LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086



FINAL DEVELOPMENT PLAN OCTOBER 16, 2024

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HOEFER WELKER

HW PROJECT NO: 138191

OWNER
CITY OF LEE'S SUMMIT
220 SE GREEN
LEE'S SUMMIT, MO 64063
816.969.1000

ARCHITECT
HOEFER WELKER
4622 PENNSYLVANIA AVENUE, SUITE 1400
KANSAS CITY, MO 64112
P: 913.307.3700

CONSTRUCTION MANAGER
TITAN BUILT
8207 MELROSE DRIVE, SUITE 200
LENEXA, KANSAS 66214
P: 913.782.6700

MEPT ENGINEER
HOEFER WELKER
4622 PENNSYLVANIA AVENUE, SUITE 1400
KANSAS CITY, MO 64112
P: 913.307.3700

FIRE PROTECTION ENGINEER
SMITH & BOUCHER
25618 W 103RD STREET
OLATHE, KS 66061
P: 913.345.2127

STRUCTURAL ENGINEER
J&S STRUCTURAL ENGINEERS, PA
6640 WEST 143RD STREET #250
OVERLAND PARK, KS 66223
P: 913.549.4701

CIVIL ENGINEER
BHC
7101 COLLEGE BLVD SUITE 400
OVERALND PARK, KANSAS 66210
P: 913.663.1900

LANDSCAPE ARCHITECT
LANDWORKS STUDIO
102 S. CHERRY STREET, 2ND FLOOR
OLATHE, KS 66061
P: 913.780.6707

LEGEND

Proposed Line Types and Symbols shown. Existing Line Types and Symbols shall be the same, but screened, unless designated otherwise by the inclusion of a survey by others.

- *Set Survey Monument*
- *Set Survey Monument (in concrete)*
- *Found Survey Monument*
- *Found Survey Monument in Box*
- *(O.U.) Origin Unknown*
- *Found Right-of-Way Marker*
- *Control Point*
- *Benchmark*
- *Set Hub*
- OHC — *Overhead Utility Line(s)*
- *Underground Electric Line Marker*
- UGE — *Underground Electric Line*
- KCP&L — *Underground KCP&L Line (e.g.)*
- *Utility Pole*
- *Utility Pole with Transformer*
- *Guy Anchor*
- *Utility Pole w/Light & arm*
- *Street Light Pole w/ arm*
- *Street Light Pole (14')*
- EP *Electric Pedestal (above ground)*
- EM *Electric Meter*
- EV *Electric Access Vault (underground)*
- EB *Electric Access Box (mounted)*
- E *Electric Manhole*
- *Electric Pull Box (underground)*
- *Transformer (pad mounted)*
- *Yard Light*
- AC *Air Conditioner Unit*
- W — *Water Line*
- WS — *Water Service Line*
- *Underground Water Line Marker*
- *Water Valve*
- *Fire Hydrant*
- *Fire Hydrant Assembly*
- WM *Water Meter*
- W *Water Manhole*
- WV *Water Vault (underground)*
- SC *Sprinkler Control Box*
- *Sprinkler Head*
- *Yard Hydrant*
- BFV *Backflow Valve (BFV)*
- BFP *Backflow Preventer (BFP)*
- BO *Blow-Off Assembly*
- GAS — *Gas Line*
- GS — *Gas Service Line*
- SPIRE — *Underground Spire Line (e.g.)*
- *Underground Gas Line Marker*
- G *Gas Manhole or Access Lid*
- *Gas Valve*
- RG *Regulator Unit*
- GM *Gas Meter*
- *Casing Vent*
- P — *Underground Pipe Line (High Capacity)*
- *Underground Pipe Line Marker*
- UGT — *Underground Telephone Line*
- ATT — *Underground AT&T Line (e.g)*
- *Underground Telephone Line Marker*
- T *Telephone Pedestal (above ground)*
- T *Telephone Manhole*
- TA *Telephone Access Vault (underground)*
- TB *Telephone Access Box (mounted)*
- FO — *Underground Fiber Optic Line*
- *Underground Fiber Optic Line Marker*
- F *Fiber Optic Pedestal*
- F *Fiber Optic Manhole*
- FV *Fiber Optic Vault (underground)*
- FM *Fiber Optic Pedestal on top of Vault*
- [36"] *Traffic Signal Post w/ Mast Arm*
- *Pedestrian Signal Pole*
- TC *Traffic Control Manhole*
- TC *Traffic Control Cabinet*
- TCV *Traffic Control Vault (underground)*
- UGTV — *Underground Cable TV Line*
- SPC — *Underground Spectrum Line (e.g.)*
- *Underground Cable TV Marker*
- TV *Cable TV Pedestal (above ground)*
- U *Manhole-Unknown Purpose*
- GT *Grease Trap Access Lid*
- MW *Monitoring Well*
- BH *Bore Hole*
- *Fill Lid (for Underground Tank)*
- SAN — *Sanitary Sewer Line*
- SS — *Sanitary Sewer Service Line*
- S *Sanitary Sewer Manhole*
- *Clean-out*
- VCP *Vitrified Clay Pipe*
- DIP *Ductile Iron Pipe*
- PVC *Polyvinyl Chloride Pipe*
- CIP *Cast Iron Pipe*
- *Underground Utility Line Marker*
- *Metal Guard Rail or Handrail*
- *Flag Pole*
- *Satellite Dish*
- *Mailbox*
- *Concrete or Metal Bollard*
- *Wood Bollard or Wood Post*
- STM — *Storm Sewer Line*
- S *Storm Sewer Manhole*
- *Curb Inlet*
- *Field Inlet*
- *Junction Box*
- *Grate Inlet*
- *Grate Inlet (Round/Domed)*
- *End Section*
- *Headwall*
- DS *Down Spout*
- RD — *Roof Drain*
- CMP *Corrugated Metal Pipe*
- CMAP *Corrugated Metal Arch Pipe*
- CPP *Corrugated Plastic Pipe*
- HDPE *High Density Polyethylene Pipe*
- RCP *Reinforced Concrete Pipe*
- RCAP *Reinforced Concrete Arch Pipe*
- RCB *Reinforced Concrete Box*
- FES *Flared End Section*
- *Pipe Continues-Outlet or Source Not Found or Not Surveyed*
- *Wood Fence*
- *Chain Link Fence*
- *Wire Fence (with or without barb)*
- *Barbed Wire Fence*
- *Plastic Fence*
- *Iron or Metal Fence*
- *Gate Post*
- *Retaining Wall*
- *Single Pole Sign*
- *Single Pole Sign*
- *Double Pole Sign*
- *Railroad Crossing Gate*
- *Railroad Switch Machine*
- *Railroad Tracks*
- *Wheel Stop*
- *ADA Parking Stall*
- *ADA Detection Warning Pad*
- *Bush*
- *Deciduous Tree and Size (Scaled for Size)*
- *Coniferous Tree and Size (Scaled for Size)*
- *Tree Stump*
- *Foliage Drip Line/Edge of Timber*
- *Hedge*
- ℄ *Center Line*
- PL *Property Line*
- R/W *Right-of-Way Line*
- R= *Radius*
- L= *Arc Length*
- CB *Chord Bearing*
- CD *Chord Distance*
- Δ *Interior Angle (Delta)*
- I.T.B. *Initial Tangent Bearing*
- R/W *Right-of-Way*
- (M) *Monumented*
- (m) *Measured*
- (D) *Deeded*
- (P) *Platted*
- (C) *Calculated*
- (CR) *Calculated from Record Dimensions*
- (CM) *Calculated from Found Monuments*
- (PR) *Proportioned*
- BK. *Book*
- PG. *Page*
- DOC. *Document Number*
- INS. *Instrument Number*
- VOL. *Volume*
- ESMT. *Easement*
- B/L *Building Setback Line*
- U/E *Utility Easement*
- D/E *Drainage Easement*
- ST/E *Storm Sewer Easement*
- S/E *Sanitary Sewer Easement*
- IE/E *Ingress/Egress Easement*
- TC/E *Temporary Construction Easement*
- SQ. FT. *Square Feet*
- AC *Acres*
- CY *Cubic Yard*
- LF *Linear Feet*
- CO. *Company*
- L/S *Landscaping (Bushes, Trees, Flowers, Border, Mulch, any or all of them)*
- ASPH *Asphalt*
- CONC *Concrete*
- COR *Corner*
- R.WALL *Retaining Wall*
- STA. *Station*
- Lt *Left*
- Rt *Right*
- PI *Point of Intersection*
- PC *Point of Curve*
- PT *Point of Tangent*
- NTS *Not To Scale*
- NTS *Not To Scale*

LEGAL DESCRIPTION

Lot 1-A, NEW LEE'S POLICE AND COURT FACIMTY, a subdivision in Lee's Summit, Jackson County, Missouri

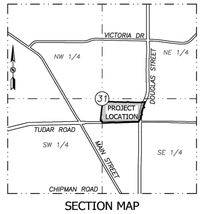
TRACT 2:
All that part of the Southeast Quarter of Section 31, Township 48, Range 31, described as follows: Beginning at a point 1450 feet west of the northeast corner of the southeast quarter of said Section 31; thence west 75 feet, more or less to the northeast corner of Lot 1, SUMMIT PARK, a subdivision in Lee's Summit, as recorded in Plat Book 6, at Page 38, at the Recorder's Office of said County; thence south along the east line of said Lot 1, 230 feet more or less to the intersection with the westerly right of way line of County Highway 10-E, aka N. Douglas Street; thence northeasterly along said westerly right of way line to the Point of Beginning.

OIL AND GAS WELLS

According to the "Oil and Gas Permits" database published by the Missouri Department of Natural Resources, as of November 13, 2024, no oil or gas wells (of any status) are listed within subject property site.

GENERAL NOTES

1. All work in public easement and Right-of-Way shall be installed per the requirements and specifications of the City of Lee's Summit, Missouri.
2. All existing topographic, survey, and utility information shown was provided to BHC in the form of an Topographic Survey prepared by BHC and dated April 2, 2024. BHC makes no guarantees as to the accuracy of the existing information shown hereon. Contractors shall satisfy themselves as to the existing conditions of the site and have all utilities located prior to commencing construction.
3. The Contractor shall be required to obtain all Federal, State, and Local permits required for this project prior to commencing construction.
4. Any work adjacent to or crossing existing streets requires proper traffic control devices. Traffic control devices shall be placed in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).
5. The contractor shall be required to demolish, remove and dispose of all existing structures, pavements, and features necessary to construct the improvements shown hereon. Any waste materials generated during construction shall be removed from the site by the Contractor and disposed of in accordance with all local, State, and Federal regulations governing such disposal.
6. The contractor shall prevent any trash, debris, or liquid wastes from being disposed of in sanitary sewers, storm sewers, or open drainage systems.
7. The Contractor shall be solely responsible to protect adjacent property, structures, and other improvements from damage during construction. In the event of damage to adjacent property, structures, or improvements, the contractor shall repair or replace such damage to the Owners's satisfaction at the Contractor's expense.
8. Contractors at the site shall be solely responsible for jobsite safety for all aspects of work shown hereon.
9. All work and materials used in the construction of the improvements shown hereon shall comply with all referenced standards, specifications, and plan notes.
10. All buildings are shown as a reference only. All buildings shall be located and constructed per the Architectural drawings prepared by others.
11. Contractor shall be responsible for contacting all utility companies for field locations of underground utilities affected by the contract. All existing utilities indicated on these plans are according to the best information available to the engineer; however, all utilities actually existing may not be shown. Utilities damaged through the negligence of the contractor to obtain the location of same shall be repaired or replaced at the expense of the contractor.
12. Coordinate with facility representative as to when construction activities may be performed to work with the operations of the facility.
13. Any and all hazards shall be properly identified and barricaded from access during all non-construction periods.
14. Unless specified otherwise, all construction shall meet the requirements of the Missouri Department of Transportation (MoDOT) Standard Specifications, except as modified by these plans.
15. Third party inspection of the storm sewer is required, after inspection, provide documentation to the City of Lee's Summit, Missouri.
16. Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit, Missouri with reports and documentation.
17. A Right-of-Way permit is required from the City of Lee's Summit, Missouri Public Works Department for any work within the public right-of-way.



SECTION MAP
SECTION 31-T48N-R31W
(NOT TO SCALE)

PROJECT CONTROL TABLE
(NAD83 MISSOURI STATE PLANE, WEST ZONE, US SURVEY FOOT)

POINT NO.	CONTROL POINT/ BENCHMARK DESCRIPTION	NORTHING COORDINATE	EASTING COORDINATE	ELEV.
1	CP1 /IB4 WITH CP CAP	1006378.56	2822886.48	1029.44'
2	CP2 /CUT PLUS BACK OF WALK	1006378.62	2821916.33	1011.43'
3	CP3 /CHISEL PLUS ON W. EDGE OF WALK	1006849.13	2821878.06	1010.62'
4	CP4 /IB4 WITH CP CAP	1006865.95	2823140.23	1023.26'
5	CP5 /IB4 W CP CAP	1006971.51	2822049.11	1009.85'
10	CP0 /IB4 WITH CP CAP	1006274.88	2823059.46	1031.60'

BENCHMARKS (NAVD88 Datum)

BM1 Chiseled square on the North face of a grate inlet, located on the South side of Tudor Road, approximately 425 feet East of the intersection of Tudor Road and Sloan Street.

Elevation: 1015.01

BM2 Chiseled square on the Northwest corner of a pedestrian crossing signal, located on the Southwest corner of the intersection of Tudor Road and Douglas Street.

Elevation: 1031.01

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

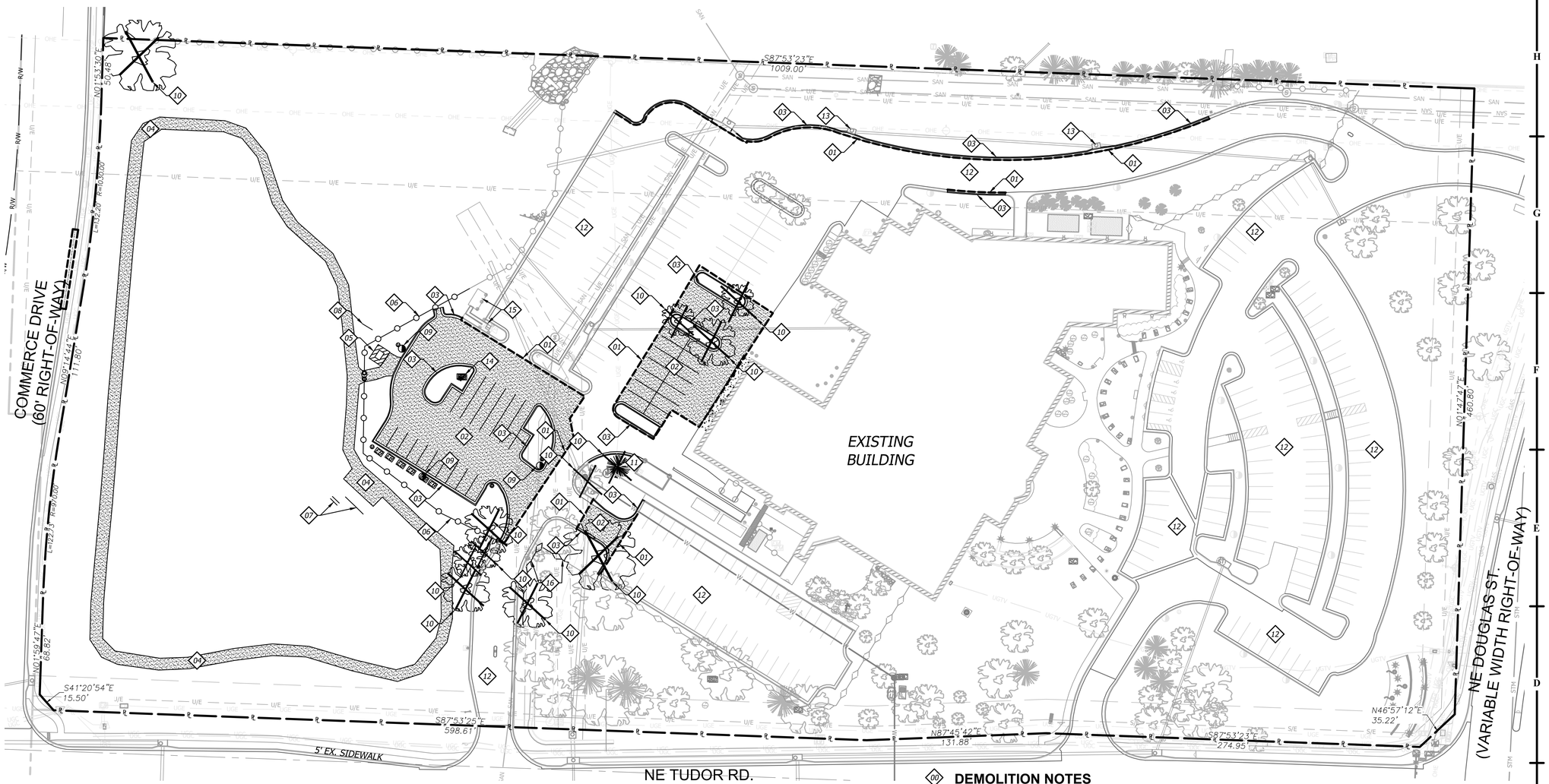
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C0.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

GENERAL INFORMATION



DEMOLITION GENERAL NOTES

1. Contractor shall verify the location, size, material and depth of all utilities prior to any excavation or construction activity.
2. All materials shall be removed and disposed of off-site. It is the contractors responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
3. The contractor shall ensure that any structures to remain which are damaged during demolition operations shall be repaired to meet current code, at no additional cost to the owner.
4. The contractor shall remove any and all existing debris which is encountered from the existing site. This shall include, but shall not be limited to, footings, concrete slabs, conduits, granular subgrade, utility services, and/or unsuitable structural fill material as determined by the owner's engineer. The cost for these removals shall be considered incidental to the project. Said debris shall become property of the contractor and it shall be the responsibility of the contractor to dispose of properly off-site.
5. It shall be the contractor's responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
6. The contractor shall be responsible for obtaining and payment of any permits for demolition that pertain to this project.
7. All protection fencing shall be installed prior to demolition/construction activity. The contractor shall provide a 6-foot security fence around the entire job site with locked gated access points, if required by the owner or the City.
8. All existing utilities removed during construction shall have their trenches backfilled with structural fill and be compacted to the requirements for structural fill.
9. All removals required to properly perform the work (whether shown on the plans or not) shall be performed by the contractor at no additional cost to the owner.

DEMOLITION NOTES

01. *SAW CUT EXISTING PAVEMENT TO FULL DEPTH AND CLEAN EDGE.*
02. *REMOVE & DISPOSE OF EXISTING ASPHALT.*
03. *REMOVE & DISPOSE OF EXISTING CURB AND GUTTER.*
04. *REMOVE & DISPOSE OF ASPHALT TRAIL.*
05. *REMOVE & DISPOSE OF EXISTING SHED.*
06. *REMOVE & DISPOSE OF EXISTING CHAIN LINK FENCE.*
07. *REMOVE & DISPOSE OF EXISTING PULL UP BARS.*
08. *REMOVE & DISPOSE OF EXISTING WOODEN WINDOW.*
09. *REMOVE & DISPOSE OF EXISTING LIGHT POLES.*
10. *REMOVE & DISPOSE OF EXISTING TREES.*
11. *RELOCATE WATER VAULT TO ALLOW FOR PROPOSED TRASH ENCLOSURE.*
12. *MILL EXISTING PARKING LOT 2", OVERLAY ASPHALT AND RESTRIPE TO MATCH EXISTING. CONTRACTOR TO COORDINATE OVERLAY WORK SEQUENCE WITH OWNER TO MINIMIZE DISRUPTION TO FACILITY OPERATIONS.*
13. *STRUCTURE TO MODIFIED TO FROM CURB INLET TO GRATE TOP INLET.*
14. *REMOVE & RELOCATE EXISTING SHUT-OFF FOR FUEL PUMP*
15. *EXISTING FUEL STATION TO REMAIN. TO BE PROTECTED DURING CONSTRUCTION.*
16. *REMOVE & DISPOSE OF EXISTING CHAIN IRON FENCE.*

LEGEND

- R/W — *RIGHT - OF - WAY LINE*
- ℄ — *PROPERTY LINE*
- OHE — *EXISTING OVERHEAD UTILITY LINES*
- UGE — *EXISTING UNDERGROUND ELECTRICAL LINE*
- GAS — *EXISTING GAS LINE*
- W — *EXISTING WATER LINE*
- *SAW CUT LINE*
- *ASPHALT PAVEMENT TO BE REMOVED*
- *EXISTING TREE LINE*
- *EXISTING TREE TO BE REMOVED*

GRAPHIC SCALE
40 0 40

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FINAL DEVELOPMENT PLAN

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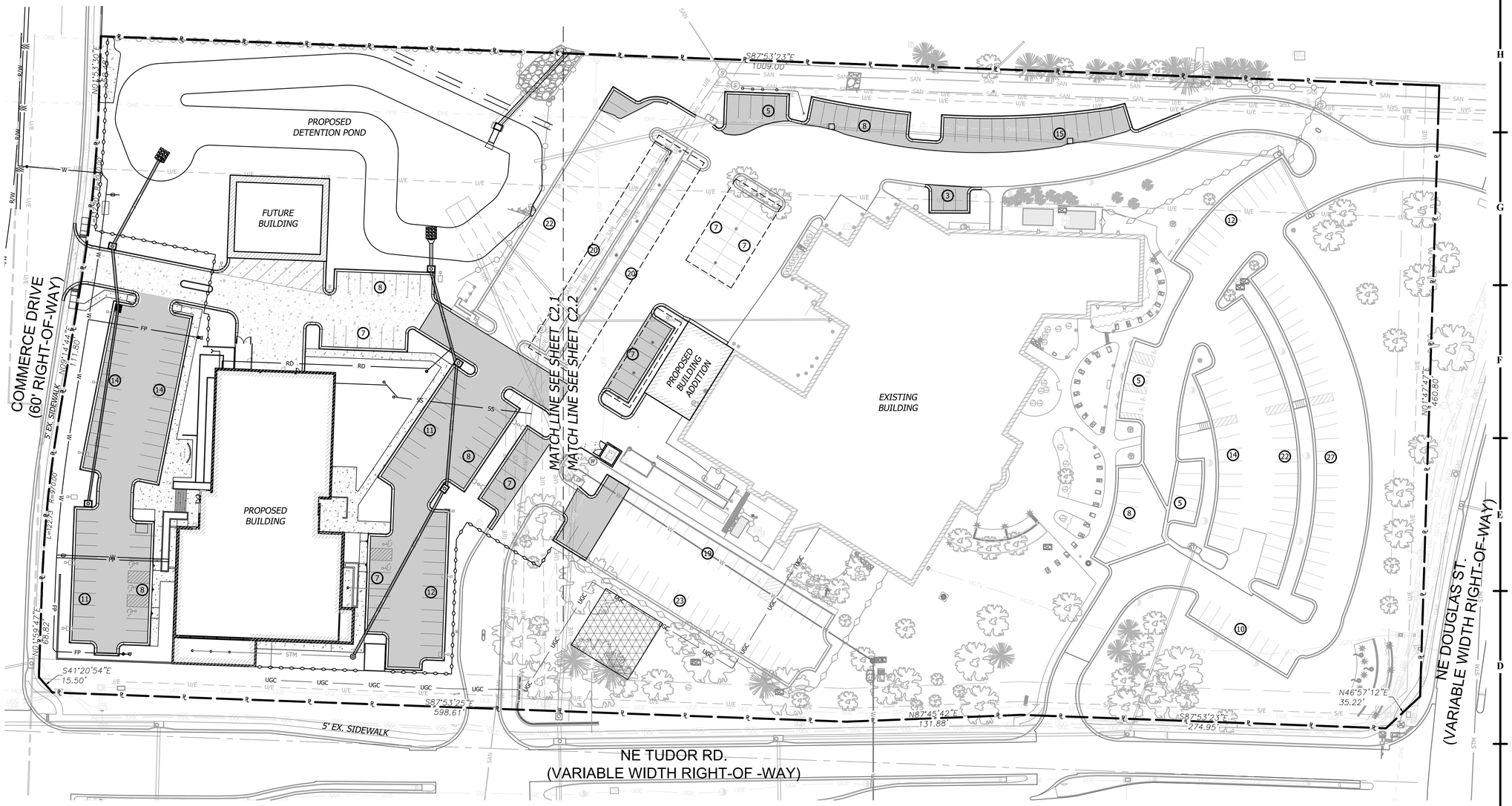
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C1.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

DEMOLITION PLAN



SITE DATA

SITE		
SITE AREA:	*11.58*	*AC*
	504,417	*SF*
IMPERVIOUS AREA:		
EXISTING:	*228,818*	*SF (45.4%)*
PROPOSED:	*296,228*	*SF (58.7%)*
BUILDING		
EXISTING BUILDING (INCLUDING ADDITION) AREA:	*93,507*	*SF (18.5)*
PROPOSED BUILDING AREA:	*43,639*	*SF (8.7%)*
PROPOSED FUTURE BUILDING AREA:	*4,724*	*SF (0.9%)*
FLOOR AREA RATIO (FAR):	*0.28:1*	
PARKING		
PARKING PROVIDED:	*366*	*STANDARD*
ADA PARKING SPACES:	*13*	*HANDICAP (6 VAN)*

ZONING

PO (PLANNED OFFICE)

OWNERSHIP:

PARCEL NO. 52-900-04-237-00-0-00-000
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT POLICE AND COURT FACILITY
INSTRUMENT NO. 199710020462, BOOK 60, PAGE 53

DIMENSIONAL STANDARDS:

BUILDING SET-BACKS	*FRONT YARD*	*15 FT*
	REAR YARD	*20 FT*
PARKING SET-BACKS	*RIGHT OF WAY*	*20 FT*
	RESIDENTIAL DISTRICT	*20 FT*
	SIDE AND REAR P/L	*6 FT*
DRIVEWAY AISLE MINIMUM		*24 FT*
PARKING SPACE DIMENSIONS	*LENGTH*	*19 FT*
	WIDTH	*9 FT*

GENERAL NOTES:

1. *MINIMUM CURB RADIUS OF 3 FEET (UNLESS OTHERWISE SPECIFIED).*
2. *ALL NEW ON-SITE WIRING AND CABLES SHALL BE INSTALLED UNDERGROUND.*
3. *ALL ABOVE GROUND ELECTRICAL AND/ OR TELEPHONE CABINETS MUST BE PLACED WITHIN THE INTERIOR SIDE OR REAR BUILDING SETBACK YARDS.*
4. *ALL CONCRETE MATERIALS (ASPHALTIC AND PORTLAND) SHALL BE MEET KANSAS CITY METROPOLITAN MATERIALS BOARD (KCMMB) SPECIFICATIONS.*
5. *ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT, INCLUDING BUT NOT LIMITED TO MECHANICAL EQUIPMENT, UTILITY METER BANKS AND COOLERS, SHALL BE SCREENED FROM PUBLIC VIEW WITH LANDSCAPING OR ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING ARCHITECTURE.*
6. *ALL EXERIOR -MOUNTED AND ROOFTOP BUILDING HVAC AND MECHANICAL EQUIPMENT, VENTS, PIPING, ROOF ACCESS LADDERS AND UTILITY METERS MUST BE LOCATED OUT OF VIEW OR OTHERWISE SCREENED FROM PUBLIC VIW FROM ALL ADJACENT STREETS AND RESIDENTIALLY ZONED OR DEVELOPED PROPERTIES. SCREENING MUST BE ACCOMPLISHED WITH LANDSCAPING, SCREEN WALLS, BUILDING ELEMENTS, OR A COMBINATION OF THESE METHODS.*
7. *BUILDING FOOTPRINT AS SHOWN REPRESENTS THE MOST EXTERIOR LINE WORK FOR BUILDING AS PROVIDED BY HOEFER WELKER. REFERENCE DRAWING DATED 2024-10-08.*

SITE LEGEND

- *PARKING STALL COUNT*
- *PROPOSED BUILDING*
- *EXISTING BUILDING*
- *LIGHT DUTY ASPHALT PAVEMENT*
- *LIGHT DUTY PCC PAVEMENT*
- *CONCRETE SIDEWALK*
- *STRAIGHT BACK CURB & GUTTER (TYPE CG-1)*
- *RETAINING WALL*
- *STRAIGHT BACK DRY CURB & GUTTER (TYPE CG-1 DRY)*
- *ZERO HEIGHT CURB*
- *TRANSITION CURB*

N

GRAPHIC SCALE
40 0 40

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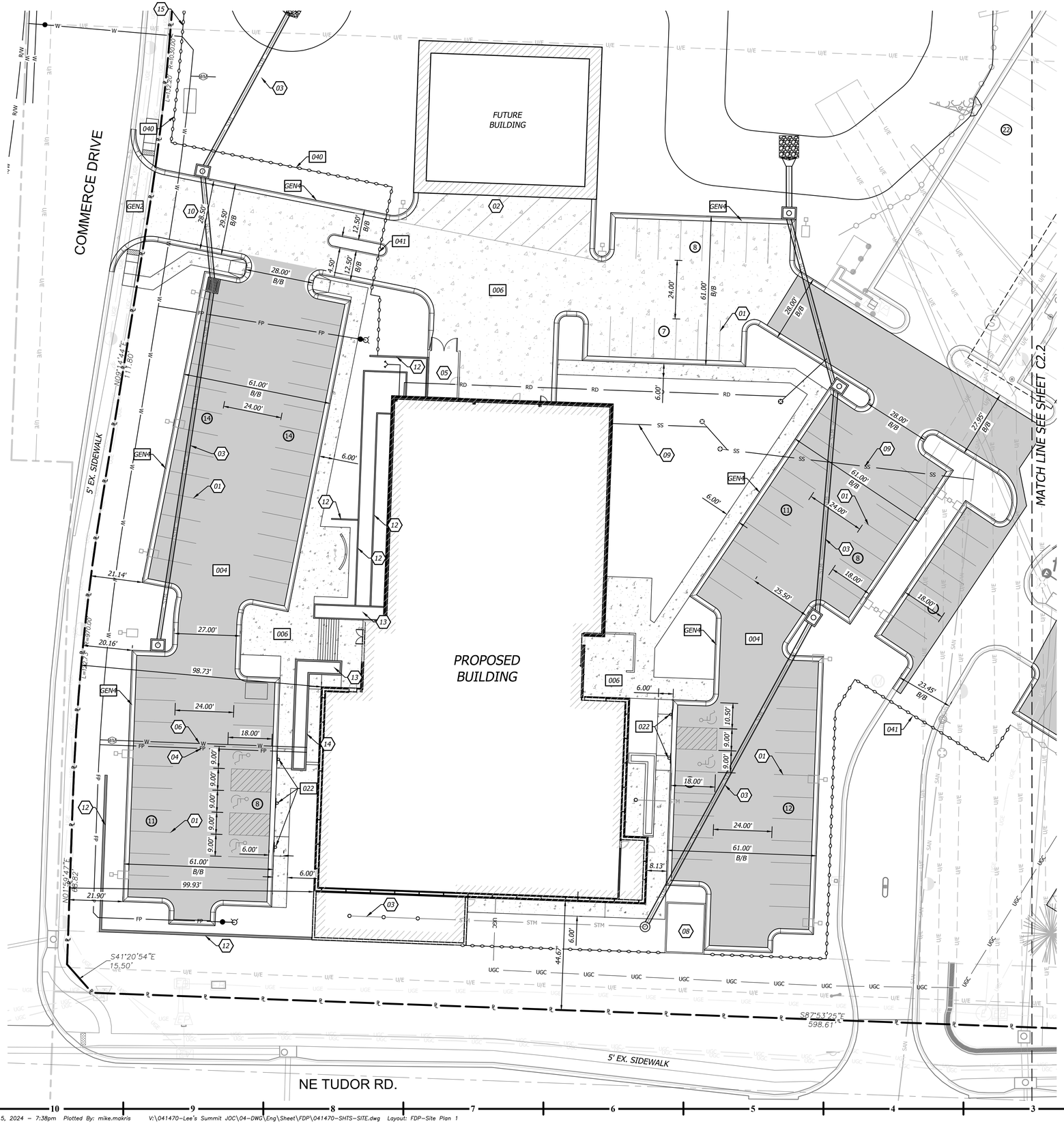
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MICHAEL T. MAKRIS
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PROFESSIONAL ENGINEER

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MO PE-2021035286

C2.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

OVERALL SITE PLAN



ZONING

PO (PLANNED OFFICE)

GENERAL NOTES:

1. *MINIMUM CURB RADIUS OF 3 FEET (UNLESS OTHERWISE SPECIFIED).*
2. *ALL NEW ON-SITE WIRING AND CABLES SHALL BE INSTALLED UNDERGROUND.*
3. *ALL ABOVE GROUND ELECTRICAL AND/ OR TELEPHONE CABINETS MUST BE PLACED WITHIN THE INTERIOR SIDE OR REAR BUILDING SETBACK YARDS.*
4. *ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT, INCLUDING BUT NOT LIMITED TO MECHANICAL EQUIPMENT, UTILITY METER BANKS AND COOLERS, SHALL BE SCREENED FROM PUBLIC VIEW WITH LANDSCAPING OR ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING ARCHITECTURE.*
5. *ALL EXERIOR -MOUNTED AND ROOFTOP BUILDING HVAC AND MECHANICAL EQUIPMENT, VENTS, PIPING, ROOF ACCESS LADDERS AND UTILITY METERS MUST BE LOCATED OUT OF VIEW OR OTHERWISE SCREENED FROM PUBLIC VIW FROM ALL ADJACENT STREETS AND RESIDENTIALLY ZONED OR DEVELOPED PROPERTIES. SCREENING MUST BE ACCOMPLISHED WITH LANDSCAPING, SCREEN WALLS, BUILDING ELEMENTS, OR A COMBINATION OF THESE METHODS.*
6. *BUILDING FOOTPRINT AS SHOWN REPRESENTS THE MOST EXTERIOR LINE WORK FOR BUILDING AS PROVIDED BY HOEFER WELKER.*

00 CONSTRUCTION NOTES

01	*LEAD FREE, WATER-BORNE EMULSION BASED TRAFFIC PAINT FOR PARKING LOT STRIPING (WHITE ON ASPHALT & YELLOW ON CONCRETE).*
02	*PROPOSED NO PARKING STRIPING*
03	*PROPOSED STORM SEWER SYSTEM*
04	*PROPOSED FIRE PROTECTION SYSTEM*
05	*PROPOSED TRASH ENCLOSURE. (REF. TO ARCHITECTURAL PLANS)*
06	*PROPOSED WATER SERVICE SYSTEM*
07	*PROPOSED GENERATOR*
08	*PROPOSED TRANSFORMER PAD LOCATION*
09	*PROPOSED SANITARY SEWER SYSTEM*
10	*CITY OF LEE'S SUMMIT COMMERCIAL DRIVE ENTRANCE (GEN-1)*
11	*PROPOSED COMMUNICATIONS TOWER LOCATION. PENDING FURTHER DESIGN.*
12	*SITE RETAINING WALLS ARE DELEGATED DESIGN. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR ENGINEER/ARCHITECT REVIEW. PRODUCT - VERSA-LOK MOSAIC, COLOR BY ARCHITECT.*
13	*PLANTER WALLS SPECIFIED BY ARCHITECT.*
14	*HANDRAILS REQUIRED FOR ADA RAMP SPECIFIED BY ARCHITECT.*
15	*PROPOSED FENCE TO CONNECT TO EXISTING FENCE ALONG NORTHERN PROPERTY LINE.*

SITE LEGEND

- (#) *PARKING STALL COUNT*
- *PROPOSED BUILDING*
- *EXISTING BUILDING*
- *LIGHT DUTY ASPHALT PAVEMENT*
- *LIGHT DUTY PCC PAVEMENT*
- *CONCRETE SIDEWALK*
- *STANDARD CURB & GUTTER*
- *RETAINING WALL*
- *DRY CURB & GUTTER*
- *ZERO HEIGHT CURB*
- *TRANSITION CURB*

000 DETAILS

SEE CONSTRUCTION DETAILS - SHEETS C7.0 - C7.3

GEN-1	*CONCRETE DRIVEWAY DETAIL*
GEN-4	*CONCRETE CURB & GUTTER*
004	*MEDIUM DUTY ASPHALT PAVEMENT*
006	*MEDIUM DUTY PCC PAVEMENT*
014	*CONCRETE SIDEWALK SECTION*
022	*ADA PARKING SIGNAGE*
040	*AMERISTAR FENCE DETAIL*
041	*AMERISTAR GATE DETAIL*

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

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FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

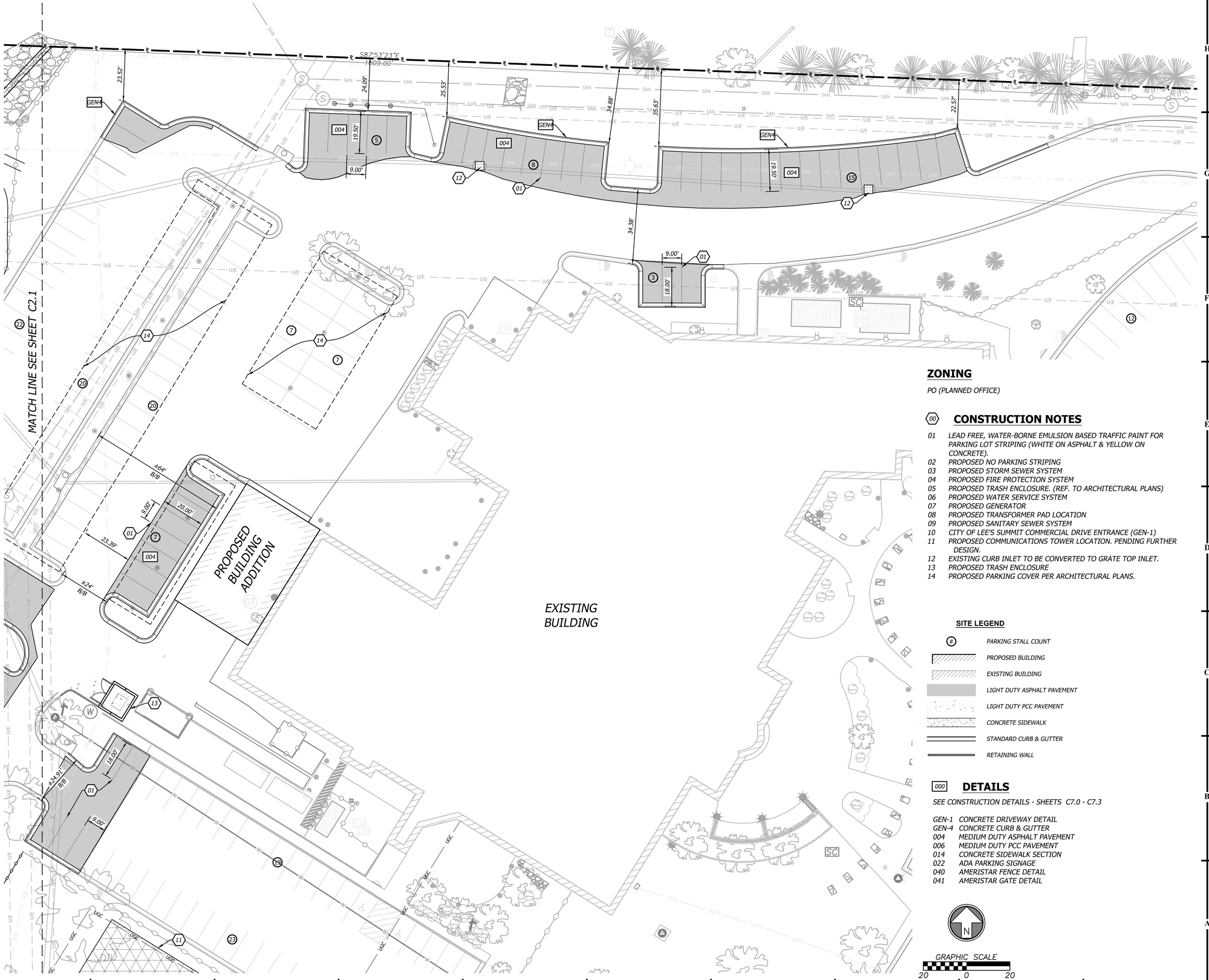
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C2.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

SITE PLAN



ZONING

PO (PLANNED OFFICE)

CONSTRUCTION NOTES

00

01 *LEAD FREE, WATER-BORNE EMULSION BASED TRAFFIC PAINT FOR PARKING LOT STRIPING (WHITE ON ASPHALT & YELLOW ON CONCRETE).*
02 *PROPOSED NO PARKING STRIPING*
03 *PROPOSED STORM SEWER SYSTEM*
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05 *PROPOSED TRASH ENCLOSURE. (REF. TO ARCHITECTURAL PLANS)*
06 *PROPOSED WATER SERVICE SYSTEM*
07 *PROPOSED GENERATOR*
08 *PROPOSED TRANSFORMER PAD LOCATION*
09 *PROPOSED SANITARY SEWER SYSTEM*
10 *CITY OF LEE'S SUMMIT COMMERCIAL DRIVE ENTRANCE (GEN-1)*
11 *PROPOSED COMMUNICATIONS TOWER LOCATION. PENDING FURTHER DESIGN.*
12 *EXISTING CURB INLET TO BE CONVERTED TO GRATE TOP INLET.*
13 *PROPOSED TRASH ENCLOSURE*
14 *PROPOSED PARKING COVER PER ARCHITECTURAL PLANS.*

SITE LEGEND

(#) *PARKING STALL COUNT*
PROPOSED BUILDING
EXISTING BUILDING
LIGHT DUTY ASPHALT PAVEMENT
LIGHT DUTY PCC PAVEMENT
CONCRETE SIDEWALK
STANDARD CURB & GUTTER
RETAINING WALL

000 **DETAILS**

SEE CONSTRUCTION DETAILS - SHEETS C7.0 - C7.3

GEN-1 CONCRETE DRIVEWAY DETAIL
GEN-4 CONCRETE CURB & GUTTER
004 MEDIUM DUTY ASPHALT PAVEMENT
006 MEDIUM DUTY PCC PAVEMENT
014 CONCRETE SIDEWALK SECTION
022 ADA PARKING SIGNAGE
040 AMERISTAR FENCE DETAIL
041 AMERISTAR GATE DETAIL

GRAPHIC SCALE
20 0 20

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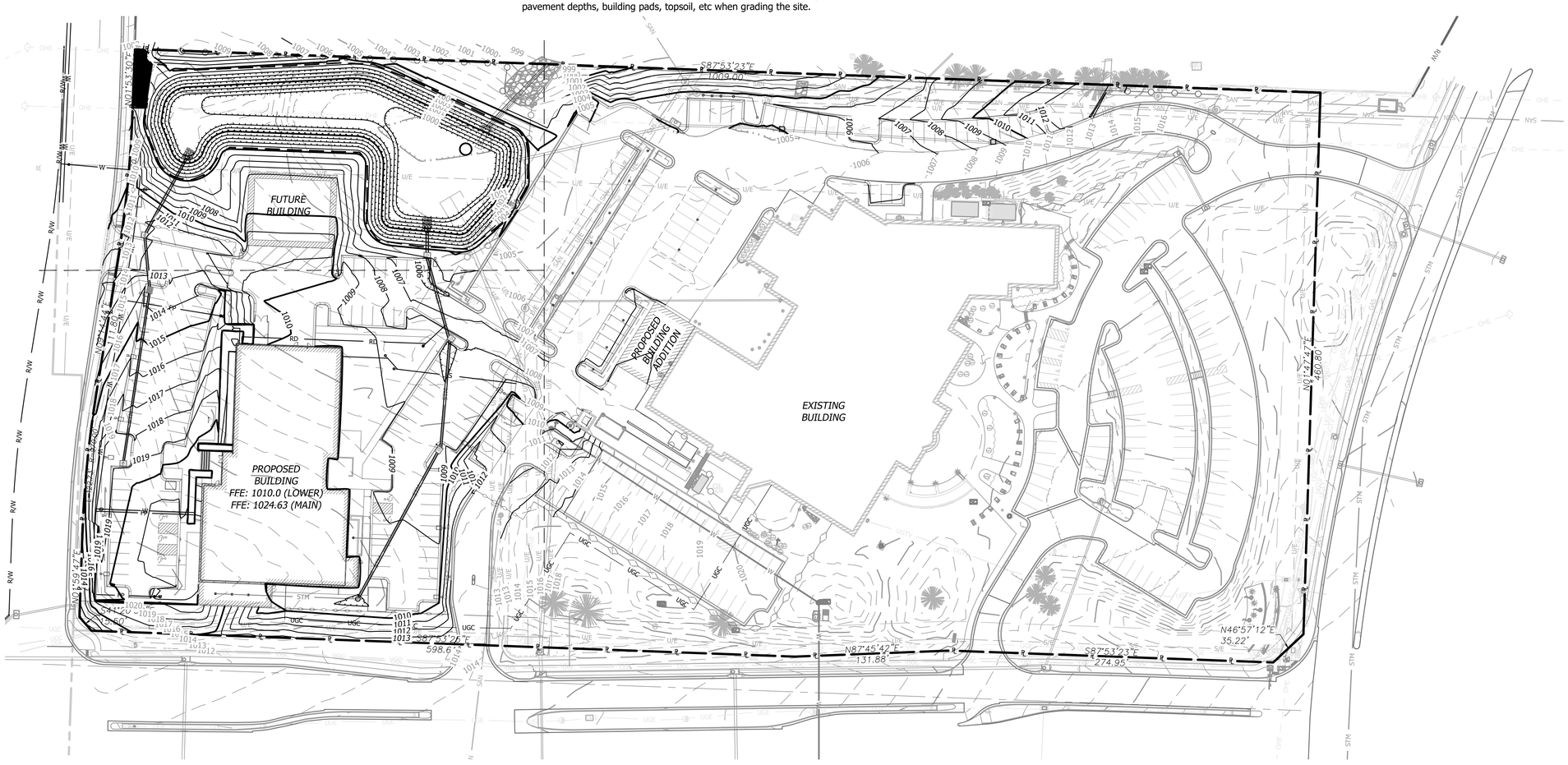
C2.2

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

SITE PLAN

GRADING GENERAL NOTES

1. Contractor shall obtain a copy of the Geotechnical Services Report, prepared for the project and satisfy himself as to the existing conditions and recommendations contained in the report.
2. As discussed in the Geotechnical Report, over excavation of existing unsuitable soils will be required under building and pavement areas. Contractor shall perform over excavation of unsuitable soils as a part of this work.
3. Contractor shall obtain soils suitable as structural fill from off-site sources. All borrow materials must be tested and approved by the Geotechnical Engineer prior to importing the soils to the project site.
4. Contractor shall operate under the terms and permits included in the Stormwater Pollution Prevention Plan (SWPPP) prepared for this project and permitted through the State of Missouri. Contractor shall employ a qualified person to conduct regular inspections of the site erosion control measures and document such inspections in the SWPPP document maintained by the Contractor.
5. All topsoil, vegetation, root structures, and deleterious materials shall be stripped from the ground surface prior to the placement of embankments. Contractor shall obtain the on-site geotechnical representative's acceptance of the existing ground surface materials and the proposed fill material prior to the placement of fill.
6. All proposed contour lines and spot elevations shown are finish ground elevations. Contractor shall account for pavement depths, building pads, topsoil, etc when grading the site.
7. All disturbed areas that are not to be paved (green spaces) shall be finish graded with a minimum of six inches of topsoil.
8. All excavation and embankments shall comply with the recommendations provided by the geotechnical engineer.
9. Prior to placing any concrete or asphalt pavement the contractor shall perform a proof roll of the pavement sub-grade with a fully loaded tandem axle dump truck. The proof roll shall be conducted in the presence of the Engineer and the on-site geotechnical representative. Areas that display rutting or pumping that are unsatisfactory to the engineer shall be re-worked and a follow-up proof roll shall be conducted prior to acceptance of the sub-grade for paving. The contractor may, at its own expense, stabilize the sub-grade using Class C fly ash or quicklime.
10. Finished grades shall not be steeper than 3:1.
11. All grading work shall be considered unclassified. No additional payments shall be made for rock excavation. Contractor shall satisfy himself as to any rock excavation required to accomplish the improvements shown hereon.
12. A 2.0% maximum cross slope shall be maintained on all pedestrian sidewalks and paths.



BENCHMARKS (DATUM: NAVD88)

BENCHMARK NUMBER: 1
ELEVATION= 1015.01

CHISELED SQUARE ON THE NORTH FACE OF A GRATE INLET, LOCATED ON THE SOUTH SIDE OF TUDOR ROAD, APPROXIMATELY 425 FEET EAST OF THE INTERSECTION OF TUDOR ROAD AND SLOAN STREET.

BENCHMARK NUMBER: 2
ELEVATION= 1031.01

CHISELED SQUARE ON THE NORTHWEST CORNER OF A PEDESTRIAN CROSSING SIGNAL, LOCATED ON THE SOUTHWEST CORNER OF THE INTERSECTION OF TUDOR ROAD AND DOUGLAS STREET.

FLOOD STATEMENT

The subject property lies within Flood Zone " X " (unshaded) (Areas determined to be outside the 0.2% annual chance floodplain.), as shown on the Jackson County, Missouri and Incorporated Areas Flood Insurance Rate Map (F.I.R.M.).

Map Number: 29095C0417G
Panel No: 417 of 625
Map Revised Date: January 20, 2017

NOTE: This statement is provided for informational purposes only and shall in no way constitute a basis for a flood certificate. No field work was performed to establish the boundaries of this zone. The information was derived by scaling the subject property on the above referenced map.

GRADING LEGEND

- 980 — FINISH GRADE MAJOR CONTOURS
- 982 — FINISH GRADE MINOR CONTOURS
- 980 — EXISTING GRADE MAJOR CONTOURS
- 982 — EXISTING GRADE MINOR CONTOURS
- PROPERTY LINE
- R/W — RIGHT-OF-WAY LINE
- STANDARD CURB & GUTTER
- DRY CURB & GUTTER
- ZERO HEIGHT CURB
- TRANSITION CURB
- RETAINING WALL

GRAPHIC SCALE
50 0 50

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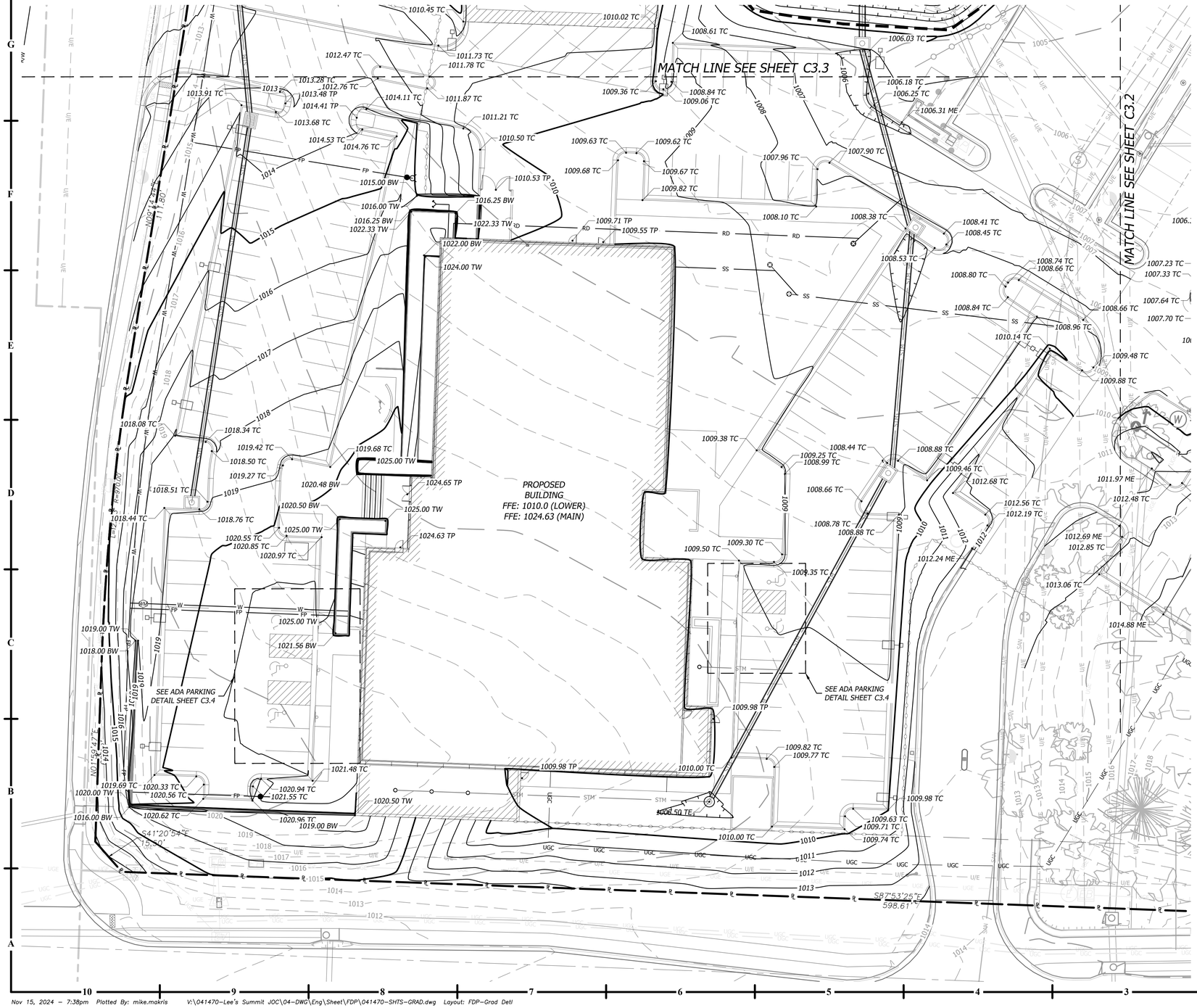
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C3.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

OVERALL GRADING PLAN



DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

GRAPHIC SCALE
20 0 20

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DETAILED GRADING



DETAILED GRADING LEGEND

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0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
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0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

GRAPHIC SCALE
20 0 20

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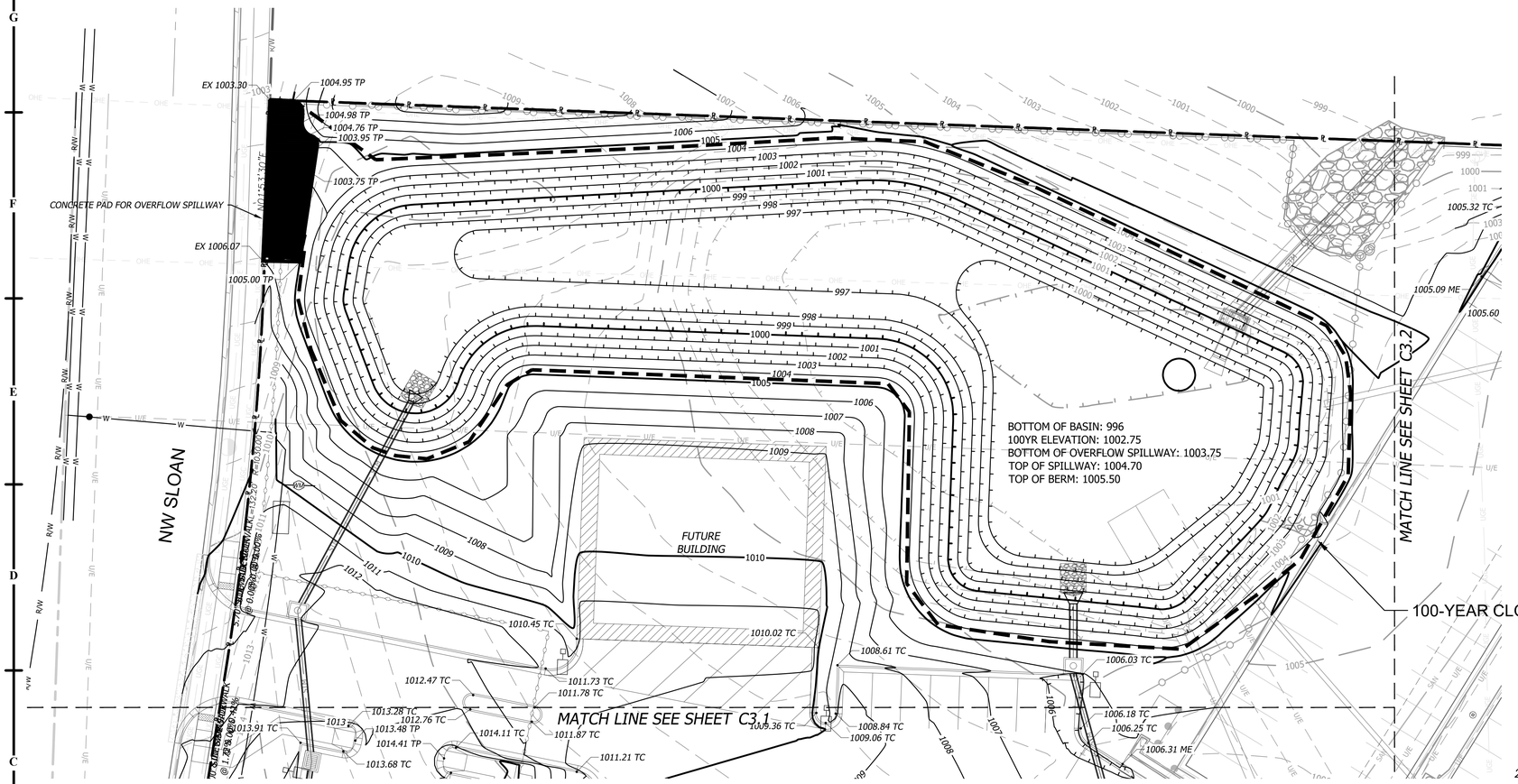
STATE OF MISSOURI
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MICHAEL T. MAKRIS, PE
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C3.2

ISSUE DATE: AUGUST 30, 2024
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DETAILED GRADING



DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
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0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

AS-BUILT CERTIFICATION

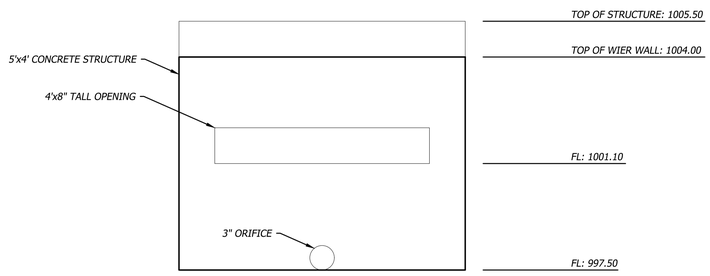
AS-BUILT DETENTION PLAN AND CERTIFICATION SHALL BE PREPARED, REVIEWED BY THE CIVIL ENGINEER AND SUBMITTED TO THE CITY PRIOR TO ANY OCCUPANCY PERMIT ISSUANCE.

CONSTRUCTION SEQUENCE

ALL CONSTRUCTION AND UPGRADES OF THE DETENTION POND SHALL BE COMPLETED AND INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITIES, WITH THE EXCEPTION OF EROSION AND SEDIMENT CONTROL.

SEDIMENT BASIN NOTE

FAIRCLOTH SKIMMER (OR APPROVED EQUAL), RE: DETAIL ON SHEET C7.5, SHALL BE INSTALLED IN 3" ORIFICE OPENING AND MAINTAIN UNTIL CONCLUSION OF LAND DISTURBING ACTIVITIES.



WEIR WALL SHALL BE INSTALLED INTEGRALTO 5' BY 4' GRATED INLET

WEIR WALL DETAIL

SCALE: N.T.S.

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FINAL DEVELOPMENT PLAN

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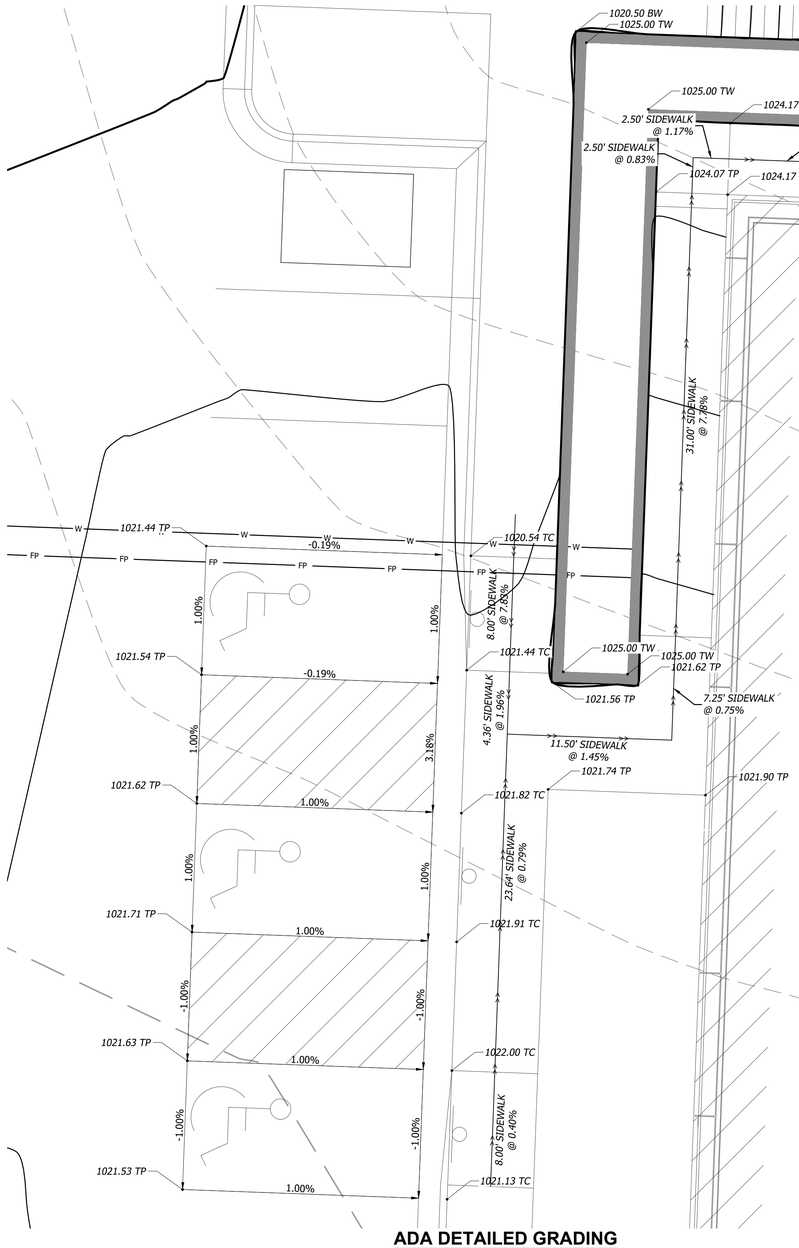
C3.3

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

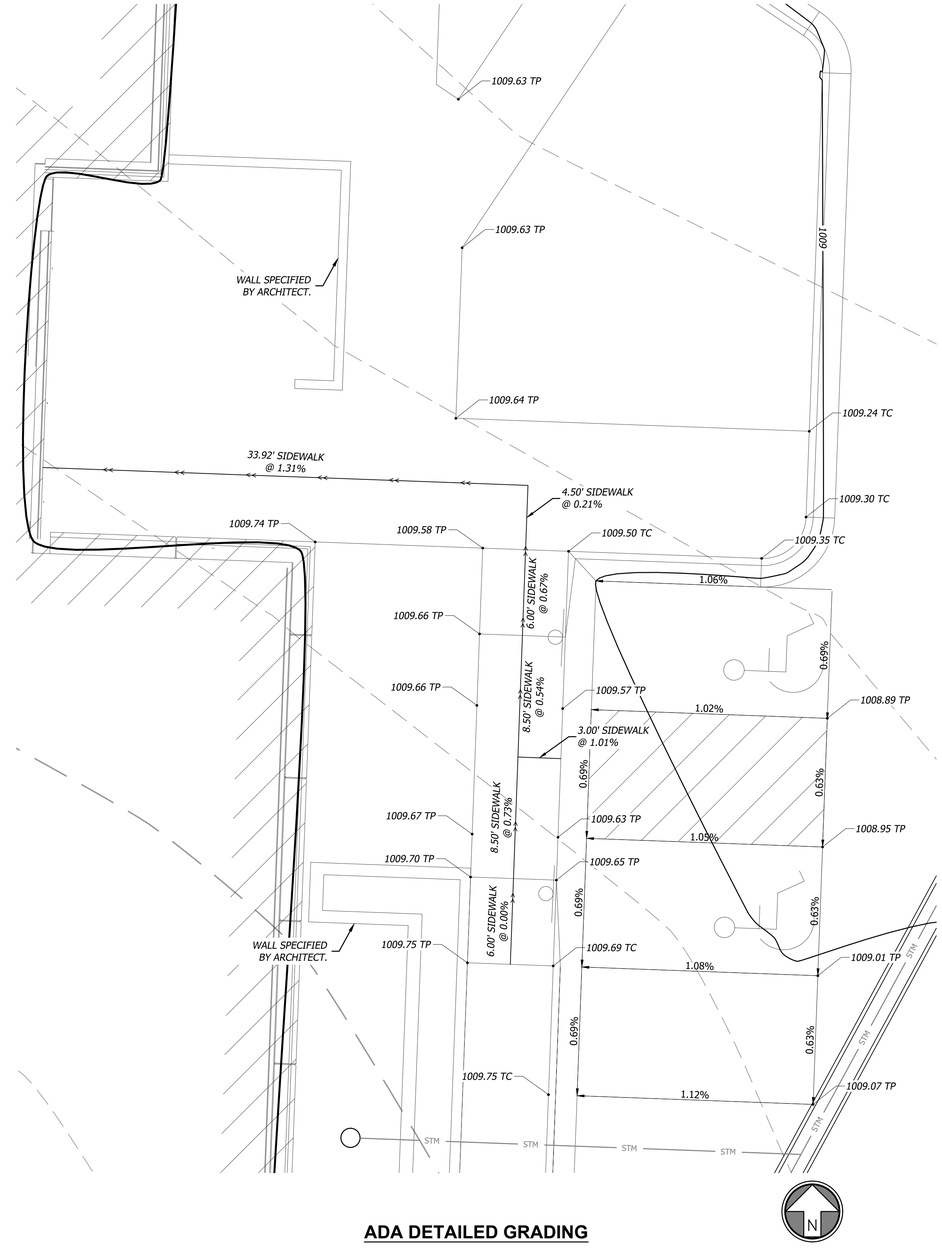
DETAILED GRAING (DET. POND)

DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
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0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR



ADA DETAILED GRADING



ADA DETAILED GRADING

GRAPHIC SCALE
20 0 20

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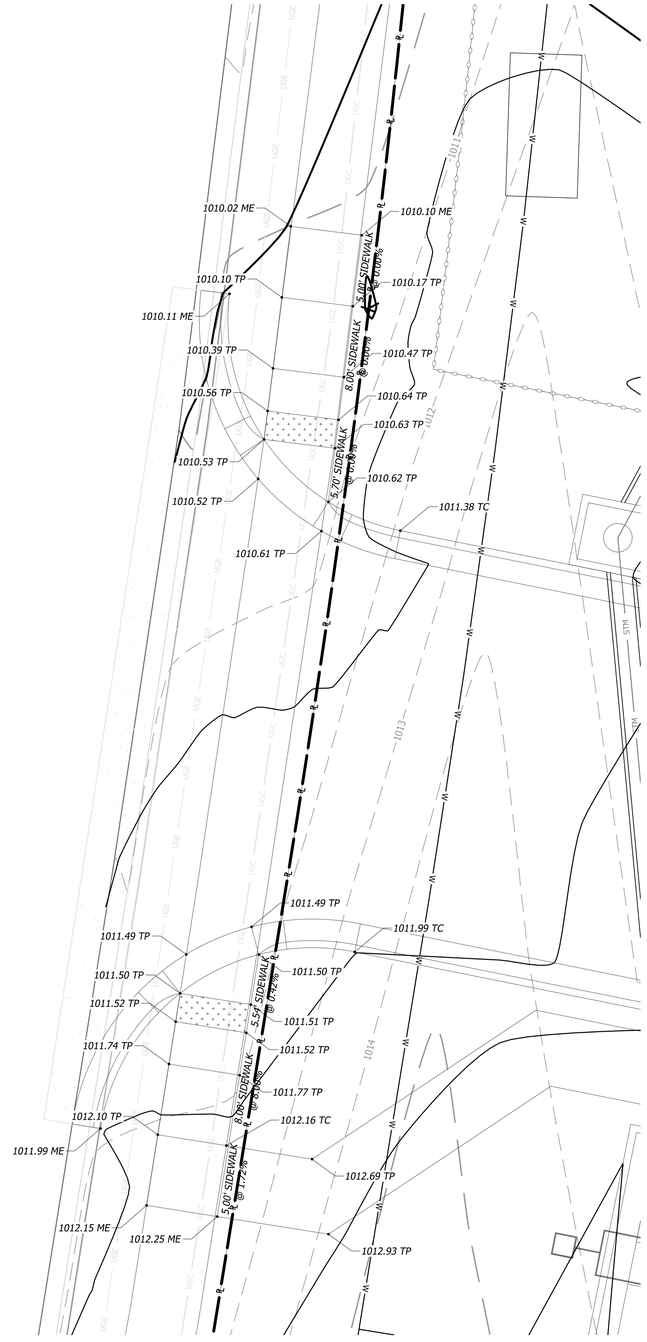
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2024-11-15
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MD PE-2021035286

C3.4

ISSUE DATE: AUGUST 30, 2024
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ADA DETAILED GRADING



ADA DETAILED GRADING - CROSSWALK

DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
0000.00 XX HIGH POINT	HIGH POINT AT SPECIFIC CALLOUT
0000.00 XX LOW POINT	LOW POINT AT SPECIFIC CALLOUT
1.00%	SLOPE INDICATOR

GRAPHIC SCALE
20 0 20

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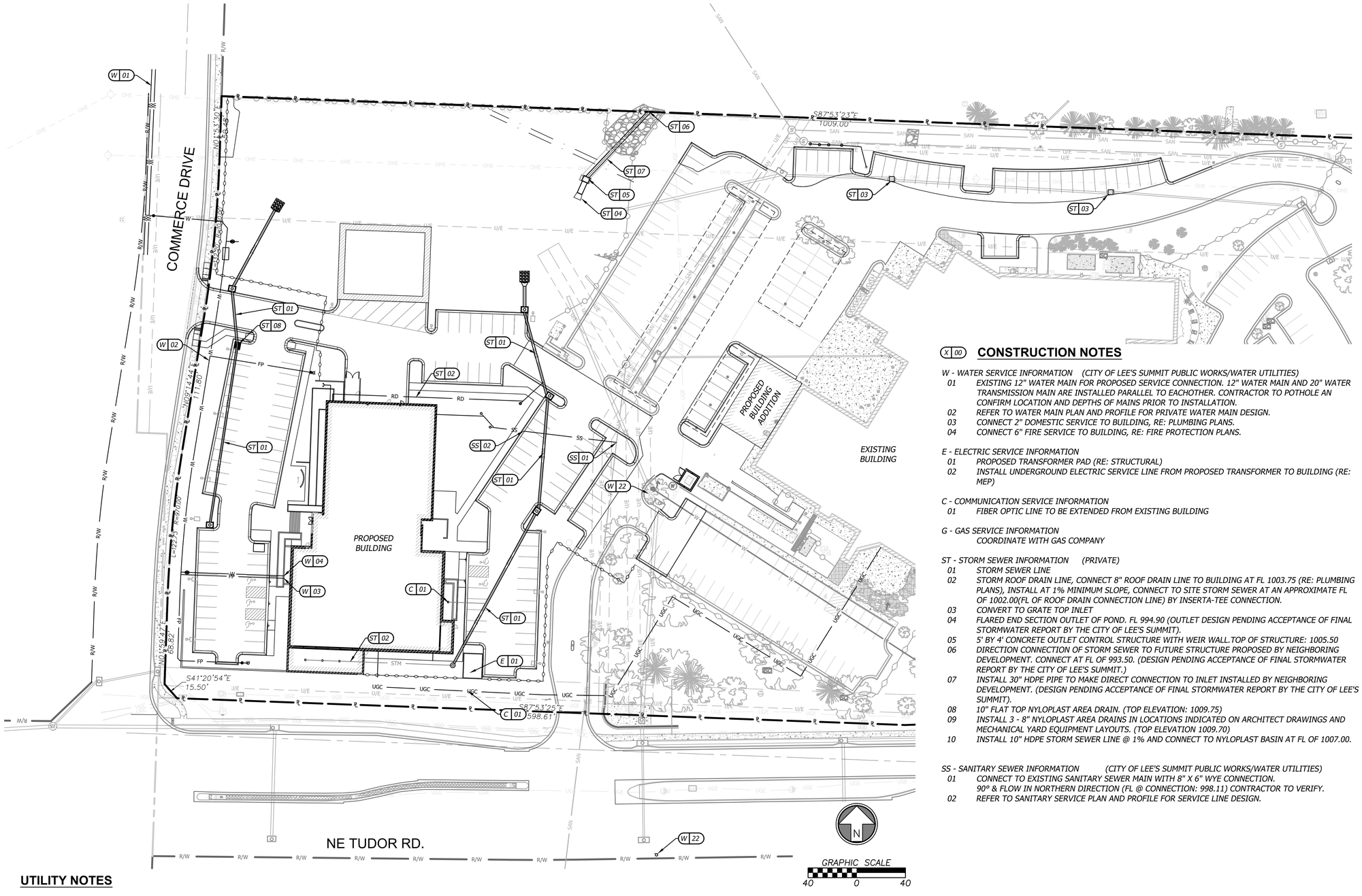
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
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MD PE-2021035286

C3.5

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

ADA DETAILED GRADING



CONSTRUCTION NOTES

W - WATER SERVICE INFORMATION (CITY OF LEE'S SUMMIT PUBLIC WORKS/WATER UTILITIES)
- *01 EXISTING 12" WATER MAIN FOR PROPOSED SERVICE CONNECTION. 12" WATER MAIN AND 20" WATER TRANSMISSION MAIN ARE INSTALLED PARALLEL TO EACHOTHER. CONTRACTOR TO POTHOLE AN CONFIRM LOCATION AND DEPTHS OF MAINS PRIOR TO INSTALLATION.*
- *02 REFER TO WATER MAIN PLAN AND PROFILE FOR PRIVATE WATER MAIN DESIGN.*
- *03 CONNECT 2" DOMESTIC SERVICE TO BUILDING, RE: PLUMBING PLANS.*
- *04 CONNECT 6" FIRE SERVICE TO BUILDING, RE: FIRE PROTECTION PLANS.*

E - ELECTRIC SERVICE INFORMATION
- *01 PROPOSED TRANSFORMER PAD (RE: STRUCTURAL)*
- *02 INSTALL UNDERGROUND ELECTRIC SERVICE LINE FROM PROPOSED TRANSFORMER TO BUILDING (RE: MEP)*

C - COMMUNICATION SERVICE INFORMATION
- *01 FIBER OPTIC LINE TO BE EXTENDED FROM EXISTING BUILDING*

G - GAS SERVICE INFORMATION
- *COORDINATE WITH GAS COMPANY*

ST - STORM SEWER INFORMATION (PRIVATE)
- *01 STORM SEWER LINE*
- *02 STORM ROOF DRAIN LINE, CONNECT 8" ROOF DRAIN LINE TO BUILDING AT FL 1003.75 (RE: PLUMBING PLANS), INSTALL AT 1% MINIMUM SLOPE, CONNECT TO SITE STORM SEWER AT AN APPROXIMATE FL OF 1002.00(FL OF ROOF DRAIN CONNECTION LINE) BY INSERTA-TEE CONNECTION.*
- *03 CONVERT TO GRATE TOP INLET*
- *04 FLARED END SECTION OUTLET OF POND. FL 994.90 (OUTLET DESIGN PENDING ACCEPTANCE OF FINAL STORMWATER REPORT BY THE CITY OF LEE'S SUMMIT).*
- *05 5' BY 4' CONCRETE OUTLET CONTROL STRUCTURE WITH WEIR WALL.TOP OF STRUCTURE: 1005.50*
- *06 DIRECTION CONNECTION OF STORM SEWER TO FUTURE STRUCTURE PROPOSED BY NEIGHBORING DEVELOPMENT. CONNECT AT FL OF 993.50. (DESIGN PENDING ACCEPTANCE OF FINAL STORMWATER REPORT BY THE CITY OF LEE'S SUMMIT.)*
- *07 INSTALL 30" HDPE PIPE TO MAKE DIRECT CONNECTION TO INLET INSTALLED BY NEIGHBORING DEVELOPMENT. (DESIGN PENDING ACCEPTANCE OF FINAL STORMWATER REPORT BY THE CITY OF LEE'S SUMMIT).*
- *08 10" FLAT TOP NYLOPLAST AREA DRAIN. (TOP ELEVATION: 1009.75)*
- *09 INSTALL 3 - 8" NYLOPLAST AREA DRAINS IN LOCATIONS INDICATED ON ARCHITECT DRAWINGS AND MECHANICAL YARD EQUIPMENT LAYOUTS. (TOP ELEVATION 1009.70)*
- *10 INSTALL 10" HDPE STORM SEWER LINE @ 1% AND CONNECT TO NYLOPLAST BASIN AT FL OF 1007.00.*

SS - SANITARY SEWER INFORMATION (CITY OF LEE'S SUMMIT PUBLIC WORKS/WATER UTILITIES)
- *01 CONNECT TO EXISTING SANITARY SEWER MAIN WITH 8" X 6" WYE CONNECTION. 90° & FLOW IN NORTHERN DIRECTION (FL @ CONNECTION: 998.11) CONTRACTOR TO VERIFY.*
- *02 REFER TO SANITARY SERVICE PLAN AND PROFILE FOR SERVICE LINE DESIGN.*

UTILITY NOTES

1. Contractor shall refer to all specifications, guidelines, and installation drawings from utility contacts for the installation of all service lines.
2. The information shown on these plans concerning the type and location of underground utilities is not guaranteed to be accurate or all inclusive. The contractor is responsible for contacting all utility companies for field location of all underground utility lines prior to any excavation and for making his own verification as to type and location of underground utilities as may be necessary to avoid damage thereto.
3. Contractor to ensure 18" minimum separation between utilities at crossings. Contractor to call engineer if any conflicts between utilities are found.
4. Fire Line Notes:
   - 4.1. All private fire lines shall be installed in accordance with NFPA 24, and other applicable codes and standards.
   - 4.2. Contact the Fire Department to schedule inspections prior to private fire lines being backfilled.
   - 4.3. Contact the Fire Department to witness scheduled hydrostatic tests and flushes of private fire lines.
5. Stub all connections to within 5' of the building to provide connection into the building by mechanical/plumbing contractor.

ROOF DRAIN LEGEND

RD	*PROPOSED ROOF LINE DRAIN*
STM	*PROPOSED STORM SEWER LINE*
R/W	*RIGHT-OF-WAY LINE*
℄	*PROPERTY LINE*
W	*PROPOSED WATER LINE*
SS	*PROPOSED SANITARY SEWER LINE*
GAS	*PROPOSED NATURAL GAS LINE*

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

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FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

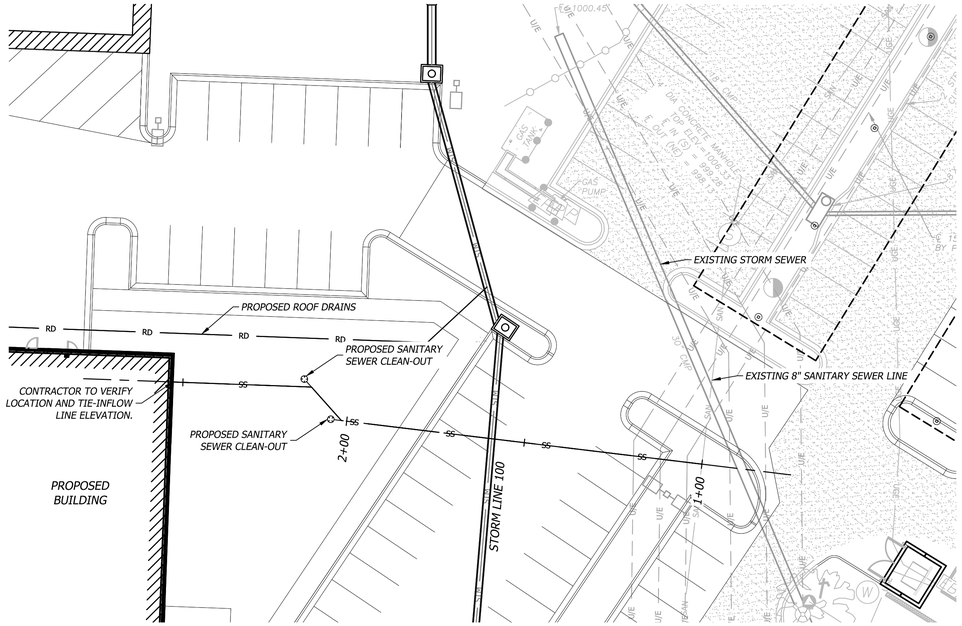
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

C4.0

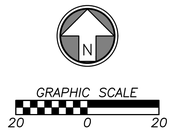
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UTILITY PLAN

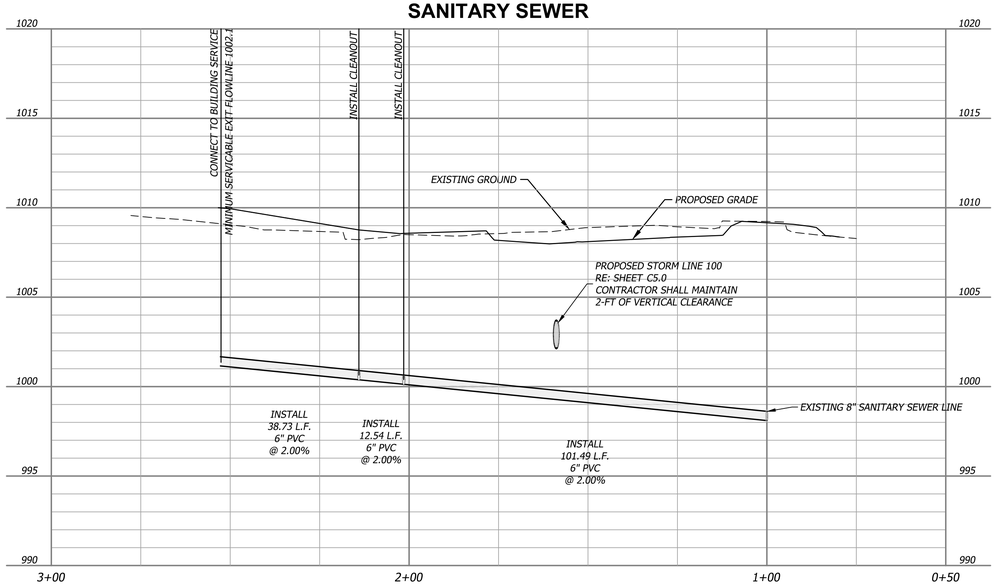


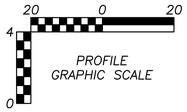
STORM NOTE

All Northings, Eastings, and alignment stationing for storm structures are to center of structure unless stated otherwise.



SANITARY SEWER





SANITARY PROFILE NOTE

SANITARY PROFILE IS BASED ON MINIMUM SERVICEABLE ELEVATION FOR EXIT OF BUILDING SERVICE. CONTRACTOR SHALL MAINTAIN FIELD REDLINES OF CONSTRUCTED ELEVATIONS.

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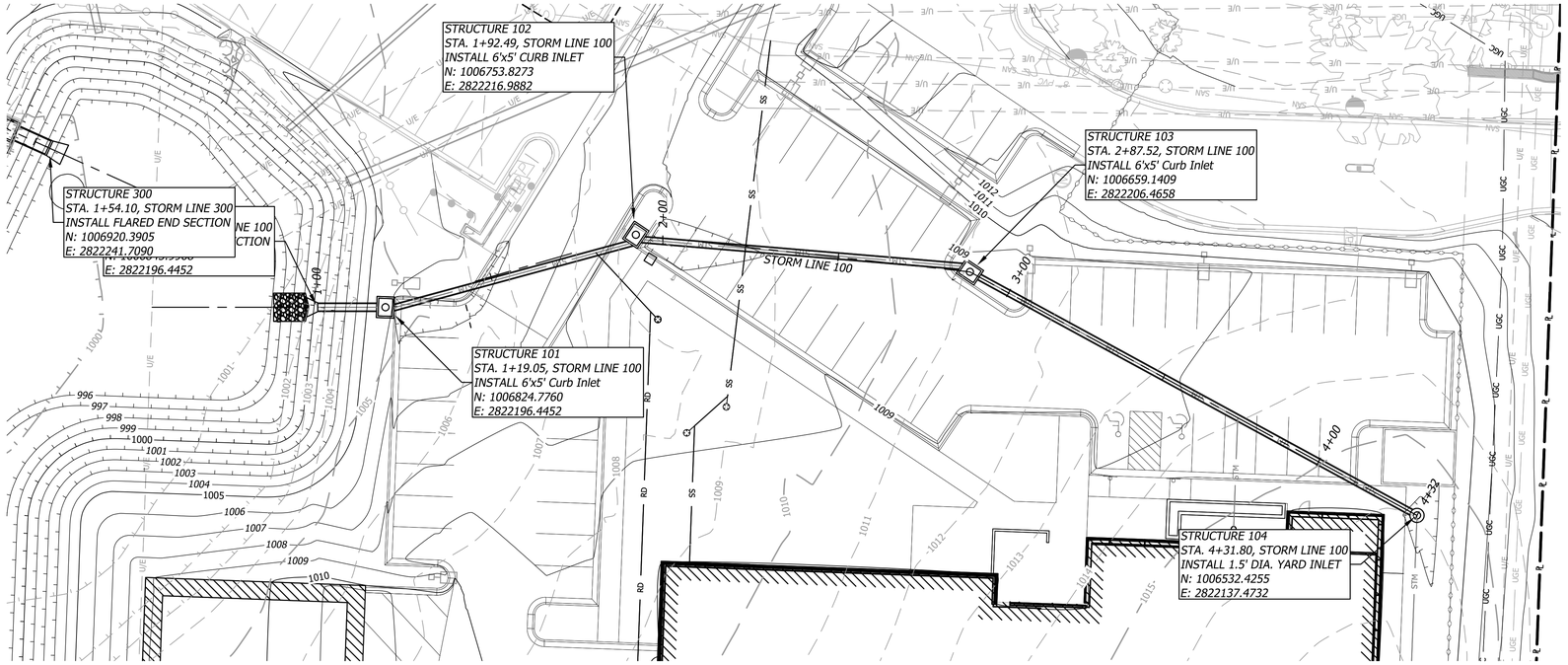
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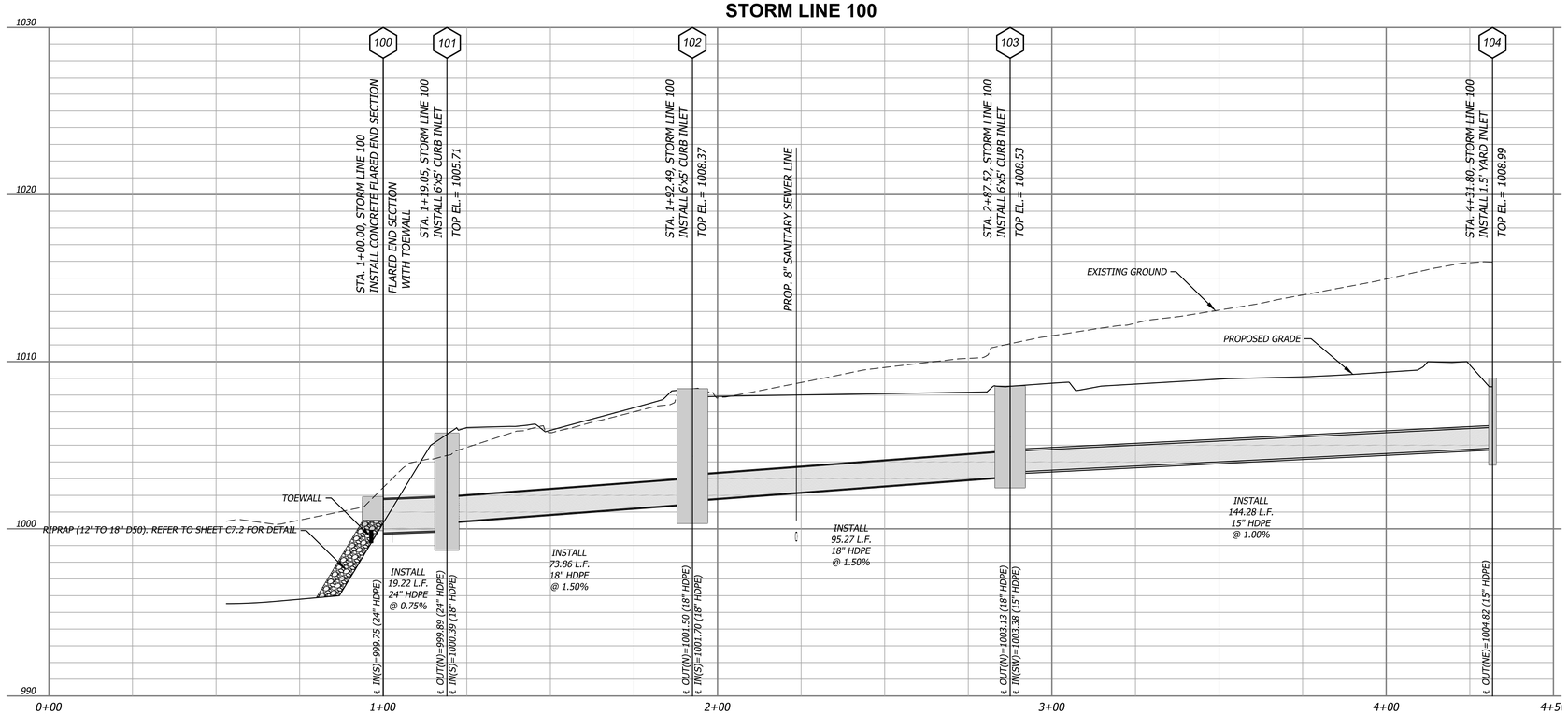
SANITARY SEWER PLAN & PROFILE

STORM NOTE

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STORM LINE 100



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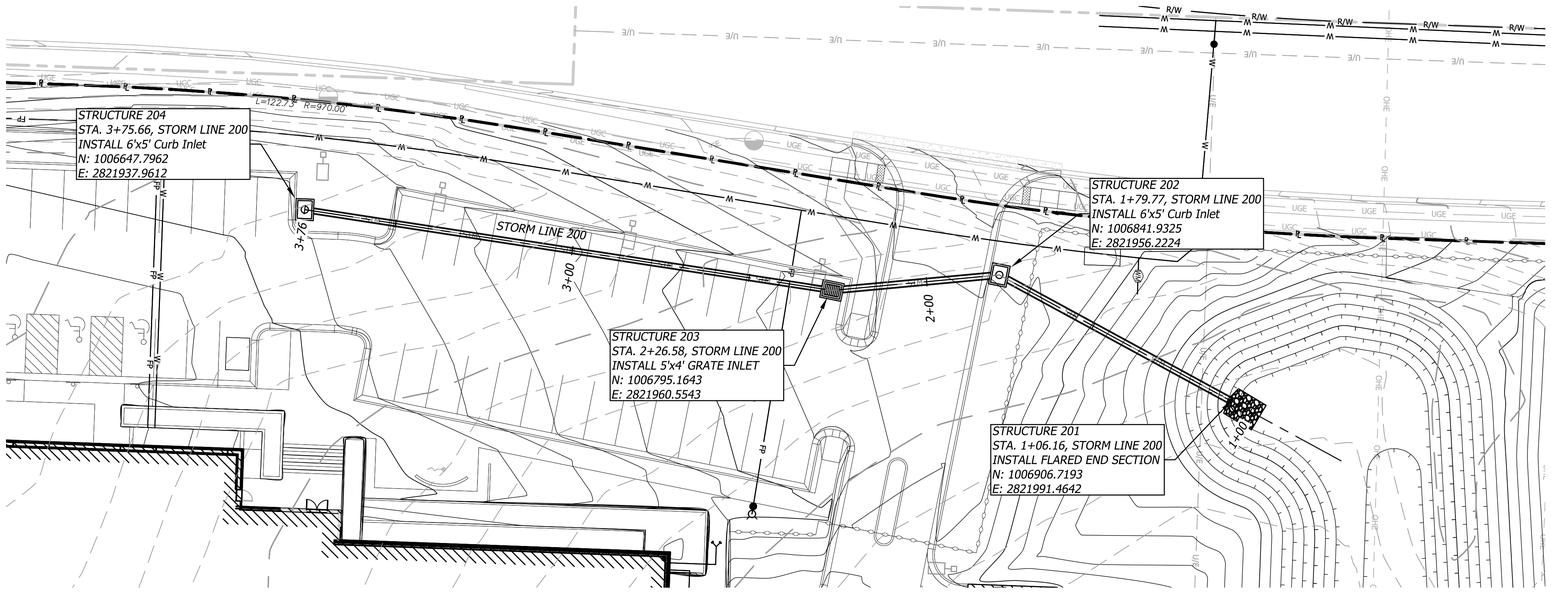
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MD PE-2021035286

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HOEFER WELKER #: 138161

STORM PLAN & PROFILE

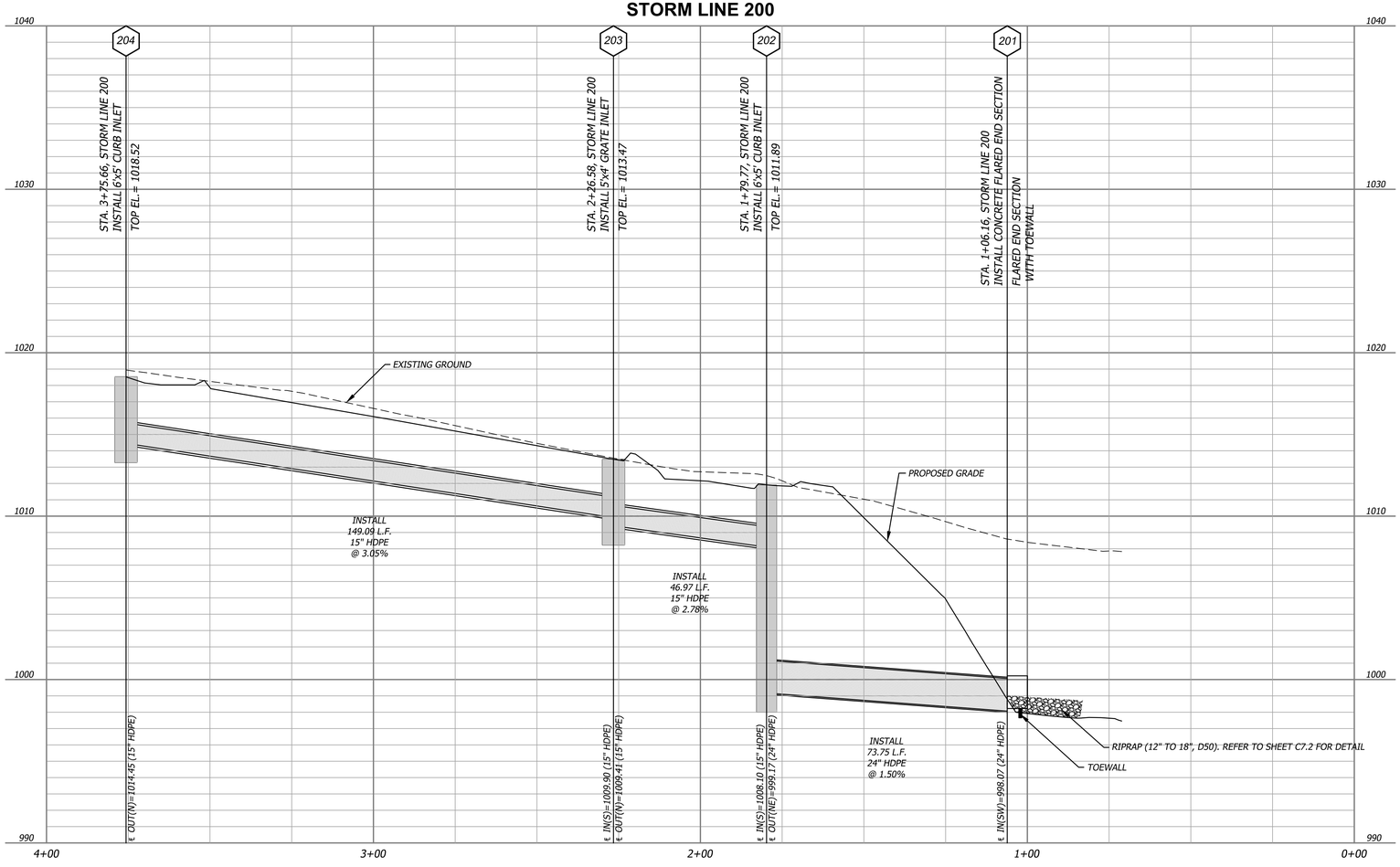


STORM NOTE

All Northings, Eastings, and alignment stationing for storm structures are to center of structure unless stated otherwise.

GRAPHIC SCALE
20 0 20

STORM LINE 200



20 0 20
5
0
PROFILE
GRAPHIC SCALE

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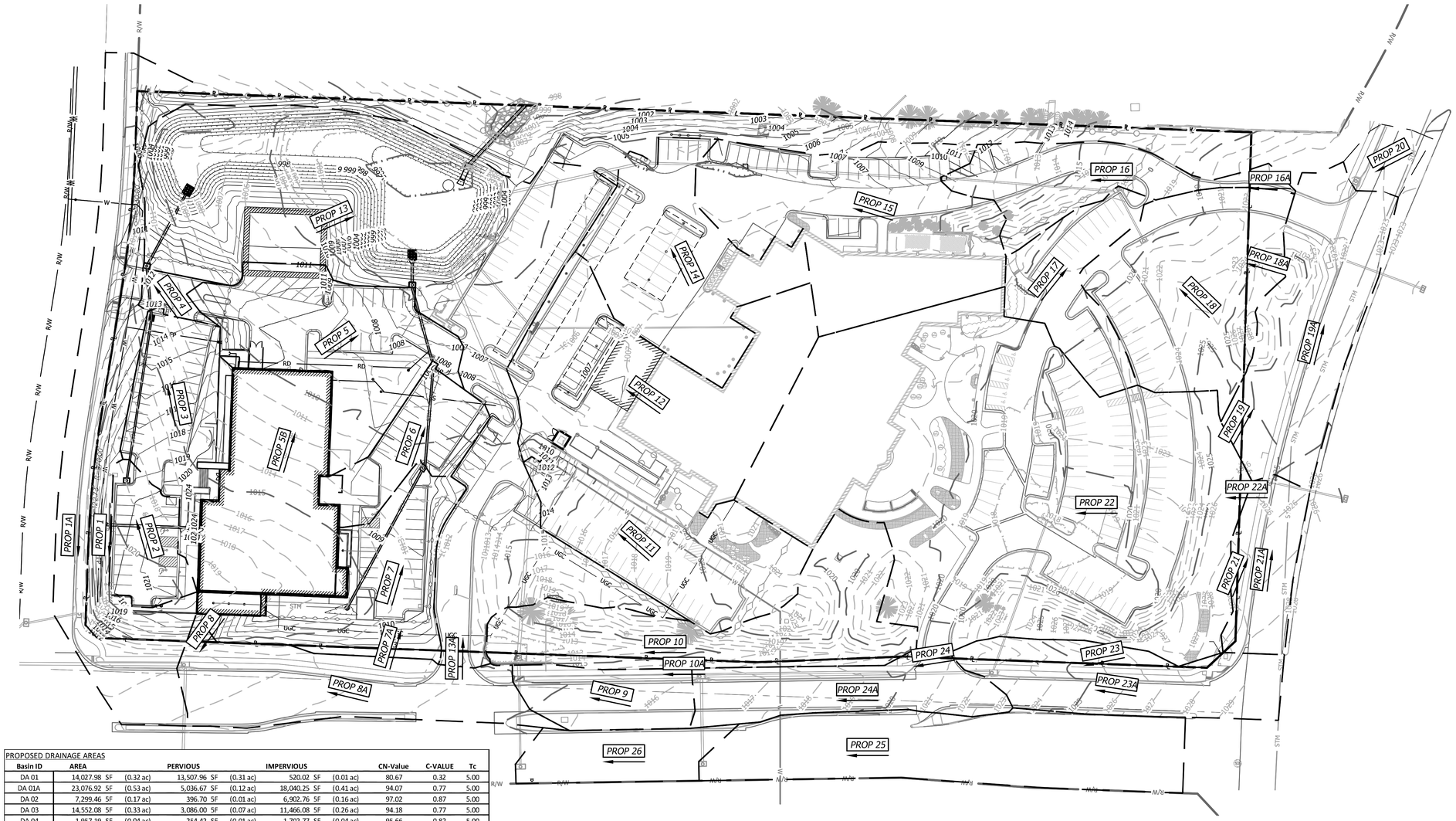
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ISSUE DATE: AUGUST 30, 2024
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STORM PLAN & PROFILE



PROPOSED DRAINAGE AREAS

Basin ID	AREA	PERVIOUS	IMPERVIOUS	CN-Value	C-VALUE	Tc
DA 01	14,027.98 SF (0.32 ac)	13,507.96 SF (0.31 ac)	520.02 SF (0.01 ac)	80.67	0.32	5.00
DA 01A	23,076.92 SF (0.53 ac)	5,036.67 SF (0.12 ac)	18,040.25 SF (0.41 ac)	94.07	0.77	5.00
DA 02	7,299.46 SF (0.17 ac)	396.70 SF (0.01 ac)	6,902.76 SF (0.16 ac)	97.02	0.87	5.00
DA 03	14,552.08 SF (0.33 ac)	3,086.00 SF (0.07 ac)	11,466.08 SF (0.26 ac)	94.18	0.77	5.00
DA 04	1,957.19 SF (0.04 ac)	254.42 SF (0.01 ac)	1,702.77 SF (0.04 ac)	95.66	0.82	5.00
DA 05	22,611.15 SF (0.52 ac)	6,936.70 SF (0.16 ac)	15,674.45 SF (0.36 ac)	92.48	0.72	5.00
DA 05B	22,976.29 SF (0.53 ac)	000.00 SF (0.00 ac)	22,976.29 SF (0.53 ac)	98.00	0.90	5.00
DA 06	9,306.97 SF (0.21 ac)	925.83 SF (0.02 ac)	8,381.14 SF (0.19 ac)	96.21	0.84	5.00
DA 07	16,975.86 SF (0.39 ac)	8,587.40 SF (0.20 ac)	8,388.46 SF (0.19 ac)	88.89	0.60	5.00
DA 07A	970.05 SF (0.02 ac)	970.05 SF (0.02 ac)	000.00 SF (0.00 ac)	80.00	0.30	5.00
DA 08	352.15 SF (0.01 ac)	352.15 SF (0.01 ac)	000.00 SF (0.00 ac)	80.00	0.30	5.00
DA 08A	19,121.21 SF (0.44 ac)	4,941.76 SF (0.11 ac)	14,179.45 SF (0.33 ac)	93.35	0.74	5.00
DA 09	8,360.61 SF (0.19 ac)	3,141.70 SF (0.07 ac)	5,218.90 SF (0.12 ac)	91.24	0.67	5.00
DA 10	21,721.11 SF (0.50 ac)	21,110.87 SF (0.48 ac)	610.24 SF (0.01 ac)	80.51	0.32	5.00
DA 10A	2,957.19 SF (0.07 ac)	2,957.19 SF (0.07 ac)	000.00 SF (0.00 ac)	80.00	0.30	5.00
DA 11	20,767.36 SF (0.48 ac)	4,447.32 SF (0.10 ac)	16,320.04 SF (0.37 ac)	94.15	0.77	5.00
DA 12	36,472.72 SF (0.84 ac)	2,383.86 SF (0.05 ac)	34,088.86 SF (0.78 ac)	96.82	0.86	5.00
DA 13	79,271.39 SF (1.82 ac)	55,914.99 SF (1.28 ac)	23,356.41 SF (0.54 ac)	85.30	0.48	5.00
DA 13A	585.81 SF (0.01 ac)	194.90 SF (0.00 ac)	390.91 SF (0.01 ac)	92.01	0.70	5.00
DA 14	23,415.46 SF (0.54 ac)	1,575.29 SF (0.04 ac)	21,840.17 SF (0.50 ac)	96.79	0.86	5.00
DA 15	32,909.54 SF (0.76 ac)	5,014.71 SF (0.12 ac)	27,894.84 SF (0.64 ac)	95.26	0.81	5.00
DA 16	12,282.50 SF (0.28 ac)	4,615.27 SF (0.11 ac)	7,667.23 SF (0.18 ac)	91.24	0.67	5.00
DA 16A	641.15 SF (0.01 ac)	452.19 SF (0.01 ac)	188.96 SF (0.00 ac)	85.30	0.48	5.00
DA 17	11,909.74 SF (0.27 ac)	3,189.25 SF (0.07 ac)	8,720.49 SF (0.20 ac)	93.18	0.74	5.00
DA 18	21,451.70 SF (0.49 ac)	12,963.09 SF (0.30 ac)	8,488.61 SF (0.19 ac)	87.12	0.54	5.00
DA 18A	3,825.88 SF (0.09 ac)	2,920.72 SF (0.07 ac)	905.16 SF (0.02 ac)	84.26	0.44	5.00
DA 19	729.59 SF (0.02 ac)	729.59 SF (0.02 ac)	000.00 SF (0.00 ac)	80.00	0.30	5.00
DA 19A	23,442.66 SF (0.54 ac)	10,216.32 SF (0.23 ac)	13,226.33 SF (0.30 ac)	90.16	0.64	5.00
DA 20	3,384.09 SF (0.08 ac)	573.85 SF (0.01 ac)	2,810.23 SF (0.06 ac)	94.95	0.80	5.00
DA 21	754.26 SF (0.02 ac)	650.90 SF (0.01 ac)	103.36 SF (0.00 ac)	82.47	0.38	5.00
DA 21A	8,206.78 SF (0.19 ac)	1,960.56 SF (0.05 ac)	6,246.22 SF (0.14 ac)	93.70	0.76	5.00
DA 22	101,945.41 SF (2.34 ac)	36,942.36 SF (0.85 ac)	65,003.06 SF (1.49 ac)	91.48	0.68	5.00
DA 22A	274.53 SF (0.01 ac)	274.53 SF (0.01 ac)	000.00 SF (0.00 ac)	80.00	0.30	5.00
DA 23	3,573.43 SF (0.08 ac)	3,519.34 SF (0.08 ac)	054.09 SF (0.00 ac)	80.27	0.31	5.00
DA 23A	12,813.96 SF (0.29 ac)	2,626.09 SF (0.06 ac)	10,187.87 SF (0.23 ac)	94.31	0.78	5.00
DA 24	247.27 SF (0.01 ac)	039.97 SF (0.00 ac)	207.29 SF (0.00 ac)	95.09	0.80	5.00
DA 24A	12,671.21 SF (0.29 ac)	2,758.35 SF (0.06 ac)	9,912.86 SF (0.23 ac)	94.08	0.77	5.00
DA 25	26,742.33 SF (0.61 ac)	559.28 SF (0.01 ac)	26,183.05 SF (0.60 ac)	97.62	0.89	5.00
DA 26	8,119.49 SF (0.19 ac)	145.86 SF (0.00 ac)	7,973.63 SF (0.18 ac)	97.68	0.89	5.00

DRAINAGE LEGEND

- DRAINAGE AREA BOUNDARY
- Field — AREA/DIRECTION OF DRAINAGE BOUNDARY
- 980 — PROPOSED FINISH GRADE MAJOR CONTOUR
- 982 — PROPOSED FINISH GRADE MINOR CONTOUR
- 980 — EXISTING GRADE MAJOR CONTOUR
- 982 — EXISTING GRADE MINOR CONTOUR
- STM — PROPOSED STORM SEWER LINE
- RD — PROPOSED ROOF LINE DRAIN
- PL — PROPERTY LINE
- R/W — RIGHT-OF-WAY LINE

N

GRAPHIC SCALE
50 0 50

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FINAL DEVELOPMENT PLAN

REVISION DATES:
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STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C5.2

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

PROPOSED DRAINAGE MAP

10-YEAR STORM CALCULATIONS

Design Storm:	10
"K" Value:	1.00
"F" Factor:	1.00

Runoff Calculations															Pipe Properties												Design Checks		
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlets	Up Piped Inlets	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.	Pipe Depth Check	Head-Water Check	Station
LINE 100																									DS TAILWATER @ STR #	1002.75			
101	1.05	0.81	1.65	1.26	5.1	7.33	6.23	9.24	21.22	6.76			0.00	0.00	101		PEP	0.012	24	19.22	0.75	0.50	999.89	999.75	1005.71	1002.85	3.57	Ok	19.22
102	0.21	0.84	0.60	0.41	5.1	7.34	1.29	3.01	13.94	7.89			0.00	0.00	102	101	PEP	0.012	18	10.00	1.50	0.50	1000.54	1000.39	1008.37	1002.88	5.58	Ok	29.22
103	0.20	0.60	0.39	0.23	5.0	7.34	0.88	1.72	13.94	7.89			0.00	0.00	103	102	PEP	0.012	18	10.00	1.50	0.50	1001.19	1001.04	1008.53	1002.89	5.34	Ok	39.22
104	0.19	0.60	0.19	0.11	5.0	7.35	0.84	0.84	7.00	5.70			0.00	0.00	104	103	PEP	0.012	15	10.00	1.00	N/A	1001.79	1001.69	1008.99	1002.89	5.70	Ok	49.22
LINE 200																									DS TAILWATER @ STR #	1002.75			
201	0.04	0.82	0.54	0.43	5.6	7.18	0.24	3.12	30.02	9.55			0.00	0.00	201		PEP	0.012	24	73.75	1.50	0.75	999.18	998.07	1011.89	1002.77	10.46	Ok	73.75
202	0.33	0.77	0.50	0.40	5.4	7.22	1.83	2.90	7.00	5.70			0.00	0.00	202	201	PEP	0.012	15	46.97	1.00	0.50	1000.40	999.93	1013.47	1002.90	11.07	Ok	120.72
203	0.17	0.87	0.17	0.15	5.0	7.35	1.09	1.09	7.00	5.70			0.00	0.00	203	202	PEP	0.012	15	149.09	1.00	N/A	1002.39	1000.90	1018.52	1002.94	14.63	Ok	269.81

100-YEAR STORM CALCULATIONS

Design Storm:	100
"K" Value:	1.25
"F" Factor:	1.00

Runoff Calculations															Pipe Properties											
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. CxA	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlets	Up Piped Inlets	Up Area (acres)	Up CxA	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.
LINE 100																									DS TAILWATER @ STR #	1002.75
101	1.05	0.81	1.65	1.26	5.1	10.29	10.94	16.22	21.22	6.76			0.00	0.00	101		PEP	0.012	24	19.22	0.75	0.50	999.89	999.75	1005.71	1003.05
102	0.21	0.84	0.60	0.41	5.1	10.30	2.27	5.28	13.94	7.89			0.00	0.00	102	101	PEP	0.012	18	10.00	1.50	0.50	1000.54	1000.39	1008.37	1003.14
103	0.20	0.60	0.39	0.23	5.0	10.31	1.55	3.02	13.94	7.89			0.00	0.00	103	102	PEP	0.012	18	10.00	1.50	0.50	1001.19	1001.04	1008.53	1003.17
104	0.19	0.60	0.19	0.11	5.0	10.32	1.47	1.47	7.00	5.70			0.00	0.00	104	103	PEP	0.012	15	10.00	1.00	N/A	1001.79	1001.69	1008.99	1003.18
LINE 200																									DS TAILWATER @ STR #	1002.75
201	0.04	0.82	0.54	0.43	5.6	10.09	0.41	5.48	30.02	9.55			0.00	0.00	201		PEP	0.012	24	73.75	1.50	0.75	999.18	998.07	1011.89	1002.81
202	0.33	0.77	0.50	0.40	5.4	10.14	3.22	5.10	7.00	5.70			0.00	0.00	202	201	PEP	0.012	15	46.97	1.00	0.50	1000.40	999.93	1013.47	1003.20
203	0.17	0.87	0.17	0.15	5.0	10.32	1.91	1.91	7.00	5.70			0.00	0.00	203	202	PEP	0.012	15	149.09	1.00	N/A	1002.39	1000.90	1018.52	1003.32

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FINAL DEVELOPMENT PLAN

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Revision 1: 2024-11-15

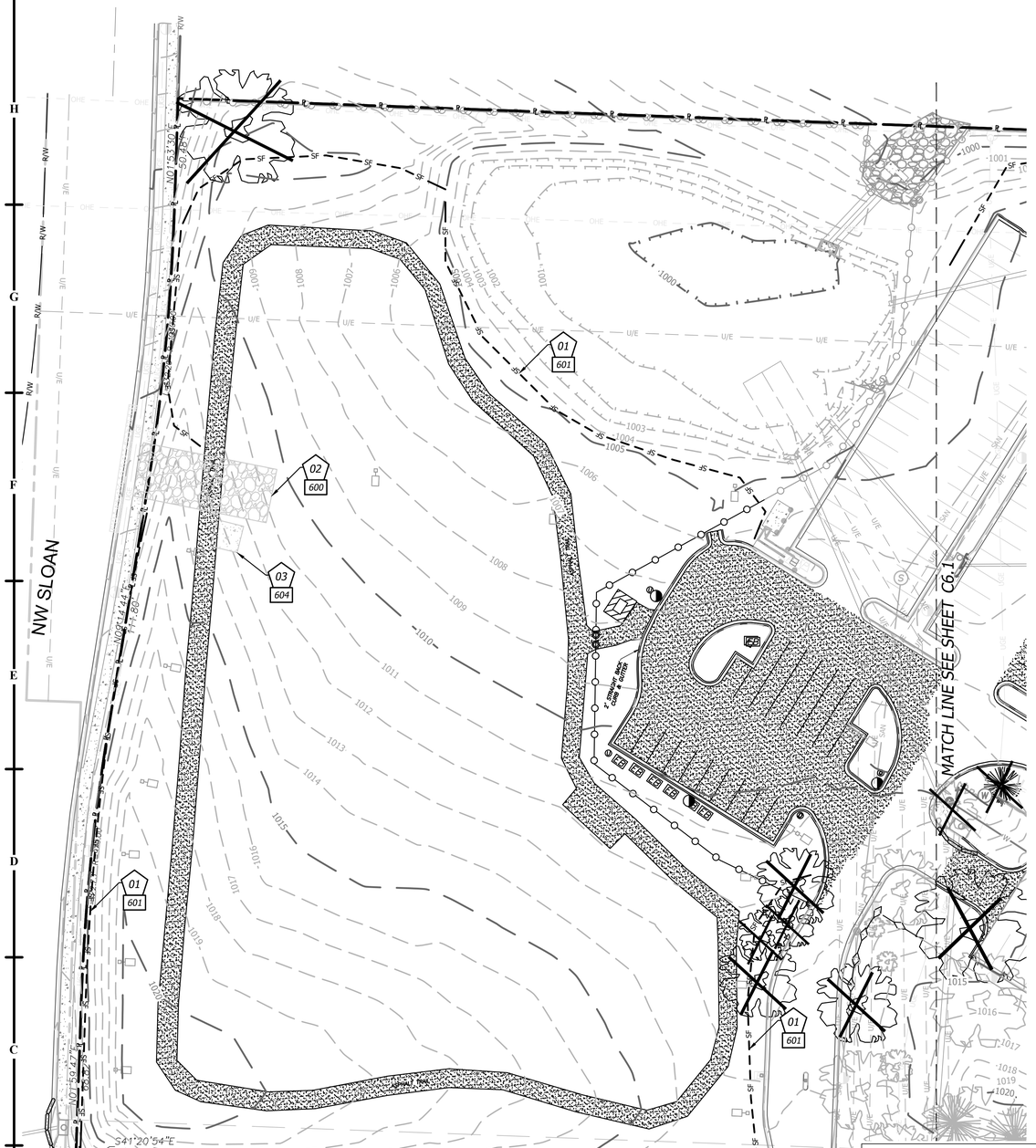
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MICHAEL T. MAKRIS, PE
MD PE-2021035286

C5.3

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

STORM CALCULATIONS



EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. Prior to Land Disturbance activities, the contractor shall:
   - Delineate the outer limits of any natural stream corridor designated with construction fencing.
   - Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
   - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the City inspector and in conformance with the erosion and sediment control plan.

2. The contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan, including but not limited to:
   - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   - The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals:
     - o During active construction phases - at least once per week
     - o During periods of inactivity - at least once per 14 days
     - o After each rainfall event of ½ inch or more - within 24 hours of the rain event
   - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.
   - The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.

3. Unless otherwise noted in the plans, all seeding must conform to Division II-Construction and Materials Specification-Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.

4. The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.

5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.

6. Concrete wash or rinse water from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc. may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place.

7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

8. Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.

9. Interior Silt Fence as necessary during construction. Portions may be limited as vegetation is established and hardscape is installed. Entire length may be installed at the contractor's option to aid in stabilizing slopes.

10. Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit with reports and documentation.

N

GRAPHIC SCALE
30 0 30

000 DETAILS
- *SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING*

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

EROSION CONTROL LEGEND
- DISTURBED AREA
- SF SILT/SEDIMENT FENCE
- INLET PROTECTION FILTER BAGS
- CONSTRUCTION ENTRANCE
- CONCRETE CLEANOUT
- EXISTING TREE TO BE REMOVED

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE-CON)	A - Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	E	Place as shown on plan
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LEE'S SUMMIT JOINT OPERATIONS FACILITY

FINAL DEVELOPMENT PLAN

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

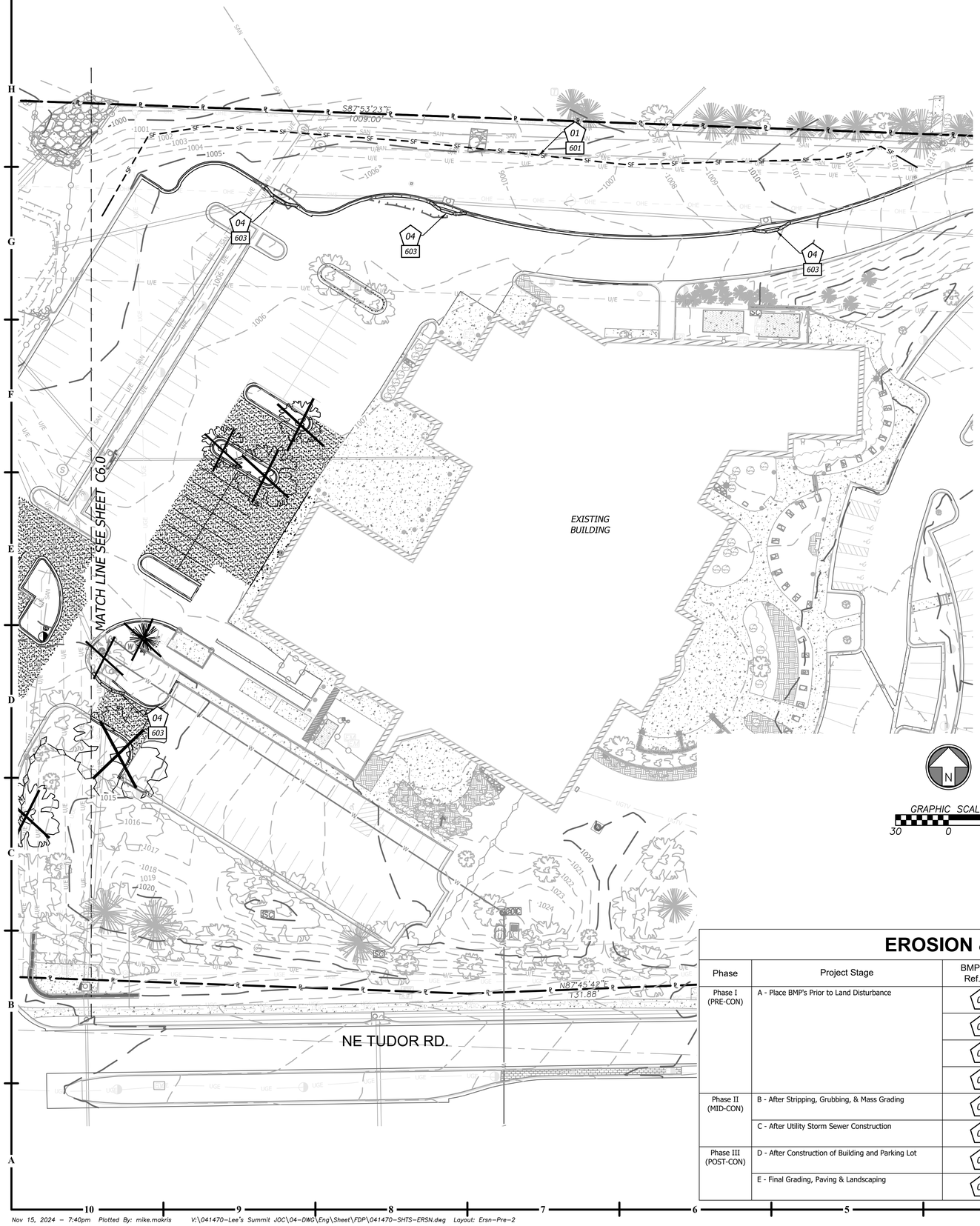
REVISION DATES:
Revision 1: 2024-11-15

STATE OF MISSOURI
MICHAEL J. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

C6.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL PLAN



EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. Prior to Land Disturbance activities, the contractor shall:
   - Delineate the outer limits of any natural stream corridor designated with construction fencing.
   - Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
   - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the City inspector and in conformance with the erosion and sediment control plan.

2. The contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan, including but not limited to:
   - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   - The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals:
     - o During active construction phases - at least once per week
     - o During periods of inactivity - at least once per 14 days
     - o After each rainfall event of ½ inch or more - within 24 hours of the rain event
   - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.
   - The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.

3. Unless otherwise noted in the plans, all seeding must conform to Division II-Construction and Materials Specification-Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.

4. The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.

5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.

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7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

8. Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.

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000 DETAILS

- *SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING*

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

EROSION CONTROL LEGEND

- *DISTURBED AREA*
- *SILT/SEDIMENT FENCE*
- *INLET PROTECTION FILTER BAGS*
- *CONSTRUCTION ENTRANCE*
- *CONCRETE CLEANOUT*
- *EXISTING TREE TO BE REMOVED*

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
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LEE'S SUMMIT JOINT OPERATIONS FACILITY

FINAL DEVELOPMENT PLAN

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

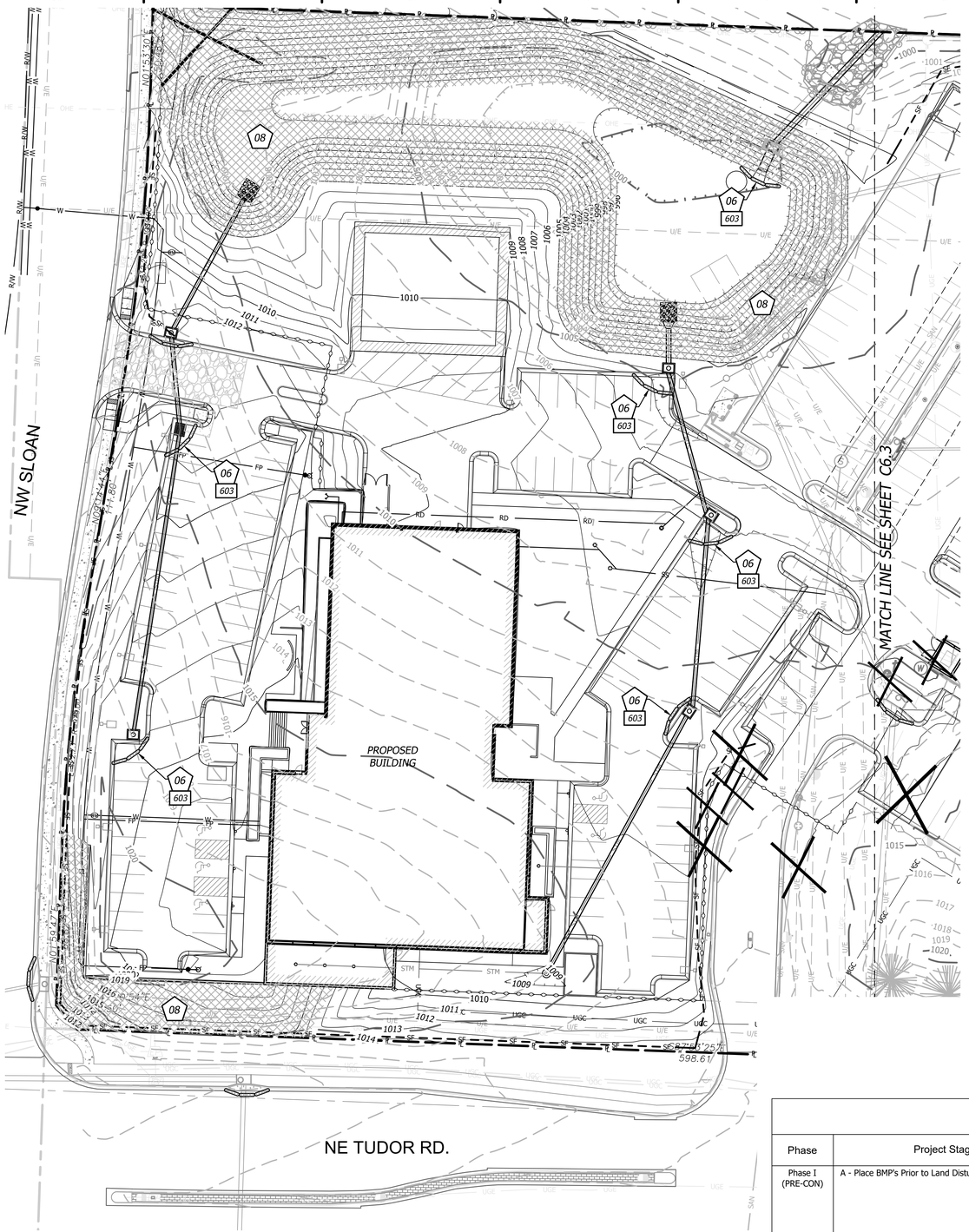
REVISION DATES:
Revision 1: 2024-11-15

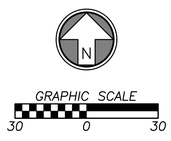
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

C6.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL PLAN





000 DETAILS

- *SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING*

600 *TEMPORARY CONSTRUCTION ENTRANCE*
601 *FILTER FABRIC SILT FENCE*
603 *STORM INLET PROTECTION*
604 *CONCRETE WASH-OUT*

EROSION CONTROL LEGEND

- *DISTURBED AREA*
- *SILT/SEDIMENT FENCE*
- *INLET PROTECTION FILTER BAGS*
- *CONSTRUCTION ENTRANCE*
- *CONCRETE CLEANOUT*
- *STEEP SLOPE PROTECTION*

EROSION & SEDIMENT CONTROL STAGING CHART

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

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FINAL DEVELOPMENT PLAN

REVISION DATES:
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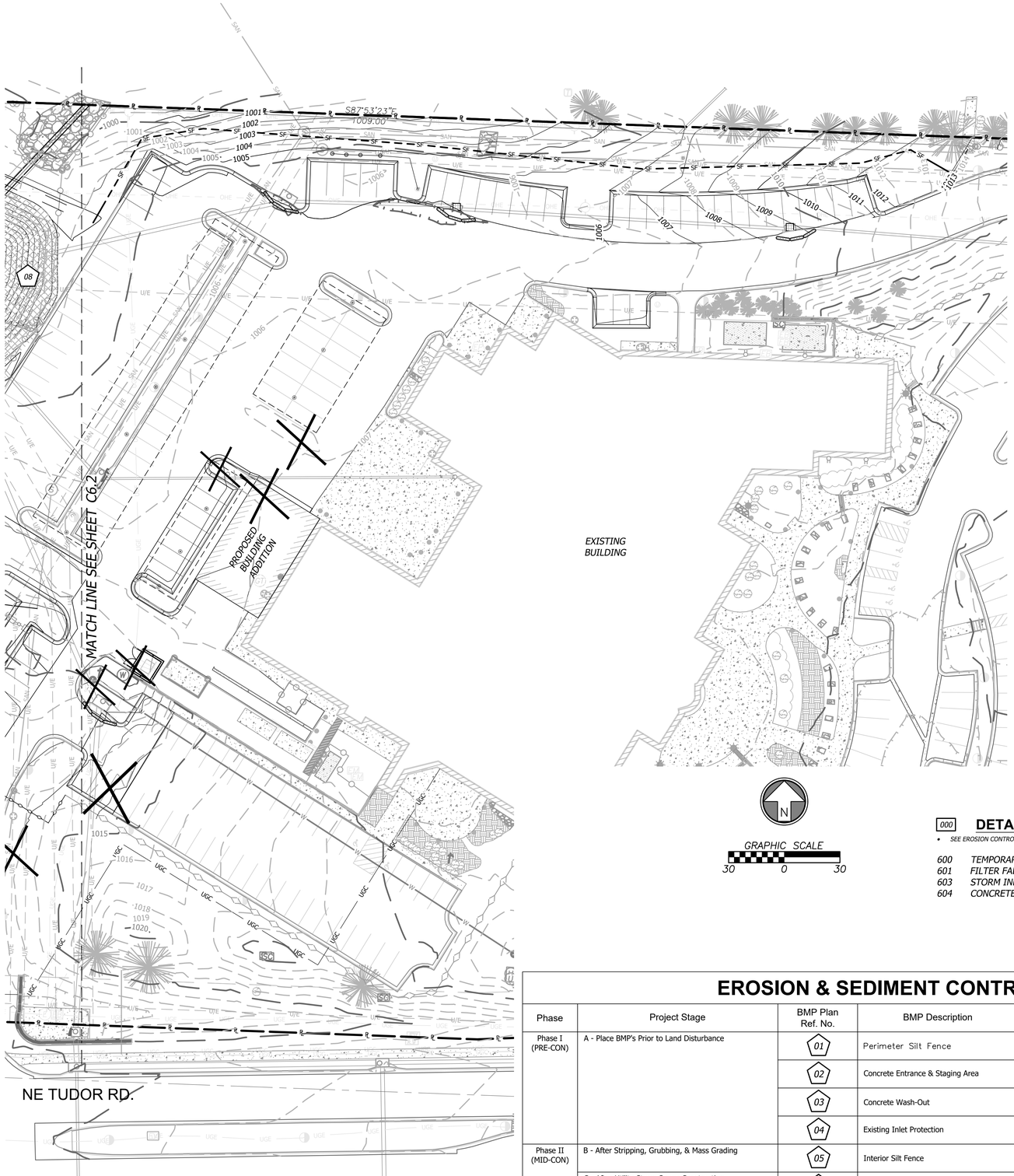
STATE OF MISSOURI
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2024-11-15
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PROFESSIONAL ENGINEER

C6.2

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL PLAN

Nov 15, 2024 – 7:40pm Plotted By: mike.makris V:\041470-Lee's Summit JOC\04-DWG\Eng\Sheet\FDP\041470-SHTS-ERSN.dwg Layout: Layout-Mid



DETAILS

000

- SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

EROSION CONTROL LEGEND

- DISTURBED AREA
- SF — SILT/SEDIMENT FENCE
- INLET PROTECTION FILTER BAGS
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FINAL DEVELOPMENT PLAN

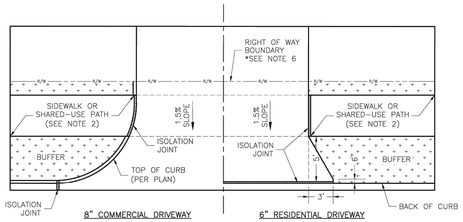
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STATE OF MISSOURI
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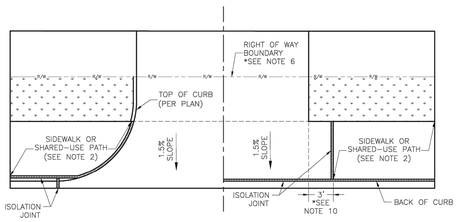
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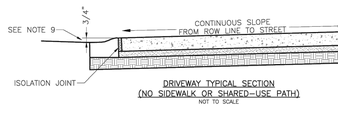
EROSION CONTROL PLAN



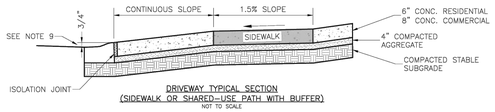
DRIVEWAY WITH BUFFER
NOT TO SCALE



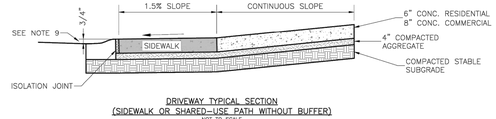
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

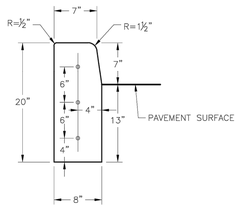
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

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

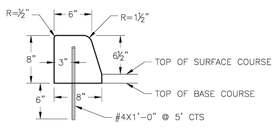
Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

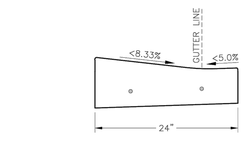
GEN-1



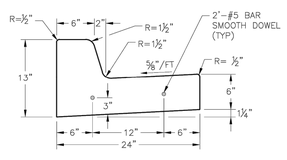
STRAIGHT CURB
(TYPE C-1)



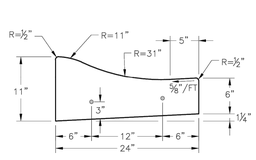
DOWELLED CURB
(TYPE DC)



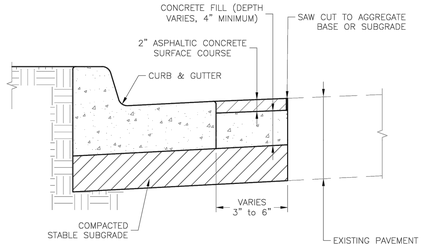
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



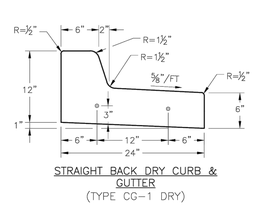
ROLL BACK CURB & GUTTER
(TYPE CG-2)



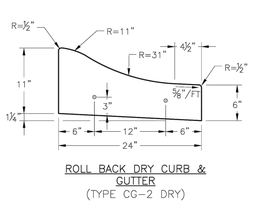
CURB REPLACEMENT DETAIL

GENERAL NOTES

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



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



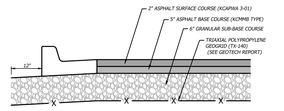
ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

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

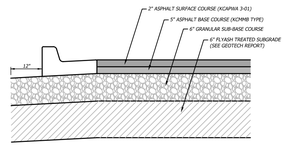
Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 08/2023
Proj. #:

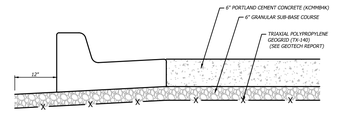
GEN-4



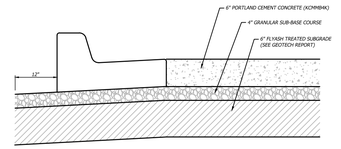
Medium Duty Asphalt Pavement
Option 1
004 Not to Scale



Medium Duty Asphalt Pavement
Option 2
004 Not to Scale



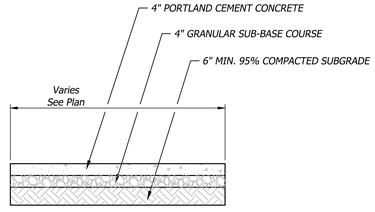
Medium Duty Concrete Pavement
Option 1
005 Not to Scale



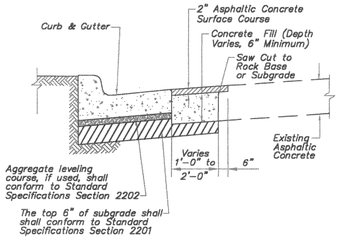
Medium Duty Concrete Pavement
Option 2
005 Not to Scale

NOTES:

1. *CONTROL JOINT SPACING SHALL MATCH WIDTH OF SIDEWALK.*
2. *ISOLATION JOINTS SHALL BE PLACED @ 250' CENTERS OR WHERE WALKS ABUT CURBS, BUILDINGS, ETC....*
3. *ALL EXTERIOR CONCRETE SHALL HAVE A BROOM FINISH.*



014 Concrete Sidewalk Section
Not to Scale



CURB REPLACEMENT DETAIL

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

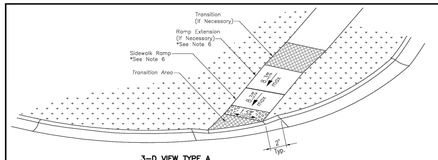
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

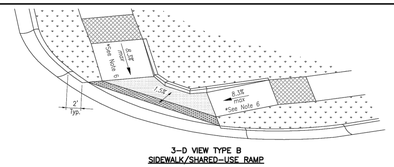
C7.0

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS



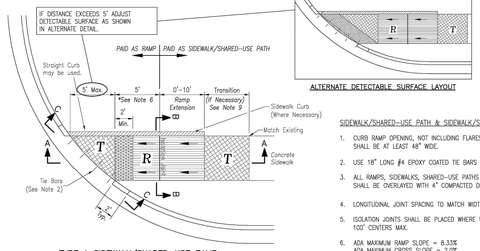
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP



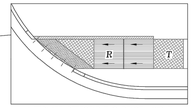
3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

LEGEND

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



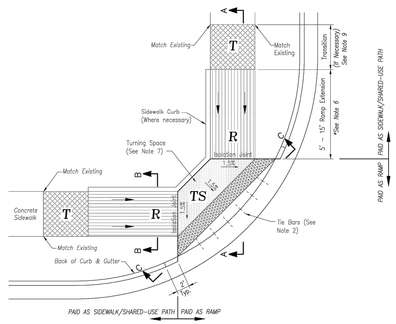
TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale



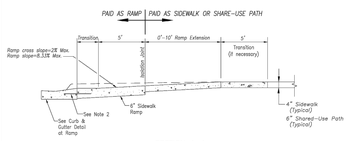
ALTERNATE DETECTABLE SURFACE LAYOUT

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

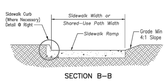
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 100' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



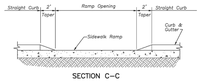
TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale



SECTION A–A

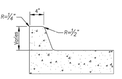


SECTION B–B

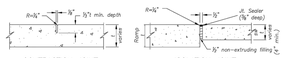


SECTION C–C

TYPE A & B SIDEWALK RAMP
Not to Scale

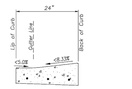


SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale

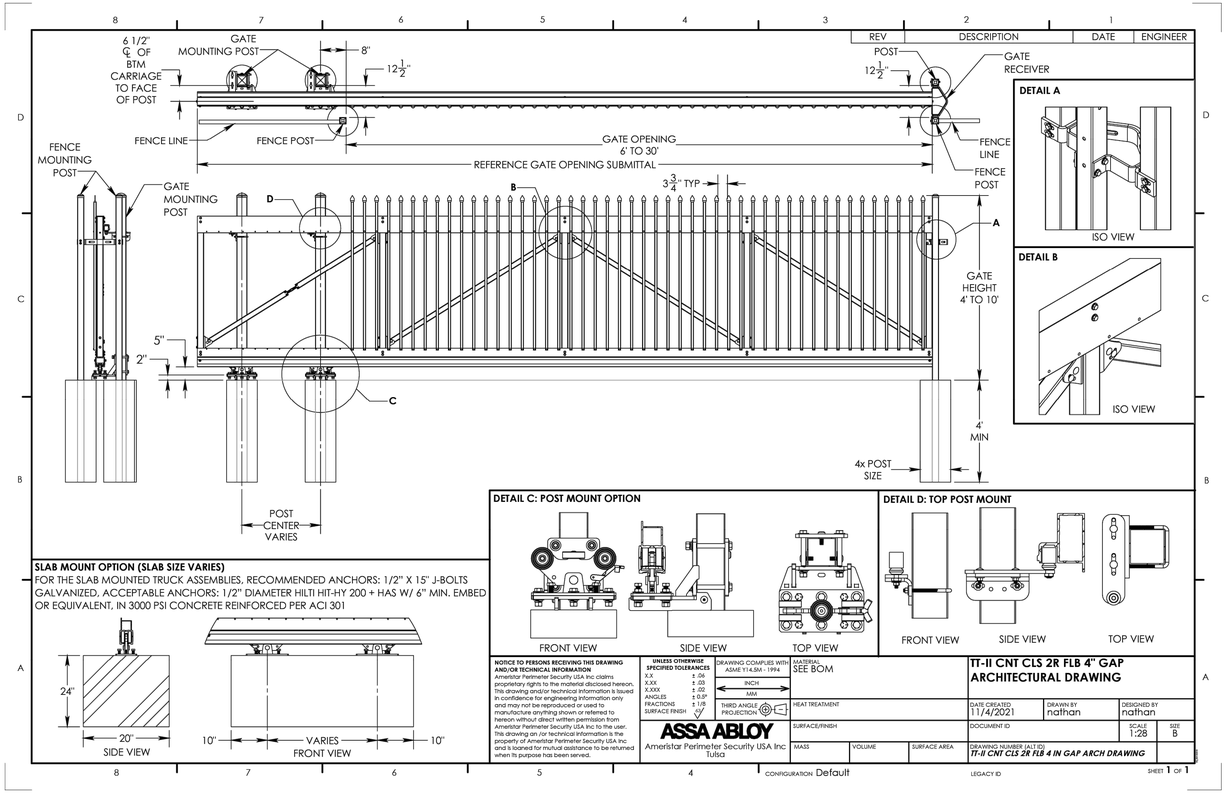


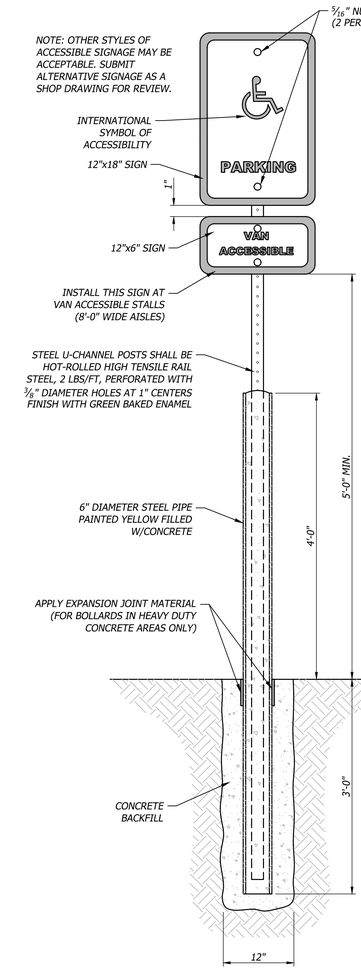
CURB & GUTTER DETAIL AT RAMP
Not to Scale

Project:	STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name:	ADA RAMP RETROFIT DETAIL
Drawn By:	MJP
Checked By:	DL
Date:	08/2023
Proj. #:	

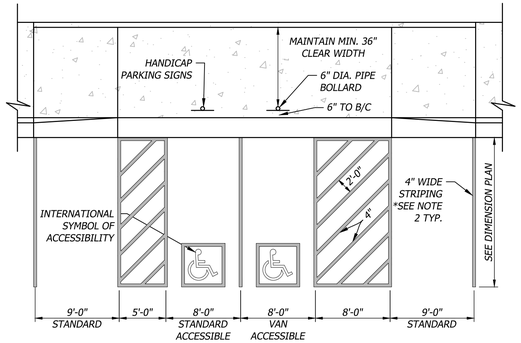
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

GEN-3A

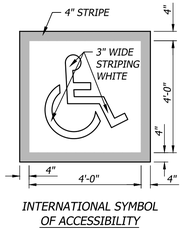




022 ADA Parking Signage
Not to Scale



020 ADA Parking Striping
Not to Scale



INTERNATIONAL SYMBOL OF ACCESSIBILITY

NOTE:
1. SEE SITE GRADING AND DRAINAGE PLAN FOR PAVEMENT AND CURB ELEVATIONS, AND ASSOCIATED ALLOWABLE SLOPES FOR ACCESSIBLE PARKING
2. PARKING STRIPING COLOR TO BE YELLOW ON CONCRETE AND WHITE ON ASPHALT.

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

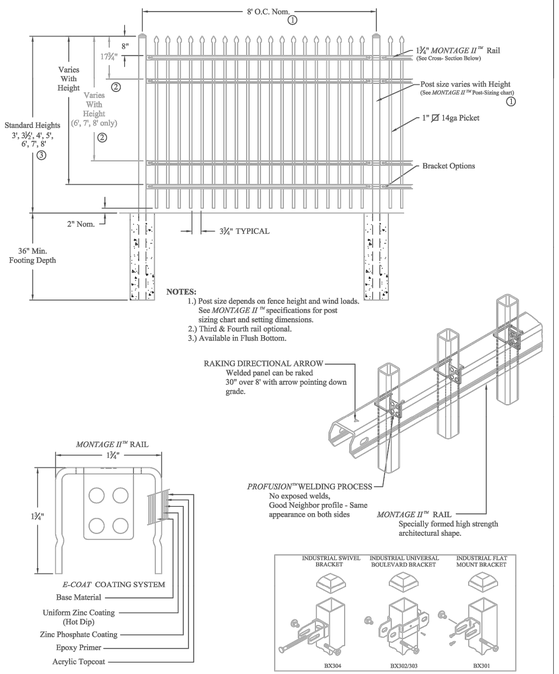
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C7.1

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS



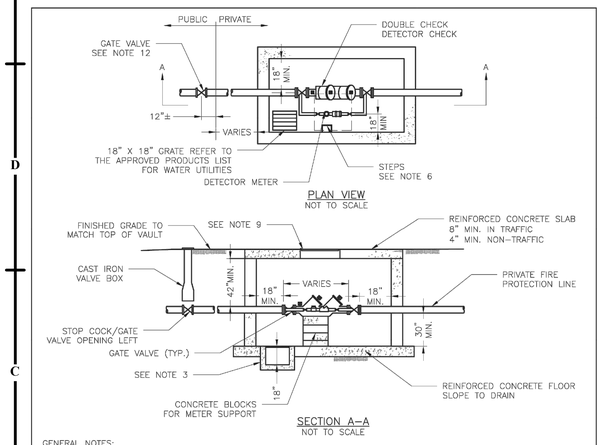
HEAVY INDUSTRIAL STRENGTH WELDED STEEL PANEL
PRE-ASSEMBLED

Values shown are nominal and not to be used for installation purposes. See product specification for installation requirements.

ZWCISO

MONTAGE II CLASSIC 2/3/4-RAIL			
DR: RTM	SH: 1of 1	SCALE: DO NOT SCALE	
CK: ME	Date 6/28/10	REV: b	

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GENERAL NOTES:

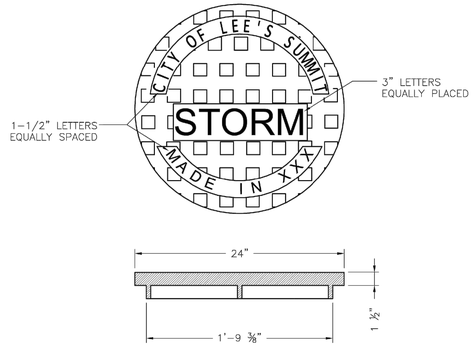
1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE-GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816-969-1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON-TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

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

VAULT FOR DOUBLE CHECK DETECTOR CHECK

Date: 02/2016
Drawn By: JN
Checked By: DL

WAT-12



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

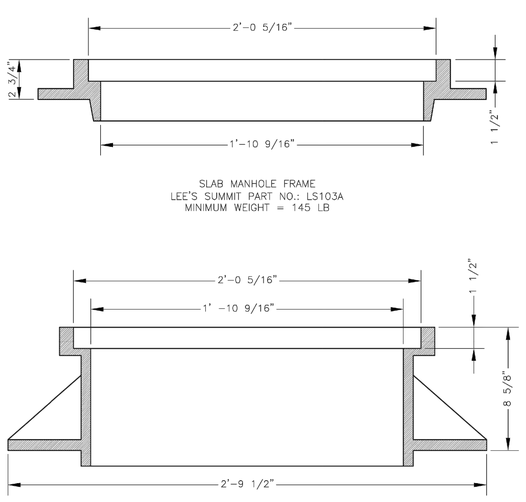
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

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

STORM MANHOLE COVER DETAIL

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

STM-6



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

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

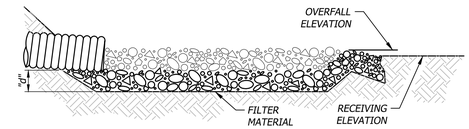
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

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

STORM MANHOLE FRAME DETAIL

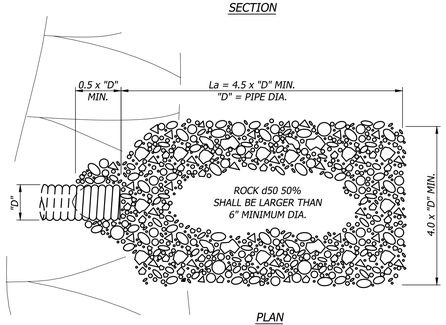
Date: 04/17
Drawn By: MJF
Checked By: DL

STM-7



THICKNESS ("d") = 1.5 x MAXIMUM DIAMETER - 6" MINIMUM

SECTION



PLAN

NOTES:

1. *'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.*
2. *APRON SHALL BE AT A ZERO GRADE AND ALIGNED STRAIGHT.*
3. *FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" THICK MINIMUM GRADED GRAVEL LAYER.*
4. *SIDE SLOPES SHALL BE 4:1 UNLESS NOTED OTHERWISE.*
5. *ROCK SHALL CONFORM TO KDOT SECTION 1114.2(b) STONE FOR AGGREGATE DITCH LINING.*

605 Energy Dissipater (Rip Rap)
Not to Scale

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2010035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C7.2

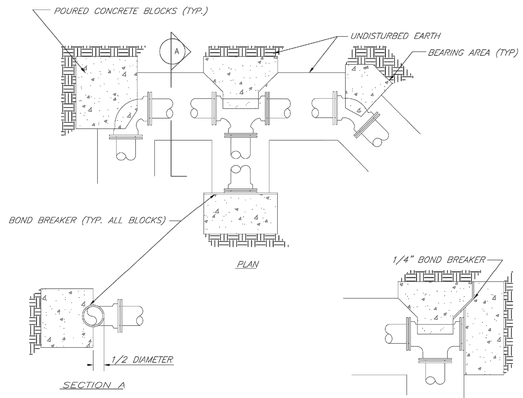
ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

CIVIL DETAILS

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

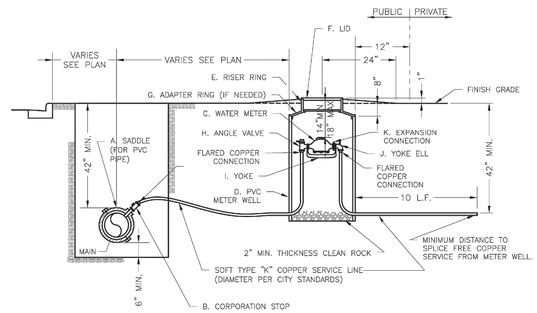
NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

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



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

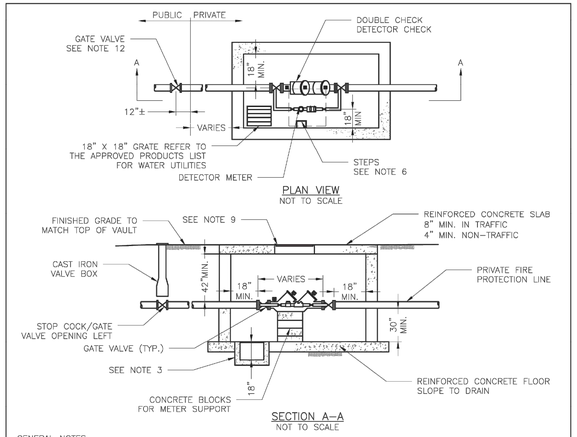
Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: WAT-1 | Rev: 1/14 | Rev:



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

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
SERVICE CONNECTION WITH METER WELL

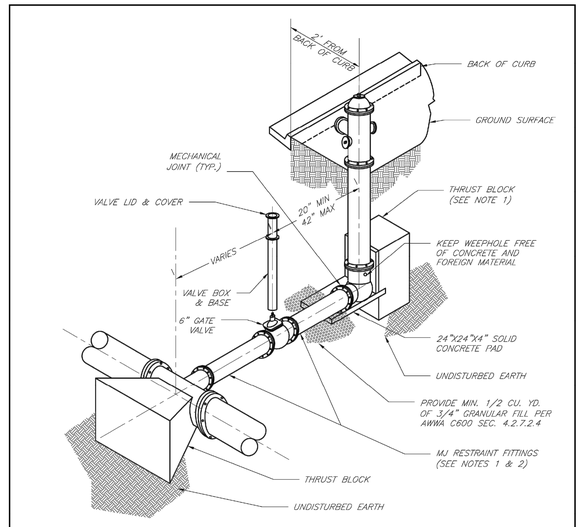
Date: 06/2015 | Drawn By: JN | Checked By: DL | WAT-11



GENERAL NOTES:
1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816–969–1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

LEE'S SUMMIT MISSOURI
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VAULT FOR DOUBLE CHECK DETECTOR CHECK

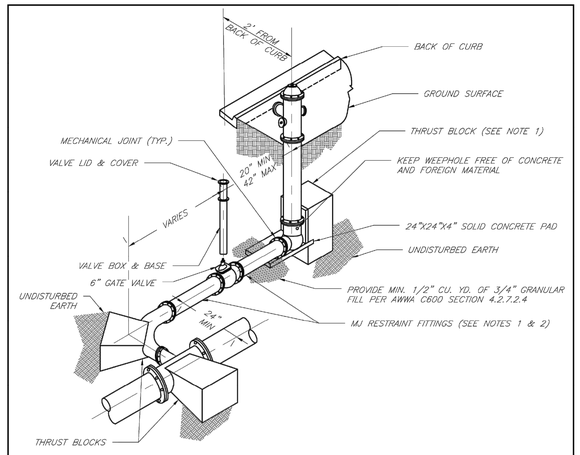
Date: 02/2016 | Drawn By: JN | Checked By: DL | WAT-12



NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT MISSOURI
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HYDRANT INSTALLATION – STRAIGHT SET

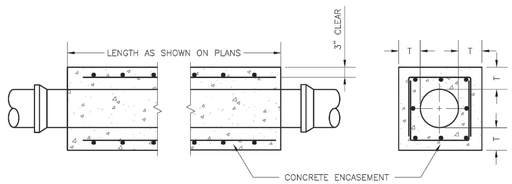
Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: WAT-7 | Rev: 1/14 | Rev:



NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
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6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
HYDRANT WITH 90 DEGREE BEND

Date: 02/13 | Drawn By: JN | Checked By: DL | FILE: WAT-8 | Rev: 1/14 | Rev:



NOTES:
1. FOR PIPES LESS THAN 15", T = 6" MIN.
2. FOR PIPES 15" THRU 36", T = 8" MIN.
3. INTERMEDIATE BELLS SHALL BE ENCASED.
4. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".

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

Date: 01/2016 | Drawn By: JN | Checked By: DL | SAN-7

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FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

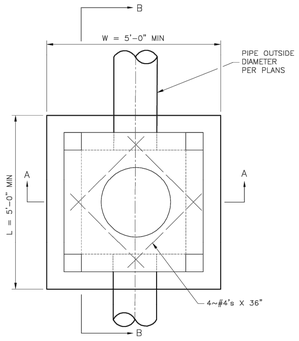
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

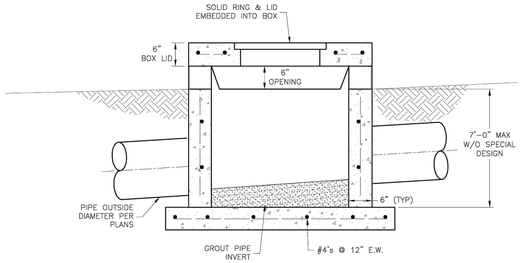
C7.3

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

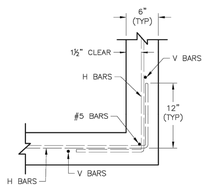
CIVIL DETAILS



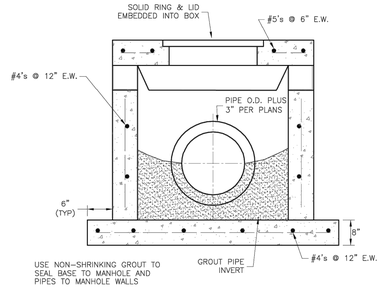
PLAN VIEW



SECTION B–B



WALL CORNER DETAIL



SECTION A–A

GENERAL NOTES:

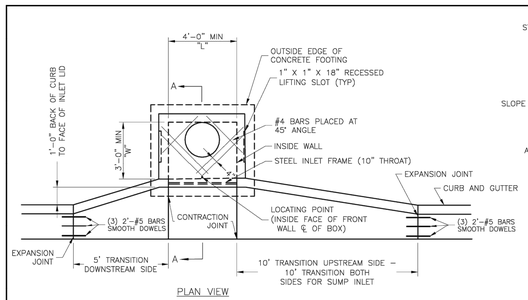
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS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

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

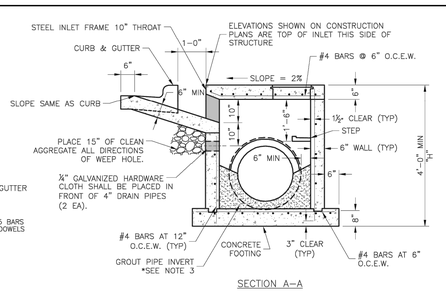
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
FIELD INLET DETAIL

Drawn By: MJF
Checked By: DL
Date: 06/17
Proj. #:

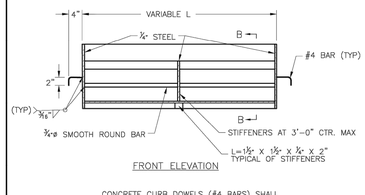
STM-2



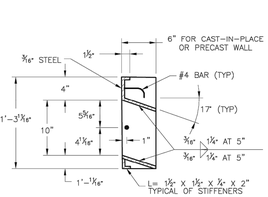
PLAN VIEW



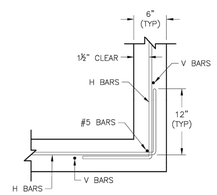
SECTION A–A



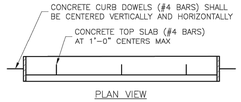
FRONT ELEVATION



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

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

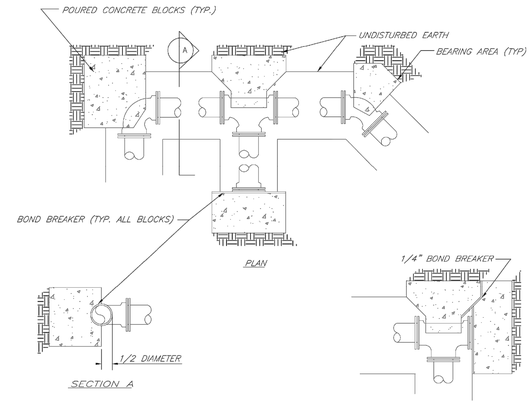
Drawn By: MJF
Checked By: DL
Date: 06/17
Proj. #:

STM-1

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

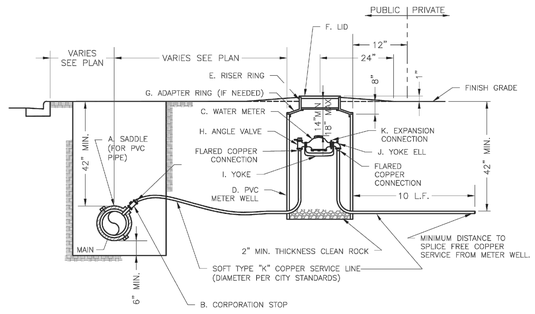
NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



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HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT–1
Rev: 1/14
Rev:



NOTES:

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2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
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6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816–969–1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LEE'S SUMMIT MISSOURI
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SERVICE CONNECTION WITH METER WELL

Date: 06/2015
Drawn By: JN
Checked By: DL

WAT–11

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FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

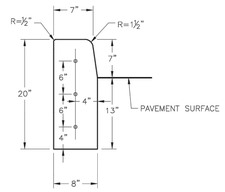
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

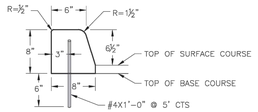
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ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

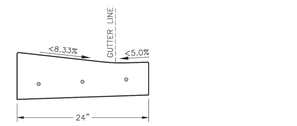
CIVIL DETAILS



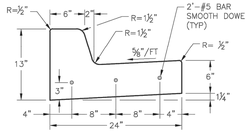
STRAIGHT CURB
(TYPE C-1)



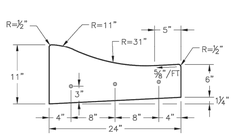
DOWELLED CURB
(TYPE DC)



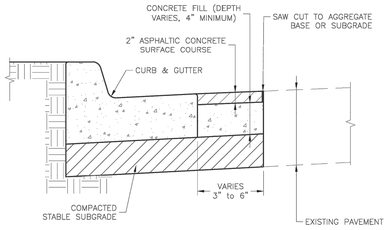
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



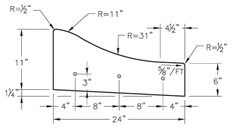
ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL

GENERAL NOTES

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



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

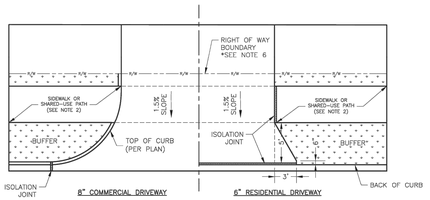
ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

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

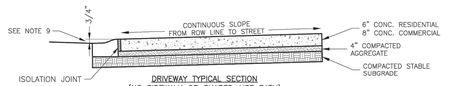
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

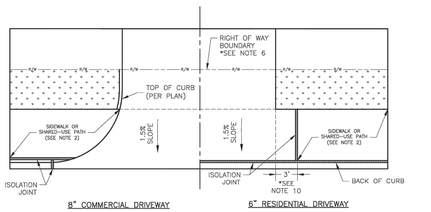
GEN-4



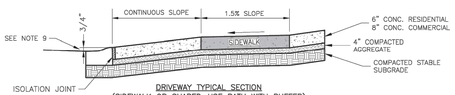
DRIVEWAY WITH BUFFER
NOT TO SCALE



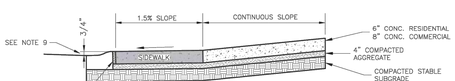
DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

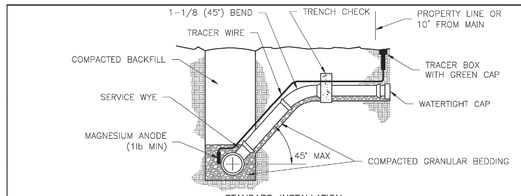
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-39, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY), MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

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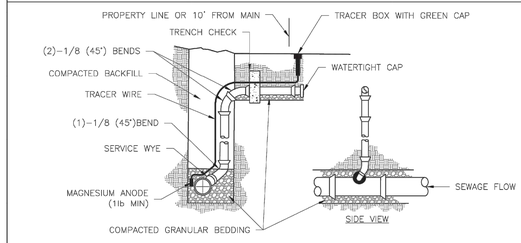
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2021
Proj. #:

GEN-1



STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

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

SANITARY SEWER STUB DETAIL

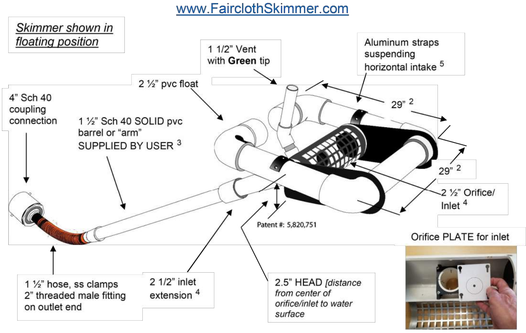
Date: 12/2015
Drawn By: MJF
Checked By: DL

SAN-1

2.5" *Faircloth Skimmer®* Surface Drain Cut Sheet

J. W. Faircloth & Son, Inc.
www.FairclothSkimmer.com

Skimmer shown in floating position



1. Skimmer can be attached to a straight 4" sch 40 pipe through the dam but the pipe may need to be anchored to the bottom at the connection so it is secure. Coupling can be removed and hose attached to outlet using the threaded 2" fitting. Typical methods used: a) a metal structure with a steel stub out welded on the side at the bottom with a 2" threaded coupling or reducer(s); b) a concrete structure with a hole or orifice at the bottom - use a steel plate with a hole cut in it and coupling welded to it that will fit over the hole in the concrete and bolted to the structure with sealant; or c) grout a 4" pvc pipe in a hole in the concrete to connect the skimmer.
2. Dimensions are approximate, not intended as plans for construction.
3. Barrel (solid, not foam core pipe) should be 1.4 times the depth of water with a minimum length of 6' so the inlet can be pulled to the side for maintenance. If more than 8' long weight may have to be added to inlet to counter the increased buoyancy.
4. Orifice/inlet tapers down from 2 ½" maximum inlet to a 1½" barrel and hose. Barrel is smaller to reduce buoyancy and tendency to lift inlet but is sufficient for flow through inlet because of slope. The orifice/inlet can be reduced using the plate and cutter provided to control the outflow rate – see #6.
5. Horizontal intake is 5" pipe between the straps with aluminum screen door for access to the 2½" inlet and orifice inside.
6. **Capacity**: 6,234 cubic feet per day maximum with 2½" inlet and 2.5 head. Inlet can be reduced by installing a smaller orifice using the plate and cutter provided to adjust flow rate for the particular drawdown time required. Please use the sizing template at www.fairclothskimmer.com .
7. Ships assembled. User glues inlet extension and barrel, installs vent, cuts orifice in plate and attaches to outlet pipe or structure. Includes float, flexible hose, rope, and orifice plate and cutter. Does NOT include 1 ½" Sch 40 SOLID pvc barrel or "arm" SUPPLIED BY USER.

2-5inchCut 5-1-19

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

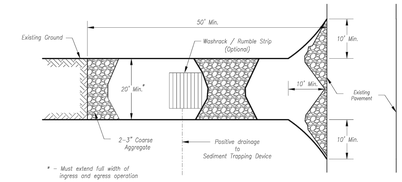
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MO PE-2021035286

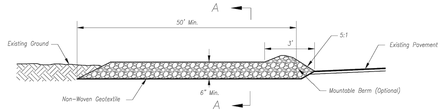
C7.5

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

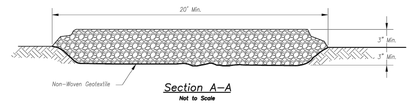
CIVIL DETAILS



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.

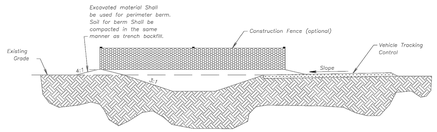
CONSTRUCTION ENTRANCE

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:

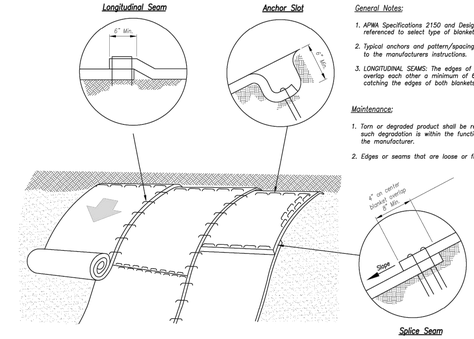
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface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



CONCRETE WASHOUT

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

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

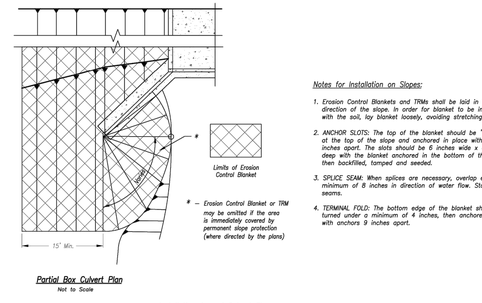


General Notes:

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

Maintenance:

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

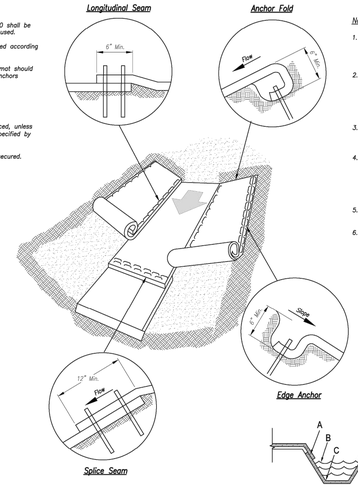


Partial Box Culvert Plan
Not to Scale

Installation Around Culvert Slope

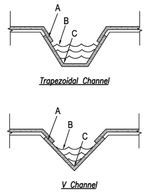
Notes for Installation on Slopes:

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



Notes for Installation in Channels:

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



Critical Points:

A – Overlaps and seams;

B – Projected water line;

C – Channel bottom / side slope vertices;

Installation in Channels

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter APWA American Public Works Association
KANSAS CITY METRO CHAPTER
EROSION CONTROL BLANKETS AND TURF REINFORMENT MATS
STANDARD DRAWING NUMBER ESC-02
ADOPTED: 10/24/2016

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
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FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

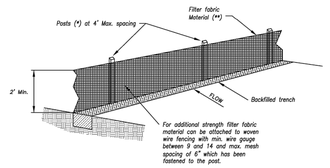
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

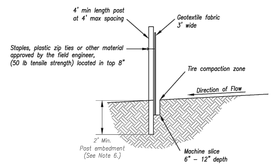
MICHAEL T. MAKRIS, PE
MD PE-2021035286

C7.6

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL DETAILS





(*) POSTS
- MIN. LENGTH 4'
- HARDWOOD 1 9/16" x 1 9/16"
- NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
- 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

Maintenance:

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

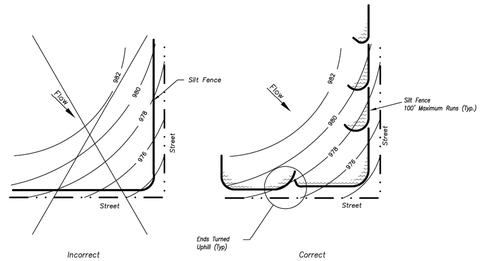
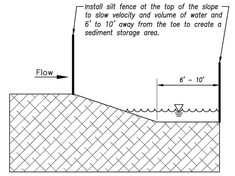
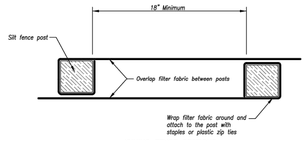


Figure A

SILT FENCE LAYOUT
Not to Scale

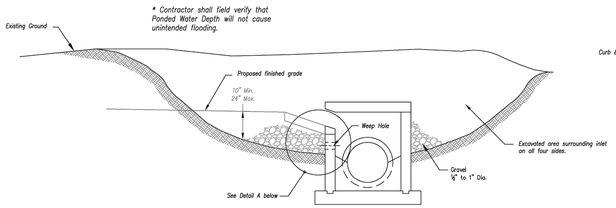


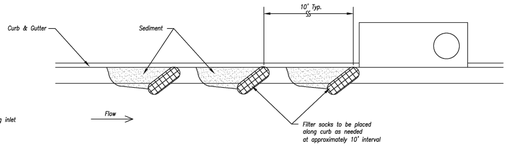


JOINING FENCE SECTIONS
Not to Scale

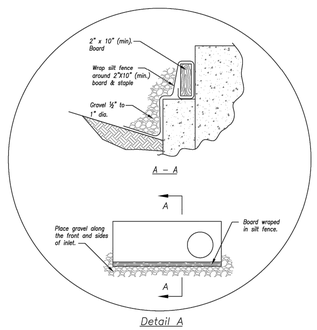
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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





On Grade Curb Inlet Protection



Detail A

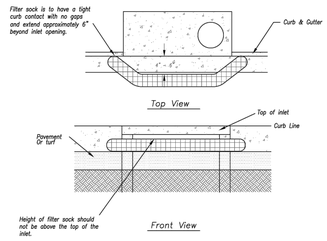
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

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 APWA
KANSAS CITY METRO CHAPTER
CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016

HOEFER WELKER
4622 PENNSYLVANIA AVENUE
SUITE 1400
KANSAS CITY, MO 64112
P: 913.307.3700
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LEE'S SUMMIT JOINT OPERATIONS FACILITY

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

FINAL DEVELOPMENT PLAN

REVISION DATES:
Revision 1: 2024-11-15

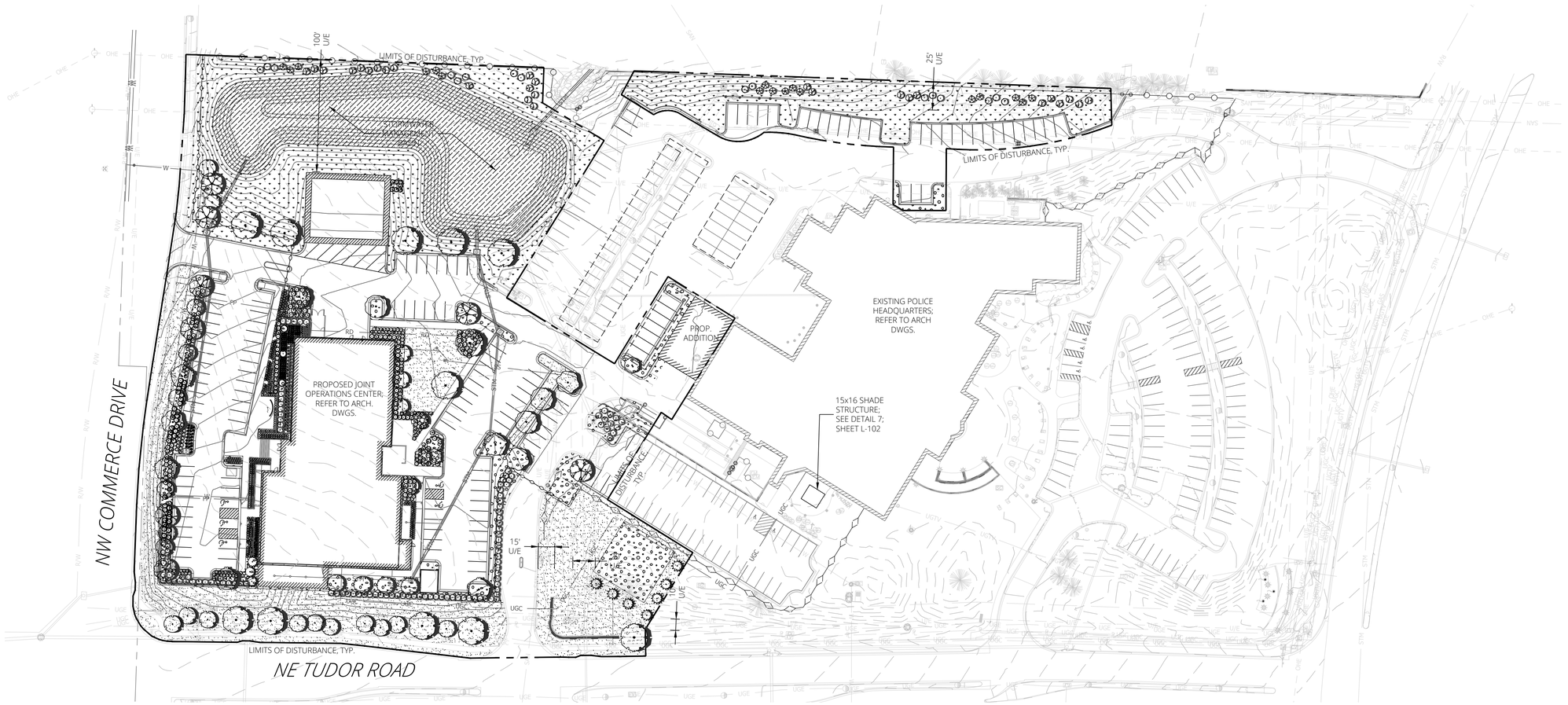
STATE OF MISSOURI
MICHAEL T. MAKRIS
2024-11-15
NUMBER PE-2021035286
PROFESSIONAL ENGINEER

MICHAEL T. MAKRIS, PE
MD PE-2021035286

C7.7

ISSUE DATE: AUGUST 30, 2024
HOEFER WELKER #: 138161

EROSION CONTROL DETAILS



1 LANDSCAPE PLAN
SCALE = 1" = 50'

GRAPHIC SCALE 50'

NORTH

LANDSCAPE CODE SUMMARY

STREET FRONTAGE TREES (8.790.A.1)
REQUIRED: 1 TREE PER 30 FEET OF STREET FRONTAGE
NE TUDOR ROAD = 438 FEET / 30 = 15 TREES
NW COMMERCE CIRCLE = 502 FEET / 30 = 17 TREES
PROVIDED: NE TUDOR ROAD = 15 TREES
NW COMMERCE CIRCLE = 17 TREES

STREET FRONTAGE SHRUBS (8.790.A.2)
REQUIRED: 1 SHRUB PER 20 FEET OF STREET FRONTAGE
NE TUDOR ROAD = 314 FEET / 20 = 16 SHRUBS
NW COMMERCE CIRCLE = 502 FEET / 20 = 26 SHRUBS
PROVIDED: NE TUDOR ROAD = 23 SHRUBS
NW COMMERCE CIRCLE = 40 SHRUBS

OPEN YARD SHRUBS (8.790.B.1)
REQUIRED: 2 SHRUBS PER 5,000 SQUARE FEET OF TOTAL LOT AREA
221,540 SF / 5,000 * 2 = 88 SHRUBS
PROVIDED: 382 SHRUBS

OPEN YARD TREES (8.790.B.3)
REQUIRED: 1 TREE PER 5,000 SQUARE FEET OF TOTAL LOT AREA
221,540 SF / 5,000 = 44 TREES
PROVIDED: 44 TREES

PARKING LOT SCREENING (8.820.C.1)
REQUIRED: HEDGE OF 12 SHRUBS / 40 LINEAR FEET
392 LINEAR FEET / 40 * 12 = 118 SHRUBS
PROVIDED: 118 SHRUBS

MINIMUM BUFFER / SCREEN (8.890)
REQUIRED: NORTHWEST = MEDIUM IMPACT SCREEN - TYPE B
1 SHADE TREE PER 1,000 SQUARE FEET = 6 SHADE TREES
1 ORNAMENTAL TREE PER 500 SQUARE FEET = 12 ORNAMENTAL TREES
1 EVERGREEN TREE PER 300 SQUARE FEET = 20 EVERGREEN TREES
1 SHRUB PER 200 SQUARE FEET = 30 SHRUBS
PROVIDED: 30 SHRUBS

REQUIRED: NORTHEAST = LOW IMPACT SCREEN - TYPE B
1 SHADE TREE PER 1,000 SQUARE FEET = 6 SHADE TREES
1 ORNAMENTAL TREE PER 500 SQUARE FEET = 12 ORNAMENTAL TREES
1 EVERGREEN TREE PER 500 SQUARE FEET = 20 EVERGREEN TREES
1 SHRUB PER 500 SQUARE FEET = 30 SHRUBS
PROVIDED: 30 SHRUBS

LANDSCAPE NOTES

1. CONTRACTOR SHALL LOCATE ALL UTILITIES BEFORE COMMENCING WORK. CONTACT THE MISSOURI ONE CALL SYSTEM AT 1-800-DIG-RITE OR 811 TO FILE A LOCATE REQUEST PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE TO UTILITIES RESULTING FROM LANDSCAPE OPERATIONS. ANY UTILITIES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND MAY OR MAY NOT DEPICT THE ACTUAL LOCATION OF SERVICES.
2. QUANTITIES OF MATERIALS SHOWN ON THE LANDSCAPE PLAN TAKE PRECEDENCE OVER QUANTITIES SHOWN ON THE PLANT SCHEDULE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES ON THE LANDSCAPE PLAN PRIOR TO BIDDING.
3. REPORT ANY DISCREPANCIES IN THE LANDSCAPE PLAN TO THE LANDSCAPE ARCHITECT, PRIOR TO PURCHASING MATERIALS OR STARTING CONSTRUCTION.
4. ALL DISTURBED AREAS NOT PAVED OR COVERED BY BUILDINGS SHALL BE BROUGHT TO FINISH GRADE AND PLANTED WITH TURF OR OTHER APPROPRIATE GROUND COVERS.
5. ALL TREE AND SHRUB PITS SHALL BE AMENDED WITH A PLANTING SOIL MIX CONSISTING OF EXISTING SOIL, TOPSOIL, AND COMPOST TO MAKE A NEW SOIL WHICH MEETS THE PROJECT GOALS FOR THE INDICATED PLANTING AREAS. THESE COMPONENTS WILL BE MIXED ON-SITE IN THE FOLLOWING RATION (BY MOIST VOLUME): EXISTING SOIL, 65-70%; TOPSOIL (UNSCREENED), 25-30%; AND COMPOST, 5%. MIX THE TOPSOIL AND COMPOST TOGETHER FIRST AND THEN ADD TO THE EXISTING SOIL. MIX WITH A LOADER BUCKET TO LOOSELY INCORPORATE THE TOPSOIL/COMPOST MIX INTO THE EXISTING SOIL. DO NOT OVER MIX. DO NOT MIX WITH A SOIL BLENDING MACHINE. DO NOT SCREEN THE SOIL. CLUMPS OF TOPSOIL, COMPOST AND EXISTING SOIL WILL BE PERMITTED IN THE OVERALL MIX.
6. ALL TREES AND SHRUBS SHALL BE WELL-FORMED AND DEVELOPED IN GOOD CONDITION, HEALTHY AND DISEASE-FREE, AND BE TYPICAL OF THE SPECIES. PLANTS SHALL COMPLY WITH ACCEPTABLE STANDARDS AS SET FORTH IN THE LATEST EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK."
7. APPLY A 3" LAYER OF DECORATIVE GRAVEL OVER NON-WOVEN GEOTEXTILE FABRIC IN ALL PLANTING BEDS. GRAVEL SHOULD NOT COME IN CONTACT WITH PLANT TRUNKS OR STEMS.
8. ALL TURF AREAS SHALL BE SEPARATED FROM BUILDING FOUNDATION WALLS, RETAINING WALLS, AND FENCES BY AN AGGREGATE MOW STRIP 18 INCHES IN WIDTH, 6 INCHES IN DEPTH, AND CONSISTING OF 1-3" DIAMETER DECORATIVE GRAVEL. REFER TO SHEET L-102, DETAIL #6.
9. ALL PLANTING BEDS AND AGGREGATE MOW STRIPS MUST BE SEPARATED FROM TURF AREAS WITH STEEL LANDSCAPE EDGING. INSTALL "BORDER KING STEEL LANDSCAPE EDGING" MANUFACTURED BY BORDER CONCEPTS, INC., OR APPROVED EQUAL.
10. TURF SOD SHALL BE CERTIFIED TURF GRASS SOD COMPLYING WITH TURF GRASS PRODUCERS INTERNATIONAL'S "GUIDELINE SPECIFICATIONS FOR TURFGRASS SODDING." SOD SHALL BE TURF-TYPE TALL FESCUE HARVESTED FROM A SOD FARM LOCATED WITHIN 100 MILES OF THE PROJECT SITE. SODS SHALL BE WELL ROOTED, 2-YEAR OLD STOCK HARVESTED IN ROLLS AND FERTILIZED 2-3 WEEKS PRIOR TO CUTTING. ALL SOD SHALL BE MACHINE CUT AND VIGOROUSLY GROWING (NOT DORMANT). MAXIMUM TIME FROM STRIPPING TO PLANTING SHALL BE 24 HOURS.
18. TURF SEED SHALL COMPLY WITH U.S. DEPARTMENT OF AGRICULTURE RULES AND REGULATIONS UNDER THE FEDERAL SEED ACT AND BE EQUAL IN QUALITY TO STANDARDS FOR CERTIFIED SEED. SEED SHALL BE A TURF-TYPE FESCUE BLEND CONSISTING OF 85% TURF-TYPE TALL FESCUE, 10% KENTUCKY BLUEGRASS, AND 5% ANNUAL RYEGRASS. ALL SEEDED AREAS SHALL BE MULCHED WITH STRAW OR HYDROMULCH AT TIME OF INSTALLATION UNTIL SEED HAS ESTABLISHED.
19. NATIVE WETLAND SEED MIX SHALL CONSIST OF PRE-MIXED WETLAND TOLERANT PLANT SEED OF A MINIMUM OF TWENTY (20) LOCAL NATIVE SPECIES. PROVIDE "ALL-STAR FACW WETLAND MIX" BY STAR SEED, INC., OR APPROVED EQUAL. CONTACT STAR SEED BY PHONE: (800) 782-7311, FAX: (785) 346-2479, OR THEIR WEBSITE: WWW.GOSTARSEED.COM. BROADCAST SEED MIX BY USING AN AGITATING SPREADER (SUCH AS A VICON SEEDER) MOUNTED TO A TRACTOR OR ATV PER NURSERY DIRECTIONS. SOW EVENLY ACROSS THE SITE IN TWO DIRECTIONS PERPENDICULAR TO ONE ANOTHER AT A RATE NOT LESS THAN 20 POUNDS PURE LIVE SEED (PLS) PER ACRE.SEED MIX INSTALLATION SHALL OCCUR EITHER BETWEEN THE DATES OF NOVEMBER 1 AND FEBRUARY 28 OR APRIL 1 AND JUNE 15. COORDINATE INSTALLATION OF SEED MIX WITH THE EROSION CONTROL CONTRACTOR.
20. CONTRACTOR SHALL USE AN APPROVED TREE GUYING SYSTEM. TREE GUYING TO BE FLAT WOVEN POLYPROPYLENE MATERIAL, 3/4-INCH-WIDE, WITH A TENSILE STRENGTH OF 900 LBS. HOSE AND WIRE WILL NOT BE ACCEPTED. CONTRACTOR SHALL PROVIDE ONE OF THE FOLLOWING PRODUCTS, OR APPROVED EQUAL: "ARBORTIE GREEN" MANUFACTURED BY DEEP ROOT PARTNERS, L.P, OR "LEONARD TREE TIE WEBBING GREEN" MANUFACTURED BY A.M. LEONARD, INC.
21. REMOVE ALL RUBBISH, EQUIPMENT, AND MATERIAL AND LEAVE THE AREA IN A NEAT, CLEAN CONDITION EACH DAY. MAINTAIN PAVED AREAS UTILIZED FOR HAULING EQUIPMENT AND MATERIALS BY OTHER TRADES IN A CLEAN AND UNOBSTRUCTED CONDITION AT ALL TIMES. REMOVE SOIL OR DIRT THAT ACCUMULATES DUE TO PLANTING OPERATIONS EACH DAY.
22. AT THE COMPLETION OF PLANTING OPERATIONS ALL PLANTS SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL REPLACE IMMEDIATELY ANY PLANTS NOT IN HEALTHY AND VIGOROUS CONDITION AT THAT TIME AT NO EXPENSE TO THE OWNER. ANY PLANT NOT IN HEALTHY CONDITION AFTER ONE FULL YEAR FROM THE DATE OF FINAL ACCEPTANCE SHALL BE REPLACED AS PER THE ORIGINAL SPECIFICATIONS, FREE OF CHARGE TO THE OWNER.
23. CONTRACTOR SHALL GUARANTEE TREES, SHRUBS, PERENNIALS AND TURF FOR ONE CALENDAR YEAR FOLLOWING PROVISIONAL ACCEPTANCE OF THE OVERALL PROJECT. DURING THE GUARANTEE PERIOD, PLANTS THAT DIE DUE TO NATURAL CAUSES OR THAT ARE UNHEALTHY OR UNSIGHTLY IN CONDITION, SHALL BE REPLACED BY THE CONTRACTOR. PLANTS USED FOR THE REPLACEMENT SHALL BE OF THE SAME VARIETY AND SIZE AS ORIGINALLY SPECIFIED IN THE PLANT SCHEDULE. REPLACEMENTS SHALL BE MADE WITHIN ONE WEEK OF REQUEST PENDING FAVORABLE SEASONAL PLANTING CONDITIONS.

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L-101

ISSUE DATE: OCT. 16, 2024
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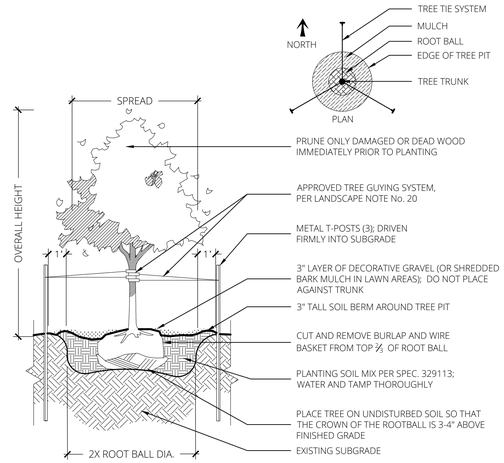
LANDSCAPE PLAN

PLANT SCHEDULE

SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT	CAL	SIZE
DECIDUOUS TREES						
	AC	8	CADDO SUGAR MAPLE / ACER SACCHARUM `CADDO`	B & B	2.5"CAL	
	GB	7	MAIDENHAIR TREE / GINKGO BILOBA	B & B	2.5"CAL	
	PB	5	BLOODGOOD LONDON PLANE TREE / PLATANUS X ACERIFOLIA 'BLOODGOOD'	B & B	2.5"CAL	
	QB	3	SWAMP WHITE OAK / QUERCUS BICOLOR	B & B	2.5"CAL	
	QS	5	SHUMARD OAK / QUERCUS SHUMARDII	B & B	2.5"CAL	
	TA	4	BOULEVARD AMERICAN LINDEN / TILIA AMERICANA 'BOULEVARD'	B & B	2.5"CAL	
EVERGREEN TREES						
	JP	10	PERFECTA JUNIPER / JUNIPERUS CHINENSIS 'PERFECTA'	B & B		5'-6' TALL
	JT	3	TAYLOR EASTERN REDCEDAR / JUNIPERUS VIRGINIANA `TAYLOR`	B & B		5'-6' TALL
ORNAMENTAL TREES						
	AG	15	AUTUMN BRILLIANCE SERVICEBERRY / AMELANCHIER X GRANDIFLORA `AUTUMN BRILLIANCE`	B & B	1.5"CAL	
	CC	11	EASTERN REDBUD / CERCIS CANADENSIS	B & B	1.5"CAL	
	MR2	5	ROYAL RAINDROPS CRABAPPLE / MALUS X 'ROYAL RAINDROPS'	B & B	1.5"CAL	

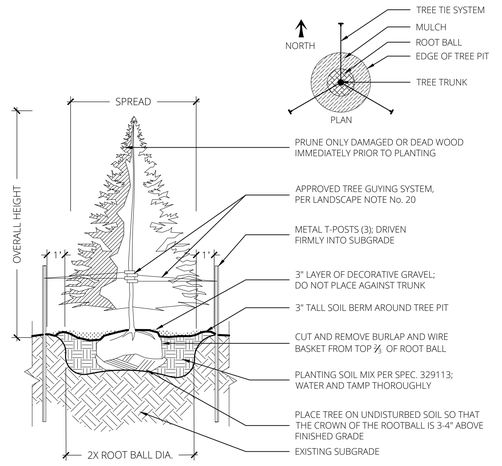
SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT
SHRUBS				
	BT	32	SUNJOY TANGELO BARBERRY / BERBERIS THUNBERGII `SUNJOY TANGELO`	#3
	BG	103	GREEN GEM BOXWOOD / BUXUS X 'GREEN GEM'	#5
	CL	16	FIBER OPTICS BUTTONBUSH / CEPHALANTHUS OCCIDENTALIS 'BAILOPTICS'	#5
	IS	79	SHAMROCK INKBERRY HOLLY / ILEX GLABRA 'SHAMROCK'	#3
	JS	110	SEA GREEN PFITZER JUNIPER / JUNIPERUS X PFITZERIANA `SEA GREEN`	#5
	PO	21	AMBER JUBILEE NINEBARK / PHYSOCARPUS OPULIFOLIUS `JEFAM`	#5
	RG	52	GRO-LOW FRAGRANT SUMAC / RHUS AROMATICA `GRO-LOW`	#3
	SE	17	BLACK LACE® ELDERBERRY / SAMBUCUS NIGRA 'EVA'	#5
	SM	126	MAGIC CARPET JAPANESE SPIREA / SPIRAEA JAPONICA 'WALBUMA'	#3
	TD	40	DENSIFORMIS YEW / TAXUS X MEDIA `DENSIFORMIS`	#5
	VA	18	ARROWWOOD VIBURNUM / VIBURNUM DENTATUM	#5
	VB	9	BLACKHAW VIBURNUM / VIBURNUM PRUNIFOLIUM	#5
GRASSES & PERENNIALS				
	CK	101	KARL FOERSTER FEATHER REED GRASS / CALAMAGROSTIS X ACUTIFLORA `KARL FOERSTER`	#1
	CP2	20	STIFF TICKSEED / COREOPSIS PALMATA	#1
	HR	113	RUBY SPIDER DAYLILY / HEMEROCALLIS X 'RUBY SPIDER'	#1
	PP	94	RUSSIAN SAGE / PEROVSKIA ATRIPLICIFOLIA `PEEK-A-BLUE`	#1
	SP	77	PRAIRIE MUNCHKIN LITTLE BLUESTEM / SCHIZACHYRIUM SCOPARIUM `PRAIRIE MUNCHKIN`	#1
	ST	19	WILD STONECROP / SEDUM TERNATUM	#1
	SH	62	PRAIRIE DROPSEED / SPOROBOLUS HETEROLEPIS	#1

SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT
GROUND COVERS				
	DG	22,445 SF	DECORATIVE GRAVEL / 1" - 3" MISSOURI RAINBOW	ROCK
	TE	39,770 SF	TURF SEED / DROUGHT TOLERANT FESCUE BLEND	SEED
	TS	35,017 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD
	WP	26,125 SF	NATIVE WETLAND SEED MIX / STORMWATER BMP PERENNIAL MIX	SEED



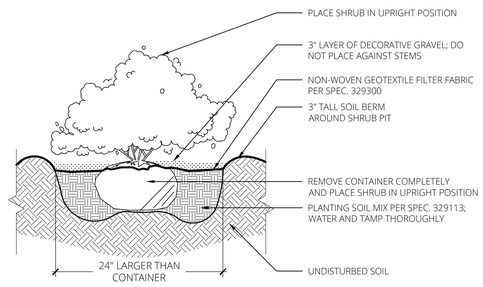
1 DECIDUOUS TREE PLANTING

SCALE = 1/4" = 1'-0"



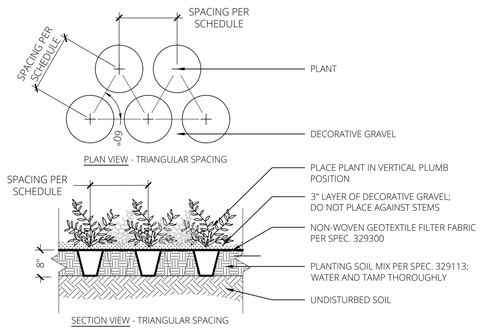
2 EVERGREEN TREE PLANTING

SCALE = 1/4" = 1'-0"



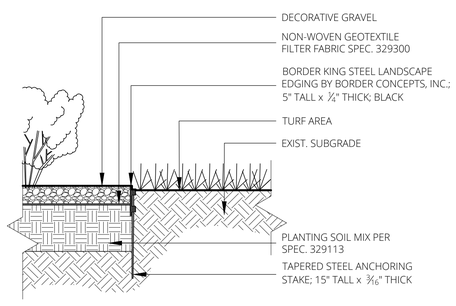
3 SHRUB PLANTING

SCALE = 1/2" = 1'-0"



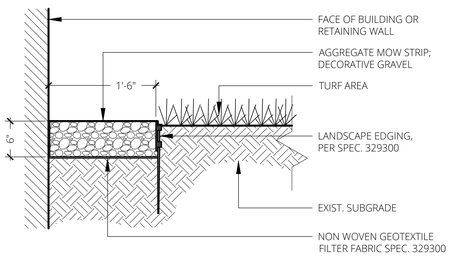
4 PERENNIAL PLANTING

SCALE = 1/2" = 1'-0"



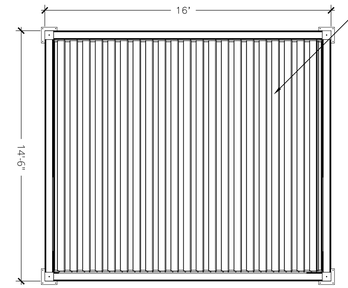
5 LANDSCAPE EDGING

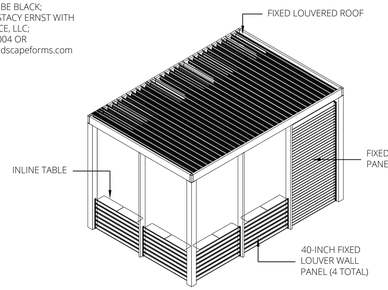
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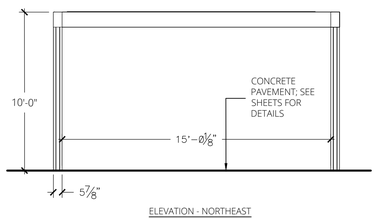


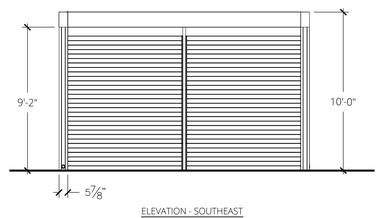
6 AGGREGATE MOW STRIP

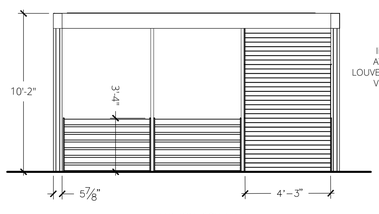
SCALE = 1" 1'-0"

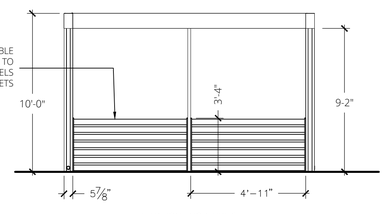












NOTES:
1. ALL STRUCTURAL MEMBERS TO BE FABRICATED FROM EXTRUDED STRUCTURAL ALUMINUM TUBE.
2. ALL FASTENERS (INCLUDING METAL AND MASONRY SCREWS) TO BE SUPPLIED BY MANUFACTURER.
3. CONTRACTOR SHALL PROVIDE PRODUCT DATA AND MANUFACTURER'S SHOP DRAWINGS (INCLUDING STRUCTURAL FOOTING DESIGN AND CALCULATIONS) FOR REVIEW AND APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. INSTALLATION OF SHADE STRUCTURE BY MANUFACTURER; CONTRACTOR TO PROVIDE CONCRETE PAD PER CIVIL DRAWINGS AND FOOTINGS PER MANUFACTURER'S ENGINEERED DRAWINGS

7 SHADE STRUCTURE

SCALE = 1/4" = 1'-0"

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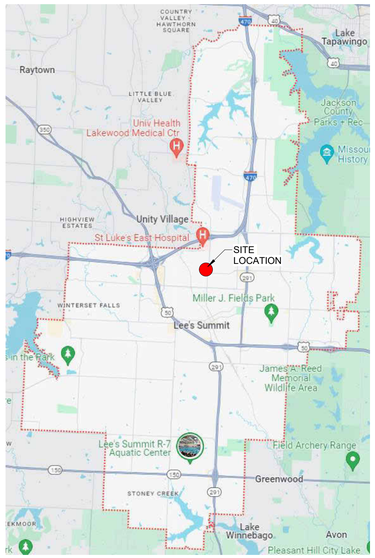
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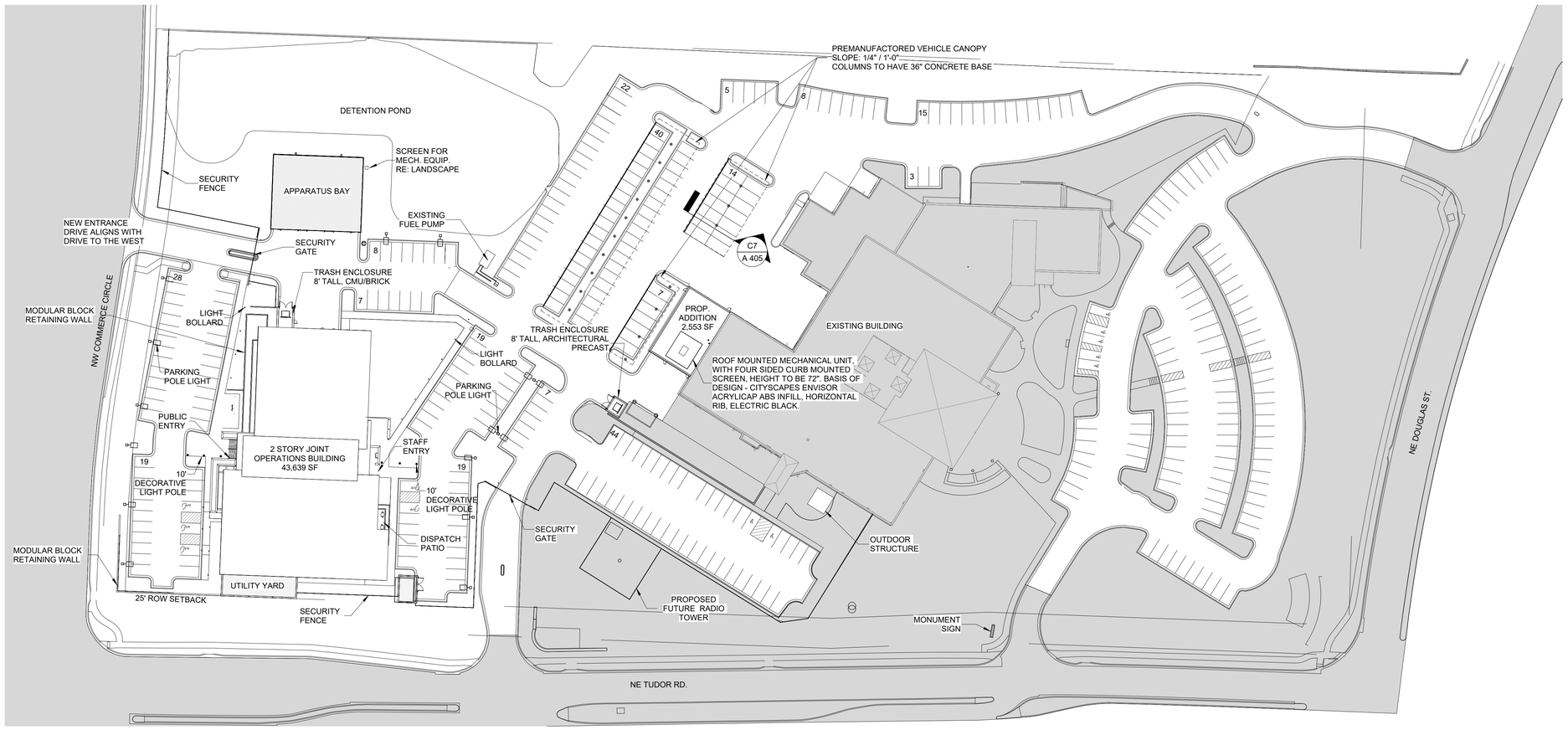
L-102

ISSUE DATE: OCT. 16, 2024
HOEFER WELKER #: 138191

LANDSCAPE SCHEDULE & DETAILS



VICINITY MAP



NORTH

A1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

NOTE: ALL EXTERIOR LIGHTING SHALL COMPLY WITH THE STANDARDS UNDER ARTICLE 8 OF THE CITY'S UNIFED DEVELOPMENT ORDINANCE (UDO) SECTIONS 8.220, 8.230, 8.250, 8.260, AND 8.270

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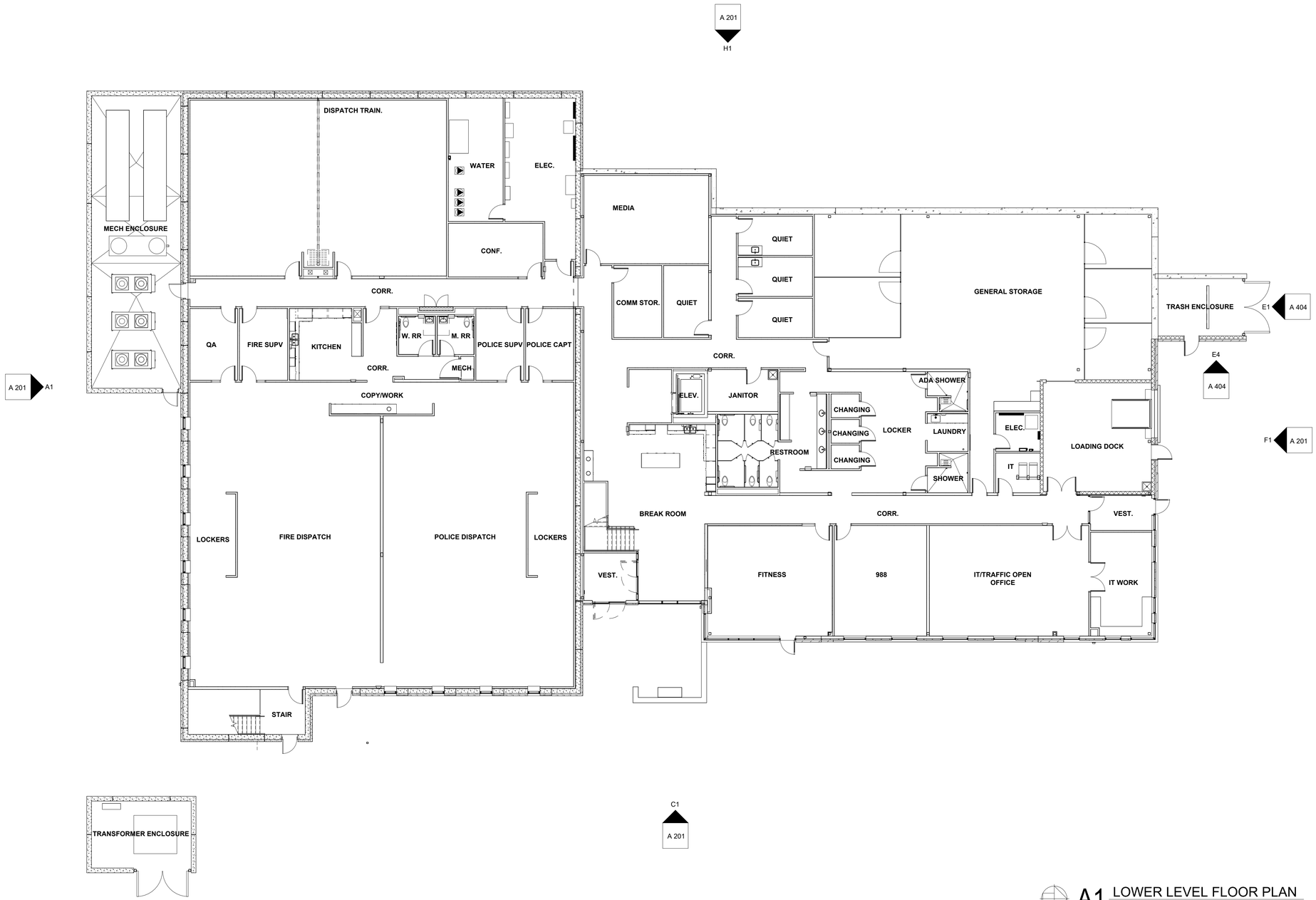
Architect Of Record:
Hoefer Welker

PROFESSIONAL SEAL

AS 101

ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

ARCHITECTURAL SITE PLAN



A1 LOWER LEVEL FLOOR PLAN
3/32" = 1'-0"

NORTH

GENERAL NOTES - FLOOR PLANS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. FOR METAL STUD CONSTRUCTION DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD/ WALL (FOG), UNLESS NOTED OR SHOWN OTHERWISE.
5. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS.
6. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO OUTSIDE FACE OF DOOR FRAME - HINGE SIDE, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.
7. ALL CLOSETS AND ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
8. ALL PUBLIC SPACES: THE WALLS WILL BE FINISHED WITH 5/8" GYP. BD. TO A LEVEL 4 FINISH AND PAINTED, UNLESS NOTED OR SPECIFIED OTHERWISE.
9. RE: FINISH LEGEND, AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.
10. ALL EXPOSED STEEL INCLUDING COLUMNS TO BE PAINTED WP4

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

FINAL DEVELOPMENT PLAN

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

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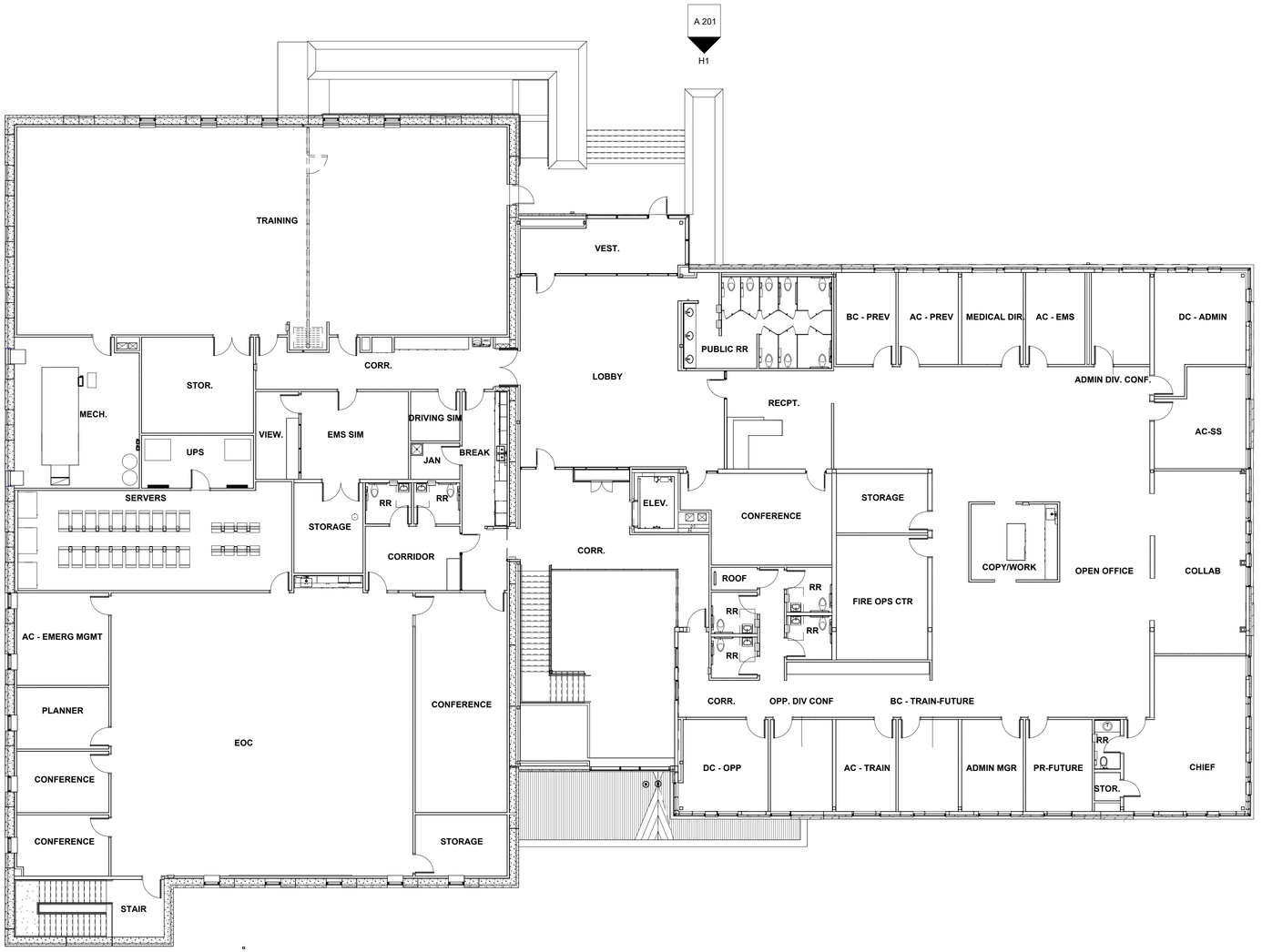
Architect Of Record:
Hoefer Welker

PROFESSIONAL SEAL

A 101

ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

LOWER LEVEL - FLOOR PLAN



GENERAL NOTES - FLOOR PLANS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. ARCHITECTURAL ELEVATION 100'-0" = CIVIL ELEVATION 1024.67'.
3. DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS NOTED OR SHOWN OTHERWISE.
4. FOR METAL STUD CONSTRUCTION DIMENSIONS SHOWN ON THE FLOOR PLAN ARE TO THE FACE OF GYP. BOARD/ WALL (FOG), UNLESS NOTED OR SHOWN OTHERWISE.
5. NOTE: WALL THICKNESSES ARE ACTUAL DIMENSIONS.
6. DOOR OPENINGS NOT LOCATED BY DIMENSION SHALL BE CENTERED IN WALL SHOWN OR LOCATED 4 INCHES FROM FINISH WALL TO OUTSIDE FACE OF DOOR FRAME - HINGE SIDE, ALWAYS ALLOWING A MINIMUM OF 18" FROM THE PULL SIDE (STRIKE SIDE) OF THE DOOR TO THE INTERSECTING WALL, OR OTHER PROTRUDING OBJECTS.
7. ALL CLOSETS AND ALCOVES WITHOUT A SPACE IDENTIFICATION NUMBER SHALL HAVE THE SAME FINISHES AS THE ADJOINING SPACES.
8. ALL PUBLIC SPACES: THE WALLS WILL BE FINISHED WITH 5/8" GYP. BD. TO A LEVEL 4 FINISH AND PAINTED, UNLESS NOTED OR SPECIFIED OTHERWISE.
9. RE: FINISH LEGEND, AND SPECIFICATIONS FOR DOOR AND DOOR FRAME FINISHES.
10. ALL EXPOSED STEEL INCLUDING COLUMNS TO BE PAINTED WP4

NORTH

A1 MAIN LEVEL FLOOR PLAN
3/32" = 1'-0"

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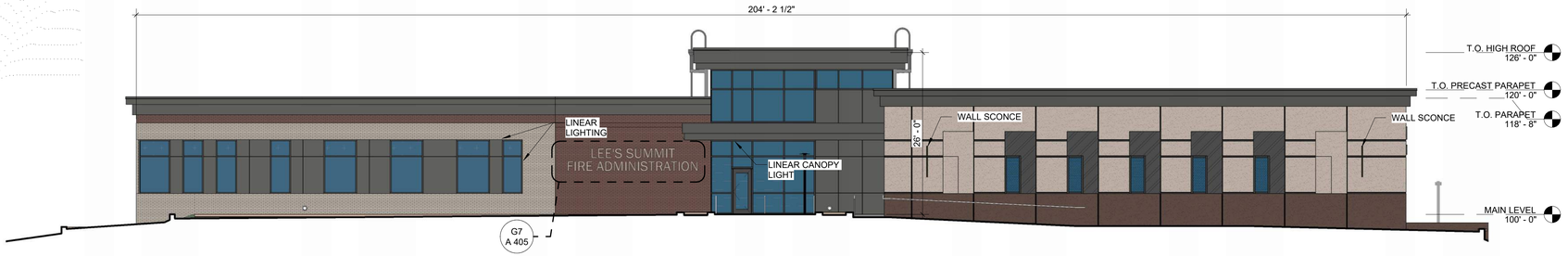
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A 102

ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

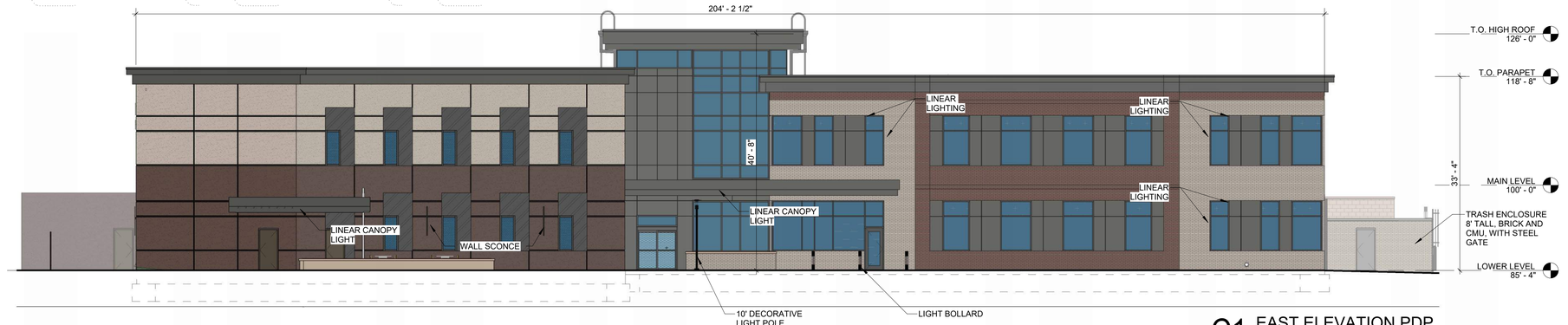
MAIN LEVEL - FLOOR PLAN



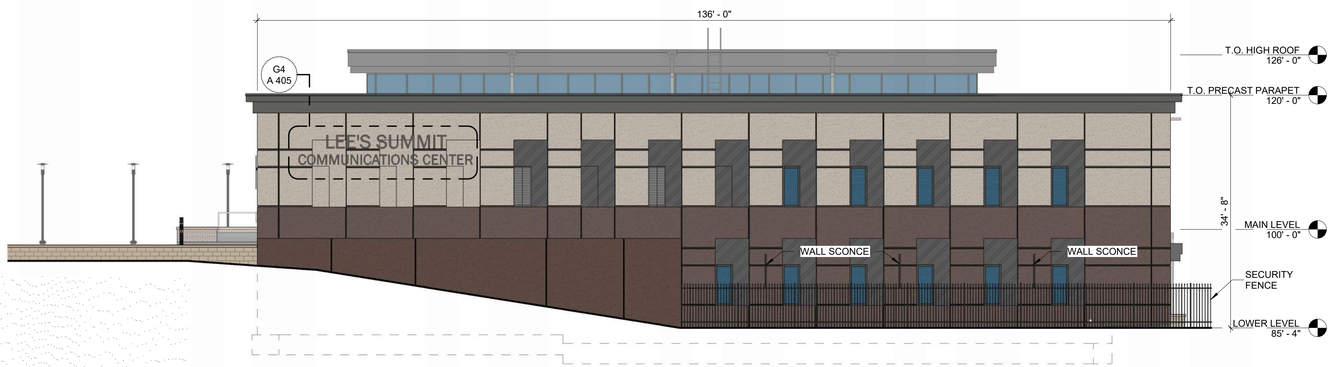
H1 WEST ELEVATION PDP
3/32" = 1'-0"



F1 NORTH ELEVATION PDP
3/32" = 1'-0"



C1 EAST ELEVATION PDP
3/32" = 1'-0"



A1 SOUTH ELEVATION PDP
3/32" = 1'-0"

GENERAL NOTES - EXTERIOR ELEVATIONS:

1. RE: SHEET G-011 FOR ADDITIONAL GENERAL NOTES THAT ARE APPLICABLE.
2. DIMENSIONS SHOWN ON THE EXTERIOR ELEVATIONS ARE TO THE FACE OF EXTERIOR WALL, FACE OF MASONRY (FOM), FACE OF CONCRETE WALLS (FOC), AND COLUMN GRID LINES, UNLESS OTHERWISE NOTED OR INDICATED.
3. RE: THE WINDOW TYPES SHEET FOR ALL EXTERIOR WINDOW TYPES AND GLASS TYPES.
4. ALL EXPOSED STEEL INCLUDING COLUMNS AND LINTELS TO BE PAINTED WP4
5. ALL SEALANT JOINTS TO MATCH ADJACENT FINISH, TYP.

METAL PANEL PERCENTAGE:

ELEVATION	TOTAL SF	METAL SF	METAL%
NORTH:	4,394 SF	1,120 SF	25.49%
EAST:	4,805 SF	1,180 SF	24.55%
SOUTH:	7,177 SF	1,668 SF	23.24%
WEST:	5,177 SF	754 SF	14.56%
TOTAL:	21,553 SF	4,722 SF	21.90%

EXTERIOR ELEVATION MATERIALS

- BRICK - BROWN
- BRICK - TAN
- PRECAST PANEL - TAN
- ROUGH AGGREGATE ARCHITECTURAL PRECAST TO MATCH EXISTING BUIDLING
- PAINTED PRECAST PANEL
- LOW E INSULATED GLAZING
- COMPOSITE METAL PANEL
- MODULAR BLOCK RETAINING WALLS

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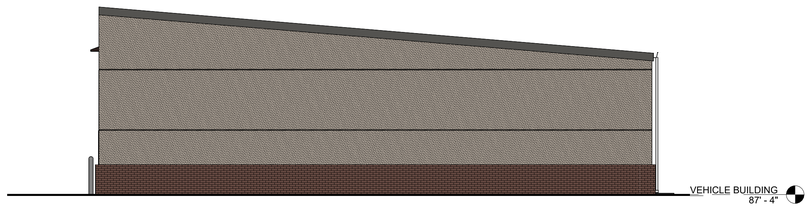
Architect Of Record:
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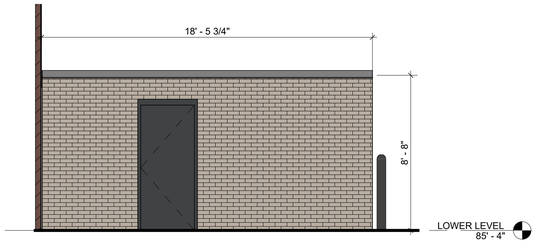
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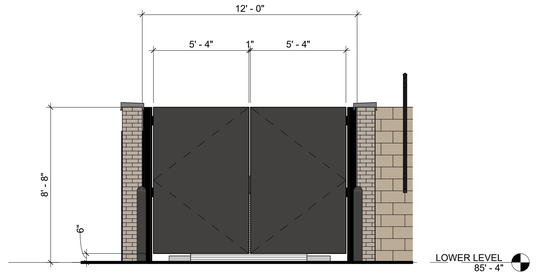
EXTERIOR ELEVATIONS



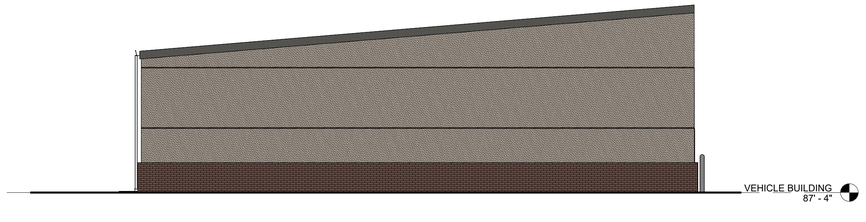
G7 EAST ELEVATION - VEHICLE
1/8" = 1'-0"



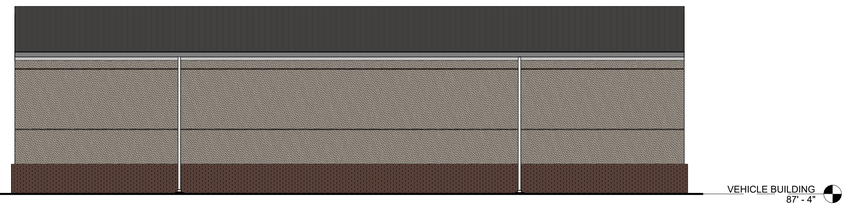
E4 TRASH ENCLOSURE@ JOF - EAST
1/4" = 1'-0"



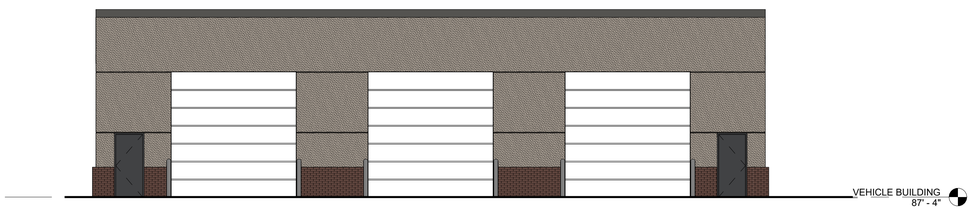
E1 TRASH ENCLOSURE JOF - NORTH
1/4" = 1'-0"



D7 WEST ELEVATION - VEHICLE
1/8" = 1'-0"



C7 NORTH ELEVATION - VEHICLE
1/8" = 1'-0"



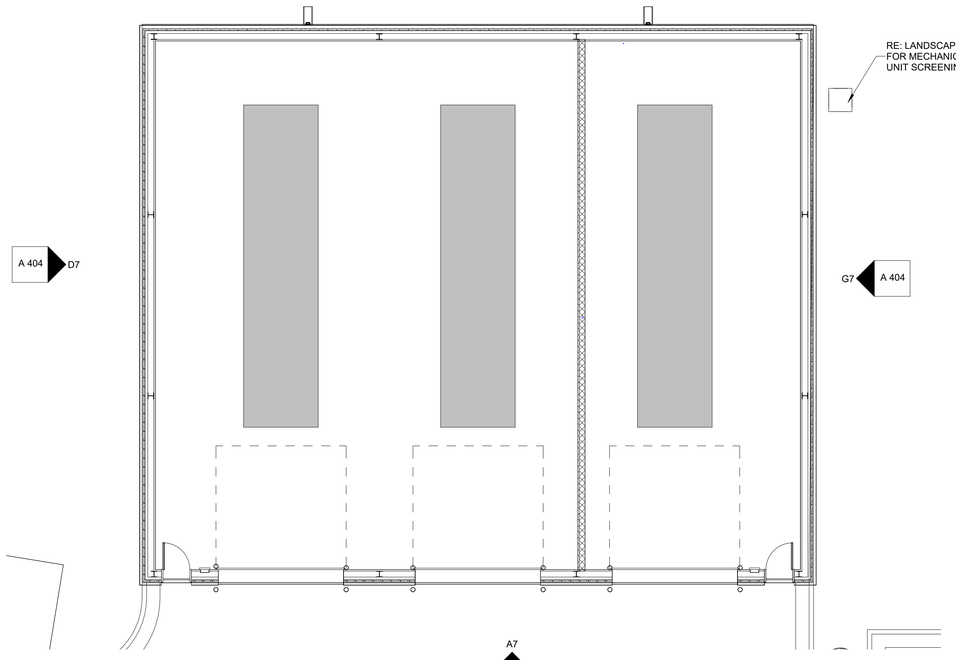
A7 SOUTH ELEVATION - VEHICLE
1/8" = 1'-0"

A 404
C7

A 404
D7

A 404
G7

A 404
A7



NORTH

A1 VEHICLE BUILDING PDP
1/8" = 1'-0"

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

FINAL DEVELOPMENT PLAN

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

EXTERIOR ELEVATION MATERIALS

- **BRICK - RUNNING BOND - EDICOTT- COLOR MEDIUM IRONSPOT 46 VELOUR**
- **BRICK - RUNNING BOND - INTERSTATE BRICK - COLOR ASH**
- **EIFS - COLOR TO MATCH TAN PRECAST**
- **MODULAR BLOCK RETAINING WALL**

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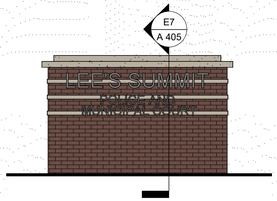
Architect Of Record:
Hoefer Welker

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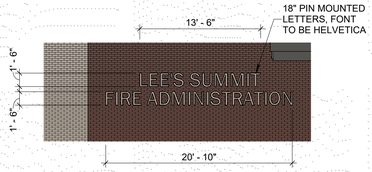
A 404

ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

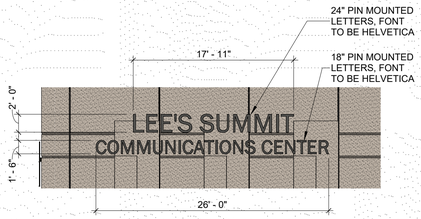
ENLARGED PLANS AND ELEVATIONS



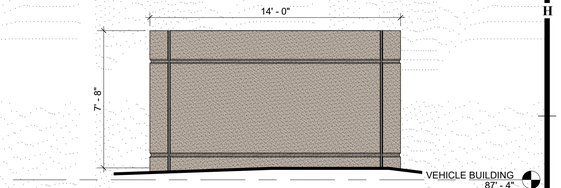
G9 POLICE BUILDING MONUMENT SIGN
1/4" = 1'-0"



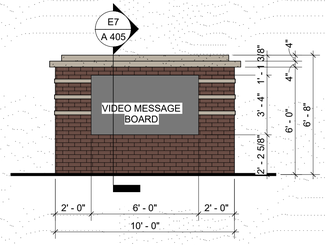
G7 EXTERIOR SIGNAGE - WEST
1/8" = 1'-0"



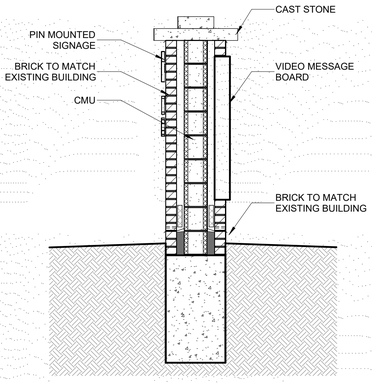
G4 EXTERIOR SIGNAGE JOF - SOUTH
1/8" = 1'-0"



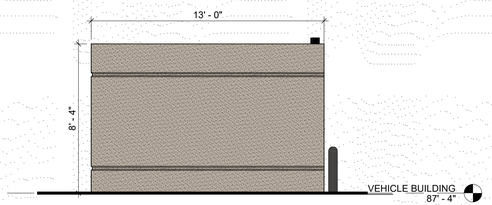
G1 TRASH ENCLOSURE @ POLICE BUILDING - WEST
1/4" = 1'-0"



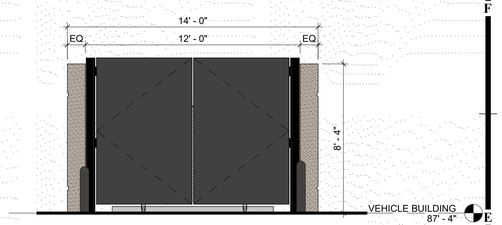
E9 POLICE BUILDING MONUMENT SIGN
1/4" = 1'-0"



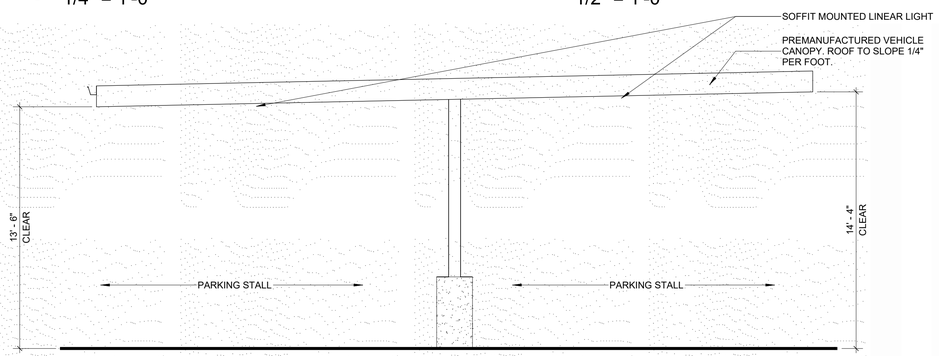
E7 MONUMENT SIGN SECTION
1/2" = 1'-0"



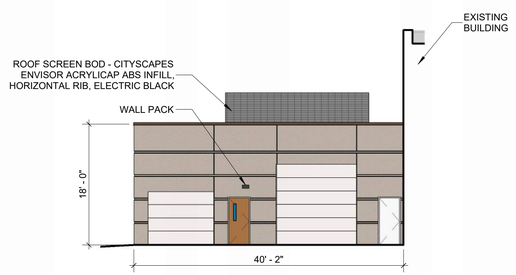
E4 TRASH ENCLOSURE @ POLICE BUILDING - SOUTH
1/4" = 1'-0"



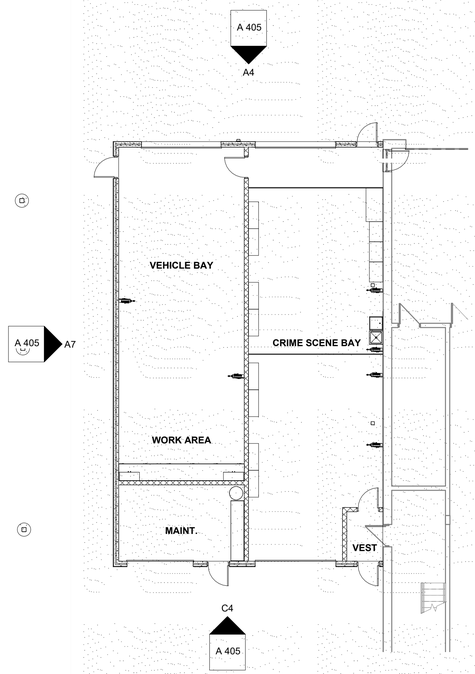
E1 TRASH ENSCLOSURE @ POLICE BUILDING - EAST
1/4" = 1'-0"



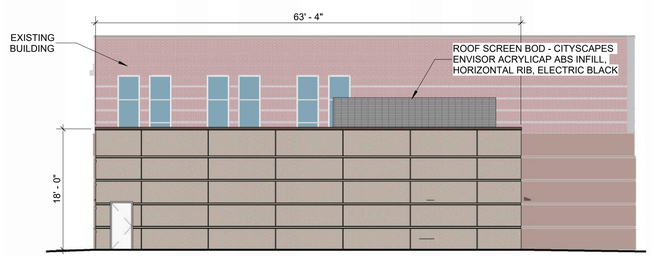
C7 VEHICLE CANOPY SECTION
1/4" = 1'-0"



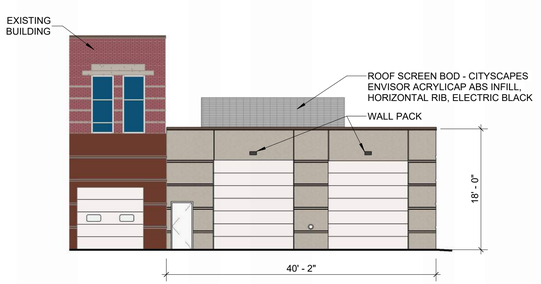
C4 CRIME SCENE ADDITION SOUTH
3/32" = 1'-0"



A1 POLICE CRIME SCENE BAY ADDITION
3/32" = 1'-0"



A7 CRIME SCENE ADDITION WEST
3/32" = 1'-0"



A4 CRIME SCENE ADDITION NORTH
3/32" = 1'-0"

NORTH

EXTERIOR ELEVATION MATERIALS

- BRICK - BROWN
- BRICK - TAN
- PRECAST PANEL - TAN
- ROUGH AGGREGATE ARCHITECTURAL PRECAST TO MATCH EXISTING BUILDING
- PAINTED PRECAST PANEL
- LOW E INSULATED GLAZING
- COMPOSITE METAL PANEL
- MODULAR BLOCK RETAINING WALLS

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FINAL DEVELOPMENT PLAN

2 NE TUDOR RD
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REVISION DATES:

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ISSUE DATE: OCTOBER 16, 2024
HOEFER WELKER #: 138191

ENLARGED PLANS AND ELEVATIONS

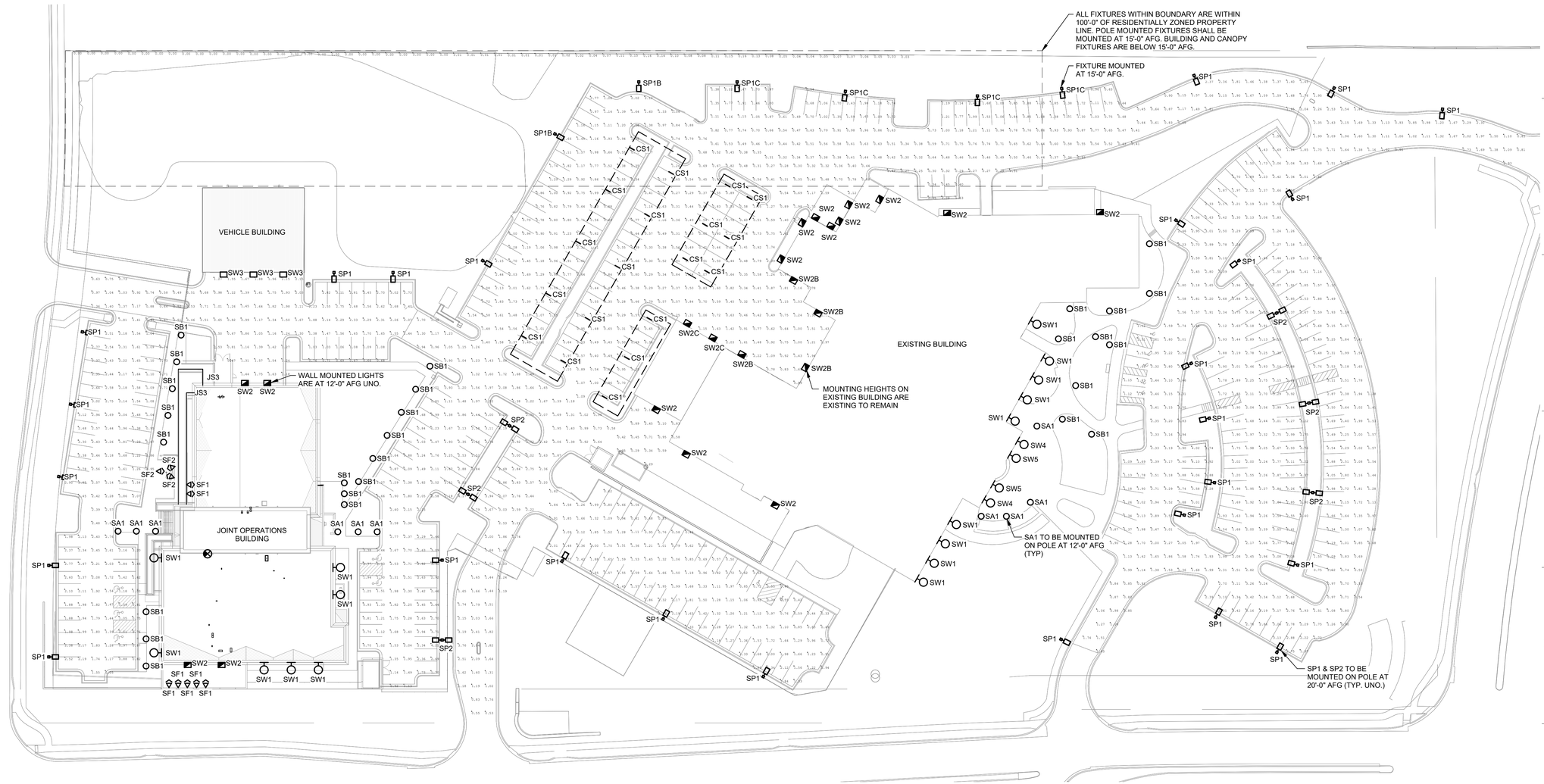
NOTES:
- LEE'S SUMMIT UDO 8.260 STATES ALL WALL MOUNTED LIGHTS SHALL BE METAL HALIDE. WE ARE PROVIDING LED LIGHTING ONLY AND REQUEST A VARIANCE ON THIS REQUIREMENT.
- PROPERTY BOUNDARY CALCULATIONS WERE PERFORMED ON THE BOUNDARY BETWEEN THIS PROPERTY AND THE ADJACENT RESIDENTIAL PROPERTY.

Luminaire Schedule

Symbol	Qty	Label	Lum. Lumens	LLF	Description
	26	SP1	12166	0.800	DSX1 LED P1 30K 80CRI T4M
	19	SW2	1733	0.800	WDGE2 LED P2 30K 80CRI VW
	10	SA1	2436	0.800	ECR00-L1S2O-L02-40K
	28	SB1	910	0.800	LQ627-L1S2O-E0K-U2M
	17	SW1	3431	0.800	OWL0-48-LM
	6	SP2	12166	0.800	DSX1 LED P1 30K 80CRI T4M
	19	CS1	1940	0.400	VIAWET-TM24-HLO-LED-80-500-3O-4FT
	4	SW2B	1669	0.800	WDGE2 LED P2 30K 90CRI VF
	2	SW2C	329	0.800	275198
	2	SW3	2436	0.800	ECR00-L1S2O-L02-40K
	2	JS3	192	0.800	RIBBONLYTE
	3	SF2	703	0.800	35174023_V10
	7	SF1	1324	0.800	35702033_V05
	2	SP1B	5775	0.800	DSX1 LED P1 30K 80CRI T4M HS
	4	SP1C	5469	0.800	DSX1 LED P1 30K 80CRI TFTM HS
	2	SW2C	1049	0.800	WDGE2 LED P1 30K 90CRI VF

Calculation Summary

Label	Units	Avg	Max	Min	Max/Min
Existing Parking Surface (East)	FC	2.12	4.37	0.44	9.93
Existing Parking Surface (West)	FC	1.07	2.77	0.27	10.26
New Parking Surface	FC	1.82	4.21	0.46	9.15
New Parking Surface (H Spots)	FC	0.85	2.47	0.25	9.88
Property Boundary (Residential)	FC	0.04	0.16	0.00	N.A.



1 ELECTRICAL SITE PLAN
1" = 40'-0"

GENERAL NOTES:

1. REFER TO SHEET EG001 FOR GENERAL ELECTRICAL NOTES.
2. ALL EXTERIOR LIGHTING SHALL COMPLY WITH THE STANDARDS UNDER ARTICLE 8 OF THE CITY'S UNIFIED DEVELOPMENT ORDINANCE (UDO). MORE SPECIFICALLY, COMPLIANCE WITH THE LIGHTING STANDARDS OF UDO SECTIONS 8.220, 8.230, 8.250, 8.260 AND 8.270 SHALL TAKE PLACE AT THE TIME OF FINAL DEVELOPMENT PLAN.

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2 NE TUDOR RD
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PACKAGE 2: CONSTRUCTION SET

REVISION DATES:

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EF101

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

ELECTRICAL FDP LIGHTING



D-Series Size 1

Legacy LED Area Luminaire

Catalog Number

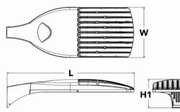
Notes

Type SP1, SP1B, SP1C, SP2

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

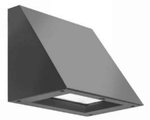
EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD G1

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4[1] P7[1] P2 P5[1] P8 P3 P6[1] P9[1] **Rotated optics** P10[1] P12[1] P11[1] P13[1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium	T5VS Type V very short[3] T5S Type V short[3] T5M Type V medium[3] T5W Type V wide[3] BLC Backlight control[4] LCCO Left corner cutoff[4] RCCO Right corner cutoff[4]	MVOLT[5] XVOLT (277V-480V)[6,7,8] 120[9] 208[9] 240[9] 277[9] 347[9] 480[9]	**Shipped included** SPA Square pole mounting RPA Round pole mounting[10] WBA Wall bracket[11] SPUMBA Square pole universal mounting adaptor[11] RPUMBA Round pole universal mounting adaptor[11] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[12]

Control options		Other options		Finish (required)		Generation (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[13] PIRHN Network, high/low motion/ambient sensor[14] PER NEMA twist-lock receptacle only (controls ordered separate)[15] PER5 Five-pin receptacle only (controls ordered separate)[15,16] PER7 Seven-pin receptacle only (controls ordered separate)[15,16] DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[17] DS Dual switching[18,19,20]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[20,21] PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[20,21] PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[20,21] PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[20,21] FAO Field adjustable output[19,22]	**Shipped installed** HS House-side shield[23] SF Single fuse (120, 277, 347V)[9] DF Double fuse (208, 240, 480V)[9] L90 Left rotated optics[2] R90 Right rotated optics[2] HA 50°C ambient operations[1] **Shipped separately** BS Bird spikes[24] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white	G1 Generation 1

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WDGE2 LED

Architectural Wall Sconce
Visual Comfort Optic

Catalog Number

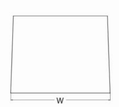
Notes

Type SW2, SW2B, SW2C

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 7"
Depth (D2): 1.5"
Height: 9"
Width: 11.5"
Weight: (without options) 13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

design select Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect. *See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P1 P15W P2 P25W P3 P35W P4 Door with small window (SW) is required to accommodate sensors. See page 2 for more details. P5	27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	80CRI 90CRI	VF Visual comfort forward throw VW Visual comfort wide	MVOLT 347[1] 480[1]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[2] **Shipped separately** AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.

Options			
E4WH Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)	**Standalone Sensors/Controls** (only available with P15W, P25W & P35W)		DDBXD Dark bronze
E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C min)	PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.		DBLXD Black DNAXD Natural aluminum
E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)	PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.		DWHXD White DSSXD Sandstone
PE Photocell, Button Type[3]	PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.		DDBTXD Textured dark bronze
DS Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[4]	PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.		DBLBXD Textured black
DMG 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)[5]	**Networked Sensors/Controls** (only available with P15W, P25W & P35W)		DNATXD Textured natural aluminum
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.	NLTAIR2 PIR Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.		DWHGXD Textured white
DSLE Dual Switching (1 Driver, 2 Light Engines)	NLTAIR2 PIRH Embedded wireless controls by nLight with Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.		DSSTXD Textured sandstone
CCE Coastal Construction	NLTAIRE2 PIR Embedded wireless controls by nLight with UL924 listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights.		
	NLTAIRE2 PIRH Embedded wireless controls by nLight with UL924 listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights.		
	See page 4 for out of box functionality		

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LUMINIS®

EC802/EC803 SERIES

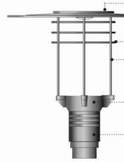
ECLIPSE MAXI

8" Pole/Wall mount

SA1, SW5

TYPE: _____ QUANTITY: _____ PROJECT: _____

CATALOG NUMBER:	FIXTURE	WATTAGE	VOLTAGE	FINISH	OPTION	OPTION	OPTION	OPTION



1- Heavy cast aluminum top cover with integral LED heat dissipating pad.
2- Ø 30" x .090" (2.5mm) thick hard aluminum top shade. Underside surface is painted white enamel to optimize light performance (EC803 only).
3- Set of three aluminum louvers.
4- Set of 4 X 1/2" (13mm) solid aluminum struts.
5- Cast aluminum upper electrical housing.
6- Cast aluminum lower electrical housing.

EC802



EC803



MATERIALS

Eclipse is made of corrosion resistant 356 aluminum alloy with a copper (CU) content of less than 0.1%.
The lower cast aluminum housing fits with a 4" (102mm) or 5" (127mm) pole and contains all electrical controls on a removable tray.

ELECTRICAL

DRIVER Standard driver is 0-10V dimming-ready (dims to 10%) with: 120-277 multi-volt compatibility (50-60Hz), optional 347V on request, minimum operating temperature of -30°C/-22ºF, output over voltage protection, output over current protection, output short circuit protection with auto-recovery, and over temperature protection (105ºC).

LED Type II, III or V light distribution via high performance optical lenses. Standard 4000K/80CRI. Optional 2700K, 3000K and 3500K. Removable modular LED platform.
Optional true amber LED for turtle sensitive areas.
Wavelengths: 585nm to 597nm.

LIFE

75,000hrs $L_{70}B_{50}$ (based on IESNA TM-21 Test Method and LM-80 data).
145,000hrs $L_{70}B_{50}$ (calculated projection from LM-80 data).

FINISH

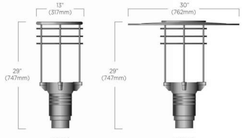
Five-stage preparation process including preheating of cast aluminum parts for air extraction, and an environmentally friendly alloy sealant. Polyester powder coating is applied through an electrostatic process and oven cured for long term finish.

MOUNTING

Maximum weight: 32 kg (34.5 kg)
Eclipse is designed for ease of access and installation.
Standard luminaire mounts on a 4" (102mm) or 5" (127mm) pole.
Alternate pole or wall adapters are proposed with high quality components to meet multiple installation conditions.

CERTIFICATION

Certified and Approved as per CSA C22.2 No.: 250.0 standard and ANSI/UL 1598 standard, for wet location. Rated IP65.
Photometric testing performed by an independent laboratory in accordance with IES LM-79 standards at 25ºC. Lumen depreciation in accordance with IESNA LM80 standards.



Luminaires may be altered for design improvement or discontinued without prior notice.

LUMINIS®

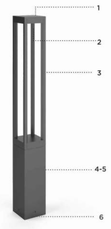
LQ627 SERIES

Lumiquad

6" BOLLARD

TYPE: SB1 QUANTITY: _____ PROJECT: _____

CATALOG NUMBER:	FIXTURE	SUFFIX	VOLTAGE	FINISH	OPTION	OPTION	OPTION	OPTION



1- Heavy cast aluminum top cover.
2- Optical system assembly.
3- 4x extruded aluminum struts.
4- Cast aluminum driver housing.
5- 6" (152mm) x 6" (152mm) extruded aluminum square body.
6- Cast aluminum mounting base.

LQ627



MATERIALS

Lumiquad bollard is made of corrosion resistant 356 aluminum alloy with a copper (CU) content of less than 0.1%.

ELECTRICAL

DRIVER Standard driver is 0-10V dimming-ready (dims to 10%) with: 120-277 multi-volt compatibility (50-60Hz), operating temperatures of -40ºC/-40ºF to 55ºC/131ºF, output over voltage protection, output over current protection, output short circuit protection with auto-recovery.

LED 3000K/3500K/4000K CCT with 80 CRI.
Optional true amber LED for turtle sensitive areas.
Wavelengths: 585nm to 597nm.

LIFE

60,000hrs $L_{70}B_{50}$ (based on IESNA TM-21 Test Method and LM-80 data).
Up to 70,000hrs $L_{70}B_{50}$ (calculated projection from LM-80 data).

FINISH

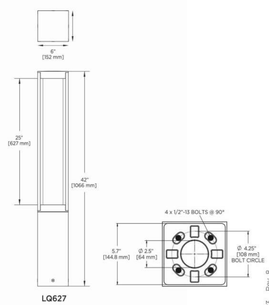
Five-stage preparation process includes preheating of cast aluminum parts for air extraction. Polyester powder coating is applied through an electrostatic process, and oven cured for long term finish.

CERTIFICATION

Certified and Approved as per CSA C22.2 No.: 250.0 standard and ANSI/UL 1598 standard, for wet location: Rated IP65.
Photometric testing performed by an independent laboratory in accordance with IES LM-79-08 standards at 25ºC. Lumen depreciation in accordance with IESNA LM80 standards.

MOUNTING

Mounts with a set of 4 x 1/2"-13 x 18" lg. galvanized anchor bolts.



Luminaires may be altered for design improvement without prior notice.

Fixture Number					
Project Title		Type	SW1	Qty	
Comments					

CAMMAN LIGHTING

- Metal Body with Indirect Lighting
- Wet Location
- ADA

Dimensions and Lamping:

OW610-24 2.75"A x 24" B x 3" D x 12" MC.....Weight: 7 lbs.
LN LED: Nominal 20W, 1400 Delivered Lumens

OW610-36 2.75"A x 36" B x 3" D x 18" MC.....Weight: 8.5 lbs.
LN LED: Nominal 30W, 2400 Delivered Lumens

OW610-48 2.75"A x 48" B x 3" D x 24" MC.....Weight: 10 lbs.
LN LED: Nominal 40W, 3400 Delivered Lumens

OW610-60 2.75"A x 60" B x 3" D x 30" MC.....Weight: 11.5 lbs.
LN LED: Nominal 50W, 4400 Delivered Lumens

LED Color Temperature:

30K 3000K **35K** 3500K **40K** 4000K

Control:

CLV Integral Power Supply, 0-10V Dimming to 1%

Voltage:

1 120V **2** 277V **MV** Multi-Volt

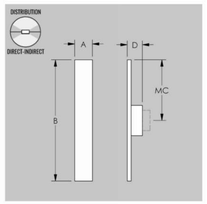
Standard Finishes:

PAL	Aluminum	**PBB**	Brushed Brass	**POR**	Pure Orange (RAL 2004)
PNL	Nickel	**PAB**	Antique Brass	**PYL**	Traffic Yellow (RAL 1023)
PBR	Bronze	**PHB**	Hammered Bronze	**PGR**	Emerald Green (RAL 6001)
PLB	Light Bronze	**PHC**	Hammered Copper	**PBL**	Signal Blue (RAL 5005)
PMB	Medium Bronze	**PHS**	Hammered Silver	**STBD**	To Be Determined
PDB	Dark Bronze	**PSG**	Satin Gold		
PSB	Satin Black	**PPA**	Patina		
PMW	Matte White	**PRD**	Traffic Red (RAL 3020)		

Other Options:

REM Remote Emergency Power Supply





Notes:

- Custom sizes and finishes available upon request.
- Camman reserves the right to make design changes without prior notice.
- Mounting is to a 2 x 4 inch rectangular junction box.
- Photometric information is available at cammanlighting.com

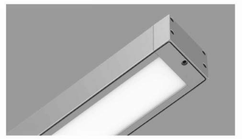
VIA WET

SURFACE
DIRECT
STATIC WHITE

LUMENWERX

Project: _____

Type: CS1



DESCRIPTION

Via Wet offers architectural lighting for wet locations in both exterior and interior applications. With a simple 3¼" high by 4½" wide profile of extruded aluminum, Via Wet can be installed in recessed, ceiling, wall, or pendant mounting.
Fully sealed, Via Wet is suitable for extreme weather condition, -20°C/-4°F to 40°C/104°F. A choice of output options provides up to 1000 lumens per foot section.

SENSORS For latest information on sensors, click here.

IMPORTANT: Fixture must be installed with lens facing down.

Order Guide

Up to 89 lm/W performance

LUMINAIRE ID	DISTRIBUTION	PROTECTIVE OPTIC	OPTIC	LIGHT SOURCE	CRI	LUMEN PACKAGE
VIAWETS	**D**			**SW**		
VIAWETS - Via Wet Surface	**D** - Direct	**TMG** - Tempered Clear Glass **PYC** - Clear Polycarbonate	**HLO** - High-Efficiency Lambertian Optic **PMO** - Precision Micro-Prism Optic	**SW** - Static white	**80CRI** - 80 CRI **90CRI** - 90 CRI	**500LMF** - Low output 500 lm/ft **750LMF** - Medium output 750 lm/ft **1000LMF** - High output 1000 lm/ft

COLOR TEMP.	LUMINAIRE LENGTH	VOLTAGE	DRIVER [1]	ELECTRICAL
27K - 2700K **30K** - 3000K **35K** - 3500K **40K** - 4000K **50K** - 5000K	**#FT** - Specify nominal length (#) in 1 foot increments **Standard nominal lengths:** Single units: 3' and 4' Continuous runs: lengths over 4'	**120V** - 120V **277V** - 277V **UNV** - 120V-277V **347V** [1] - 347V [1] Only available with DI driver.	**DI** - 1% 0-10V **DA** [2] - DALI **LTD10** [3] - Low-temperature 10% 0-10V [2] PoE (Power-over-Ethernet) compatible. Consult factory for details. [3] On-site commissioning is required. * Suitable for temperatures down to -40°C/F.	**1C** - 1 circuit **#MC** [4] - Multi circuit **EC** - Emergency-powered fixture **NL** - Night light fixture **DL** - Daylight fixture **CTD** [5,6,7] - Generator transfer device fixture [4] Specify total number of circuits (#), including any circuits required for electrical section options. Provide drawing or layout specifications. * Minimum 4' section per circuit. * Minimum 4' fixture. [5] Not available with 347V. [6] Not available for environments where the ambient temperature falls below 0°C (32°F).

ELECTRICAL SECTIONS (optional) [8,10]	POWER FEED	MOUNTING	FINISH	OPTION
		GSM		
#ECS# [9] - Emergency-powered section **#NLS#** [9] - Night light section **#DLS#** [9] - Daylight section **#CTD#B** [9,10,11] - Generator transfer device section **NA** - None [8] Specify with multi circuit (#MC) electrical option only. [9] Provide drawing or layout specifications. Consult factory for other configurations. Default section length is 4'. [10] Specify quantity (#), and section length in inches (##). [11] Minimum 4' section. [12] Not available with 347V. [13] Not available for environments where the ambient temperature falls below 0°C (32°F).	**TF** - Top feed **EF** - End feed	**GSM** - Gasketed surface mount	**W** - Matte white **AL** - Aluminum **CF#** - Custom finish, specify RAL#	**NATA** - Natatorium finish **NA** - None

Intertek
Lumenwerx reserves the right to modify product specifications without notification.
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VIAWET-SURFACE-SPEC-REV1 February 15, 2023

GENERAL NOTES:

1. REFER TO SHEET EG001 FOR GENERAL ELECTRICAL NOTES.
2. ALL EXTERIOR LIGHTING SHALL COMPLY WITH THE STANDARDS UNDER ARTICLE 8 OF THE CITY'S UNIFIED DEVELOPMENT ORDINANCE (UDO). MORE SPECIFICALLY, COMPLIANCE WITH THE LIGHTING STANDARDS OF UDO SECTIONS 8.220, 8.230, 8.250, 8.260 AND 8.270 SHALL TAKE PLACE AT THE TIME OF FINAL DEVELOPMENT PLAN.

HOEFER WELKER
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SUITE 1400
KANSAS CITY, MO 64112
P: 913.307.3700
www.hoeferwelker.com

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

PROFESSIONAL SEAL

EF102

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

ELECTRICAL FDP LIGHT FIXTURES

PERFORMANCE IN LIGHTING | powered by GEWISS

PRODUCT CODE 070198
PROJECT
TYPE SW4

QUASAR 10 4WB

PROTO | IP 44 | WET | UL LISTED | ADAL

Part number	070198
Lampholder:	LED
Wattage:	10 W
Finishing:	WH-87 / White / Textured
Degree of protection:	IP44
CRI:	80
Kelvin:	3000
Luminaire lumen output [lm]:	329 lm
L:	L80
B:	B10
Lifetime:	60000 h
cULus:	
Voltage:	120/277 V
Min. ambient temperature [°C]:	-30
Max. ambient temperature [°C]:	40



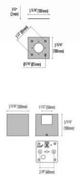
Description

Wall effect series. Fixtures consist of:
- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free (<1%) precision die-cast aluminum housing and mounting plate.
- Extra-clear, tempered, silk-screened, flat glass diffuser.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote long LED life.
- Surface effects light emission.
- Input voltage: 120-277 V (50 / 60 Hz), integral driver.
- Junction box mounting plate included (for 4" octagon box only, provided by others).
- The luminaire may be configured with numerous options and multiple standard finishes. Not all options are available in all configurations. Consult factory for more information about specification sheet details to build your light.
- Product meets Buy American Act (BAA) requirements within ARRA.
- 5-year warranty.

Photometric data



Technical drawings



LineLED LL Series Wet Tube | IP65, IP67, & IP68 rated Linear LED strip - 24V

optic arts by lumini

JS3



IP65 | IP67 | IP68

Features

LineLED Wet Tube is a small profile, energy efficient LED strip for IP65, IP67, and IP68 rated wet installations. LineLED Wet Tube offers excellent color quality with CRI and R9 values up to 97 as well as multiple output options and a wide angle 120° beam. With a durable but flexible circuit board, LineLED Wet Tube is also easy to install.

To maintain IP65, IP67, and IP68 rating, LineLED Wet Tube is factory sealed and bonded. Order in exact lengths required for install. LineLED Wet Tube is not field cuttable. IP rating of strip is equal to the lowest IP rating of section start and end options.

Mounting
LED strip is equipped with 3M™ adhesive transfer tape (9472LE).

Applications
Outdoor and wet locations - cove lighting, architectural accent, handrail, wet bars

Approvals
IP65, IP67, and IP68 rated

Operating voltage
24 VDC

Life (L70)
50,000 hours

Warranty
3 years

CE | LM80 | RoHS | Single Pin FCI | cULus LISTED | JA8 COMPLIANT | DOE

Technical information

TYPE	LL42-WET-T		
OUTPUT OPTIONS	**SO**	**HO**	**VHO**
Lumens Output (3000K)	119 lm/ft	200 lm/ft	290 lm/ft
Average Power Consumption (for a 4' section)	1.4 W/ft	2.4 W/ft	3.6 W/ft
Efficacy	85 lm/W	83 lm/W	81 lm/W
Cutting Increment (in)	1.97"		
Pitch Length	0.28"		
Max Run Length (in series)	55 ft	45 ft	35 ft
Dimensions	0.47"W x 0.24" H		

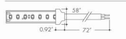
CCT	Multiplier (reference - 3000K)	CRI	TM-30 Rf	TM-30 Rg	R9
2700K	0.76	97	96	101	91
3000K	1.00	97	95	104	97
3500K	1.02	97	94	105	97
4100K	1.12	97	90	99	97

Section Start/End Options

SL65
72" Soldered Leads, IP65 rated



SL68
72" Soldered Leads, IP68 rated



LF
Female Quick Connect End, IP67 rated



LM
Male Quick Connect End, IP67 rated



NC
No Connector



IP65 rated when used with SL65 selection

IP67 rated when used with LM or LF selection

IP68 rated when used with SL68 selection

Ordering code

MODEL	OUTPUT	CCT	SECTION START[1]	SECTION END[1]	LENGTH
LL42WET-LineLED LL42 Wet Tube	**SO**-Standard **HO**-High **VHO**-Very High	**27K**-2700K **30K**-3000K **35K**-3500K **41K**-4100K	**SL65**-IP65 Soldered lead wires (72") **SL68**-IP68 Soldered lead wires (72") **LF**-IP67 Female Quick Connect **LM**-IP67 Male Quick Connect **NC**-No Connector	**SL65**-IP65 Soldered lead wires (72") **SL68**-IP68 Soldered lead wires (72") **LF**-IP67 Female Quick Connect **LM**-IP67 Male Quick Connect **NC**-No Connector	Ordered in one foot increments. See chart above for max run length.

1- IP rating of strip is equal to the lowest IP rating of section start and end options.

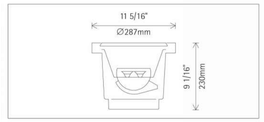
ERCO

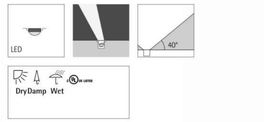
Tesis In-ground luminaire

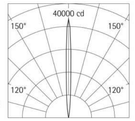
SF2

Directional luminaire









h(ft)	E(fc)	D
15	154	1'4"
12	241	1'1"
9	428	0'9"
6	962	0'6"
3	3850	0'3"

35174.023
LED module: 8.1W 956lm 3000K warm white
0-10V dimmable
Version 10
Size 7
Flush mounting detail
Spherolit lens, narrow spot

Product description
Housing: polymer, black.
Longitudinally watertight cable 5xAWG14, L 31 1/2" / 800mm.
Control gear 120V/277V, 60Hz, dimmable.
LED module: high-power LEDs.
Collimating lens made of optical polymer. 0°-30° tilt, 360° rotation.
Optical cut-off 40° from horizontal.
Screw-fastened cover ring with flush safety glass: stainless steel. Safety glass: 5/8" / 15mm, clear.
Installation with separate connection sleeve.
Mounting in recessed housing: Can be driven over in vehicles with pneumatic tyres. Load 11240lbf / 50kN.
Dimming with external dimmers possible (0-10V).
Suitable for wet location (IP68): dust-proof.
Weight 13.11lbs / 5.94kg
Version with 3000K CRI 97 or 2700K, 3500K, 4000K CRI 92 available on request.

Technical data

Luminous flux of the luminaire	695lm
Connected load	9.8W
Luminaire efficacy	71lm/W
Color deviation	1.5 SDCM
Color rendition index	CRI 92
Lumen maintenance (LED manufacturer specifications)	l90/B10 ≤50000h l90 ≤100000h
LED failure rate	0.1% ≤50000h
LMF	E
Temperature on the cover glass	100°F / 38°C

For your regional contact in the ERCO Sales network click here
www.erco.com/contact

Technical region: 120V/60Hz, 277V/60Hz
We reserve the right to make technical and design changes.
Edition: 08.05.2024
Current version under www.erco.com/35174.023

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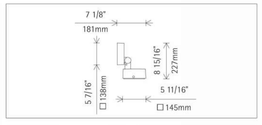
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ERCO

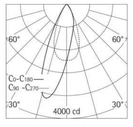
Lightscan Lens wallwasher

SF1









35702.023 Graphit m
LED module: 18.6W 2008lm 3000K warm white
0-10V dimmable
Version 5
Spherolit lens, wallwash

Product description
Housing and hinge: corrosion-resistant cast aluminum, No-Rinse surface treatment. Double powder-coated. Optimized surface for reduced accumulation of dirt. 90° tilt, 360° rotation. Hinge with sealing and inner cable routing.
Mounting plate: polymer, coated.
2 cable entries. Through-wiring possible. 5-pole terminal block.
Control gear 120V/277V, 60Hz, dimmable.
LED module: high-power LEDs.
Collimating lens made of optical polymer.
Luminaire head with non-reflective safety glass: corrosion-resistant cast aluminum, double powder-coated.
Internal anti-glare cone, polymer, black lacquered.
Dimming with external dimmers possible (0-10V).
Suitable for wet location (IP65): dust-proof and water jet-proof.
Housing temperature 113°F / 45°C
Maximum wind load area 0.32ft² / 0.03m²
Weight 4.64lbs / 2.11kg
Version with 3000K CRI 97 or 2700K, 3500K, 4000K CRI 92 available on request.

Mean illuminance (wall)

Angle of tilt 35°			
Wall height (ft)	16		
Offset from wall (ft)	4	5	6
Luminaire spacing (ft)	5	7	7
Illuminance (fc)	**19**	**12**	**11**

Technical data

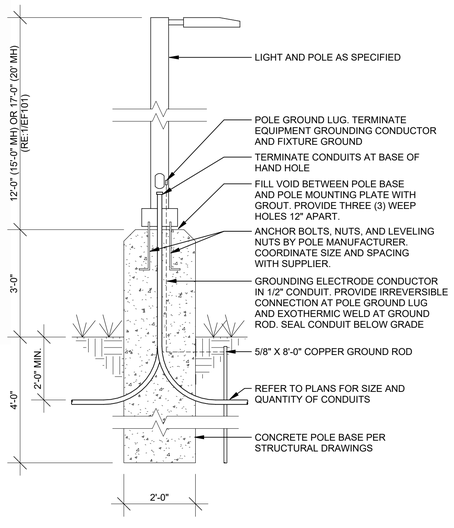
Luminous flux of the luminaire	1523lm
Connected load	22.0W
Luminaire efficacy	69lm/W
Color deviation	1.5 SDCM
Color rendition index	CRI 92
Lumen maintenance (LED manufacturer specifications)	l90/B10 ≤50000h l90 ≤100000h
LED failure rate	0.1% ≤50000h
LMF	E

For your regional contact in the ERCO Sales network click here
www.erco.com/contact

Technical region: 120V/60Hz, 277V/60Hz
We reserve the right to make technical and design changes.
Edition: 08.05.2024
Current version under www.erco.com/35702.023

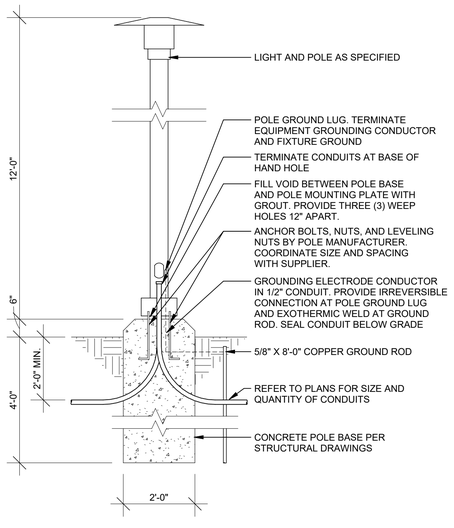
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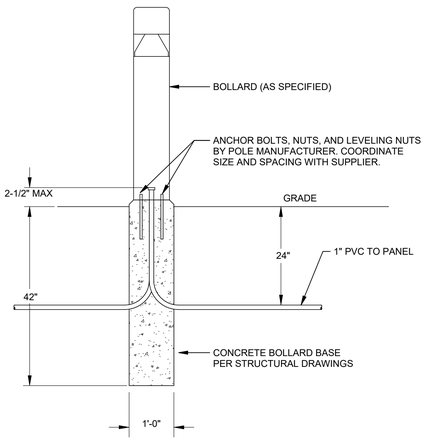
NOTE: CONFIRM ALL BASE DIMENSIONS WITH STRUCTURAL DETAILS. STRUCTURAL ENGINEERING DRAWINGS SHALL GOVERN.

3 POLE BASE DETAIL - TALL BASE
NOT TO SCALE



NOTE: CONFIRM ALL BASE DIMENSIONS WITH STRUCTURAL DETAILS. STRUCTURAL ENGINEERING DRAWINGS SHALL GOVERN.

2 POLE BASE DETAIL - SHORT BASE
NOT TO SCALE



1 BOLLARD INSTALLATION DETAIL
NOT TO SCALE

GENERAL NOTES:

1. REFER TO SHEET EG001 FOR GENERAL ELECTRICAL NOTES.
2. ALL EXTERIOR LIGHTING SHALL COMPLY WITH THE STANDARDS UNDER ARTICLE 8 OF THE CITY'S UNIFIED DEVELOPMENT ORDINANCE (UDO). MORE SPECIFICALLY, COMPLIANCE WITH THE LIGHTING STANDARDS OF UDO SECTIONS 8.220, 8.230, 8.250, 8.260 AND 8.270 SHALL TAKE PLACE AT THE TIME OF FINAL DEVELOPMENT PLAN.

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LEE'S SUMMIT JOINT OPERATIONS FACILITY

PACKAGE 2: CONSTRUCTION SET

2 NE TUDOR RD
LEE'S SUMMIT, MISSOURI 64086

REVISION DATES:

PROFESSIONAL SEAL

EF103

ISSUE DATE: NOVEMBER 1, 2024
HOEFER WELKER #: 138191

ELECTRICAL FDP LIGHT FIXTURES