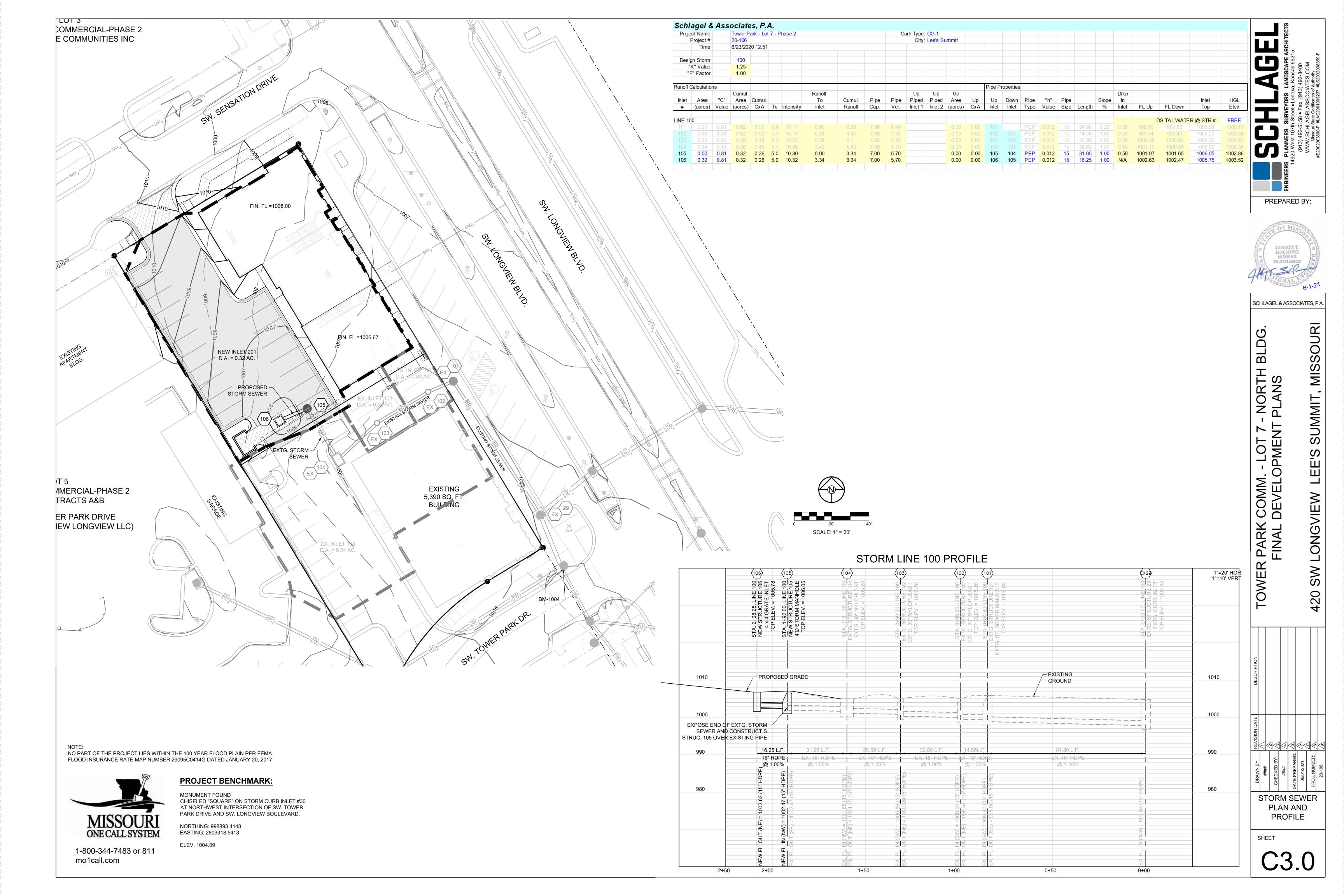
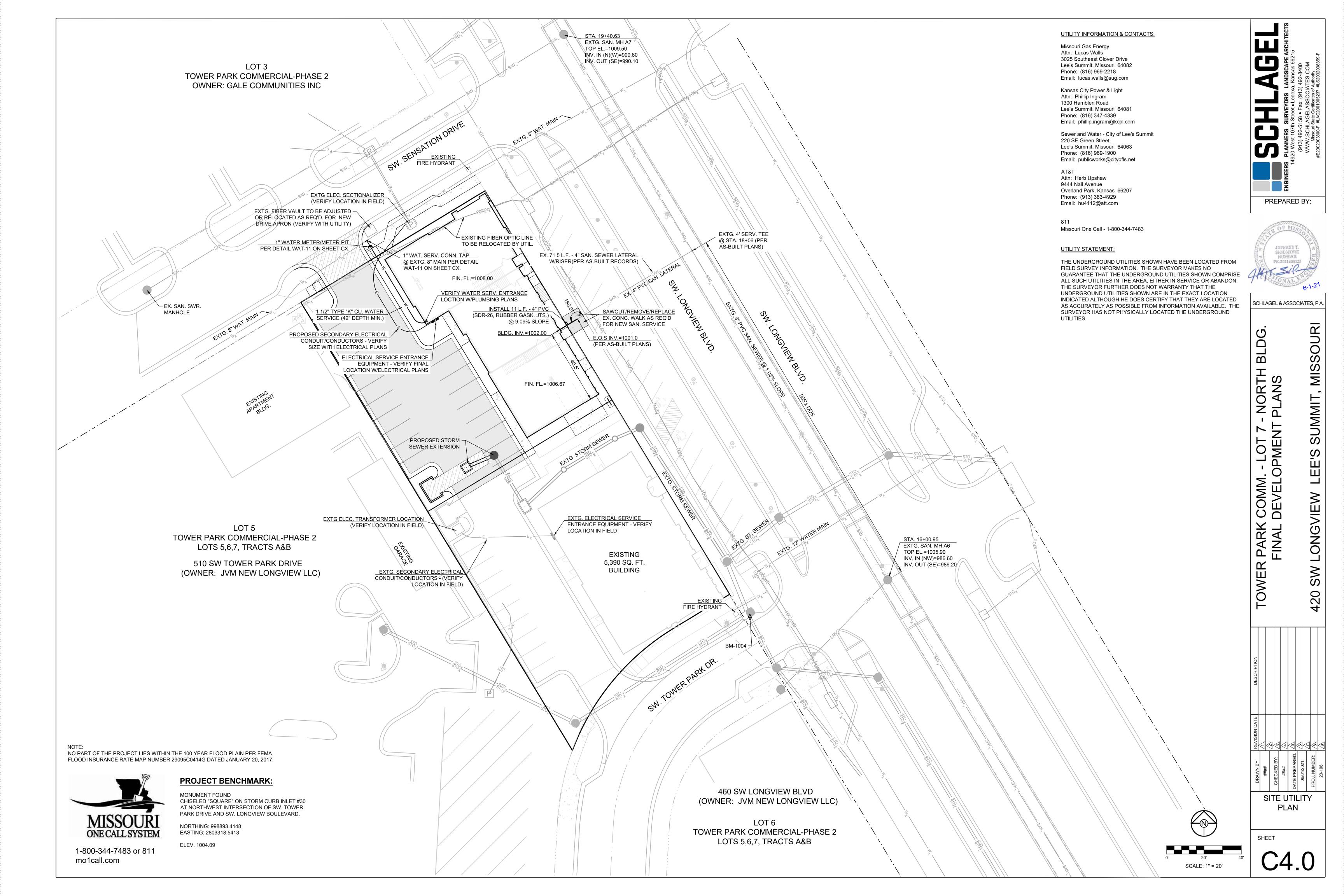
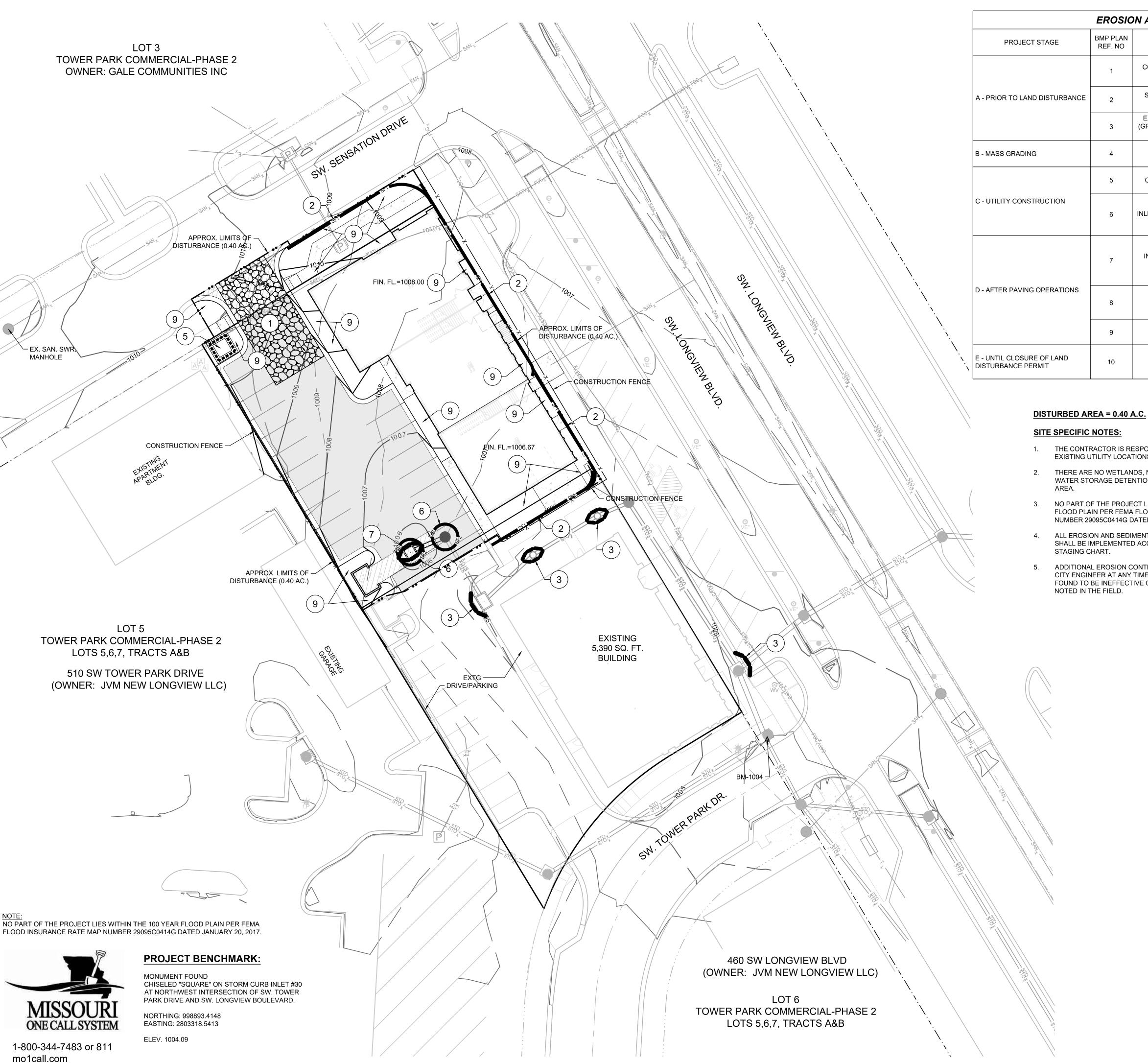
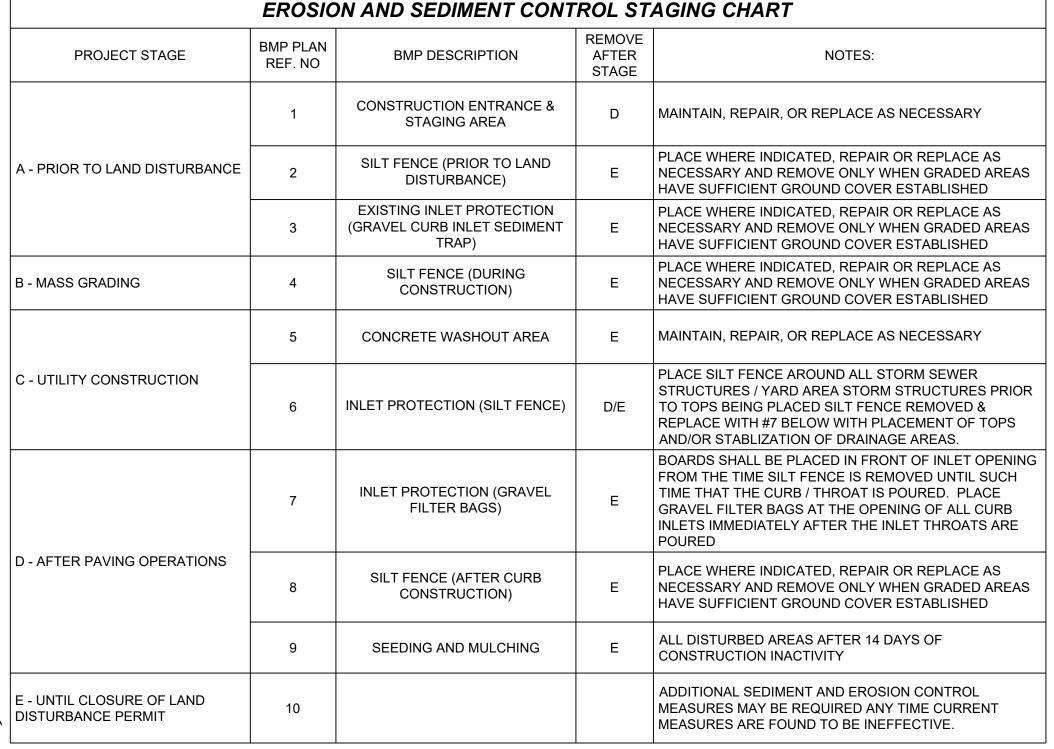


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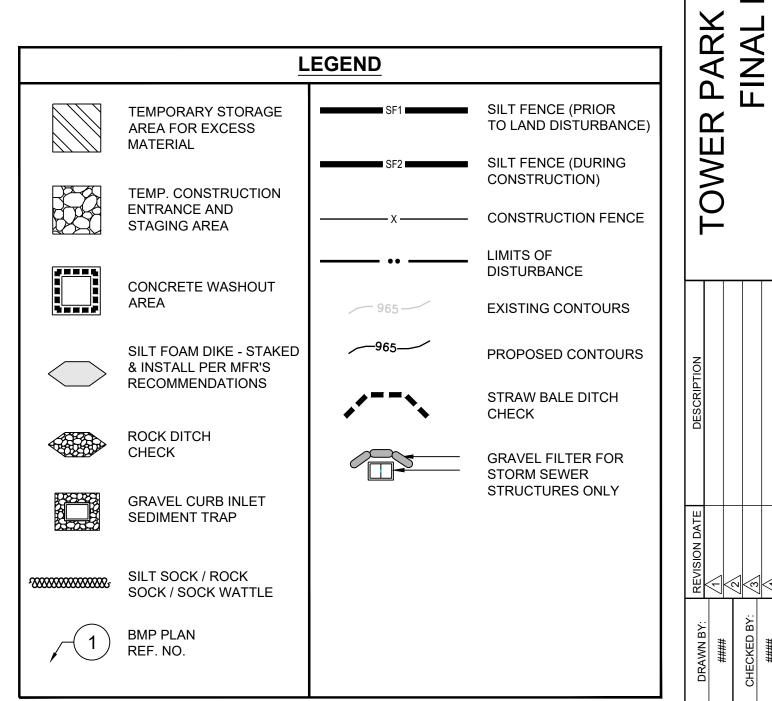


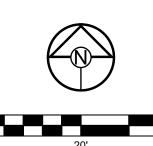






- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT
- NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0414G DATED JANUARY 20, 2017.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP
- ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE
- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPS. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
- ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
- SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING
- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.





SCALE: 1" = 20'

EROSION CONTROL PLAN

SHEET

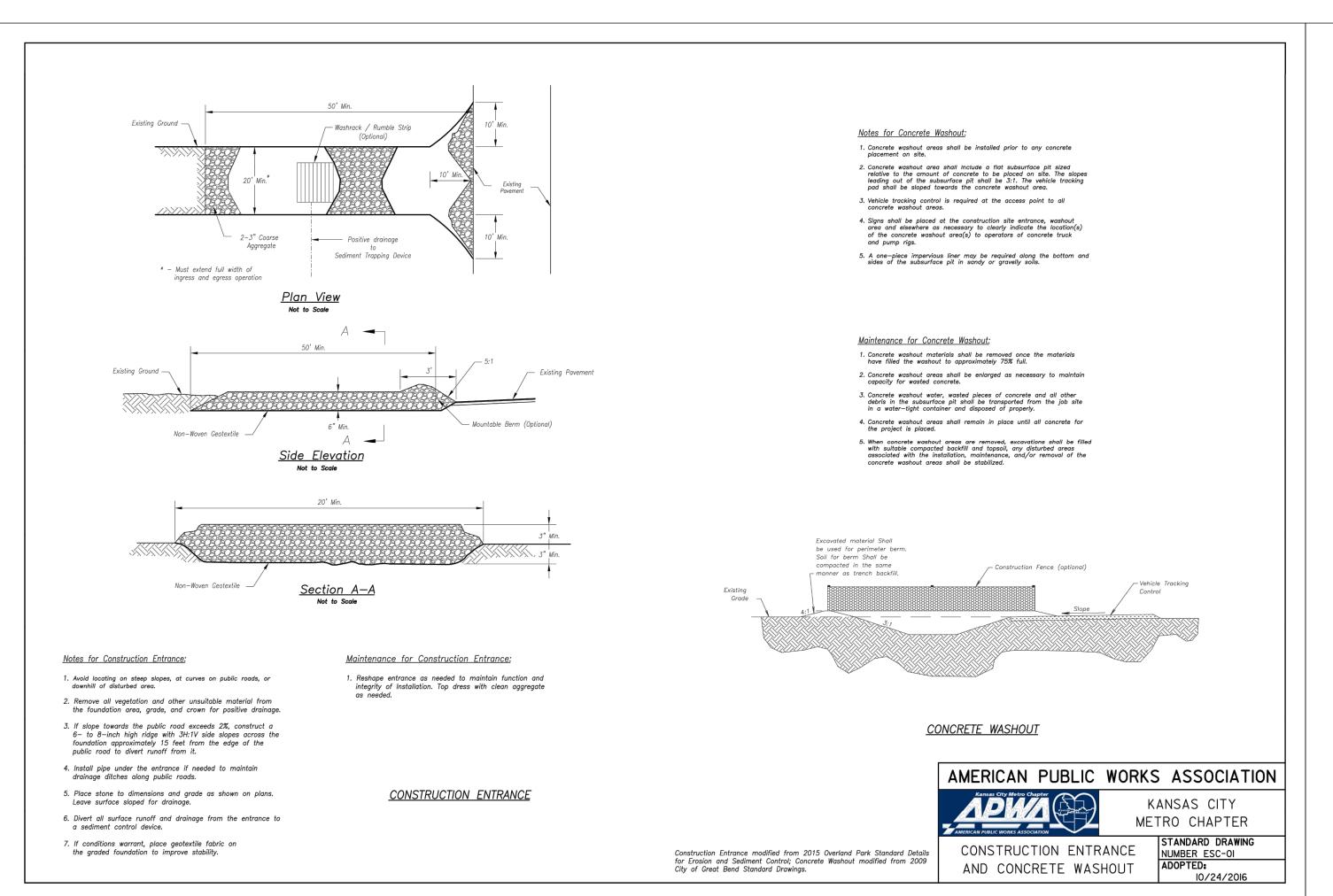
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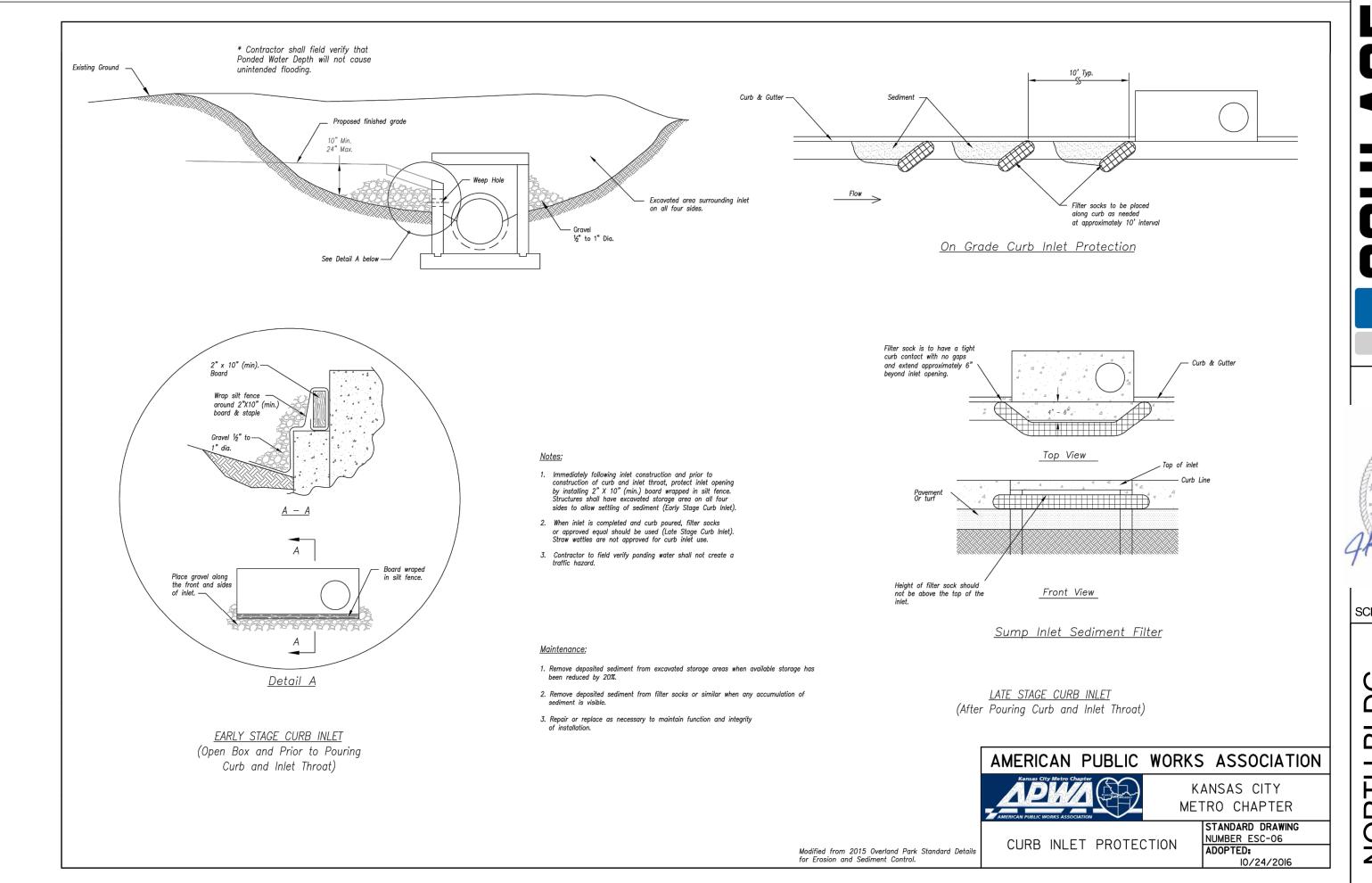
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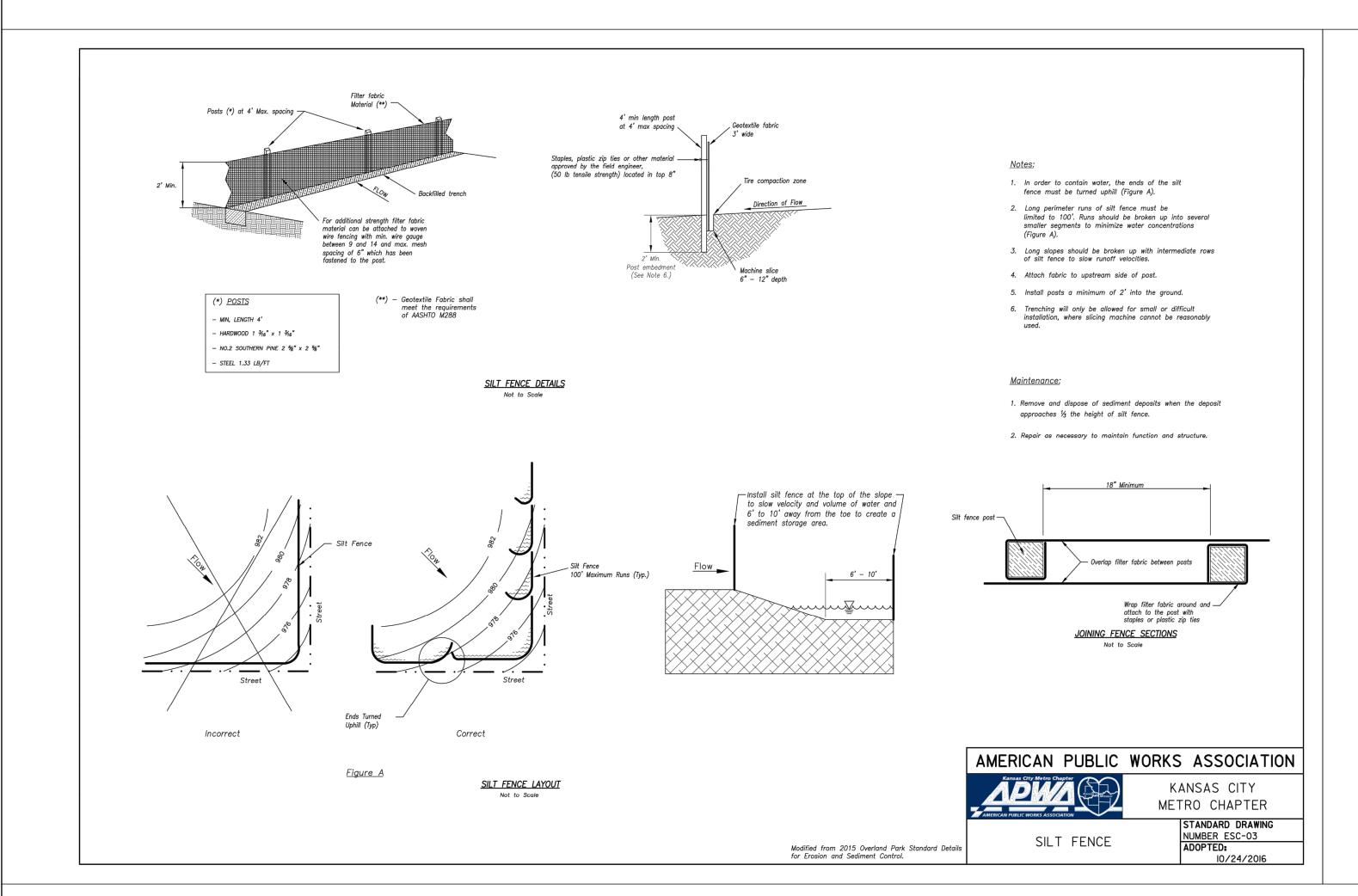
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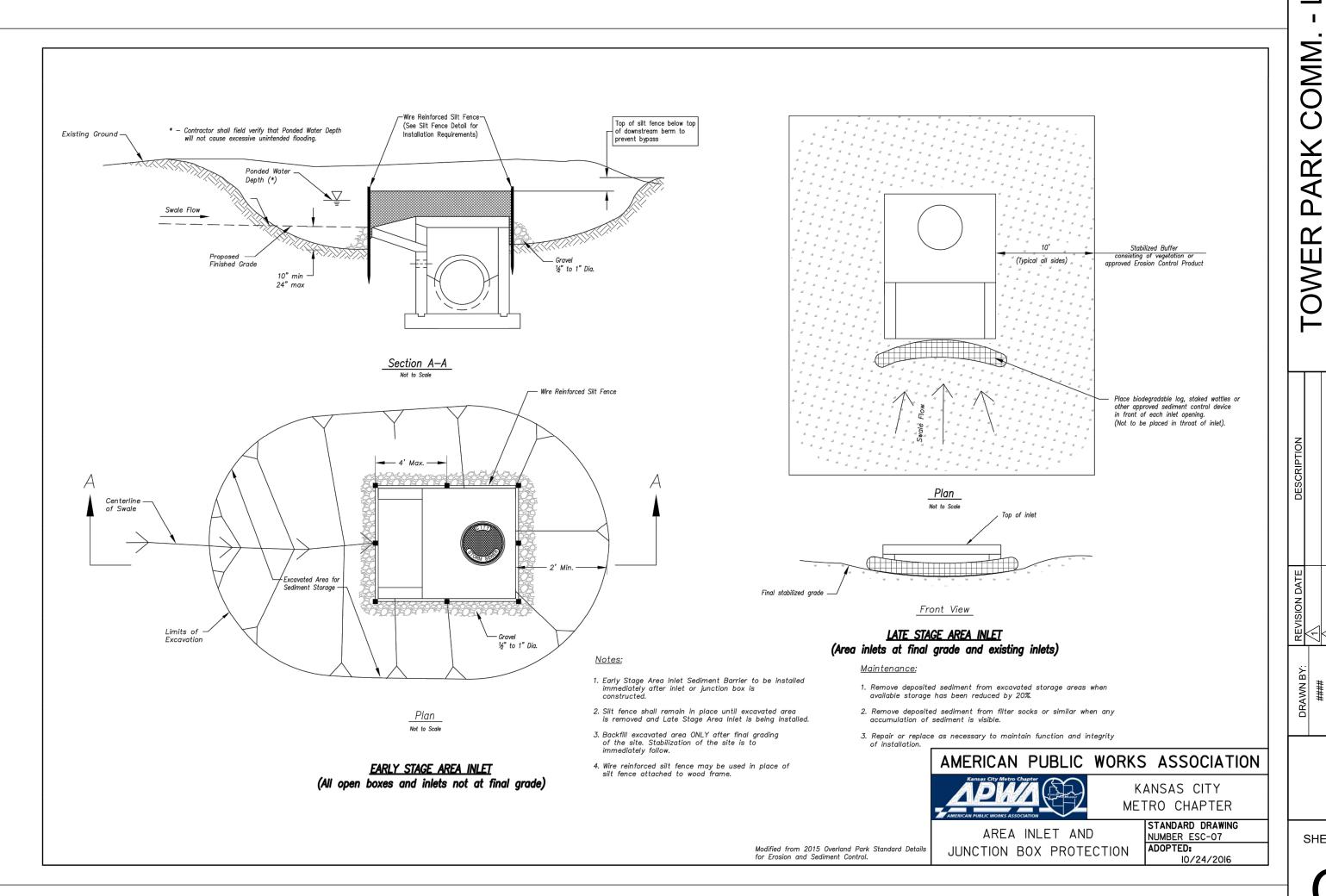
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JEFFREY T.

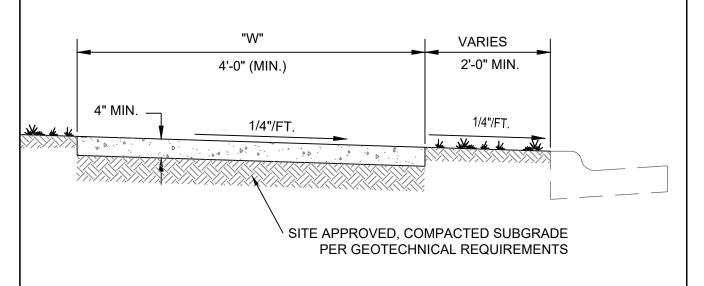
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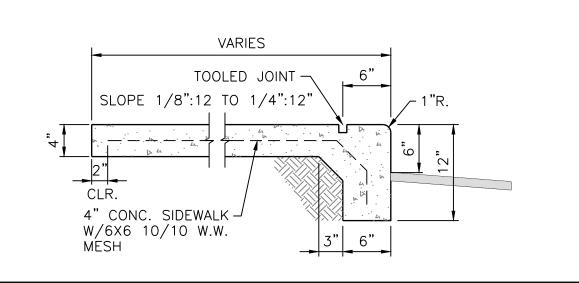
EROSION CONTROL **DETAILS**



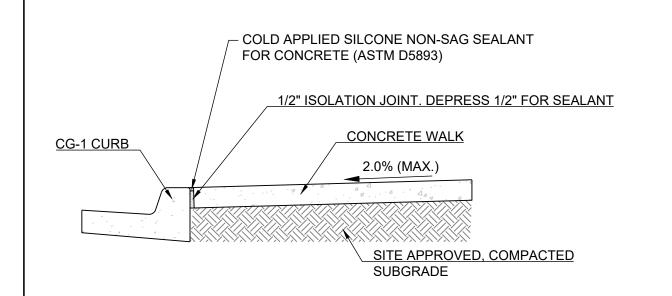
TYPE 1 JOINTS SHALL BE PLACED "W" CENTERS

- 2. TYPE THREE JOINTS SHALL BE PLACED AT 250' CENTERS AND WHERE WALK ABUTS
- EXISTING CONCRETE.
- ALL CONCRETE SHALL BE KCMMB-4K. 4. WHEN UTILITY SERVICE BOXES, METER BOXES, ETC. WHICH MEASURE LESS THAN 1 FT. SQUARE MUST BE PLACED IN THE SIDEWALK, THE UTILITY SERVICE BOXES,
- ETC. SHALL BE NO CLOSER TO ANY EDGE OF THE SIDEWALK PANEL THAN 1 FT. WHEN UTILITY BOXES, METER BOXES, ETC. GREATER THAN 1 FT. IN ANY
- DIMENSION MUST BE PLACED IN THE SIDEWALK, THEY SHALL BE PLACED IN THE
- CORNER OF THE SIDEWALK PANEL AN ISOLATION JOINT SHALL BE PLACED BETWEEN THE CONCRETE AND ANY
- UTILITY BOX, ETC. WHICH IS PLACED IN THE SIDEWALK.
- NO SECTION OF SIDEWALK LESS THEN 12" IN ANY DIMENSION. (HORIZONTAL) AB-3 MAY BE USED AS A LEVELING COURSE. AB-3 MUST BE MOIST (MIN. 5% MOISTURE) AND COMPACTED. DEPTH OF LEVELING COURSE SHALL NOT EXCEED 6". CLEAN ROCK WILL NOT BE ALLOWED.

TYPICAL CONCRETE SIDEWALK DETAILS

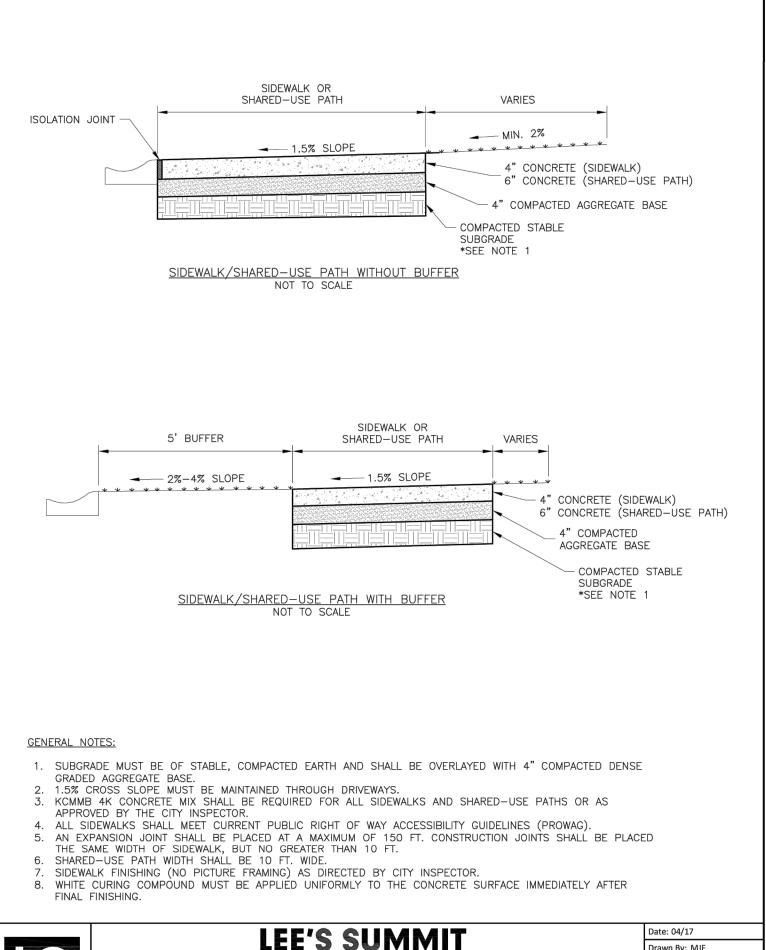


INTEGRAL CURB/SIDEWALK DETAIL

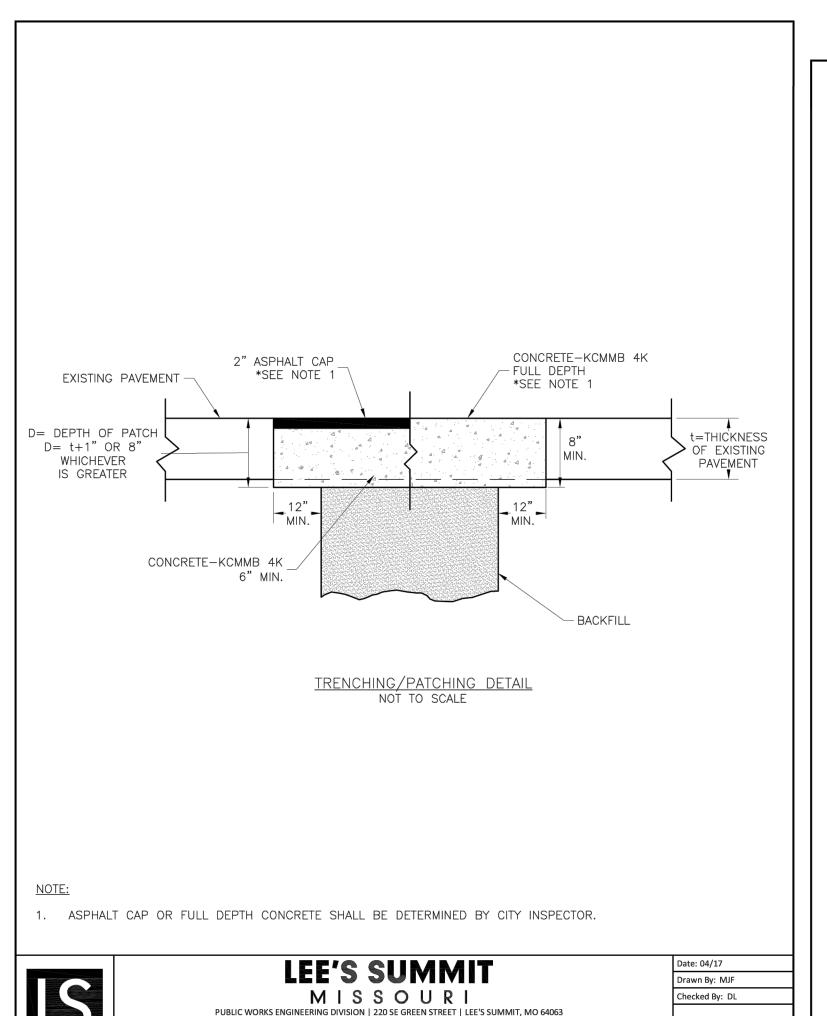


A. Expansion- and Isolation-Joint-Filler Strips: ASTM D994, D1751 or D1752. B. Cold Applied Joint Sealant : Single Component, Nonsag, Silicone Joint Sealant for Concrete: ASTM D5893, Type NS

SIDEWALK @ BACK OF CURB DETAIL

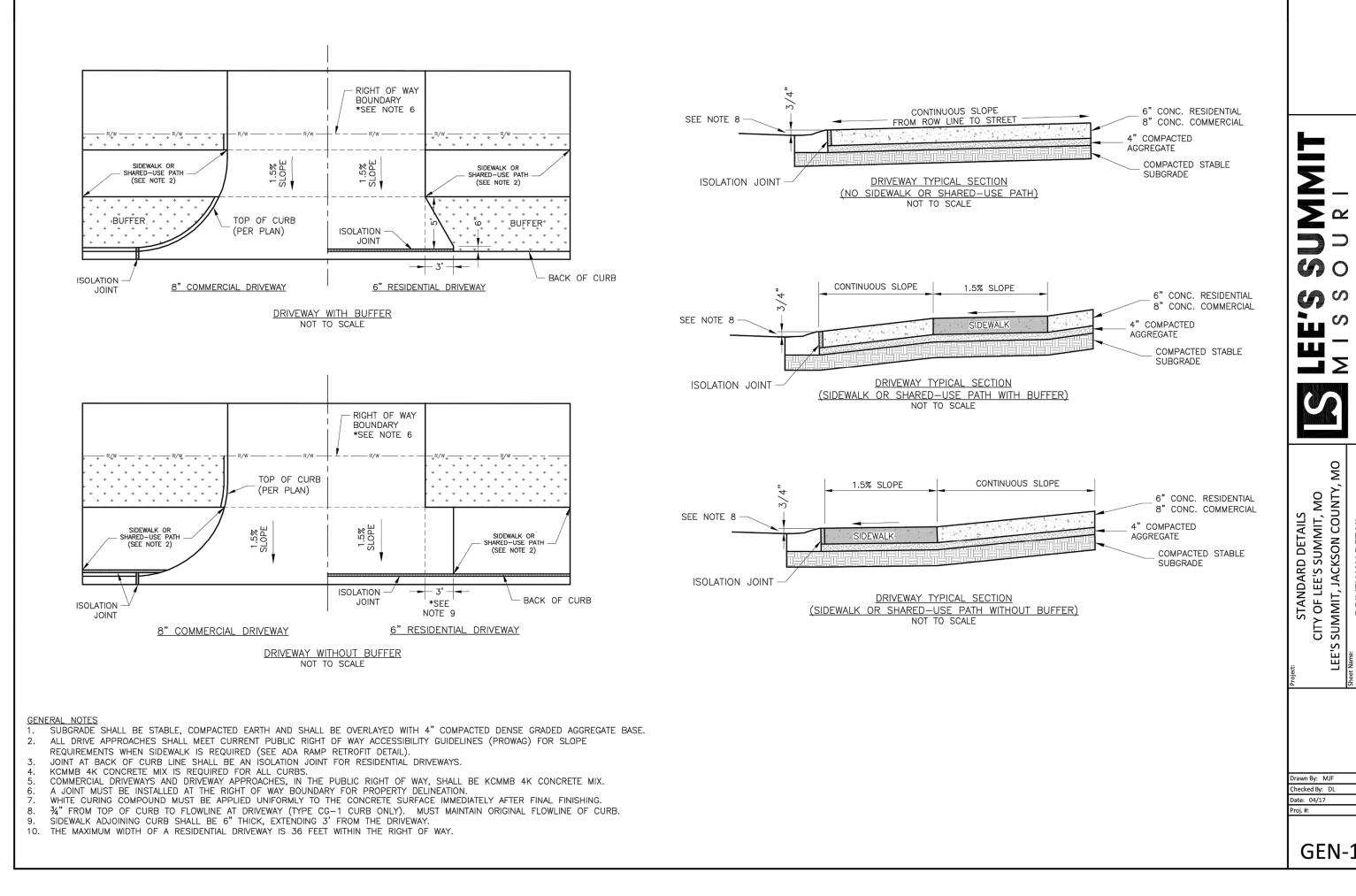




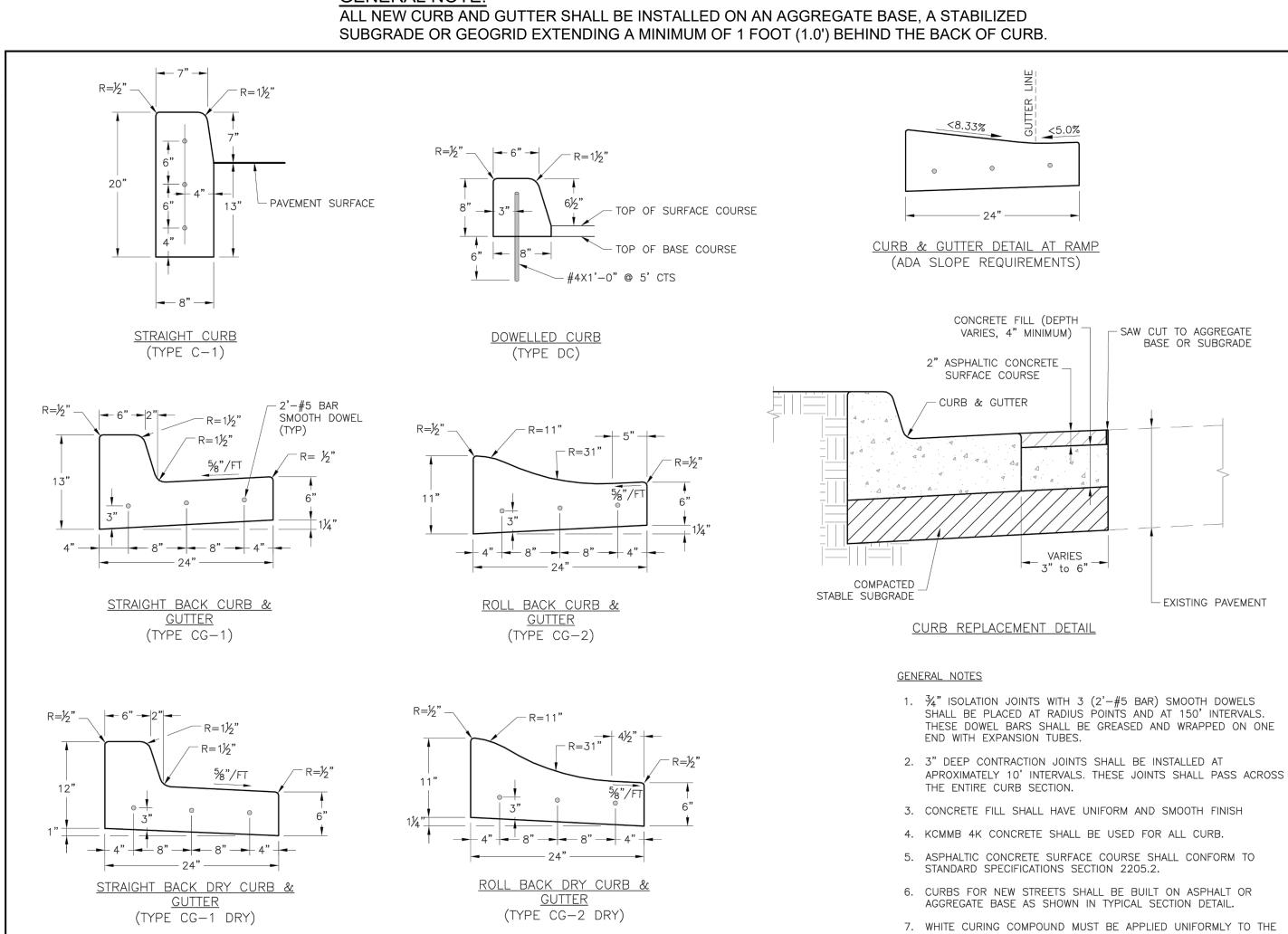


TRENCHING/PATCHING ROADWAYS DETAIL

GEN-5









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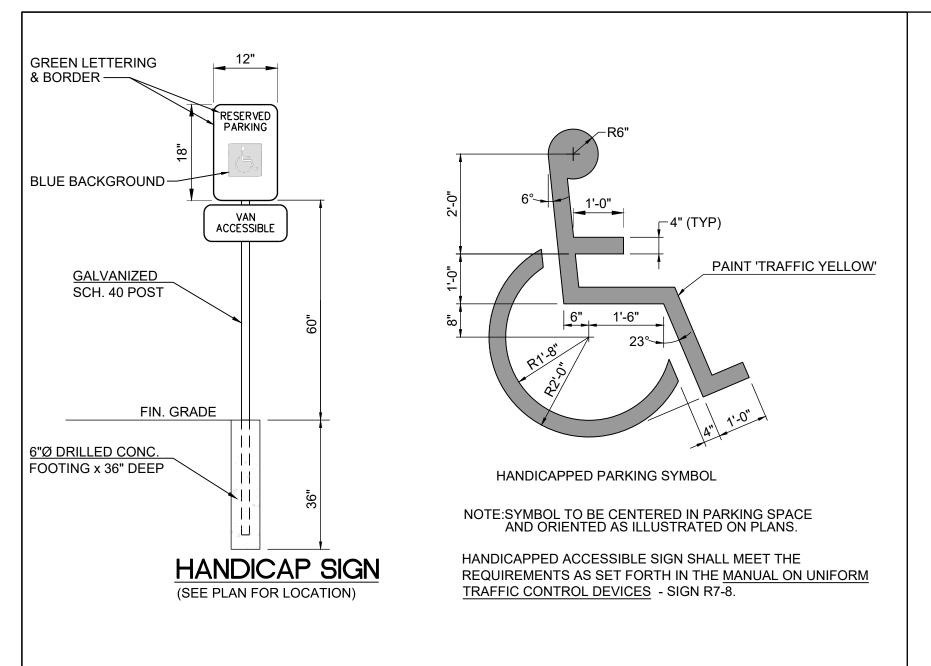
GEN-4

BASE OR SUBGRADE

- EXISTING PAVEMENT

CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

SIDEWALK & **CURB DETAILS**



TYPICAL HANDICAPPED PARKING DETAILS

DRIVE AREAS

1.5" - KCAPWA TYPE 5

4" - KCAPWA TYPE 5

The pavement subgrades be proofrolled and the moisture content and density of the top 12 inches of subgrade

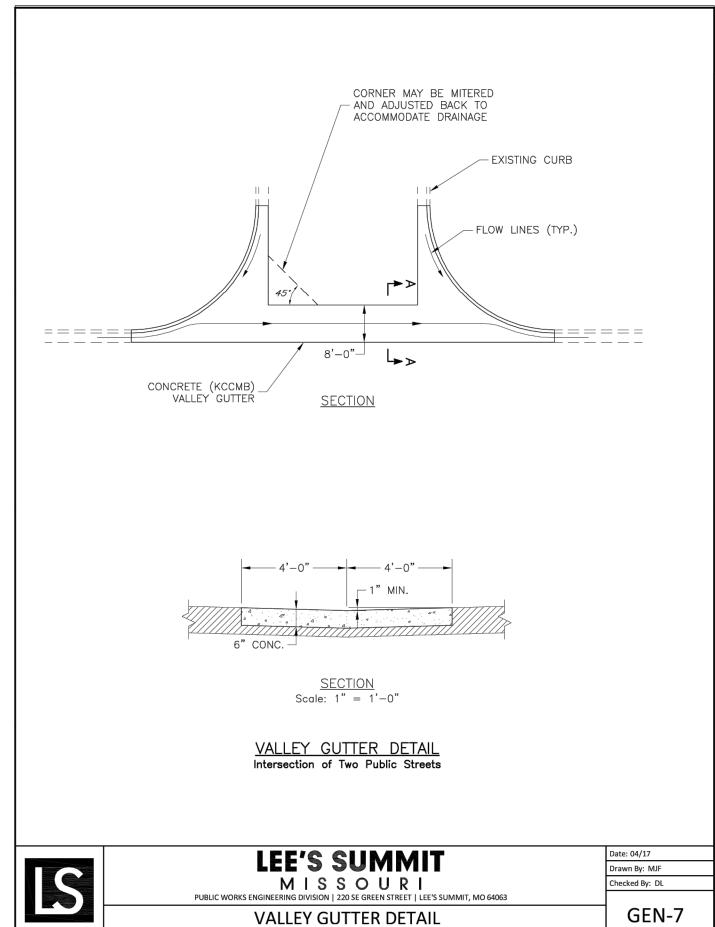
be checked within two days prior to commencement of actual paving operations. If any significant event, such

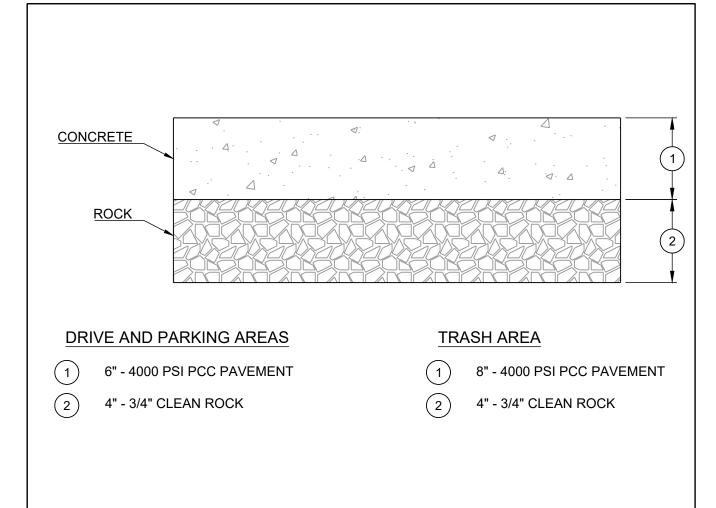
as precipitation, occurs after proofrolling, the subgrade should be reviewed by qualified personnel immediately

prior to placing the pavement. The subgrade should be in its finished form at the time of the final review.

6" - GRANULAR BASE AND

6" FLYASH TREATED SUBGRADE





SECTION B-B

TYPE A & B SIDEWALK RAMP

SECTION C-C

ASPHALT PAVEMENT SECTION

SURFACE COURSE

BASE COURSE

SUB GRADE

PARKING AREAS

1) 1.5" - KCAPWA TYPE 5

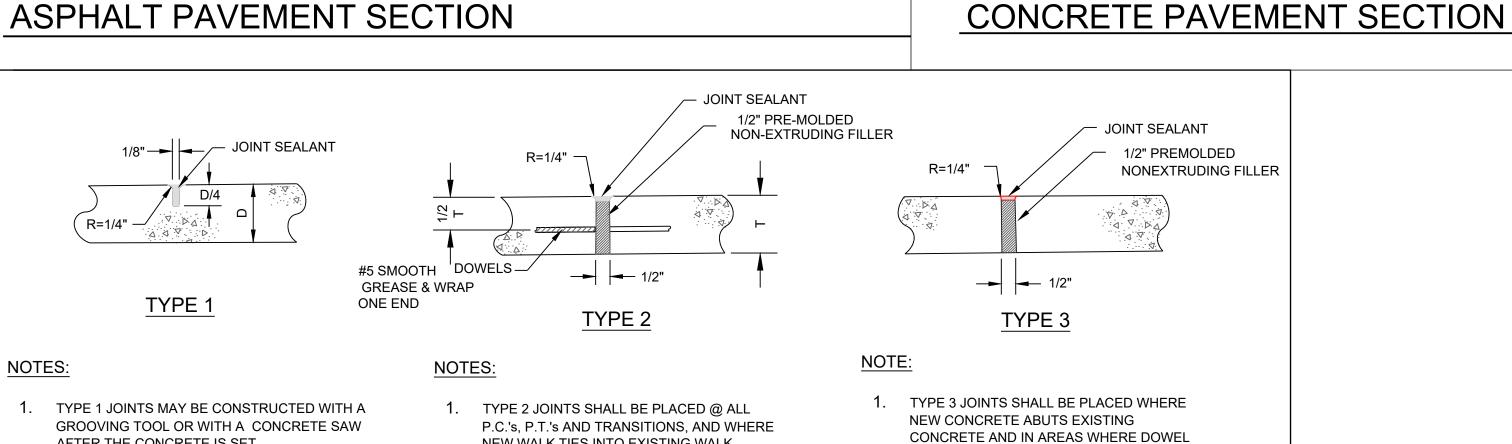
4" - KCAPWA TYPE 5

AFTER THE CONCRETE IS SET.

WIDTH OF THE SIDEWALK.

2. TYPE 1 JOINTS SHALL BE SPACE TO EQUAL THE

6" FLYASH TREATED SUBGRADE



NEW WALK TIES INTO EXISTING WALK.

2. SMOOTH BARS SHALL BE 24" LONG.

HEAVY DUTY DRIVE AREAS

1.5" - KCAPWA TYPE 5

5" - KCAPWA TYPE 5

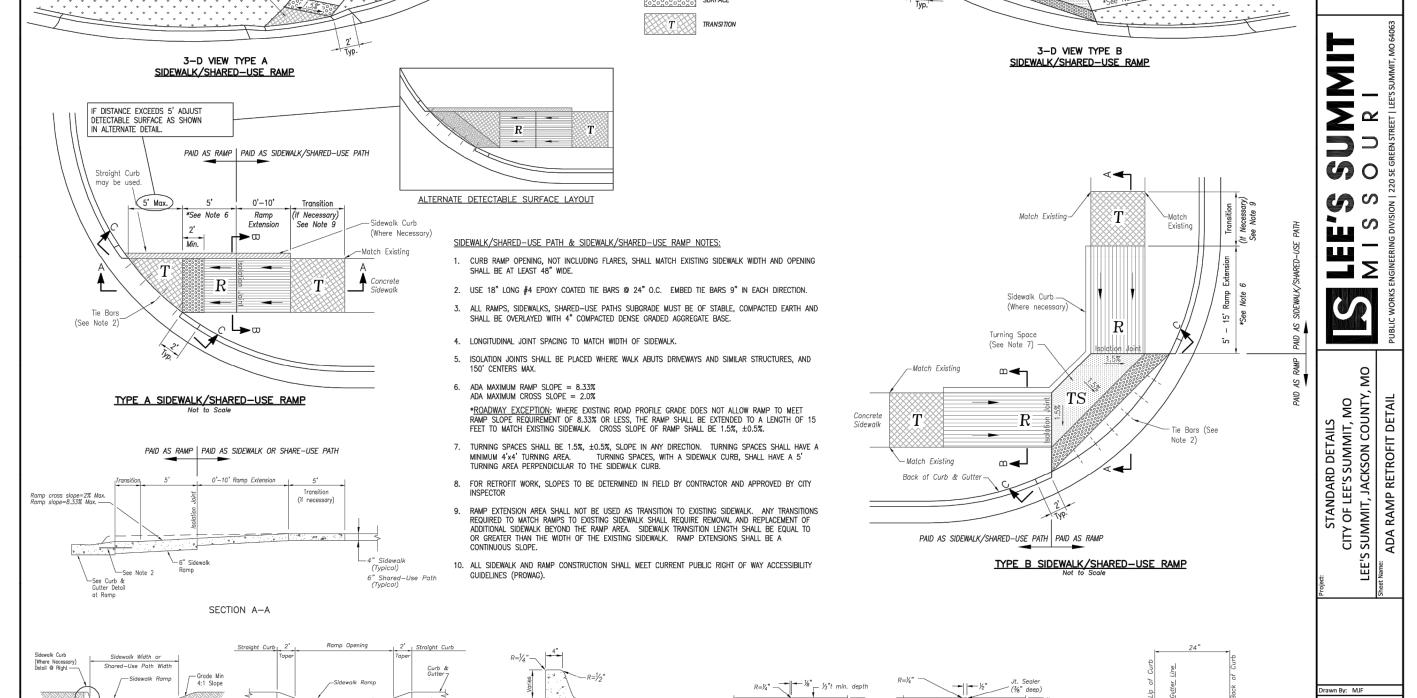
6" - GRANULAR BASE AND

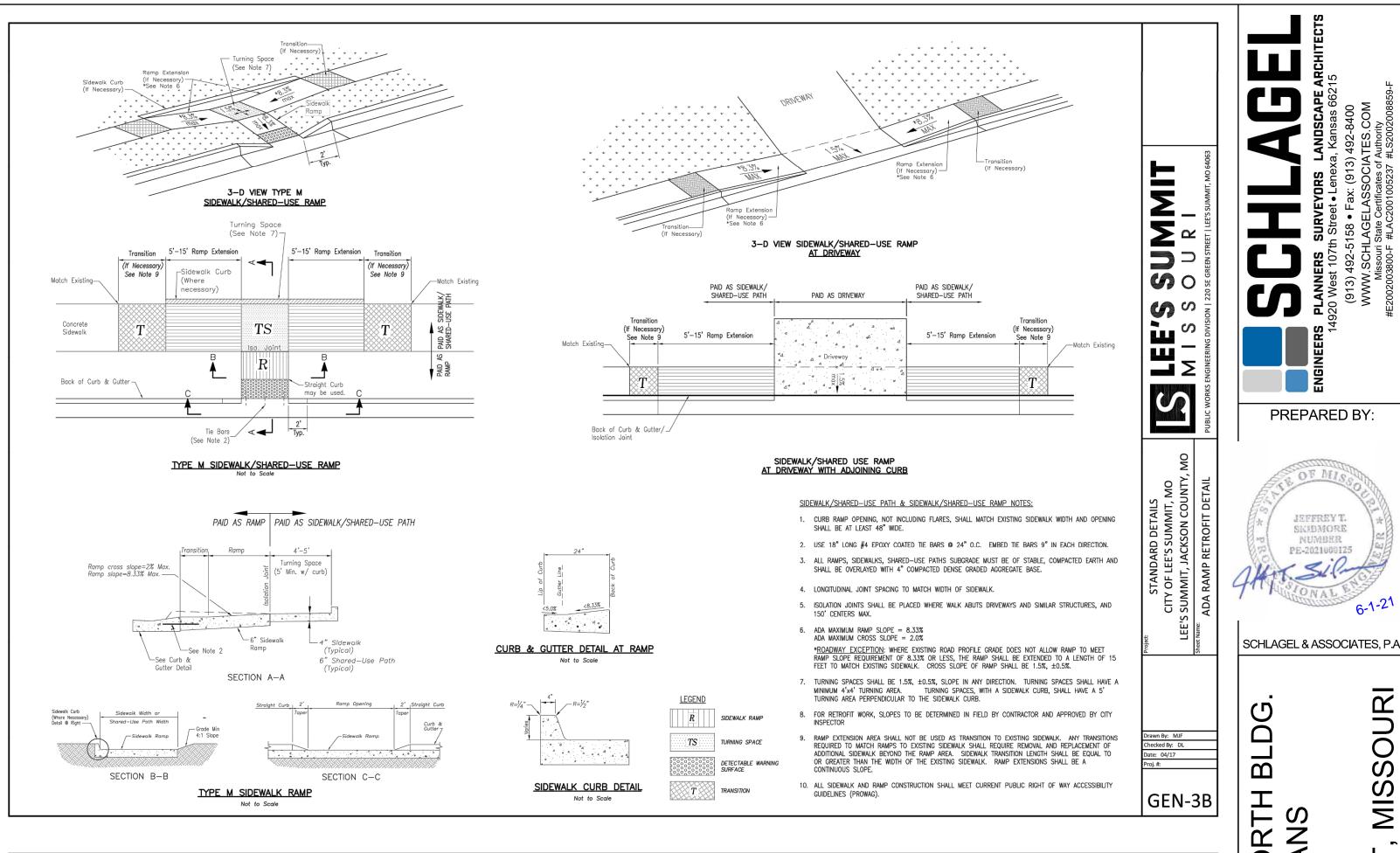
6" - FLYASH TREATED SUBGRADE

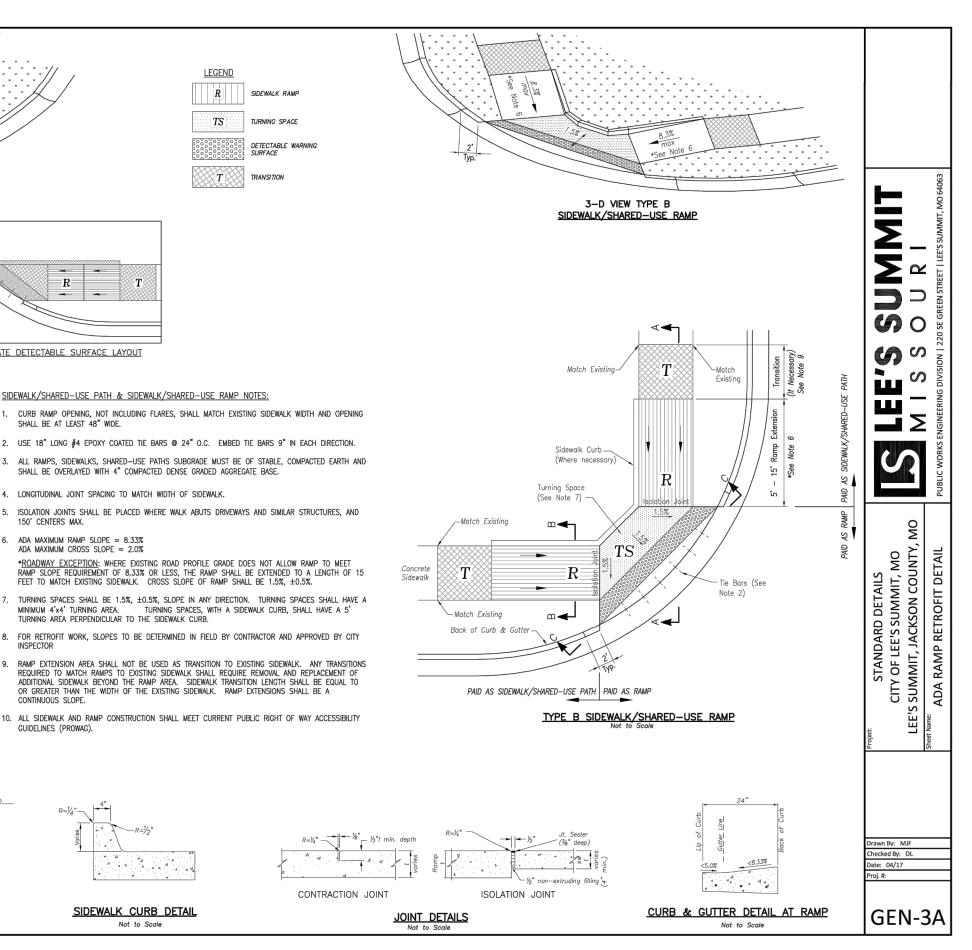
BARS ARE NOT REQUIRED BY THE

ENGINEER.

TYPICAL CONCRETE PAVEMENT - JOINT DETAILS





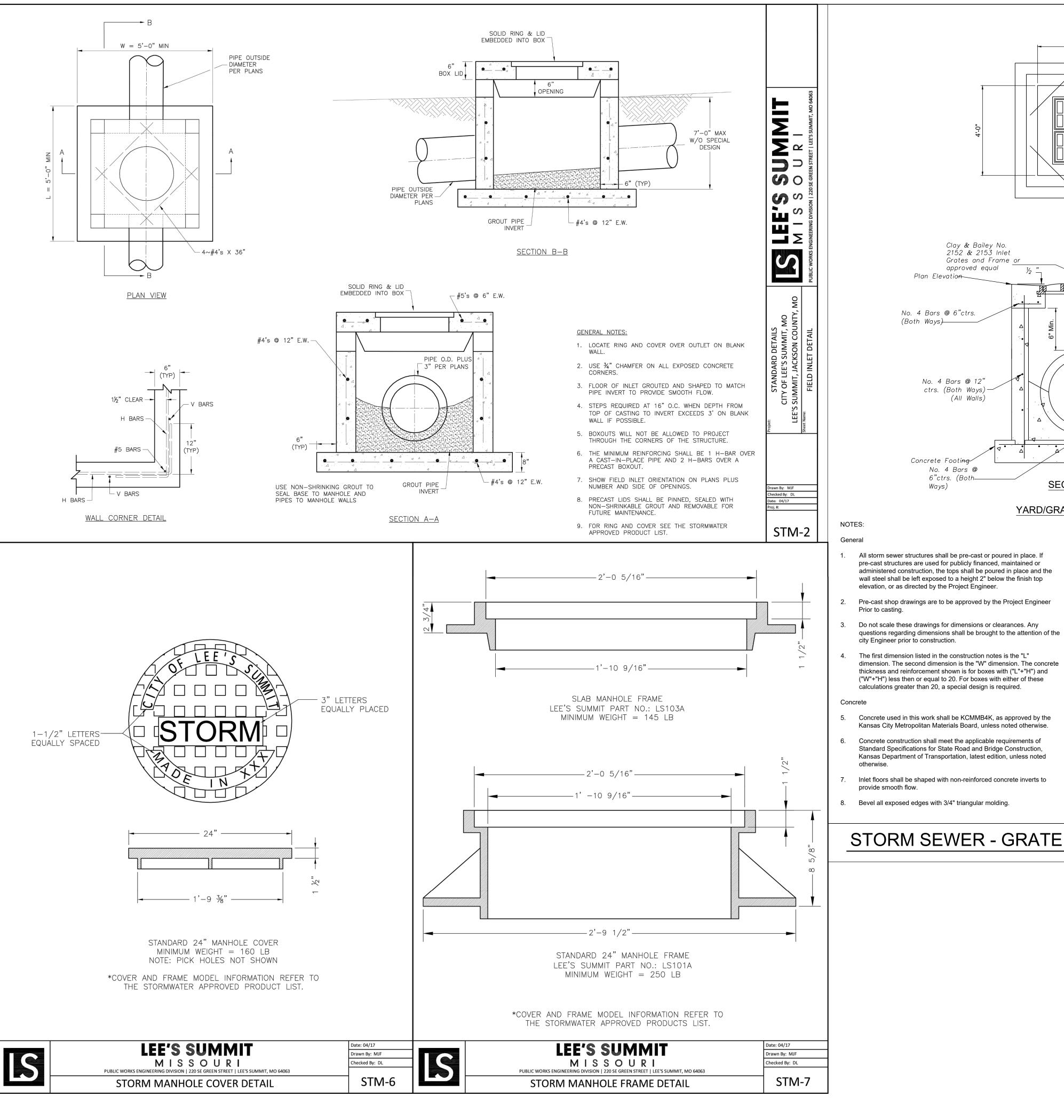


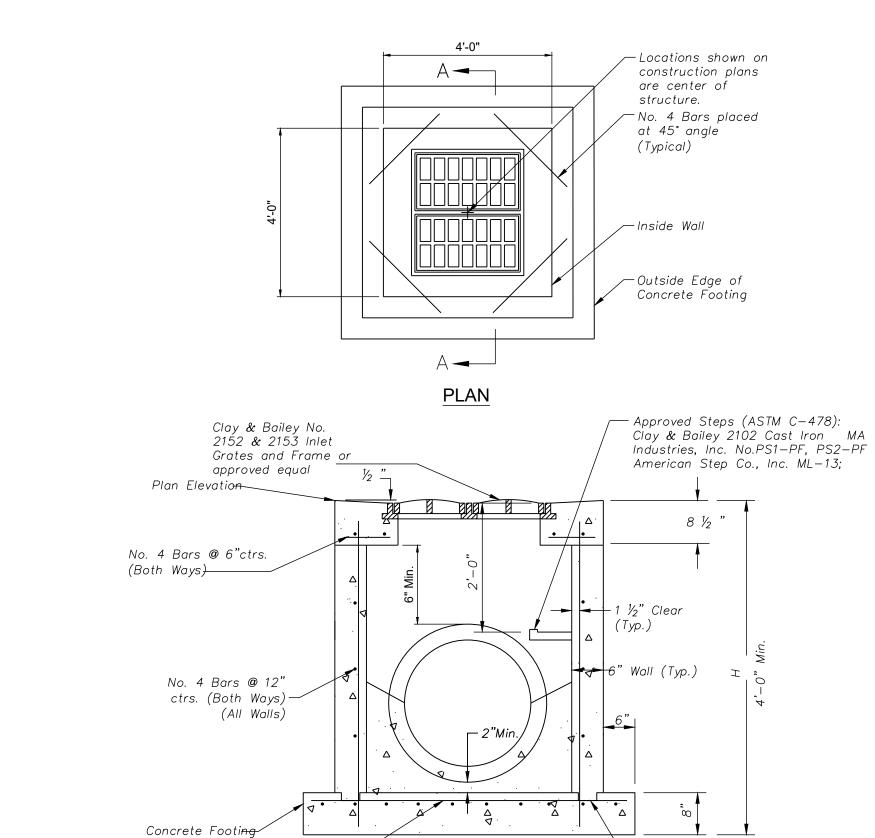


COMM. -PARK FINAL

PAVEMENT

DETAILS





YARD/GRATE INLET DETAILS

Reinforcing Steel

SECTION A-A

No. 4 Bars @

6"ctrs. (Both_

Ways)

- 9. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
- 10. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.

_3 ½ " X 1 ½ "

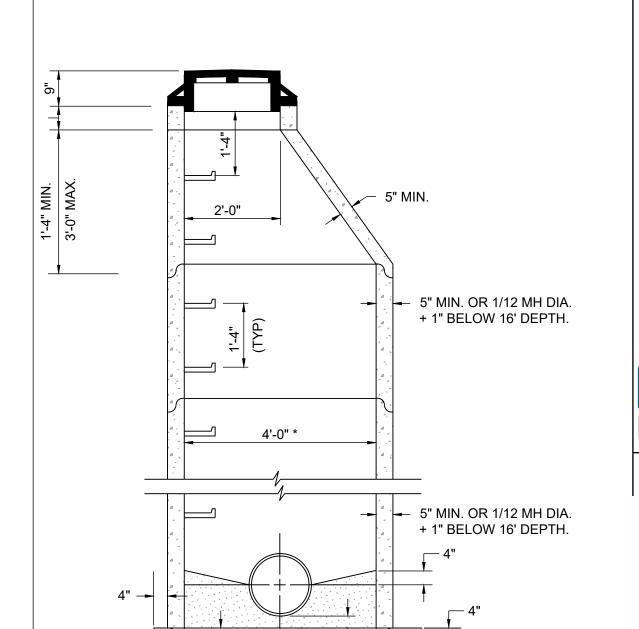
Keyway all sides

- 11. All lap splices not shown shall be a minimum of 40 bar diameters in
- 12. All reinforcing steel shall be supported on fabricated steel bar supports
- 13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or
- partially hardened concrete will not be acceptable.

Construction

@ 3'-0" maximum spacing.

- 14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
- 15. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
- 16. Material selection and compaction requirements for backfill around structures shall be as specified in the project manual.



3" MIN. FROM DOWNSTREAM INVERT SCHLAGEL & ASSOCIATES, P.A.

GENERAL NOTES:

2" MIN.

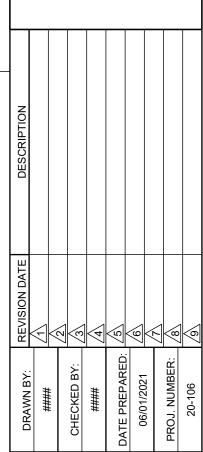
All manhole rings shall be set in a minimum of two (2) rows of 3/4 to 1 inch pre-formed bitumastic joint sealer.

* UNLESS OTHERWISE NOTED ON PLANS

- All manhole rings to be placed in pavement or in areas to be subsequently paved shall have "Machined Horizontal Bearing Surfaces" and shall comply with Class #25 as established in ASTM A-48.
- The inside diameter of the manhole shall be 4'-0" for pipe diameters from 8" thru 24" and shall be 5'-0" for pipe diameters from 27" thru 36".
- All manhole bases (pre-cast or poured-in-place) shall have No. 4 reinforcing bars placed on 12" centers both ways.
- All standard manhole rings and covers to be Deeter 1315-ics, Neenah NF-15360009/B (frame) and NF-15360010/B (cover), or approved equal.
- All manhole rings and covers shown in plans to be "boltdown" to be Clay & Bailey Manufacturing Co. No. 20140R, Neenah R-1915-F2 or approved equal. An extra payment for furnishing "bolt-down" ring and cover as shown in plans will not be made, but shall be considered as subsidiary to the item, "Standard Manhole -6".
- Standard cast iron manhole steps to be Clay & Bailey Manufacturing Co. No. 2102 or approved equal. Steel core, plastic coated steps may be used (M.A. Ind., Inc. No. PS1-PF, PS2-PF, or approved equal).
- Maximum grade adjustment allowable is 12". Minimum allowable vertical thickness for precast concrete grade adjustment ring is 2". Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board.
- **GENERAL NOTES FOR PRE-CAST MANHOLES**
 - Reinforcement in all sections shall equal or exceed A.S.T.M. C-478 specifications. 2. Mastic material to be used at all sections joints. O-Rings may be used for joints below the cone section, but the cone section itself shall not have O-ring
 - 3. Approved gasket and concrete mortar to be used around pipe in knock-outs.

STORM SEWER - GRATE INLET DETAIL

STORM SEWER - MANHOLE DTL.



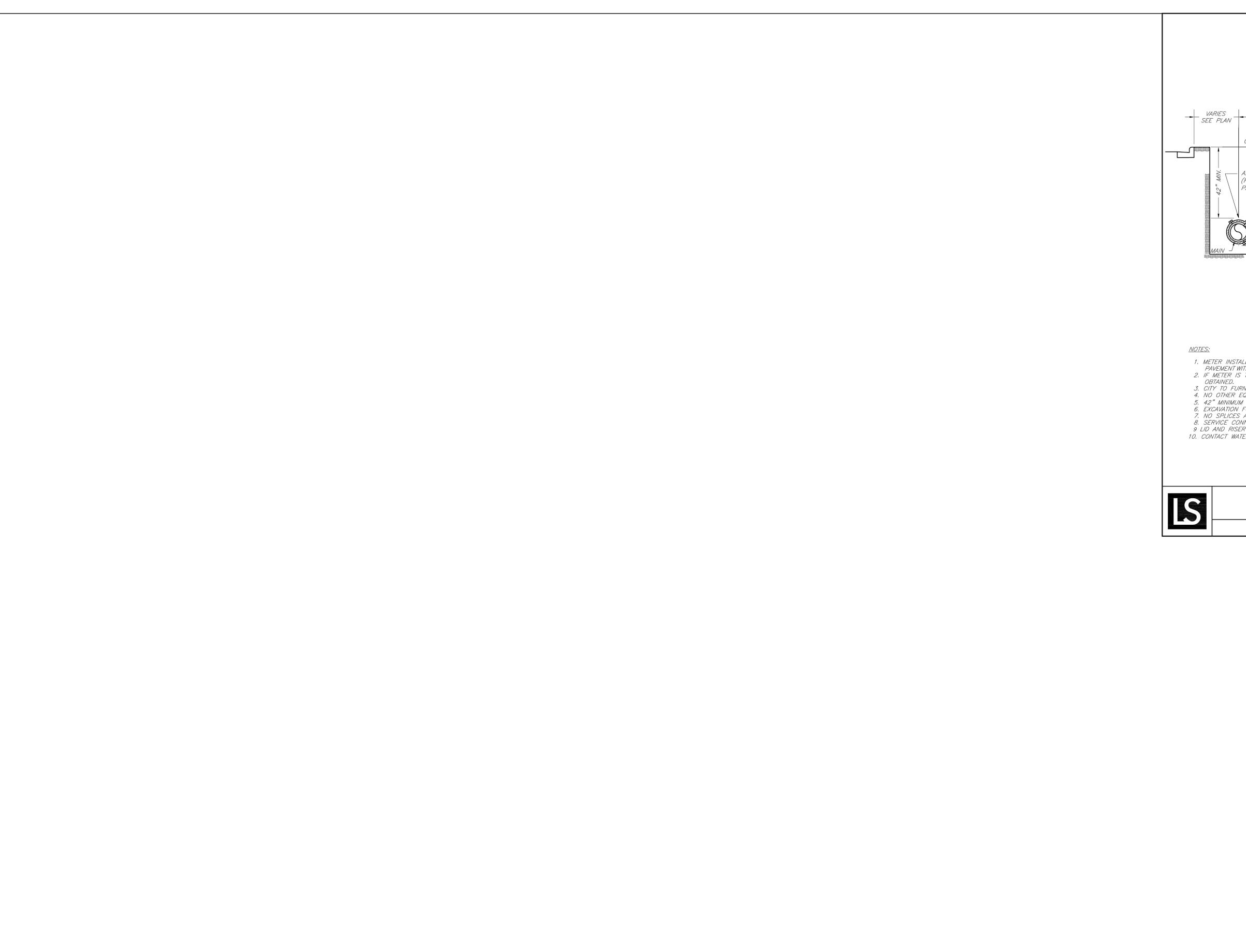
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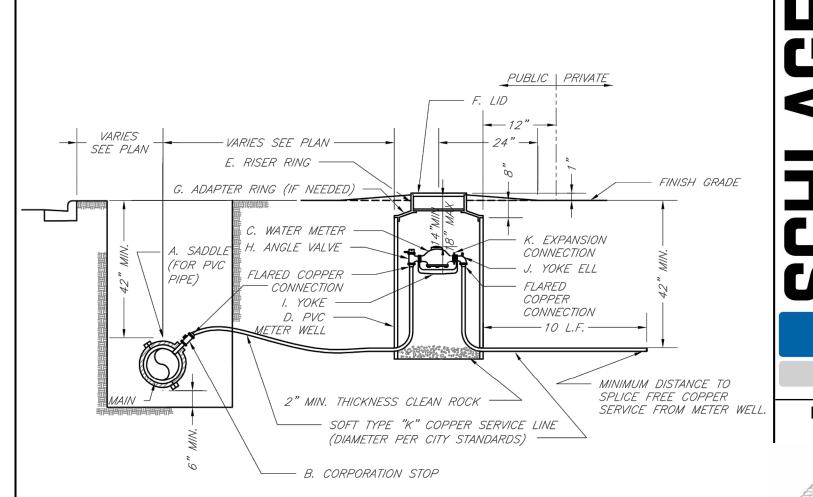
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PREPARED BY:

STORM SEWER **DETAILS**





<u>TYPICAL METER INSTALLATION — 2" AND SMALLER</u> NOT TO SCALE

- 1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
- 2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE
- 3. CITY TO FURNISH ITEMS A-K. 4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
- 5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
 6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
 7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
- 8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
- 9 LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL. 10. CONTACT WATER UTILITIES, 816-969-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LEE'S SUMMIT Checked By: DL MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063 SERVICE CONNECTION/METER WELL

PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

BLD - NORTH PLANS

420 SW LONGVIEW LEI

UTILITY DETAILS

