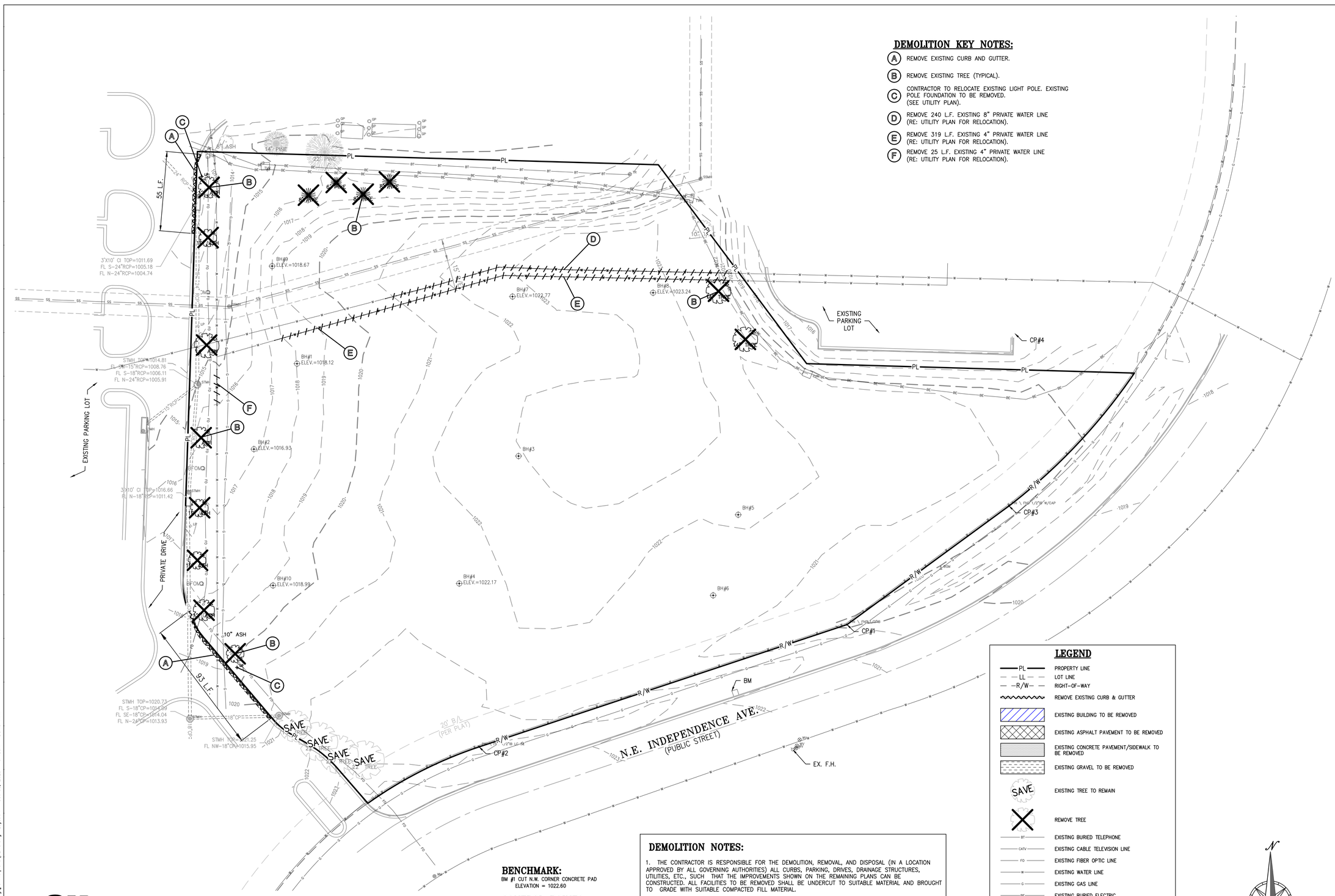

BENCHMARK:

BM #1 CUT N.W. CORNER CONCRETE PAD
ELEVATION = 1022.60

CONTROL POINTS:

CP #1 FND. 1/2" I.B. W/CAP #10
ELEVATION = 1019.65
CP #2 FND. 1/2" I.B. LC 52 #11
ELEVATION = 1022.12
CP #3 FND. 1/2" I.B. W/ CAP #9
ELEVATION = 1020.74
CP #4 + CUT TOP CURB MID CURVE
ELEVATION = 1016.39

DEMOLITION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.

2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

3. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

4. CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.

5. ALL TREE CLEARING MUST OCCUR BETWEEN NOVEMBER 1 TO MARCH 31 PER BAT HABITAT REGULATIONS.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- REMOVE EXISTING CURB & GUTTER
- EXISTING BUILDING TO BE REMOVED
- EXISTING ASPHALT PAVEMENT TO BE REMOVED
- EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
- EXISTING GRAVEL TO BE REMOVED
- SAVE — EXISTING TREE TO REMAIN
- REMOVE TREE
- BT — EXISTING BURIED TELEPHONE
- CATV — EXISTING CABLE TELEVISION LINE
- FO — EXISTING FIBER OPTIC LINE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- BE — EXISTING BURIED ELECTRIC
- OHP — EXISTING OVERHEAD POWER LINE
- SS — EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING FIRE HYDRANT
- LP — EXISTING LIGHT POLE
- EXISTING CHAIN LINK FENCE

Know what's below. Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

N

SCALE: 1"=30'
0' 30' 60'

PEI #220481

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

PHELPS ENGINEERING, INC.
PLANNING ENGINEERING IMPLEMENTATION
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005059

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-100.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

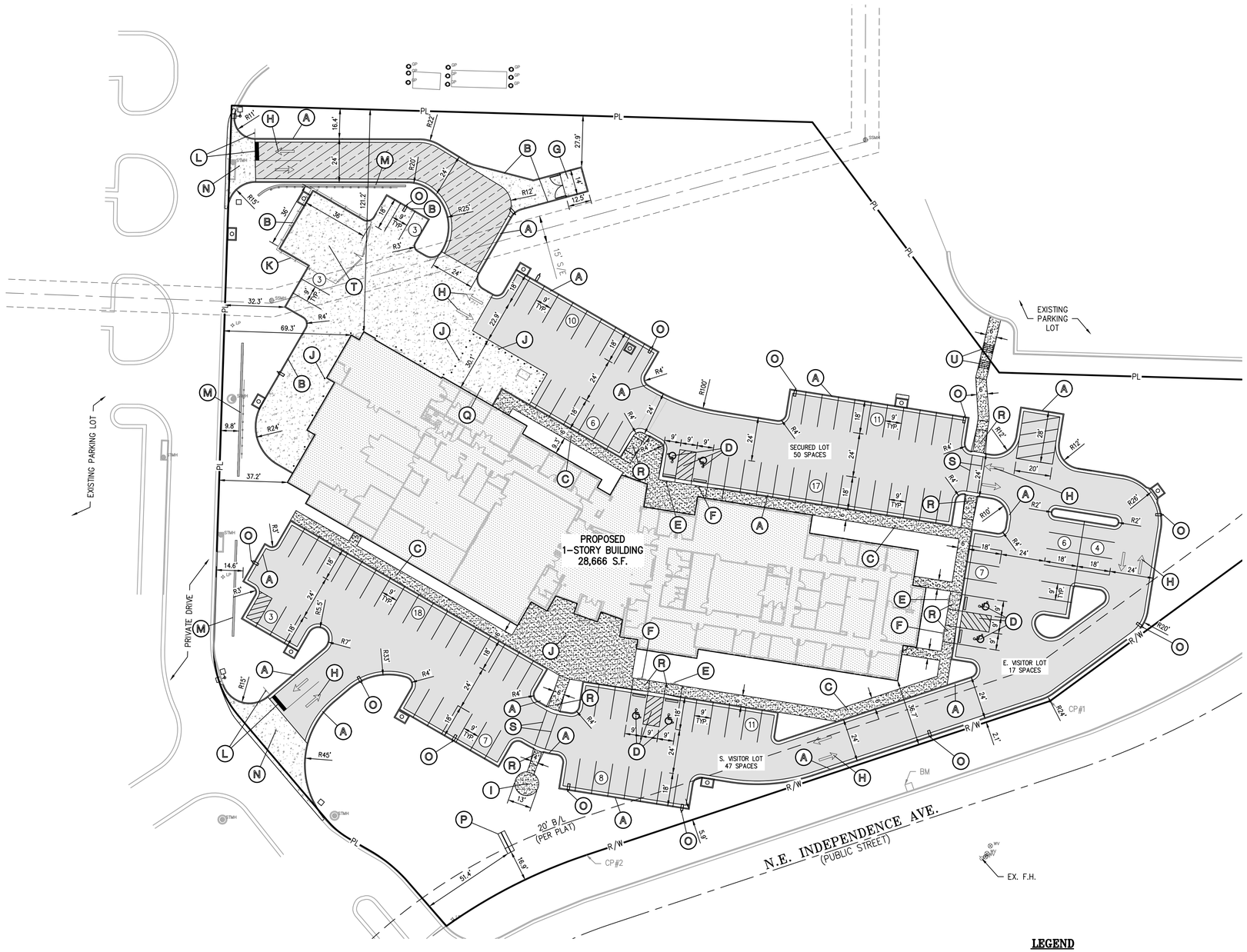
EXISTING CONDITIONS / DEMOLITION PLAN

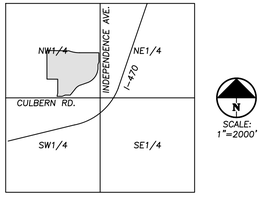
SHEET NUMBER:

C-100

SHEET 005 OF 202

08/01/2023





VICINITY MAP
SEC. 19-48-31

N
SCALE:
1"=2000'

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- RETAINING WALL
- PARKING LOT LIGHT

BUILDING & LOT DATA

Site Area	178,701 S.F./4.10 Ac.
Zoning	CP-2
Proposed Building No. of Stories	1 Story
Main Building S.F.	28,666 S.F.
Total Building S.F.	28,666 S.F.
Floor Area Ratio (FAR)	0.16

PARKING SUMMARY

Parking Provided - Lot X	
Standard Parking Provided	108 Spaces
Handicap Accessible Parking Spaces Provided	6 Spaces
Total Parking Provided	114 Spaces

811 Know what's below. Call before you dig.

UTILITY NOTES:
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SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) Project Specifications
2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.
3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.
5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.
6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.
7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.
9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.
10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.
11. All site concrete (curbs, pavements, sidewalks, etc.) shall meet Kansas City Materials Metro Board (KCMMB) mix design specifications for 4,000 p.s.i. air entrained concrete. APWA detail references are provided for all geometrical and other design information.
12. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.
2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FROM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.
2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.
3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.
5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70°F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60°F AND RISING. TWO COATS SHALL BE APPLIED.

SITE KEY NOTES:

- (A) CONSTRUCT 2' CONCRETE & CURB & GUTTER (TYPICAL) (RE: DETAIL #4, SHEET C-800).
- (B) CONSTRUCT 6" CONCRETE CURB (TYPICAL) .
- (C) CONSTRUCT CONCRETE SIDEWALK (TYPICAL) (RE: DETAIL #4, SHEET C-800).
- (D) CONSTRUCT ACCESSIBLE PARKING SPACE. INSTALL MARKINGS PER STANDARD DETAIL, AND CONCRETE WHEEL STOPS (RE: DETAIL #4, SHEET C-801).
- (E) INSTALL ACCESSIBLE PARKING SIGN (RE: DETAILS #1-#2, SHEET C-801).
- (F) INSTALL VAN ACCESSIBLE PARKING SIGN (RE: DETAILS #1-#2, SHEET C-801).
- (G) INSTALL TILT UP CONCRETE TRASH ENCLOSURE (RE: ARCHITECT PLANS).
- (H) INSTALL DIRECTIONAL ROAD MARKINGS (RE: DETAIL #2, SHEET C-803).
- (I) INSTALL FLAG POLE (RE: ARCHITECT PLANS).
- (J) INSTALL BOLLARDS (RE: ARCHITECT PLANS).
- (K) INSTALL 6' GALVANIZED CHAIN LINK FENCE AROUND CAR IMPOUND AREA)RE: ARCHITECT PLANS).
- (L) INSTALL STOP SIGN, 10 L.F. SOLID WHITE 24" STOP BAR & 23 L.F. 6" SOLID WHITE LINE. (RE: DETAIL #2, SHEET C-803).
- (M) CONSTRUCT RETAINING WALL (W/ HANDRAIL AT ANY LOCATION WALL EXCEEDS 30" IN HEIGHT) (RE: DETAIL #1, SHEET C-802).
- (N) CONSTRUCT CONCRETE ENTRANCE (RE: DETAIL #3, SHEET C-800).
- (O) PARKING LOT LIGHT POLE (RE: SITE LIGHTING PLANS).
- (P) INSTALL MONUMENT SIGN (RE: ARCH PLANS) (RE: MEP PLANS FOR CONDUIT REQUIREMENTS).
- (Q) MECHANICAL EQUIPMENT YARD (RE: MEP PLANS).
- (R) CONSTRUCT PRIVATE SIDEWALK RAMP (RE: DETAIL #3, SHEET C-801).
- (S) INSTALL 6" SOLID WHITE PAINTED CROSSWALK.
- (T) CAR IMPOUND AREA (RE: ARCH PLANS).
- (U) INSTALL CONCRETE STEPS WITH HANDRAILS ON BOTH SIDES AND CONCRETE CHEEK WALL (RE: DETAIL #1, SHEET C-803).

N

SCALE: 1"=30'
0' 30' 60'

PEI #220481

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

JUDD DAVID CLAUSEN
NUMBER PE-29850
10/5/2023
STATE OF MISSOURI
PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

PEI PLANNING ENGINEERING IMPLEMENTATION
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CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007002508

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-200.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

OVERALL
SITE
PLAN

SHEET NUMBER:

C-200

SHEET 006 OF 202

08/01/2023

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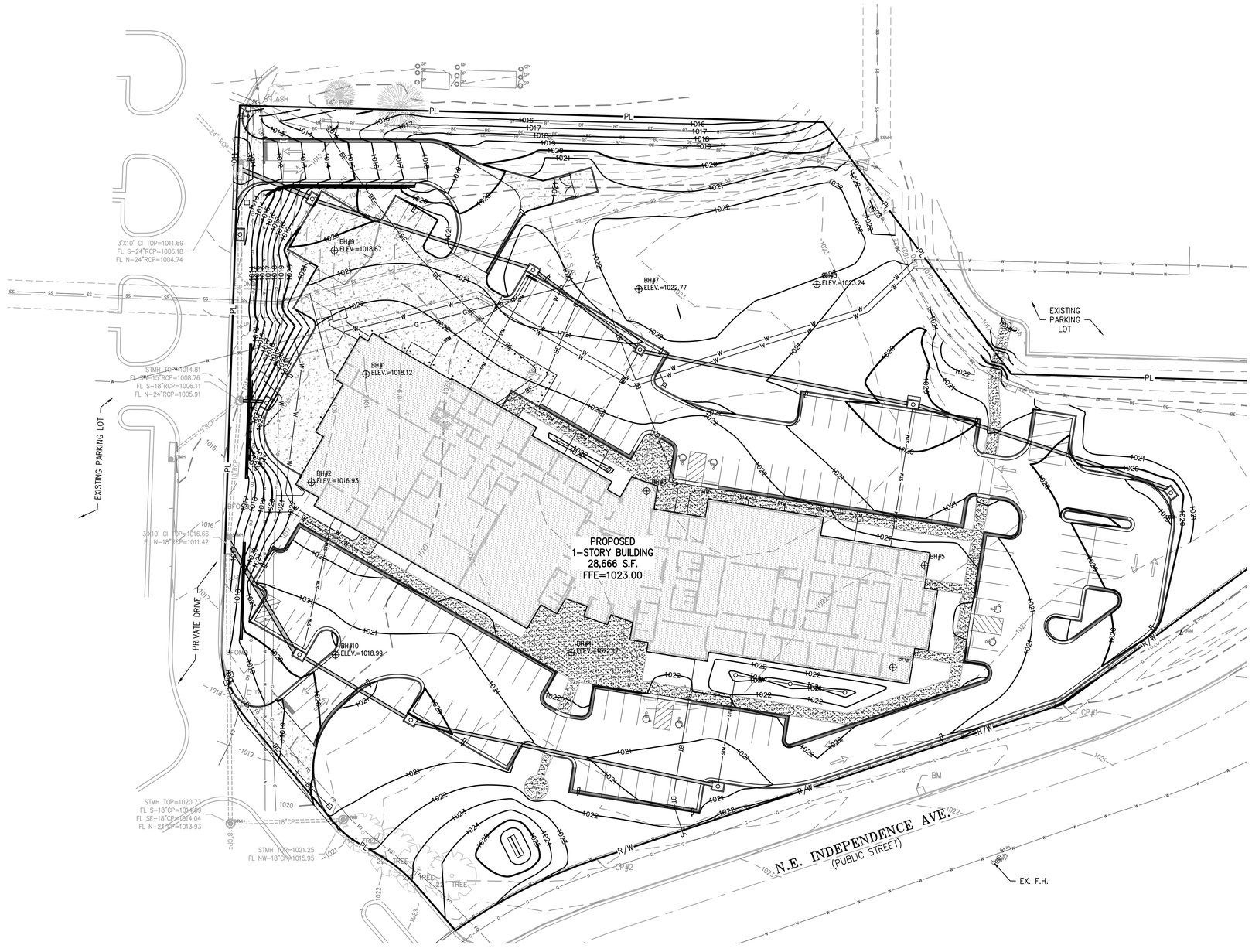

SITE GRADING NOTES:

1. CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted, proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.

2. If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.

3. CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.

4. TOPSOIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ITL.

5. Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.

6. SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.

7. PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.

8. EARTHWORK:

   A) GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.

   B) SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.

   C) FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five, feet building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.

   D) BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.

   E) EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.

   F) COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.

9. All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.

10. TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.

11. CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.

12. PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.

13. UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.

14. LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P.P. requirements.

Earthwork Summary Troop A 5/30/2023		
Raw Excavation	2,880 Cu. Yds.	
In Place Compaction (+15%)	-6,738 Cu. Yds.	
Building Adjustment	2,569 Cu. Yds.	(assume 24" of additional excavation)
Pavement Adjustment	2,452 Cu. Yds.	(assume 12" of additional excavation)
On Site Net	1,162 Cu. Yds.	

* EARTHWORK COMPUTATIONS BY PHELPS ENGINEERING, INC. ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE VERIFIED BY CONTRACTORS BY THEIR CHOSEN METHOD PRIOR TO PLACING BID. ALL EARTHWORK SHALL BE CONSIDERED UNCLASSIFIED. 15% WAS ADDED INTO RAW FILL QUANTITY TO ACCOUNT FOR SHRINKAGE.

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 920 — EXISTING CONTOURS
- 920 — PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION (XXX.XX / TW)

LG	LIP OF GUTTER
TC	TOP OF CURB
SW	SIDEWALK
ME	MATCH EXISTING
HP	HIGH POINT
LP	LOW POINT
P	TOP OF PAVEMENT
TE	TOP OF STRUCTURE
GR	GROUND ELEVATION
BS	BOTTOM OF STEPS
TS	TOP OF STEPS
BW	BOTTOM OF WALL
TW	TOP OF WALL

- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- PROPOSED RETAINING WALL

SCALE: 1"=30'
0' 30' 60'

PEI #220481

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0430G, AND DATED JANUARY 20, 2017.

BENCHMARK:

BM #1 CUT N.W. CORNER CONCRETE PAD
ELEVATION = 1022.60

CONTROL POINTS:

CP #1 FND. 1/2" I.B. W/CAP #10
ELEVATION = 1019.65
CP #2 FND. 1/2" I.B. LC 52 #11
ELEVATION = 1022.12
CP #3 FND. 1/2" I.B. W/ CAP #9
ELEVATION = 1020.74
CP #4 + CUT TOP CURB MID CURVE
ELEVATION = 1016.39

Know what's below. Call before you dig.

UTILITY NOTES:
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STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker &
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817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

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CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007002508

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-300.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

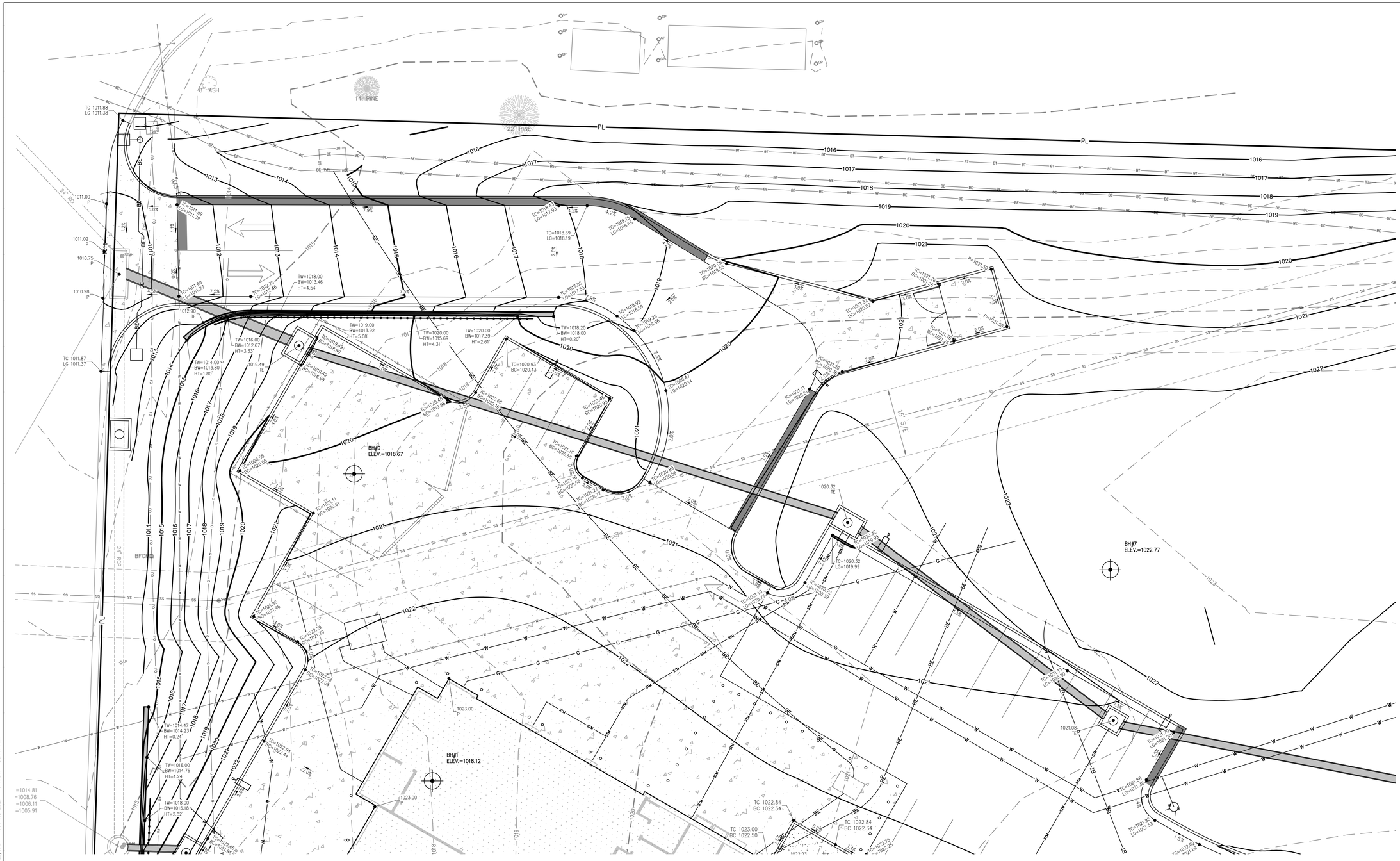
OVERALL GRADING PLAN

SHEET NUMBER:

C-300

SHEET 007 OF 202

08/01/2023



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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHAMBERS
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker &

Architects | Interior Designers | Construction Managers
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PLANNING
ENGINEERING
IMPLEMENTATION

CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007005059

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-301.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

ENLARGED GRADING PLAN

SHEET NUMBER:

C-301

SHEET 008 OF 202

08/01/2023

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID
CARLSON
NUMBER
PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker&

Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

PLANNING
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PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

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CAD DWG FILE: C-302.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

ENLARGED
GRADING
PLAN

SHEET NUMBER:

C-302

SHEET 009 OF 202
08/01/2023

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHAMBERS
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
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PEI PLANNING ENGINEERING IMPLEMENTATION
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Fax (913) 393-1166
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CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005058

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SHEET TITLE:

ENLARGED GRADING PLAN

SHEET NUMBER:

C-303

SHEET 010 OF 202
08/01/2023

PEI #220481

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

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Project Number: 2022.152

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REVISION: Addendum 04
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DESIGNED BY: JDC

SHEET TITLE:

ENLARGED GRADING PLAN

SHEET NUMBER:

C-304

SHEET 011 OF 202

08/01/2023

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
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ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
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CAD DWG FILE: C-305.dwg
DRAWN BY: SNH
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DESIGNED BY: JDC

SHEET TITLE:

ENLARGED GRADING PLAN

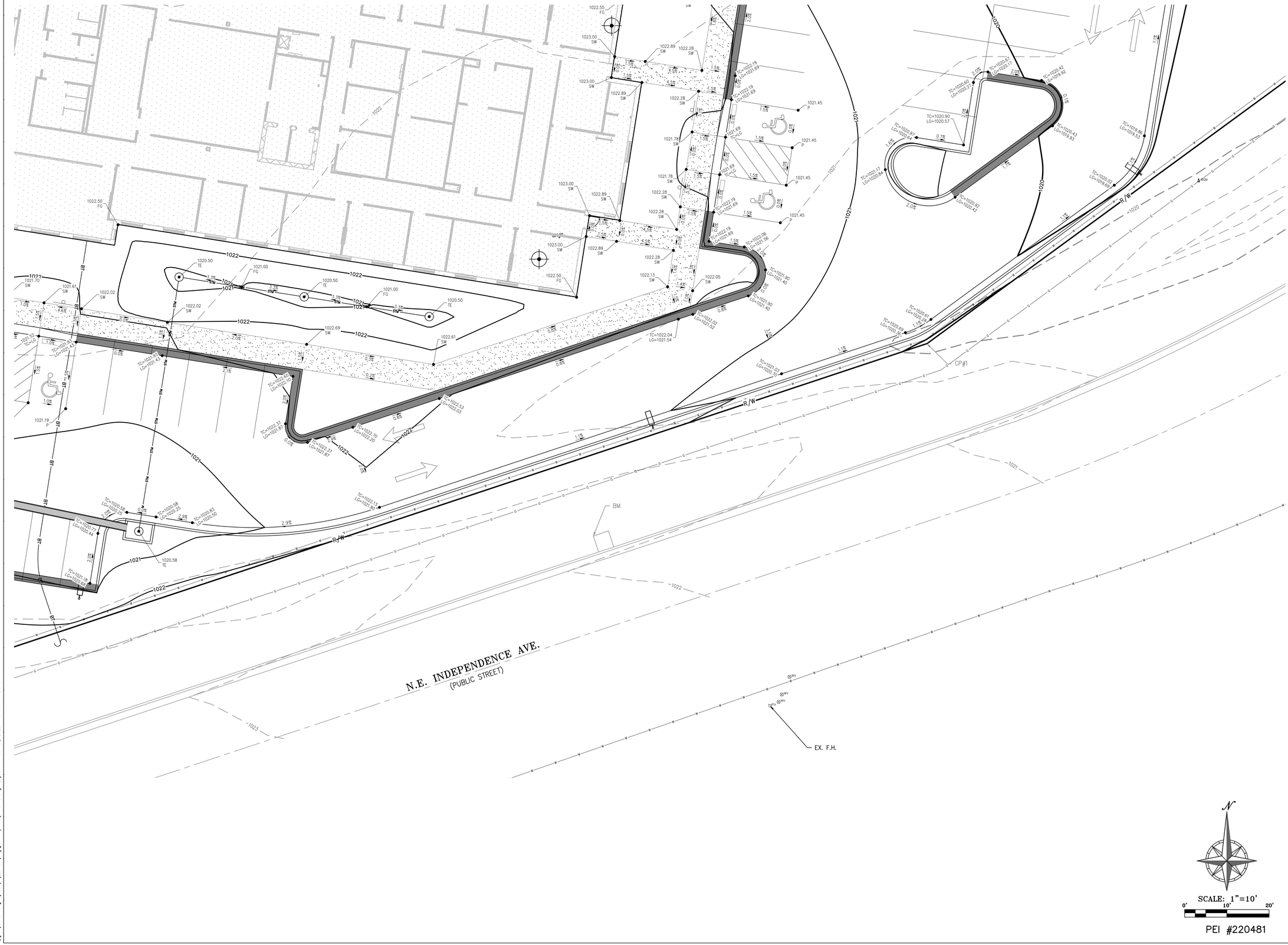
SHEET NUMBER:

C-305

SHEET 012 OF 202

08/01/2023

PEI #220481



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MIKE PARSON,
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CAD DWG FILE: C-306.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

ENLARGED GRADING PLAN

SHEET NUMBER:

C-306

SHEET 013 OF 202

08/01/2023

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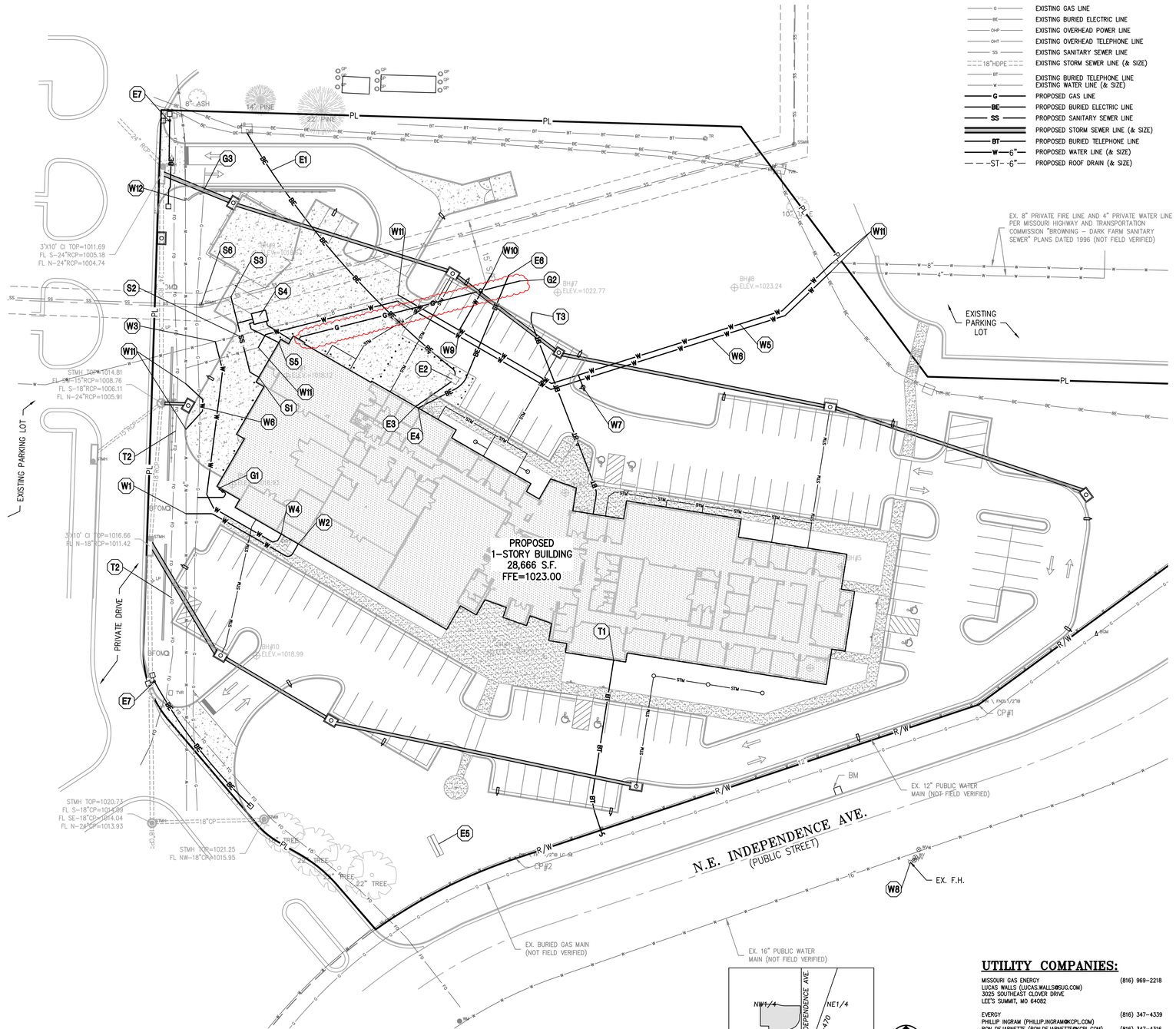

VICINITY MAP
SEC. 19-48-31

LEGEND

PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC LINE
OHP	EXISTING OVERHEAD POWER LINE
OHT	EXISTING OVERHEAD TELEPHONE LINE
SS	EXISTING SANITARY SEWER LINE
18"HDPE	EXISTING STORM SEWER LINE (& SIZE)
BT	EXISTING BURIED TELEPHONE LINE
W	EXISTING WATER LINE (& SIZE)
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRIC LINE
SS	PROPOSED SANITARY SEWER LINE
	PROPOSED STORM SEWER LINE (& SIZE)
BT	PROPOSED BURIED TELEPHONE LINE
W 6"	PROPOSED WATER LINE (& SIZE)
ST 6"	PROPOSED ROOF DRAIN (& SIZE)

UTILITY NOTES:

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the project specifications.
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5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City.
8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
13. Water lines shall be per the project specifications.
14. Minimum trench width shall be 2 feet.
15. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
16. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
17. Sanitary conflicts will be resolved prior to permit issuance.
18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
19. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
20. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
21. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
22. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
23. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

UTILITY KEY NOTES:

- E1 FOLLOW ELECTRIC COMPANY WORK ORDER AND SPECIFICATIONS FOR PRIMARY ELECTRICAL SERVICE ROUTING AND CONNECTION TO EXISTING.
- E2 INSTALL CONCRETE TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH ELECTRIC COMPANY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- E3 ELECTRIC ENTRY INTO BUILDING. FOLLOW ELECTRIC COMPANY REQUIREMENTS (RE: MEP PLANS).
- E4 INSTALL SECONDARY ELECTRICAL SERVICE FROM MAIN BUILDING TO FUTURE FIRING RANGE BUILDING (RE: MEP PLANS).
- E5 CONTRACTOR TO INSTALL CONDUITS TO MONUMENT SIGN (RE: BUILDING ELECTRICAL PLANS FOR POWER REQUIREMENTS)
- E6 CONTRACTOR TO COORDINATE INSTALLATION OF ELECTRICAL CONDUITS FOR FUTURE FIRING RANGE BUILDING. CAP AND MARK WITH TEE POST.
- E7 CONTRACTOR TO INTERCEPT EXISTING STREET LIGHT CABLE, INSTALL NEW JUNCTION BOX, AND INSTALL RELOCATED STREET LIGHT.
- W1 CONTRACTOR TO CONNECT TO EXISTING 4" PRIVATE WATER LINE FOR NEW 3" PRIVATE DOMESTIC SERVICE LINE W/ TS&V.
- W2 3" DOMESTIC WATER LINE ENTRY TO BUILDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS). GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH THE DEVELOPMENT SERVICES INSPECTOR.
- W3 CONTRACTOR TO INSTALL 8"x8"x6" TS&V ON EXISTING PRIVATE 8" FIRE LINE FOR PROPOSED 6" PRIVATE BUILDING FIRE LINE.
- W4 6" PRIVATE FIRE LINE ENTRY TO BUILDING (UPSTREAM OF BACKFLOW PREVENTION DEVICE). BACKFLOW PREVENTION DEVICE SHALL BE LOCATED INSIDE BUILDING (RE: BUILDING PLANS FOR BACKFLOW PREVENTION DEVICE DETAILS AND SPECIFICATIONS).
- W5 CONTRACTOR TO INSTALL 8" PRIVATE FIRE LINE AROUND BUILDING. SEE DEMOLITION PLAN FOR EXISTING LOCATION.
- W6 CONTRACTOR TO INSTALL 4" PRIVATE WATER LINE AROUND BUILDING. SEE DEMOLITION PLAN FOR EXISTING LOCATION.
- W7 CONTRACTOR TO INSTALL PRIVATE FIRE HYDRANT. PRIVATE FIRE SHALL BE PAINTED RED. (RE: DETAIL #2, SHEET C-802).
- W8 EXISTING PUBLIC FIRE HYDRANT TO REMAIN.
- W9 CONTRACTOR TO CONNECT TO EXISTING 4" PRIVATE WATER LINE FOR FUTURE 1-1/2" PRIVATE DOMESTIC SERVICE LINE W/ TS&V.
- W10 INSTALL 1-1/2" DOMESTIC WATER LINE FOR FUTURE FIRING RANGE BUILDING. CAP AND INSTALL TEE POST.
- W11 INSTALL STRADDLE BLOCKS AT CONNECTION TO EXISTING PRIVATE WATER LINES (TYP). (SEE DETAIL #3, SHEET C-803).
- W12 CONTRACTOR TO COORDINATE RELOCATION OF EXISTING 4" PRIVATE WATER LINE, AS NEEDED, FOR RETAINING WALL INSTALLATION.
- T1 CONTRACTOR TO PROVIDE TWO (2) – 4" PVC SCH. 40 CONDUITS FROM BUILDING TO R/W. CONTRACTOR TO TERMINATE IN QUAZITE BOX WITH PULL STRING FROM BUILDING TO TELEPHONE FEED POINT. CONTRACTOR TO VERIFY EXACT ROUTING AND FEED POINT WITH TELEPHONE COMPANY.
- T2 CONTRACTOR TO COORDINATE RELOCATION OF EXISTING BURIED FIBER LINE, AS NEEDED, FOR RETAINING WALL INSTALLATION.
- T3 CONTRACTOR TO COORDINATE ONE (1) – 4" PVC SCH. 40 CONDUITS ROUTING FROM MAIN BUILDING TO FUTURE FIRING RANGE BUILDING (RE: MEP PLANS). CAP AND INSTALL TEE POST.
- S1 CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE. TRANSITION FROM 4" (INTERIOR) TO 6" (EXTERIOR) AT FOUNDATION WALL (RE: MEP PLANS). FG=1023.00 FL 6"=1018.00
- S2 INSTALL 41 L.F. 6" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 1.0% MIN. SLOPE.
- S3 INSTALL 8"x6" WYE CONNECTION TO CONNECT TO EXISTING PUBLIC SANITARY SEWER MAIN. FL=997.78
- S4 INSTALL 500 GALLON SAND/OIL INTERCEPTOR (REF: PROCEPTOR BY GREENTURLE 500, HIGHLAND TANK 550, STRIEM 500, OR BETTER OPTION).
- S5 CONNECT 4" VENT FROM BUILDING TO SAND/OIL INTERCEPTOR (RE: MEP PLANS).
- S6 ADJUST EXISTING SANITARY SEWER MANHOLE TO NEW FINISHED GRADE. FG=1019.44
- G1 INSTALL 4" GAS ENTRY WITH GAS METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYING OF INDIVIDUAL METER. SIZE OF GAS MAIN SHALL BE AS DETERMINED BY UTILITY OR AS SHOWN ON BUILDING PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE & INSTALLATION OF GAS SERVICE LINE.
- G2 CONTRACTOR TO COORDINATE 3" GAS SERVICE ROUTING FROM MAIN BUILDING TO FUTURE FIRING RANGE BUILDING (RE: MEP PLANS). CAP AND INSTALL TEE POST.
- G3 CONTRACTOR TO COORDINATE RELOCATION OF EXISTING GAS LINE, AS NEEDED, FOR RETAINING WALL INSTALLATION.

UTILITY COMPANIES:

MISSOURI GAS ENERGY LUCAS WALLS (LUCAS.WALLS@SUG.COM) 3025 SOUTHEAST CLOVER DRIVE LEE'S SUMMIT, MO 64082	(816) 969-2218
EVERGY PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM) RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) 1300 HAMBLEN ROAD LEE'S SUMMIT, MO 64081	(816) 347-4339 (816) 347-4316
STORM SEWER (PUBLIC WORKS DEPARTMENT) 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	(816) 969-1800
SANITARY SEWER & WATER (WATER UTILITIES DEPT.) 1200 SE HAMBLEN ROAD, LEE'S SUMMIT, MO 64081	(816)-969-1900
AT&T (913) 383-4929 MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) 9444 NALL AVENUE OVERLAND PARK, KANSAS 66207	(913) 383-4849-FAX

Know what's below. Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

N
SCALE: 1"=30'
0' 30' 60'

PEI #220481

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
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OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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FACILITY # 8136018019

REVISION: Addendum 04
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CAD DWG FILE: C-400.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

OVERALL UTILITY PLAN

SHEET NUMBER:

C-400

SHEET 014 OF 202

08/01/2023

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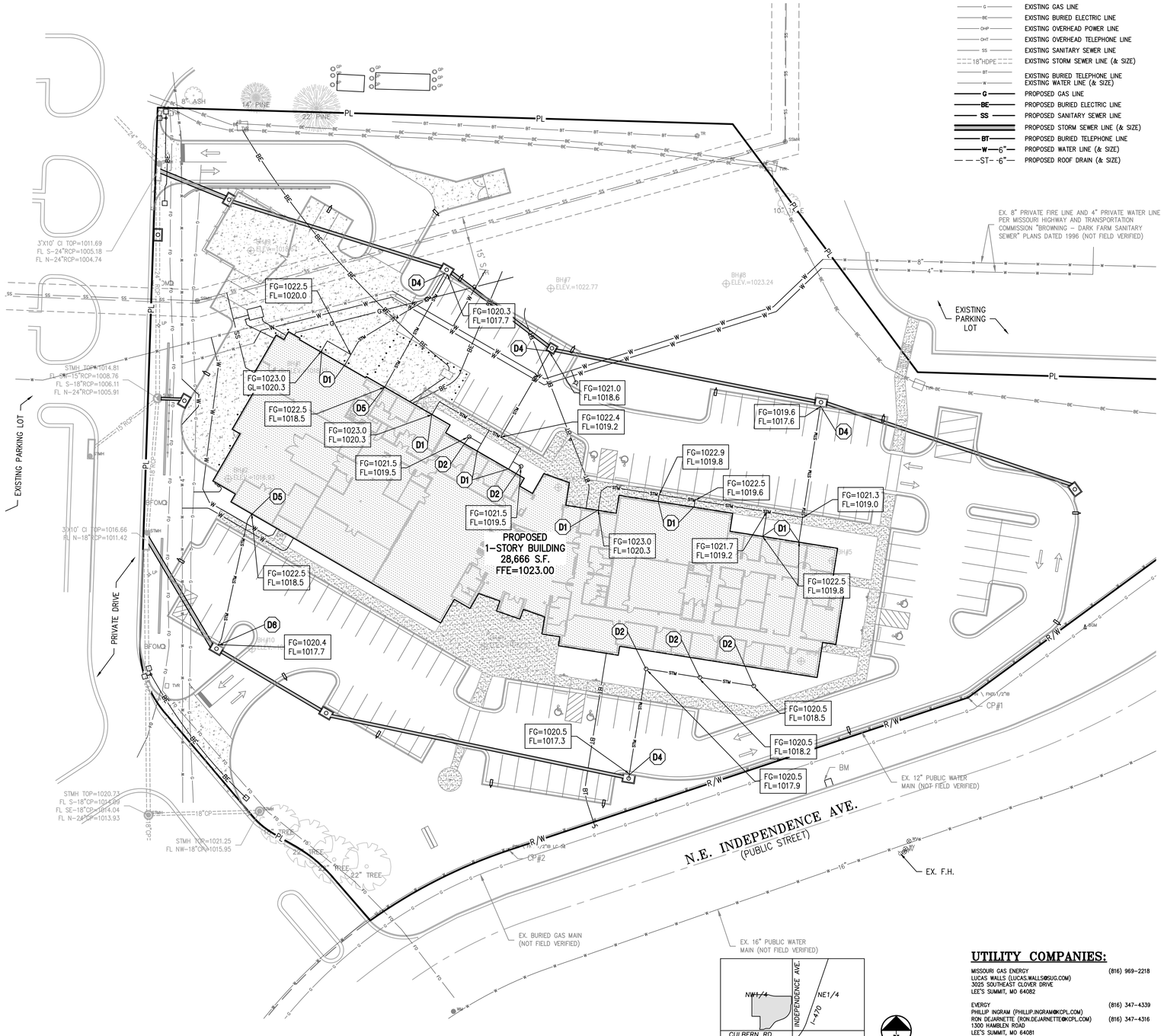

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- CATV — EXISTING CABLE TELEVISION LINE
- FO — EXISTING FIBER OPTIC LINE
- G — EXISTING GAS LINE
- BE — EXISTING BURIED ELECTRIC LINE
- OHP — EXISTING OVERHEAD POWER LINE
- OHT — EXISTING OVERHEAD TELEPHONE LINE
- SS — EXISTING SANITARY SEWER LINE
- 18"HDPE — EXISTING STORM SEWER LINE (& SIZE)
- BT — EXISTING BURIED TELEPHONE LINE
- W — EXISTING WATER LINE (& SIZE)
- G — PROPOSED GAS LINE
- BE — PROPOSED BURIED ELECTRIC LINE
- SS — PROPOSED SANITARY SEWER LINE
- PROPOSED STORM SEWER LINE (& SIZE)
- BT — PROPOSED BURIED TELEPHONE LINE
- W — 6" — PROPOSED WATER LINE (& SIZE)
- -ST- -6"- PROPOSED ROOF DRAIN (& SIZE)

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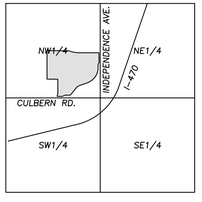
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6–inches above finished ground elevations in non–paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City.
8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie–in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On–site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
13. Water lines shall be per the project specifications.
14. Minimum trench width shall be 2 feet.
15. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
16. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
17. Sanitary conflicts will be resolved prior to permit issuance.
18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C–151) (CLASS 50).
19. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
20. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
21. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
22. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
23. Refer to the building plans for site lighting electrical requirements, including conduits, pole boxes, pull boxes, etc.

- (D1) TYPICAL STORM WATER DRAIN LINE FROM ROOF. ALL SECONDARY STORM LINES SHALL BE PVC SDR 35 OR HDPE (ST). SEE ARCH PLANS FOR BUILDING CONNECTION LOCATIONS.
- (D2) INSTALL 18" NYOPLAST DRAIN BASIN W/ STANDARD GRATE.
- (D3) INSTALL SECONDARY STORM SEWER FROM ROOF DRAINS AND NYOPLAST DRAIN BASINS. ALL SECONDARY STORM LINES SHALL BE 8" (MINIMUM) WITH 18" COVER (MINIMUM) UNLESS OTHERWISE NOTED ON PLANS. ALL SECONDARY STORM LINES SHALL HAVE A MINIMUM SLOPE SHALL OF 1.0% AND MINIMUM COVER DEPTH OF 18".
- (D4) CONNECT SECONDARY STORM LINE TO PROPOSED STORM STRUCTURE.
- (D5) INSTALL 6" PVC PVC SDR 35 OR HDPE (ST) @ 1.0% SLOPE (MINIMUM) FROM FOUNDATION DRAIN SYSTEM TO PROPOSED STORM STRUCTURE.
- (D6) CONNECT FOUNDATION DRAIN SYSTEM OUTLET PIPE TO PROPOSED STORM STRUCTURE.

UTILITY COMPANIES:

MISSOURI GAS ENERGY LUCAS WALLS (LUCAS.WALLS@SUG.COM) 3025 SOUTHEAST CLOVER DRIVE LEE'S SUMMIT, MO 64082	(816) 969–2218
EVERGY PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM) RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) 1300 HAMBLEN ROAD LEE'S SUMMIT, MO 64081	(816) 347–4339 (816) 347–4316
STORM SEWER (PUBLIC WORKS DEPARTMENT) 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	(816) 969–1800
SANITARY SEWER & WATER (WATER UTILITIES DEPT.) 1200 SE HAMBLEN ROAD, LEE'S SUMMIT, MO 64081	(816)–969–1900
AT&T (913) 383–4929 MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) 9444 NALL AVENUE OVERLAND PARK, KANSAS 66207	(913) 383–4849–FAX



VICINITY MAP
SEC. 19–48–31

SCALE: 1"=2000'

811 Know what's below. Call before you dig.

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

SCALE: 1"=30'
0' 30' 60'

PEI #220481

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI · JUDD DAVID CHESSER · NUMBER PE-29850 · 10/5/2023 · PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

PEI PLANNING ENGINEERING IMPLEMENTATION
PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS–82 ENGINEERING – E–391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007002508

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-401.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

SECONDARY STORM PLAN

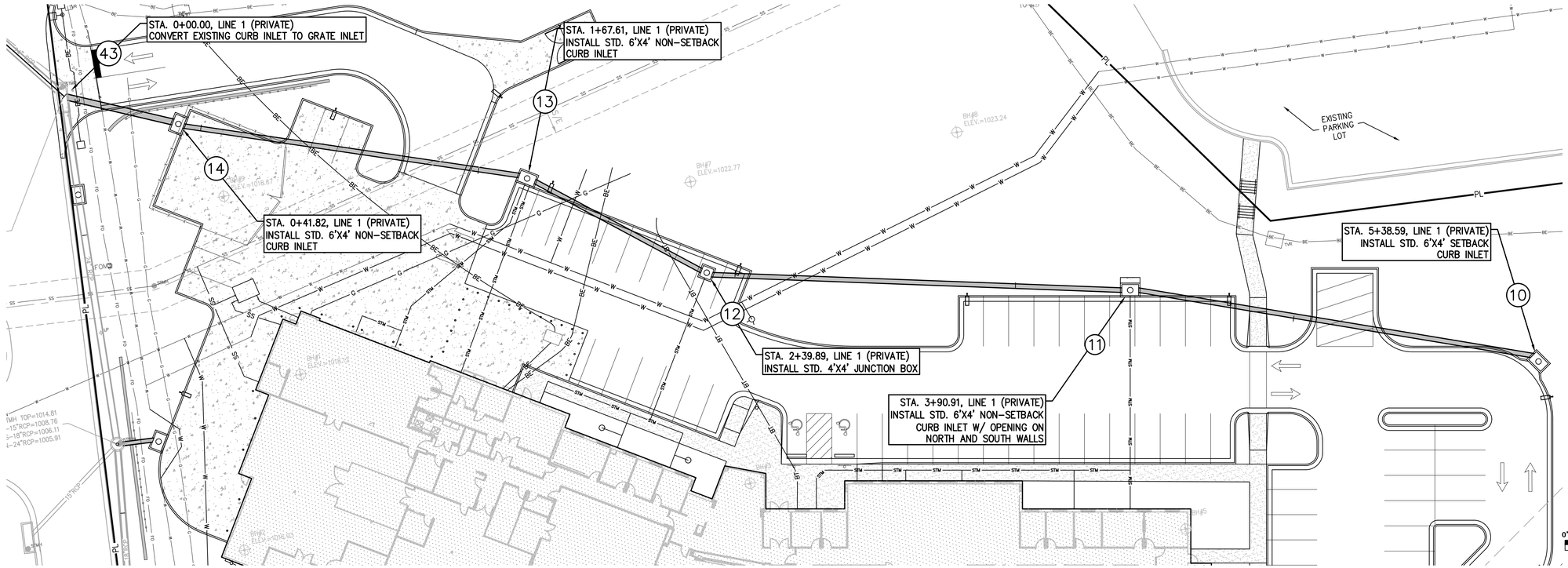
SHEET NUMBER:

C-401

SHEET 015 OF 202

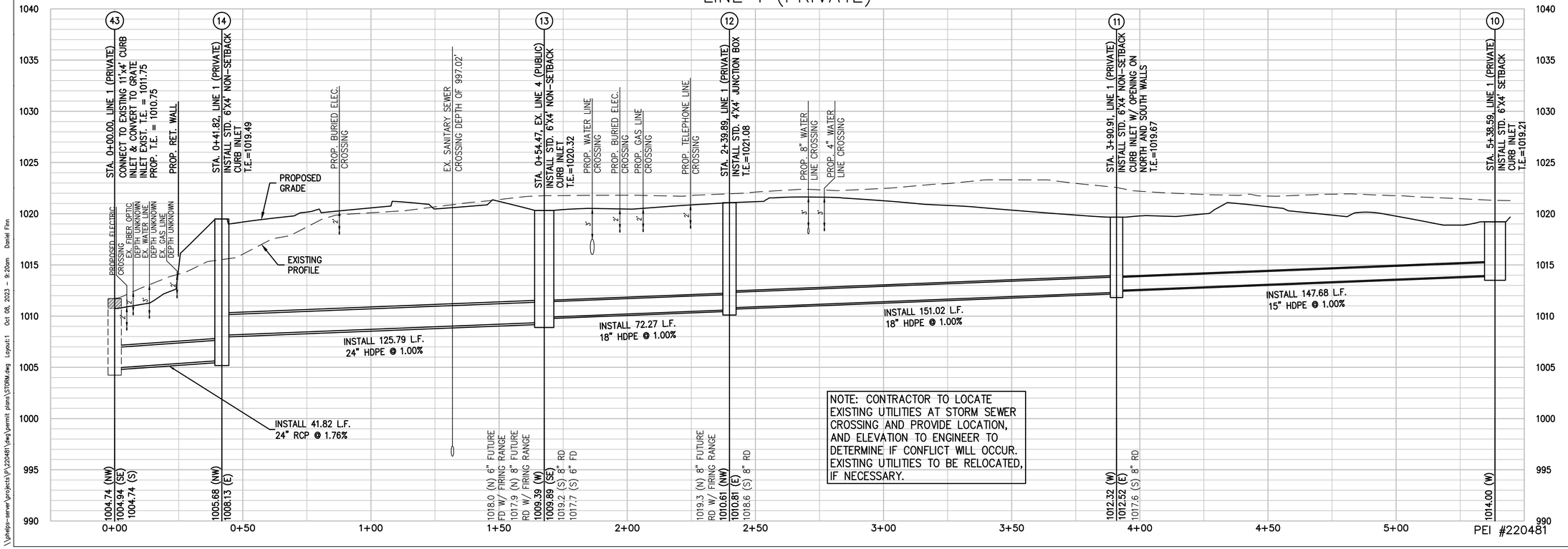
08/01/2023

\\phelps-server\projects\P\220481\dwg\permit plans\SECONDARY STORM PLAN.dwg Layout:1 Oct 08, 2023 - 9:20am Daniel Finn



SCALE: 1"=20' HORIZ.
1"= 5' VERT.

LINE 1 (PRIVATE)



NOTE: CONTRACTOR TO LOCATE EXISTING UTILITIES AT STORM SEWER CROSSING AND PROVIDE LOCATION, AND ELEVATION TO ENGINEER TO DETERMINE IF CONFLICT WILL OCCUR. EXISTING UTILITIES TO BE RELOCATED, IF NECESSARY.

PEI #220481

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STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CARLSON
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

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1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com
CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007002508

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: Bid Documents
01 August 2023

CAD DWG FILE: C-500.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

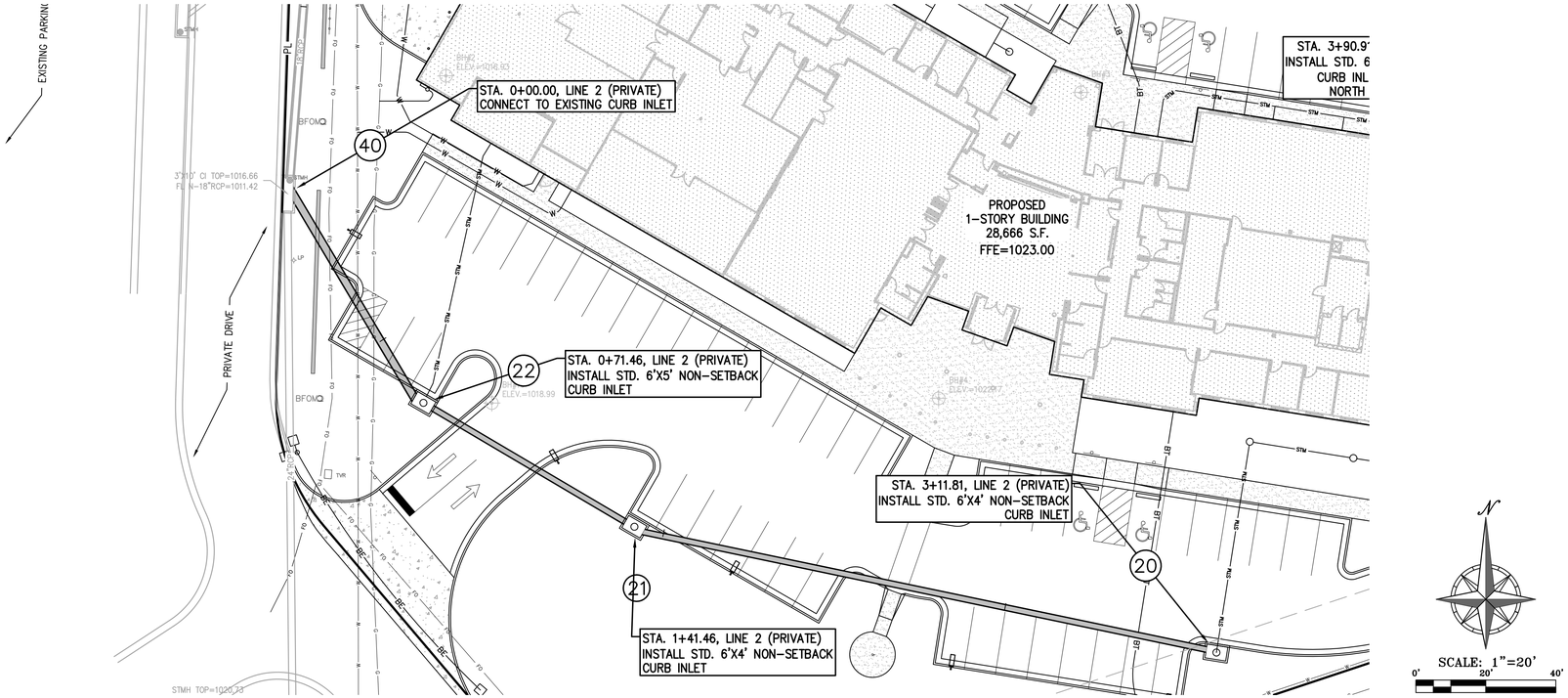
STORM SEWER PLAN AND PROFILE

SHEET NUMBER:

C-500

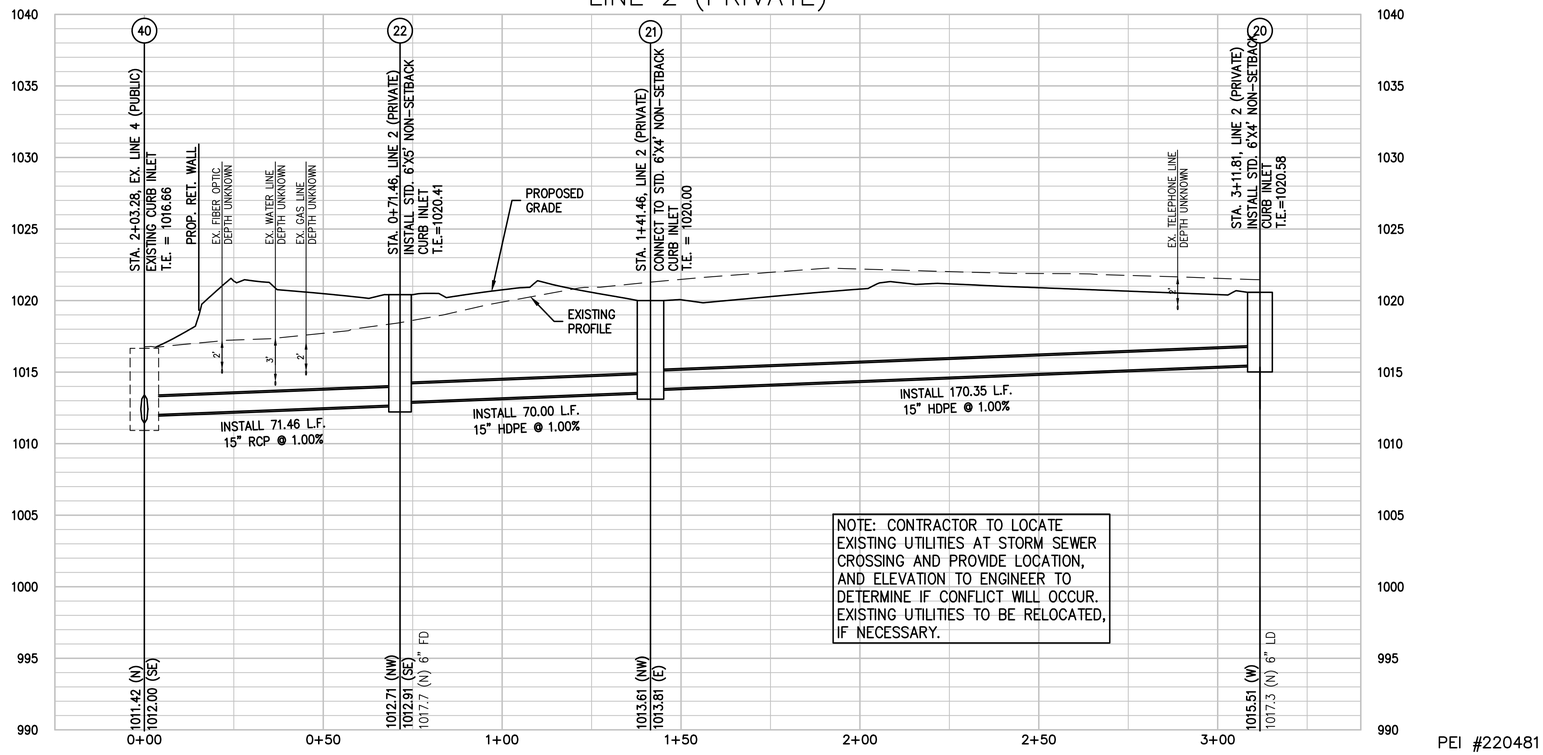
SHEET 016 OF 202

08/01/2023



SCALE: 1"=20' HORIZ.
1"= 5' VERT.

LINE 2 (PRIVATE)



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PEI #220481

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CLARKSON
NUMBER PE-29850
PROFESSIONAL ENGINEER
10/5/2023

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

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Olathe, Kansas 66061
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Fax (913) 393-1166
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CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007002508

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-501.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

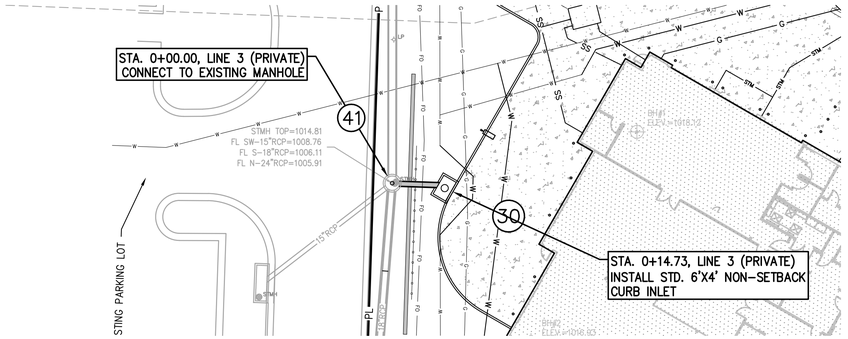
STORM SEWER PLAN AND PROFILE

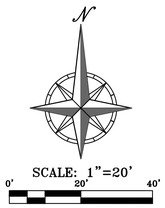
SHEET NUMBER:

C-501

SHEET 017 OF 202

08/01/2023

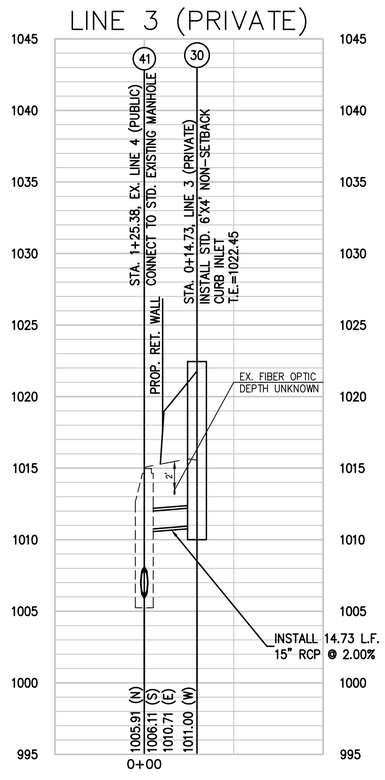




SCALE: 1"=20'

0' 20' 40'

SCALE: 1"=20' HORIZ.
1"= 5' VERT.



NOTE: CONTRACTOR TO LOCATE EXISTING UTILITIES AT STORM SEWER CROSSING AND PROVIDE LOCATION, AND ELEVATION TO ENGINEER TO DETERMINE IF CONFLICT WILL OCCUR. EXISTING UTILITIES TO BE RELOCATED, IF NECESSARY.

PEI #220481

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CARLSON
NUMBER PE-29850
PROFESSIONAL ENGINEER
10/5/2023

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817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

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1270 N. Winchester
Olathe, Kansas 66061
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Fax (913) 393-1166
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CERTIFICATE OF AUTHORIZATION
KANSAS
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ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007020058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-502.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

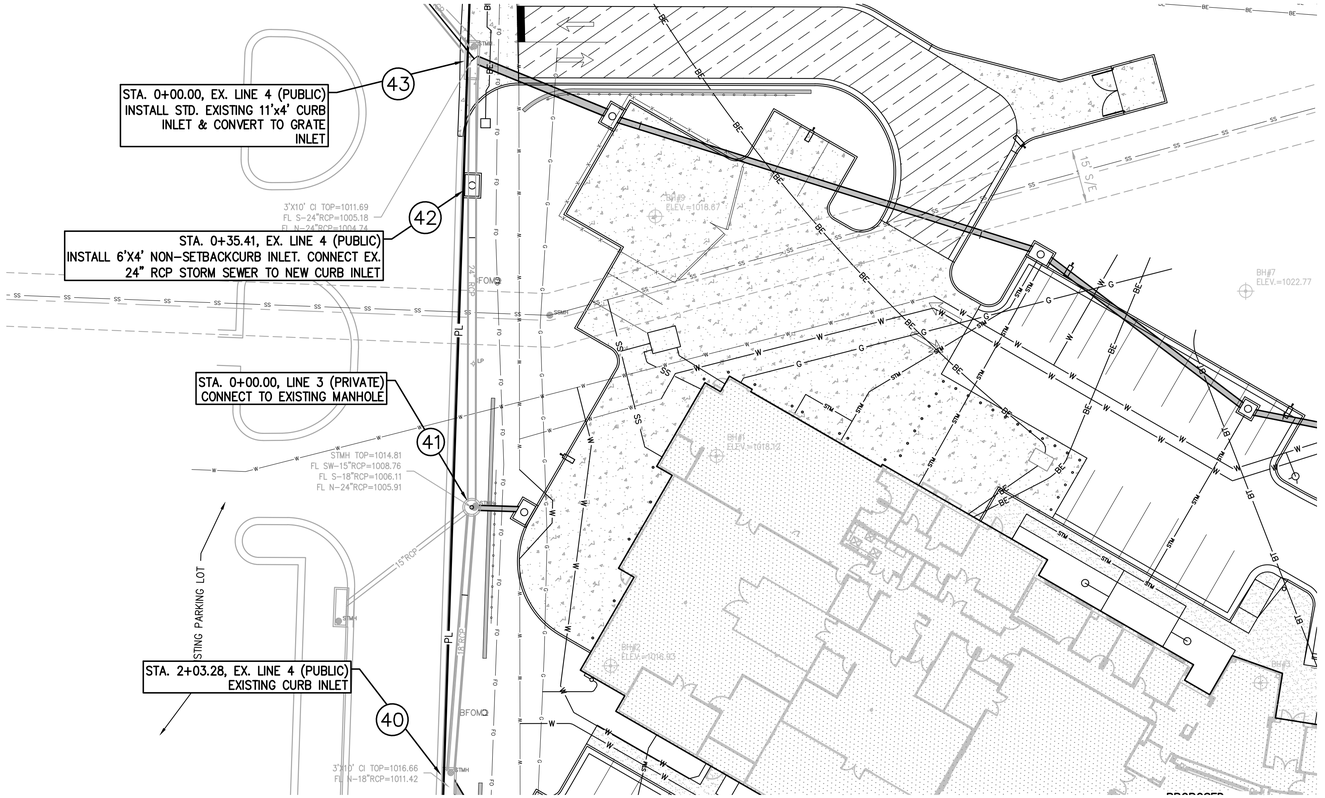
STORM SEWER PLAN AND PROFILE

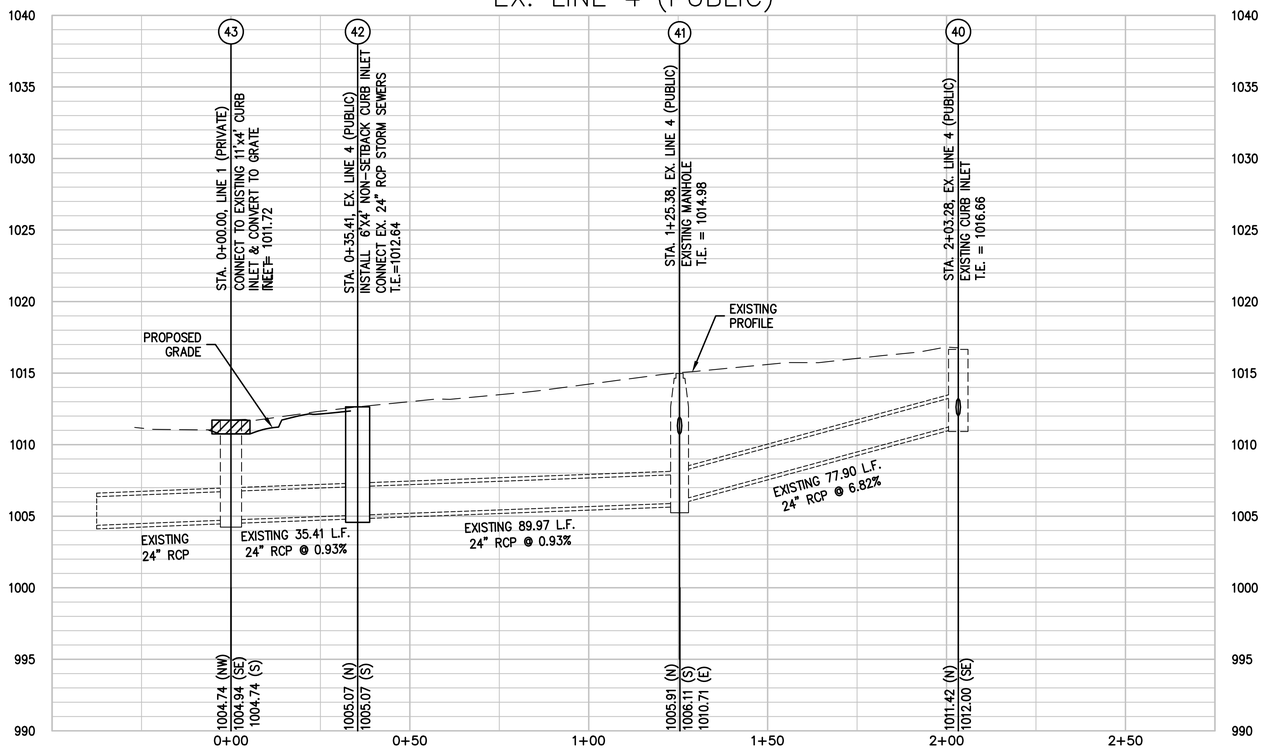
SHEET NUMBER:

C-502

SHEET 018 OF 202

08/01/2023





SCALE: 1"=20' HORIZ.
1"= 5' VERT.

PEI #220481

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STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

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JUDD DAVID CARLSON
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

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ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007005058

OFFICE OF
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FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-503.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

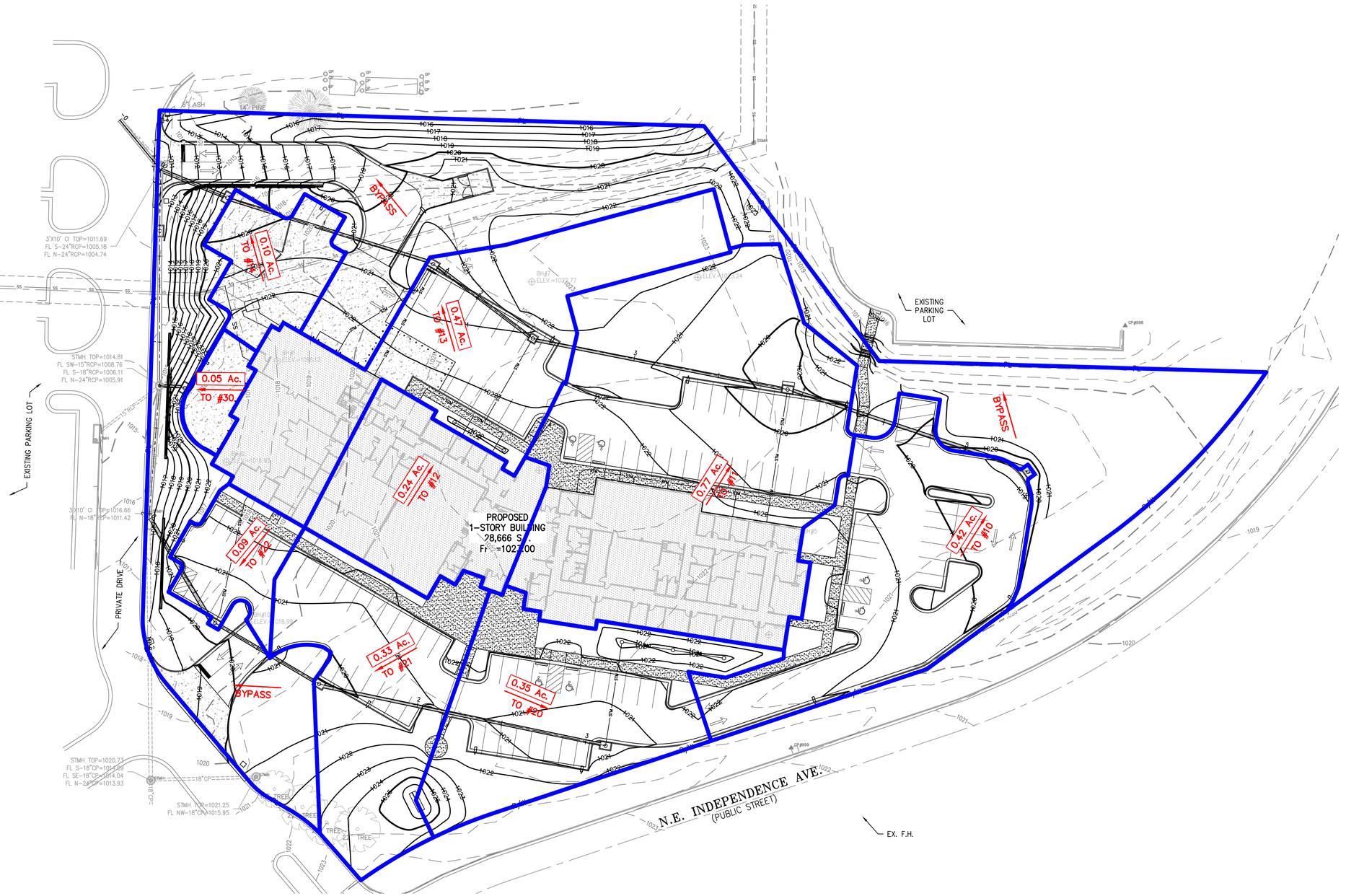
STORM SEWER
PLAN AND
PROFILE

SHEET NUMBER:

C-503

SHEET 019 OF 202

08/01/2023



FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0430G, AND DATED JANUARY 20, 2017.

811

Know what's **below.**

Call before you dig.

UTILITY NOTES:

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LEGEND

---XXX---	EXISTING CONTOURS
—XXX—	PROPOSED CONTOURS
▬	DENOTES DRAINAGE AREA
→	DENOTES FLOW DIRECTION
X.XX Ac. →	DENOTES DRAINAGE AREA TO STRUCTURE
(XX)	DENOTES STRUCTURE NUMBER

N

SCALE: 1"=30'

0' 30' 60'

PEI #220481

\\phelps-server\projects\P\220481\dwg\permit plans\DRAINAGE MAP.dwg Layout:1 Oct 08, 2023 - 9:20am Daniel Finn

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

JUDD DAVID CLAUSSEN
NUMBER
PE-29850
10/5/2023

GastingerWalker&

Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
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CERTIFICATE OF AUTHORIZATION
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ENGINEERING–2007005058

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-600.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

DRAINAGE
MAP

SHEET NUMBER:

C-600

SHEET 020 OF 202

08/01/2023

STORM DRAINAGE CALCULATIONS

I. RUNOFF											III. PIPE DESIGN								REMARKS
			INCREMENTAL			CUMULATIVE					STRUCTURE		PIPE						
LINE NUMBER	STRUCTURE	RUNOFF COEFFICIENT "C"	AREA "A" (ACRES)	C x A	AREA "A" (ACRES)	C x A	SYSTEM TIME OF CONCENTRATION "T_c" AT STRUCTURE (MIN)	RAINFALL INTENSITY "I_{25} / I_{100}" (IN/HR)	ANTECEDENT PRECIPITATION FACTOR "K_{25} / K_{100}"	RUNOFF "Q_{25} / Q_{100}" (CFS)	Upstream Structure Number	Downstream Structure Number	Diameter "D" (IN)	Slope "S" (FT/FT)	Velocity Full V_p (FPS)	Runoff Q_{25} (CFS)	Runoff Q_{100} (CFS)	Full Flow Q_p (CFS)	25-Year Check
1	10	0.81	0.42	0.34	0.42	0.34	6.00	8.19	1.10	3.1	10	11	15	0.0100	5.3	3.1	4.2	7.6	OK
								9.92	1.25	4.2									
	11	0.81	0.77	0.62	1.19	0.96	6.00	8.19	1.10	8.6	11	12	18	0.0100	6.0	8.6	11.9	12.4	OK
								9.92	1.25	11.9									
	12	0.81	0.24	0.19	1.43	1.15	6.00	8.19	1.10	10.4	12	13	18	0.0100	6.0	10.4	14.3	12.4	OK
								9.92	1.25	14.3									
	13	0.81	0.47	0.38	1.90	1.53	6.00	8.19	1.10	13.8	13	14	24	0.0100	7.2	13.8	19.0	26.7	OK
								9.92	1.25	19.0									
	14	0.81	0.10	0.08	2.00	1.61	6.00	8.19	1.10	14.5	14	43	24	0.0176	9.6	14.5	20.0	35.5	OK
								9.92	1.25	20.0									
2	20	0.81	0.35	0.28	0.35	0.28	6.00	8.19	1.10	2.5	20	21	15	0.0100	5.3	2.5	3.5	7.6	OK
								9.92	1.25	3.5									
	21	0.81	0.33	0.27	0.68	0.55	6.00	8.19	1.10	5.0	21	22	15	0.0100	5.3	5.0	6.8	7.6	OK
								9.92	1.25	6.8									
	22	0.81	0.09	0.07	0.77	0.62	6.00	8.19	1.10	5.6	22	40	15	0.0100	5.3	5.6	7.7	7.6	OK
								9.92	1.25	7.7									
3	30	0.81	0.05	0.04	0.05	0.04	6.00	8.19	1.10	0.4	30	41	15	0.0200	7.5	0.4	0.5	10.8	OK
								9.92	1.25	0.5									

PEI #220481

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CLARKSON
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

PEI PLANNING ENGINEERING IMPLEMENTATION
PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007005058

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND
CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-601.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

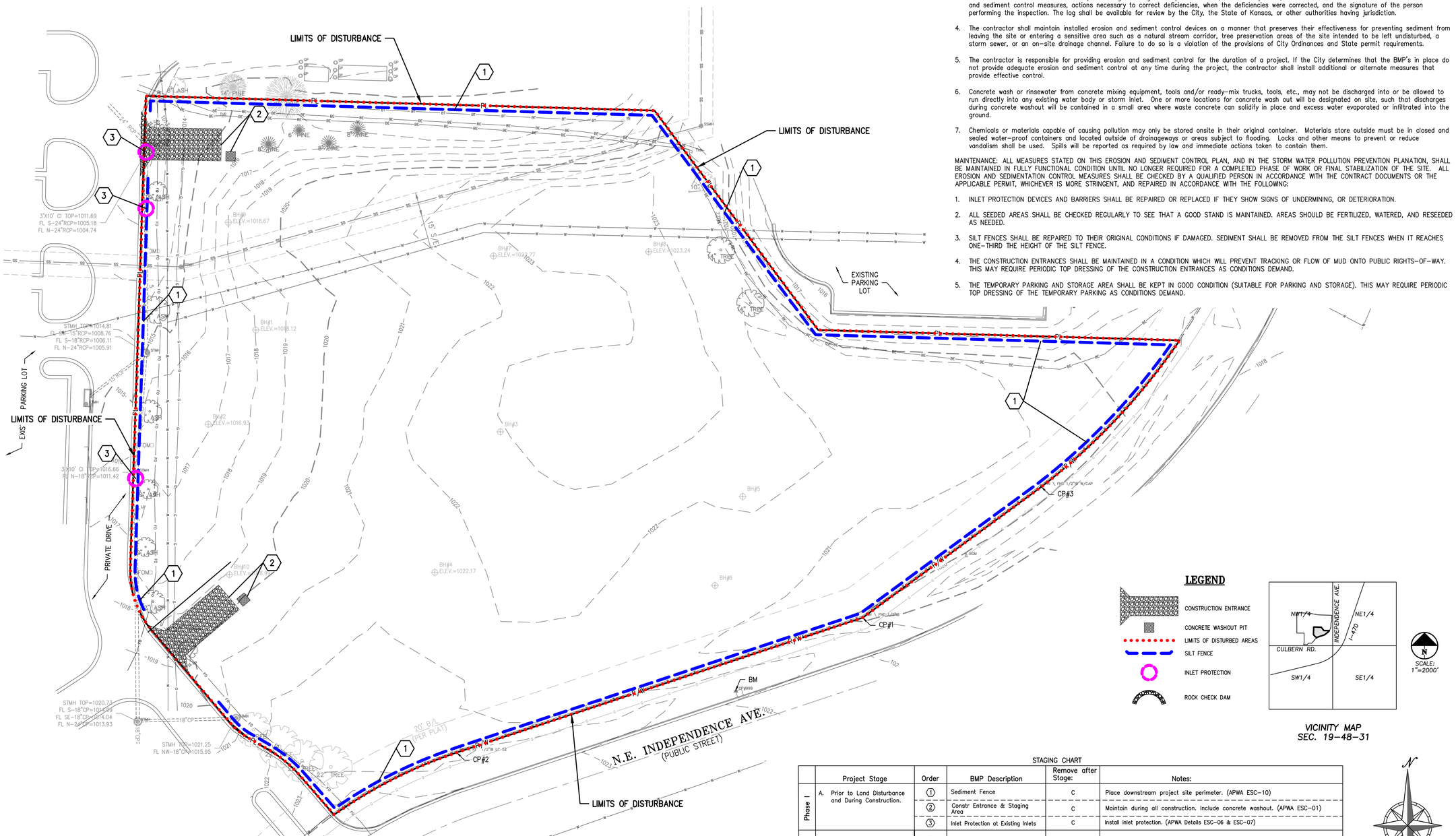
DRAINAGE
CALCULATIONS

SHEET NUMBER:

C-601

SHEET 021 OF 202

08/01/2023



EROSION AND SEDIMENT CONTROL GENERAL NOTES:

1. Prior to Land Disturbance activities, the contractor shall:
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   –Construct a stabilized entrance/parking/delivery area and install all perimeter sediment controls on the site.
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   –Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, placement of physical barriers or other means acceptable to the contractor and the City inspector.
2. Erosion and sediment control devices protecting the public right–of–way shall be installed as soon as the right–of–way has been backfilled and graded.
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   –The contractor shall perform inspections of erosion and sediment control measures at least once a every 14 days and within 24 hours following each rainfall event of ½" or more within any 24–hour period
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3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE–THIRD THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

LEGEND

- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT PIT
- LIMITS OF DISTURBED AREAS
- SILT FENCE
- INLET PROTECTION
- ROCK CHECK DAM

VICINITY MAP
SEC. 19–48–31

STAGING CHART

	Project Stage	Order	BMP Description	Remove after Stage:	Notes:
Phase I	A. Prior to Land Disturbance and During Construction.	1	Sediment Fence	C	Place downstream project site perimeter. (APWA ESC–10)
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Refer to Overall Grading Plan and Landscape Plan for final contours and final land cover.

DISTURBED AREA = 4.10± ACRES

UTILITY NOTES:
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811 Know what's **below.** **Call** before you dig.

N

SCALE: 1"=30'
0' 30' 60'

PEI #220481

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CARLSON
NUMBER PE-29850
10/5/2022
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CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS–82 ENGINEERING – E–391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION:
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-700.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

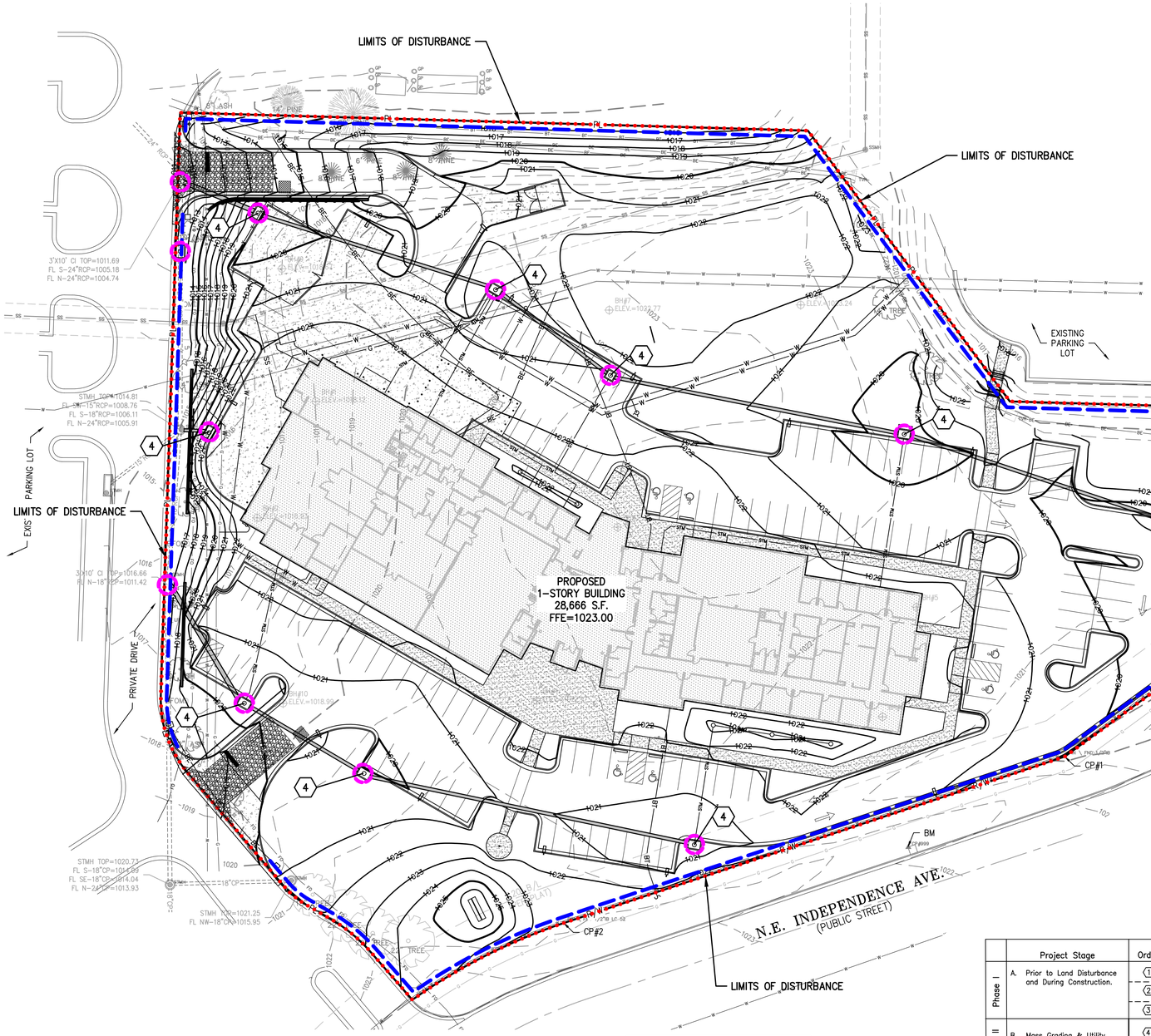
EROSION CONTROL PHASE I

SHEET NUMBER:

C-700

SHEET 022 OF 202

08/01/2023



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- CONCRETE WASHOUT PIT
- LIMITS OF DISTURBED AREAS
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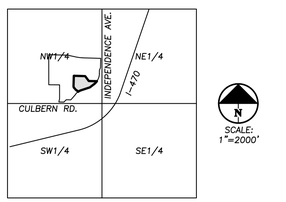
- ROCK CHECK DAM



VICINITY MAP
SEC. 19–48–31

STAGING CHART

		Project Stage	Order	BMP Description	Remove after Stage:	Notes:
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N

SCALE: 1"=30'
0' 30' 60'

PEI #220481

\\phelps-server\projects\P\220481\dwg\permit plans\EROSION CONTROL.dwg Layout:2 Oct 08, 2023 - 9:21am Daniel Finn

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CARLSON
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

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CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS–82 ENGINEERING – E–391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007002508

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-701.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

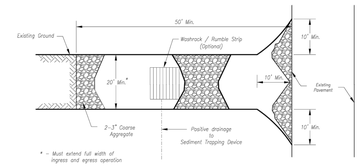
EROSION CONTROL PHASE II

SHEET NUMBER:

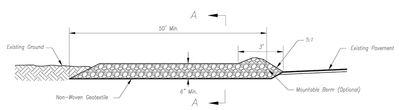
C-701

SHEET 023 OF 202

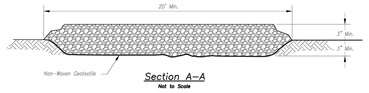
08/01/2023



Plan View
Not to Scale



Side Elevation
Not to Scale



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.

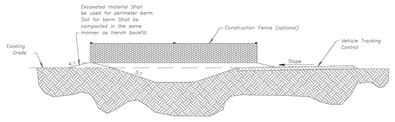
CONSTRUCTION ENTRANCE

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:

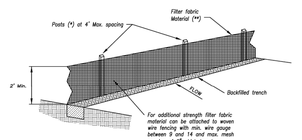
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface 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 topped, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

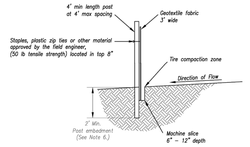
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

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



(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 ½" x 1 ½"
- NO.2 SOUTHERN PINE 2 ⅜" x 2 ⅜"
- STEEL 1.33 LB/FT

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



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.

SILT FENCE DETAILS
Not to Scale

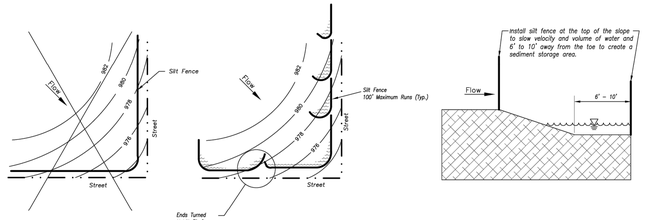
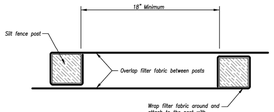


Figure A

SILT FENCE LAYOUT
Not to Scale

Maintenance:

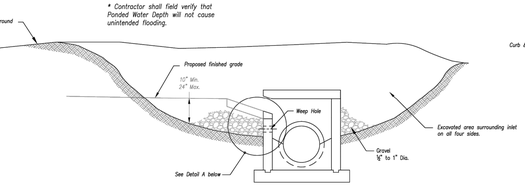
1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

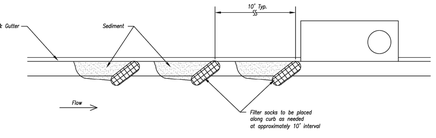


JOINING FENCE SECTIONS
Not to Scale

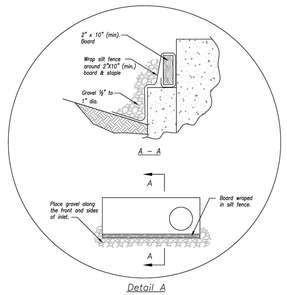
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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





On Grade Curb Inlet Protection



Detail A

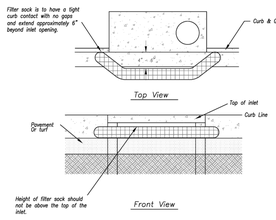
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

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

Maintenance:

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

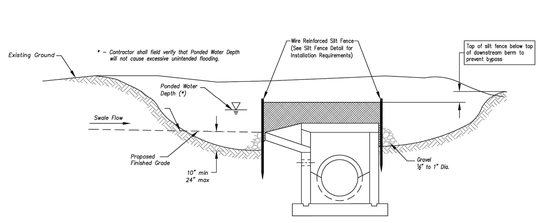


Sump Inlet Sediment Filter

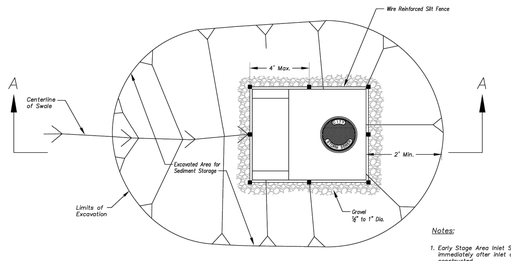
LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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

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



Section A–A
Not to Scale

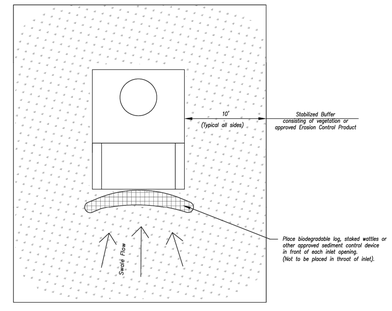


Plan
Not to Scale

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.

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



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	
AREA INLET AND JUNCTION BOX PROTECTION	STANDARD DRAWING NUMBER ESC-07
	ADOPTED: 10/24/2016

PEI #220481

\\phelps-server\projects\P\220481\dwg\permitt plans\DETAILS – EROSION.dwg Layout:1 Oct 08, 2023 – 9:21am Daniel Finn

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

PEI PLANNING ENGINEERING IMPLEMENTATION

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS
LAND SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007005058

OFFICE OF
ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND
CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-702.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

EROSION CONTROL DETAILS

SHEET NUMBER:

C-702

SHEET 024 OF 202

08/01/2023

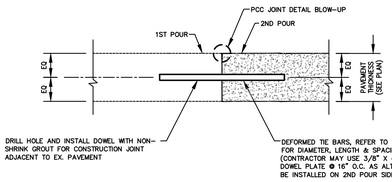
Dowel size*

Slab depth, in. (mm)	Dowel diameter, in. (mm)	Dowel embedment, in. (mm)†	Total dowel length, in. (mm)‡
5 (125)	5/8 (16)	5 (125)	12 (300)
6 (150)	3/4 (19)	6 (150)	14 (360)
7 (180)	7/8 (22)	6 (150)	14 (360)
8 (200)	1 (25)	6 (150)	14 (360)
9 (230)	1-1/8 (29)	7 (180)	16 (400)

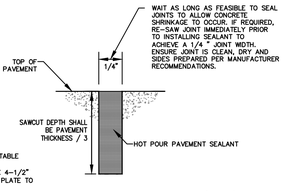
*All dowels spaced at 12 in. (300 mm) centers.
†On each side of joint.
‡Allowance made for joint openings and for minor errors in positioning dowels.

Tie bar dimensions

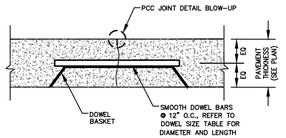
Slab depth, in. (mm)	Tiebar size, in. (mm)	Tiebar spacing: Distance to nearest free edge or to nearest joint where movement can occur			
		10 ft, in. (mm)	12 ft, in. (mm)	14 ft., in. (mm)	24 ft, in. (mm)
5 (125)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	28 (710)
5-1/2 (140)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	25 (630)
6 (150)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	23 (580)
6-1/2 (165)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	21 (530)
7 (180)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	20 (510)
7-1/2 (190)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	30 (760)	18 (460)
8 (200)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	28 (710)	17 (430)
8-1/2 (215)	1/2 x 24 (13 x 610)	30 (760)	30 (760)	36 (910)	16 (410)
9 (230)	1/2 x 30 (13 x 760)	36 (910)	36 (910)	—	24 (610)



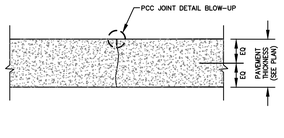
CONSTRUCTION JOINT



PCC JOINT DETAIL BLOW-UP (TYP.)



CONTRACTION JOINT (DOWELED)

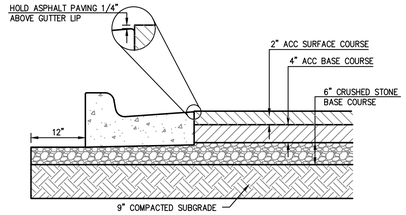


CONTRACTION JOINT (UNDOWELED)

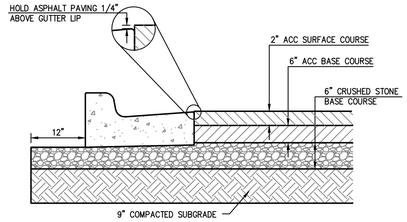
1 C-800 CONCRETE JOINT DETAILS
SCALE: N.T.S.

GENERAL PAVING NOTES:

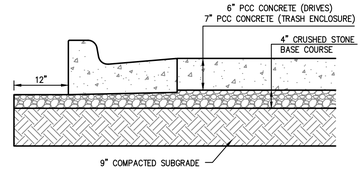
1. PRIOR TO PLACEMENT OF GRANULAR BASE OR ASPHALT, PROOF ROLL AND RE-COMPACT THE EXPOSED SURFACES UP TO A MINIMUM LATERAL DISTANCE OF TWO (2) FEET OUTSIDE THE PAVEMENT. ANY LOCALIZED SOFT, WET, OR LOOSE AREAS IDENTIFIED DURING THE PROOF ROLLING SHOULD BE REPAIRED PRIOR TO PAVING. FILL MATERIAL SHOULD BE PLACED IN LOOSE LIFTS UP TO A MAXIMUM OF EIGHT (8) INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D698 AT MOISTURE CONTENTS WITHIN 0% AND +4% OF THE OPTIMUM FOR SOILS WITH A LIQUID LIMIT OF LESS THAN 40. MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT SHOULD BE DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D 698).
2. PROOFROLL WITH A 25 TON RUBBER TIRE VEHICLE AND REPAIR SUBGRADE DEFICIENCIES. IF ANY SIGNIFICANT EVENT, SUCH AS PRECIPITATION, OCCURS AFTER PROOFROLLING, THE SUBGRADE SHOULD BE REVIEWED BY QUALIFIED PERSONNEL IMMEDIATELY PRIOR TO PLACING THE PAVEMENT.
3. CRUSHED STONE BASE COURSE USED BENEATH CONCRETE PAVING SHALL BE COMPACTED AB-3 OR EQUIVALENT.
4. ASPHALTIC SURFACE COURSE SHALL BE APWA TYPE 3. THE SURFACE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 97% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
5. ASPHALTIC BASE COURSE SHALL BE APWA TYPE 1. THE BASE COURSE SHOULD BE COMPACTED TO A MINIMUM OF 95% MARSHALL DENSITY (ASTM SPECIFICATION D 1559). 30% RAP IS ALLOWED.
6. THE CONTRACTOR SHALL PROVIDE A TACK COAT BETWEEN LIFTS OF ASPHALT.
7. ALL SITE CONCRETE (CURBS, PAVEMENTS, SIDEWALKS, ETC.) SHALL MEET KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE.
8. IN NEW PAVEMENT AREAS, CONTRACTOR SHALL OVER EXCAVATE AS REQUIRED TO ESTABLISH NEW COMPACTED SUBGRADE ELEVATIONS.
9. CONTRACTOR IS RESPONSIBLE FOR ALL PAVEMENT AND SUBGRADE MATERIALS TESTING.
10. FIBERMESH REINFORCEMENT: COMPLY WITH ASTM C-1116 AND ASTM C-1018. FIBERMESH REINFORCEMENT SHALL BE USED IN ALL CONCRETE CURB AND CONCRETE FLAT WORK AT A RATE OF 2 LBS. PER CUBIC YARD OF CONCRETE.



ASPHALT PAVING - STANDARD DUTY AREAS

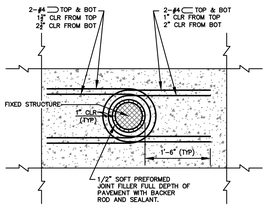


ASPHALT PAVING - HEAVY DUTY AREAS

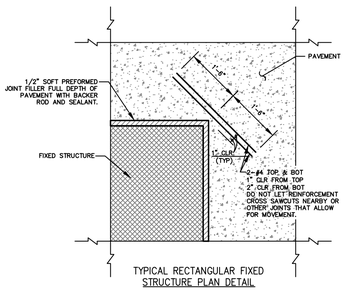


CONCRETE PAVING

3 C-800 PAVING SECTIONS
SCALE: N.T.S.

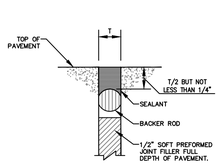


TYPICAL ROUND FIXED
STRUCTURE PLAN DETAIL
USES: MANHOLES, LIGHT POLE BASES AND BOLLARDS

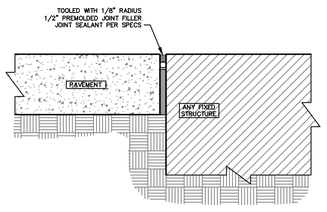


TYPICAL RECTANGULAR FIXED
STRUCTURE PLAN DETAIL
USES: BUILDINGS, RETAINING WALLS/DOCK WALLS AND DROP INLETS

2 C-800 ISOLATION JOINT DETAILS
SCALE: N.T.S.



BACKER ROD AND SEALANT
SECTION AT FIXED STRUCTURE

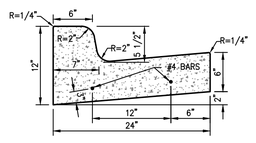


ISOLATION JOINT

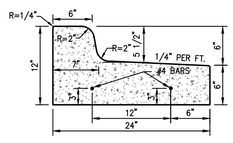
NOTES:

ISOLATION JOINT TO BE USED FOR FIXED STRUCTURES SUCH AS BUILDINGS, RETAINING WALLS/DOCK WALLS, DROP INLETS, MANHOLES, LIGHT POLE BASES AND BOLLARDS.

PAVEMENT IS NOT CONSIDERED A FIXED STRUCTURE.

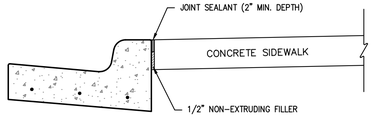


TYPE "B"
CURB & GUTTER



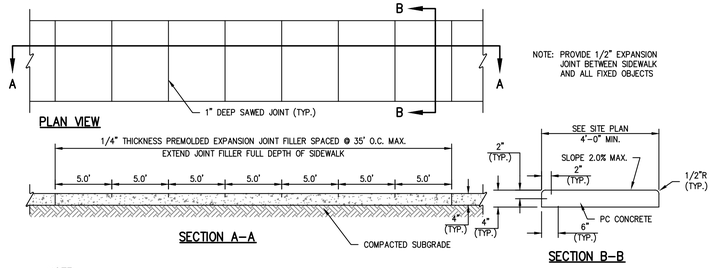
TYPE "B" TIP-OUT
CURB & GUTTER

4 C-800 PRIVATE CURB & GUTTER DETAILS
SCALE: N.T.S.



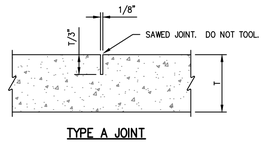
ALL OTHER DETAILS SAME AS SHOWN PER THIS SHEET.

6 C-800 SIDEWALK AT CURB DETAIL
SCALE: N.T.S.

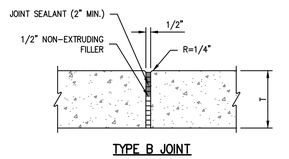


NOTE:
1. USE KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE FOR ALL PRIVATE SIDEWALKS.

5 C-800 PRIVATE CONCRETE SIDEWALKS (NON REINFORCED)
SCALE: N.T.S.



TYPE A JOINT



TYPE B JOINT

NOTE: TYPE A JOINTS SHALL NOT EXCEED 20 TIMES THE PAVEMENT THICKNESS (T).

7 C-800 CONCRETE SIDEWALK JOINT DETAILS
SCALE: N.T.S.

PEI #220481

\\phelps-server\projects\P\220481\dwg\permit plans\DETAILS - PRIVATE.dwg Layout:PAVE 1 Oct 08, 2023 - 9:21am Daniel Finn

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
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817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

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1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING - LS-82 ENGINEERING - E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING-2007001128 ENGINEERING-2007005058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-800.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

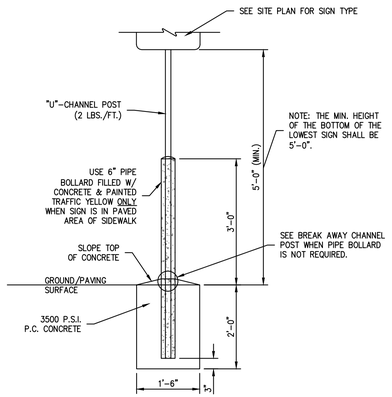
SHEET TITLE:

STANDARD DETAILS

SHEET NUMBER:

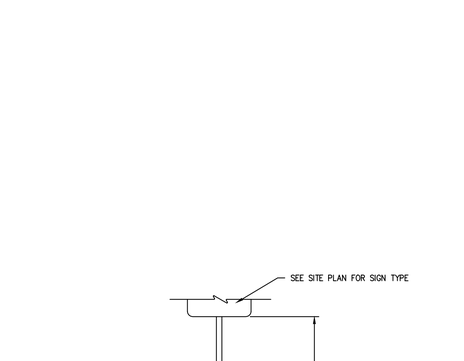
C-800

SHEET 025 OF 202
08/01/2023



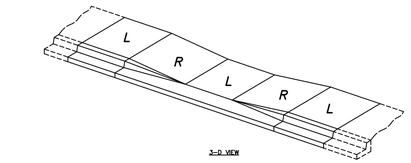
SIGN BASE DETAIL IN SIDEWALK & PAVED AREAS

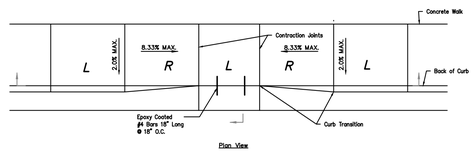
1 / C-801 SCALE: N.T.S.

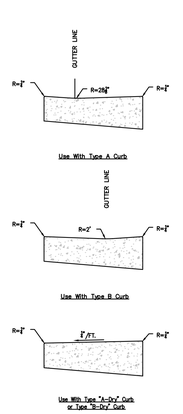


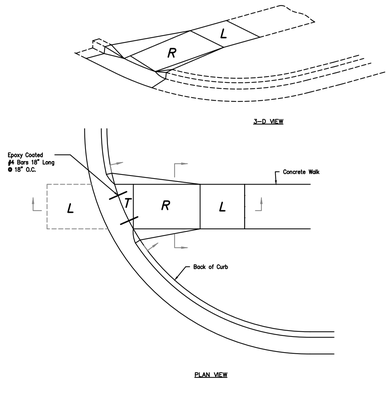
SIGN DETAIL IN GRASS AREA

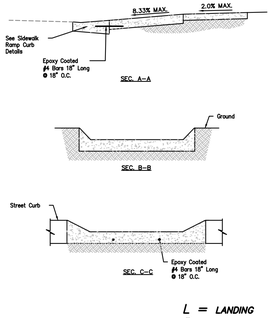
2 / C-801 SCALE: N.T.S.

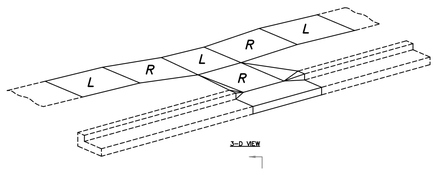


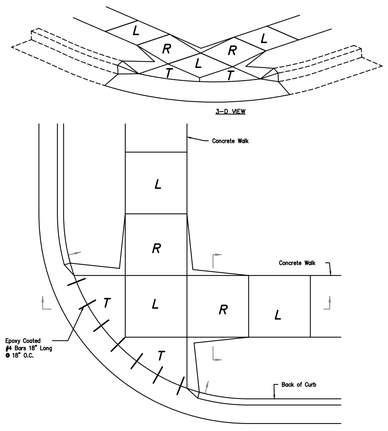


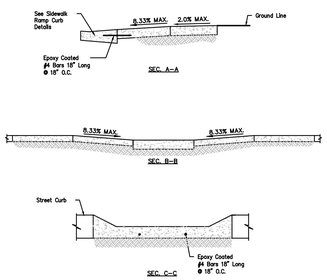


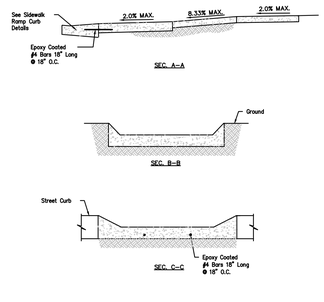












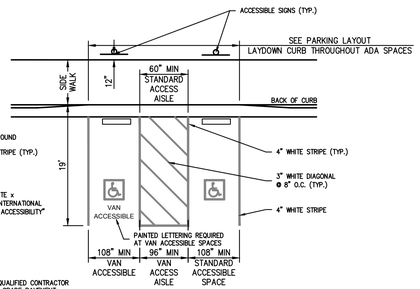
L = LANDING
R = RAMP
T = TRANSITION

RAMP (Required to transition elevation): Max. Longitudinal Slope — 8.33%, Max. Cross Slope — 2.00%, Min. Width — 5', Min. Length — 5'

LANDING (Required to change direction of travel): Max. Longitudinal Slope — 2.00%, Max. Cross Slope — 2.00%, Min. Width — 5'

PRIVATE SIDEWALK RAMPS

3 / C-801 SCALE: N.T.S.



ACCESSIBLE SYMBOL MARKING DETAIL

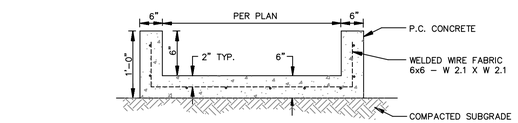
SCALE: N.T.S.

GENERAL NOTES:

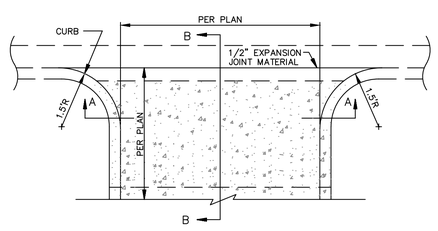
1. ALL PAVEMENT MARKINGS SHALL BE APPLIED BY A QUALIFIED CONTRACTOR HAVING A MINIMUM 3 YEARS EXPERIENCE IN TRAFFIC GRADE PAVEMENT MARKING APPLICATIONS.
2. PAINT SHALL BE A NON-BLEEDING, QUICK-DRYING, ALKYD PETROLEUM BASE PAINT SUITABLE FOR TRAFFIC-BEARING SURFACE AND SHALL MEET FS TTP-85E & MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION.
3. SWEEP AND CLEAN SURFACE TO ELIMINATE LOOSE MATERIAL & DUST.
4. APPLY TWO (2) COATS OF PAINT AT MANUFACTURER RECOMMENDED RATE WITHOUT THE ADDITION OF THINNER, WITH A MAXIMUM OF 100 SQUARE FEET PER GALLON. APPLY WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. AT SIDEWALK, CURBS, AND CROSSWALKS USE A STRAIGHTEDGE TO ENSURE A UNIFORM, CLEAN, & STRAIGHT STRIPE.
5. THE FOLLOWING ITEMS SHALL BE PAINTED WITH THE COLORS NOTED BELOW:
   A. HANDICAP SYMBOLS: SEE DETAIL THIS SHEET.
   B. PARKING STALL STRIPING: WHITE.
6. ACCESSIBLE PARKING SPACE DESIGN LAYOUT SHALL BE IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
7. SEE SITE PLANS FOR COMPLETE PARKING LAYOUT.

ACCESSIBLE PARKING SPACE DETAIL

4 / C-801 SCALE: N.T.S.



SECTION A—A



CONCRETE FLUME DETAIL

5 / C-801 N.T.S.

PEI #220481

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI — JUDD DAVID CHESSER — NUMBER PE-29850 — 10/5/2023 — PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

PHELPS ENGINEERING, INC.
PLANNING ENGINEERING IMPLEMENTATION
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005058

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-801.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

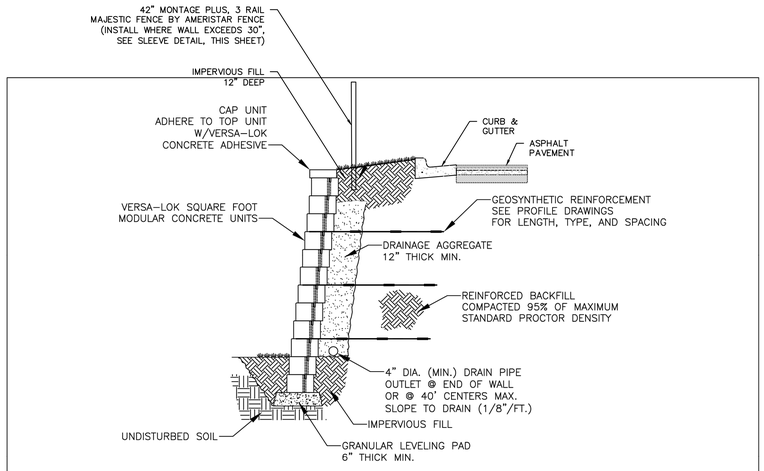
STANDARD DETAILS

SHEET NUMBER:

C-801

SHEET 026 OF 202

08/01/2023



TYPICAL SECTION–REINFORCED RETAINING WALL

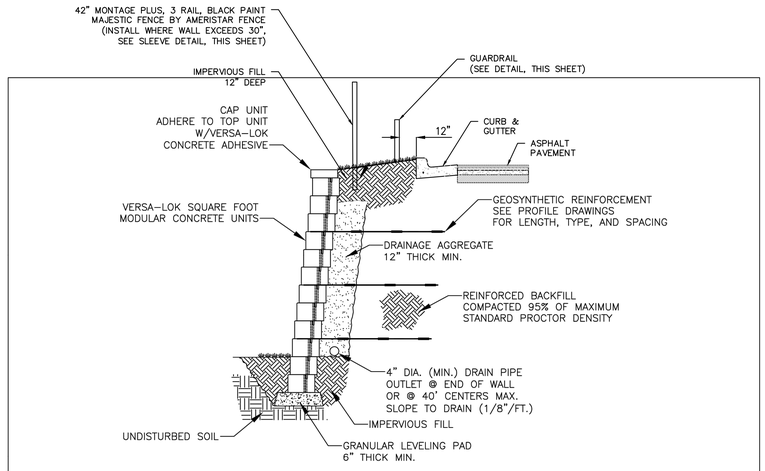
SQUARE FOOT MODULAR CONCRETE UNIT
SCALE: NONE

THESE PRELIMINARY DETAILS ARE INTENDED AS AN AID IN DESIGNING ATTRACTIVE, DURABLE RETAINING WALLS WITH VERSA-LOK UNITS. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR THE USE CONTEMPLATED, AND ITS MANNER OF USE, IS THE SOLE RESPONSIBILITY OF THE USER. A FINAL PROJECT SPECIFIC DESIGN SHOULD BE PREPARED BY A QUALIFIED, LICENSED, PROFESSIONAL ENGINEER.

VERSA-LOK® Retaining Wall Systems
(800)770-4525 fax(651)770-4089
6348 Hwy36 Ste1, Oakdale,MN 55128 Solid Solutions.™

VERSA-LOK SQUARE FOOT DETAILS
REINFORCED TYPICAL SECTION

SCALE: 3/8"=1'
DRAWN BY: PPS
CHECKED BY:
DATE: 10/2007
SHT. NO. of reinforced section



TYPICAL SECTION–REINFORCED RETAINING WALL

SQUARE FOOT MODULAR CONCRETE UNIT
SCALE: NONE

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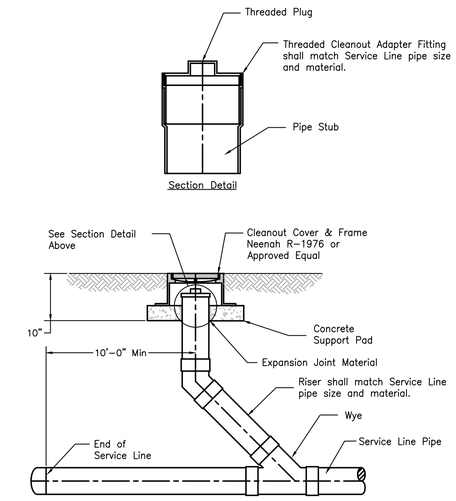
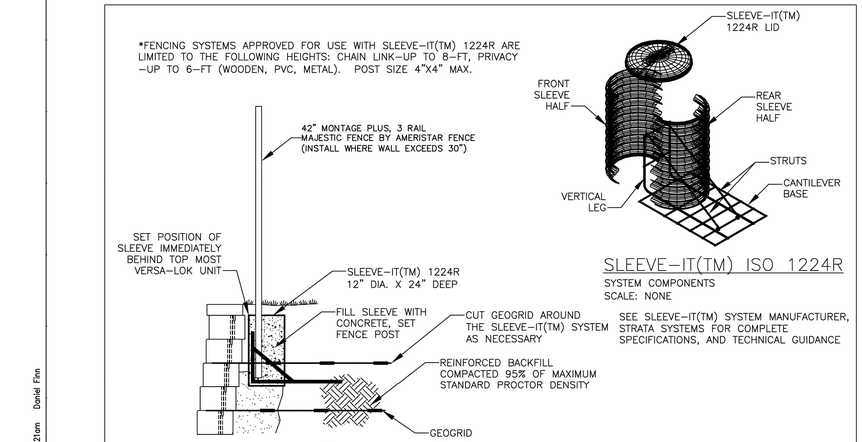
VERSA-LOK SQUARE FOOT DETAILS
REINFORCED TYPICAL SECTION

SCALE: 3/8"=1'
DRAWN BY: PPS
CHECKED BY:
DATE: 10/2007
SHT. NO. of reinforced section



3 C-802 **CLEANOUT DETAIL (NON-PAVED AREAS)**
SCALE: N.T.S.



SLEEVE-IT(TM) ISO 1224R

SYSTEM COMPONENTS
SCALE: NONE

SEE SLEEVE-IT(TM) SYSTEM MANUFACTURER, STRATA SYSTEMS FOR COMPLETE SPECIFICATIONS, AND TECHNICAL GUIDANCE

FENCE POST DETAIL W/ SLEEVE-IT(TM) 1224R

SQUARE FOOT UNIT–WITH SLEEVE-IT(TM) 1224R
SCALE: NONE

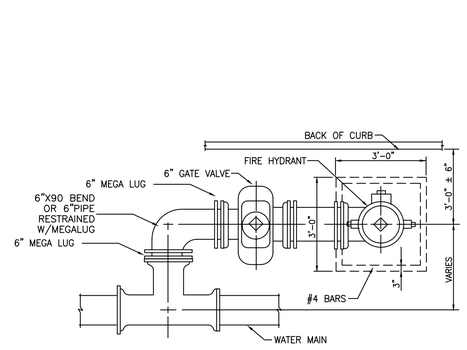
THESE PRELIMINARY DETAILS ARE INTENDED AS AN AID IN DESIGNING ATTRACTIVE, DURABLE RETAINING WALLS WITH VERSA-LOK UNITS. FINAL DETERMINATION OF THE SUITABILITY OF ANY INFORMATION OR MATERIAL FOR THE USE CONTEMPLATED, AND ITS MANNER OF USE, IS THE SOLE RESPONSIBILITY OF THE USER. A FINAL PROJECT SPECIFIC DESIGN SHOULD BE PREPARED BY A QUALIFIED, LICENSED, PROFESSIONAL ENGINEER.

VERSA-LOK® Retaining Wall Systems
(800)770-4525 fax(651)770-4089
6348 Hwy36 Ste1, Oakdale,MN 55128 Solid Solutions.™

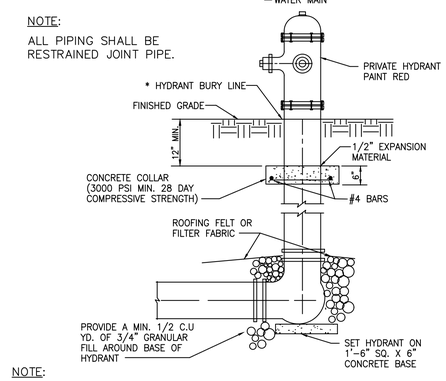
VERSA-LOK SQUARE FOOT DETAILS
FENCEPOST WITH SLEEVE IT

SCALE: 3/4"=1'
DRAWN BY: PPS
CHECKED BY:
DATE: 10/2007
SHT. NO. of fencepost with sleeve it

1 C-802 **REINFORCED LANDSCAPE RETAINING WALL DETAILS**
SCALE: N.T.S.
VERSA-LOK SHOWN AS BASIS OF DESIGN. REFER TO SPECIFICATIONS FOR APPROVED ALTERNATIVES.



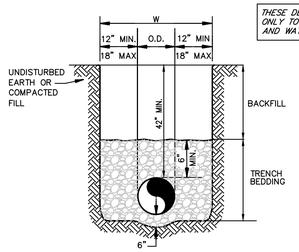
NOTE:
ALL PIPING SHALL BE RESTRAINED JOINT PIPE.



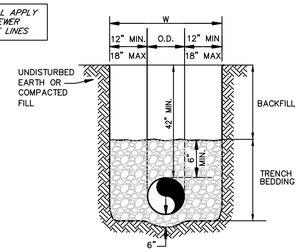
NOTE:
WHEN FIRE HYDRANT'S GATE VALVE EXCEEDS THE DISTANCE OF 5'-0" FROM CENTER OF GATE VALE TO CENTERLINE OF TEE. GATE VALVE SHALL BE ASSEMBLED TO WATER MAIN'S TEE.

2 C-802 **PRIVATE FIRE HYDRANT INSTALLATION DETAIL**
SCALE: N.T.S.

THESE DETAILS SHALL APPLY ONLY TO PRIVATE SEWER AND WATER SERVICE LINES



WATER LINE
SCALE: NOT TO SCALE



SANITARY SEWER
SCALE: NOT TO SCALE

GENERAL NOTES

TRENCH BEDDING

1. GRANULAR EMBEDMENT SHALL BE KDOT STD. SPEC. SECT. 1100, PB-2 COURSE AGGREGATE FOR CONCRETE, WASHED STONE OR GRAVEL, MEETING THE FOLLOWING CONDITIONS:

SIEVE SIZE	PERCENT RETAINED
1-INCH	0
3/4-INCH	0-20
3/8-INCH	40-70
No. 8	95-100

GRANULAR EMBEDMENT FROM THE TOP OF PIPE DOWN SHALL BE COMPACTED TO 85% MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.

GRANULAR EMBEDMENT ABOVE TOP OF PIPE SHALL BE AN UN-COMPACTED LAYER FOR ALL INSTALLATIONS.

2. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE, SOIL CONDITIONS, OR PRESENCE OF SHEETING LEFT IN PLACE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.

BACKFILL

1. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
2. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
3. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
4. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWSE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

4 C-802 **UTILITY TRENCH AND BEDDING**

PEI #220481

\\phelps-server\projects\P\220481\dwg\permit plans\DETAILS - PRIVATE.dwg Layout:PAVE 3 Oct 06, 2023 - 9:21am Daniel Finn

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI JUDD DAVID CHANDLER NUMBER PE-29850 10/5/2023 PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

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CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS-82 ENGINEERING – E-391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-802.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

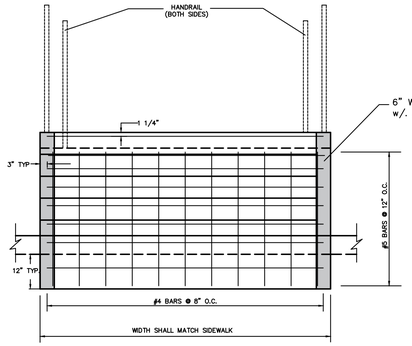
STANDARD DETAILS

SHEET NUMBER:

C-802

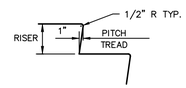
SHEET 027 OF 202

08/01/2023

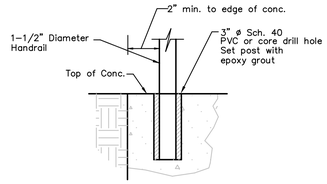


FRONT VIEW (TYP.)

SLOPE	TREAD	RISE
2:1	12"	6"

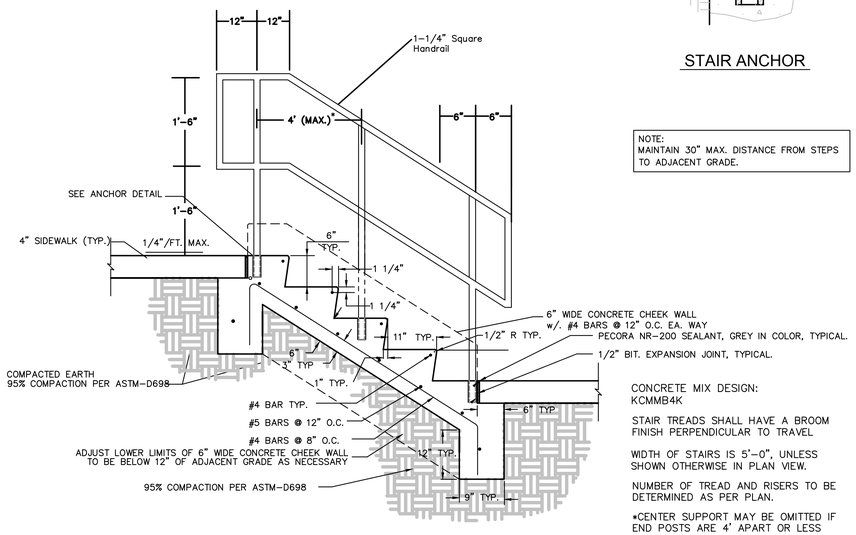


STEP DETAIL (TYP.)



STAIR ANCHOR

NOTE:
MAINTAIN 30" MAX. DISTANCE FROM STEPS TO ADJACENT GRADE.



STAIR SECTION DETAIL (TYP.)

CONCRETE MIX DESIGN:
KCMMB4K

STAIR TREADS SHALL HAVE A BROOM FINISH PERPENDICULAR TO TRAVEL

WIDTH OF STAIRS IS 5'–0", UNLESS SHOWN OTHERWISE IN PLAN VIEW.

NUMBER OF TREAD AND RISERS TO BE DETERMINED AS PER PLAN.

*CENTER SUPPORT MAY BE OMITTED IF END POSTS ARE 4' APART OR LESS

CONTRACTOR TO SUBMIT SHOP DWGS. FOR HANDRAIL FOR APPROVAL

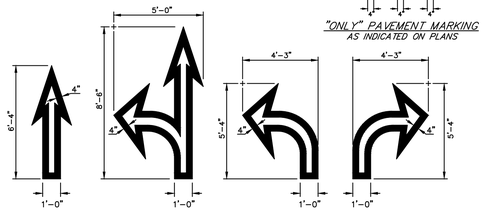
1 C-803 CONCRETE STAIRS WITH CHEEK WALL AND HANDRAIL DETAILS

SCALE: N.T.S.

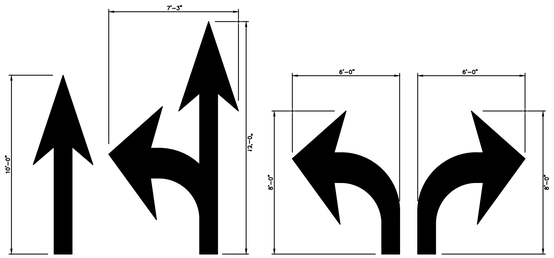
NOTES:

1. WORDS AND ARROWS SHALL BE APPLIED IN ACCORDANCE WITH SECTION 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND ARROWS ARE TO BE PAINTED RETROREFLECTIVE WHITE.
3. OPEN ARROWS SHALL CONSIST OF A 4" PERIMETER STRIPE.

"ONLY" PAVEMENT MARKING
AS INDICATED ON PLANS

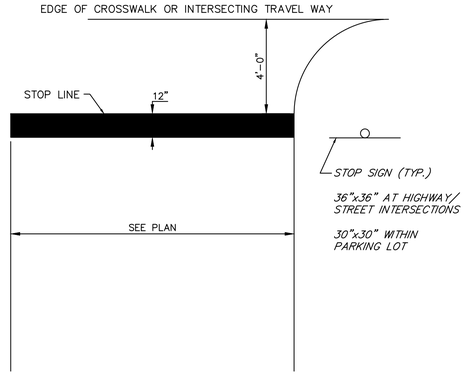


OPEN ARROW MARKINGS
USED IN THE PARKING LOT AISLES



SOLID ARROW MARKINGS
USED AT EXITS FROM THE PARKING LOT TO PUBLIC STREETS

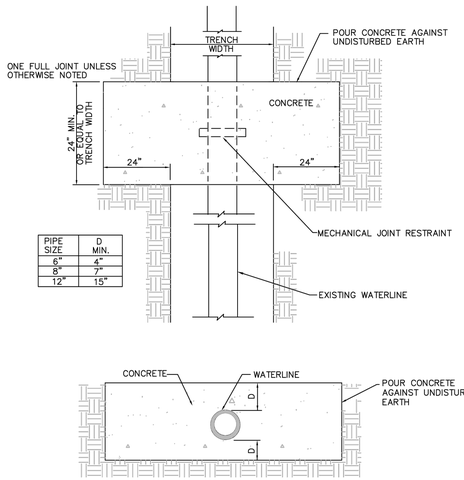
2 C-803 PAVEMENT MARKING DETAILS



NOTE:

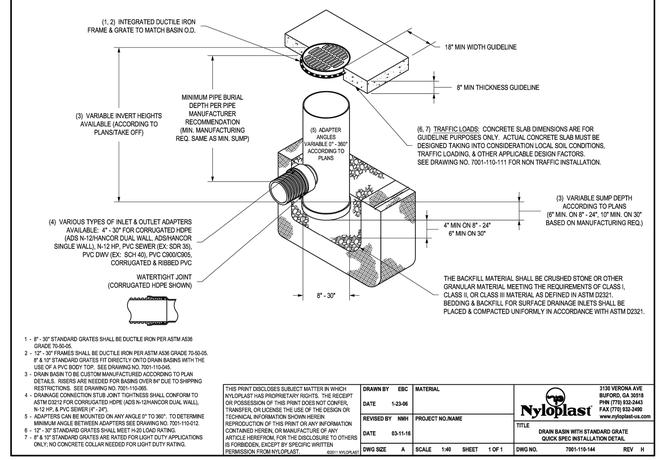
1. WORDS AND LINES SHALL BE APPLIED IN ACCORDANCE WITH SECTIONS 3B.16 AND 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND BAR ARE TO BE PAINTED RETROREFLECTIVE WHITE.

SCALE: N.T.S.



3 C-803 STRADDLE BLOCK

NYOPLAST DRAIN BASIN WITH STANDARD GRATE



1 - 8" - 30" STANDARD GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05. 8" & 10" STANDARD GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (8" - 24").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 12" - 30" STANDARD GRATES SHALL MEET H-20 LOAD RATING.
7 - 8" & 10" STANDARD GRATES ARE RATED FOR LIGHT DUTY APPLICATIONS ONLY; NO CONCRETE COLLAR NEEDED FOR LIGHT DUTY RATING.

DRAWN BY	EBC	MATERIAL	
DATE	1-23-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-11-16		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-3443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH STANDARD GRATE QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-144 REV H

4 C-803 NYOPLAST DRAIN BASIN

NYOPLAST SHOWN AS BASIS OF DESIGN. REFER TO SPECIFICATIONS FOR APPROVED ALTERNATIVES.

PEI #220481

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STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CLAUSEN
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

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PLANNING
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IMPLEMENTATION

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS–82 ENGINEERING – E–391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005958

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
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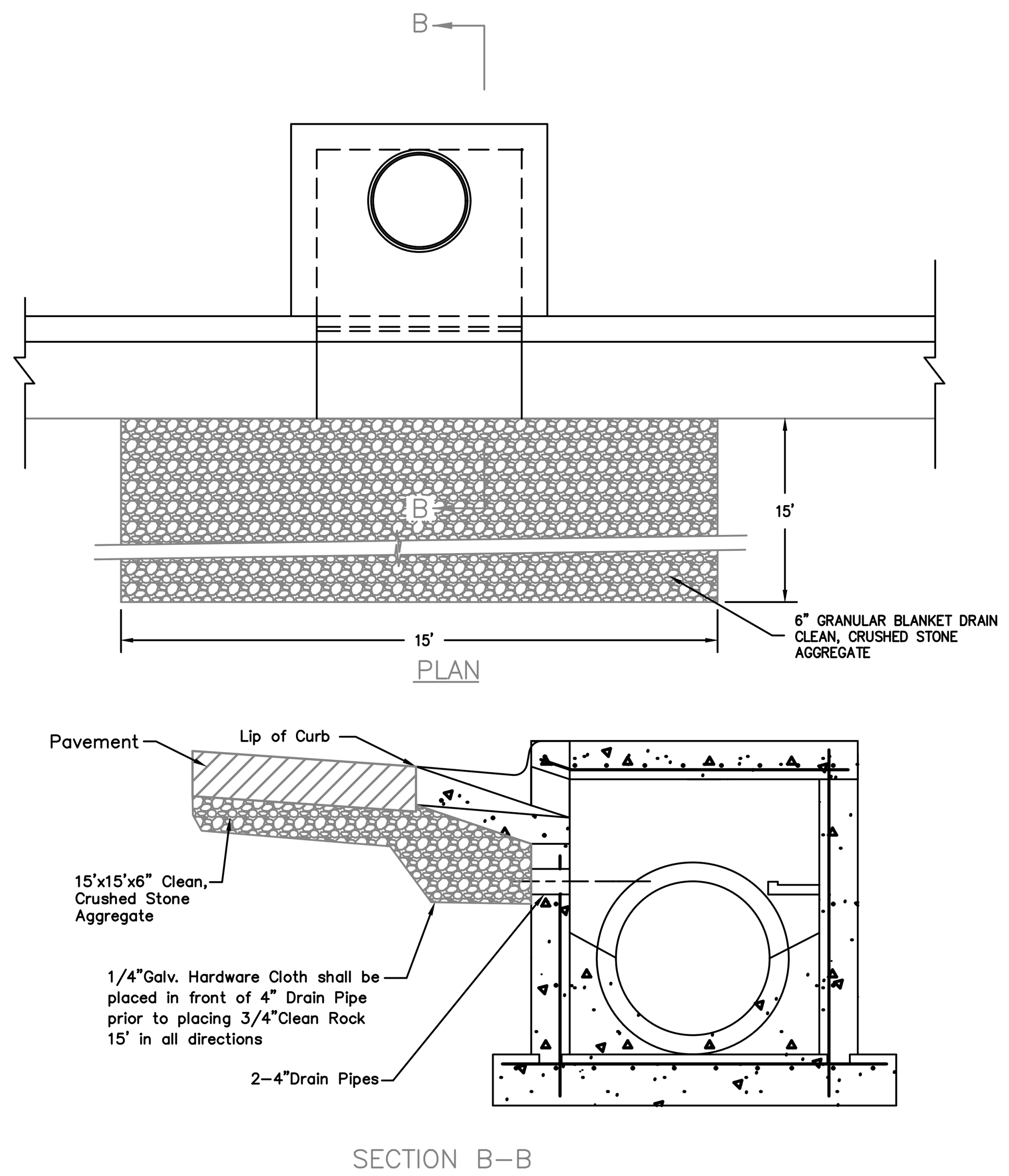
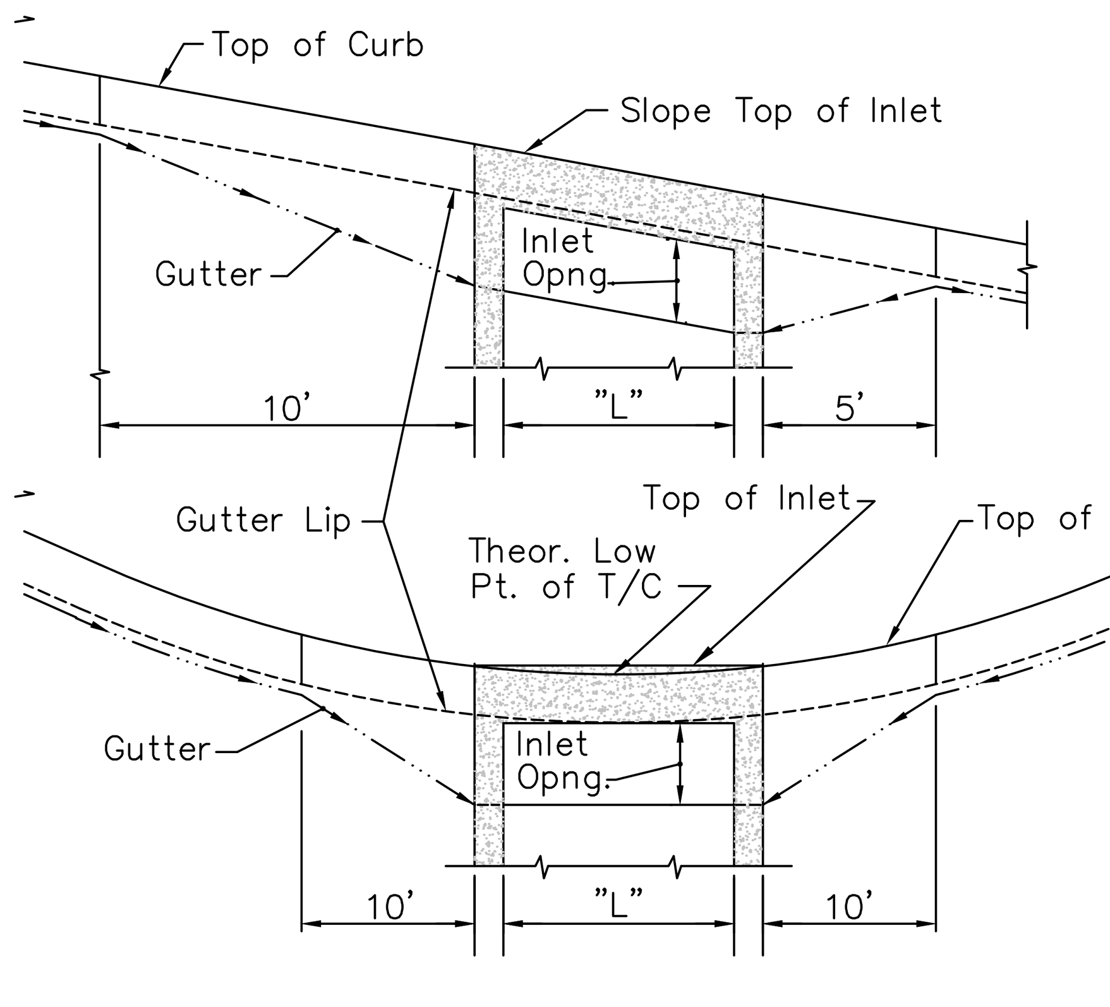
SHEET 028 OF 202

08/01/2023

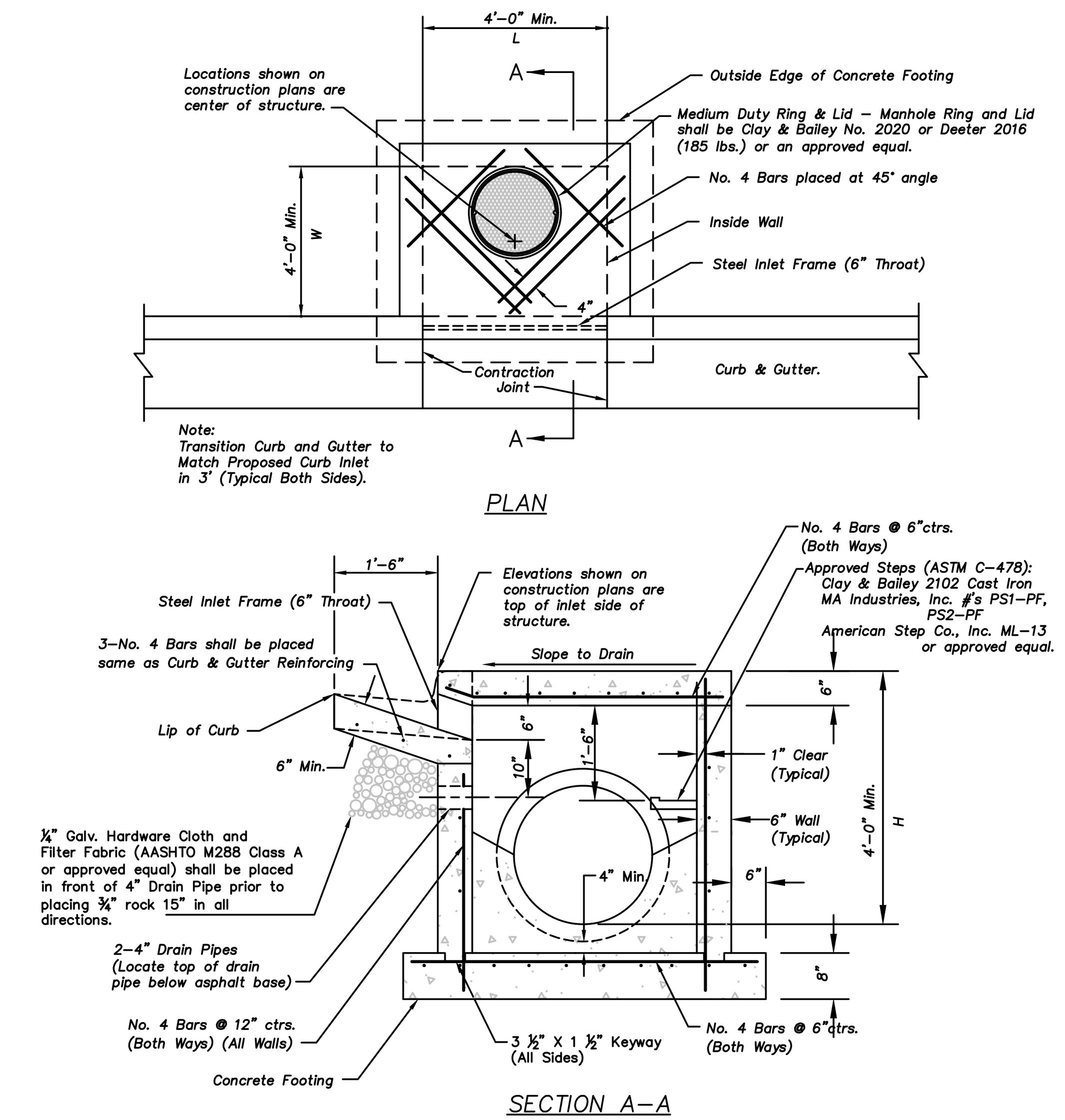


1
C-804
GRANULAR BLANKET DRAIN ADJACENT TO CURB INLETS
SCALE: N.T.S.



ALL CURB INLETS SHALL CONFORM TO THE GRADE OF THE ADJACENT ROAD/CURB AND BE SET PER THIS DETAIL SHOWN THUS.

2
C-804
INLET SETTING DIAGRAM
SCALE: N.T.S.



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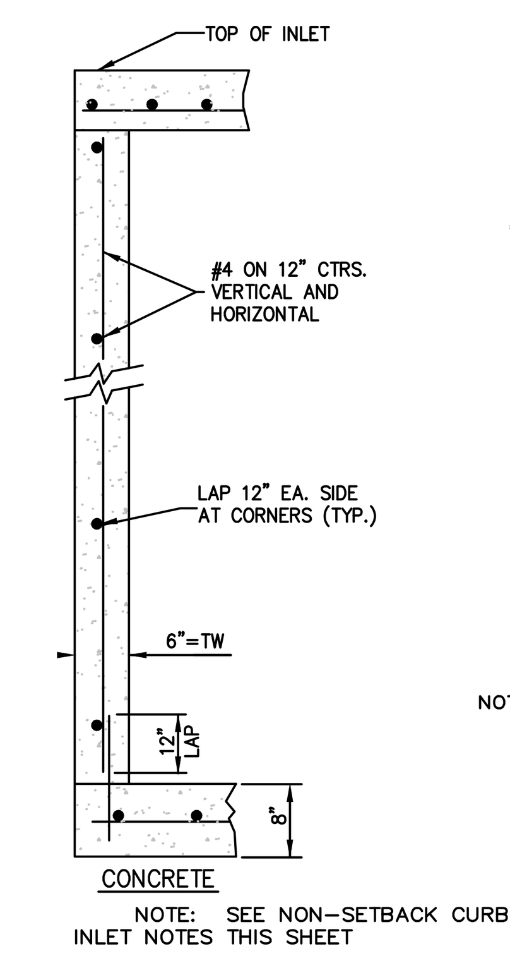
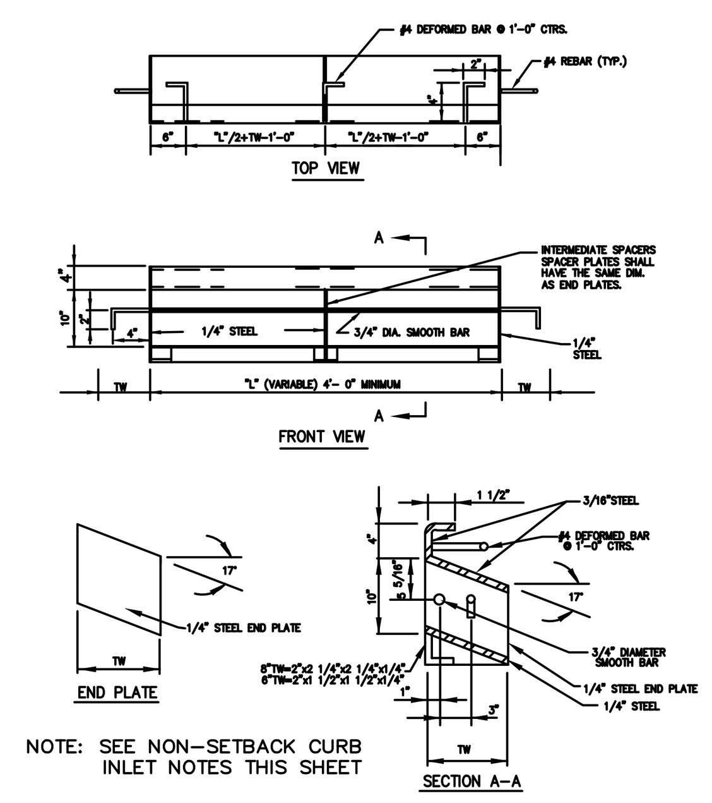
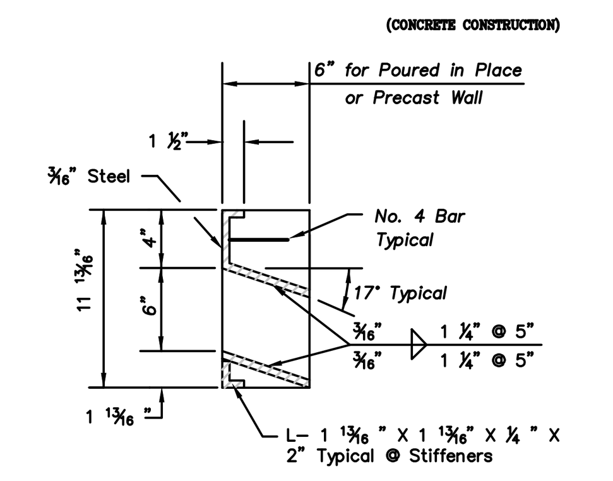


WALL SECTIONS

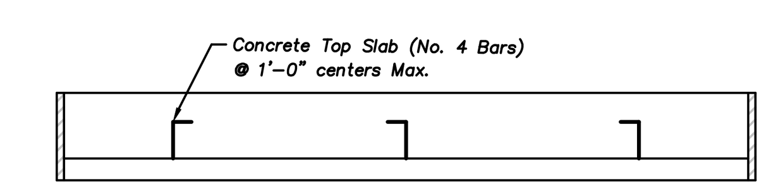


STEEL FRAME DETAIL



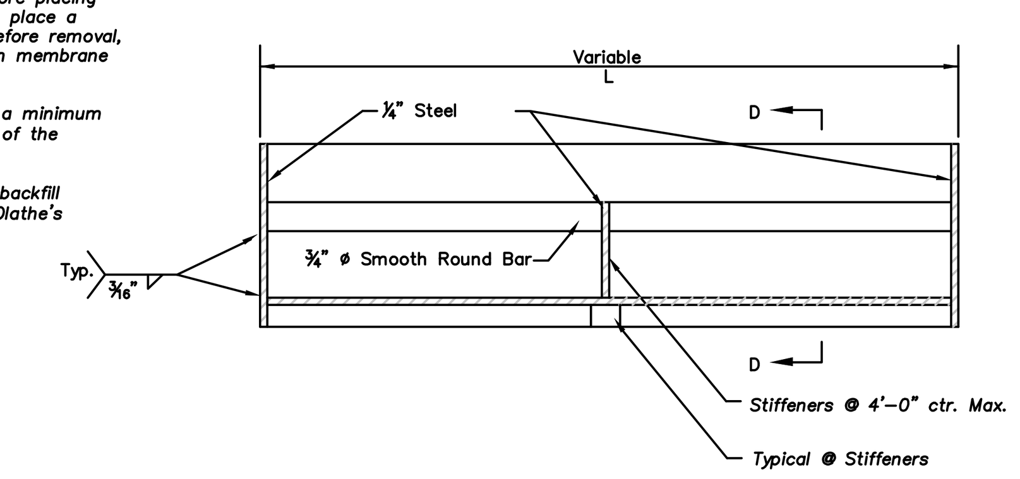
SECTION D-D (6" THROAT)

NTS



TOP VIEW

NTS

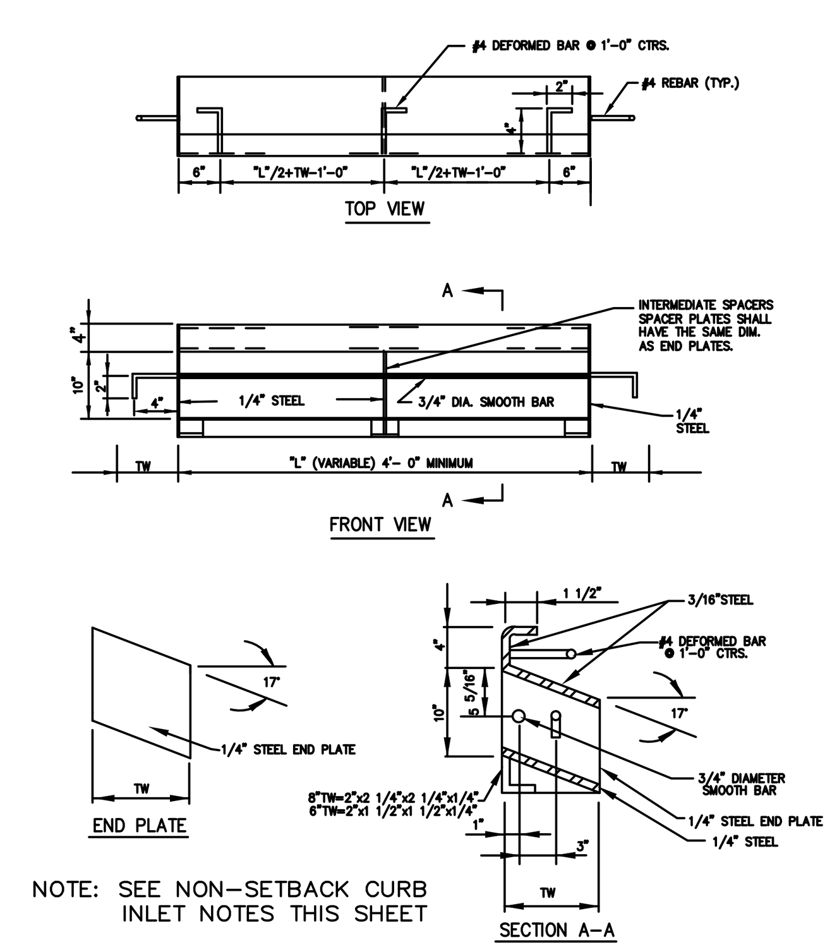


FRONT VIEW (6" THROAT)

NTS

Steel Inlet 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 hot dip zinc coated in accordance with ASTM A-123.



STEEL FRAME DETAIL

Non-Setback Curb Inlet Notes

General

1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the City Engineer.
2. Pre-cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects.
3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less then or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

5. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the City of Olathe.
6. Concrete construction shall meet the applicable requirements of the City of Olathe's Technical Specifications.
7. Inlet floors shall be shaped with non-reinforced concrete inv erts to provide smooth flow.
8. Bevel all exposed edges with ¾" triangular molding.

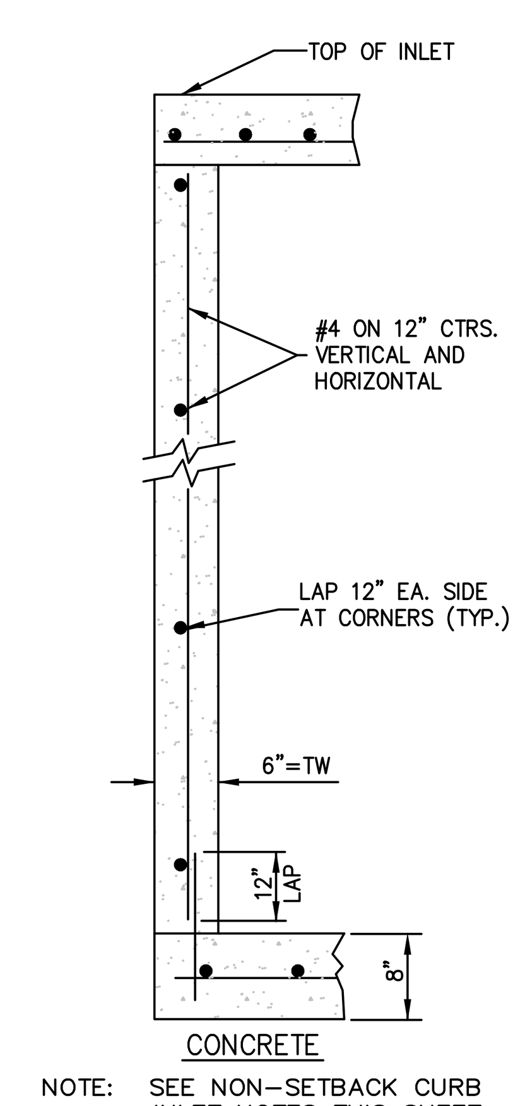
Reinforcing Steel

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 +/- ⅛" shall be permitted.
11. All lap splices not shown shall be a minimum of 40 bar diameters in length.
12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
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

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 City of Olathe's Technical Specifications.

3
C-804
NON-SETBACK CURB INLET
(6" Throat)
SCALE: N.T.S.



WALL SECTIONS

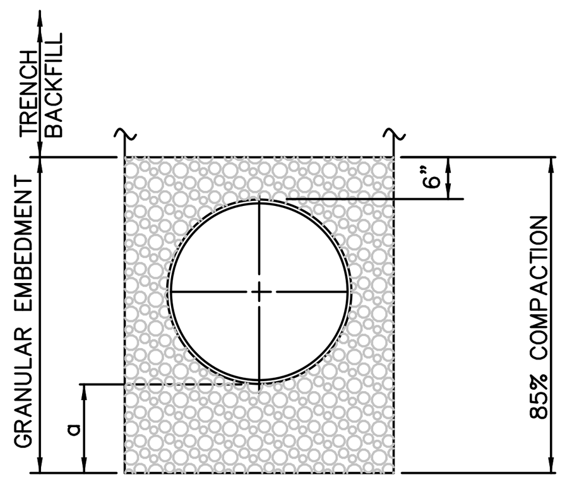


TABLE OF EMBEDMENT DEPTH BELOW PIPE		
D	a MIN. SOIL	a MIN. ROCK
LESS THAN 60" 60" OR LARGER	4" 6"	6" 12"

LEGEND

D NOMINAL PIPE SIZE
a EMBEDMENT BELOW PIPE

GRANULAR EMBEDMENT

TRENCH BEDDING

1. GRANULAR EMBEDMENT SHALL BE KDOT STD. SPEC. SECT. 1100, PB-2 COURSE AGGREGATE FOR CONCRETE, WASHED STONE OR GRAVEL, MEETING THE FOLLOWING CONDITIONS:

SIEVE SIZE	PERCENT RETAINED
1-INCH	0
¾-INCH	0-20
⅜-INCH	40-70
No. 8	95-100

GRANULAR EMBEDMENT FROM THE TOP OF PIPE DOWN SHALL BE COMPACTED TO 85% MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.

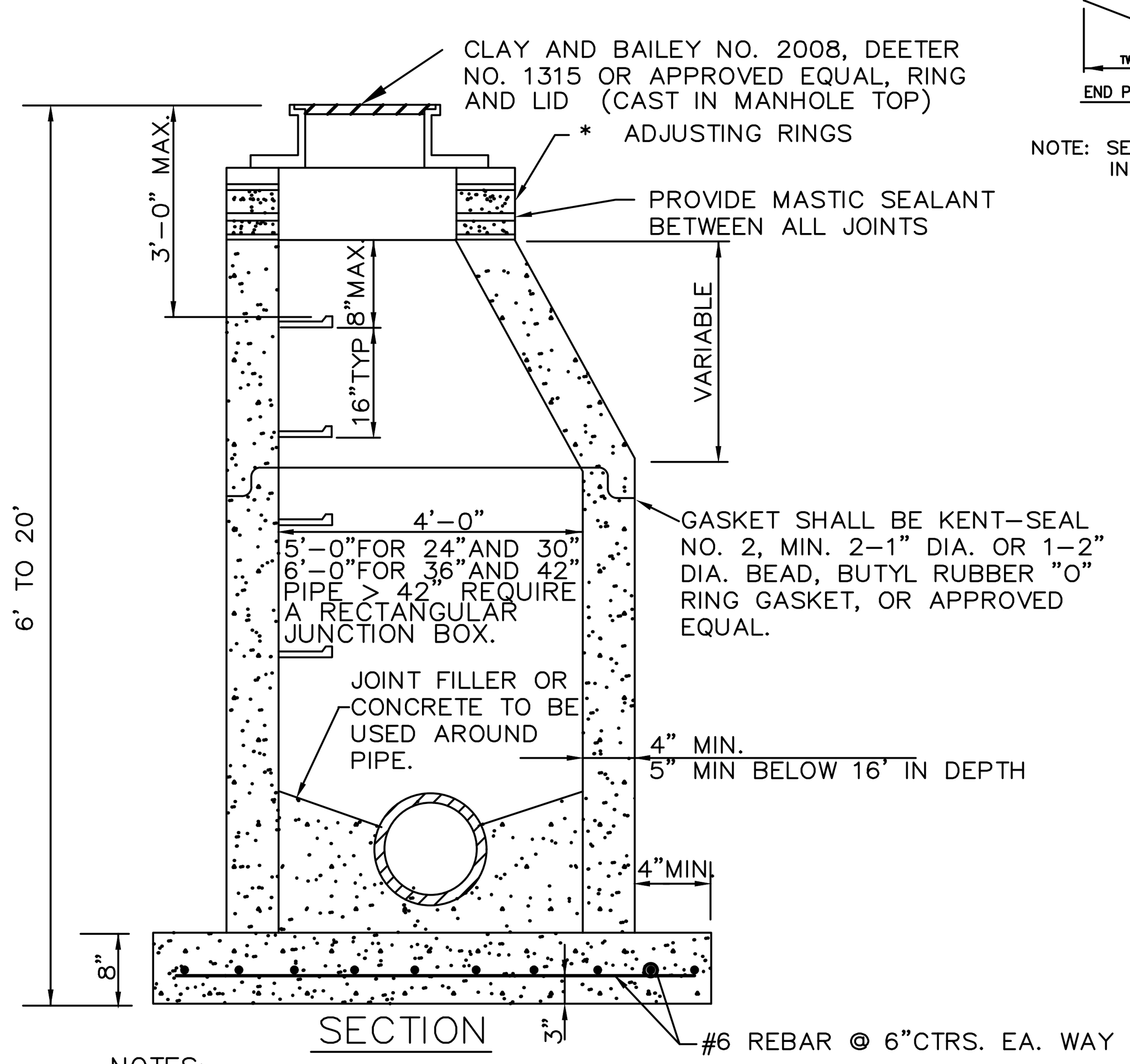
GRANULAR EMBEDMENT ABOVE TOP OF PIPE SHALL BE AN UN-COMPACTED LAYER FOR ALL INSTALLATIONS.

2. TRENCH OUTLINES DO NOT INDICATE ACTUAL TRENCH EXCAVATION SHAPE, SOIL CONDITIONS, OR PRESENCE OF SHEETING LEFT IN PLACE. EMBEDMENT MATERIAL SHALL EXTEND THE FULL WIDTH OF THE ACTUAL TRENCH EXCAVATION.
3. TRENCH WIDTHS SHALL BE LIMITED BELOW AN ELEVATION OF ONE (1) FOOT ABOVE THE TOP OF THE INSTALLED PIPE AS FOLLOWS: NOT LESS THAN FIFTEEN (15) INCHES NOR MORE THAN TWENTY-FOUR (24) INCHES GREATER THAN THE NOMINAL OUTSIDE DIAMETER OF THE PIPE.

BACKFILL

1. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-89.
2. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
3. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
4. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES. (SEE SPECIFICATIONS)

4
C-804
EMBEDMENTS FOR STORM SEWER PIPE
SCALE: N.T.S.

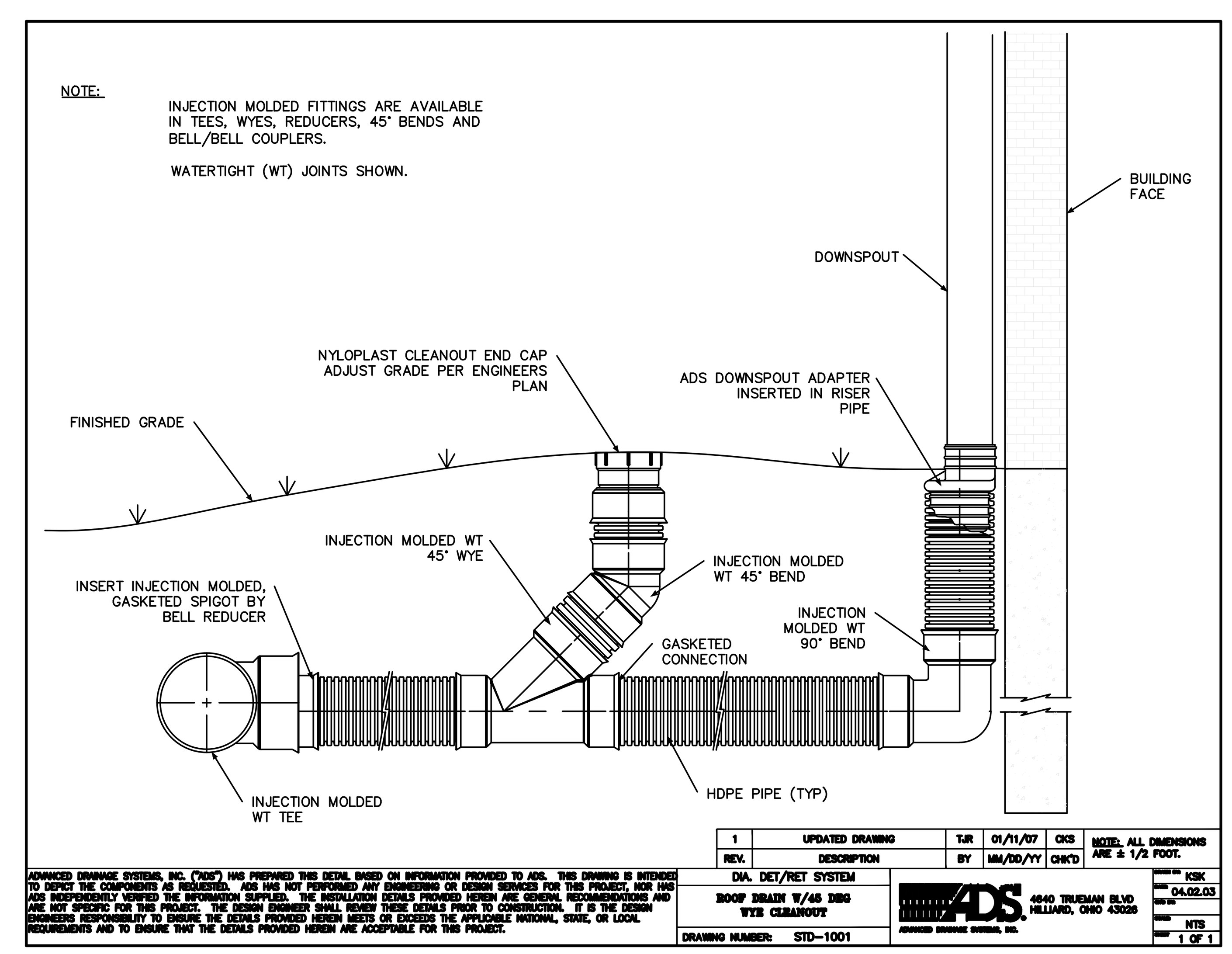


NOTES:

1. CONTRACTOR SHALL PROVIDE STEPS SPACED AT 1'-4" O.C. WHERE INLET OR MANHOLE DEPTH IS GREATER THAN 4'-0". STEPS SHALL BE M.A. INDUSTRIES, INC. MODEL PS-2-PF OR APPROVED EQUAL.
2. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
3. BASES NOT BUILT MONOLITHIC WITH BOTTOM SECTION SHALL BE POURED OF CLASS I 3000 PSI CONCRETE.
4. MANHOLE MAY BE TRANSITIONED TO 4'-0" DIA., 8' ABOVE F.L. OF OUTFALL FOR 5'-0" AND 6'-0" MANHOLES.
5. THE BOTTOM SECTION OF ALL PRECAST MANHOLES NOT BUILT MONOLITHIC WITH THE BASE SHALL BE SET INTO A STEEL REINFORCED POURED CONCRETE BASE A MINIMUM OF 8". (#4 @ 6" E.W.)
6. THE COMPRESSIVE STRENGTH OF CONCRETE USED IN THE CONSTRUCTION OR PRECAST REINFORCED CONCRETE MANHOLES SHALL NOT BE LESS THAN 4000 PSI.
7. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

* 8. ADJUSTING RING(S) SHALL PROVIDE A MINIMUM ADJUSTMENT OF 4" AND A MAXIMUM ADJUSTMENT OF 12".

5
C-804
STANDARD PRE-CAST JUNCTION BOX
SCALE: N.T.S.



6
C-804
ROOF DRAIN W/45 DEG WYE CLEANOUT
SCALE: N.T.S.
ADS SHOWN AS BASIS OF DESIGN. REFER TO SPECIFICATIONS FOR APPROVED ALTERNATIVES.

PEI #220481

\\phelps-server\projects\P\220481\dwg\permit plans\DETAILS - PRIVATE.dwg Layout: STORM 1 Oct 08, 2023 - 9:21am Daniel Finn

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

JUDD DAVID CLAUSSEN
NUMBER PE-29850
10/5/2023
STATE OF MISSOURI PROFESSIONAL ENGINEER

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

PHELPS ENGINEERING, INC.
PLANNING ENGINEERING IMPLEMENTATION
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS
LAND SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005058

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-804.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

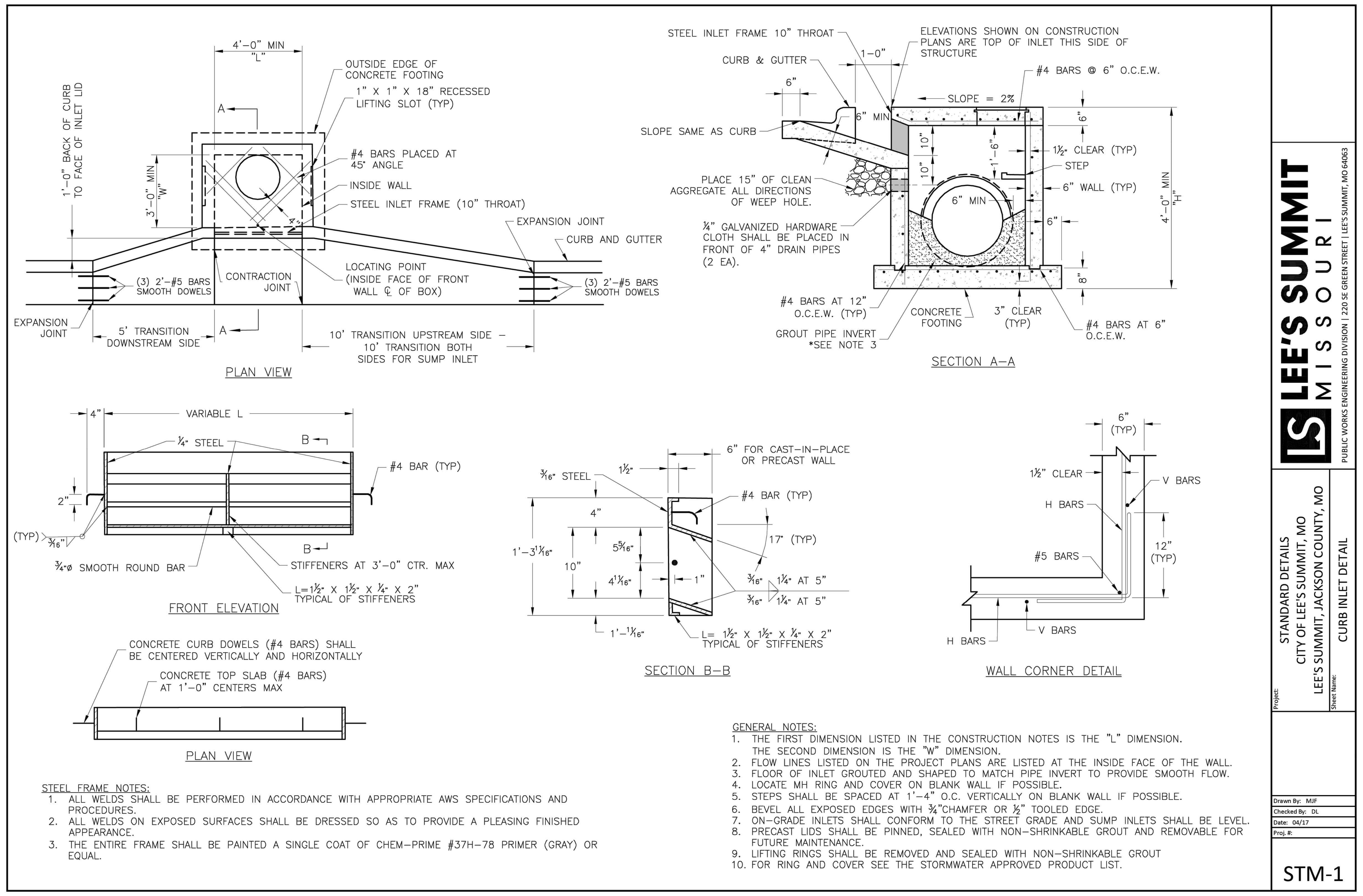
STORM SEWER DETAILS

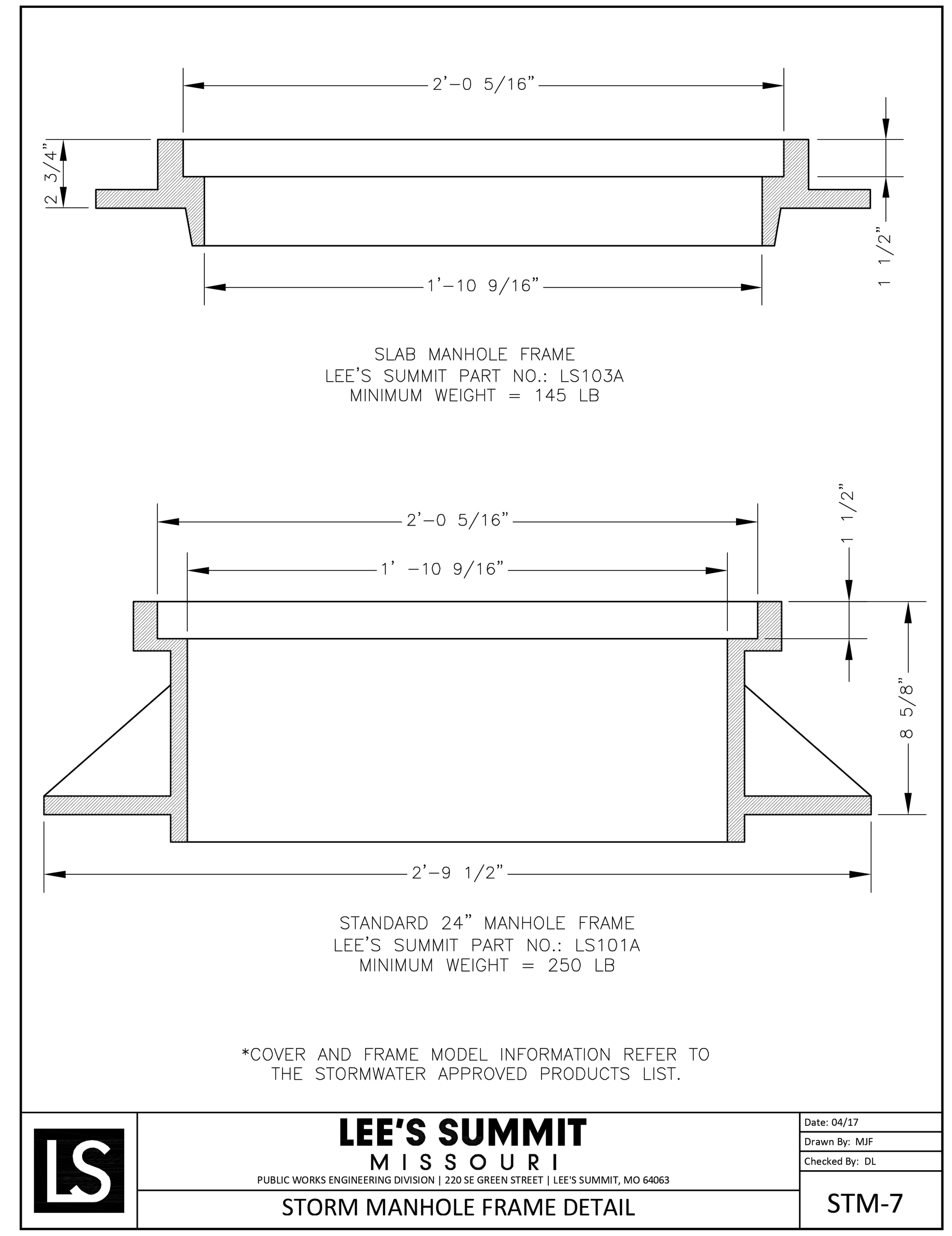
SHEET NUMBER:

C-804

SHEET 029 OF 202

08/01/2023


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 ½" 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
STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
CURB INLET DETAIL
STM-1


2'–0 5/16"
1'–10 9/16"
SLAB MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS103A
MINIMUM WEIGHT = 145 LB
2'–9 1/2"
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.
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
STORM MANHOLE FRAME DETAIL
STM-7

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number: 2022.152

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www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS LAND SURVEYING – LS–82 ENGINEERING – E–391
CERTIFICATE OF AUTHORIZATION MISSOURI LAND SURVEYING–2007001128 ENGINEERING–2007005058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

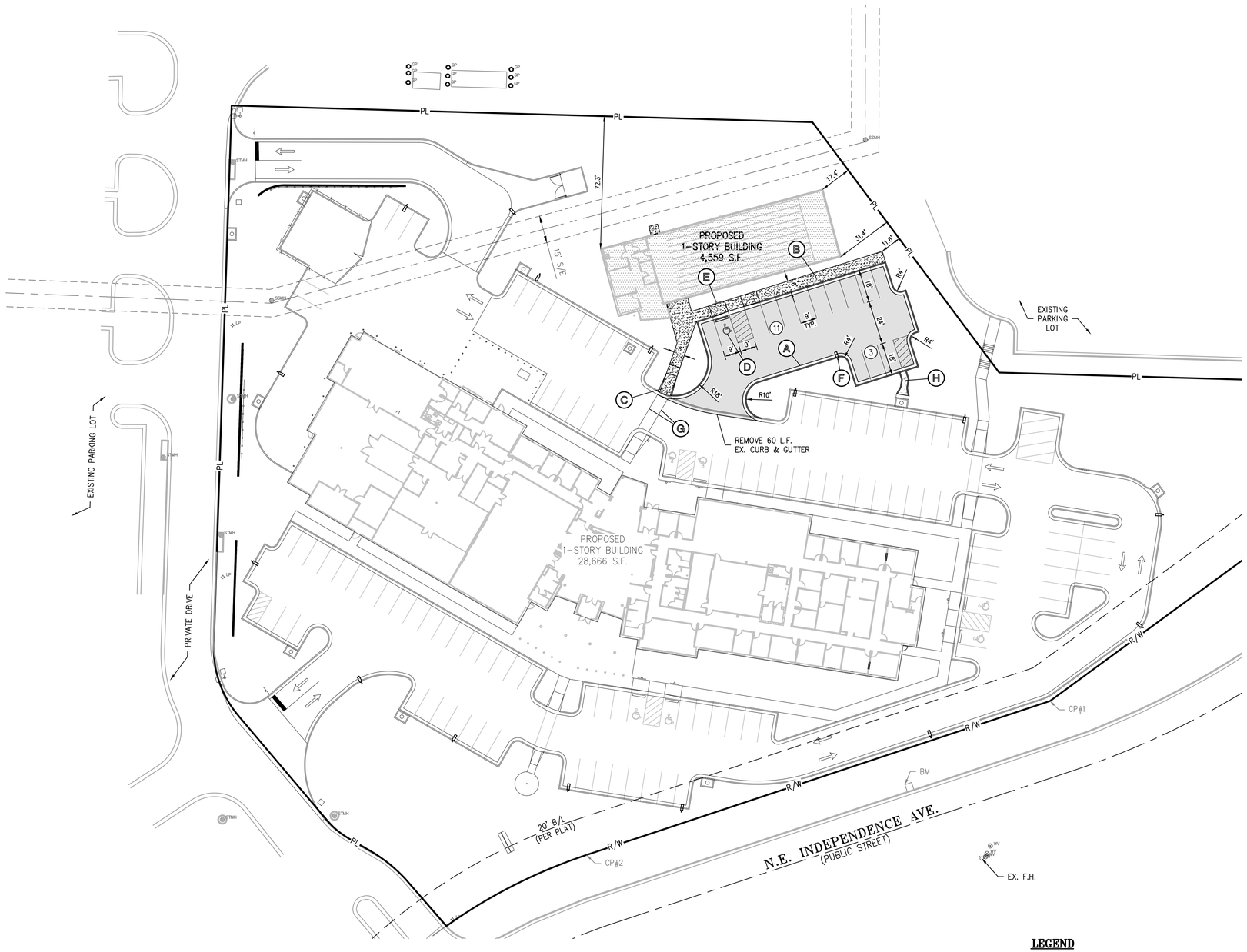
CAD DWG FILE: C-805.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

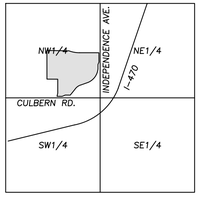
SHEET TITLE:
STORM SEWER DETAILS

SHEET NUMBER:
C-805

SHEET 030 OF 202
08/01/2023

PEI #220481





VICINITY MAP
SEC. 19-48-31

SCALE: 1"=2000'

SCOPE SHOWN ON THIS SHEET SHALL BE PART OF ALTERNATE #4

UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

811 Know what's below. Call before you dig.

SITE PLAN NOTES:

1. All construction materials and procedures on this project shall conform to the latest revision of the following governing requirements, incorporated herein by reference:
   A) City ordinances & O.S.H.A. Regulations.
   B) Project Specifications
2. The contractor shall have one (1) signed copy of the plans (approved by the City) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.
3. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits, bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
4. The contractor is responsible for coordination of his and his sub-contractor's work. The contractor shall assume all responsibility for protecting and maintaining his work during the construction period and between the various trades/sub-contractors constructing the work.
5. The demolition and removal(or relocation) of existing pavement, curbs, structures, utilities, and all other features necessary to construct the proposed improvements, shall be performed by the contractor. All waste material removed during construction shall be disposed off the project site. The contractor shall be responsible for all permits for hauling and disposing of waste material. The disposal of waste material shall be in accordance with all local, state and federal regulations.
6. Contractor shall be responsible for all relocations, including but not limited to, all utilities, storm drainage, sanitary sewer services, signs, traffic signals & poles, etc. as required. All work shall be in accordance with governing authorities specifications and shall be approved by such. All cost shall be included in base bid.
7. All existing utilities indicated on the drawings are according to the best information available to the Engineer; however, all utilities actually existing may not be shown. The contractor shall be responsible for contacting all utility companies for an exact field location of each utility prior to any construction. All underground utilities shall be protected at the contractor's expense. All utilities, shown and unshown, damaged through the negligence of the contractor shall be repaired or replaced by the contractor at his expense.
8. The contractor will be responsible for all damage to existing utilities, pavement, fences, structures and other features not designated for removal. The contractor shall repair all damages at his expense.
9. The contractor shall verify the flow lines of all existing storm or sanitary sewer connections and utility crossings prior to the start of construction. Notify the engineer of any discrepancies.
10. SAFETY NOTICE TO CONTRACTOR: In accordance with generally accepted construction practices, the contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. Any construction observation by the engineer of the contractor's performance is not intended to include review of the adequacy of the contractor's safety measures, in, on or near the construction site.
11. All site concrete (curbs, pavements, sidewalks, etc.) shall meet Kansas City Materials Metro Board (KCMMB) mix design specifications for 4,000 p.s.i. air entrained concrete. APWA detail references are provided for all geometrical and other design information.
12. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

SITE DIMENSION NOTES:

1. BUILDING TIES SHOWN ARE TO THE OUTSIDE FACE OF PROPOSED WALLS. THE SUBCONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR SPECIFIC DIMENSIONS AND LAYOUT INFORMATION FOR THE BUILDINGS.
2. ALL DIMENSIONS SHOWN FOR THE PARKING LOT AND CURBS ARE MEASURED FROM BACK OF CURB TO BACK OF CURB.

PAVEMENT MARKING AND SIGNAGE NOTES:

1. PARKING STALL MARKING STRIPES SHALL BE FOUR INCH (4") WIDE WHITE STRIPES. DIRECTIONAL ARROW AND HANDICAP STALL MARKINGS SHALL BE FURNISHED AT LOCATIONS SHOWN ON PLANS.
2. HANDICAP PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO ALL FEDERAL (AMERICANS WITH DISABILITIES ACT) AND STATE LAWS AND REGULATIONS.
3. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
4. STOP SIGNS SHALL BE PROVIDED AT ALL LOCATIONS AS SHOWN ON PLANS AND SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". SIGNS SHALL BE 18" X 12", 18 GAUGE STEEL AND SHALL BE ENGINEER GRADE REFLECTIVE.
5. TRAFFIC CONTROL AND PAVEMENT MARKINGS SHALL BE PAINTED WITH A WHITE SHERWIN WILLIAMS S-W TRAFFIC MARKING SERIES B-29Y2 OR APPROVED EQUAL. THE PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. APPLY ON A CLEAN, DRY SURFACE AND AT A SURFACE TEMPERATURE OF NOT LESS THAN 70F AND THE AMBIENT AIR TEMPERATURE SHALL NOT BE LESS THAN 60F AND RISING. TWO COATS SHALL BE APPLIED.

SITE KEY NOTES:

- (A) CONSTRUCT 2' CONCRETE & CURB & GUTTER (TYPICAL) (RE: DETAIL #4, SHEET C-800).
- (B) CONSTRUCT CONCRETE SIDEWALK (TYPICAL) (RE: DETAIL #4, SHEET C-800).
- (C) CONSTRUCT PRIVATE SIDEWALK RAMP (RE: DETAIL #3, SHEET C-801).
- (D) CONSTRUCT ACCESSIBLE PARKING SPACE. INSTALL MARKINGS PER STANDARD DETAIL, AND CONCRETE WHEEL STOPS (RE: DETAIL #4, SHEET C-801).
- (E) INSTALL VAN ACCESSIBLE PARKING SIGN (RE: DETAILS #1-#2, SHEET C-801).
- (F) PARKING LOT LIGHT POLE (RE: SITE LIGHTING PLANS).
- (G) INSTALL 6" SOLID WHITE PAINTED CROSSWALK.
- (H) CONSTRUCT CONCRETE FLUME (RE: DETAIL #5, SHEET C-801).

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- STANDARD DUTY ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- RETAINING WALL
- PARKING LOT LIGHT

N

SCALE: 1"=30'
0' 30' 60'

PEI #220481

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

JUDD DAVID CHARLTON
NUMBER PE-29850
10/5/2023
STATE OF MISSOURI
PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

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ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007002058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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MSHP

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Lee's Summit, MO 64086

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SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-900.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

FIRING RANGE
SITE PLAN
(ALTERNATE #04)

SHEET NUMBER:

C-900

SHEET 006 OF 202

08/01/2023

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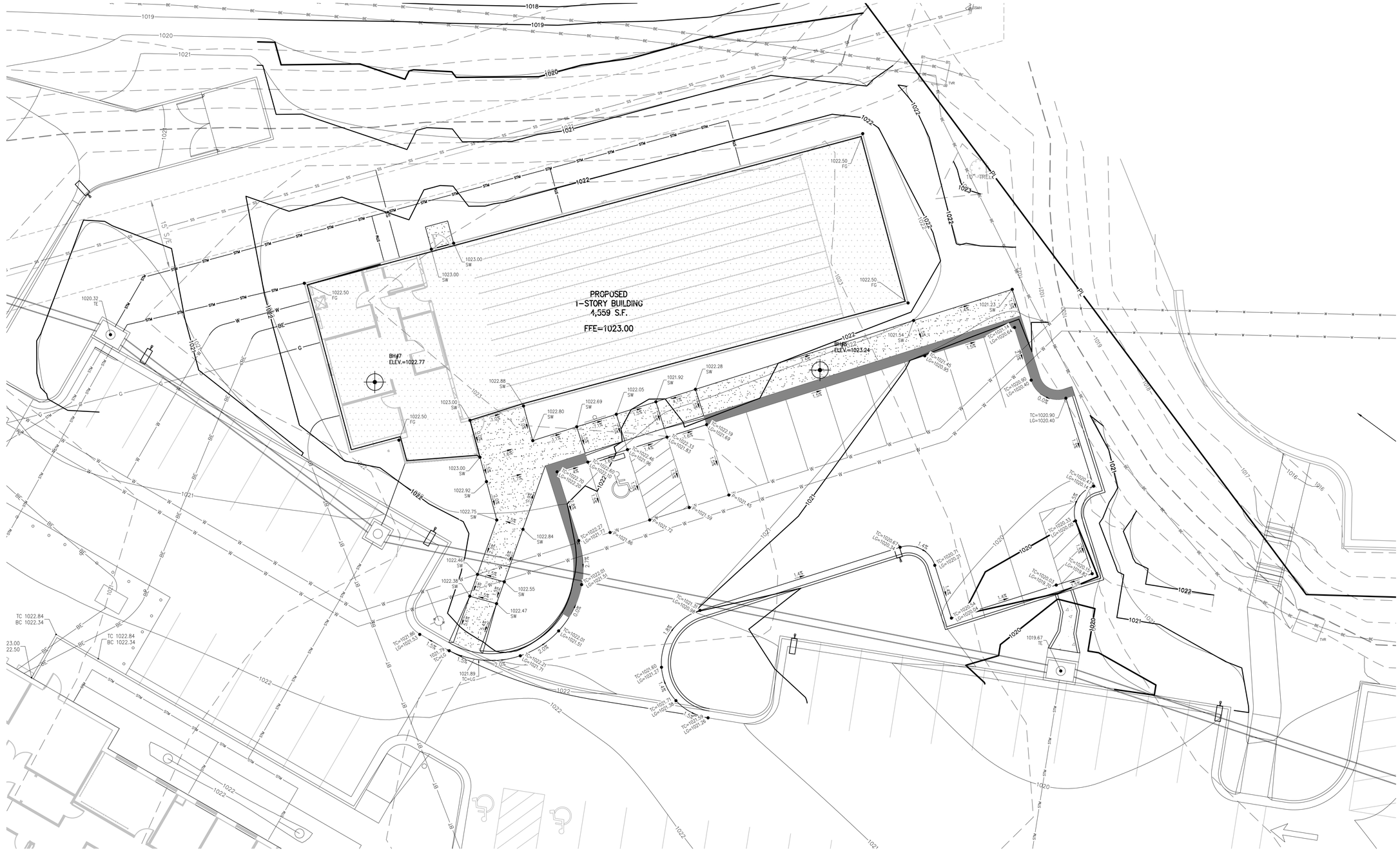

SCOPE SHOWN ON THIS SHEET
SHALL BE PART OF ALTERNATE #4

N

SCALE: 1"=10'
0' 10' 20'

PEI #220481

\\phelps-server\projects\P\220481\dwg\permit plans\GRADING - 2.dwg Layout:1 Oct 06, 2023 - 9:22am Daniel Finn

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CARLSON
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker&
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

PLANNING
ENGINEERING
IMPLEMENTATION

PHELPS ENGINEERING, INC.
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Olathe, Kansas 66061
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Fax (913) 393-1166
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CERTIFICATE OF AUTHORIZATION
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LAND SURVEYING – LS-82
ENGINEERING – E-391

CERTIFICATE OF AUTHORIZATION
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LAND SURVEYING–2007001128
ENGINEERING–2007005058

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1950 NE Independence Ave.
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SITE # 6018
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DATE:	05 October 2023
REVISION:	
DATE:	
REVISION:	
DATE:	Bid Documents
ISSUE DATE:	01 August 2023

CAD DWG FILE: C-901.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

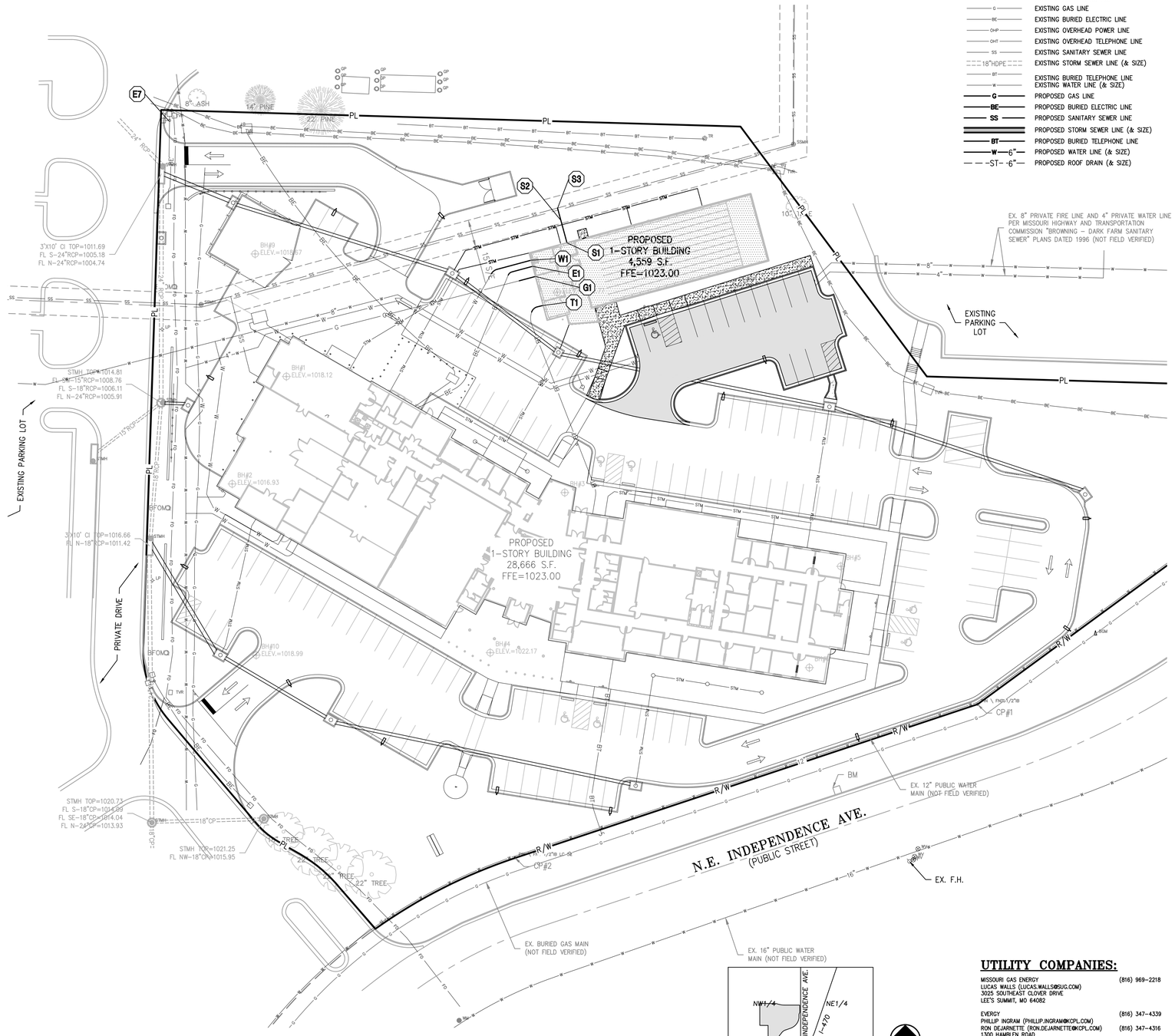
FIRING RANGE
GRADING PLAN
(ALTERNATE #04)

SHEET NUMBER:

C-901

SHEET 013 OF 202

08/01/2023



LEGEND

PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC LINE
OHP	EXISTING OVERHEAD POWER LINE
OHT	EXISTING OVERHEAD TELEPHONE LINE
SS	EXISTING SANITARY SEWER LINE
18"HDPE	EXISTING STORM SEWER LINE (& SIZE)
BT	EXISTING BURIED TELEPHONE LINE
W	EXISTING WATER LINE (& SIZE)
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRIC LINE
SS	PROPOSED SANITARY SEWER LINE
STM	PROPOSED STORM SEWER LINE (& SIZE)
BT	PROPOSED BURIED TELEPHONE LINE
W 6"	PROPOSED WATER LINE (& SIZE)
-ST- 6"	PROPOSED ROOF DRAIN (& SIZE)

UTILITY NOTES:

1. The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
2. The construction of storm sewers on this project shall conform to the project specifications.
3. The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
4. It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
5. Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
6. The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
7. The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City.
8. The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
9. By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
10. The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
11. All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
12. Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
13. Water lines shall be per the project specifications.
14. Minimum trench width shall be 2 feet.
15. Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterone's specifications for commercial services.
16. All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, an 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
17. Sanitary conflicts will be resolved prior to permit issuance.
18. In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
19. All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
20. All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
21. Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
22. When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
23. Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

UTILITY KEY NOTES:

- **G1** CONTRACTOR TO COORDINATE 3" GAS SERVICE ROUTING FROM MAIN BUILDING TO FIRING RANGE BUILDING (RE: MEP PLANS).
- **E1** CONTRACTOR TO INTERCEPT EXISTING CONDUITS AND PROVIDE ELECTRIC ENTRY INTO BUILDING. FOLLOW ELECTRIC COMPANY REQUIREMENTS (RE: MEP PLANS).
- **W1** 1-1/2" DOMESTIC WATER LINE ENTRY TO BUILDING. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED.
- **T1** CONTRACTOR TO COORDINATE ONE (1) - 4" PVC SCH. 40 CONDUITS ROUTING FROM MAIN BUILDING TO FIRING RANGE BUILDING (RE: MEP PLANS).
- **S1** CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE. TRANSITION FROM 4" (INTERIOR) TO 6" (EXTERIOR) AT FOUNDATION WALL (RE: MEP PLANS).
  FG=1022.50
  FL 6"=1018.50
- **S2** INSTALL 20 L.F. 6" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 1.0% MIN. SLOPE.
- **S3** INSTALL 8"x6" WYE CONNECTION TO CONNECT TO EXISTING PUBLIC SANITARY SEWER MAIN.

UTILITY COMPANIES:

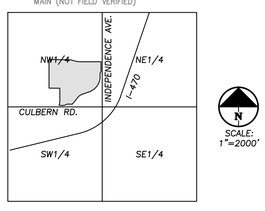
MISSOURI GAS ENERGY (816) 969-2218
LUCAS WALLS (LUCAS.WALLS@SUG.COM)
3025 SOUTHEAST CLOVER DRIVE
LEE'S SUMMIT, MO 64082

EVERGY (816) 347-4339
PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM)
RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) (816) 347-4316
1300 HAMBLEN ROAD
LEE'S SUMMIT, MO 64081

STORM SEWER (PUBLIC WORKS DEPARTMENT) (816) 969-1800
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

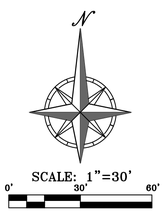
SANITARY SEWER & WATER (WATER UTILITIES DEPT.) (816)-969-1900
1200 SE HAMBLEM ROAD,
LEE'S SUMMIT, MO 64081

AT&T (913) 383-4929
MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) (913) 383-4849-FAX
9444 NALL AVENUE
OVERLAND PARK, KANSAS 66207



VICINITY MAP
SEC. 19-48-31

SCOPE SHOWN ON THIS SHEET SHALL BE PART OF ALTERNATE #4



PEI #220481

811 Know what's below. Call before you dig.

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\\phelps-server\projects\P\220481\dwg\permit plans\UTILITY - 2.dwg Layout:1 Oct 08, 2023 - 9:23am Daniel Finn

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

PLANNING
ENGINEERING
IMPLEMENTATION

CERTIFICATE OF AUTHORIZATION
KANSAS
LAND SURVEYING - LS-82
ENGINEERING - E-391

CERTIFICATE OF AUTHORIZATION
MISSOURI
LAND SURVEYING-2007001128
ENGINEERING-2007005058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters,
MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-902.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

SHEET TITLE:

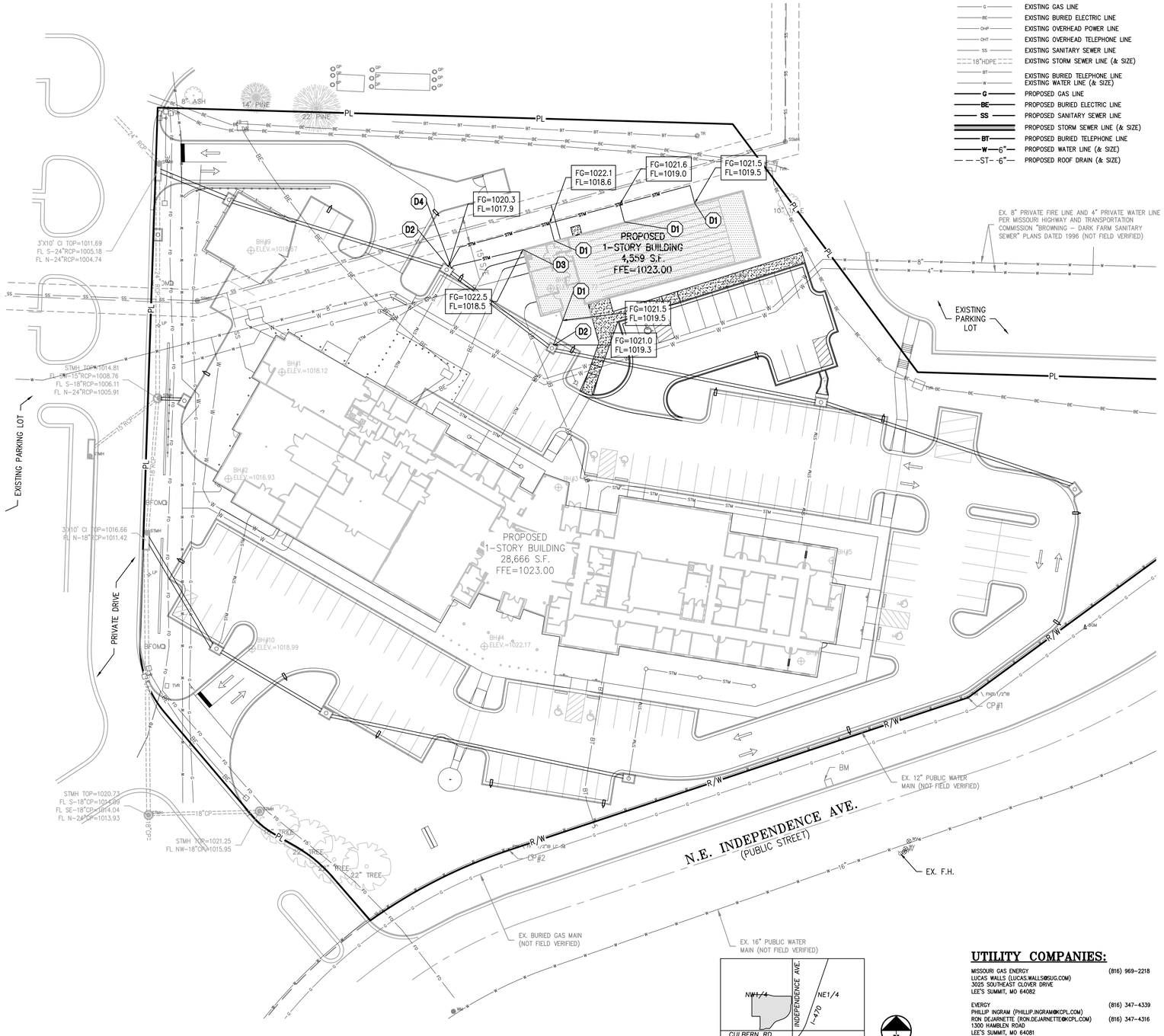
FIRING RANGE
UTILITY PLAN
(ALTERNATE #04)

SHEET NUMBER:

C-902

SHEET 014 OF 202

08/01/2023



LEGEND

PL	PROPERTY LINE
LL	LOT LINE
R/W	RIGHT-OF-WAY
CATV	EXISTING CABLE TELEVISION LINE
FO	EXISTING FIBER OPTIC LINE
G	EXISTING GAS LINE
BE	EXISTING BURIED ELECTRIC LINE
OHP	EXISTING OVERHEAD POWER LINE
OHT	EXISTING OVERHEAD TELEPHONE LINE
SS	EXISTING SANITARY SEWER LINE
18"HDPE	EXISTING STORM SEWER LINE (& SIZE)
BT	EXISTING BURIED TELEPHONE LINE
W	EXISTING WATER LINE (& SIZE)
G	PROPOSED GAS LINE
BE	PROPOSED BURIED ELECTRIC LINE
SS	PROPOSED SANITARY SEWER LINE
	PROPOSED STORM SEWER LINE (& SIZE)
BT	PROPOSED BURIED TELEPHONE LINE
W—6"	PROPOSED WATER LINE (& SIZE)
-ST- -6"-	PROPOSED ROOF DRAIN (& SIZE)

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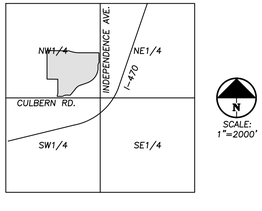
(D1) TYPICAL STORM WATER DRAIN LINE FROM ROOF. ALL SECONDARY STORM LINES SHALL BE PVC SDR 35 OR HDPE (ST). SEE ARCH PLANS FOR BUILDING CONNECTION LOCATIONS.

(D2) CONNECT SECONDARY STORM LINE TO PROPOSED STORM STRUCTURE.

(D3) INSTALL 6" PVC PVC SDR 35 OR HDPE (ST) @ 1.0% SLOPE (MINIMUM) FROM FOUNDATION DRAIN SYSTEM TO PROPOSED STORM STRUCTURE.

(D4) CONNECT FOUNDATION DRAIN SYSTEM OUTLET PIPE TO PROPOSED STORM STRUCTURE.



VICINITY MAP
SEC. 19–48–31

SCALE: 1"=2000'

UTILITY COMPANIES:

MISSOURI GAS ENERGY LUCAS WALLS (LUCAS.WALLS@SUG.COM) 3025 SOUTHEAST CLOVER DRIVE LEE'S SUMMIT, MO 64082	(816) 969–2218
EVERGY PHILLIP INGRAM (PHILLIP.INGRAM@KCPL.COM) RON DEJARNETTE (RON.DEJARNETTE@KCPL.COM) 1300 HAMBLEN ROAD LEE'S SUMMIT, MO 64081	(816) 347–4339 (816) 347–4316
STORM SEWER (PUBLIC WORKS DEPARTMENT) 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	(816) 969–1800
SANITARY SEWER & WATER (WATER UTILITIES DEPT.) 1200 SE HAMBLEN ROAD, LEE'S SUMMIT, MO 64081	(816)–969–1900
AT&T (913) 383–4929 MR. CLAYTON ANSPAUGH (CA4089@ATT.COM) 9444 NALL AVENUE OVERLAND PARK, KANSAS 66207	(913) 383–4849–FAX

SCOPE SHOWN ON THIS SHEET SHALL BE PART OF ALTERNATE #4

SCALE: 1"=30'
0' 30' 60'

PEI #220481

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\\phelps-server\projects\P\220481\dwg\permit plans\SECONDARY STORM PLAN - 2.dwg Layout:1 Oct 08, 2023 - 9:23am Daniel Finn

STATE OF MISSOURI
MIKE PARSON, GOVERNOR

STATE OF MISSOURI
JUDD DAVID CHESSER
NUMBER PE-29850
10/5/2023
PROFESSIONAL ENGINEER

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com

Project Number: 2022.152

PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1166
www.phelpsengineering.com

CERTIFICATE OF AUTHORIZATION KANSAS
LAND SURVEYING – LS–82
ENGINEERING – E–391

CERTIFICATE OF AUTHORIZATION MISSOURI
LAND SURVEYING–2007001128
ENGINEERING–2007005058

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

Project Name
Troop A Headquarters, MSHP

1950 NE Independence Ave.
Lee's Summit, MO 64086

PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

REVISION: Addendum 04
DATE: 05 October 2023
REVISION:
DATE:
REVISION:
DATE: Bid Documents
ISSUE DATE: 01 August 2023

CAD DWG FILE: C-903.dwg
DRAWN BY: SNH
CHECKED BY: DAF
DESIGNED BY: JDC

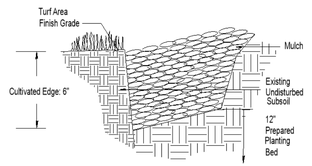
SHEET TITLE:
FIRING RANGE SECONDARY STORM PLAN (ALTERNATE #04)

SHEET NUMBER:
C-903

SHEET 015 OF 202

08/01/2023

1 LANDSCAPE PLAN
SCALE: 1"=30'-0"



4 CULTIVATED EDGE DETAIL
SCALE: NTS

Planting Notes

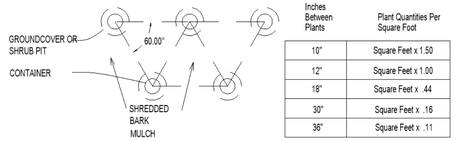
1. Location of all existing utilities needs to done before commencing work.
2. The planting plan graphically illustrates overall plant massings. Each plant species massing shall be placed in the field to utilize the greatest coverage of ground plane. The following applies for individual plantings:
a. Creeping groundcover shall be a minimum of 6" from paving edge.
b. All trees shall be a minimum of 3' from paving edge.
c. All plants of the same species shall be equally spaced apart and placed for best aesthetic viewing.
d. All shrubs shall be a minimum of 2' from paved edge.
3. Mulch all planting bed areas to a minimum depth of 3". Mulch individual trees to a minimum depth of 4".
4. Note: If plants are not labeled - they are existing and shall remain.
5. All landscaped areas in ROW shall be sodded and irrigated unless otherwise specified.

Materials:
1. Plant material shall be healthy, vigorous, and free of disease and insects as per AAN standards.
2. Shredded bark mulch installed at trees shall be finely chipped and shredded hardwood chips, consisting of pure wood products and free of all other foreign substances. Pine bark compost mulch installed at planting bed areas shall be free of all other foreign substances.

Installation:
1. All planting beds shall be amended with 1 cubic yard of peat moss per 1,000 square feet. Till peat moss into soil to a 6" depth. A 10-10-10 fertilizer shall be spread over all planting areas prior to planting, at a rate of 50 pounds per 2,000 square feet.
2. After plants have been installed, all planting beds shall be treated with Dacthal pre-emergent herbicide prior to mulch application.
3. Plant pit backfill for trees and shrubs shall be 50% peat or well composted manure and 50% topsoil.
4. Plant material shall be maintained and guaranteed for a period of one year after Owner's acceptance of finished job. All dead or damaged plant material shall be replaced at Landscape Contractor's expense.
6. Landscape contractor shall maintain all plant material until final acceptance, at which point the one year guarantee begins.

Landscape Schedule

Symbol	Qty.	Botanical Name	Common Name	Min.Root	Min.Size	Caliper	Remarks
OVERSTORY TREES							
	4	Acer x truncatum 'Warrenred'	Pacific Sunset Maple			2.5"	6' min. clear., ground to canopy



Inches Between Plants	Plant Quantities Per Square Foot
10"	Square Feet x 1.50
12"	Square Feet x 1.00
18"	Square Feet x .44
30"	Square Feet x .16
36"	Square Feet x .11

NOTES: 1. SPACING FOR GROUNDCOVERS, SHRUBS, AND PERENNIALS NOTED ON PLANS.
2. TILL SOIL IN BED TO A 12" MINIMUM DEPTH AND THOROUGHLY MIX IN SOIL AMENITIES AS NOTED ON PLANS.

2 GROUNDCOVER/SHRUB DETAIL
SCALE: NTS

TREE PLANTING NOTES:
1) DO NOT HEAVILY PRUNE THE TREE. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, & BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS & LATERAL BRANCHES MAY BE PRUNED. DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN

2) MARK THE NORTH SIDE OF THE TREE IN THE NURSERY, AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE

3) SET TOP OF ROOT BALL 1-2 INCHES HIGHER THAN SURROUNDING GRADE

4) APPLY 4"THK WOOD MULCH, DO NOT PLACE MULCH IN DIRECT CONTACT w/ TREE TRUNK

5) EACH TREE MUST BE PLANTED SUCH THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL w/ SOIL

6) REMOVE ALL TWINE, ROPE, WIRE AND BURLAP FROM THE UPPER 1/3 OF ROOT BALL (REMOVE WIRE BASKETS)

7) PLACE ALL ROOT BALLS ON UN-EXCAVATED OR TAMPED SOIL, TYP

STAKING REQUIREMENTS:
1) WIRE / CABLE SHALL BE GALV, 12-GAUGE

2) TIGHTEN WIRE / CABLE ONLY ENOUGH TO KEEP FROM SLIPPING, ALLOW FOR SOME TRUNK MOVEMENT PLASTIC HOSE SHALL BE LONG ENOUGH TO ACCOM-MODATE 1½" OF GROWTH

3) STAKES SHALL BE 2"x 2" HARDWOOD OR EQUAL

PERENNIAL PLANTING NOTES:
1) APPLY 2"THK BED OF MULCH ON PERENNIAL PLANT BED, DO NOT COVER PLANTS

2) THOROUGHLY MIX PEAT IN TOP 3-4" OF SOIL

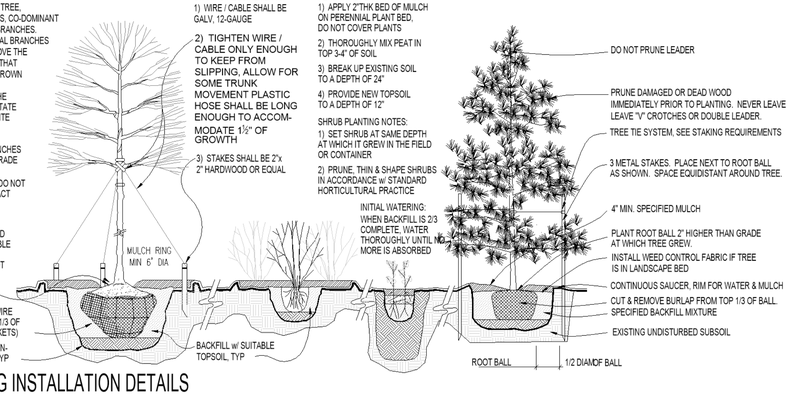
3) BREAK UP EXISTING SOIL TO A DEPTH OF 24"

4) PROVIDE NEW TOPSOIL TO A DEPTH OF 12"

SHRUB PLANTING NOTES:
1) SET SHRUB AT SAME DEPTH AT WHICH IT GREW IN THE FIELD OR CONTAINER

2) PRUNE, THIN & SHAPE SHRUBS IN ACCORDANCE w/ STANDARD HORTICULTURAL PRACTICE

INITIAL WATERING:
WHEN BACKFILL IS 2/3 COMPLETE, WATER THOROUGHLY UNTIL NO MORE IS ABSORBED



3 PLANTING INSTALLATION DETAILS
SCALE: NTS

MLA #: 932

STATE OF MISSOURI
MIKE PARSON,
GOVERNOR

STATE OF MISSOURI
JASON D. MEIER
NUMBER LA-2009014761
LANDSCAPE ARCHITECT

GastingerWalker &
Architects | Interior Designers | Construction Managers
817 Wyandotte Kansas City Missouri 64105 816.421.8200 gastingerwalker.com
Project Number 2022.182

MEIER
LANDSCAPE ARCHITECTURE
15245 Metcalf Ave.
Overland Park, KS 66223
913.787.2817

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

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1950 NE Independence Ave.
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PROJECT # R2219-01
SITE # 6018
FACILITY # 8136018019

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Landscape Plan

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L-100

SHEET 35 OF 202
08/01/2023

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