

ALTA/NSPS LAND TITLE SURVEY

Project No. 19001

Sht. No.

1

Date

By

1

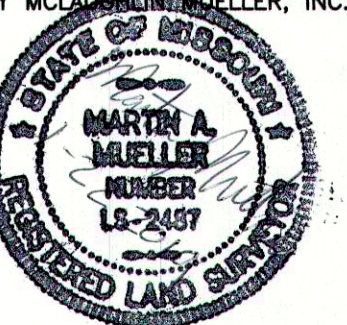
Revision

No.

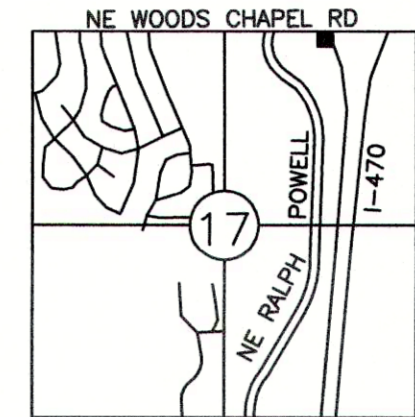
McLaughlin Mueller, Inc.
 PROFESSIONAL LAND SURVEYORS
 218 WEST MILL STREET
 LIBERTY, MO 64068
 PHONE 816-407-0002 FAX 816-407-0003
 Corporation LS 1999141096

Designed By: MAM
 Drawn By: MAM
 Checked By: MAM
 Approved By: MAM
 Date: JANUARY 22, 2019

ALTA/NSPS CHAPEL RIDGE, LOT 7B-1, 851 N.E. WOODS CHAPEL ROAD,
 SECTION 17, T48N, R31W, LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

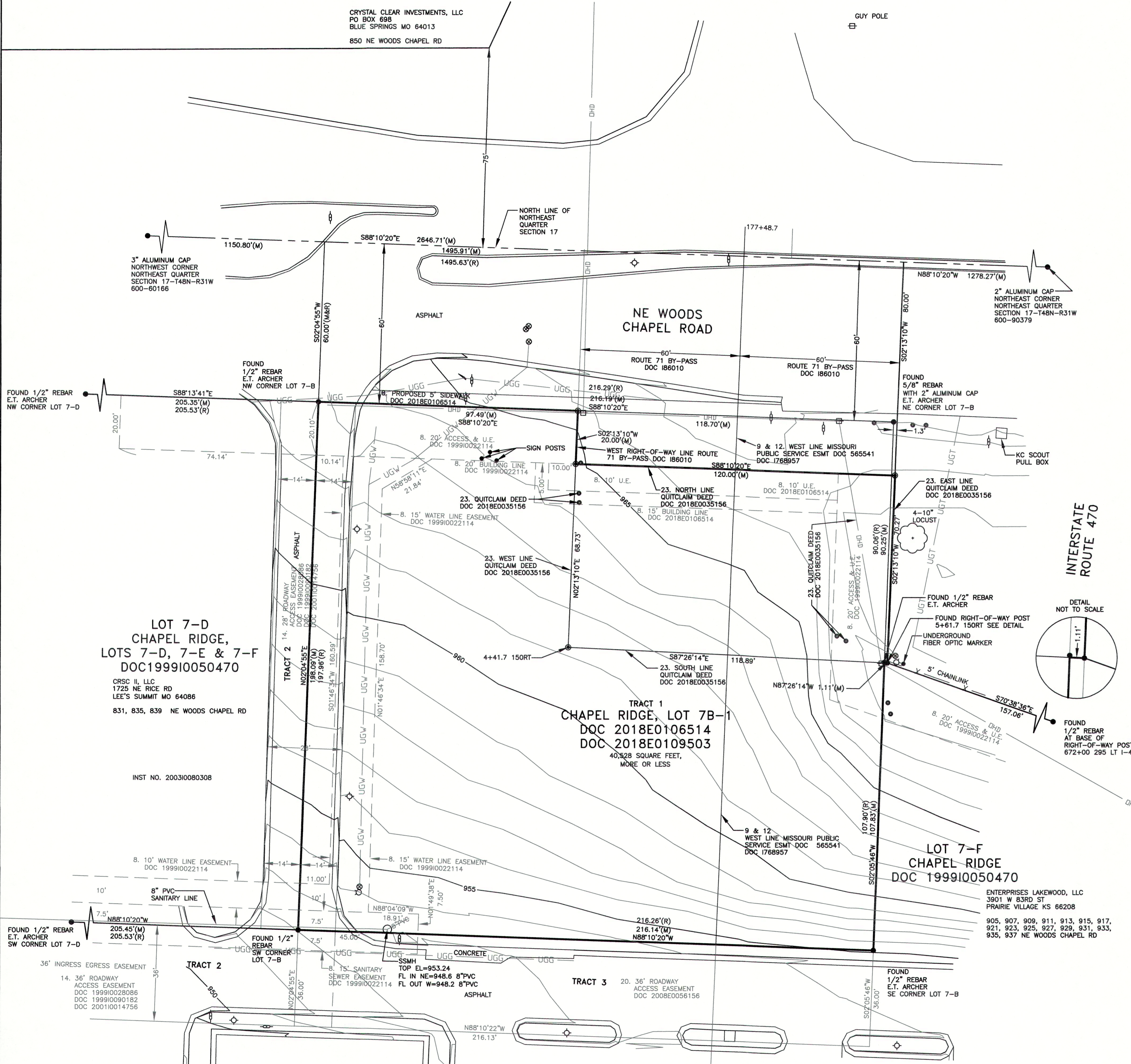
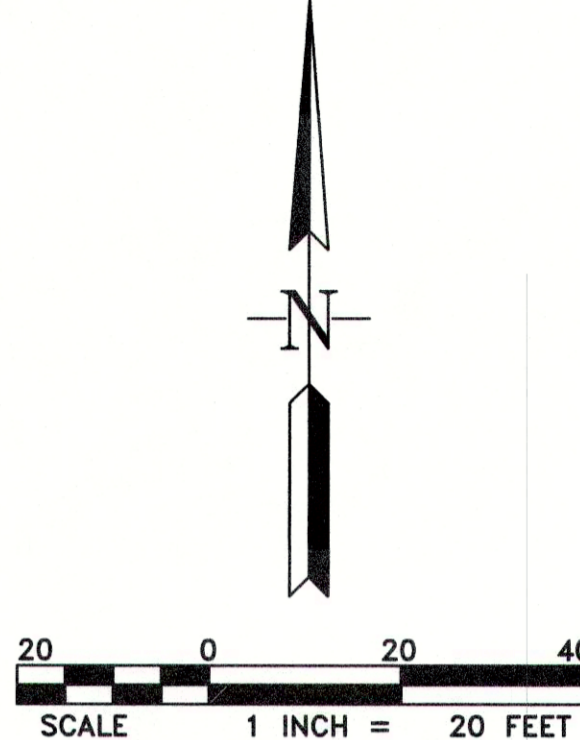
BY MCLAUGHLIN MUELLER, INC.

 MARTIN MUELLER, PLS 2487

RESERVED FOR THE RECORDER OF DEEDS



VICINITY MAP
 SECTION 17-48-31
 LEE'S SUMMIT,
 JACKSON COUNTY, MISSOURI
 1"=2640'

- LEGEND**
- FOUND 1/2" REBAR WITH PLASTIC CAP STAMPED CLS 1999141096
 - FOUND MONUMENT AS NOTED
 - (M) MEASURED DISTANCE
 - (R) RECORD DISTANCE
 - ⊙ FIRE HYDRANT
 - ⊕ UTILITY POLE
 - ⊖ DOWN GUY
 - ⊙ LIGHT POLE
 - POST
 - SIGN
 - MANHOLE
 - TREE
 - ⊗ WATER VALVE
 - U.E. UTILITY EASEMENT
 - OHD OVERHEAD UTILITY
 - UGG UNDERGROUND GAS
 - UGW UNDERGROUND WATER



ORDERED BY: HETTIE B. ENSIGN, VICE PRESIDENT
 BMO HARRIS BANK NATIONAL ASSOCIATION
 111 WEST MONROE STREET, 24-W
 CHICAGO, IL 60603

DESCRIPTION PROVIDED IN EXHIBIT A

TRACT 1
 CHAPEL RIDGE, LOT 7B-1, CHAPEL RIDGE, LOT 7B-1, A SUBDIVISION OF LAND IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT IN BOOK 180, PAGE 49, AS DOCUMENT NO. 2018E0106514, AS AMENDED BY AFFIDAVIT RECORDED AS DOCUMENT NO. 2018E0109503.

TRACT 2
 NON-EXCLUSIVE EASEMENT FOR INGRESS AND EGRESS AS SET FORTH IN DEDICATION OF ROADWAY/ACCESS EASEMENT FILED APRIL 16, 1999 AS DOCUMENT NO. 1999I0028086 AMENDED BY DOCUMENT NO. 1999I0090182 AND RE-RECORDED AS DOCUMENT NO. 2001I014756.

TRACT 3
 NON-EXCLUSIVE ACCESS EASEMENT FOR VEHICULAR AND PEDESTRIAN INGRESS AND EGRESS AS SET FORTH IN ACCESS EASEMENT FILED MAY 22, 2008 AS DOCUMENT NO. 2008E0056156.

ITEMS 8, 9, 12, 13, 14, 15, 17, 18, 19 AND 23 FROM THE SCHEDULE B, PART II EXCEPTIONS FROM THE ALTA COMMITMENT FOR TITLE INSURANCE FROM FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT/FILE NO: NCS-924722-KCT, DATED DECEMBER 18, 2018, FOURTH AMENDMENT:

8. EASEMENTS, RESTRICTIONS AND SETBACK LINES, AS PER PLAT, RECORDED AS DOCUMENT NO. 1999I0022114. SHOWN HEREON.

EASEMENTS, RESTRICTIONS AND SETBACK LINES, AS SET FORTH ON THE RECORDED PLAT FILED DECEMBER 14, 2018 AS DOCUMENT NO. 2018E0106514 IN BOOK 180, PAGES 49-50. SHOWN HEREON.

AS AMENDED BY AFFIDAVIT RECORDED DECEMBER 27, 2018 AS DOCUMENT NO. 2018E0109503. SHOWN HEREON.

9. EASEMENT GRANTED TO MISSOURI PUBLIC SERVICE CORPORATION, A DELAWARE CORPORATION, BY THE INSTRUMENT RECORDED AS DOCUMENT NO. 565541 IN BOOK 862, PAGE 453, SHOWN HEREON.

12. EASEMENT GRANTED TO MISSOURI PUBLIC SERVICE CORPORATION, A DELAWARE CORPORATION, BY THE INSTRUMENT RECORDED AS DOCUMENT NO. 1768957 IN BOOK 11673, PAGE 1422, SHOWN HEREON.

13. TERMS AND PROVISIONS OF THE RESTRICTIONS CONTAINED IN THE INSTRUMENT RECORDED AS DOCUMENT NO. 98-1-44075 IN BOOK 13213, PAGE 914 CORRECTED BY DOCUMENT NO. 2002I0087160. LIES WITHIN THE BOUNDARY DESCRIBED.

14. DEDICATION OF ROADWAY/ACCESS EASEMENT FILED APRIL 16, 1999 AS DOCUMENT NO. 1999I0028086 AMENDED BY DOCUMENT NO. 1999I0090182 AND RE-RECORDED AS DOCUMENT NO. 2001I014756. SHOWN HEREON.

15. RESTRICTIONS AS SET FORTH IN THE RESTRICTIVE COVENANT AGREEMENT RECORDED AS DOCUMENT NO. 1999I0018754. LIES WITHIN THE BOUNDARY DESCRIBED.

17. THE FOLLOWING MATTERS DISCLOSED BY AN ALTA/ACSM SURVEY MADE BY LHE ON MARCH 8, 2006, DESIGNATED JOB NO. 0602006: DOCUMENT NOT PROVIDED.

A) DISCLOSURE OF EXISTING WATER MAIN LYING OUTSIDE OF PLATTED EASEMENT.

18. TERMS AND PROVISIONS OF AN ACCESS EASEMENT FILED MAY 22, 2008 AS DOCUMENT NO. 2008E0056156. SHOWN HEREON.

19. RESERVATION IN AND TO THE OIL, GAS AND OTHER MINERALS OF EVERY NATURE ON, IN AND UNDER OR THAT BE PRODUCED FROM THE LAND AND THE TERMS AND PROVISIONS RELATED THERETO, ALL AS SET FORTH IN A SPECIAL WARRANTY DEED FROM N3 DEVELOPMENT, LTD., A TEXAS LIMITED PARTNERSHIP TO M&I MARSHALL & ILSLEY BANK, A WISCONSIN STATE CHARTERED BANK, FILED MAY 22, 2008, AS DOCUMENT NO. 2008E0056157. LIES WITHIN THE BOUNDARY DESCRIBED.

23. ABUTTER'S RIGHT OF ACCESS AND UTILITIES RESERVED IN QUITCLAIM DEED BY THE STATE OF MISSOURI, ACTING BY AND THROUGH THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION RECORDED APRIL 24, 2018 AS DOCUMENT NO. 2018E0035156. SHOWN HEREON. SEE NOTE.

TABLE A:
 1. MONUMENTS HAVE BEEN PLACED OR FOUND AT ALL MAJOR CORNERS OF THE BOUNDARY OF THE PROPERTY.
 2. ADDRESSES SHOWN HEREON HAVE BEEN TAKEN FROM THE JACKSON COUNTY ASSESSOR.
 3. THIS PROPERTY IS DESIGNATED AS ZONE X, ACCORDING TO THE FLOOD INSURANCE RATE MAP, COMMUNITY-PANEL NUMBER 29095C0430G, DATE JANUARY 20, 2017.
 4. THE GROSS LAND AREA OF CHAPEL RIDGE, LOT 7B-1 CONTAINS 0.93 ACRES, MORE OR LESS.
 5. VERTICAL RELIEF BASED ON MGRS STATION JA-134, EL=969.81 NAVD 1988.
 6. SUBSTANTIAL FEATURES ARE SHOWN HEREON, NO BUILDINGS OBSERVED.
 11. OBSERVED EVIDENCE OF UTILITIES TOGETHER WITH EVIDENCE FROM PLANS FROM APPROPRIATE SOURCES HAS BEEN SHOWN HEREON. MISSOURI ONE-CALL WAS CONTACTED, TICKET NUMBER 190092705 INDICATING THAT SPIRE MO WEST, THE CITY OF LEE'S SUMMIT AND CENTURYLINK FIBER WERE MARKED, ALL OTHERS NOTED AS CLEAR.
 13. NAMES OF ADJOINING OWNERS OF PLATTED LANDS SHOWN HEREON HAVE BEEN TAKEN FROM THE JACKSON COUNTY ASSESSOR.
 16. NO EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS WERE OBSERVED DURING THE PROCESS OF CONDUCTING THE FIELDWORK.

NOTES:
 ITEM NUMBER 23 IN THE SCHEDULE B, PART II EXCEPTIONS DISCLOSED DOCUMENT 2018E0035156 A QUITCLAIM DEED, WHICH RESERVES ABUTTER'S RIGHT OF NO ACCESS TO ROUTE I-470 AND WOODS CHAPEL ROAD AND FOR KNOWN OR UNKNOWN UTILITY FACILITIES CURRENTLY LOCATED WITHIN THE AREA OF THE QUITCLAIM DEED.

THE EASEMENT THAT DESCRIBES TRACT 2 PURPORTS TO DEDICATE AN EASEMENT TO FUTURE OWNERS FROM THE OWNER.

BEARINGS SHOWN HEREON ARE BASED ON MISSOURI STATE PLANE COORDINATES 1983 FROM MGRS STATION JA-134. N=312470.096M E=862368.275M GRID FACTOR=0.9999018 DATE OF ADJUSTMENT=2003

THIS ALTA/NSPS LAND TITLE SURVEY WAS MADE FOR THE EXCLUSIVE USE OF BMO HARRIS BANK NATIONAL ASSOCIATION, SUCCESSOR BY MERGER AND NAME CHANGE OF M&I MARSHALL & ILSLEY BANK, A WISCONSIN STATE CHARTERED BANK AND FIRST AMERICAN TITLE INSURANCE COMPANY.
 THIS CERTIFICATION DOES NOT EXTEND TO ANY UNNAMED PERSONS OR LEGAL ENTITIES WITHOUT WRITTEN CERTIFICATION EXPRESSLY NAMING THOSE PERSONS OR LEGAL ENTITIES.
 THIS SURVEY WAS BASED ON THE COMMITMENT FOR TITLE INSURANCE FROM FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT/FILE NO: NCS-924722-KCT, DATED DECEMBER 18, 2018, FOURTH AMENDMENT.
 TO: BMO HARRIS BANK NATIONAL ASSOCIATION, SUCCESSOR BY MERGER AND NAME CHANGE OF M&I MARSHALL & ILSLEY BANK, A WISCONSIN STATE CHARTERED BANK AND FIRST AMERICAN TITLE INSURANCE COMPANY.
 THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 5, 8, 11, 13 AND 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 15, 2019. THIS SURVEY WAS EXECUTED IN ACCORDANCE WITH THE CURRENT MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS, TYPE URBAN. DIGITAL MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT. ONLY A SIGNED AND SEALED DRAWING IS TO BE CONSIDERED THE ORIGINAL DOCUMENT.

UTILITIES:
 THE INFORMATION CONCERNING LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WHICH ARE NOT VISIBLE FROM THE SURFACE, HAS BEEN TAKEN FROM THE RECORDS AND FIELD LOCATIONS OF THE VARIOUS UTILITY COMPANIES AND HAS NOT BEEN FIELD VERIFIED BY THIS COMPANY. THESE LOCATIONS ARE NOT TO BE CONSTRUED AS ACCURATE OR EXACT.

19001-ALTA Update 1-22-19.dwg

LOT 7-F
 CHAPEL RIDGE,
 LOTS 7-D, 7-E & 7-F
 DOC1999I0050470

INST. NO. 2012E0115274

ENTERPRISES LAKEWOOD, LLC
 3901 W 83RD ST
 PRAIRIE VILLAGE KS 66208
 905, 907, 909, 911, 913, 915, 917,
 921, 923, 925, 927, 929, 931, 933,
 935, 937 NE WOODS CHAPEL RD

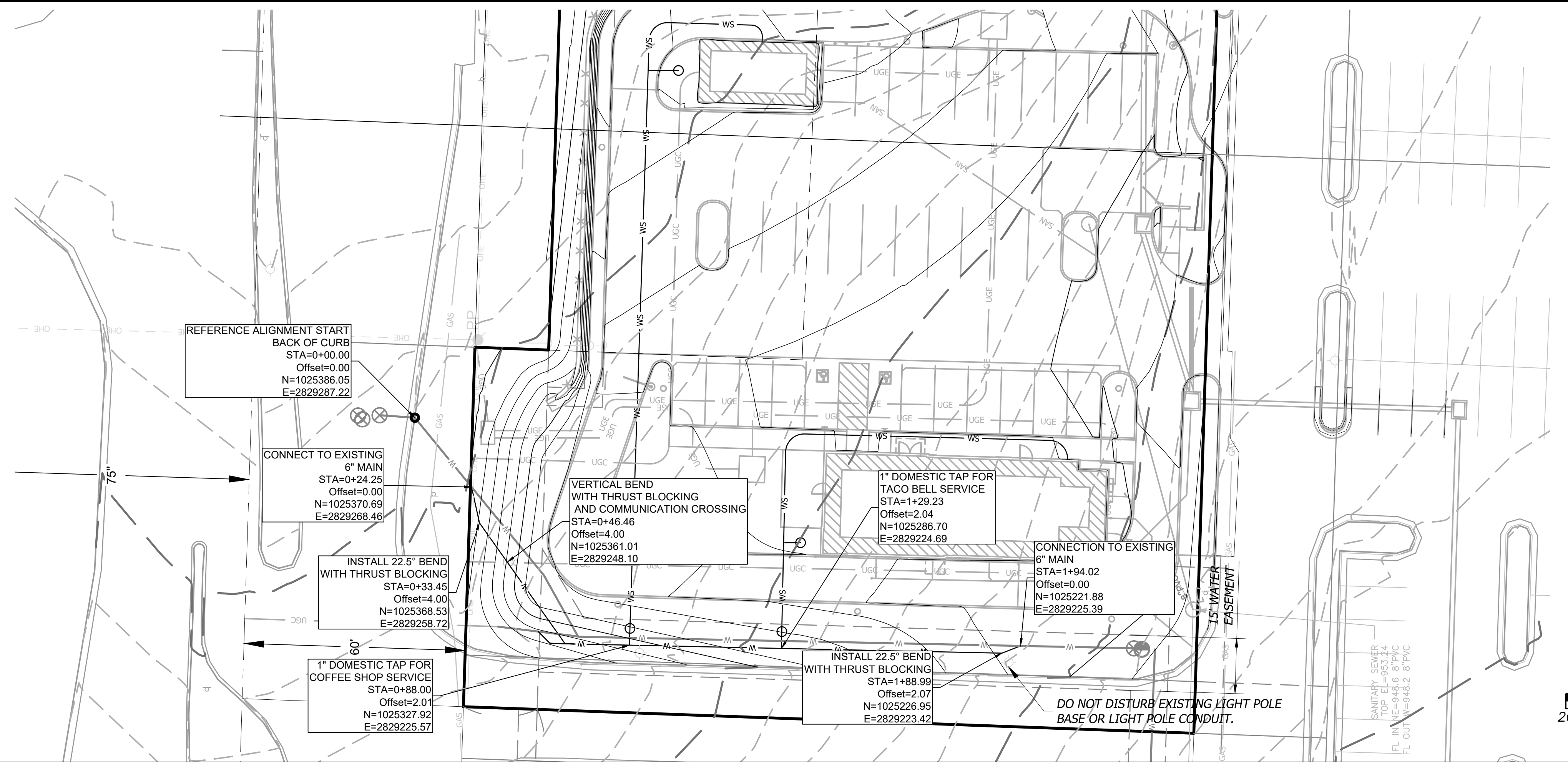
LOT 7-D
 CHAPEL RIDGE,
 LOTS 7-D, 7-E & 7-F
 DOC1999I0050470

CRSC II, LLC
 1725 NE RICE RD
 LEE'S SUMMIT MO 64086
 831, 835, 839 NE WOODS CHAPEL RD

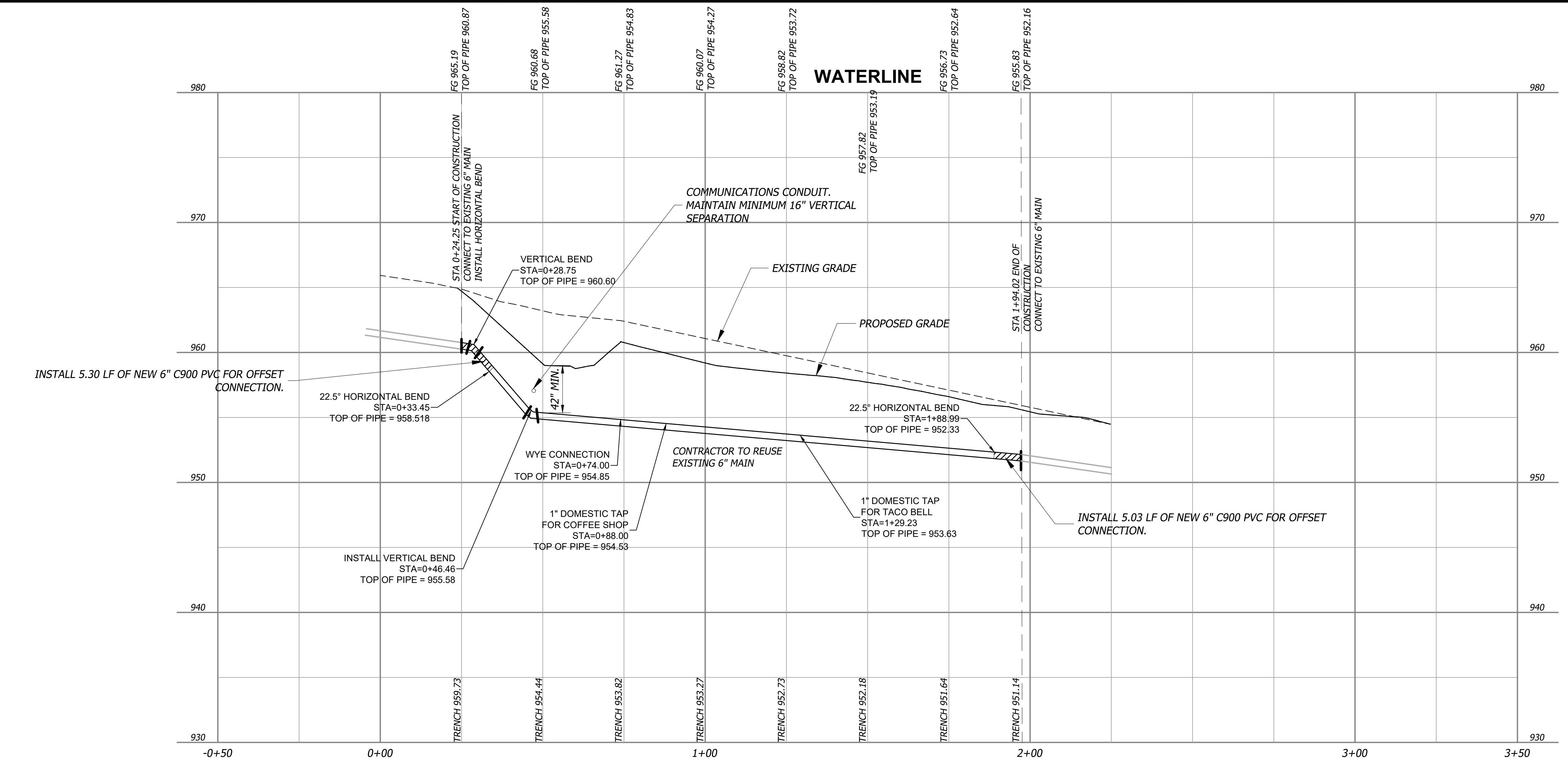
INST. NO. 2003I0080308

UTILITIES:
 THE INFORMATION CONCERNING LOCATIONS OF UNDERGROUND UTILITIES SHOWN HEREON WHICH ARE NOT VISIBLE FROM THE SURFACE, HAS BEEN TAKEN FROM THE RECORDS AND FIELD LOCATIONS OF THE VARIOUS UTILITY COMPANIES AND HAS NOT BEEN FIELD VERIFIED BY THIS COMPANY. THESE LOCATIONS ARE NOT TO BE CONSTRUED AS ACCURATE OR EXACT.

Jul 01, 2019 - 8:34am Plotted By: jay.odell V:\282940-First Street Development - Master\282940.05-Woods Chapin\04-DWG\Eng Sheet\WATER RELOCATION\282940.05-SHTS-WATR-PL.MXD Layout: Plan & Profile



- NOTES**
- 1) ALL BENDS SHALL HAVE TRUST BLOCKING PER CITY DETAILS PROVIDED ON SHEET 6.
 - 2) CONTRACTOR SHALL NOTIFY ADJACENT PROPERTY OWNERS EFFECTED BY TEMPORARY WATER OUTAGES MINIMUM 2 BUSINESS DAYS IN ADVANCE OF SERVICE INTERRUPTION.
 - 3) CONTRACTOR TO HAVE PROPOSED TRENCH DUG, BEDDING PLACED, INSPECTED AND APPROVED BY CITY INSPECTOR PRIOR TO SERVICE INTERRUPTION.
 - 4) CONTRACTOR TO REUSE EXISTING 6" WATER MAIN PIPE AS POSSIBLE IF MATERIAL FOUND TO BE IN ACCEPTABLE CONDITION. ALL OTHER PIPE SHALL BE 6" C900 PVC MINIMUM PRESSURE CLASS 235.
 - 5) ALL JOINTS AND PIPES SHALL BE RESTRAINED THROUGHOUT.
 - 6) CONTRACTOR TO ENSURE ALL WATER MAIN IMPROVEMENTS ARE LOCATED WITHIN EXISTING EASEMENT ON SITE.
 - 7) CONTRACTOR TO NOTIFY ENGINEER AND OWNER OF ANY ONSITE CONDITIONS FOUND TO BE OTHER THAN AS SPECIFIED HERE FOR DIRECTION AND APPROVAL.
 - 8) CONTRACTOR TO ENSURE MINIMUM 42" OF COVER AT ALL PLACES OF PROPOSED RELOCATION AND AT CONNECTION POINTS.



Design: JDO	Drawn: JDO
Checked: MGG	
Issue Date: 7/1/2019	
Project Number:	

WATER MAIN IMPROVEMENTS
851 NE WOODS CHAPEL ROAD
LEE'S SUMMIT, MO

PLAN AND PROFILE

Prepared For:
 FIRST STREET DEVELOPMENT
 4455 E CAMELBACK ROAD
 BUILDING C241
 PHOENIX, AZ 85018
 602-714-3099

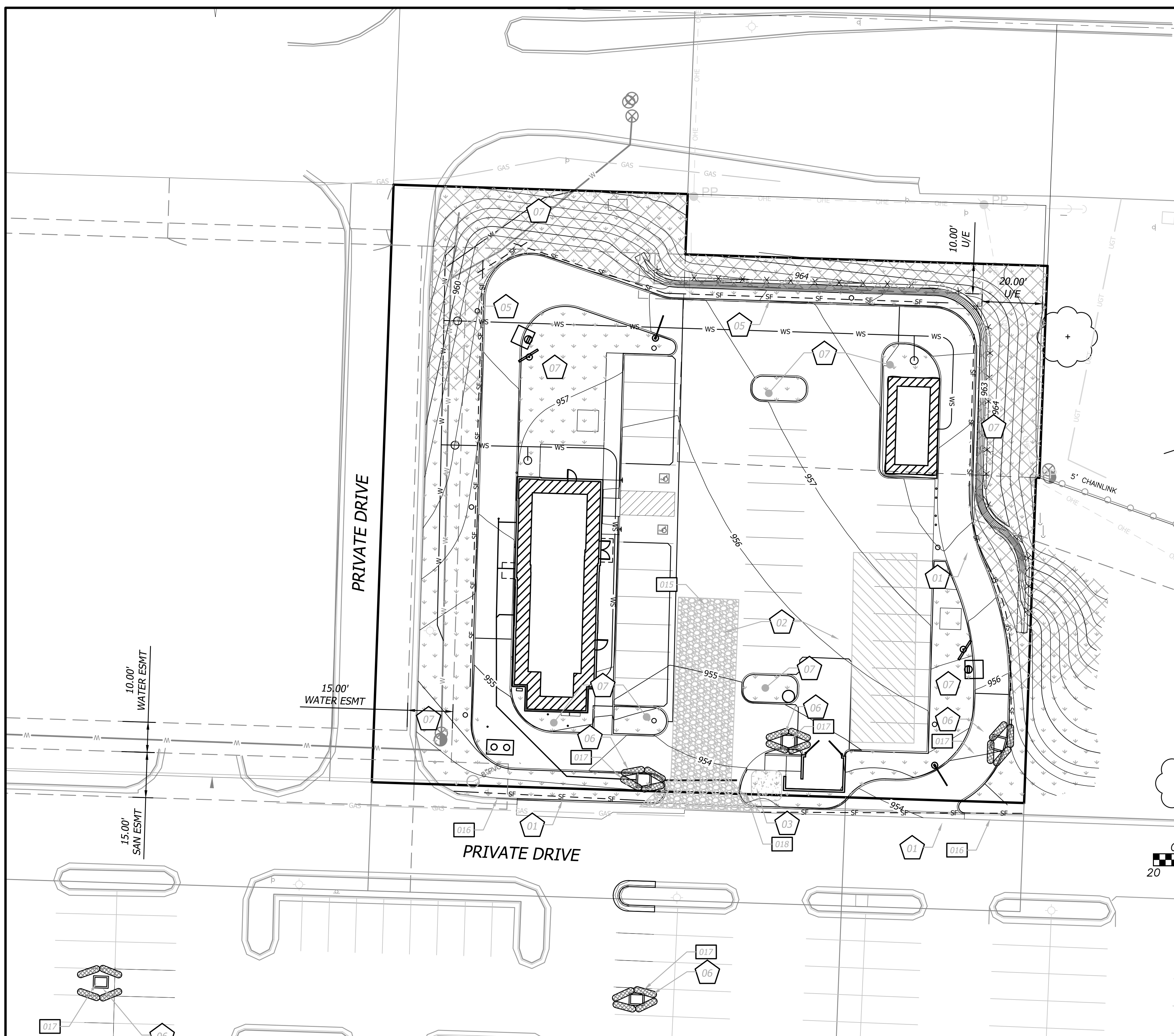
BHC RHODES
 Civil Engineering • Surveying • Utilities
 7101 College Blvd., Suite 400
 Overland Park, Kansas 66210
 P: (913) 662-1900 F: (913) 663-1633
 BHC RVDSS is a trademark of Blumenthal & Company, P.A.

Professional Engineer
 JAY D. O'DELL
 NUMBER PE-2017019021

Rev.	Date	Description	By	App.

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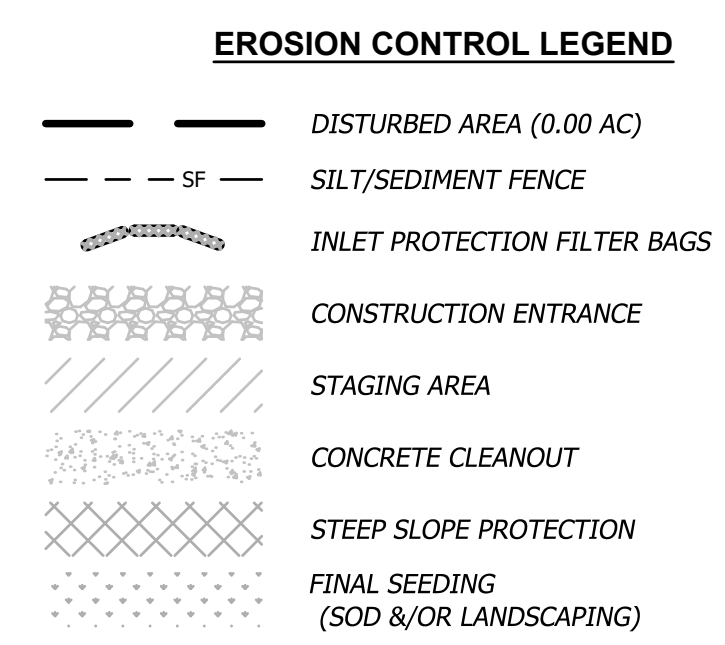


EROSION AND SEDIMENT CONTROL GENERAL NOTES

- Prior to Land Disturbance activities, the contractor shall:
 - Delineate the outer limits of any natural stream corridor designated with construction fencing.
 - Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
 - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the City Inspector and in conformance with the erosion and sediment control plan.
- The contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan, including but not limited to:
 - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
 - The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals:
 - During active construction phases - at least once per week
 - During periods of inactivity - at least once per 14 days
 - After each rainfall event of 1/2 inch or more - within 24 hours of the rain event
 - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.
 - The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.
- Unless otherwise noted in the plans, all seeding must conform to Division II-Construction and Materials Specification-Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.
- The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.
- The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
- Concrete wash or rinse water from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc. may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place.
- Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.
- Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.
- Interior Silt Fence as necessary during construction. Portions may be limited as vegetation is established and hardscape is installed. Entire length may be installed at the contractor's option to aid in stabilizing slopes.
- Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit with reports and documentation.

EROSION & SEDIMENT CONTROL STAGING CHART


Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE-CON)	A - Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	E	Place as shown on plan
		02	Concrete Entrance & Staging Area	D	Place as shown on plan
		03	Concrete Wash-Out	D	Place as shown on plan
		04	Existing Inlet Protection	E	Place as shown on plan
Phase II (MID-CON)	B - After Stripping, Grubbing, & Mass Grading	05	Interior Silt Fence (See Note 9)	E	Place as shown on plan
	C - After Utility Storm Sewer Construction	06	Storm Inlet Protection	D	Place as shown on plan
Phase III (POST-CON)	E - Final Grading, Paving & Landscaping	07	Final Seeding, Sod, and Landscaping	N/A	Silt fencing & inlet protect may be removed once seed & sodded areas are established on 80% of site. (RE: L1.1 Landscape Plan for the stormwater treatment facility)

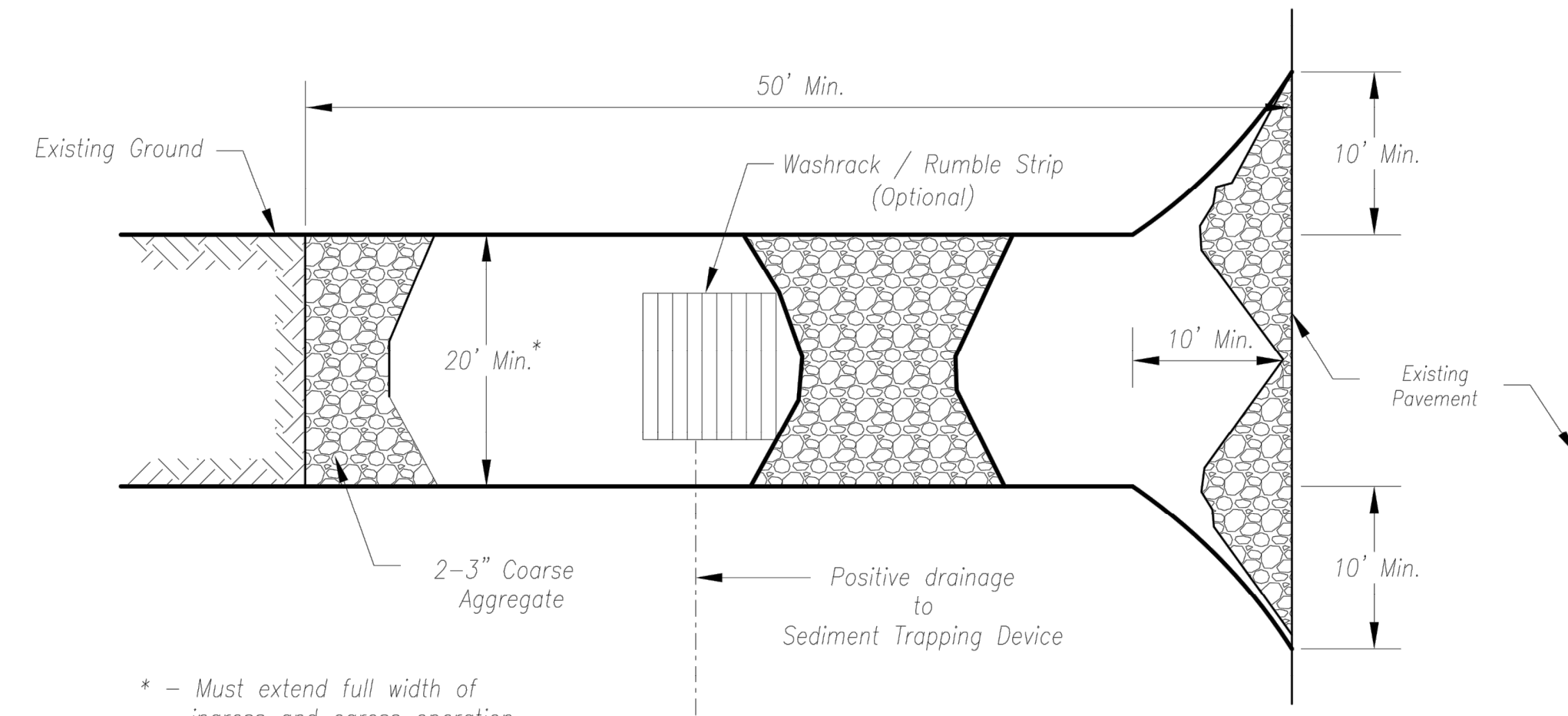


DETAILS

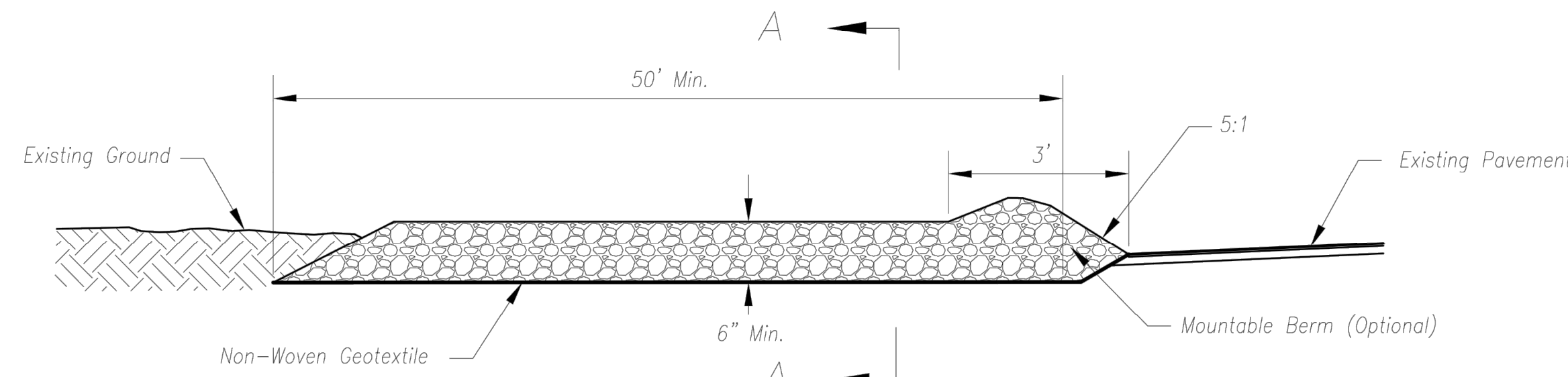
SEE EROSION CONTROL DETAIL SHEETS FOR THE FOLLOWING

015	CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
016	EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS
017	CURB INLET PROTECTION
018	FILTER FABRIC SILT FENCE

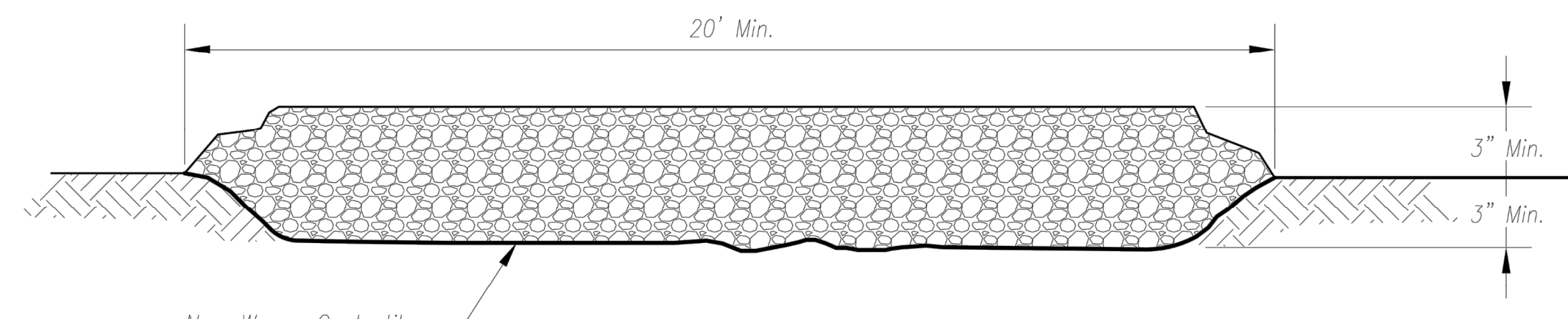
<p>WATER MAIN IMPROVEMENTS 851 NE WOODS CHAPEL ROAD LEE'S SUMMIT, MO</p>	<p>EROSION CONTROL</p>										
5											
Design: JDO Drawn: JDO Checked: MGG Issue Date: 7/1/2019 Project Number:	Prepared For: FIRST STREET DEVELOPMENT 4455 E CAMELBACK ROAD BUILDING C241 PHOENIX, AZ 85018 602-714-3099										
											
<p>BHC RHODES Civil Engineering • Surveying • Utilities 7101 College Blvd., Suite 400 Overland Park, Kansas 66210 P: (913) 663-1900 F: (913) 663-1633 BHC is a trademark of Blumenthal Hornum & Company, P.A.</p>											
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Rev.	Date	Description	By	App.							



Plan View
Not to Scale



Side Elevation
Not to Scale



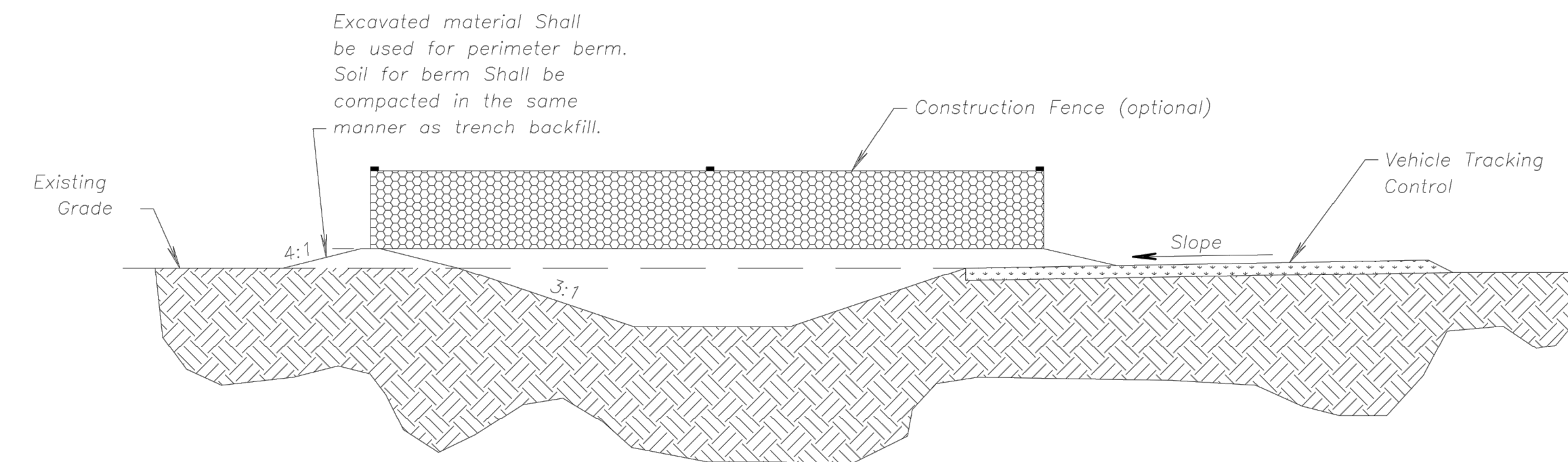
Section A-A
Not to Scale

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 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 from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of Installation. Top dress with clean aggregate as needed.

CONSTRUCTION ENTRANCE

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
APWA
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

Design: JDO	Drawn: JDO
Checked: MGG	Issue Date: 7/1/2019
Project Number:	

6

WATER MAIN IMPROVEMENTS
851 NE WOODS CHAPEL ROAD
LEE'S SUMMIT, MO

EROSION CONTROL DETAILS

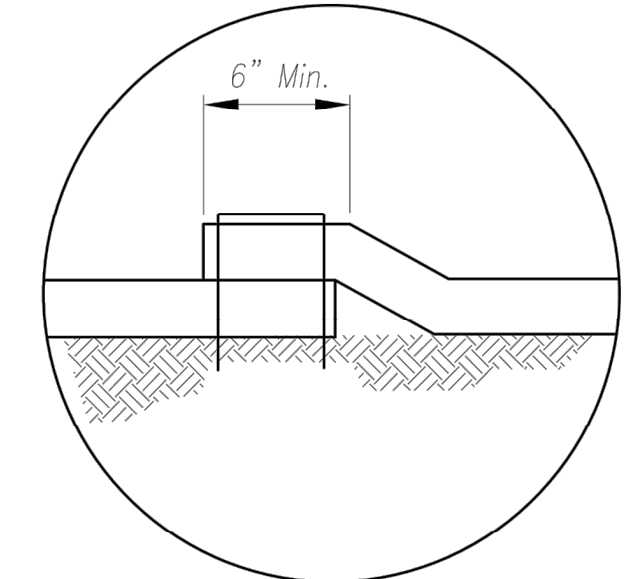
Prepared For:
FIRST STREET DEVELOPMENT
4455 E CAMELBACK ROAD
BUILDING C241
PHOENIX, AZ 85018
602-714-3099

BHC RHODES
Civil Engineering • Surveying • Utilities
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
P. (913) 463-1900 F. (913) 663-1633
BHC RHODES is a trademark of Flannery Homestead & Company, P.A.

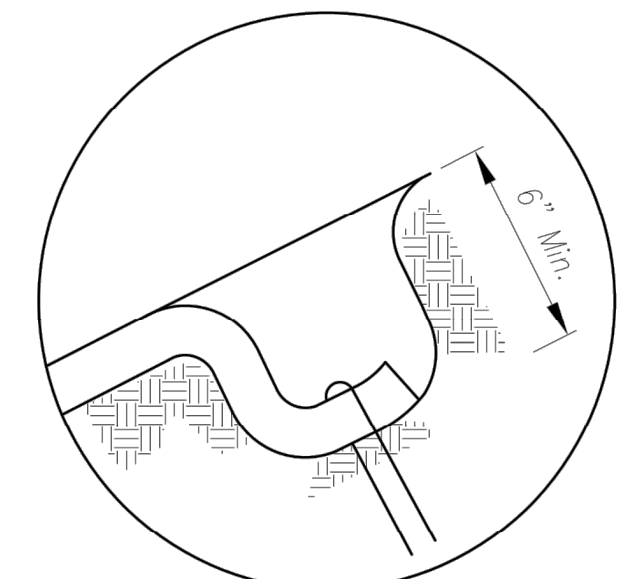
STATE OF MISSOURI
JAY D. O'DELL
NUMBER PE-2017019021
PROFESSIONAL ENGINEER

Jul 01, 2019 - 8:34am Plotted By: jay.odell V:\2019\2019-08-08-Woods Chapin\04-DWG\Eng Sheet\WATER RELOCATION\20190408-08-SHETS-WATR-ERCS-DTCS.dwg Layout: Strip Slope Protection

Longitudinal Seam



Anchor Slot



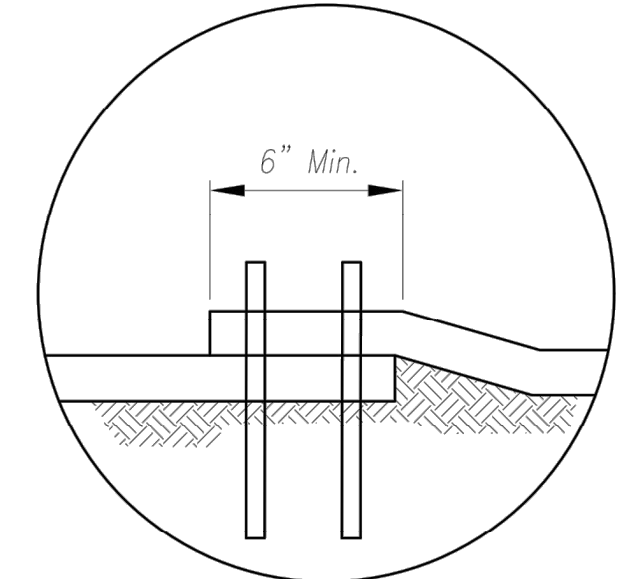
General Notes:

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. **LONGITUDINAL SEAMS:** The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

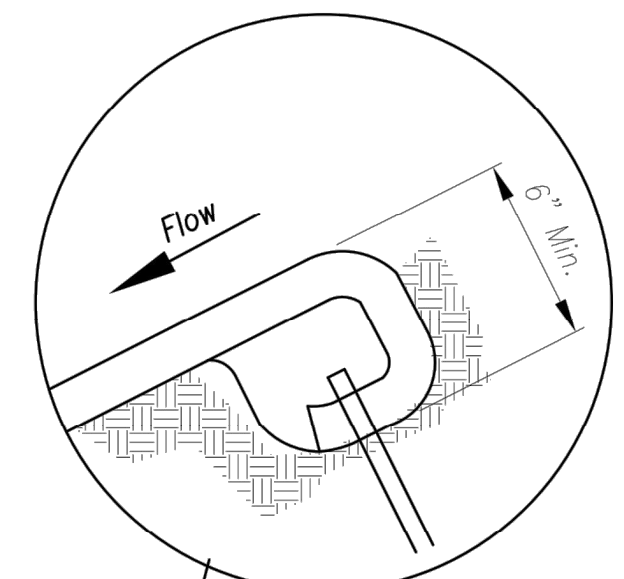
Maintenance:

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

Longitudinal Seam

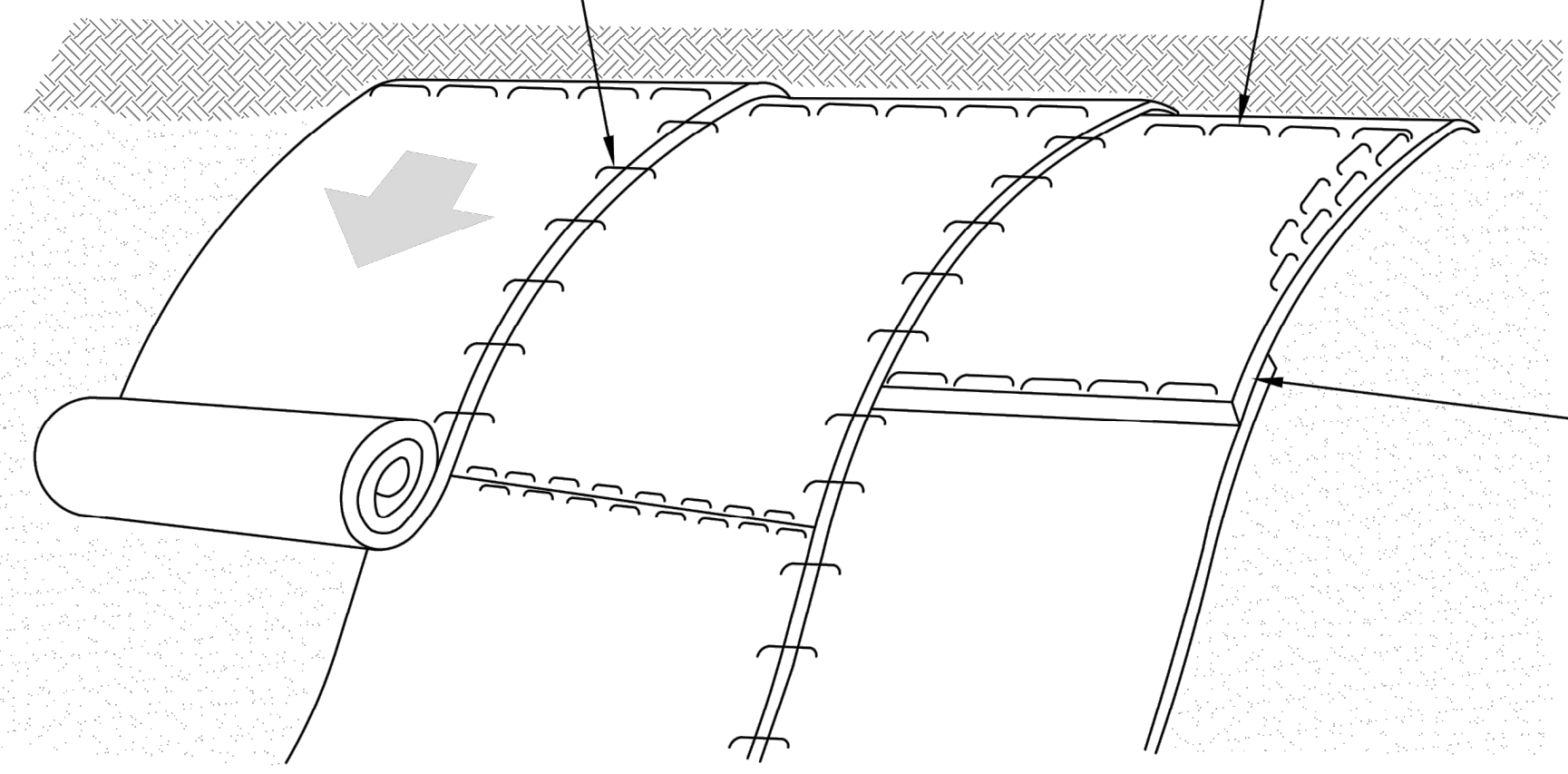


Anchor Fold

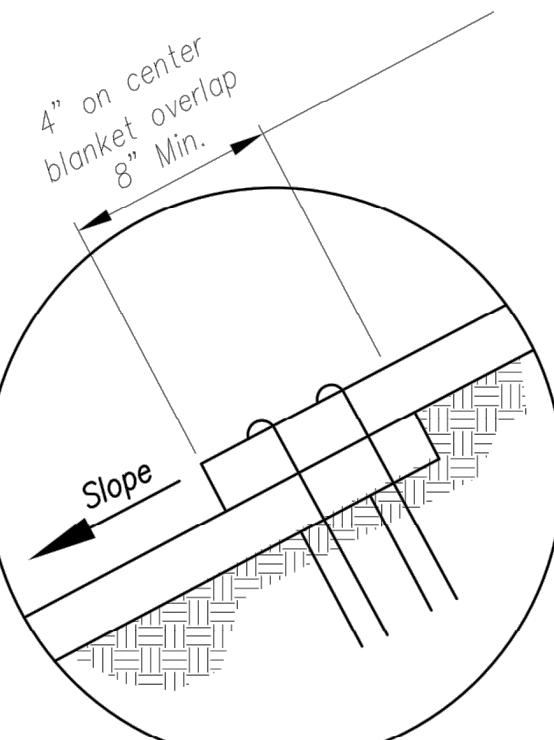


Notes for Installation in Channels:

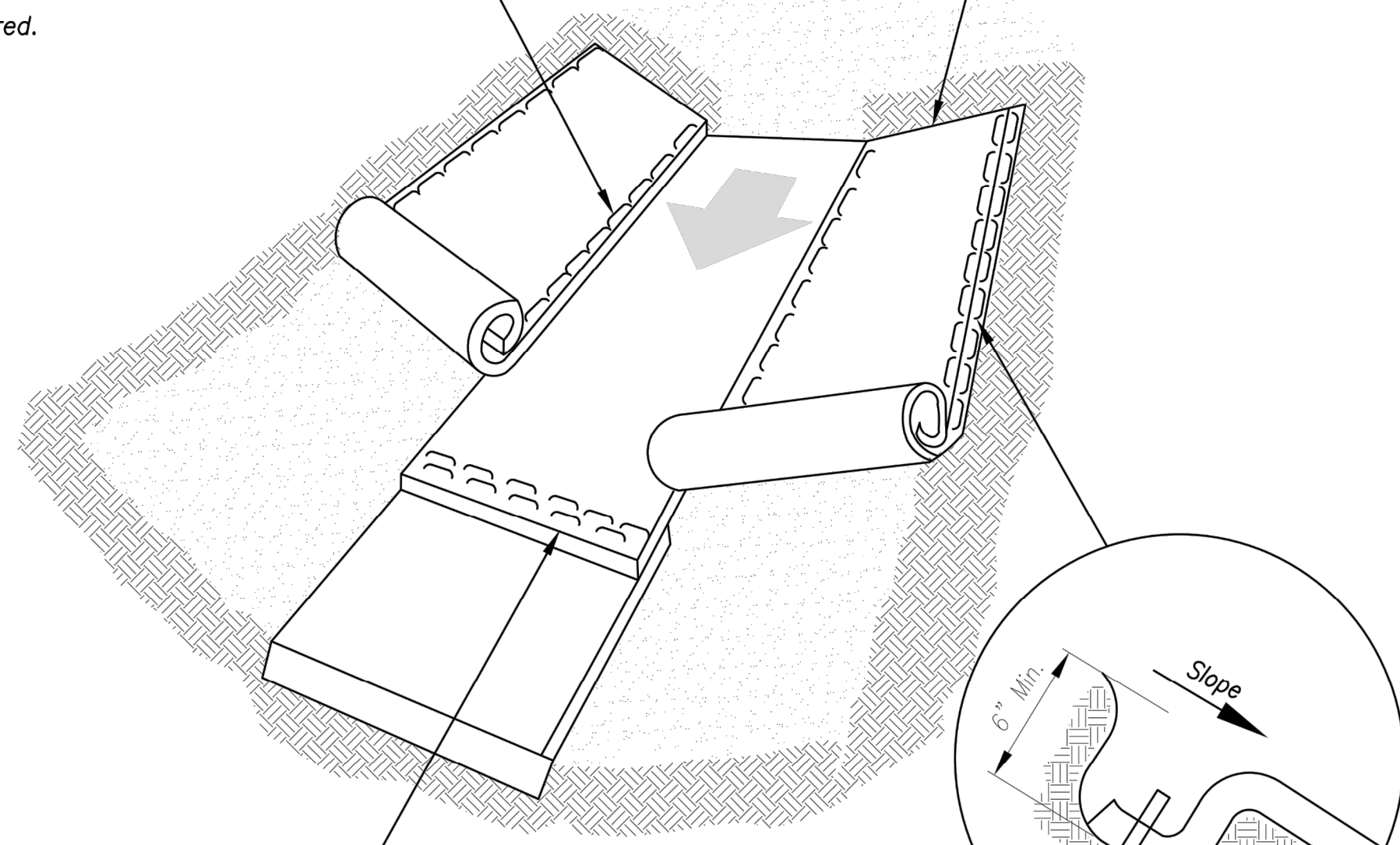
1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. **ANCHOR FOLD:** The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. **SPLICE SEAM:** When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. **CHECK SLOTS:** Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. **EDGE ANCHORS:** Lay outside edge of mat into trench at top of the slope and anchor.
6. **TERMINUS:** The bottom edge of the mat shall be anchored.



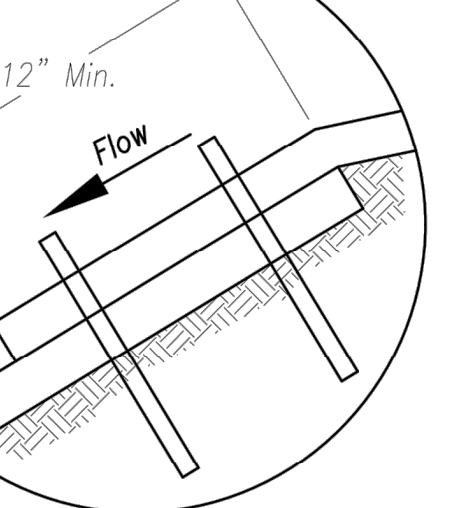
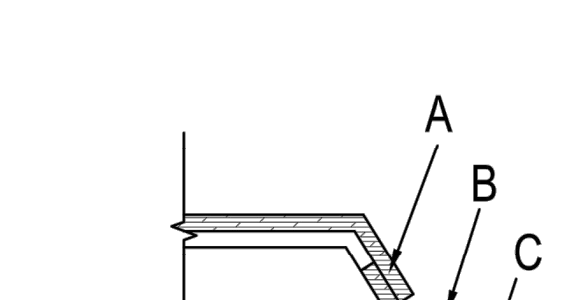
Installation on Slopes



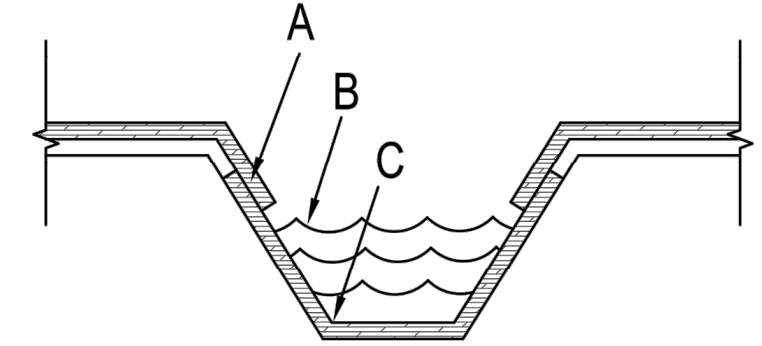
Splice Seam



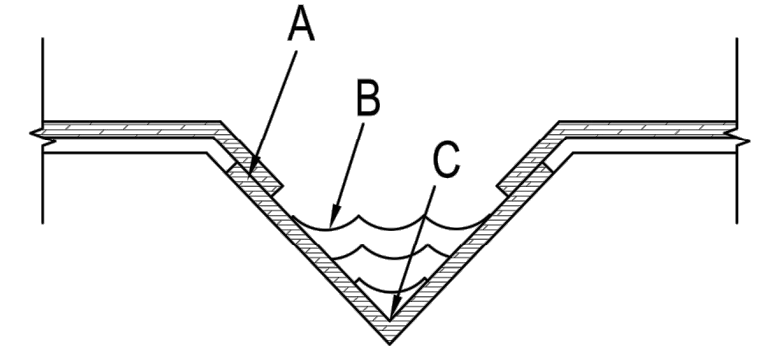
Edge Anchor



Splice Seam



Trapezoidal Channel



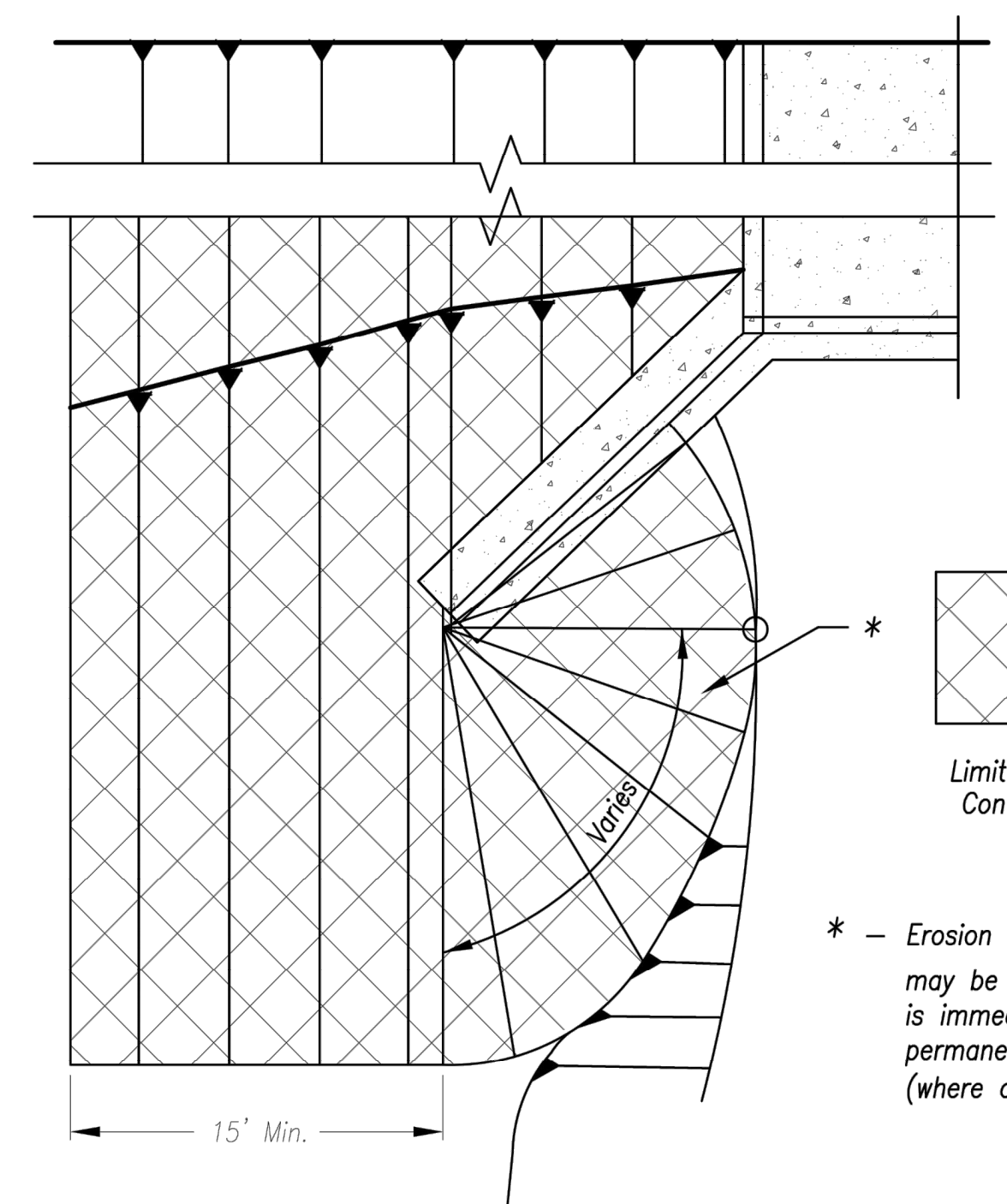
V Channel

Critical Points:

- A - Overlaps and seams;
- B - Projected water line;
- C - Channel bottom / side slope vertices;

Notes for Installation on Slopes:

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. **ANCHOR SLOTS:** The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. **SPLICE SEAM:** When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. **TERMINAL FOLD:** The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Partial Box Culvert Plan
Not to Scale

Installation Around Culvert Slope

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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KANSAS CITY METRO CHAPTER

EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS

STANDARD DRAWING NUMBER ESC-02
ADOPTED:
10/24/2016

Rev.	Date	Description	By	App.

Prepared For:
FIRST STREET DEVELOPMENT
4455 E CAMELBACK ROAD
BUILDING C241
PHOENIX, AZ 85018
602-714-3099

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Overland Park, Kansas 66210
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STATE OF MISSOURI
JAY D. O'DELL
NUMBER PE-2017019021
PROFESSIONAL ENGINEER

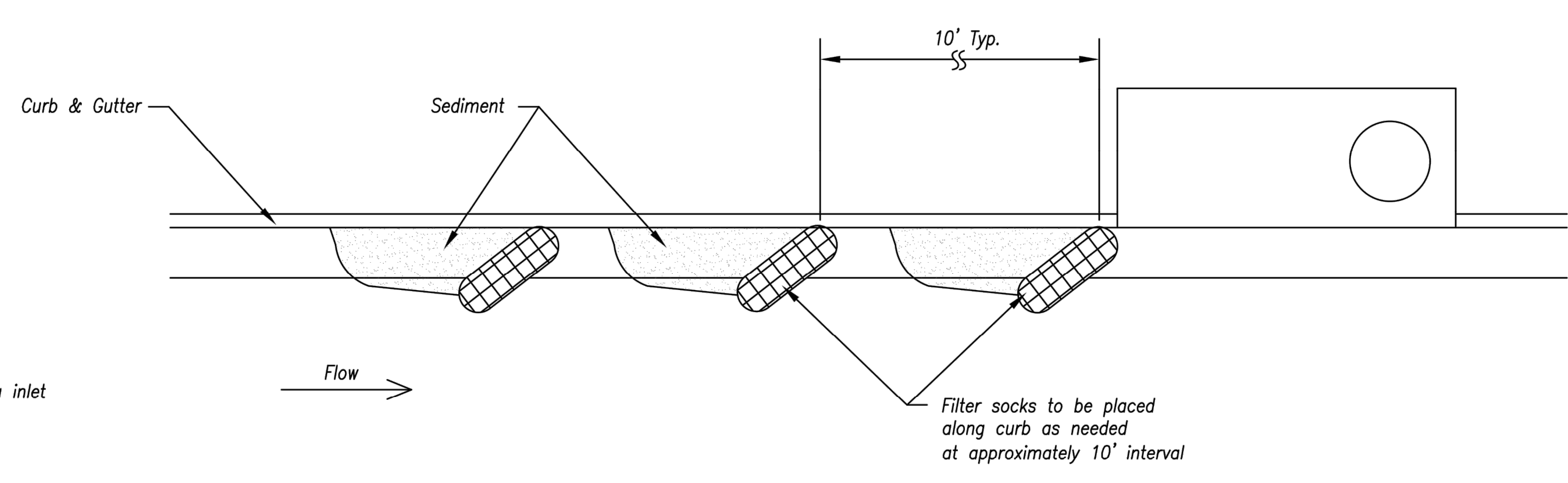
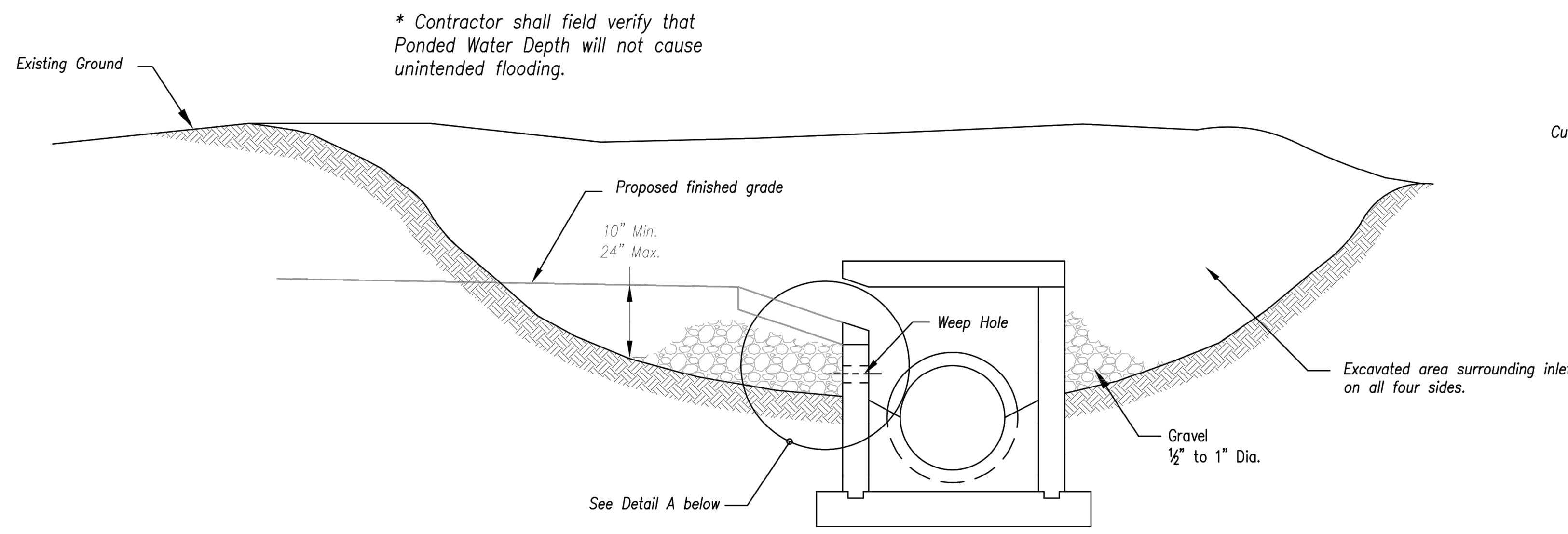
WATER MAIN IMPROVEMENTS
851 NE WOODS CHAPEL ROAD
LEE'S SUMMIT, MO

EROSION CONTROL DETAILS

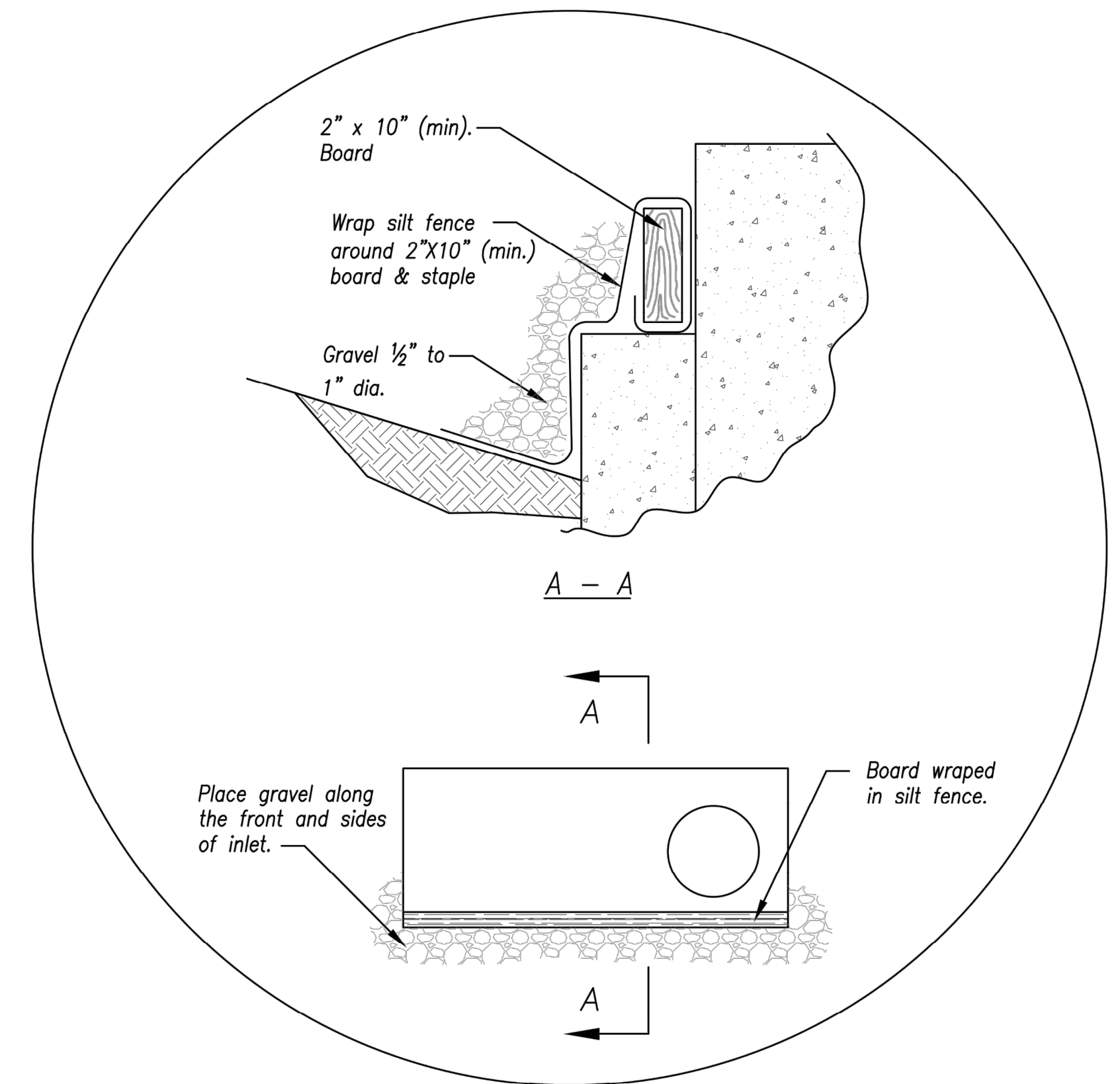
Design: JDO | Drawn: JDO
Checked: MGG
Issue Date: 7/1/2019
Project Number:

7

Jul 01, 2019 - 8:34am Plotted By: jay.odell V:\2019\04-First Street Development - Master\2019\04-08-Woods Chapel\04-DWG\Eng Sheet\WATER RELOCATION\2019\04-08-SIFTS-WATR-EROS-DITS.dwg Layout: Area Inlet Protection



On Grade Curb Inlet Protection

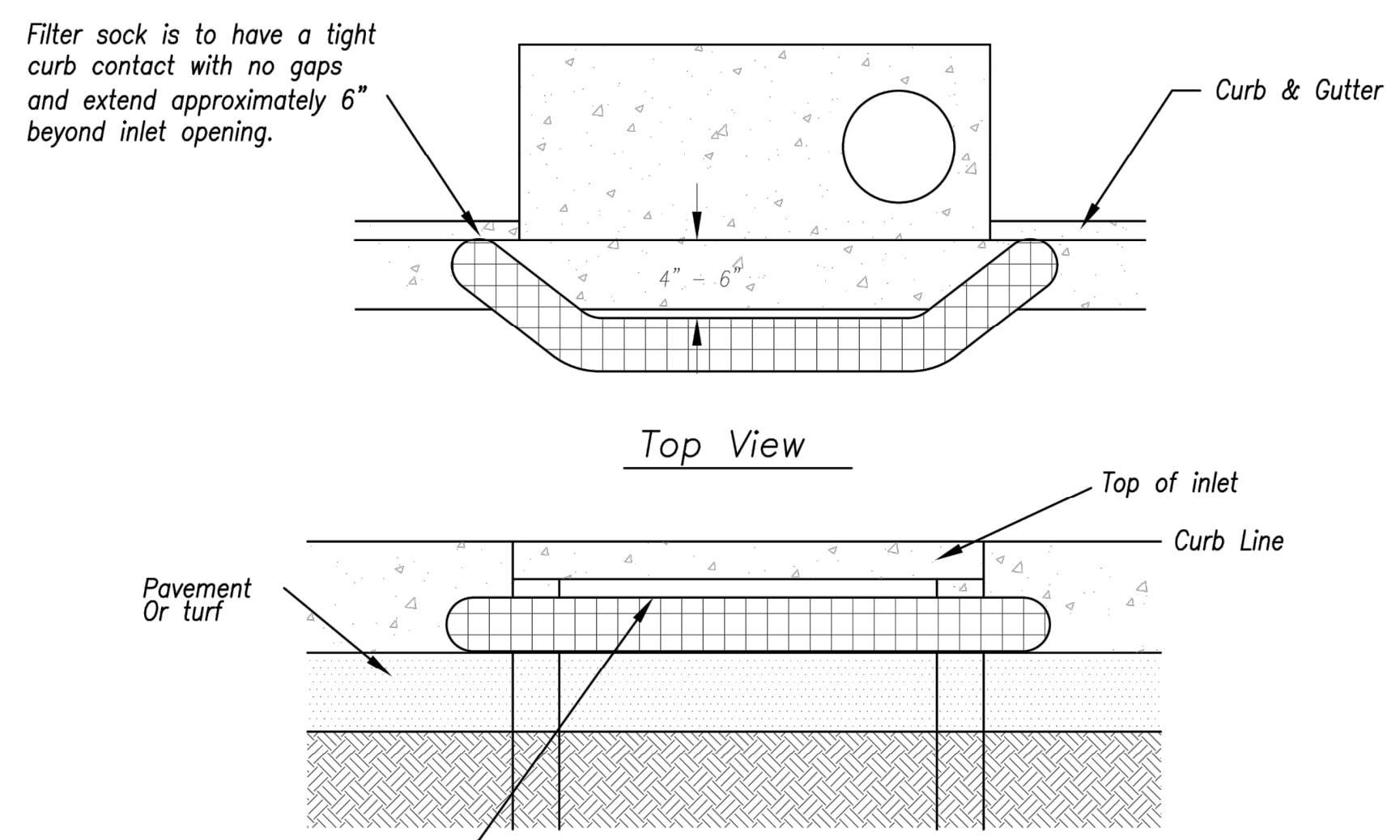


Detail A

EARLY STAGE CURB INLET
(Open Box and Prior to Pouring
Curb and Inlet Throat)

- Notes:**
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
 2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
 3. Contractor to field verify ponding water shall not create a traffic hazard.

- Maintenance:**
1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
 2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
 3. Repair or replace as necessary to maintain function and integrity of installation.



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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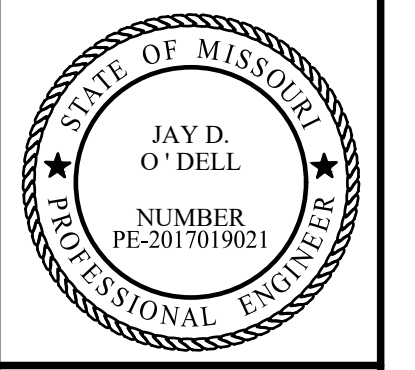
KANSAS CITY
METRO CHAPTER

CURB INLET PROTECTION

STANDARD DRAWING
NUMBER ESC-06
ADOPTED:
10/24/2016

Modified from 2015 Overland Park Standard Details
for Erosion and Sediment Control.

Rev.	Date	Description	By	App.



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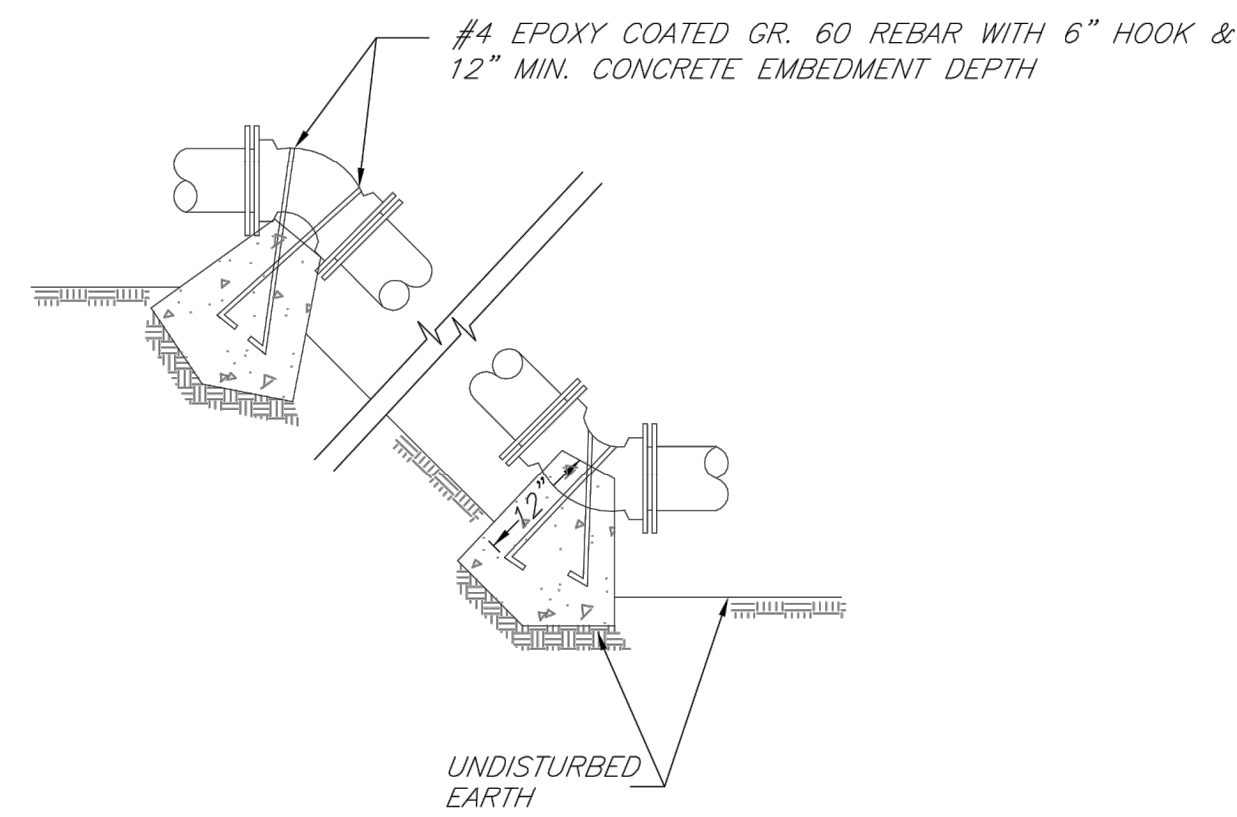
WATER MAIN IMPROVEMENTS
851 NE WOODS CHAPEL ROAD
LEE'S SUMMIT, MO
EROSION CONTROL DETAILS

Design: JDO | Drawn: JDO
Checked: MGG
Issue Date: 7/1/2019
Project Number:

Jul 01, 2019 - 8:34am Plotted By: jay.odell V:\026040-08-Water Development - Master\026040-08-Woods Chapin\04-DWG\Eng Sheet\WATER RELOCATION\026040-08-SHTS-WATR-DTLS.dwg Layout: Details

REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)					
NOM. DIA. (INCHES)	TEE, PLUG	BEND	BEND	BEND	BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

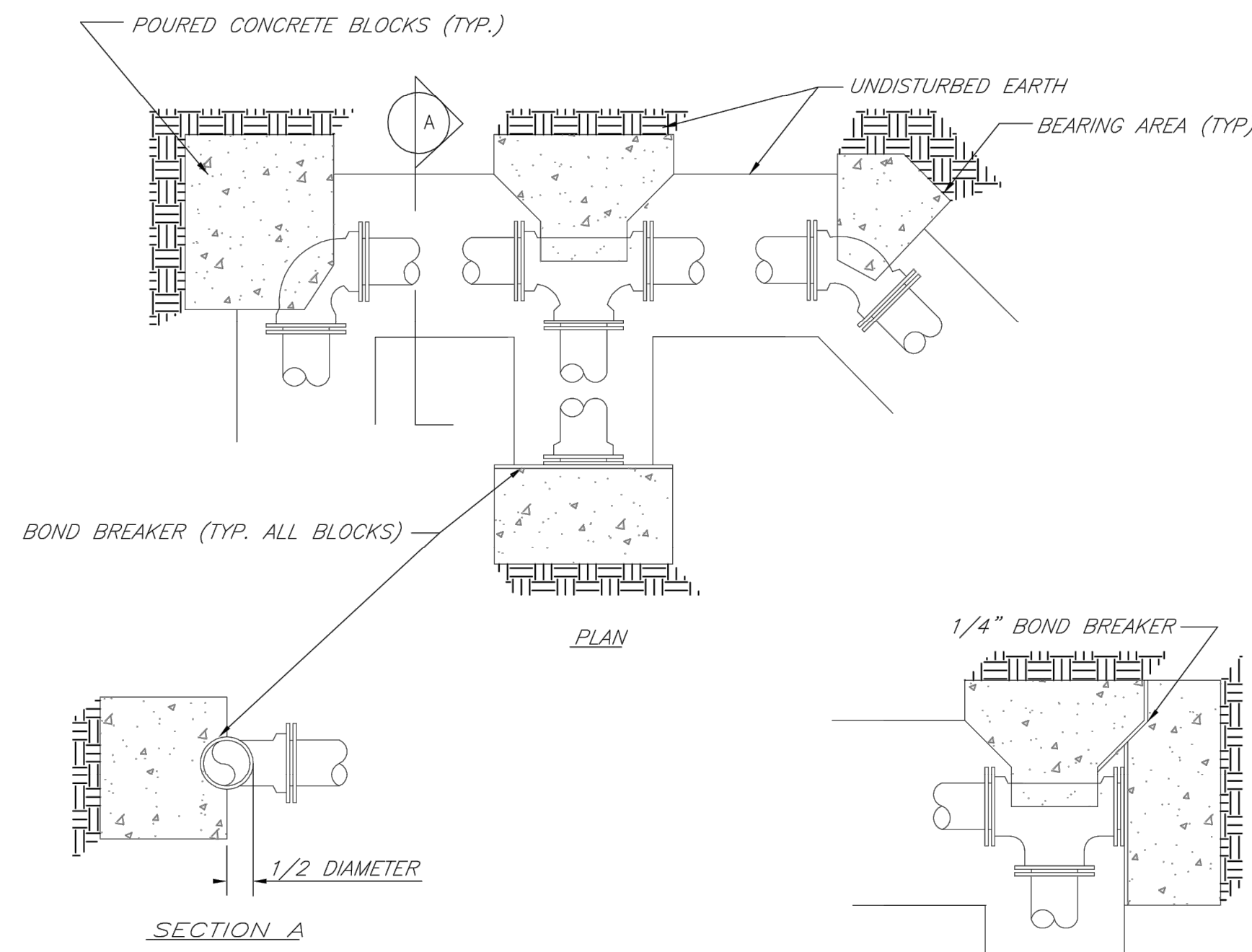
- NOTES:**
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
 3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



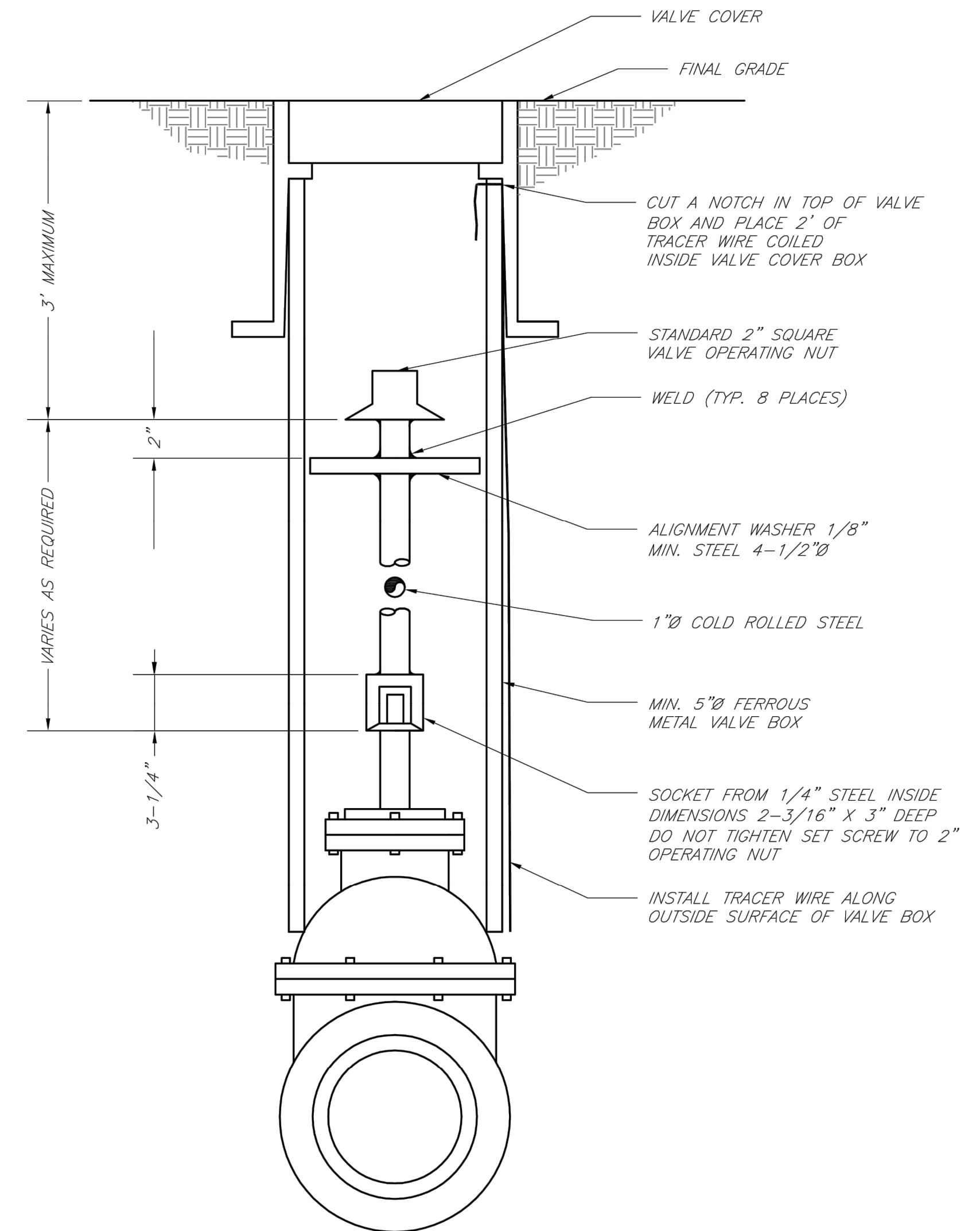
LS	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
	VERTICAL THRUST BLOCKS	Drawn By: JN Checked By: DL FILE: WAT-2 Rev: 1/14 Rev:

REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)					
NOM. DIA. (INCHES)	TEE, PLUG	BEND	BEND	BEND	BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	19.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

- NOTES:**
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
 3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



LS	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
	HORIZONTAL THRUST BLOCKS	Drawn By: JN Checked By: DL FILE: WAT-1 Rev: 1/14 Rev:



LS	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
	VALVE STEM EXTENSION AND VALVE BOX	Drawn By: JN Checked By: DL FILE: WAT-9 Rev: 1/14 Rev:

WATER MAIN IMPROVEMENTS 851 NE WOODS CHAPEL ROAD LEE'S SUMMIT, MO	026040.08-SHTS-WATR-DTLS - Details 1	Design: JDO Drawn: JDO
		Checked: MGG
Project Number:		Issue Date: 7/1/2019
		By: _____
		Date: _____
		Rev: _____
		Description: _____

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