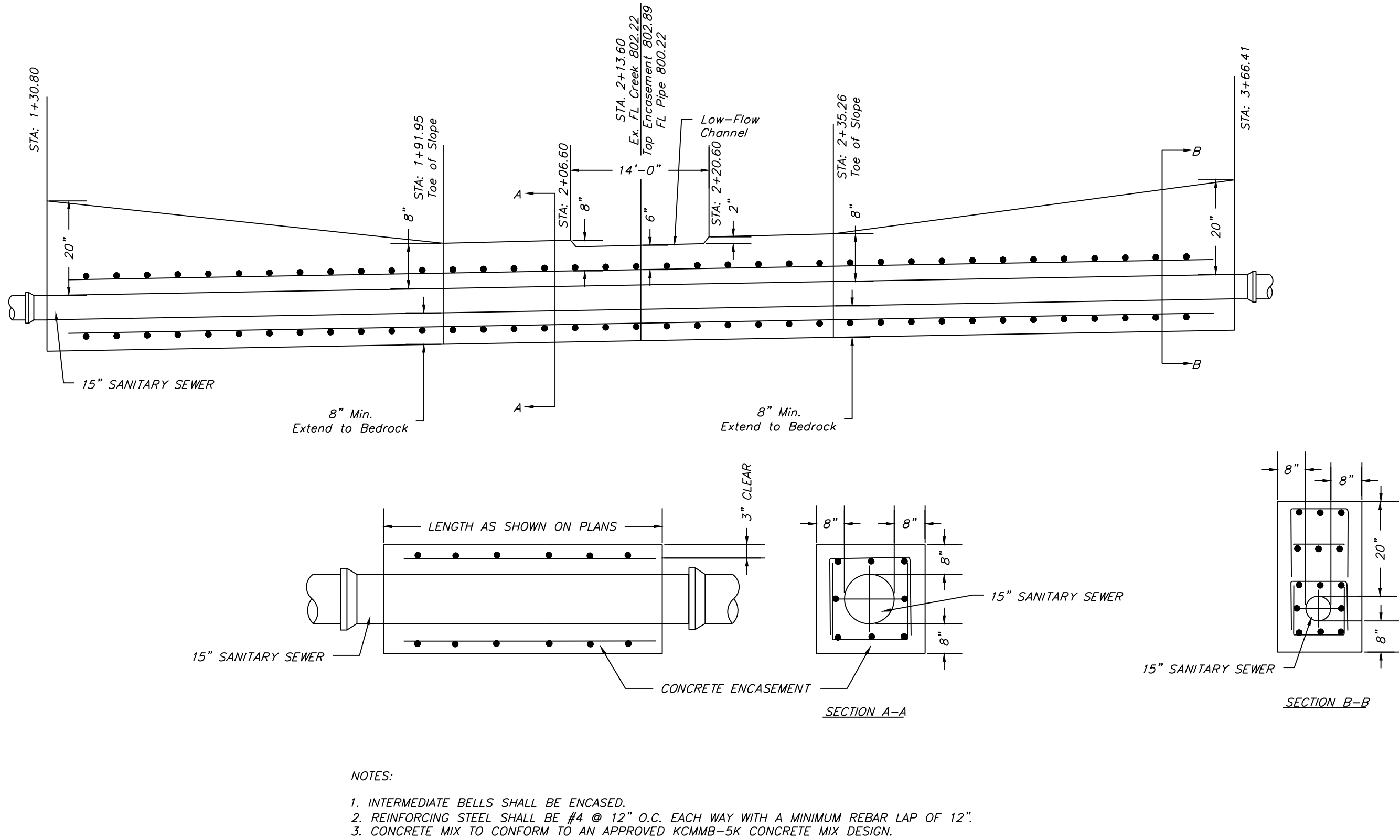
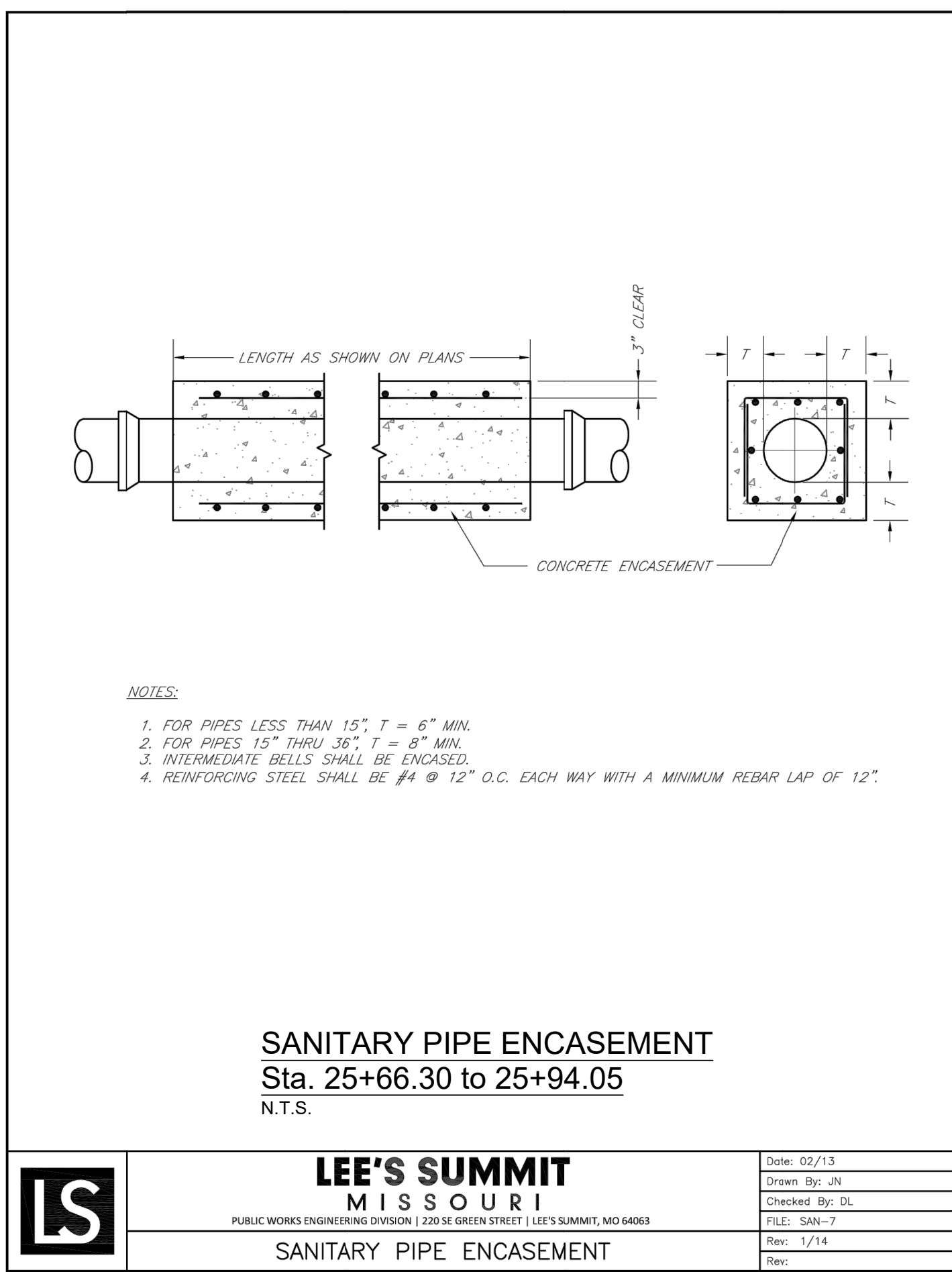
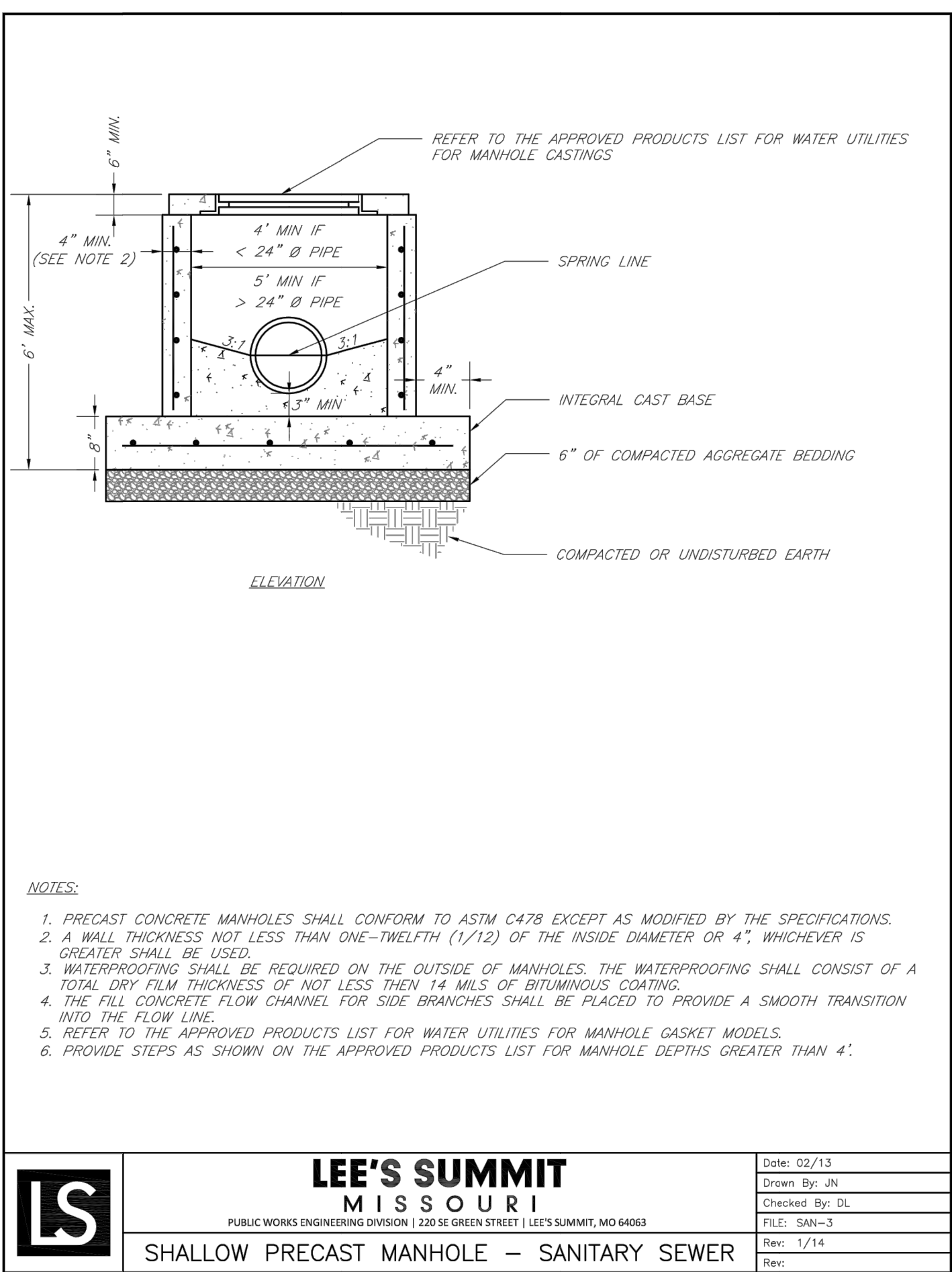
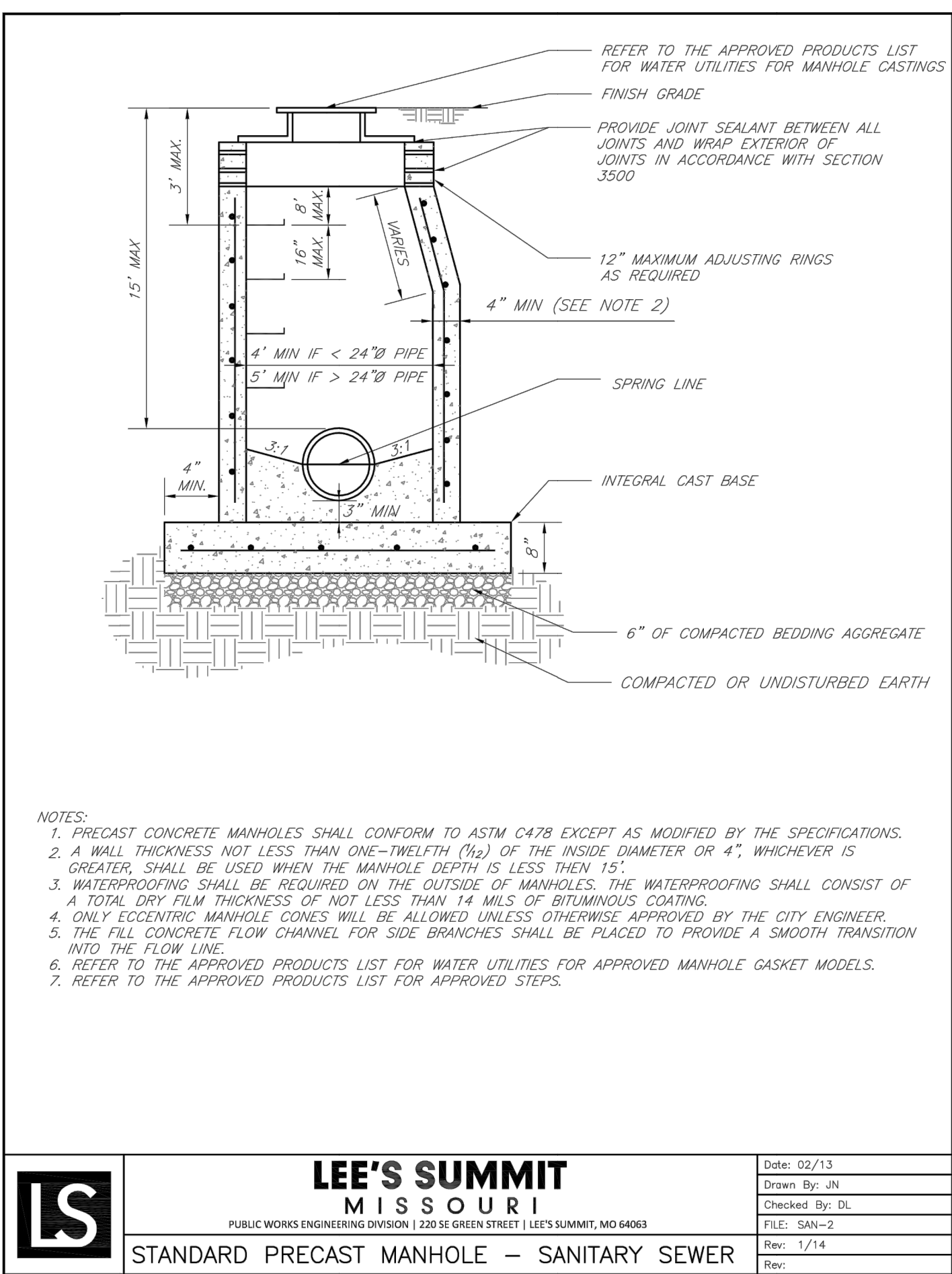
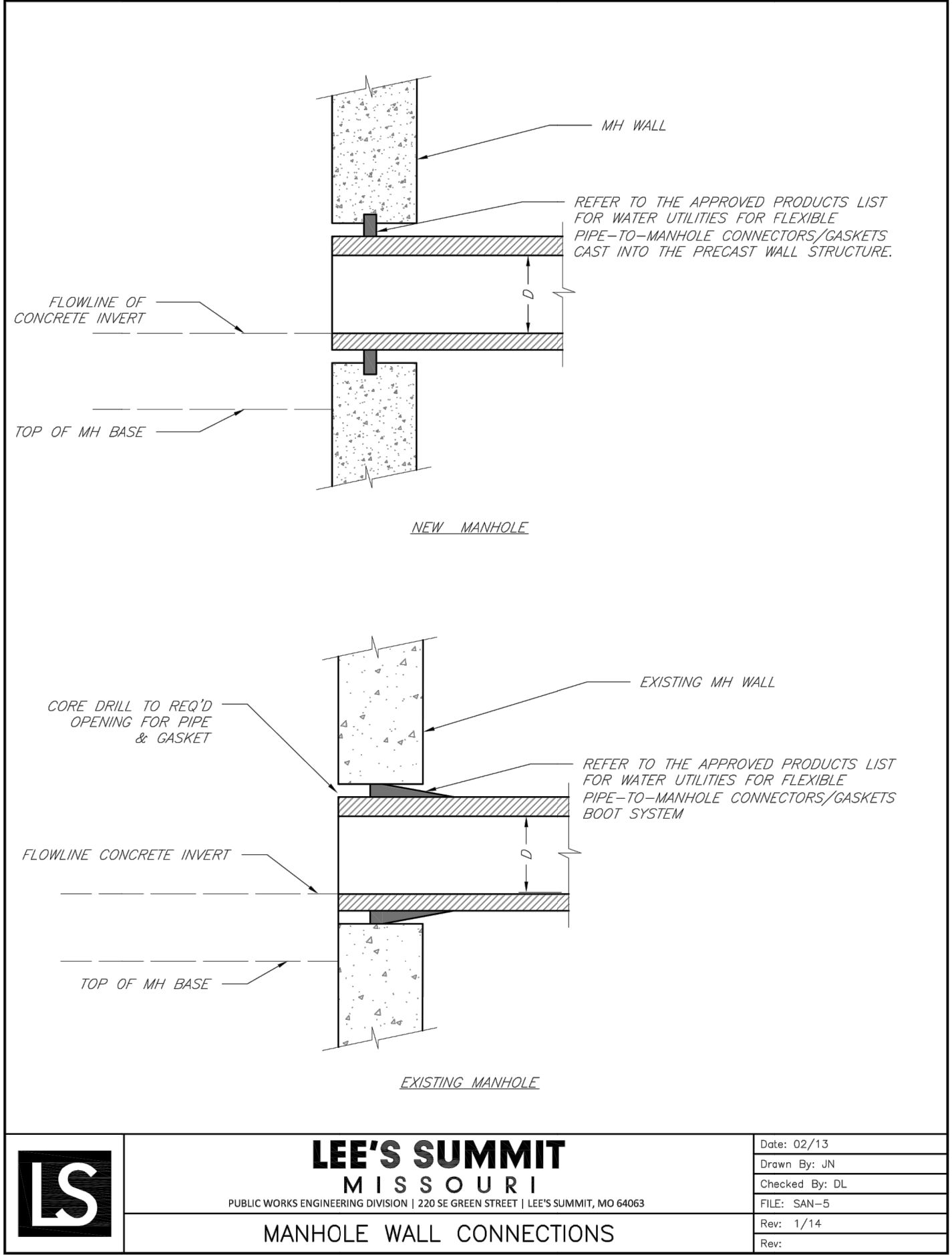
Project:
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Sanitary Plan and Profile
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25526

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7/2/18 - As-Built

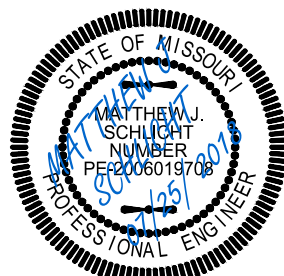


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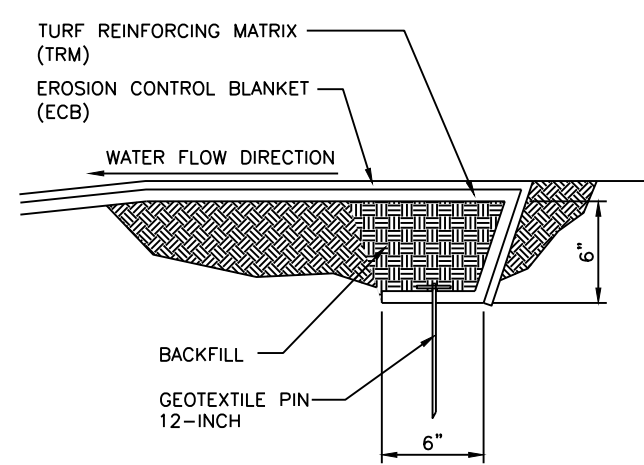
View High Project
Lee's Summit, Jackson County, Missouri

Sanitary Details
Sanitary Sewer Construction Plans for:
View High Project
Lee's Summit, Jackson County, Missouri

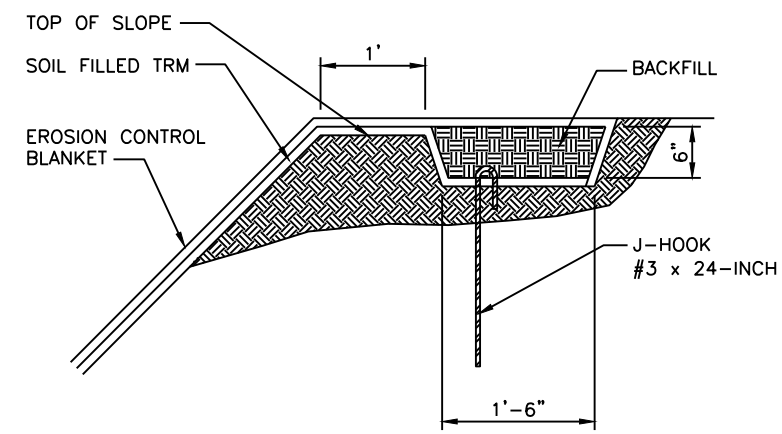


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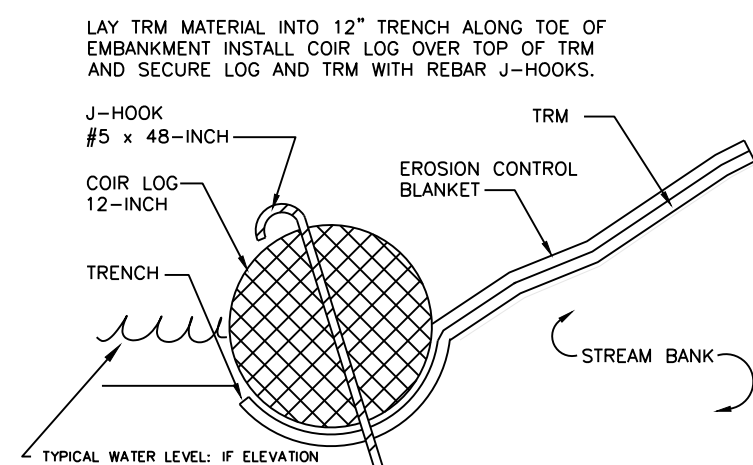
REVISIONS
7/2/18 - As-Built



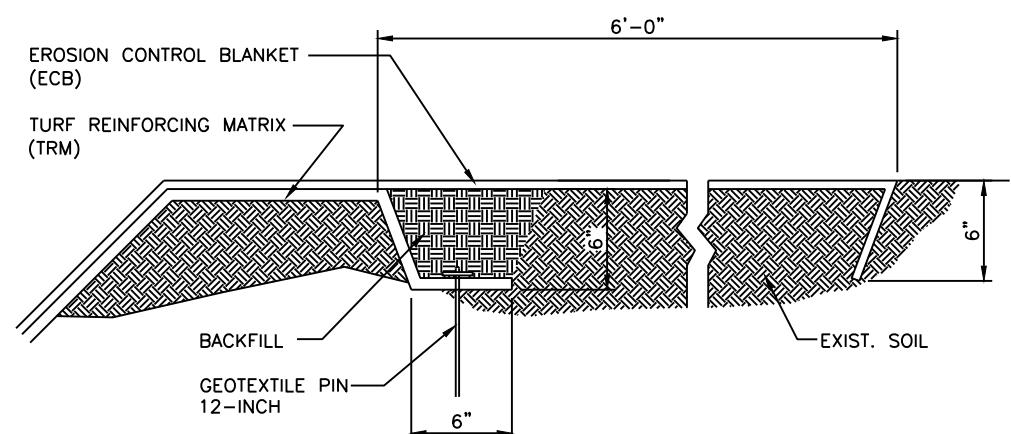
Typ. TRM Upstream Anchoring System
N.T.S.



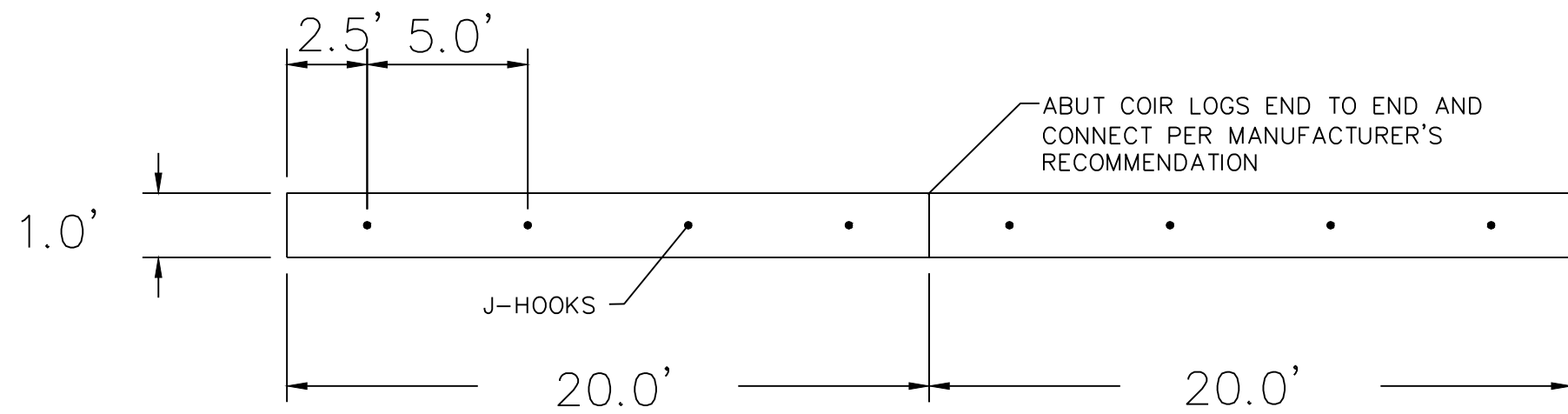
Typ. TRM Top of Bank Anchoring System
N.T.S.



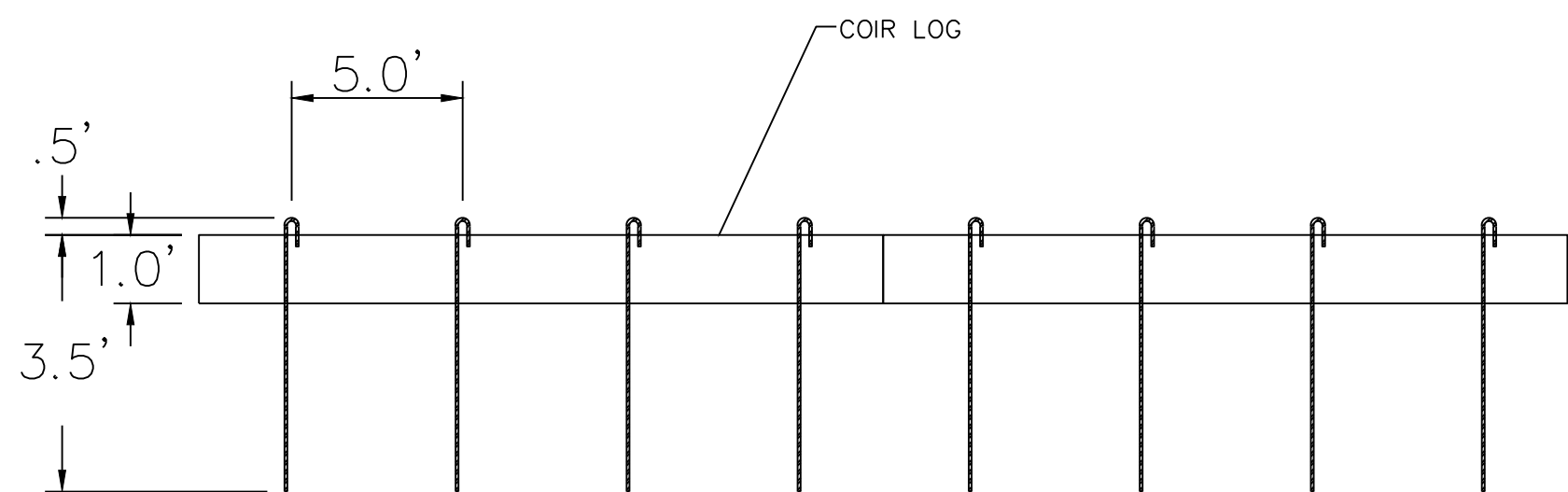
Typ. Coir Log / TRM Interface
N.T.S.



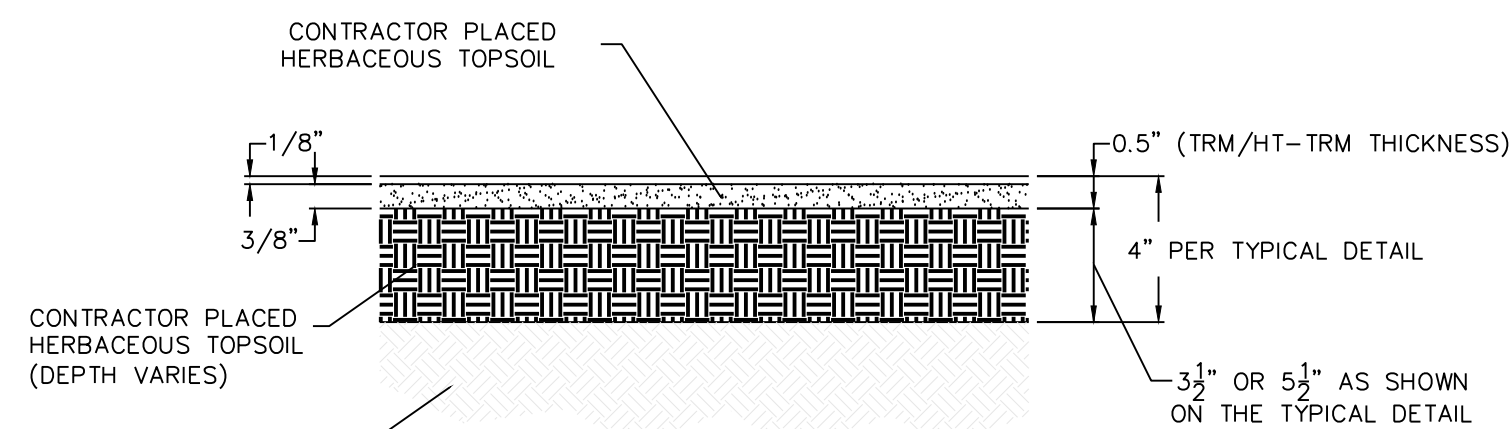
Typ. TRM Downstream Anchoring System
N.T.S.



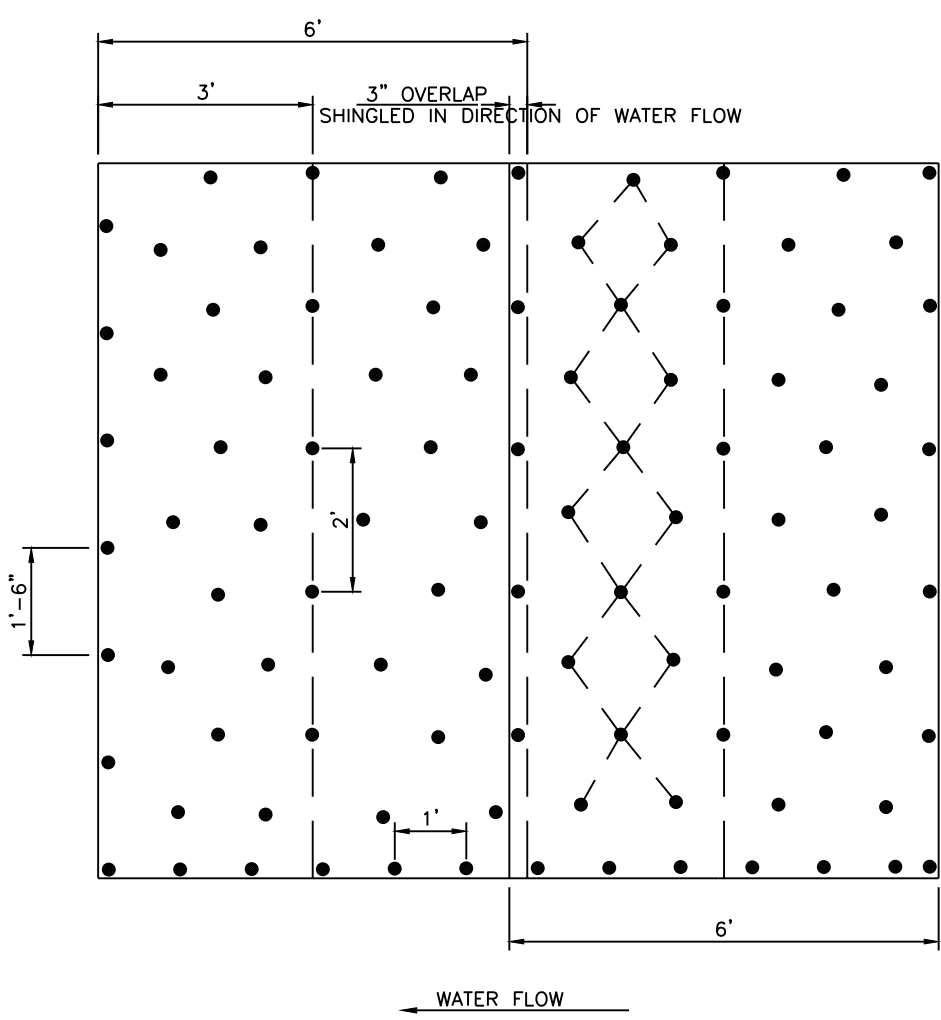
COIR LOG J-HOOK SPACING (PLAN)
NOTE: MAXIMUM COIR LOG LENGTH OF 20FT



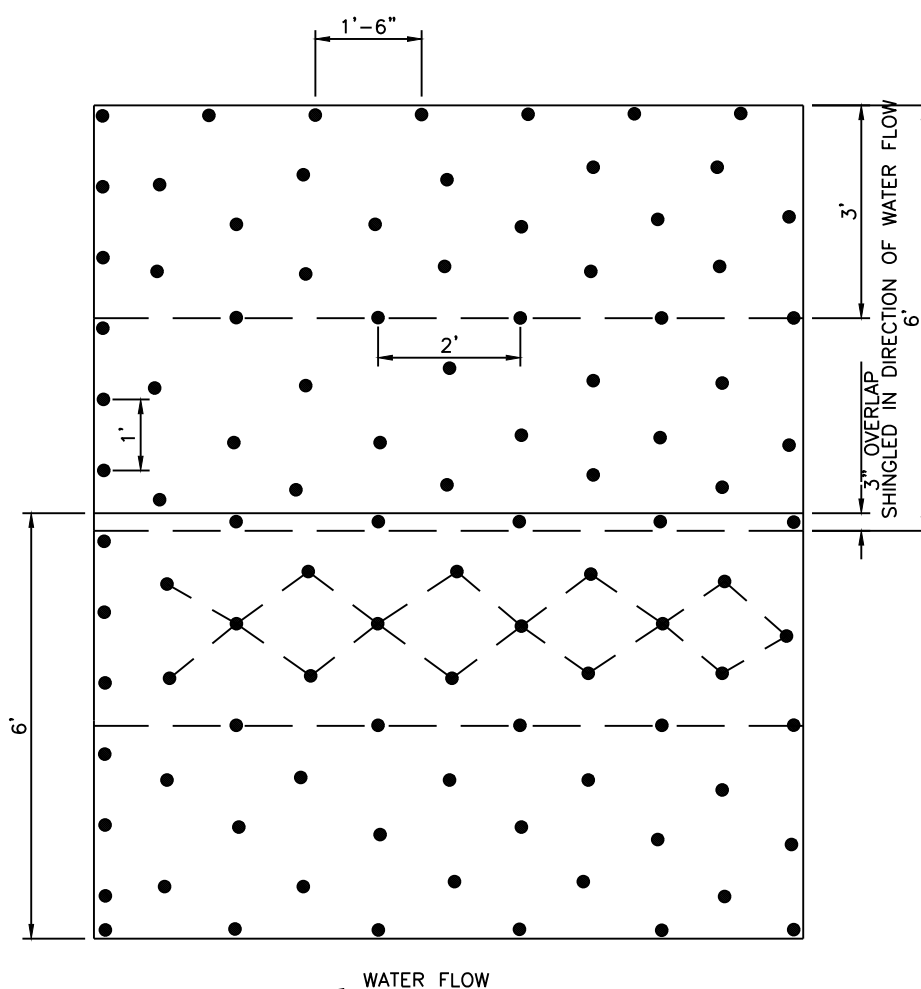
COIR LOG J-HOOK SPACING (PROFILE)
NOTE: DRIVE REBAR THROUGH COIR LOG AND BEND OVER 0.5FT PARALLEL WITH STREAM



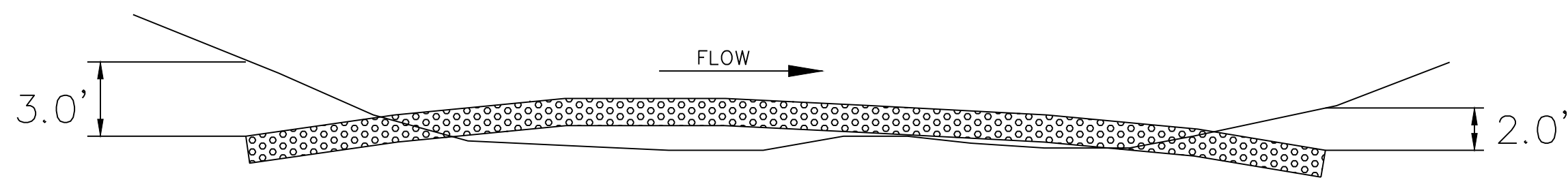
TYPICAL SECTION
SOIL-FILLED TRM/HT-TRM INSTALLATION



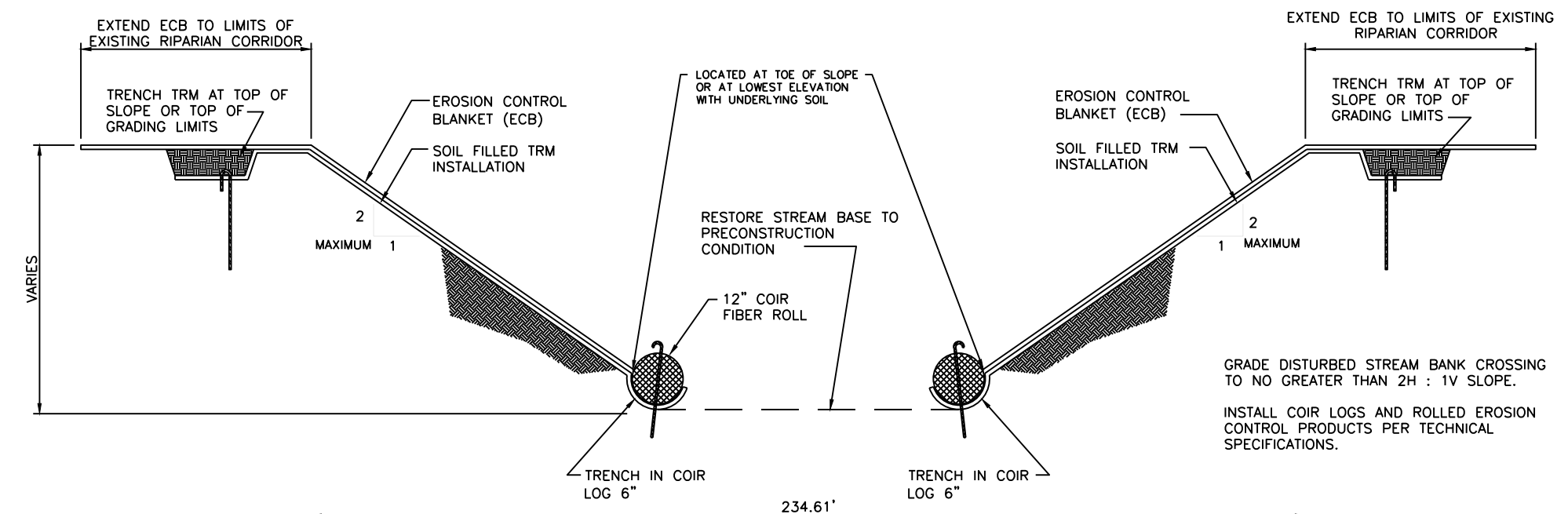
Typ. TRM Overlap Pattern
N.T.S.



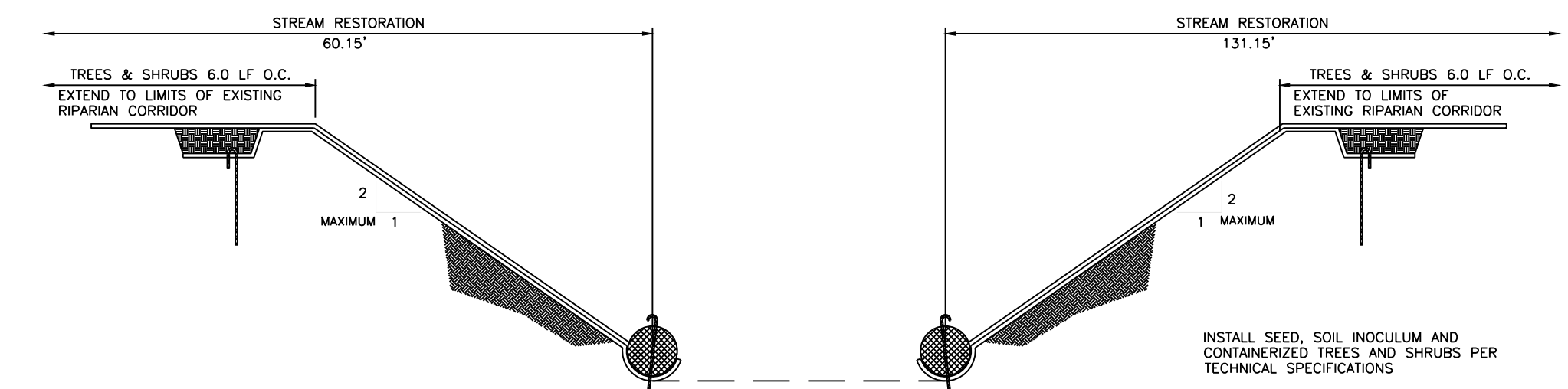
Typ. ECB Overlap Pattern
N.T.S.



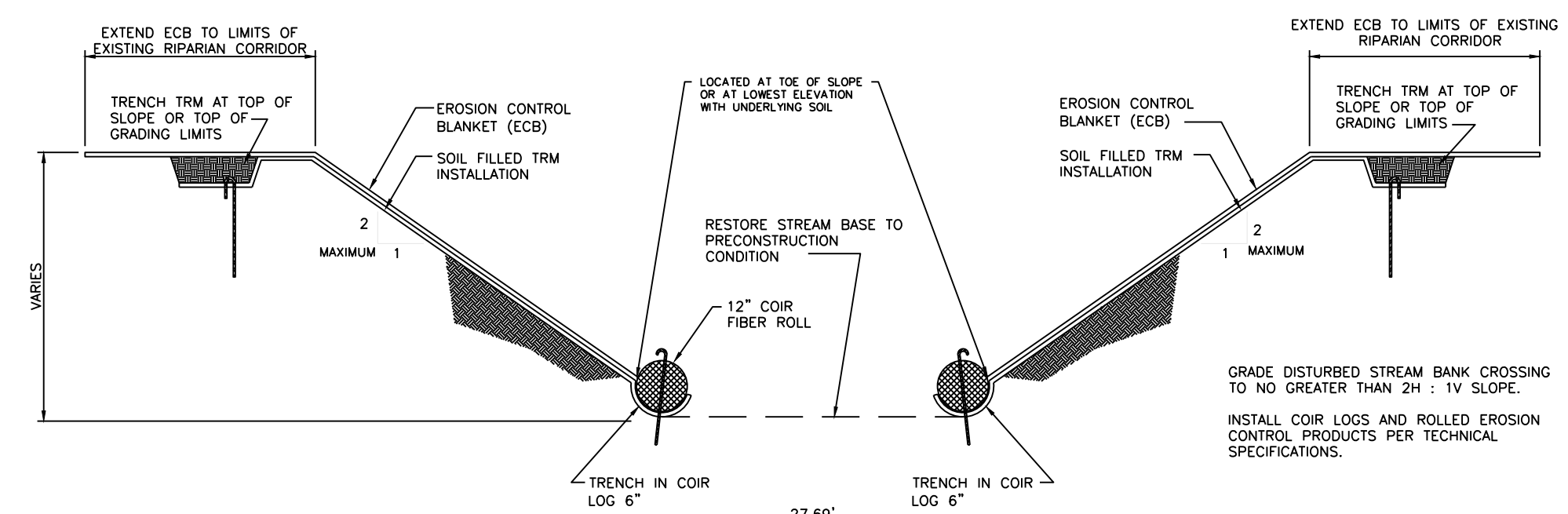
COIR LOG ALIGNMENT (SECTION VIEW)
NOTE: TRENCH AND ANCHOR COIR LOG 3 FT INTO BANK AT POINT OF ORIGIN AND 2 FT AT POINT OF TERMINATION



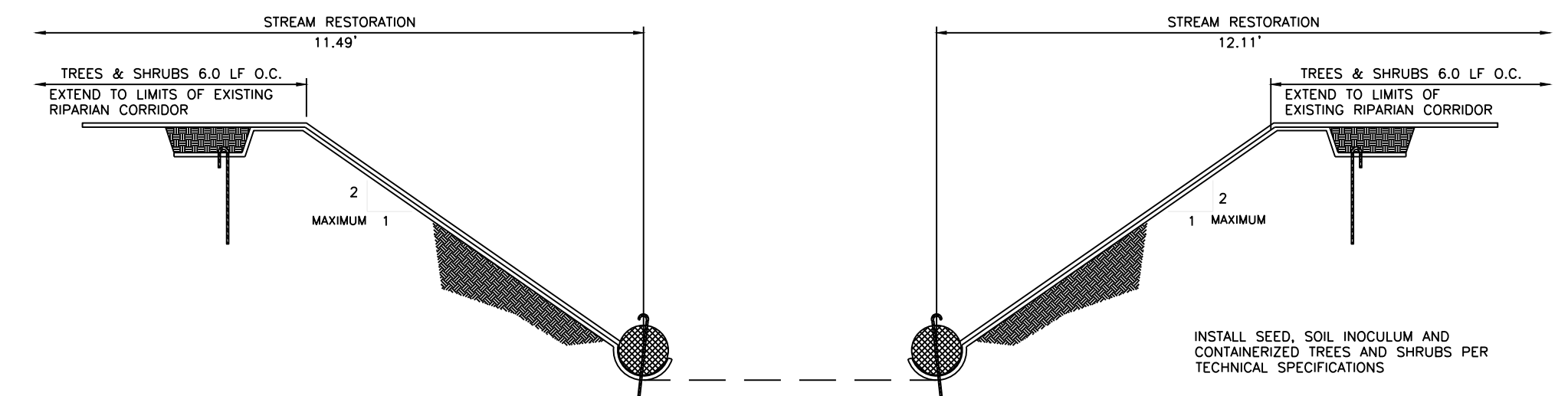
Station 2+13.60
Stream Bank Stabilization Detail
Civil Requirements
See Sheet C.200
N.T.S.



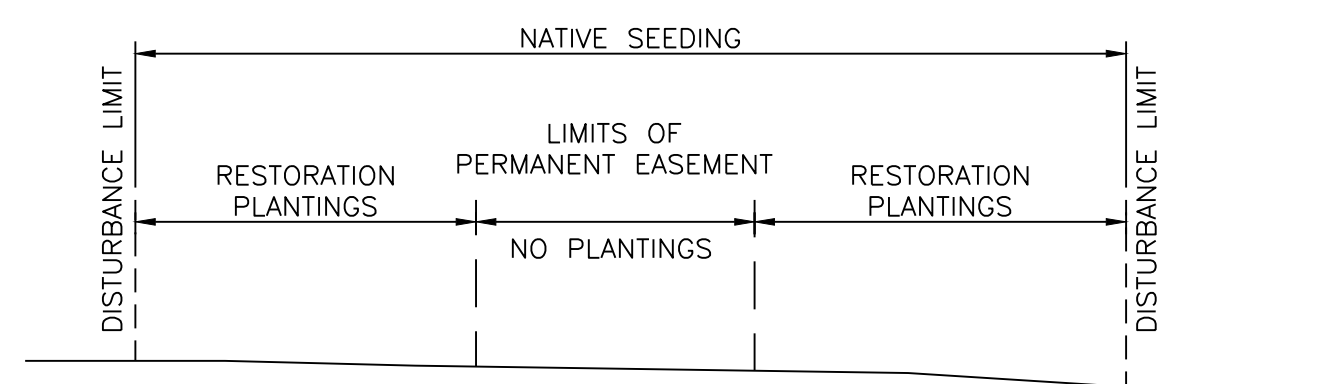
Station 2+13.60
Stream Bank Stabilization Detail
Planting Requirements
See Sheet C.200
N.T.S.



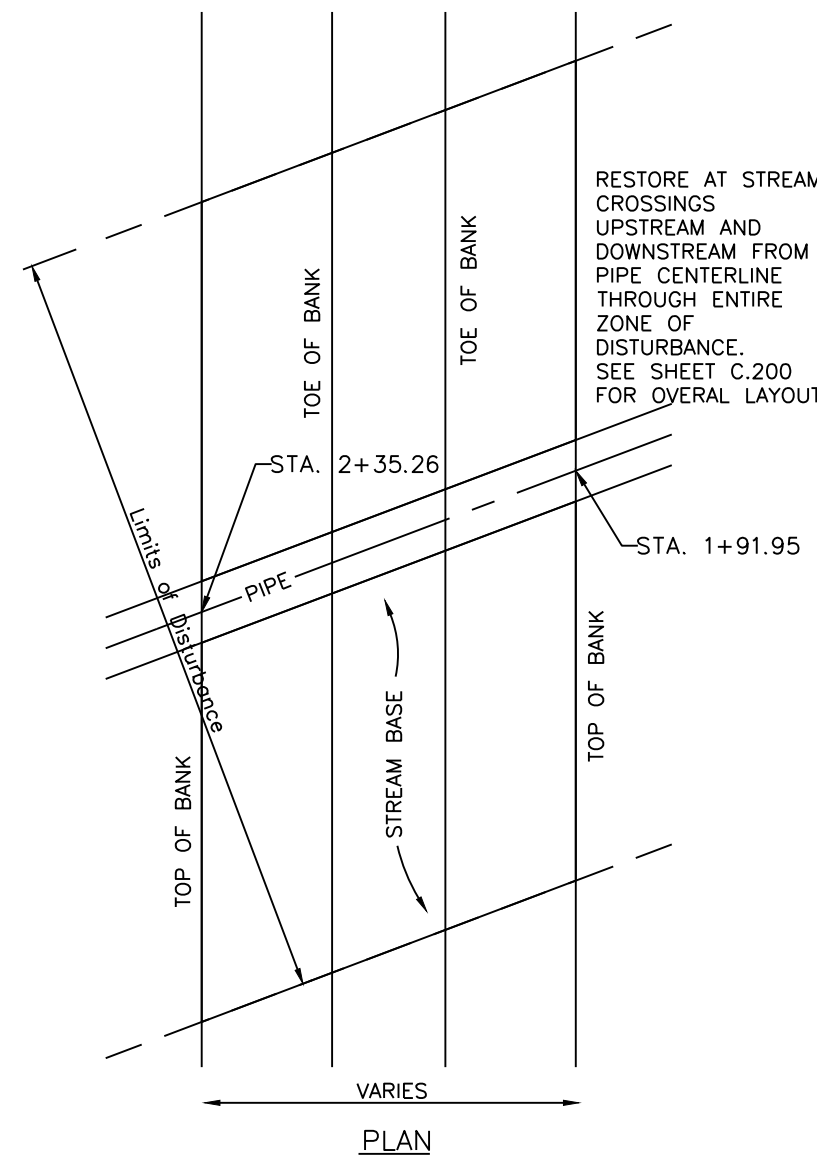
Station 25+66.30
Stream Bank Stabilization Detail
Civil Requirements
See Sheet C.200
N.T.S.



Station 25+66.30
Stream Bank Stabilization Detail
Planting Requirements
See Sheet C.200
N.T.S.



Typical Section Stream Crossings
Planting Zone
N.T.S.



Stream Crossing
Limits of Restoration
N.T.S.

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1. Perform restoration of designated stream crossings per plan details.
2. Seeding, fertilizing, and mulching shall be required within limit of disturbance as follows:
 - (a) Agricultural Pastures – Utilize seed mix per Specification Section 2400
 - (b) Woodland Corridors and Stream Crossings – Utilize native seed mixes as provided in the plans. Perform seeding, soil inoculation, and mulching per Specification Section 2405.
 - (c) Row Crop Fields – No seeding is required unless noted in project special provisions.
3. Perform restoration plantings per Section 2405 at locations specified in plan details. Native seeding shall accompany restoration plantings.
4. Any area disturbed beyond the temporary construction easement shall be restored to pre-existing conditions at no additional cost to the owner.

Native Seeding Woodland Mix				
Scientific Name	Common Name	# PLS / acre	Min. % Germ.	Origin
<i>Elymus virginicus</i>	Virginia Wild Rye	15.00	80	MO/KS
<i>Elymus canadensis</i>	Canada Wild Rye	15.00	80	MO/KS
<i>Hystrix patula</i>	Bottlebrush Grass	5.00	80	MO/KS
<i>Bouteloua arispendula</i>	Sideoats Grama	2.50	80	Midwest
<i>Panicum virgatum</i>	Switchgrass var Blackwell	1.00	80	MO/KS
<i>Chasmanthium latifolia</i>	Sea Oats	2.50	90	MO/KS
<i>Calamagrostis arundinacea</i>	Blue Joint	0.50	80	Midwest
<i>Andropogon virginicus</i>	Broomsedge Upland Ecotype	0.250	50	Midwest
<i>Desmanthus illinoensis</i>	Bundleflower	0.250	80	Midwest
<i>Echinacea purpurea</i>	Purple Coneflower	0.250	80	MO/KS
<i>Ratibida pinnata</i>	Grey Headed Coneflower	0.250	80	MO/KS
<i>Coreopsis lanceolata</i>	Lanceleaf Coreopsis	0.125	80	MO/KS
<i>Baptisia australis</i>	Blue False Indigo	0.125	80	MO/KS
<i>Liatris pycnostachya</i>	Prairie Blazing Star	0.125	80	MO/KS
<i>Asclepias tuberosa</i>	Butterfly Milkweed	0.125	90	Midwest
<i>Cassia fasciculata</i>	Partridge Pea	0.125	90	MO/KS
<i>Eupatorium maculatum</i>	Joe Pye Weed	0.125	50	MO/KS
<i>Tradescantiahiensis</i>	Ohio Spiderwort	0.125	90	MO/KS
<i>Penstemon digitalis</i>	Smooth Beardtongue	0.125	90	MO/KS
<i>Rudbeckia fulgida</i>	Orange Black Eyed Susan	0.125	90	MO/KS
<i>Lespedeza capitata</i>	Roundhead Lespedeza	0.125	90	Midwest
<i>Campanula spp</i>	Tall Bellflower	0.063	50	Midwest
<i>Aster oblongifolius</i>	Oblong Aster	0.063	80	Midwest
<i>Solidago speciosa</i>	Goldenrod	0.063	80	Midwest
<i>Triticum x Agropyron</i>	Regreen Sterile Wheat	50.00	95	Northwest

All native seed to originate from local source ecotype
(Kansas Osage Cuestas or Missouri Osage Plains Ecoregions)

Restoration Details				
Wetland Native Seed Mix				
Scientific Name	Common Name	#PLS / acre	Min. % Germ.	Origin
<i>Scirpus pectinatus</i>	Prairie Cordgrass	10,000	80	MO/KS
<i>Glyceria striata</i>	Fowl Mammagrass	1,000	90	MO/KS
<i>Sagittaria latifolia</i>	Arrowhead	0,500	90	MO/KS
<i>Callagrostis arundinacea</i>	Blue Joint	2,500	80	MO/KS
<i>Elymus canadensis</i>	Canadian Wild Rye	2,500	90	MO/KS
<i>Carex stricta</i>	Tussock Sedge	2,500	80	MO/KS
<i>Carex frankii</i>	Frank's Sedge	5,000	80	MO/KS
<i>Scirpus acutus</i>	Hardstem Bulrush	0,500	80	MO/KS
<i>Juncus effusus</i>	Soft Rush	0,500	80	MO/KS
<i>Eleocharis palustris</i>	Creeping Spikerush	1,000	90	MO/KS
<i>Rudbeckia fulgida</i>	Orange Black Eyed Susan	0,500	80	MO/KS
<i>Lobelia cardinalis</i>	Cardinal Flower	0,500	90	MO/KS
<i>Lobelia silphitica</i>	Great Blue Lobelia	0,500	90	MO/KS
<i>Pycnanthemum tenuifolium</i>	Slender Mint	0,500	90	MO/KS
<i>Rudbeckia subtomentosa</i>	Sweet Black Eyed Susan	0,500	90	MO/KS
<i>Aster nova-angiae</i>	New England Aster	0,500	80	MO/KS
<i>Tradescantia ohiensis</i>	Spiderwort	0,500	80	MO/KS
<i>Helenium autumnale</i>	Sneezeweed	0,500	80	MO/KS
<i>Bidens aristata</i>	Tickseed Sunflower	0,500	80	MO/KS
<i>Asclepias s. incarnata</i>	Swamp Milkweed	0,500	90	MO/KS
<i>Zizia aurea</i>	Golden Alexanders	0,500	80	MO/KS
<i>Triticum x Agropyron</i>	Regreen Sterile Wheat	50,000	95	Northeast

NOTE: Utilize this mix across all disturbed wetland crossings. Cover with Erosion Control Blanket.

[illegible]

NOTE: WHERE CONSTRUCTION ACTIVITIES PROPOSE TO DISTURB SURFACE WETLANDS, CONTRACTOR SHALL STOCKPILE TOPSOIL FROM WETLANDS PRIOR TO SUBSURFACE DISTURBANCE. WETLAND TOPSOIL SHALL BE RESPREAD OVER DISTURBED WETLAND AREAS PRIOR TO RESTORATION SEEDING. REFER TO SPECIFIED

NOTE: AREAS NOT PROPOSED FOR NATIVE SEEDING SHALL BE RESTORED PER STANDARD SPECIFICATIONS.

% Humus, Minimum	70%
% Humic Acid, Minimum	15%
% Total Nitrogen, Maximum	0%
% Available Phosphate, Minimum	3%
% Soluble Potassium, Minimum	1%
Microbial Count CFU/100g, Minimum	60,000
Rate of Use (Pounds/Acre)	1250
Approved Manufacturer, or equal	GroPower

Note: Apply soil inoculant per technical specifications to areas requiring native seeding.

HT TRM and TRM:	Colbond Enkamat 7520 Pyramat Macmat R6G Tenax Multimat TRM 100 RS3
ECB:	North American Green CS150BN Greenfix CFS072B Greenfix SG072B
Geopins:	Steel 18-inch, with fender washers
Staples:	Steel, Style 616 (6-inch U-shape)
Coir Logs:	12-inch diameter, jute wrap

1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S
SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY
ORDINANCE 5813.

900.10
~~900.00~~ Indicates data replaced with "As-Built" information. All other data is as designed and has not been field verified.

Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

Project: _____
View High Drive
Issue Date: _____

Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

7/2/18 - As-Built

[illegible]

C.407