

A SET OF AS-BUILT PLANS FOR DYNAFLEX

A TRACT OF LAND BEING LOT 1 AND LOT 2 OF DYNAFLEX HAWK RIDGE PLAT BOOK 50 PAGE 367 AND BEING PART OF LOT 7 OF "PLAT NO. 1 OF BALDRIDGE PARTITION" DEED BOOK T PAGE 456 IN FRACTIONAL SECTION 10 AND FRACTIONAL SECTION 11 TOWNSHIP 47 NORTH, RANGE 2 EAST OF THE FIFTH PRINCIPAL MERIDIAN CITY OF O'FALLON ST. CHARLES COUNTY, MISSOURI

Conditions of Approval From Planning and Zoning - Site Plan

Staff Recommendations

- Provide a 10' wide trail along the MODOT Outer Road and Hawk Ridge Trail to be connected to Springhurst Parkway when Lot 1 develops. Provide pedestrian and bicycle connection to the intersection of Hawk Ridge Trail and the Outer Road. The trail system shall be separated from the roadway.
- Provide a 6' wide PC sidewalk from the new curb cut on Hawk Ridge Trail to the end of the concrete block wall then provide a 10' wide trail for the portion past that point and to the end of the property along the outer road.
- The applicant shall address the Municipal Code Requirement listed below.

Municipal Code Requirements

- Provide a fence detail.
- Provide approval from the jurisdiction that owns Highway N in this location for the entrance.
- Provide approval from the fire district and water and sanitary districts.
- Provide a photometric lighting plan with lighting values shown to the property line.
- Provide additional information on tree species and height with Construction Plans.
- All mechanical units shall be screened in accordance with Code Section 400.278.

Utility Contacts

Sanitary Sewer
Duckett Creek Sanitary District
3550 Highway K
O'Fallon, MO, 63368
636-441-1244

Water
Public Water Supply District No. 2
P.O. Box 967
O'Fallon, MO 63366
636-561-3737 ext. 131

Electric
Cuivre River Electric Co.
P.O. Box 160
Troy, MO, 63379-0160
1-800-392-3709

Telephone
Centurylink
1151 Century Tel Dr.
Wentzville, MO 63385
636-332-7261

Charter Communications
941 Charter Commons
Town & Country, MO 63017
888-438-2427

Fire Department
Wentzville Fire Protection District
502 Luetkenhaus Boulevard
Wentzville, MO 63385
636-332-9869

Developer

Contact: Duke Property Management L.L.C.
10403 International Plaza
St. Ann, MO 63074
Maureen Miller
314-426-4020

Benchmarks: ALL AS-BUILT ITEMS HAVE BEEN LOCATED AND TIED TO THE MISSOURI COORDINATE SYSTEM OF 1983, EAST ZONE, (GRID NORTH), NAD83 FOR HORIZONTAL DATUM AND NAVD83 FOR VERTICAL DATUM.

Project
PROJECT ELEVATIONS UTILIZE THE NAVD 88 VERTICAL DATUM AND WERE GENERATED BY GPS OBSERVATIONS USING A CELLULAR EQUIPPED TRIMBLE R8 GNSS ROVER AND TRIMBLE TSC3 DATA COLLECTOR AND ARE BASED ON THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUS OPERATING REFERENCE STATIONS.

REFERENCE BENCHMARK: THE OBSERVED VERTICAL CHECK STATION UTILIZED IS LISTED ON WWW.NGSOA.GOV AS DESIGNATION "A 149" WITH A PID OF J00542 AND A PUBLISHED ELEVATION OF 630.08 (NAVD88).

DESCRIPTION: BRASS DISK SET IN NORTHWEST WINGWALL OF THE NORFOLK AND WESTERN RAILROAD BRIDGE OVER US HIGHWAY 61 BUSINESS LOOP.

Site

SITE BENCHMARK A (NAVD 88)- CUT SQUARE ON UTILITY VAULT IN CONCRETE ISLAND AT THE NORTHEAST CORNER OF SITE (ELEVATION=639.01) AS SHOWN HEREON.

SITE BENCHMARK B (NAVD 88)- "M" IN "MUELLER" ON FIRE HYDRANT LOCATED ON WEST SIDE OF SPRINGHURST PARKWAY AND ACROSS FROM SUBJECT PROPERTY (ELEVATION=614.27) AS SHOWN HEREON.

Fire Protection District Notes:

- Each fire hydrant shall not have less than two 2-1/2 inch outlets and one 4-1/2 inch outlet, a 5-1/4 inch valve, a 6 inch barrel and shall be of the breakaway design, frost free with chain, left hand open design and have national standard threads.
- Fire hydrant shall be provided with a control valve in the hydrant connection such that the hydrant can be removed from service without shutting off water supply to other fire hydrants.
- In setting hydrants, due regard shall be given to final grade line. The center of a hose nozzle outlet shall not be less than (18) inches above grade and the outlets must face the street or access drive.
- There shall be no obstruction, i.e. planting, bushes, trees, signs, light standards, mailboxes, etc. within six (6) feet of any fire hydrant, and/or fire department connection to an automatic sprinkler system.
- A fire hydrant is required to be within 150 feet of a fire department connection to an automatic fire suppression system.
- All tees, plugs, bends and hydrant branches shall be restrained against movement in accordance with Section 8-6 of the NFPA 24.
- The flushing and testing of the underground piping, etc. for private service mains shall comply with Chapter 9 of NFPA 24 and shall be witnessed by a representative from the fire district.
- Fire Department connection shall be accessible and installed in accordance to Section 912 of the 2009 I.F.C.

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Development Notes:

- THIS PROPERTY IS REFERENCED AS THE FOLLOWING PARCEL I.D. NUMBERS OF THE ST. CHARLES COUNTY ASSESSOR'S OFFICE:
LOT 1 = PARCEL ID: 4-0036-C841-00-0001.000000
LOT 2 = PARCEL ID: 4-0036-C841-00-0002.000000
- AREA OF TRACT: 11.068 ACRES TOTAL
LOT 1 = 3.989 ACRES
LOT 2 = 7.079 ACRES
- EXISTING ZONING: HTCD HIGH TECH CORRIDOR DISTRICT/PLANNED UNIT DEVELOPMENT, CITY OF O'FALLON
- BUILDING ADDRESS (LOT 2): 8050 HAWK RIDGE TRAIL O'FALLON, MO 63387
- PROPOSED USE: DYNAFLEX - MANUFACTURING
- OWNER: DUKE PROPERTY MANAGEMENT, L.L.C. 10403 INTERNATIONAL PLAZA DRIVE ST. ANN, MO 63074
- SITE COVERAGE (LOT 2):
SITE = 308,375 SQ. FT. (7,079 ACRES)
PROPOSED BUILDING = 2,500 SQ. FT. = 1%
PROPOSED PAVEMENT = 105,124 SQ. FT. = 34%
PROPOSED GREENSPACE = 133,231 SQ. FT. = 43%
- BASIS OF BEARINGS IS THE "MISSOURI COORDINATE SYSTEM OF 1983, EAST ZONE" (GRID NORTH).
- TO DETERMINE THE LOCATION OF FLOOD DESIGNATIONS AND BOUNDARIES, WE DETERMINED THE HORIZONTAL LOCATION OF THIS TRACT OF LAND BY SCALING THE FOLLOWING FLOOD INSURANCE RATE MAP (FIRM): ST. CHARLES COUNTY, MISSOURI AND INCORPORATED AREAS, MAP NUMBER 29183C0220G, WITH AN EFFECTIVE DATE OF JANUARY 20, 2016.

COMMUNITY: CITY OF O'FALLON
NUMBER: 290316
PANEL: 0220
SUFFIX: G

BY EXPRESS REFERENCE TO THIS MAP AND ITS LEGEND, THIS TRACT OF LAND IS INDICATED TO BE WITHIN ZONE X - AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE EVALUATION PROVIDED IN THIS NOTE IS RESTRICTED TO SIMPLY INDICATING THE APPARENT HORIZONTAL LOCATION OF THE PROPERTY WITH RESPECT TO THE FEATURES DISPLAYED ON THE MAP. NO FIELD STUDY OF THE DRAINAGE CHARACTERISTICS TO WHICH THIS PROPERTY MAY BE SUBJECT TO HAS BEEN CONDUCTED AND NO REPRESENTATION CONCERNING THE INSURABILITY OF THIS PROPERTY OR THE POTENTIAL SUSCEPTIBILITY OF THIS PROPERTY TO FLOODING HAS BEEN MADE. BAX ENGINEERING MAKES NO REPRESENTATION CONCERNING THE ACCURACY OF THE ABOVE REFERENCED FIRM MAP WHICH INCLUDES A NOTE THAT THIS MAP IS FOR USE IN ADMINISTERING THE NATIONAL FLOOD INSURANCE PROGRAM. IT DOES NOT NECESSARILY IDENTIFY ALL AREA SUBJECT TO FLOODING, PARTICULARLY FROM LOCAL DRAINAGE SOURCES OF SMALL SIZE.

THIS FLOOD ZONE DETERMINATION AND THE FLOOD ZONE LIMITS SHOWN HEREON, IF ANY, WERE MADE USING FEMA INFORMATION WHICH WAS AVAILABLE ON THE DATE THIS SURVEY WAS SIGNED AND SEALED.

ALL NEW LIGHTING SHALL BE DOWNCAST LIGHTS CONSISTENT WITH CITY OF O'FALLON STANDARDS AND SPECIFICATIONS. POLE HEIGHT SHALL BE 22 FEET.

ALL MECHANICAL EQUIPMENT SHALL BE ROOFTOP MOUNTED AND WILL BE SCREENED PER CITY OF O'FALLON ZONING CODE, SECTION 400.278.

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

ALL NEW UTILITIES ARE TO BE LOCATED UNDERGROUND.

ANY OFFSITE GRADING OR UTILITY CONSTRUCTION WILL REQUIRE AN EASEMENT BEFORE CONSTRUCTION.

ALL SITE CONSTRUCTION SHALL COMPLY WITH CITY OF O'FALLON STANDARDS. ALL CONSTRUCTION WITHIN STATE RIGHT OF WAY SHALL COMPLY WITH MODOT STANDARDS.

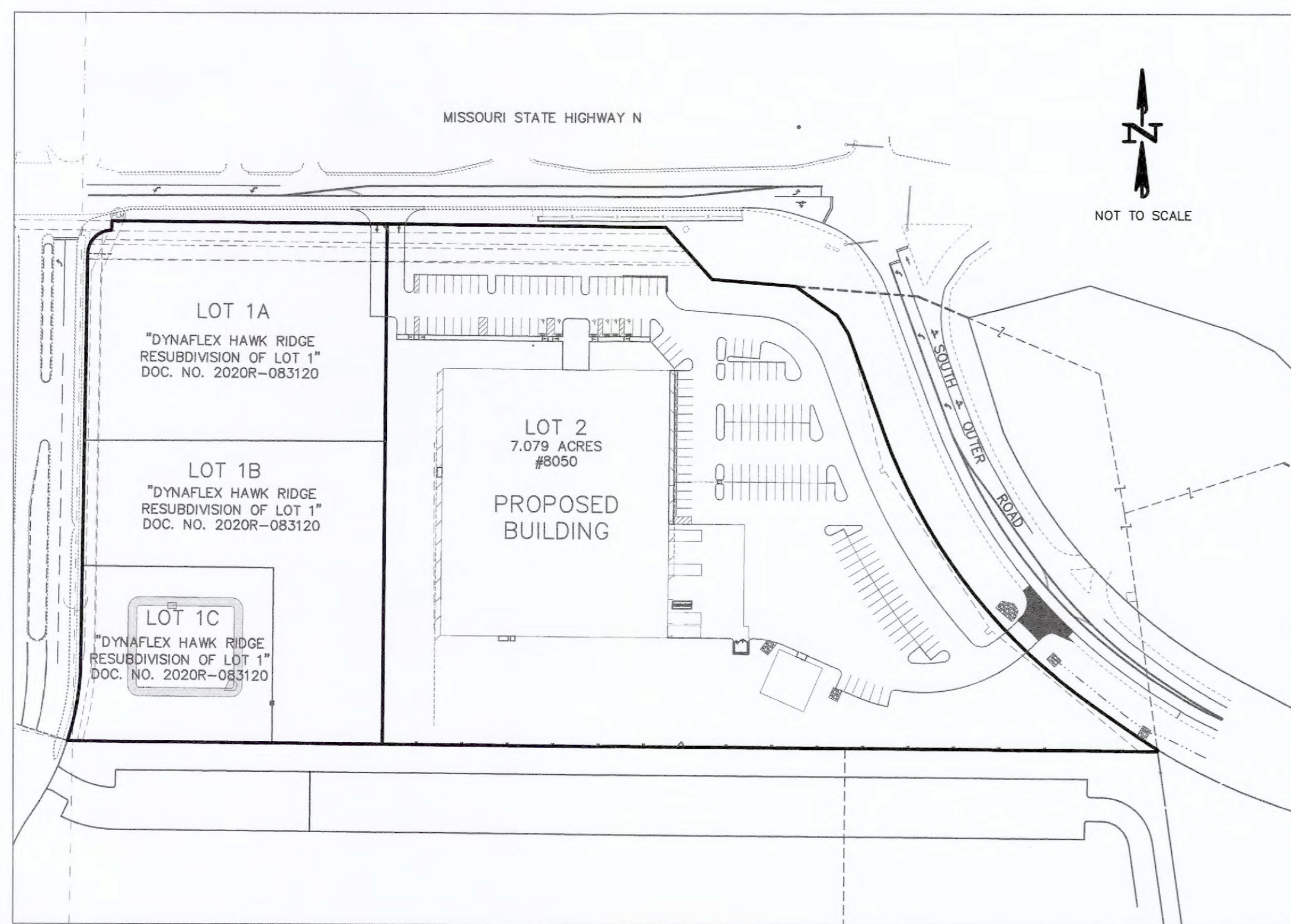
ALL SIGNAGE FOR THIS FACILITY SHALL REQUIRE SEPARATE PERMIT APPROVAL.

City approval of any construction site plans does not mean that any building can be constructed on the lots without meeting the building setbacks as required by the zoning codes.

All installations and construction shall conform to the approved engineering drawings. However, if the developer chooses to make minor modifications in design and/or specifications during construction, they shall make such changes at their own risk, without any assurance that the City Engineer will approve the completed installation or construction. It shall be the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer may be required to correct the installed improvement so as to conform to the approved engineering drawings. The developer may request a letter from the Construction Inspection Division regarding any field changes approved by the City Inspector.

Lighting values will be reviewed on site prior to the final occupancy inspection.

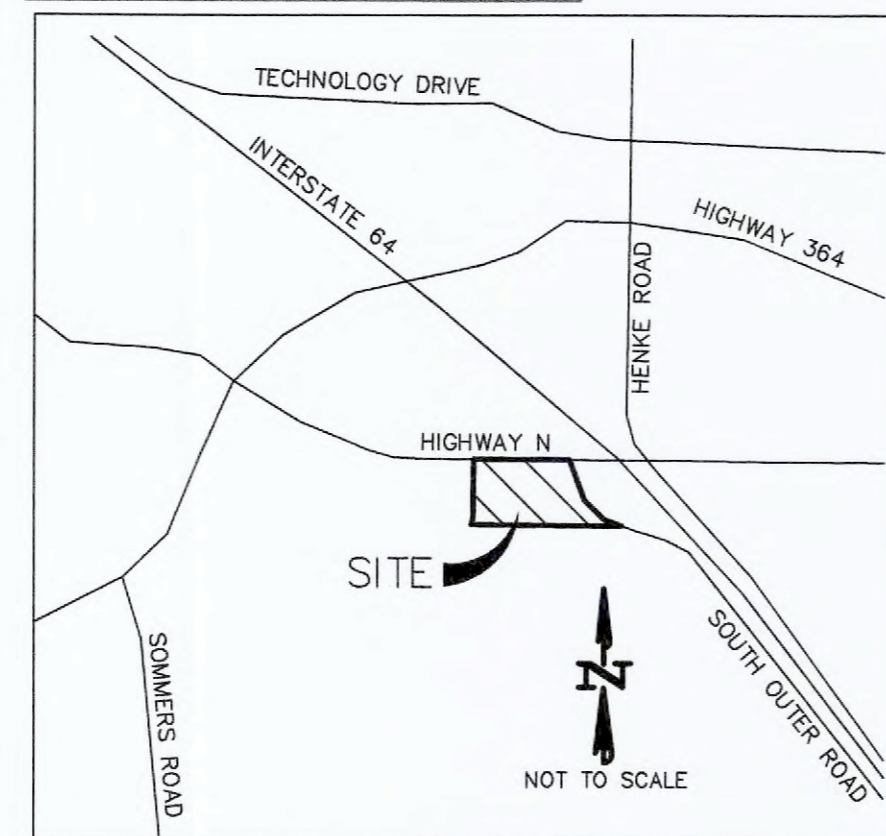
CITY OF O'FALLON
COMMUNITY DEVELOPMENT DEPARTMENT
ACCEPTED FOR CONSTRUCTION
BY: *Jamie Swanson* DATE: 08/26/2021
PROFESSIONAL ENGINEER'S SEAL
INDICATES RESPONSIBILITY FOR DESIGN



Plan View

AS-BUILT LEGEND

- AS-BUILT STORM MANHOLE
- AS-BUILT CURB INLET
- ▲ AS-BUILT STORM FLARED END
- AS-BUILT SANITARY MANHOLE
- AS-BUILT FIRE HYDRANT
- AS-BUILT WATER VALVE
- AS-BUILT FIRE HOSE CONNECTION
- AS-BUILT LIGHT STANDARD
- AS-BUILT CLEANOUT
- AB AS-BUILT



Locator Map

Legend

600.00	EXISTING LABELS	□	EXIST. SINGLE CURB INLET
600.00	PROPOSED LABELS	□	EXIST. AREA INLET
CI	SINGLE CURB INLET	□	EXIST. GRATE INLET
DCI	DOUBLE CURB INLET	□	PROPOSED SINGLE CURB INLET
AI	AREA INLET	□	PROPOSED AREA INLET
DAI	DOUBLE AREA INLET	□	PROPOSED GRATE INLET
GI	GRATE INLET	□	EXIST. SANITARY MANHOLE
DGI	DOUBLE GRATE INLET	□	EXIST. STORM MANHOLE
MH	MANHOLE	●	PROPOSED MANHOLE
FE	FLARED END SECTION	●	POWER POLE
EP	END PIPE	●	GUY WIRE
CP	CONCRETE PIPE	●	LIGHT STANDARD
RCP	REINFORCED CONCRETE PIPE	●	FIRE HYDRANT
CMP	CORRUGATED METAL PIPE	●	WATER METER
CPP	CORRUGATED PLASTIC PIPE	●	WATER VALVE
PVC	POLY VINYL CHLORIDE (PLASTIC)	●	GAS VALVE
CO	CLEAN OUT	●	TELEPHONE MANHOLE
.....	SLOPE LIMITS	●	FIBER OPTIC MARKER
—	DRAINAGE SWALE	●	AC UNIT
— STM —	EXISTING STORM SEWER	●	TELEPHONE CABLE PEDESTAL
— SAN —	EXISTING SANITARY SEWER	●	ELECTRIC METER
— W —	EXISTING WATER LINE	●	CLEANOUT
— FO —	EXISTING FIBER OPTIC LINE	●	MAILBOX
— GAS —	EXISTING GAS LINE	●	SIGN
— UGE —	EXISTING UNDERGROUND ELECTRIC	●	TREE
— OHW —	EXISTING OVERHEAD ELECTRIC	●	
— CTV —	EXISTING CABLE TV LINE	●	
— T —	EXISTING TELEPHONE LINE	●	
—	PROPOSED STORM SEWER	●	
—	PROPOSED SANITARY SEWER	●	
— X —	FENCE LINE	●	
—	SAWCUT LINE	●	
TBR	TO BE REMOVED	●	
UIP	USE IN PLACE	●	

* City of O'Fallon Construction work hours per City Ordinance 3429 as shown in Section 500.420 of the Municipal Code of the City of O'Fallon are as follows:
October 1 through May 31
7:00 A.M. To 7:00 P.M. Monday Through Sunday
June 1 Through September 30
6:00 A.M. To 8:00 P.M. Monday Through Friday
7:00 A.M. to 8:00 P.M. Saturday and Sunday

* The area of this phase of development is 11.068 Acres Total
The area of land disturbance is 10.85 Acres Number of proposed lots is one.
Building Setback Information. Front = 30 Feet
Side = 20 Feet, 30 Feet for corner lot
Rear = 35 Feet

* The estimated sanitary flow in gallons per day is 9,000

* Parking Calculations:
Office: 1 Space per 300 Sq. Ft. Floor Area
11,400/300 Sq. Ft. x 1 Space = 38 Spaces

Manufacturing: 1 Space per Employee + 1 Space per 1,000 Sq. Ft. Floor Area
(75 Employees x 1 Space) + (22,150/1,000 Sq. Ft. x 1 Space) = 97.15 Spaces

Warehouse: 1 Space per Employee on Max. Work Shift + 1 Space per each Business Vehicle + 2 Guest Spaces
(25 Employees x 1 Space) + (2 Business Vehicles x 1 Space) + 2 Guest Spaces = 29 Spaces

Required Parking Spaces = 165 Spaces
Provided Parking Spaces = 166 Spaces (including 6 Accessible Spaces)

* Loading Calculations:
Loading Spaces: 1 loading space for use over 5,000 Sq. Ft. Gross Floor Area and
1 Additional Loading Space for every additional 20,000 Sq. Ft. Gross Floor Area
1 Loading Space + {(67,520-5,000)/20,000 Sq. Ft.} x 1 Loading Space = 3.13 Loading Spaces

Required Loading Spaces = 4 Loading Spaces
Provided Loading Spaces = 4 Loading Spaces

* Tree Preservation Calculations: 20% of existing trees or 15 trees per acre
(whichever is greater) shall be preserved

Required Tree Preservation = 0 Trees x 0.20 = 0 Trees Preserved

* Landscape Calculations:

1 Tree per 40 Feet Street Frontage (Lot 2)
1,074.64 Feet Street Frontage/40 Feet x 1 Tree = 27 Trees Required

1 Tree per 3,000 Sq. Ft. of Landscaped Open Space
7127.40/3,000 Sq. Ft. x 1 Tree = 3 Trees Required

Interior Landscape Area = 6% Minimum Interior Parking Lot
0.06(166 Spaces x 270 Sq. Ft.) = 2,689.20 Sq. Ft. Interior Landscape Area Required
Total Interior Landscape Area Provided = 4,071.16 Sq. Ft.

Buffer Yard Requirements (South Property Line):
4 Deciduous Trees (3" Caliper Min.) + 8 Shrubs (5 Gal. Min.) and a 6 foot high sight-proof fence within 20 foot wide buffer yard per every 100 feet of frontage where buffer yard is required
818.99/100 Feet x 4 Deciduous Trees = 33 Trees Required
818.99/100 Feet x 8 Shrubs = 66 Shrubs Required

Grading Quantities:

19,200 C.Y. CUT (INCLUDES SUBGRADE & IMPORTING 2 FEET OF SCREENINGS BELOW BUILDING PAD)
19,200 C.Y. FILL (INCLUDES 8% SHRINKAGE)
BALANCED

THE ABOVE GRADING QUANTITY IS APPROXIMATE ONLY. NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL VERIFY QUANTITIES PRIOR TO CONSTRUCTION.

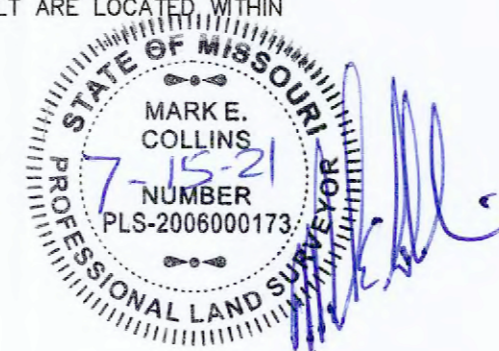
AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

- STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES, DEPTHS OF STORM SEWER STRUCTURES AND TOPOGRAPHY OF RETENTION BASIN.
- SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.
- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.

BAX ENGINEERING COMPANY, INC.
MARK E. COLLINS
MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173



PROJECT TITLE:
AS-BUILT PLANS FOR DYNAFLEX 8050 HAWK RIDGE TRAIL O'FALLON, MISSOURI 63376

ENGINEERING PLANNING SURVEYING
221 Point West Blvd. St. Charles, MO 63301
636-928-5552 FAX 928-1718

REVISIONS

DATE	CITY COMMENTS	REVS.
07/15/21		

Developer / Owner:
Duke Property Management L.L.C.
10403 International Plaza
St. Ann, Missouri 63074
(314) 426-4020

COVER SHEET

P+Z No. #19-003530
Approval Date 11-07-19
City No. #
Page No. 1 of 19

GENERAL NOTES

- 1. Driveway locations shall not interfere with the sidewalk handicap ramps, or curb inlet sumps
2. Sidewalks, curb ramps, ramps and accessible parking spaces shall be constructed in accordance with the current approved
'American with Disabilities Act Accessibility Guidelines' (ADAAG) along with the required grades, construction materials,
specifications and signage. If any conflict occurs between the above information and the plans, the ADAAG guidelines shall
take precedence and the contractor prior to any construction shall notify the Project Engineer.
2.1. Truncated domes for curb ramps located in public right of way shall meet PROWAG requirements and shall be
constructed using red pre-cast truncated domes per pavement details.
3. Any proposed pavilions or playground areas will need a separate permit from the Building Division.
4. The Contractor is responsible to call Missouri One Call and The City of O'Fallon for the location of utilities. Contact the City
of O'Fallon (636) 379-3814 for the location of City maintained cable for street lights and traffic signals, all other utilities
call Missouri One Call 1-800-DIG-RITE. 1-800-344-7483
5. All proposed utilities and/or utility relocations shall be located underground.
6. All proposed fencing requires a separate permit through the Building Safety Division.
7. All construction operations and work zone traffic control within the right of way will follow MoDOT or M.U.T.C.D. standards
whichever is more stringent.
8. (INTENTIONALLY OMITTED)
9. All subdivision identification or directional sign(s) must have the locations and sizes approved and permitted separately
through the Planning and Development Division.
10. Materials such as trees, organic debris, rubble, foundations, and other deleterious material shall be removed from the site
and disposed of in compliance with all applicable laws and regulations. If the material listed previously are reused, a letter
from a soil Engineer must clarify amount, location, depth, etc. and be approved with the construction plans. Landfill tickets
for such disposal shall be maintained on file by the developer. Burning on site shall be allowed only by permit from the
local fire district. If a burn pit is proposed the location and mitigation shall be shown on the grading plan and documented
by the soils engineer.
11. Twenty-four (24) hours prior to starting any of the work covered by the above plans and after approval thereof, the
developer shall make arrangements with the Construction Inspection Office to provide for inspection of the work, sufficient
in the opinion of the City Engineer, to assure compliance with the plans and specifications as approved.
12. The City Engineer or their duly authorized representative shall make all necessary inspections of City infrastructure, escrow
items or infrastructure located on the approved plans.
13. All installations and construction shall conform to the approved engineering drawings. However, if the developer chooses to
make minor modifications in design and/or specifications during construction, he/she shall make such changes at his/her
own risk, without any assurance that the City Engineer will approve the completed installation or construction. It shall be
the responsibility of the developer to notify the City Engineer of any changes from the approved drawings. The developer
may be required to correct the installed improvements so as to conform to the approved engineering drawings. The
developer may request a letter from the Construction Inspection Division regarding any field changes approved by the City
inspector.
14. City approval of the construction site plans does not mean that any building can be constructed on the lots without
meeting the building setbacks as required by the zoning code.

Grading Notes

- 1. Developer must supply City Construction Inspectors with an Engineer's soil reports prior to and during site grading. The soil
report will be required to contain the following information on soil test curves (Proctor reports) for projects within the City:
1.1. Maximum dry density
1.2. Optimum moisture content
1.3. Maximum and minimum allowable moisture content
1.4. Curve must be plotted to show density from a minimum of 90% Compaction and above as determined by the "Modified
AASHTO T-180 Compaction Test" (A.S.T.M.-D-1157) or from a minimum of 95% as determined by the "Standard Proctor
Test" AASHTO T-99, Method C" (A.S.T.M.-D-698). Proctor type must be designated on document.
1.5. Curve must have at least 5 density points with moisture content and sample locations listed on document
1.6. Specific gravity
1.7. Natural moisture content
1.8. Liquid limit
1.9. Plastic limit
Be advised that if this information is not provided to the City's Construction Inspector the City will not allow grading or
construction activities to proceed on any project site.
2. All fill placed in areas other than proposed storm sewers, sanitary sewers, proposed roads, and paved areas shall be
compacted from the bottom of the fill up in 8" lifts and compacted to 90% maximum density as determined by Modified
AASHTO T-180 compaction test or 95% of maximum density as determined by the Standard Proctor Test AASHTO T-99.
Ensure the moisture content of the soil in fill areas corresponds to the compactive effort as defined by the Standard or
Modified Proctor Test. Optimum moisture content shall be determined using the same test that was used for compaction. Soil
compaction curves shall be submitted to the City of O'Fallon prior to the placement of fill.
3. The surface of the fill shall be finished so it will not impound water. If at the end of a days work it would appear that there
may be rain prior to the next working day, the surface shall be finished smooth. If the surface has been finished smooth for
any reason, it shall be scarified before proceeding with the placement of succeeding lifts. Fill shall not be placed on frozen
ground, nor shall filling operations continue when the temperature is such as to permit the layer under placement to freeze.
4. All sediment and detention basins are to be constructed during the initial phase of the grading operation or in accordance
with the approved SWPPP.
5. When grading operations are complete or suspended for more than 14 days, permanent grass must be established at
sufficient density to provide erosion control on site. Between permanent grass seeding periods, temporary cover shall be
provided according to Missouri Department of Natural Resources Protecting Water Quality - a field guide to erosion, sediment
and stormwater best management practices for development sites in Missouri and Kansas. All finished grades (areas not to
be disturbed by improvements) in excess of 20% slopes (5:1) shall be mulched and tacked at a rate of 100 pounds per 1000
square feet when seeded.
6. No slopes shall exceed 3 (horizontal): 1 (vertical) unless otherwise approved by the soils report and specifically located on
the plans and approved by the City Engineer.
7. All low places whether on site or off shall be graded to provide drainage with temporary ditches.
8. Any existing wells and/or springs which may exist on the property must be sealed in a manner acceptable to the City of
O'Fallon Construction Inspection Department and following Missouri Department of Natural Resources standards and
specifications.
9. (INTENTIONALLY OMITTED)
10. All trench back fills under paved areas shall be granular back fill, and compacted mechanically. All other trench back fills may
be earth material (free of large clods, or stones) and compacted using either mechanical tamping or water jetting. Granular
material and earth material associated with new construction outside of pavements may be jetted, taking care to avoid
damage to newly laid sewers. The jetting shall be performed with a probe route on not greater than 7.5 foot centers with the
jetting probe centered over and parallel with the direction of the pipe. Trench widths greater than 10 feet will require multiple
probes every 7.5 foot centers.
10.1. Depth. Trench back fills less than 8 feet deep shall be probed to a depth extending half the depth of the trench back
fill, but not less than 3 feet. Trench back fill greater than 8 feet in depth shall be probed to half the depth of the
trench back fill but not greater than 8 feet.
10.2. Equipment. The jetting probe shall be a metal pipe with an interior diameter of 1.5 to 2 inches.
10.3. Method. Jetting shall be performed from the lowest surface topographic point and proceed toward the highest point, and
from the bottom of the trench back fill toward the surface. The flooding of each jetting probe shall be started slowly
allowing slow saturation of the soil. Water is not allowed to flow away from the trench without first saturating the trench.
10.4. Surface Bridging. The contractor shall identify the locations of the surface bridging (the tendency for the upper surface to
crust and arch over the trench rather than collapse and consolidate during the jetting process). The contractor shall break
down the bridged areas using an appropriate method such as wheels or bucket of a backhoe. When surface crust is
collapsed, the void shall be back filled with the same material used as trench back fill and re-jetted. Compaction of the
materials within the sunken/jetted area shall be compacted such that no further surface subsidence occurs.
11. Site grading.
11.1. Within City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted per the
approved compaction requirements. One (1) compaction test will be performed every two hundred fifty (250) feet along
the centerline for each lift.
11.2. Outside of City right-of-way. Material is to be placed in eight (8) inch to twelve (12) inch loose lifts and compacted
per the approved compaction requirements. One (1) compaction test will be performed at two (2) foot vertical intervals
and approximately every one thousand (1,000) cubic yards.
12. Access to the site from any other location other than the proposed construction entrance is strictly prohibited!

Erosion Control Notes

- 1. The Permittee shall assume complete responsibility for controlling all siltation and erosion of the project area. The Permittee
shall use whatever means necessary to control erosion and siltation including, but not limited to, staked straw bales and/or
siltation fabric fences (possible methods of control are detailed in the plan). Control shall commence with the clearing
operations and be maintained throughout the project until acceptance of the work by City of O'Fallon and as needed by
MoDOT. The Permittee's responsibilities include all design and implementation as required to prevent erosion and the depositing
of silt. The City of O'Fallon and as required by MoDOT may at their option direct the Permittee in his methods as deemed fit
to protect property and improvements. Any depositing of silt or mud on new or existing pavement shall be removed
immediately. Any depositing of silts or mud in new or existing storm sewers and/or swales shall be removed after each rain
and affected areas cleaned to the satisfaction of the City of O'Fallon and as required by MoDOT."
2. All erosion control systems are to be inspected and corrected weekly, especially within 48 hours of any rain storm resulting in
one-quarter inch of rain or more. Any silt or debris leaving the site and affecting public right of way or storm water
drainage facilities shall be cleaned up within 24 hours after the end of the storm.
3. Erosion control devices (silt fence, sediment basin, etc.) shall be in accordance with Missouri Department of Natural Resources
Protecting Water Quality - a field guide to erosion, sediment and stormwater best management practices for development
sites in Missouri and Kansas.
4. This development is required to provide long term post construction BMP's such as; low impact design, source control and
treatment controls that protects water quality and controls runoff to maximum extent practical in compliance with Phase II
Illicit Storm Water Discharge Guidelines. (Ord. 5082, section 405.245)
5. Graded areas shall be seeded and mulched (strawed) within 14 days of stopping land disturbance activities. Unless it can be
shown to the City Engineer that weather conditions are not favorable, vegetative growth is to be established within 6 weeks of
stopping grading work on the project. The vegetative growth established shall be sufficient to prevent erosion and the standard
shall be as required by EPA and DNR. (70% coverage per square foot) Ord. 6496, Section 405.095

Sanitary Sewer Notes

- 1. All sanitary sewer installation is to be in accordance with M.S.D. standards and specifications except as modified by the City
of O'Fallon Ordinances.
2. Brick shall not be used in the construction of sanitary sewer structures. Pre cast concrete structures are to be used unless
otherwise approved by the City of O'Fallon.
3. Connections at all sanitary structures are to be made with A-Lock joint or equal
4. All sanitary laterals shall be a minimum of 4" residential, 6" commercial diameter pipe.
5. All sanitary mains shall be a minimum of 8" diameter pipe.
6. All sanitary sewer line with a slope greater than 20% will require concrete cradle or concrete collar of same pipe joint.
Sanitary line with a slope greater than 50% will require a special approved design as shown on sheet.
7. All manholes built within the 100 year flood plain must have (4) type watertight manhole covers.
8. All sanitary sewer mains must have a minimum 42" cover.
9. When sanitary mains cross over streets, the sanitary main shall be ductile iron pipe for 10 feet on each side of the
crossing.
10. Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary sewer.
Add concrete cradle to sanitary storm sewer and encase flexible storm sewer when it is more than 18 inches above
sanitary line. Show on profile sheet.
11. The sanitary sewers should run diagonally through the side yards to minimize any additional utility easements required.
12. All sanitary sewer structures shall be waterproofed on the exterior in accordance to Missouri DNR specifications 10CSR-8.120
(7)(C).
13. All sanitary sewer pipe shall be SDR35 or equal. All sanitary sewer laterals shall be Schedule 40.
14. All sanitary sewer manholes and pipes will be tested to the following specifications. ASTM C1244, Standard testing method for
Concrete Sewer Manhole by Negative Air Pressure (Vacuum), Latest revision F1417, Standard testing method for
Installation Acceptance of Plastic Gravity Sewer Lines Using Low Pressure Air, Latest revision.
15. Add 1" minus rock back fill to all sanitary sewer and all other utilities that lie within the 1:1 shear plane of the road.

Storm Sewer Notes

- 1. All Storm Sewer installation is to be in accordance with M.S.D. standards and specifications except as modified by the City of
O'Fallon ordinances.
2. Brick shall not be used in the construction of storm sewer structures. Pre cast concrete structures are to be used unless
otherwise approved by the City of O'Fallon.
3. A 5/8" trash bar shall be installed horizontally in the center of the opening(s) in all curb inlets and area inlets.
4. (INTENTIONALLY OMITTED)
5. Encase with concrete both sanitary and storm sewer at crossing when storm sewer is within 18 inches above sanitary
sewer. Add concrete cradle to only RCP storm sewer and encase flexible storm sewer when it is more than 18 inches
above sanitary line. Show on profile sheet.
6. The storm sewers should run diagonally through the side yards to minimize any additional utility easements required.
7. All concrete pipes will be installed with O-ring rubber type gaskets.
8. Connections at all storm structures are to be made with A-lock joint or equal.
9. Pre cast concrete inlet covers are not to be used.
10. The swale in the detention basins shall have a minimum 2% longitudinal slope and be lined with a permanent erosion control
blanket that will allow infiltration of storm water.
11. All structures and flored end sections must be concrete. H.D.P.E. pipe will not be allowed for detention basin outflows, final
pipe run to detention basins, creek discharge or other approved means.
12. (INTENTIONALLY OMITTED)
13. Rip rap shown at flored and sections will be evaluated in the field by the Engineer, Contractor, and City inspectors after
installation for effectiveness and field modified, if necessary to reduce erosion on and off site.
14. Add 1" minus rock back fill to all storm sewer that lie within the 1:1 shear plane of the road.
15. (INTENTIONALLY OMITTED)

Flood plain Information

- 1. Refer to Section 415 for Floodplain Development Information

Retaining Walls: Terraced and Vertical

- 1. A permit is required for all retaining walls that are 48 inches or taller in height, measured from the top of the footing to
the top of the wall or for walls that support a surcharge load or that alters the channelized drainage of any lot or drainage
area.
2. Retaining walls will not be allowed in public right-of-way without written approval from the City Engineer.
3. Any retaining wall more than thirty (30) inches tall which supports a walking surface that is within two (2) feet of the wall
will require a guard on the retaining wall.
4. Retaining walls that alter the channelized drainage of any lot or drainage area shall not be constructed without prior approval
and permitting from the City of O'Fallon Engineering Department regardless of the height of the wall.
5. See section 405.275 of the City code for additional design requirements.

AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

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BASIN.
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• LIGHT STANDARDS

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BAX ENGINEERING COMPANY, INC.
MARK E. COLLINS
MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173



Water Notes

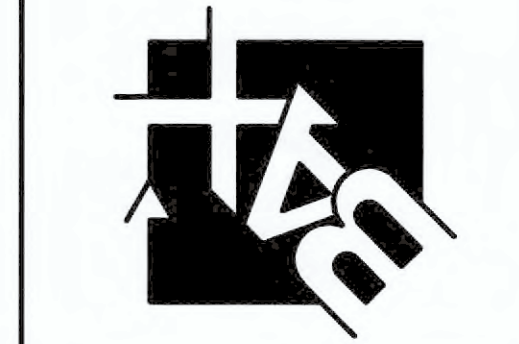
- 1. Fire hydrants shall be a maximum of 600' apart. Local fire district approval is required.
2. Coordinate with the water company on the location of water meters. For meters in the City's district, meters shall be in the
right-of-way, otherwise an access easement from the right-of-way shall be provided.
3. All water main must have a minimum of 42" of cover. (City water mains)
4. Provide water valves to isolate the system.
5. All water mains shall be class 200 SDR 21 or equal with locator/tracer wires
6. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over
exposed facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished
surface for concrete pavement. There will be a plastic membrane placed between the rock base and the CLSM to prevent the
material from bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psd concrete
mix.
7. DISINFECTING: Disinfecting shall be accomplished by placing sufficient hypochlorite granule (HTH) in each section of pipe to
achieve a chlorine residual in the pipeline, upon initial filling, of 50 mg/L (PPM). HT tablets will not be allowed. Following
completion of the pipeline, it shall be slowly filled with water and a sample will be taken immediately and the chlorine
residual must be 50 mg/L or greater. The solution shall be allowed to stand for 24 hours and a sample shall then be
taken. The chlorine residual after 24 hours shall be 30 mg/L or greater. If the piping shows insufficient chlorine residuals in
either test, the piping shall be re-chlorinated by the injector of hypochlorite solution until satisfactory results are achieved.
All disinfecting shall be done by the contractor. Only the testing laboratory determine the chlorine residual will be done by the City.
8. PRESSURE TESTING: Immediately following disinfection, the piping shall be pumped to a pressure (at the HIGHEST point in the
project) of 150 psi or higher when the test pressure is higher than 150 PSI as determined by the City. In such cases,
the pressure shall be 20% greater than the test pressure. The City and two pressure tests shall be conducted. The first test shall be with the fire
hydrant auxiliary valve open and be to 50 PSI. The second test shall be with the fire hydrant auxiliary valve closed and be to
the higher pressure as directed by the City. All pumping equipment and pressure gauges shall be provided by the contractor.
After achieving the test pressure, the piping shall be left closed for a period of two (2) hours. At the end of this time the
pressure drop shall not exceed 2 psi. In addition, if the pressure appears, in judgment of the City's representative, to be
continuing to drop, the test shall be continued for another two (2) hours and if any further drops occur, the test shall be
considered a failure. If the pressure test fails, the contractor will be required to find and correct the source of the leakage.
If this requires draining of the pipeline, when the leakage is corrected, the pipeline must be re-disinfected and the pressure
tested again until satisfactory result are achieved. Any MDRN required dechlorination will be performed by the contractor.
9. All tops for valves, meters, and manholes are to be constructed to within 1 inch (0.08") of finish grade. Grading
around structure tops on slopes need to be accounted for.
10. BACTERIOLOGICAL TESTING: After satisfactory disinfection and pressure testing, a sample shall be taken by the contractor in
the presence of a City representative and submitted to a laboratory approved by the Missouri Department of Natural
Resources and the City for bacteriological analysis. After 24 hours, a second sample shall be taken in a like manner and
submitted for analysis. The two samples taken on consecutive days a minimum of 24 hours apart, must be found to be
"safe" by the testing laboratory, and copies of the test results must be supplied to the City. If the samples are not found to be
"safe" further flushing and/or disinfection as directed by the City shall be conducted by the contractor until "safe"
samples on two consecutive test days are achieved. Following successful bacteriological testing and a determination by the
City that the samples are "safe", the mains may be placed into service.

Roadway Notes

- 1. All paving (public and private) to be in accordance with St. Louis County Standards and Specifications except as modified by the City
of O'Fallon ordinances.
2. If the intersecting road does not have a curb, then the curb on the new entrance shall begin 10' from the edge of the existing
road.
3. Provide 6" of concrete over 5" of aggregate base rock or asphalt equivalent for minor residential streets per City Code 405.370.
3.1. Rock to meet the all the requirements of MoDOT type 5 rock with a tighter restriction on the fines being that no more than ten
percent (10%) fines shall pass a no. 200 sieve. (City Code 405.210.B.1) The gradation of this rock needs to be submitted to
the City for approval. Any deliveries made without the proper delivery ticket, including signature, will not be accepted. The delivery
ticket must list the project name or jobsite location. A separate certification sheet may be provided attached to the delivery
ticket with a signature of the company's quality control manager. The quality control certification must be current and dated
within 4 weeks of the delivery. (City Code 405.210.A.2.k)
4. Multi-use trail (when required) Shall have a minimum of 3" Type "C" Asphalt over 4" aggregate base per City requirements.
5. Type C (BP-1) Compaction requirements shall be 98% minimum density according to St. Louis Co. Standard Specifications.
6. Provide pavement striping at any point where the multi-use trail crosses existing or proposed pavement
7. All street stub-outs over 250' in length will require a temporary turnaround.
8. All sub grade in cut or fill will need to conform to the City of O'Fallon Compaction requirements
9. Material Testing And Frequency. Materials for construction shall be tested and inspected per the appropriate ASTM code or at the City
Engineer's discretion. The developer's engineer shall perform quality control guidelines, in accordance with St. Louis County
requirements 501.3.1.
10. Approval of Sub grade And Base (Sub base). The City Engineer or representative shall approve the sub grade before any base is
placed thereon. The sub grade shall be placed before concrete or surface course is placed. The sub grade and base shall be so
constructed that it will be uniform in density throughout.
11. In all fill areas in the roadways, soil tests shall be submitted and approved by the City Engineer for each foot of fill and at least
one (1) test and an average of one (1) test within every two hundred fifty (250) feet.
12. No traffic will be allowed on new concrete pavement until it has cured for seven (7) days and it reaches three thousand five hundred
(3,500) psi within 28 days.
12.1. Concrete pavements shall not be approved unless it reaches a strength of four thousand (4,000) psi. Cylinders/compressive
strength. One (1) set of four (5) cylinders within the first fifty (50) cubic yards and one (1) set per one hundred (100) cubic
yards thereafter. One (1) cylinder must be tested at seven (7) days, three (3) at twenty-eight (28) days, and one (1) held in
reserve.
13. Prior to placement of aggregate base material on sub grade and prior to placement of pavement on base material, the sub grade and
base must be proof-rolled with a fully loaded (ten (10) ton load) tandem truck or equivalent tire vehicle with one (1) pass
down each driving lane no faster than three (3) miles per hour. If soft spots are detected, or pumping, rutting or heaving occurs
greater than one (1) inch at the sub grade, the roadbed shall be considered unsatisfactory and the soil in these areas shall be
remediated to the depth indicated by the contractor's testing firm and approved by a representative of the City Engineer.
14. Sub grade and base beneath pavements shall be compacted to St. Louis County Highway Department specifications. The moisture
range shall be determined by the Standard or Modified Proctor Density Method AASHTO T-99 and within -2/+4 percentage points of
the optimum moisture content.
15. The entire width and length will conform to line, grade and cross section shown on the plans or as established by the engineer. If
any settling or washing occurs, or where hauling results in ruts or other objectionable irregularities, the contractor shall improve the
sub grade or base to the satisfaction of the City before the pavement is placed. Additional rolling or methods to verify compaction
shall be at the discretion of the City Engineer. Tolerance allowed on all lines, grades and cross sections shall be plus or minus
four-hundredths (+0.04) feet.
16. Utility Work Prior To Base Construction. No base course work may proceed on any street until all utility excavations (storm and
sanitary sewers, water, gas, electric, etc.) have been properly back filled with granular material, crushed stone or gravel mechanically
tamped in ten (10) inch lifts. Utilities installed after sub grade preparation shall be bored. Compaction requirements shall follow St.
Louis County standards.
17. Equipment calibration. The developer's contractors and subcontractors must have their equipment calibrated by the following minimum
standards.
17.1. Air meter--weekly.
17.2. Cylinder compression--annually by independent calibration service.
17.3. Batch scales--monthly.
17.4. Nuclear testing devices--every six (6) months.
17.5. Proctor equipment--every six (6) months.
17.6. Slump cone--monthly.
18. All permanent traffic control will be per M.U.T.C.D. or MoDOT standards. S1-1 from the M.U.T.C.D. manual will be used at all crosswalk
locations accompanied with either w16-9p or w16-7p signs.
19. All traffic signals, street signs, sign post, backs and bracket arms shall be painted black using Carboline Rust Bond Penetrating Sealer
SG and Carboline 133 HB paint (or equivalent as approved by City of O'Fallon and MoDOT)
20. If the excavations are made in the improved portion of the right-of-way, twelve inches of granular backfill will be placed over exposed
facilities and controlled low strength material (CLSM) aka flowable fill will fill the hole with eight inches of the finished surface for
concrete pavement. There will be a plastic membrane placed between the rock base and the CLSM to prevent the material from
bleeding into the rock base. The remaining eight inches will be restored by placing a 28 day, 4,000 psi concrete mix.

PROJECT TITLE:
AS-BUILT PLANS FOR
DYNAFLEX
8050 HAWK RIDGE TRAIL
O'FALLON, MISSOURI 63376

ENGINEERING
PLANNING
SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-0582
FAX 636-928-1718



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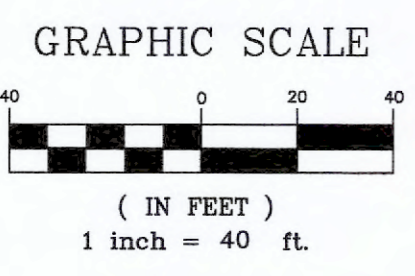
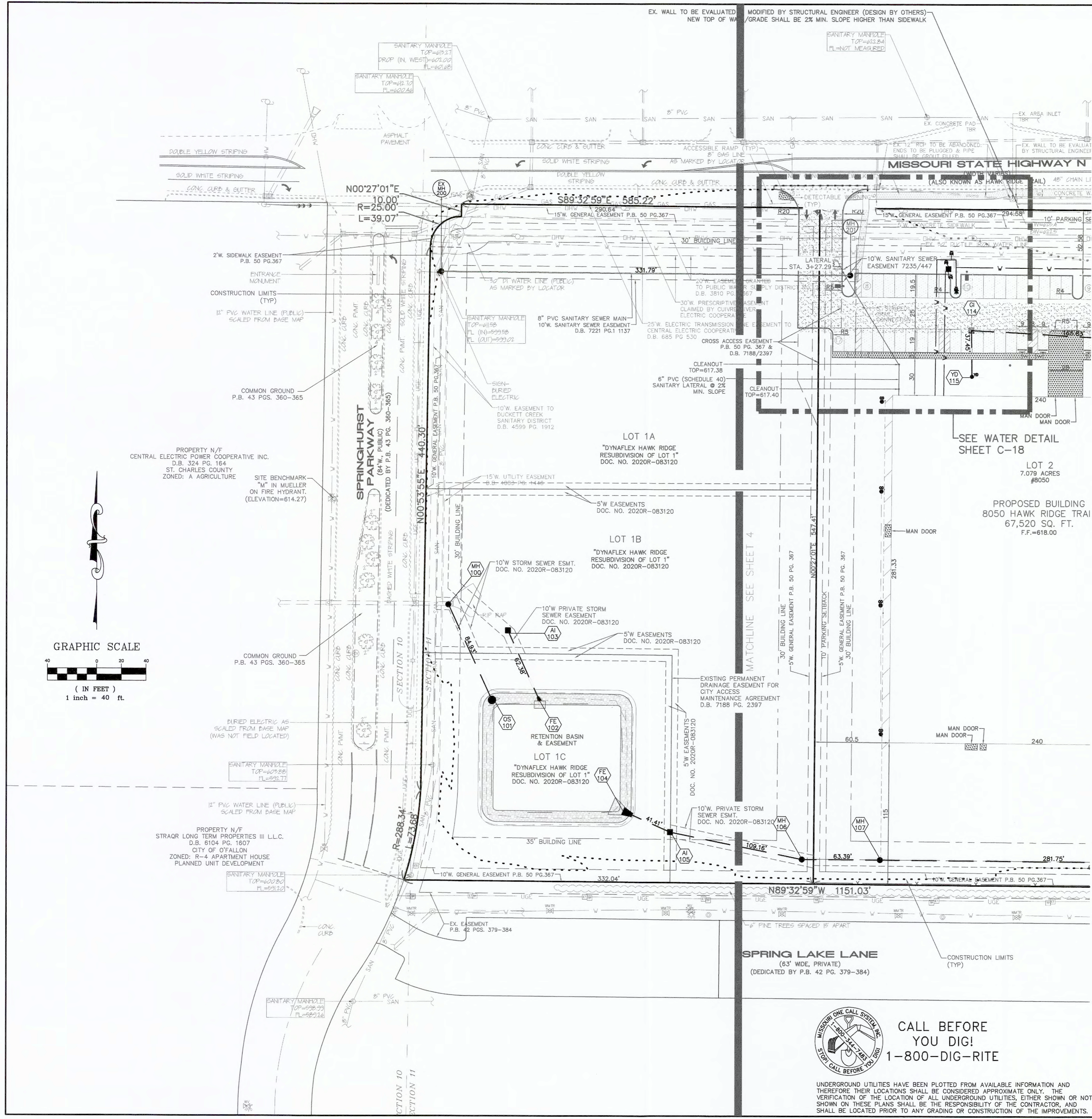
Table with 2 columns: REVISIONS, 07/15/21, CITY COMMENTS, REVS.

Developer / Owner:
Duke Property Management L.L.C.
10403 International Plaza
St. Ann, Missouri 63074
(314) 426-4020

P+Z No. #19-003530
Approval Date 11-07-19
City No. #

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COMMERCIAL NOTES



AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

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BAX ENGINEERING COMPANY, INC.
 MARK E. COLLINS
 MISSOURI PROFESSIONAL LAND SURVEYOR #206000173



DCSD NOTES:

1. EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
2. CONSTRUCTION OF SANITARY MAINS AND CONNECTION TO DCSD SANITARY MAINS REQUIRED DCSD INSPECTION CONTACT THE DCSD INSPECTION DEPARTMENT AT 636 441-1244 TO SCHEDULE INSPECTION. 48 HOUR ADVANCE IS REQUIRED.
3. DEVELOPMENT OF LOT 1 REQUIRES SUBMITTAL OF PLANS TO DCSD FOR REVIEW AND APPROVAL PRIOR TO CONNECTION. CONNECTION FEE WILL BE REQUIRED WHEN LOT 1 OR ANY PORTION OF LOT 1 DEVELOPS.

PROJECT TITLE:
 AS-BUILT PLANS FOR
 DYNAFLEX
 8050 HAWK RIDGE TRAIL
 OF FALLON, MISSOURI 63376



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07/15/21	CITY COMMENTS REVS.

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SITE PLAN

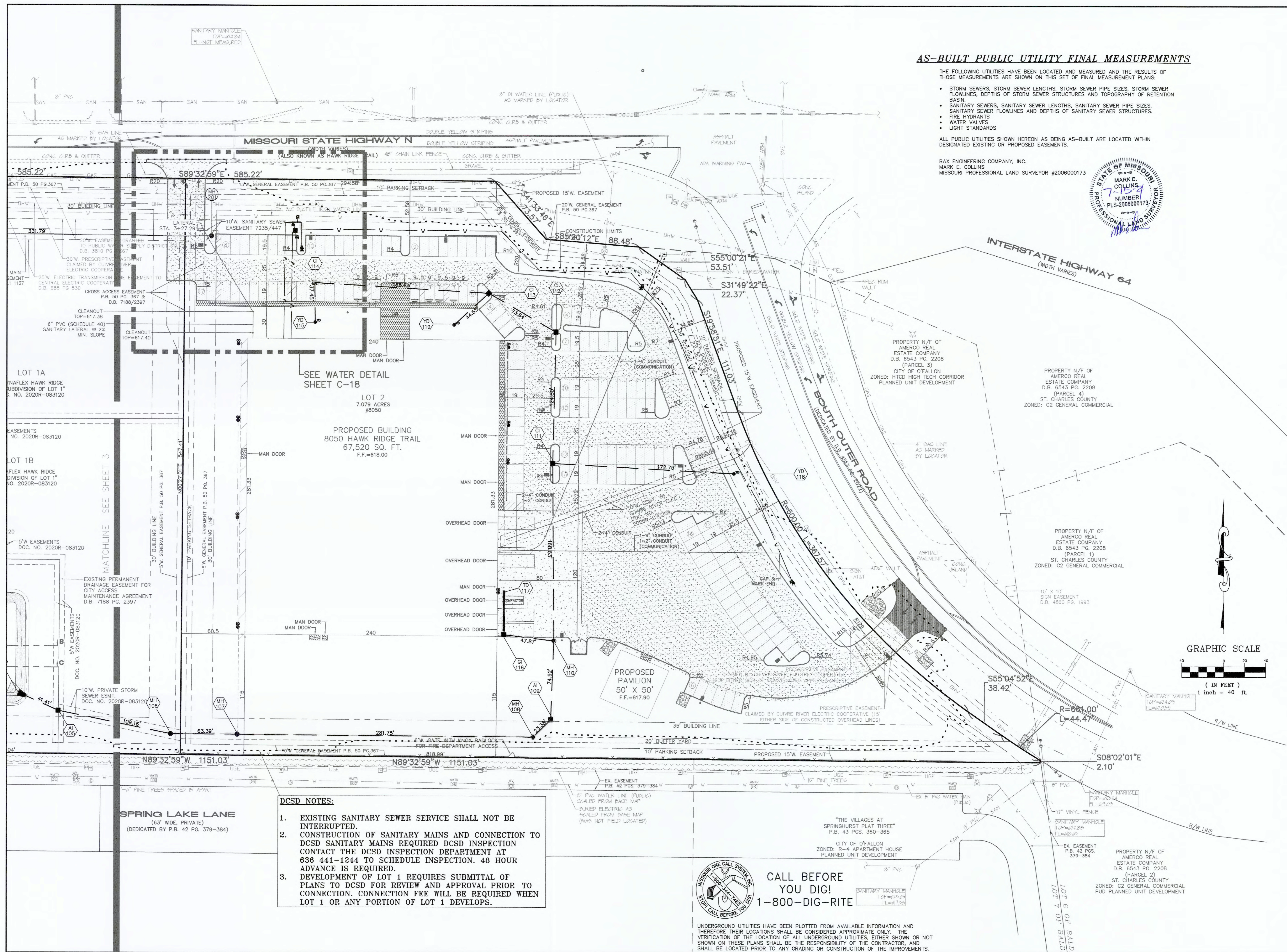
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UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.



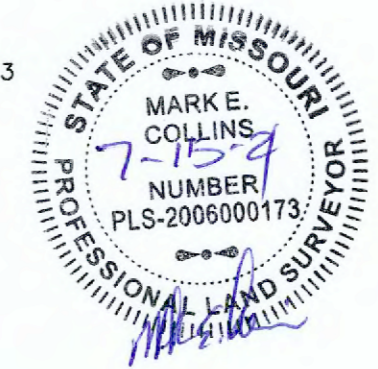
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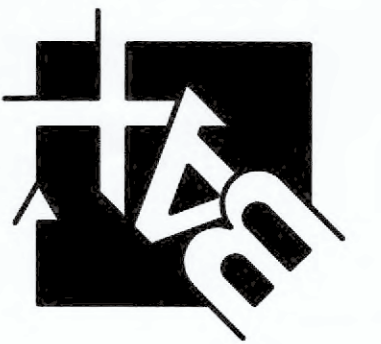
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BAX ENGINEERING COMPANY, INC.
MARK E. COLLINS
MISSOURI PROFESSIONAL LAND SURVEYOR #200600173



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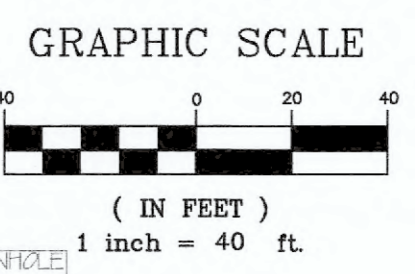
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St. Charles, MO 63301
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FAX 928-1718



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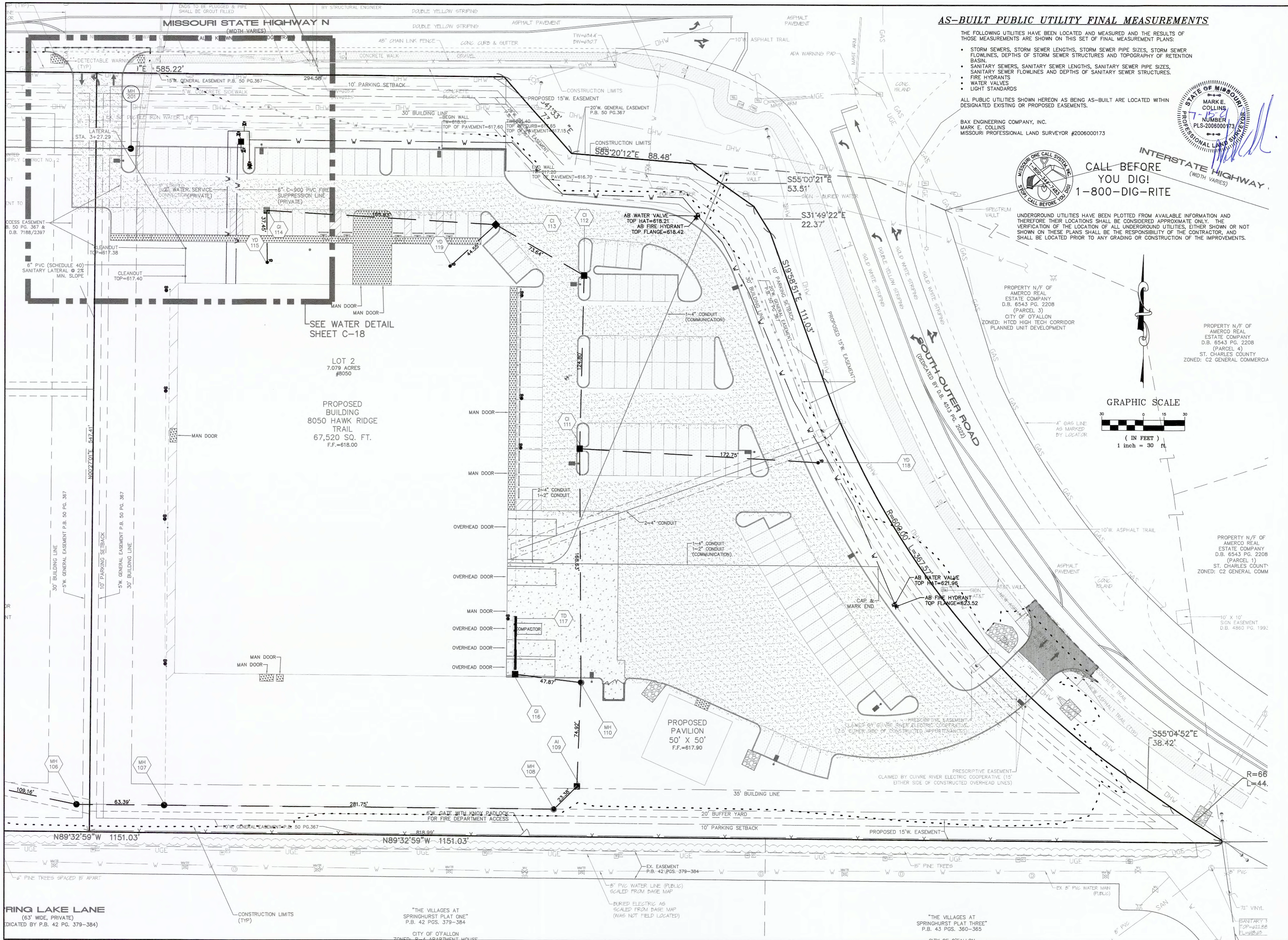
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SITE PLAN

Bax Project # 19-17667 Issue Date: 01/04/2021



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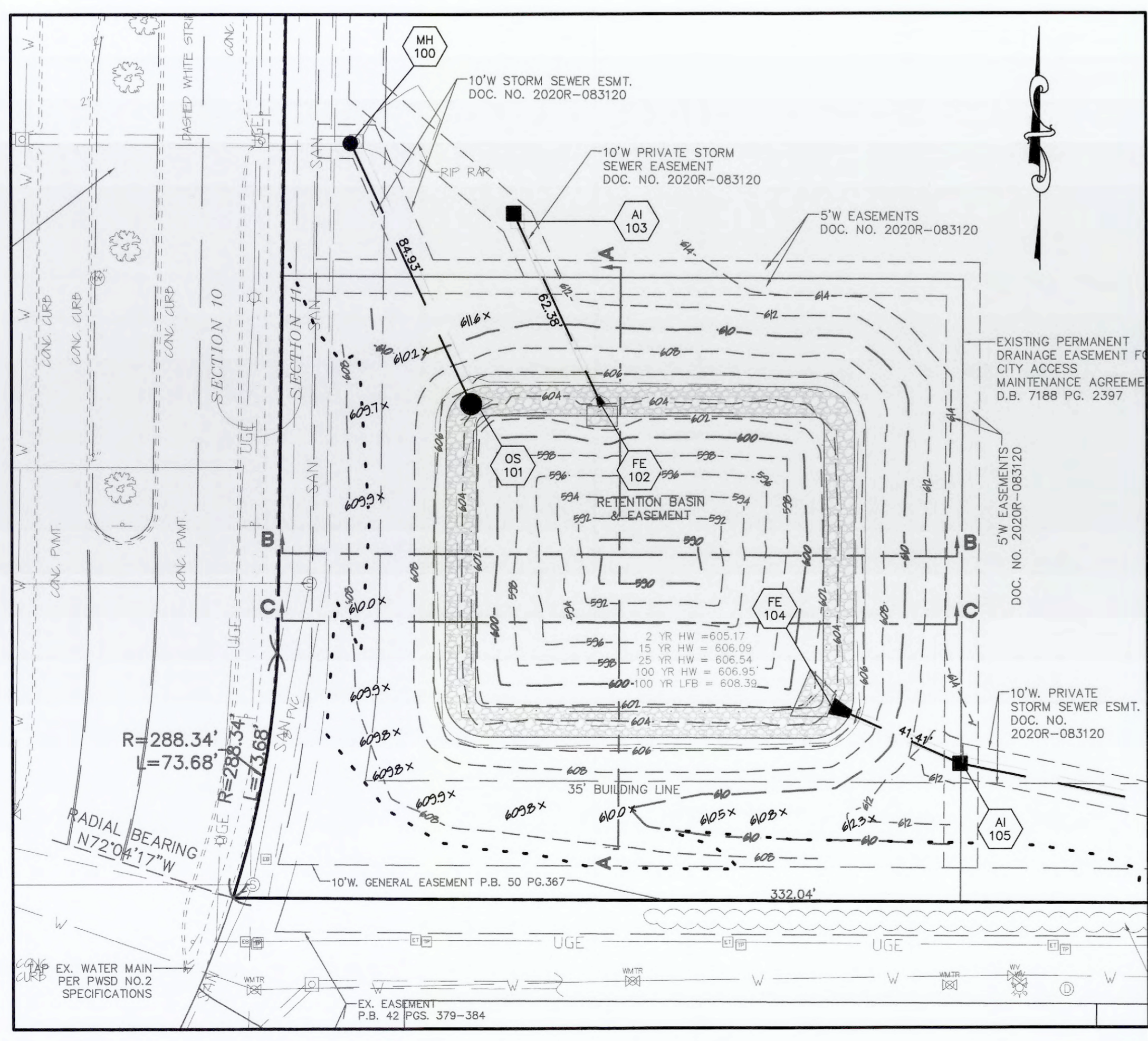
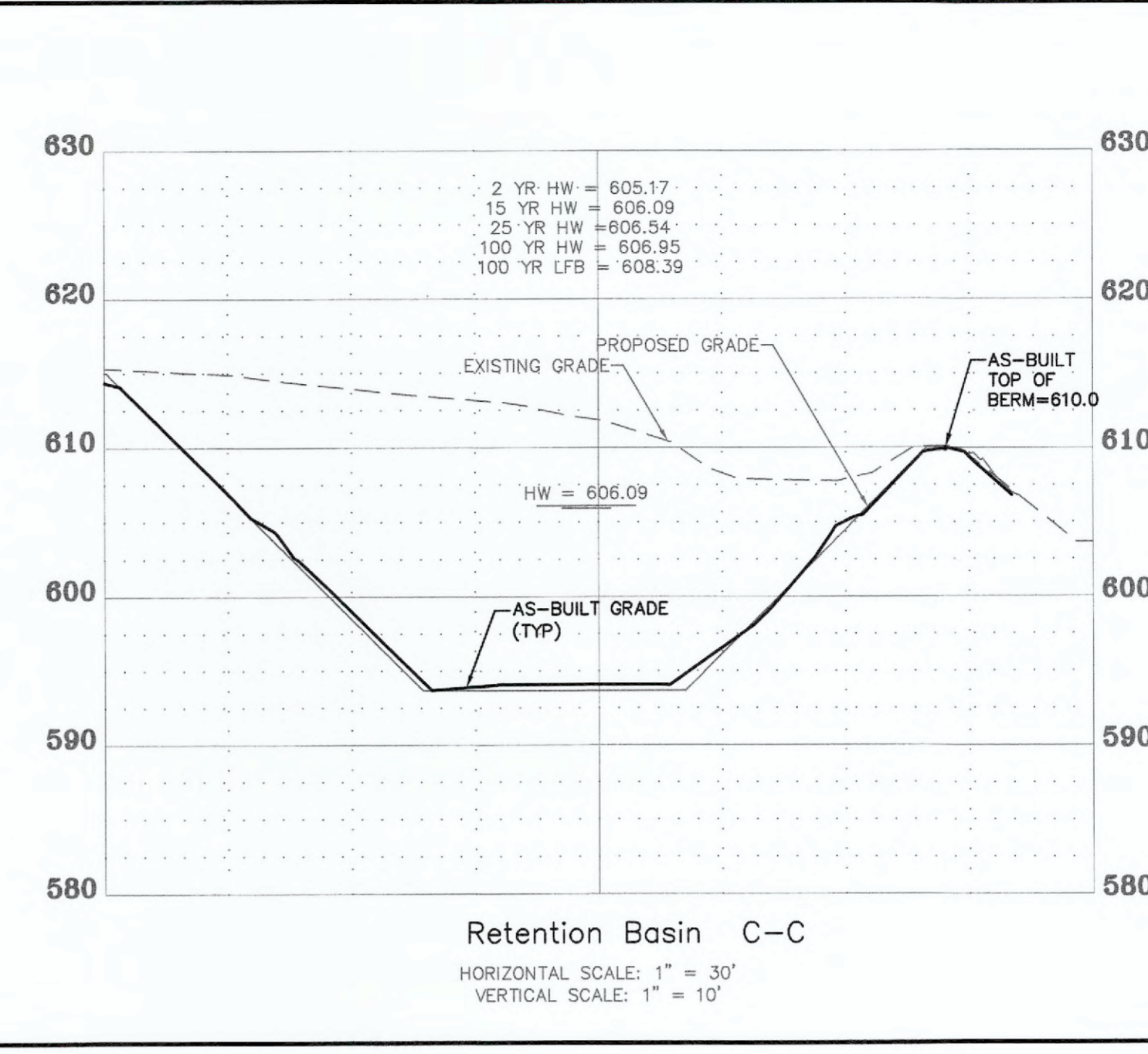
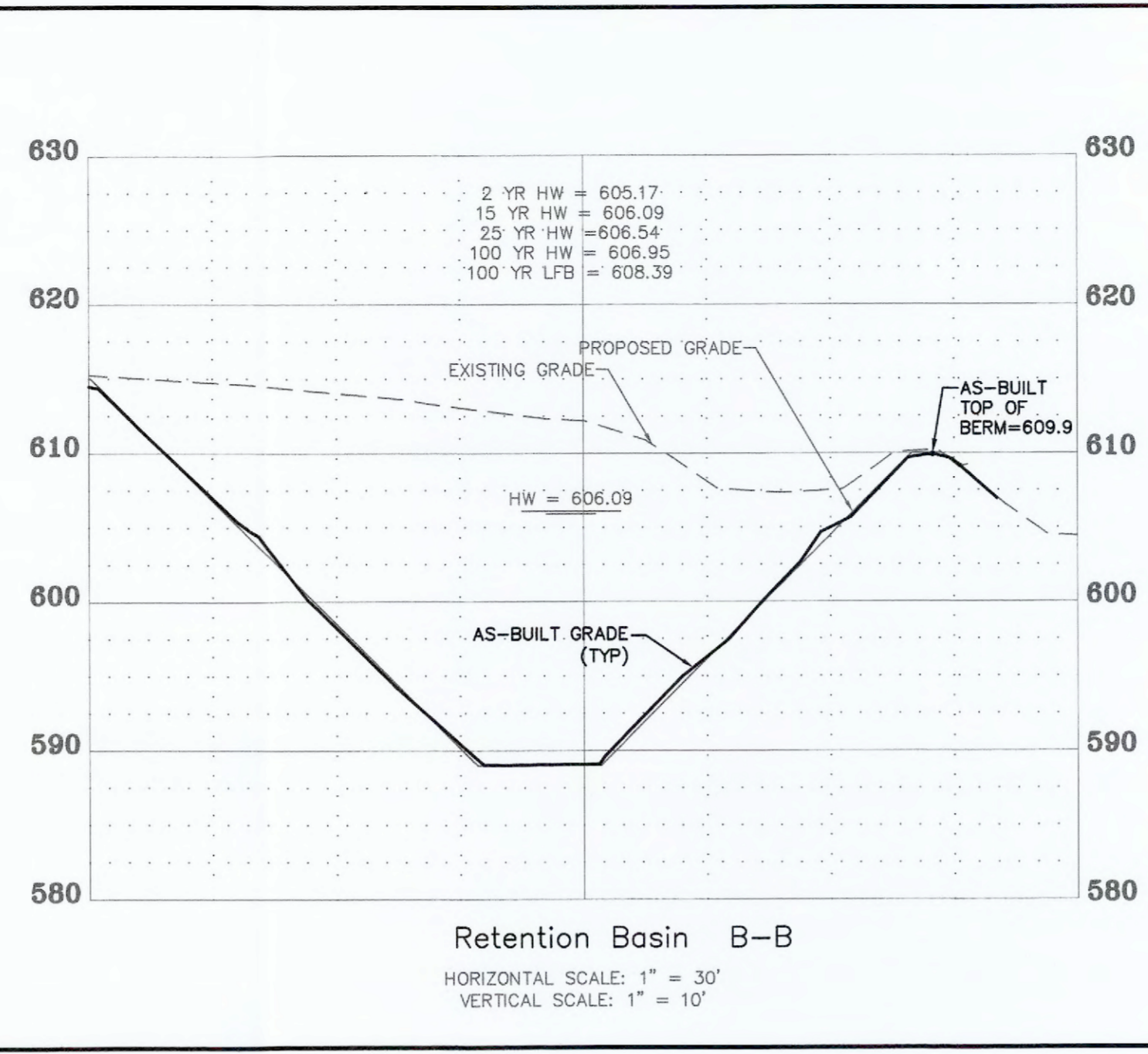
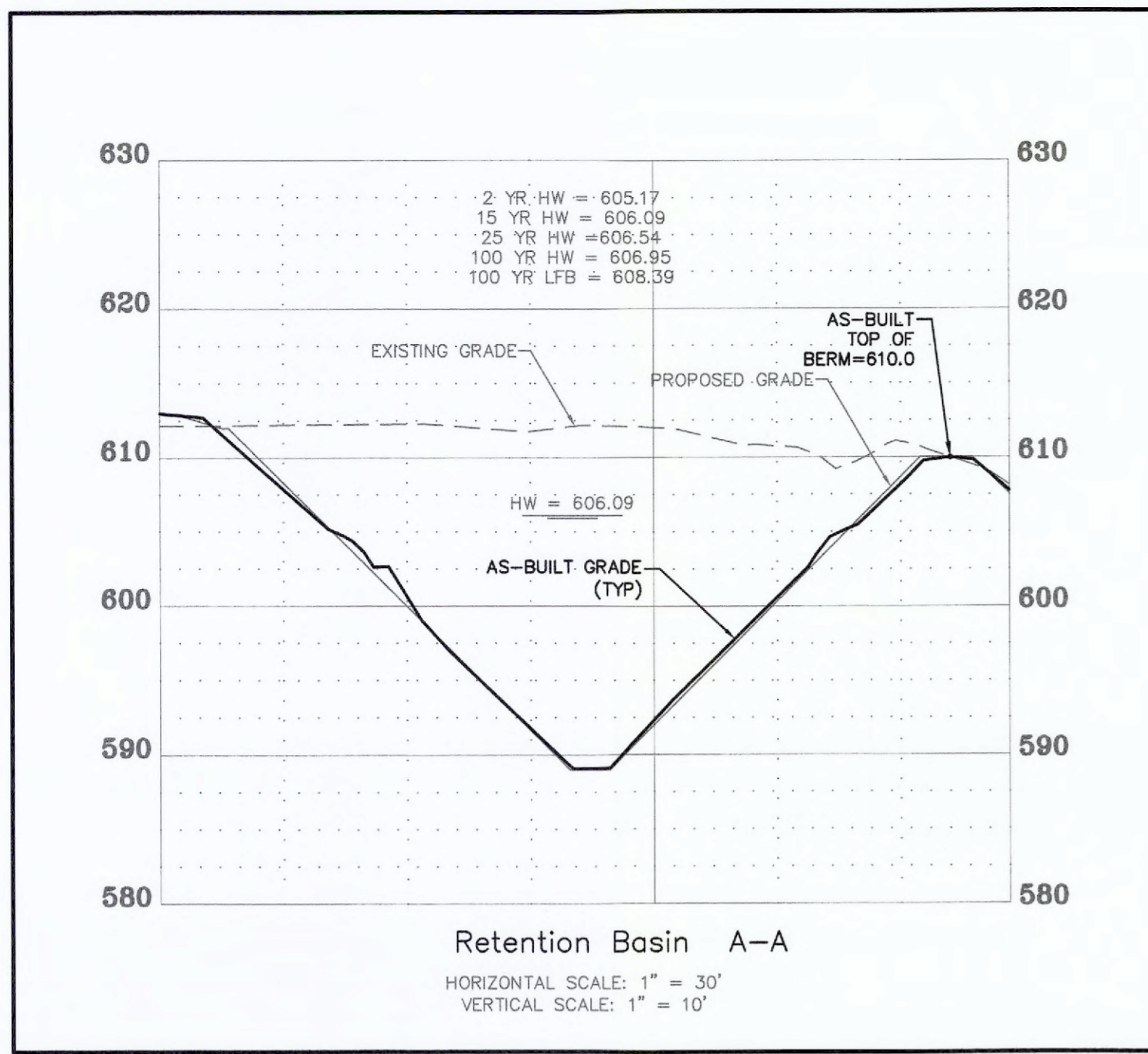
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UTILITY PLAN



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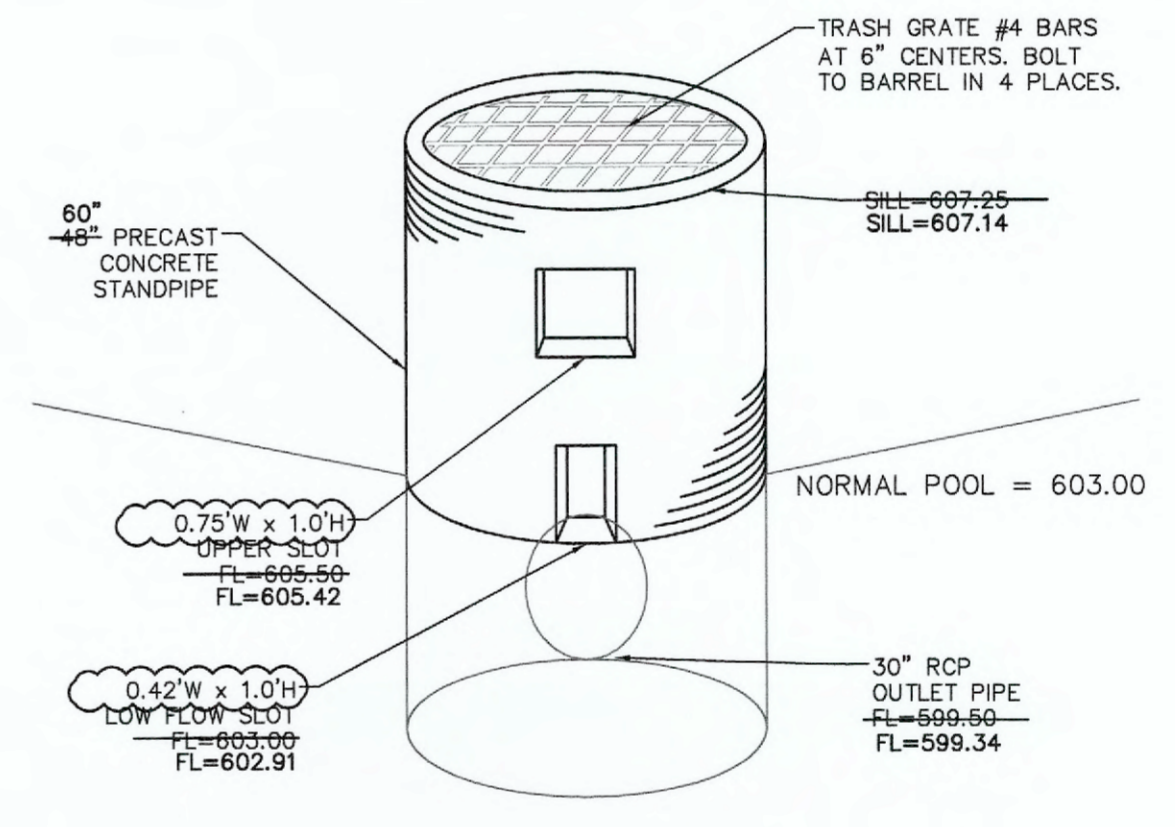
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 MARK E. COLLINS
 MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173

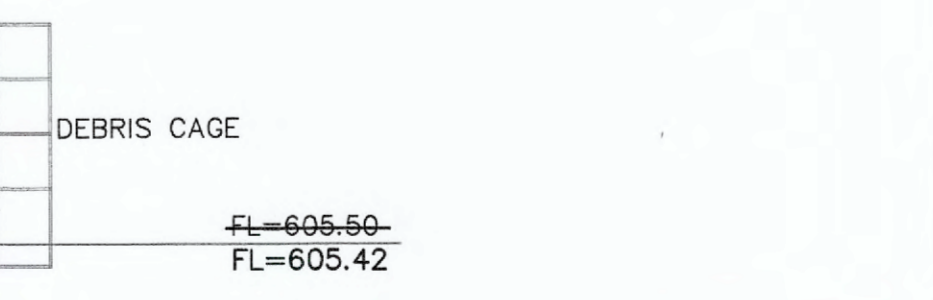


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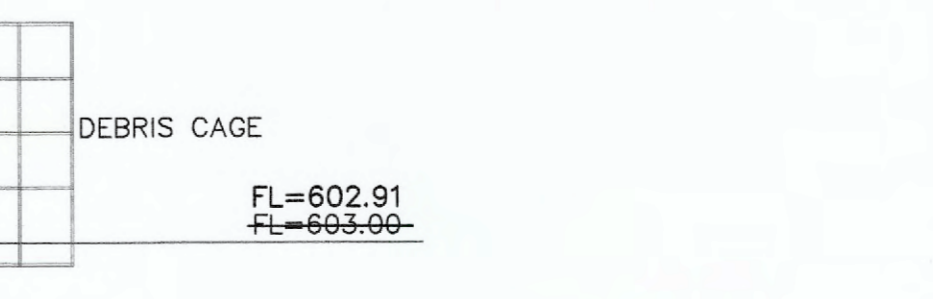


#3 BARS DRILLED AND GROUTED TO OUTFALL STRUCTURE FLOOR AND WALL. 3" MAXIMUM SPACING OF REBAR, CAGE TO EXTEND A MINIMUM OF 6" FROM FACE OF STRUCTURE.



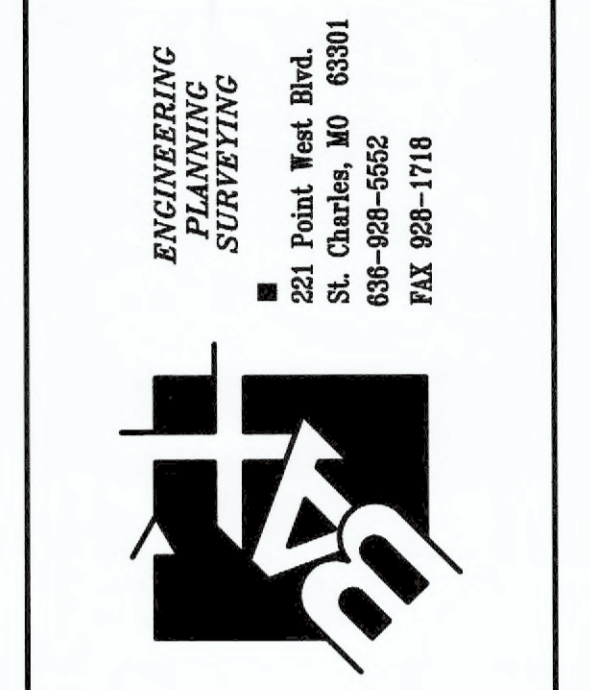
DEBRIS CAGE OS 101-UPPER SLOT

#3 BARS DRILLED AND GROUTED TO OUTFALL STRUCTURE FLOOR AND WALL. 3" MAXIMUM SPACING OF REBAR, CAGE TO EXTEND A MINIMUM OF 6" FROM FACE OF STRUCTURE.



DEBRIS CAGE OS 101-LOWER SLOT

PROJECT TITLE:
 AS-BUILT PLANS FOR
 DYNAFLEX
 8050 HAWK RIDGE TRAIL
 O'FALLON, MISSOURI 63376



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REVISIONS

DATE	CITY COMMENTS	REV.
07/15/21	CITY COMMENTS	REV.

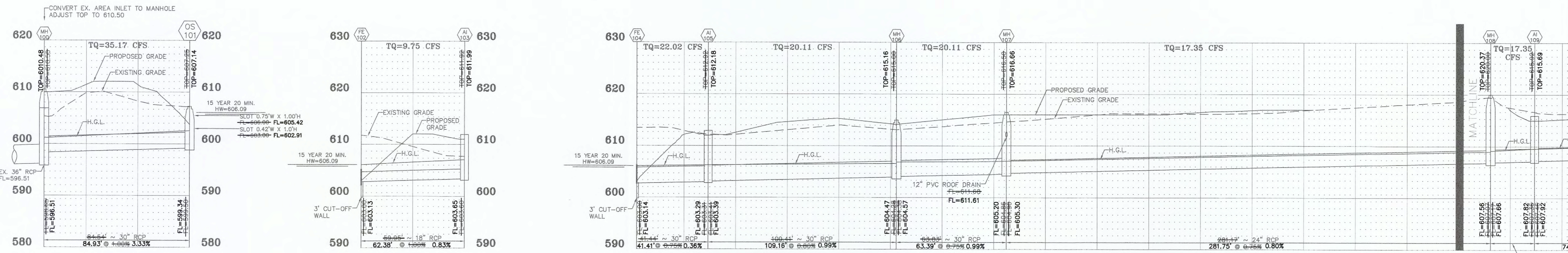
Developer / Owner:
 Duke Property Management L.L.C.
 10403 International Plaza
 St. Ann, Missouri 63074
 (314) 426-4020

RETENTION BASIN DETAILS

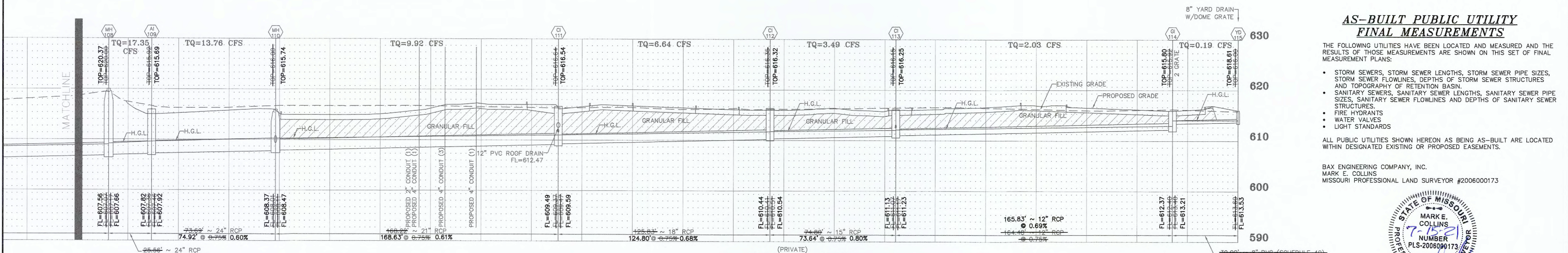
P+Z No. #19-003530
 Approval Date 11-07-19
 City No. #

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Bax Project # 19-17667 Issue Date: 07/04/2021



(PRIVATE)
Storm Sewer Profile
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'
 * STORM SEWERS MAY ALSO BE ADS N-12 OR EQUAL



(PRIVATE)
Storm Sewer Profile
 HORIZONTAL SCALE: 1" = 30'
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R-4990 and R-4999 Series

Heavy Duty Trench

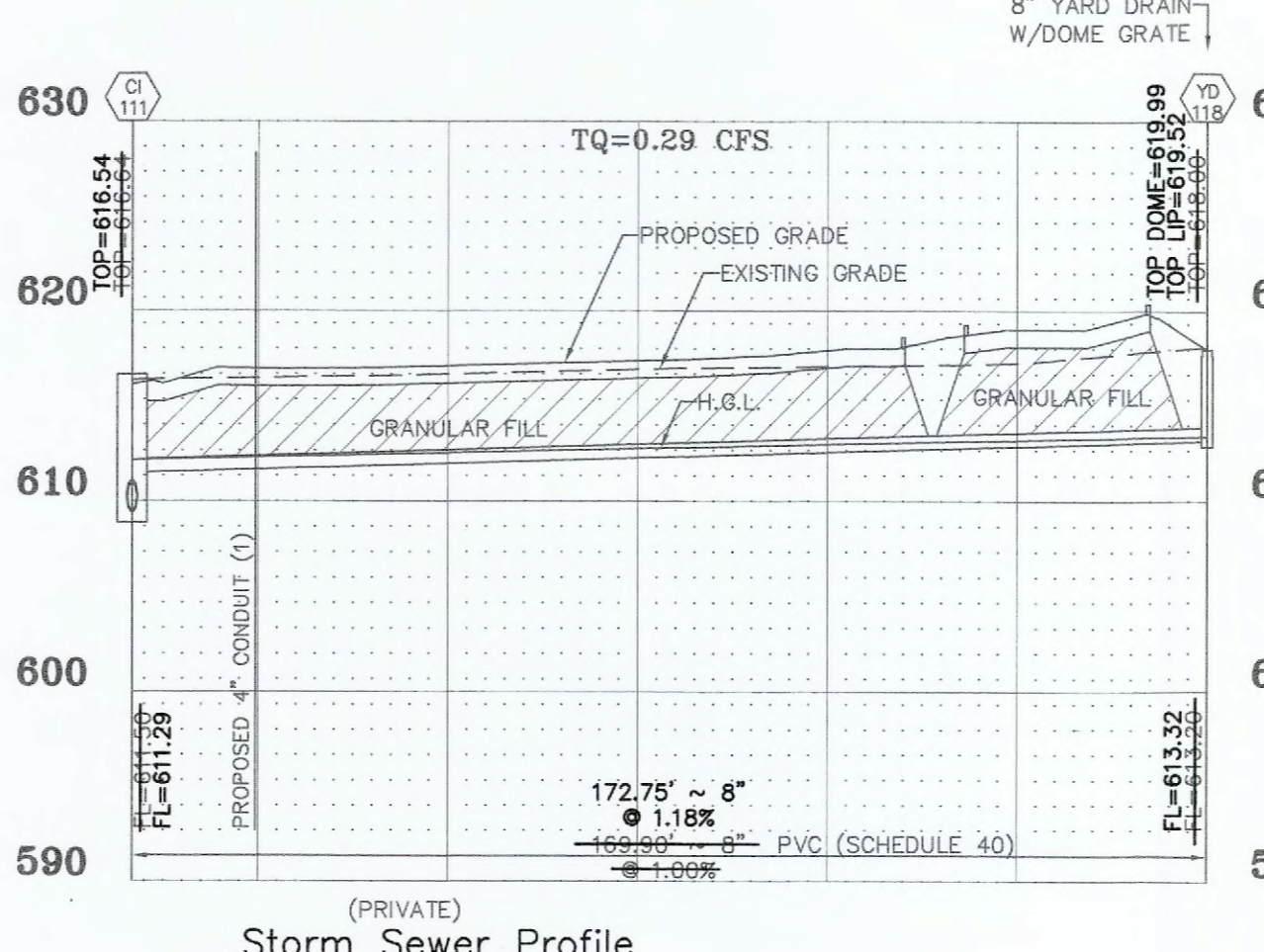
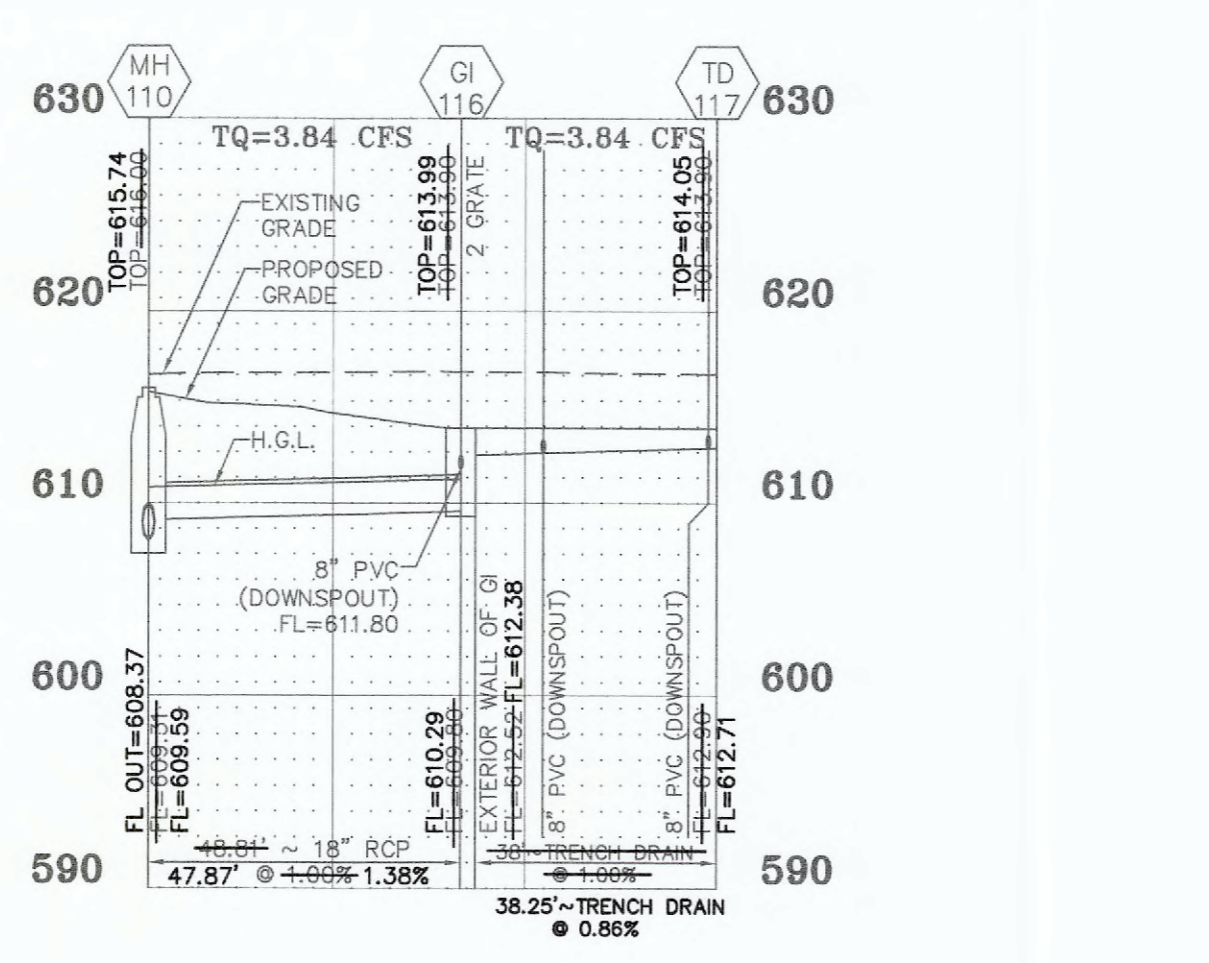
Materials: All frames and grates/lids are furnished standard in Gray Iron, Class 35-B for heavy-duty use. For extra heavy-duty use or superior durability requirements, see our [Light and Post Siting](#) Series and our [R-4993 & R-4994](#) Series.

General schematic shown may not apply to all designs. Bar and rib details, plate thicknesses, and section widths vary on different sizes and styles. If your project has design restrictions, contact your sales representative or product engineering.

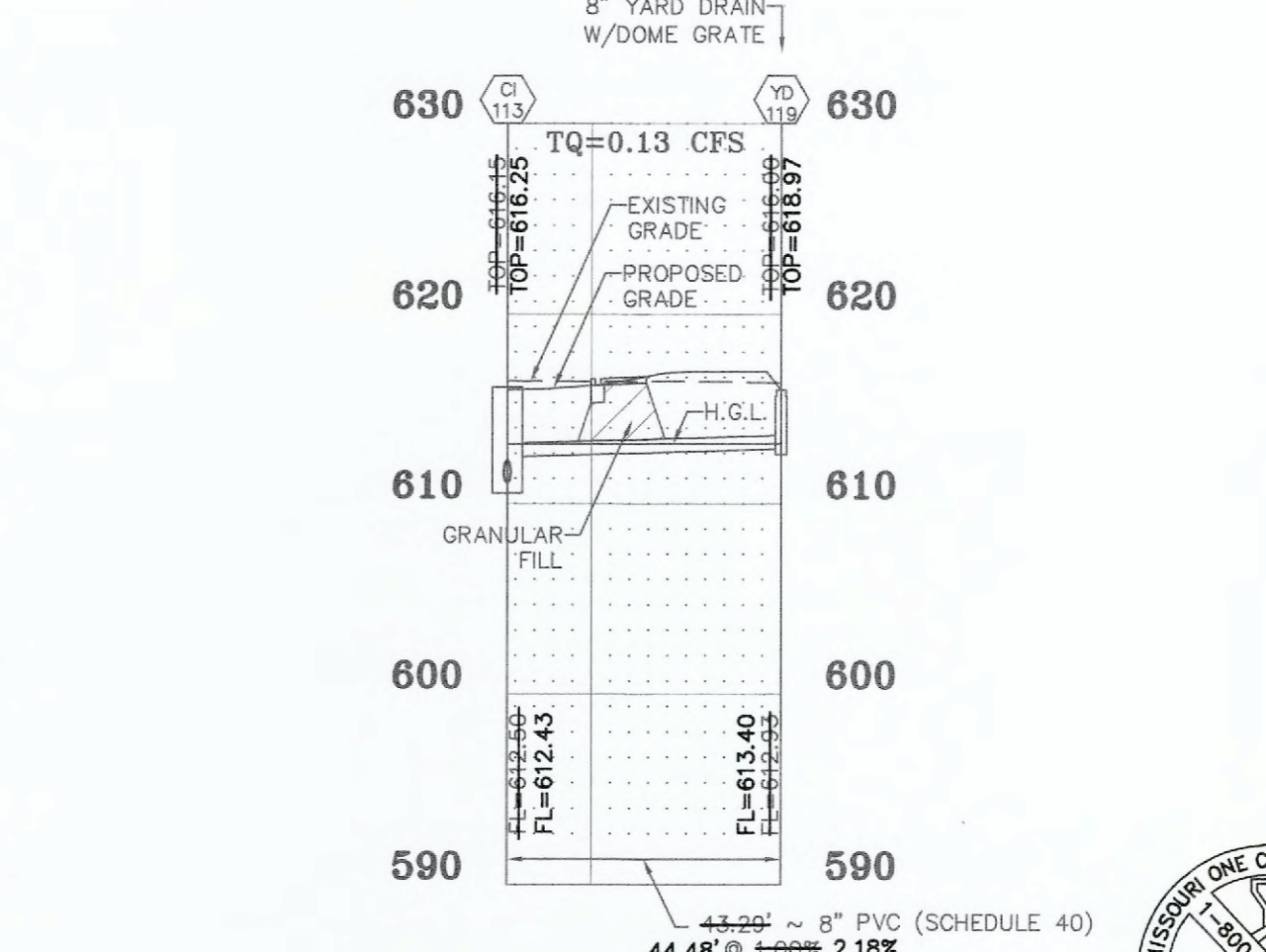
Illustrating Type C bolted trench. Bolted trench sections are furnished in 20' standard lengths. When bolted trench is furnished, they are shipped assembled. AT NO TIME should the units be disassembled during installation. When removing covers, do not mix or rotate 180 degrees as both holes may have alignment and improper bearing may occur.

Un-bolted Catalog No.	Bolted Catalog No.	A	B	C	Type A	Type C	Type D	Type E	Type P	Type Q
R-4990-AX	R-4999-AX	8	1-1/2	6	x	x	x	x	x	x
R-4990-BX	R-4999-BX	10	1-1/2	8	x	x	x	x	x	x
R-4990-CX	R-4999-CX	12	1-1/2	10	x	x	x	x	x	x
R-4990-DX	R-4999-DX	14	1-1/2	12	x	x	x	x	x	x
R-4990-EX	R-4999-EX	17	1-1/2	15	x	x	x	x	x	x
R-4990-FX	R-4999-FX	20	1-1/2	18	x	x	x	x	x	x

NEENAH HEAVY DUTY TRENCH DRAIN DETAIL
 NOT TO SCALE



(PRIVATE)
Storm Sewer Profile
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'
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MISSOURI ONE CALL SYSTEM
 1-800-444-7445
 STOP CALL BEFORE YOU DIG

CALL BEFORE YOU DIG!
 1-800-DIG-RITE

AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

- STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES, DEPTHS OF STORM SEWER STRUCTURES AND TOPOGRAPHY OF RETENTION BASIN.
- SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.
- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS

ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.

BAX ENGINEERING COMPANY, INC.
 MARK E. COLLINS
 MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173



PROJECT TITLE:
 AS-BUILT PLANS FOR
 DYNAFLEX
 8050 HAWK RIDGE TRAIL
 OF FALLON, MISSOURI 63376

ENGINEERING
 PLANNING
 SURVEYING

221 Point West Blvd.
 St. Charles, MO 63301
 636-426-5552
 FAX 636-426-1716

REVISIONS

DATE	REVISION
07/15/21	CITY COMMENTS REVS.

Developer / Owner:
 Duke Property Management L.L.C.
 10403 International Plaza
 St. Ann, Missouri 63074
 (314) 426-4020

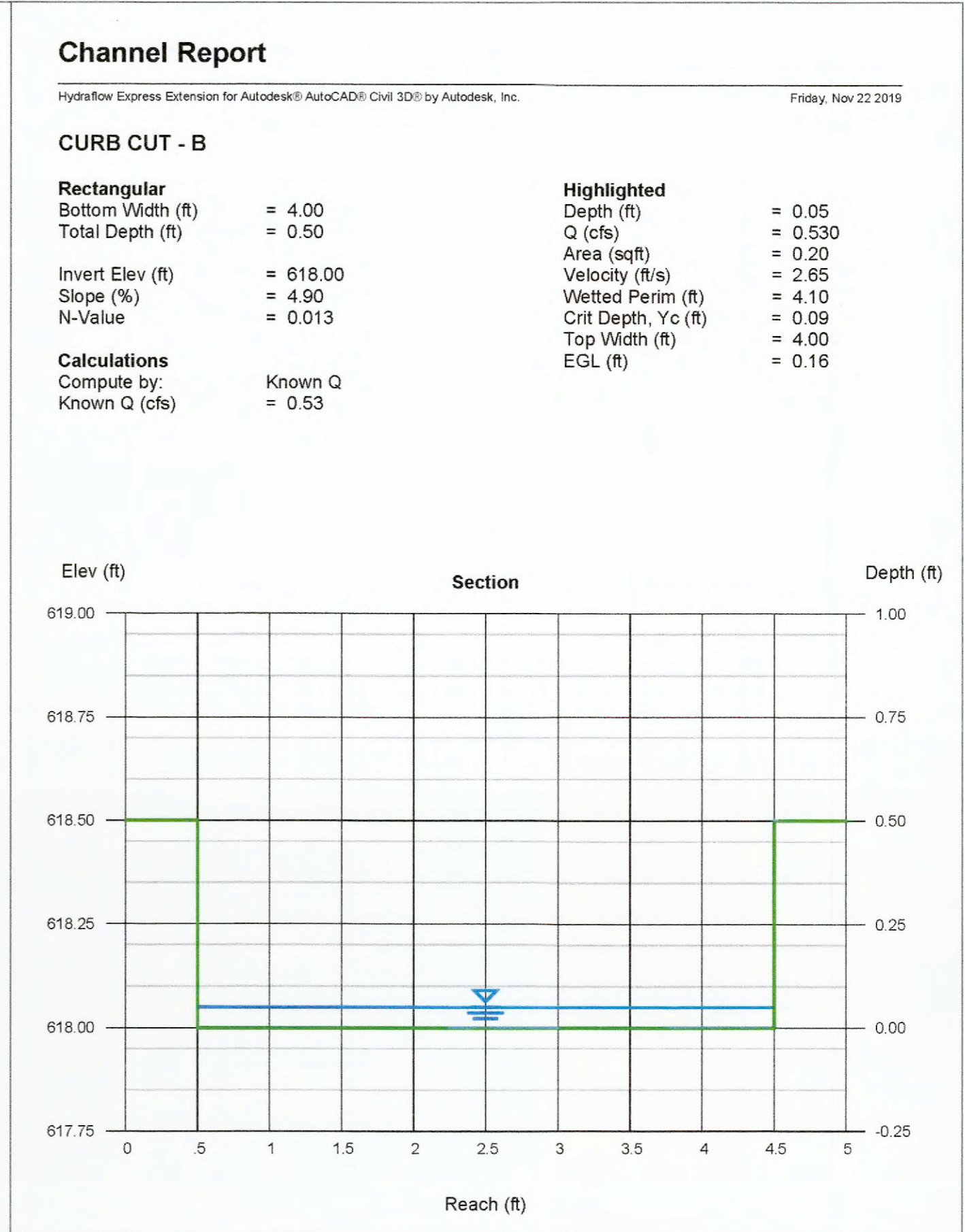
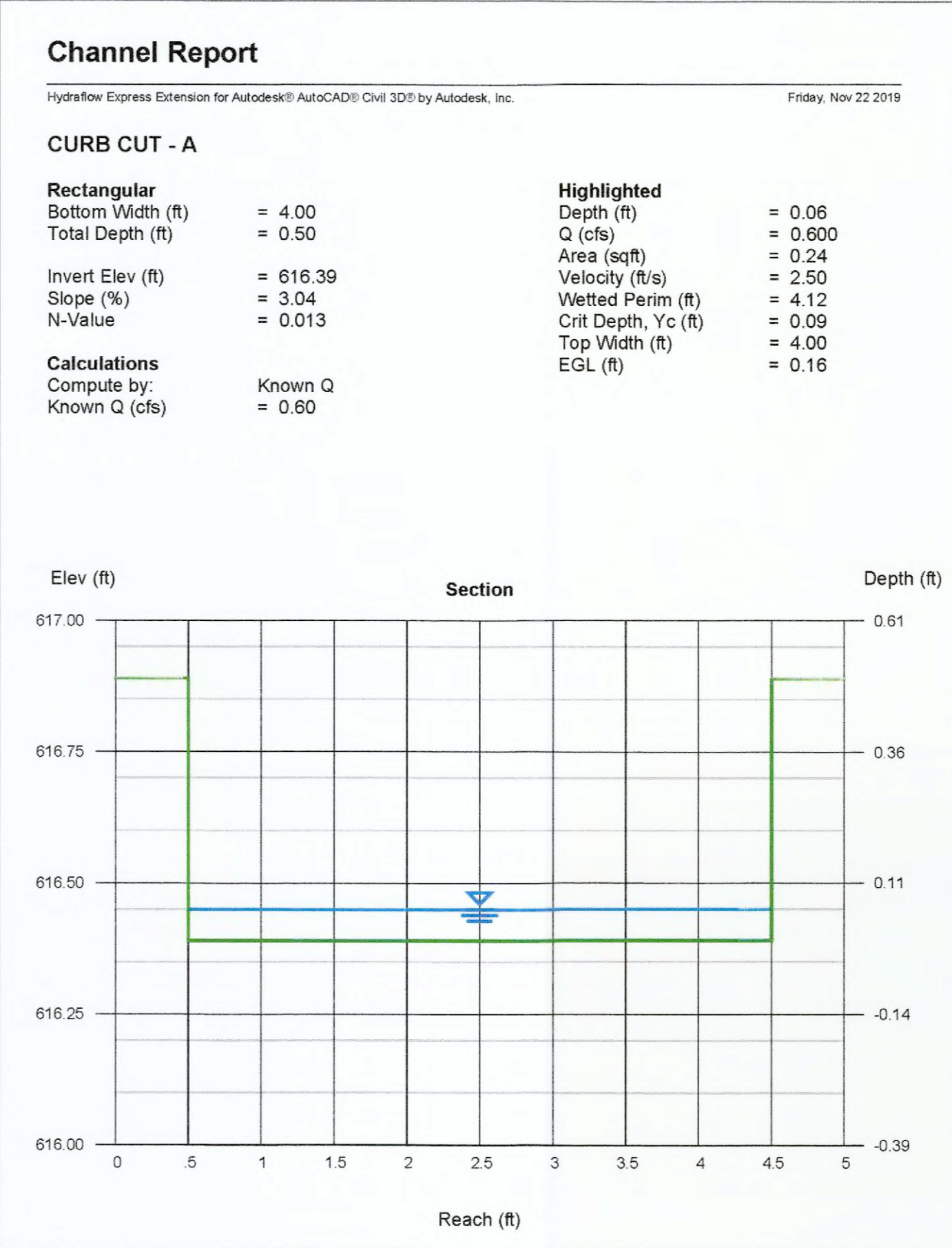
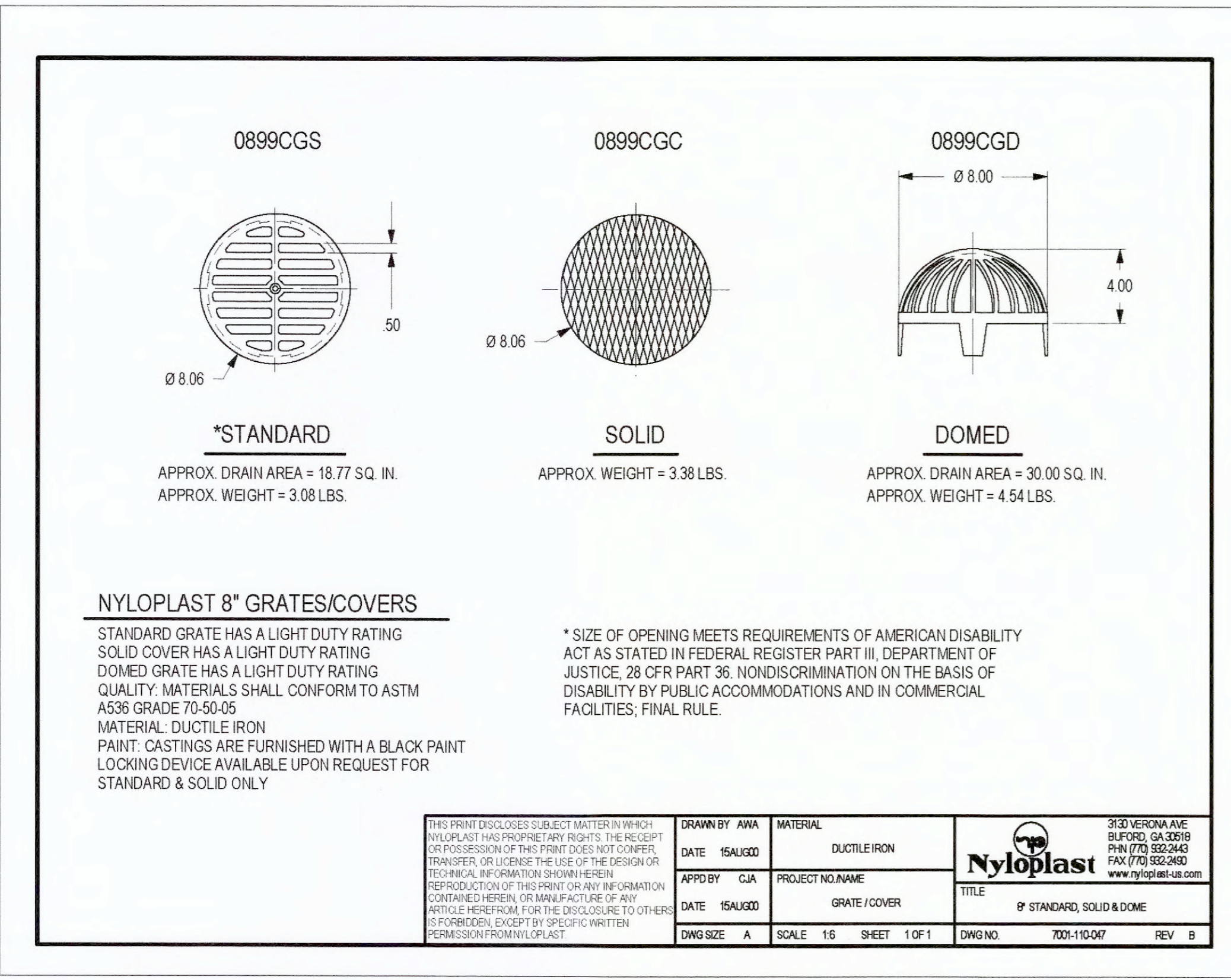
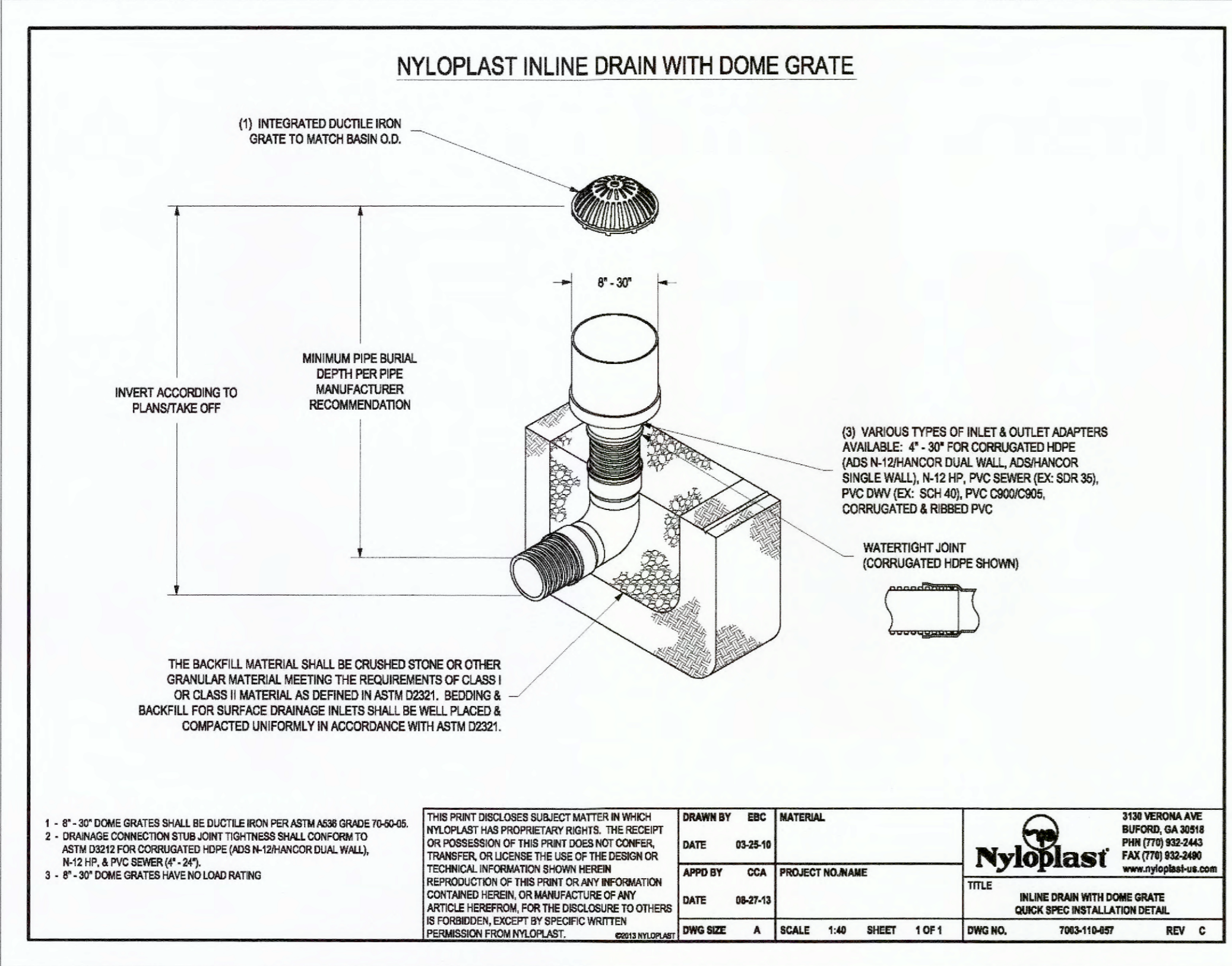
P+Z No. #19-003530
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STORM SEWER PROFILES

Bar Project # 19-17667 Issue Date: 01/04/2021

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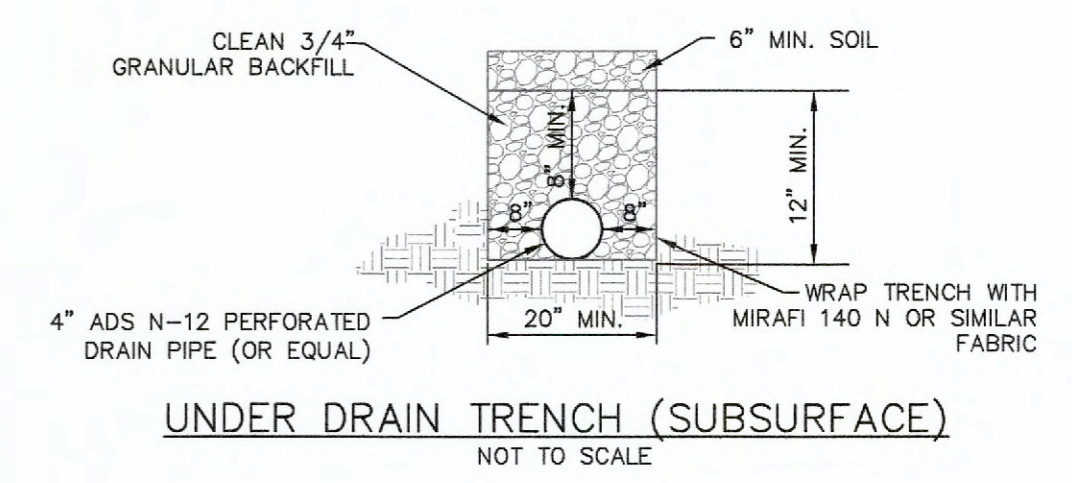
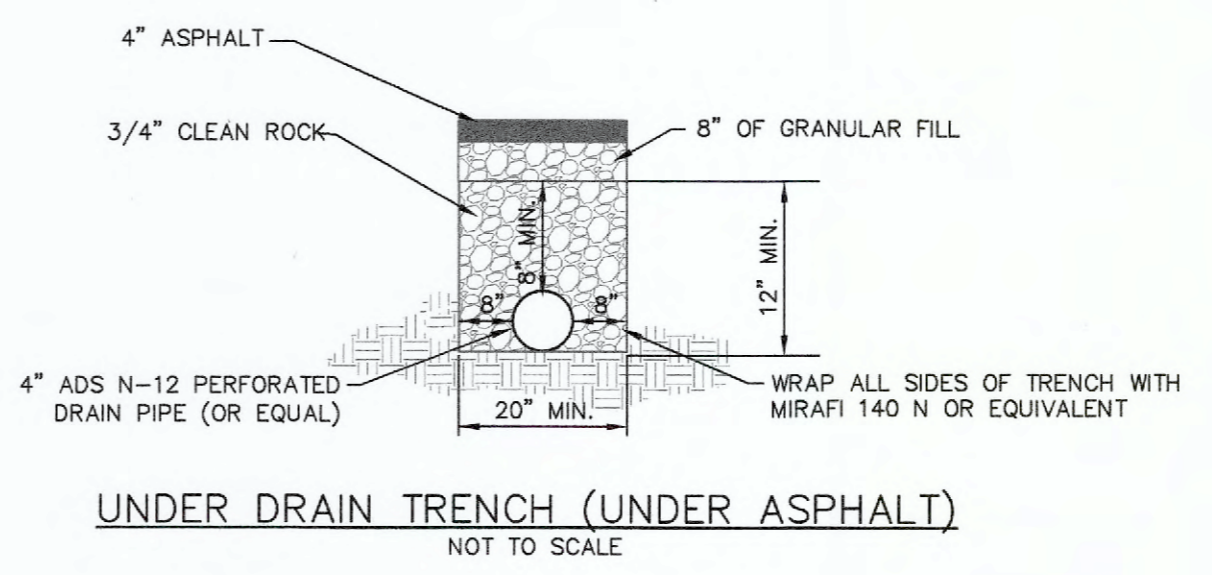
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- WATER VALVES
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BAX ENGINEERING COMPANY, INC.
MARK E. COLLINS
MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173



PROJECT TITLE:
AS-BUILT PLANS FOR
DYNAFLEX
8050 HAWK RIDGE TRAIL
O'FALLON, MISSOURI 63376

Bax Project # 19-17667 Issue Date: 01/04/2021



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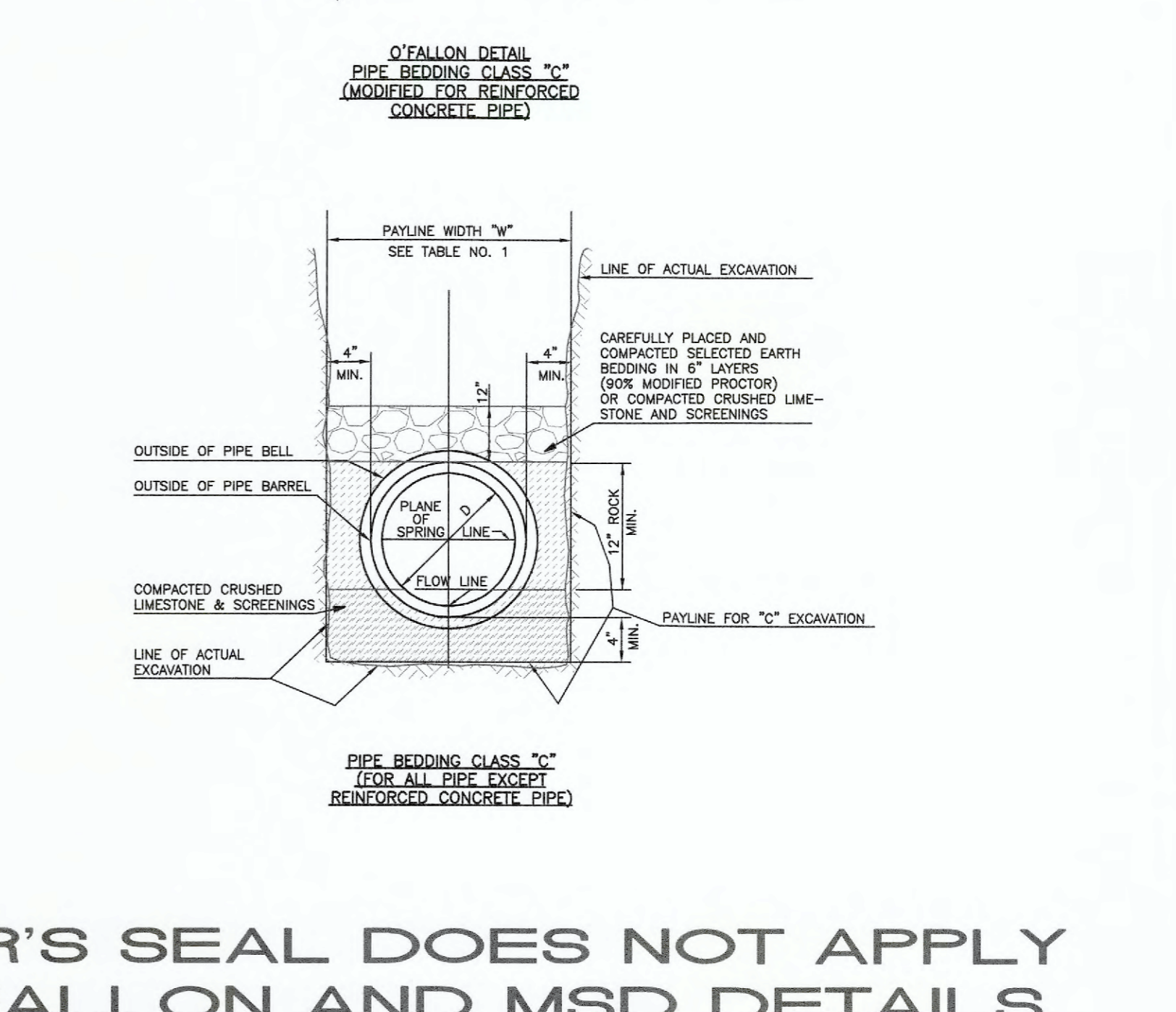
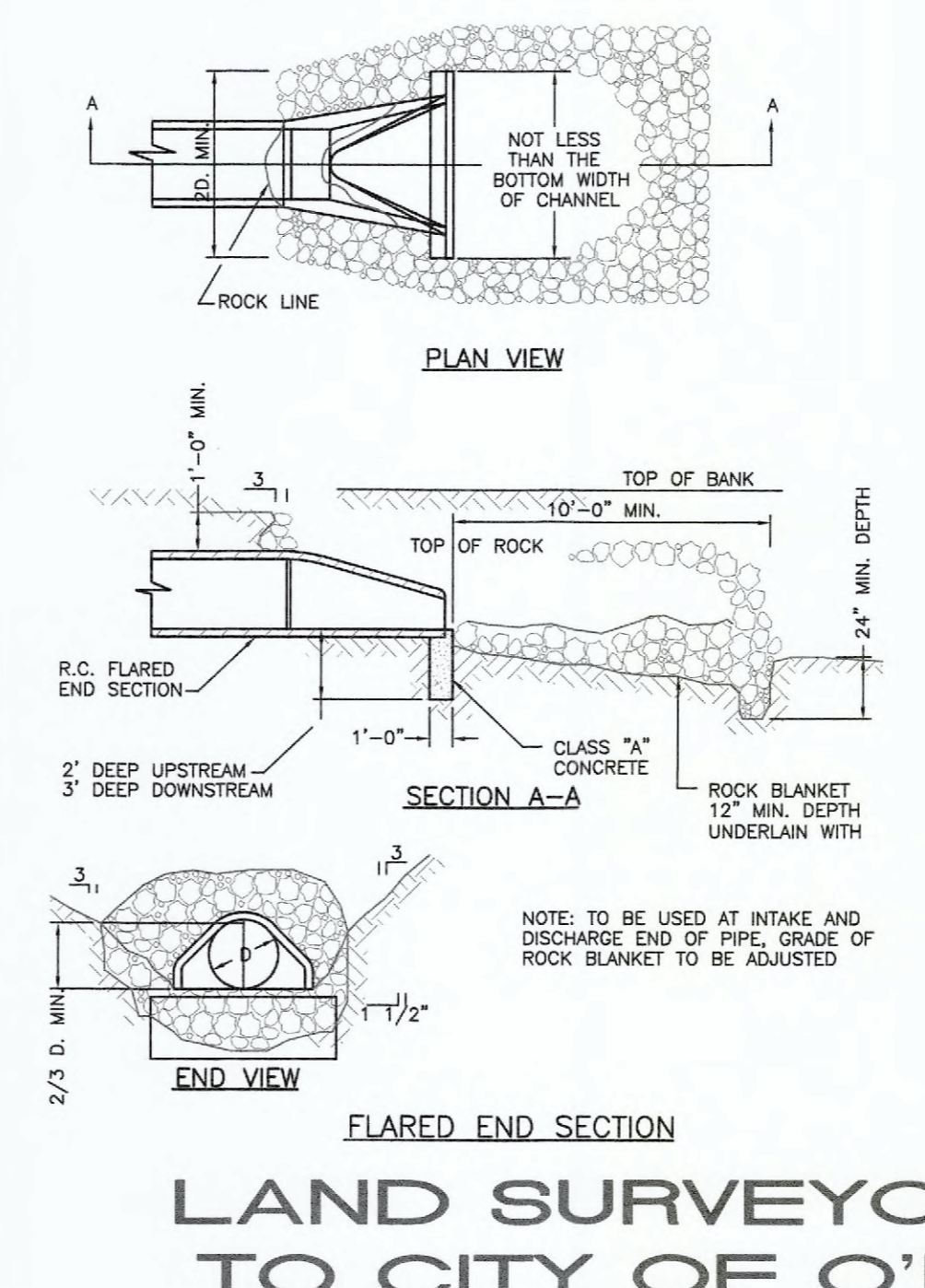
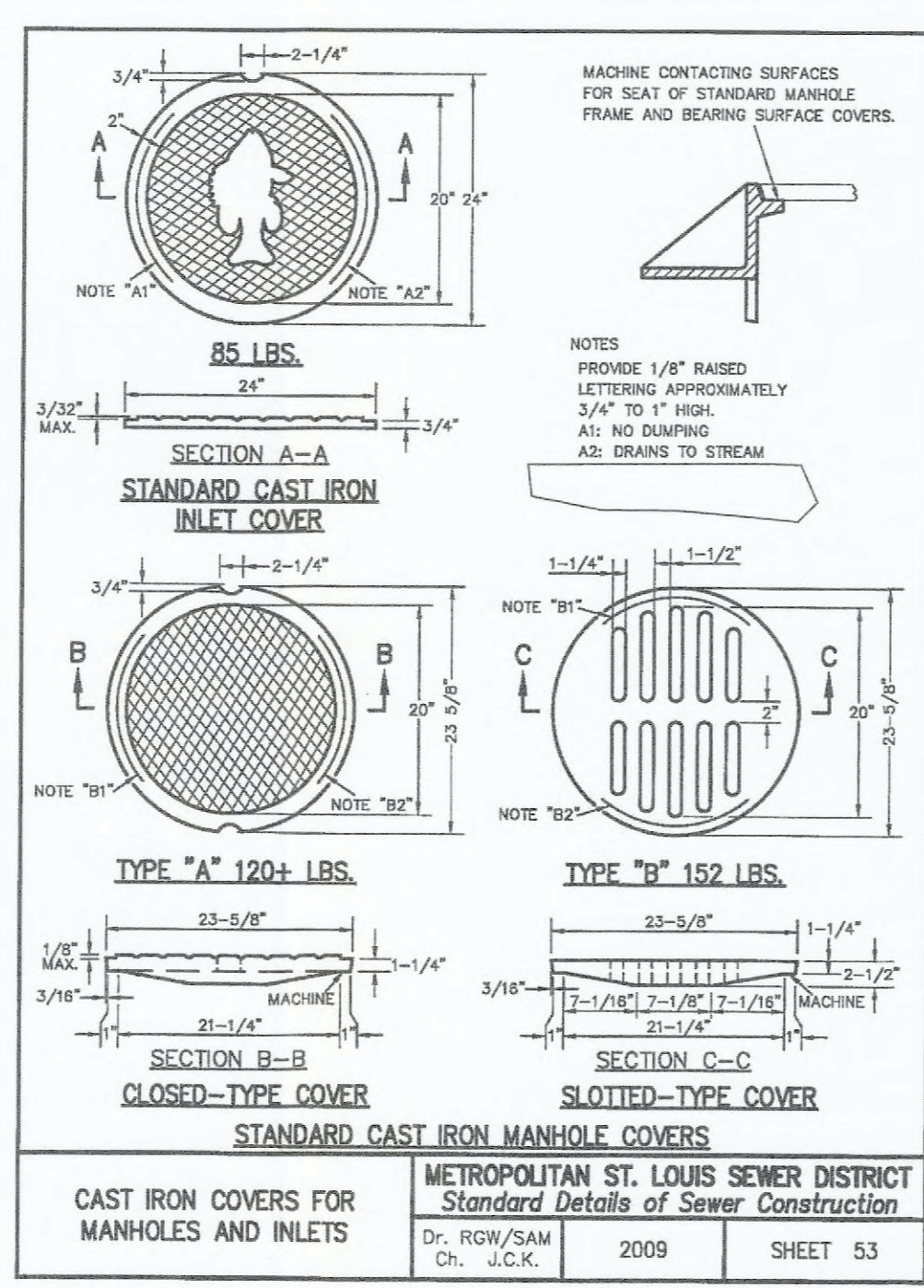
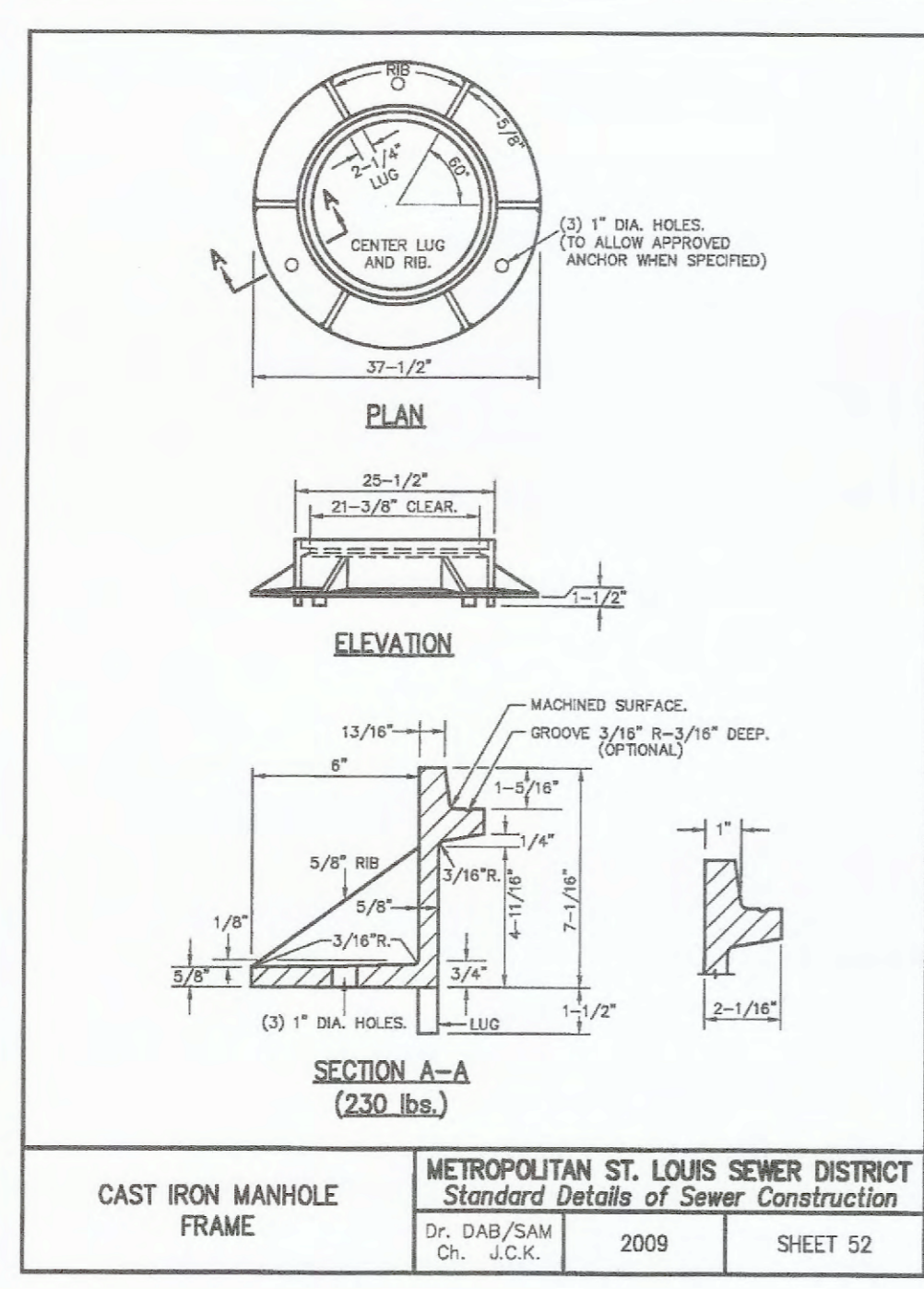
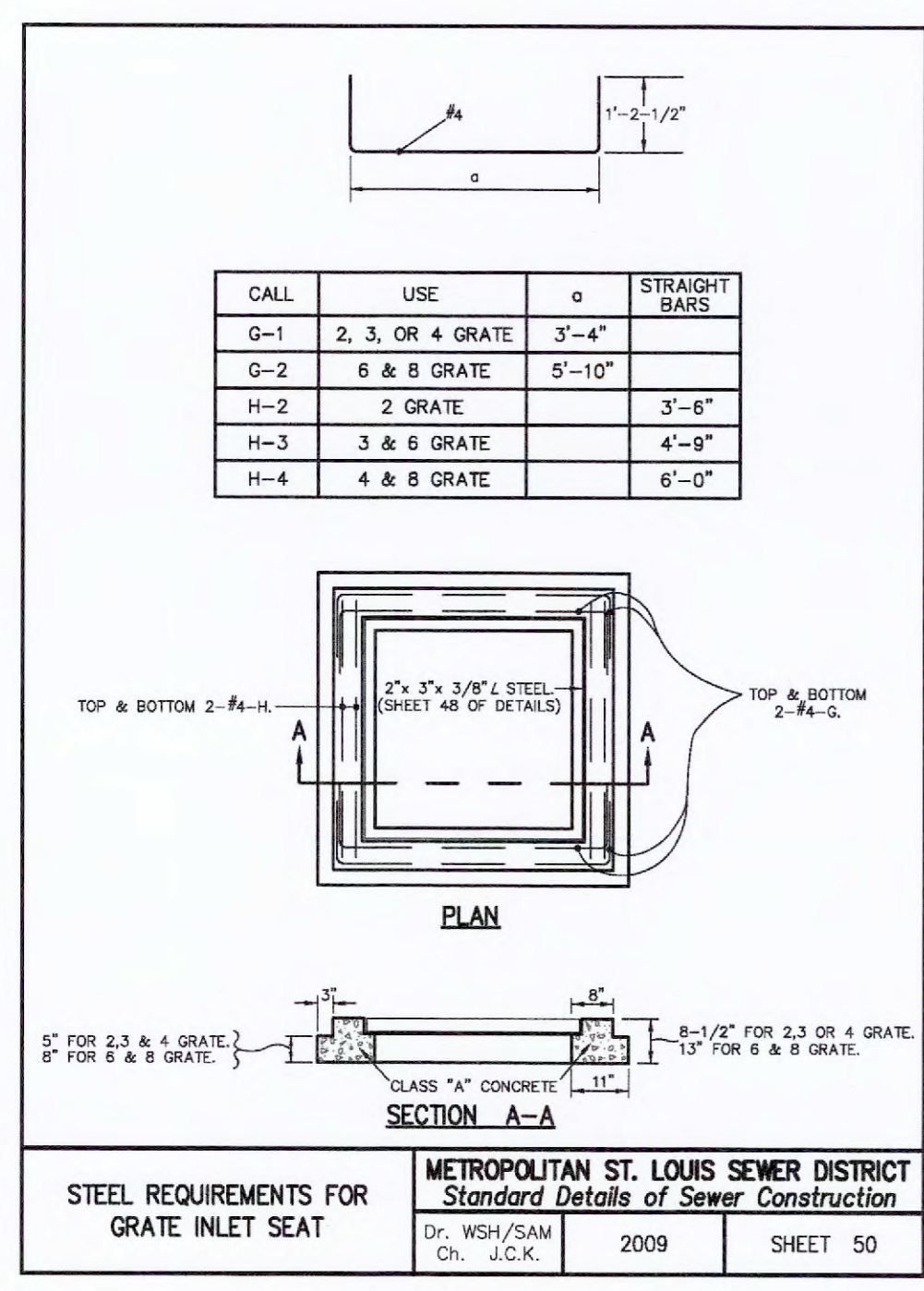
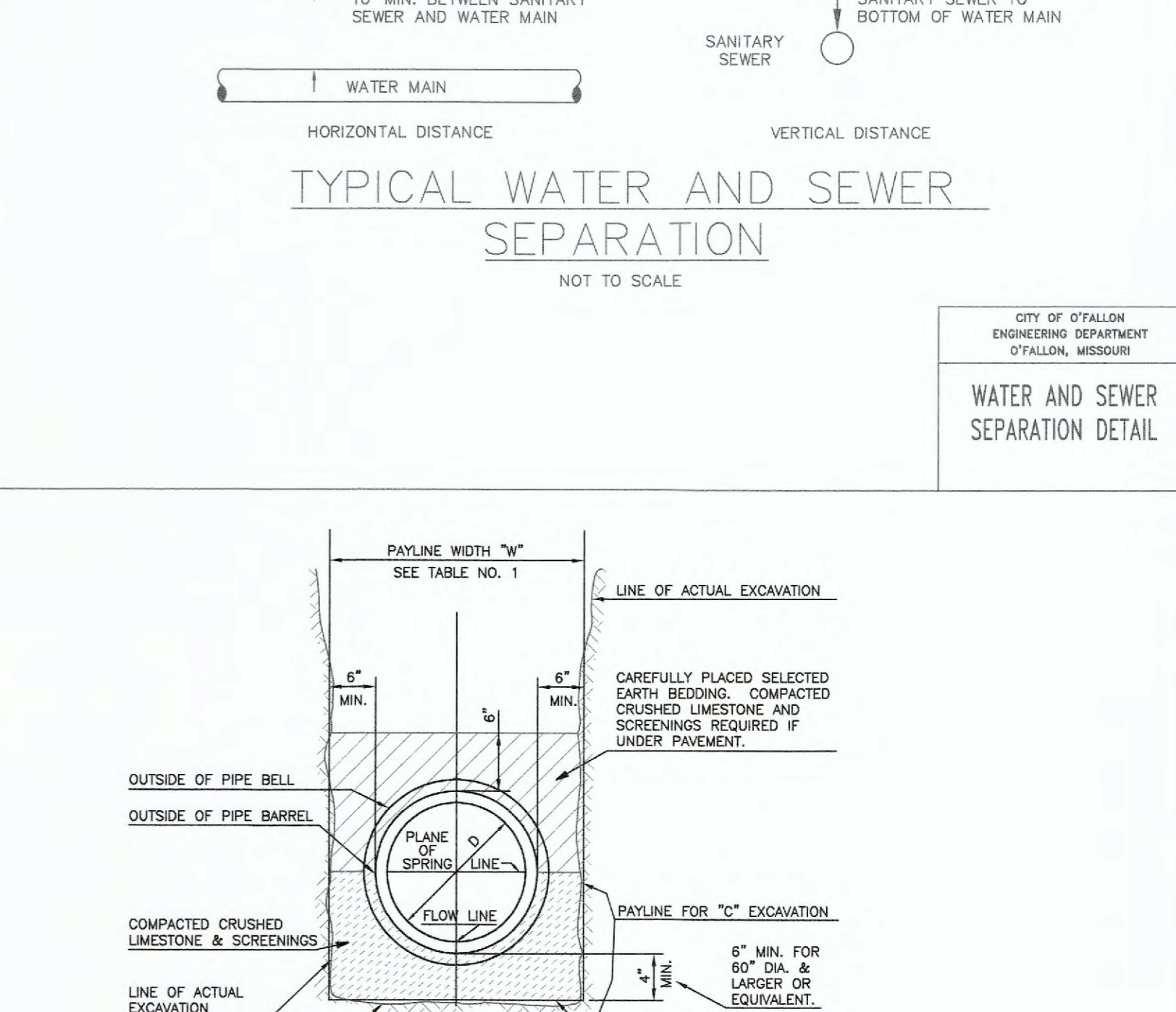
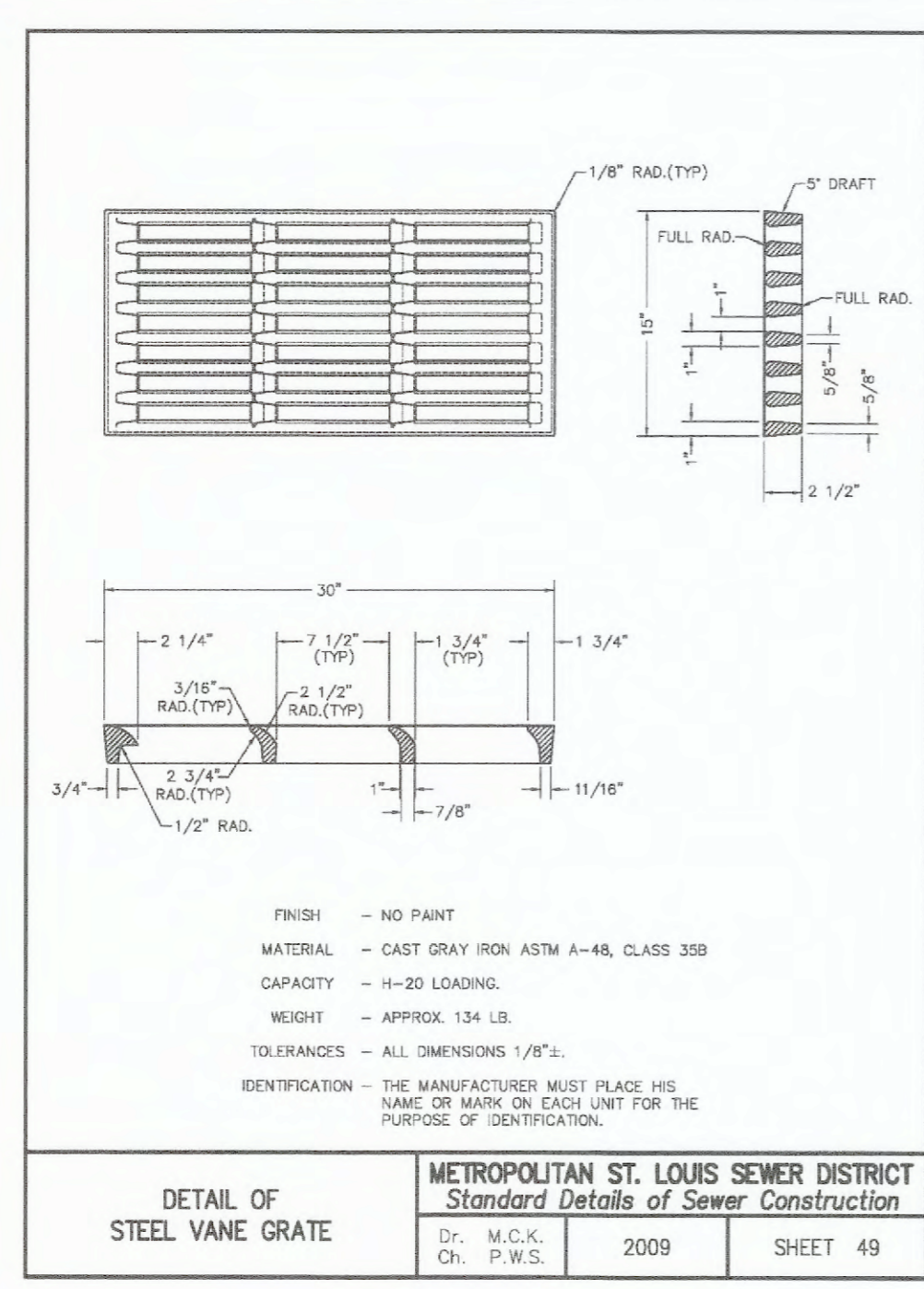
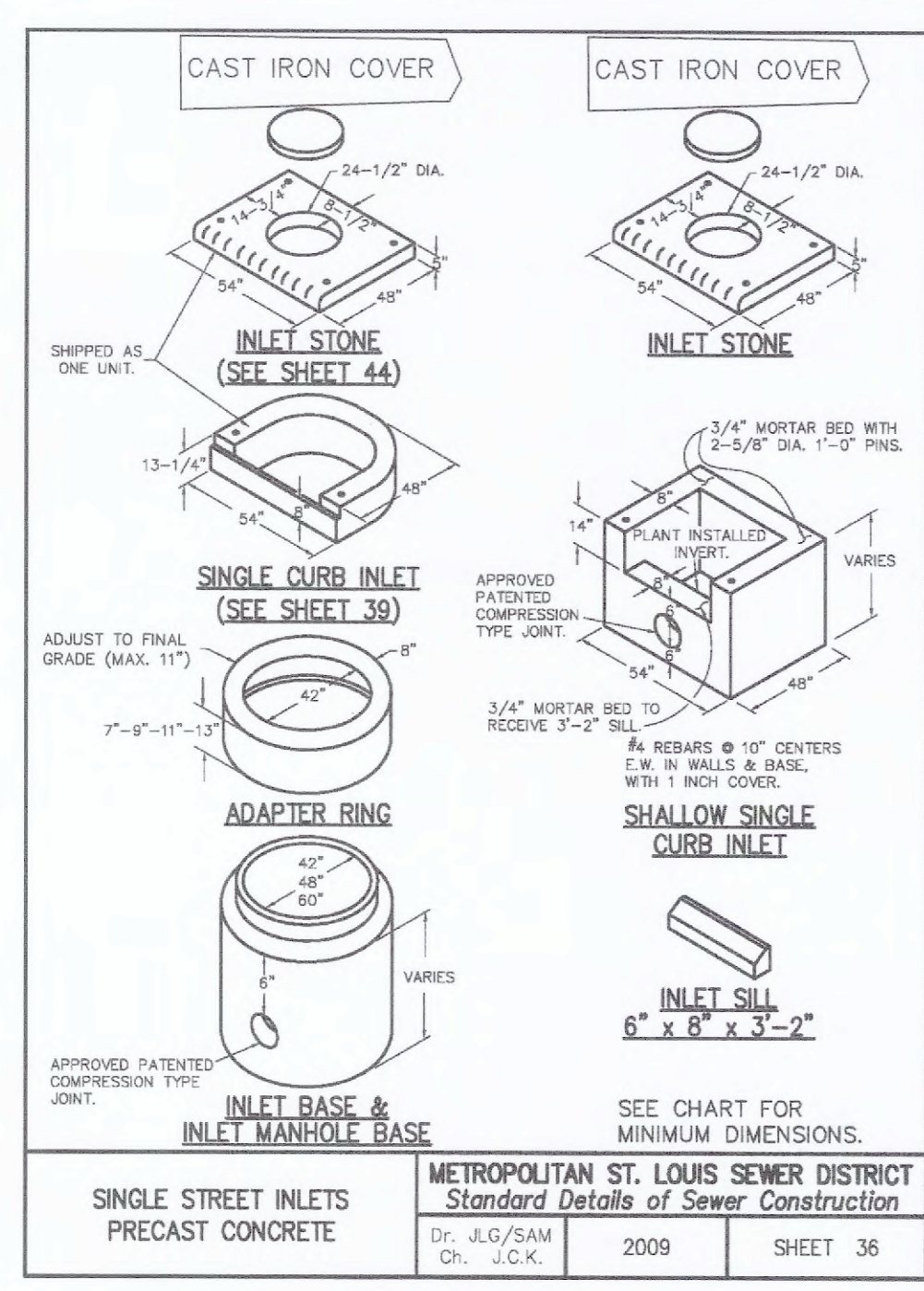
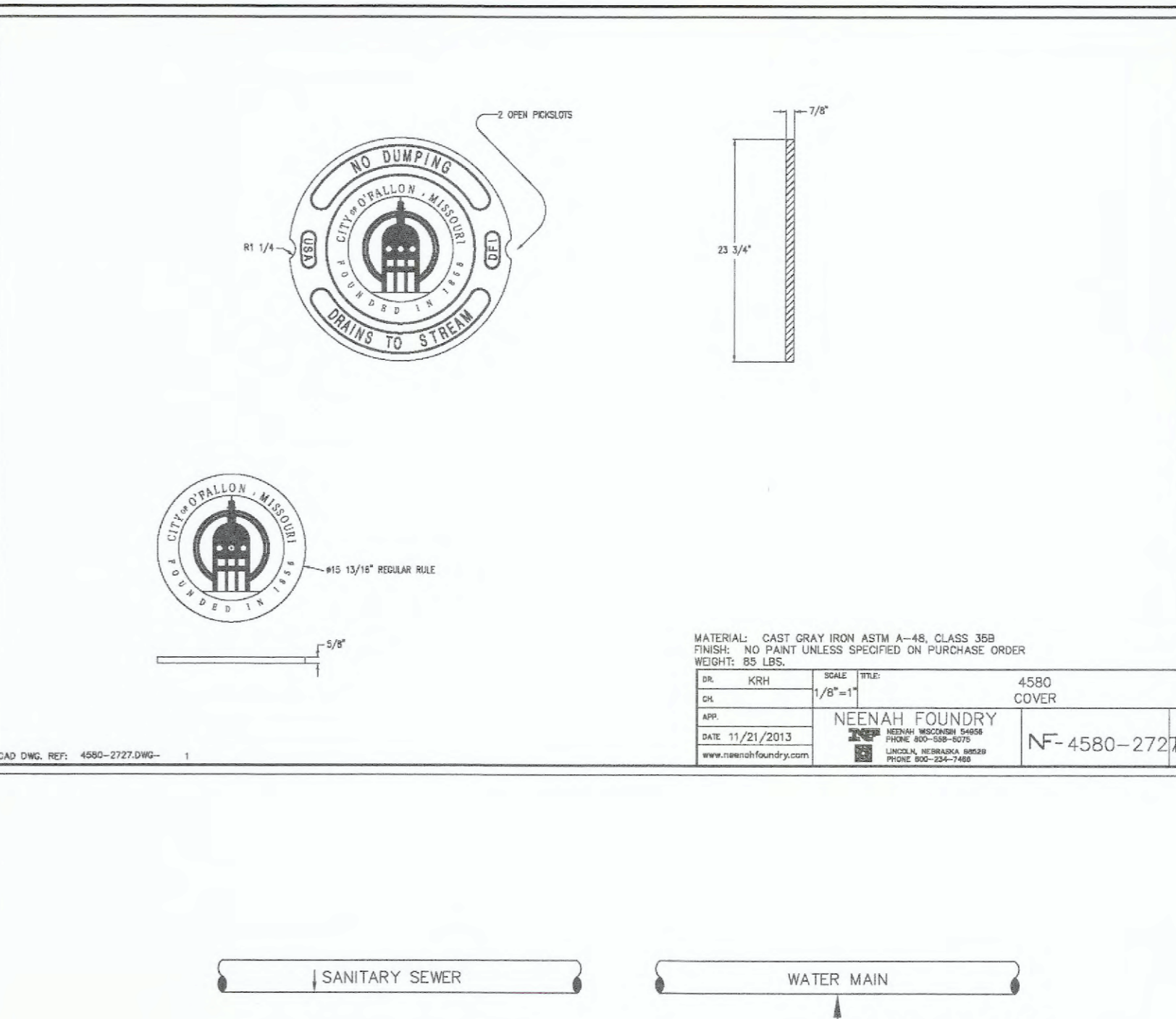
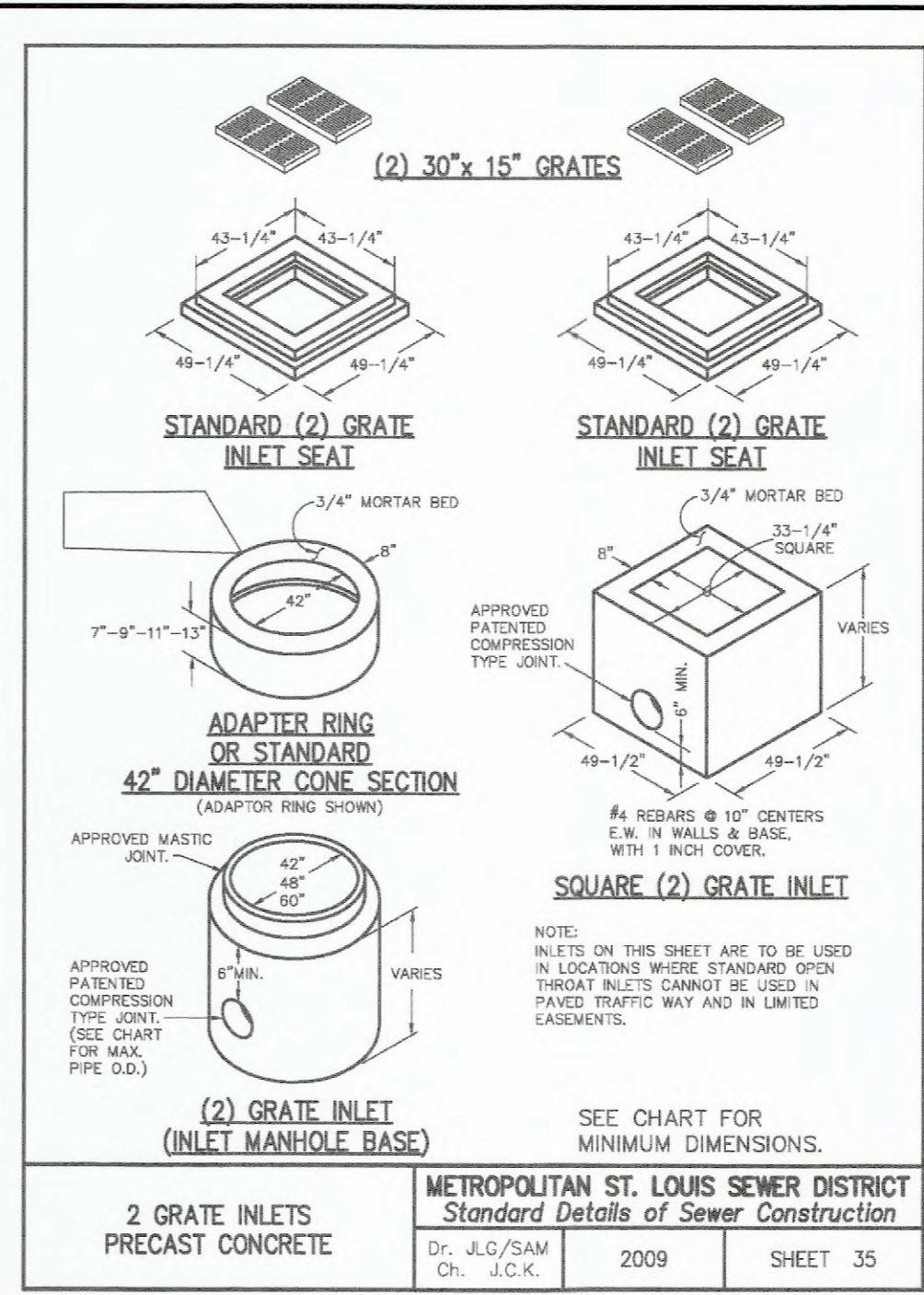
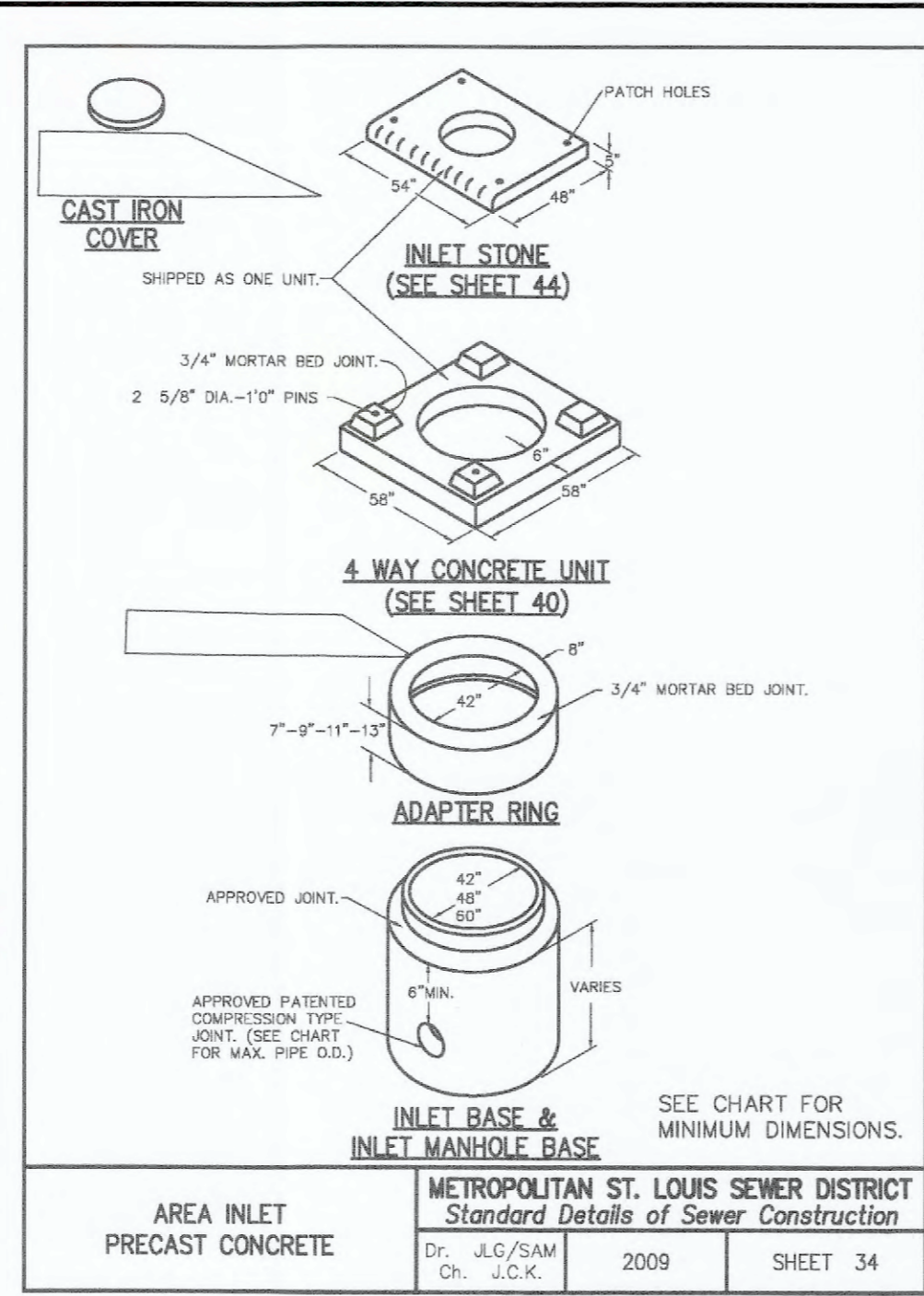
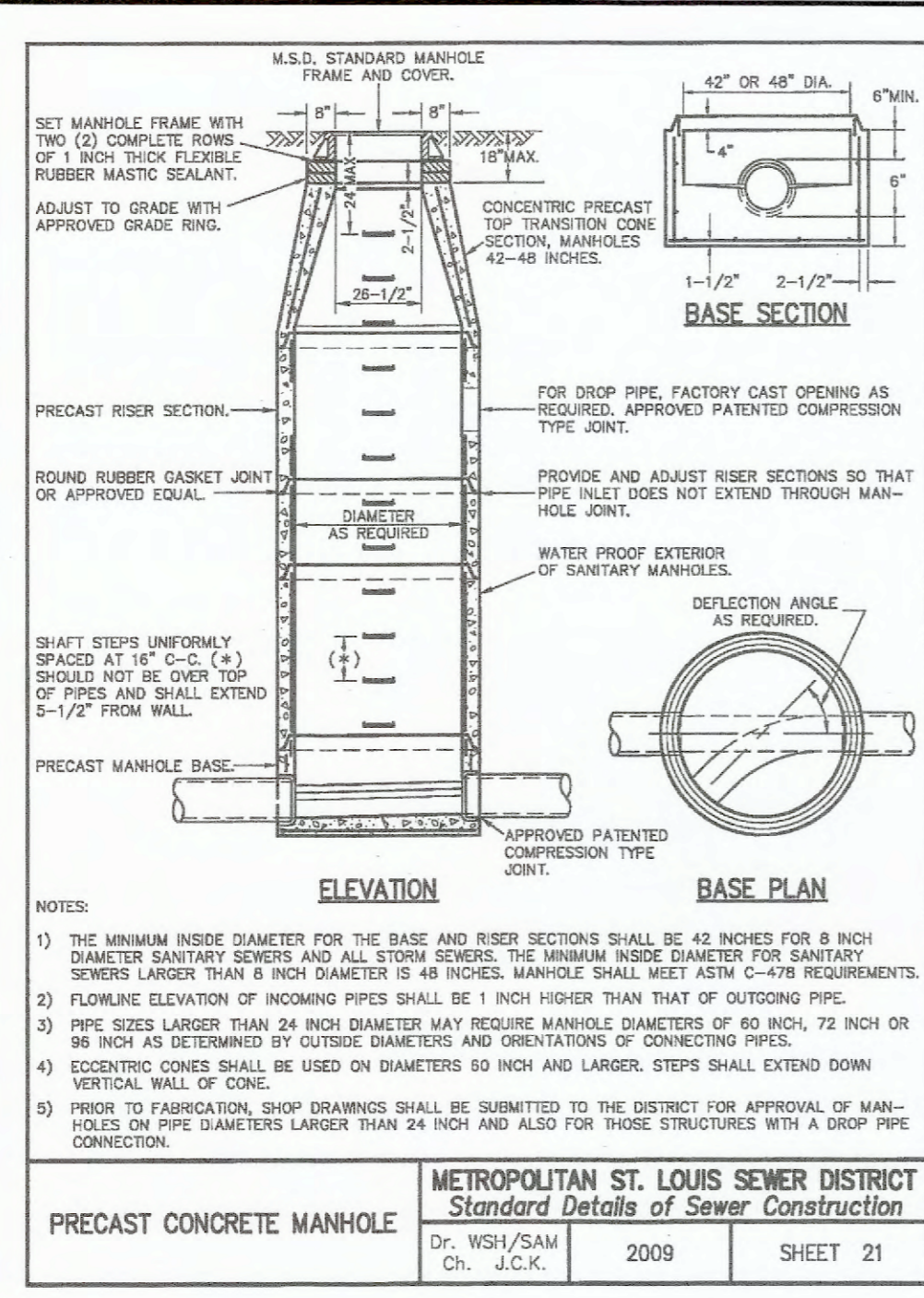
STORM SEWER DETAILS

P+Z No. #19-003530
Approval Date 11-07-19
City No. #

Page No.
15 of 19

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASMENT	INSIDE DIMENSIONS OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	PAY-VOLUMES CU. FT. PER FT. CONCRETE ENCASMENT
4	30	2.50	3.28				
6	30	2.50	3.59				
8	30	2.50	3.87				
10	30	2.50	4.09				
12	30	2.50	4.25				
15	36	3.00	5.55				
18	36	3.00	5.77	14 x 23	41	3.42	5.94
21	39	3.25	6.61				
24	42	3.50	7.39	19 x 30	49	4.08	7.66
27	45	3.75	8.18	22 x 34	53	4.42	8.61
30	48	4.00	9.30	24 x 38	56	4.83	9.70
33	51	4.25	10.53	27 x 42	62	5.17	10.71
36	54	4.50	11.43	29 x 45	66	5.50	11.72
39	57	4.75	12.45	31 x 48	71	5.92	13.14
42	60	5.00	13.38	34 x 53	75	6.25	14.00
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.81
60	84	7.00	20.73	48 x 78	101	8.42	21.59
66	91	7.58	23.45	53 x 83	109	9.08	24.35
72	98	8.17	26.37	59 x 91	118	9.83	27.45
78	105	8.75	29.39	63 x 98	126	10.30	30.50
84	112	9.33	32.57	68 x 106	135	11.25	33.91
90	119	9.92	35.90	72 x 113	143	11.92	36.99
96	126	10.50	39.37	77 x 121	152	12.67	40.69
102	133	11.08	42.99	82 x 128	160	13.33	44.45
108	140	11.67	46.75	87 x 136	168	14.00	47.79
114	147	12.25	50.66	92 x 143	178	14.67	51.70
120	154	12.83	54.72	97 x 151	185	15.42	56.01
126	161	13.42	58.92				
132	168	14.00	63.27	106 x 166	202	16.83	64.48
144	182	15.17	72.40	116 x 180	218	18.17	73.59

TABLE 1
PAYLINE WIDTHS OF TRENCH AND PAY-VOLUMES OF CONCRETE
METROPOLITAN ST. LOUIS SEWER DISTRICT
Standard Details of Sewer Construction
Dr. B.E.B./SAM Ch. J.C.K. 2009 SHEET 1



PROJECT TITLE:
AS-BUILT PLANS FOR DYNAFLEX 8050 HAWK RIDGE TRAIL O'FALLON, MISSOURI 63376

ENGINEERING PLANNING SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-6552
PAX 928-1718

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07/15/21			CITY COMMENTS REVS.

Developer / Owner:
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10403 International Plaza
St. Ann, Missouri 63074
(314) 426-4020

STORM SEWER DETAILS

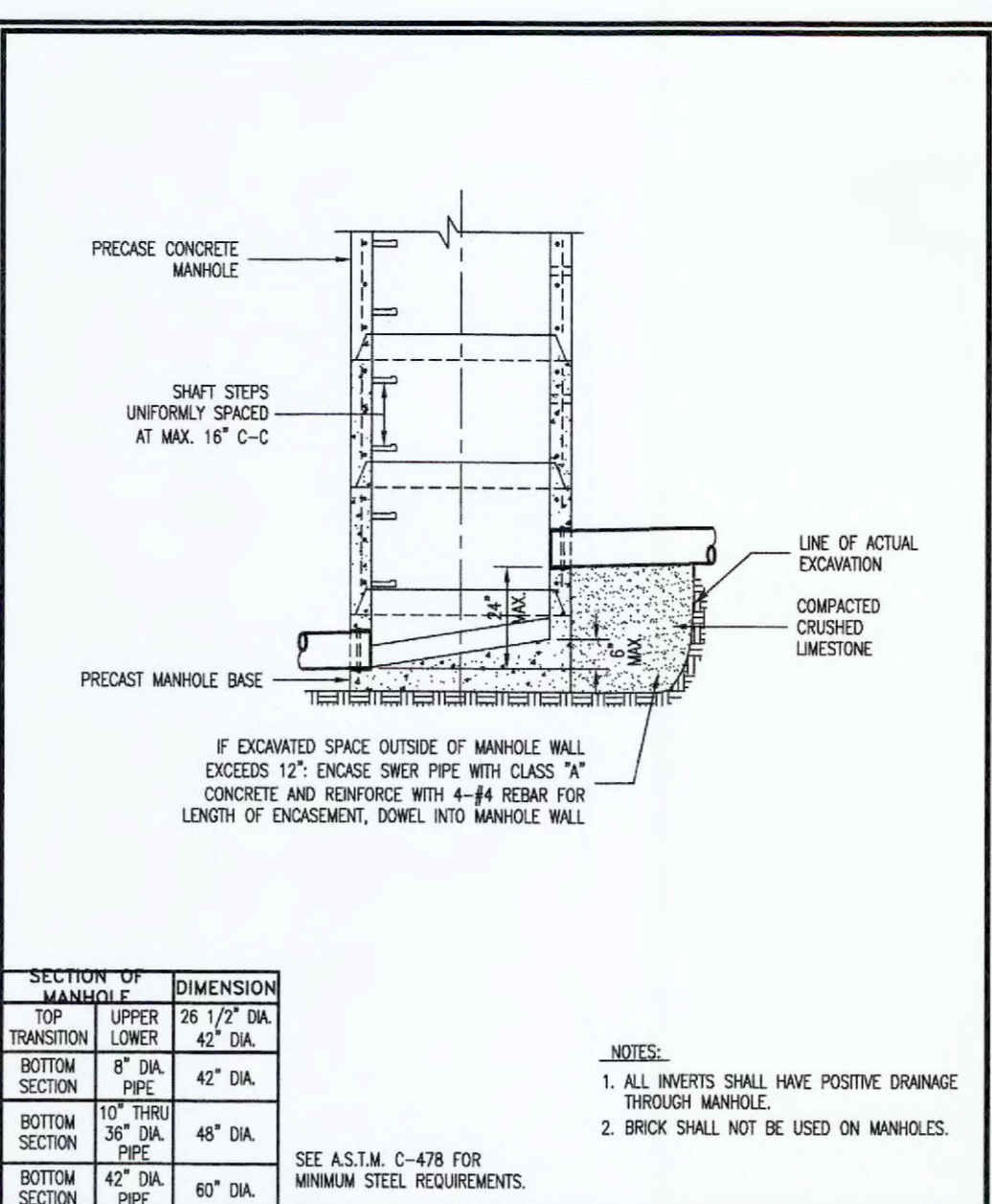
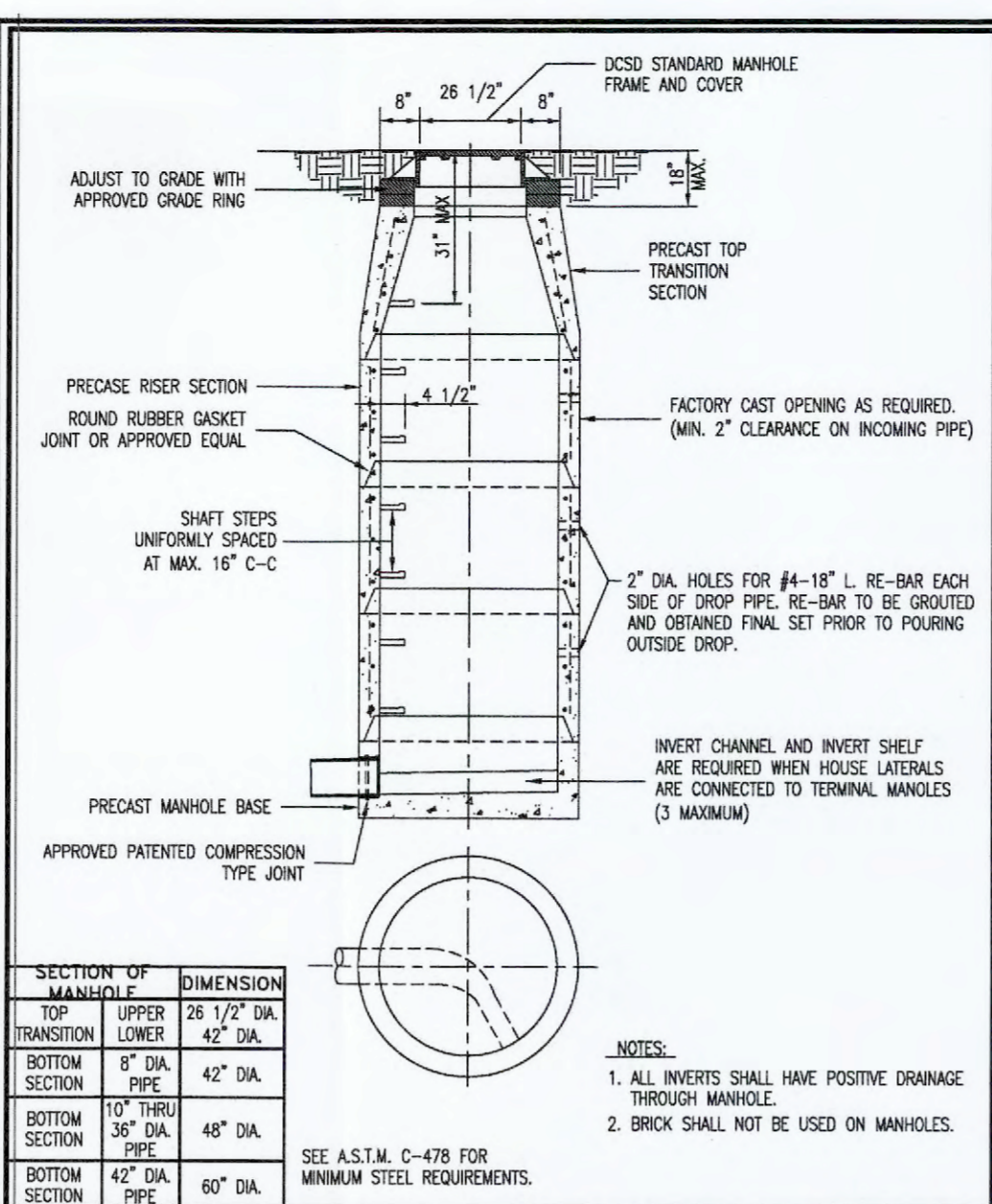
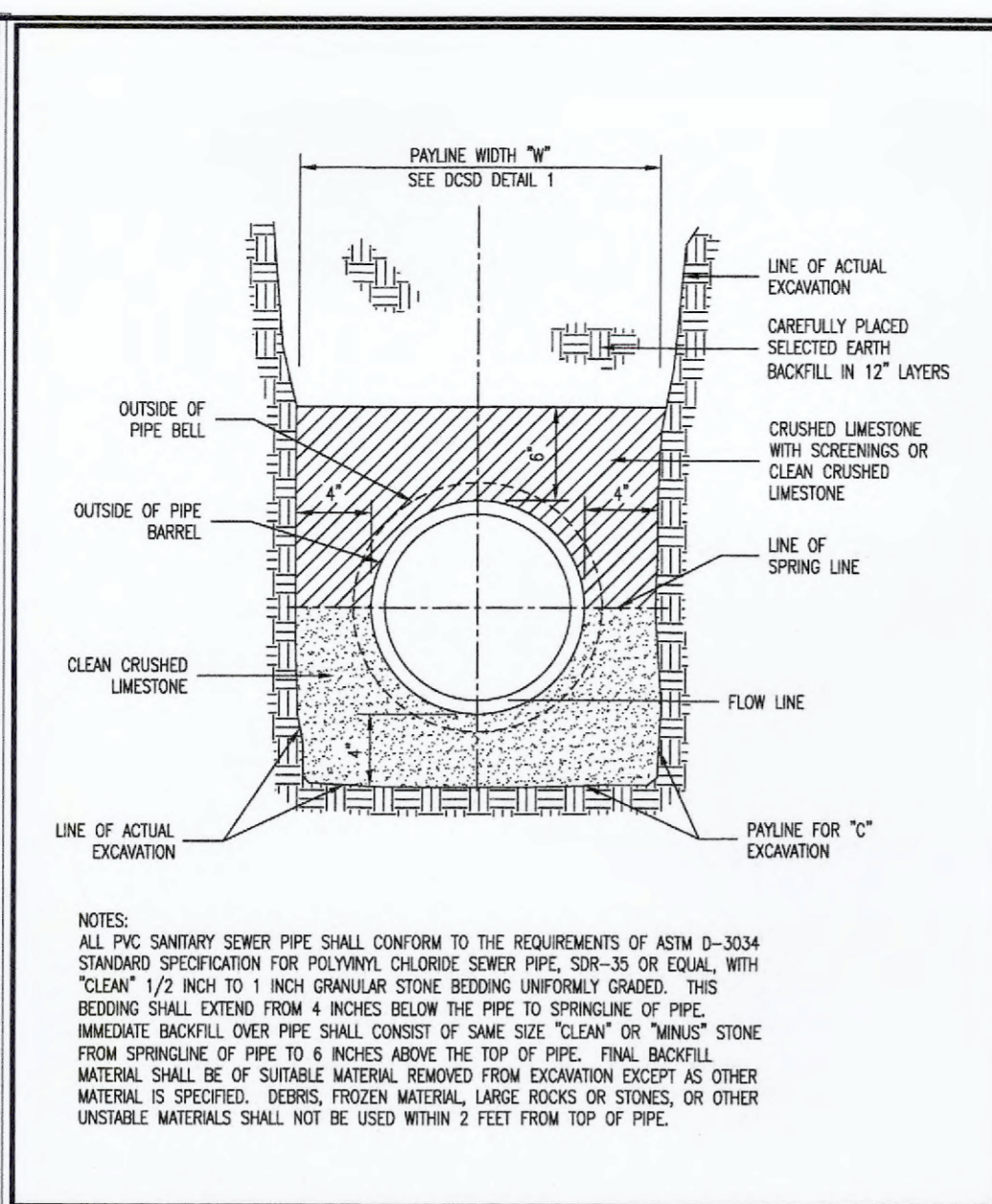
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LAND SURVEYOR'S SEAL DOES NOT APPLY TO CITY OF O'FALLON AND MSD DETAILS

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Bax Project #19-17667 Issue Date: 01/04/2021

ROUND PIPE				HORIZONTAL ELLIPTICAL PIPE			
INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	CONCRETE ENCASEMENT	INSIDE DIAMETER OF PIPE (INCHES)	"W" PAYLINE WIDTH OF TRENCH (INCHES)	"W" PAYLINE WIDTH OF TRENCH (FEET)	CONCRETE ENCASEMENT
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33	53	4.42	10.53	27 x 42	62	5.17	10.71
36	56	4.67	11.43	29 x 45	66	5.50	11.72
39		DISCONTINUED		32 x 49	71	5.92	13.14
42	63	5.25	13.38	34 x 53	75	6.25	14.05
48	70	5.83	15.67	38 x 60	83	6.92	16.18
54	77	6.42	18.15	43 x 68	92	7.67	18.81
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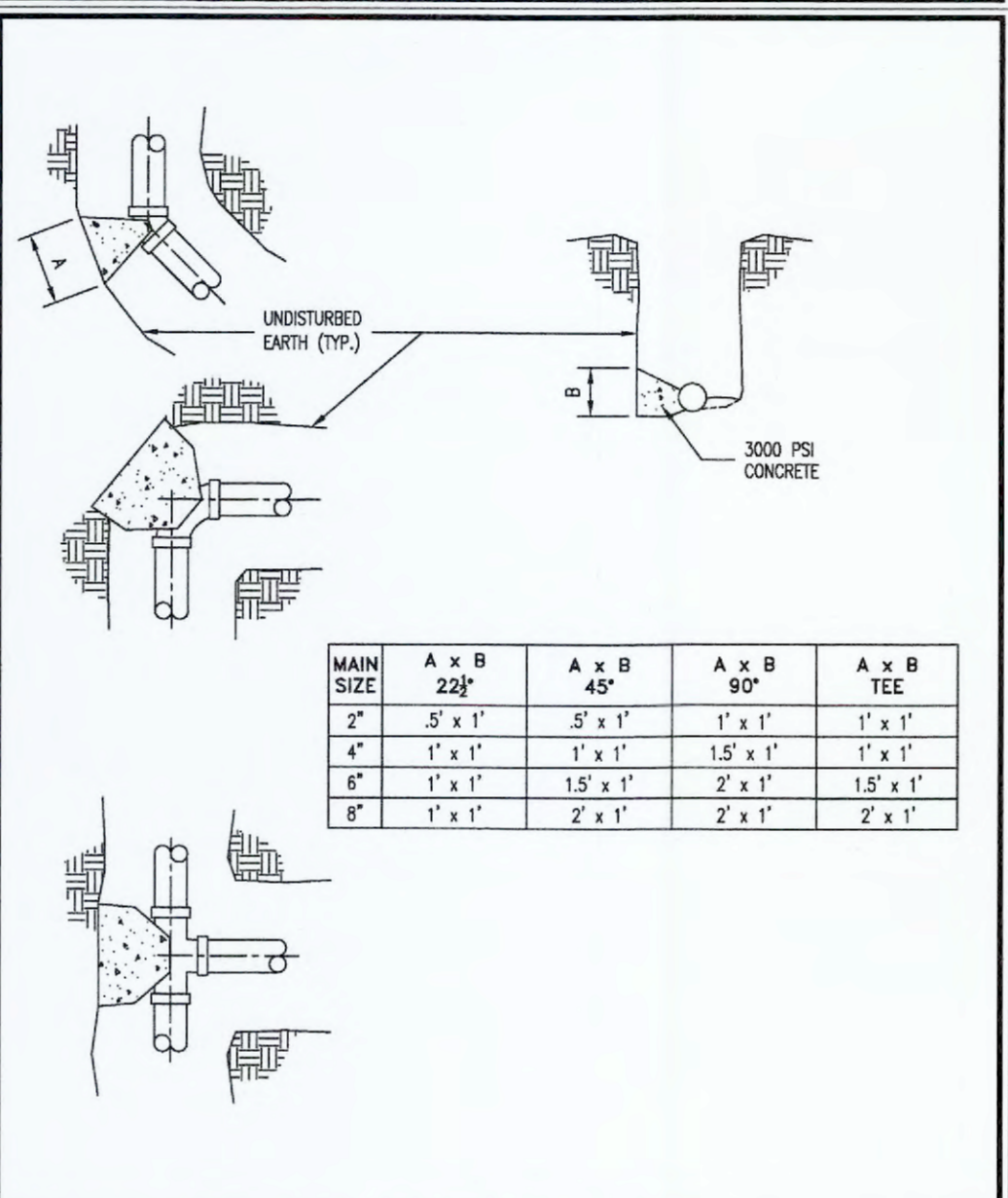
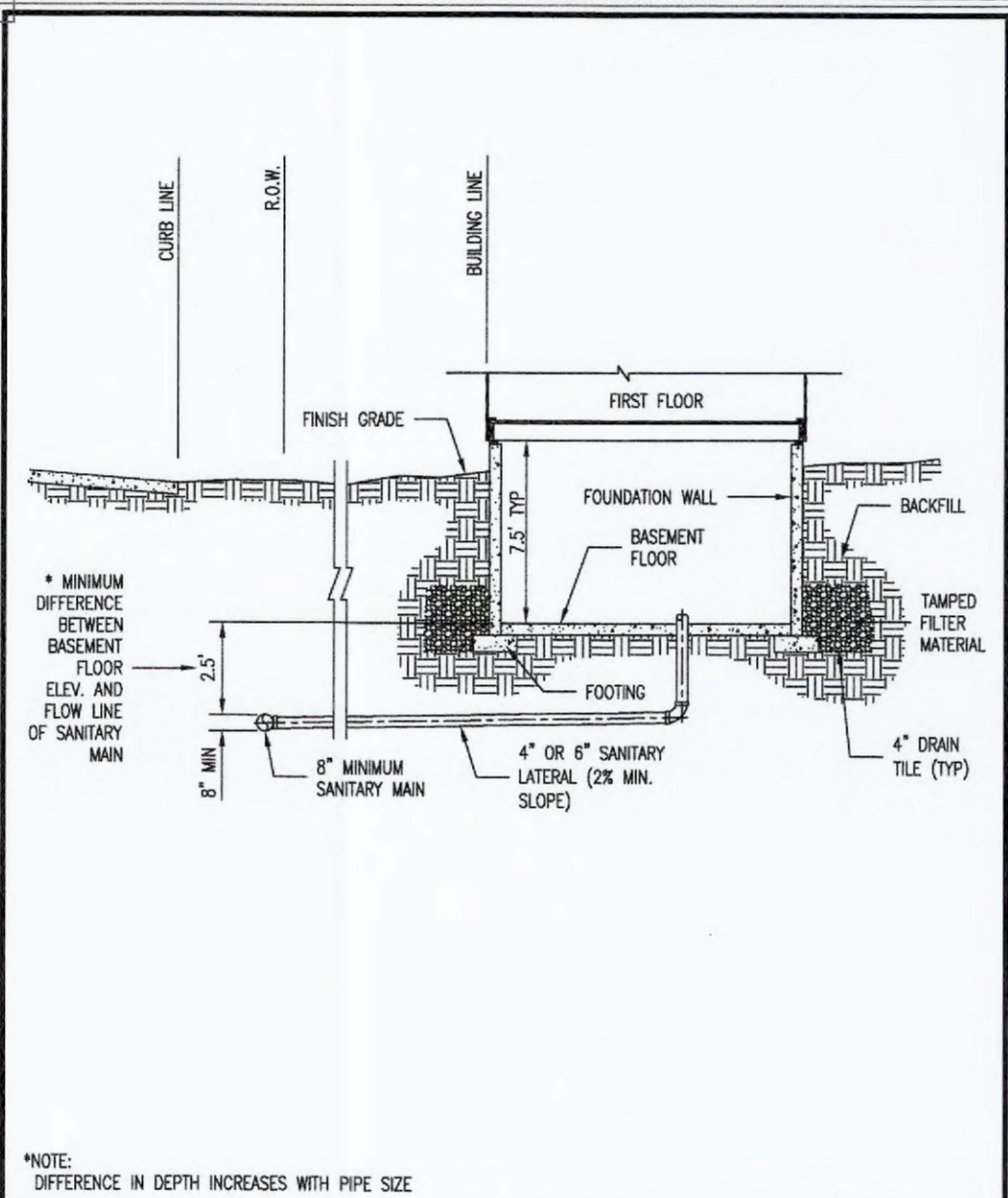
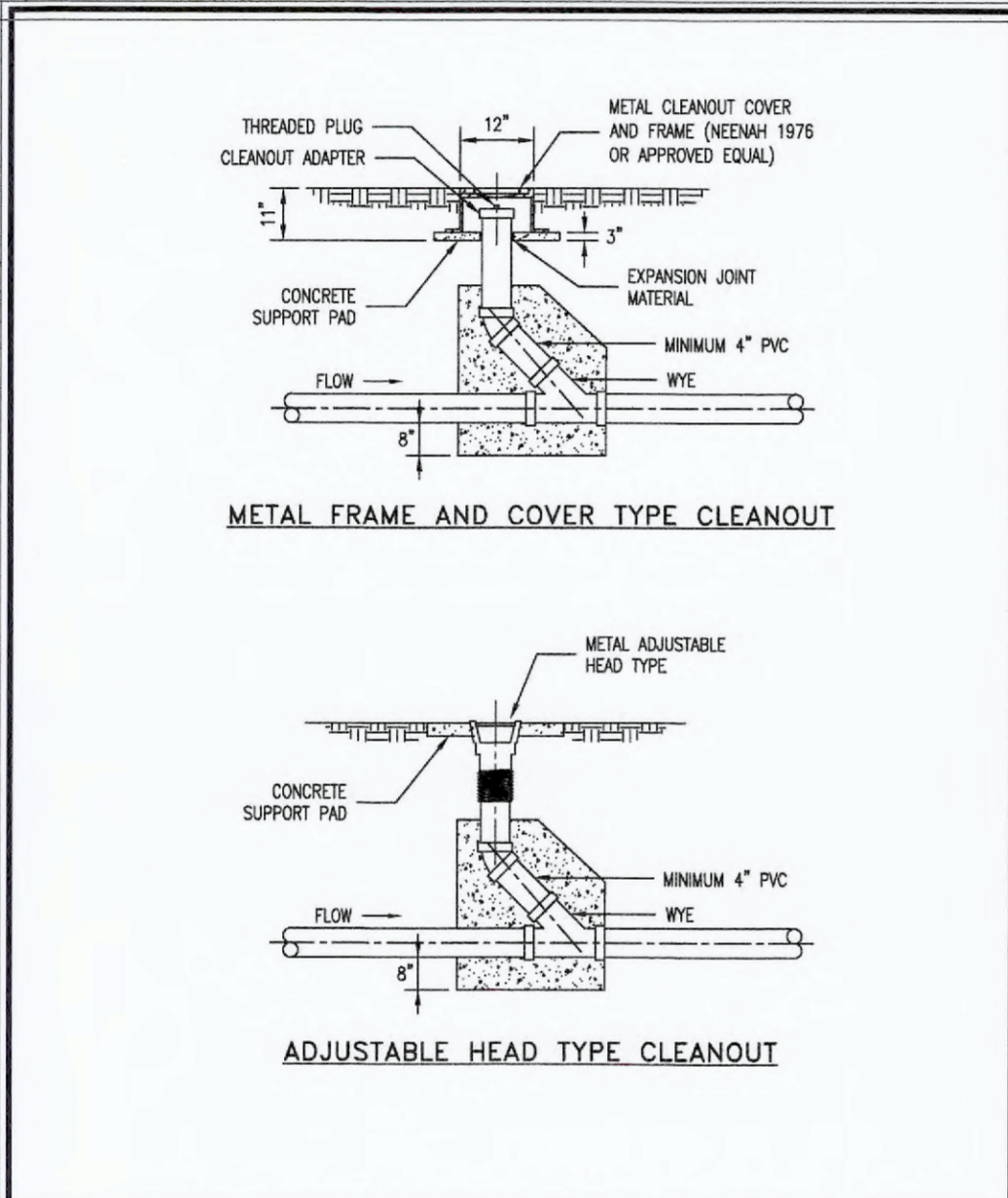
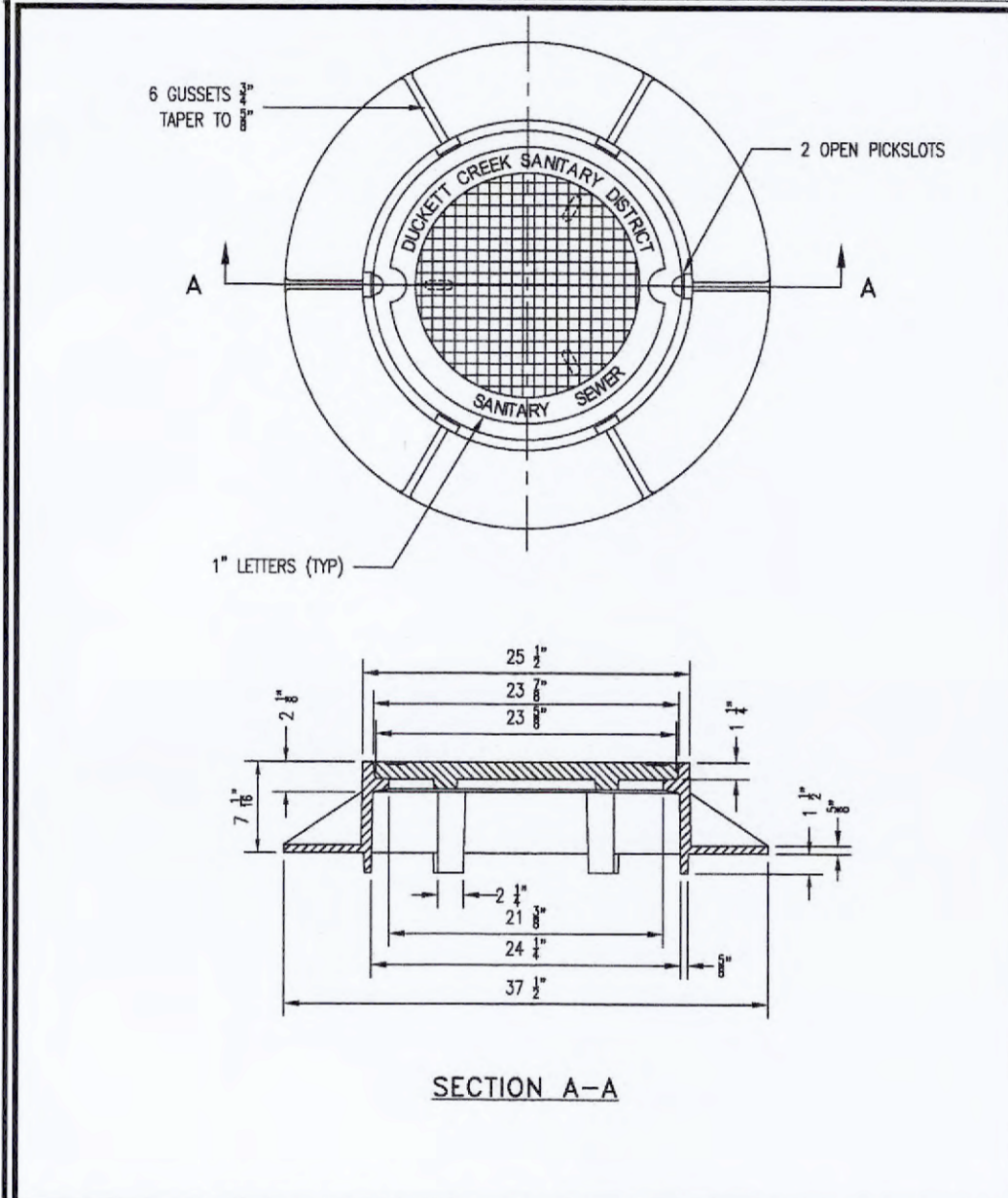


Duckett Creek Sanitary District	MANHOLE FRAME AND COVER	DATE: DEC. 2015	DESIGN NO: 1
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Duckett Creek Sanitary District	PIPE BEDDING CLASS "C" (REINFORCED CONCRETE PIPE)	DATE: JULY 2016	DESIGN NO: 3
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Duckett Creek Sanitary District	TERMINAL MANHOLE FOR SEWERS 8" THROUGH 18"	DATE: DEC. 2015	DESIGN NO: 8
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Duckett Creek Sanitary District	INSIDE FOULWATER DROP MANHOLE (SWEEP INLET)	DATE: DEC. 2015	DESIGN NO: 9
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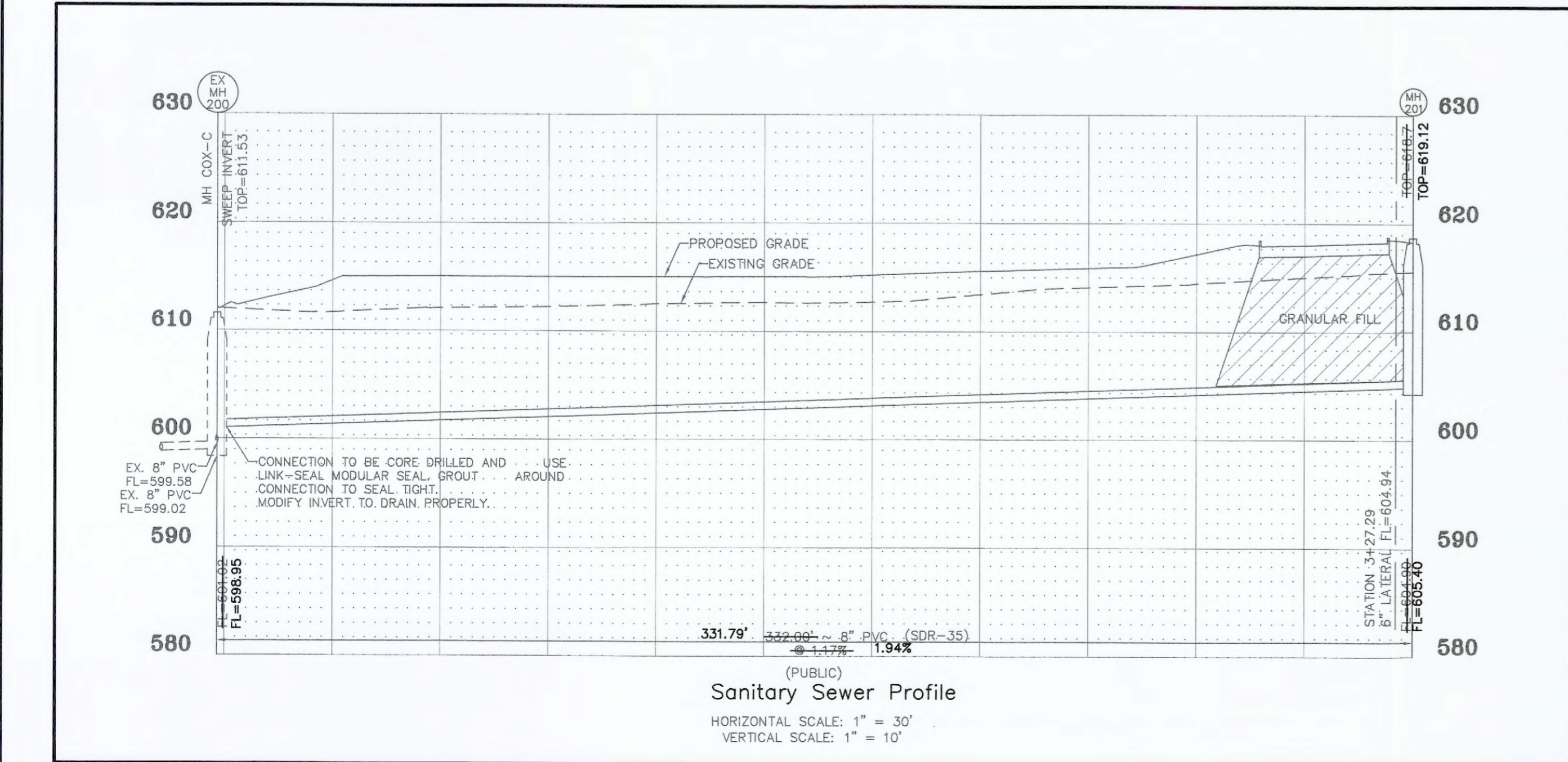
Duckett Creek Sanitary District	MANHOLE FRAME AND COVER	DATE: DEC. 2015	DESIGN NO: 12
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Duckett Creek Sanitary District	TYPICAL SEWER LATERAL CLEANOUT DETAIL	DATE: DEC. 2015	DESIGN NO: 25
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Duckett Creek Sanitary District	TYPICAL SANITARY SEWER LATERAL PROFILE	DATE: DEC. 2015	DESIGN NO: 26
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Duckett Creek Sanitary District	THRUST BLOCK DETAIL AND SIZE SCHEDULE	DATE: DEC. 2015	DESIGN NO: 29
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LAND SURVEYOR'S SEAL DOES NOT APPLY TO GPT AND DUCKETT CREEK SEWER DISTRICT DETAIL



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ALL PUBLIC UTILITIES SHOWN HEREON AS BEING AS-BUILT ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS.

BAX ENGINEERING COMPANY, INC.
MARK E. COLLINS
MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173

DUCKETT CREEK SEWER DISTRICT NOTES:

- EXISTING SANITARY SEWER SERVICE SHALL NOT BE INTERRUPTED.
- CONNECTION TO DUCKETT CREEK SEWER DISTRICT (DCSD) SANITARY SEWERS REQUIRES DCSD INSPECTION. CONTACT THE DCSD INSPECTION DEPARTMENT AT (636) 441-1244 TO SCHEDULE INSPECTION. 48 HOUR ADVANCE NOTICE IS REQUIRED.
- ALL LATERALS UNDER ANY FUTURE PAVEMENT WILL REQUIRE GRANULAR FILL TO TOP OF TRENCH AND/OR BOTTOM OF PAVEMENT SECTION.

CALL BEFORE YOU DIG!
1-800-DIG-RITE

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING OR CONSTRUCTION OF THE IMPROVEMENTS.

DUCKETT CREEK SANITARY DISTRICT CONSTRUCTION NOTES

- Underground utilities have been plotted from available information and therefore location shall be considered approximate only. The verification of the location of all underground utilities, either shown or not shown on these plans, shall be the responsibility of the contractor and shall be located prior to any grading or construction of improvements.
- Gas, water and other underground utilities shall not conflict with the depth or horizontal location of existing or proposed sanitary and storm sewers, including house laterals.
- All existing site improvements disturbed, damaged or destroyed shall be repaired or replaced to closely match preconstruction conditions.
- All fill including places under proposed storm and sanitary sewer lines and paved areas including trench backfills within and off the road right-of-way shall be compacted to 90 percent of maximum density as determined by the Modified AASHTO T-99 Compaction Test (ASTM D1557). All tests shall be verified by a Soils Engineering consultant with grading and backfilling operations. The compacted fill shall be free of rutting and shall be non-vibrating and non-pumping during proofrolling and compaction.
- The contractor shall prevent all storm, surface water, mud and construction debris from entering the existing sanitary sewer system. The contractor will be required to install a brick curb on the downstream side of the first new manhole constructed when connecting into existing sewers.
- All sanitary sewer flowlines and tops built without elevations furnished by the engineer will be the responsibility of the sewer contractor.
- It is the responsibility of the contractor to adjust all sanitary sewer manholes (that are affected by the development) to finish grade.
- Easements shall be provided for all sanitary sewers, storm sewers and all utilities on the record plat.
- All sanitary sewer construction and materials shall conform to the current construction standards of the Duckett Creek Sanitary District.
- The Duckett Creek Sanitary District shall be notified at least 48 hours prior to construction for coordination of inspection.
- All sanitary sewer building connections shall be designed so that the minimum vertical distance from the low point of the basement to the flowline of a sanitary sewer at the corresponding building connection shall not be less than the diameter of the pipe plus the vertical distance of 2% feet.
- All sanitary sewer manholes shall be watertight in accordance with Missouri Dept. of Natural Resources specification 10 CSR 20-8.120(6)(F) 1.
- All PVC sanitary sewer pipe shall conform to the requirements of ASTM D-3034 Standard Specification for PSM Polyvinyl Chloride Sewer Pipe, SDR-35 or equal, with "clean" 1/2 inch to 1 inch granular stone bedding uniformly graded. This bedding shall extend from 4 inches below the pipe to springline of pipe. Immediate backfill over pipe shall consist of same size "clean" or "minus" stone from springline of pipe to 6 inches above the top of pipe. Final backfill material shall be of suitable material removed from excavation except as other material is specified. Debris, frozen material, large rocks or stones, or other unstable materials shall not be used within 2 feet from top of pipe.
- All sanitary and storm sewer trench backfills shall be water jetted. Granular backfill will be used under pavement areas.
- All pipes shall have positive drainage through manholes. Flat invert structures not allowed.
- Epoxy Coating shall be used on all sanitary sewer manholes that receive pressurized mains.
- All creek crossings shall be lined with rip-rap as directed by District inspectors.
- Brick shall not be used on sanitary sewer manholes.
- Existing sanitary sewer service shall not be interrupted.
- Maintain access to existing residential driveways and streets.
- Pre-manufactured adapters shall be used at all PVC to DIP connections. Rubber boot / Mission-type couplings will not be allowed.
- Any permits, licenses, easements, or approvals required to work on public or private properties or roadways are the responsibility of the developer.
- Type N Lock-Type Cover and Locking Device (Lock-Lug) shall be used where lock-type covers are required.
- All sanitary sewer system work shall be conducted under the inspection of a representative of the District. All work may not require inspection but the District's representative may designate specific areas that must be inspected before the work is backfilled. All testing must be witnessed by the District's Inspector and the Contractor shall furnish all testing equipment as approved by the District. Testing shall include:
 - A mandrel test of all gravity sewers using a mandrel with a diameter that has a diameter 95% of the inside pipe diameter. If the mandrel test fails on any section of pipe, that section of pipe shall be uncovered and replaced. No expansion devices will be allowed to be used to "force" the pipe that is deformed back into round. Any string lines used in mandrel testing shall be removed after testing is completed. Deflection testing cannot be conducted prior to 30 days after final backfill.
 - An air pressure test of all gravity sewers to a pressure of 5 PSI with no observed drop in pressure during a test period of 5 minutes.
 - A vacuum test of all manholes for a period of 1 minute and the vacuum shall be 10" of mercury and may not drop below 9" of mercury at the end of the 1 minute test.

Revised October 2016

LINK-SEAL® MODULAR SEALS INSTALLATION INSTRUCTIONS

- Center the pipe, cable or conduit in wall opening or casing. Make sure the pipe will be adequately supported on both ends. More than 4 LINK-SEAL® modular seals are not intended to support the weight of the pipe.
- Loosen rear pressure plate with nut just enough so links move freely. Connect both ends of belt around the pipe.
- Check to be sure all bolt heads are facing the installer. Extra slack or sag is normal. Do not remove links if extra slack exists.
- Slide belt assembly into annular space. For larger size belts, start inserting LINK-SEAL® modular seal assembly at the 6 o'clock position and work both sides up toward the 12 o'clock position in the annular space.
- LS-200 through LS-916 Using a hand socket allen head or off-set wrench ONLY start at 12 o'clock. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner until links have been uniformly compressed. (Approx. 2 or 3 rotations)
- LS-925 through LS-650 Using a hand socket or off-set wrench ONLY start at 12 o'clock. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner until links have been uniformly compressed. (Approx. 2 or 3 rotations)
- Make 2 or 3 more passes at 4 turns per bolt. MAJULUM tightening all bolts clockwise until all sealing elements "bulge" around all pressure plates. On type 916 stainless steel bolts, hand tighten ONLY without power tool.
- If the seal doesn't appear to be correct using the instructions provided, call GPT at 1-800-425-2410.

Installation Notes: The LINK-SEAL® modular seal bolt heads are usually recessed below the wall opening or the edge of casing pipe and therefore a socket or offset wrench must be used.

LINK-SEAL® Modular Seal - Do's

- Make sure pipe is centered.
- Install the belt with the pressure plates evenly spaced.
- Install the exact number of links indicated in sizing charts.
- Check to make sure pipe is supported properly during backfill operation. NOTE: LINK-SEAL® modular seals are not intended to support the weight of the pipe.
- Make sure seal assembly and pipe surfaces are free from dirt.
- For tight fits, use non-polluting liquid detergent to assist installation.
- Don't use grease installing LINK-SEAL® modular seals.

LINK-SEAL® Modular Seal - Don'ts

- Don't install the belt with the pressure plates aimed in irregular directions (Diagonal).
- Don't install LINK-SEAL® modular seals where weld-beads or other irregular surfaces exist without consideration of the sealing requirements.
- Don't torque each bolt completely before moving on to the next.
- Don't use high speed power tools (500 rpm or more).
- Don't use power tools on LINK-SEAL® modular seal 316 stainless steel bolts.
- Don't use grease installing LINK-SEAL® modular seals.

Hand Tools: Review provided chart below. (Tools not provided) Tools can be purchased from hardware store, auto parts store, or home improvement store.

LINK-SEAL® Model	Top Bolt Type	Bolt Head Type
LS-200, LS-275	4mm Allen	Hex
LS-300, LS-315	6mm Allen	Hex
LS-325, LS-360, LS-390	1/2" Hex	Hex
LS-400, LS-410, LS-425, LS-475	17mm Hex	Hex
LS-500, LS-525, LS-575	19mm Hex	Hex
LS-615	30mm Hex	Hex
LS-650	19mm Hex	Hex

CORRECT **INCORRECT**

IF THE SEAL DOESN'T APPEAR TO BE CORRECT USING THE TECHNIQUE PROVIDED, CALL GPT AT 1-800-425-2410.

ALWAYS WEAR PPE WHEN USING LINK-SEAL® MODULAR SEALS

PROJECT TITLE:
AS-BUILT PLANS FOR
DYNAFLEX
8050 HAWK RIDGE TRAIL
O'FALLON, MISSOURI 63376

**ENGINEERING
PLANNING
SURVEYING**

221 Point West Blvd.
St. Charles, MO 63301
636-928-6562
FAX 636-928-1718

Issue Date: 01/04/2021

DISCLAIMER OF RESPONSIBILITY

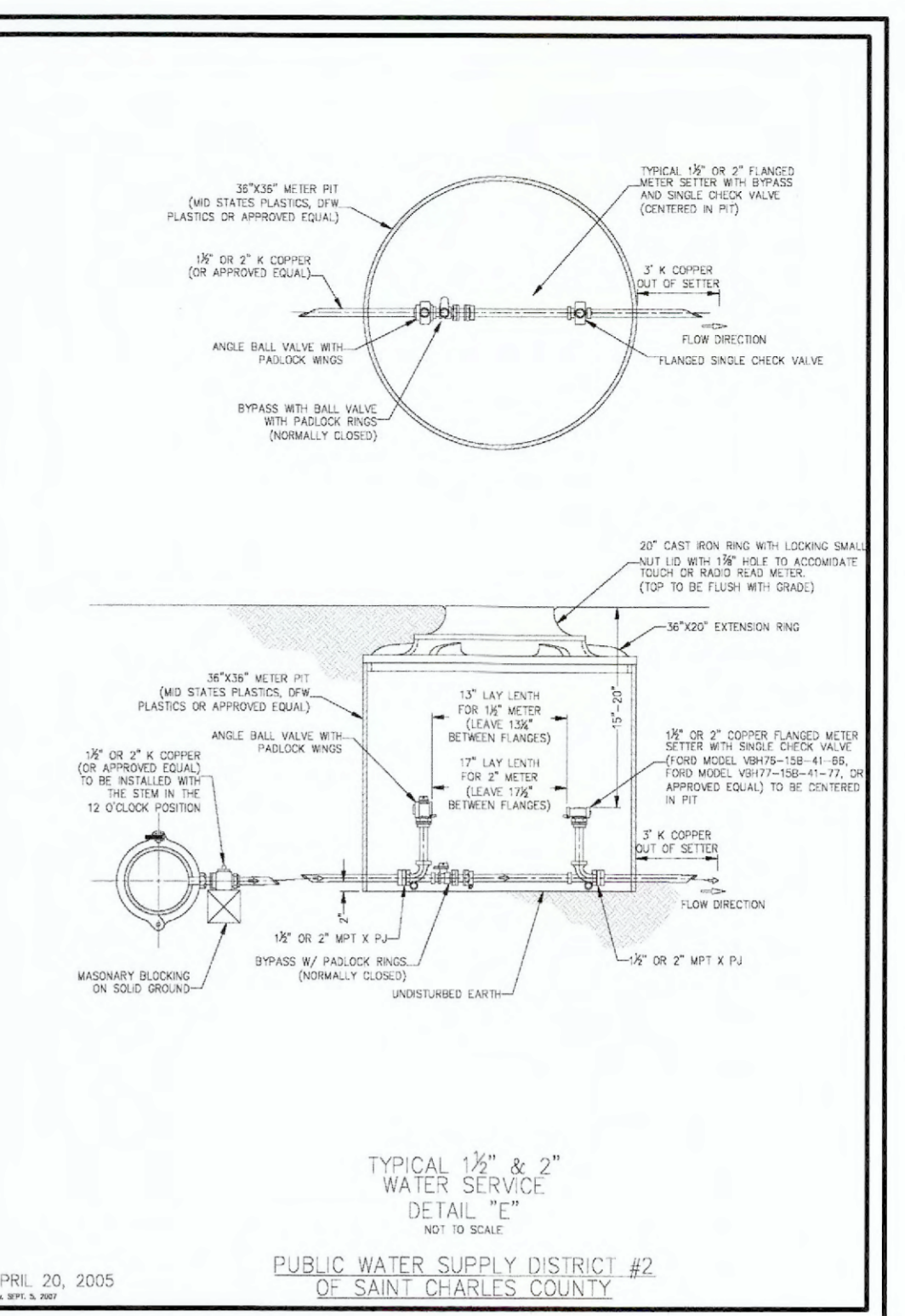
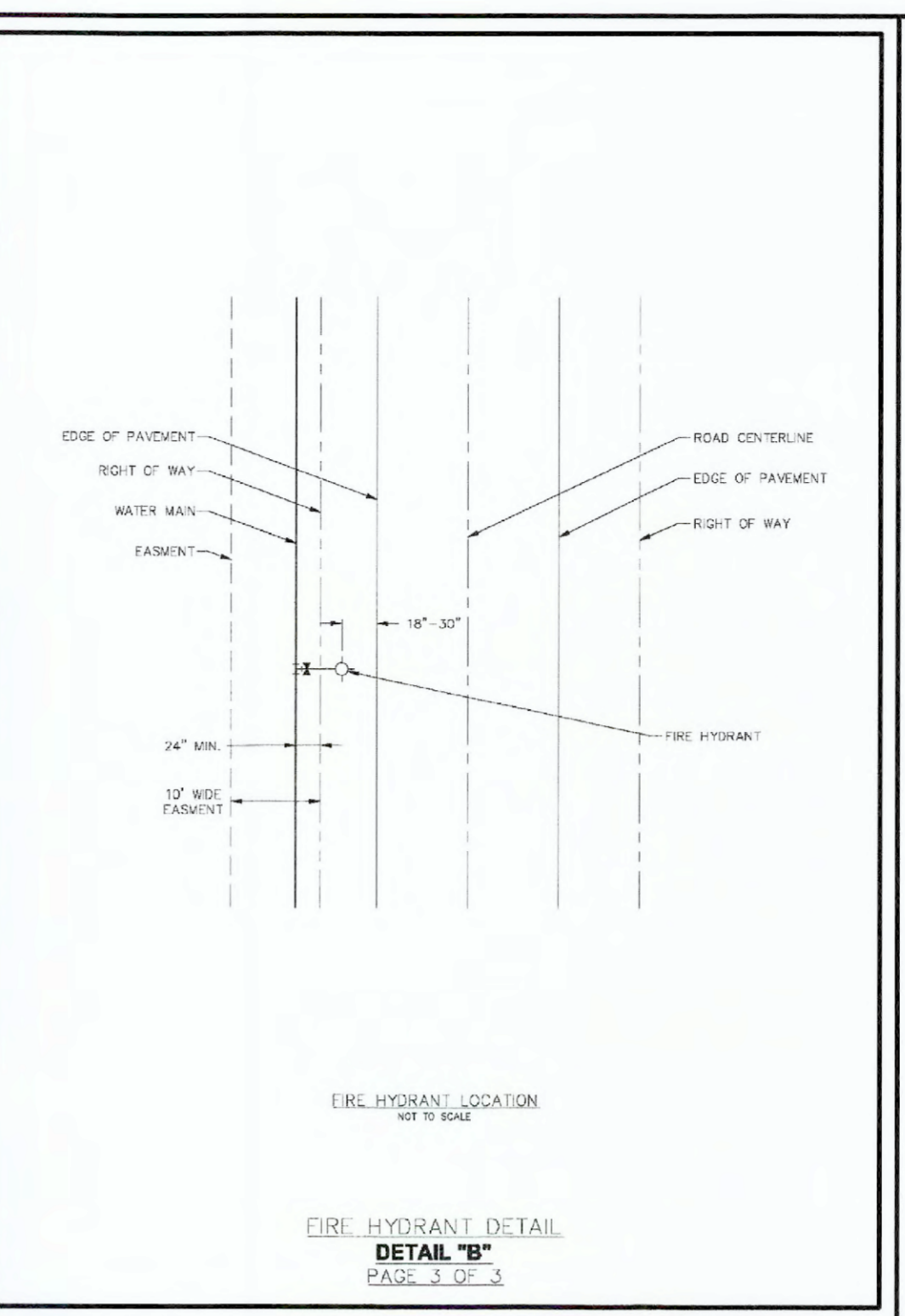
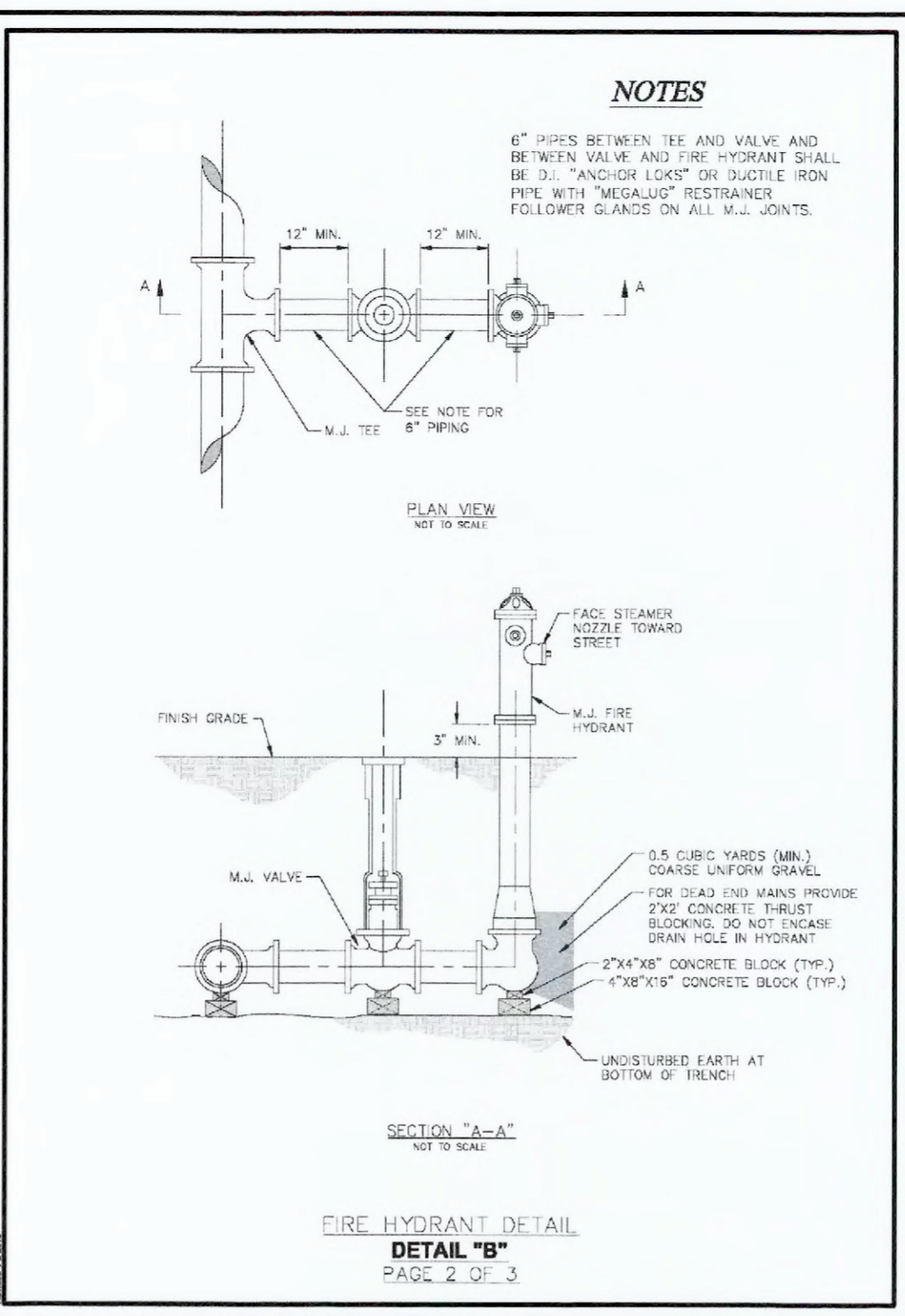
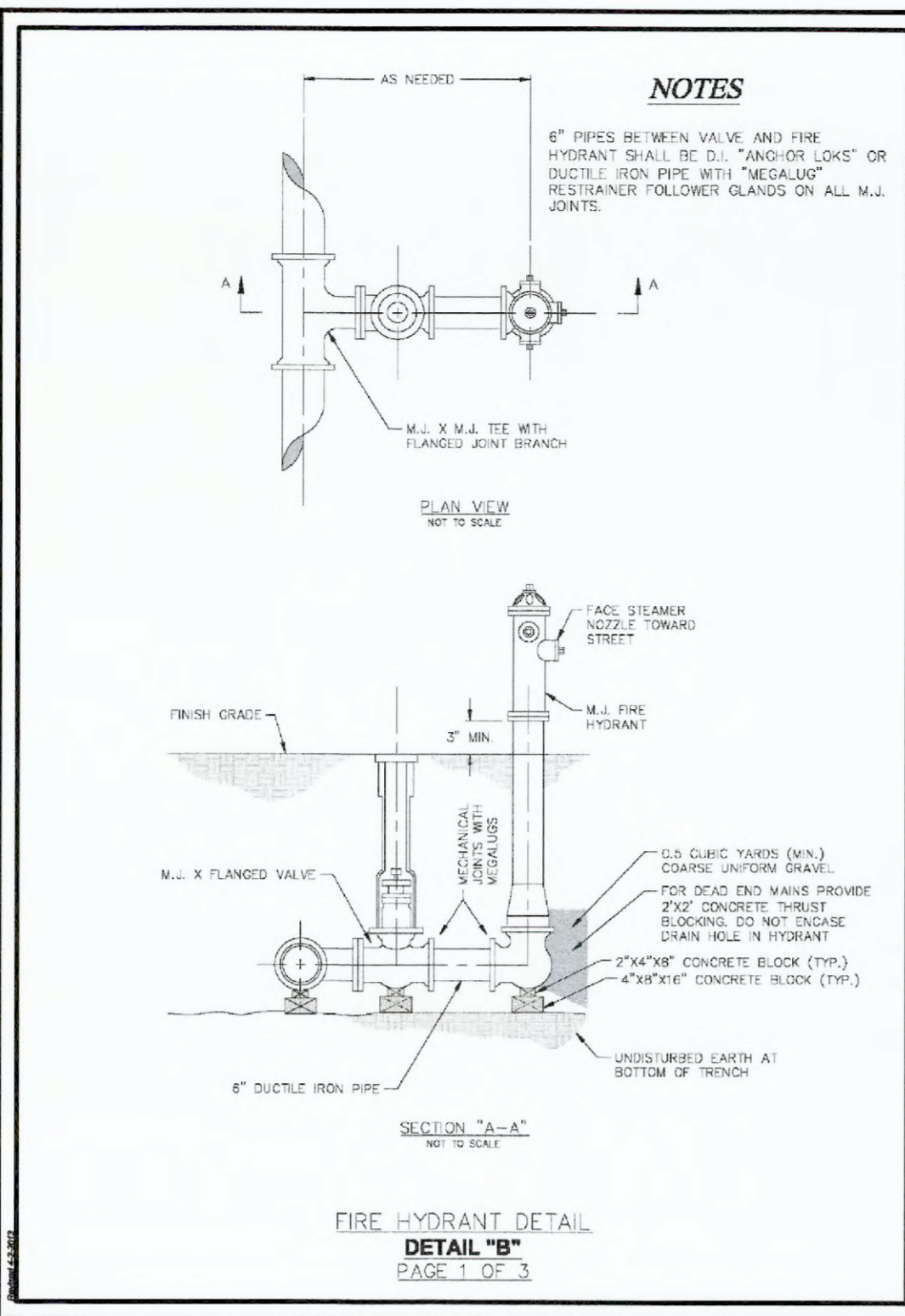
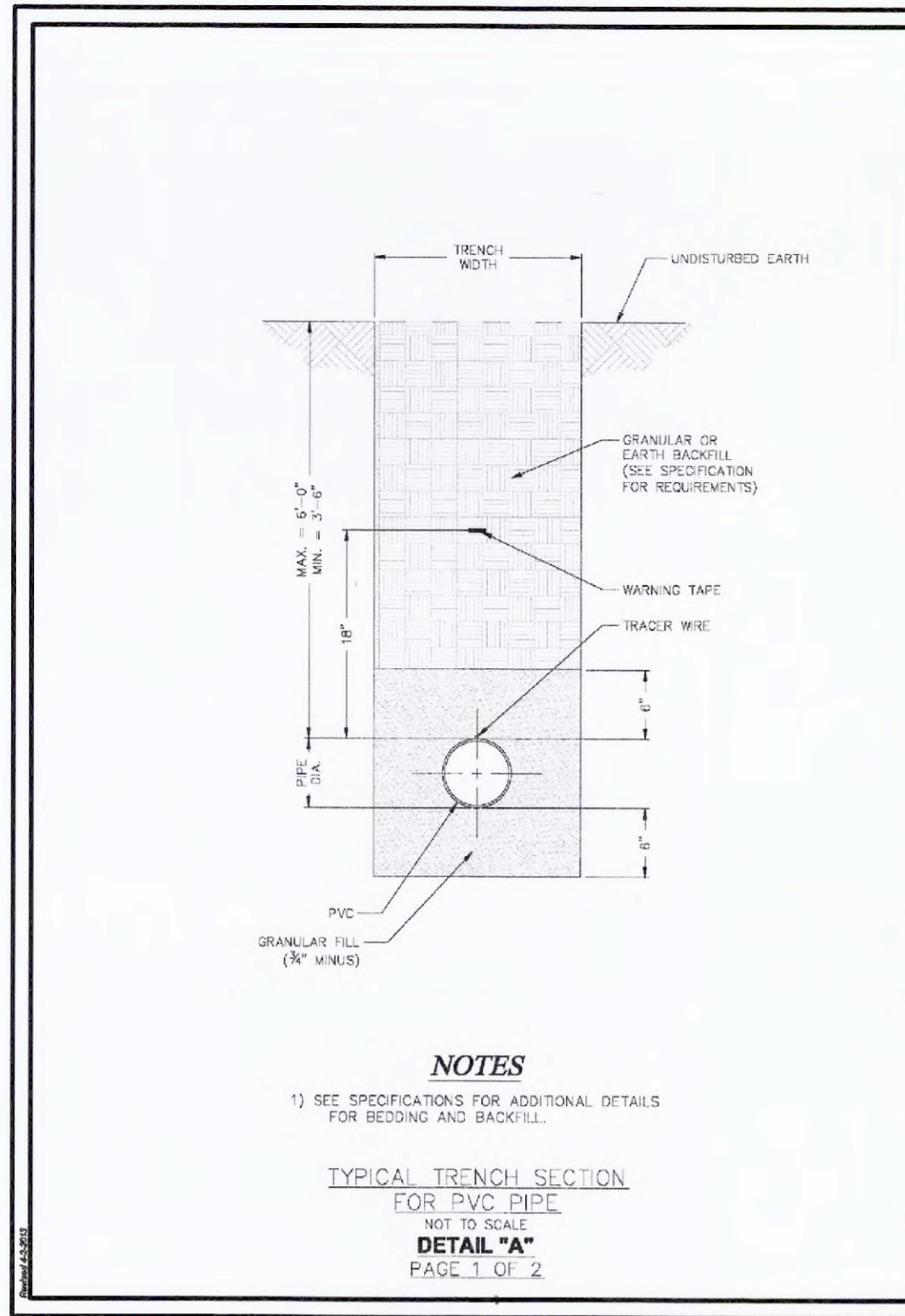
I hereby certify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

REVISIONS	
07/15/21	CITY COMMENTS REVS.

Developer / Owner:
Duke Property Management L.L.C.
10403 International Plaza
St. Ann, Missouri 63074
(314) 426-4020

SANITARY SEWER DETAILS

P+Z No. #19-003530
Approval Date 11-07-19
City No. #
Page No.
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PROJECT TITLE:
AS-BUILT PLANS FOR DYNAFLEX 8050 HAWK RIDGE TRAIL OF FALLON, MISSOURI 63376



DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authorized by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

KENNEDY VALVE KS-FW RESILIENT WEDGE VALVES

KENNEDY VALVE AWWA C509 Resilient Wedge Gate Valves
Meet or Exceed the Requirements of AWWA Standard C509 UL-262/FM-1120/1130 ULC-Underwriters of Canada

Size Range	Water Working Pressure psi	Seat Test psi	Hydraulic Seal Test psi
AWWA 2"-12"	250 Water Works	250 & 400	500
UL/FM 2"-12"	200 Fire Protection	250 & 400	500

Available in either non-rising stem or outside screw & yoke.

Accessories: Indicator Plates, Handholds, T-Handles, Extension Stems, Stem Guides, Chain Wheels, 2" Sq. Operating Nuts, Flangeless (non-rising stem), Flangeless (non-rising stem).

NOTE: 2" OS&Y Flanged and Threaded versions are UL Listed.

09/11/13 Kennedy Valve/KS-FW C509 3-1

EBBA IRON MEGA-COUPLING® Series 3800 Restrained Coupling

Features and Applications:
• Ductile Iron Pipe, 4 in. - 54 in.
• CSOS AWWA C900, PVC Pipe, 4 in. - 12 in.
• CSOS PVC Pipe, 14 in. - 36 in.
• Carbon Steel Pipe, 4 in. - 12 in.
• HDPE Pipe, 4 in. - 12 in.

Minimum 2 to 1 Safety Factor

MEGA-BOND® Restrained Coupling System
For more information regarding MEGA-BOND, refer to our web site at www.ebba.com

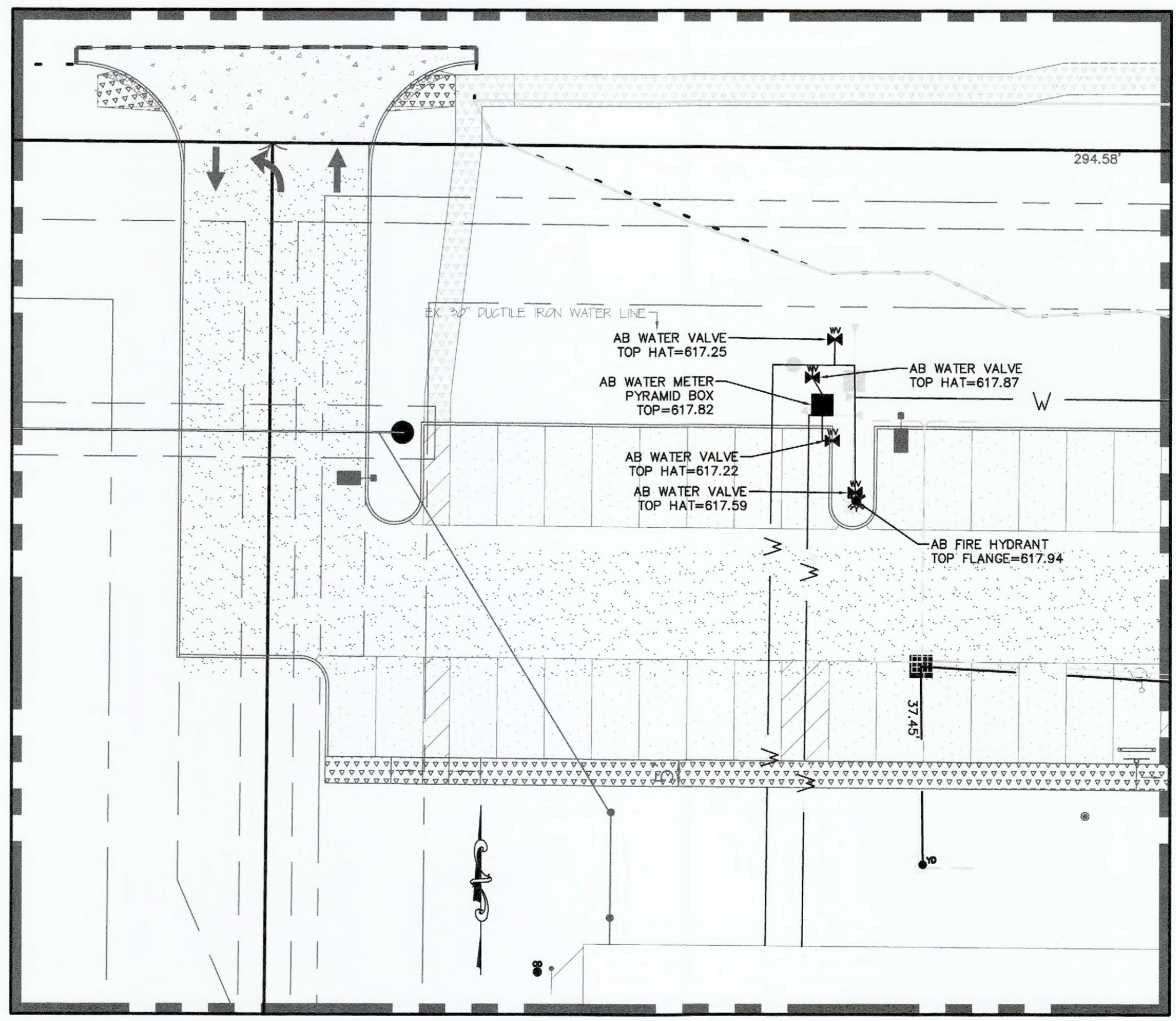
Constructed of:
• Restraint Ring: ASTM A536 Ductile Iron (DI)
• Coupling Sleeve: 4 - 12 in., ASTM A536 DI
• Coupling Sleeve: 14 in. and greater, Carbon Steel
• Double Ended Threaded Rod w/Nuts: Corrosion Resistant, low alloy high strength steel per AWS/AWWA C122/A21.1
• ANS/ASME 1111/A21.1
• ASTM D3000

Product Code	Material	Length	Weight	Pressure Rating (PSI)	Pressure Rating (MPa)
1	3504	36.00	350	100	100
2	3506	48.00	350	100	100
3	3508	60.00	350	100	100
4	3510	72.00	350	100	100
5	3512	84.00	350	100	100
6	3514	96.00	350	100	100
7	3516	108.00	350	100	100
8	3518	120.00	350	100	100
9	3520	132.00	350	100	100
10	3522	144.00	350	100	100
11	3524	156.00	350	100	100
12	3526	168.00	350	100	100
13	3528	180.00	350	100	100
14	3530	192.00	350	100	100
15	3532	204.00	350	100	100
16	3534	216.00	350	100	100
17	3536	228.00	350	100	100
18	3538	240.00	350	100	100
19	3540	252.00	350	100	100
20	3542	264.00	350	100	100
21	3544	276.00	350	100	100
22	3546	288.00	350	100	100
23	3548	300.00	350	100	100
24	3550	312.00	350	100	100
25	3552	324.00	350	100	100
26	3554	336.00	350	100	100
27	3556	348.00	350	100	100
28	3558	360.00	350	100	100
29	3560	372.00	350	100	100
30	3562	384.00	350	100	100
31	3564	396.00	350	100	100
32	3566	408.00	350	100	100
33	3568	420.00	350	100	100
34	3570	432.00	350	100	100
35	3572	444.00	350	100	100
36	3574	456.00	350	100	100
37	3576	468.00	350	100	100
38	3578	480.00	350	100	100
39	3580	492.00	350	100	100
40	3582	504.00	350	100	100
41	3584	516.00	350	100	100
42	3586	528.00	350	100	100
43	3588	540.00	350	100	100
44	3590	552.00	350	100	100

Special Notes For Use On HDPE Pipe
For use on 4 inch through 12 inch HDPE pipe only. The use of a pipe with differing wall thickness is not permitted for use on HDPE pipe. The stiffness must be used to accommodate the entire length of the restraint device. Pipe systems must be engineered to prevent movement during flexing, sliding or rotation.

EDMA products for HDPE are designed for underground pressurized fluid service and are pressure rated to match the pipe SDR pressure rating, do not exceed as appropriate for service temperature. Maximum test pressure limited to pipe rated pressure.

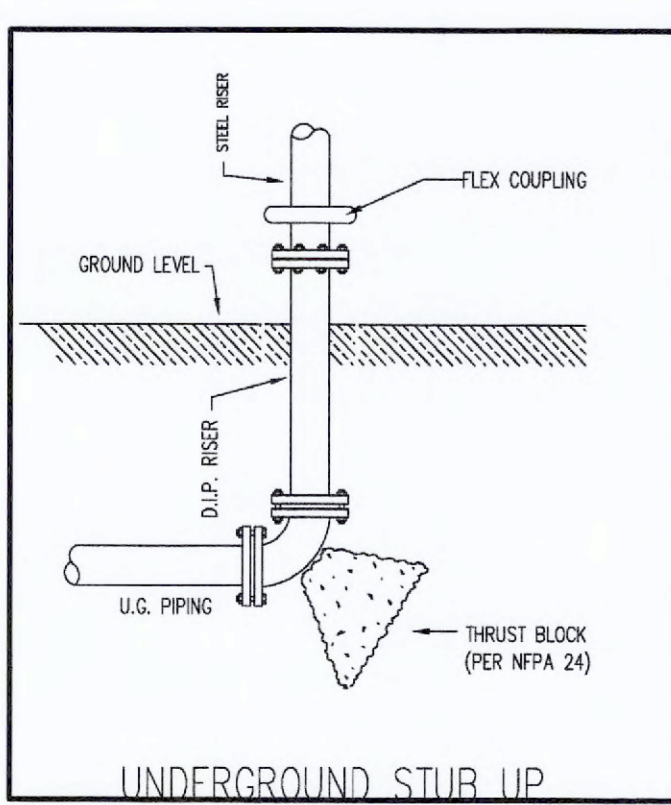
09/14/10 Copyright 2013 EBBA Iron, Inc. 09/14



- PUBLIC WATER SUPPLY DISTRICT NO. 2**
- ALL WATER MAINS, VALVES, FITTINGS, HYDRANTS, AND RELATED ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT ST. CHARLES COUNTY PWSO NO. 2 GUIDELINES AND SPECIFICATIONS AS APPROVED BY MDNR REVIEW NO. 6050805-13.
 - PWSO NO. 2 REQUIRES ONE (1) WEEK NOTICE PRIOR TO THE START OF CONSTRUCTION.
 - ALL METER PITS/VAULTS ARE TO BE INSTALLED IN GREEN SPACE PER PWSO NO. 2 SPECIFICATIONS.
 - ALL PRIVATE FIRE HYDRANTS MUST BE PAINTED RED PER PWSO NO. 2 SPECIFICATIONS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL MODOT AND CITY PERMITS REQUIRED TO WORK ALONG THE ROADWAYS. COPIES OF ALL REQUIRED PERMITS SHALL BE PROVIDED TO PWSO NO. 2 PRIOR TO CONSTRUCTION.
 - ALL OFFSITE RESTORATION MUST BE REPAIRED WITH SOD UNLESS OTHERWISE REQUESTED FROM THE PROPERTY OWNERS.
 - THE PROPOSED PRIVATE WATER SYSTEM WILL REQUIRE TESTING PER PWSO NO. 2 SPECIFICATIONS BEFORE IT IS ALLOWED INTO SERVICE.
 - ALL GRADING WORK COMPLETED OVER OR NEAR THE PWSO NO. 2 EXISTING 30" TRANSMISSION MAIN MUST BE PERFORMED WITH EXTREME CAUTION. ALL EXISTING FIRE HYDRANTS, INLINE VALVES AND TAPPING VALVES MUST REMAIN OR BE BROUGHT TO GRADE.

REVISIONS

DATE	CITY COMMENTS REVS.
07/15/21	



AS-BUILT PUBLIC UTILITY FINAL MEASUREMENTS

THE FOLLOWING UTILITIES HAVE BEEN LOCATED AND MEASURED AND THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS:

- STORM SEWERS, STORM SEWER LENGTHS, STORM SEWER PIPE SIZES, STORM SEWER FLOWLINES, DEPTHS OF STORM SEWER STRUCTURES AND TOPOGRAPHY OF RETENTION BASIN.
- SANITARY SEWERS, SANITARY SEWER LENGTHS, SANITARY SEWER PIPE SIZES, SANITARY SEWER FLOWLINES AND DEPTHS OF SANITARY SEWER STRUCTURES.
- FIRE HYDRANTS
- WATER VALVES
- LIGHT STANDARDS

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BAX ENGINEERING COMPANY, INC.
MARK E. COLLINS
MISSOURI PROFESSIONAL LAND SURVEYOR #2006000173



MISSOURI ONE CALL SYSTEM
CALL BEFORE YOU DIG!
1-800-DIG-RITE

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Developer / Owner:
Duke Property Management L.L.C.
10403 International Plaza
St. Ann, Missouri 63074
(314) 426-4020

P+Z No. #19-003530
Approval Date 11-07-19
City No. #

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