

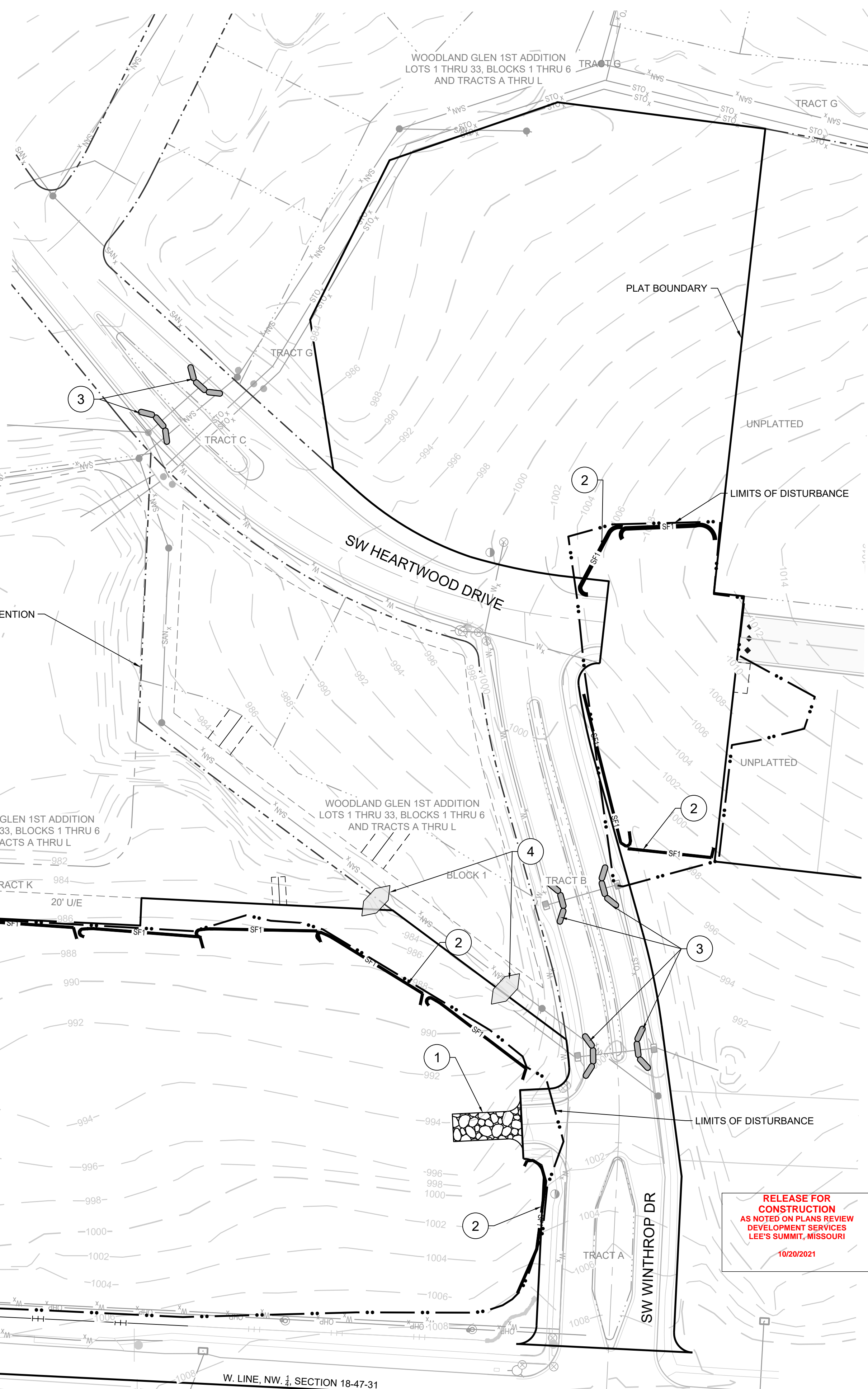
| LEGEND | |
|--------|---|
| | TEMPORARY STORAGE AREA FOR EXCESS MATERIAL |
| | TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA |
| | CONCRETE WASHOUT AREA |
| | SILT FOAM DIKE OR STRAW WATTLE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS |
| | ROCK DITCH CHECK |
| | STRAW WATTLE OR COIL LOG STAKED & INSTALL PER MFR'S RECOMMENDATIONS |
| | SILT FENCE (PRIOR TO LAND DISTURBANCE) |
| | SILT FENCE (DURING CONSTRUCTION) |
| | SILT SOCK / ROCK SOCK / SOCK WATTLE |
| | LIMITS OF DISTURBANCE |
| | EXISTING CONTOURS |
| | PROPOSED CONTOURS |
| | GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY |
| | BMP PLAN REF. NO. |

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SITE SPECIFIC NOTES:

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RELEASE FOR CONSTRUCTION
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 LEE'S SUMMIT, MISSOURI
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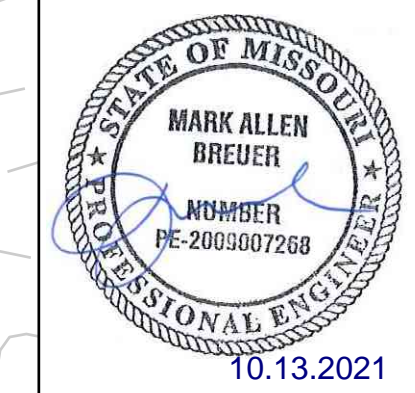
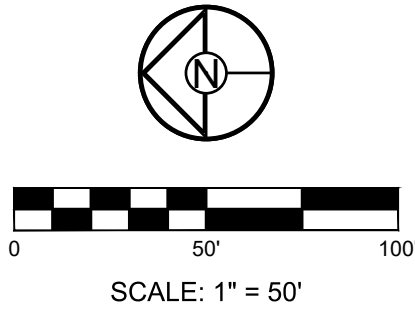
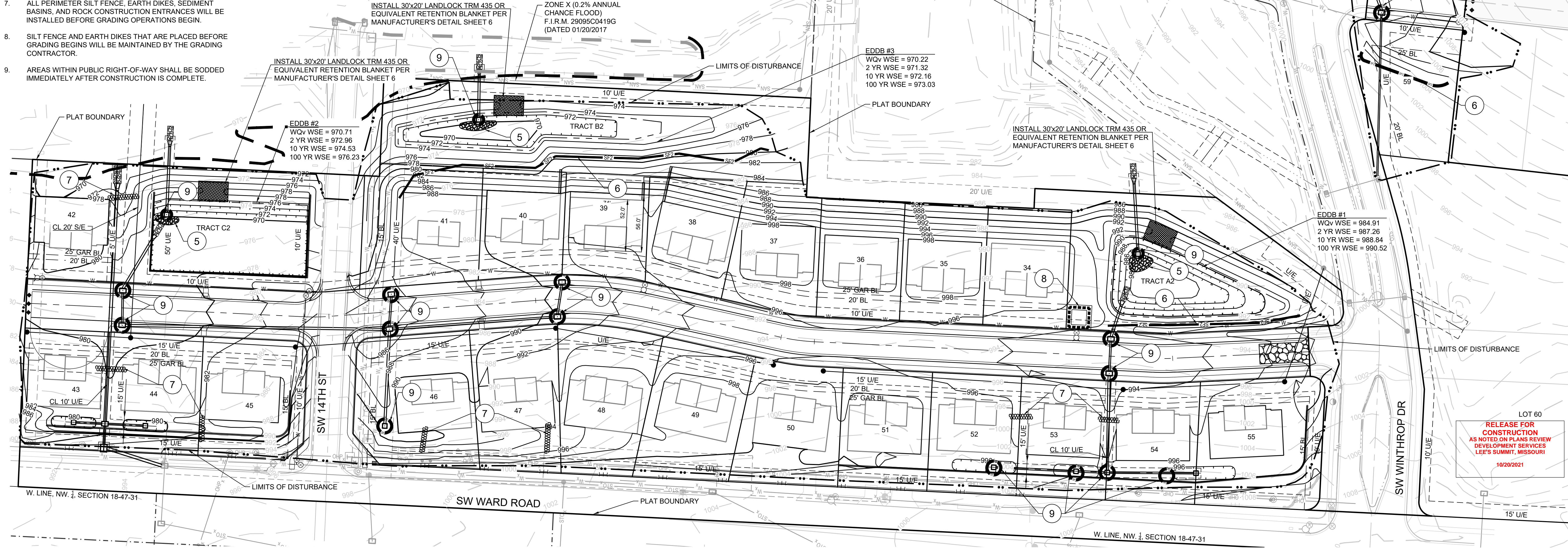
TOTAL DRAINAGE AREA TO TEMPORARY SEDIMENT BASIN
 EDDB#1 AREA = 2.59 AC.
 EDDB#2 AREA = 4.99 AC.
 EDDB#3 AREA = 1.26 AC.

SEDIMENT VOLUME REQUIRED (3600 CU. FT./AC.)
 EDDB#1 2.59 AC. * 3600 CU.FT./AC. = 9,324 CU.FT.
 EDDB#2 4.99 AC. * 3600 CU.FT./AC. = 17,964 CU.FT.
 EDDB#3 1.26 AC. * 3600 CU.FT./AC. = 4,536 CU.FT.

SEDIMENT VOLUME PROVIDED
 EDDB#1 VOLUME @ 986.90 = 9,537 CU.FT.
 EDDB#2 VOLUME @ 972.10 = 18,904 CU.FT.
 EDDB#3 VOLUME @ 971.70 = 5,225 CU.FT.

INSTALL 30"x20" LANDLOCK TRM 435 OR EQUIVALENT RETENTION BLANKET PER MANUFACTURER'S DETAIL SHEET 6

ZONE X (0.2% ANNUAL CHANCE FLOOD)
 F.I.R.M. 29095C0419G
 (DATED 01/20/2017)



WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

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ECP
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SHEET
3

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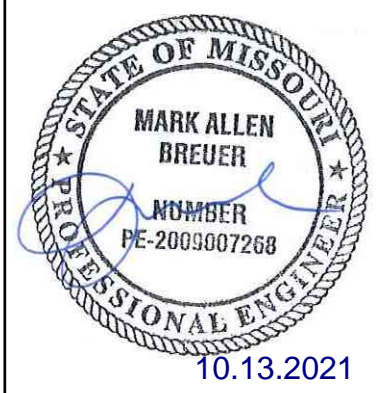
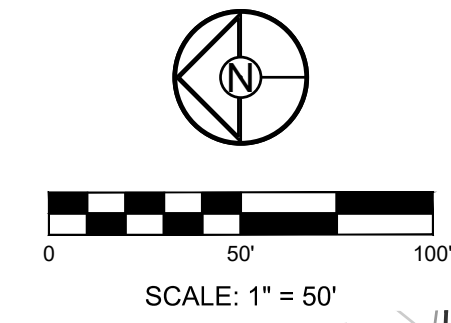
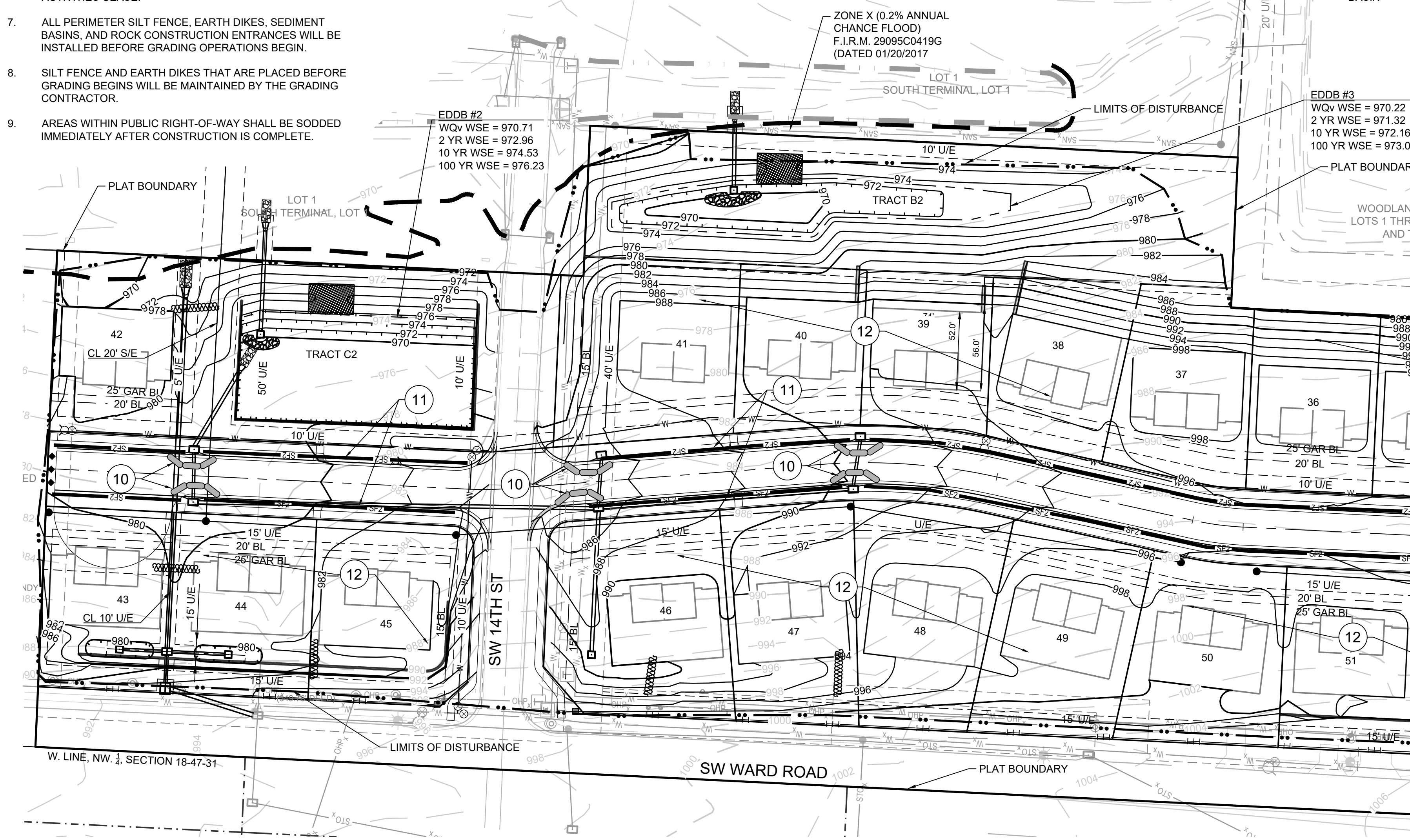
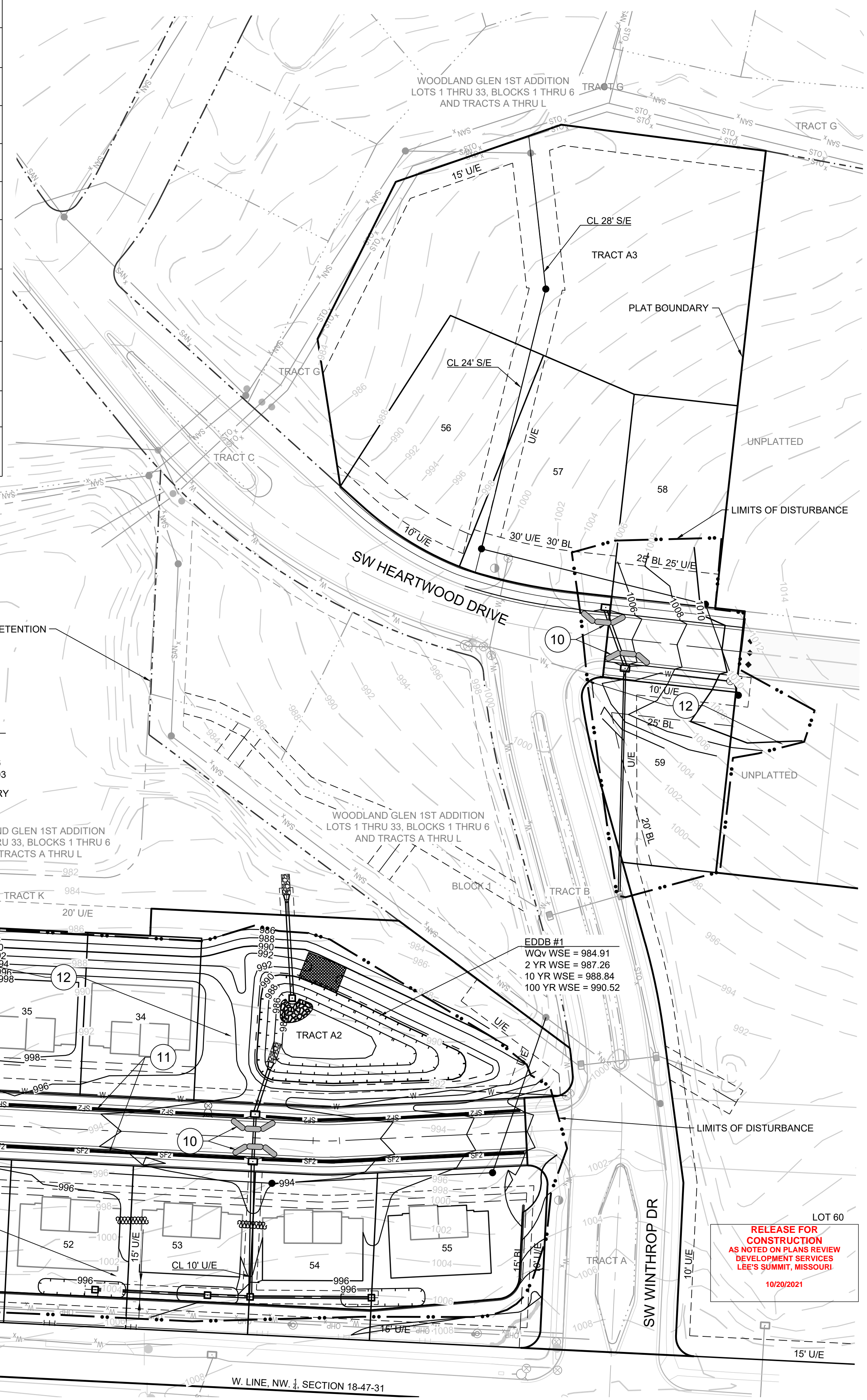
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ECP FINAL
 STABILIZATION

SHEET

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PREPARED BY:



10.13.2021

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EROSION CONTROL DETAILS

SHEET

Plan View
Not to Scale

Side Elevation
Not to Scale

Section A-A
Not to Scale

Notes for Concrete Washout:

- Concrete washout areas shall be installed prior to any concrete placement on site.
- Concrete washout areas shall include a flat substrate pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the substrate pit shall be 3:1. The vehicle tracking pit shall be sloped towards the concrete washout area.
- Vehicle tracking control is required at the access point to all concrete washout areas.
- Slope shall be placed at the construction site entrance, washout area and elsewhere as necessary to steady outside the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
- A non-woven geotextile liner may be installed along the bottom and sides of the substrate pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

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

Notes for Construction Entrance:

- Avoid locating on steep slopes, at curves on public roads, or downhills of disturbed areas.
- Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
- If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
- Install pipe under the entrance if needed to maintain drainage ditches along public roads.
- Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
- Divert all surface runoff and drainage from the entrance to a sediment control device.
- If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

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

CONCRETE WASHOUT

Excavated material shall be used for perimeter berm. Soil for berm shall be compacted in the same manner as trench backfill.

CONSTRUCTION ENTRANCE

AMERICAN PUBLIC WORKS ASSOCIATION

APWA KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

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

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

Detail A

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

* Contractor shall field verify that Ponded Water Depth will not cause unintended flooding.

On Grade Curb Inlet Protection

Filter socks to be placed along curb as needed at approximately 10' interval

Sump Inlet Sediment Filter

Filter sock to be flow a tight curb contact with no gaps and extend approximately 6" beyond inlet opening.

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

Notes:

- 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).
- When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Show notices are not approved for curb inlet.
- Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

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

AMERICAN PUBLIC WORKS ASSOCIATION

APWA KANSAS CITY METRO CHAPTER

CURB INLET PROTECTION

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

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

SILT FENCE DETAILS
Not to Scale

SILT FENCE LAYOUT
Not to Scale

Notes:

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

Maintenance:

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

AMERICAN PUBLIC WORKS ASSOCIATION

APWA KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016

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

Section A-A

Typical Elevation

Notes for Wattles and Biodegradable Log Slope Protection:

- The Slope barriers shall be placed along contour lines, with a short section turned up slope at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
- Install wattles and biodegradable logs per manufacturer's instructions.
- Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

Figure 1
(Perimeter Control)

Figure 2
(Steep Slopes)

Notes for Mulch and Compost Filter Berm:

- The sediment control berm shall be placed uncompact in a window at locations shown on the plans or as directed by the engineer.
- Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high (trapezoidal) berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
- If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
- Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
- Wood mulch shall consist of free and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch adding water with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Berm:

- Berm shall be reshaped and material added as necessary to maintain function and dimensions.
- Breaches in the berm shall be repaired promptly.

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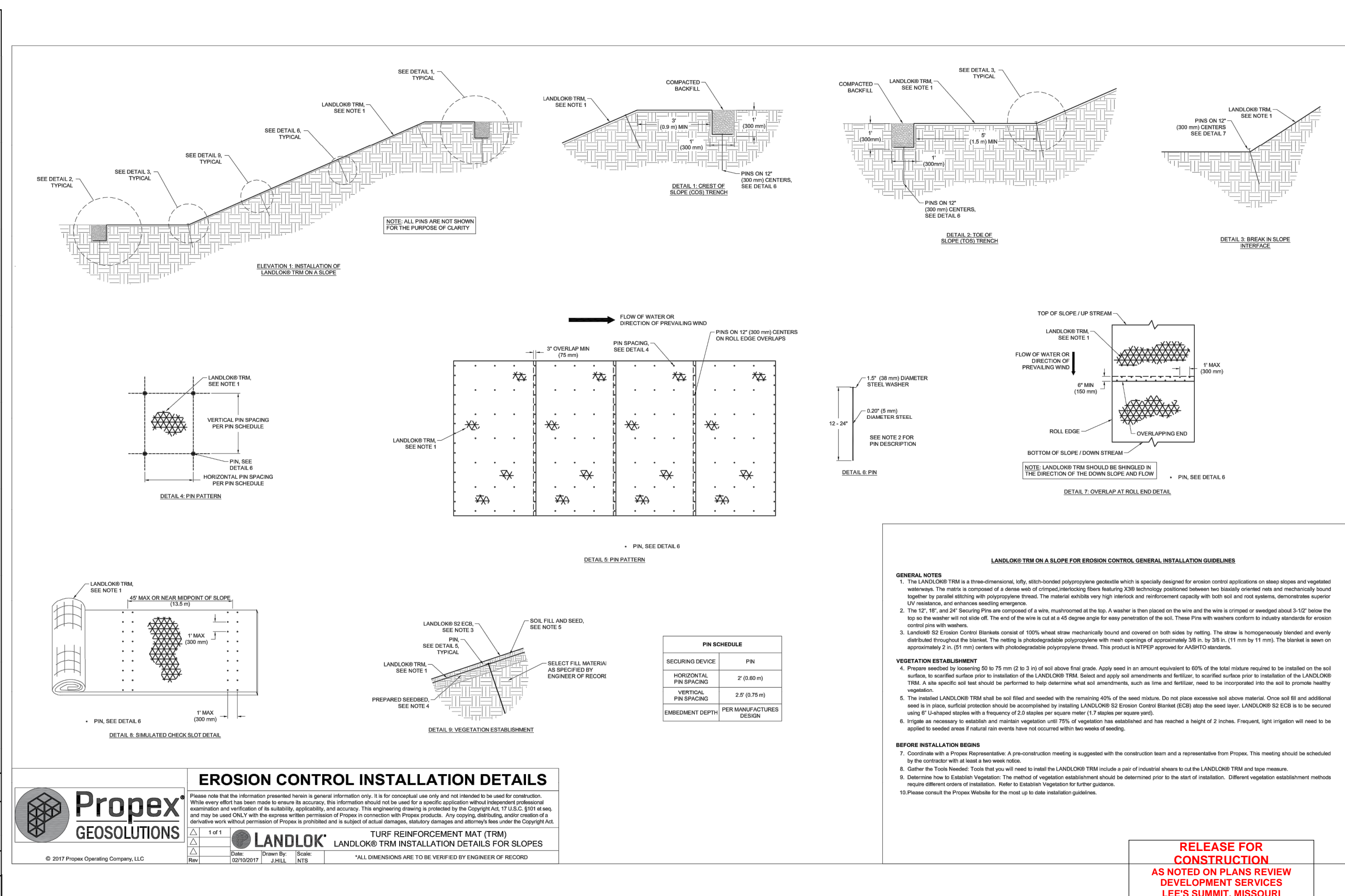
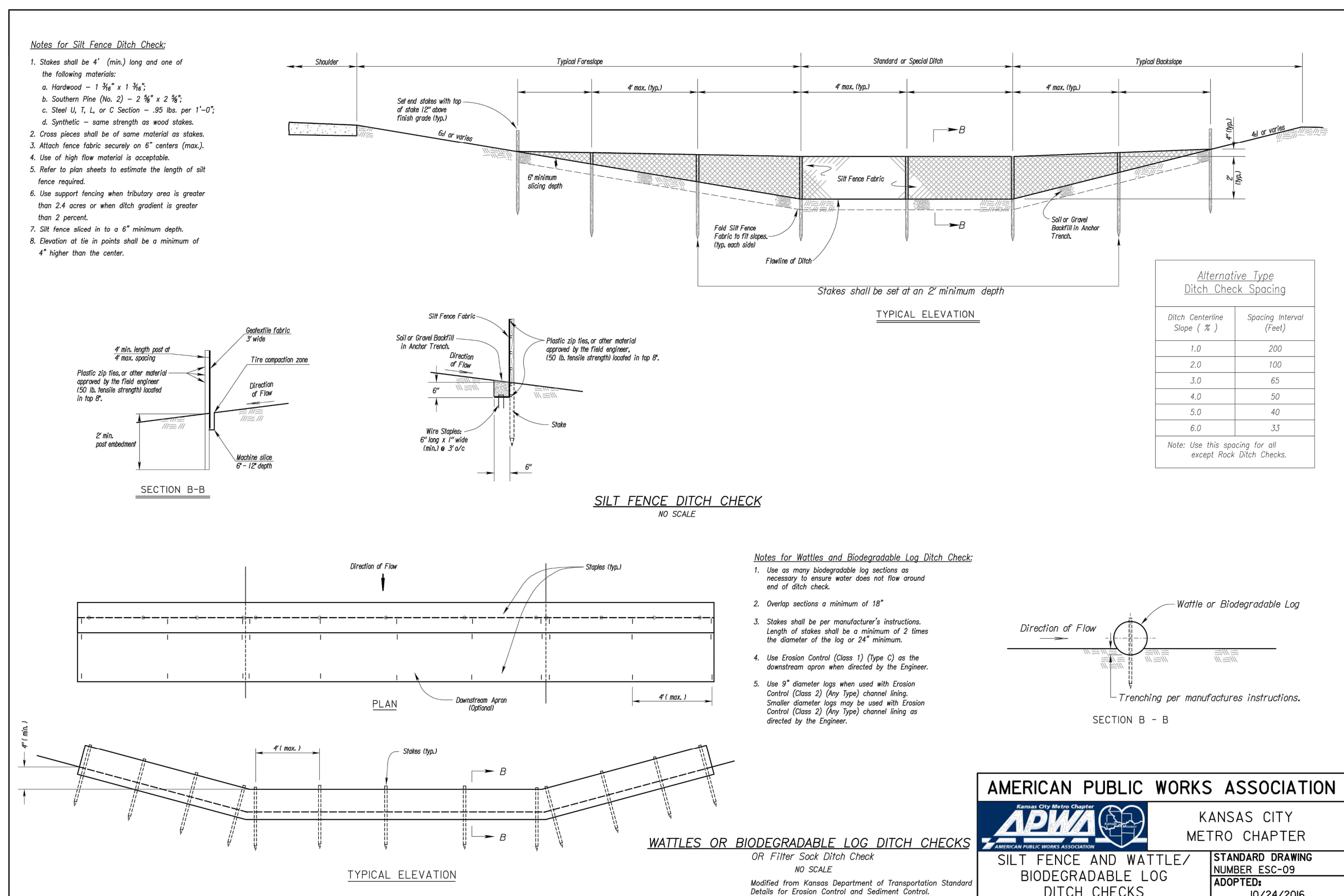
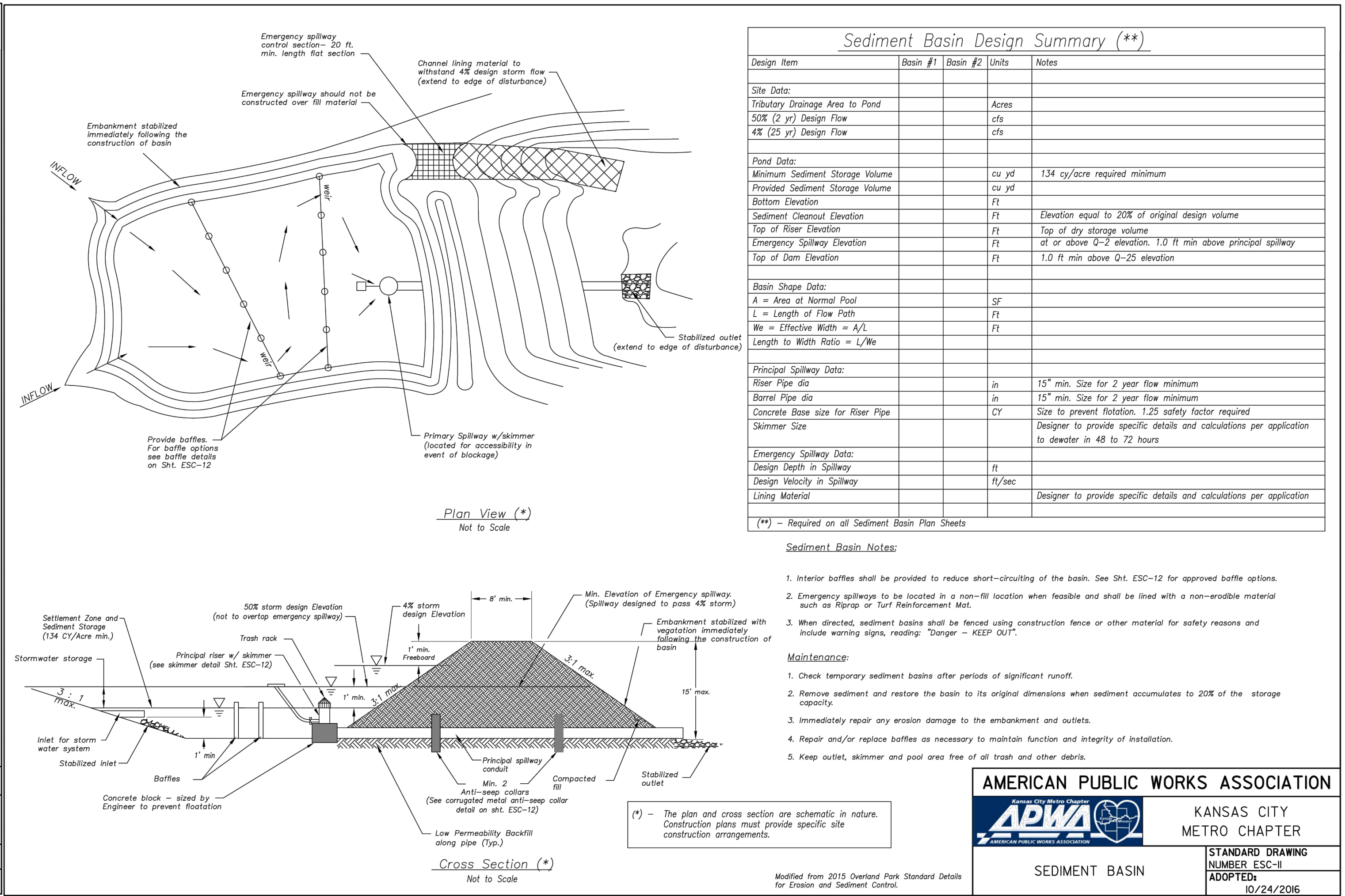
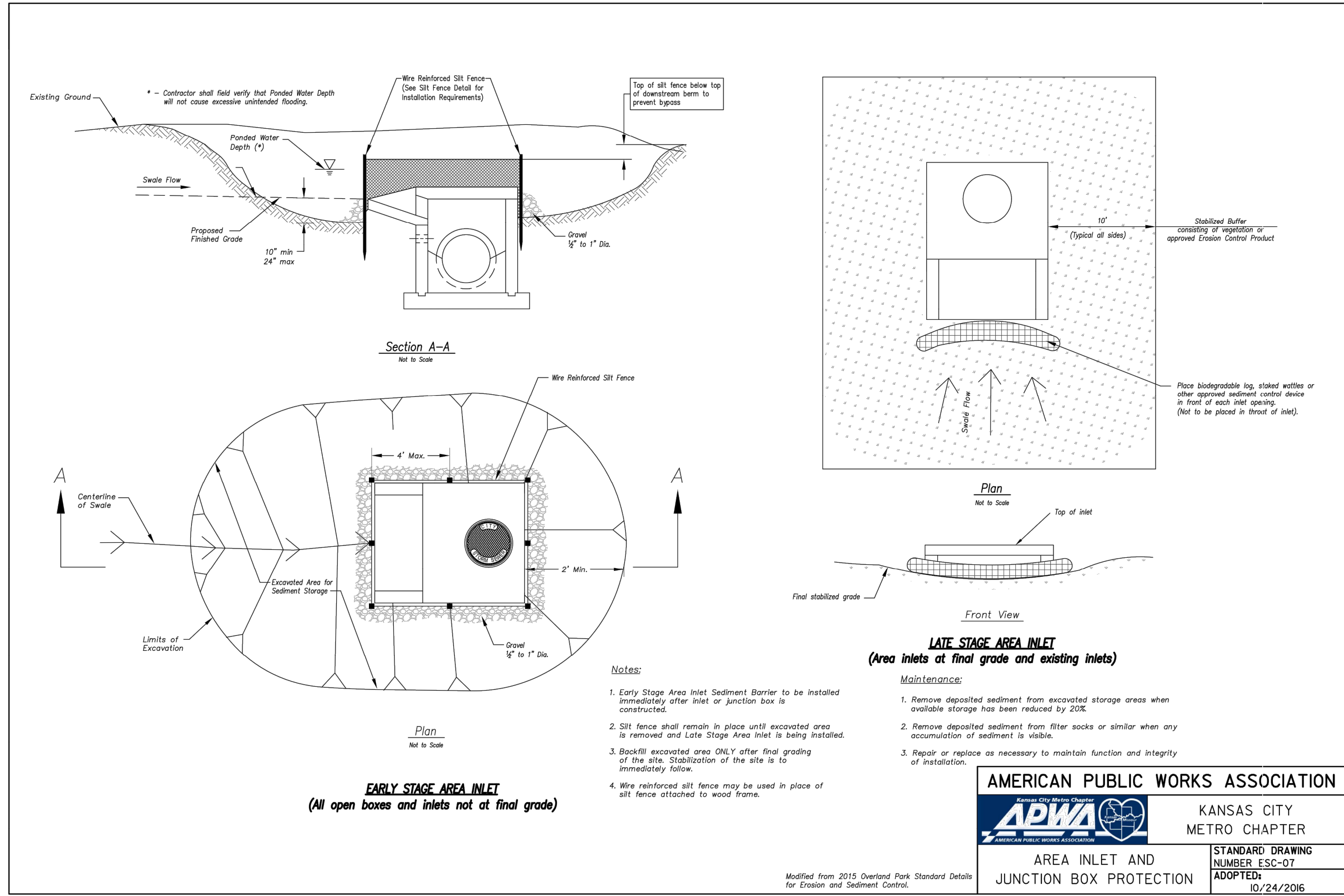
APWA KANSAS CITY METRO CHAPTER

WATTLES/BIOGRADABLE LOG AND MULCH/COMPOST FILTER BERM

STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016

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

RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 10/20/2021



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ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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(913) 492-5158 • Fax: (913) 492-8400
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Missouri State Certificate of Authority #E200200360PFL #LAC201005237 #LS2002008959F

PREPARED BY:
MARK ALLEN BREUER
PROFESSIONAL ENGINEER
NUMBER RE-2003007268
10.13.2021

WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER
STANDARD DRAWING NUMBER ESC-II
ADOPTED: 10/24/2016

| REVISION DATE | DESCRIPTION |
|---------------|---------------------|
| 04/24/2020 | CITY COMMENTS |
| 01/12/2021 | SCHLAGEL QUANTITIES |
| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 10/06/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | 18-017 |

EROSION CONTROL DETAILS

SHEET **6**

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/20/2021

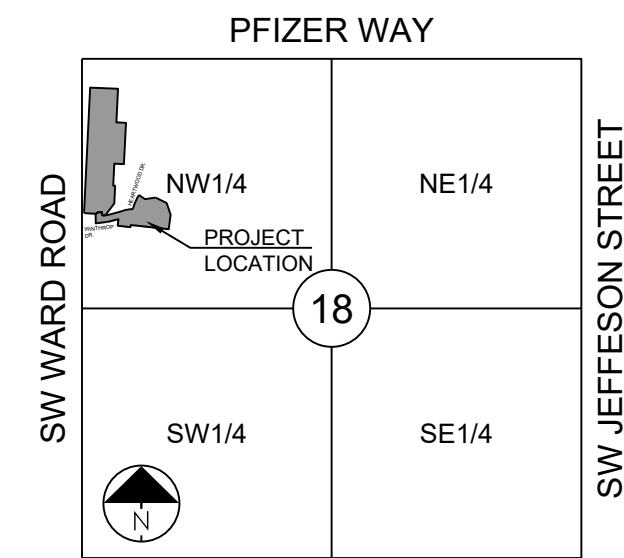


- ▲ WALL UPDATED AND REQUIRED ADDITIONAL GOEGRID IN THIS AREA RESULTING IN THE WALL MOVING NORTH ROUGHLY 2 FEET.
- ▲ PROPOSED WROUGHT IRON FENCE CALLED OUT TO MATCH AND CONTINUE WITH THE EXISTING WROUGHT IRON FENCE IN THIS AREA.
- ▲ ADDED STONE PILLARS AND DETAIL TO THE END OF THE WROUGHT IRON FENCE AS REQUESTED BY THE CITY. DEVELOPER TO PROVIDE WROUGHT FENCE SPECIFICATIONS FROM SUPPLIER.

PROJECT BENCHMARK:

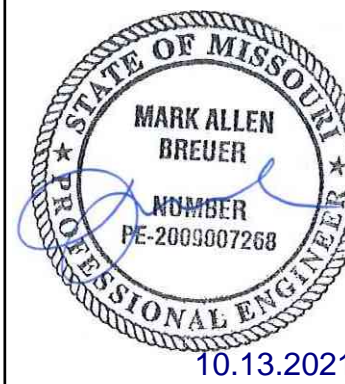
SW. CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX
 M.D.N.R. DOC. NO. 600-65374

ELEV. 1036.41

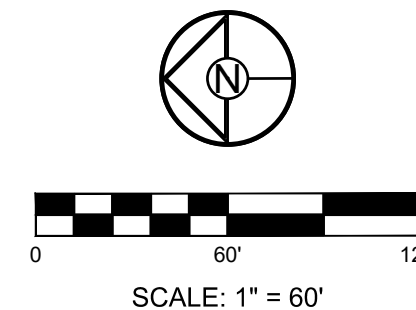


SECTION 18-47N-31W

LOCATION MAP
 SCALE 1" = 2000'



10.13.2021



WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

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| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 10/06/2021 | SCHLAGEL UPDATE |

GENERAL LAYOUT

SHEET

7

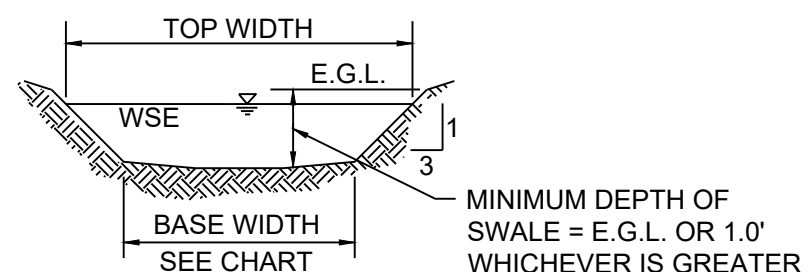
RELEASE FOR CONSTRUCTION
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 LEE'S SUMMIT, MISSOURI
 10/20/2021

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NOTES:

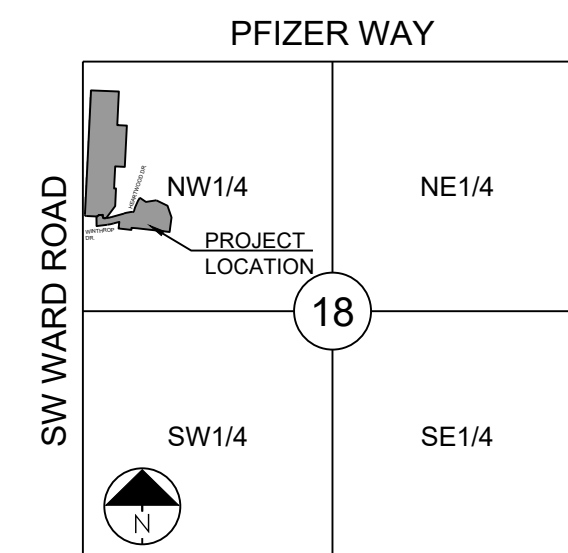
- MBOE = MINIMUM BUILDING OPENING ELEVATION FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE MINIMUM 2 FEET ABOVE THE 100 YR WATER SURFACE ELEVATION.
- EGL = ENERGY GRADE LINE (100 YR)
- WSE = WATER SURFACE ELEVATION (100 YR)
- ENGINEERED SWALES TO BE GRADED TO NORMAL DEPTH OF FLOW (WATER SURFACE ELEVATION) OR 1.0 FT, WHICHEVER IS GREATER. MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
- MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM.
- SWALE SECTIONS EXTEND THE ENTIRE LENGTH BETWEEN UPSTREAM AND DOWNSTREAM STRUCTURES WITH THE EXCEPTION OF A TRANSITION AT EACH STRUCTURE.

RUNOFF CALCULATIONS:
 $Q = K \cdot C \cdot I \cdot A$
 $K_{10} = 1.0$ $K_{100} = 1.25$ $C = 0.51$ $I = \text{INTENSITY}$
 DESIGN OVERFLOW = $Q_{\text{OVERFLOW}} = Q_{100} - Q_{10}$
 MANNINGS "n" = .030 FOR SWALES



100 YR OVERFLOW SWALE SECTIONS
SECTION 1-2

| 100 YEAR OVERFLOW SWALES | | | | | | | | | | | | |
|--------------------------|---------------------|------------|-----------|-----------------------|---------------|------------------|------------|-----------------|--------------------|----------------|---------------------|-----------|
| SECTION | DRAINAGE AREA (AC.) | Q100 (CFS) | Q10 (CFS) | DESIGN OVERFLOW (CFS) | BED SLOPE (%) | BASE WIDTH (FT.) | SIDE SLOPE | TOP WIDTH (FT.) | NORMAL DEPTH (FT.) | VELOCITY (FPS) | VELOCITY HEAD (FT.) | EGL (FT.) |
| A-A | 0.32 | 2.11 | - | 2.11 | 2.52 | 5 | 3:1 | 6.02 | 0.17 | 2.26 | 0.08 | 0.25 |
| B-B | 3.54 | 23.29 | - | 23.29 | 7.93 | 5 | 3:1 | 7.91 | 0.49 | 7.44 | 0.86 | 1.35 |
| C-C | 0.93 | 6.12 | - | 6.12 | 6.50 | 5 | 3:1 | 6.44 | 0.24 | 4.46 | 0.31 | 0.55 |
| D-D | 2.65 | 17.44 | - | 17.44 | 5.93 | 5 | 3:1 | 7.69 | 0.45 | 6.13 | 0.58 | 1.03 |



SECTION 18-47N-31W
LOCATION MAP
SCALE 1" = 2000'

DETENTION STORAGE EDDB #1:
100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 990.54 (SEE FINAL STORMWATER MGMT. PLAN)

AUXILIARY SPILLWAY SET AT 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 991.04

AUXILIARY SPILLWAY DESIGN:
 $Q(100)=2.71$ CFS, $Q=CLH^{(3/2)}$, $C=3.33$, $L=20$ FT., 2.71 CFS = $3.33 * 20FT. * (H^{(3/2)})$, $H=0.12$ FT.

DETENTION STORAGE EDDB #2:
100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 975.90 (SEE FINAL STORMWATER MGMT. PLAN)

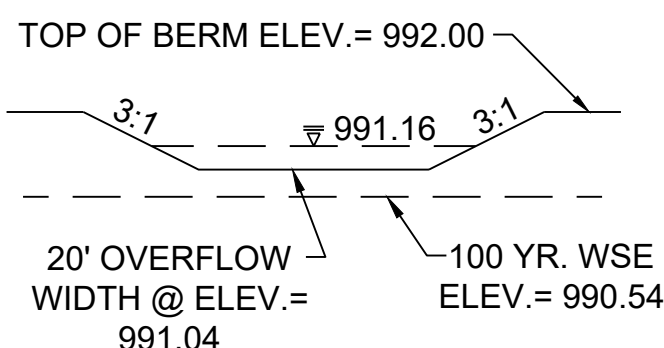
AUXILIARY SPILLWAY SET AT 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 976.40

AUXILIARY SPILLWAY DESIGN:
 $Q(100)=18.47$ CFS, $Q=CLH^{(3/2)}$, $C=3.33$, $L=20$ FT., 18.47 CFS = $3.33 * 20FT. * (H^{(3/2)})$, $H=0.43$ FT.

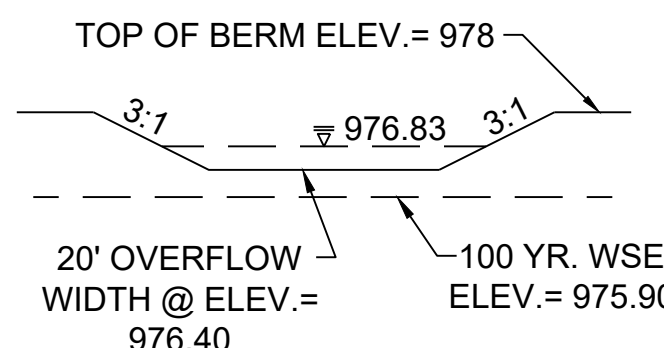
DETENTION STORAGE EDDB #3:
100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 972.96 (SEE FINAL STORMWATER MGMT. PLAN)

AUXILIARY SPILLWAY SET AT 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 973.46

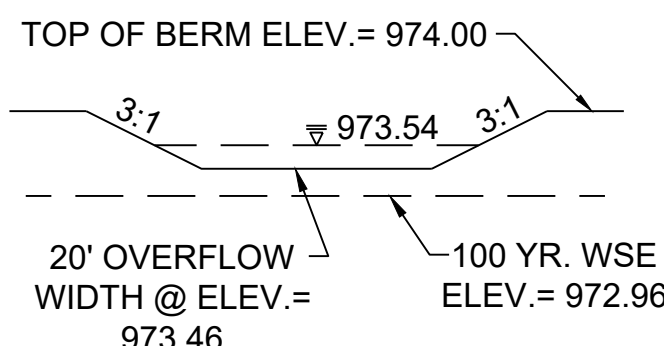
AUXILIARY SPILLWAY DESIGN:
 $Q(100)=1.43$ CFS, $Q=CLH^{(3/2)}$, $C=3.33$, $L=20$ FT., 1.43 CFS = $3.33 * 20FT. * (H^{(3/2)})$, $H=0.08$ FT.



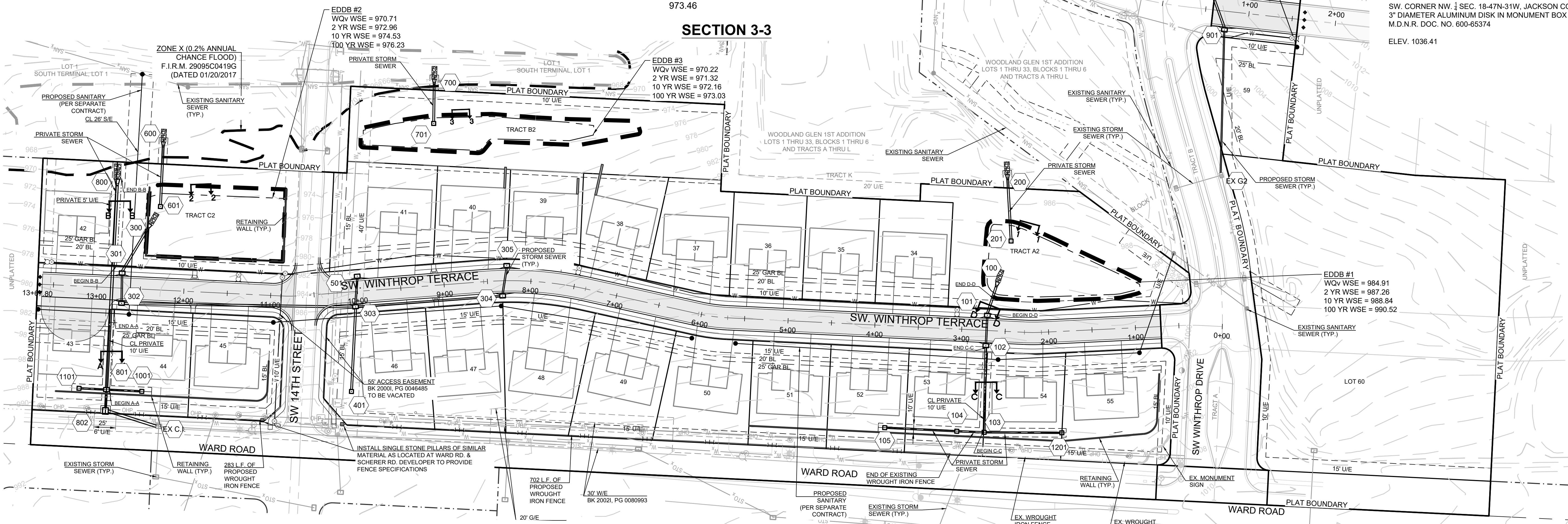
SECTION 1-1



SECTION 2-2



SECTION 3-3



PROJECT BENCHMARK:

SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX
 M.D.N.R. DOC. NO. 600-65374
 ELEV. 1036.41



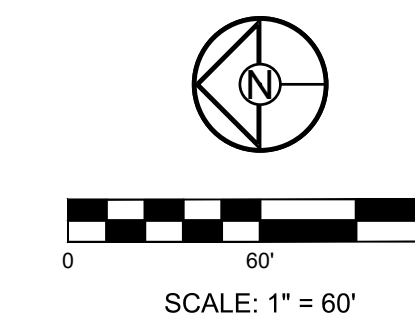
WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

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| 10/06/2021 | |

MASTER DRAINAGE PLAN GRADING PLAN

SHEET

RELEASE FOR CONSTRUCTION
 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 10/20/2021



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| LOT TYPE TABLE | | |
|----------------|---------------|-------|
| LOT # | BASEMENT TYPE | MBOE |
| 34 | WALKOUT | 992.5 |
| 35 | WALKOUT | N/A |
| 36 | WALKOUT | N/A |
| 37 | WALKOUT | 975.0 |
| 38 | WALKOUT | 975.0 |
| 39 | WALKOUT | 975.0 |
| 40 | WALKOUT | 975.0 |
| 41 | WALKOUT | 975.0 |
| 42 | WALKOUT | 971.5 |
| 43 | STANDARD | 981.0 |
| 44 | STANDARD | 981.0 |
| 45 | STANDARD | N/A |
| 46 | STANDARD | 982.8 |
| 47 | STANDARD | N/A |
| 48 | STANDARD | N/A |
| 49 | STANDARD | N/A |
| 50 | STANDARD | N/A |
| 51 | STANDARD | N/A |
| 52 | STANDARD | 996.0 |
| 53 | STANDARD | 996.0 |
| 54 | STANDARD | 996.0 |
| 55 | STANDARD | 996.0 |
| 56 | WALKOUT | N/A |
| 57 | WALKOUT | N/A |
| 58 | WALKOUT | N/A |
| 59 | WALKOUT | N/A |

- NOTE:**
- DAYLIGHT BASED ON ADJACENT GRADE 4 FT BELOW TOP OF FOUNDATION WHILE MAINTAINING 2.5% (MIN) GRADE TO LOT CORNERS.
 - WALKOUT BASED ON ADJACENT GRADE AT BASEMENT FLOOR ELEVATION WHILE MAINTAINING 2.5% (MIN) GRADE TO LOT CORNERS.

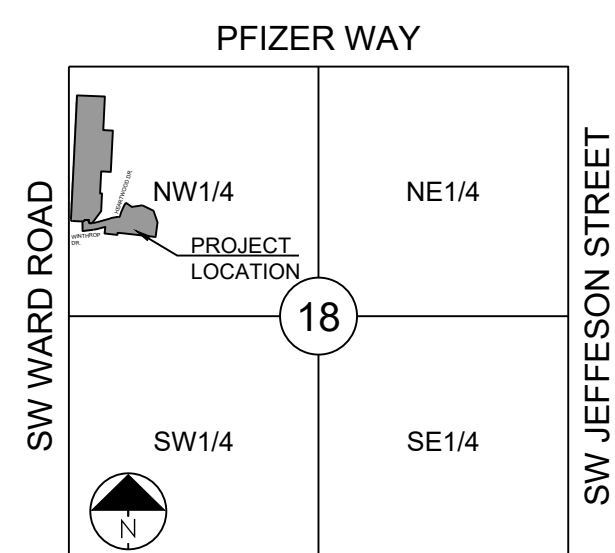
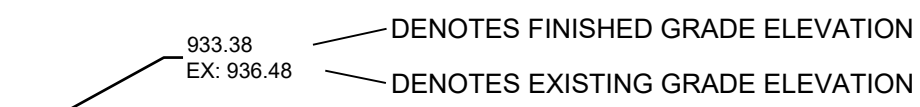
NOTES:

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PROJECT BENCHMARK:

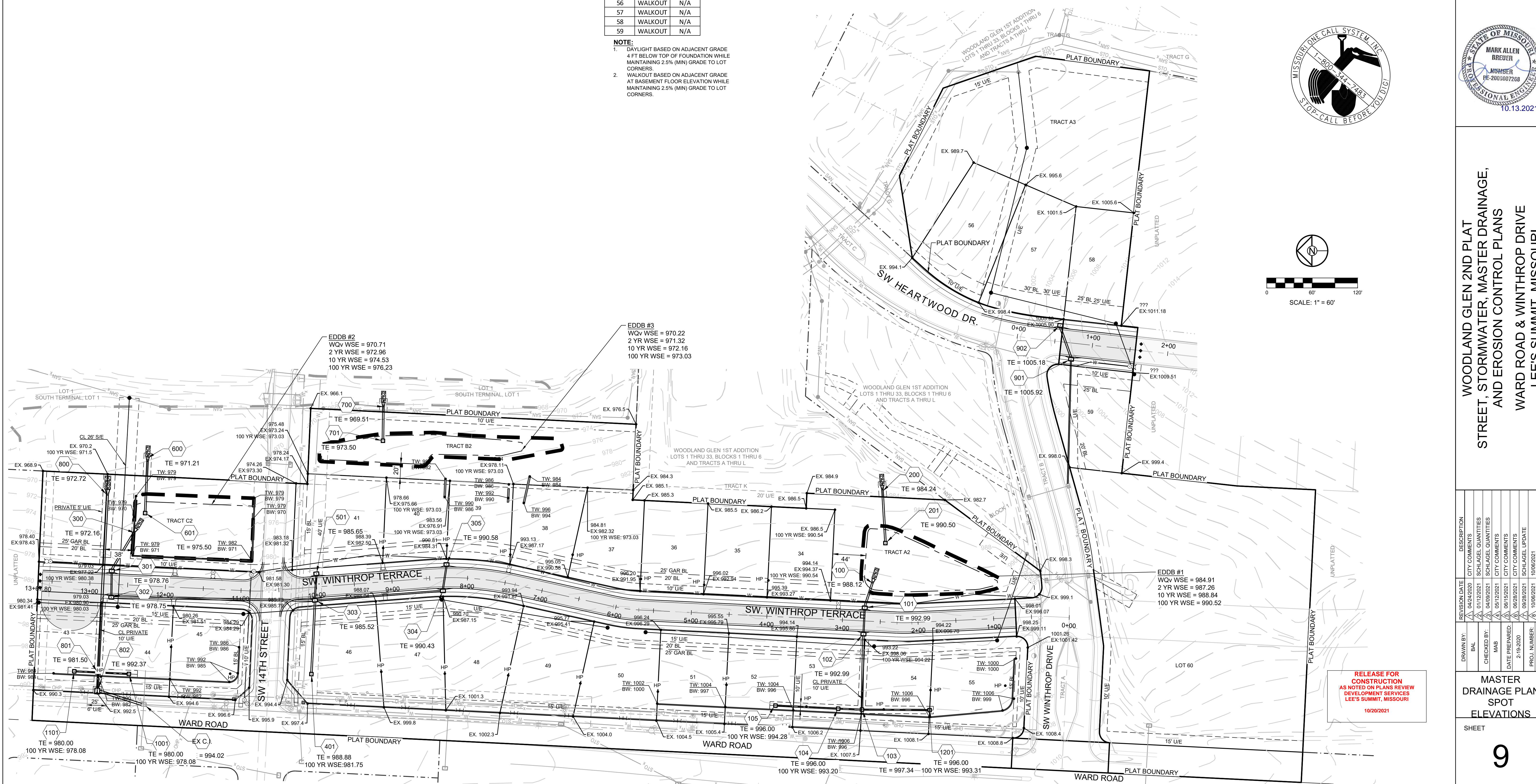
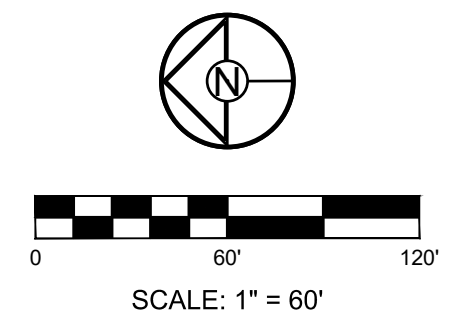
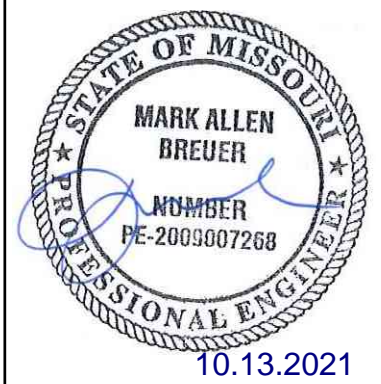
SW. CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
3" DIAMETER ALUMINUM DISK IN MONUMENT BOX
M.D.N.R. DOC. NO. 600-65374

ELEV. 1036.41



SECTION 18-47N-31W

LOCATION MAP
SCALE 1" = 2000'



RELEASE FOR CONSTRUCTION AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 10/20/2021

WOODLAND GLEN 2ND PLAT STREET, STORMWATER, MASTER DRAINAGE, AND EROSION CONTROL PLANS WARD ROAD & WINTHROP DRIVE LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---------------|---------------------|
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| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | |

MASTER DRAINAGE PLAN SPOT ELEVATIONS

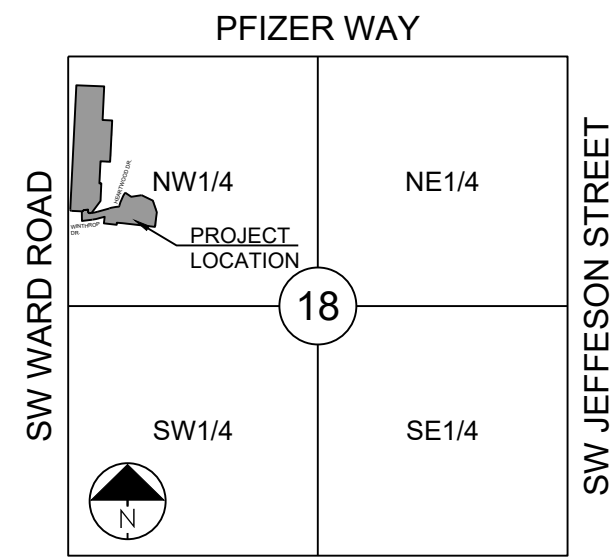
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PROJECT BENCHMARK:

SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
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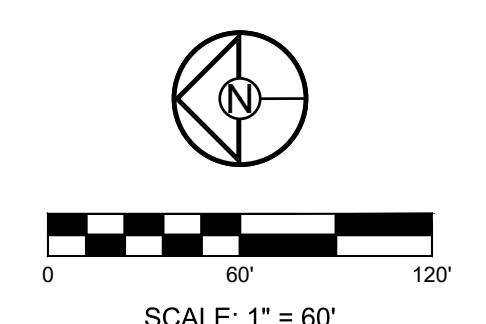
SECTION 18-47N-31W

LOCATION MAP
SCALE 1" = 2000'

ZONE X (0.2% ANNUAL CHANCE FLOOD)
F.I.R.M. 29095C0419G
(DATED 01/20/2017)



RELEASE FOR CONSTRUCTION
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WOODLAND GLEN 2ND PLAT
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WARD ROAD & WINTHROP DRIVE
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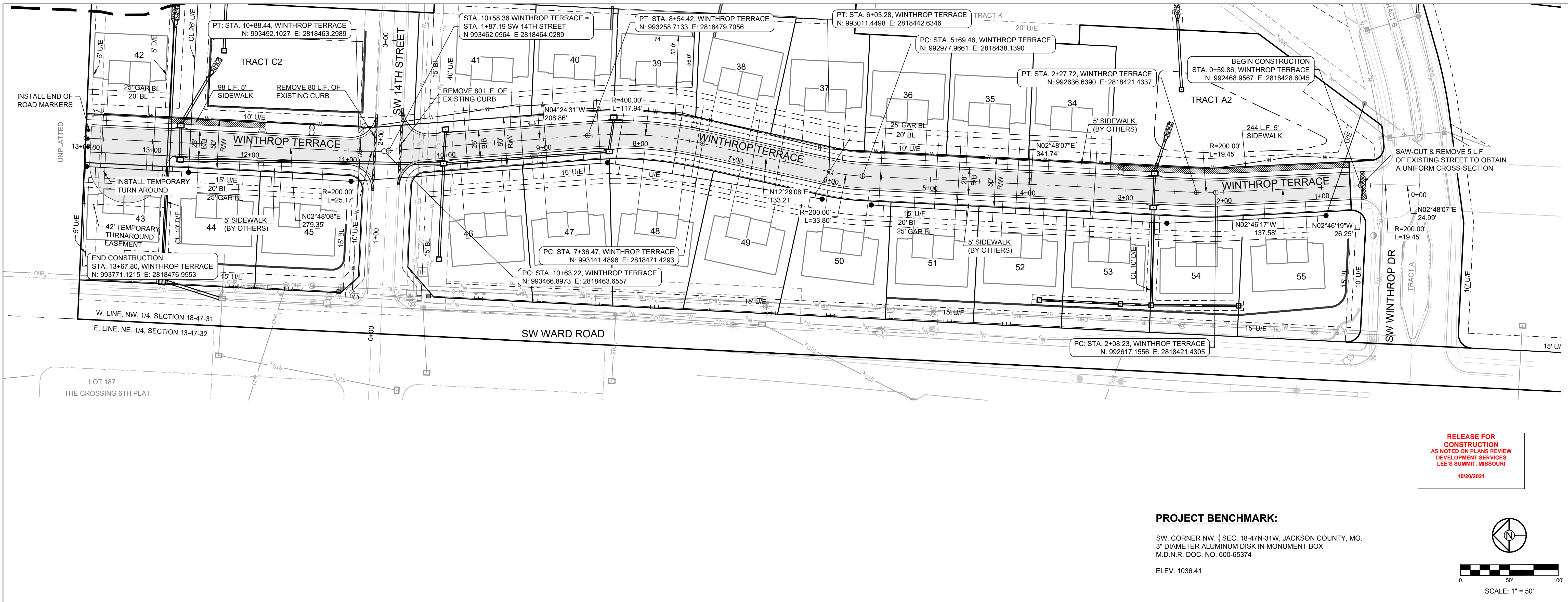
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MASTER DRAINAGE PLAN
DRAINAGE AREAS

SHEET

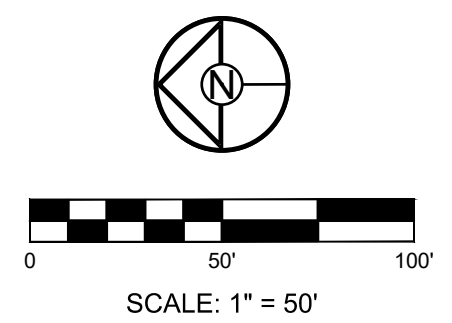
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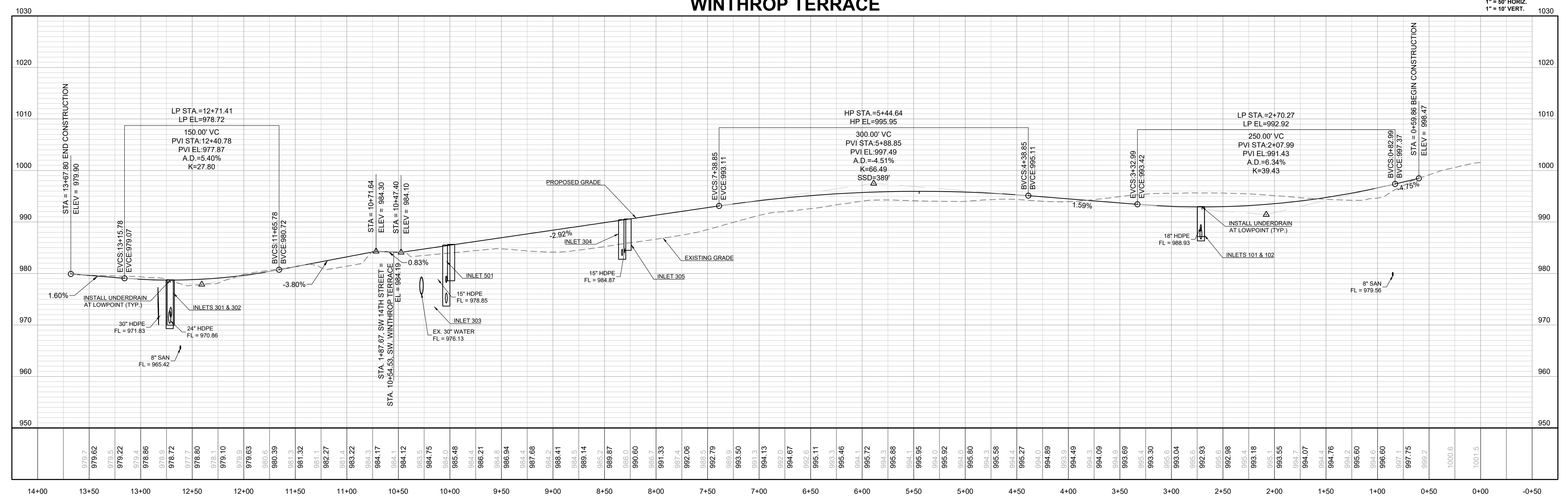


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WINTHROP TERRACE



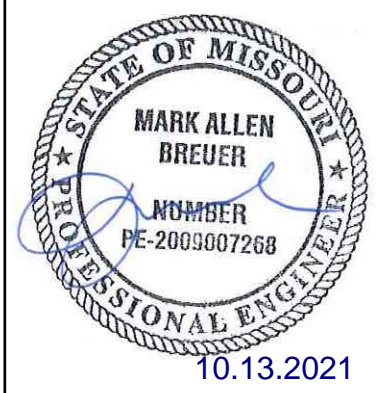
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| 10/06/2021 | 10/06/2021 |

WINTHROP
 TERRACE PLAN &
 PROFILE

SHEET

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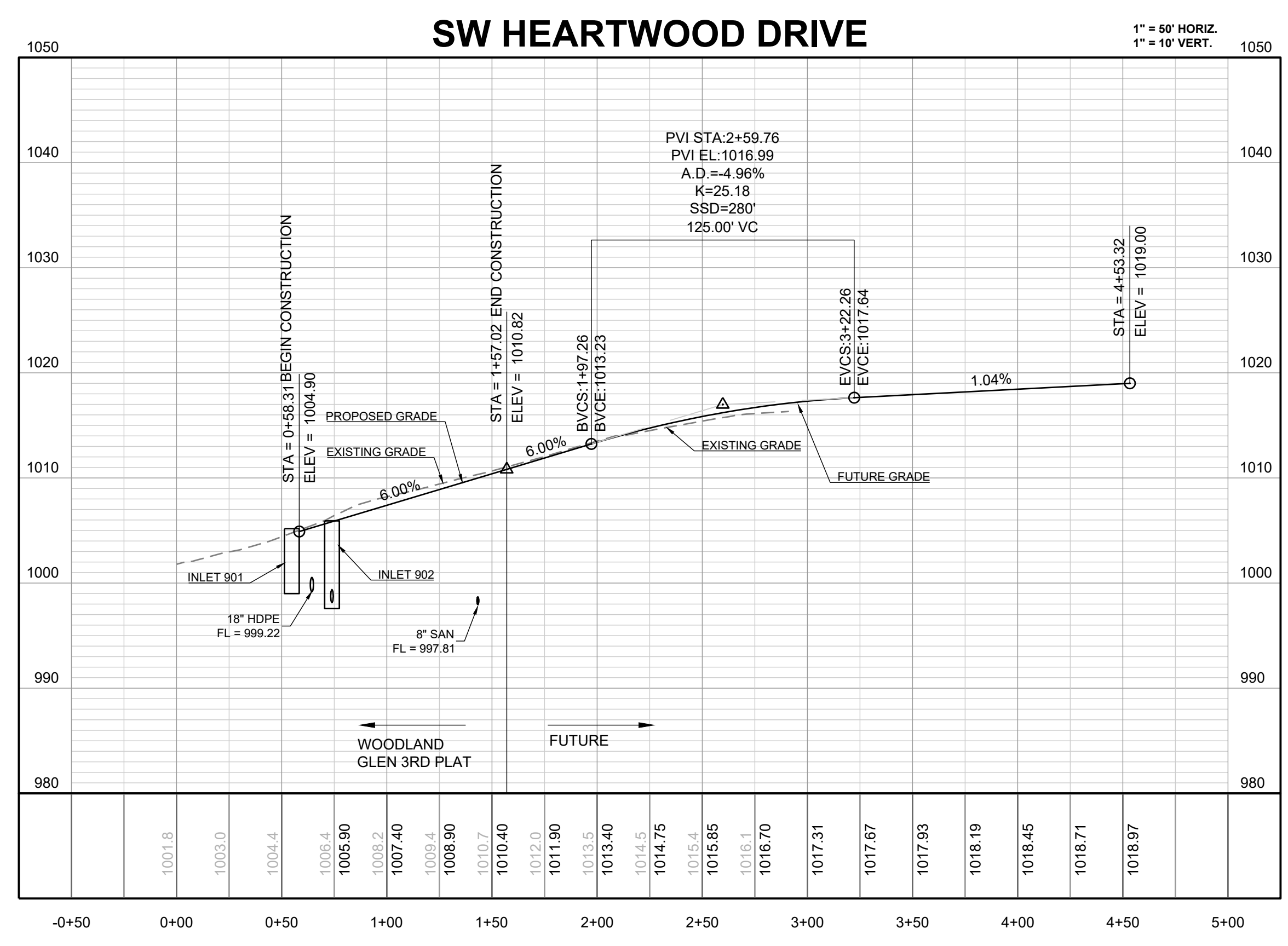
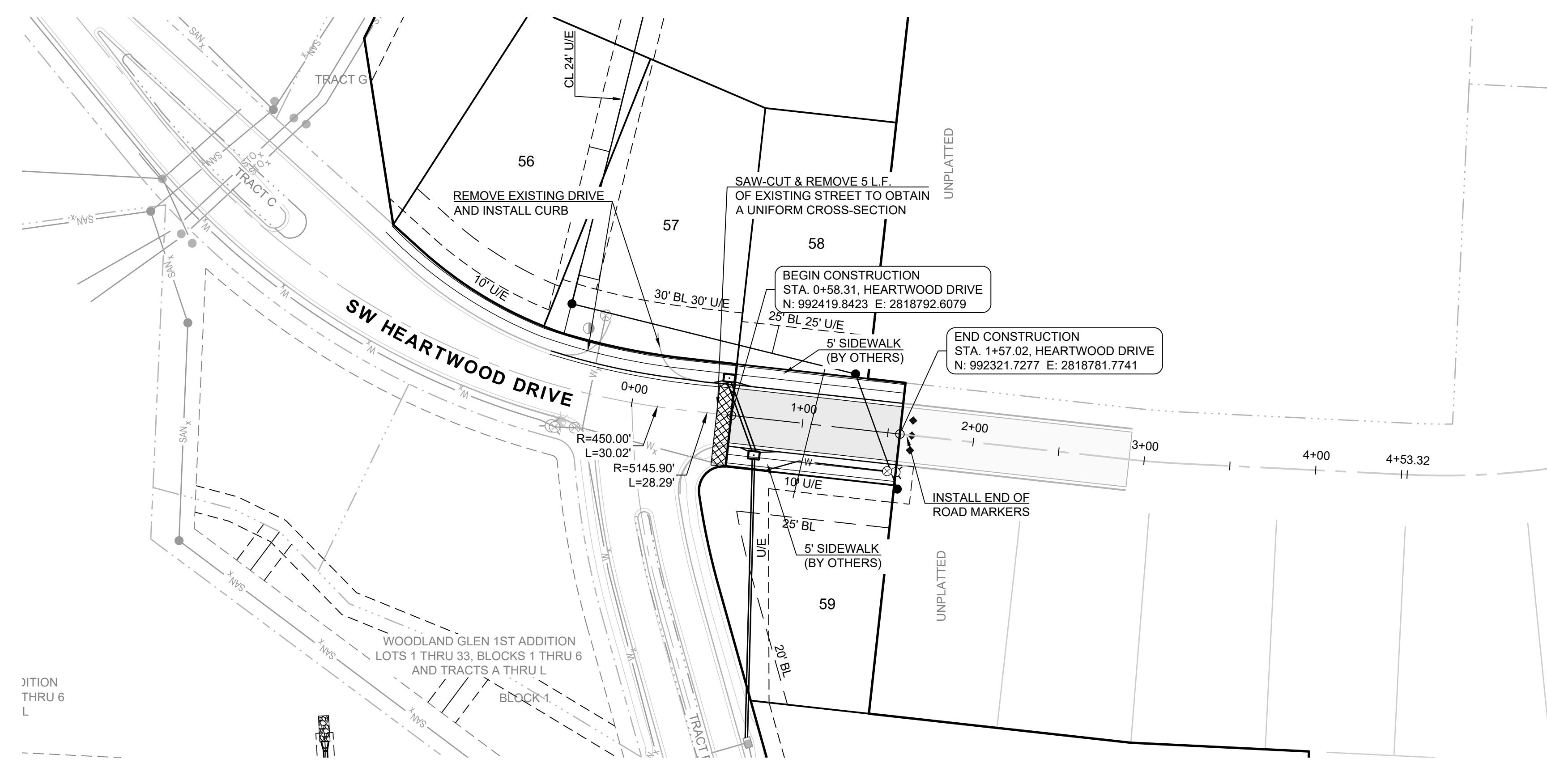
WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---------------|---------------------|
| 04/24/2020 | CITY COMMENTS |
| 01/12/2021 | SCHLAGEL QUANTITIES |
| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 10/06/2021 | SCHLAGEL UPDATE |

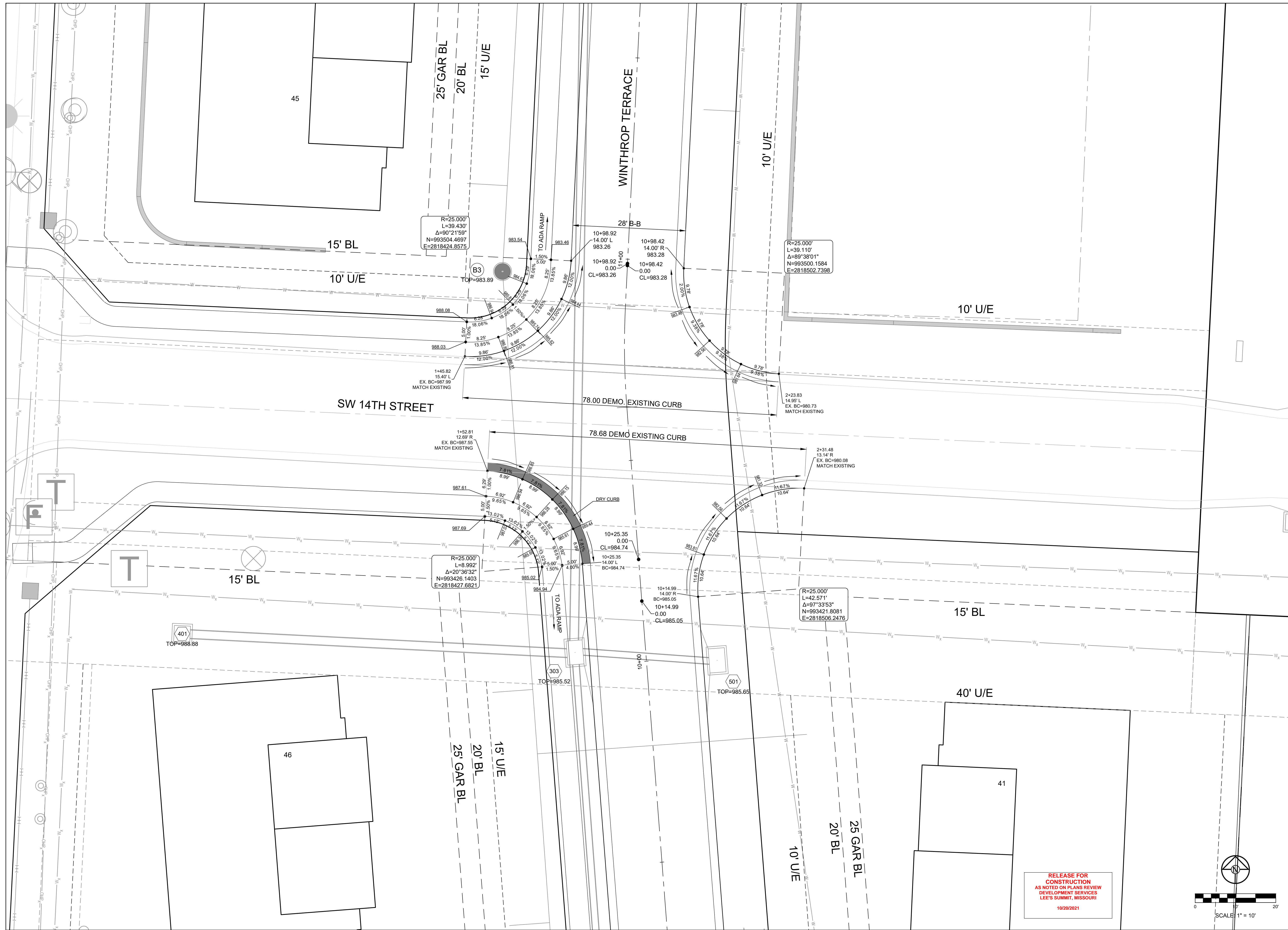
HEARTWOOD DRIVE PLAN & PROFILE

SHEET
13

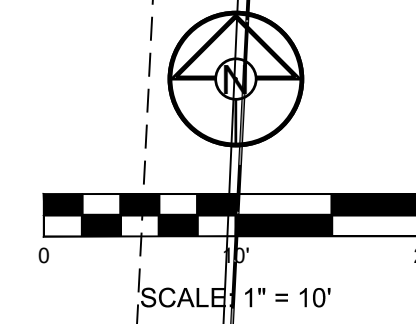
PROJECT BENCHMARK:
 SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX
 M.D.N.R. DOC. NO. 600-65374
 ELEV. 1036.41



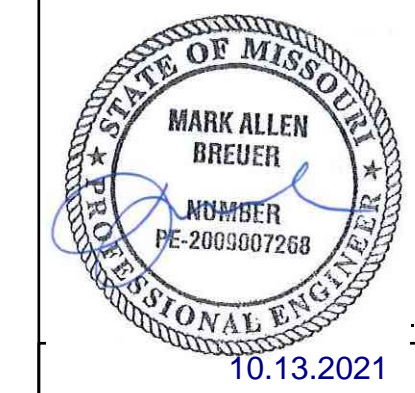
RELEASE FOR
 CONSTRUCTION
 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 10/20/2021



RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/20/2021



PREPARED BY:

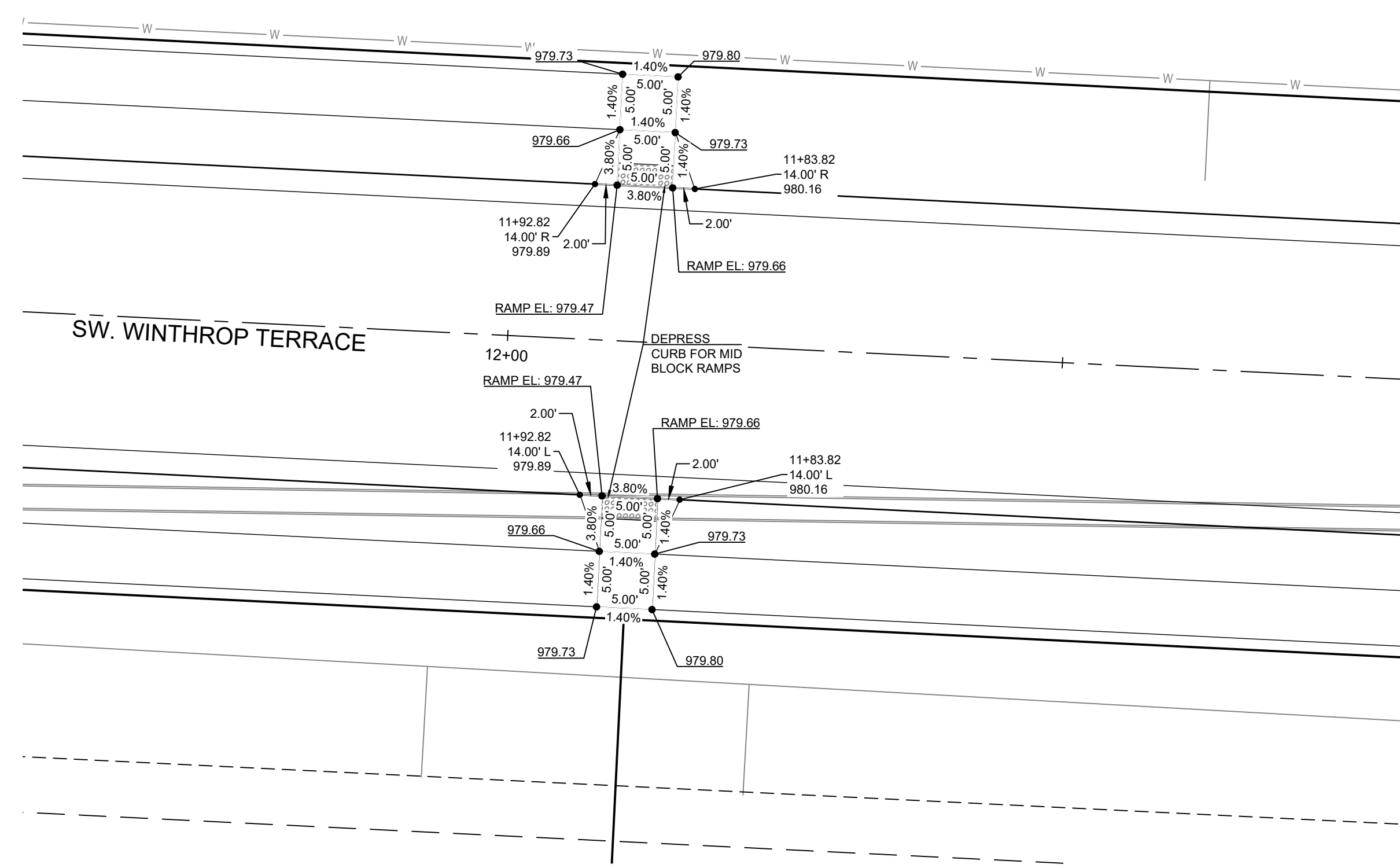
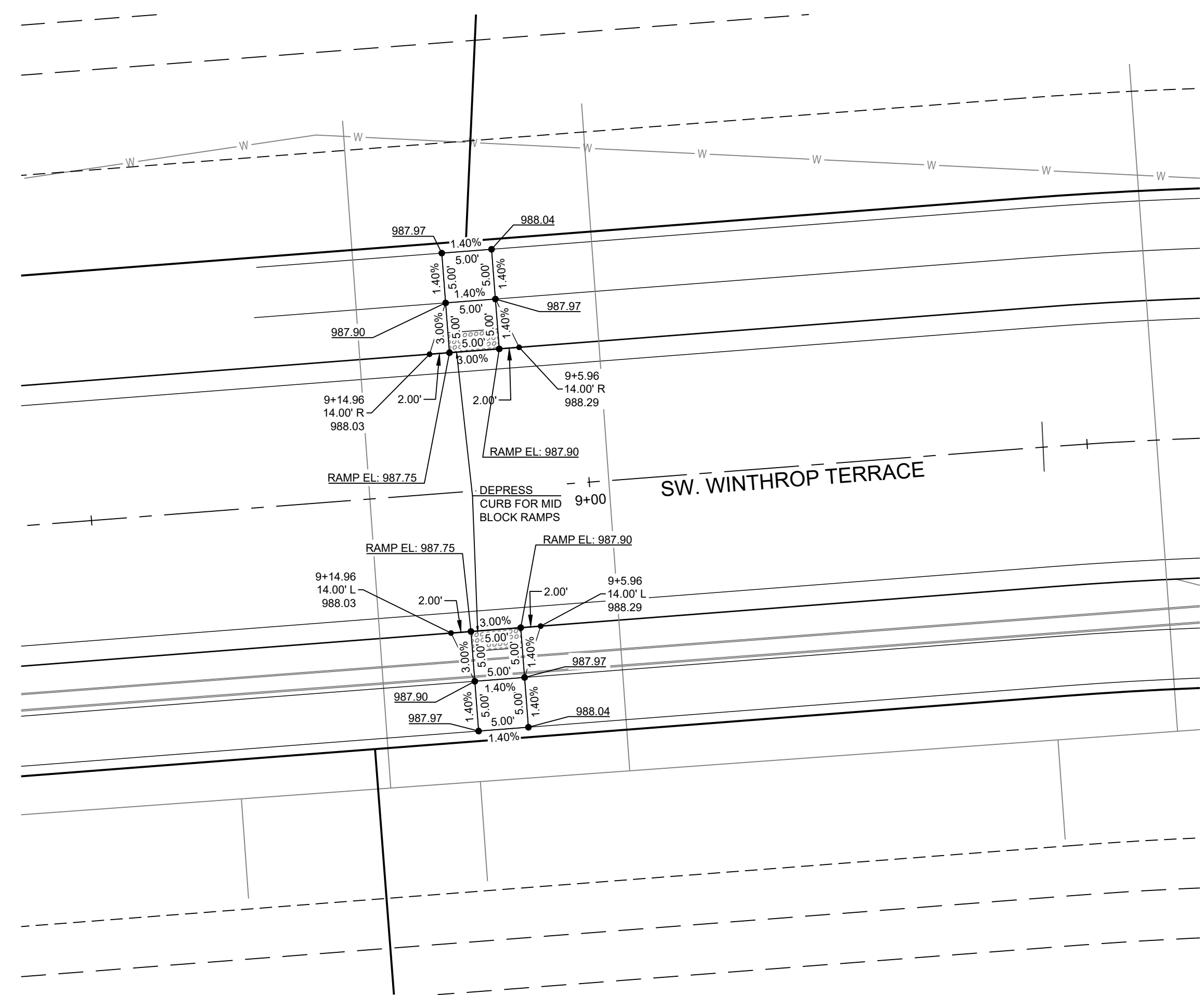
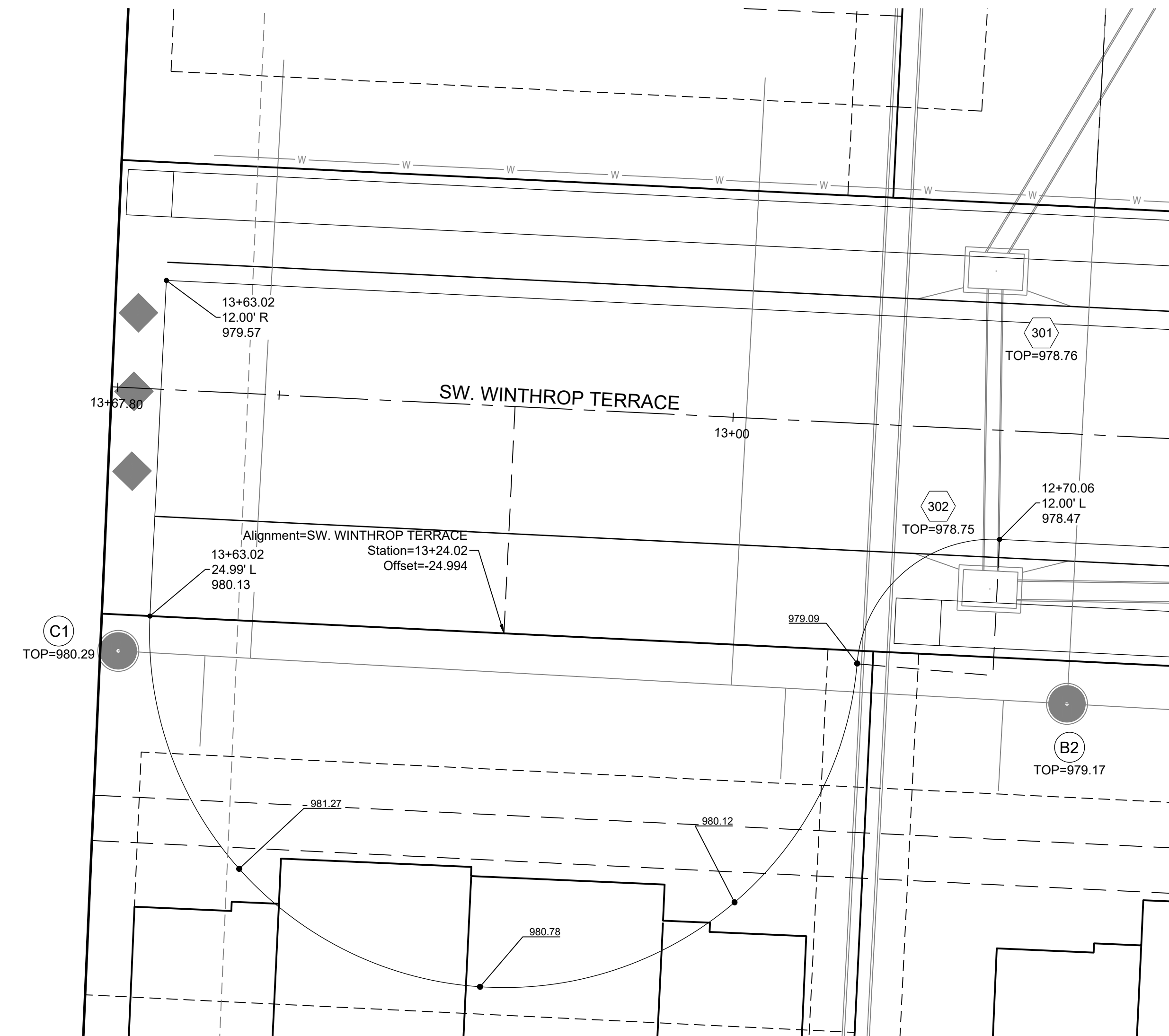


WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

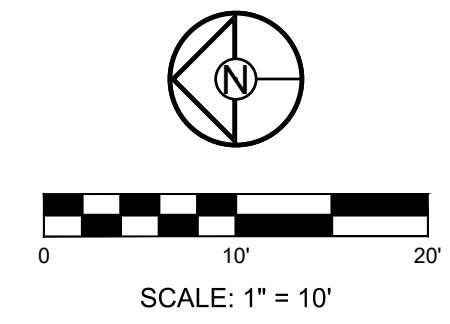
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| 10/06/2021 | SCHLAGEL UPDATE |

INTERSECTION
DETAIL

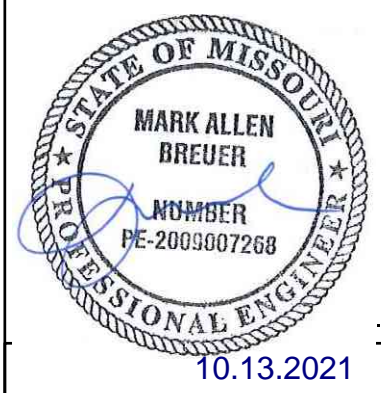
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RELEASE FOR
CONSTRUCTION
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DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/20/2021



PREPARED BY:

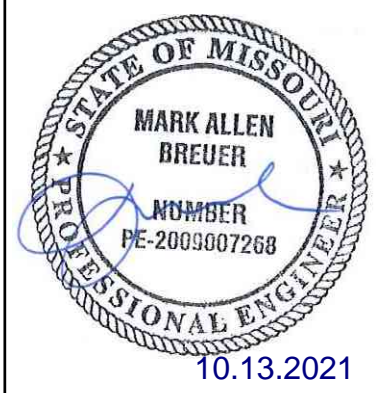


WOODLAND GLEN 2ND PLAT
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AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

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| 10/06/2021 | SCHLAGEL UPDATE |

INTERSECTION
DETAILS

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PROJECT BENCHMARK:

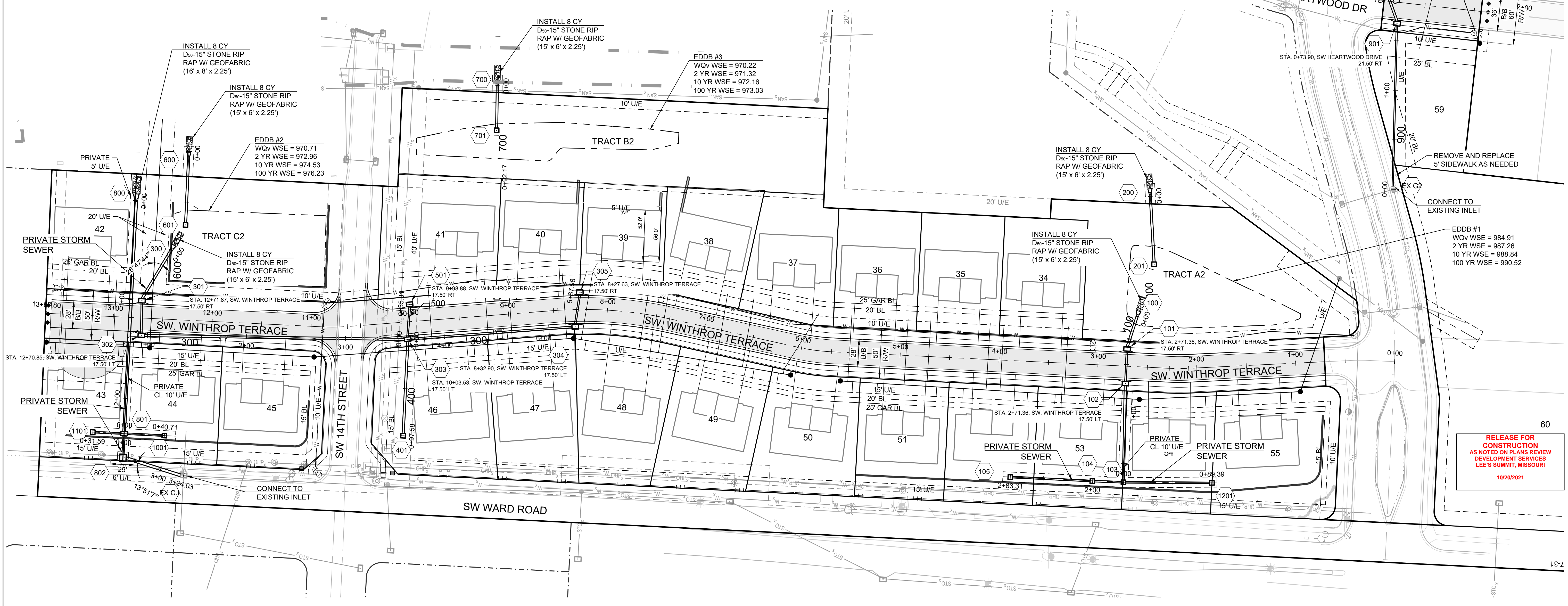
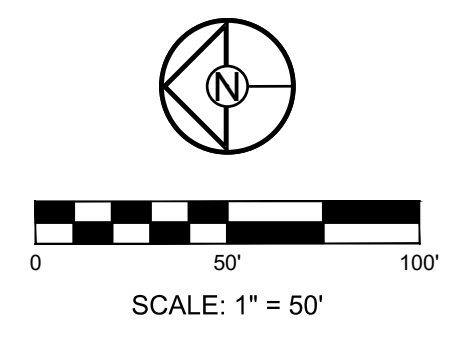
SW CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
 3" DIAMETER ALUMINUM DISK IN MONUMENT BOX
 M.D.N.R. DOC. NO. 600-65374
 ELEV. 1036.41

| Structure | Notes |
|-----------|---|
| 100 | STA 0+00.00, 100 INSTALL 24" END SECTION N 992669.2728 E 2818473.6957 |
| 101 | STA 0+34.17, 100 INSTALL 6 X 4 CURB INLET N 992679.3667 E 2818441.0459 |
| 102 | STA 0+69.17, 100 INSTALL 6 X 4 CURB INLET N 992681.0777 E 2818406.0877 |
| 103 | STA 1+68.90, 100 INSTALL 4 X 4 JUNCTION BOX F.F.B. 358°53'41" N 992683.0605 E 2818306.3812 |
| 104 | STA 2+00.35, 100 INSTALL 4 X 4 AREA INLET (OPENINGS N.E.S.W) F.F.B. 0°00'00" N 992714.4882 E 2818307.6069 |
| 105 | STA 2+83.31, 100 INSTALL 4 X 4 AREA INLET (OPENINGS N.E.S.W) F.F.B. 86°30'58" N 992797.3500 E 2818311.6624 |
| 200 | STA -0+00.04, 200 INSTALL 15" END SECTION N 992655.8760 E 2818595.2227 |

| Structure | Notes |
|-----------|---|
| 201 | STA 0+68.76, 200 INSTALL OUTLET STRUCTURE F.F.B. 180°00'00" N 992652.0986 E 2818526.5222 |
| 300 | STA -0+00.00, 300 INSTALL 24" END SECTION N 993645.0883 E 2818540.6336 |
| 301 | STA 0+58.76, 300 INSTALL 6 X 4 CURB INLET N 993674.4582 E 2818489.7451 |
| 302 | STA 0+93.77, 300 INSTALL 6 X 4 CURB INLET N 993675.1476 E 2818454.7370 |
| 303 | STA 3+62.91, 300 INSTALL 6 X 4 CURB INLET N 993406.0386 E 2818450.7956 |
| 304 | STA 5+32.58, 300 INSTALL 6 X 4 CURB INLET N 993236.8248 E 2818463.2865 |
| 305 | STA 5+67.98, 300 INSTALL 6 X 4 CURB INLET N 993232.1336 E 2818498.3682 |

| Structure | Notes |
|-----------|--|
| 401 | STA 0+97.58, 400 INSTALL 4 X 4 AREA INLET (OPENINGS S.W) F.F.B. 357°17'49" N 993410.6806 E 2818353.3299 |
| 501 | STA 0+35.31, 500 INSTALL 6 X 4 CURB INLET N 993404.0946 E 2818486.0494 |
| 600 | STA -0+00.04, 600 INSTALL 18" END SECTION N 993627.2204 E 2818639.2364 |
| 601 | STA 0+73.07, 600 INSTALL OUTLET STRUCTURE F.F.B. 357°23'29" N 993630.3926 E 2818566.1938 |
| 700 | STA 0+00.00, 700 INSTALL 15" END SECTION N 993315.5193 E 2818706.7724 |
| 701 | STA 0+44.96, 700 INSTALL OUTLET STRUCTURE F.F.B. 0°00'00" N 993316.1131 E 2818661.8180 |
| 800 | STA 0+00.85, 800 INSTALL 38" END SECTION N 993680.3317 E 2818589.9535 |

| Structure | Notes |
|-----------|---|
| 801 | STA 2+35.65, 800 INSTALL 6 X 4 JUNCTION BOX F.F.B. 87°17'49" N 993692.4917 E 2818355.4726 |
| 802 | STA 2+60.17, 800 INSTALL 7 X 6 JUNCTION BOX N 993693.6905 E 2818330.9777 |
| 901 | STA 1+67.35, 900 INSTALL 6 X 4 CURB INLET N 992406.7121 E 2818769.5220 |
| 902 | STA 2+14.40, 900 INSTALL 6 X 4 CURB INLET N 992420.9665 E 2818814.3651 |
| 1001 | STA 0+40.71, 1000 INSTALL 4 X 4 AREA INLET (OPENINGS N.E.S.W) F.F.B. 357°17'49" N 993651.8261 E 2818353.4824 |
| 1101 | STA 0+31.59, 1100 INSTALL 4 X 4 AREA INLET (OPENINGS N.E.S.W) F.F.B. 357°17'49" N 993724.0390 E 2818357.0166 |
| 1201 | STA 0+89.39, 1200 INSTALL 4 X 4 AREA INLET (OPENINGS N.E.S.W) F.F.B. 0°53'19" N 992593.6700 E 2818305.7533 |



RELEASE FOR CONSTRUCTION
 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 10/20/2021

WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
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| 10/06/2021 | SCHLAGEL UPDATE |

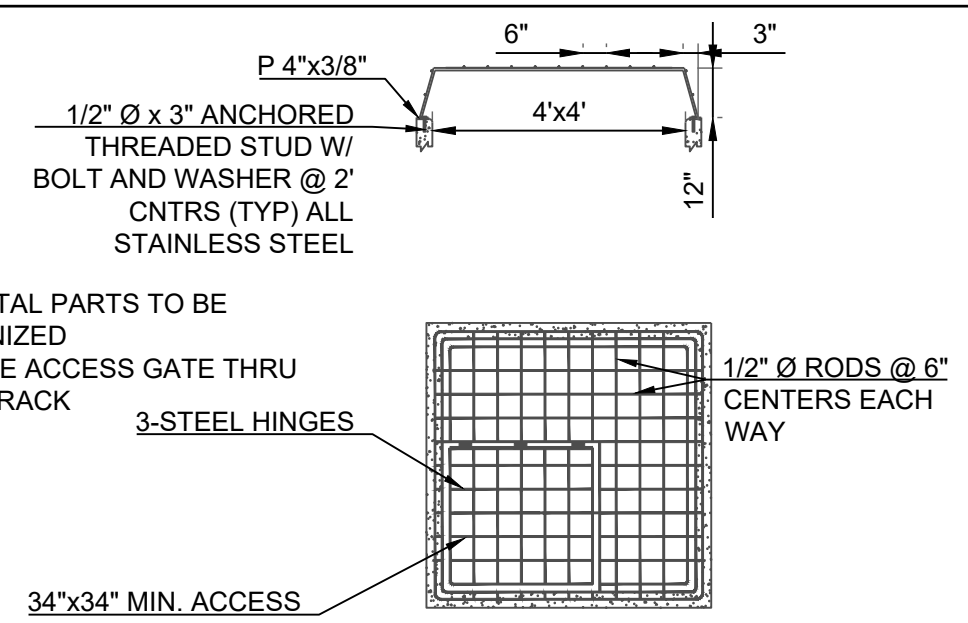
DRAWN BY: BAL
 CHECKED BY: MAB
 DATE PREPARED: 2-19-2020
 PROJ. NUMBER: 101062021
 18-017

STORM PLAN

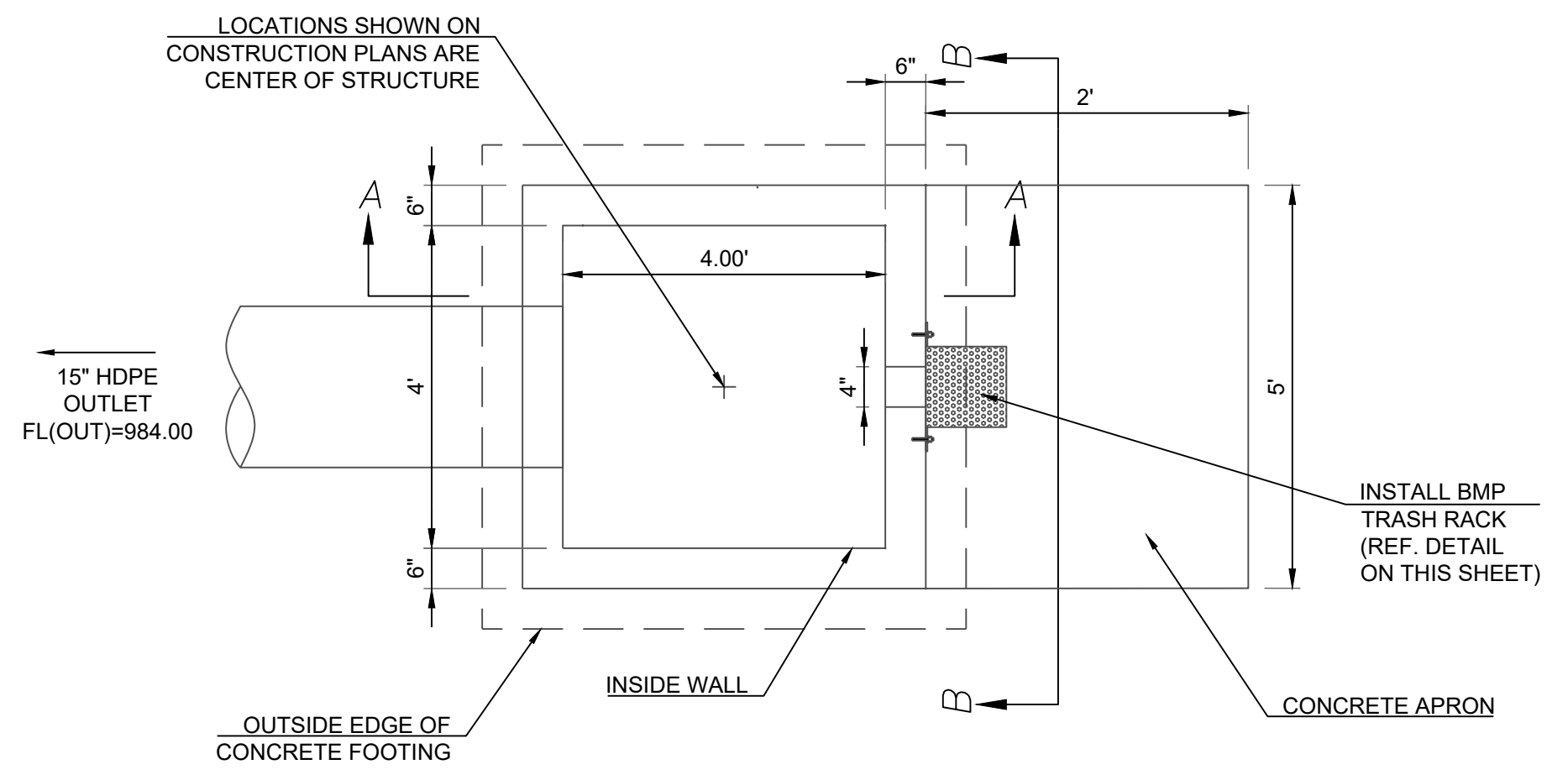
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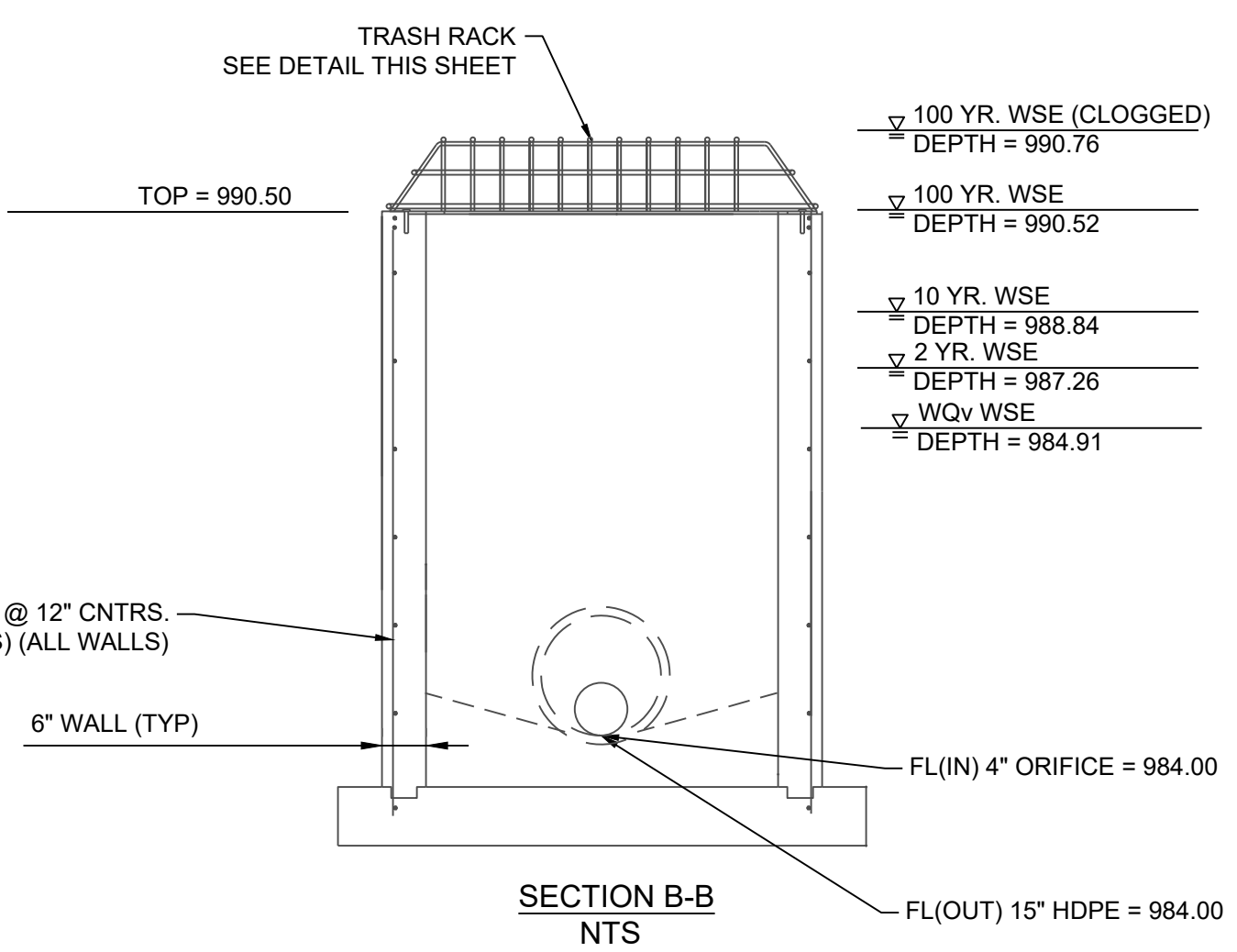
- NOTES:
- ALL METAL PARTS TO BE GALVANIZED
 - PROVIDE ACCESS GATE THRU TRASH RACK



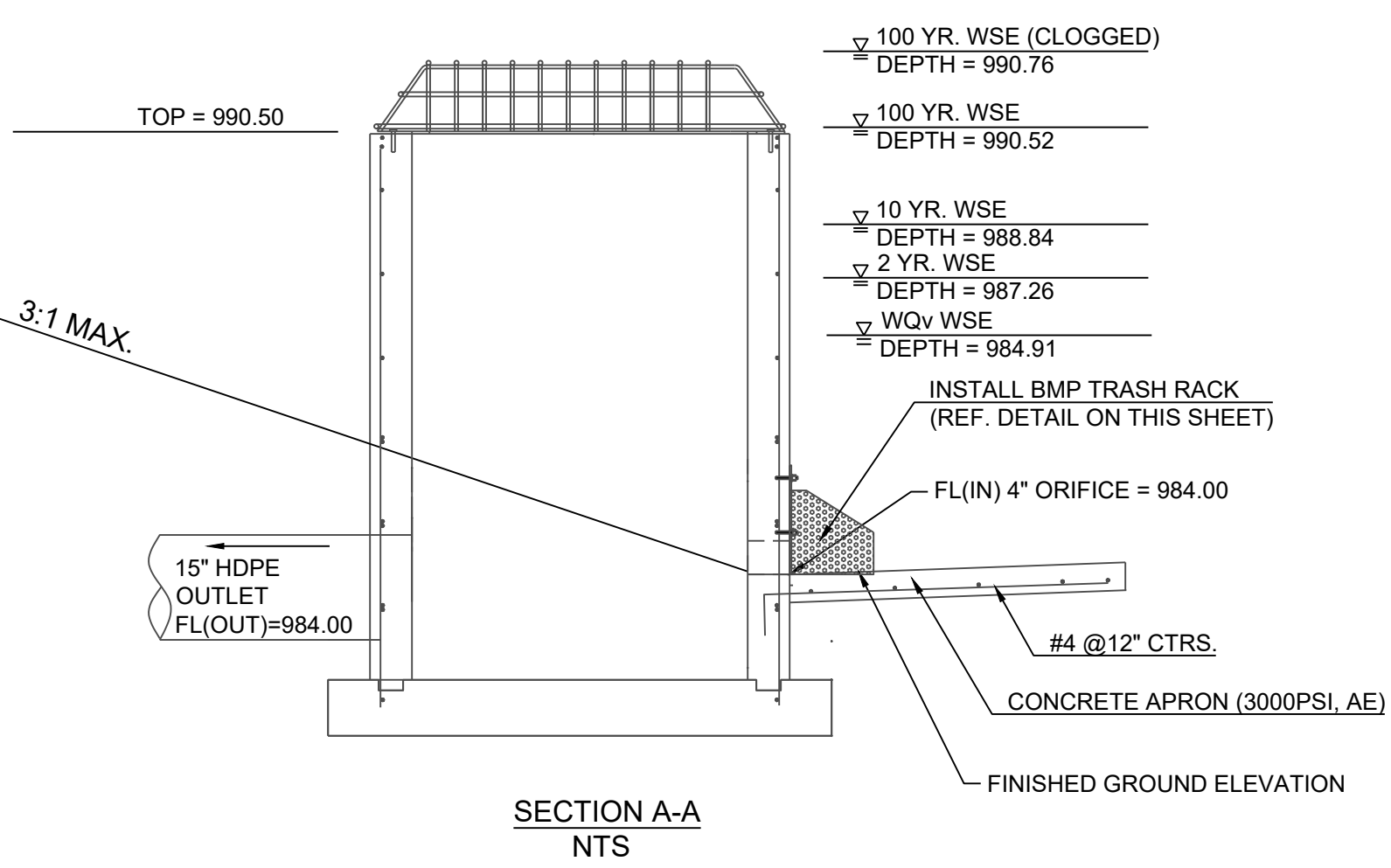
TRASH RACK DETAIL



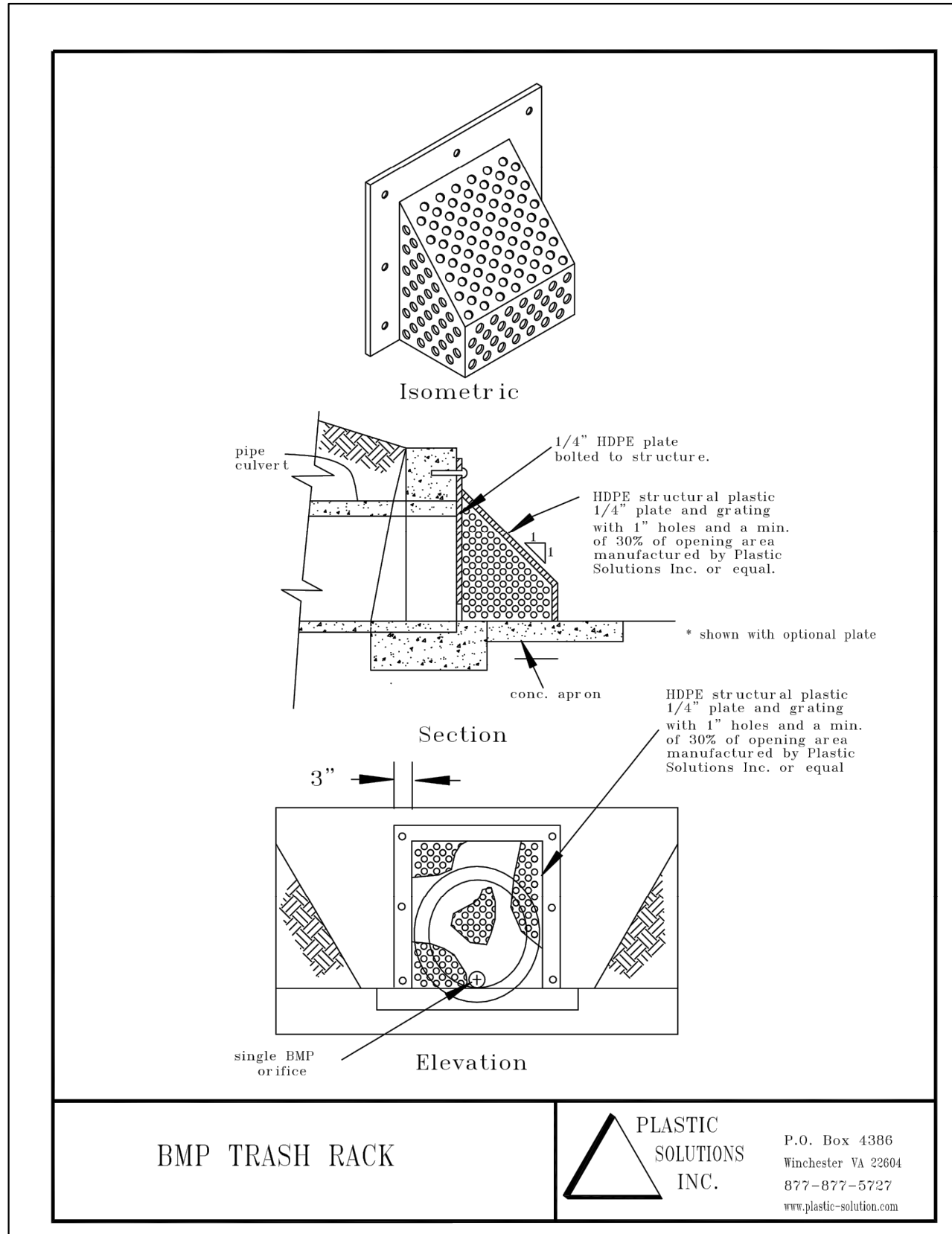
INSTALL BMP TRASH RACK (REF. DETAIL ON THIS SHEET)



SECTION B-B NTS

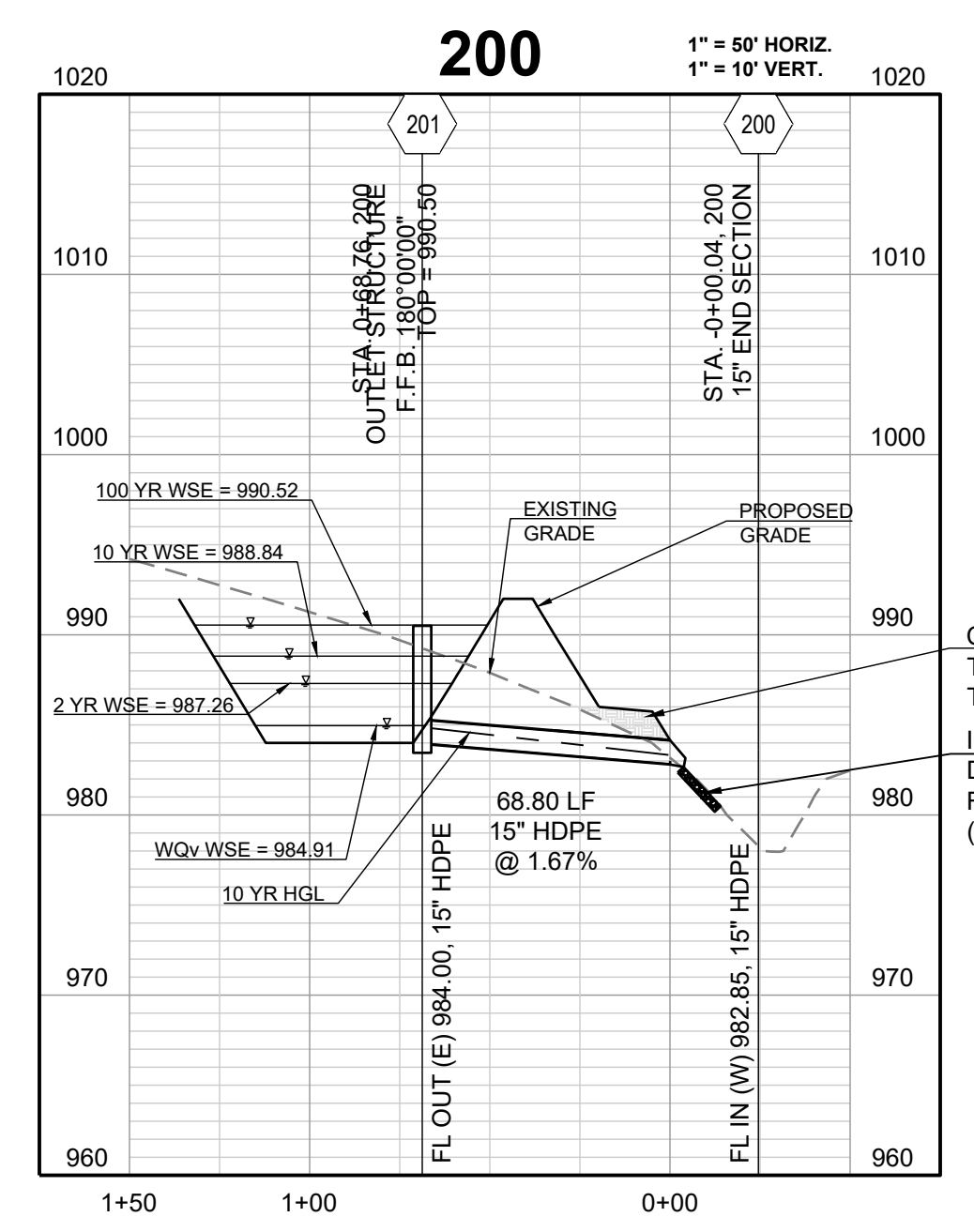
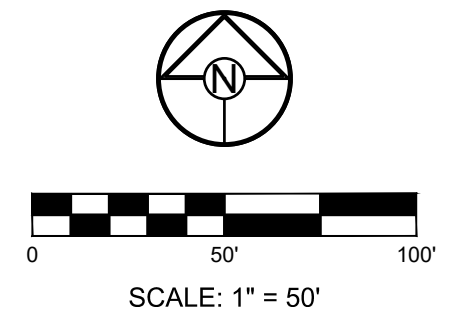
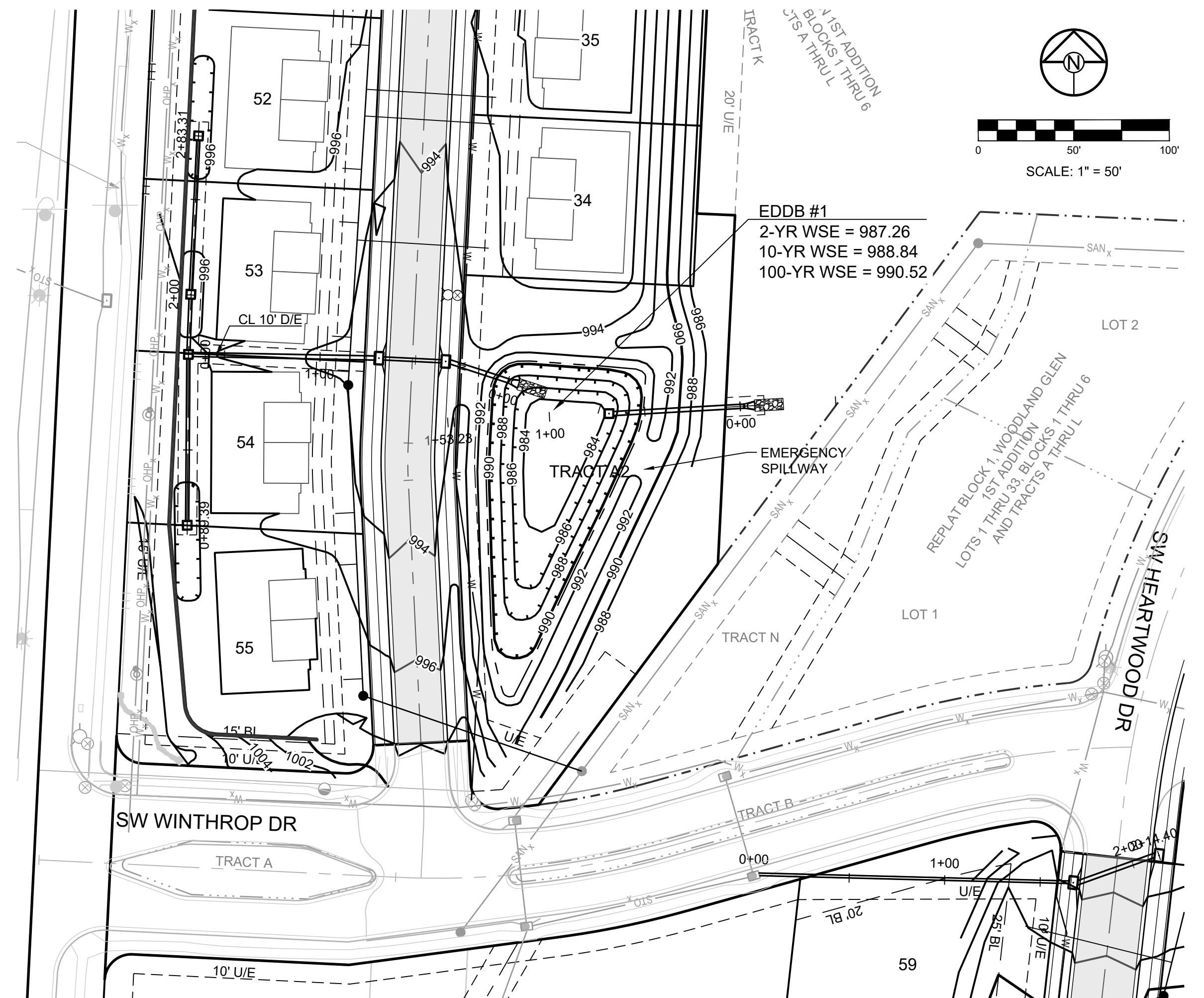


SECTION A-A NTS



BMP TRASH RACK

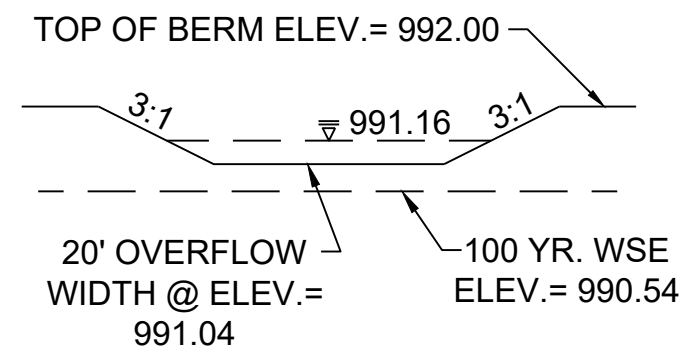
PLASTIC SOLUTIONS INC.
P.O. Box 4386
Winchester VA 22094
877-877-5727
www.julco-solutions.com



DETENTION STORAGE EDDB #1:
100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 990.52 (SEE FINAL STORMWATER MGMT. PLAN)

AUXILIARY SPILLWAY SET AT 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 991.02

AUXILIARY SPILLWAY DESIGN:
Q(100)=2.71 CFS, Q=CLH^{3/2}, C=3.33, L=20 FT., 2.71 CFS = 3.33 * 20FT. * (H^{3/2}), H=0.12 FT.



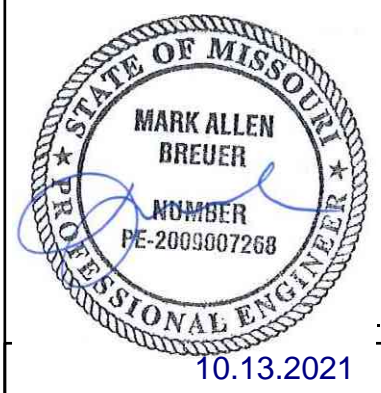
PROJECT BENCHMARK:

SW. CORNER NW 1/4 SEC. 18-47N-31W, JACKSON COUNTY, MO.
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M.D.N.R. DOC. NO. 600-65374
ELEV. 1036.41



RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/20/2021

PREPARED BY:



WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

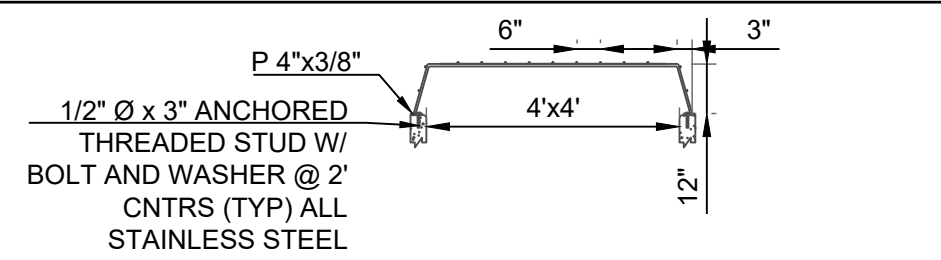
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| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | |

EDDB 1 OUTLET STRUCTURE

SHEET

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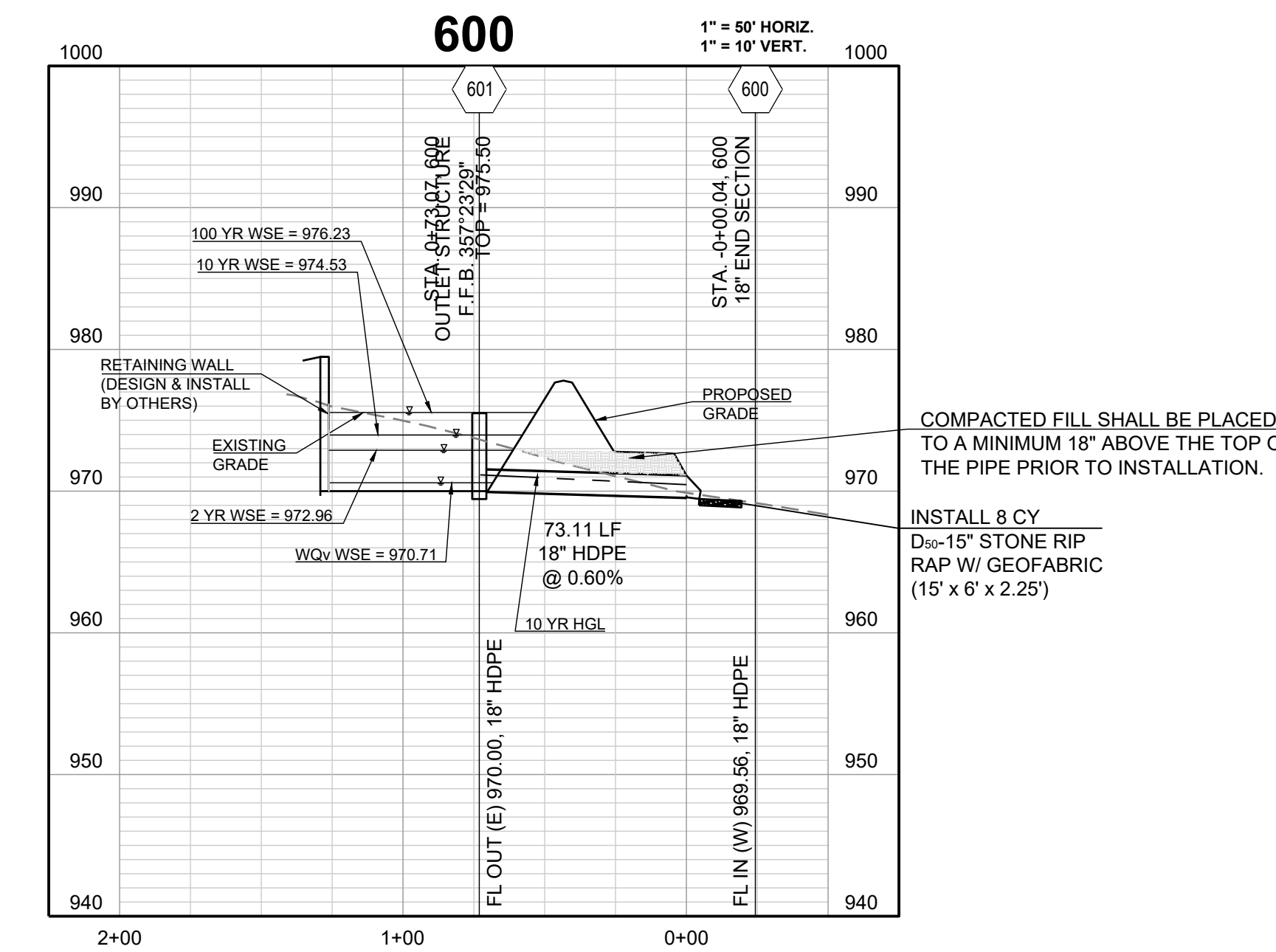
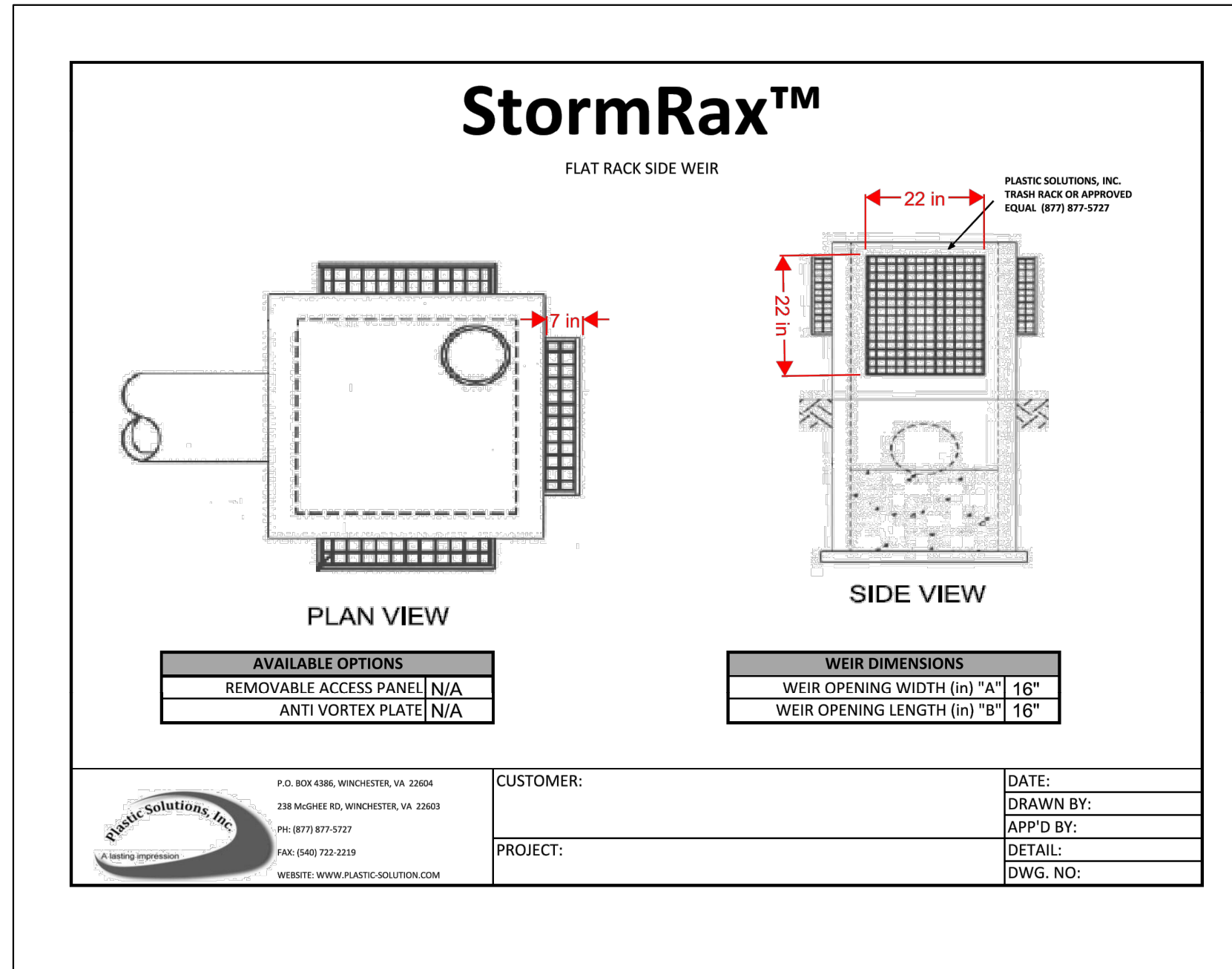
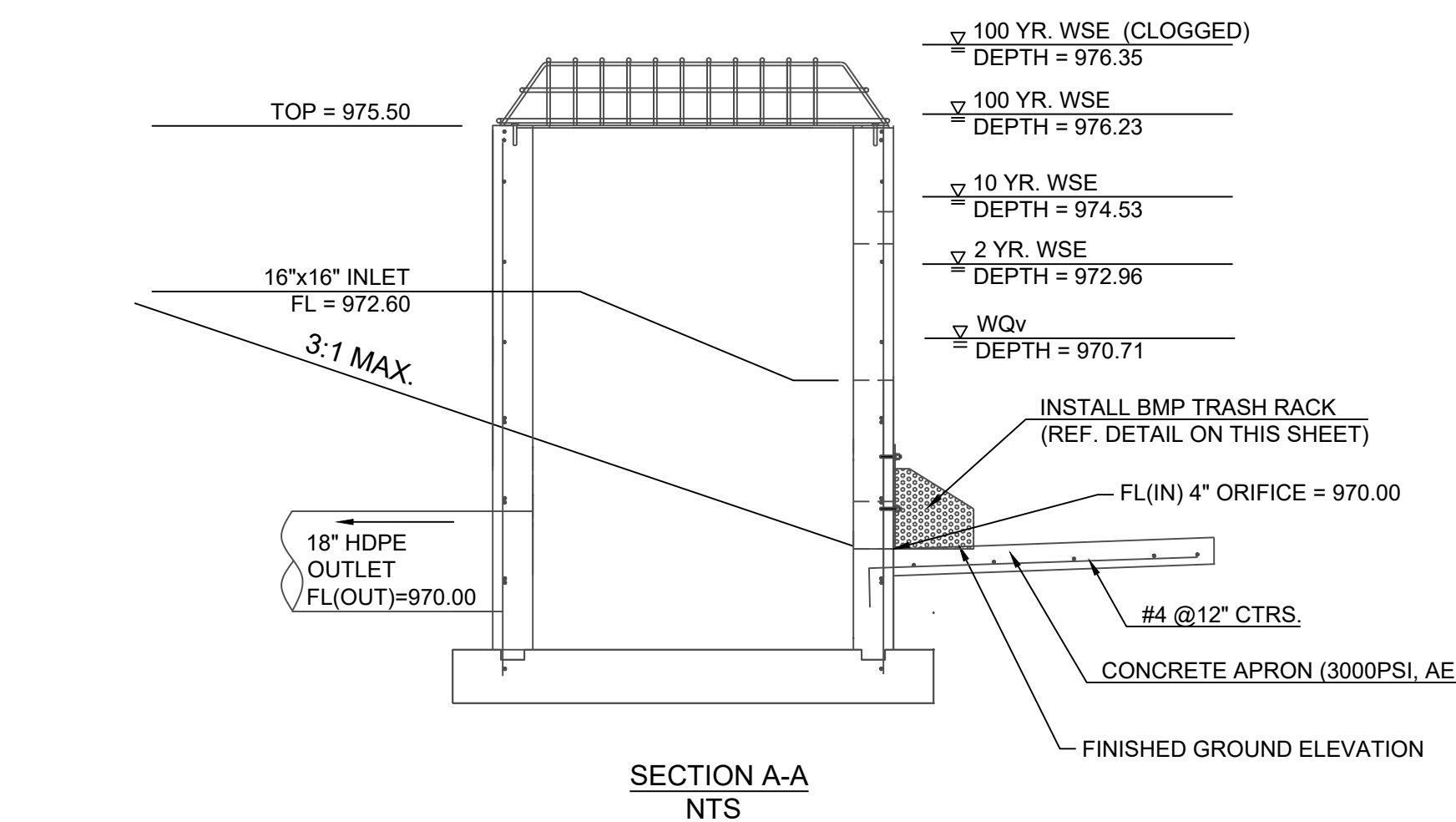
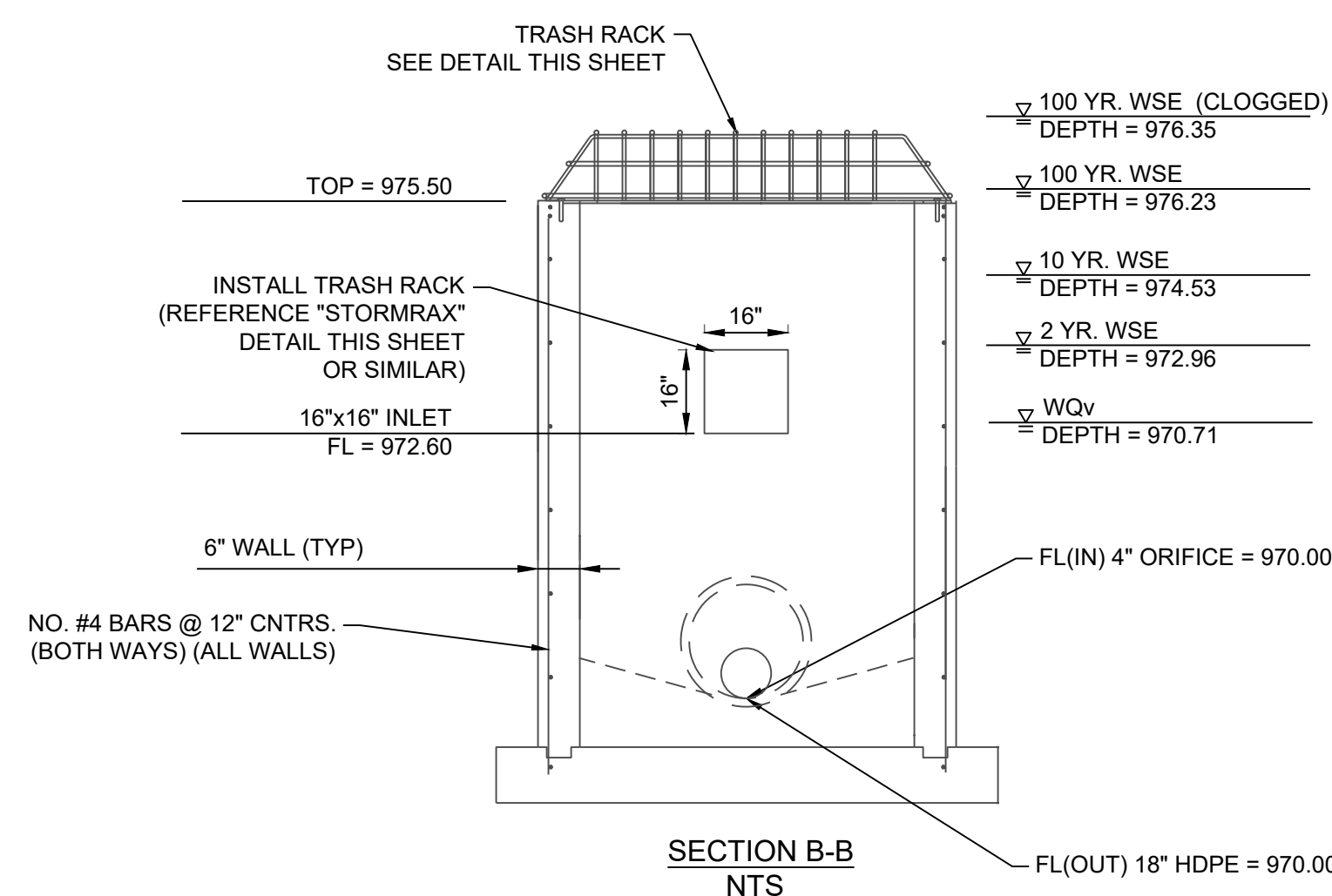
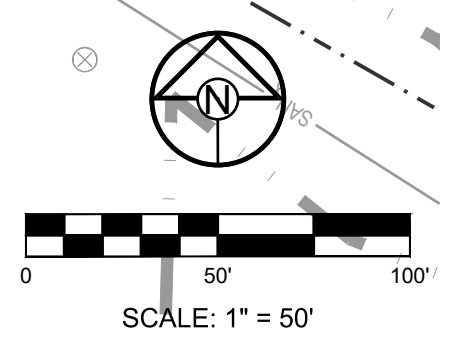
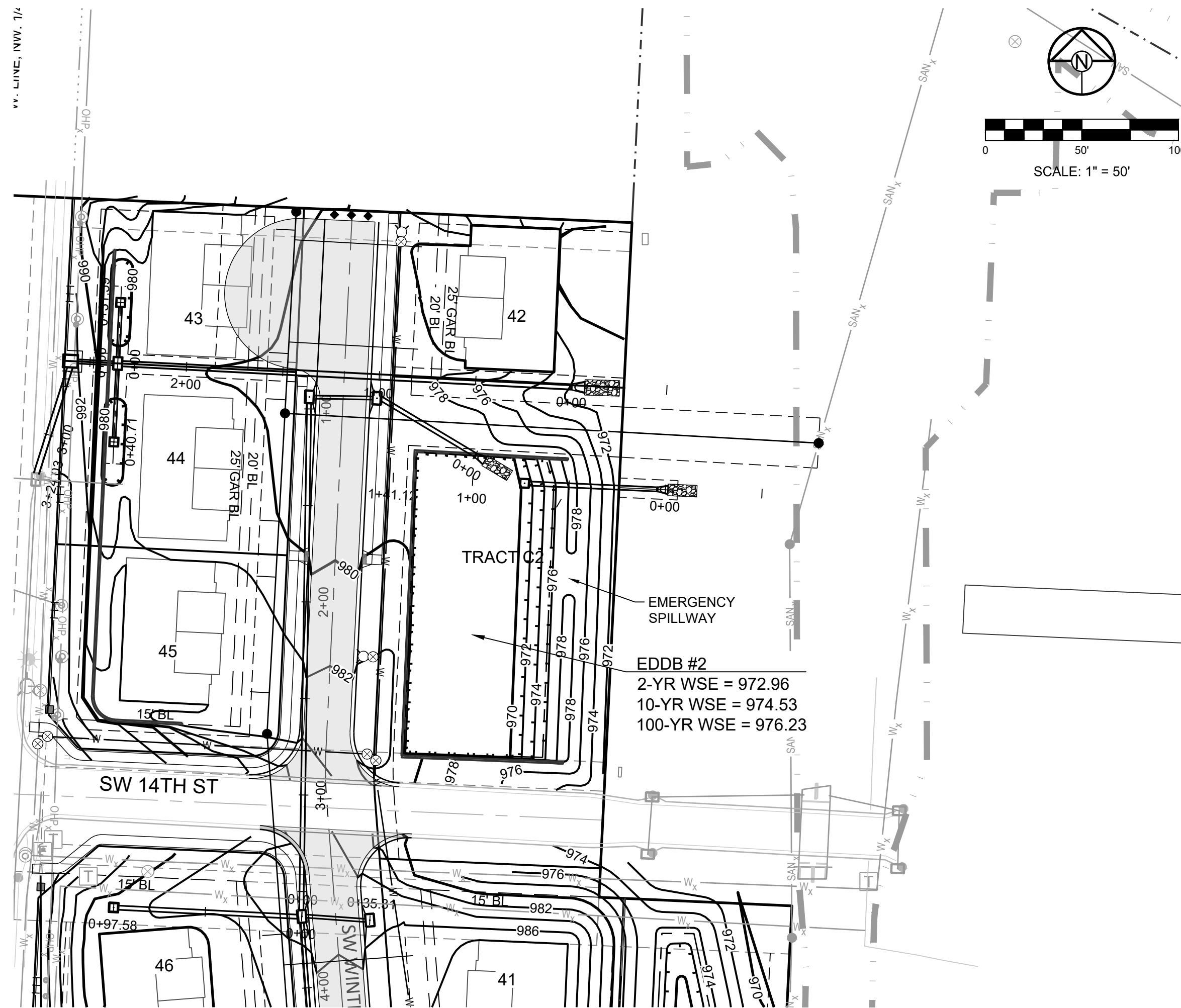
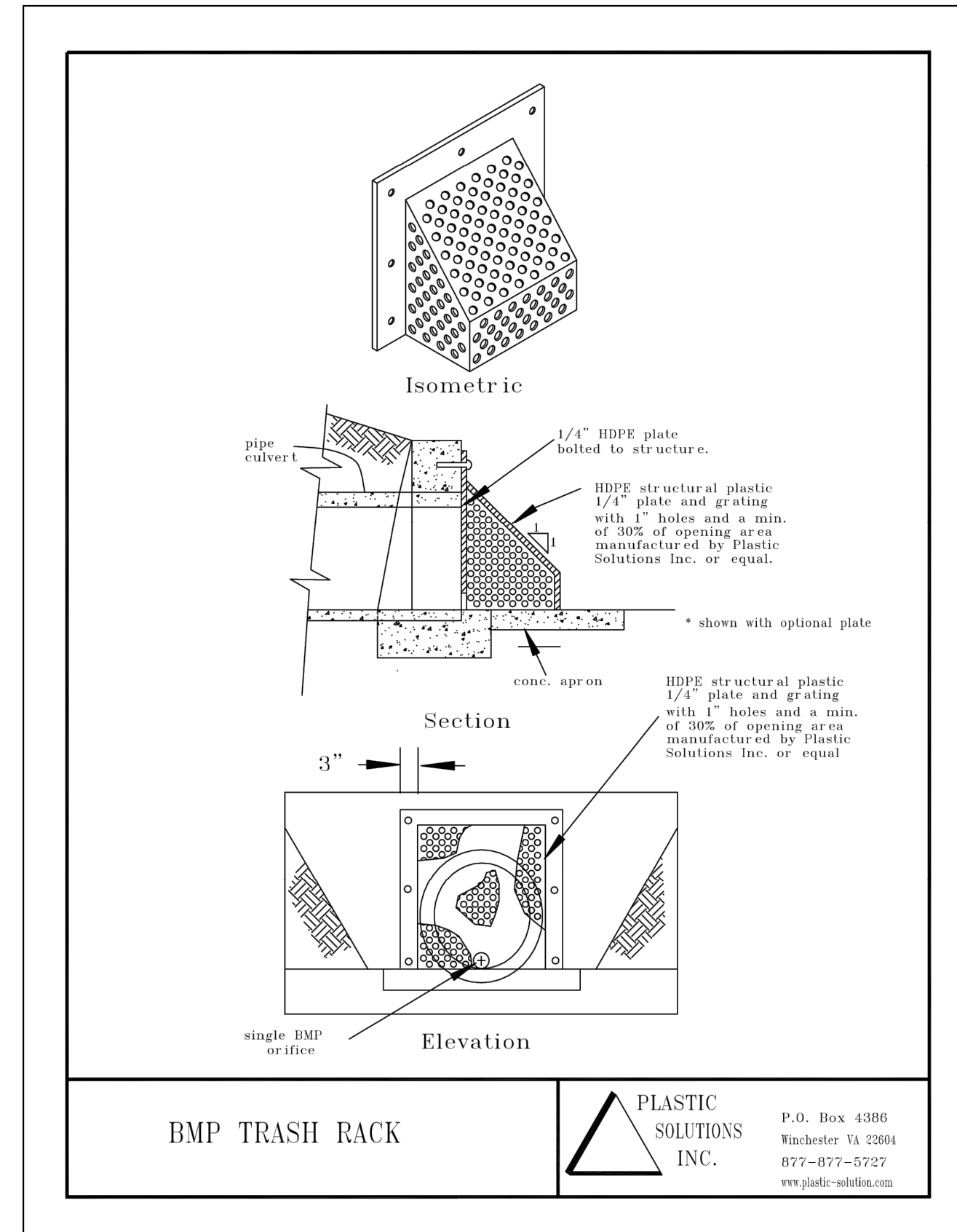
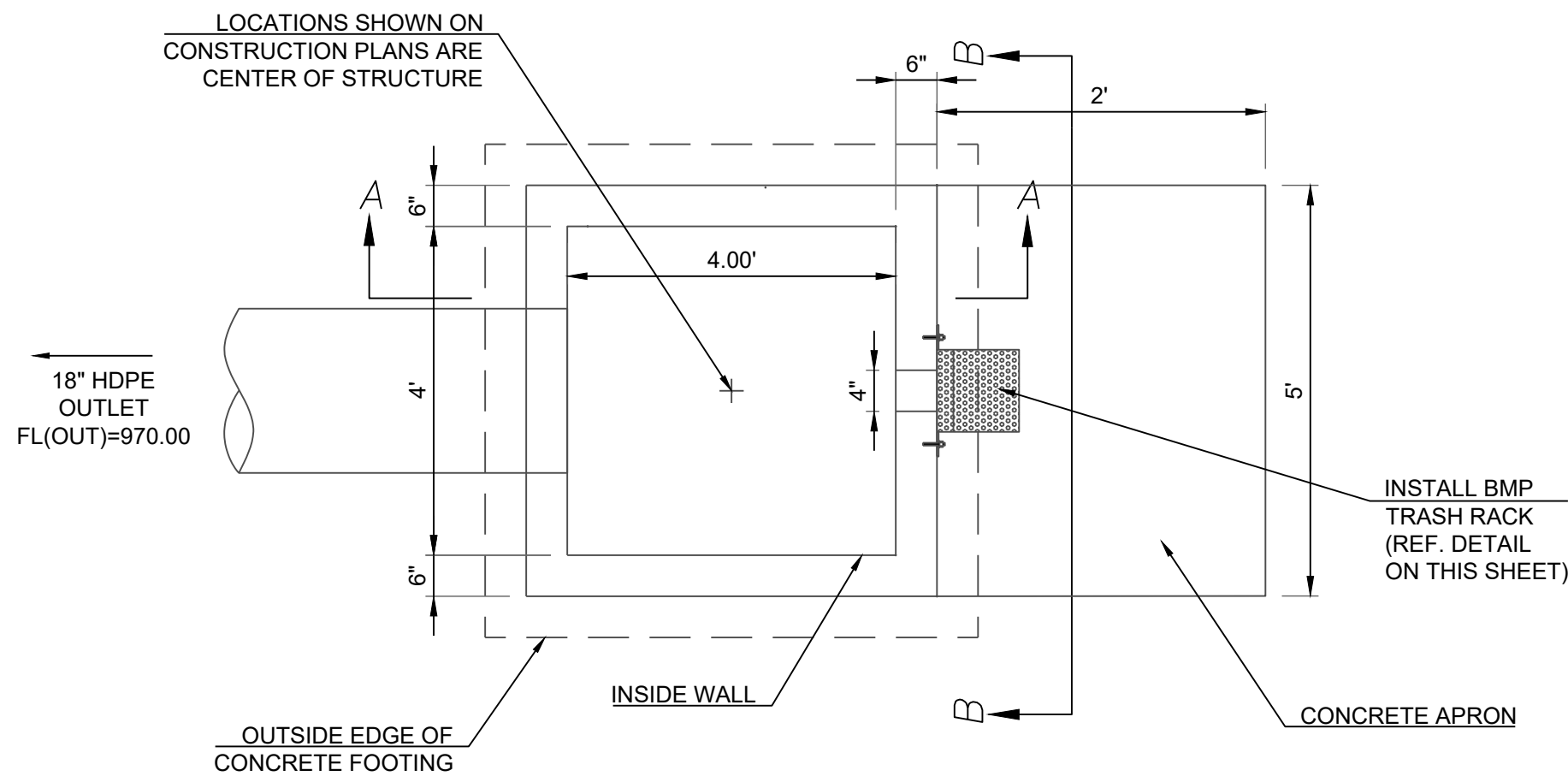
- NOTES:
 1. ALL METAL PARTS TO BE GALVANIZED
 2. PROVIDE ACCESS GATE THRU TRASH RACK



1/2" Ø RODS @ 6" CENTERS EACH WAY



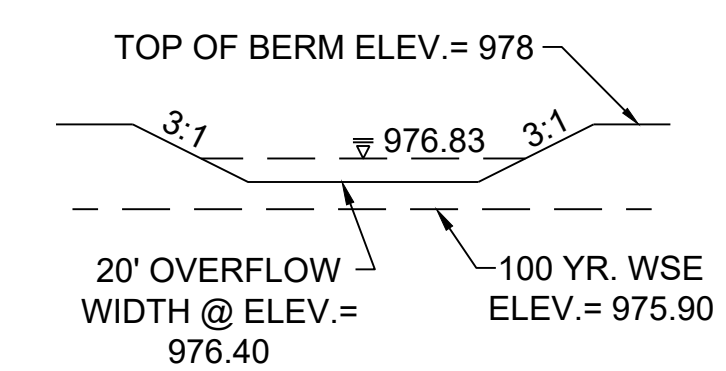
TRASH RACK DETAIL



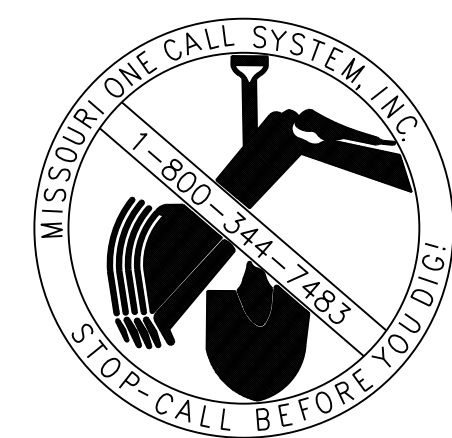
DETENTION STORAGE EDDB #2:
 100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 976.23 (SEE FINAL STORMWATER MGMT. PLAN)

AUXILIARY SPILLWAY SET AT 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 976.73

AUXILIARY SPILLWAY DESIGN:
 Q(100)=18.47 CFS, Q=CLH*(3/2), C=3.33, L=20 FT., 18.47 CFS = 3.33 * 20FT. * (H^{3/2}), H=0.43 FT.



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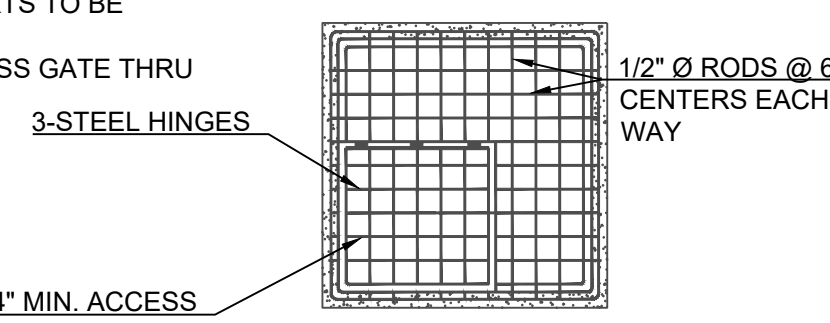
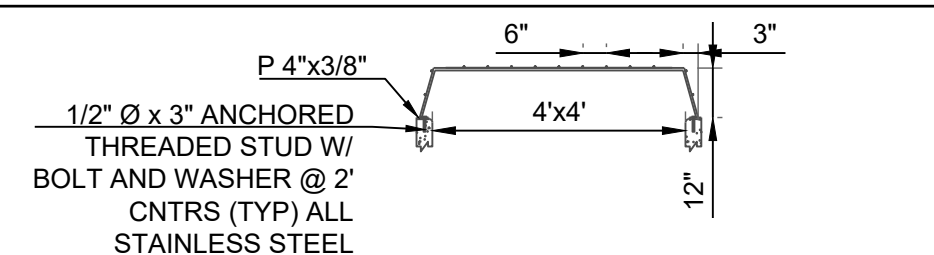
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| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | |

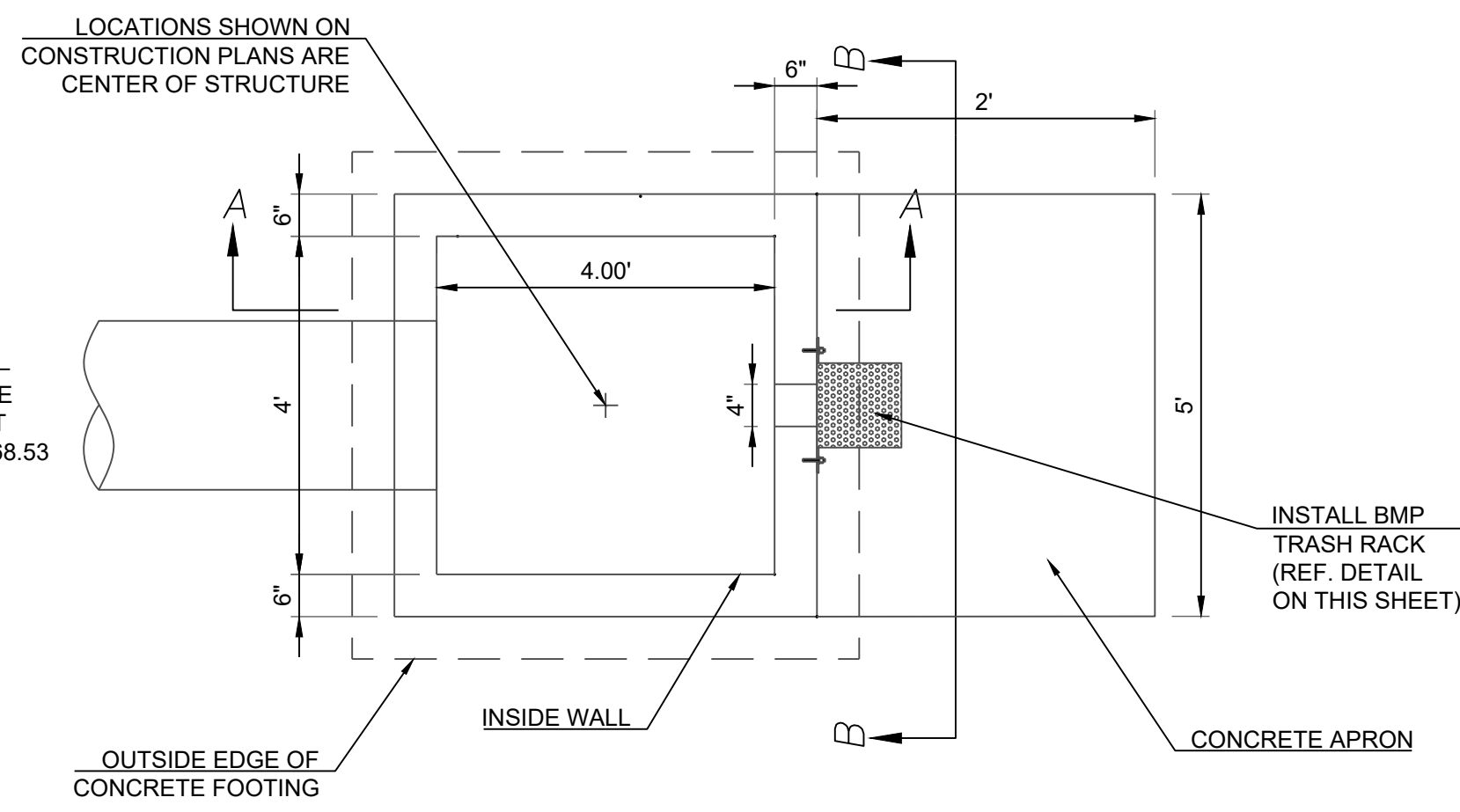
EDDB 2 OUTLET STRUCTURE

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- NOTES:
1. ALL METAL PARTS TO BE GALVANIZED
 2. PROVIDE ACCESS GATE THRU TRASH RACK

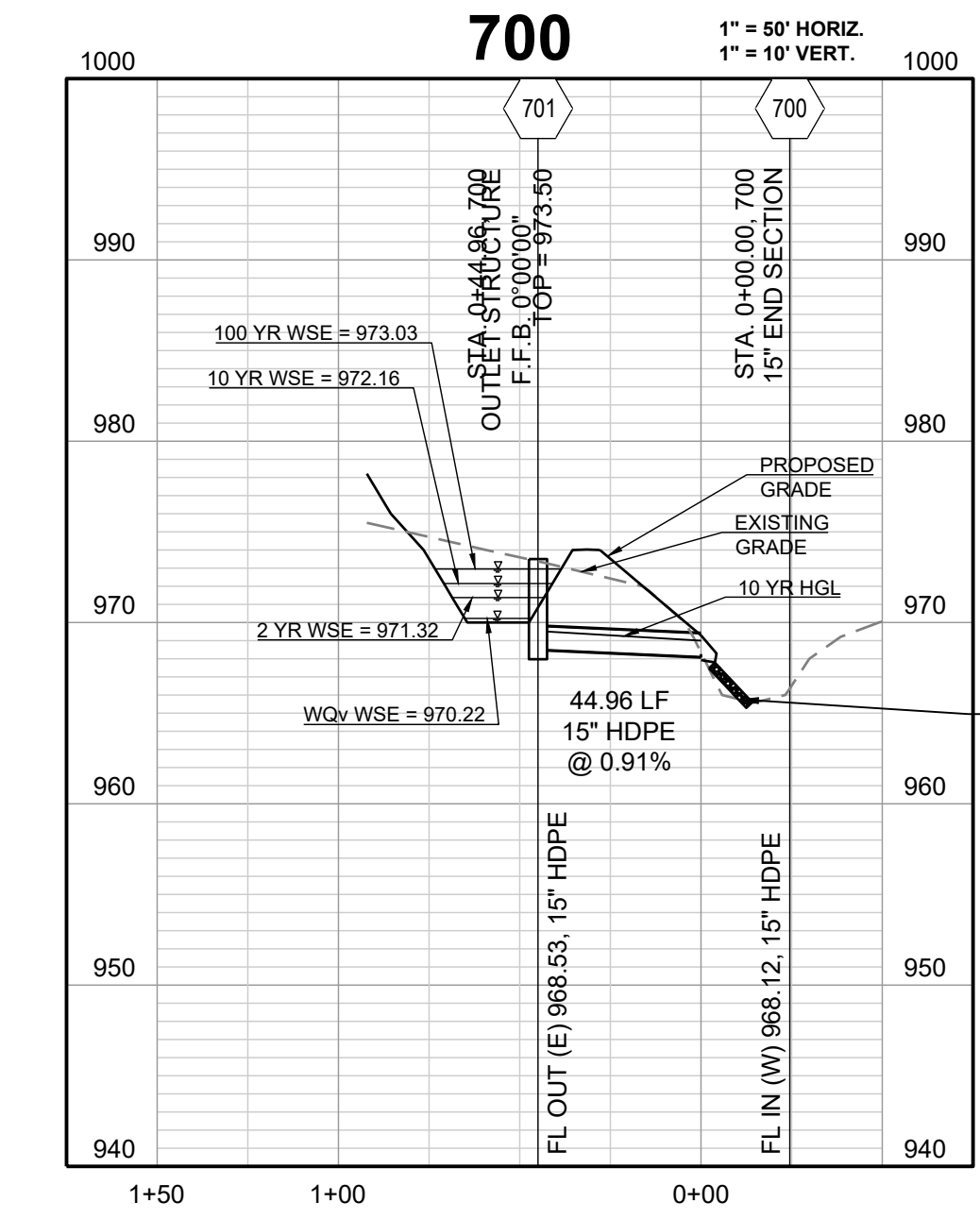
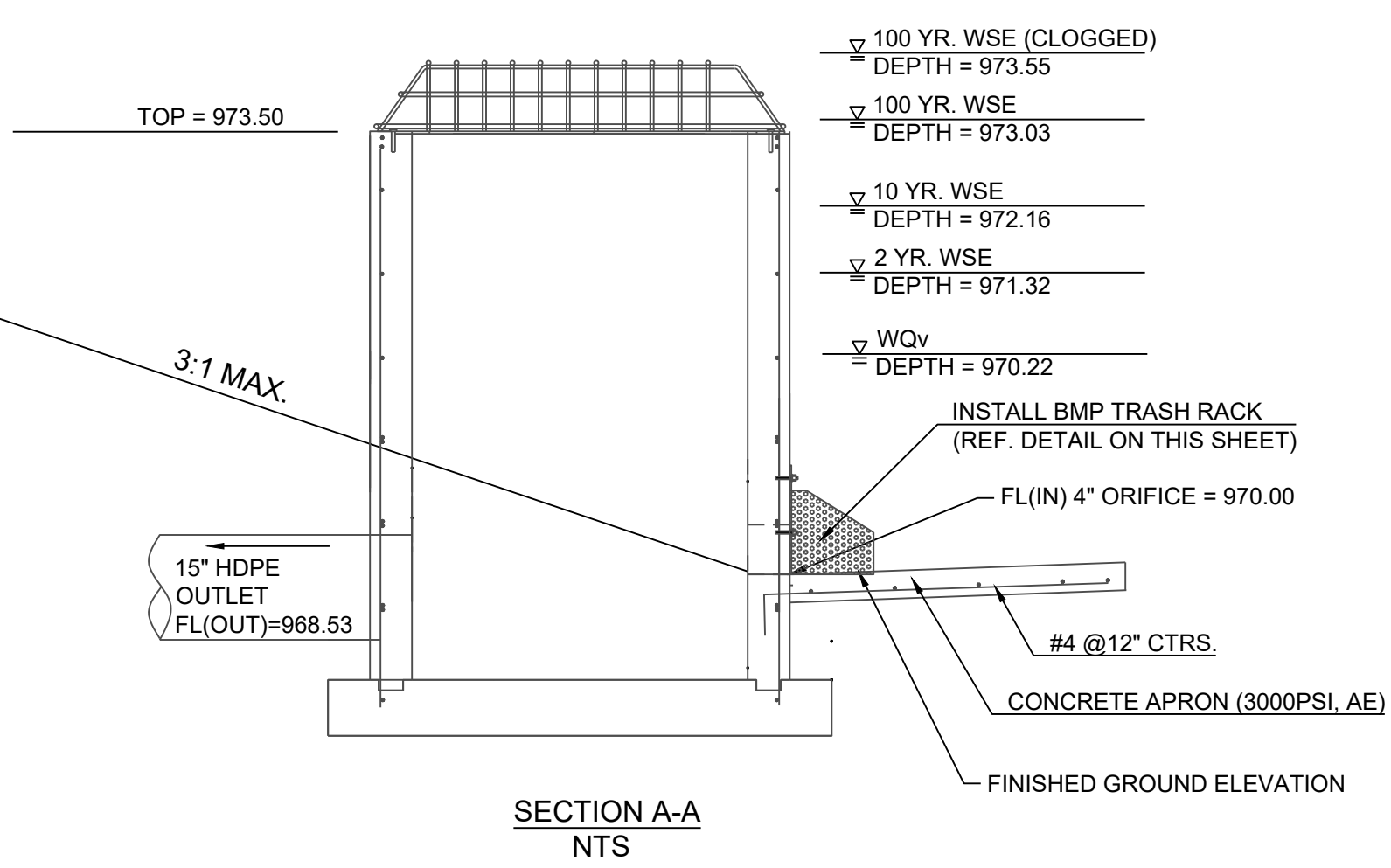
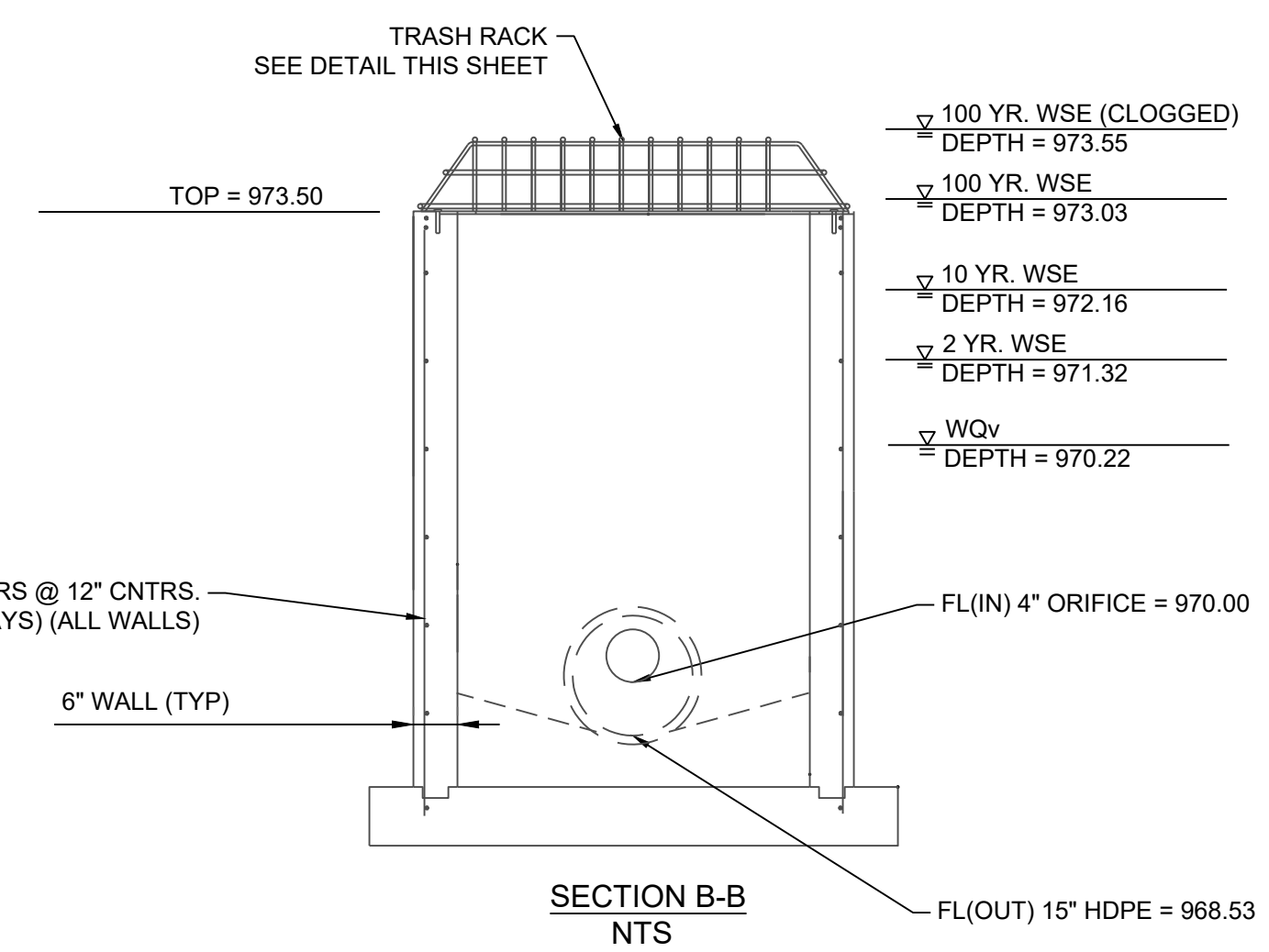
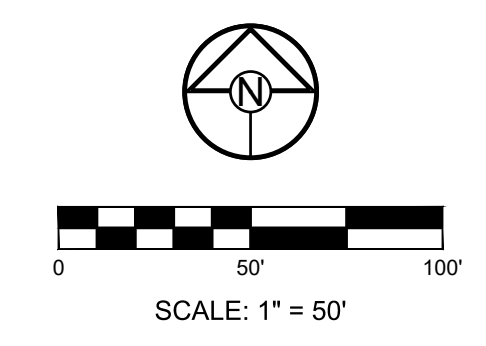
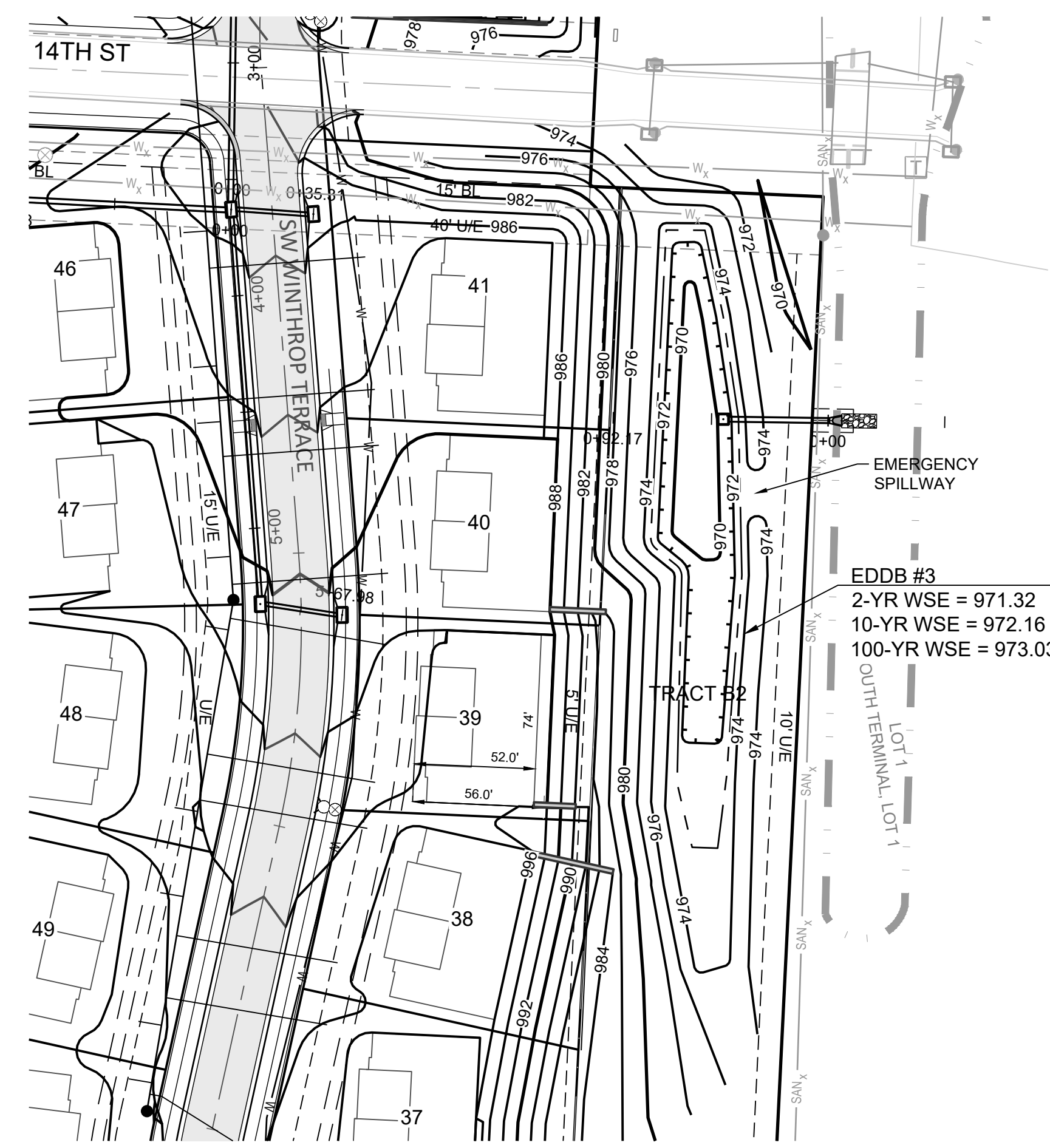


TRASH RACK DETAIL



BMP TRASH RACK

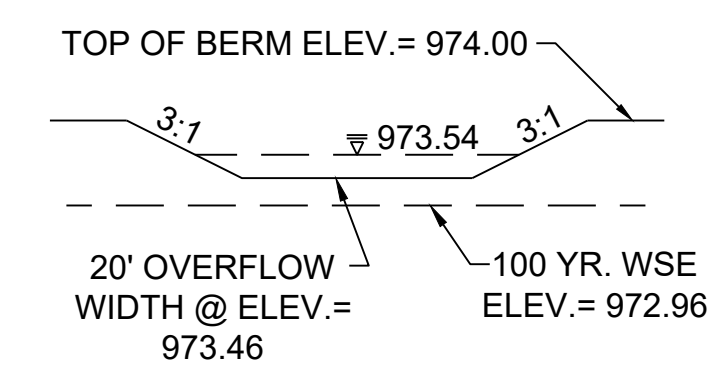
PLASTIC SOLUTIONS INC.
 P.O. Box 4886
 Winchester VA 23091
 877-877-5727
 www.plastic-solutions.com



DETENTION STORAGE EDDB #3:
 100 YEAR, 24 HR. RAINFALL - MAXIMUM WSE = 973.03 (SEE FINAL STORMWATER MGMT. PLAN)

AUXILIARY SPILLWAY SET AT 0.5 FEET ABOVE MAX. WSE, SPILLWAY ELEV. = 973.53

AUXILIARY SPILLWAY DESIGN:
 $Q(100) = 1.43 \text{ CFS}$, $Q = CLH^{3/2}$, $C = 3.33$, $L = 20 \text{ FT.}$, $1.43 \text{ CFS} = 3.33 * 20 \text{ FT.} * (H^{3/2})$, $H = 0.08 \text{ FT.}$



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SCHLAGEL
 ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
 14920 West 107th Street • Lenexa, Kansas 66215
 (913) 492-5158 • Fax: (913) 492-8400
 WWW.SCHLAGELASSOCIATES.COM
 Missouri State Certificates of Authority
 #E2002003690F #LAC2001005237 #S2002008695F

PREPARED BY:

 MARK ALLEN BREUER
 LICENSE NUMBER
 PE-2005007268
 10.13.2021

WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

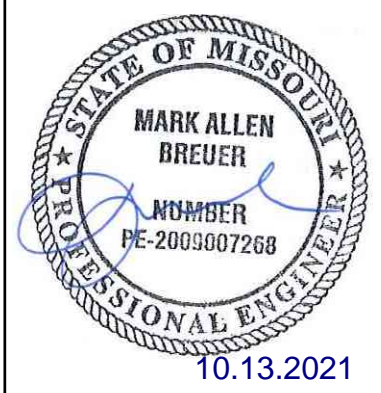
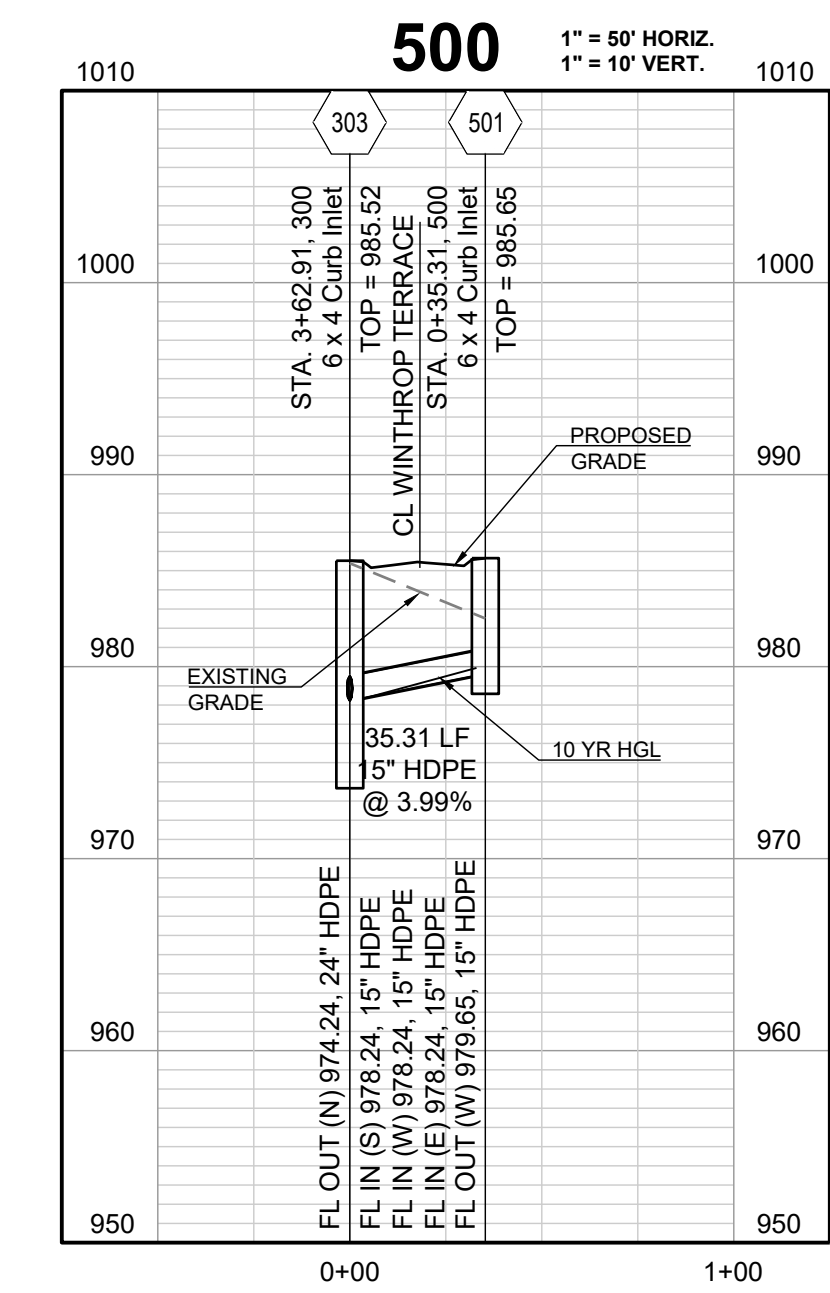
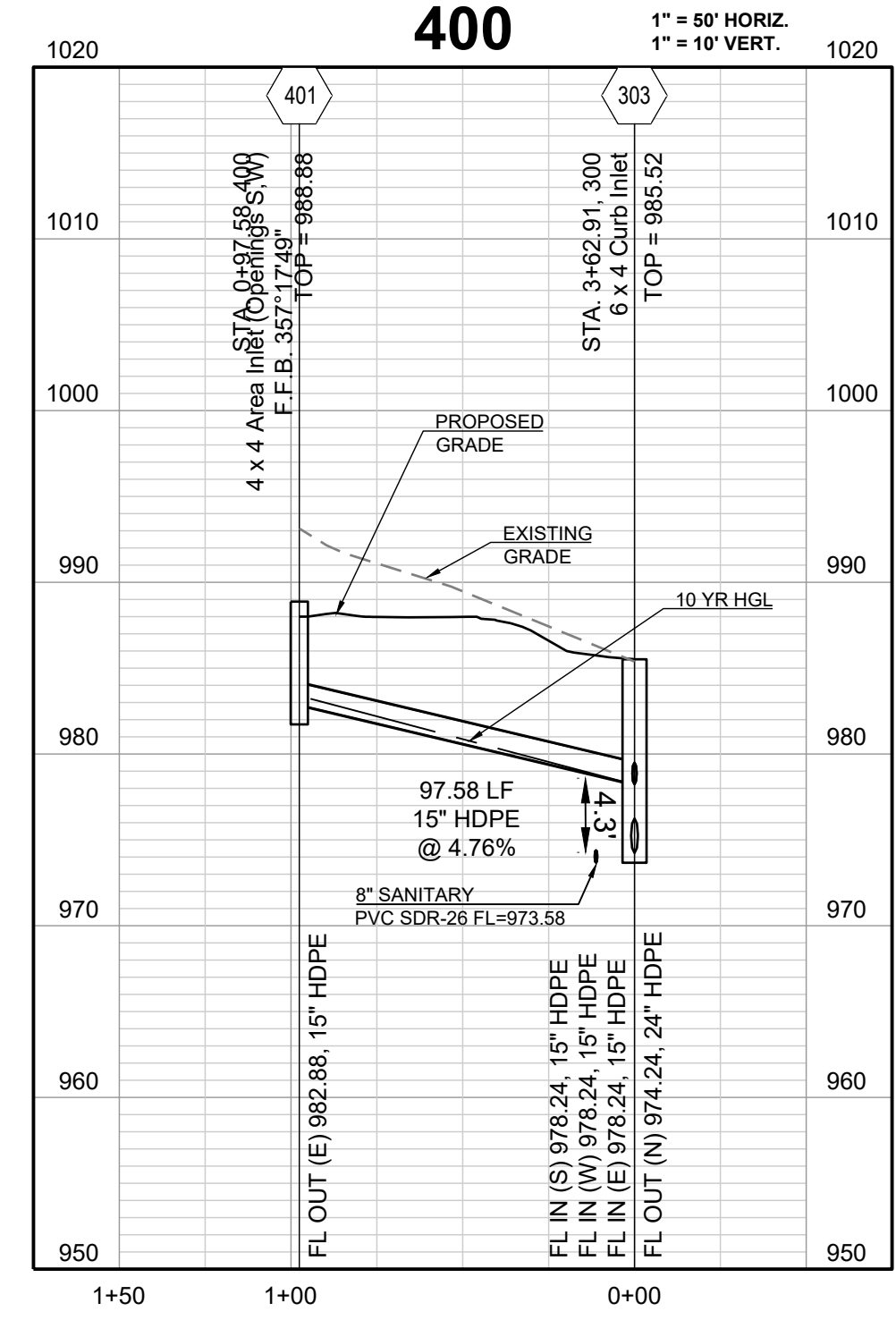
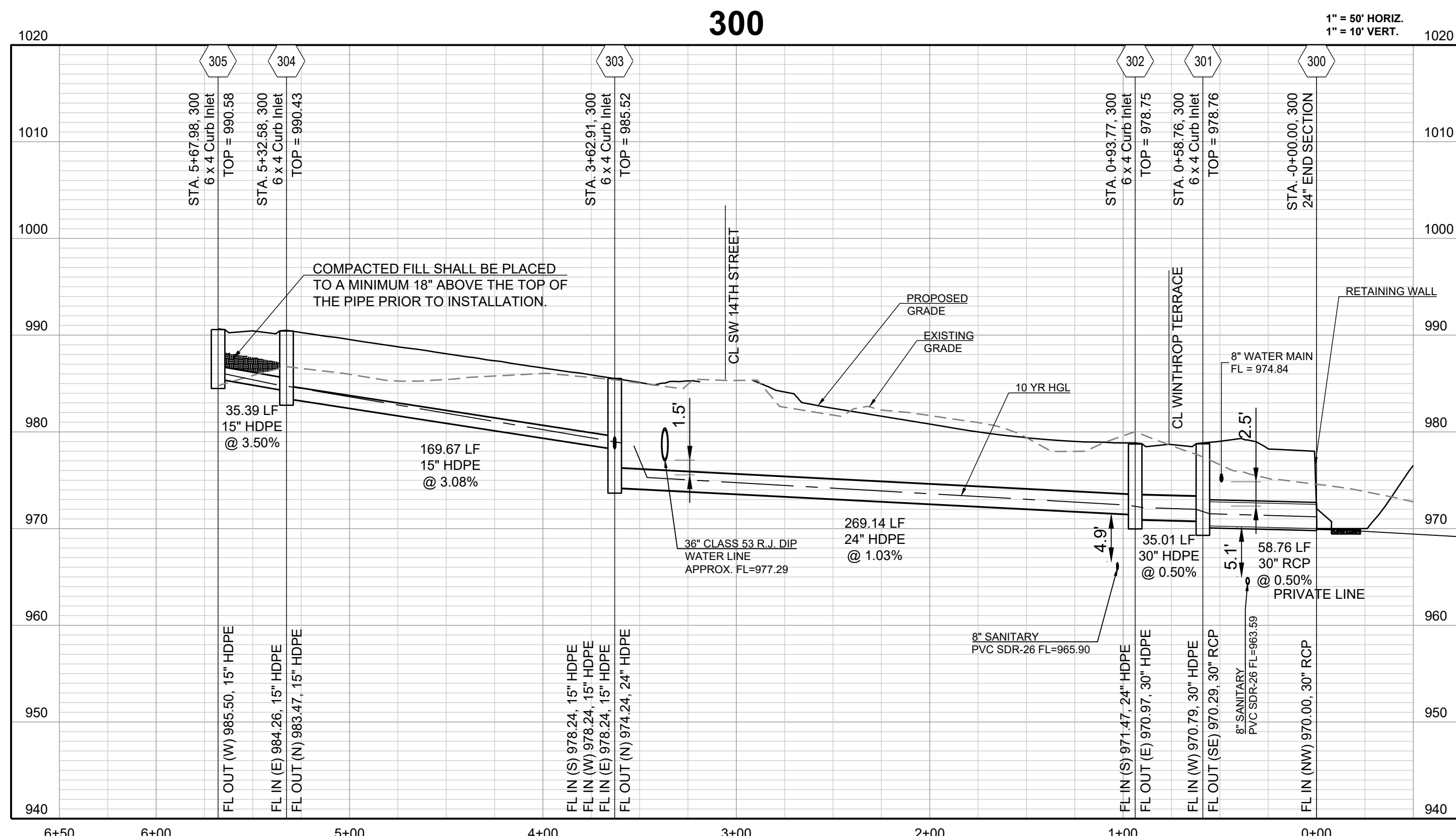
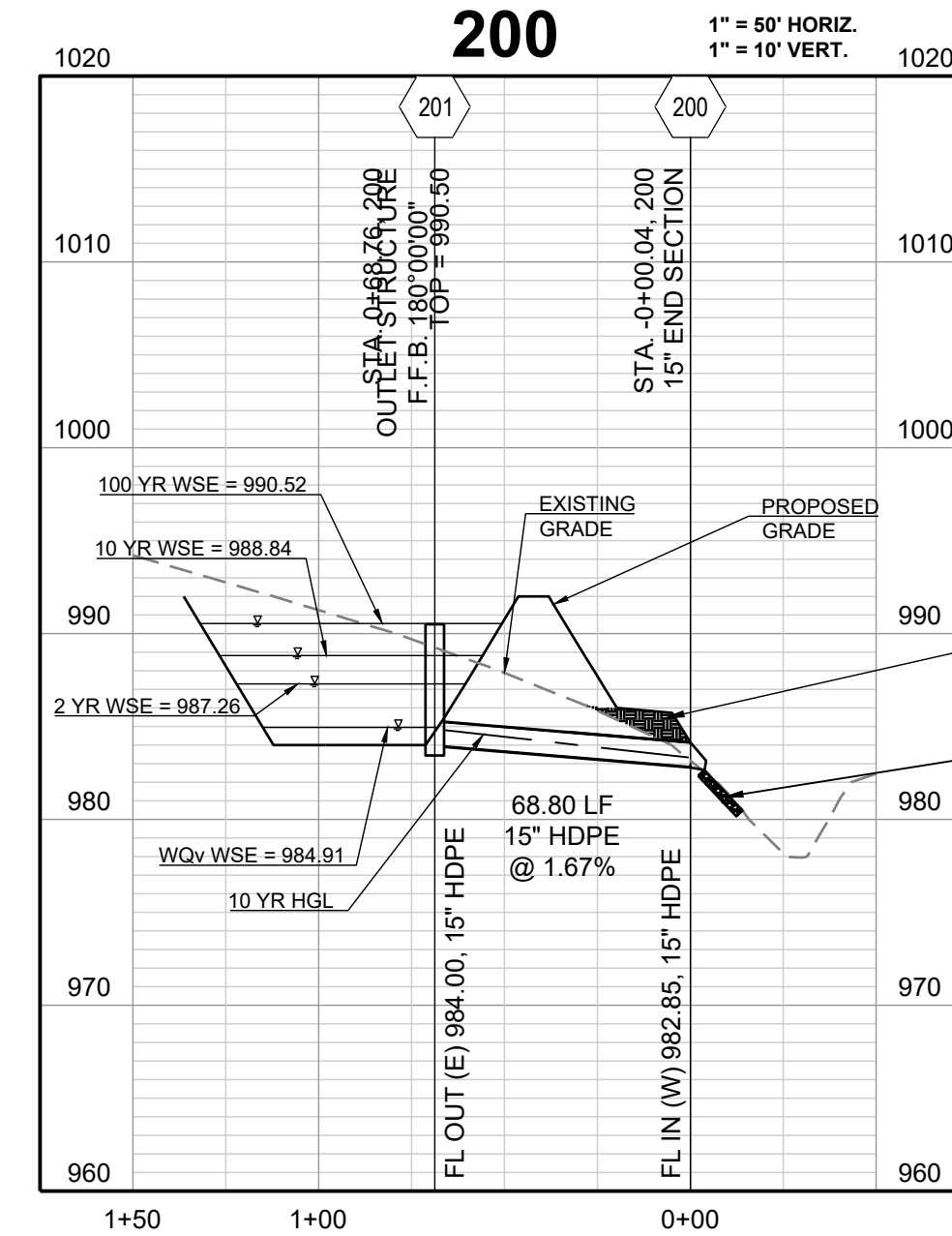
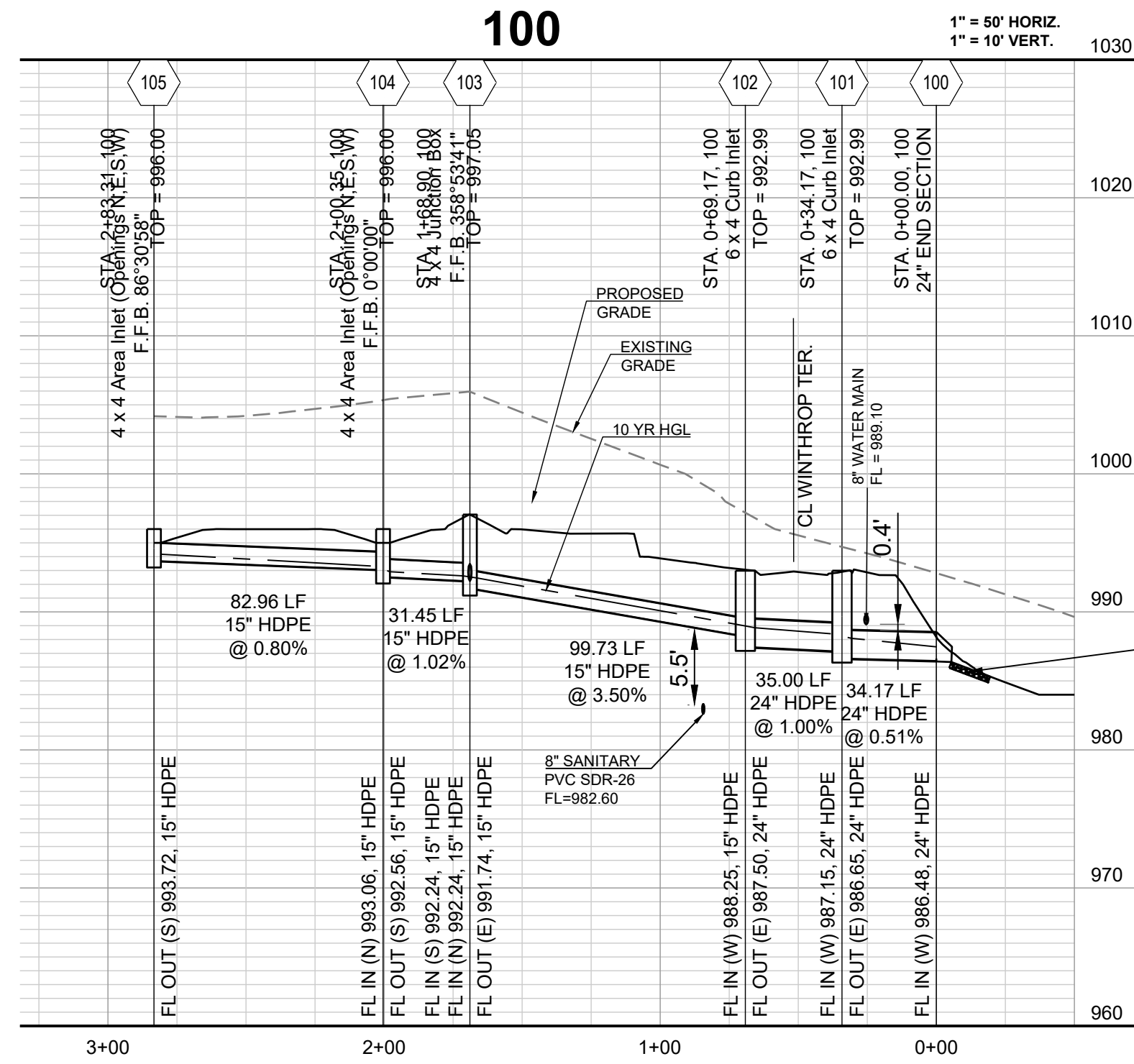
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| 04/24/2020 | CITY COMMENTS |
| 01/12/2021 | SCHLAGEL QUANTITIES |
| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 05/15/2021 | CITY COMMENTS |
| 06/28/2021 | CITY COMMENTS |
| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | 10/06/2021 |

DRAWN BY: 18-017
 CHECKED BY: ###
 DATE PREPARED: 2-19-2020
 PROJ. NUMBER: 10/06/2021

EDDB 3 OUTLET STRUCTURE

SHEET
19

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WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

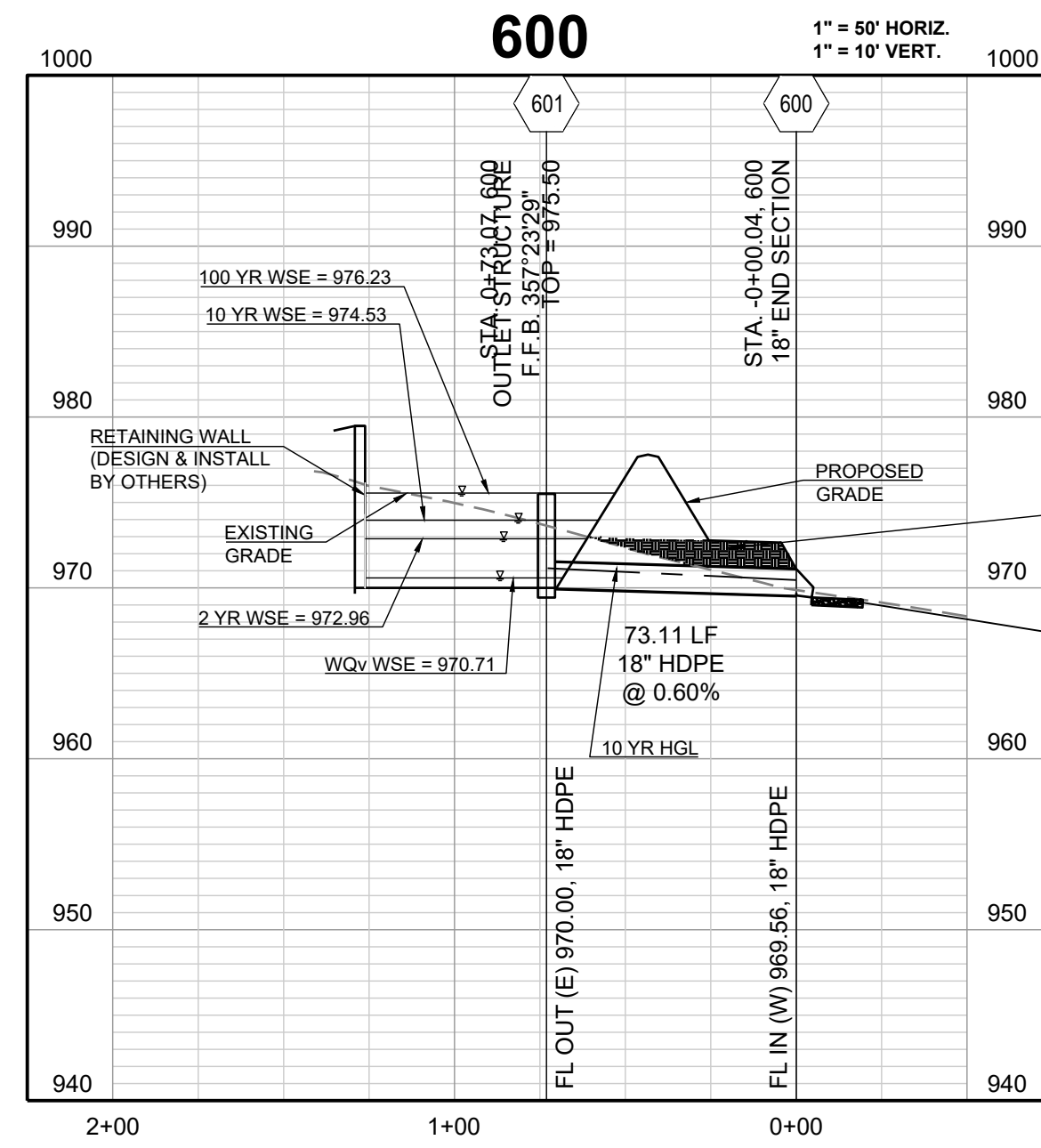
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| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | |

STORM PROFILE

SHEET

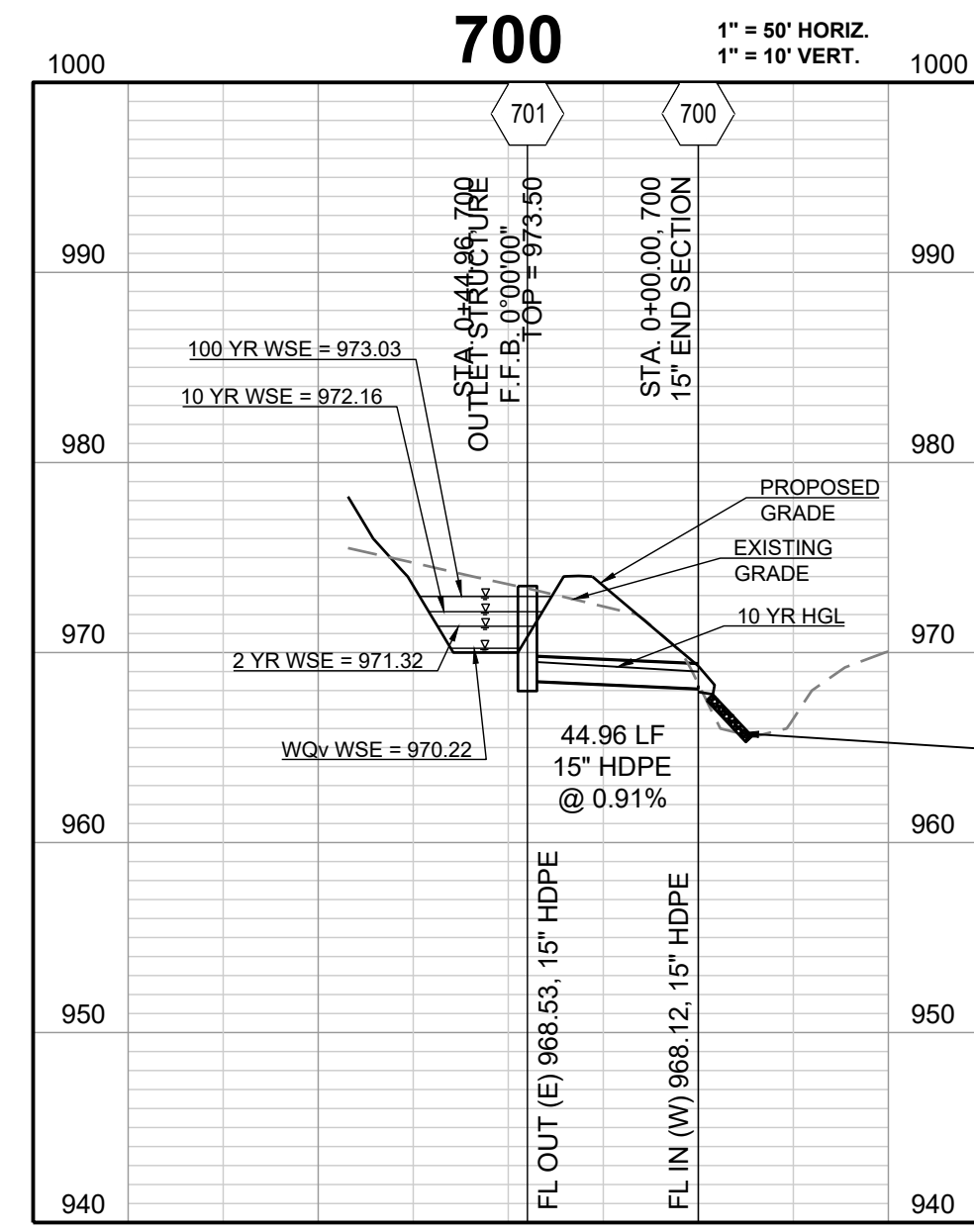
RELEASE FOR
 CONSTRUCTION
 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 10/20/2021

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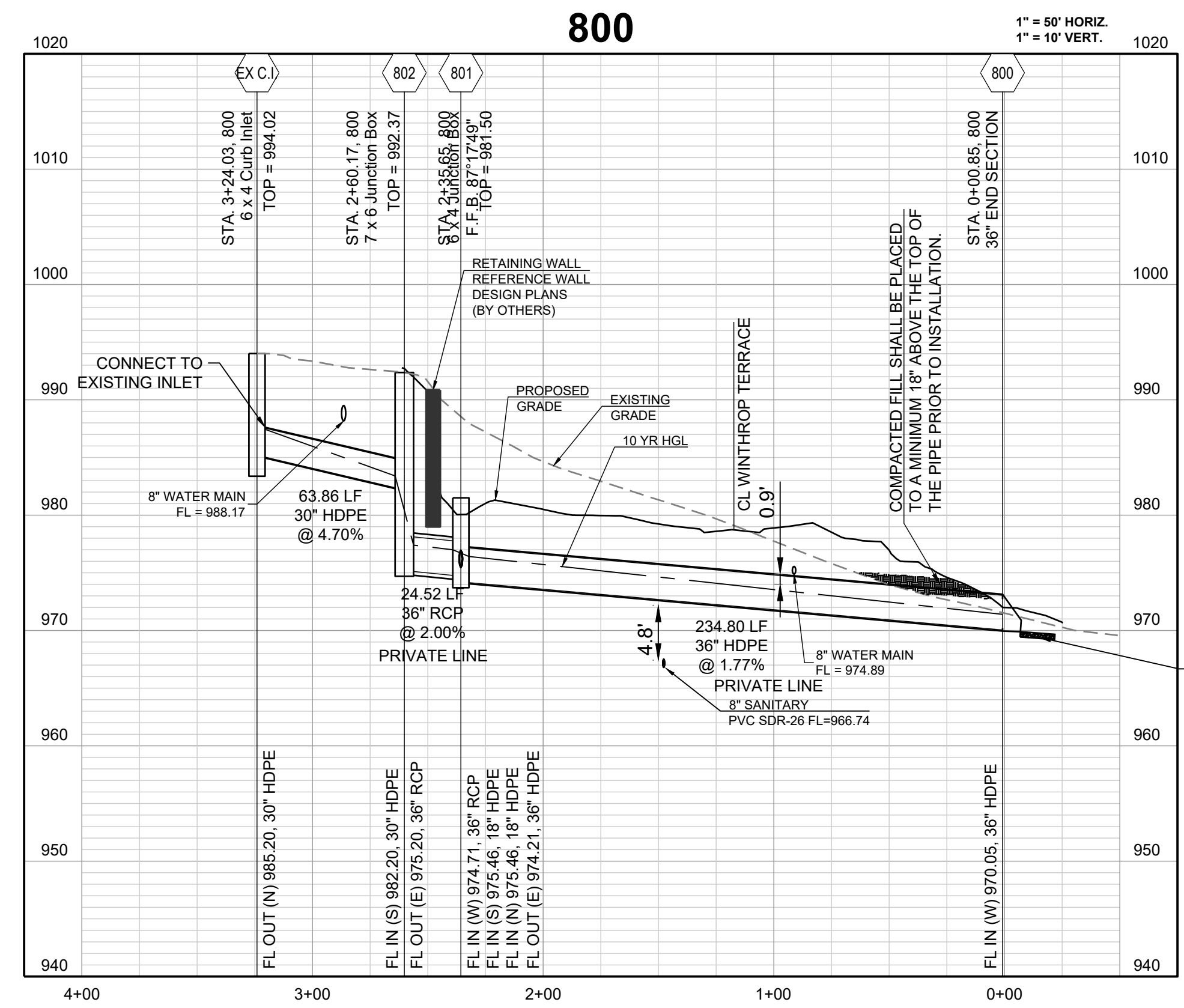


COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF THE PIPE PRIOR TO INSTALLATION.

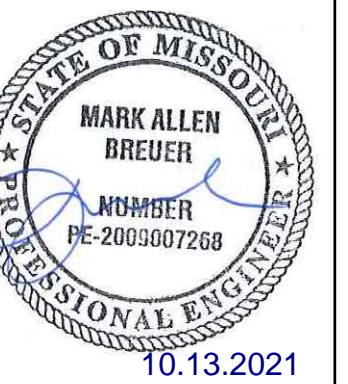
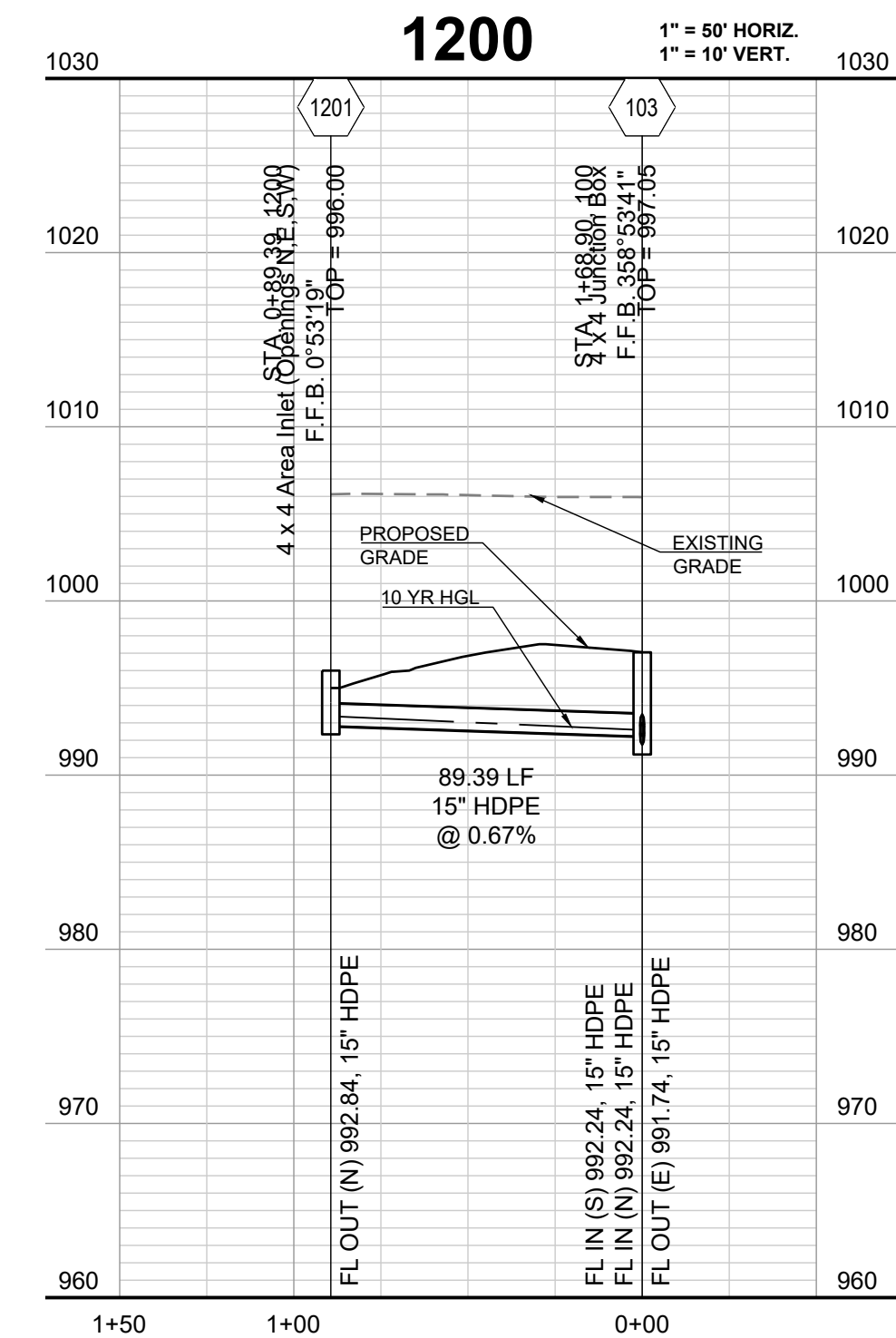
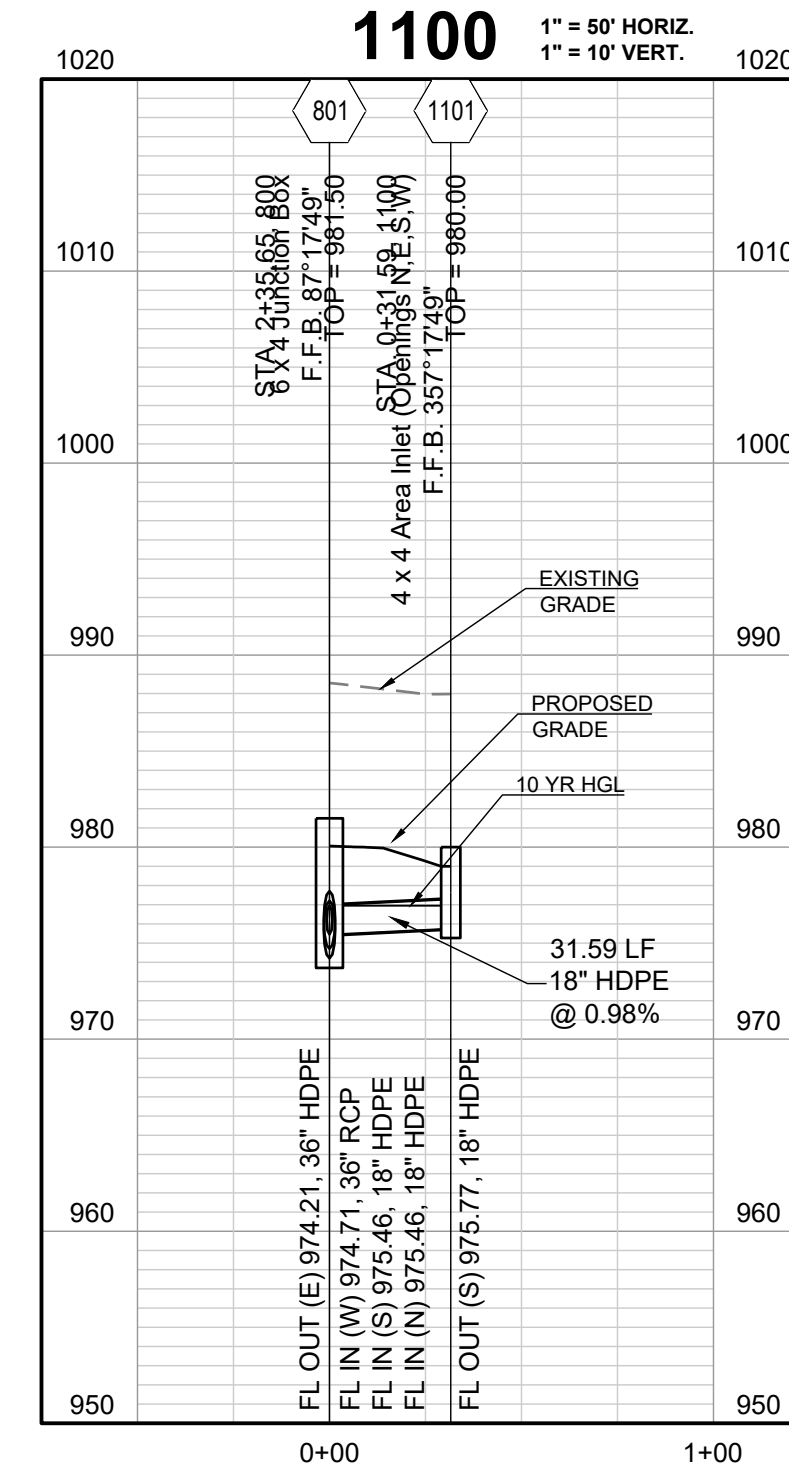
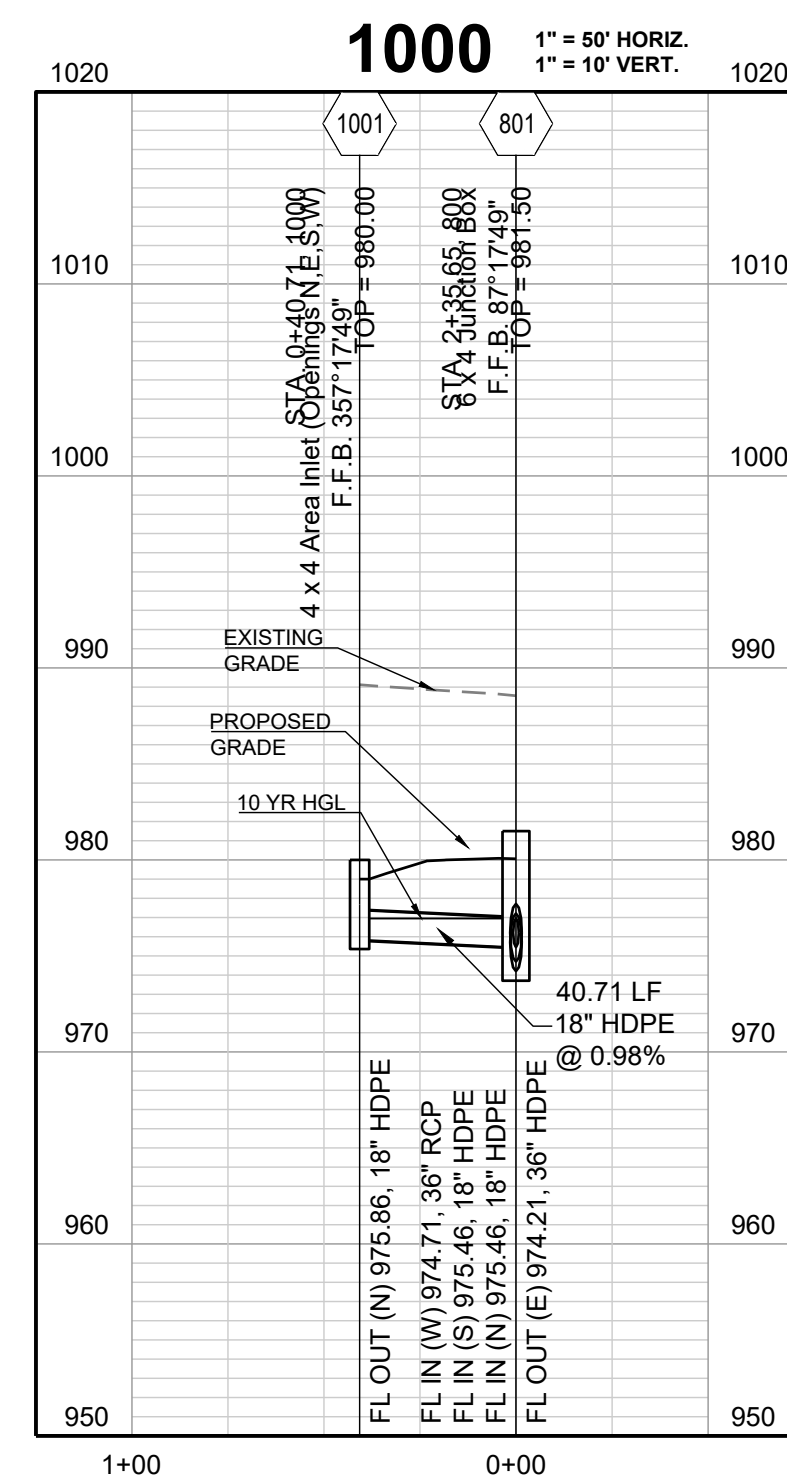
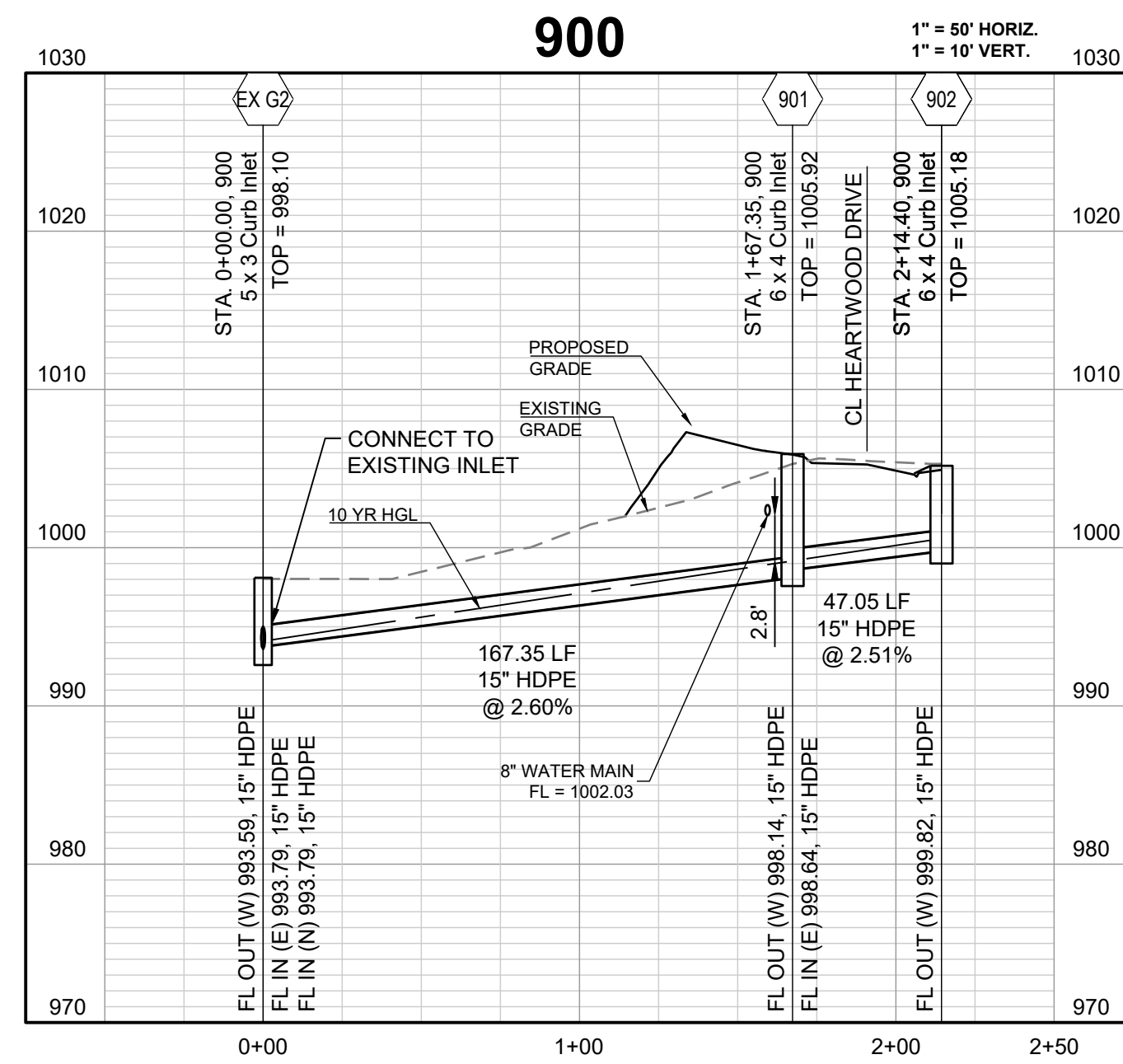
INSTALL 8 CY D₅₀-15" STONE RIP RAP W/ GEOFABRIC (15' x 6' x 2.25')



INSTALL 8 CY D₅₀-15" STONE RIP RAP W/ GEOFABRIC (15' x 6' x 2.25')



INSTALL 8 CY D₅₀-15" STONE RIP RAP W/ GEOFABRIC (16' x 8' x 2.25')



WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

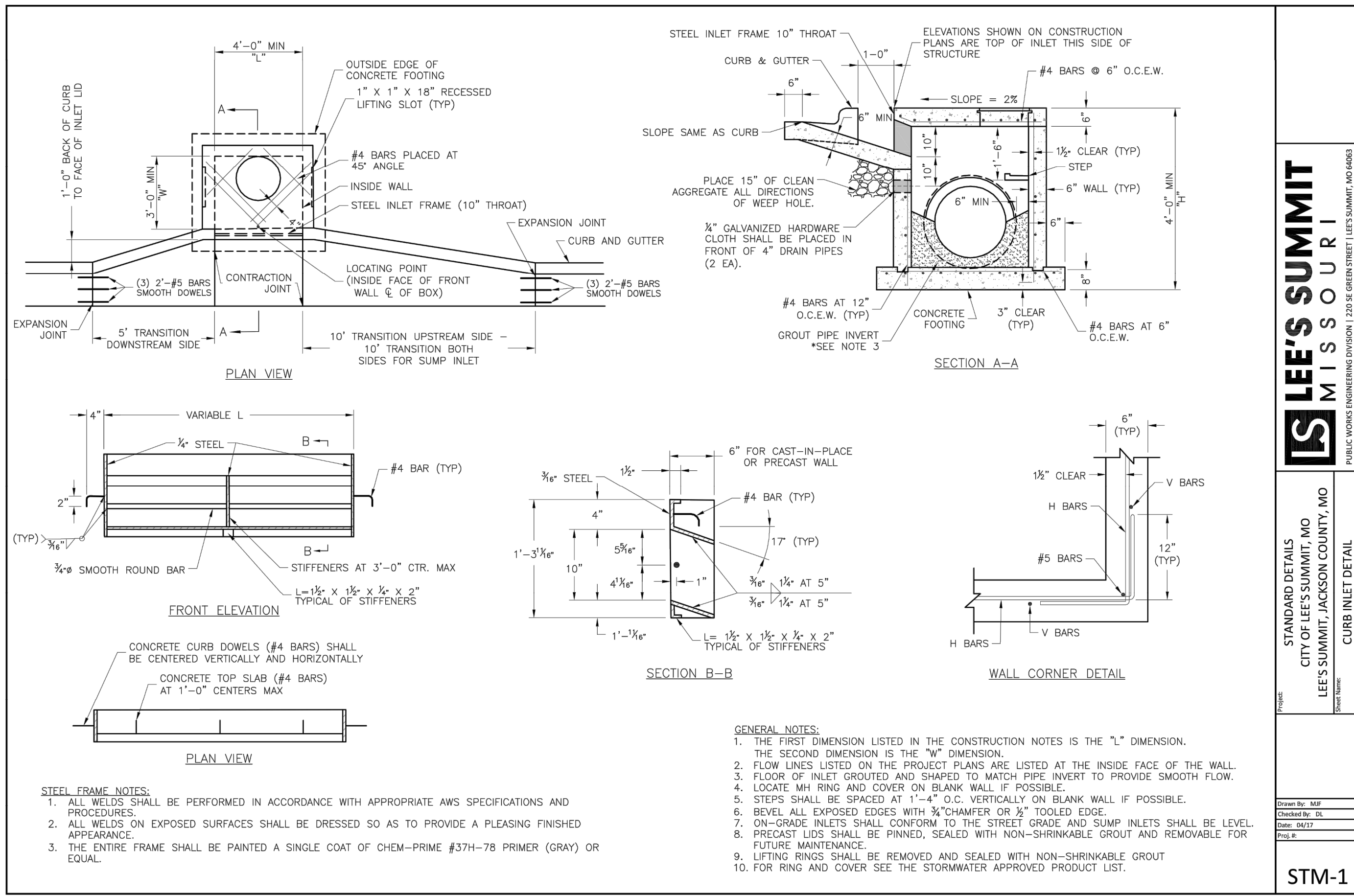
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| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | 10/06/2021 |

STORM PROF
 CONT

SHEET

21

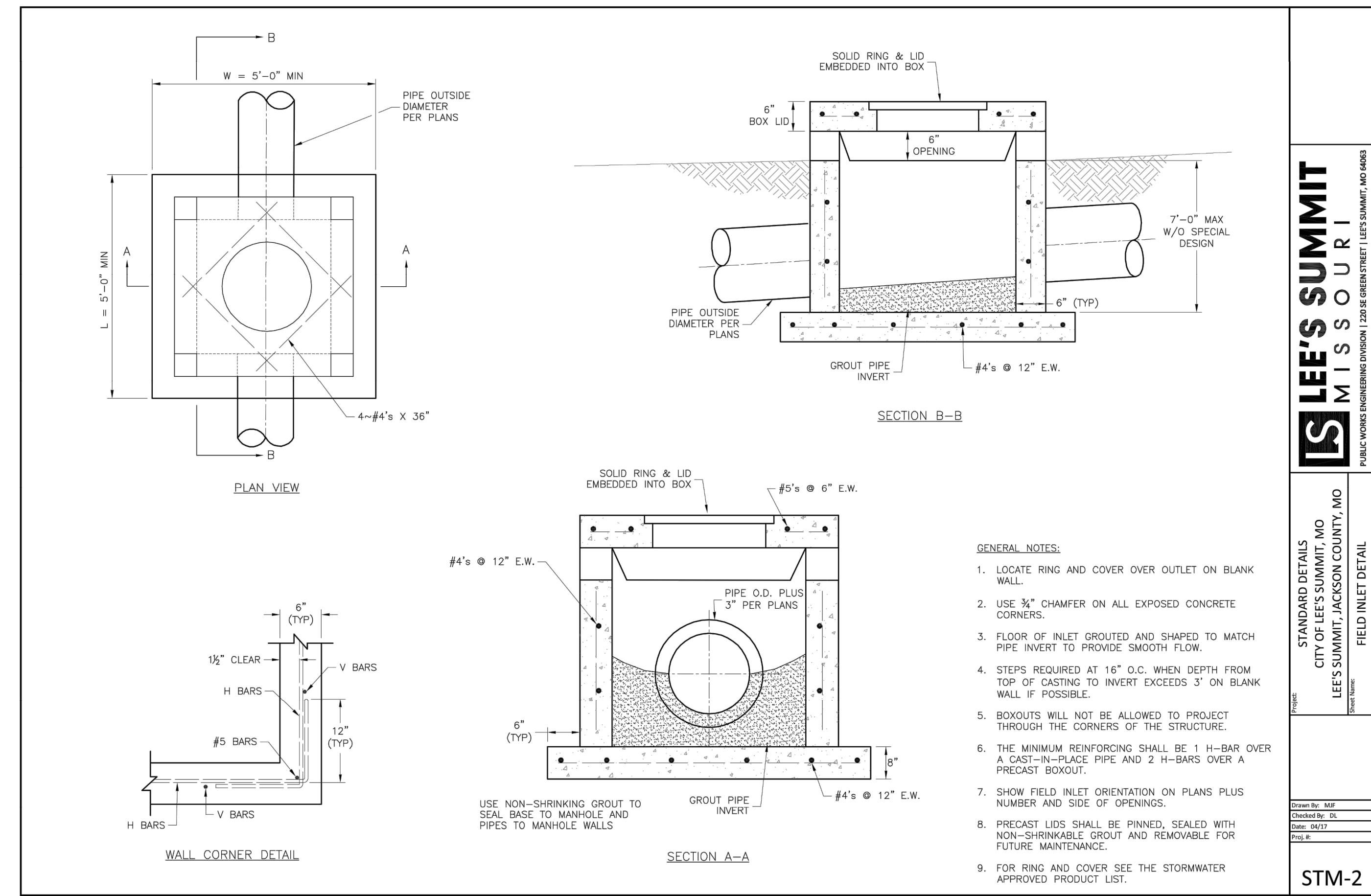
RELEASE FOR
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 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 10/20/2021



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 S. GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

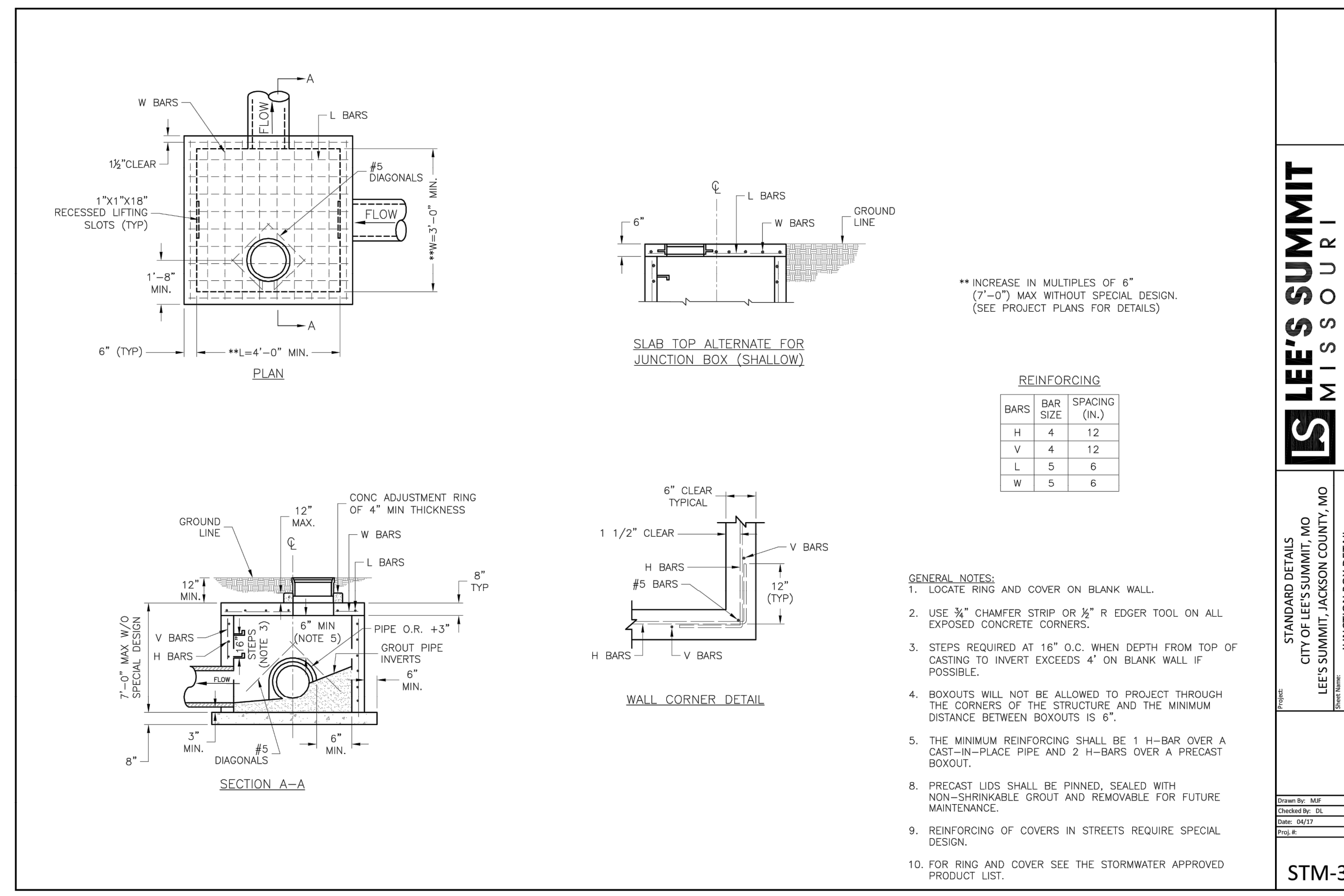
STM-1



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 S. GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

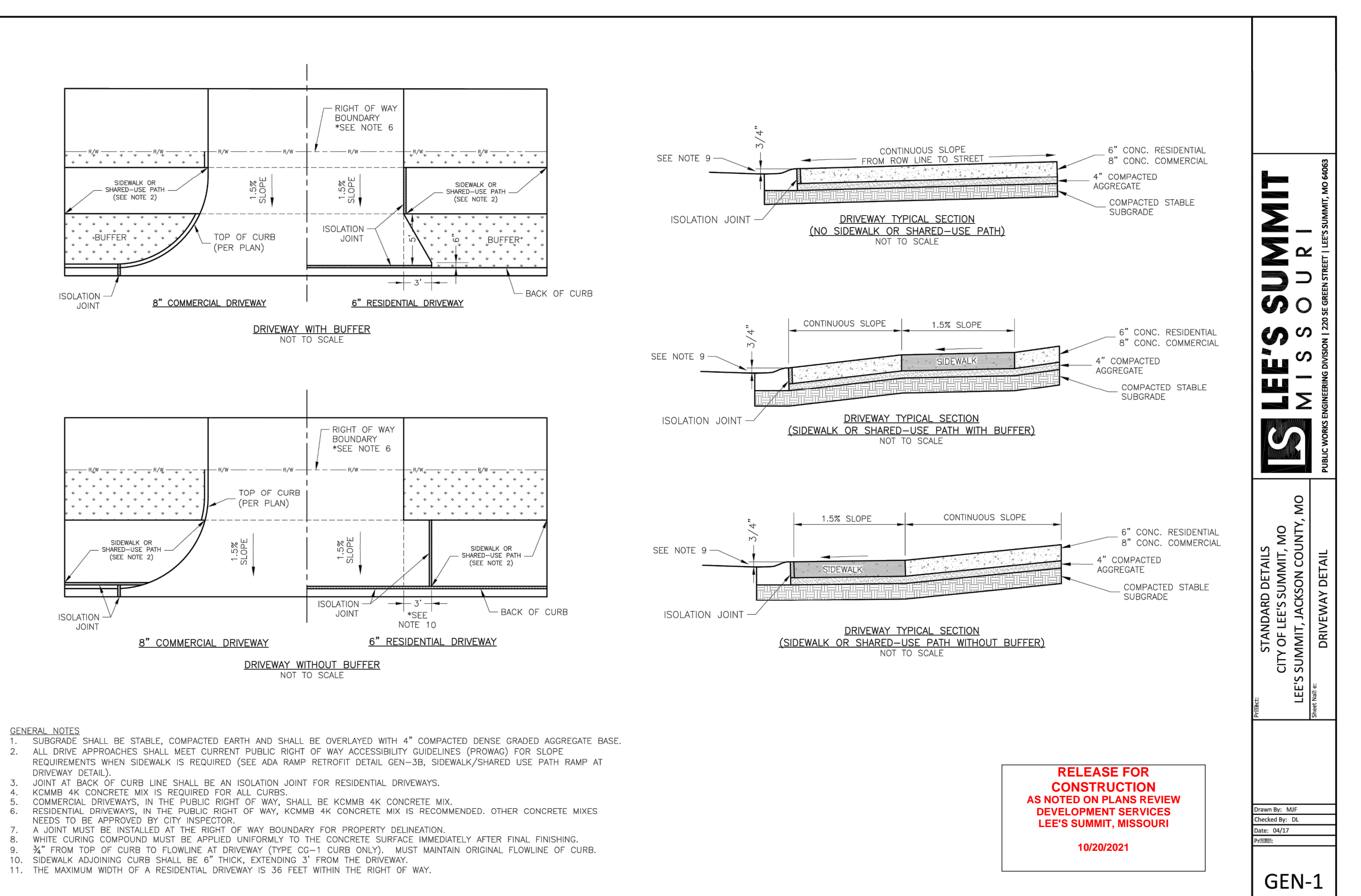
STM-2



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 S. GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

STM-3



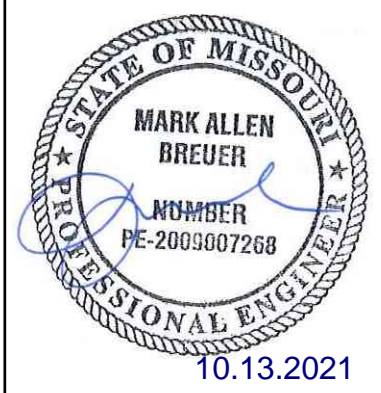
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 S. GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

GEN-1

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
10/20/2021

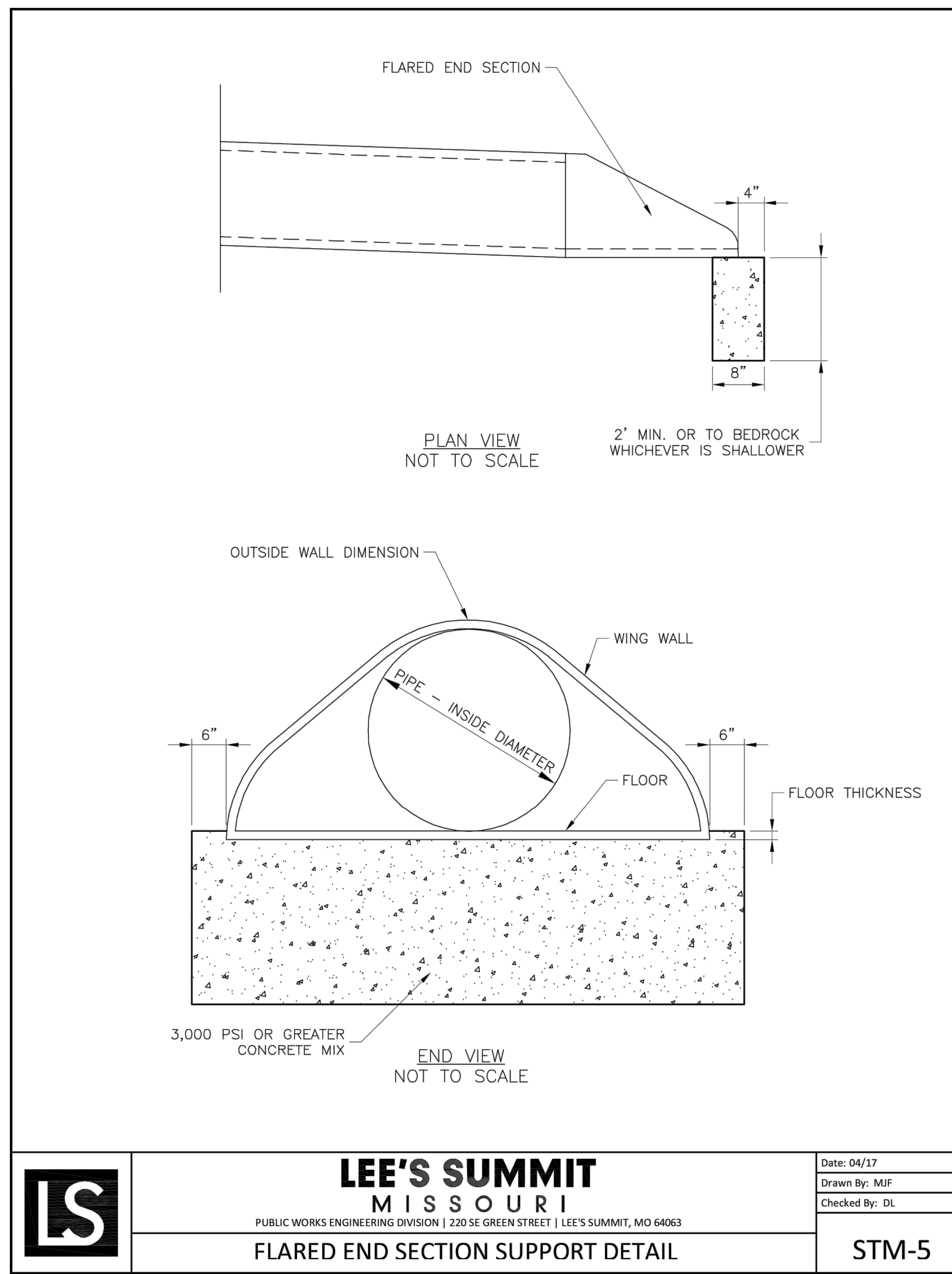
SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E200200360P-F #LAC201005237 #LS2002008695-F



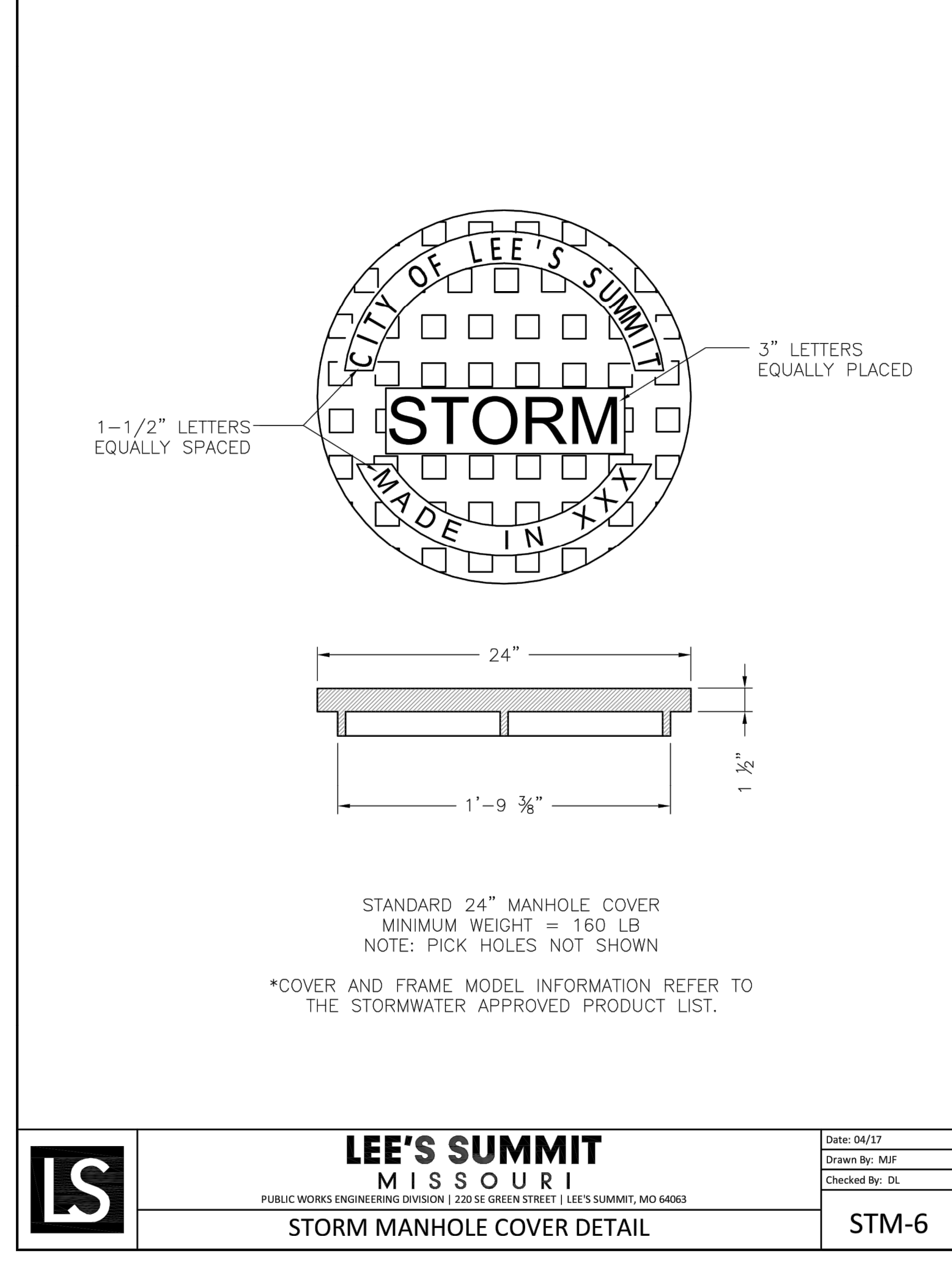
WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

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| 05/12/2021 | CITY COMMENTS |
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| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | CITY COMMENTS |

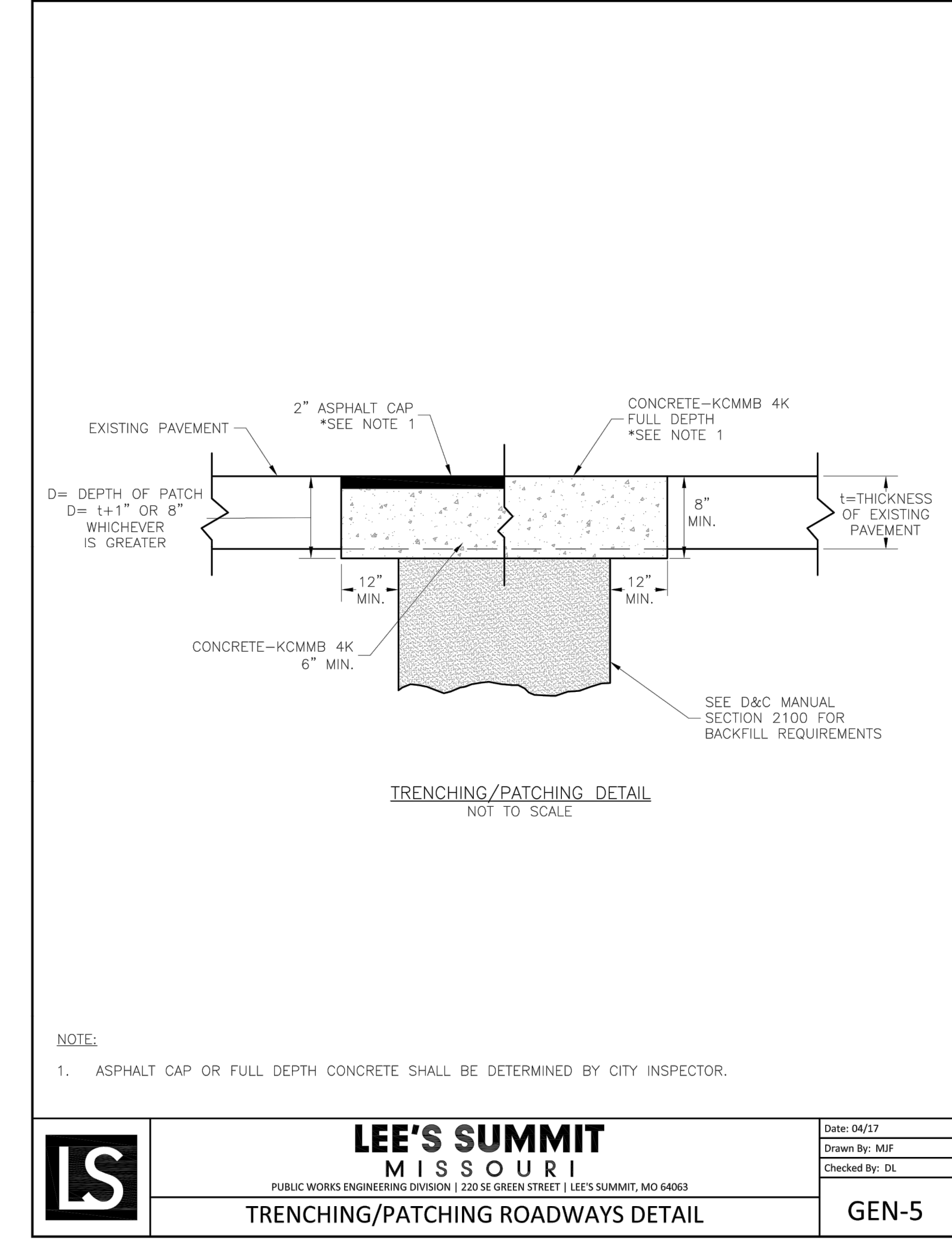
STREET AND STORM DETAILS
SHEET
22



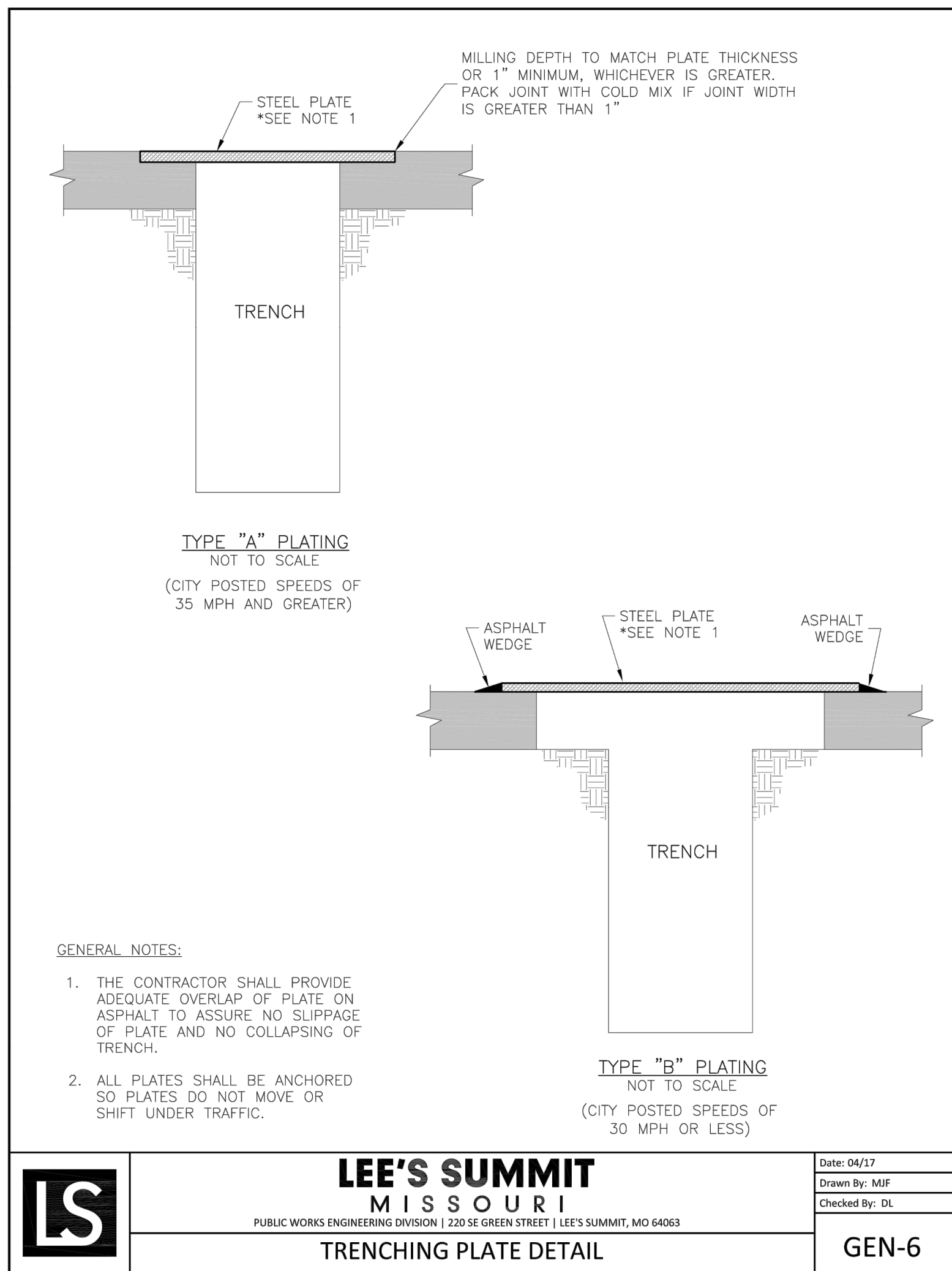
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| | | Drawn By: MJF Checked By: DL |
| FLARED END SECTION SUPPORT DETAIL | | STM-5 |



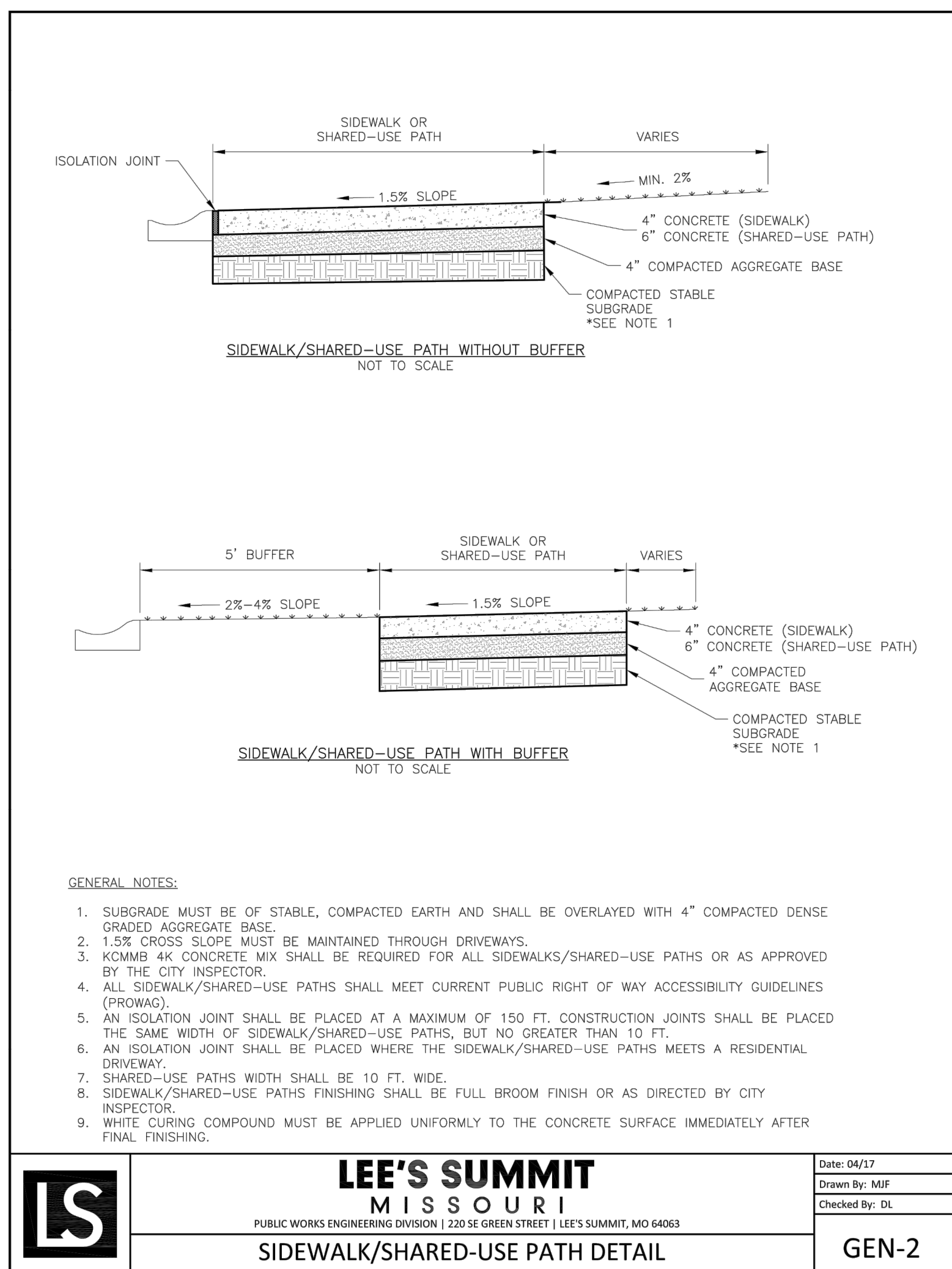
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| | | Drawn By: MJF Checked By: DL |
| STORM MANHOLE COVER DETAIL | | STM-6 |



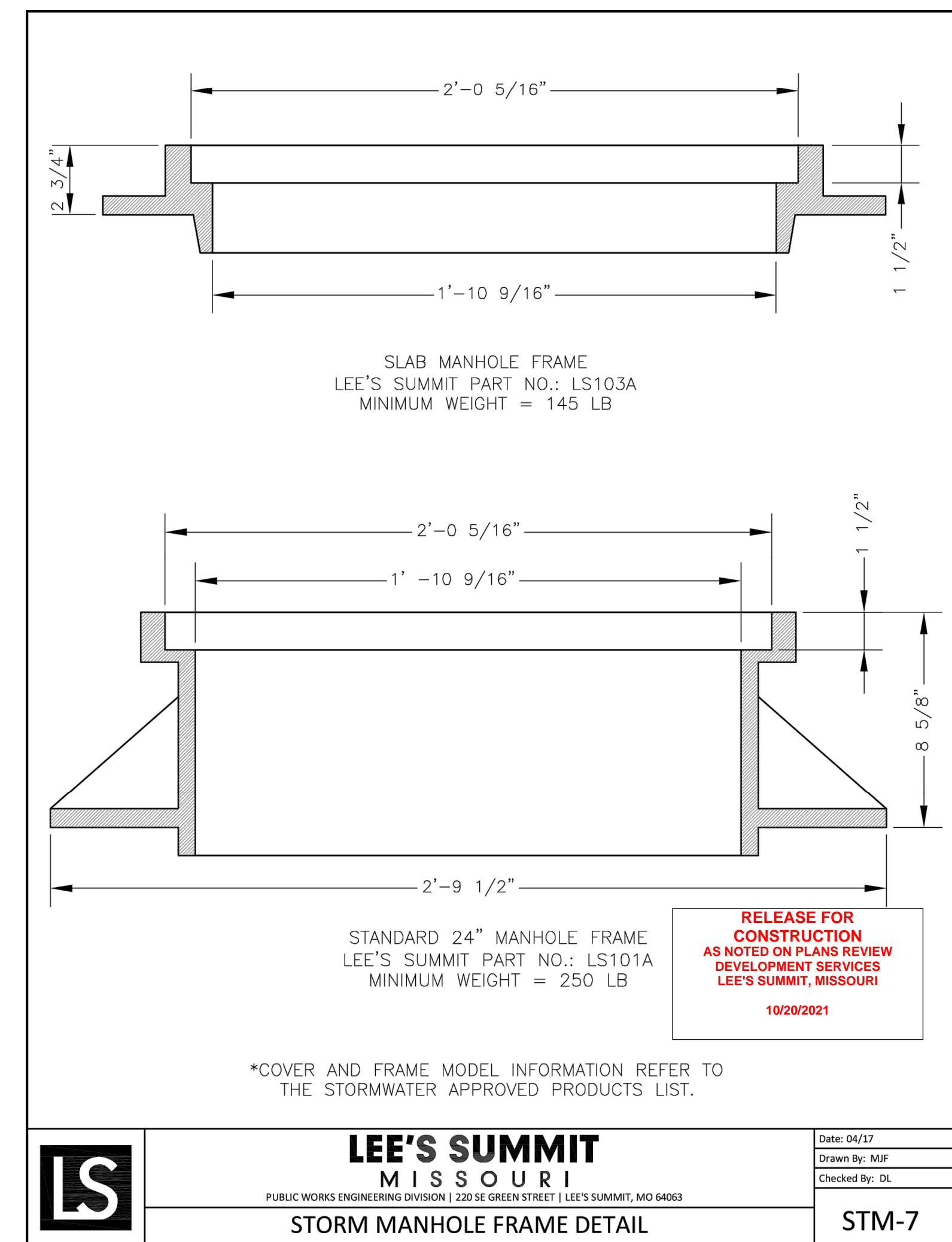
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| TRENCHING/PATCHING ROADWAYS DETAIL | | GEN-5 |



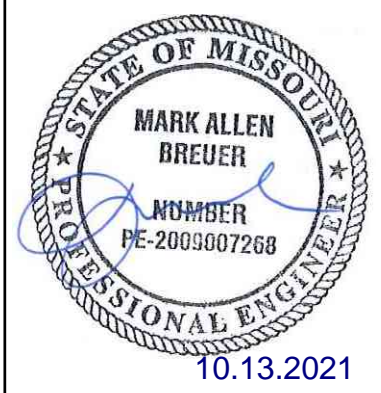
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| | | Drawn By: MJF Checked By: DL |
| TRENCHING PLATE DETAIL | | GEN-6 |



| | | |
|--|--|---------------------------------|
| LS | LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 | Date: 04/17 |
| | | Drawn By: MJF Checked By: DL |
| SIDEWALK/SHARED-USE PATH DETAIL | | GEN-2 |



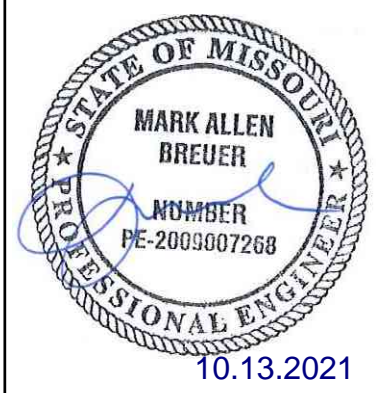
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| LS | LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063 | Date: 04/17 |
| | | Drawn By: MJF Checked By: DL |
| STORM MANHOLE FRAME DETAIL | | STM-7 |



WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---------------|---------------------|
| 04/24/2020 | CITY COMMENTS |
| 01/11/2021 | SCHLAGEL QUANTITIES |
| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 10/06/2021 | SCHLAGEL UPDATE |
| 18-017 | CITY COMMENTS |

| | |
|---------------------------------|--|
| STREET AND STORM DETAILS | |
| SHEET | |
| 23 | |



WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
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| 04/24/2020 | CITY COMMENTS |
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| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 06/15/2021 | CITY COMMENTS |
| 09/28/2021 | CITY COMMENTS |
| 10/06/2021 | SCHLAGEL UPDATE |
| | CITY COMMENTS |

STREET AND
 STORM DETAILS

SHEET

24

RELEASE FOR
 CONSTRUCTION
 AS NOTED ON PLANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 10/20/2021

TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES

| Street Classification | Pavement Option | AC Surface (in.) | AC Base (in.) | MoDOT Type 5 Base (in.) | Geogrid(1) | Chemical Subgrade Stabilization(2) (in.) |
|---------------------------------------|-----------------|------------------|---------------|-------------------------|------------|--|
| Residential Local/Access | A | 2 | 4 | 6 | -- | 6 |
| | B | 2 | 4 | 10 | Geogrid | -- |
| Residential Collector | A | 2 | 5.5 | 6 | -- | 9 |
| | B | 2 | 5.5 | 12 | Geogrid | -- |
| Commercial Industrial Local/Collector | A | 2 | 7.5 | 6 | -- | 9 |
| | B | 2 | 7.5 | 12 | Geogrid | -- |

TABLE LS-3: MINIMUM PCC PAVEMENT THICKNESSES

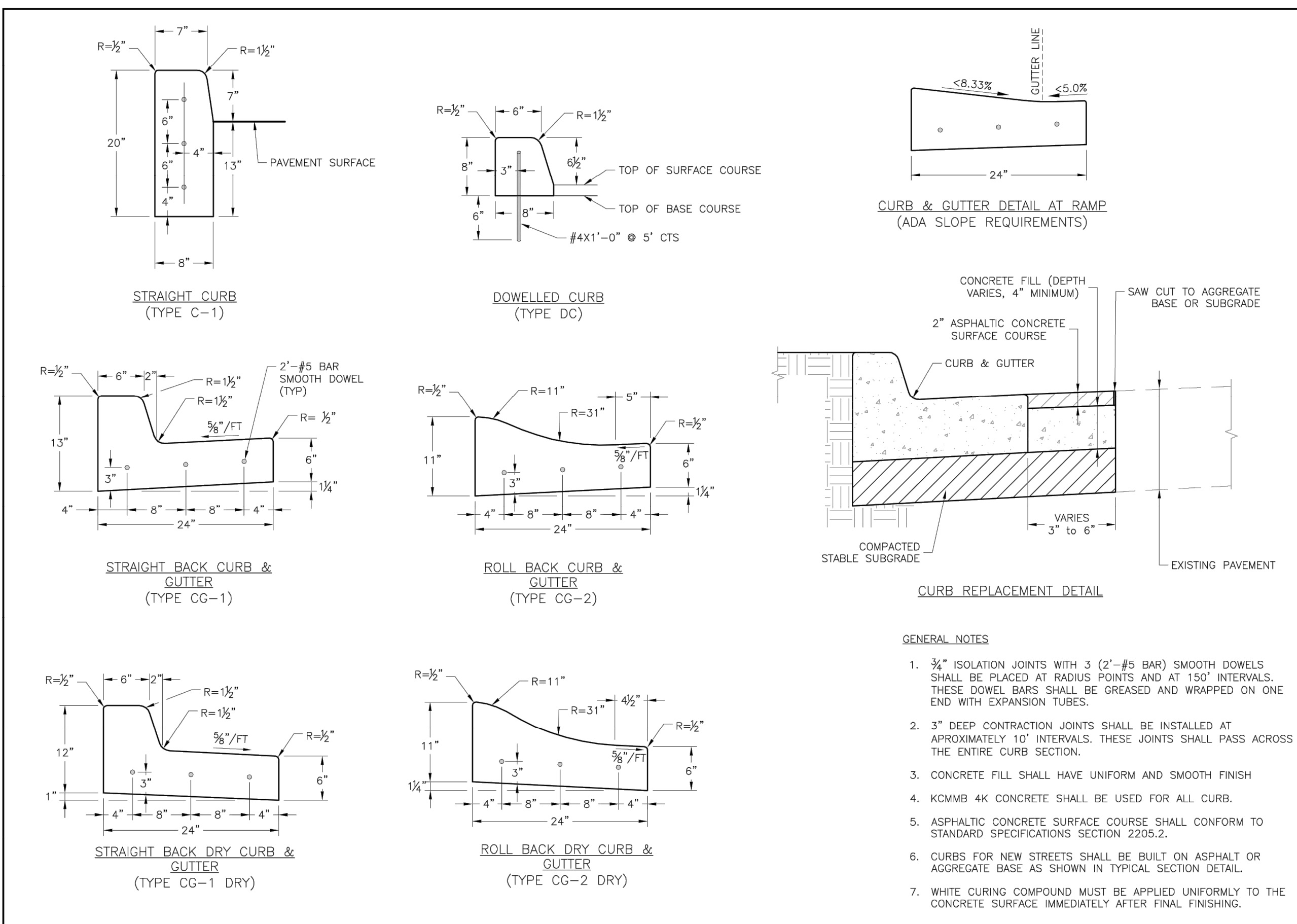
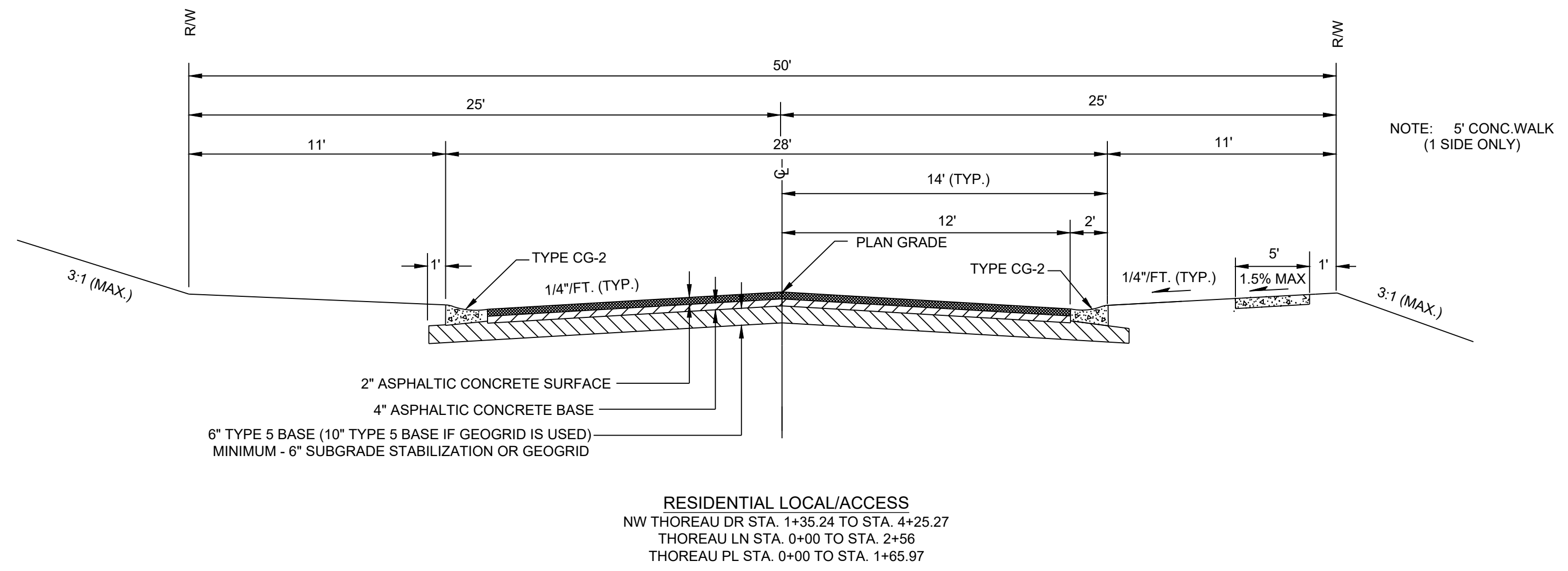
| Street Classification | PCC (in.) | Aggregate Base (in.) | Subgrade Stabilization ⁽¹⁾ (in.) |
|---------------------------------------|-----------|----------------------|---|
| Residential Local/Access | 6 | 4 | -- |
| Residential Collector | 6 | 4 | 6 |
| Commercial Industrial Local/Collector | 8 | 4 | 9 |

(1) Subgrade Stabilization and 4" aggregate base may be replaced by approved geogrid and 6" of aggregate base

LS5200

16

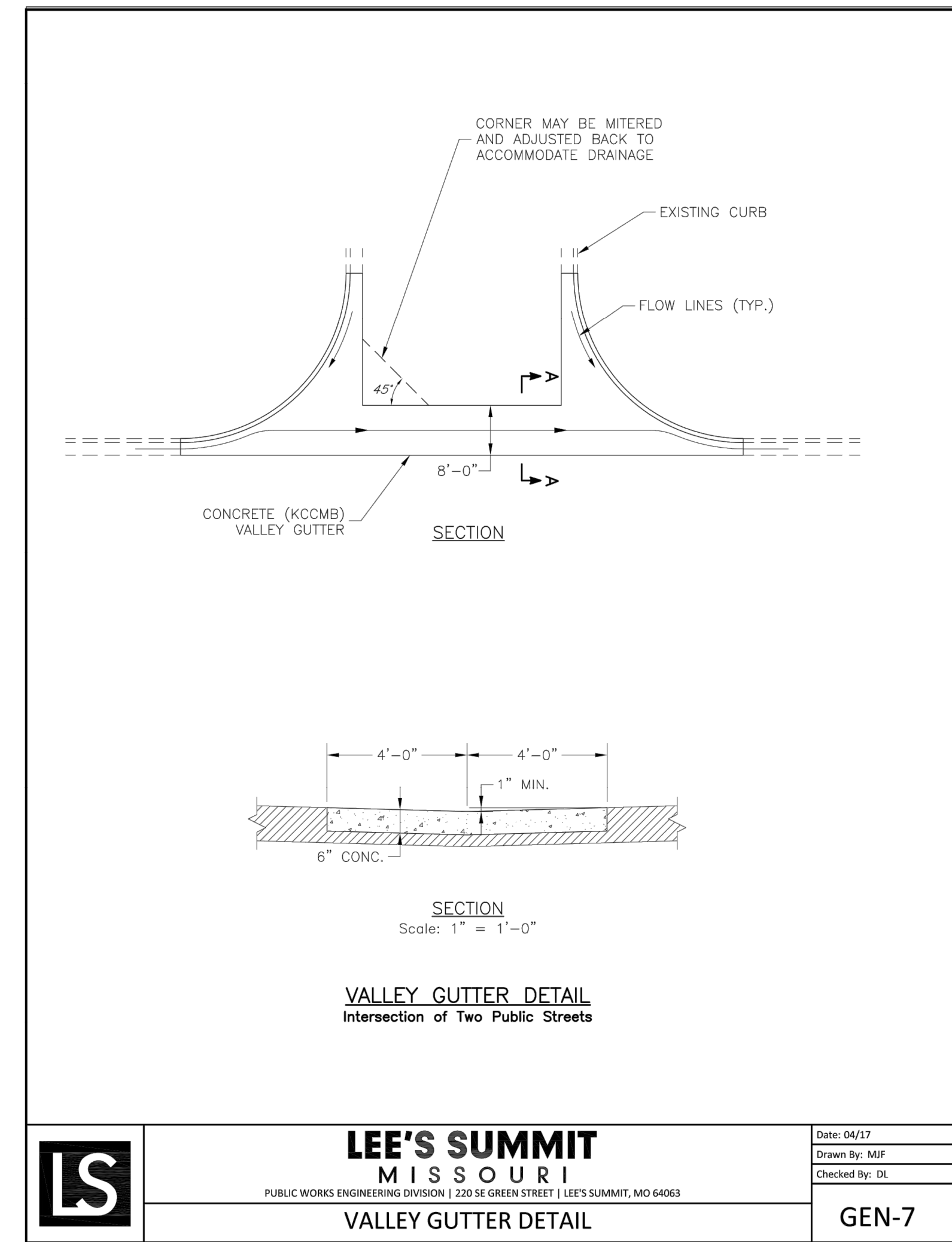
October 2016



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

Drawn By: MJF
 Checked By: DL
 Date: 04/17
 Proj #: GEN-4



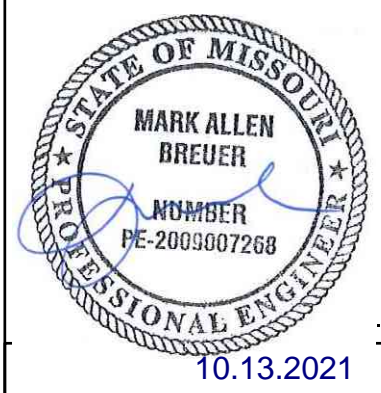
LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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

GEN-7



PREPARED BY:



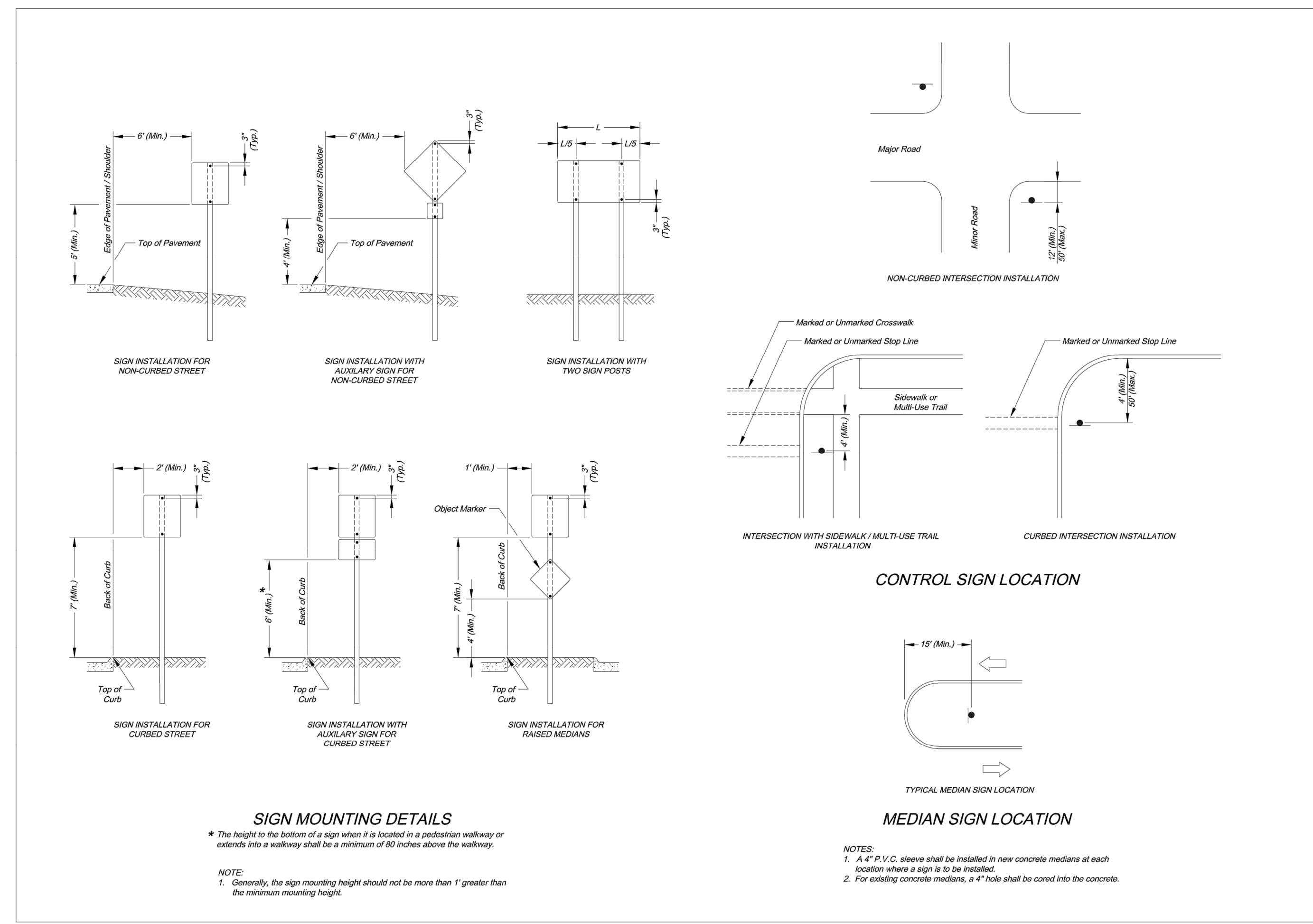
WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
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 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI

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| 06/28/2021 | CITY COMMENTS |
| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | 10/06/2021 |

SIGNING PLAN

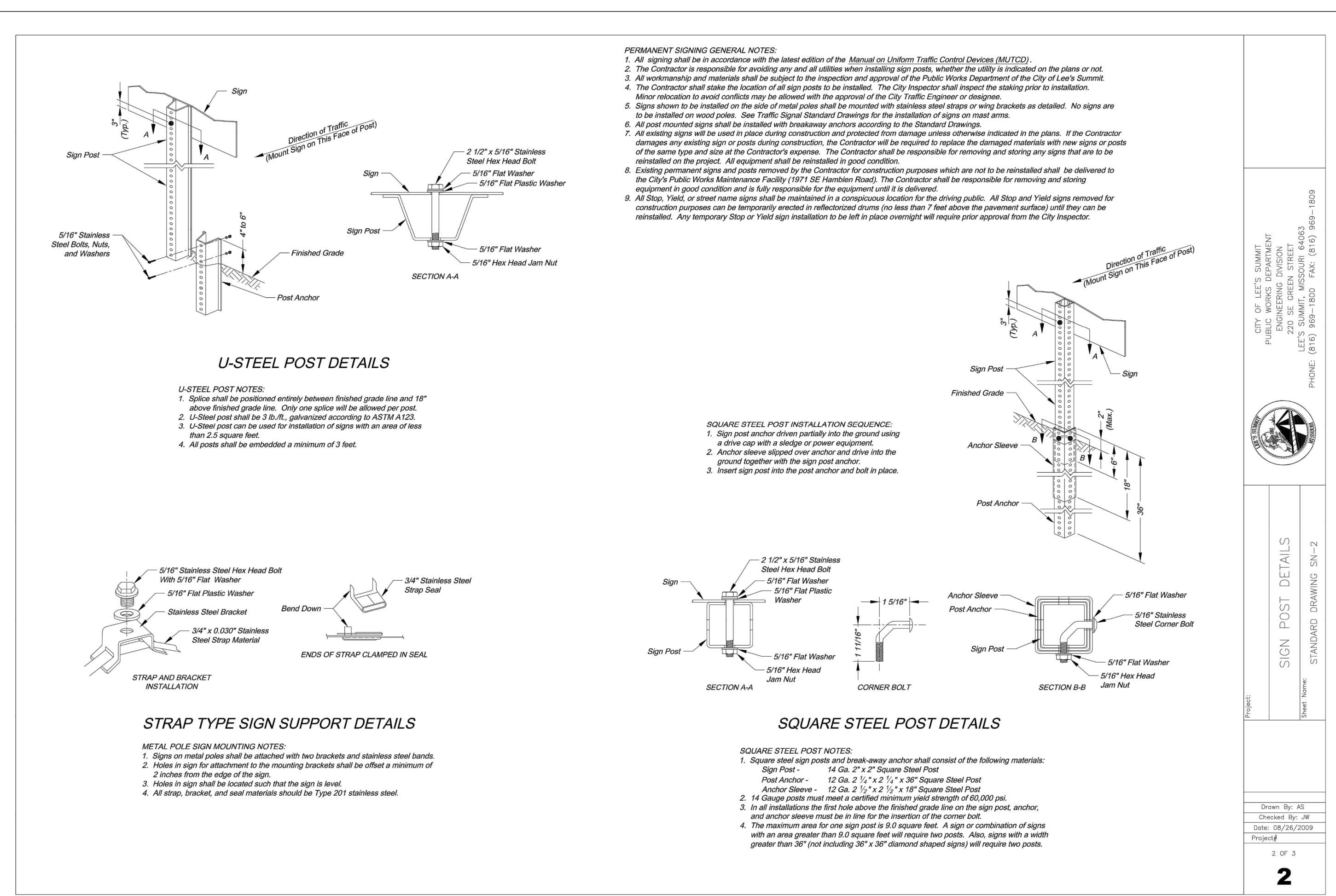
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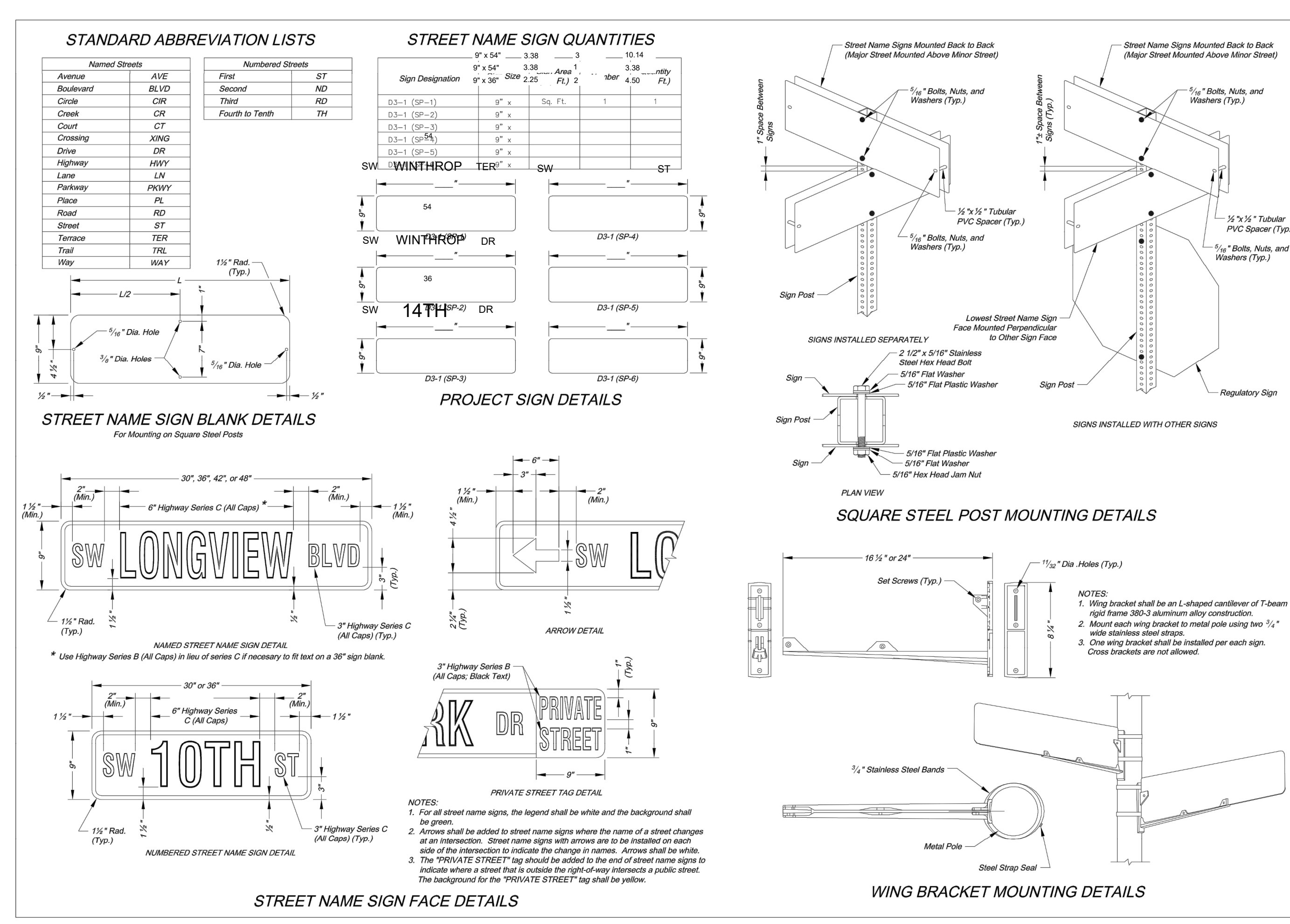
CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
200 SE OGDEN STREET
LEE'S SUMMIT, MISSOURI 64083
PHONE: (816) 999-1800 FAX: (816) 999-1809

Project: SIGN MOUNTING DETAILS
Sheet Name: STANDARD DRAWING SN-1
1 OF 3



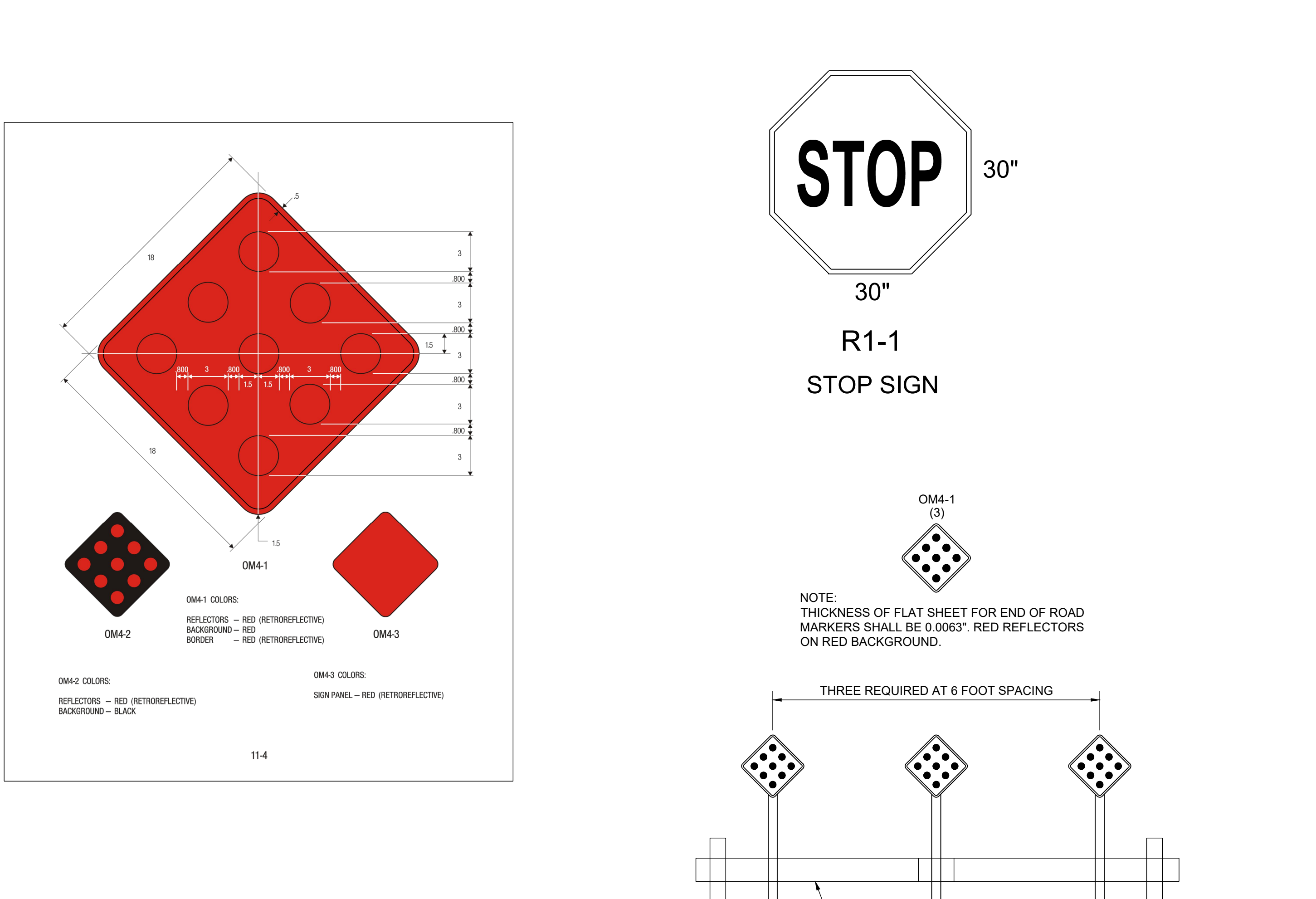
CITY OF LEE'S SUMMIT
ENGINEERING DIVISION
LEE'S SUMMIT, MISSOURI 64083
PHONE: (816) 999-1800 FAX: (816) 999-1809

Project: SIGN POST DETAILS
Sheet Name: STANDARD DRAWING SN-2
2 OF 3



CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
200 SE OGDEN STREET
LEE'S SUMMIT, MISSOURI 64083
PHONE: (816) 999-1800 FAX: (816) 999-1809

Project: STREET NAME SIGN DETAILS
Sheet Name: STANDARD DRAWING SN-3
3 OF 3



WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

REVISION DATE: 04/24/2020
CITY COMMENTS: SCHLAGEL QUANTITIES

REVISION DATE: 01/12/2021
CITY COMMENTS: SCHLAGEL QUANTITIES

REVISION DATE: 04/09/2021
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REVISION DATE: 05/12/2021
CITY COMMENTS: CITY COMMENTS

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CITY COMMENTS: CITY COMMENTS

REVISION DATE: 06/28/2021
CITY COMMENTS: SCHLAGEL UPDATE

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CITY COMMENTS: SCHLAGEL UPDATE

REVISION DATE: 10/06/2021
CITY COMMENTS: SCHLAGEL UPDATE

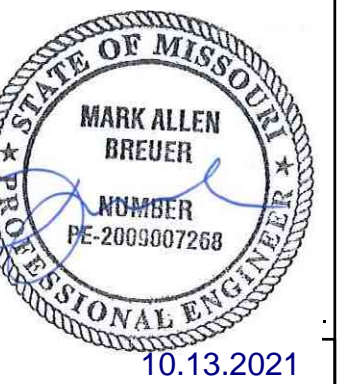
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CHECKED BY: MAB
DATE PREPARED: 2-19-2020
PROJ. NUMBER: 18-017

SIGN DETAILS

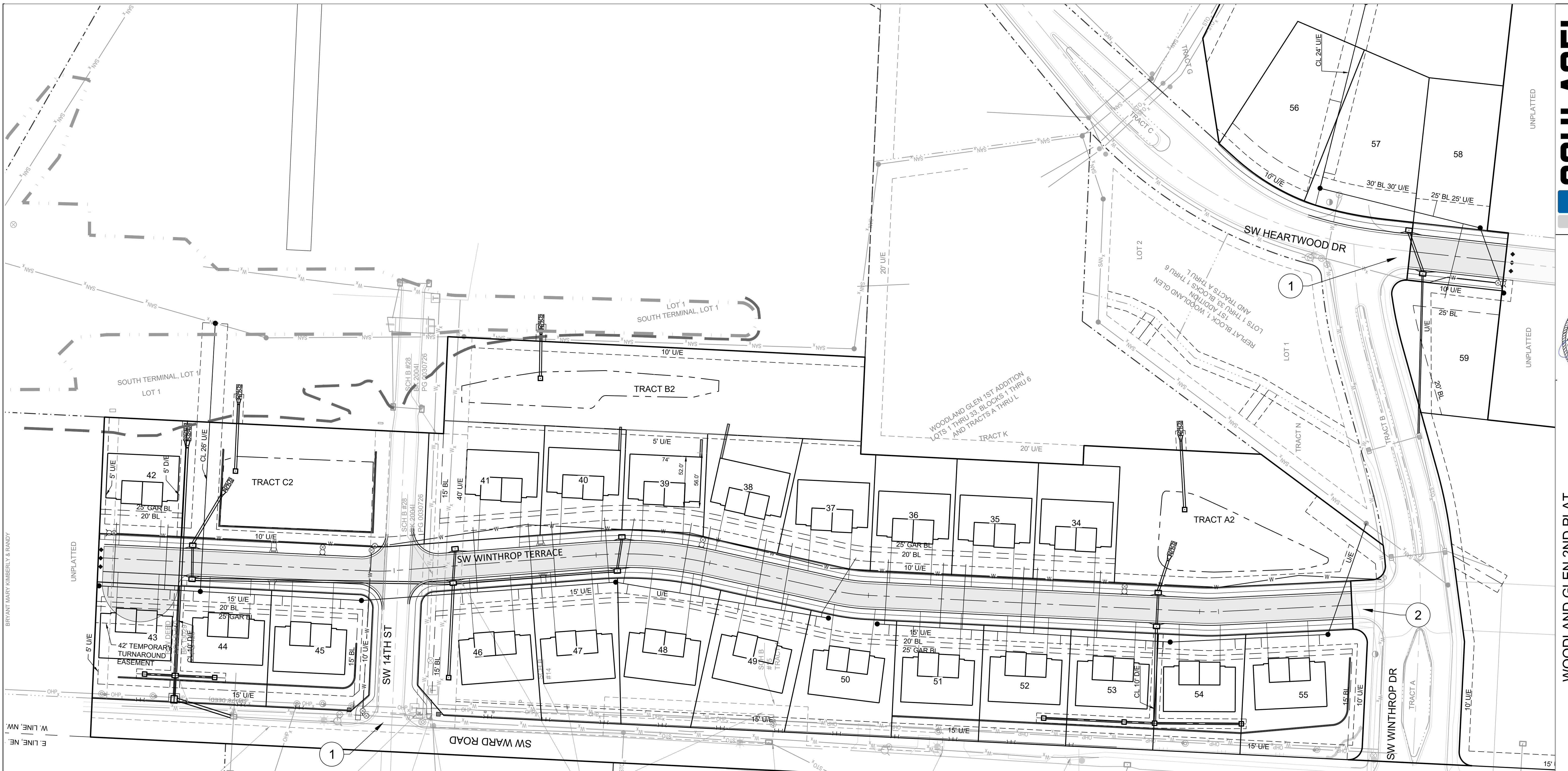
SHEET

26

PREPARED BY:



WOODLAND GLEN 2ND PLAT
 STREET, STORMWATER, MASTER DRAINAGE,
 AND EROSION CONTROL PLANS
 WARD ROAD & WINTHROP DRIVE
 LEE'S SUMMIT, MISSOURI



Sign Spacing "S"

| Speed Limit (mph) | Spacing (Feet) |
|-------------------|----------------|
| 25 | 100 |
| 30 - 35 | 250 |
| ≥ 40 | 350 |

Taper Dimensions (Feet)

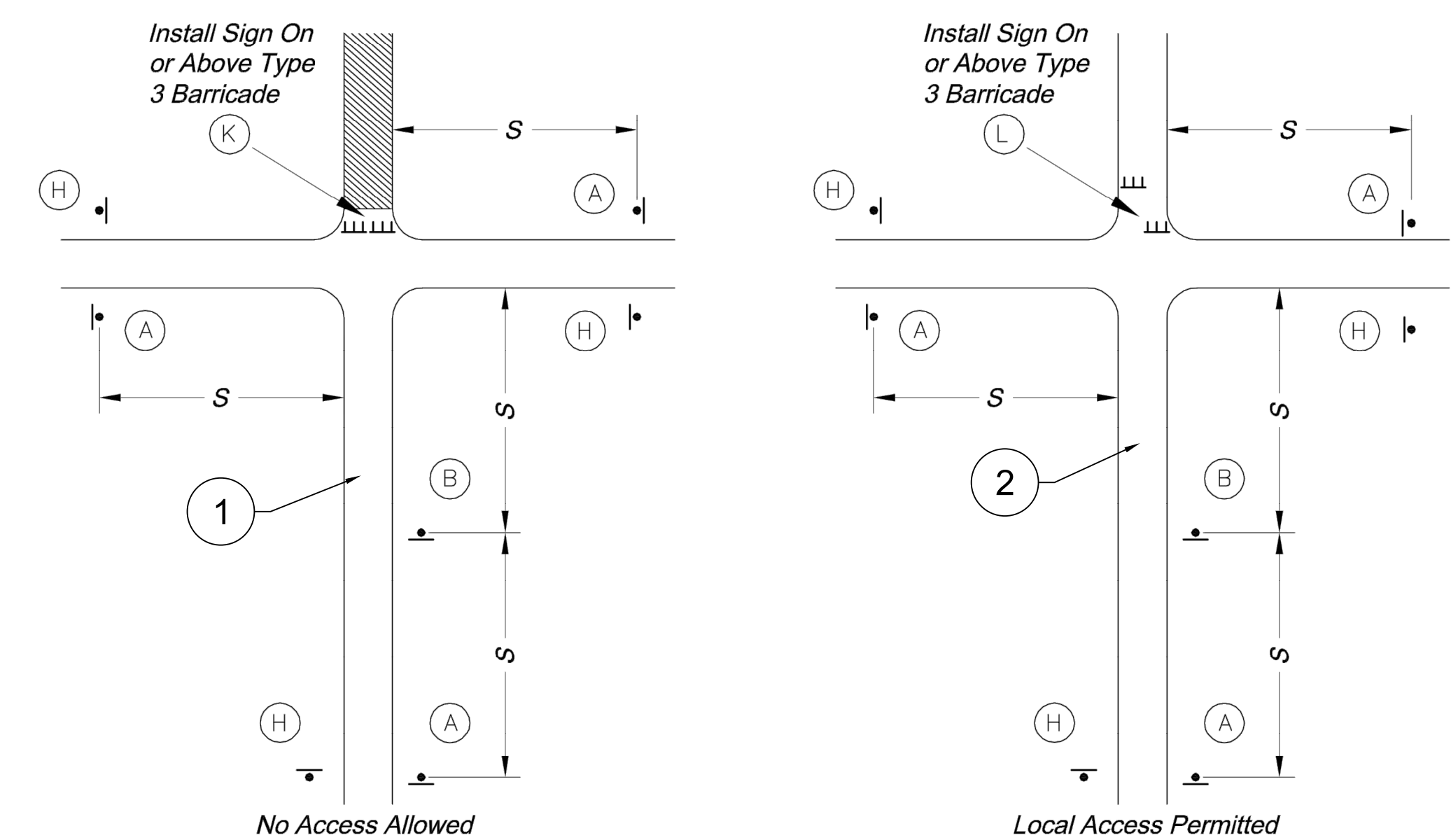
| Speed Limit (mph) | Minimum Taper Length "L", per Lane Width "W" | | | Minimum Number of Channelizers |
|-------------------|--|-----|-----|--------------------------------|
| | 10 | 11 | 12 | |
| 25 | 105 | 115 | 125 | 6 |
| 30 | 150 | 165 | 180 | 7 |
| 35 | 205 | 225 | 245 | 8 |
| 40 | 270 | 295 | 320 | 9 |
| 45 | 450 | 495 | 540 | 13 |

Guidelines for Length of Longitudinal Buffer Space "B"

| Speed Limit (mph) | Length (Feet) |
|-------------------|---------------|
| 25 | 35 |
| 30 | 55 |
| 35 | 85 |
| 40 | 120 |
| 45 | 170 |

Maximum Channelizer Spacing

| Speed Limit (mph) | Within Taper (Feet) | Outside Taper (Feet) |
|-------------------|---------------------|----------------------|
| 25 | 25 | 50 |
| 30 | 30 | 60 |
| 35 | 35 | 70 |
| 40 | 40 | 80 |
| 45 | 45 | 90 |



TYPICAL STREET CLOSURE

NOTE:
 Reference the City of Lee's Summit
 "TRAFFIC CONTROL DETAILS"
 Standard Drawing TC-1 on Sheet 28
 for sign types listed in the Typical
 Street Closure Diagrams.

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| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | |

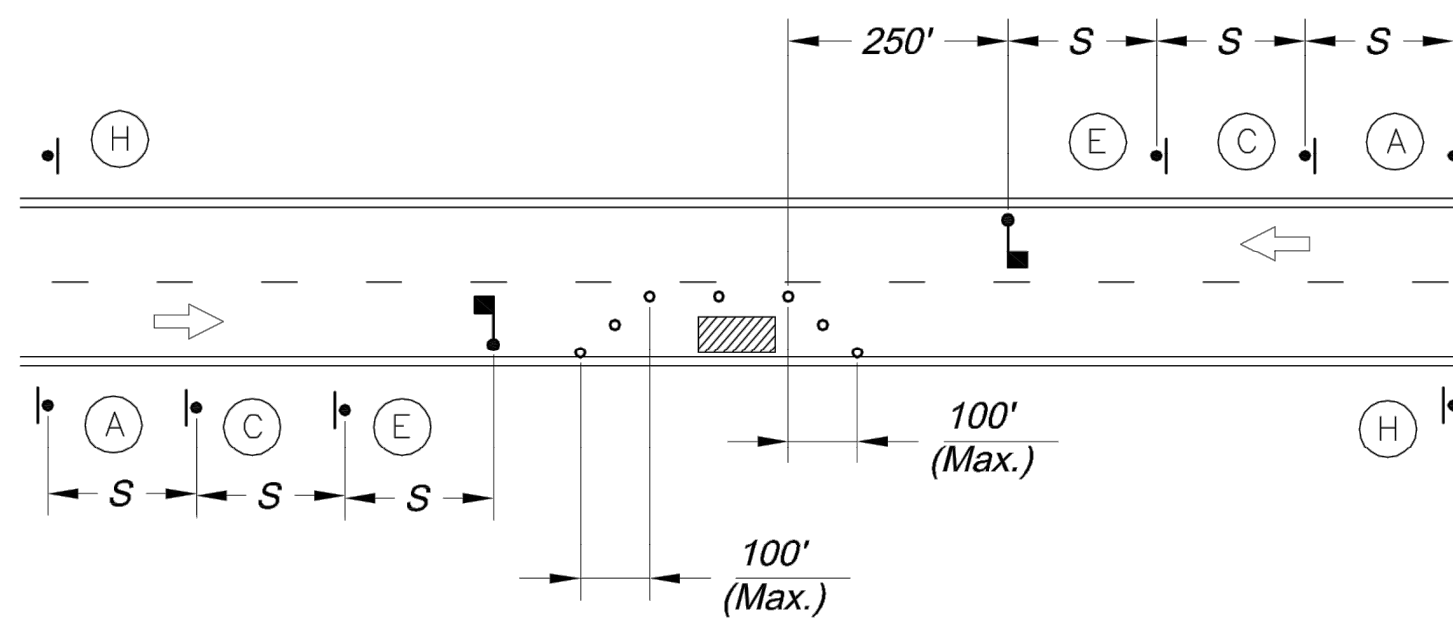
TRAFFIC CONTROL PLAN

SHEET

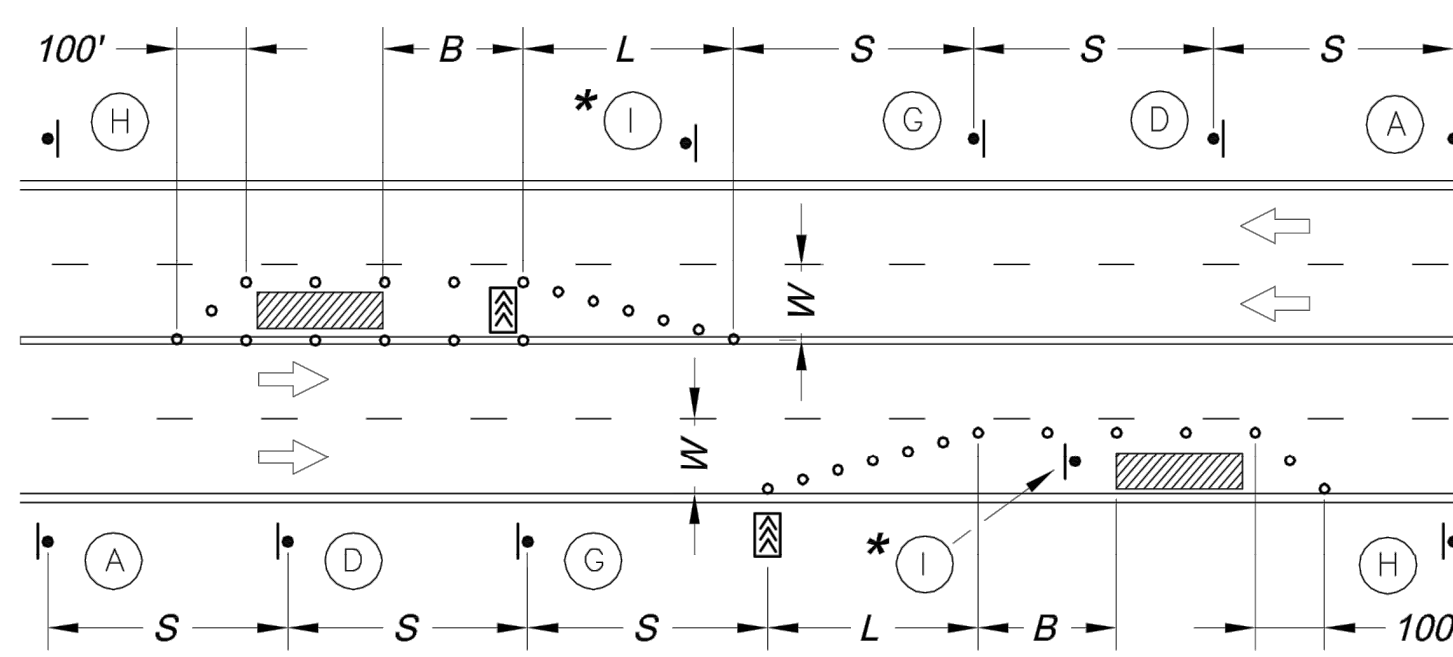
I:\PROJECTS\2018\18-0713.0 Design\3.0 DWG Plans\6.0 SS\18-017 SS TC PLAN & DETAILS.dwg, 10/20/2021, 2:46:12 PM, 1:1

SYMBOL LEGEND

- Work Area
- Channelizer
- Sign
- Arrow Panel
- Barricade
- Flagger
- Direction of Travel

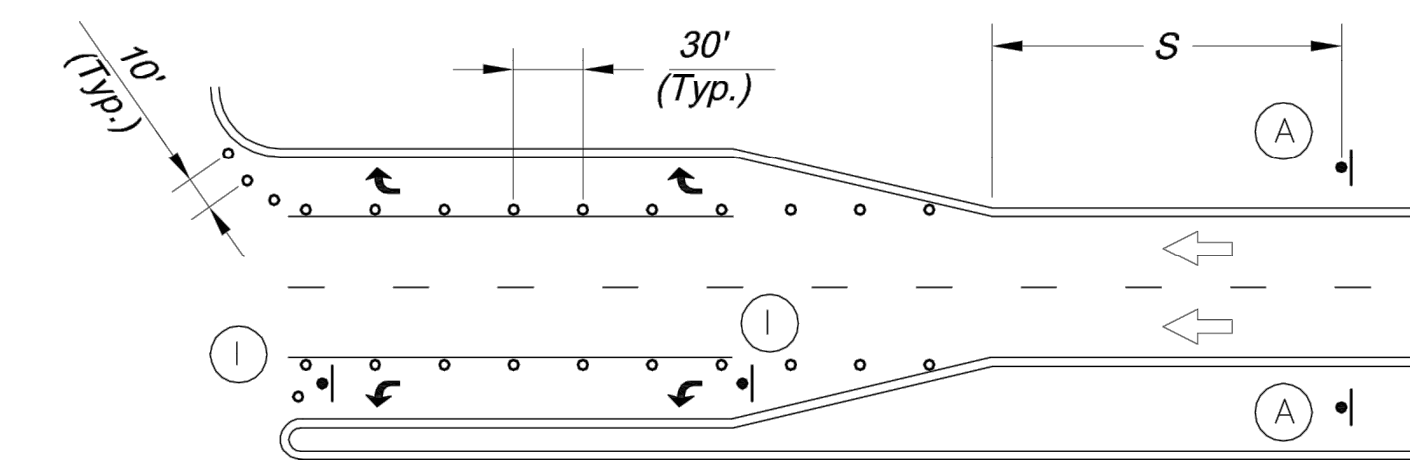


LANE CLOSURE - TWO LANE STREET



LANE CLOSURE - FOUR LANE STREET

* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



TURN LANE CLOSURE

| Sign Spacing "S" | |
|-------------------|----------------|
| Speed Limit (mph) | Spacing (Feet) |
| 25 | 100 |
| 30 - 35 | 250 |
| ≥ 40 | 350 |

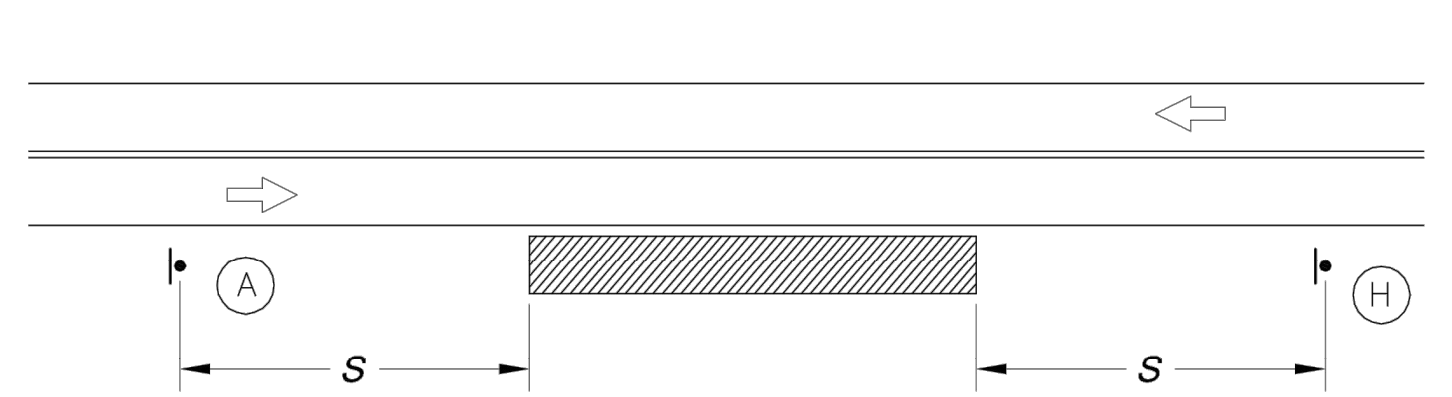
| Speed Limit (mph) | Taper Dimensions (Feet) | | | Minimum Number of Channelizers |
|-------------------|--|-----|-----|--------------------------------|
| | Minimum Taper Length "L", per Lane Width "W" | 11 | 12 | |
| 25 | 105 | 115 | 125 | 6 |
| 30 | 150 | 165 | 180 | 7 |
| 35 | 205 | 225 | 245 | 8 |
| 40 | 270 | 295 | 320 | 9 |
| 45 | 450 | 495 | 540 | 13 |

| Guidelines for Length of Longitudinal Buffer Space "B" | |
|--|---------------|
| Speed Limit (mph) | Length (Feet) |
| 25 | 35 |
| 30 | 55 |
| 35 | 85 |
| 40 | 120 |
| 45 | 170 |

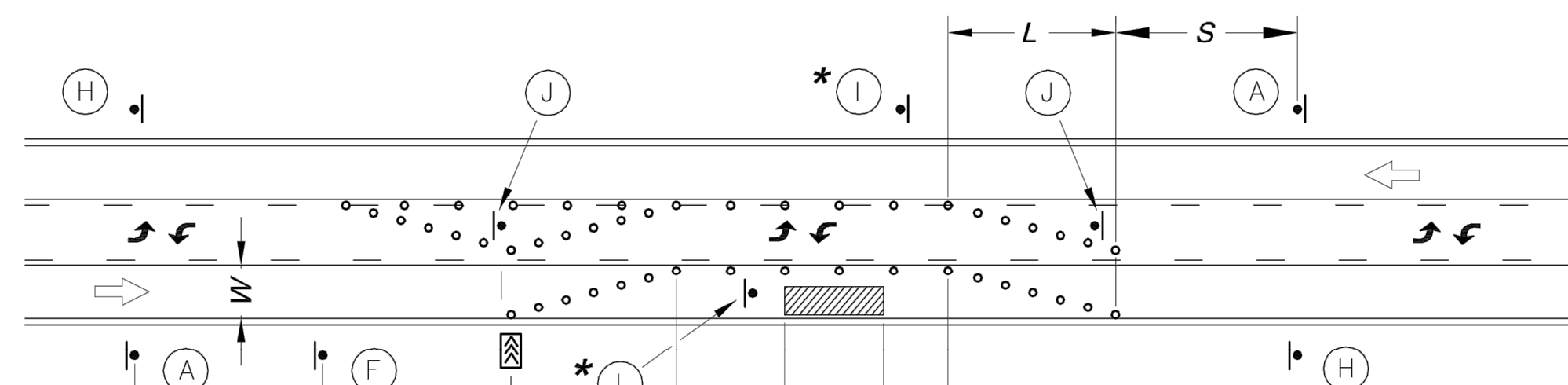
| Maximum Channelizer Spacing | | |
|-----------------------------|---------------------|----------------------|
| Speed Limit (mph) | Within Taper (Feet) | Outside Taper (Feet) |
| 25 | 25 | 50 |
| 30 | 30 | 60 |
| 35 | 35 | 70 |
| 40 | 40 | 80 |
| 45 | 45 | 90 |

SIGN LEGEND

- ROAD WORK AHEAD (A) W20-1 36" x 36"
- ROAD CLOSED AHEAD (B) W20-2 36" x 36"
- ONE LANE ROAD AHEAD (C) W20-4 36" x 36"
- RIGHT LANE CLOSED AHEAD (D) W20-5R 36" x 36"
- LEFT LANE CLOSED AHEAD (E) W20-7a 36" x 36"
- (F) W1-4L 36" x 36"
- (G) W4-2R 36" x 36"
- END ROAD WORK (H) G20-2 36" x 18"
- (I) R3-2 24" x 24"
- KEEP RIGHT (J) R4-7a 24" x 30"
- ROAD CLOSED (K) R11-2 48" x 30"
- ROAD CLOSED TO THRU TRAFFIC (L) R11-4 60" x 30"

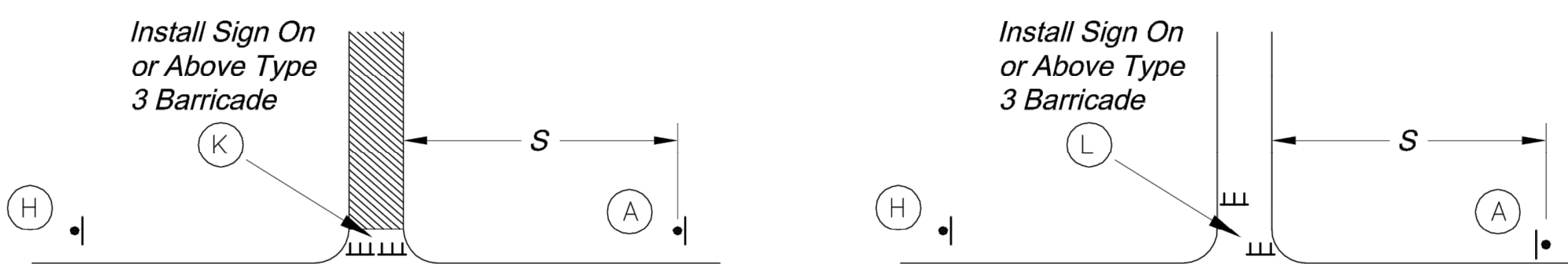


TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET



LANE CLOSURE - THREE LANE STREET

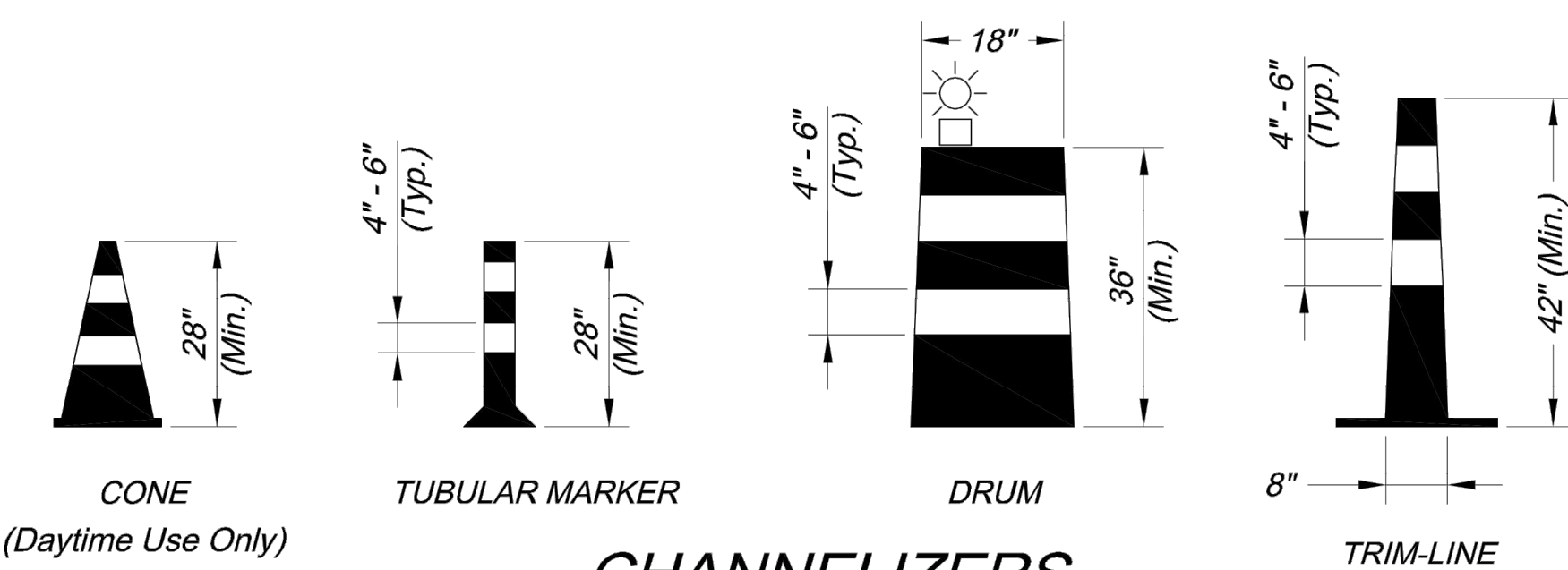
* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



TYPICAL STREET CLOSURE

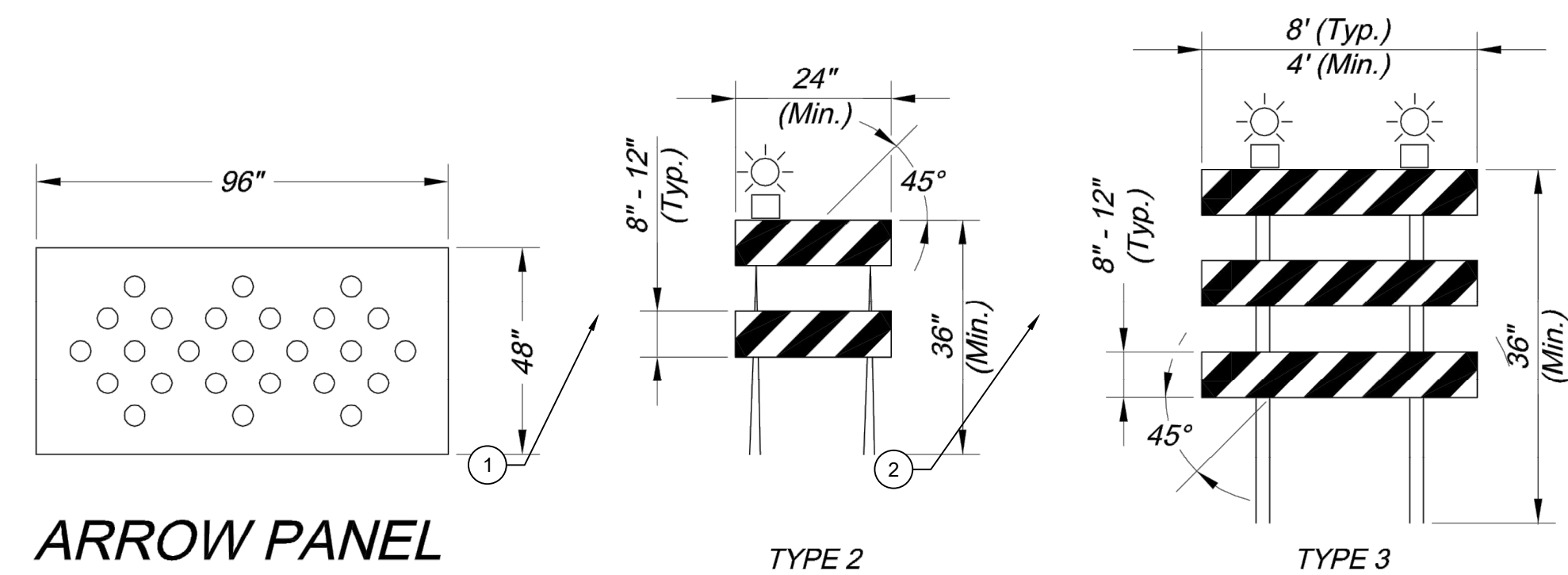
GENERAL NOTES:

- All signs, barricades, channelizers, markings and other traffic control devices shall conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- All traffic control devices shall be standard in size, shape, color, and message, in good condition, and retro-reflectORIZED.
- Warning lights shall be used on barricades in place at night and on warning signs which alert drivers about a change in alignment, traffic control, lane closure, or road closure.
- Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic, or where construction activities impose a restriction on traffic, as directed by the City Traffic Engineer. Where flaggers are used, advance signing shall be erected as shown in the details or as specified in the MUTCD. Flaggers shall meet the requirements in the MUTCD in regard to character, training, attire, and behavior.
- Trim-lines are the City's preferred channelizing device. Cones may not be used at nighttime.
- Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
- The Contractor shall use barricades, street plates, or fencing as needed to effectively shield pedestrian and vehicular traffic from exposed objects, excavations, and construction activities.
- Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
- No street shall be closed without the approval of the City Traffic Engineer. The Contractor shall notify the City Traffic Engineer at least 7 days in advance of any street closure. If a detour route around the closure is to be provided, all detour signing shall be as shown on a plan approved by the City Traffic Engineer.
- Construction vehicles parked along streets shall be located within the work area (traffic control) or where otherwise normally permitted. Construction materials, including traffic control and vehicles shall not restrict sight distance for vehicles exiting at streets or drives.
- Construction materials shall be kept off of sidewalks, consolidated in one location within City right-of-way, and removed daily unless otherwise approved by the Inspector. Dirt, mud, and other construction debris on streets and sidewalks shall be removed immediately.
- The Contractor shall not perform any work that will restrict vehicular traffic in any way between the hours of 7:00 a.m. and 9:00 p.m. or 4:00 p.m. and 6:00 p.m. Monday through Friday unless otherwise indicated in the specifications.
- All travel lanes should be at least 11 feet wide unless otherwise authorized by the City Traffic Engineer. A "Narrow Lanes" sign shall be installed in advance of a lane width reduction to less than 11 feet.
- All edge drop-offs of more than 2 inches and less than 4 inches should be protected by a wedge or barrier and all edge drop-offs greater than 4 inches shall have edge protection (see Traffic Control Specifications for edge treatment requirements).
- The "Workers" symbolic sign (MUTCD No. W21-1a) may be used instead of the "Road Work Ahead" sign for work with a duration of 12 hours or less. The "End Road Work" sign is not required to be installed after the "Workers" sign.
- No traffic signal shall be altered or modified in any way without a plan approved by the City Traffic Engineer.
- The Contractor shall be responsible for maintaining all traffic control devices on an around-the-clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
- The traffic control requirements shown on these plans are minimum requirements only and do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the Contractor of his responsibility for selecting the proper traffic control devices and implementation procedures that will assure the safety of drivers, pedestrians, and workers at all times.
- Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the City Traffic Engineer or representative, the City may take one or more of the following actions:
 - Employ another agency to correct deficiencies in traffic control devices and deduct the cost from the Contractor's pay estimate.
 - Stop the work until deficiencies are corrected.
 - Suspend all pay estimates until deficiencies are corrected, or
 - Place the Contractor in default.



CHANNELIZERS

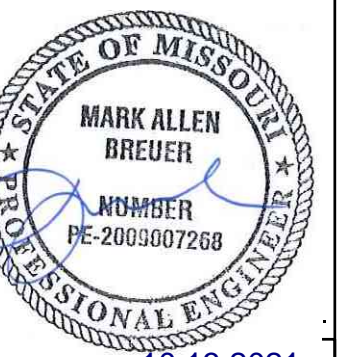
NOTE: White Bands On Barricades and Channelizers Shall Be Made From High Intensity Sheeting Material.



ARROW PANEL

BARRICADES

PREPARED BY:



10.13.2021

WOODLAND GLEN 2ND PLAT
STREET, STORMWATER, MASTER DRAINAGE,
AND EROSION CONTROL PLANS
WARD ROAD & WINTHROP DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---------------|---------------------|
| 04/24/2020 | CITY COMMENTS |
| 01/12/2021 | SCHLAGEL QUANTITIES |
| 04/09/2021 | SCHLAGEL QUANTITIES |
| 05/12/2021 | CITY COMMENTS |
| 05/15/2021 | CITY COMMENTS |
| 06/28/2021 | CITY COMMENTS |
| 09/28/2021 | SCHLAGEL UPDATE |
| 10/06/2021 | SCHLAGEL UPDATE |

TRAFFIC CONTROL DETAILS

SHEET