The Manor at Stoney Creek - 4th Plat

Lots 109 Thru 136
CONSTRUCTION PLANS
Part of the SW 1/4 Section 36, Township 47 N, Range 32 W
LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

CONSTRUCTION AND DESIGN NOTES:

STREET & STORM SEWERS:

1 ~ STREET PAVEMENT SHALL CONSIST OF TYPE CG-2 CURBS WITH PAVEMENT PER TABLE LS-2 OF THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL

RESIDENTIAL LOCAL STREET FOR SW MERRYMAN DRIVE AND SW GRINDSTONE CIRCLE. SEE THIS SHEET FOR TYPICAL SECTION.
OPTION 1) 4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER A 6" MoDOT TYPE 5 BASE AND A SUBGRADE MIXTURE OF 6" FLY ASH STABILIZED SUBGRADE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
OPTION 2) 4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER 10" MoDOT TYPE 5 BASE OVERTOP A BIAXIAL GEOGRID MEETING THE REQUIREMENTS OF TABLE 2201.6-1

2 ~ RESIDENTIAL LOCAL STREETS SHALL BE PER APWA STANDARD FOR 50' R/W TYPICAL SECTION TABLE LS-2 SECTION 5200 (RESIDENTIAL LOCAL STREET).

3 ~ STORM SEWER PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) AS APPROVED BY CITY OF LEES SUMMIT DESIGN AND CONSTRUCTION MANUAL.

4 ~ CURB INLETS SHALL BE PER CITY OF LEES SUMMIT DRAWING NO. ST-1. FIELD INLETS SHALL BE PER CITY OF LEES SUMMIT STANDARD DRAWING STM-2.

WATER:

1 ~ THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT WATER UTILITIES DEPARTMENT AT 816.969.1900 AT LEAST 48 HOURS PRIOR TO CONNECTING TO ANY EXISTING WATER MAIN.

2 ~ ALL WATER MAINS SHALL COMPLY WITH ANSI/AWWA C150/A21.50 AND C151/A21.51, AND CITY OF LEES SUMMIT STANDARDS.

3 ~ FIRE HYDRANTS SHALL BE OPTIC YELLOW WATEROUS "PACER" MODEL NO. WB-67-250 WITH NON-RISING STEM OR CITY ENGINEER APPROVED EQUAL. HYDRANTS SHALL HAVE A 5 1/4" VALVE WITH A 4 1/2" PUMPER NOZZLE AND 2 - 2 1/2" HOSE NOZZLES (LEFT HAND OPENING).

4 ~ GATE VALVES SHALL BE MUELLER NO. A 2380-5 HUB END "O" RING SEAL NON-RISING STEM. VALVES 12" OR LARGER SHALL BE BUTTERFLY VALVES MANUFACTURED BY THE HENRY PRATT COMPANY OR CITY ENGINEER APPROVED EQUAL. LEFT HAND OPENING. MINIMUM 200# TESTING AWWA.

5 ~ VALVE BOXES SHALL BE CLAY & BAILEY NO. P-108 OR CITY ENGINEER APPROVED EQUAL. ALL VALVE BOXES SHALL BE LOCATED OUT OF EXISTING OR PROPOSED PAVEMENT AREAS.

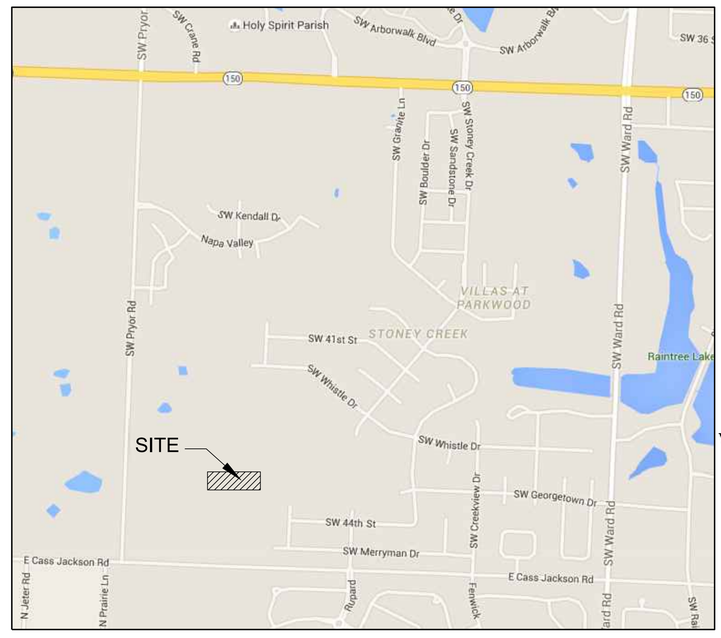
6 ~ ALL WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 42 INCHES. STREET GRADING SHALL BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION OF WATER MAINS.

7 ~ ALL BENDS, TEES AND FIRE HYDRANTS SHALL BE INSTALLED WITH SUITABLE CONCRETE THRUST BLOCKS POURED IN PLACE AGAINST UNDISTURBED EARTH AND PER CITY OF LEES SUMMIT AND APWA STANDARDS.

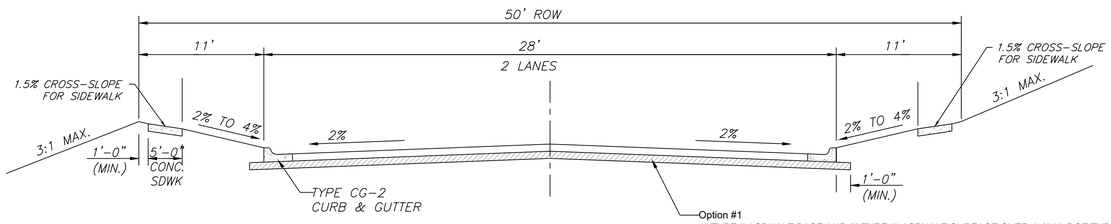
8 ~ THE MINIMUM SEPARATION BETWEEN THE PROPOSED WATER MAIN AND SANITARY OR STORM SEWERS IS AS FOLLOWS:
A ~ SANITARY SEWERS: HORIZONTAL = 10 FEET - VERTICAL = 18 INCHES
B ~ STORM SEWERS: HORIZONTAL = 5 FEET - VERTICAL = 18 INCHES
THESE SEPARATIONS SHALL PREVAIL OVER ANY DATA SHOWN IN THESE PLANS AND THE CONTRACTOR SHALL INSTALL BENDS OR OTHER FITTINGS AS NECESSARY TO ACHIEVE THE REQUIRED SEPARATIONS.

GENERAL NOTES:

1 ~ ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2 ~ ALL REQUIRED EASEMENTS WITHIN THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR ON THE FINAL PLAT.
3 ~ ANY REQUIRED EASEMENT LOCATED OUTSIDE OF THE BOUNDARY OF THIS PROJECT SHALL BE PROVIDED FOR BY SEPARATE INSTRUMENT PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS.
4 ~ THE CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING INSPECTION AT 816.969.1200 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
5 ~ THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH THE IMPROVEMENTS PROPOSED BY THESE PLANS AND SITE CONDITIONS.
6 ~ THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND OBTAIN THE APPROPRIATE BLASTING PERMITS FOR A REQUIRED BLASTING. IF BLASTING IS ALLOWED, ALL BLASTING SHALL CONFORM TO STATE REGULATIONS AND LOCAL ORDINANCES.



SITE LOCATION MAP



TYPICAL SECTION
(RESIDENTIAL STREET)
N.T.S.

Option #1
4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER A 6" MoDOT TYPE 5 BASE AND A SUBGRADE MIXTURE OF 6" FLY ASH STABILIZED SUBGRADE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.

Option #2
4" TYPE II ASPHALT BASE AND 2" TYPE III ASPHALT SURFACE OVER 10" MoDOT TYPE 5 BASE OVERTOP A BIAXIAL GEOGRID MEETING THE REQUIREMENTS OF TABLE 2201.6-1

INDEX OF SHEETS:

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 DEVELOPMENT ENGINEERING INSPECTION AT 816.969.1200
CITY OF LEE'S SUMMIT WATER UTILITIES ~ 969-1900
MISSOURI ONE CALL (DIG RITE) ~ 1-800-344-7483

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

BENCHMARK:

CENTER OF SANITARY SEWER MANHOLE LOCATED IN THE SE CORNER OF THE LOT 123, FOXWOOD EAST 5TH PLAT.

ELEVATION 945.69

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

REVISED LOTS 128 & 129, REMOVED TRACT Q.

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

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

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

Cover Sheet
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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

REVISIONS

1	REV. 1–4–19
2	REV. 2–11–19
3	REV. 5–10–19
4	REV. 5–30–19
5	REV. 11–6–19

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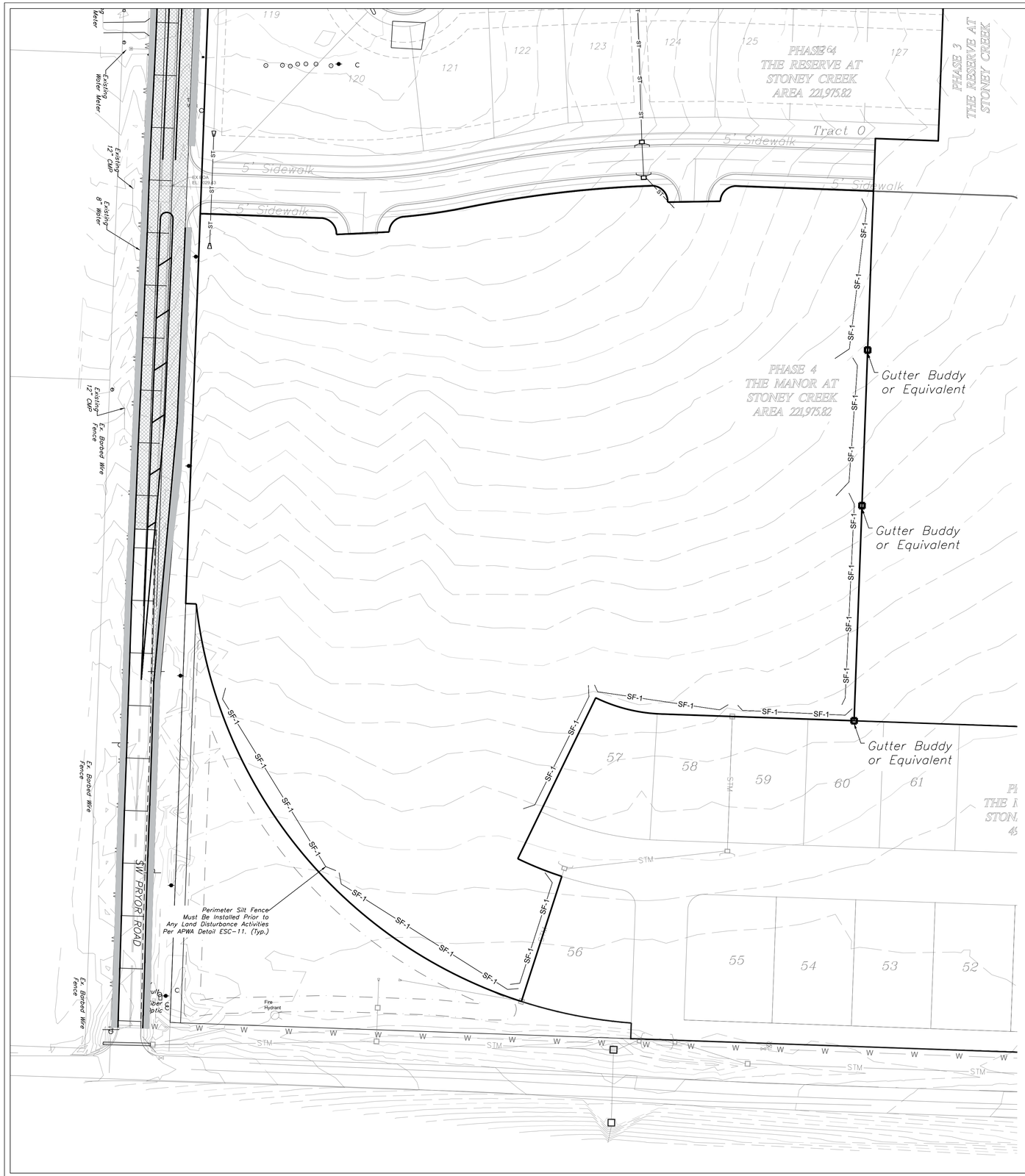

0 50' 100' 200'

PRE CLEARING PLAN

SCALE: 1" = 100'

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.

SF-1 — 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
INLET PROTECTION	

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

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Engineering CA2821

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project:
THE MANOR AT
STONEY CREEK
4TH PLAT

Issue Date:
August 29, 2018

ESC PHASE 1 - Pre Clearing Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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

REVISIONS

1	REV. 1-4-19
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5	REV. 11-6-19

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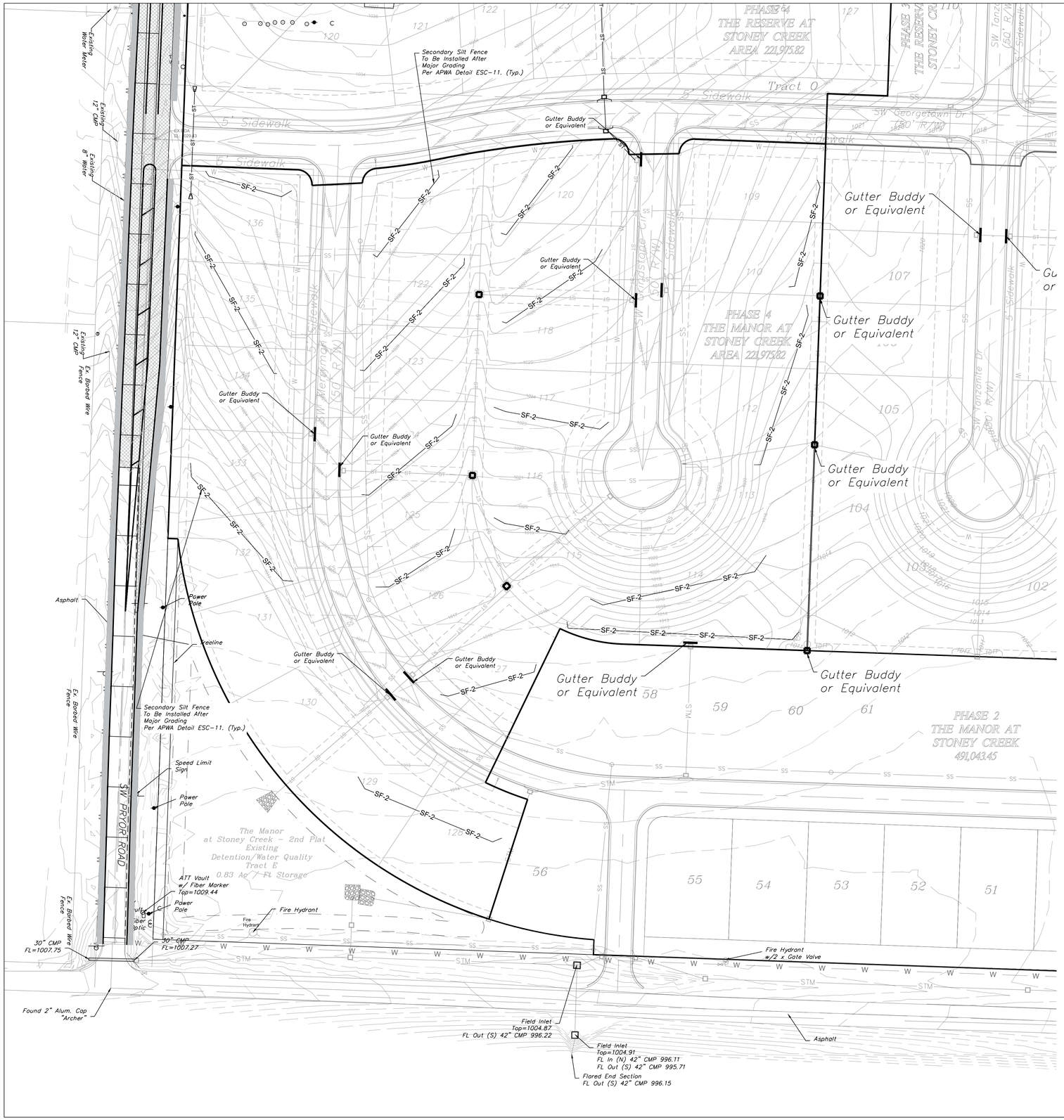

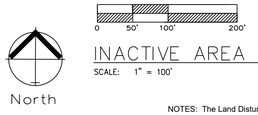

INACTIVE AREA STABELIZATION PLAN

SCALE: 1" = 100'

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.

SF-1 — 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
INLET PROTECTION GUTTER BUDDY OR EQUIVALENT	

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.

EROSION CONTROL DESCRIPTION:

1.) SILT FENCE SHALL BE PLACE 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

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Professional Registration
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Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date: August 29, 2018

ESC PHASE 2 - Inactive Area Stabilization Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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

REVISIONS

1	REV. 1-4-19
2	REV. 2-11-19
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5	REV. 11-6-19

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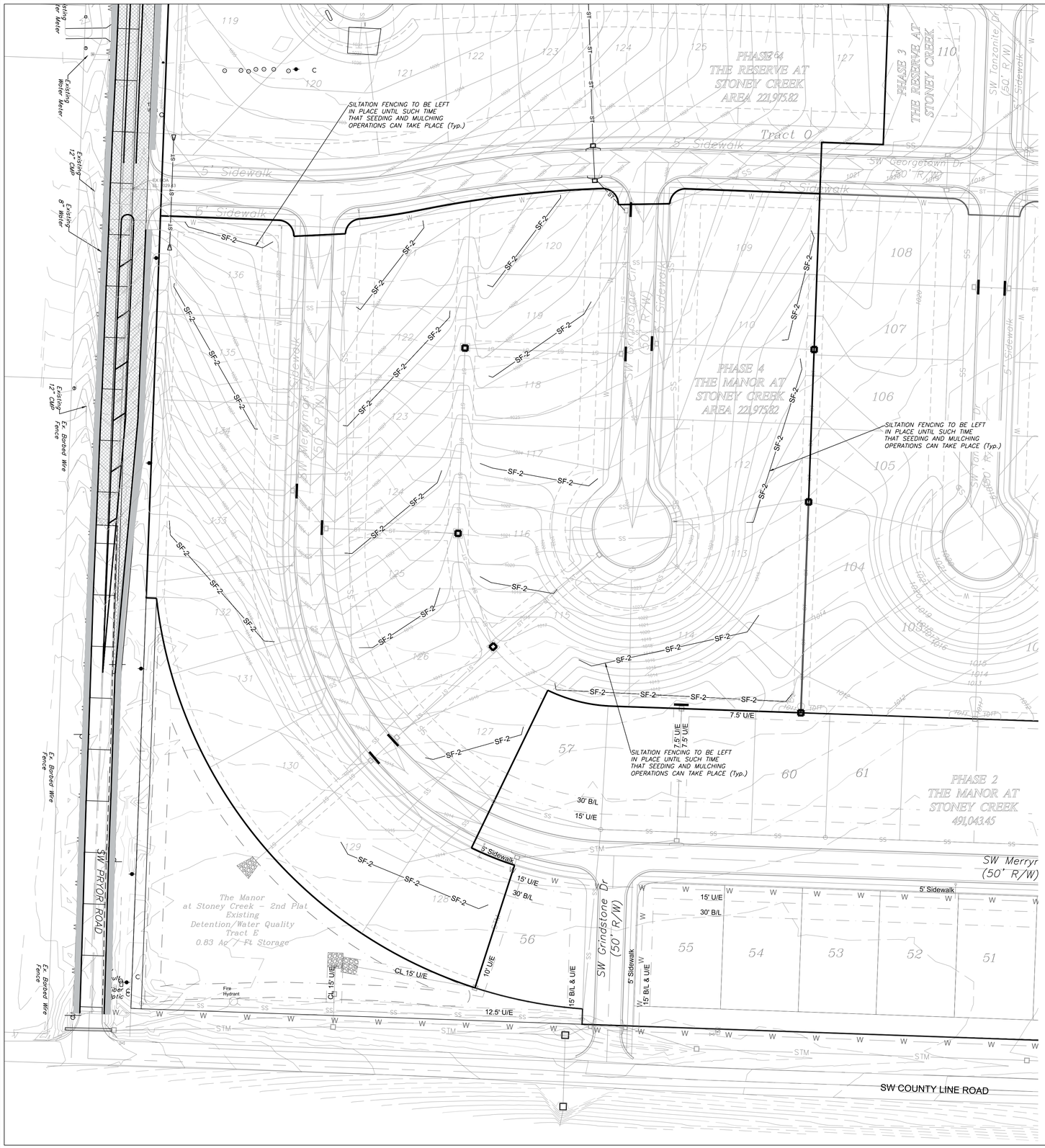

North

0 50' 100' 200'

FINAL RESTORATION PLAN

SCALE: 1" = 100'

SF-1 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—

INLET PROTECTION
GUTTER BUDDY OR EQUIVALENT

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

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

ONCE SITE IS 90% VEGETATED ALL ESC DEVICES SHALL BE REMOVED AND ANY DISTURBED AREAS SHALL BE RESTORED

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Professional Registration
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Engineering E-1695
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Engineering 6254
Nebraska
Engineering CA2821

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

ESC PHASE 3 - Final Restoration Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
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KS PE 19071
OK PE 25226

REVISIONS

1	REV. 1-4-19
2	REV. 2-11-19
3	REV. 5-10-19
4	REV. 5-30-19
5	REV. 11-6-19

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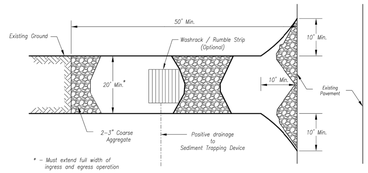
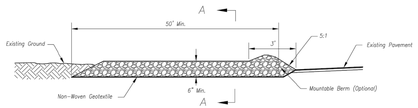


Plan View
Not to Scale



Side Elevation
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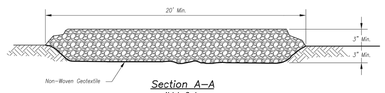


Section A-A
Not to Scale

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.

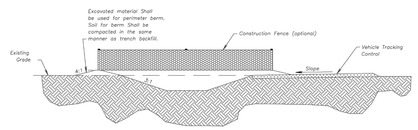
CONSTRUCTION ENTRANCE

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:

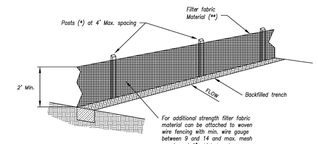
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface 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

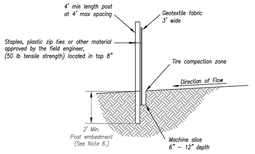
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT
STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 9/16" x 1 9/16"
- NO.2 SOUTHERN PINE 2 9/16" x 2 9/16"
- STEEL 1.33 LB/FT

(**) - Geotextile Fabric shall meet the requirements of AASHTO M288



SILT FENCE DETAILS
Not to Scale

Notes:

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

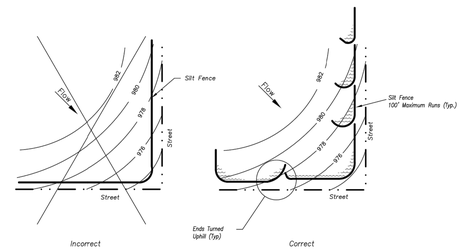
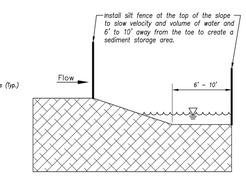
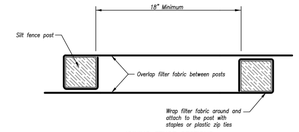


Figure A

SILT FENCE LAYOUT
Not to Scale

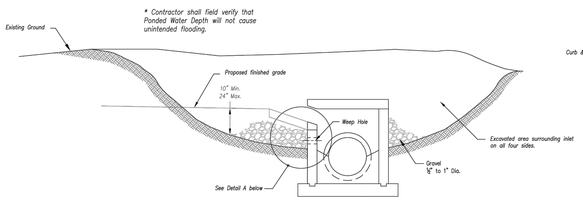


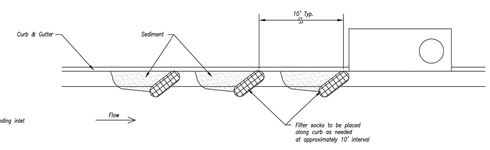


JOINING FENCE SECTIONS
Not to Scale

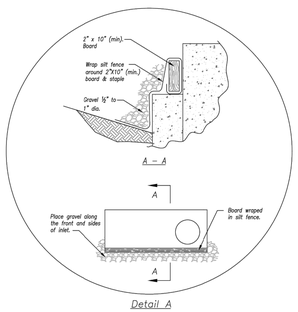
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
SILT FENCE
STANDARD DRAWING NUMBER ESC-03
ADOPTED: 10/24/2016



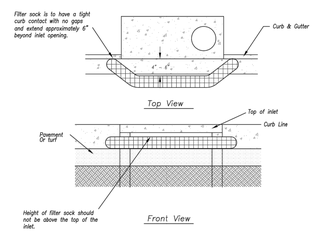


On Grade Curb Inlet Protection



Detail A

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



Sump Inlet Sediment Filter

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.

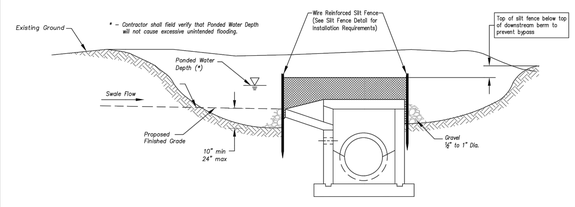
Maintenance:

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.

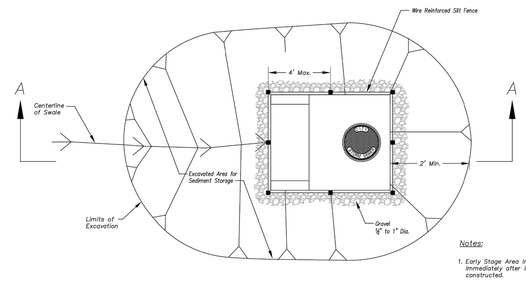
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016



Section A-A
Not to Scale

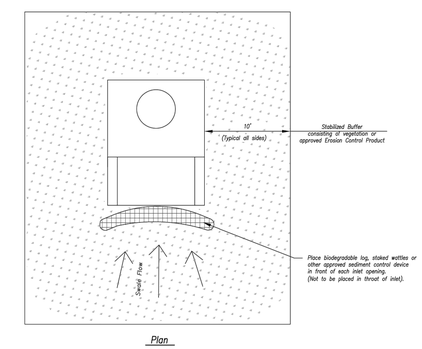


Plan
Not to Scale

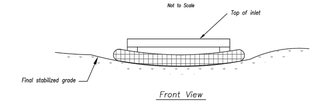
EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



Plan
Not to Scale



Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

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.

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
AREA INLET AND JUNCTION BOX PROTECTION
STANDARD DRAWING NUMBER ESC-07
ADOPTED: 10/24/2016

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Surveying 2005008319-D
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Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

ESC - Standard Details
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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

REVISIONS

1	REV. 1-4-19
2	REV. 2-11-19
3	REV. 5-10-19
4	REV. 5-30-19
5	REV. 11-6-19

C.053

Sidewalk Construction Notes

-Sidewalk and ADA ramps will be constructed with the subdivision improvements.

North

0 50' 100' 200'

SITE PLAN

SCALE: 1" = 100'

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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project:
THE MANOR AT
STONEY CREEK
4TH PLAT

Issue Date:
August 29, 2016

Site Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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5	REV. 11-6-19

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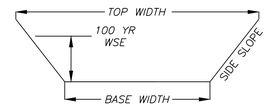
Notes

1. Contractor is responsible for verifying all existing utility locations prior to excavation
2. There are no known natural or artificial water storage detention areas, or wetlands in the area designated for construction
3. No part of the project lies within the 100 year flood plain
4. All erosion and sediment control measures need to be implemented prior to construction
5. Additional erosion control may be required by the City Engineer, Design Engineer or Owner at any time problematic areas are noted in the field or existing measures are found to be ineffective
6. Soil Stabilization of disturbed areas shall be completed within 14 days of construction inactivity
7. Contractor responsible for all density testing of roadway subgrade and granular base.



TYPICAL CHANNEL SECTION
SWALE DETAIL
Not To Scale

NOTE: Swale sections extend the entire length between upstream and downstream structures with the exception of a transition at each structure.

100 YEAR AND 10 YEAR OVERFLOW SWALE SECTIONS

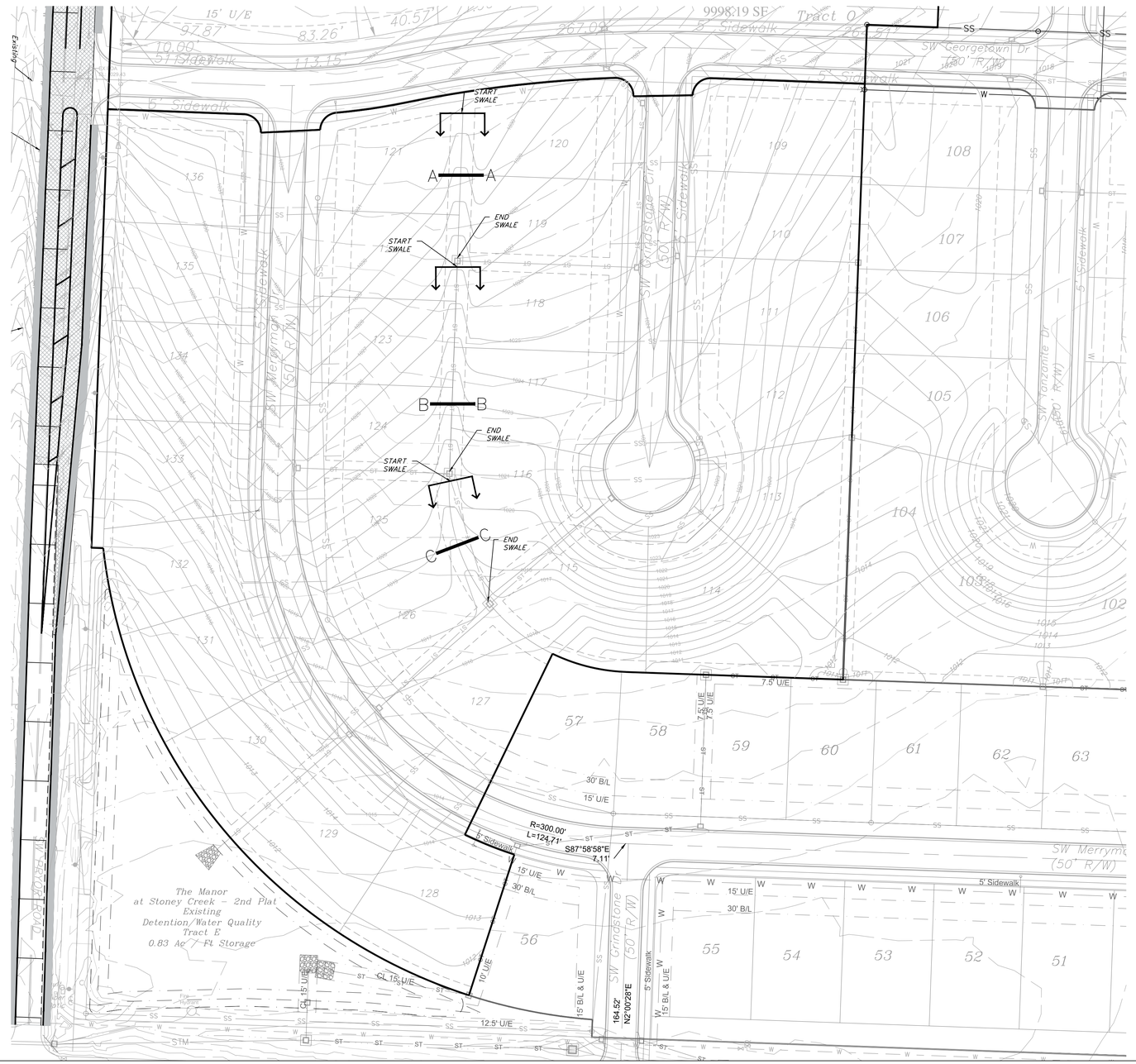
Section	100 Yr. Runoff (c.f.s.)	10 Yr. Runoff (c.f.s.)	Bed Slope (%)	Base Width (ft)	Side Slope (1:V)	100 Yr WSE (ft)	Sectional Area	Velocity 100Yr. (f.p.s.)	Velocity 10Yr. (f.p.s.)	Hydrualic Radius (ft)	Shear Stress (p.s.f.)
A-A	1.49	0.98	3.48	8	8	0.10	0.88	1.69	1.42	0.09	0.20
B-B	5.05	3.34	3.48	8	8	0.20	1.92	2.63	2.25	0.17	0.37
C-C	7.38	4.88	3.48	8	8	0.24	2.38	2.70	3.10	0.20	0.44

NOTE: Swale should be lined with "Straw with Net" turf reinforcment (Curlex Blanket or Eqv.) . Per Table 5607-1 in APWA Manual

North

0 25' 50' 100'

GRADING PLAN
SCALE: 1" = 50'



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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project:
THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date:
August 29 , 2018

Master Drainage Plan 1 of 3:
Grading Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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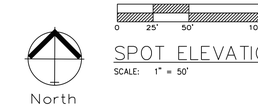

SPOT ELEVATIONS

SCALE: 1" = 50'

Lot Number	Basement Type	MBOE Lt.	MBOE Rt.
109	Daylight	1022.00	1022.00
110	Daylight	1022.00	1021.03
111	Daylight/Walkout	1021.03	1019.59
112	Daylight/Walkout	1019.59	1018.15
113	Daylight/Walkout	1018.15	1015.07
114	Walkout	1015.07	1015.50
115	Walkout	1015.50	1017.24
116	Daylight	1017.24	1023.47
117	Full	1023.47	1025.82
118	Full	1025.82	1027.60
119	Full	1027.60	1030.89
120	Full	1030.89	1032.21
121	Full	1032.21	1029.70
122	Full/Daylight	1029.70	1027.31
123	Full/Daylight	1027.31	1024.64
124	Full/Daylight	1024.64	1021.20
125	Full/Daylight	1021.20	1019.90
126	Full/Daylight	1019.90	1017.25
127	Full	1017.25	1016.25
128	Daylight	1012.82	1012.82
129	Daylight	1012.82	1012.82
130	Daylight	1012.82	1012.82
131	Daylight/Walkout	1012.82	1014.75
132	Daylight/Walkout	1014.75	1018.35
133	Daylight/Walkout	1018.35	1020.65
134	Daylight/Walkout	1020.65	1024.00
135	Daylight/Walkout	1024.00	1027.70
136	Daylight	1027.70	1027.70

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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project:
THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date:
August 29, 2018

Master Drainage Plan 2 of 3:
Spot Elevations
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
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OK PE 25226

REVISIONS

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5	REV. 11-6-19

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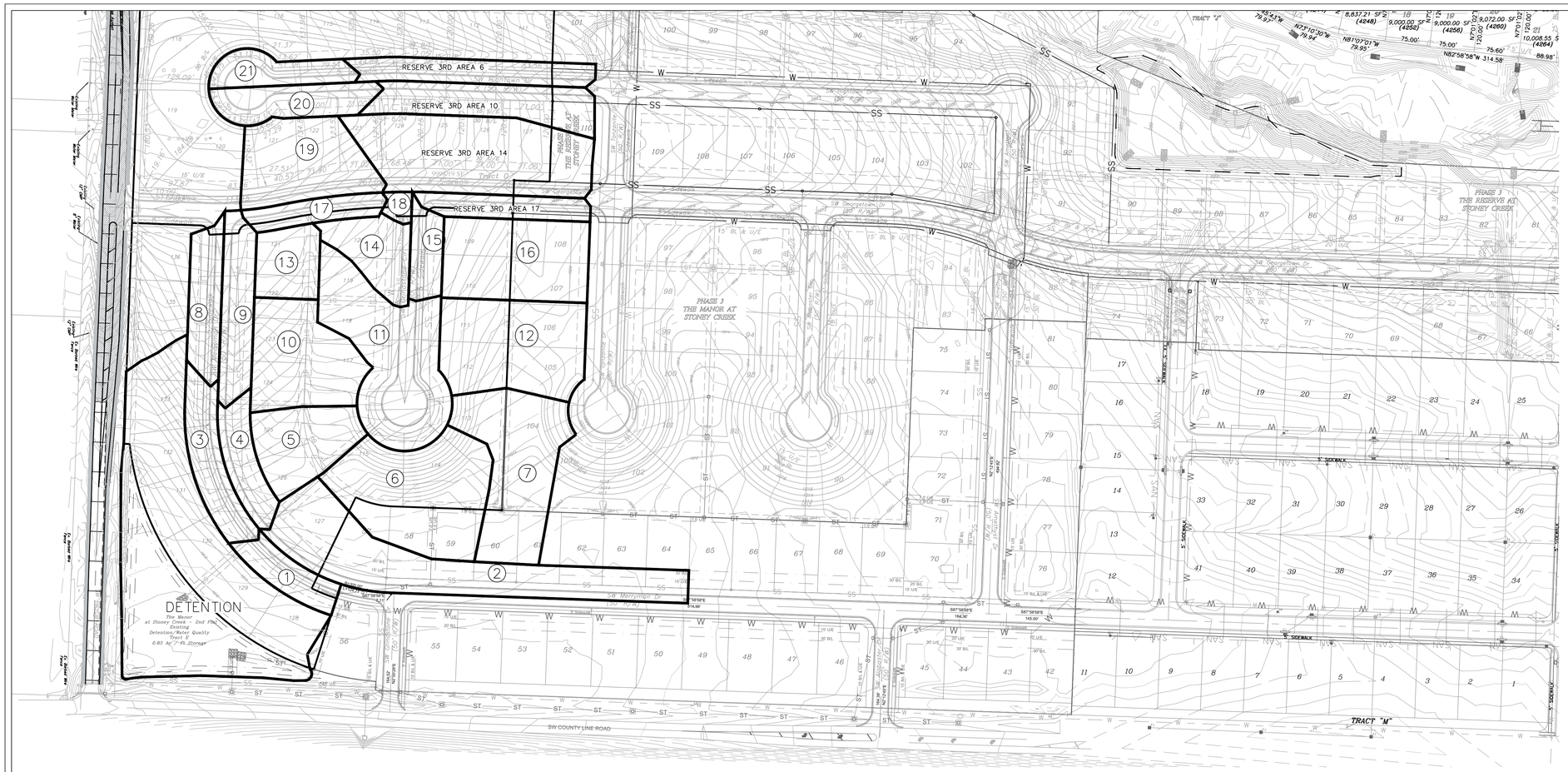

DRAINAGE AREA MAP

SCALE: 1" = 100'

Drainage Area	Area Sq. Ft.	Area Ac.
1	10057.25	0.23
2	56598.12	1.30
3	16170.5	0.37
4	11883.94	0.27
5	20519.85	0.47
6	43928.99	1.01
7	37720.92	0.87
8	13781.71	0.32
9	16826.56	0.39
10	29334.69	0.67
11	44019.84	1.01
12	37589.96	0.86
13	12668.28	0.29
14	14547.61	0.33
15	8364.55	0.19
16	33381.6	0.77
17	9224.51	0.21
18	2238.52	0.05
19	28448.12	0.65
20	15039.79	0.35
21	11369.09	0.26
Detention	102259.96	2.35

APWA STORM DRAINAGE "TC" COMPUTATIONS FOR : The Manor at Stoney Creek - 4th Plat

yellow areas are self computing overwrite if necessary

Surface types: Asph/ConcBus/Com Dirt Grass/Park Lake MultFam SnglFam Undev Other
SURFACE CODES A B D G L M S U Z
"C" Values 0.90 0.87 0.60 0.30 0.90 0.66 0.51 0.3

TOTAL WATERSHED — OVERLAND FLOW - 100' MAX (Overwrite Length - DnElev or Slope if necessary) — CHANNEL FLOW - FIRST REACH (SURFACE CODE P=Paved U=Unpaved; Overwrite Slope or Elevations if necessary) — TC COMPUTATION

AREA ID	TOTAL ACRES	WTRSHD LENGTH	UP ELEV	DN ELEV	SURFACE CODE	"C" VALUE	OVRLND LENGTH	UP ELEV	DN ELEV	SLOPE %	P or U	CHANNEL LENGTH	UP ELEV	DN ELEV	SLOPE %	VELOCITY F/S	Cal Overland Flow T(i)	Used Min 5 Max 15 T(i)	Cal Channel One T(T)	Cal Channel Two T(T)	Total T© 10	AREA ID
1	0.23	212.0	1016.0	1013.0	S	0.51	50.0	1016.0	1015.0	2.0	P	162.0	1015.0	1013.0	1.23	2.3	6.0	6.0	1.2	0.0	7.2	1.0
2	1.20	475.0	1015.5	1012.3	S	0.51	42.0	1015.5	1014.7	2.0	P	433.0	1014.7	1012.3	0.54	1.5	5.4	5.4	4.8	0.0	10.3	2.0
3	0.37	329.0	1026.2	1015.0	S	0.51	59.0	1026.2	1025.0	2.0	P	270.0	1025.0	1015.0	3.70	3.9	6.4	6.4	1.2	0.0	7.6	3.0
4	0.27	269.0	1025.1	1015.0	S	0.51	54.0	1025.1	1024.0	2.0	P	215.0	1024.0	1015.0	4.19	4.2	6.2	6.2	0.9	0.0	7.1	4.0
5	0.47	202.0	1022.0	1017.0	S	0.51	90.0	1022.0	1020.0	2.2	U	112.0	1020.0	1017.0	2.68	2.6	7.7	7.7	0.7	0.0	8.4	5.0
6	1.01	261.0	1021.0	1010.0	S	0.51	100.0	1021.0	1016.1	4.9	U	161.0	1016.1	1010.0	3.79	3.1	6.3	6.3	0.9	0.0	7.1	6.0
7	0.87	246.0	1023.0	1010.0	S	0.51	100.0	1023.0	1015.5	7.5	U	146.0	1015.5	1010.0	3.77	3.1	5.4	5.4	0.8	0.0	6.2	7.0
8	0.32	281.0	1032.8	1025.5	S	0.51	42.0	1032.8	1032.0	2.0	P	239.0	1032.0	1025.5	2.72	3.4	5.5	5.5	1.2	0.0	6.7	8.0
9	0.39	319.0	1032.9	1024.2	S	0.51	44.0	1032.9	1032.0	2.0	P	275.0	1032.0	1024.2	2.84	3.4	5.6	5.6	1.3	0.0	6.9	9.0
10	0.67	247.0	1030.3	1020.0	S	0.51	92.0	1030.3	1024.3	6.5	U	155.0	1024.3	1020.0	2.77	2.7	5.5	5.5	1.0	0.0	6.4	10.0
11	1.01	367.0	1030.3	1022.0	S	0.51	100.0	1030.3	1026.5	3.8	P	267.0	1026.5	1022.0	1.69	2.6	6.8	6.8	1.7	0.0	8.5	11.0
12	0.86	232.0	1024.2	1017.0	S	0.51	100.0	1024.2	1019.9	4.3	U	132.0	1019.9	1017.0	2.20	2.4	6.5	6.5	0.9	0.0	7.5	12.0
13	0.29	162.0	1031.9	1026.4	S	0.51	99.0	1031.9	1028.6	3.3	U	63.0	1028.6	1026.4	3.49	3.0	7.1	7.1	0.3	0.0	7.4	13.0
14	0.33	239.0	1030.9	1024.5	S	0.51	100.0	1030.9	1028.0	2.9	P	139.0	1028.0	1024.5	2.52	3.2	7.4	7.4	0.7	0.0	8.2	14.0
15	0.19	162.0	1026.9	1024.5	S	0.51	46.0	1026.9	1026.0	2.0	P	116.0	1026.0	1024.5	1.29	2.3	5.7	5.7	0.8	0.0	6.6	15.0
16	0.77	222.0	1026.9	1019.9	S	0.51	100.0	1026.9	1021.7	5.2	P	122.0	1021.7	1019.9	1.48	2.5	6.1	6.1	0.8	0.0	6.9	16.0
17	0.21	265.0	1033.4	1027.5	S	0.51	33.0	1033.4	1032.7	2.0	P	232.0	1032.7	1027.5	2.24	3.0	4.8	5.0	1.3	0.0	6.3	17.0
18	0.05	72.0	1027.8	1026.0	S	0.51	23.0	1027.8	1027.3	2.0	P	49.0	1027.3	1026.0	2.65	3.3	4.0	5.0	0.2	0.0	5.2	18.0
19	0.65	360.0	1037.2	1027.5	S	0.51	100.0	1037.2	1033.5	3.7	P	260.0	1033.5	1027.5	2.31	3.1	6.9	6.9	1.4	0.0	8.3	19.0
20	0.35	315.0	1038.0	1032.0	S	0.51	26.0	1038.0	1037.5	2.0	P	289.0	1037.5	1032.0	1.89	2.8	4.3	5.0	1.7	0.0	6.7	20.0
21	0.26	276.0	1038.0	1033.0	S	0.51	26.0	1038.0	1037.5	2.0	P	250.0	1037.5	1033.0	1.78	2.7	4.3	5.0	1.5	0.0	6.5	21.0
Detention	2.35	N/A			Z	0.42																Detention

AREAS 19, 20 AND 21 ARE LOCATED IN THE RESERVE AT STONEY CREEK 4TH PLAT

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Engineering 6254
Nebraska
Engineering CA2821

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

Master Drainage Map 3 of 3:
Drainage Area Map
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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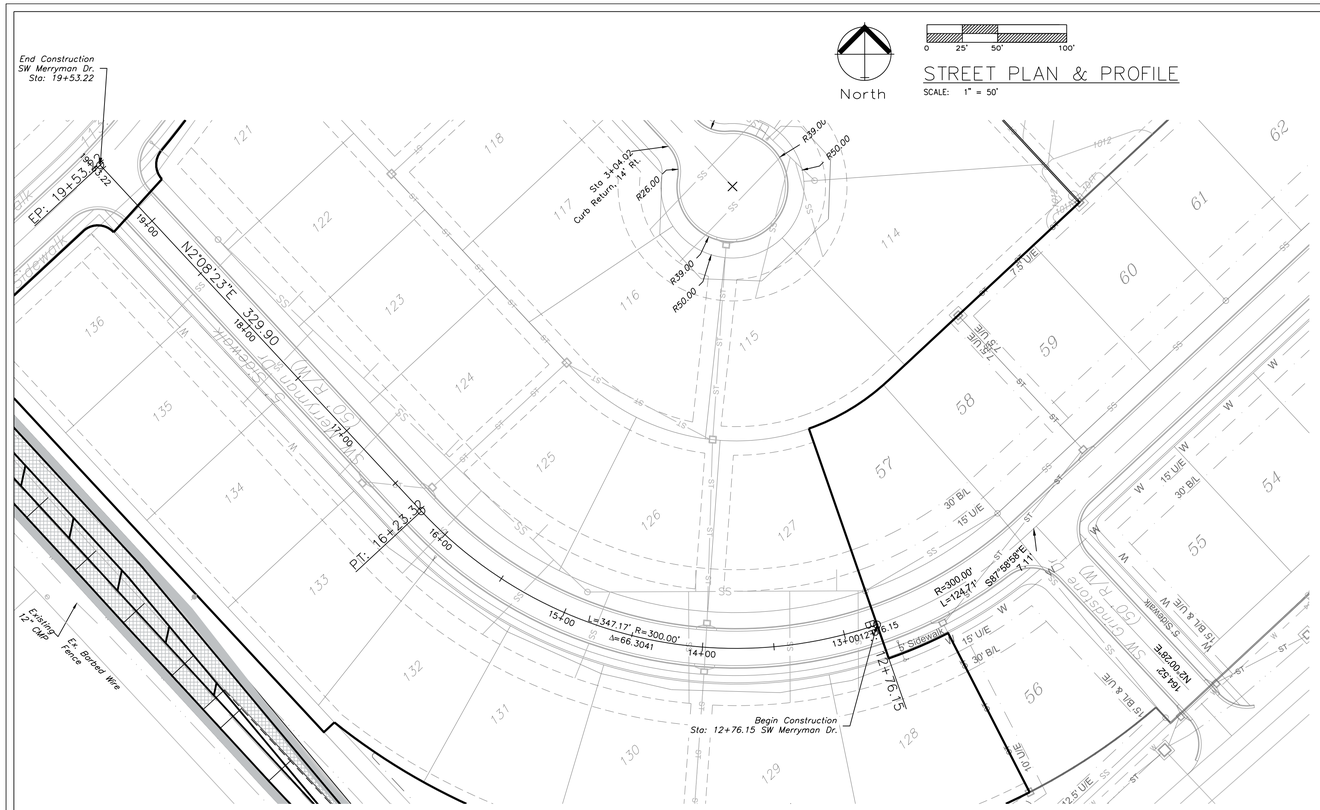
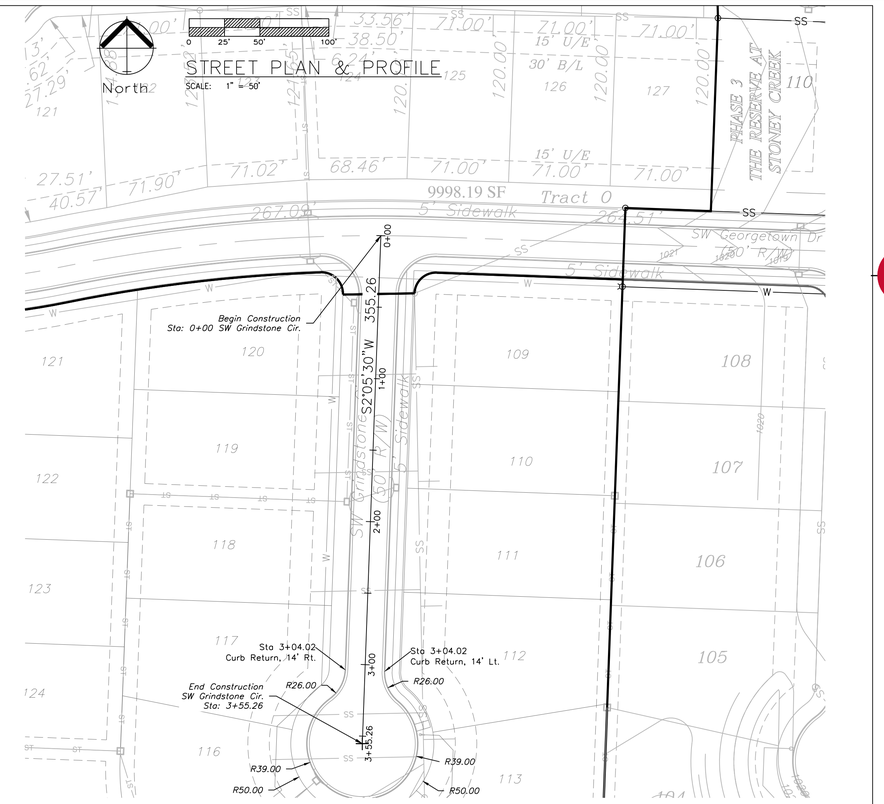
REVISIONS

1 REV. 1-4-19
2 REV. 2-11-19
3 REV. 5-10-19
4 REV. 5-30-19
5 REV. 11-6-19

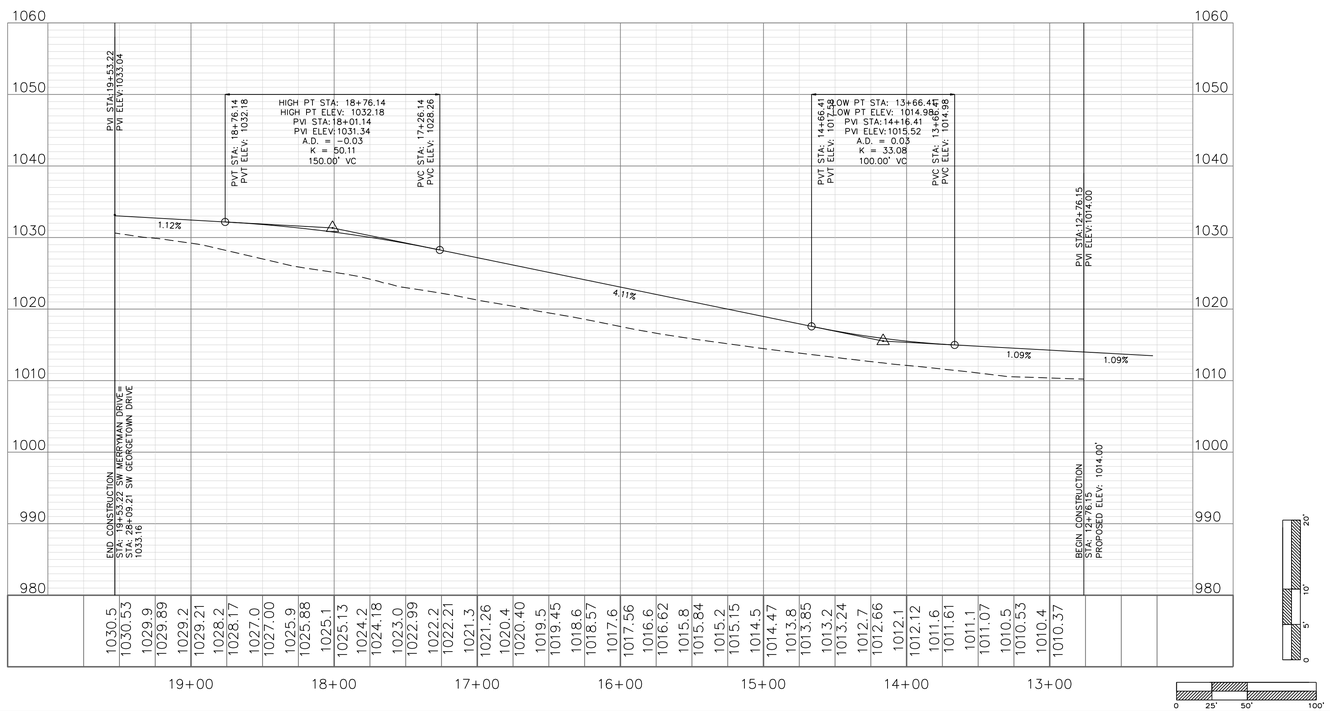
C.202

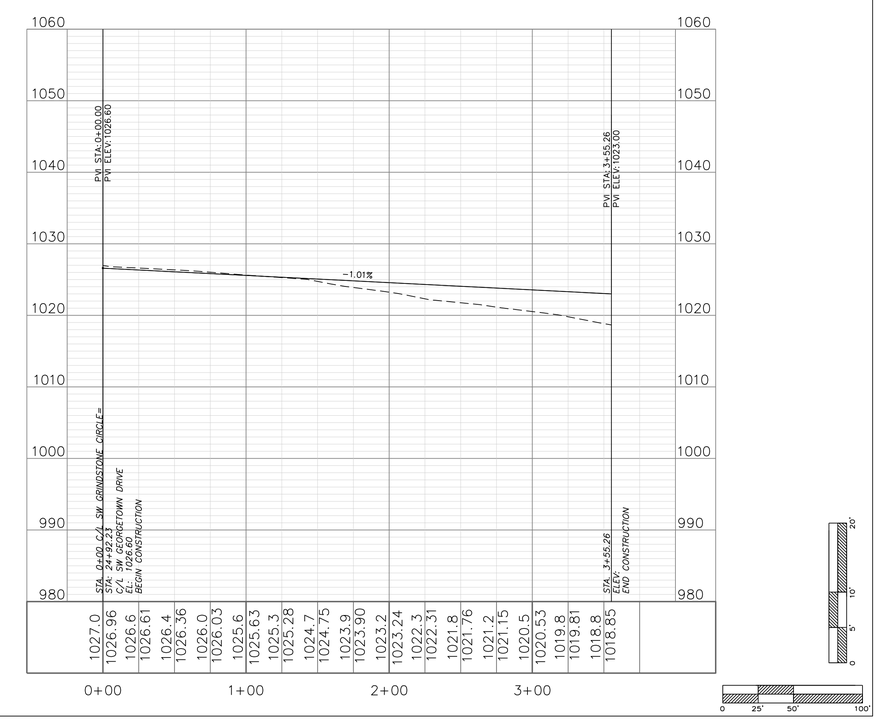


SW MERRYMAN DRIVE



SW GRINDSTONE CIR





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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project:
THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date:
August 29, 2018

Street Plan and Profile
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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REVISIONS

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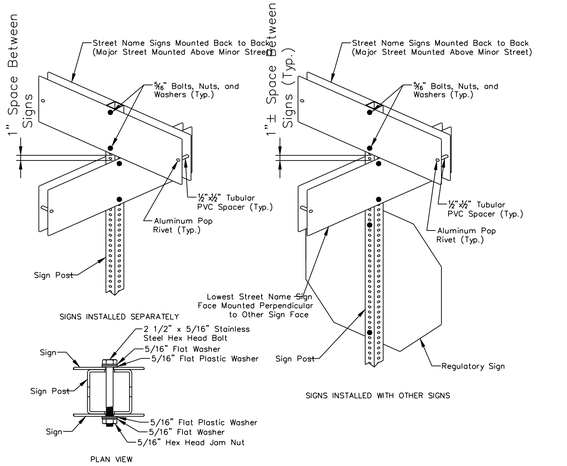
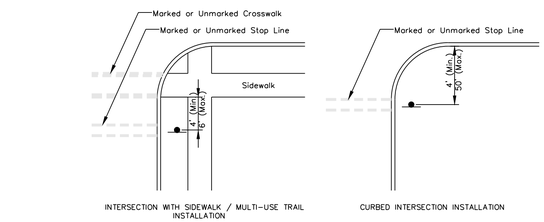
4	REV. 5-30-19
5	REV. 11-6-19

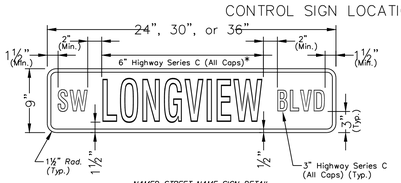
C.203



SQUARE STEEL POST MOUNTING DETAILS

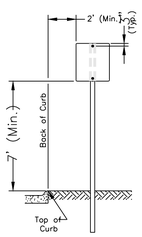


CONTROL SIGN LOCATION



NAMED STREET NAME SIGN DETAIL

* Use Highway Series B (All Caps) in lieu of series C if necesary to fit text on a 36" sign blank.



SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

STREET SIGNAGE

SCALE: 1" = 60'

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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date: August 29, 2018

Street Signage Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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REVISIONS

1	REV. 1-4-19
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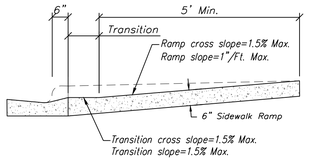
5	REV. 11-6-19

C.204

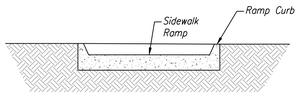
NOTE:

1. ADA ACCESSIBLE RAMPS SHALL BE CONSTRUCTED ALONG WITH SUBDIVISION IMPROVEMENTS.



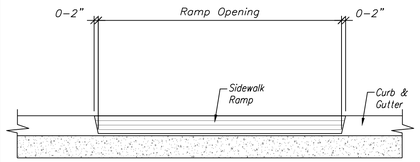
Section A-A

NOT TO SCALE



Section B-B

NOT TO SCALE

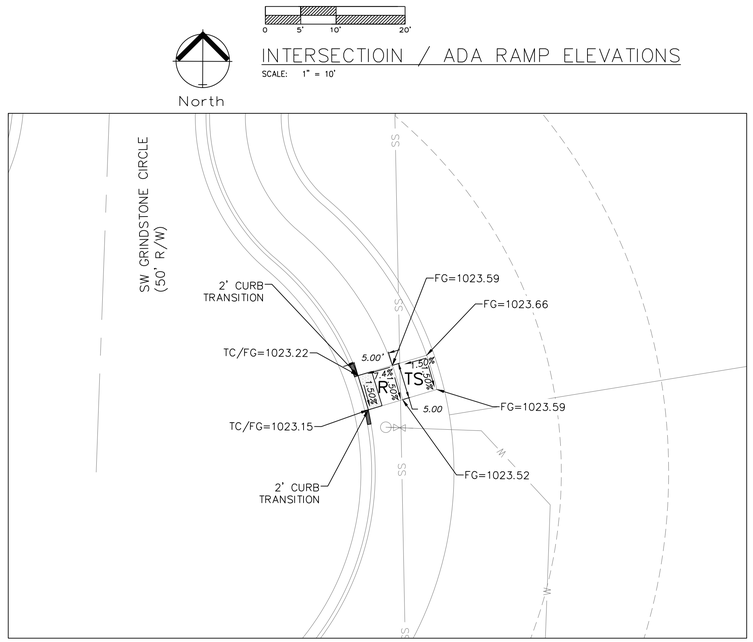


Section C-C

NOT TO SCALE

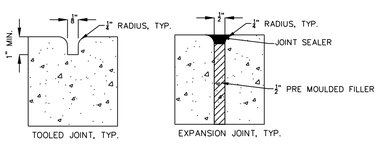
LEGEND

- R — SIDEWALK RAMP
- TS — TURNING SPACE
- DETECTABLE WARNING SURFACE
- T — TRANSITION



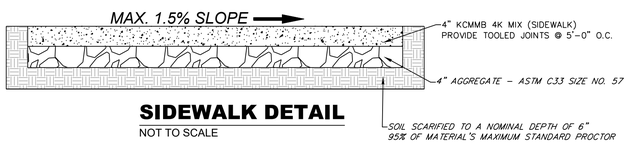
INTERSECTIOIN / ADA RAMP ELEVATIONS

SCALE: 1" = 10'



SIDEWALK NOTES:

1. CONCRETE SHALL BE CLASS A CONCRETE AIR ENTRAINED AGGREGATE SPECIFICATIONS PROVIDE 3000LB AIR ENTRAINED CONCRETE (6% AIR PLUS OR MINUS 1%)
2. 1/2" PRE MOULDED EXPANSION JOINTS SHALL BE PLACED AT 30'-0" CENTERS OR WHEN ABUTTING EXISTING CONCRETE/BRICK. PROVIDE SELF LEVELING SEALANT ABOVE JOINT
3. 1/4" x 1" CONTRACTION JOINTS SHALL BE PLACED AS SHOWN ON THE DRAWINGS OR AT DISTANCE NOT EXCEEDING THE WIDTH OF THE SIDEWALK IF NOT SHOWN. SAW CUT ALL JOINTS AND PROVIDE A SMOOTH FINISH.
4. KEY ALL CONSTRUCTION JOINTS.



SIDEWALK DETAIL

NOT TO SCALE

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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date: August 29, 2018

Intersection Details & ADA Ramp Plan
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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REVISIONS

1	REV. 1-4-19
2	REV. 2-11-19
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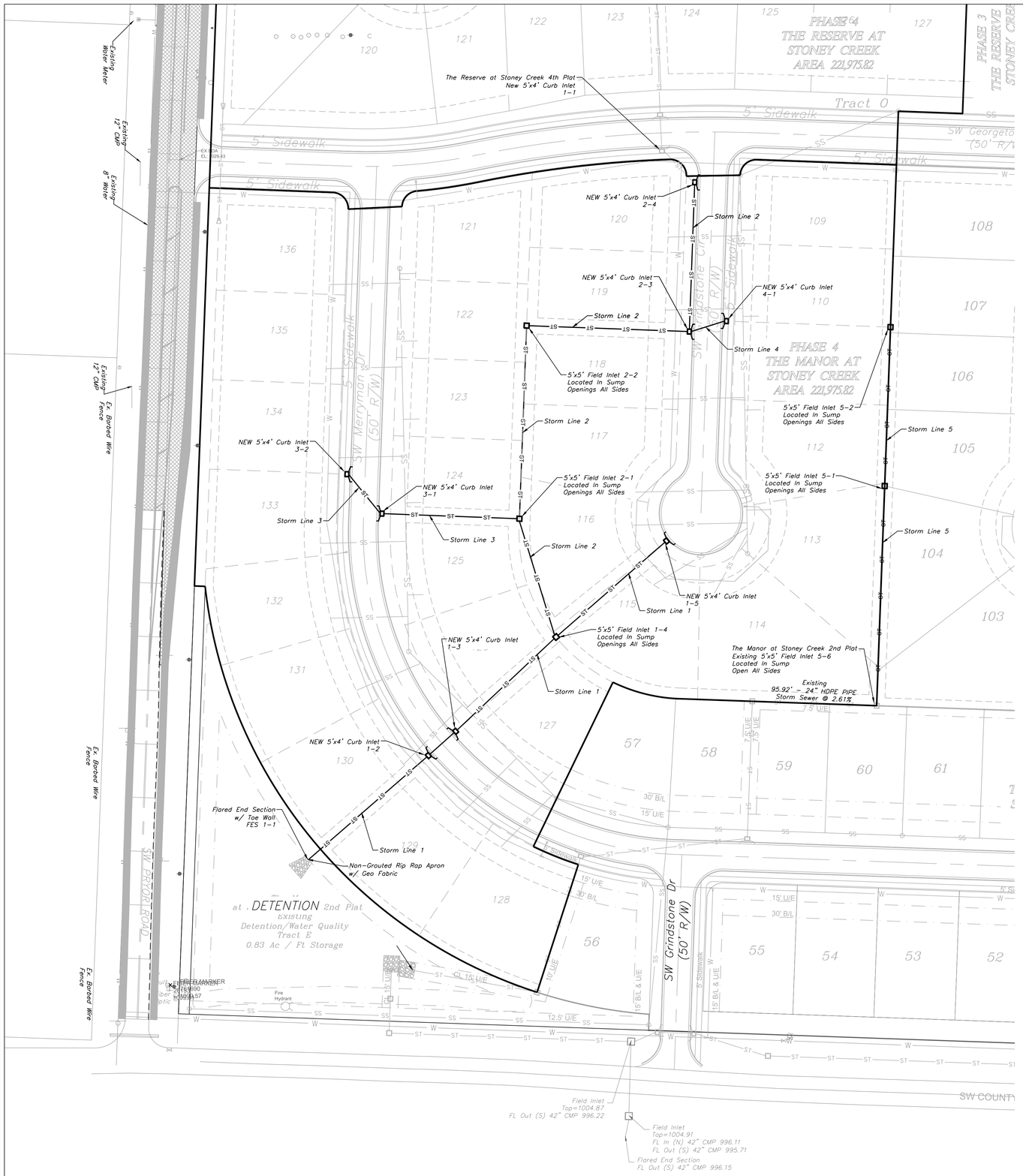
4	REV. 5-30-19
5	REV. 11-6-19



North

0 30' 60' 120'

STORM SEWER GENERAL LAYOUT

SCALE: 1" = 60'

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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT

Issue Date: August 29, 2018

Storm Sewer General Layout
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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REVISIONS

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4	REV. 5-30-19
5	REV. 11-6-19

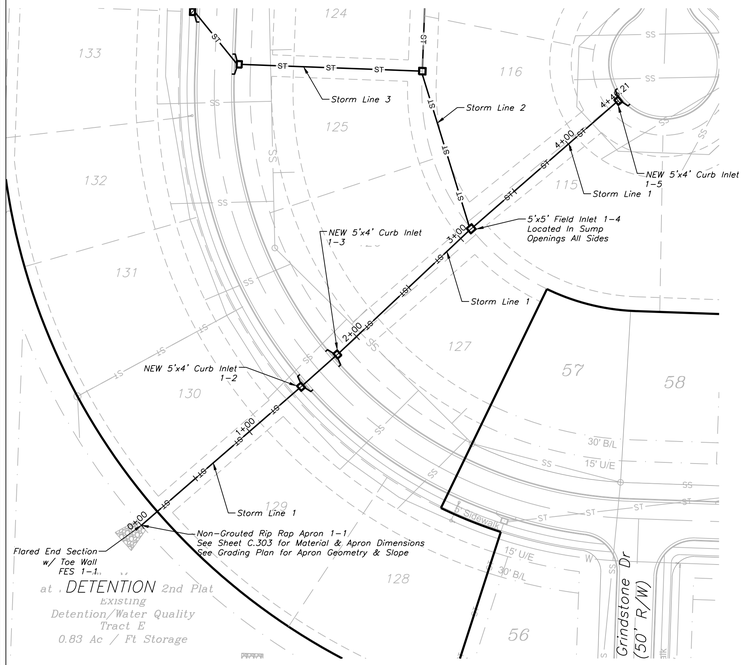
C.300

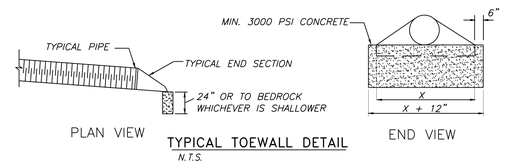
STORM SEWER PLAN & PROFILE

North

0 25' 50' 100'

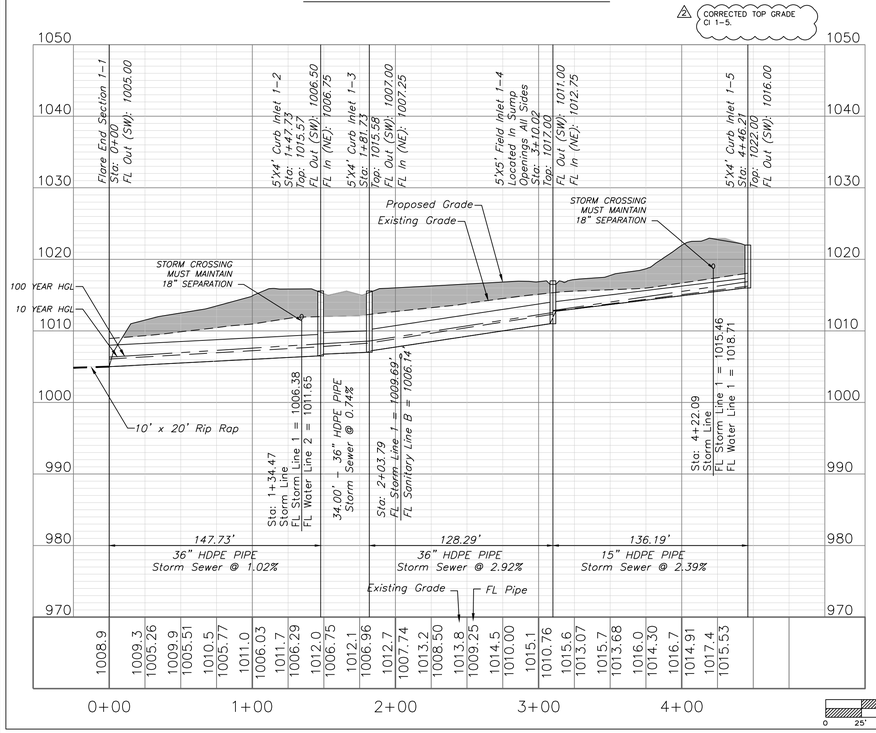
SCALE: 1" = 50'





TYPICAL TOEWALL DETAIL
N.T.S.

STORM LINE 1

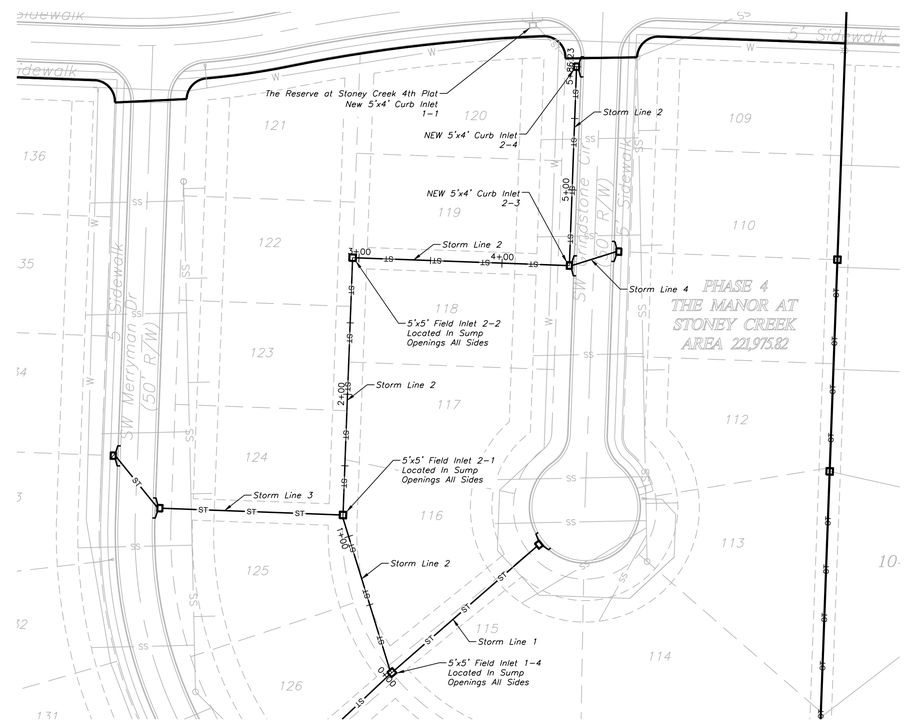


STORM SEWER PLAN & PROFILE

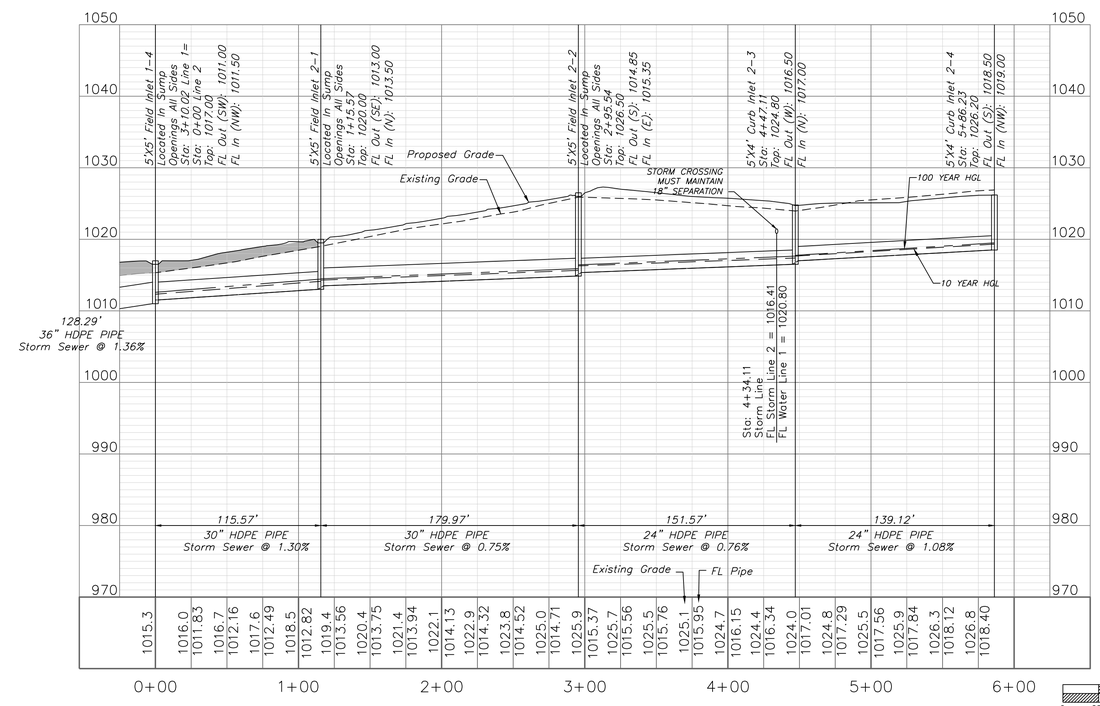
North

0 25' 50' 100'

SCALE: 1" = 50'



STORM LINE 2



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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

Storm Sewer Plan and Profile
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
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REVISIONS

1 REV. 1-4-19
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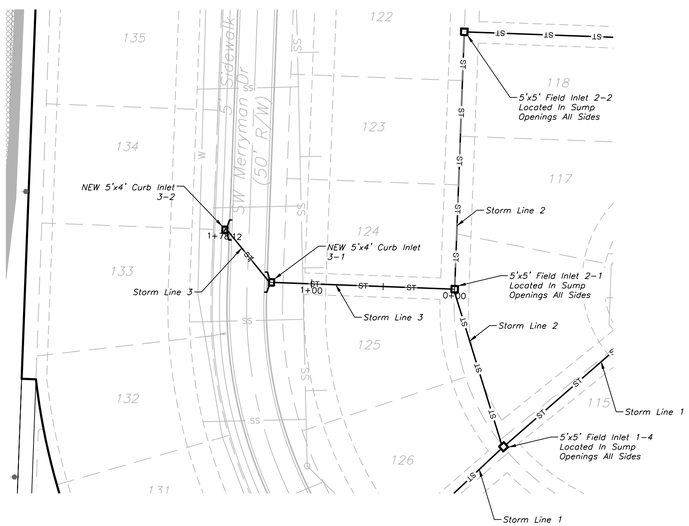
4 REV. 5-30-19
5 REV. 11-6-19

C.301

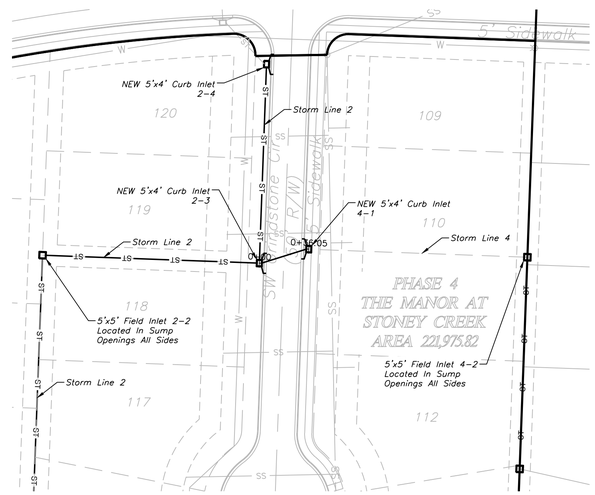
STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'



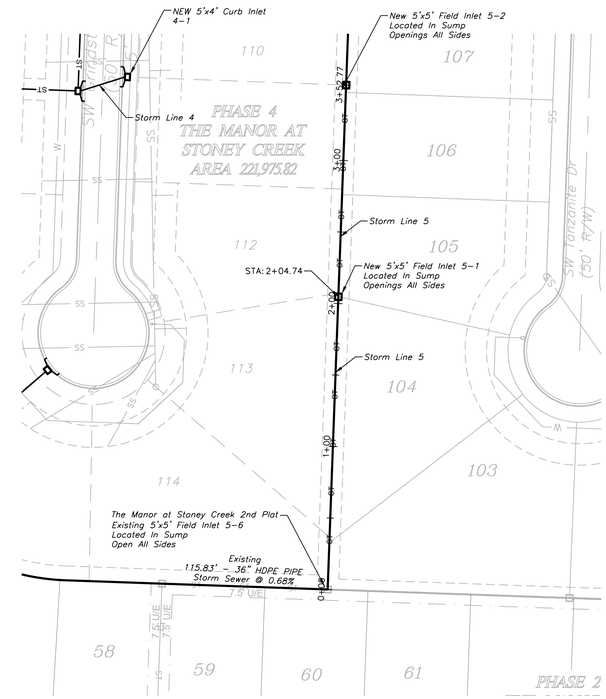
STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'



STORM SEWER PLAN & PROFILE

SCALE: 1" = 50'



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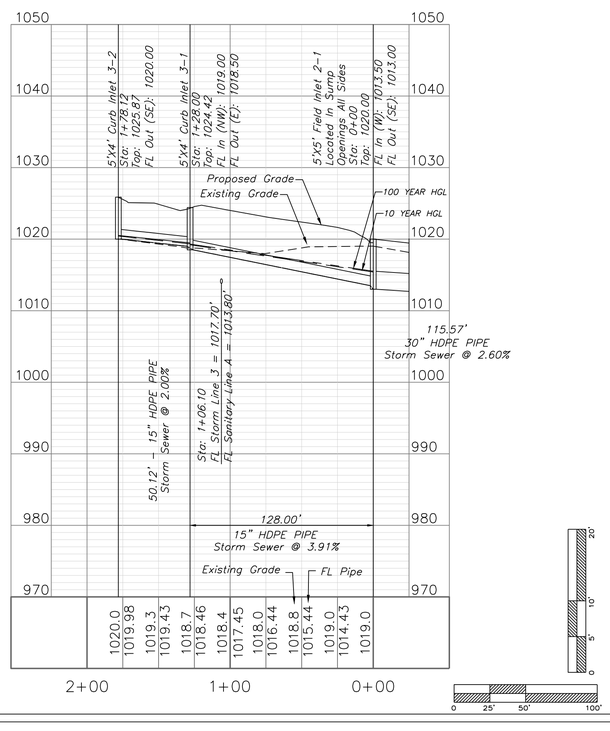

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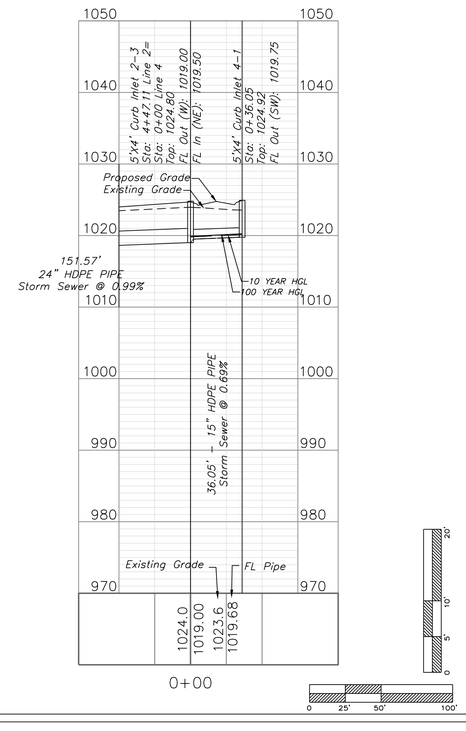
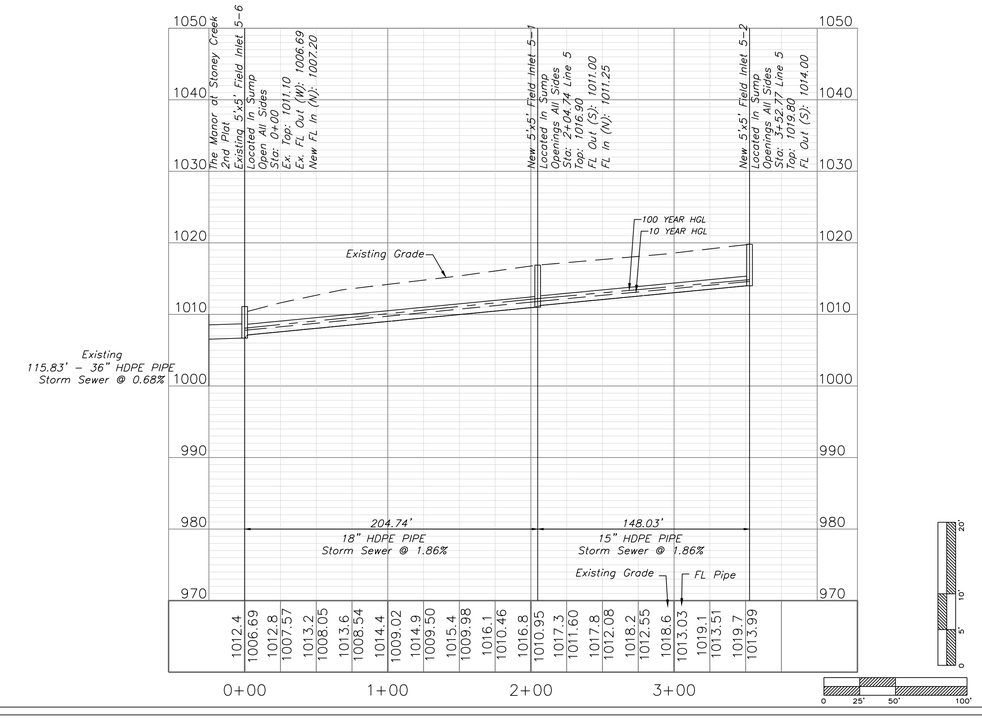


STORM LINE 5



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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project:
THE MANOR AT STONEY CREEK 4TH PLAT

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C.302

10 YEAR INLET																					
D.S. Line	U.S. Line	Area	InletTime	Int.	RunoffCoeff.	Q =CIA	Q Carry-over	QCaptured	QBypassed	JunctType	CurbHeight	CurbLength	GutterSlope	GutterWidth	CrossSlope, Sw	CrossSlope, Sx	InletDepth	GutterDepth	GutterSpread	BypassLine No.
		(ac)	(min)	(in/hr)	(C)	(cfs)	(cfs)	(cfs)	(cfs)		(in)	(ft)	(ft/ft)	(ft)	(ft/ft)	(ft/ft)	(ft)	(ft)	(ft)	
5-5	5-6	0.87	6.2	6.94	0.51	3.08	0	3.08	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.19	0.19	9.7	Sag
5-6	M4 5-1	0.86	7.5	6.63	0.51	2.91	0	2.91	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.19	0.19	9.33	Sag
M4 5-1	M4 5-2	0.77	6.9	6.77	0.51	2.66	0	2.66	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.18	0.18	8.79	Sag
M4 1-1	M4 1-2	0.37	7.6	6.6	0.51	1.25	0.67	0.56	1.36	Curb	10	5	0.011	2	0.02	0.02	0.17	0.17	8.37	16
M4 1-2	M4 1-3	0.27	7.1	6.72	0.51	0.93	0.86	0.77	1.01	Curb	10	5	0.011	2	0.05	0.02	0.21	0.21	7.5	17
M4 1-3	M4 1-4	0.47	8.4	6.42	0.51	1.54	0	1.54	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.12	0.12	6.11	Sag
M4 1-4	M4 1-5	1.01	8.5	6.4	0.51	3.3	0.82	4.12	0	Curb	10	5	Sag	2	0.05	0.02	0.42	0.42	18.11	Sag
M4 1-5	M4 2-1	0.67	6.4	6.89	0.51	2.36	0	2.36	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.16	0.16	8.11	Sag
M4 2-1	M4 2-2	0.29	7.4	6.65	0.51	0.98	0	0.98	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.09	0.09	4.53	Sag
M4 2-2	M4 2-3	0.33	8.2	6.47	0.51	1.09	0.15	0.64	0.6	Curb	10	5	0.01	2	0.05	0.02	0.19	0.19	6.51	34
M4 2-3	M4 2-4	0.05	5.2	7.21	0.51	0.18	0.35	0.39	0.15	Curb	10	5	0.01	2	0.05	0.02	0.15	0.15	4.27	37
M4 2-4	R4 1-1	0.21	6.3	6.92	0.51	0.74	0	0.39	0.35	Curb	10	5	0.026	2	0.05	0.02	0.14	0.14	3.92	38
R4 1-1	R4 1-2	0.65	8.3	6.44	0.51	2.14	0	0.7	1.44	Curb	10	5	0.026	2	0.05	0.02	0.19	0.19	6.73	Offsite
R4 1-2	R4 1-3	0.35	6.7	6.82	0.51	1.22	0	0.46	0.76	Curb	10	5	0.042	2	0.05	0.02	0.15	0.15	4.52	Offsite
R4 1-3	R4 1-4	0.26	6.5	6.87	0.51	0.91	0	0.42	0.49	Curb	10	5	0.032	2	0.05	0.02	0.14	0.14	4.15	Offsite
R4 1-4	M4 3-1	0.39	6.9	6.77	0.51	1.35	0	0.49	0.86	Curb	10	5	0.041	2	0.05	0.02	0.16	0.16	4.8	32
M4 3-1	M4 3-2	0.32	6.7	6.82	0.51	1.11	0	0.44	0.67	Curb	10	5	0.041	2	0.05	0.02	0.15	0.15	4.33	31
M4 3-2	M4 4-1	0.19	6.6	6.84	0.51	0.66	0	0.44	0.22	Curb	10	5	0.01	2	0.05	0.02	0.16	0.16	4.79	34

10 YEAR STORM PIPE																						
U.S. Line	D.S. Line	LineLength	Incr.Area	TotalArea	RunoffCoeff.	IncrC x A	TotalC x A	InletTime	TimeConc	RnfallInt	TotalRunoff	TotalFlow	CapacFull	Veloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn	HGLUp	Grnd/RimDn	Grnd/RimUp
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
5-5	5-6	115.83	0.87	2.5	0.51	0.44	1.28	6.2	8	6.5	8.29	8.29	51.85	4.98	36	0.6	1005.95	1006.65	1006.76	1007.56	1011	1011.1
5-6	M4 5-1	204.74	0.86	1.63	0.51	0.44	0.83	7.5	7.5	6.6	5.51	5.51	14.31	6.26	18	1.86	1007.2	1011	1007.85	1011.9	1011.1	1016.9
M4 5-1	M4 5-2	148.03	0.77	0.77	0.51	0.39	0.39	6.9	6.9	6.8	2.66	2.66	8.8	4.09	15	1.86	1011.25	1014	1011.9	1014.65	1016.9	1019.8
M4 1-1	M4 1-2	147.73	0.37	5.83	0.51	0.19	2.97	7.6	10.7	6	17.7	17.7	67.2	6.89	36	1.02	1005	1006.5	1006.05	1007.85	1008	1015.57
M4 1-2	M4 1-3	34	0.27	5.46	0.51	0.14	2.78	7.1	10.6	6	16.63	16.63	57.19	6.33	36	0.74	1006.75	1007	1007.86	1008.3	1015.57	1015.58
M4 1-3	M4 1-4	128.29	0.47	5.19	0.51	0.24	2.65	8.4	10.3	6	15.97	15.97	114.03	6.4	36	2.92	1007.25	1011	1008.3	1012.28	1015.58	1017
M4 1-4	M4 1-5	136.19	1.01	1.01	0.51	0.52	0.52	8.5	8.5	6.4	3.3	3.3	10.72	6.05	15	2.75	1012.25	1016	1012.73	1016.73	1017	1023.3
M4 1-5	M4 2-1	115.57	0.67	3.71	0.51	0.34	1.89	6.4	10	6.1	11.52	11.52	46.72	6.59	30	1.3	1011.5	1013	1012.35	1014.14	1017	1020
M4 2-1	M4 2-2	179.97	0.29	2.33	0.51	0.15	1.19	7.4	9.4	6.2	7.38	7.38	35.52	5.17	30	0.75	1013.5	1014.85	1014.27	1015.75	1020	1026.5
M4 2-2	M4 2-3	151.57	0.33	2.04	0.51	0.17	1.04	8.2	8.9	6.3	6.56	6.56	19.7	5.19	24	0.76	1015.35	1016.5	1016.15	1017.41	1026.5	1024.8
M4 2-3	M4 2-4	139.12	0.05	1.52	0.51	0.03	0.78	5.2	8.5	6.4	4.96	4.96	23.49	5.13	24	1.08	1017	1018.5	1017.63	1019.28	1024.8	1026.2
M4 2-4	R4 1-1	43.15	0.21	1.47	0.51	0.11	0.75	6.3	8.4	6.4	4.82	4.82	48.69	7.09	24	4.63	1019	1021	1019.43	1021.77	1026.2	1028.03
R4 1-1	R4 1-2	33.95	0.65	1.26	0.51	0.33	0.64	8.3	8.3	6.4	4.14	4.14	47.54	6.7	24	4.42	1021.5	1023	1021.9	1023.71	1028.03	1028.03
R4 1-2	R4 1-3	152.68	0.35	0.61	0.51	0.18	0.31	6.7	6.7	6.8	2.12	2.12	17	4.09	18	2.62	1023.25	1027.25	1023.71	1027.8	1028.03	1032.28
R4 1-3	R4 1-4	52.3	0.26	0.26	0.51	0.13	0.13	6.5	6.5	6.9	0.91	0.91	7.73	3.59	15	1.43	1027.75	1028.5	1028.04	1028.87	1032.28	1033.72
R4 1-4	M4 3-1	128	0.39	0.71	0.51	0.2	0.36	6.9	6.9	6.8	2.45	2.45	10.68	5.52	15	2.73	1015	1018.5	1015.41	1019.13	1020	1024.42
M4 3-1	M4 3-2	50.12	0.32	0.32	0.51	0.16	0.16	6.7	6.7	6.8	1.11	1.11	9.12	4.08	15	2	1019	1020	1019.3	1020.42	1024.42	1025.87
M4 3-2	M4 4-1	36.05	0.19	0.19	0.51	0.1	0.1	6.6	6.6	6.8	0.66	0.66	5.38	2.84	15	0.69	1019.5	1019.75	1019.8	1020.07	1024.8	1024.92

100 YEAR INLET																				
D.S. Line	U.S. Line	Area	InletTime	Int.	RunoffCoeff.	Q =CIA	Q Carry-over	QCaptured	QBypassed	JunctType	CurbHeight	CurbLength	GutterSlope	GutterWidth	CrossSlope, Sw	CrossSlope, Sx	InletDepth	GutterDepth	GutterSpread	BypassLine No.
		(ac)	(min)	(in/hr)	(C)	(cfs)	(cfs)	(cfs)	(cfs)		(in)	(ft)	(ft/ft)	(ft)	(ft/ft)	(ft/ft)	(ft)	(ft)	(ft)	
5-5	5-6	0.87	6.2	10.5	0.51	4.66	0	4.66	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.26	0.26	12.79	Sag
5-6	M4 5-1	0.86	7.5	10.02	0.51	4.4	0	4.4	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.25	0.25	12.3	Sag
M4 5-1	M4 5-2	0.77	6.9	10.24	0.51	4.02	0	4.02	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.23	0.23	11.59	Sag
M4 1-1	M4 1-2	0.37	7.6	9.99	0.51	1.88	1.13	0.73	2.28	Curb	10	5	0.011	2	0.02	0.02	0.2	0.2	9.91	16
M4 1-2	M4 1-3	0.27	7.1	10.17	0.51	1.4	1.42	0.98	1.84	Curb	10	5	0.011	2	0.05	0.02	0.24	0.24	9.14	17
M4 1-3	M4 1-4	0.47	8.4	9.71	0.51	2.33	0	2.33	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.16	0.16	8.05	Sag
M4 1-4	M4 1-5	1.01	8.5	9.68	0.51	4.99	1.62	6.6	0	Curb	10	5	Sag	2	0.05	0.02	0.58	0.58	25.93	Sag
M4 1-5	M4 2-1	0.67	6.4	10.43	0.51	3.56	0	3.56	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.21	0.21	10.69	Sag
M4 2-1	M4 2-2	0.29	7.4	10.06	0.51	1.49	0	1.49	0	Dp-Curb	10	12	Sag	....	0.02	0.02	0.12	0.12	5.97	Sag
M4 2-2	M4 2-3	0.33	8.2	9.78	0.51	1.65	0.37	0.84	1.18	Curb	10	5	0.01	2	0.05	0.02	0.22	0.22	8.09	34
M4 2-3	M4 2-4	0.05	5.2	10.91	0.51	0.28	0.63	0.53	0.37	Curb	10	5	0.01	2	0.05	0.02	0.17	0.17	5.61	37
M4 2-4	R4 1-1	0.21	6.3	10.47	0.51	1.12	0	0.49	0.63	Curb	10	5	0.026	2	0.05	0.02	0.16	0.16	4.93	38
R4 1-1	R4 1-2	0.65	8.3	9.75	0.51	3.23	0	0.87	2.36	Curb	10	5	0.026	2	0.05	0.02	0.22	0.22	8.09	Offsite
R4 1-2	R4 1-3	0.35	6.7	10.31	0.51	1.84	0	0.58	1.26	Curb	10	5	0.042	2	0.05	0.02	0.17	0.17	5.59	Offsite
R4 1-3	R4 1-4	0.26	6.5	10.39	0.51	1.38	0	0.52	0.85	Curb	10	5	0.032	2	0.05	0.02	0.16	0.16	5.17	Offsite
R4 1-4	M4 3-1	0.39	6.9	10.24	0.51	2.04	0	0.61	1.42	Curb	10	5	0.041	2	0.05	0.02	0.18	0.18	5.9	32
M4 3-1	M4 3-2	0.32	6.7	10.31	0.51	1.68	0	0.55	1.13	Curb	10	5	0.041	2	0.05	0.02	0.17	0.17	5.38	31
M4 3-2	M4 4-1	0.19	6.6	10.35	0.51	1	0	0.57	0.44	Curb	10	5	0.01	2	0.05	0.02	0.18	0.18	5.89	34

100 YEAR STORM PIPE																						
U.s. Line	D.S. Line	LineLength	Incr.Area	TotalArea	RunoffCoeff.	IncrC x A	TotalC x A	InletTime	TimeConc	RnfallInt	TotalRunoff	TotalFlow	CapacFull	Veloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn	HGLUp	Grnd/RimDn	Grnd/RimUp
5-5	5-6	115.83	0.87	2.5	0.51	0.44	1.28	6.2	8	9.9	12.57	12.57	51.85	5.61	36	0.6	1005.95	1006.65	1006.96	1007.78	1011	1011.1
5-6	M4 5-1	204.74	0.86	1.63	0.51	0.44	0.83	7.5	7.5	10	8.33	8.33	14.31	7.15	18	1.86	1007.2	1011	1008.02	1012.12	1011.1	1016.9
M4 5-1	M4 5-2	148.03	0.77	0.77	0.51	0.39	0.39	6.9	6.9	10.2	4.02	4.02	8.8	4.6	15	1.86	1011.25	1014	1012.12	1014.81	1016.9	1019.8
M4 1-1	M4 1-2	147.73	0.37	5.83	0.51	0.19	2.97	7.6	10.5	9.1	27	27	67.2	7.81	36	1.02	1005	1006.5	1006.32	1008.18	1008	1015.57
M4 1-2	M4 1-3	34	0.27	5.46	0.51	0.14	2.78	7.1	10.4	9.1	25.35	25.35	57.19	7.07	36	0.74	1006.75	1007	1008.18	1008.62	1015.57	1015.58
M4 1-3	M4 1-4	128.29	0.47	5.19	0.51	0.24	2.65	8.4	10.1	9.2	24.33	24.33	114.03	7.06	36	2.92	1007.25	1011	1008.62	1012.59	1015.58	1017
M4 1-4	M4 1-5	136.19	1.01	1.01	0.51	0.52	0.52	8.5	8.5	9.7	4.99	4.99	10.72	6.91	15	2.75	1012.25	1016	1012.85	1016.91	1017	1023.3
M4 1-5	M4 2-1	115.57	0.67	3.71	0.51	0.34	1.89	6.4	9.8	9.3	17.54	17.54	46.72	7.33	30	1.3	1011.5	1013	1012.59	1014.42	1017	1020
M4 2-1	M4 2-2	179.97	0.29	2.33	0.51	0.15	1.19	7.4	9.3	9.4	11.2	11.2	35.52	5.84	30	0.75	1013.5	1014.85	1014.47	1015.97	1020	1026.5
M4 2-2	M4 2-3	151.57	0.33	2.04	0.51	0.17	1.04	8.2	8.9	9.6	9.95	9.95	19.7	5.87	24	0.76	1015.35	1016.5	1016.36	1017.63	1026.5	1024.8
M4 2-3	M4 2-4	139.12	0.05	1.52	0.51	0.03	0.78	5.2	8.5	9.7	7.51	7.51	23.49	5.8	24	1.08	1017	1018.5	1017.78	1019.47	1024.8	1026.2
M4 2-4	R4 1-1	43.15	0.21	1.47	0.51	0.11	0.75	6.3	8.4	9.7	7.29	7.29	48.69	8.01	24	4.63	1019	1021	1019.52	1021.96	1026.2	1028.03
R4 1-1	R4 1-2	33.95	0.65	1.26	0.51	0.33	0.64	8.3	8.3	9.7	6.26	6.26	47.54	7.58	24	4.42	1021.5	1023	1021.99	1023.89	1028.03	1028.03
R4 1-2	R4 1-3	152.68	0.35	0.61	0.51	0.18	0.31	6.7	6.7	10.3	3.21	3.21	17	4.31	18	2.62	1023.25	1027.25	1023.89	1027.93	1028.03	1032.28
R4 1-3	R4 1-4	52.3	0.26	0.26	0.51	0.13	0.13	6.5	6.5	10.4	1.38	1.38	7.73	4.04	15	1.43	1027.75	1028.5	1028.11	1028.96	1032.28	1033.72
R4 1-4	M4 3-1	128	0.39	0.71	0.51	0.2	0.36	6.9	6.9	10.2	3.71	3.71	10.68	6.27	15	2.73	1015	1018.5	1015.51	1019.28	1020	1024.42
M4 3-1	M4 3-2	50.12	0.32	0.32	0.51	0.16	0.16	6.7	6.7	10.3	1.68	1.68	9.12	4.6	15	2	1019	1020	1019.36	1020.51	1024.42	1025.87
M4 3-2	M4 4-1	36.05	0.19	0.19	0.51	0.1	0.1	6.6	6.6	10.4	1	1	5.38	3.19	15	0.69	1019.5	1019.75	1019.87	1020.14	1024.8	1024.92

RIPRAP APRON CALCULATIONS

Field End Section #	1-1	
Q =	25.35	cfs
D =	3	ft
Tw =	1.2	ft
g =	32.2	ft/s^2
D_{50} =	3.4	inches
Use	5	inches

D_{50} = riprap size, m(ft)
Q = design discharg, m^3/s (ft^3/s)
D = culvert diameter (circular), m(ft)
Tw = tailwater depth, m(ft)
g = acceleration due to gravity, 9.81 m/s^2 (32.2 ft/s^2)

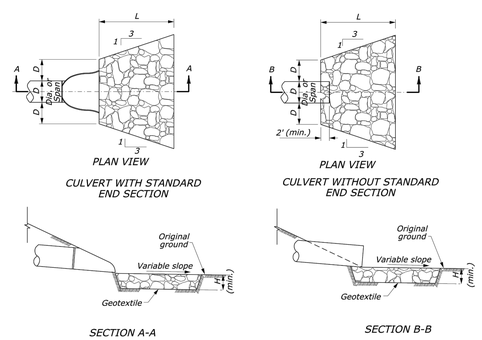
*Taken From Publication No. FHWA-NHI-06-086
Hydraulic Engineering Circular No. 14, 3rd Edition

Class 1

Apron Length =	4*D	12.00 ft	use	12.00 ft
Apron Depth =	3.5*D_{50}	17.50 inches	use	18.00 inches
Apron Width =	3*D+(2/3)L	17.00 ft	use	17.00 ft

				RipRap Apron					
RipRap Apron	Area (ac.)	Q100 (cfs)	Dia. (ft)	Class	D_{50} (in)	Length (ft)	Depth (in)	Width (ft)	Slope (%)
1-1	5.83	25.35	3	1	5	12	18	17	2.00

STANDARD RIPRAP APRON DETAIL



PROTECTIVE APRON AT CULVERT OUTLET WITHOUT DITCH

NOTES:
1. ALL RIPRAP APRONS SHALL CONFORM TO THE STANDARD CONFIGURATION SHOWN IN THE STANDARD DETAIL ABOVE UNLESS OTHERWSE NOTED. PLAN VIEW DIMENSIONS SHOWN SHALL BE MET OR EXCEEDED INCLUDING AREAS OF LONGITUDINAL AND/OR TRANSVERSE SLOPE.
2. DIMENSIONS FOR EACH RIPRAP APRON AND ASSOCIATED RIPRAP ARE DETAILED IN THE TABLE ABOVE.
3. WIDTH REFERS TO DIMENSION OPPOSITE PIPE AND DEPTH IS DIMENSION H.
4. GEOTEXTILE SHALL BE "GEI WORKS 4 OUNCE" NON-WOVEN FILTER FABRIC DESIGNED FOR FILTRATION, STABILIZATION AND SEPARATION WRAPPED CONTINUOUSLY ALONG THE SIDEWALLS AND BOTTOM OF THE PREPARED AREA OR SLOPE.
   - WATER FLOW = 120 GPM/SF
   - GRAB STRENGTH (MIN) = 400 N
   - PUNCTURE STRENGTH (MIN) = 178 N
   - TRAPEZOIDAL TEAR (MIN) = 133 N
   - ELONGATION (MIN) = 15%

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The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

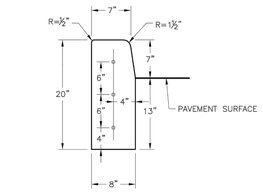
Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

Storm Sewer Tables 10 and 100 Year
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

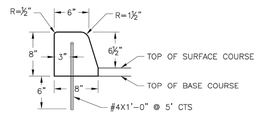
Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226

REVISIONS

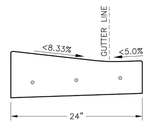
1	REV. 1-4-19
2	REV. 2-11-19
3	REV. 5-10-19
4	REV. 5-30-19
5	REV. 11-6-19



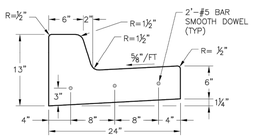
STRAIGHT CURB
(TYPE C-1)



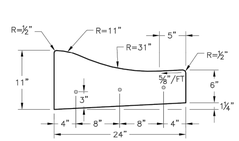
DOWELLED CURB
(TYPE DC)



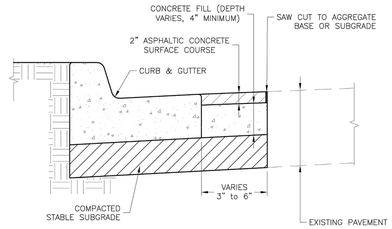
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



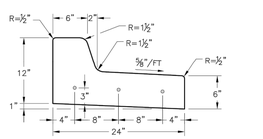
STRAIGHT BACK CURB &
GUTTER
(TYPE CG-1)



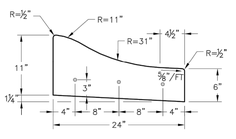
ROLL BACK CURB &
GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB &
GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB &
GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES

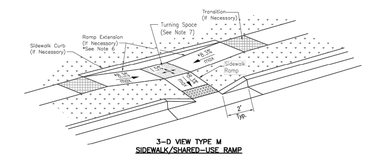
1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

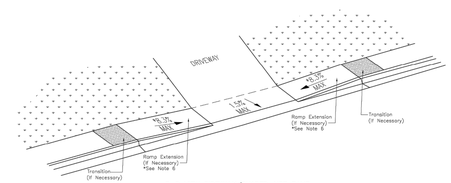
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

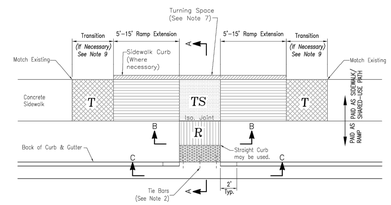
GEN-4



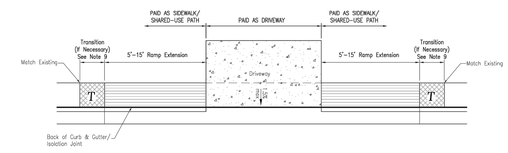
3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



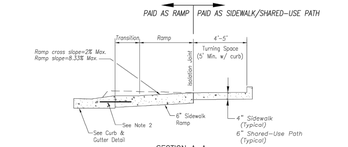
3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY



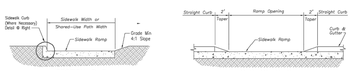
TYPE M SIDEWALK/SHARED-USE RAMP
Not to Scale



SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB



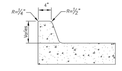
SECTION A-A



SECTION B-B
SECTION C-C

TYPE M SIDEWALK RAMP
Not to Scale

CURB & GUTTER DETAIL AT RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

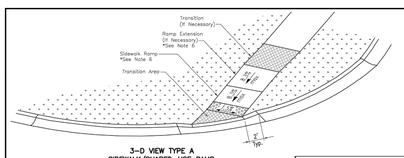
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

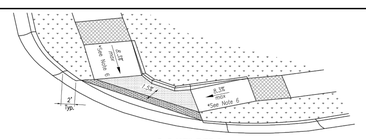
GEN-3B



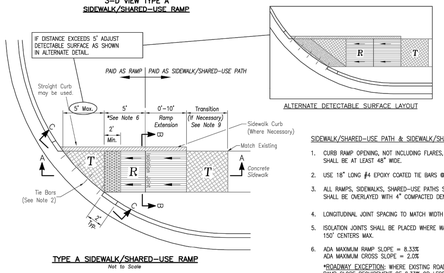
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION



3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

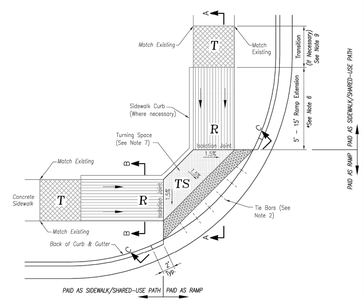


TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

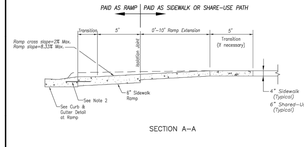
ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

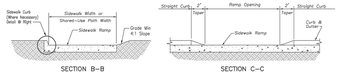
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

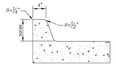


SECTION A-A

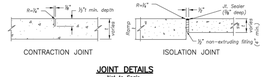


SECTION B-B
SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT
ISOLATION JOINT

JOINT DETAILS
Not to Scale

CURB & GUTTER DETAIL AT RAMP
Not to Scale

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-3A

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

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

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

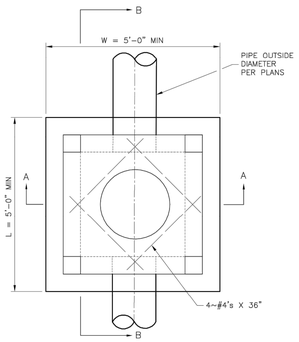
Construction Details
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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

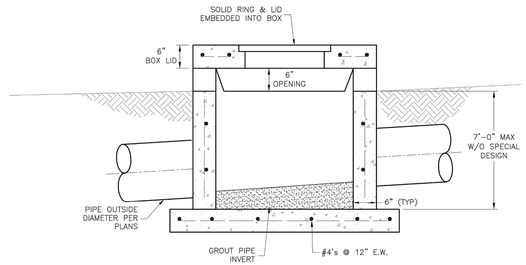
REVISIONS

1	REV. 1-4-19
2	REV. 2-11-19
3	REV. 5-10-19
4	REV. 5-30-19
5	REV. 11-6-19

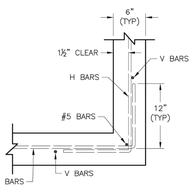
C.600



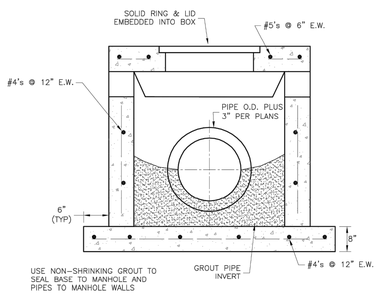
PLAN VIEW



SECTION B–B



WALL CORNER DETAIL



SECTION A–A

GENERAL NOTES:

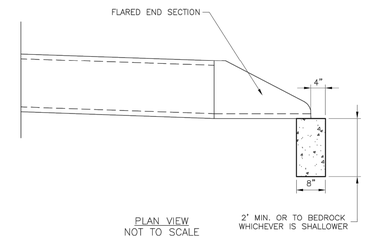
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

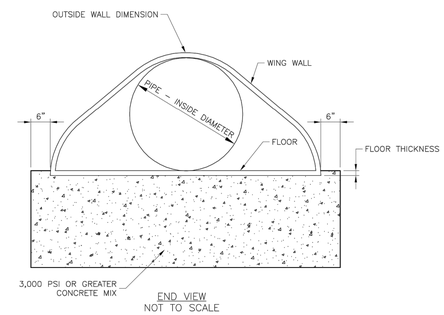
Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Drawn Name:
FIELD INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-2



PLAN VIEW
NOT TO SCALE



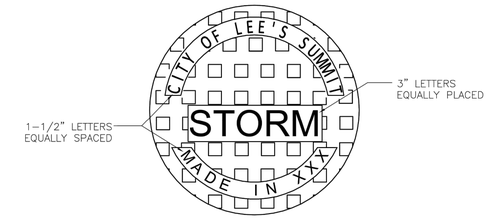
END VIEW
NOT TO SCALE

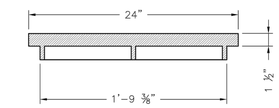
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

FLARED END SECTION SUPPORT DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-5





STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

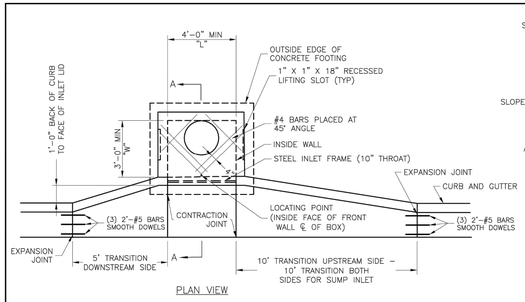
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

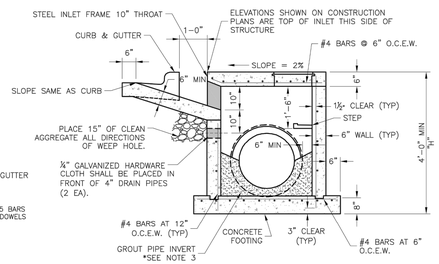
STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

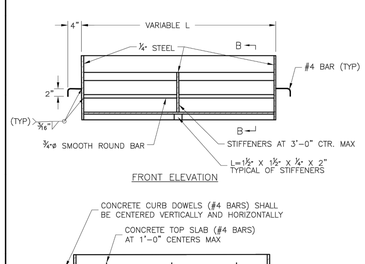
STM-6



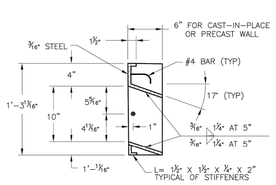
PLAN VIEW



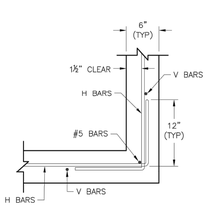
SECTION A–A



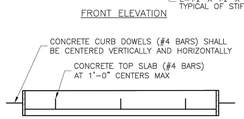
FRONT ELEVATION



SECTION B–B



WALL CORNER DETAIL



PLAN VIEW

STEEL FRAME NOTES:

1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

GENERAL NOTES:

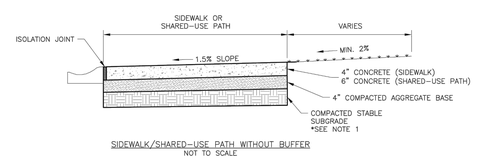
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ¾" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

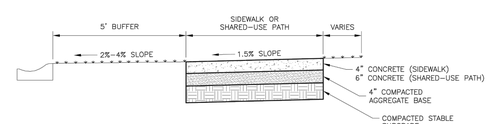
Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Drawn Name:
CURB INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

STM-1



SIDEWALK/SHARED–USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED–USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED–USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED–USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

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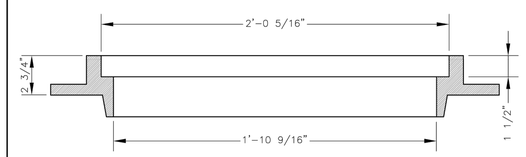
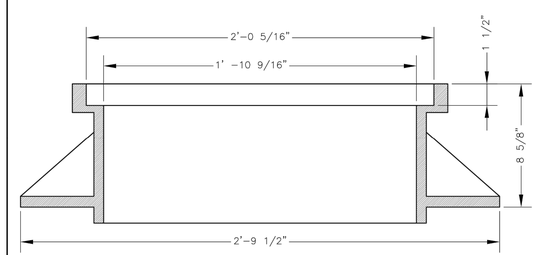
SIDEWALK/SHARED-USE PATH DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-2



SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB



STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

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STORM MANHOLE FRAME DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

STM-7

SIDEWALK DETAIL
NOT TO SCALE

GENERAL NOTE:

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

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Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

Project: THE MANOR AT STONEY CREEK 4TH PLAT
Issue Date: August 29, 2018

Construction Details
Construction Plans for:
The Manor at Stoney Creek - 4th Plat
Lee's Summit, Jackson County, Missouri

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

REVISIONS

1	REV. 1–4–19
2	REV. 2–11–19
3	REV. 5–10–19
4	REV. 5–30–19
5	REV. 11–6–19

C.601