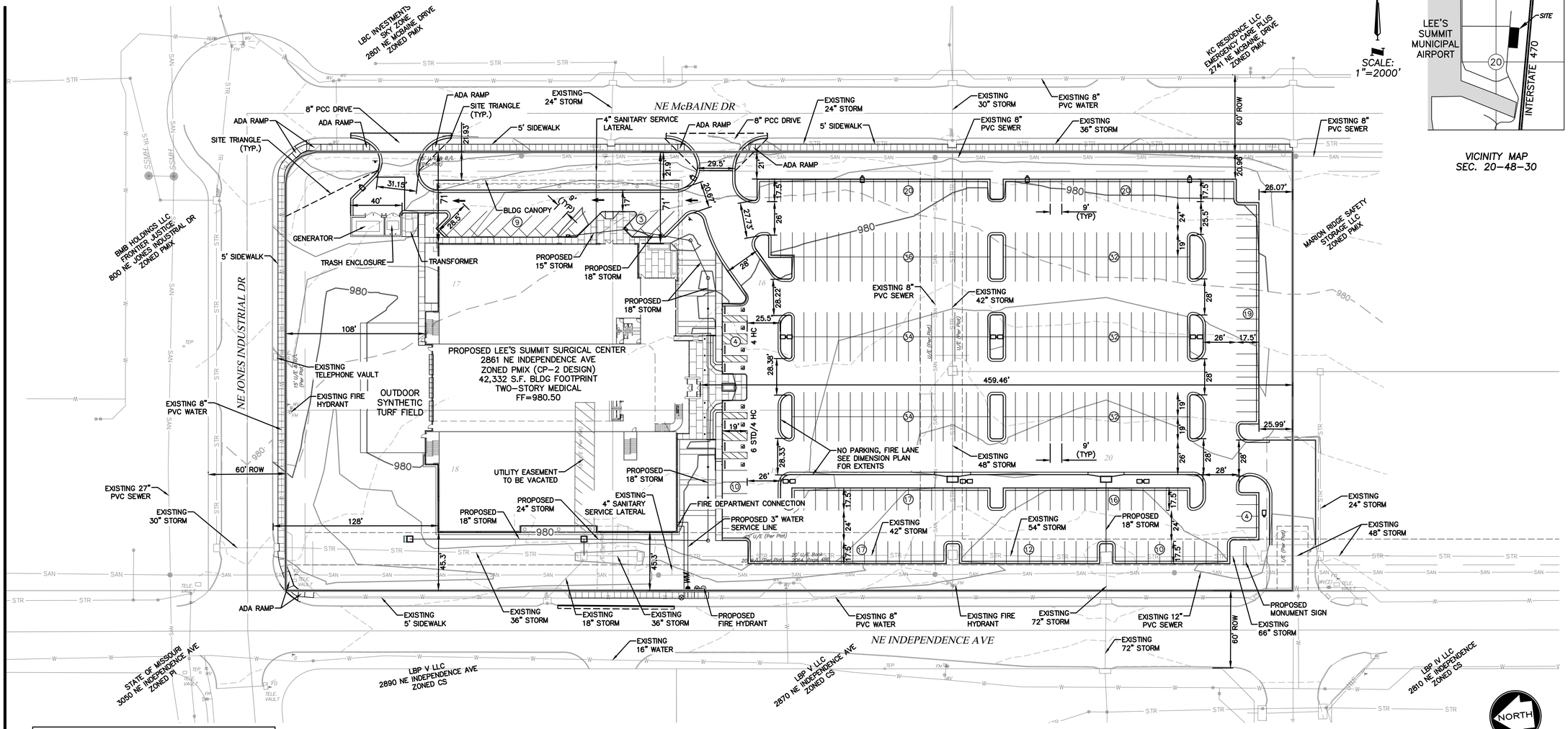
FINAL DEVELOPMENT PLAN – LEE'S SUMMIT SURGICAL CENTER – LEE'S SUMMIT, MO

2861 NE INDEPENDENCE AVE.



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PARKING INFORMATION		
ITEM	REQUIREMENTS	PROVIDED
BUILDING SIZE	-	RE: ARCHITECT
FAR = FLOOR AREA RATIO	MAX. 0.55 FAR	0.159 FAR
MINIMUM PARKING DIM.	9'x19', 9'x17' W/OVERHANG	9'x19', 9'x17' W/OVERHANG
MIN. DRIVEWAY WITDH (TWO WAY)	24'	24'
MIN. DRIVEWAY WIDTH (ONE WAY)	16'	16'
ADA SPACES	8 (INC VAN)	8 (INC VAN)
ADA VAN ACCESSIBLE SPACES	1	2
TOTAL PARKING STALLS	5/1,000 GSF (MEDICAL OFFICE) 4.5/1,000 GSF (REHAB GYM)	361
AREA REQUIREMENTS		
LOCATION	2861 NE INDEPENDENCE AVE	
ZONE:	PMIX - PLANNED MIXED USE (CP-2 DESIGN)	
USE:	MEDICAL OFFICE	
LEGAL:	LOTS 15-20 (PROPOSED LOT 15A)	
	I-470 BUSINESS AND TECHNOLOGY CENTER	
ITEM:	REQUIREMENTS	PROVIDED
MINIMUM LOT AREA	20,000 S.F.	265,696 S.F.
MINIMUM LOT FRONTAGE	-	1,892'
MINIMUM FRONT SETBACK	15'	459.5'
MINIMUM SIDE SETBACK	10'	21.9'
MINIMUM REAR SETBACK	20'	108'
MAXIMUM BUILDING HEIGHT	40' (THREE-STORY)	RE: ARCHITECT
MAXIMUM IMPERVIOUS COVERGE	80% (212,550 SF)	68.4% (181,700 SF)

DEVELOPER:	LSMOB OWNER, LLC
ADDRESS:	11715 ADMINISTRATION DRIVE MARYLAND HEIGHTS, MO 63146
PHONE:	314.503.5006
CONTACT NAME:	TIM BREECE

DESIGN PROFESSIONAL:	SHAFER, KLINE & WARREN INC.
CONTACT NAME:	DAN McGHEE
ADDRESS:	11250 CORPORATE AVENUE LENEXA, KS 66219
PHONE:	913.888.7800
EMAIL:	DAN.MCGHEE@SKW-INC.COM

GENERAL NOTES;

1. ALL IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY'S DESIGN AND CONSTRUCTION MANUAL, AS STATED IN ORDINANCE NO. 5813.
2. PUBLIC WORKS INSPECTIONS ((816) 969-1800) MUST BE CONTACTED FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY EXCAVATION ON SITE.
3. ALL PERMANENT CONCRETE CURB SHALL BE STRAIGHT BACK CURB AND GUTTER (APWA TYPE CG-1) OR INTEGRAL WITH SIDEWALK AS INDICATED HEREIN.
4. AT THE HEAD OF EACH ACCESSIBLE PARKING SPACE, PROVIDE A SIGN MEETING THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE SIGN SHALL BE MOUNTED A MAXIMUM OF 6 INCHES (5 FEET) ABOVE THE GROUND MEASURED FROM THE BOTTOM OF THE SIGN. THE SIGN SHALL BE 12"X18" IN AREA.
5. ALL PRIVATE SANITARY SEWER LATERALS SHALL BE 4" PVC, SDR 26, AT 2.0% MINIMUM SLOPE UNLESS NOTED OTHERWISE.
6. ALL WATER LINES SHALL HORIZONTALLY CLEAR STORM SEWER STRUCTURES BY 5 FEET, SANITARY SEWER STRUCTURES BY 10 FEET, AND PIPES BY 18-INCHES VERTICALLY.
7. ALL GROUND MOUNTED ELECTRICAL AND MECHANICAL EQUIPMENT LOCATED ADJACENT TO THE BUILDING AND VISIBLE FROM ANY ADJACENT PUBLIC THOROUGHFARE OR RESIDENTIAL AREA SHALL BE SCREENED FROM VIEW IN ACCORDANCE WITH CITY ORDINANCE.
8. THE PROJECT IS LOCATED IN FIRM COMMUNITY PANEL NUMBER 29095C0430G, EFFECTIVE JANUARY 20, 2017, FOR THE CITY OF LEE'S SUMMIT. THE PROJECT SITE IS NOT WITHIN A 1-% ANNUAL CHANCE FLOOD OR AREAS IMPACTED BY THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN.
9. ALL SIDEWALK PAVEMENT SURFACES SHALL BE STANDARD CONCRETE PAVEMENT PER CITY SPECIFICATION.
10. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CITY'S DESIGN AND CONSTRUCTION MANUAL, SECTION 5100, AS STATED IN ORDINANCE NO. 5813.
11. THE UTILITY LOCATIONS SHOWN ON THESE DRAWINGS ARE APPROXIMATE, BASED ON FIELD LOCATIONS, UTILITY MAPS, AND AS-BUILTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES, WHETHER SHOWN OR NOT, AND PROTECT SAID UTILITIES FROM ANY DAMAGE.
12. REFER TO TYPICAL SECTION DETAILS FOR PROPOSED PAVEMENT SECTIONS.
13. ACCESS TO FIRE DEPARTMENT CONNECTION AND FIRE HYDRANTS SHALL BE MAINTAINED DURING CONSTRUCTION. ACCESS MUST BE WITHIN 100 FEET OF FIRE DEPARTMENT CONNECTIONS AND ROADS SHALL BE CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS.
14. PROPERTY LINE AND RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY CONSTRUCTION. IF DISTURBED, THEY SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR.
15. BUILDING DIMENSIONS SHOWN ON THE CIVIL ENGINEERING PLANS ARE DIMENSIONED FROM OUTSIDE FACE OF STRUCTURE, EXCLUDING DECORATIVE FAÇADE, AND ARE FOR REFERENCE ONLY. CONTRACTOR SHALL USE THE ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT BUILDING DIMENSIONS.
16. ALL SITE DIMENSIONS ARE REFERENCED TO THE BACK OF CURBS ON THIS SHEET UNLESS OTHERWISE NOTED.
17. ALL DISTURBANCE INCURRED TO ANY ADJOINING PROPERTY DUE TO CONSTRUCTION OR DEMOLITION SHALL BE RESTORED TO THE PREVIOUS CONDITION OR BETTER, AND TO THE SATISFACTION OF THE CITY INSPECTOR.

STATE OF MISSOURI
Mark Daniel McGhee Jr.
2008019568
PROFESSIONAL ENGINEER
Civil Engineer
MO# PE-2008019568

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Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

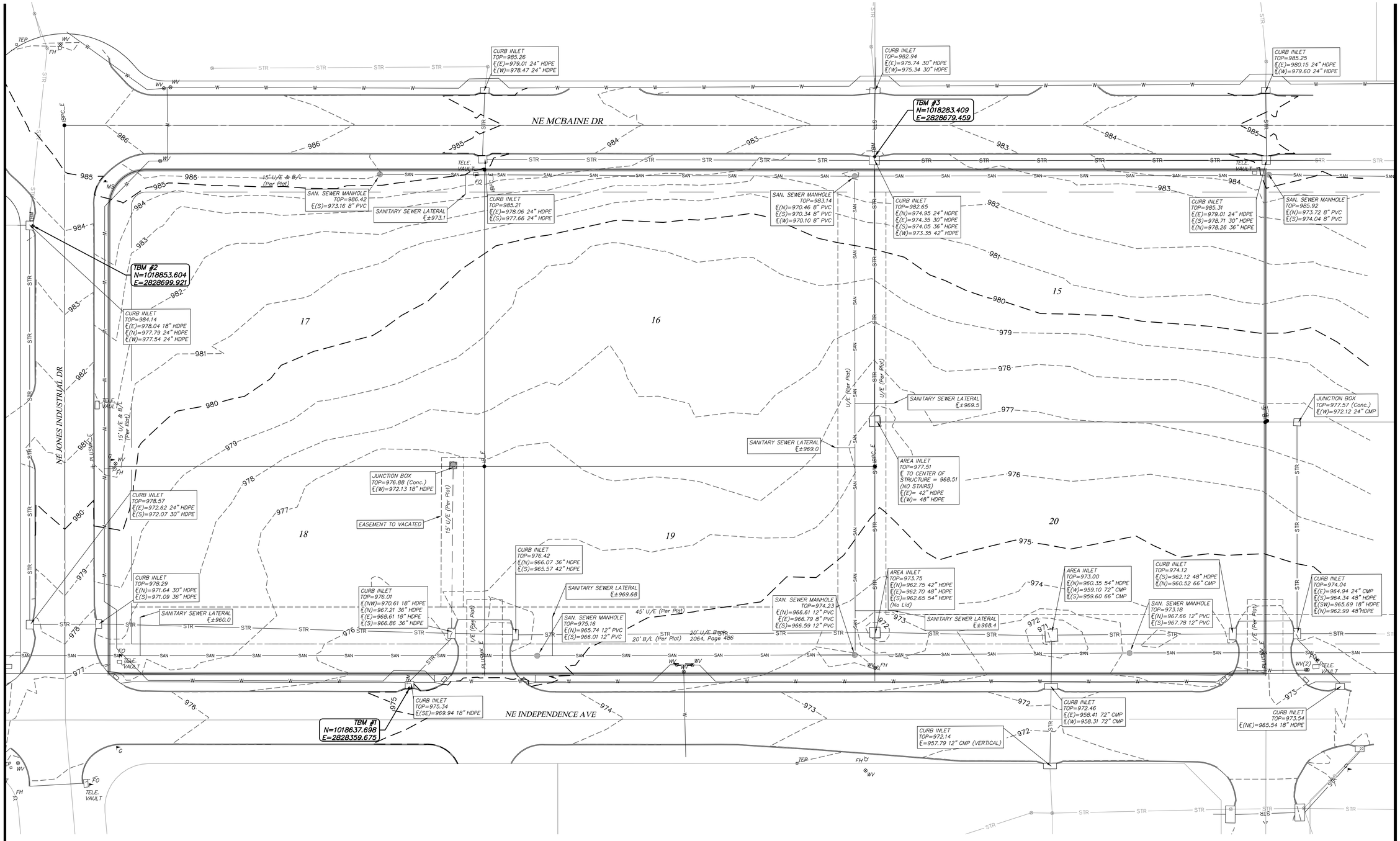
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

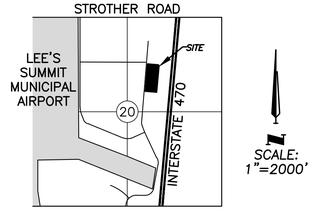
Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C00

OVERVIEW SHEET





VICINITY MAP
SEC. 20-48-30

SCALE: 1"=2000'

LEGEND

● IB_E	= EXIST IRON BAR
● IBPC_E	= EXIST. IRON BAR WITH PLASTIC CAP
+ PLUSMK_E	= EXIST. PLUS CUT
FO	= FIBER OPTIC MARKER
FH	= FIRE HYDRANT
G	= GAS MARKER
H&V	= HORIZONTAL & VERTICAL CONTROL POINT
MS	= METAL SIGN
SSMH	= SANITARY SEWER MANHOLE
STMH	= STORM MANHOLE
TEP	= TELEPHONE PEDESTAL
TBM	= TEMP BENCHMARK
UMH	= UNKNOWN MH
WV	= WATER VALVE

BENCHMARK #1: ELEV.=975.34

SQUARE CUT ON CENTER FRONT FACE OF CURB INLET EAST SIDE OF INDEPENDENCE AVE. FIRST INLET SOUTH OF THE INTERSECTION OF INDEPENDENCE AVE. AND JONES INDUSTRIAL.

BENCHMARK #2: ELEV.=984.11

SQUARE CUT ON CENTER FRONT FACE OF CURB INLET NORTHWEST QUADRANT OF JONES INDUSTRIAL AND MCBAINE.

BENCHMARK #3: ELEV.=982.64

SQUARE CUT ON CENTER FRONT FACE OF CURB INLET WEST SIDE OF MCBAINE AND 500'± SOUTH OF JONES INDUSTRIAL.

GENERAL NOTES:

1. BEARING SHOWN HEREON ARE BASED UPON THE FINAL PLAT OF I-470 BUSINESS AND TECHNOLOGY CENTER.
2. THE VERTICAL DATUM USED FOR THIS PROJECT IS: NAVD 88.
3. CONTOURS SHOWN HEREON ARE 1' CONTOUR INTERVALS.

NORTH

SCALE: 1"=30'

30 15 0 30

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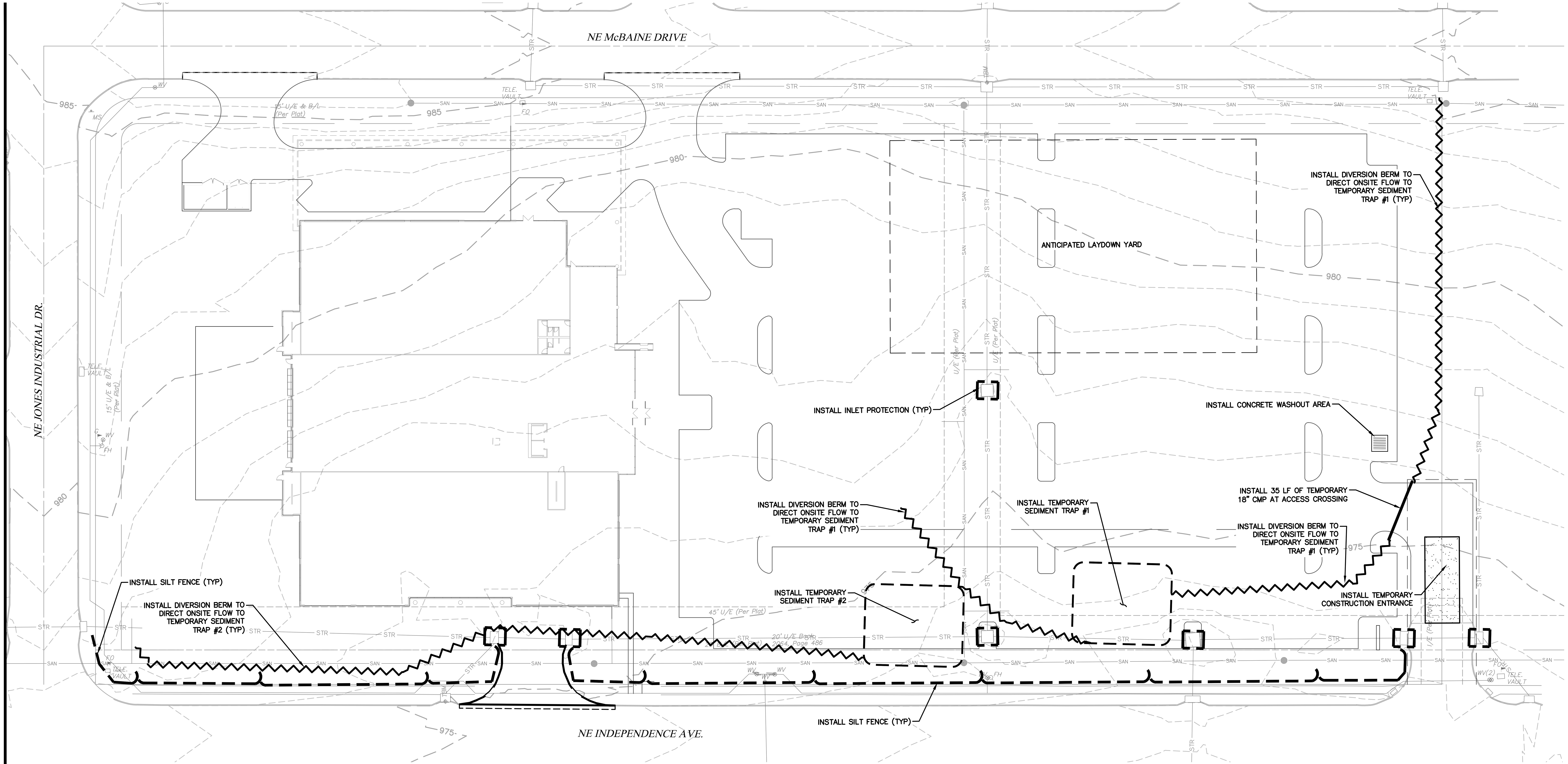
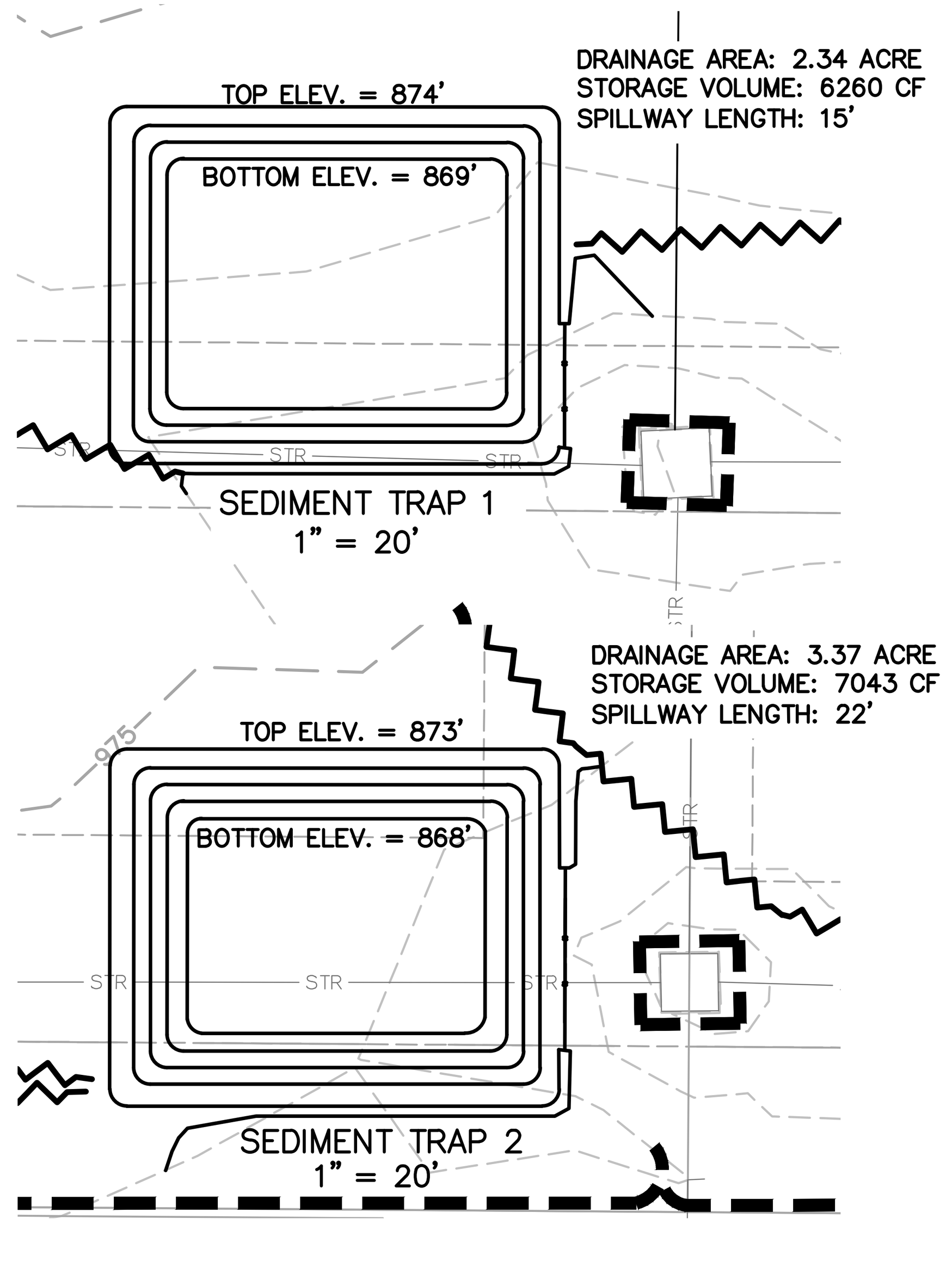
EXISTING CONDITIONS



EROSION CONTROL LEGEND

- INLET PROTECTION
- SILT FENCE
- CONSTRUCTION ENTRANCE
- WATTLE DITCH CHECK
- 924 EXISTING 1' CONTOUR
- 925 EXISTING 5' CONTOUR
- 929 PROPOSED 1' CONTOUR
- 930 PROPOSED 5' CONTOUR
- DENOTES PROPOSED CONCRETE WASHOUT AREA



PHASE 1 EROSION CONTROL NOTES:

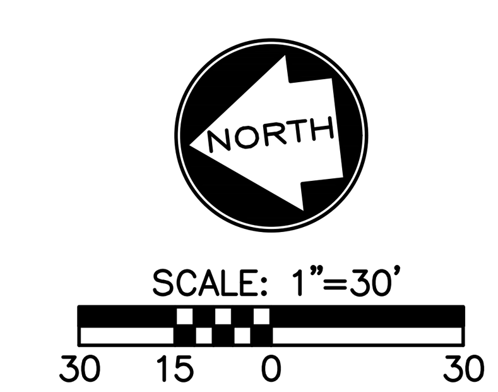
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE SWPPP. A COPY OF THE SWPPP SHALL BE AVAILABLE ON SITE AT ALL TIMES.
2. THE EROSION CONTROL FEATURES, NOTES, AND SPECIFICATIONS IN THE SWPPP REPRESENT THE MINIMUM ACCEPTABLE REQUIREMENTS. LOCATIONS ARE TYPICAL AND MAY VARY ACCORDING TO CONTRACTOR'S STAGING AND LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL ADJUST, MODIFY, AND ADD TO THIS PLAN AS NECESSARY TO CONTROL EROSION, SILTATION, AND POLLUTION.
3. IT SHALL BE EACH CONTRACTOR'S RESPONSIBILITY TO CONTROL EROSION AND PREVENT POLLUTION FOR ALL WORK WHICH THEY ARE DIRECTLY INVOLVED.
4. EROSION CONTROL DEVICES SHOWN ON THIS PLAN SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION OR GRADING WORK.
5. WHEN POSSIBLE, WITHOUT ADVERSELY AFFECTING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL: MINIMIZE THE AMOUNT OF SURFACE AREA WHICH IS EXPOSED AT ONE TIME, LEAVE GRADED AREAS WITH A ROUGH TEXTURE, CONSTRUCT TEMPORARY TERRACES DURING GRADING OPERATIONS, AND LIMIT UNNECESSARY VEHICLE TRAFFIC IN GRADED AREAS.
6. THE SPILLAGE OF DEBRIS, INCLUDING THE TRACKING OF SOIL, OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE AVOIDED. THEREFORE THE CONTRACTOR SHALL PROVIDE AND UTILIZE STABILIZED DRIVES AT ALL ACCESS LOCATIONS AS NECESSARY AND SHALL REMOVE PROMPTLY ANY MATERIAL WHICH FINDS ITS WAY INTO THE PUBLIC RIGHT–OF WAY.
7. SILT FENCES SHALL BE PLACED ON A CONTOUR ELEVATION ALONG THE DOWNHILL SIDE AND FOR THE FULL EXTENT OF THE DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS. THE LAST FIVE FEET ON EACH END OF RUN OF SILT FENCE/STRAW BALE DIKE SHALL BE PLACED FACING UPHILL AT 90 DEGREES TO THE CONTOUR LINE.
8. THE CONTRACTOR SHALL INSPECT THEIR EROSION CONTROL DEVICES EVERY 7 DAYS AND WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN DEPTH. THE CONTRACTOR SHALL REPAIR DAMAGE, CLEAN OUT SEDIMENT AND ADD ADDITIONAL CONTROL DEVICES AS NEEDED AS SOON AS PRACTICABLE AFTER INSPECTION. DEFICIENCIES MUST BE CORRECTED WITHIN 7 DAYS OF INSPECTION.
9. ALL AREAS UPON REACHING FINAL GRADE SHALL BE BROUGHT TO FINAL TREATMENT, AS SOON AS POSSIBLE. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE AND A UNIFORM PERENNIAL COVER WITH A DENSITY OF 70% (MINIMUM) IS ESTABLISHED.
10. WHERE GRADED AREAS DRAIN ONTO PAVED AREAS, SILT FENCE SHALL BE PLACED AT THE BACK OF CURB TO PREVENT SILT FROM ENTERING THE PAVED AREAS. WHEN THESE EROSION CONTROL DEVICES ARE NOT PLACED ON THE CONTOUR, THEN THEY SHALL INSTALLED AT 50 FOOT INTERVALS WITH A 5 FOOT LENGTH PLACED AT 90 DEGREES TO THE MAIN LENGTH.
11. REMOVE CONCRETE WASH OUT AREA AFTER ALL CONCRETE WORK IS COMPLETE. AFTER REMOVAL OF THE CONCRETE WASHOUT AREA THE CONTRACTOR SHALL ESTABLISH PERMANENT GROUND COVER (SEED) IN THE AREA WHERE THE WASH OUT WAS LOCATED.
12. ALL STORM SEWER INLETS SHALL HAVE INLET PROTECTION AFTER STORM SEWER CONSTRUCTION. SEE PHASE 2 EROSION CONTROL PLAN FOR NEW INLET LOCATIONS AND ADDITIONAL REQUIREMENTS.
13. ALL TREES LOCATED INSIDE THE GRADING LIMITS SHALL BE REMOVED.

EROSION CONTROL GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS AND PUBLIC STORMWATER INFRASTRUCTURE ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT.
2. CONTRACTOR SHALL REFER TO THE SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND MDNR LAND DISTURBANCE PERMIT FOR ADDITIONAL REQUIREMENTS AND BEST MANAGEMENT PRACTICES.
3. ALL WASTE MATERIAL RESULTING FROM THE CONSTRUCTION OF THE PROJECT SHALL BE DISPOSED OF OFF–SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.

PHASE 1 EROSION AND SEDIMENT CONTROL SEQUENCING:

1. IMPLEMENT PRE–CLEARING PLAN: ALL STRUCTURAL BMPS SHOWN ON THE PLAN MUST BE IN PLACE BEFORE GENERAL CLEARING OPERATIONS. CLEARING NECESSARY TO PLACE STRUCTURAL BMPS IS THE MINIMUM REQUIRED FOR THE INSTALLATION. COORDINATE CLEARING NECESSARY TO PLACE STRUCTURAL BMPS WITH LOCAL WEATHER FORECAST SO THAT CLEARING AND PLACEMENT MAY BE COMPLETED WITHIN A FORECAST DRY PERIOD. STABILIZE ALL DIVERSION DIKES, SEDIMENT TRAPS, AND SEDIMENT BASINS WITHIN 5 DAYS AFTER INSTALLATION.
2. CLEAR AND STABILIZE WORK AREAS: GRADE BUILDING PAD AND CONTRACTOR AREAS AND PLACE ALL WEATHER SURFACE ON CONTRACTOR AREAS.



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Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

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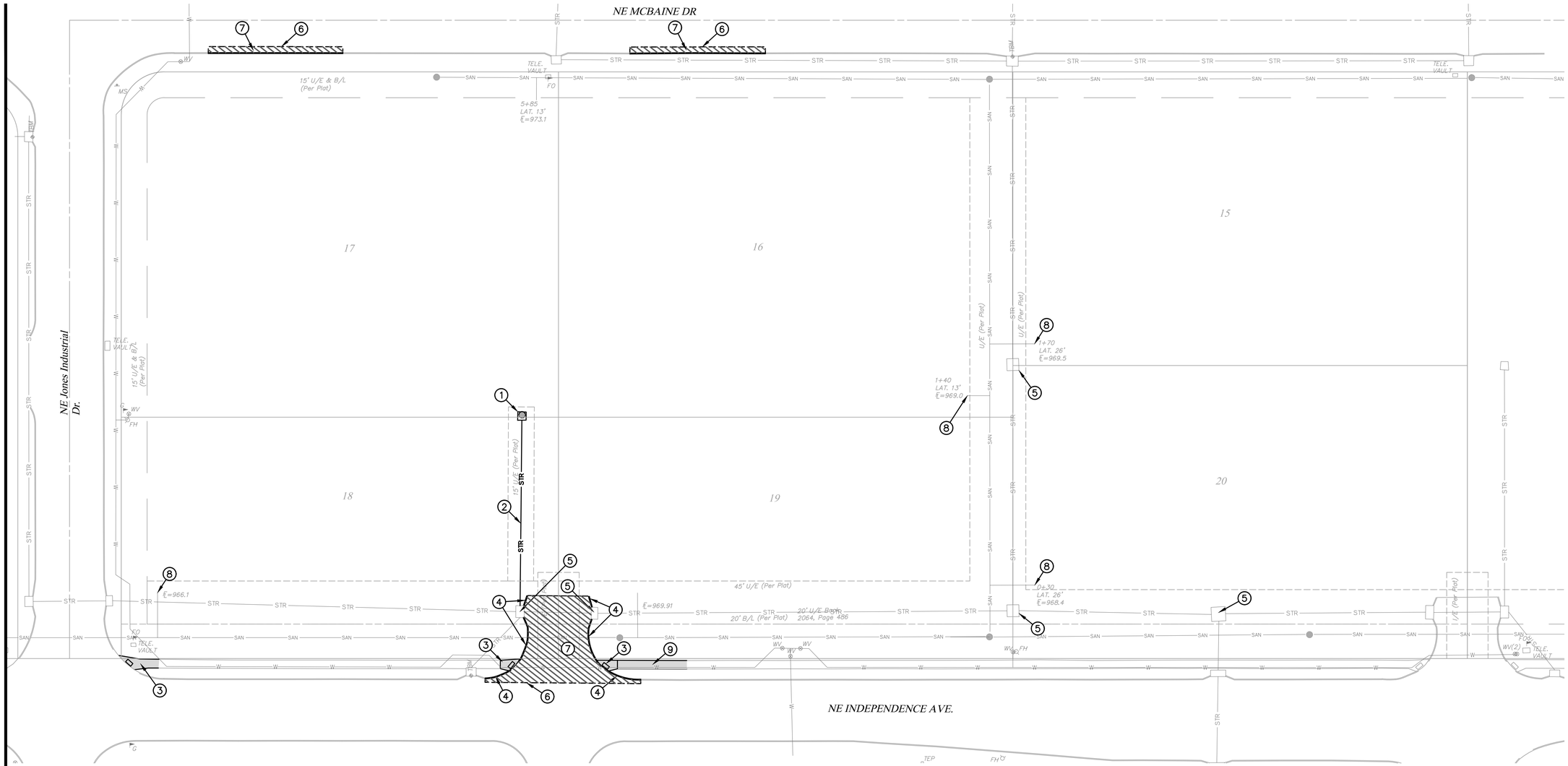
C02

EROSION CONTROL PHASE 1



#DEMOLITION KEYNOTES:

1. REMOVE EXISTING STORM STRUCTURE.
2. REMOVE EXISTING STORM SEWER PIPE.
3. REMOVE EXISTING SIDEWALK RAMP, FLARES, AND ADA DETECTION STRIP.
4. REMOVE EXISTING CONCRETE CURB.
5. EXISTING STORM STRUCTURES TO REMAIN. CONTRACTOR TO MODIFY STRUCTURES. REFER TO UTILITY PLAN AND DETAILS.
6. SAWCUT EXISTING SURFACE 2-FT INTO EXISTING PAVEMENT.
7. REMOVE EXISTING SURFACE.
8. ABANDON IN PLACE EXISTING SANITARY SEWER LATERAL PER CITY REQUIREMENTS.
9. REMOVE EXISTING SIDEWALK FOR WATER IMPROVEMENTS.

DEMOLITION NOTES:

1. THE SCOPE OF DEMOLITION IS NOT LIMITED EXCLUSIVELY TO THE WORK INDICATED ON THE DEMOLITION PLAN. THE CONSTRUCTION DOCUMENTS ARE PROVIDED AS A GENERAL GUIDE FOR DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ADDITIONAL WORK THAT MAY BE REQUIRED FOR PROPER INSTALLATION OF NEW WORK. SEE ALL CONSTRUCTION DOCUMENTS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
2. ALL UTILITIES NOT SPECIFICALLY MARKED FOR DEMOLITION, SHALL BE PROTECTED THROUGHOUT CONSTRUCTION. SPECIAL SUPPORTS, BRACING ETC. SHOULD BE PROVIDED TO PROTECT EXISTING UTILITIES TO REMAIN.
3. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE ALL UTILITY DEMOLITION, SHUTOFFS, AND SWITCH OVERS WITH THE RESPECTIVE UTILITY COMPANY.
4. THE CONTRACTOR SHALL PROTECT ALL ITEMS, NOT SPECIFICALLY NOTED FOR DEMOLITION. IF ITEMS ARE DAMAGED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL REPAIR THE ITEMS AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL REPAIR ALL SURROUNDING PAVEMENTS, SIDEWALKS, AND CURBS DAMAGED BY CONSTRUCTION ACTIVITIES.
6. ALL UTILITY BOXES, MANHOLES, VALVES, POLES AND OTHER APPURTENANCES, TO REMAIN, SHALL BE ADJUSTED TO MATCH THE FINISHED GRADE.

NORTH

SCALE: 1"=30'

30 15 0 30

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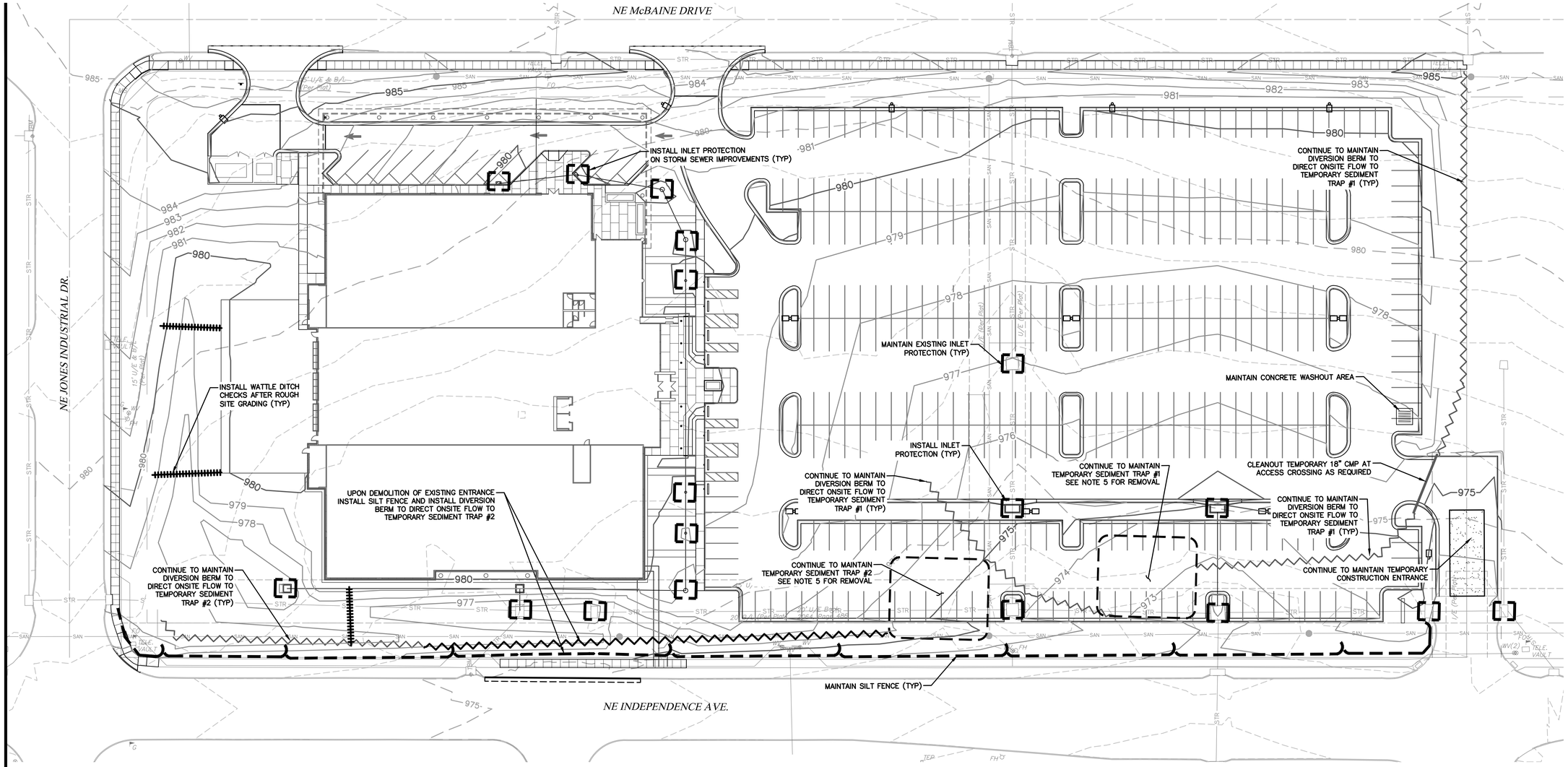
C03

DEMOLITION PLAN



EROSION CONTROL LEGEND

- INLET PROTECTION
- SILT FENCE
- CONSTRUCTION ENTRANCE
- WATTLE DITCH CHECK
- 924 EXISTING 1' CONTOUR
- 925 EXISTING 5' CONTOUR
- 929 PROPOSED 1' CONTOUR
- 930 PROPOSED 5' CONTOUR
- DENOTES PROPOSED CONCRETE WASHOUT AREA

PHASE 2 EROSION AND SEDIMENT CONTROL SEQUENCING:

1. BUILDING TOP-OUT: COMPLETE BUILDING FOUNDATION, FRAMING, SIDING AND ROOF INSTALLATION INCLUDING UTILITY SERVICES.
2. STABILIZE INACTIVE AREAS: THE GROUND COVER AND OTHER STRUCTURAL BMPS SHOWN ON THE PHASE 2 STABILIZATION MUST BE PLACED WITHIN 14 DAYS OF CESSATION OF GROUND DISTURBING ACTIVITY AT THE LOCATION OF THE BMP, BUT IN NO CASE LATER THAN 14 DAYS FROM BUILDING TOP OUT. IN DETERMINING THE INACTIVE STATUS OF THE GROUND, EVALUATE EACH PORTION OF THE SITE SEPARATELY. THE NEED FOR SUBSEQUENT PLACEMENT OF TRENCHED UTILITIES, PAVEMENT OR OTHER CONSTRUCTION IN AN OTHERWISE INACTIVE AREA IS NOT JUSTIFICATION FOR DELAY OF STABILIZATION.
3. FINISH INTERIOR: CONSTRUCTION THE INTERIOR OF THE STRUCTURE AND MINOR STRUCTURES DEPICTED ON THE CONSTRUCTION PLANS.
4. IMPLEMENT FINAL STABILIZATION: PLACE PERMANENT SITE COVER. COORDINATE REMOVAL OF CONSTRUCTION PHASE BMPS NECESSARY TO PLACE FINAL STABILIZATION WITH LOCAL WEATHER FORECAST SO THAT REMOVAL AND PLACEMENT MAY BE COMPLETED WITHIN A FORECAST DRY PERIOD. DOWN-SLOPE PERIMETER CONTROLS SHALL NOT BE REMOVED UNTIL FINAL STABILIZATION IS PLACED AND VEGETATIVE COVER IS ESTABLISHED OVER THE REMAINDER OF THE SITE.
5. ESTABLISHMENT AND FINAL CONSTRUCTION: ONCE THE REMAINDER OF THE SITE IS STABILIZED INCLUDING ESTABLISHMENT OF SEEDED COVER TYPES, CONSTRUCT PERMANENT WATER QUALITY BMPS AND REMOVE THE SEDIMENT CONTROLS AND THE REMAINING ACCESS CONTROLS. RESTORE AREA DISTURBED BY REMOVAL OF SEDIMENT CONTROLS.
6. PLAN MODIFICATION: THE CONTRACTOR MUST MODIFY THE PLAN IF THE PLAN FAILS TO SUBSTANTIALLY CONTROL EROSION AND OFFSITE SEDIMENTATION. PLAN MODIFICATIONS DUE TO INEFFECTIVENESS MAY BE TAKEN WITHOUT PRIOR APPROVAL OF THE REVIEW AGENCY, BUT MUST BE FULL DOCUMENTED AND APPROVAL SECURED FROM THE PERMITTING AUTHORITY AS SOON AS PRACTICABLE. THE CONTRACTOR MAY MODIFY THE PLAN OR CONSTRUCTION SEQUENCE IF IMPLEMENTATION IS INFEASIBLE FOR SITE CONDITIONS OR CONTRACTOR METHODS. ANY SUCH MODIFICATION SHALL CONTROL EROSION AND OFFSITE SEDIMENTATION TO THE MAXIMUM EXTENT PRACTICABLE. ANY SUCH MODIFICATION SHALL REQUIRE THE APPROVAL OF THE PERMITTING AUTHORITY.

EROSION CONTROL GENERAL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL PUBLIC ROADWAYS AND PUBLIC STORMWATER INFRASTRUCTURE ADJACENT TO THE CONSTRUCTION SITE FREE OF DIRT AND DEBRIS RESULTING FROM ACTIVITIES RELATED TO THE CONSTRUCTION OF THIS PROJECT.
2. CONTRACTOR SHALL REFER TO THE SITE SPECIFIC STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND MDNR LAND DISTURBANCE PERMIT FOR ADDITIONAL REQUIREMENTS AND BEST MANAGEMENT PRACTICES.
3. ALL WASTE MATERIAL RESULTING FROM THE CONSTRUCTION OF THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.

PHASE 2 EROSION CONTROL NOTES:

1. CONTRACTOR SHALL INSTALL INLET PROTECTION MEASURES AFTER ALL NEW STORM SEWER STRUCTURES ARE INSTALLED.
2. CONTRACTOR SHALL MAINTAIN PHASE 2 EROSION CONTROL MEASURES, UNTIL FINAL SITE STABILIZATION HAS OCCURRED.
3. CONTRACTOR MAY MAKE ADJUSTMENTS TO EROSION CONTROL MEASURES, TO ALLOW FOR CONSTRUCTION SEQUENCING, HOWEVER THEY ARE ULTIMATELY RESPONSIBLE FOR PREVENTING STORMWATER POLLUTION RUNOFF FROM PROJECT SITE.
4. CONTRACTOR SHALL STABILIZE SLOPES AND INACTIVE AREAS WITH MULCH AND TEMPORARY SEEDING. STABILIZATION ACTIVITIES ARE TO BE INITIATED IMMEDIATELY WHEN SOIL DISTURBING ACTIVITIES CEASE AND WILL NOT RESUME FOR MORE THAN 14 DAYS. STABILIZATION ACTIVITIES ARE TO BE COMPLETED WITHIN 21 DAYS.
5. UPON FINAL SITE STABILIZATION (PAVING, LANDSCAPING, ETC.) THE CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES.
6. CONTRACTOR SHALL MAINTAIN THE SWPPP THROUGHOUT CONSTRUCTION.

NORTH

SCALE: 1"=30'

30 15 0 30

STATE OF MISSOURI — MARK DANIEL MCGHEE JR. — NUMBER 2008019568 — PROFESSIONAL ENGINEER — # 170534-010

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314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

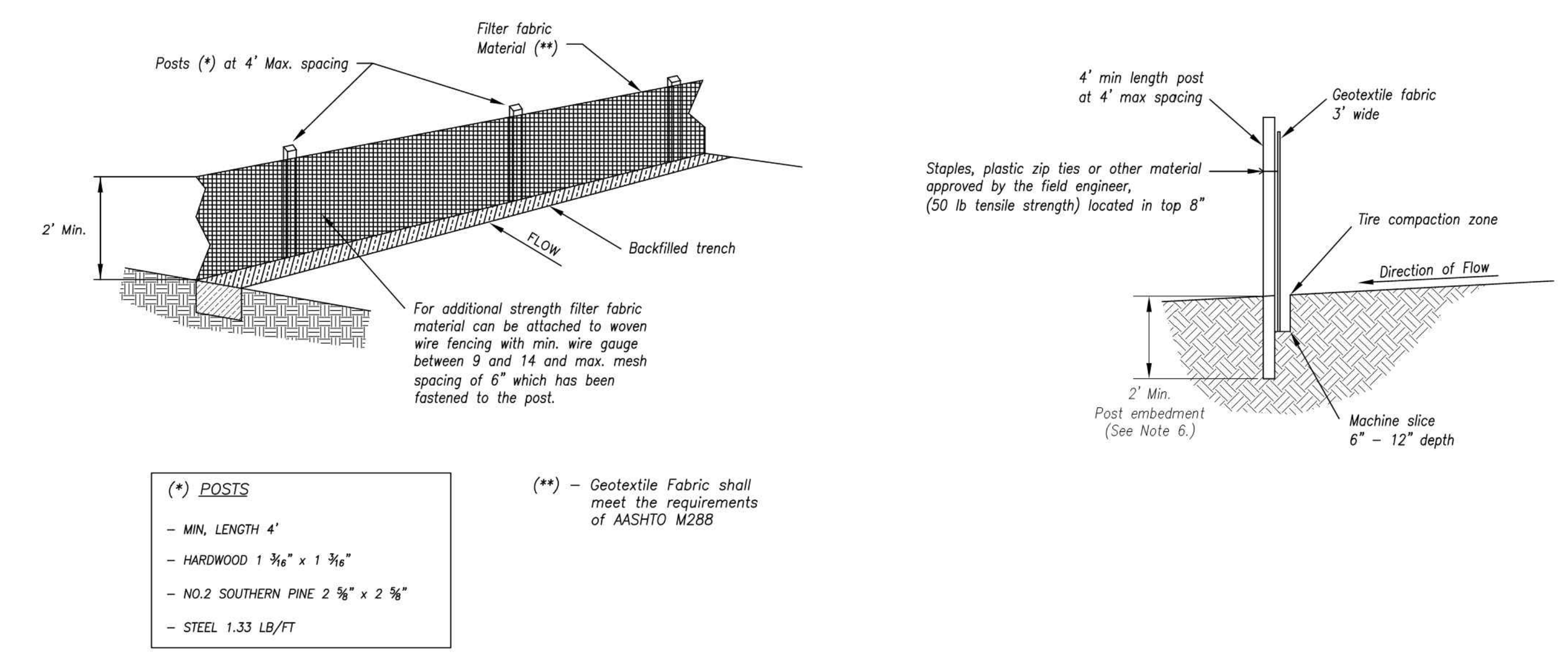
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C04

EROSION CONTROL PHASE 2



SILT FENCE DETAILS
Not to Scale

Notes:

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

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ⅓ the height of silt fence.
2. Repair as necessary to maintain function and structure.

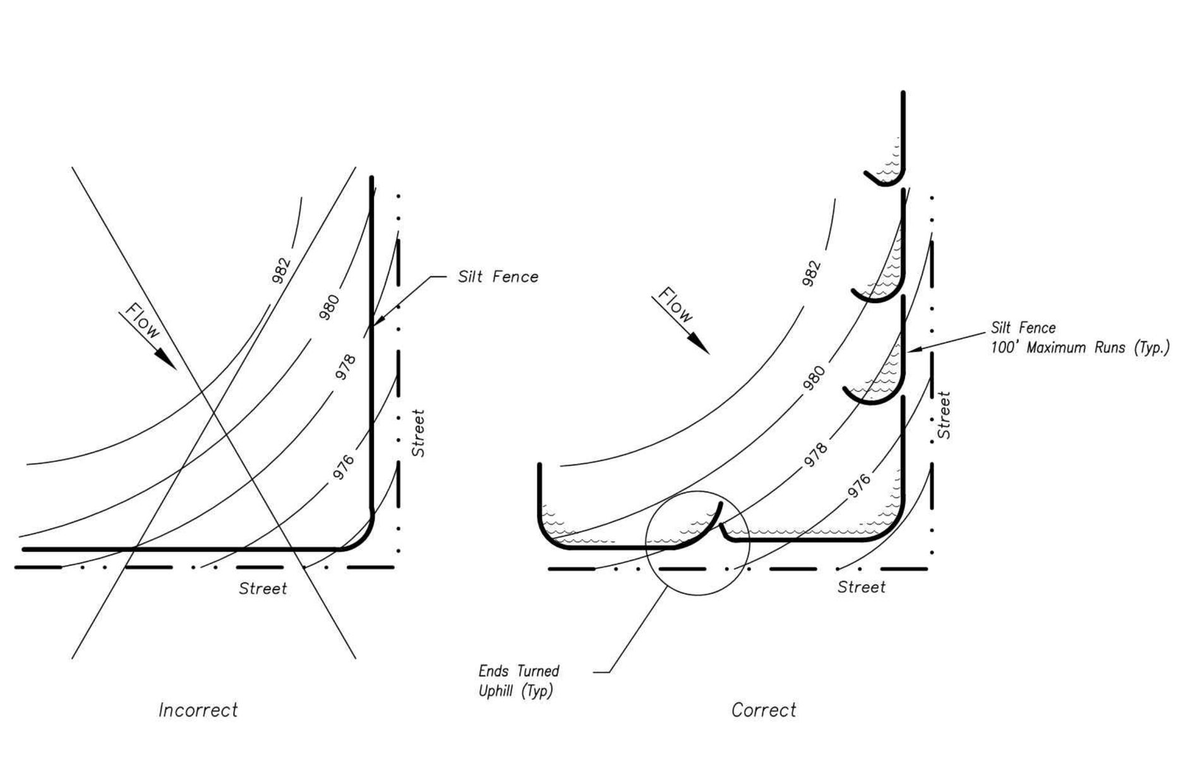
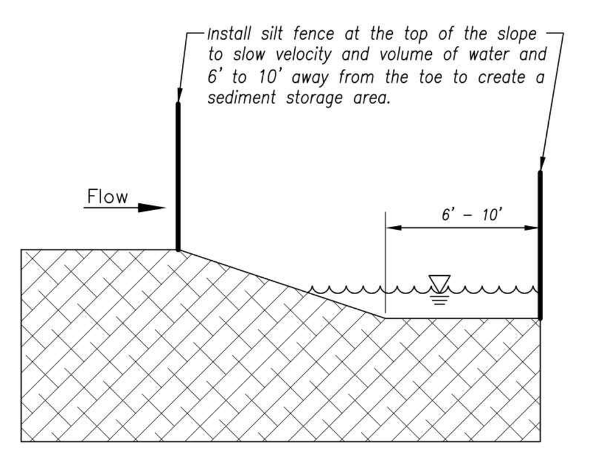
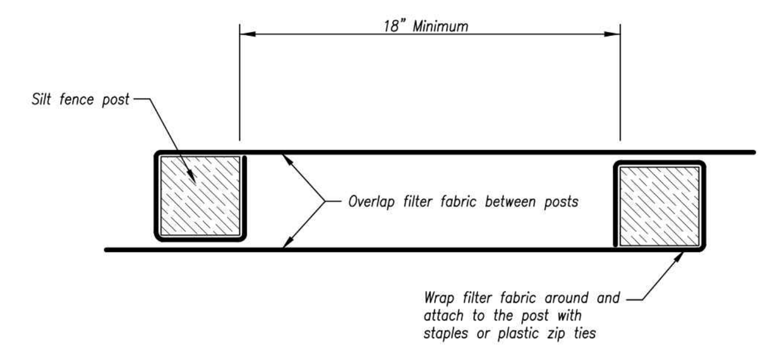


Figure A

SILT FENCE LAYOUT
Not to Scale

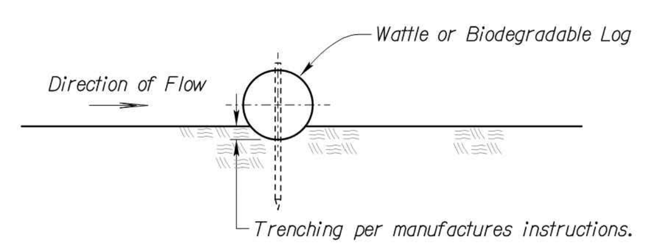




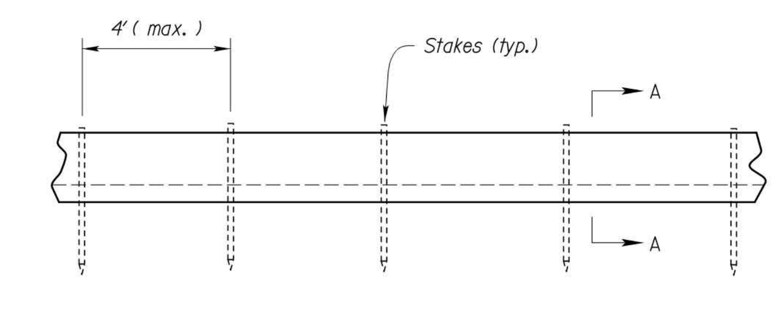
JOINING FENCE SECTIONS
Not to Scale

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

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



Section A–A



Typical Elevation

WATTLES AND BIODEGRADABLE LOG

Notes for Wattles and Biodegradable Log Slope Protection:

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

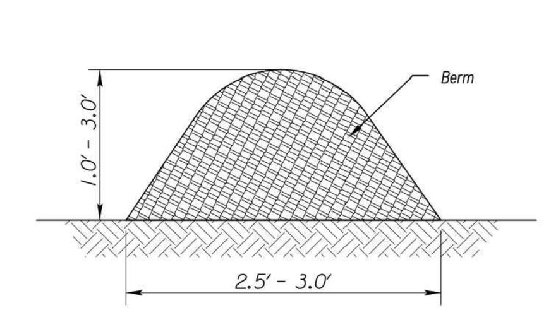


Figure 1
(Perimeter Control)

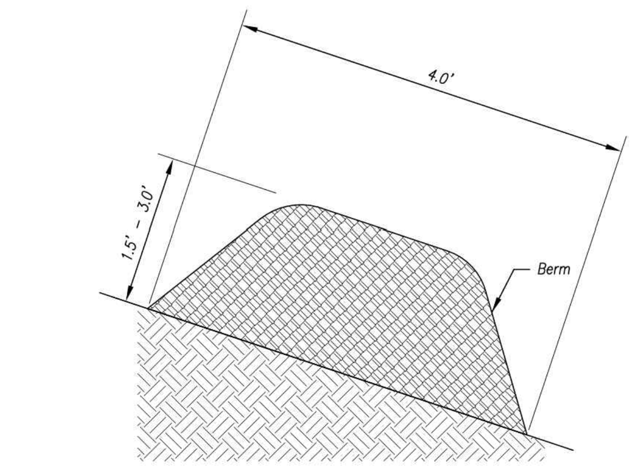


Figure 2
(Steep Slopes)

Notes for Mulch and Compost Filter Beam:

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

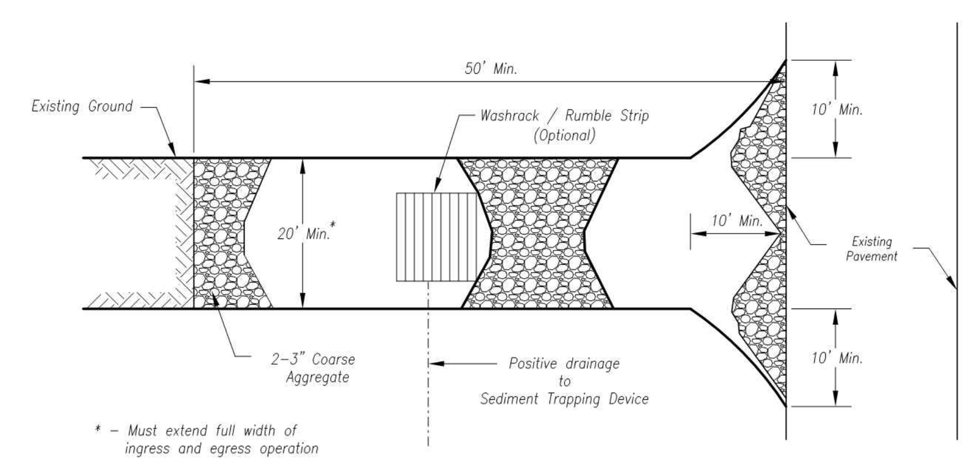
Maintenance for Mulch and Compost Filter Beam:

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

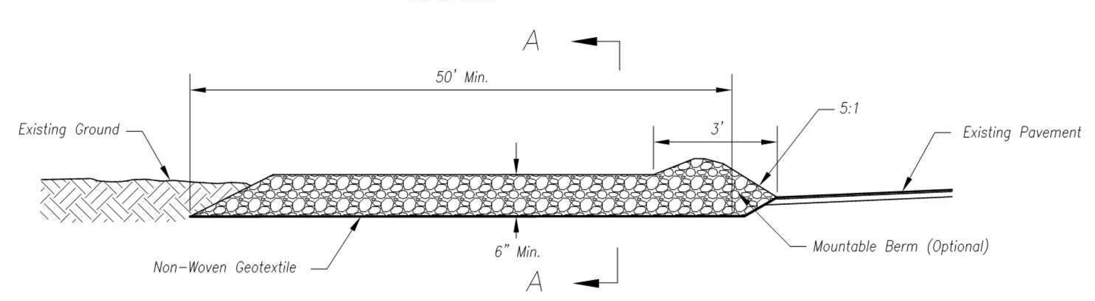
MULCH OR COMPOST FILTER BERMS

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

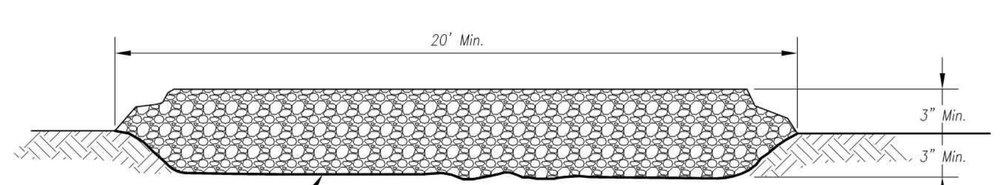
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
WATTLES/BIODEGRADABLE LOG AND MULCH/COMPOST FILTER BERM	STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016



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.

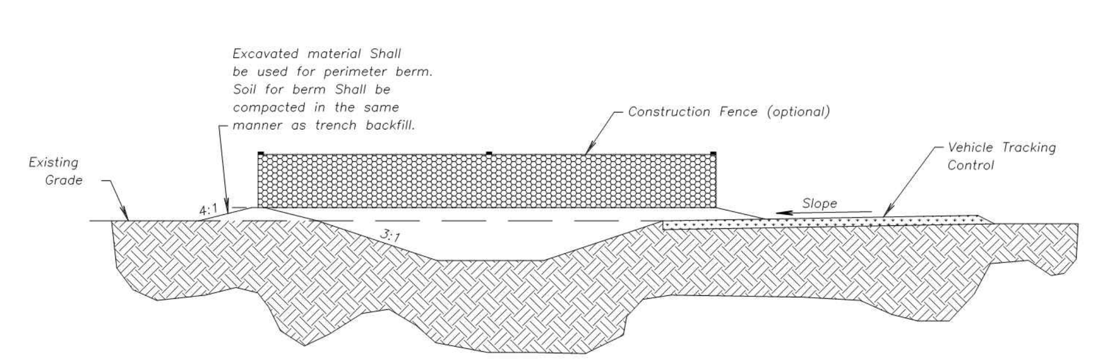
CONSTRUCTION ENTRANCE

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:

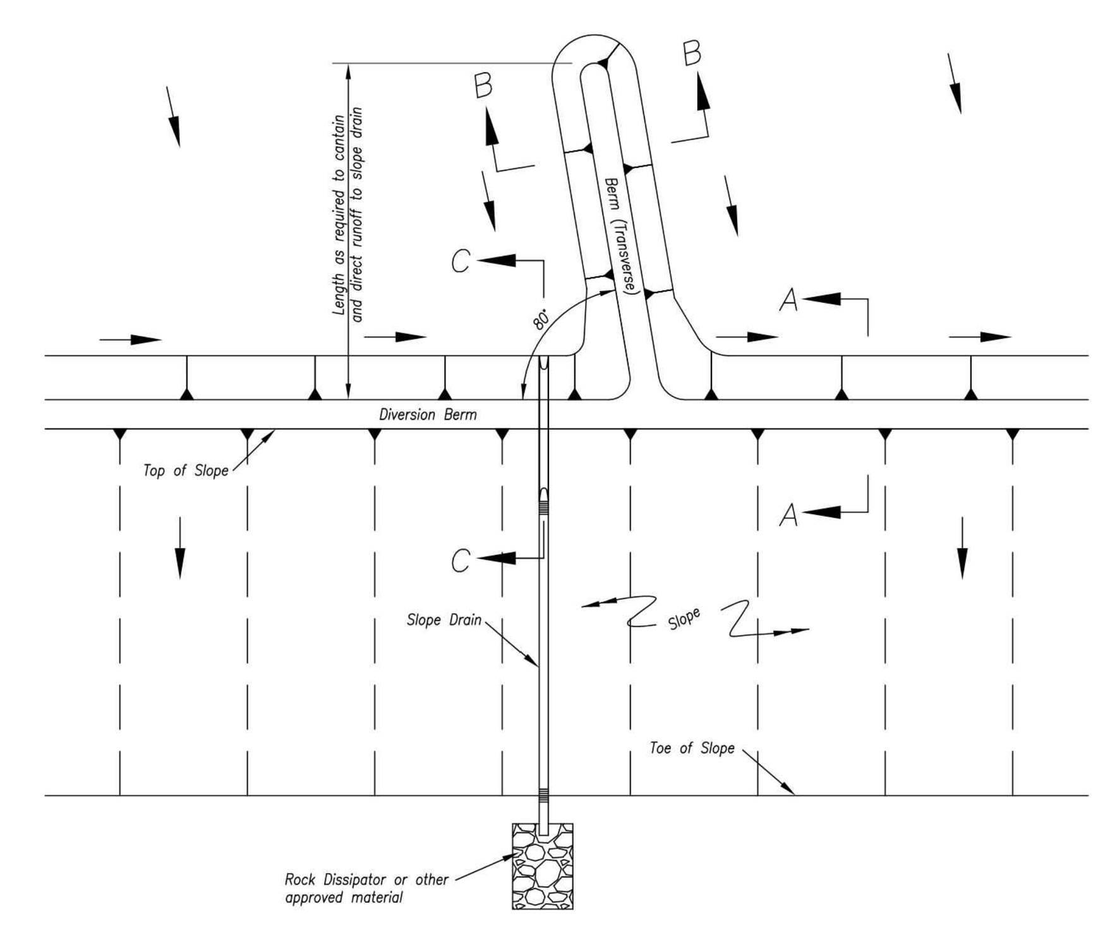
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface 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	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT	STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016



TYPICAL PLAN VIEW OF DIVERSION BERM AND SLOPE DRAIN

Notes for Diversion Berm:

1. Slope drains are optional, but may be required by the engineer if the berm is at the top of a steep slope.
2. Diversion berms must be installed as a first step in the land–disturbing activity and must be functional prior to upslope land disturbance.
3. The berm should be adequately compacted to prevent failure.
4. Temporary or permanent seeding and mulch shall be applied to the berm immediately following its construction.
5. Place the berm so to minimize damages by construction operations and traffic.
6. The berm must discharge to a temporary sediment trap or stabilized area.
7. All trees, brush, stumps, obstructions and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of diversion.
8. The diversion shall be excavated or shaped to line, grade and cross–section as required to meet the criteria specified herein, free of irregularities which will impede flow.
9. Fills shall be compacted as needed to prevent unequal settlement that would cause damage in the completed diversion. Fill shall be composed of soil which is free from excessive organic debris, rocks or other objectionable materials.

Maintenance:

1. Berm shall be reshaped, compacted, and stabilized as necessary to maintain its function.
2. Breaches in the berm shall be repaired immediately.

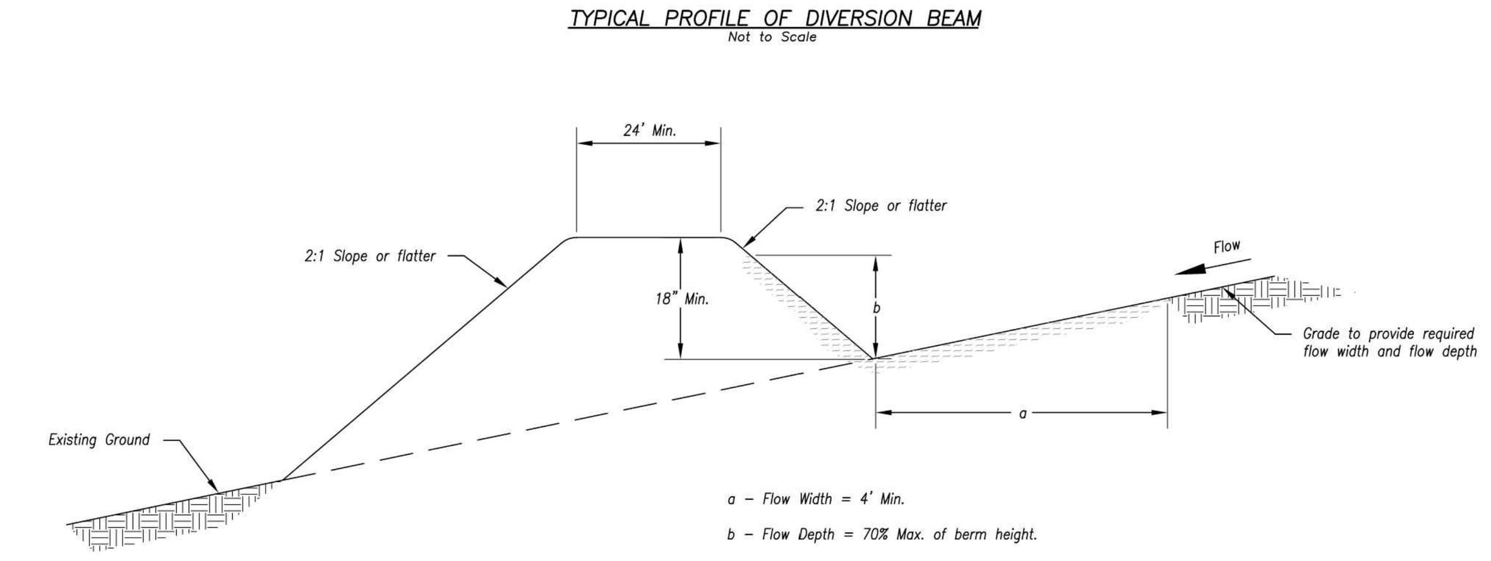
Notes for Slope Drain:

1. Slope Drain and Diversion Berm may be used on either project foreslopes or project backslopes.
2. Discharge of Slope Drains shall be into stabilized ditch or area, or into Sediment Basin.
3. Pipe shall be secured in place as approved by Engineer.

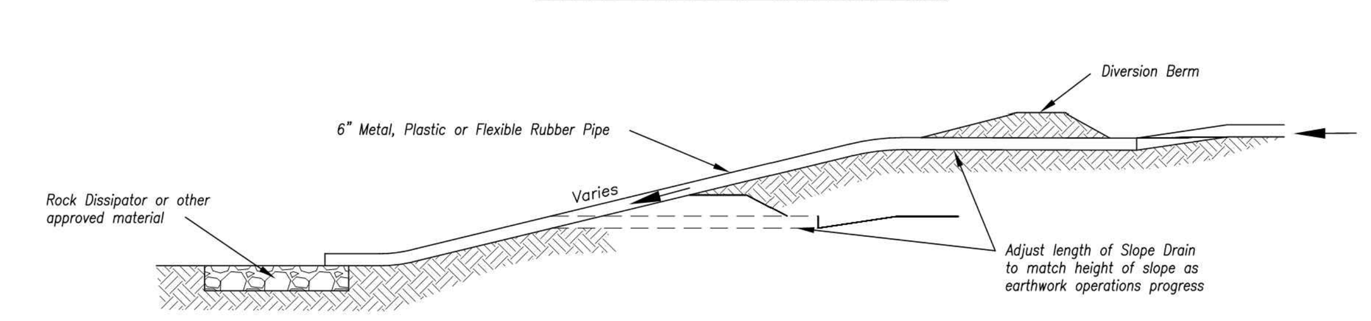
Maintenance:

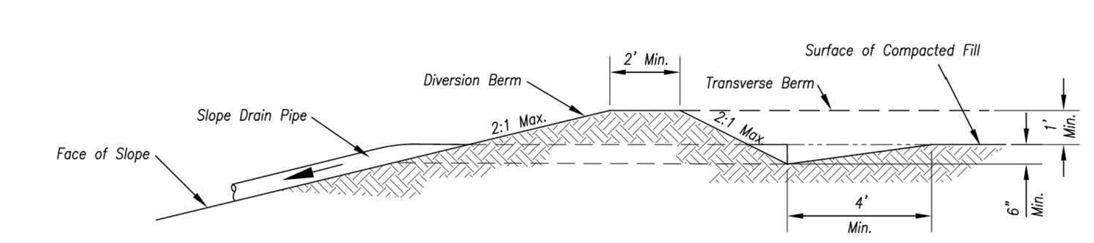
1. Accumulation of any visible sediment at the inlet and outlet shall be removed promptly.
2. Outlet conditions shall be repaired if scour is observed. Leaking or damaged section of pipe shall be repaired immediately.
3. Barriers directing water to the inlet shall be monitored for continuity and effectiveness.

TYPICAL PROFILE OF DIVERSION BEAM
Not to Scale

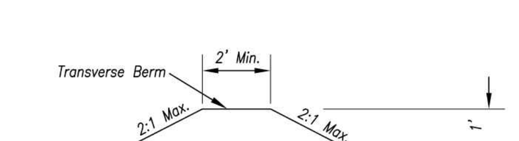


TYPICAL PROFILE OF DIVERSION BERM





Section C–C

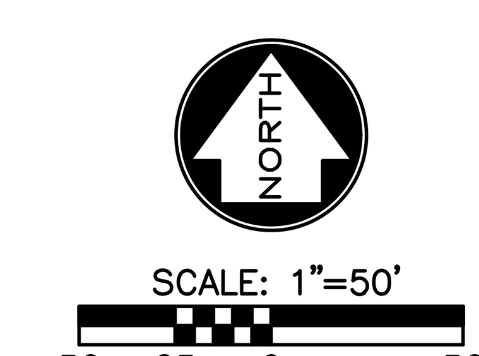


Section B–B

TYPICAL PROFILE OF DIVERSION BERM WITH SLOPE DRAIN

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

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA Kansas City Metro Chapter	KANSAS CITY METRO CHAPTER
DIVERSION BERMS AND SLOPE DRAINS	STANDARD DRAWING NUMBER ESC-05 ADOPTED: 10/24/2016



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Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

Date	9/22/17
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Drawn By	ELM
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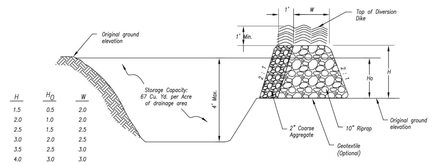
Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C05

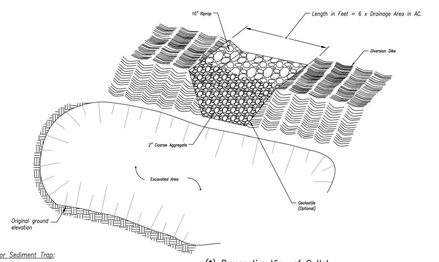
EROSION CONTROL DETAILS



H	H_O	W
1.5	0.5	2.0
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

(*) Cross Section of Outlet

Not to Scale



(*) Perspective View of Outlet

Not to Scale

(*) – The perspective view and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

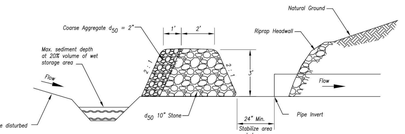
Notes for Sediment Trap:

1. The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 6-inch layers by traversing with construction equipment.
3. The earthen embankment shall be stabilized immediately after installation.
4. Construction operations shall be carried out to minimize erosion and water pollution.
5. The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.
6. All cut and fill slopes shall be 2H : 1V or flatter, except for excavated, wet storage areas which may be at a maximum 1H : 1V grade.

Maintenance for Sediment Trap:

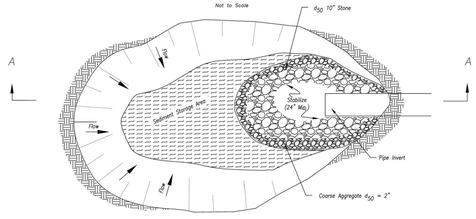
1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP



Section A–A

Not to Scale



Plan View

Not to Scale

Notes for Sediment Trap at Culvert Opening:

1. The inlet protection device shall be constructed in a manner that will facilitate clean-out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such manner that any resultant ponding stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Geometry of the design will be a horseshoe shape around the culvert inlet.
4. The toe of the riprap shall be no closer than 24" from the culvert opening to provide an acceptable emergency outlet for flows from larger storm events.
5. Storage requirements equivalent to that of temporary sediment trap.
6. 67 CY./Acre wet storage below base of stone.
7. 67 CY./Acre dry storage from base of stone to top of stone berm.

Maintenance for Sediment Trap at Culvert Opening:

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

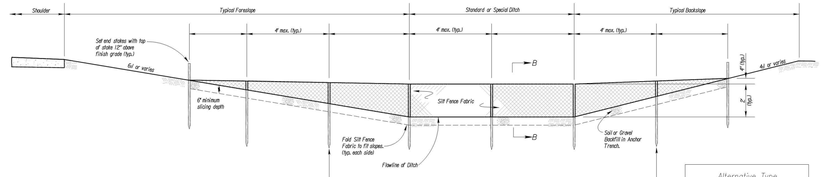
SEDIMENT TRAP AT CULVERT OPENING

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

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER	
SEDIMENT TRAPS	STANDARD DRAWING NUMBER ESC-08	ADOPTED: 10/24/2016

Notes for Silt Fence Ditch Check:

1. Stakes shall be 4' (min.) long and one of the following materials:
   a. Hardwood – 1 ¾" x 1 ¾".
   b. Southern Pine (No. 2) – 2 ⅜" x 2 ⅜".
   c. Steel U, T, L, or C Section – .95 lbs. per 1'-0".
   d. Synthetic – same strength as wood stakes.
2. Cross pieces shall be of same material as stakes.
3. Attach fence fabric securely on 6" centers (max.).
4. Use of high flow material is acceptable.
5. Refer to plan sheets to estimate the length of silt fence required.
6. Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
7. Silt fence sliced in to a 6" minimum depth.
8. Elevation of tie in points shall be a minimum of 4" higher than the center.

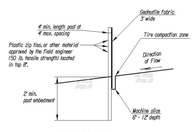


Stakes shall be set at an 2' minimum depth

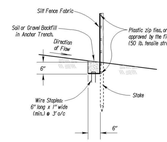
TYPICAL ELEVATION

Alternative Type Ditch Check Spacing	
Ditch Centerline Slope (%)	Spacing Interval (Feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33

Note: Use this spacing for all except Rock Ditch Checks.

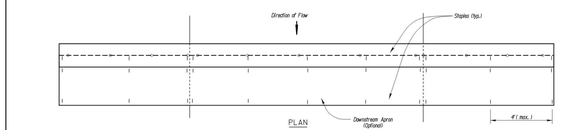


SECTION B-B



SILT FENCE DITCH CHECK

NO SCALE



WATTLES OR BIODEGRADABLE LOG DITCH CHECKS

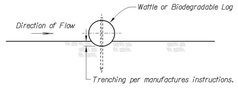
OR Filter Sock Ditch Check

NO SCALE

Modified from Kansas Department of Transportation Standard Details for Erosion Control and Sediment Control.

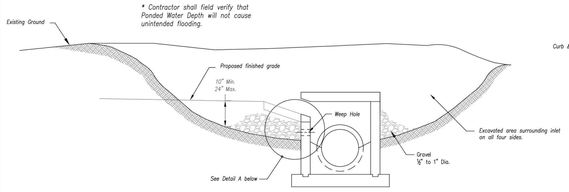
Notes for Wattles and Biodegradable Log Ditch Check:

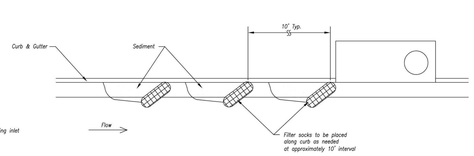
1. Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
2. Overlap sections a minimum of 18"
3. Stakes shall be per manufacturer's instructions. Length of stakes shall be a minimum of 2 times the diameter of the log or 24" minimum.
4. Use Erosion Control (Class 1) (Type C) as the downstream apron when directed by the Engineer.
5. Use 9" diameter logs when used with Erosion Control (Class 2) (Any Type) channel lining. Smaller diameter logs may be used with Erosion Control (Class 2) (Any Type) channel lining as directed by the Engineer.



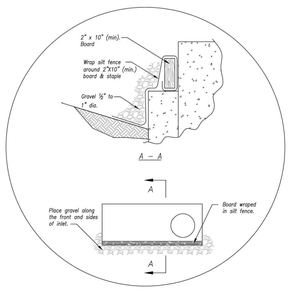
SECTION B - B

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METRO CHAPTER	
SILT FENCE AND WATTLE/ BIODEGRADABLE LOG DITCH CHECKS	STANDARD DRAWING NUMBER ESC-09	ADOPTED: 10/24/2016





On Grade Curb Inlet Protection



Detail A

EARLY STAGE CURB INLET

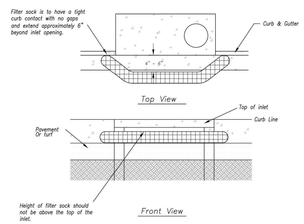
(Open Box and Prior to Pouring Curb and Inlet Throat)

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

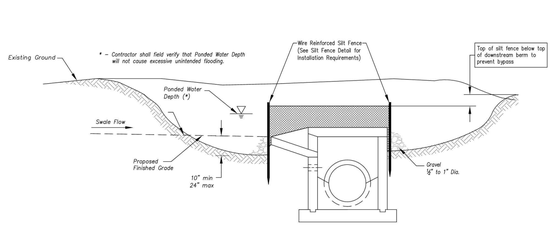
(After Pouring Curb and Inlet Throat)

Maintenance:

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

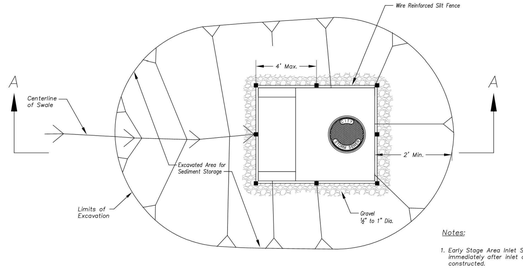
Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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



Section A–A

Not to Scale



Plan

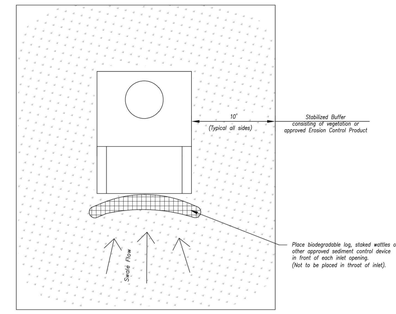
Not to Scale

EARLY STAGE AREA INLET

(All open boxes and inlets not at final grade)

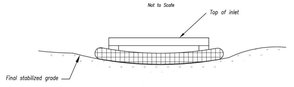
Notes:

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



Plan

Not to Scale



Front View

LATE STAGE AREA INLET

(Area inlets at final grade and existing inlets)

Maintenance:

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

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

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

NORTH

SCALE: 1"=50'

50 25 0 50

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Missouri No.: 000958 (Expires: 12.31.2017)

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STRUCTURAL CONSULTANT
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St. Louis, Missouri 63131
314.835.0524
State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

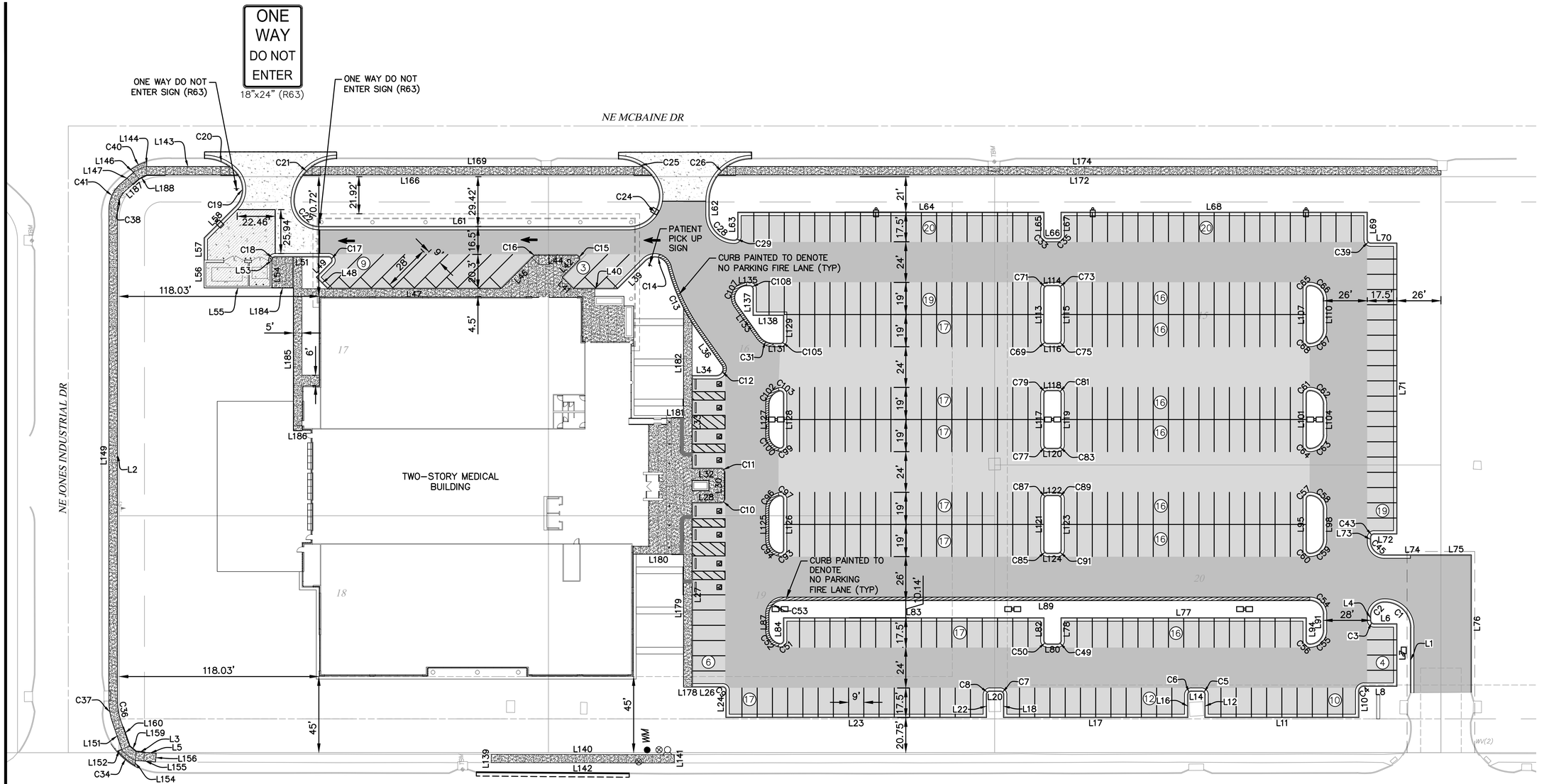
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

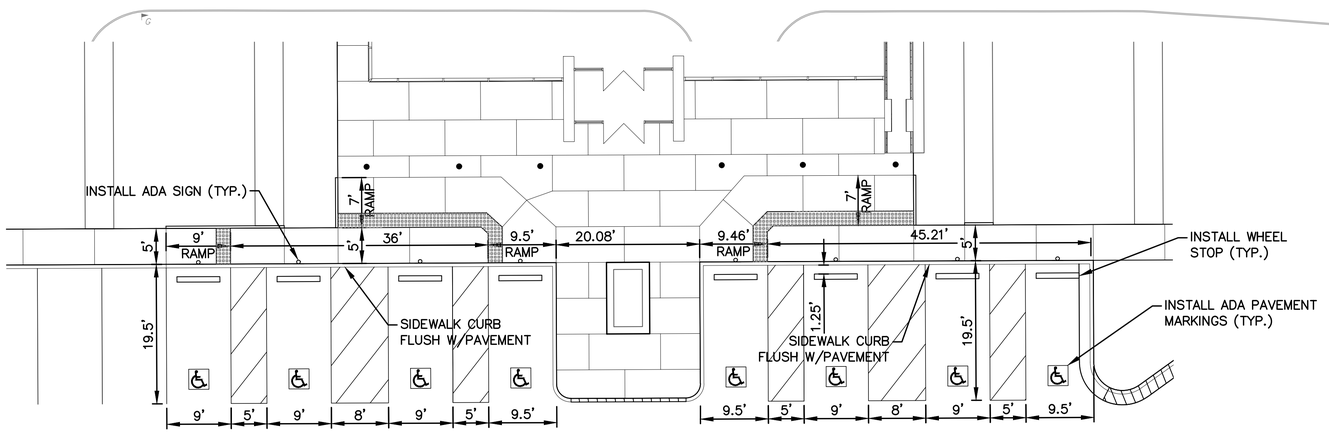
Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C06

EROSION CONTROL DETAILS





ADA/ENTRANCE LAYOUT DETAIL

SCALE: 1"=10'

NOTE: SEE SHEET C08 FOR LINE AND CURVE TABLES.

PAVEMENT LEGEND

- DENOTES HEAVY DUTY PAVEMENT
- DENOTES LIGHT DUTY PAVEMENT
- DENOTES 8" REINFORCED PORTLAND CONCRETE CEMENT PAVEMENT
- DENOTES 8" NON-REINFORCED PORTLAND CONCRETE CEMENT PAVEMENT
- DENOTES NON-REINFORCED PORTLAND CEMENT CONCRETE SIDEWALK AND SIDEWALK RAMPS

NORTH

SCALE: 1"=30'

30 15 0 30

STATE OF MISSOURI — MARK DANIEL MCGHEE — NUMBER 2008019568 — PROFESSIONAL ENGINEER — 10-24-17

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

Date	9/22/17
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Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C07

DIMENSION AND PARKING PLAN

Line Table		
Line #	Length	Direction
L1	38.48	S83° 14' 44.00"E
L2	290.39	S83° 14' 29.96"E
L3	5.00	N11° 46' 41.45"E
L4	2.68	N83° 14' 56.00"W
L5	6.96	N11° 46' 41.45"E
L6	13.50	S06° 45' 04.00"W
L7	37.00	N83° 14' 56.00"W
L8	19.50	N06° 45' 04.00"E
L10	15.44	N83° 14' 56.00"W
L11	91.00	N06° 45' 04.00"E
L12	13.50	S83° 14' 56.00"E
L14	6.00	N06° 45' 04.00"E
L16	13.50	N83° 14' 56.00"W
L17	109.00	N06° 45' 04.00"E
L18	13.50	S83° 14' 56.00"E
L20	6.00	N06° 45' 04.00"E
L22	13.50	N83° 14' 56.00"W
L23	154.00	N06° 45' 04.00"E
L24	16.05	S83° 14' 56.00"E
L26	18.00	N06° 45' 04.00"E
L27	109.00	S83° 14' 56.00"E
L28	17.00	S06° 45' 04.00"W
L30	16.08	S83° 14' 56.00"E
L32	17.00	N06° 45' 04.00"E
L33	55.00	S83° 14' 56.00"E
L34	14.23	S06° 45' 04.00"W
L36	24.71	N61° 23' 03.58"E
L39	23.15	N38° 14' 56.00"W
L40	25.87	N06° 45' 04.00"E
L41	9.71	N51° 45' 04.00"E
L42	13.46	S38° 14' 56.00"E
L44	23.62	N06° 45' 04.00"E
L46	27.17	N38° 14' 56.00"W
L47	102.24	N06° 45' 04.00"E
L48	9.71	N51° 45' 04.00"E
L49	12.05	S38° 14' 56.00"E
L51	31.38	N06° 45' 04.00"E
L53	0.30	N83° 14' 56.00"W
L54	16.00	N83° 14' 56.00"W
L55	40.00	N06° 45' 04.00"E
L56	16.00	S83° 14' 56.00"E
L57	13.53	S83° 14' 56.00"E
L58	25.64	S38° 14' 56.00"E
L61	182.69	S06° 45' 04.00"W
L62	8.04	N83° 14' 56.00"W
L63	14.50	S83° 14' 56.00"E
L64	181.00	S06° 45' 04.00"W
L65	13.50	N83° 14' 56.00"W
L66	6.00	S06° 45' 04.00"W
L67	13.50	S83° 14' 56.00"E

Line Table		
Line #	Length	Direction
L68	181.00	S06° 45' 04.00"W
L69	16.20	N83° 14' 56.00"W
L70	15.50	S06° 45' 04.00"W
L71	172.00	N83° 14' 56.00"W
L72	13.50	N06° 45' 04.00"E
L73	2.31	N83° 14' 56.00"W
L74	33.49	S06° 45' 04.00"W
L75	18.00	S06° 45' 04.00"W
L76	81.22	N83° 14' 44.00"W
L77	145.00	N06° 45' 04.00"E
L78	13.50	N83° 14' 56.00"W
L80	6.00	N06° 45' 04.00"E
L82	13.50	S83° 14' 56.00"E
L83	154.00	N06° 45' 04.00"E
L84	13.31	N83° 14' 56.00"W
L87	9.64	S83° 14' 56.00"E
L89	311.50	S06° 45' 04.00"W
L91	9.64	N83° 14' 56.00"W
L94	13.50	S83° 14' 56.00"E
L95	30.00	S83° 14' 56.00"E
L98	18.00	N83° 14' 56.00"W
L101	30.00	S83° 14' 56.00"E
L104	18.00	N83° 14' 56.00"W
L107	30.00	S83° 14' 56.00"E
L110	18.00	N83° 14' 56.00"W
L113	30.00	S83° 14' 56.00"E
L114	6.00	S06° 45' 04.00"W
L115	30.00	N83° 14' 56.00"W
L116	6.00	N06° 45' 04.00"E
L117	30.00	S83° 14' 56.00"E
L118	6.00	S06° 45' 04.00"W
L119	30.00	N83° 14' 56.00"W
L120	6.00	N06° 45' 04.00"E
L121	30.00	S83° 14' 56.00"E
L122	6.00	S06° 45' 04.00"W
L123	30.00	N83° 14' 56.00"W
L124	6.00	N06° 45' 04.00"E
L125	18.00	S83° 14' 56.00"E
L126	29.62	N83° 14' 56.00"W
L127	18.00	S83° 14' 56.00"E
L128	29.62	N83° 14' 56.00"W
L129	14.50	N83° 14' 56.00"W
L131	4.02	N06° 45' 04.00"E
L133	22.98	N61° 23' 03.58"E
L135	1.77	S06° 45' 04.00"W
L137	15.50	N83° 14' 56.00"W
L138	18.00	S06° 45' 04.00"W
L139	4.85	S83° 01' 11.64"E
L140	108.17	S06° 49' 05.35"W
L141	4.92	N83° 14' 27.72"W

Line Table		
Line #	Length	Direction
L142	108.19	N06° 51' 03.36"E
L143	48.75	N06° 45' 04.00"E
L144	2.87	S83° 14' 56.00"E
L146	2.25	S55° 11' 03.05"W
L147	10.33	N34° 48' 56.95"W
L149	290.59	N83° 14' 30.32"W
L151	16.77	S77° 53' 50.22"W
L152	2.67	N15° 27' 38.73"W
L154	3.01	S78° 36' 38.14"E
L155	11.96	S11° 23' 21.86"W
L156	5.12	S78° 36' 38.14"E
L159	5.00	N46° 20' 21.51"E
L160	16.48	N77° 53' 50.22"E
L166	205.71	S06° 45' 04.00"W
L169	195.10	N06° 45' 04.00"E
L172	427.00	S06° 45' 04.00"W
L174	419.60	N06° 45' 04.00"E
L178	5.00	N06° 45' 04.00"E
L179	78.54	S83° 14' 56.00"E
L180	29.50	N06° 45' 04.00"E
L181	10.11	S06° 45' 04.00"W
L182	64.96	S83° 14' 56.00"E
L184	12.77	S06° 45' 04.00"W
L185	84.33	N83° 14' 56.00"W
L186	5.00	S06° 45' 04.00"W
L187	10.33	S34° 48' 56.95"E
L188	5.00	S19° 17' 07.59"E

Curve Table			
Curve #	Length	Radius	Delta
C1	24.60	15.00	093.97
C2	12.01	8.00	086.03
C3	3.14	2.00	090.00
C4	4.71	3.00	090.00
C5	3.14	2.00	090.00
C6	3.14	2.00	090.00
C7	3.14	2.00	090.00
C8	3.14	2.00	090.00
C9	3.14	2.00	090.00
C10	3.14	2.00	090.00
C11	3.14	2.00	090.00
C12	8.75	4.00	125.37
C13	41.62	114.00	020.92
C14	16.83	8.00	120.55
C15	4.71	2.00	135.00
C16	1.57	2.00	045.00
C17	4.71	2.00	135.00
C18	3.14	2.00	090.00
C19	23.16	15.00	088.48
C20	20.34	25.00	046.62
C21	39.41	25.06	090.09
C22	23.49	14.96	089.97
C24	36.64	18.00	116.61
C25	27.53	25.00	063.09
C26	39.31	25.00	090.10
C28	23.39	15.00	089.33
C29	3.16	2.00	090.67
C31	9.54	10.00	054.63
C33	3.14	2.00	090.00
C34	13.40	40.43	018.99
C35	3.14	2.00	090.00
C36	11.52	35.00	018.86
C37	12.97	40.00	018.57
C38	12.68	15.00	048.43
C39	3.14	2.00	090.00
C40	10.43	37.20	016.07
C41	16.90	20.00	048.43
C43	3.14	2.00	090.00
C45	12.57	8.00	090.00
C49	3.14	2.00	090.00
C50	3.14	2.00	090.00
C51	3.65	2.00	104.48
C52	10.54	8.00	075.52
C53	12.57	8.00	090.00
C54	12.57	8.00	090.00
C55	12.57	8.00	090.00
C56	3.14	2.00	090.00
C57	3.14	2.00	090.00
C58	12.57	8.00	090.00
C59	12.57	8.00	090.00

Curve Table			
Curve #	Length	Radius	Delta
C60	3.14	2.00	090.00
C61	3.14	2.00	090.00
C62	12.57	8.00	090.00
C63	12.57	8.00	090.00
C64	3.14	2.00	090.00
C65	3.14	2.00	090.00
C66	12.57	8.00	090.00
C67	12.57	8.00	090.00
C68	3.14	2.00	090.00
C69	3.14	2.00	090.00
C71	3.14	2.00	090.00
C73	3.14	2.00	090.00
C75	3.14	2.00	090.00
C77	3.14	2.00	090.00
C79	3.14	2.00	090.00
C81	3.14	2.00	090.00
C83	3.14	2.00	090.00
C85	3.14	2.00	090.00
C87	3.14	2.00	090.00
C89	3.14	2.00	090.00
C91	3.14	2.00	090.00
C93	3.65	2.00	104.48
C94	10.54	8.00	075.52
C96	10.54	8.00	075.52
C97	3.65	2.00	104.48
C99	3.65	2.00	104.48
C100	10.54	8.00	075.52
C102	10.54	8.00	075.52
C103	3.65	2.00	104.48
C105	3.14	2.00	090.00
C107	15.32	7.00	125.37
C108	3.14	2.00	090.00

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Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

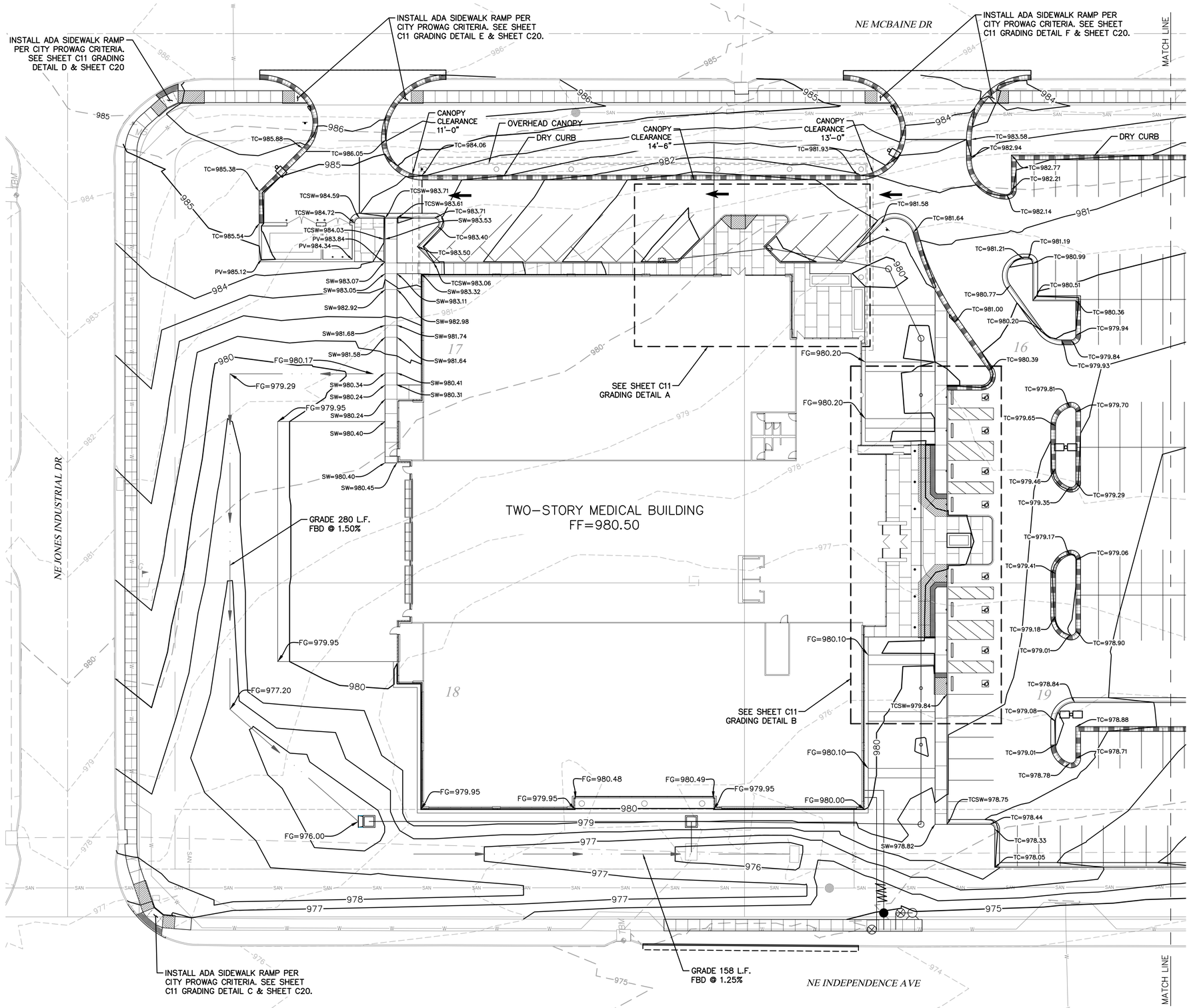
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C08

DIMENSION PLAN TABLES



GRADING PLAN NOTES:

1. ALL CURB SHALL BE CG-1 UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS SHOWN ARE TO FINISHED GRADE.
3. ALL GRADING OPERATIONS, EXCAVATION, FILL, COMPACTION TESTING, AND BACKFILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER. NO PAVEMENTS SHALL BE PLACED PRIOR TO APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
4. SIDEWALK AND STOOP ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR SO THAT THE SIDEWALK ELEVATIONS AND FINISHED FLOOR ELEVATIONS ARE COORDINATED FOR PROPER INGRESS/EGRESS. ALL DOORS SHALL HAVE A 5-FT OUTSIDE LANDING WITH 1.5% SLOPE AWAY FROM THE BUILDING.
5. THE FINISH GRADING AROUND THE BUILDING SHALL BE SUCH THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM THE BUILDING AND THAT NO PONDING OF WATER WILL EXIST. SUBGRADE OF GRASS AND LANDSCAPE AREAS SHALL BE SET AT THE SIDEWALK, PAVEMENT, AND OR TOP OF CURB ELEVATION SO THAT STORMWATER CAN FLOW WITHOUT PONDING.
6. PARKING GRADES SHALL BE VERIFIED TO CONFIRM POSITIVE DRAINAGE IS MAINTAINED WITHOUT THE PRESENCE OF PONDING WATER.
7. ALL ADA PARKING STALLS AND ADA ACCCESS ACROSS PARKING AISLES SHALL HAVE LESS THAN 2% SLOPE IN ANY DIRECTION.
8. ALL SIDEWALKS SHALL HAVE A CROSS SLOPE OF 1.5% (2.0% MAX) AND LESS THAN 5% RUN SLOPE.
9. ANY PROPERTY LINE AND RIGHT-OF-WAY MONUMENTS DISTURBED BY CONSTRUCTION SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR.

LEGEND

DENOTES NEW CURB RAMP

DENOTES NEW CURB & GUTTER (WET)

DENOTES NEW CURB & GUTTER (DRY)

LEGEND

924	EXISTING 1' CONTOUR
925	EXISTING 5' CONTOUR
929	PROPOSED 1' CONTOUR
930	PROPOSED 5' CONTOUR
TC	TOP OF CURB ELEVATION
SW	SIDEWALK ELEVATION
PV	PAVEMENT ELEVATION
ME	MATCH EXISTING ELEVATION
FG	FINISHED GRADE ELEVATION
FBD	FLAT BOTTOM DITCH

NORTH

SCALE: 1"=20'

20 10 0 20

STATE OF MISSOURI MARK DANIEL MCGHEE NUMBER PE-2008019568 PROFESSIONAL ENGINEER

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

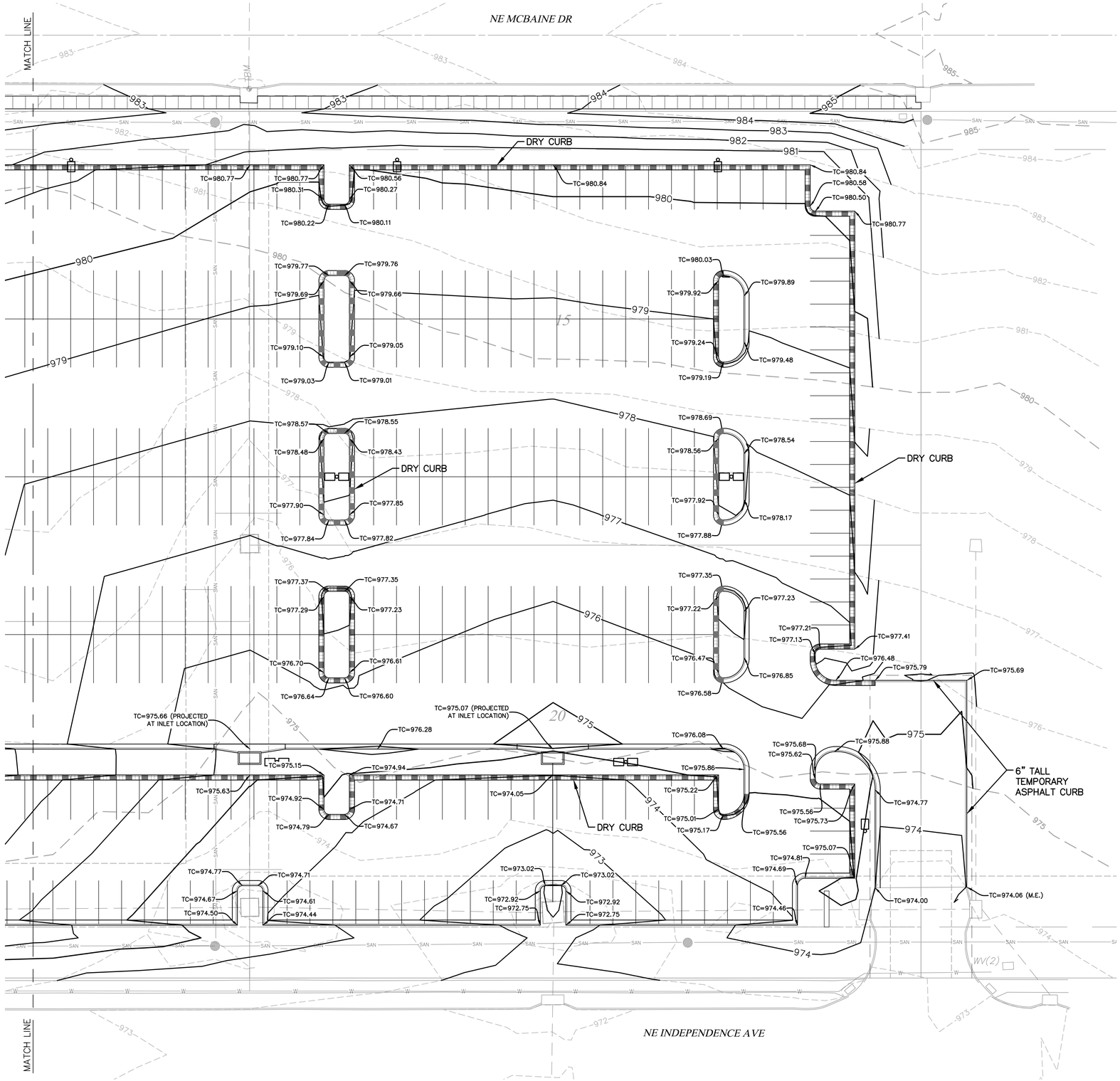
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C09

GRADING PLAN



GRADING PLAN NOTES:

1. ALL CURB SHALL BE CG-1 UNLESS NOTED OTHERWISE.
2. ALL ELEVATIONS SHOWN ARE TO FINISHED GRADE.
3. ALL GRADING OPERATIONS, EXCAVATION, FILL, COMPACTION TESTING, AND BACKFILL SHALL BE OBSERVED AND TESTED BY A QUALIFIED GEOTECHNICAL ENGINEER. NO PAVEMENTS SHALL BE PLACED PRIOR TO APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
4. SIDEWALK AND STOOP ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR SO THAT THE SIDEWALK ELEVATIONS AND FINISHED FLOOR ELEVATIONS ARE COORDINATED FOR PROPER INGRESS/EGRESS. ALL DOORS SHALL HAVE A 5-FT OUTSIDE LANDING WITH 1.5% SLOPE AWAY FROM THE BUILDING.
5. THE FINISH GRADING AROUND THE BUILDING SHALL BE SUCH THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM THE BUILDING AND THAT NO PONDING OF WATER WILL EXIST. SUBGRADE OF GRASS AND LANDSCAPE AREAS SHALL BE SET AT THE SIDEWALK, PAVEMENT, AND OR TOP OF CURB ELEVATION SO THAT STORMWATER CAN FLOW WITHOUT PONDING.
6. PARKING GRADES SHALL BE VERIFIED TO CONFIRM POSITIVE DRAINAGE IS MAINTAINED WITHOUT THE PRESENCE OF PONDING WATER.
7. ALL ADA PARKING STALLS AND ADA ACCCESS ACROSS PARKING AISLES SHALL HAVE LESS THAN 2% SLOPE IN ANY DIRECTION.
8. ALL SIDEWALKS SHALL HAVE A CROSS SLOPE OF 1.5% (2.0% MAX) AND LESS THAN 5% RUN SLOPE.
9. ANY PROPERTY LINE AND RIGHT-OF-WAY MONUMENTS DISTURBED BY CONSTRUCTION SHALL BE RESET TO THEIR ORIGINAL LOCATIONS AT THE CONTRACTOR'S EXPENSE BY A REGISTERED LAND SURVEYOR.

LEGEND

DENOTES NEW CURB RAMP

DENOTES NEW CURB & GUTTER (WET)

DENOTES NEW CURB & GUTTER (DRY)

LEGEND

924	EXISTING 1' CONTOUR
925	EXISTING 5' CONTOUR
929	PROPOSED 1' CONTOUR
930	PROPOSED 5' CONTOUR
TC	TOP OF CURB ELEVATION
SW	SIDEWALK ELEVATION
PV	PAVEMENT ELEVATION
ME	MATCH EXISTING ELEVATION
FG	FINISHED GRADE ELEVATION
FBD	FLAT BOTTOM DITCH

NORTH

SCALE: 1"=20'

20 10 0 20

STATE OF MISSOURI — MARK DANIEL MCGHEE JR. — NUMBER 2008019568 — PROFESSIONAL ENGINEER

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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Lee's Summit, Missouri

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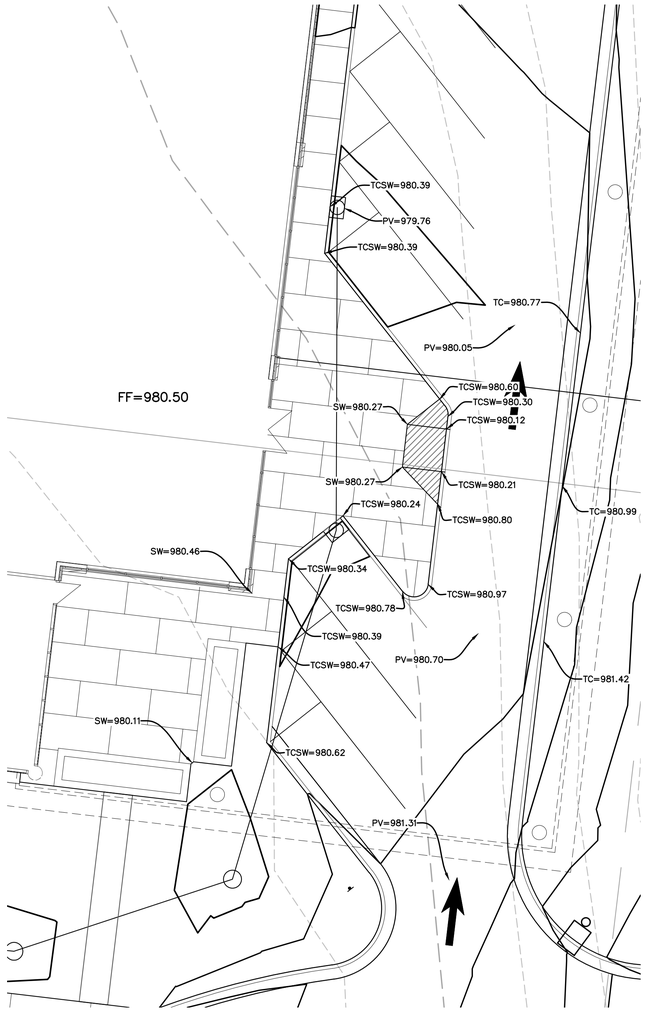
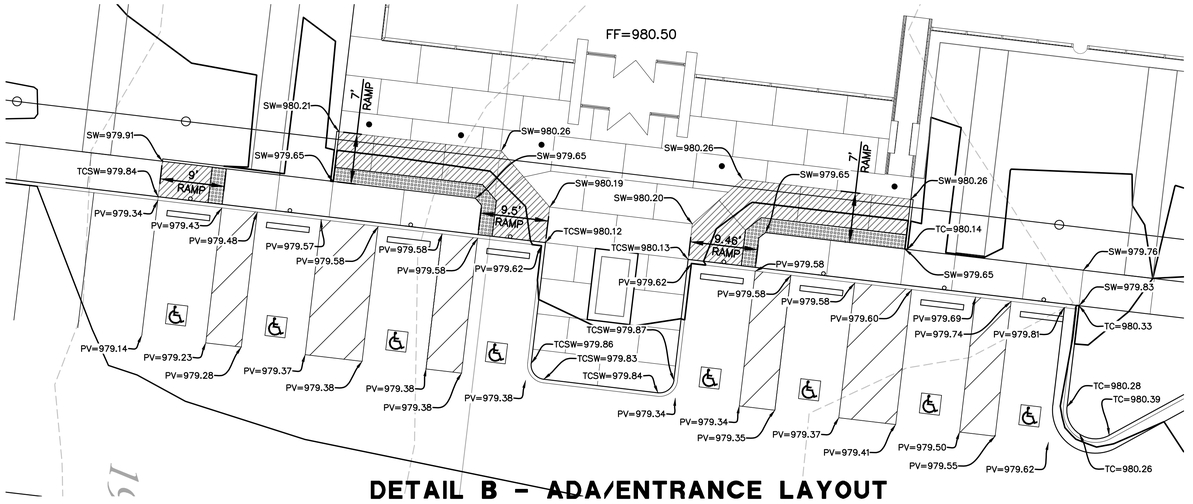
C10

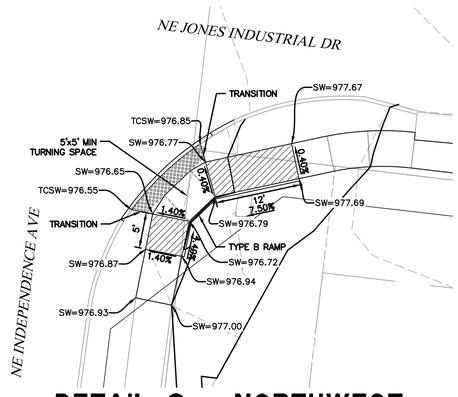
GRADING PLAN



DETAIL A - EAST ENTRANCE LAYOUT

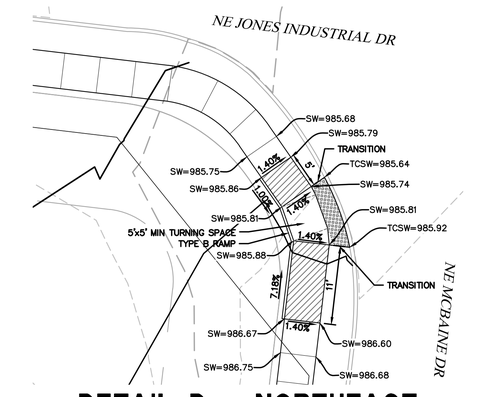


DETAIL B - ADA/ENTRANCE LAYOUT

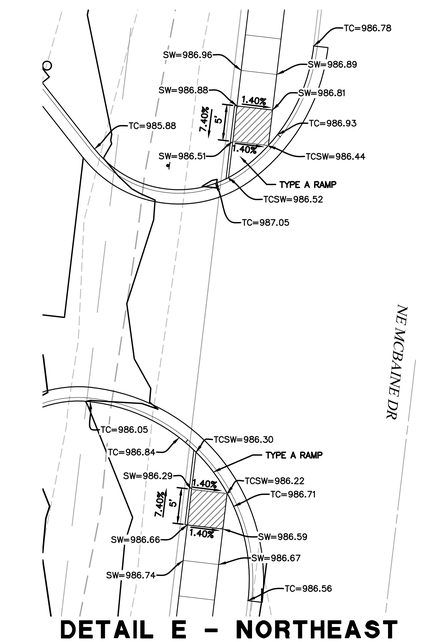


DETAIL C - NORTHWEST RAMP DETAIL

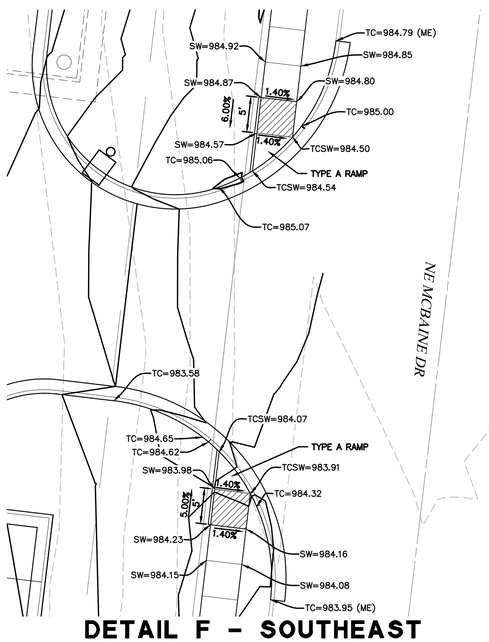
SEE SHEET C20 FOR CITY STANDARD RAMP DETAILS.



DETAIL D - NORTHEAST RAMP DETAIL



DETAIL E - NORTHEAST ENTRANCE DETAIL



DETAIL F - SOUTHEAST ENTRANCE DETAIL

LEGEND

- DENOTES NEW CURB RAMP
- DENOTES NEW CURB & GUTTER (WET)
- DENOTES NEW CURB & GUTTER (DRY)

LEGEND

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PV	PAVEMENT ELEVATION
ME	MATCH EXISTING ELEVATION
FG	FINISHED GRADE ELEVATION
FBD	FLAT BOTTOM DITCH

NORTH

SCALE: 1"=10'

10 5 0 10

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Lee's Summit, Missouri

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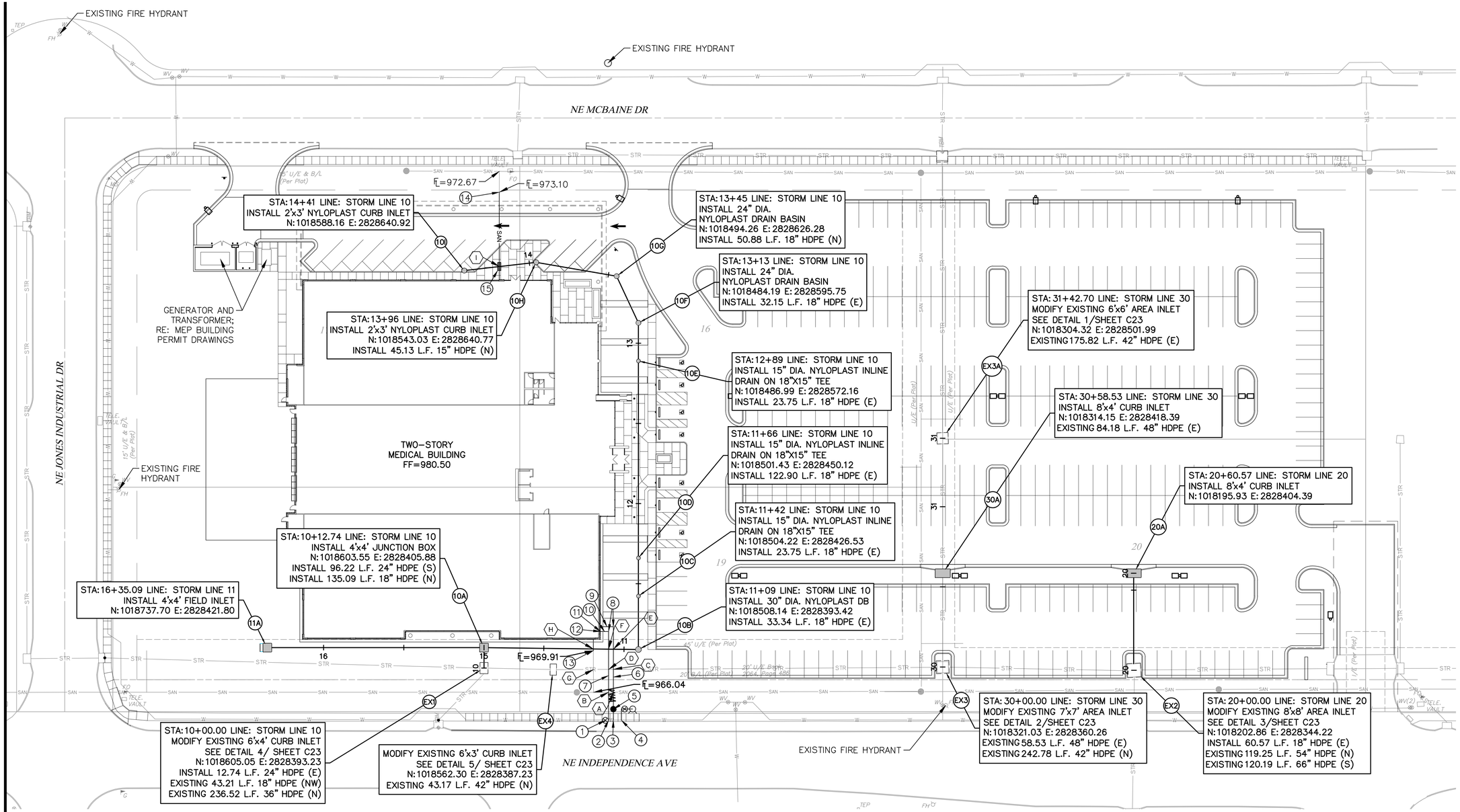
C11

GRADING PLAN DETAIL



PIPE SEPARATION (A)				
CROSSING	PIPE 1	PIPE 2	SEPARATION	NOTES
A	PROPOSED WATER	EXISTING SANITARY	±4.45'	FIELD VERIFY
B	PROPOSED WATER	EXISTING SANITARY	±4.44'	FIELD VERIFY
C	PROPOSED WATER	EXISTING STORM	±3.64'	FIELD VERIFY
D	PROPOSED WATER	EXISTING STORM	±3.66'	FIELD VERIFY
E	PROPOSED WATER	PROPOSED STORM	±3.22'	
F	PROPOSED WATER	PROPOSED STORM	±3.22'	
G	EXISTING SANITARY	EXISTING STORM	±0.45'	FIELD VERIFY
H	PROPOSED SANITARY	PROPOSED STORM	±2.00'	
I	PROPOSED SANITARY	PROPOSED STORM	±0.73'	CONCRETE ENCASE SANITARY

(#) KEYNOTES:

1. INSTALL 8" GATE VALVE ON WATER MAIN.
2. INSTALL 8"x6" TEE WITH 6" GATE VALVE TO EAST.
3. INSTALL 8"x6" TEE WITH A 6" TO 3" REDUCER TO EAST AND 7 L.F. 3" DOMESTIC SERVICE LINE.
4. INSTALL STANDARD HYDRANT ASSEMBLY.
5. INSTALL A 2" WATER METER.
6. INSTALL 51.4 L.F. 3" DOMESTIC SERVICE LINE.
7. INSTALL 55.4 L.F. 6" FIRE LINE.
8. INSTALL 90° BEND.
9. INSTALL 8.0 L.F. 3" DOMESTIC SERVICE LINE.
10. INSTALL 5 L.F. OF 6" FIRE LINE.
11. DOUBLE CHECK DETECTOR/FIRE RISER IN BUILDING; RE:MEP BUILDING PERMIT DRAWINGS.
12. INSTALL FIRE DEPARTMENT CONNECTION ON OUTSIDE FACE OF BUILDING.
13. CONNECT TO EXISTING SANITARY STUB @ 969.91 (FIELD VERIFY ELEVATION) AND INSTALL 6.91 L.F. OF 4" PVC SDR-26 AND CONNECT TO THE BUILDING SANITARY SEWER.
14. CONNECT TO EXISTING SANITARY SEWER STUB @ 973.10 (FIELD VERIFY ELEVATION) AND INSTALL 54.81 L.F. OF 4" PVC SDR-26 AND CONNECT TO THE BUILDING SANITARY SEWER.
15. INSTALL 5 L.F. OF CONCRETE ENCASEMENT AROUND SANITARY SEWER LINE.

UTILITY PLAN NOTES:

1. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING, FIELD LOCATES, AND AS-BUILTS. THE EXACT LOCAITON OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
2. GENERAL CONTRACTOR TO COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR ALL LOCATIONS AND SERVICE CONNECTIONS.
3. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. THE CONTRACTOR SHALL CONTACT ENGINEER IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
4. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY COMPANIES AND CITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTION, RELOCATIONS, INSPECTIONS, AND DEMOLITION.
5. ALL VALVE PITS SHALL BE ADJUSTED TO FINAL GRADE.
6. SANITARY SERVICE LATERAL SHALL MAINTAIN MINIMUM OF 10-FT HORIZONTAL AND 1.5-FT VERTICAL SEPARATION DISTANCE FROM WATER LINES. WATER LINES SHALL BE INSTALLED TO MAINTAIN A MINIMUM OF 42-INCHES OF COVER OVER THE PIPE. THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE ELEVATION OF THE WATER LINE TO AVOID OTHER UTILITIES AND UNDERGROUND OBSTRUCTIONS.
7. THIS PLAN DETAILS PIPES UP TO 5-FT FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS.
8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE GOVERNING AUTHORITY.
9. COPPER PIPE SHALL BE TYPE K TUBING WITH COMPRESSION FITTINGS.
10. ALL SANITARY SEWER SERVICE LINES SHALL BE SDR-26 PVC PIPE. ALL PVC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH CITY REQUIREMENTS.
11. ELECTRICAL SERVICE LINES SHOWN ON THE PLAN SHALL BE INSTALLED IN CONDUITS IN ACCORDANCE WITH KCPL&L'S STANDARD REQUIREMENTS.
12. SANITARY SEWER AND STORM SEWER LINES SHALL BE INSTALLED TO MAINTAIN POSITIVE SLOPE. THE CONTRACTOR SHALL VERIFY THAT EACH RUN OF PIPE CAN BE INSTALLED WITH A POSITIVE SLOPE WITHOUT INTERFERENCE WITH OTHER UNDERGOUND UTILITIES OR OBSTRUCTIONS PRIOR TO INSTALLING THE LINE.
13. PROVIDE CONCRETE THRUST BLOCKS AT ALL FIRE LINE TEES AND HORIZONTAL OR VERTICAL BEND FITTINGS.
14. COORDINATE SIZING OF FIRE LINE, DOUBLE CHECK DETECTOR ASSEMBLY, AND ASSOCIATED VAULT WITH BUILDING FIRE SUPPRESSION SYSTEM DESIGN, BY OTHERS.

NORTH

SCALE: 1"=30'

30 15 0 30

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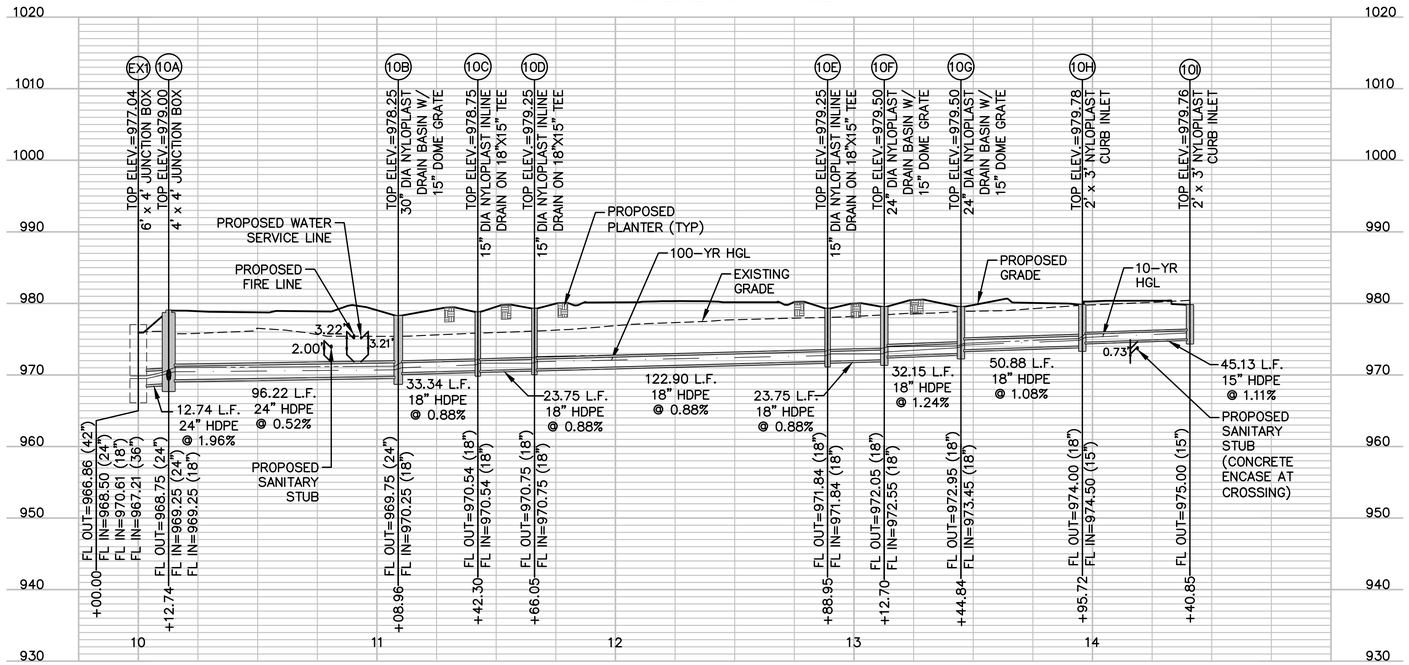
C12

UTILITY PLAN

STORM LINE 10 PROFILE



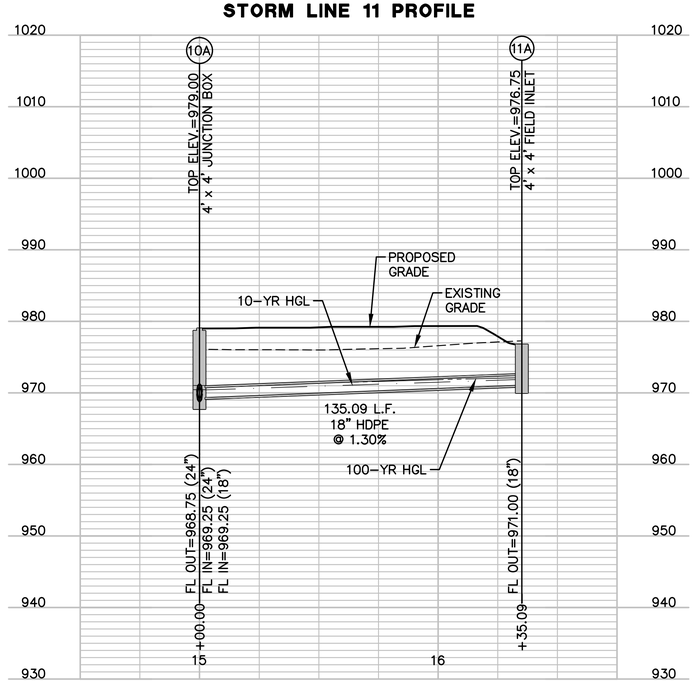
HORIZ. SCALE: 1"=30'

30 15 0 30

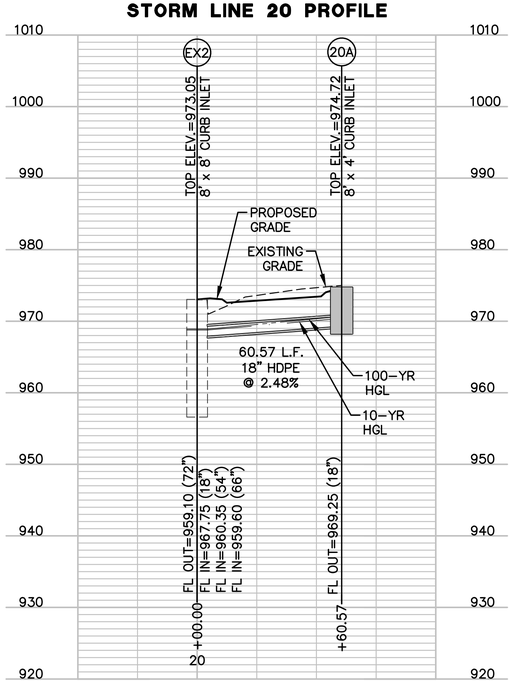
VERT. SCALE: 1"=10'

10 5 0 10

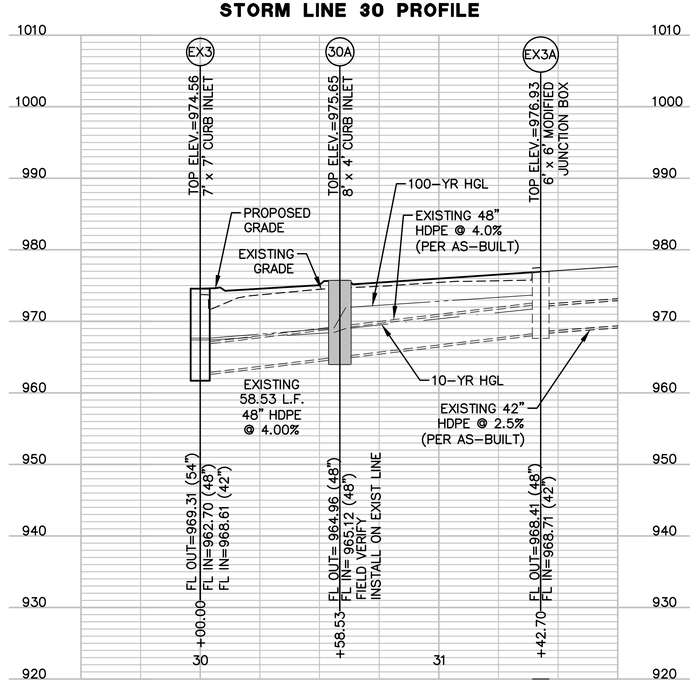
STORM LINE 11 PROFILE



STORM LINE 20 PROFILE



STORM LINE 30 PROFILE



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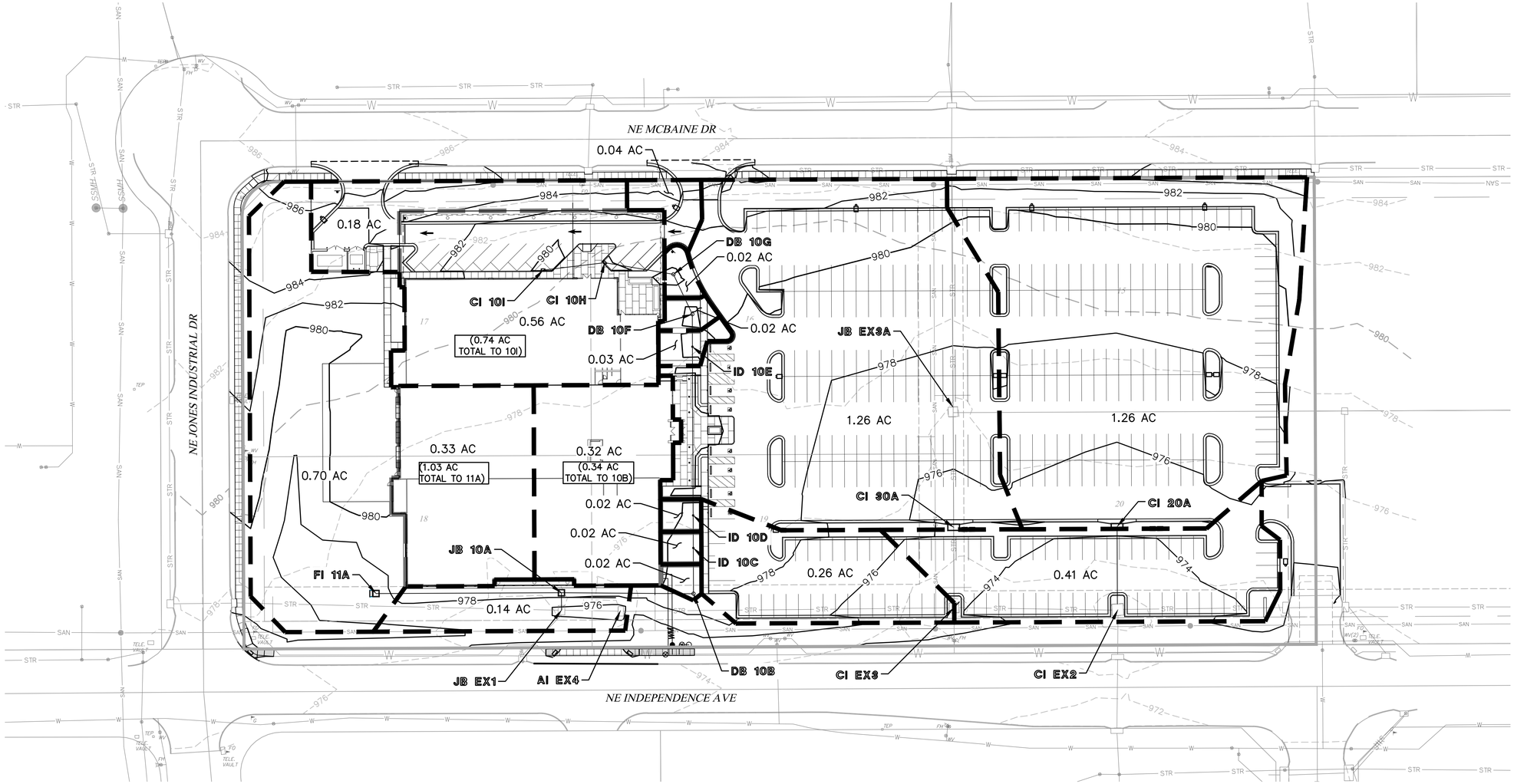
C13

STORM SEWER PROFILES



SEE SHEET C15 FOR STORM CALCULATION SUMMARY

NORTH

SCALE: 1"=40'

40 20 0 40

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C14

DRAINAGE AREA MAP

10-YEAR STORM DRAINAGE CALCULATIONS: LEE'S SUMMIT SURGICAL CENTER

LINE NO.	STR. NO.	"C"	"A" (AC.)	ADD. AREA (AC.)	TOTAL AREA (AC.)	TOTAL "AxC"	"Tc" (MIN.)	I. RUNOFF FREQ. (YR.)	"K"	C x K	C x K x A	"I" (IN.)	Inc. "Q" (CFS)	DESIGN FREQ. (YR.)	II. STRUCTURE UP STR.	LOW STR.	III. PIPE DESIGN "D" (IN.)	"TYPE"	n"	"L" (FT.)	"S" (%)	"Tt" (MIN.)	"d" (IN.)	"Vd" (FPS)	"Vf" (FPS)	Total "Qd" (CFS)	"Qcap" (CFS)
								10	1.00	0.82	0.61	7.35	4.46														
10	10 I	0.82	0.74		0.74	0.61	5.00	25	1.10	0.90	0.67	8.53	5.68	10	10 I	10 H	15	HDPE	0.013	45.13	1.11	0.13	8.85	5.92	5.55	4.46	6.81
								100	1.25	1.00	0.74	10.32	7.64														
								10	1.00	0.85	0.03	7.35	0.25														
	10 H	0.85	0.04		0.78	0.66	5.00	25	1.10	0.94	0.04	8.53	0.32	10	10 H	10 G	18	HDPE	0.013	50.88	1.08	0.14	8.26	5.95	6.18	4.71	10.92
								100	1.25	1.00	0.04	10.32	0.41														
								10	1.00	0.50	0.01	7.35	0.07														
	10 G	0.50	0.02		0.80	0.40	5.00	25	1.10	0.55	0.01	8.53	0.09	10	10 G	10 F	18	HDPE	0.013	32.15	1.24	0.09	8.01	6.29	6.62	4.78	11.70
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.50	0.01	7.35	0.07														
	10 F	0.50	0.02		0.82	0.41	5.00	25	1.10	0.55	0.01	8.53	0.09	10	10 F	10 E	18	HDPE	0.013	23.75	0.88	0.07	8.91	5.56	5.58	4.85	9.85
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.50	0.02	7.35	0.11														
	10 E	0.50	0.03		0.85	0.43	5.00	25	1.10	0.55	0.02	8.53	0.14	10	10 E	10 D	18	HDPE	0.013	122.90	0.88	0.37	9.02	5.60	5.58	4.96	9.85
								100	1.25	0.63	0.02	10.32	0.20														
								10	1.00	0.50	0.01	7.35	0.07														
	10 D	0.50	0.02		0.87	0.44	5.00	25	1.10	0.55	0.01	8.53	0.09	10	10 D	10 C	18	HDPE	0.013	23.75	0.88	0.07	9.11	5.61	5.58	5.03	9.85
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.50	0.01	7.35	0.07														
	10 C	0.50	0.02		0.89	0.45	5.00	25	1.10	0.55	0.01	8.53	0.09	10	10 C	10 B	18	HDPE	0.013	33.34	0.88	0.10	9.18	5.63	5.58	5.10	9.85
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.86	0.29	7.35	2.15														
	10 B	0.86	0.34		1.23	0.74	5.00	25	1.10	0.95	0.32	8.53	2.76	10	10 B	10 A	24	HDPE	0.013	96.22	0.52	0.32	11.18	5.05	5.19	7.25	16.31
								100	1.25	1.00	0.34	10.32	3.51														
								10	1.00	0.85	0.00	7.35	0.00														
	10 A	0.85	0.00	1.03	2.26	1.39	5.00	25	1.10	0.94	0.00	8.53	0.00	10	10 A	EX 1	24	HDPE	0.013	12.74	1.96	0.02	10.25	9.39	10.08	12.02	31.67
								100	1.25	1.00	0.00	10.32	0.00														
								10	1.00	0.63	0.65	7.35	4.77														
11	11 A	0.63	1.03		1.03	0.65	5.00	25	1.10	0.69	0.71	8.53	6.06	10	11 A	10 A	18	HDPE	0.013	135.09	1.30	0.35	7.88	6.41	6.78	4.77	11.98
								100	1.25	0.79	0.81	10.32	8.40														
								10	1.00	0.85	1.07	7.35	7.88														
20	20 A	0.85	1.26		1.26	1.07	5.00	25	1.10	0.94	1.18	8.53	10.10	10	20 A	EX 2	18	HDPE	0.013	60.57	2.48	0.11	8.73	9.27	9.36	7.88	16.54
								100	1.25	1.00	1.26	10.32	13.01														
								10	1.00	0.85	1.07	7.35	7.88														
30	30 A	0.85	1.26	21.91	23.17	19.69	5.00	25	1.10	0.94	1.18	8.53	10.10	10	30 A	EX 3	48	HDPE	0.013	58.53	4.00	0.04	22.46	22.28	22.86	128.60	287.29
								100	1.25	1.00	1.26	10.32	13.01														

100-YEAR STORM DRAINAGE CALCULATIONS: LEE'S SUMMIT SURGICAL CENTER

LINE NO.	STR. NO.	"C"	"A" (AC.)	ADD. AREA (AC.)	TOTAL AREA (AC.)	TOTAL "AxC"	"Tc" (MIN.)	I. RUNOFF FREQ. (YR.)	"K"	C x K	C x K x A	"I" (IN.)	Inc. "Q" (CFS)	DESIGN FREQ. (YR.)	II. STRUCTURE UP STR.	LOW STR.	III. PIPE DESIGN "D" (IN.)	"TYPE"	n"	"L" (FT.)	"S" (%)	"Tt" (MIN.)	"d" (IN.)	"Vd" (FPS)	"Vf" (FPS)	Total "Qd" (CFS)	"Qcap" (CFS)
								10	1.00	0.82	0.61	7.35	4.46														
10	10 I	0.82	0.74		0.74	0.61	5.00	25	1.10	0.90	0.67	8.53	5.68	100	10 I	10 H	15	HDPE	0.013	45.13	1.11	SUR	SUR	SUR	5.55	7.64	6.81
								100	1.25	1.00	0.74	10.32	7.64														
								10	1.00	0.85	0.03	7.35	0.25														
	10 H	0.85	0.04		0.78	0.66	5.00	25	1.10	0.94	0.04	8.53	0.32	100	10 H	10 G	18	HDPE	0.013	50.88	1.08	0.13	11.48	6.76	6.18	8.05	10.92
								100	1.25	1.00	0.04	10.32	0.41														
								10	1.00	0.50	0.01	7.35	0.07														
	10 G	0.50	0.02		0.80	0.40	5.00	25	1.10	0.55	0.01	8.53	0.09	100	10 G	10 F	18	HDPE	0.013	32.15	1.24	0.07	11.09	7.16	6.62	8.18	11.70
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.50	0.01	7.35	0.07														
	10 F	0.50	0.02		0.82	0.41	5.00	25	1.10	0.55	0.01	8.53	0.09	100	10 F	10 E	18	HDPE	0.013	23.75	0.88	0.06	12.65	6.26	5.58	8.31	9.85
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.50	0.02	7.35	0.11														
	10 E	0.50	0.03		0.85	0.43	5.00	25	1.10	0.55	0.02	8.53	0.14	100	10 E	10 D	18	HDPE	0.013	122.90	0.88	0.33	12.91	6.28	5.58	8.51	9.85
								100	1.25	0.63	0.02	10.32	0.20														
								10	1.00	0.50	0.01	7.35	0.07														
	10 D	0.50	0.02		0.87	0.44	5.00	25	1.10	0.55	0.01	8.53	0.09	100	10 D	10 C	18	HDPE	0.013	23.75	0.88	0.06	13.05	6.30	5.58	8.64	9.85
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.50	0.01	7.35	0.07														
	10 C	0.50	0.02		0.89	0.45	5.00	25	1.10	0.55	0.01	8.53	0.09	100	10 C	10 B	18	HDPE	0.013	33.34	0.88	0.09	13.21	6.31	5.58	8.77	9.85
								100	1.25	0.63	0.01	10.32	0.13														
								10	1.00	0.86	0.29	7.35	2.15														
	10 B	0.86	0.34		1.23	0.74	5.00	25	1.10	0.95	0.32	8.53	2.76	100	10 B	10 A	24	HDPE	0.013	96.22	0.52	0.28	15.53	5.71	5.19	12.28	16.31
								100	1.25	1.00	0.34	10.32	3.51														
								10	1.00	0.85	0.00	7.35	0.00														
	10 A	0.85	0.00	1.03	2.26	1.39	5.00	25	1.10	0.94	0.00	8.53	0.00	100	10 A	EX 1	24	HDPE	0.013	12.74	1.96	0.02	14.14	10.74	10.08	20.68	31.67
								100	1.25	1.00	0.00	10.32	0.00														
								10	1.00	0.63	0.65	7.35	4.77														
11	11 A	0.63	1.03		1.03	0.65	5.00	25	1.10	0.69	0.71	8.53	6.06	100	11 A	10 A	18	HDPE	0.013	135.09	1.30	0.31	11.11	7.34	6.78	8.40	11.98
								100	1.25	0.79	0.81	10.32	8.40														
								10	1.00	0.85	1.07	7.35	7.88														
20	20 A	0.85	1.26		1.26	1.07	5.00	25	1.10	0.94	1.18	8.53	10.10	100	20 A	EX 2	18	HDPE	0.013	60.57	2.48	0.10	12.02	10.37	9.36	13.01	16.54
								100	1.25	1.00	1.26	10.32	13.01														
								10	1.00	0.85	1.07	7.35	7.88														
30	30 A	0.85	1.26	21.91	23.17	19.69	5.00	25	1.10	0.94	1.18	8.53	10.10	100	30 A	EX 3	48	HDPE	0.013	58.53	4.00	0.04	30.77	25.07	22.86	213.36	287.29
								100	1.25	1.00	1.26	10.32	13.01														

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State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

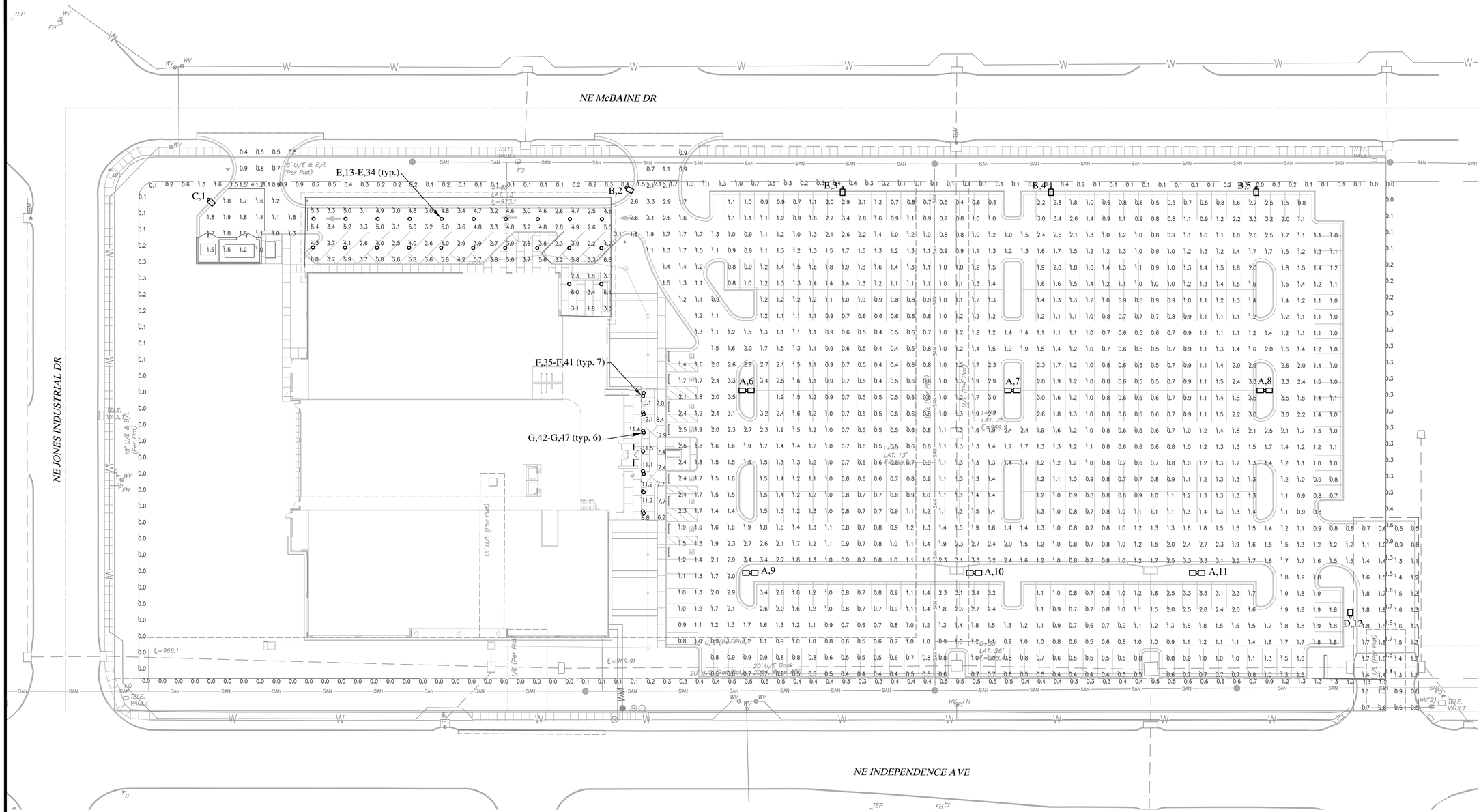
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/20/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C15

STORM DESIGN TABLES



PLAN NOTES:

1. ALL WORK AND MATERIAL SHALL COMPLY WITH THE 2011 NATIONAL ELECTRICAL CODE.
2. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL APPLICABLE STANDARDS AND SPECIFICATIONS OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI, IN CURRENT USAGE.
3. THE PARKING LOT LIGHTING LAYOUT WAS BASED ON THE MCGRAW-VENTUS SERIES LED FIXTURE. EACH LUMINAIRE SHALL BE ADJUSTED AND LEVELED TO THE PAVEMENT. FIXTURE SHALL BE MOUNTED ON 25' ROUND GARDCO SRS255 POLE (SEE ARM MOUNT ORIENTATION REQUIRED FOR EA. POLE) AND 2.5' EXTENDED BASE.
4. VERIFY THE POLE AND ALL FIXTURE COLORS WITH THE ARCHITECT.
5. INDIVIDUAL AND SYSTEM GROUNDS SHALL BE INSTALLED ON ALL CIRCUITS.
6. LUMINAIRE ORIENTATION AND OPTICS ORIENTATION SHALL BE AS SHOWN ON THIS DRAWING.
7. POLE SETBACK SHALL BE AS SHOWN ON DRAWING.
8. POLES SHALL BE LOCATED IN LINE WITH PARKING LOT LINES WHERE APPLICABLE.

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	LLF	Watts
	A	6	VTS-E04-LED-E1-T4	0.95	194.4
	B	4	VTS-E06-LED-E1-SL4-HSS	0.95	150.5
	C	1	VTS-E04-LED-E1-T4_1	0.95	97.2
	D	1	VTS-E06-LED-E1-5MQ	0.95	150.5
○	E	22	LD6B20D010 EU6B10208040 6LBWH	0.95	20.8
○	F	7	LD6B40D010 EU6B30508035 6LBNH	0.95	41.8
○	G	6	RW404-56L45T5-MD_03	0.95	66.2

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE	+	1.30	3.5	0.4 fc	8.7:1	3.3:1

NORTH

SCALE: 1"=30'

30 15 0 30

STATE OF MISSOURI
DALE K. DICKSON
NUMBER PE-023058
PROFESSIONAL ENGINEER
10-27-2017
DALE K. DICKSON
PE-023058

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Licensee's Certificate of Authority Number:
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Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/27/17	NEW SHEET

C16

LIGHTING PLAN

McGraw-Edison

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics
Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical
LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting
Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish
Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty
Five-year warranty.

VTS
VENTUS LED

2 - 12 LightBARs
Solid State LED

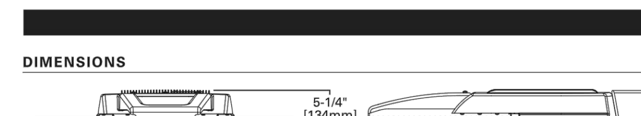
AREA LUMINAIRE

CERTIFICATION DATA
UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA
Approximate Net Weight:
(See Tabulated Reference Data)

DIMENSIONS



DIMENSIONAL DATA

Number of LightBars	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

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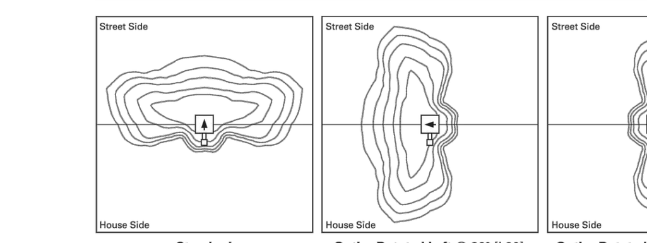
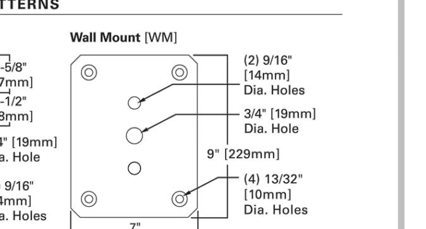
OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family [1, 2]	Number of LightBARs [3, 4]		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs E06=(6) 21 LED LightBARs E07=(7) 21 LED LightBARs E08=(8) 21 LED LightBARs E09=(9) 21 LED LightBARs E10=(10) 21 LED LightBARs E11=(11) 21 LED LightBARs E12=(12) 21 LED LightBARs	F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs F06=(6) 7 LED LightBARs F07=(7) 7 LED LightBARs F08=(8) 7 LED LightBARs F09=(9) 7 LED LightBARs F10=(10) 7 LED LightBARs F11=(11) 7 LED LightBARs F12=(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V [5, 6] 480=480V [5, 6, 7]	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White

Options (Add as Suffix)	Accessories (Order Separately) [22]
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) [5] R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle [8] HA=50°C High Ambient Temperature Rating [9, 10] 2L=Two Circuits [6, 11, 12, 13] L90=Optics Rotated 90° Left [14] R90=Optics Rotated 90° Right [14] 7030=70 CRI / 3000K CCT [15] 7050=70 CRI / 5000K CCT [15] 7060=70 CRI / 5700K CCT [15] 8030=80 CRI / 3000K CCT [15] TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation [16] MS/X-LXX=Motion Sensor for Bi-Level Operation [17] MS/DIM-LXX=Motion Sensor for Dimming Operation [18, 19] DIM=0-10V Dimming Drivers [20] HSS=Factory Installed House Side Shield [21]	VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2@120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor [23] OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield [24]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. 6" arm and round pole adapter included with fixture.
3. 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
4. Standard 4000K CCT and nominal 70CRI.
5. Not available with HA option.
6. Must specify voltage.
7. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
8. Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
9. Not available with DIM option or MS/DIM-LXX.
10. Not available with button photocontrol or motion sensor.120 - 277V only.
11. Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
12. Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
13. Not available in 347V or 480V.
14. Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
15. Extended lead times apply.
16. Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
17. Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
18. Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
19. Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
20. Available in E02-E06 and F02-F06 only.
21. Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
22. Replace XX with color suffix.
23. Only compatible with MS/DIM-LXX motion sensor.
24. One required for each LightBAR. Not available with L90 or R90 options.

EATON
Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

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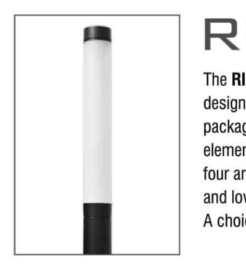
FIXTURES A, B, C AND D

RIALTA® RW404



The **RIALTA® RW404** luminaire is a cylindrical post top mounted luminaire designed to bring ambiance to any project by providing a performance lighting package in a vertical form. The 8" Acrylic cylinder adds a four foot high luminous element with near perfect surface brightness and uniformity. The RW404 uses a four arc LED configuration to deliver IES type 5 distributions with high efficiency and low wattage consumption. A variety of LED color temperatures are available. A choice of several popular polyester powder coat colors is also available.

SternbergLighting
ESTABLISHED 1923 / EMPLOYEE OWNED

PROJECT:

TYPE:

ORDERING EXAMPLE: PT8-RW404FAC-56L45T5-MDL05-R1-FHD/UBKT

MOUNTING CONFIG.	HEIGHT (H) FT.		SERIES	LENS	NO. OF LEDS	COLOR TEMP K	DISTRIBUTION TYPE	DRIVER	CONTROLS	DUAL FUSE & HOLDER	COLOR	
			RW404						OPTIONS			
PT	6	13	Post Top Mounted Luminaire	FAC	56L	27(00) K	T5	MDL03			UBKT	UBK
	7	14				35(00) K		MDL05	R	FHD	UBT	UB
	8	15				45(00) K		MDH03	R1		ULBT	ULB
	9	16						MDH05	PEC		USLT	USL
	10	17									UWHT	UWH
	11	18									UCHS	
	12											

PT = Post Top H = Overall Height of Pole and Fixture

Product Specs

Optical
- IP66 rated optic module.
- Available in IES Type 5 distribution.
- Utilizes high output, high brightness LEDs.
- Operates at -40°C (-40°F) to +50°C (122°F) ambient air temperature range.
- Typical CRI of 70, CCT 2700, 3500 and 4500K. Call factory for custom CCT.
- LM-79 and LM-80 tests in accordance with IESNA standards.
- Lumen depreciation rating L70>200,000 hrs. projected per TM-21 guideline using 525mA drive at 25°C ambient.
- RoHS Compliant.

Electrical
- 120-277 volt and 347-480 volt available.
- Minimum drivers power factor: >0.9.
- Electrical surge protection in accordance with IEEE/ANSI C62.41.2 guidelines.
- UL or ETL listed in U.S. and Canada.

Mechanical
- Cast aluminum heat sink, cylindrical lens and twist-lock housing.
- Spun aluminum heat sink cover.
- Twist-lock housing installs on 8" OD welded tenon.
- Pole door driver access and removeable driver tray.

Controls
- Supplied with dimmable driver.
- Optional Twist-lock photocell receptacle only R.
- Optional Twist-lock receptacle with photo cell R1.
- Optional electronic button photocell (in pole ONLY): PEC (120-277V).

Finish
- Durable, color retentive powder coat finish.

Warranty & Standards
LED Systems and Drivers - 7 years.
All fixtures shall be free from all defects in materials and workmanship for a period of 7 years from the date of manufacture. The luminaire manufacturer shall warrant the LED boards/system, during the stated warranty period, against failure defined as more than 10 percent of non-operating LEDs.

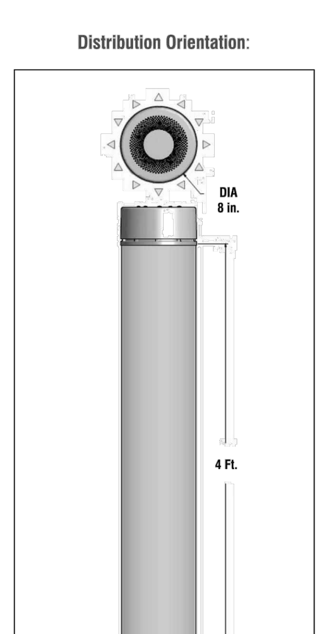
Housing
Housing shall consist of 0.188" wall extruded aluminum and A360 cast top and bottom lens retaining assemblies.

Drivers:
MDL03: 350mA, 120-277V
MDL05: 525mA, 120-277V
MDH03: 350mA, 347-480V
MDH05: 525mA, 347-480V

Lens:
FAC - Frosted Acrylic Cylinder 4 Ft. LG.

Colors:
UBKT - Urban Black Textured
UBT - Urban Bronze Textured
ULBT - Urban Light Bronze Textured
USLT - Urban Silver Textured
UWHT - Urban White Textured
UCHS - Urban Champagne Satin Smooth
UBK - Urban Black Matte
UB - Urban Bronze Matte
ULB - Urban Light Bronze Matte
USL - Urban Silver Matte
UWH - Urban White Matte

Distribution Orientation:



Performance

MODEL #	T5 DELIVERED LUMENS	EFFICACY (LPW)	WATTAGE
RW404-56L45T5-MD_05	6190	62.8	99
RW404-56L45T5-MD_03	4535	68.5	67

800-621-3376 | 555 Lawrence Ave., Roselle, IL 60172 | info@sternberglighting.com | www.sternberglighting.com

FIXTURE G

Steel Poles

RSS ROUND
STRAIGHT STEEL

Catalog #		Type
Project		
Comments		Date
Prepared by		

FEATURES
- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" poles, 2" x 4" on 4" poles
- 10'-30' mounting heights
- Drilled or tenon (specify)

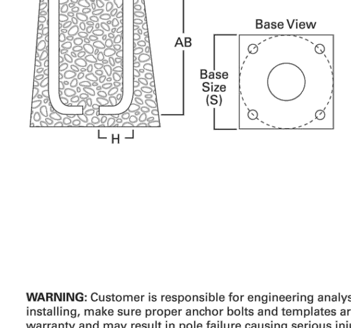
ORDERING INFORMATION

SAMPLE NUMBER: RSS4A20SF2XG

Product Family	Shaft Size (Inches) [1]	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Options (Add as Suffix)
RSS=Round Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188"	10=10' 15=15' 20=20' 25=25' 30=30'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling S=Standard Upsweep Arm Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple [2] 4=4 at 90° 5=2 at 90° 6=3 at 90° 7=2 at 120° X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet [3] E=GFCI Convenience Outlet [3] G=Ground Lug H=Additional Hand Hole [4] L=Drilled for Bumper Glitter V=Vibration Dampener

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unauthorized uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

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Powering Business Worldwide

TD513015EN
2015-12-09 13:40:09

25' POLE

Portfolio

DESCRIPTION

6 inch LED recessed narrow, medium, or wide beam downlight designed for glare free even illumination. Featuring a two-stage diffused reflector system producing smooth distribution with excellent light control and low aperture brightness. Lumen packages range from 1000 to 7000 with color temperatures of 2400K, 2700K, 3000K, 3500K, 4000K, and 5000K. Available with dim-to-warm technology – similar to halogen at full power, the 3000K LED warms smoothly as dimmed to 1850K creating a rich warm glow within the space.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Lower Shielding Reflector
Painted die cast aluminum or spun aluminum lower reflector with a lensed upper optical chamber providing superior lumen output with minimal source brightness. Spun reflectors are offered in all Portfolio Alzak® finishes. Available with non-conductive polymer trim. Reflector is retained with two torsion springs holding the flange tight to the finished ceiling surface.

Plaster Frame / Collar
Die cast aluminum 1-1/2" deep collar accommodates ceiling materials up to 2". Universal mounting bracket accepts 1/2" EMT, C channel and bar hangers and adjusts 5" vertically from above and below the ceiling.

Junction Box
Listed for (8) #12 AWG (four in, four out) 90°C conductors and feed thru branch wiring. (4) 1/2" and (2) 3/4" trade size pry outs positioned to allow straight conduit runs. Lever connectors for simple push in wiring.

Thermal
Aluminum heat sink conducts heat away from the LED module for optimal performance and long life.

LED
Chip on board with a multitude of highly efficient white LED's, combined with a high reflectance upper reflector and convex transitional lens produce even distribution with no pixilation. Rated for 50,000 hours at 70% lumen maintenance. Auto resetting, thermally protected, LED's are turned off when safe operating temperatures are exceeded. Color variation within 3-step MacAdam ellipses. Quick disconnect allows for tool-less replacement of LED engine from below ceiling. Available in 80, 90 or 97 CRI. D2W™ – dim-to-warm shifts CCT from 3000K to1850K as fixture dims mimicking halogen sources.

Driver
Standard 120-277V 0-10V dimming driver provides flicker free dimming from 100% to 1% (offered up to 4000 lumens). Optional 120V leading edge, <1% 0-10V, Fifth Light, DMX or Lutron® Ecosystem. Driver can be serviced from above or through the aperture.

Connected Lighting Systems
WaveLinx tilemount daylight sensor includes control module, sensor and cable allowing use with the comprehensive lighting system.

LumaWatt Pro (powered by Enlighted) wireless tile mount sensor and relay accessory enables wireless control using a tile mount sensor accessory.

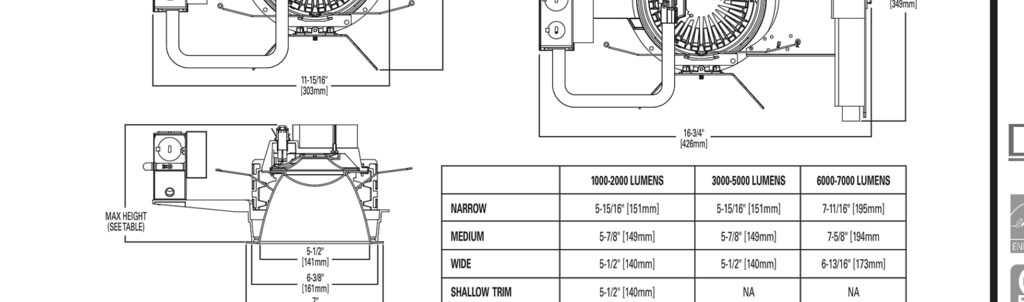
Code Compliance
Thermally protected and cULus listed for wet locations with covered ceiling. IP66 rated when used with IP66 gasket kit accessory. Optional City of Chicago environmental air (CCEA) marking for plenum applications. EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits. Non-IC rated - Insulation must be kept 3" from top and sides of housing. IC rated up to 1500 lumens. 5000 lumen and above are marked spacing and must follow spacing requirements. RoHS Compliant. Photometric testing completed in accordance with IES LM 79 and TM-30 standards. LED life testing completed in accordance with LM 80 standards.

Warranty
5-year warranty

LD6B EU6B 6LBW 6LBM 6LBN

1000 - 7000 lumens LED

Narrow, Medium, or Wide Beam
New Construction



	1000-2000 LUMENS	3000-5000 LUMENS	6000-7000 LUMENS
NARROW	5-15/16" [151mm]	5-15/16" [151mm]	7-11/16" [195mm]
MEDIUM	5-7/8" [149mm]	5-7/8" [149mm]	7-5/8" [194mm]
WIDE	5-1/2" [140mm]	5-1/2" [140mm]	6-13/16" [173mm]
SHALLOW TRIM	5-1/2" [140mm]	NA	NA

D2W™

Can be used to comply with T24 California Non-Residential Lighting Controls requirements

Refer to ENERGY STAR® Qualified Products List. Can be used to comply with California Title 24 High Efficacy requirements.

TD520041EN
2017-05-01 16:29:35

ORDERING INFORMATION

SAMPLE NUMBER: LD6B15D010EMBOD

Housing	Lumens [1]	Voltage	Driver	Options
LD6B=LED Downlight 6" Nominal Aperture LD6BCP=LED Downlight 6" Nominal Aperture, Chicago Plenum	10=1000 lumens 15=1500 lumens 20=2000 lumens 30=3000 lumens 40=4000 lumens 50=5000 lumens [10] 60=6000 lumens [10] 70=7000 lumens [10]	Blank=120-277V	1000 - 4000 Lumen D010=0-10V Dimming, 1% to 100%, 120V-277V D010TR=0-10V or Line Voltage Dimming, 5% to 100%, 120V-277V DE010=0-10V Dimming, 0% to 100%, 120V-277V D5LT=Fifth Light® (DALI) Dimming, 0% to 100%, 120V-277V DMX=DMX Dimming, 0% to 100%, 120V-277V [14] DL2=Lutron® Hi-Lume Forward Phase Dimming, 1% to 100%, 120V Only DL3=Lutron® Hi-Lume 3 Wire Dimming, 1% to 100%, 120V-277V DLE=Lutron Ecosystem dimming 1% to 100%, 120V-277V 5000, 6000, and 7000 Lumen D010TE=0-10V 1% or Trailing Edge, 10% to 100%, 120V-277V (120V Only for Trailing Edge Dimming)	EMBOD=Bodine® Emergency Module with Remote Test Switch [3] EM7=7W Emergency Module with Remote Test Switch [3, 4] EM14=14W Emergency Module with Remote Test Switch [3, 4] IEMBOD=Bodine® Emergency Module with Integral Test Switch [3] IEM7=7W Emergency Module with Integral Test Switch [3, 4] IEM14=14W Emergency Module with Integral Test Switch [3, 4]

SAMPLE NUMBER: EU6B10208035

Power Module	Lumen Levels [1]	CRI	Color		
			80 CRI	90 CRI	97 CRI
EU6B=6" Universal LED Module	1020=1000, 1500, 2000 lumens 3050=3000, 4000, 5000 lumens 6070=6000, 7000 lumens 1015IC=1000, 1500 lumen IC rated	80=80 CRI Minimum 90=90 CRI Minimum 97=97 CRI Minimum	27=2700K 30=3000K 35=3500K 40=4000K 50=5000K	24=2400K 27=2700K 30=3000K 35=3500K 40=4000K 50=5000K	27=2700K 30=3000K
	Dim 2 Warm 109030D2W=1000 lumen, 90 CRI, Dim 2 Warm 159030D2W=1500 lumen, 90 CRI, Dim 2 Warm 209030D2W=2000 lumen, 90 CRI, Dim 2 Warm				

SAMPLE NUMBER: 6LBM1LIE

Trim	Distribution [5]	Flange	Finish	Options
6LB=6" LED	N=Narrow (30° Beam), Spun Aluminum M=Medium (50° Beam), Spun Aluminum W=Wide (75° Beam), Spun Aluminum S=Shallow (75° Beam), Spun Aluminum [12] PS=Plastic Shallow (75° Beam), Injection Molded white [11, 12] CS=Cast Shallow (75° Beam), Die Cast Aluminum [12] BA=Baffle (50° Beam), Spun Aluminum [7]	0=White Polymer Trim Ring 1=Self-flanged [13] 2=White Painted Self-flanged	LI=Specular Clear [6] H=Semi-Specular Clear [6] WMH=Warm Haze [8] WH=Wheat [8] GPH=Graphite Haze [8] B=Specular Black [8] MW=Matte White MB=Matte Black [8] MMS=Matte Metallic Silver [8]	E=Integral Emergency Test Switch Hole [9]

Accessories
HSA6=Slope Adapter for 6" Aperture Housings, Specify Slope
TRM6=Metal Trim Ring, Specify Color [2]
PRR6=Rimless Trim Ring for Flush Mount [2]
LGSKT6IP66=IP66 Gasket Kit
DT6=Deco Trim [2]
Bar Hangers
HB26=C-channel Bar Hanger, 26" Long, Pair
HB50=C-channel Bar Hanger, 50" Long, Pair
RMB22=Wood Joist Bar Hanger, 22" Long, Pair
Transformers
H347=347 to 120V Step Down Transformer, 75VA
H347200=347 to 120V Step Down Transformer, 200VA
Connected Lighting Systems
PORLWTPD1=LumaWatt Pro wireless sensor kit (0-10V only)
TMSWPD1=WaveLinx tilemount daylight sensor (includes control module, sensor, cable and tile mount)

Notes:
1 Nominal Lumens will vary depending on selected color, driver and reflector finish.
2 Order trim with polymer trim ring (Consult specification sheet for color ordering information and options).
3 Not available with Chicago Plenum.
4 ULus listed only
5 Beam angles are nominal with LI finish trims.
6 Only available with Narrow and Medium Spun Aluminum trims. Required for use with all IEMBOD, IEM7, and IEM14 housings. Requires above ceiling access with wide beam trim.
7 Only available with Matte White and Matte Black Finishes.
8 Available only on CS distributions.
9 Not available on PS, CS or BA distributions.
10 Product is marked spacing and must be installed with the following minimum spacing.
- Center to center of adjacent luminaires: 36"
- Center of luminaire to side of building member: 18"
- Minimum overhead: 1/2"
- Not available with CS or PS trims
11 PS available in self-flanged MW finish only.
12 Offered up to 2000 lumens
13 Flange is the same finish as the reflector
14 DMX fixtures default to full on upon loss of DMX signal.

ENERGY

ENERGY DATA
Sound Rating: Class A standards
(Values at non-dimming line voltage)
Minimum Starting Temperature: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)
Input Voltage: UNV (120V - 277V)
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)
Input Frequency: 50/60Hz

1000 Lumen D010		1500 Lumen D010	
Input Power: 11W	THD: <14%	Input Power: 15.5W	THD: <13%
120V Input Current: 0.09A	277V Input Current: 0.04A	120V Input Current: 0.13A	277V Input Current: 0.06A
2000 Lumen D010		**3000 Lumen D010**	
Input Power: 21.2W	THD: <9%	Input Power: 27.6W	THD: <10%
120V Input Current: 0.18A	277V Input Current: 0.08A	120V Input Current: 0.23A	277V Input Current: 0.10A
4000 Lumen D010		**5000 Lumen D010TE**	
Input Power: 41.6W	THD: <13%	Input Power: 57.9W	THD: <14%
120V Input Current: 0.35A	277V Input Current: 0.15A	120V Input Current: 0.49A	277V Input Current: 0.22A
6000 Lumen D010TE		**7000 Lumen D010TE**	
Input Power: 59.7W	THD: <14%	Input Power: 75.8W	THD: <13%
120V Input Current: 0.50A	277V Input Current: 0.22A	120V Input Current: 0.64A	277V Input Current: 0.29A

	120V		277V	
Lumens	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)
1000 Lumen D010	1.02	0.041	2.18	0.021
1500 Lumen D010	1.02	0.042	2.24	0.064
2000 Lumen D010	1.02	0.077	2.43	0.027
3000 Lumen D010	1.15	0.067	3.26	0.027
4000 Lumen D010	1.2	0.088	3.9	0.03
5000 Lumen D010TE	5.1	0.132	10.2	0.153
6000 Lumen D010TE	5.4	0.123	10.8	0.154
7000 Lumen D010TE	4.9	0.13	9.8	0.156

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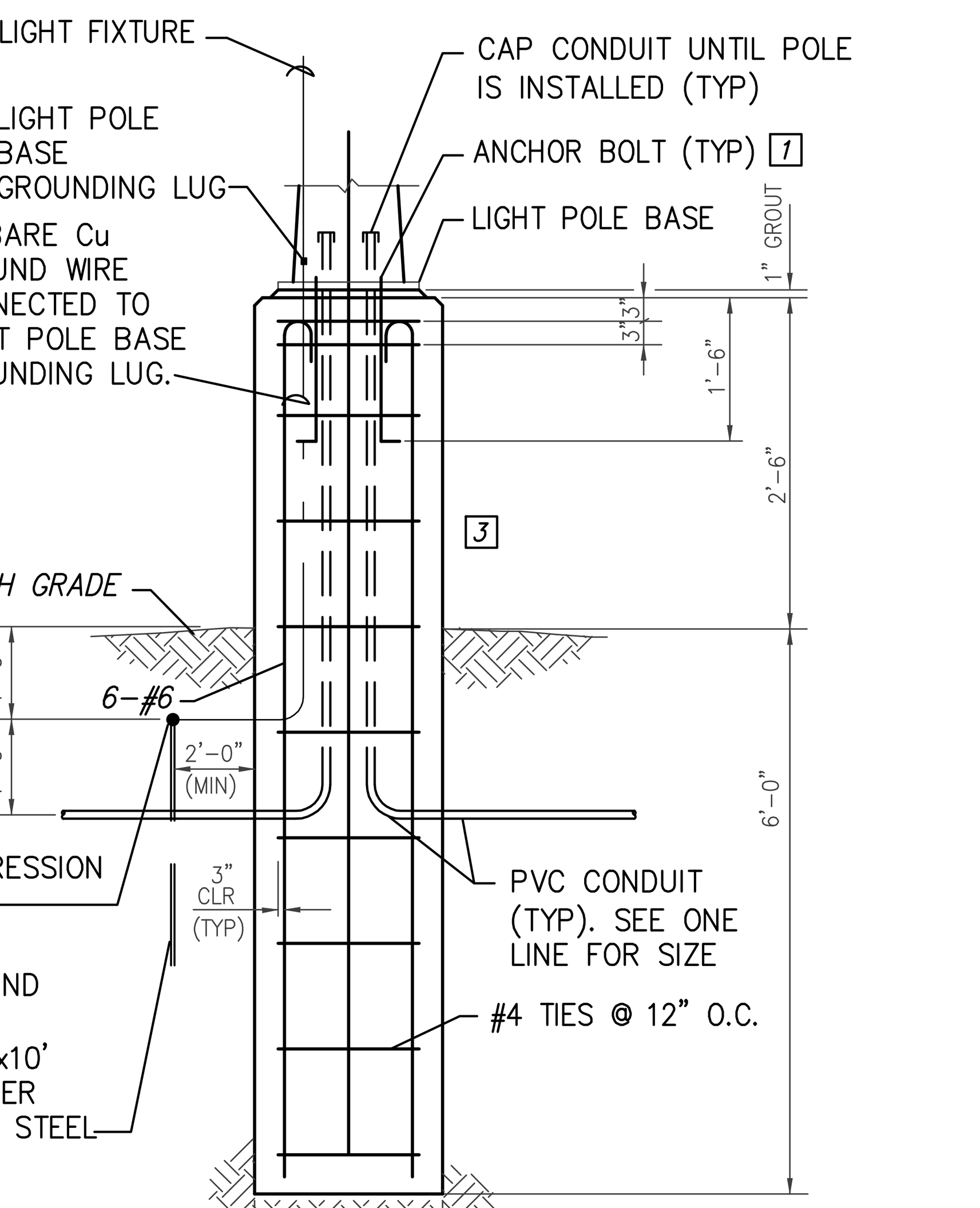
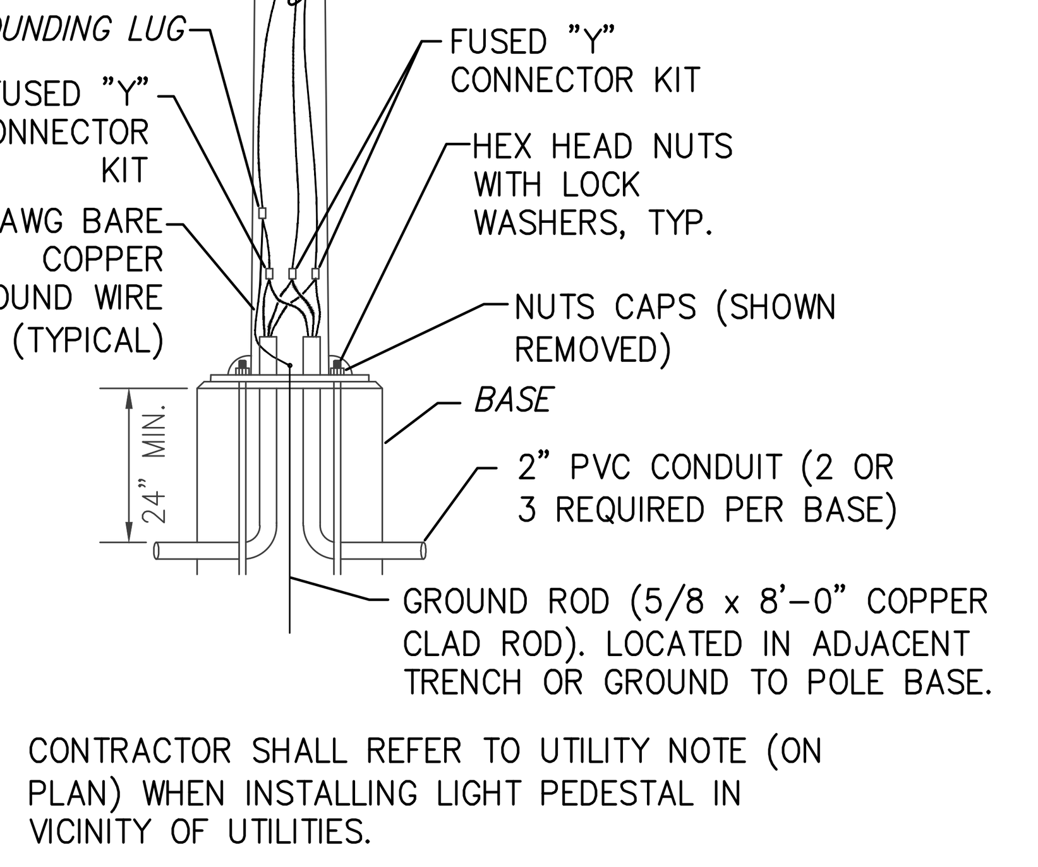
FIXTURES E & F



NOTE

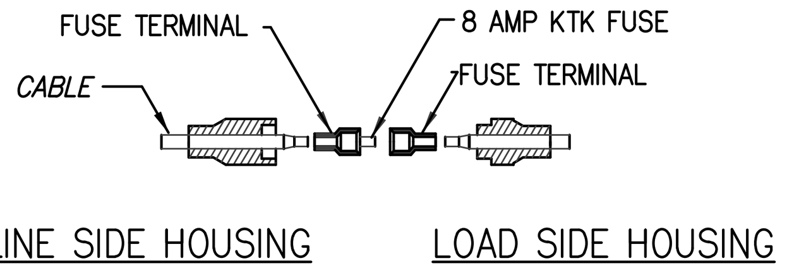
1. ANCHOR BOLTS SHALL BE DESIGNED AND FURNISHED BY THE LIGHT POLE MANUFACTURER. ANCHOR BOLTS PROVIDED SHALL BE GALVANIZED.
2. BOND INCOMING EQUIPMENT GROUNDING CONDUCTOR TO LIGHT POLE BASE GROUNDING LUG.
3. ALL CONCRETE POLE BASES SHALL BE CONSOLIDATED BY AN INTERNAL TYPE VIBRATOR.

PARKING LOT LIGHTING POLE
EXTENDED CONCRETE BASE DETAIL
NO SCALE



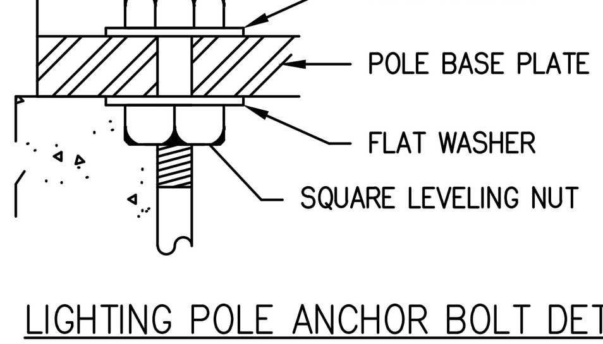
CONTRACTOR SHALL REFER TO UTILITY NOTE (ON PLAN) WHEN INSTALLING LIGHT PEDESTAL IN VICINITY OF UTILITIES.

POLE TO BASE CONNECTIONS
NO SCALE

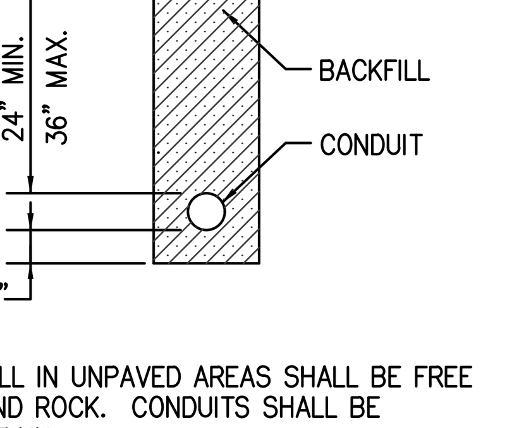


LINE SIDE HOUSING LOAD SIDE HOUSING

FUSED CONNECTOR
NO SCALE

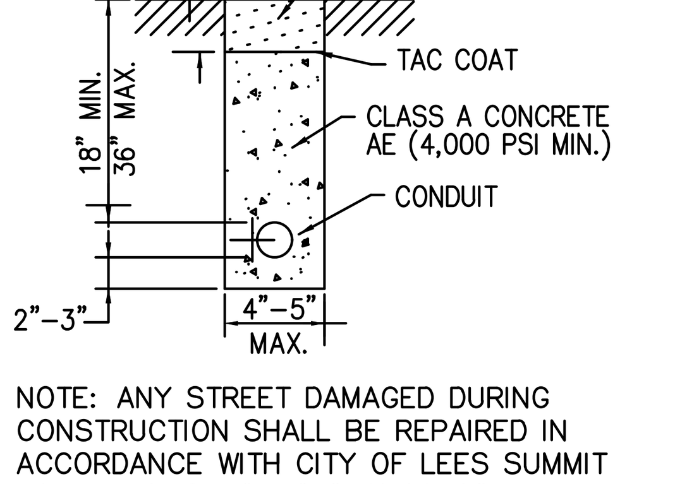


LIGHTING POLE ANCHOR BOLT DETAIL
NO SCALE



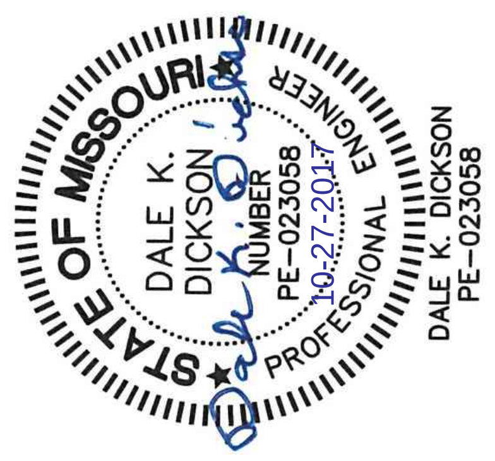
NOTE: BACKFILL IN UNPAVED AREAS SHALL BE FREE OF RUBBLE AND ROCK. CONDUITS SHALL BE PITCHED TO DRAIN.

TRENCHING IN UNPAVED AREAS
NO SCALE



NOTE: ANY STREET DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED IN ACCORDANCE WITH CITY OF LEES SUMMIT PARK PUBLIC WORKS STANDARDS.

TRENCHING IN PAVED AREAS
NO SCALE



ACI BOLAND ARCHITECTS

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ACI Boland Architects
St. Louis | Kansas City
Licensee's Certificate of Authority Number:
Missouri No.: 000958 (Expires: 12.31.2017)

CIVIL CONSULTANT
Shafer, Kline & Warren, Inc.
11250 Corporate Avenue
Lenexa, Kansas 66219
913.888.7800
State Certificate of Authority #000143

STRUCTURAL CONSULTANT
KPFF, Inc.
1610 Des Peres Road, Suite 100
St. Louis, Missouri 63131
314.835.0524
State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

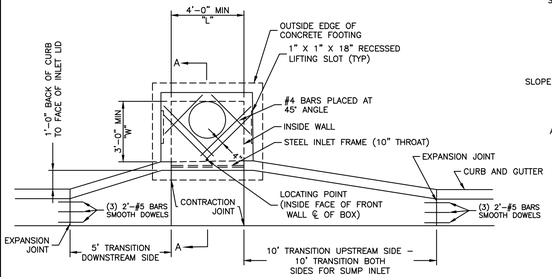
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

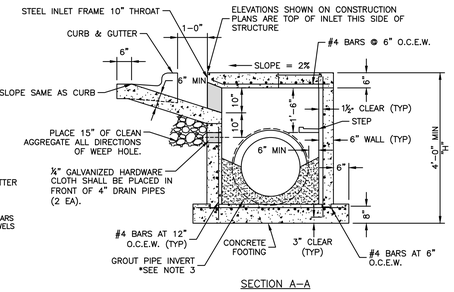
Number	Date	Description
1	10/27/17	NEW SHEET

C17

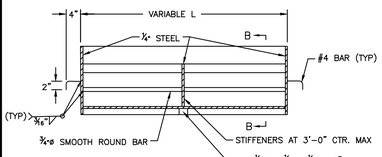
LIGHTING DETAILS



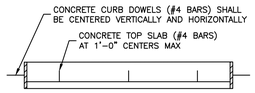
PLAN VIEW



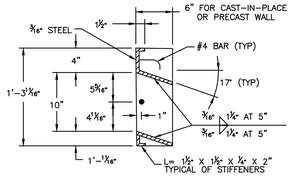
SECTION A–A



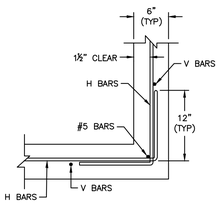
FRONT ELEVATION



PLAN VIEW



SECTION B–B



WALL CORNER DETAIL

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.

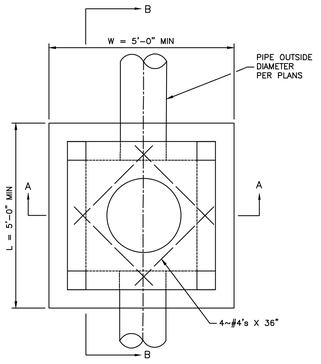
STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY)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

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

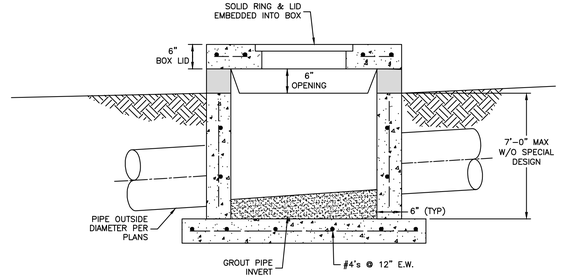
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO
Sheet Name: LEE'S SUMMIT, JACKSON COUNTY, MO CURB INLET DETAIL

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

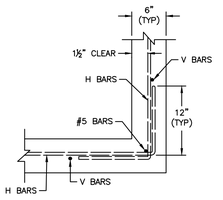
STM-1



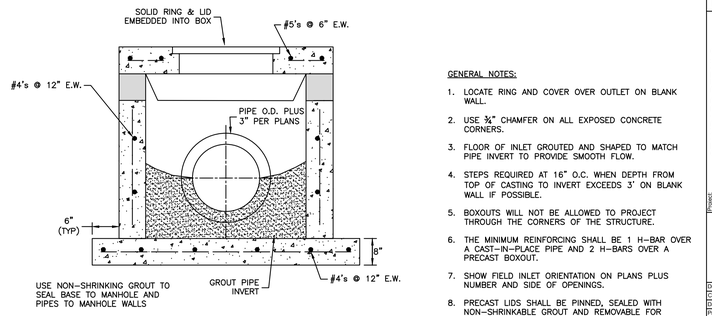
PLAN VIEW



SECTION B–B



WALL CORNER DETAIL



SECTION A–A

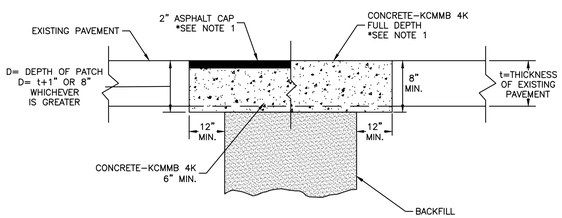
GENERAL NOTES:
1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.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

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

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

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

STM-2



TRENCHING/PATCHING DETAIL
NOT TO SCALE

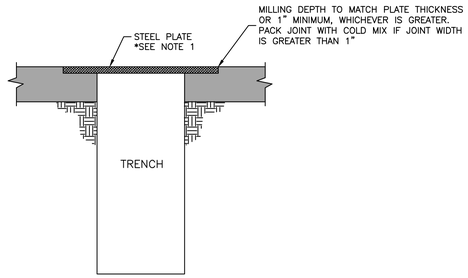
NOTE:
1. ASPHALT CAP OR FULL DEPTH CONCRETE SHALL BE DETERMINED BY CITY INSPECTOR.

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

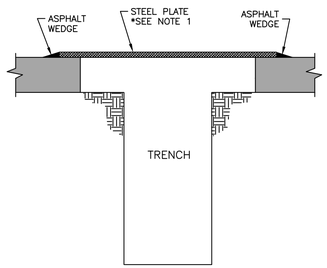
TRENCHING/PATCHING ROADWAYS DETAIL

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

GEN-5



TYPE "A" PLATING
NOT TO SCALE
(CITY POSTED SPEEDS OF 35 MPH AND GREATER)



TYPE "B" PLATING
NOT TO SCALE
(CITY POSTED SPEEDS OF 30 MPH OR LESS)

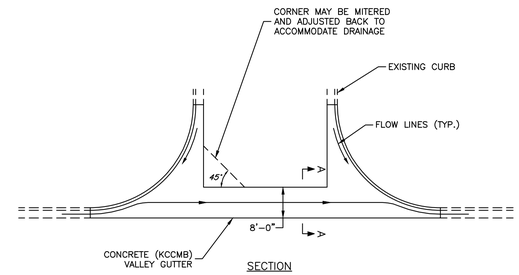
GENERAL NOTES:
1. THE CONTRACTOR SHALL PROVIDE ADEQUATE OVERLAP OF PLATE ON ASPHALT TO ASSURE NO SLIPPAGE OF PLATE AND NO COLLAPSING OF TRENCH.
2. ALL PLATES SHALL BE ANCHORED SO PLATES DO NOT MOVE OR SHIFT UNDER TRAFFIC.

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

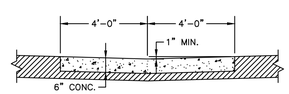
TRENCHING PLATE DETAIL

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

GEN-6



SECTION



SECTION
Scale: 1" = 1'-0"

VALLEY GUTTER DETAIL
Intersection of Two Public Streets

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

VALLEY GUTTER DETAIL

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

GEN-7

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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ACI Boland Architects
St. Louis | Kansas City
Licensee's Certificate of Authority Number:
Missouri No.: 000958 (Expires: 12.31.2017)

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KPFF, Inc.
1610 Des Peres Road, Suite 100
St. Louis, Missouri 63131
314.835.0524
State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

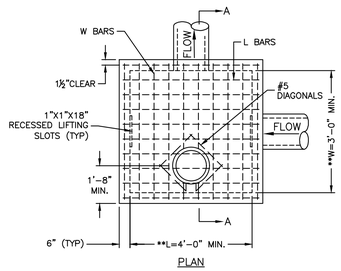
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

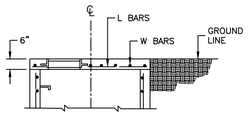
Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C18

DETAILS 1



PLAN

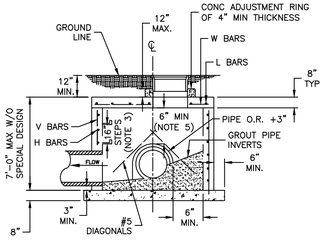


SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

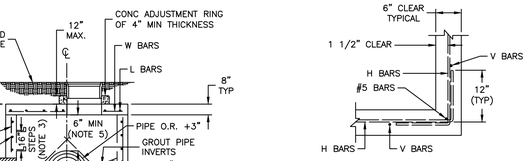
** INCREASE IN MULTIPLES OF 6" (7'-0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6



SECTION A–A



WALL CORNER DETAIL

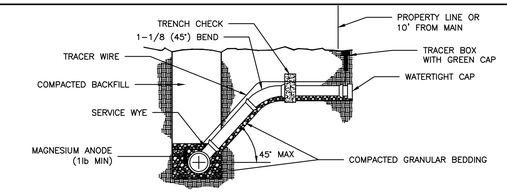
GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ½" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

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

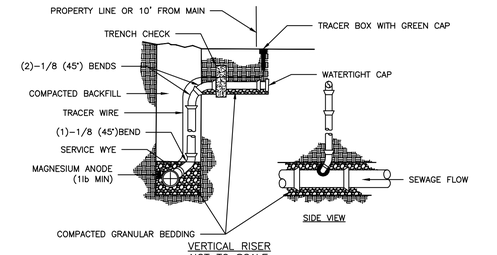
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY
Sheet Name: JUNCTION BOX DETAIL

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

STM-3



STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

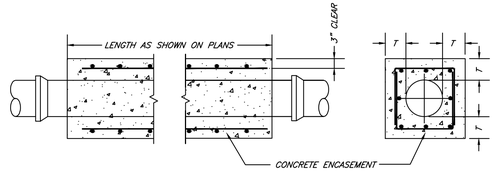
NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
4. 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.
5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
6. #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.
7. 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.
8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
9. 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

BUILDING SEWER STUB AND RISER

Date: 04/17
Drawn By:MJF
Checked ByDL

SAN-1

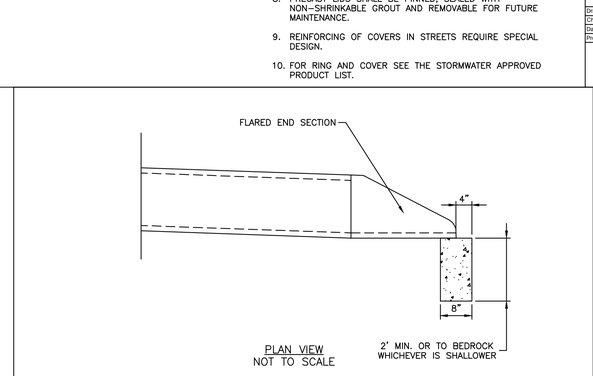


NOTES:
1. FOR PIPES LESS THAN 15", T = 6" MIN.
2. FOR PIPES 15" THRU 36", T = 8" MIN.
3. INTERMEDIATE BELLS SHALL BE ENCASED.
4. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".

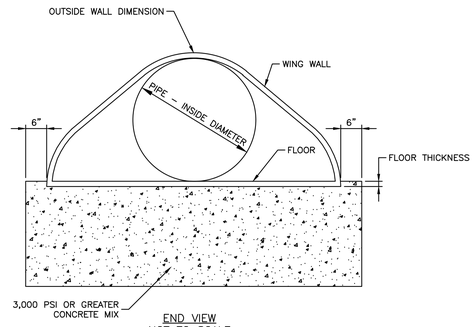
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SANITARY PIPE ENCASEMENT

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: SAN–7
Rev: 1/14
Rev:



PLAN VIEW
NOT TO SCALE



END VIEW
NOT TO SCALE

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

FLARED END SECTION SUPPORT DETAIL

Date: 04/17
Drawn By:MJF
Checked ByDL

STM-5

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

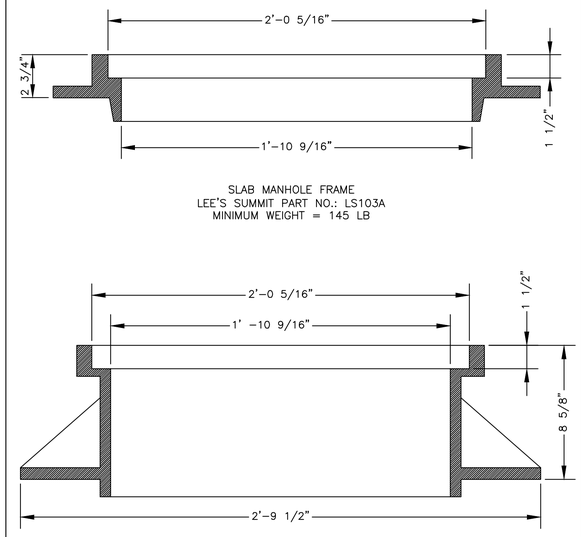
*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

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

STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By:MJF
Checked ByDL

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 ByDL

STM-7

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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ACI Boland Architects
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Licensee's Certificate of Authority Number:
Missouri No.: 000958 (Expires: 12.31.2017)

CIVIL CONSULTANT
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State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

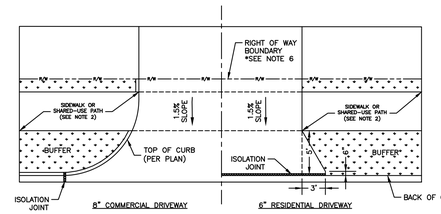
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

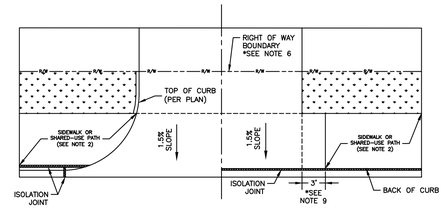
Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C19

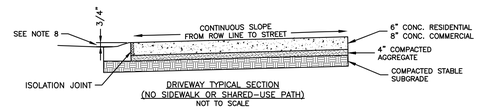
DETAILS 2



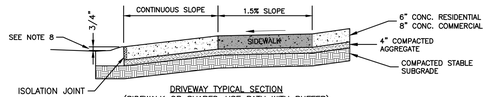
DRIVEWAY WITH BUFFER
NOT TO SCALE



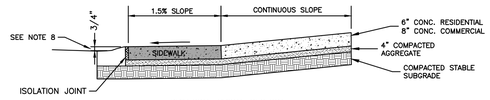
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



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

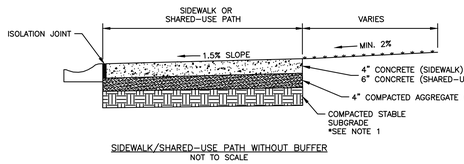
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL).
3. JOINT 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 AND DRIVEWAY APPROACHES, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
9. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
10. 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

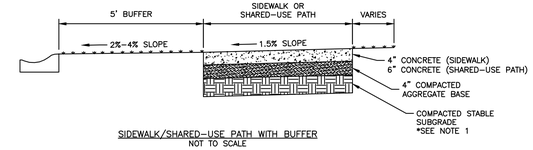
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: DRIVEWAY DETAIL

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

GEN-1



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

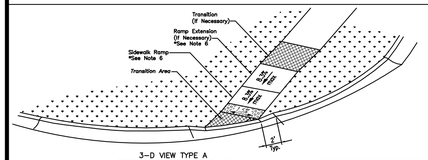
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL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

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

SIDEWALK/SHARED-USE PATH DETAIL

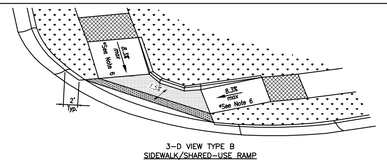
Date: 04/17
Drawn By:MJF
Checked ByDL

GEN-2

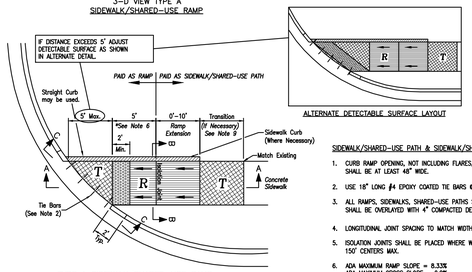


3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND
R SIDEWALK RAMP
TS TURNING SPACE
DETECTABLE WARNING SURFACE
T TRANSITION



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

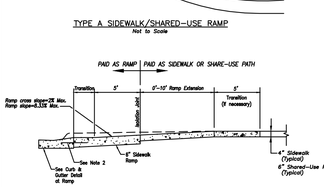


TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

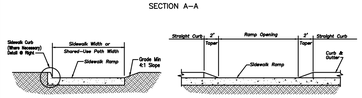
ALTERNATE DETECTABLE SURFACE LAYOUT

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

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



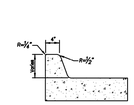
SECTION A-A



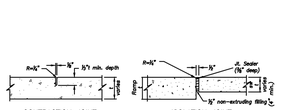
SECTION B-B

SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale



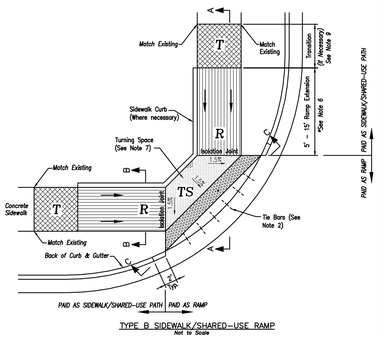
SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale

CURB & GUTTER DETAIL AT RAMP
Not to Scale



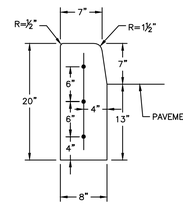
TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

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

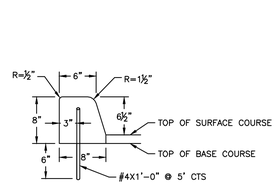
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

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

GEN-3A

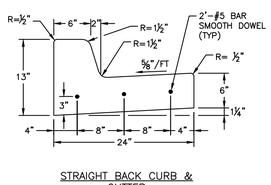


STRAIGHT CURB
(TYPE C-1)

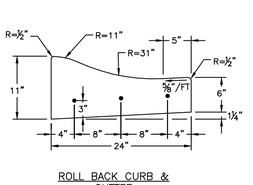


DOWELLED CURB
(TYPE DC)

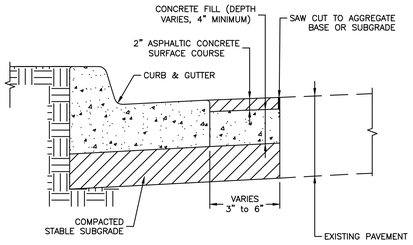
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



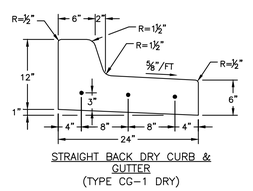
STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



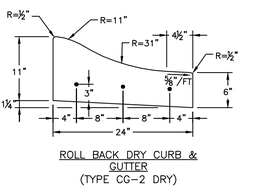
ROLL BACK CURB & GUTTER
(TYPE CG-2)



CURB REPLACEMENT DETAIL



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



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

GENERAL NOTES

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

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

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: 04/17
Proj. #:

GEN-4

NOTE:
DETECTABLE WARNING SURFACES ARE NOT REQUIRED AT TYPE A SIDEWALK RAMPS (ENTRY/EXIT DRIVES TO SITE) ON THIS PROJECT.

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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17107 Chesterfield Airport Road | Suite 110
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T: 314.991.9993
aciboland.com

ACI Boland Architects
St. Louis | Kansas City
Licensee's Certificate of Authority Number:
Missouri No.: 000958 (Expires: 12.31.2017)

CIVIL CONSULTANT
Shafer, Kline & Warren, Inc.
11250 Corporate Avenue
Lenexa, Kansas 66219
913.888.7800
State Certificate of Authority #000143

STRUCTURAL CONSULTANT
KPFF, Inc.
1610 Des Peres Road, Suite 100
St. Louis, Missouri 63131
314.835.0524
State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

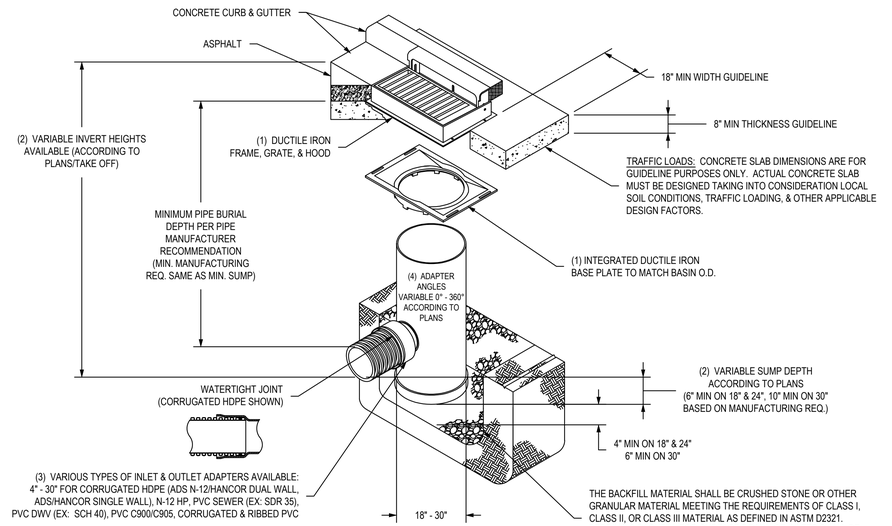
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C20

NYLOPLAST 2 FT X 3FT CURB INLET STRUCTURE: 30 _ _ AGR _ _ X



1 - 18" - 30" FRAMES, GRATES, HOODS, & BASE PLATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS.
3 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
4 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
5 - ALL CURB INLET GRATE OPTIONS (DIAGONAL & HIGH FLOW) SHALL MEET H-20 LOAD RATING

DRAWN BY	EBC	MATERIAL	
DATE	03-22-10		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-10-16		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

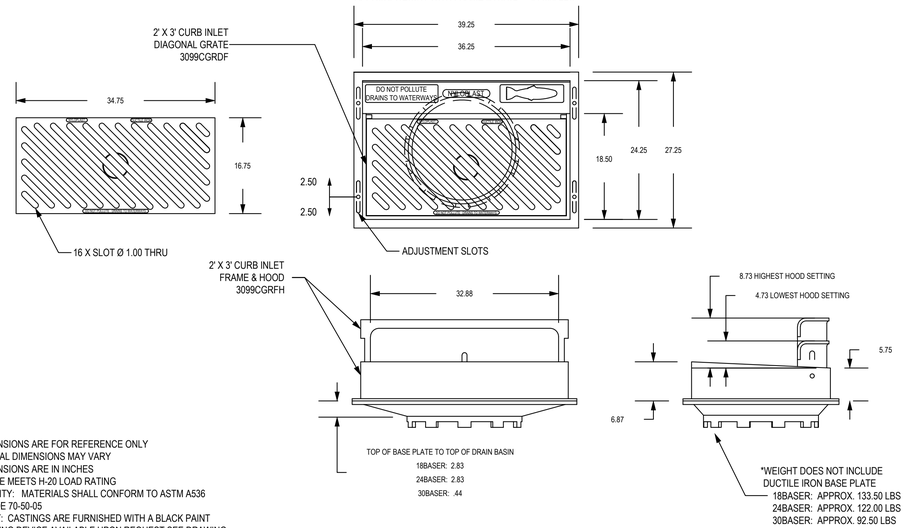
Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH 2 FT X 3 FT CURB INLET QUICK SPEC INSTALLATION DETAIL

DWG NO. 7002-110-087 REV C

3099CGRDF & 3099CGRFH

APPROX. GRATE DRAIN AREA = 232.87 SQ IN
*APPROX. WEIGHT WITH FRAME & HOOD = 344.00 LBS



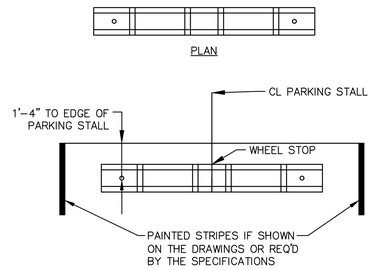
DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY
DIMENSIONS ARE IN INCHES
GRATE MEETS H-20 LOAD RATING
QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05
PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7002-110-057
SLOPE OF GRATE SURFACE IS 5.2%
CURB INLET FRAME INSIDE VOLUME IS APPROX 2.73 CU FT
APPROX. DRAIN AREA OF GRATE & HOOD
LOWEST SETTING = 369.54 SQ IN
LOWEST + 1" SETTING = 402.41 SQ IN
LOWEST + 2" SETTING = 435.29 SQ IN
LOWEST + 3" SETTING = 468.16 SQ IN
HIGHEST SETTING = 501.04 SQ IN

DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	04-10-06		
REVISED BY	CCA	PROJECT NO./NAME	
DATE	09-05-13		
DWG SIZE	A	SCALE 1:16	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

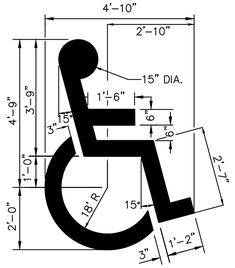
TITLE: 2 FT X 3 FT CURB INLET DIAGONAL GRATE ASSEMBLY

DWG NO. 7002-110-046 REV D



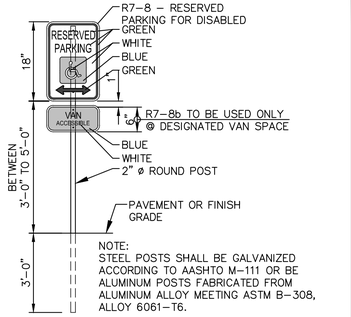
INSTALLATION PLAN

PRECAST CONCRETE WHEEL STOP DETAIL

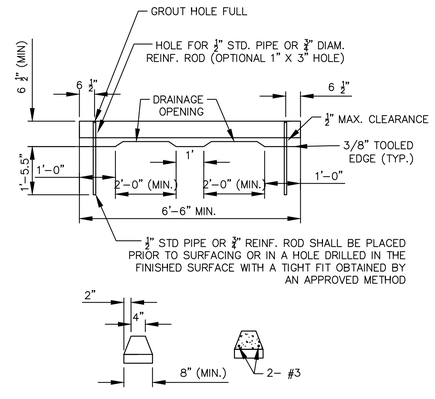


NOTE:
1. ACCESSIBLE SYMBOL TO BE 6" WHITE LINE
2. ACCESSIBLE PARKING STALLS SHALL HAVE 4" SOLID BLUE LINES FOR STALL LINES, AND ACCESS AISLES.

ACCESSIBLE PARKING SYMBOL

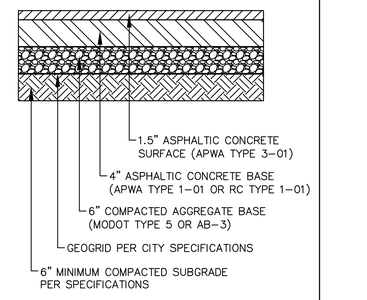


ACCESSIBLE PARKING SIGN



END VIEWS SECTION

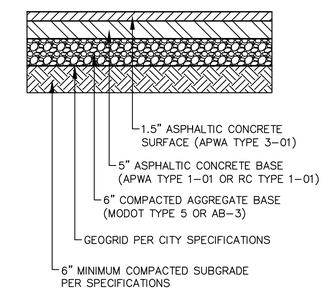
PRECAST CONCRETE WHEEL STOP DETAIL



NOTE:

MINIMUM CITY PAVEMENT SECTION IS SHOWN. ALTERNATE EQUIVALENT PAVEMENT SECTION, PER GEOTECHNICAL ENGINEER, MAY BE SUBMITTED FOR CITY APPROVAL.

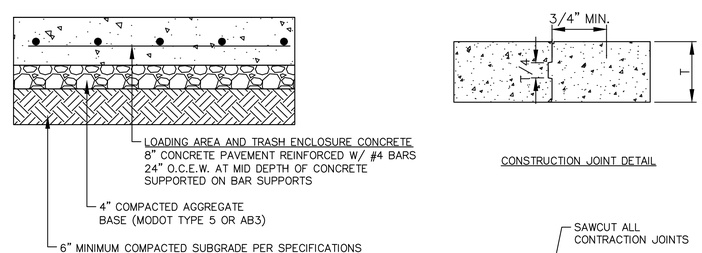
LIGHT DUTY ASPHALT PAVEMENT DETAIL



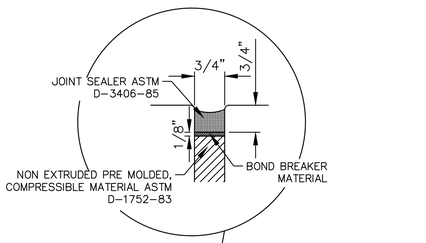
NOTE:

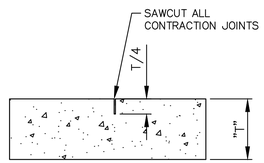
MINIMUM CITY PAVEMENT SECTION IS SHOWN. ALTERNATE EQUIVALENT PAVEMENT SECTION, PER GEOTECHNICAL ENGINEER, MAY BE SUBMITTED FOR CITY APPROVAL.

HEAVY DUTY ASPHALT PAVEMENT DETAIL

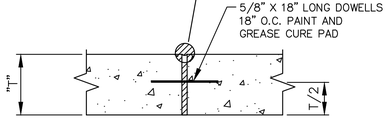


CONSTRUCTION JOINT DETAIL





CONTROL JOINT DETAIL



EXPANSION JOINT DETAIL

NOTES:
1. CONCRETE SHALL CONFORM TO SPECIFICATIONS. (KCMMB4K)
2. ALL IRREGULAR SLABS AND RECTANGULAR SLABS EXCEEDING LENGTH TO WIDTH RATIO OF 1.25 SHALL BE ADDITIONALLY REINFORCED WITH 6" X 6" W2.9WWF.
3. CONTROL JOINTS SHALL BE PLACED PER THE PLAN DRAWINGS. IF CONTRACTOR WISHES TO ADJUST THE JOINT LAYOUT, THEY SHALL SUBMIT IN WRITING FOR ENGINEER REVIEW/APPROVAL, PRIOR TO CONSTRUCTION.
4. SAWCUT ALL CONTROL JOINTS.
5. ALL JOINTS SHALL BE SEALED WITH VULCAN 45 OR DOW CORNING 888 SILICONE JOINT SEALANT.

FULL DEPTH CONCRETE PAVEMENT DETAILS

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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17107 Chesterfield Airport Road | Suite 110
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aciboland.com

ACI Boland Architects
St. Louis | Kansas City
Licensee's Certificate of Authority Number:
Missouri No.: 000958 (Expires: 12.31.2017)

CIVIL CONSULTANT
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KPFF, Inc.
1610 Des Peres Road, Suite 100
St. Louis, Missouri 63131
314.835.0524
State Certificate of Authority #2001010829

MEP/FP CONSULTANT
G&W Engineering Corporation
138 Weldon Parkway
Maryland Heights, Missouri 63043
314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

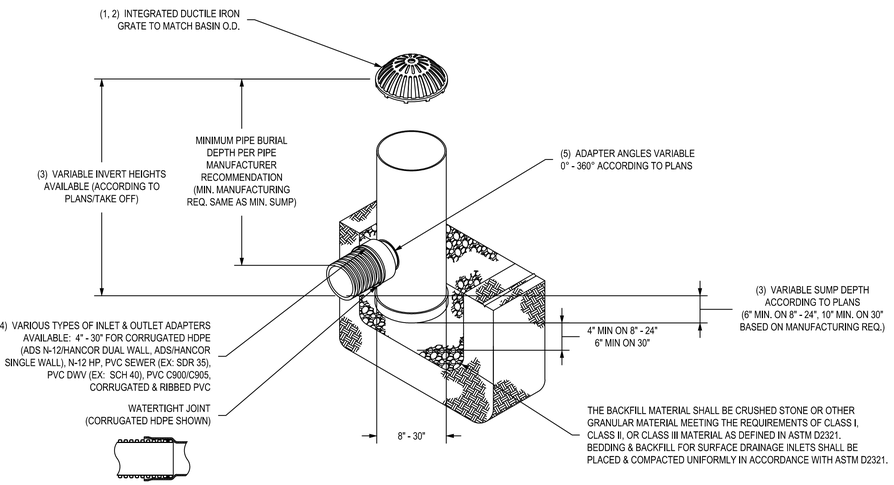
Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C21

DETAILS 4

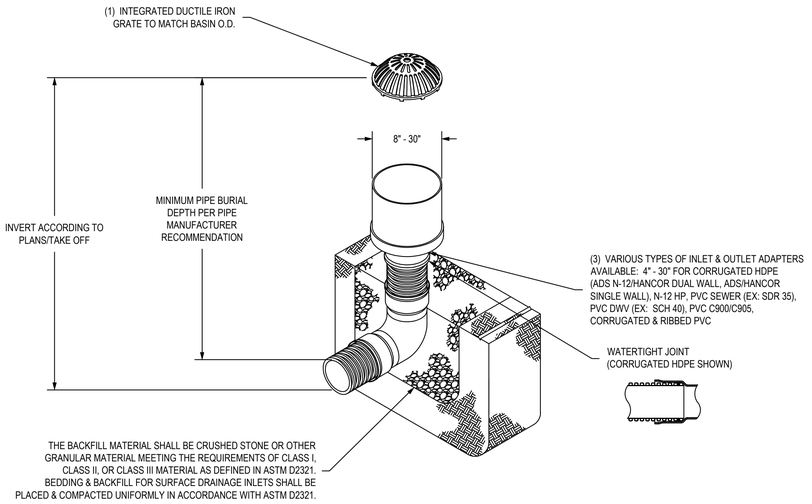
NYLOPLAST DRAIN BASIN WITH DOME GRATE



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

DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-25-10		TITLE	DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL
REVISED BY NMH	PROJECT NO./NAME		
DATE 03-11-16			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO. 7001-110-397	REV D

NYLOPLAST INLINE DRAIN WITH DOME GRATE

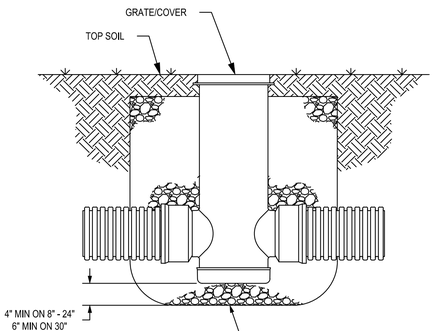


1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
3 - 8" - 30" DOME GRATES HAVE NO LOAD RATING

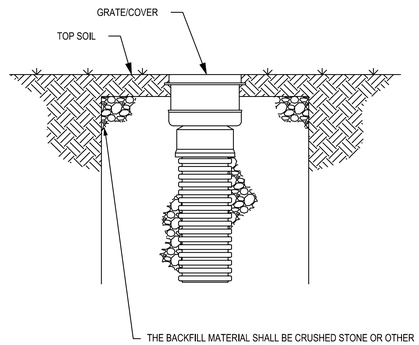
DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 03-25-10		TITLE	INLINE DRAIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL
REVISED BY NMH	PROJECT NO./NAME		
DATE 03-15-16			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO. 7003-110-057	REV D

NON TRAFFIC INSTALLATION

DRAIN BASIN



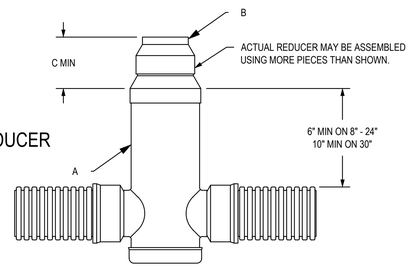
INLINE DRAIN



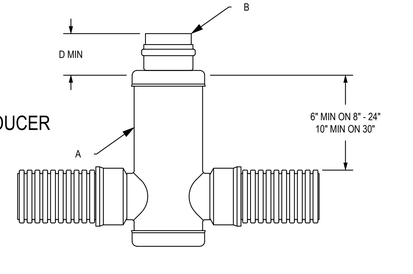
DRAWN BY CJA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 9-30-99		TITLE	DRAIN BASIN & INLINE DRAIN NON TRAFFIC INSTALLATION
REVISED BY NMH	PROJECT NO./NAME		
DATE 03-11-16			
DWG SIZE A	SCALE 1:25 SHEET 1 OF 1	DWG NO. 7001-110-111	REV E

A	B	C	D
10"	8"	6.00	9.00
12"	8"	12.00	9.00
12"	10"	6.00	10.00
15"	8"	18.50	9.00
15"	10"	12.50	10.00
15"	12"	6.50	
18"	8"	25.50	9.00
18"	10"	19.50	10.00
18"	12"	13.50	11.50
18"	15"	7.00	
24"	8"	36.50	9.00
24"	10"	30.50	10.00
24"	12"	24.50	11.00
24"	15"	18.00	12.00
24"	18"	11.00	
30"	8"	46.50	9.00
30"	10"	40.50	10.00
30"	12"	34.50	11.50
30"	15"	28.00	12.00
30"	18"	21.00	14.50
30"	24"	13.50	

CONE STYLE REDUCER



CAP STYLE REDUCER



NOTE: DIMENSIONS ARE FOR REFERENCE ONLY
ACTUAL DIMENSIONS MAY VARY

DRAWN BY CJA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 2-6-03		TITLE	DRAIN BASIN WITH REDUCER OPTIONS
REVISED BY JJC	PROJECT NO./NAME		
DATE 7-10-13			
DWG SIZE A	SCALE 1:25 SHEET 1 OF 1	DWG NO. 7001-110-104	REV E

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Civil Engineer
MO# PE-2008019568

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Licensee's Certificate of Authority Number:
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314.737.4200
State Certificate of Authority #2002018767

Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

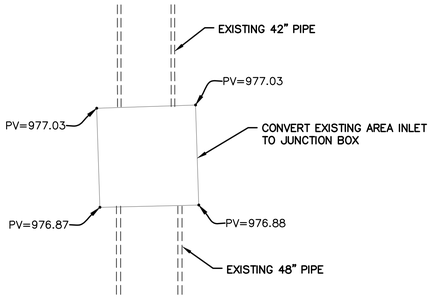
Date	9/22/17
Job Number	170534-010
Drawn By	ELM
Checked By	MDM

Revisions

Number	Date	Description
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C22

DETAILS 5



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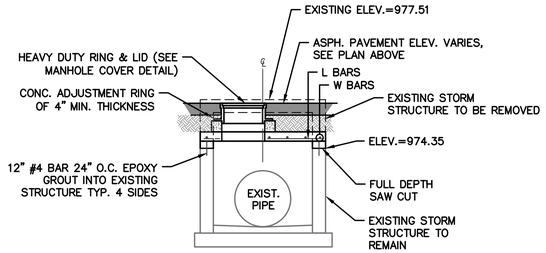
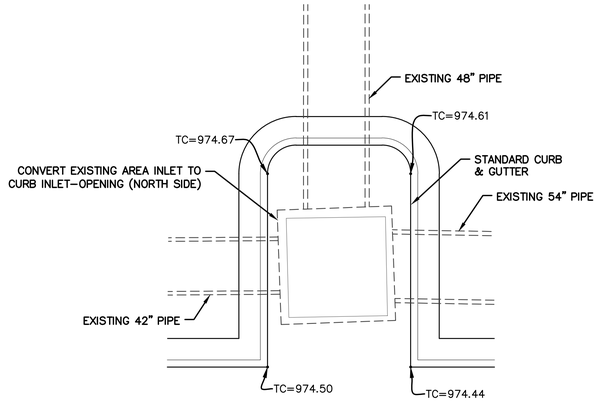


REINFORCING

BARS	SIZE	SPACING (IN.)
L	5	6
W	5	6

DETAIL 1 (EX3A)
AREA INLET TO JUNCTION BOX DETAIL



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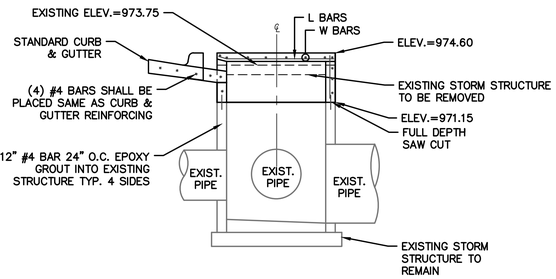
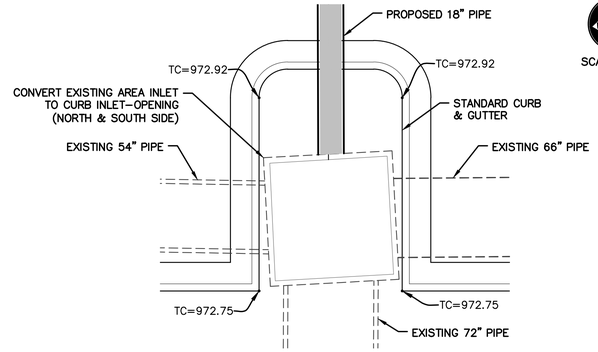


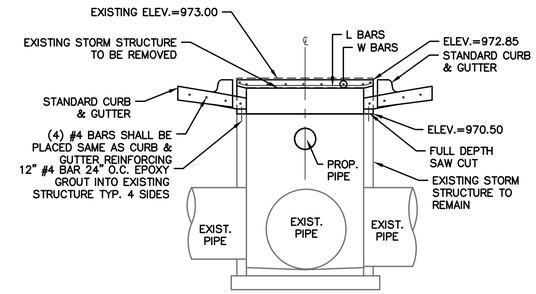
REINFORCING

BARS	SIZE	SPACING (IN.)
L	5	6
W	5	6

DETAIL 2 (EX3)
AREA INLET TO CURB INLET DETAIL



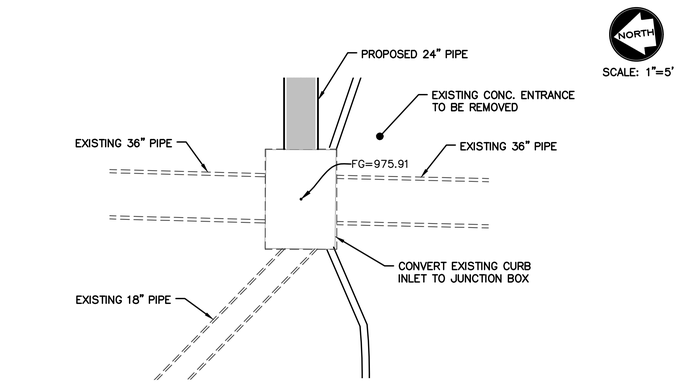
SCALE: 1"=5'



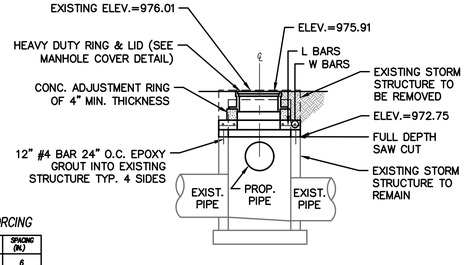
REINFORCING

BARS	SIZE	SPACING (IN.)
L	5	6
W	5	6

DETAIL 3 (EX2)
AREA INLET TO CURB INLET DETAIL



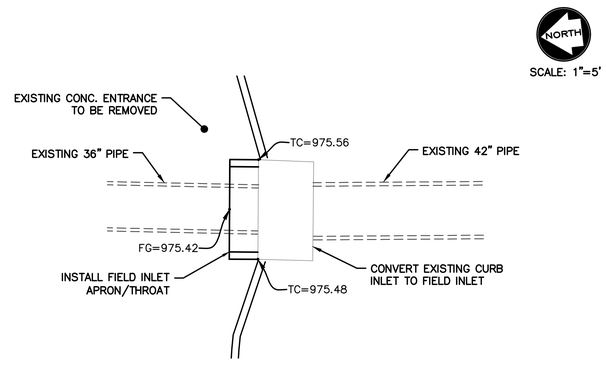
SCALE: 1"=5'



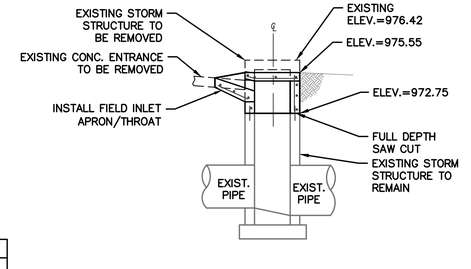
REINFORCING

BARS	SIZE	SPACING (IN.)
L	5	6
W	5	6

DETAIL 4 (EX1)
CURB INLET TO JUNCTION BOX DETAIL



SCALE: 1"=5'



REINFORCING

BARS	SIZE	SPACING (IN.)
L	5	6
W	5	6

DETAIL 5 (EX4)
CURB INLET TO FIELD INLET DETAIL

STATE OF MISSOURI — MARK DANIEL MCGHEE JR. — NUMBER PE-2008019568 — PROFESSIONAL ENGINEER — # 170534-010

Mark Daniel McGhee Jr.
Civil Engineer
MO# PE-2008019568

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Proposed New Core & Shell Building For:

Lee's Summit Surgical

Lee's Summit, Missouri

Date	9/22/17
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Revisions

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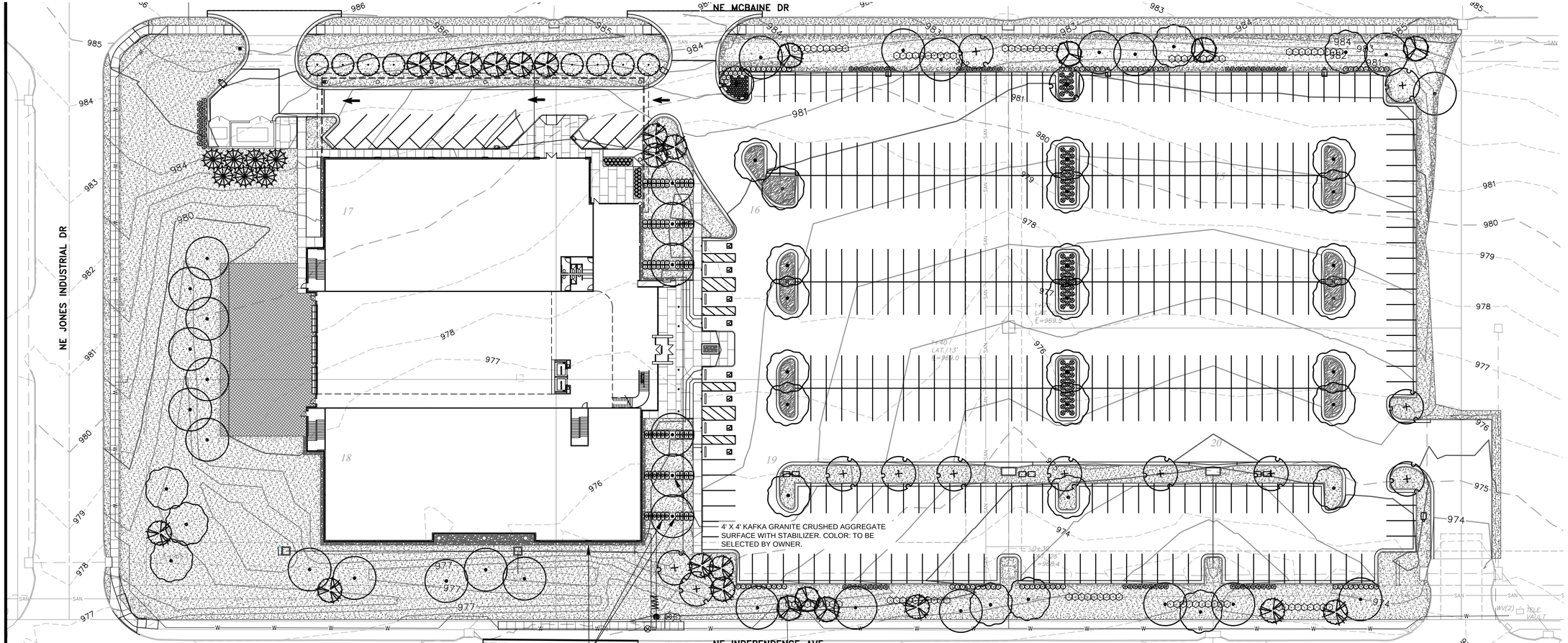
1	10/30/17	CITY COMMENTS
2	11/28/17	CITY COMMENTS

C23

STRUCTURE MODIFICATION DETAILS



1 OVERALL LANDSCAPE PLAN

1" = 30'-0"

LANDSCAPE PLAN NOTES:

1. EXISTING UNDERGROUND (U/G), OVERHEAD (O.H.) UTILITIES AND DRAINAGE STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO VERIFY EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE STARTING ANY WORK.

2. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL GIVE 72 HOURS ADVANCED NOTICE TO ALL THOSE COMPANIES/UTILITIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION SITE.

3. CONTRACTOR SHALL VERIFY ALL LANDSCAPE MATERIAL QUANTITIES AND SHALL REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.

4. CONTRACTOR SHALL STAKE/LAYOUT PLANT LOCATIONS IN THE FIELD & HAVE APPROVAL BY LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH INSTALLATION.

5. NO SUBSTITUTIONS (INCL. CULTIVARS) SHALL BE ACCEPTED WITHOUT WRITTEN APPROVAL PER SPECIFICATIONS. PROPOSED PLANT SUBSTITUTIONS REQUIRE APPROVAL OF THE LANDSCAPE ARCHITECT, CITY OF OVERLAND PARK, KS & THE OWNER'S REPRESENTATIVE.

6. ALL PLANT MATERIAL SHALL BE OF EXCELLENT QUALITY, FREE OF DISEASE & INFESTATION--TRUE TO TYPE, VARIETY, SIZE SPECIFIED, & FORM PER ANSA STANDARDS.

7. ALL PROPOSED TREES AND SHRUBS SHALL BE LAID OUT IN A UNIFORM AND CONSISTENT PATTERN, FOLLOWING THE LANDSCAPE PLAN ACCURATELY. INSTALL ALL PLANTS PER PLANTING DETAILS.

8. ALL TREES & MULCH BEDS (UNLESS ROCK MULCH) SHALL RECEIVE 3" MIN. OF SHREDDED DARK PREMIUM HARDWOOD MULCH, AS DETAILED. ADD PREEN OR SNAPSHOT TO BEDS BEFORE & AFTER MULCHING FROM MARCH 1 TO OCTOBER 1. IF WINTER INSTALLATION, RETURN NEXT SPRING & INSTALL PREEN/SNAPSHOT WITH NEW MULCH.

9. ROCK MULCH SHALL BE 3"-5" BLACK MEXICAN BEACH PEBBLES FROM STRUGIS OUTDOORS OR APPROVED EQUAL . PLACE OVER PIN WEED BARRIER FABRIC TO 8" IN DEPTH. ELEVATION OF TOP OF ROCK SHALL BE 1/4" BELOW ANY ADJACENT PAVEMENT.

10. TREE TIES SHALL BE DEWITT 20" STRAPS FOR TREE STAKING. USE 10 GAUGE ELECTRIC WIRE. TREES AND STAKES SHALL BE STRAIGHT, PLUMB AND TAUT. TREE STAKES TO BE REMOVED WINTER OF YEAR 2 AFTER INSTALLATION.

11. CONTRACTOR SHALL THOROUGHLY WATER-IN EACH PLANT IMMEDIATELY FOLLOWING INSTALLATION AND CONTINUE WATERING UNTIL SUBSTANTIAL COMPLETION. CONTRACTOR REQUIRED TO COORDINATE WATERING WITH THE OWNER AFTER SUBSTANTIAL COMPLETION. PROVIDE HOURLY RATE TO WATER THE SITE, IF IRRIGATION NOT INSTALLED OR NOT WORKING.

12. ALL AREAS OF THE SITE DISTURBED DURING CONSTRUCTION THAT ARE NOT DESIGNATED AS BEDS / PAVEMENT AREAS SHALL BE SODDED WITH 90% TURF-TYPE TALL FESCUE AND 10% BLUEGRASS MIX SOD (NATURE'S CARPET -- L.C. BRIGGS TURF FARM. CAPEN BRIGGS 816.547.6214 OR EQUAL).

13. CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING ALL AREAS OF SOD, ROCK & MULCH AND THE AMOUNTS OF EACH NEEDED FOR OPTIMUM COVERAGE.

14. NO TREES SHALL BE PLANTED OVER TOP OF ANY UTILITY LINES OR PIPES. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO PLANTING AND ANY MODIFICATIONS TO TREE LOCATIONS SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT AND APPROVED BY THE CITY PRIOR TO PLANTING.

15. ALL PLANT MATERIALS AND IRRIGATION SYSTEM SHALL BE GUARANTEED FOR 1 YEAR FROM DATE OF SUBSTANTIAL COMPLETION. PLANT MATERIALS WILL BE ONE TIME REPLACEMENT AND RECORDS KEPT BY THE LANDSCAPE CONTRACTOR FOR ALL REPLACEMENTS.

16. THIS LANDSCAPE PLAN IS DESIGNED TO BE IN CONFORMANCE WITH THE CITY OF LEE'S SUMMIT, MO UNIFIED DEVELOMENT ORDINANCE. THE LANDSCAPE ARCHITECT WILL COORDINATE CLOSELY WITH THE CITY OF LEE'S SUMMIT, MO TO MAKE SURE FINAL DEVELOPMENT AND PERMIT PLANS ARE IN CONFORMANCE WITH THIS CODE.

2 LANDSCAPE NOTES

NTS

LANDSCAPE REQUIREMENTS

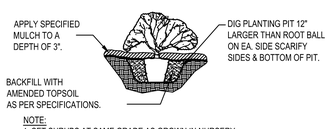
PER THE LEE'S SUMMIT UDO -ARTICLE 14:

STREET PLANTINGS -

STREET FRONTAGE	LENGTH	REQUIRED	PROVIDED
NE INDEPENDENCE AVE.	781 LF	ONE TREE PER 30 LF FRONTAGE (26 TREES) ONE SHRUB PER 20 LF FRONTAGE (39 SHRUBS)	26 NEW TREES 39 NEW SHRUBS
NE JONES INDUSTRIAL DR.	340 LF	ONE TREE PER 30 LF FRONTAGE (11 TREES) ONE SHRUB PER 20 LF FRONTAGE (17 SHRUBS)	11 NEW TREES 17 NEW SHRUBS
NE McBAINE DR.	781 LF	ONE TREE PER 30 LF FRONTAGE (26 TREES) ONE SHRUB PER 20 LF FRONTAGE (39 SHRUBS)	26 NEW TREES 39 NEW SHRUBS

OPEN SPACE AREA:
1 TREE PER 5,000 SF OF LOT AREA NOT COVERED BY BUILDINGS/STRUCTURES
223,374 SF OPEN SPACE AREA = 45 TREES REQUIRED/50 TREES PROVIDED
2 SHRUBS PER 5,000 SF OF LOT AREA NOT COVERED BY BUILDINGS/STRUCTURES
223,374 SF OPEN SPACE AREA = 89 SHRUBS REQUIRED/428 SHRUBS PROVIDED

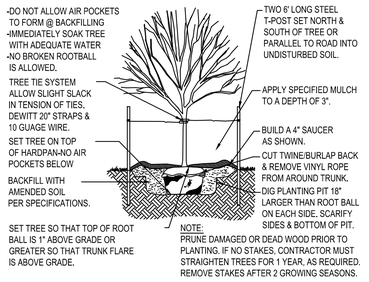
PARKING LOT ISLANDS:
5% OF TOTAL PARKING AREA TO BE LANDSCAPE ISLANDS (123,305 TOTAL SF PARKING AREA)
6,165 REQUIRED SF LANDSCAPE ISLANDS/8,414 PROVIDED SF LANDSCAPE ISLANDS



NOTE:
1. SET SHRUBS AT SAME GRADE AS GROWN IN NURSERY.
2. PRUNE ALL DAMAGED OR DEAD WOOD PRIOR TO PLANTING.

3 SHRUB & PERENNIAL PLANTING DETAIL

NTS

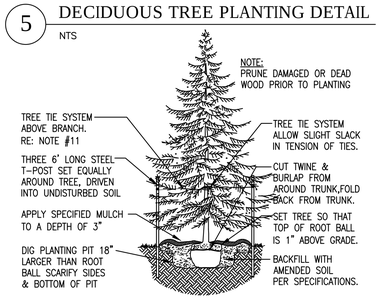


4 EVERGREEN TREE PLANT DETAIL

NTS

5 DECIDUOUS TREE PLANTING DETAIL

NTS



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE
	AS	31	Acer miyabei `State Street` / Miyabei Maple	B & B	3"Cal	
	AG	17	Amelanchier x grandiflora `Autumn Brilliance` / `Autumn Brilliance` Serviceberry	B & B		8` Ht.
	CF	8	Carpinus betulus `Franz Fontaine` / Franz Fontaine Hornbeam	B & B	3"Cal	
	GA	14	Ginkgo biloba `Autumn Gold` TM / Autumn Gold Ginkgo	B & B	3"Cal	
	MP	7	Malus x `Prairifire` / Prairifire Crab Apple	B & B	3"Cal	
	PF	7	Pinus flexilis `Vanderwolf`s Pyramid` / Vanderwolf`s Pyramid Pine	B & B		8` Ht.
	QB	29	Quercus bicolor / Swamp White Oak	B & B	3"Cal	

SHRUBS	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT
	BS	194	Buxus microphylla `Sprinter` / Sprinter Boxwood	5 gal
	CO	28	Calamagrostis x acutiflora `Overdam` / Overdam Feather Reed Grass	1 gal
	CA	93	Cornus stolonifera `Arctic Fire` / Arctic Fire Dogwood	5 gal
	JF	74	Juniperus chinensis `Sea Green` / Sea Green Juniper	5 gal
	JG	89	Juniperus procumbens `Green Mound` / Green Mound Juniper	5 gal
	R3	15	Rosa x `Novarospop` / Popcorn Drift Rose	3 gal
	SH	30	Sporobolus heterolepis / Prairie Dropseed	1 gal

GROUND COVERS	CODE	QTY	BOTANICAL NAME / COMMON NAME	CONT	SPACING
	A1	48	Annual Bed / Annual Beds	4" pot	10" o.c.
	DD	921 sf	Decorative Rock / Decorative Rock	Ton	
	FS	79,791 sf	Fescue Sod / Drought-Tolerant Fescue Sod	sy rolls	
	RG	125	Rhus aromatica `Gro-Low` / Gro-Low Fragrant Sumac	3 Gal.	48" o.c.

6 PLANT SCHEDULE

NTS

Gregory Michael Plau
Landscape Architect
MO# LA-2013025746

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Proposed New Core & Shell Building For:
Lee's Summit Surgical
Lee's Summit, Missouri

Date	9/22/17
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Drawn By	GMP
Checked By	GMP

Revisions

Number	Date	Description

L01

LANDSCAPE PLAN