

SITE DEVELOPMENT PLANS
FOR
MARKET STREET CENTER
ADDRESS: M291 AND SW MARKET STREET
IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

FIRE ACCESS ROAD NOTE:

ALL FIRE ACCESS LANES SHALL BE HEAVY DUTY ASPHALT CAPABLE OF SUPPORTING 75,000-POUNDS.

OIL-GAS WELLS:

ACCORDING TO THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STATE OIL & GAS COUNCIL WELLS, LOCATED AT www.dnr.mo.gov/geology/geosrv/oilandgas.htm, THERE ARE NO OIL OR GAS WELLS ON THE PROPERTY SHOWN HEREON.

PRE-CONSTRUCTION MEETING NOTE:

THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH A FIELD ENGINEERING INSPECTOR PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200.

UTILITY COMPANIES:

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

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

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

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

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

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



Know what's below.
Call before you dig.



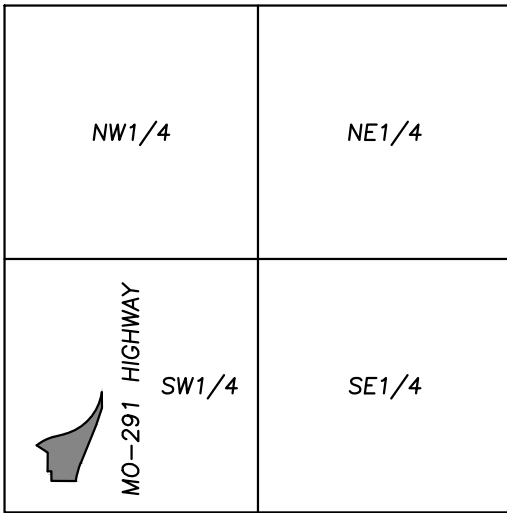
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PREPARED & SUBMITTED BY:

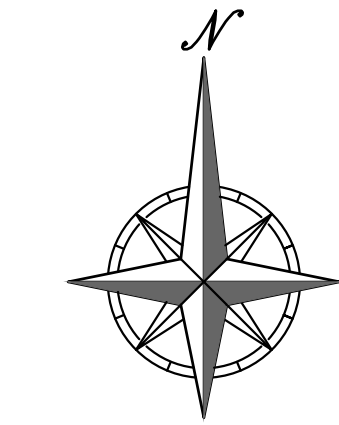
PHELPS ENGINEERING, INC.
1270 N. WINCHESTER
OLATHE, KS 66061
913-393-1155 OFFICE
913-393-1166 FAX
CONTACT: JUDD CLAUSSEN, P.E.

DEVELOPER:

FORESIGHT REAL ESTATE SERVICES, LLC
105 NORTH STEWART COURT, SUITE 225
LIBERTY, MO 64068
816-918-1612
CONTACT: JOHN R. DAVIS, JR.



VICINITY MAP
SEC. 29-47-31



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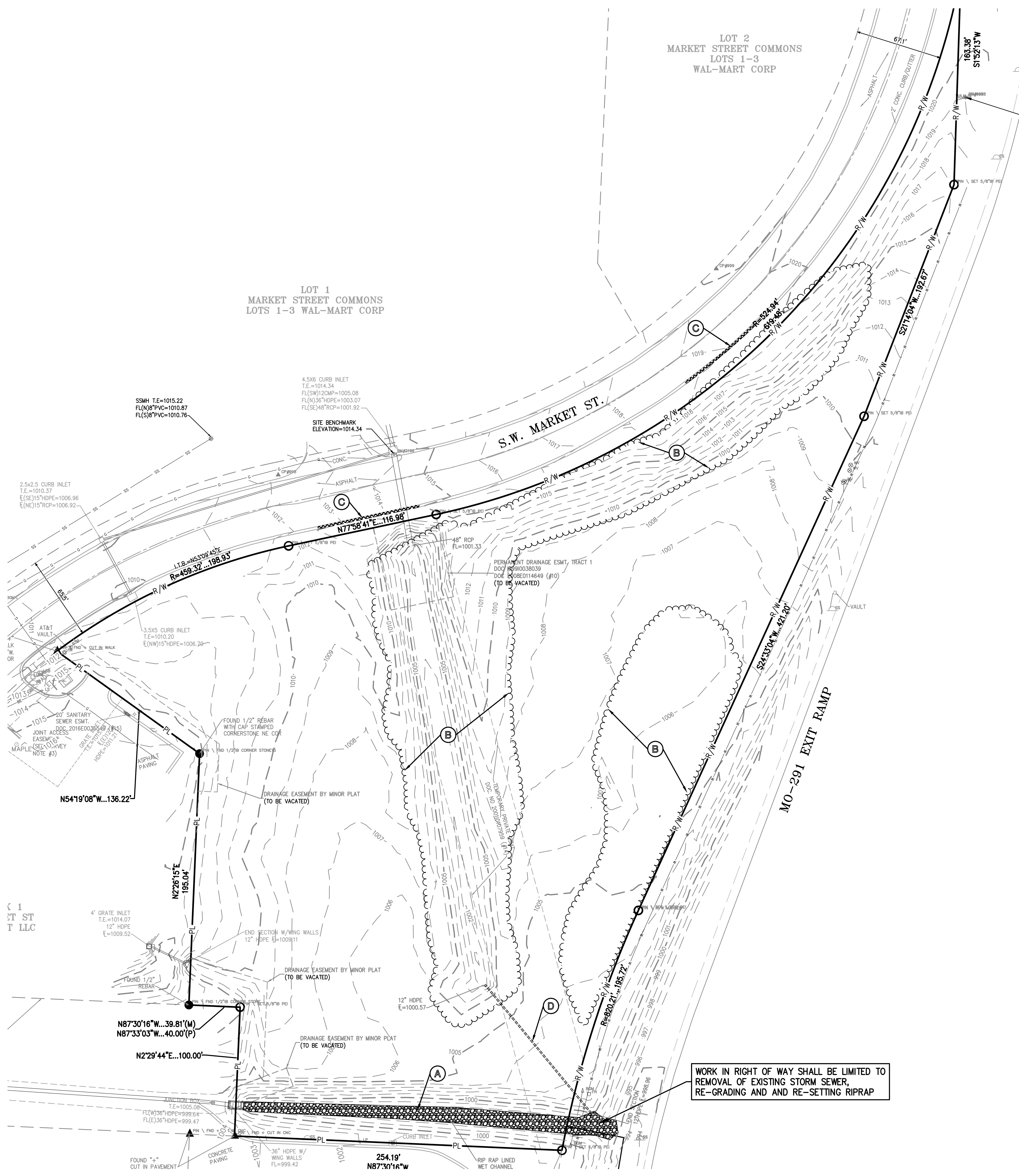
COVER SHEET
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	Revisions:	By	App.
CHECKED	10-14-21	1.	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
DATE	10-14-21	2.	04-06-22	REVISED PER CITY COMMENTS	SNH	DAF
CERTIFICATE OF AUTHORIZATION		3.	04-15-22	REVISED PER CITY COMMENTS	SNH	DAF
CERTIFICATE OF AUTHORIZATION						
CERTIFICATE OF AUTHORIZATION						
CERTIFICATE OF AUTHORIZATION						
CERTIFICATE OF AUTHORIZATION						
CERTIFICATE OF AUTHORIZATION						
CERTIFICATE OF AUTHORIZATION						

SHEET

C0

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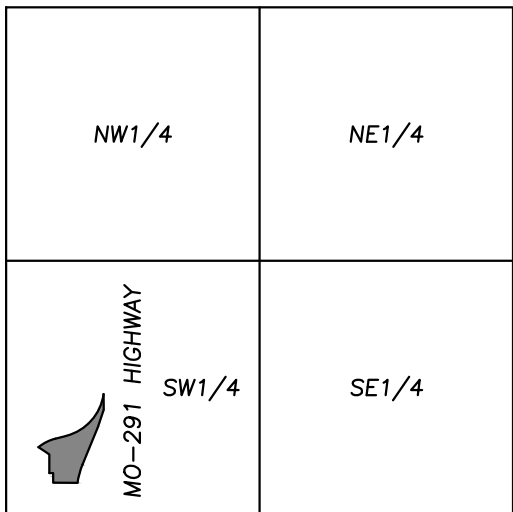


DEMOLITION KEY NOTES:

- (A)** THE CONTRACTOR SHALL REMOVE EXISTING RIPRAP LINER (TYP). CONTRACTOR TO DOCUMENT EXISTING RIPRAP WITH ENGINEER FOR POTENTIAL RE-USE.
- (B)** THE CONTRACTOR SHALL REMOVE ALL GROUND VEGETATION, TREES, SHRUBS, BRUSH AND DEBRIS SPECIFICALLY SHOWN TO BE REMOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF CLEARED ITEMS.
- (C)** THE CONTRACTOR SHALL REMOVE EXISTING CONCRETE CURB & GUTTER FOR NEW DRIVE ENTRANCE.
- (D)** THE CONTRACTOR SHALL REMOVE EXISTING 12" HDPE STORM SEWER.

LEGEND

- PL ——— PROPERTY LINE
- LL ——— LOT LINE
- R/W ——— RIGHT-OF-WAY
- ~~~~~ REMOVE EXISTING CURB & GUTTER
- [Hatched Box] EXISTING BUILDING TO BE REMOVED
- [Cross-hatched Box] EXISTING ASPHALT PAVEMENT TO BE REMOVED
- [Stippled Box] EXISTING CONCRETE PAVEMENT/SIDEWALK TO BE REMOVED
- [Dotted Box] EXISTING GRAVEL TO BE REMOVED
- [Tree Symbol] EXISTING TREE TO REMAIN
- [Tree Symbol] REMOVE TREE
- BT ——— EXISTING BURIED TELEPHONE
- CATV ——— EXISTING CABLE TELEVISION LINE
- FO ——— EXISTING FIBER OPTIC LINE
- W ——— EXISTING WATER LINE
- G ——— EXISTING GAS LINE
- BE ——— EXISTING BURIED ELECTRIC
- CHP ——— EXISTING OVERHEAD POWER LINE
- SS ——— EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- [Hydrant Symbol] EXISTING FIRE HYDRANT
- [Light Pole Symbol] EXISTING LIGHT POLE
- [Chain Link Fence Symbol] EXISTING CHAIN LINK FENCE



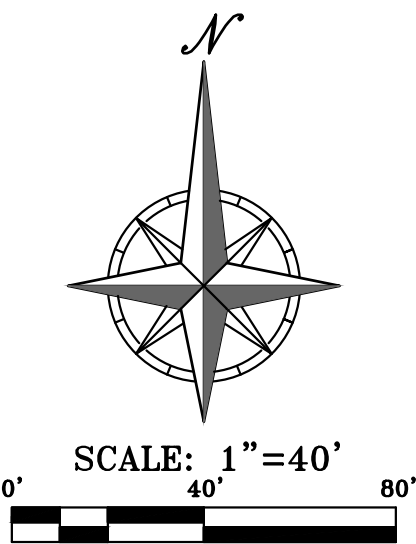
VICINITY MAP
SEC. 29-47-31



UTILITY NOTES:
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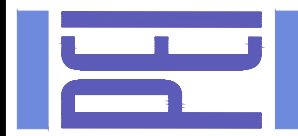
DEMOLITION NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL CURBS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE REMAINING PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.
- DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.
- CONTRACTOR MUST COORDINATE WITH OWNER PRIOR TO ANY CONSTRUCTION TO ESTABLISH CUSTOMER ACCESS AND TRAFFIC FLOW DURING ALL PHASES.



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DEMOLITION PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	2106339	No.	Date	By	App.
DATE	10-14-21	DRAWN	03-16-22	SNH	DAF
CHECKED	DAF	APPROVED	04-06-22	SNH	DAF
DATE OF AUTHORIZATION	04-15-22	REVISED	04-15-22	SNH	DAF
CERTIFICATE OF AUTHORIZATION	04-15-22	REVISED	04-15-22	SNH	DAF
LAND SURVEYING - LS-82					
ENGINEERING - E-361					
CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING - 200700128					
ENGINEERING - 200700339					

SHEET

C0.1



Know what's below.
Call before you dig.

LEGAL DESCRIPTION:

ALL THAT PART OF THE SOUTHWEST QUARTER OF SECTION 29, TOWNSHIP 47 NORTH, RANGE 31 WEST, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT TO THE NORTHEAST CORNER OF LOT 2, QUINCKP 20R, A PLATTED SUBDIVISION OF LAND IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, SAID POINT ALSO BEING ON THE WEST RIGHT-OF-WAY LINE OF MISSOURI ROUTE 291 (HEREINAFTER AS THE "HIGHWAY") AND BEING THE INTERSECTION OF SAID RIGHT-OF-WAY LINE OF SAID HIGHWAY WITH THE WEST LINE OF SAID LOT 2, TO AN ANGLE POINT ON THE EAST LINE OF LOT 1A, QUINCKP 20R, LOT 1A, A SUBDIVISION OF LAND IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE N 22°54' E, ALONG SAID EAST LINE OF SAID LOT 1A, A DISTANCE OF 100.00 FEET, TO THE NORTHEAST CORNER OF SAID LOT 1A; THENCE N 87°30' 16" W, ALONG THE NORTH LINE OF SAID LOT 1A, A DISTANCE OF 150.00 FEET, TO THE INTERSECTION OF SAID NORTH LINE OF SAID LOT 1A WITH THE WEST LINE OF SAID LOT 1, A SUBDIVISION IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI; THENCE N 22°15' E, ALONG THE EAST LINE OF SAID LOT 1, BLOCK 1, A DISTANCE OF 195.04 FEET, TO THE NORTHEAST CORNER OF SAID LOT 1, BLOCK 1; THENCE N 54°19'08" E, ALONG THE NORTHERLY LINE OF SAID LOT 1, BLOCK 1, A DISTANCE OF 136.22 FEET, TO THE NORTH MOST CORNER OF SAID LOT 1, BLOCK 1, FIRST STREET, A CITY STREET, SAID POINT ALSO BEING ON THE EASTERLY RIGHT-OF-WAY LINE OF SAID FIRST STREET, AS NOW ESTABLISHED; THENCE S 89°00' 00" E, ALONG THE EASTERLY RIGHT-OF-WAY LINE OF SAID FIRST STREET, FOLLOWING THREE (3) COURSES; THENCE ALONG A CURVE TO THE RIGHT HAVING AN INTERNAL TANGENT BEARING OF N 53°09'45" E, A RADIUS OF 459.32 FEET, AND AN ARC LENGTH OF 198.93 FEET; THENCE N 77°58'41" E, ALONG A DISTANCE OF 116.98 FEET; THENCE NORTHERLY ALONG A CURVE TO THE LEFT, BEING TANGENT TO THE LAST COURSE, HAVING A RADIUS OF 524.94 FEET, AND AN ARC LENGTH OF 106.17 FEET, TO THE INTERSECTION OF SAID CURVE WITH THE WEST LINE OF SAID HIGHWAY, AS NOW ESTABLISHED; THENCE SOUTHERLY ALONG SAID WEST RIGHT-OF-WAY LINE FOR THE FOLLOWING FOUR (4) COURSES; THENCE S 152°13' W, A DISTANCE OF 163.38 FEET; THENCE S 21°14'04" W, A DISTANCE OF 192.67 FEET; THENCE S 24°33'04" W, A DISTANCE OF 42.20 FEET; THENCE SOUTH ALONG A CURVE TO THE LEFT BEING TANGENT TO THE LAST DESCRIBED COURSE, HAVING A RADIUS OF 100.00 FEET, TO THE POINT OF BEGINNING, CONTAINING 219,027.21 SQUARE FEET, OR 5,028 ACRES, MORE OR LESS, OF UNPLATTED LAND.

AREA = ± 5.028 ACRES / ± 219,027.21 SQ.FT.

SITE PLAN NOTES:

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

SITE DIMENSION NOTES:

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

PAVEMENT MARKING AND SIGNAGE NOTES:

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

ZONING:

THIS PROPERTY IS ZONED CP-2, DEFINED AS PLANNED COMMUNITY COMMERCIAL DISTRICT.

OIL-GAS WELLS:

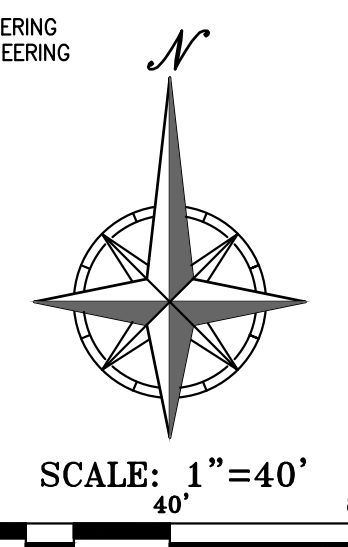
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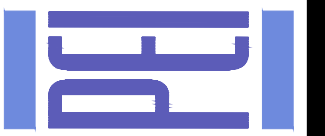
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PLANNING ENGINEERING IMPLEMENTATION



OVERALL SITE PLAN

MARKET STREET CENTER
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	Revisions:	By	App
1.	03-16-22	1	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
2.	04-06-22	2	04-06-22	REVISED PER CITY COMMENTS	SNH	DAF
3.	04-15-22	3	04-15-22	REVISED PER CITY COMMENTS	SNH	DAF
CHANGED DATE OF APPROVAL KEANS DATE OF APPROVAL CHANGED PERMITS TO BE ENGINEERING "E-36" CERTIFICATE OF AUTHORIZATION AND SURVEYING 200/00128 ENGINEERING 200/00268						

SHEET

C1

LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP



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SITE PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SITE KEY NOTES:

- (A) CONSTRUCT PRIVATE TYPE CG-1 CONCRETE CURB & GUTTER, TYP. SEE DETAIL GEN-4 ON SHEET C8.2.
- (B) CONSTRUCT PRIVATE CONCRETE SIDEWALK, TYP. SEE "PRIVATE CONCRETE SIDEWALKS (NON-REINFORCED)" DETAIL ON SHEET C8.
- (C) CONSTRUCT PRIVATE SIDEWALK CURB RAMP (OMIT DETECTABLE WARNING). SEE "PRIVATE SIDEWALK RAMP" DETAIL ON SHEET C8.1.
- (D) CONSTRUCT ELECTRICAL UTILITY PAD (RE: EVERY WORKORDER).
- (E) INSTALL ACCESSIBLE PAVEMENT MARKINGS PER ADA SPECIFICATIONS. SEE "ACCESSIBLE PARKING SPACE DETAIL" DETAIL ON SHEET C8.1.
- (F) INSTALL ACCESSIBLE PARKING SIGN. SEE "ACCESSIBLE SIGN IN GRASS AREA" DETAIL ON SHEET C8.1.
- (G) INSTALL VAN ACCESSIBLE PARKING SIGN. SEE "ACCESSIBLE SIGN IN GRASS AREA" DETAIL ON SHEET C8.1.
- (H) CONSTRUCT PRIVATE 6" MONOLITHIC CONCRETE CURB. SEE "MONOLITHIC CONCRETE CURB DETAIL" DETAIL ON SHEET C8.
- (I) INSTALL SCORED CONCRETE CROSSWALK. SEE "CROSSWALK DETAIL" ON SHEET C8.1.
- (J) INSTALL TRASH ENCLOSURE (RE: ARCH PLANS).
- (K) INSTALL MONUMENT SIGN (RE: ARCH PLANS).
- (L) INSTALL CONCRETE COMMERCIAL ENTRANCE. SEE DETAIL GEN-1 ON SHEET C8.2.
- (M) CONSTRUCT PUBLIC SIDEWALK RAMP (OMIT DETECTABLE WARNING) SEE SHEET C2.1 FOR SITE SPECIFIC DESIGN INFORMATION.
- (N) CONSTRUCT PUBLIC CONCRETE SIDEWALK. SEE DETAIL GEN-2 ON SHEET C8.2.
- (O) INSTALL STANDARD ASPHALT PAVEMENT. SEE "STANDARD ASPHALT PAVING" DETAIL ON SHEET C8.
- (P) INSTALL HEAVY DUTY ASPHALT PAVEMENT. SEE "HEAVY DUTY ASPHALT PAVING" DETAIL ON SHEET C8.
- (Q) INSTALL CONCRETE PAVEMENT. SEE "CONCRETE PAVING" DETAIL ON SHEET C8.
- (R) INSTALL LANDSCAPE RETAINING WALL. SEE "LANDSCAPE RETAINING WALL" DETAIL ON SHEET C8.4.

BUILDING & LOT DATA

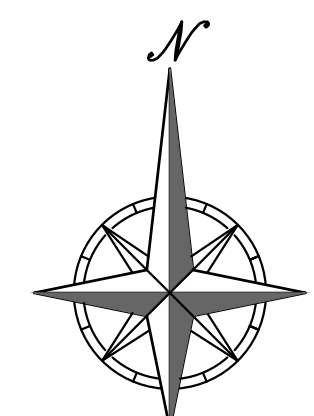
Zoning	CP-2
Lot 1	
Site Area	1.85 Ac.
Retail Building	
No. of Stories	1 Story
Building S.F.	7,200 S.F.
Building Footprint	7,200 S.F.
FAR / Building Coverage	0.0893
Impervious Area	0.75 Ac. (41%)
Open Space	1.10 Ac. (59%)

PARKING SUMMARY

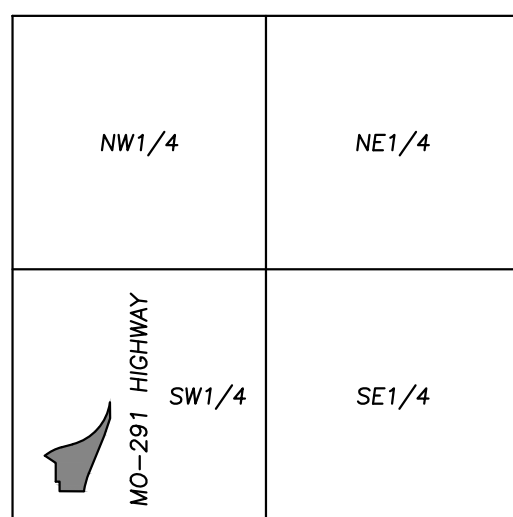
Lot 1	
Parking Required:	
Retail Sales (5 / 1,000 S.F.)	
Total Required Parking	36 Spaces
Parking Provided:	
Standard Parking Provided	48 Spaces
Accessible Parking Spaces Provided	3 Spaces
Total Provided Parking	51 Spaces
Parking Lot, Aisles, and Drives Area	39,000 SF
Parking Lot Landscape Islands, Strips, Planting Areas	14,000 SF (36%)

LEGEND

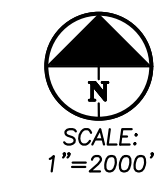
- PL PROPERTY LINE
- LL LOT LINE
- R/W RIGHT-OF-WAY
- 2' CURB & GUTTER
- B/L BUILDING SETBACK LINE
- P/S PARKING SETBACK LINE
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK



SCALE: 1"=20'
0' 20' 40'



VICINITY MAP
SEC. 29-47-31



SCALE:
1"=2000'

LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP

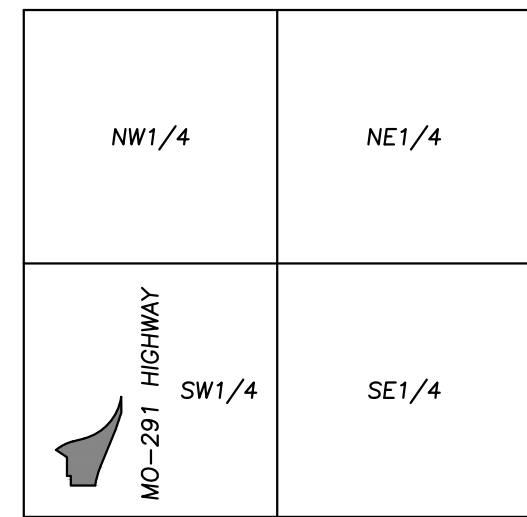
S.W. MARKET ST.

LOT 1
1.85 AC.

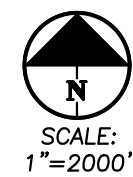
TENANT A
4,200 S.F.

TENANT B
3,000 S.F.

LOT 2
2.58 AC.

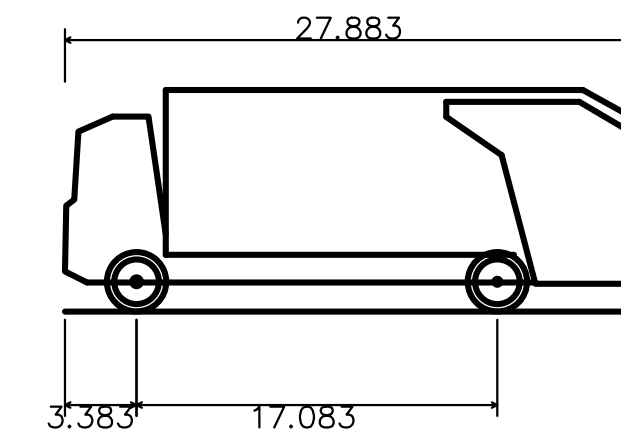


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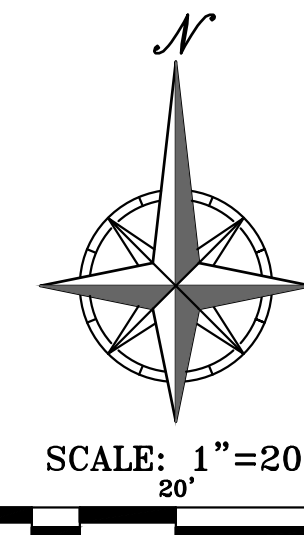
UTILITY NOTES:
VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN.
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LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN
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Hino 338 M + Wayne Royal GT14 Refuse Truck
Overall Length 27.883ft
Overall Width 8.042ft
Overall Body Height 10.488ft
Min Body Ground Clearance 1.318ft
Track Width 8.042ft
Lock-to-lock time 6.00s
Curb to curb Turning Radius 27.400ft

LEGEND

- PL PROPERTY LINE
- LL LOT LINE
- R/W RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- B/L BUILDING SETBACK LINE
- P/S PARKING SETBACK LINE
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK



PHELPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1165
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TRUCK TURN PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	Revisions:	By	App.
DATE: 10-14-21	DRAWNMR	1.	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
CHECKED: DAF	APPROVED: JDC	2.	04-06-22	REVISED PER CITY COMMENTS	SNH	DAF
CERTIFICATE OF AUTHORIZATION		3.	04-15-22	REVISED PER CITY COMMENTS	SNH	DAF
LAND SURVEYING - LS-82						
ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING-200701028						
ENGINEERING-200700039						

SHEET

C1.2

\\phelps-server\projects\p\210639\dwg\permit plans\truck 2.dwg Layout1 1 Apr 15, 2022 - 3:55pm Daniel Finn

LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP

LOT 2
2.58 AC.

LOT 1
1.85 AC.

TENANT A
4,200 S.F.

TENANT B
3,000 S.F.

S.W. MARKET ST.

MO-291 EXIT RAMP



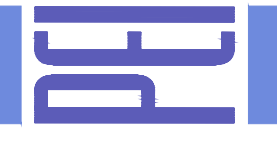
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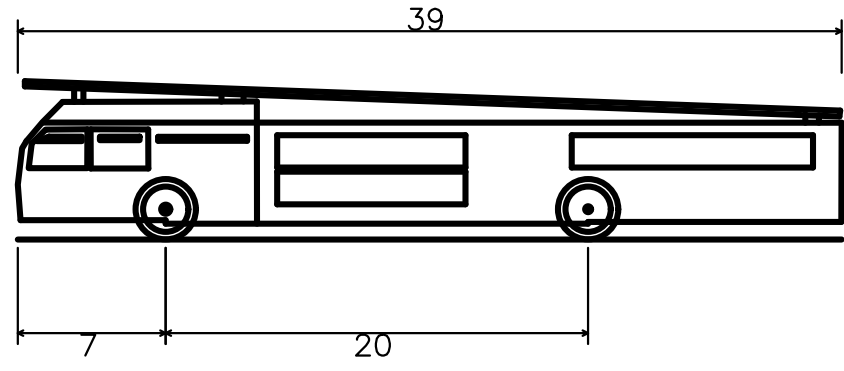


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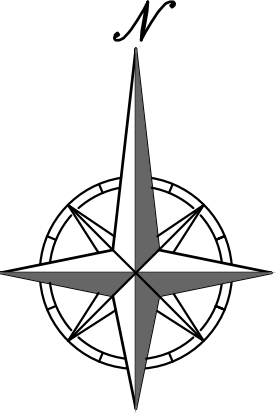
TRUCK TURN PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



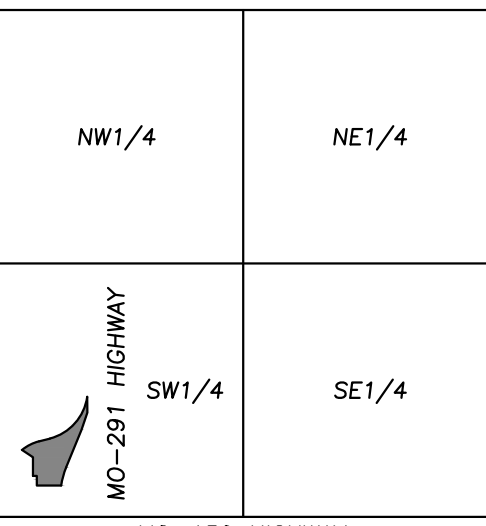
Aerial Fire Truck
Overall Length 39.000ft
Overall Width 8.167ft
Overall Body Height 7.500ft
Min Body Ground Clearance 0.750ft
Track Width 8.167ft
Lock-to-lock time 5.00s
Max Wheel Angle 45.00°

LEGEND

- PL PROPERTY LINE
- LL LOT LINE
- R/W RIGHT-OF-WAY
- 2' CURB & GUTTER
- 6" CURB
- B/L BUILDING SETBACK LINE
- P/S PARKING SETBACK LINE
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD ASPHALT PAVEMENT
- PROPOSED BUILDING
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK



SCALE: 1"=20'
0' 20' 40'



VICINITY MAP
SEC. 29-47-31

PROJECT NO.	210639	No.	Date	Revisions:	By	App.
DATE: 10-14-21	DRAWNMR	1.	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
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LAND SURVEYING - LS-82						
ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING-200701028						
ENGINEERING-200700039						

SHEET

C1.3

LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP

S.W. MARKET ST.

LOT 1
1.85 AC.

TENANT A
4,200 S.F.

TENANT B
3,000 S.F.

LOT 2
2.58 AC.

MO-291 EXIT RAMP



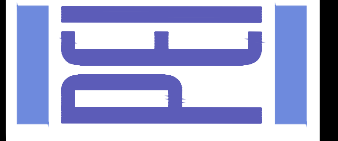
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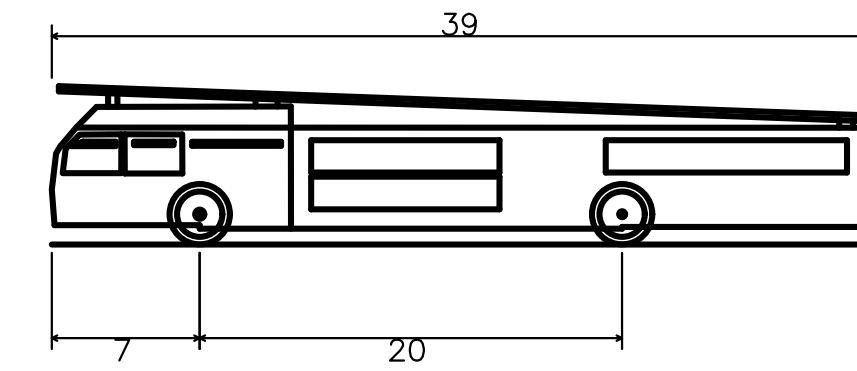


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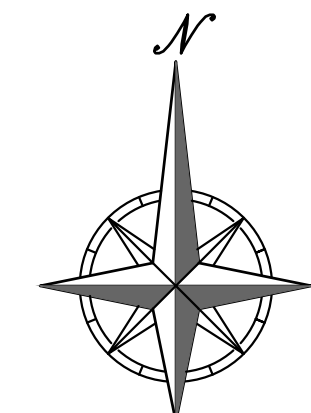
TRUCK TURN PLAN
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CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



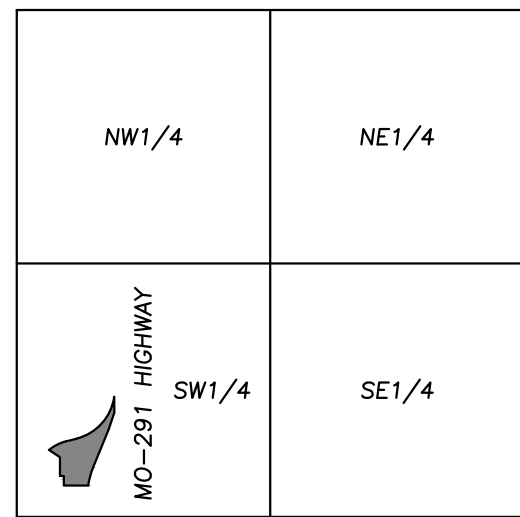
Aerial Fire Truck
Overall Length 39.000ft
Overall Width 8.167ft
Overall Body Height 7.500ft
Min Body Ground Clearance 0.750ft
Track Width 8.167ft
Lock-to-lock time 5.00s
Max Wheel Angle 45.00°

LEGEND

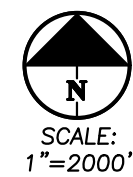
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SCALE: 1"=20'
0' 20' 40'



VICINITY MAP
SEC. 29-47-31



SCALE: 1"=2000'

PROJECT NO.	210639	No.	Date	Revisions:	By	App.
DATE: 10-14-21	DRAWNMR	1.	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
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ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING-200701028						
ENGINEERING-200700039						

SHEET

C1.4



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LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP

LOT 2
MARKET STREET COMMONS
LOTS 1-3
WAL-MART CORP

SITE GRADING NOTES:

- CONTOURS AND ELEVATIONS: Existing and proposed contours are shown on plans at one foot (1') contour intervals, unless otherwise noted. Proposed contours and elevations shown represent approximate finish grade. Contractor shall hold down subgrades to allow for pavement and sub-base thicknesses.
- If the contractor does not accept existing topography as shown on the plans, without exception, he shall have made at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
- CLEARING AND GRUBBING: Prior to beginning preparation of subgrade, all areas under pavements or building shall be stripped of all topsoil, vegetation, large rock fragments (greater than 6 inches in any dimension) and any other deleterious material. The actual stripping depth should be based on visual examination during construction and the results of proof-rolling operations. The root systems of all trees (not designated to remain) shall be removed in their entirety. Stripping materials shall not be incorporated into structural fills.
- TOPSAIL STRIPPING: Prior to the start of site grading, the contractor shall strip all topsoil from areas to be graded, and stockpiled at a location on or adjacent to the site as directed by the owner. At completion of grading operations and related construction, the contractor will be responsible for redistribution of topsoil over all areas disturbed by the construction activities. Topsoil shall be placed to a minimum depth of six inches (6") and in accordance with specifications for landscaping. At that time, and prior to the installation of landscaping or irrigation, all topsoil graded areas shall be visually inspected and accepted by the owner and ILL.
- Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade. Contractor shall assure positive drainage away from buildings for all natural and paved areas.
- SUBGRADE PREPARATION: Prior to placement of new fill material, the existing subgrade shall be proofrolled and approved under the direction of the Geotechnical Engineer or his representative.
- PROOFROLLING: Subsequent to completion of stripping and over-excavation, all building and pavement areas to receive engineered fill should be systematically proof-rolled using a tandem axle dump truck loaded to approximately 20,000 pounds per axle. Also, any finished subgrade areas to receive paving shall be proof-rolled within 48 hours of paving. Unsuitable soils that are detected and that can not be recompacted should be over-excavated and replaced with controlled structural fill.
- EARTHWORK:
 - GEOTECHNICAL: All earthwork shall conform to the recommendations of the Geotechnical report. Said report and its recommendations are herein incorporated into the project requirements by reference. Prior to beginning construction, the contractor shall obtain a copy of and become familiar with the geotechnical report. Unless specifically noted on the plans, the recommendations in the geotechnical report are hereby incorporated into the project requirements and specifications.
 - SURFACE WATER: Surface water shall be intercepted and diverted during the placement of fill.
 - FILLS: All fills shall be considered controlled or structural fill and shall be free of vegetation, organic matter, topsoil and debris. In areas where the thickness of the engineered fill is greater than five feet, fast building and pavement construction should not commence until so authorized by the on-site geotechnical engineer to allow for consolidation.
 - BUILDING SUBGRADE: As specified in the Geotechnical Engineering Report, the upper section of building subgrade shall consist of Low Volume Change (LVC) material defined as approved, compacted granular fill or low to moderate plasticity cohesive soil materials stabilized with Class C Flyash. Granular fill shall consist of compacted granular materials with a maximum particle size of two (2) inches or less, such as limestone screenings. Refer to geotechnical report for complete requirements.
 - EXISTING SLOPES: Where fill material is to be placed on existing slopes greater than 5:1 (horizontal to vertical), existing slope shall be benched providing a minimum vertical face of twelve inches (12"). The benches should be cut wide enough to accommodate the compaction equipment. Fill material shall be placed and compacted in horizontal lifts not exceeding nine inches (9") (loose lift measurement), unless otherwise approved by the Geotechnical Engineer.
 - COMPACTION REQUIREMENTS: The upper 9 inches of pavement subgrade areas shall be compacted to a minimum density of ninety five percent (95%) of the material's maximum dry density as determined by ASTM D698 (standard proctor compaction). The moisture content at the time of placement and compaction shall be within a range of 0% below to 4% above optimum moisture content as defined by the standard proctor compaction procedure. The moisture contents shall be maintained within this range until completion of the work. Where compaction of earth fill by a large roller is impractical or undesirable, the earth fill shall be hand compacted with small vibrating rollers or mechanical tampers.
- All cut or fill slopes shall be 3:1 or flatter. All asphalt parking areas shall be a minimum of 1% slope but not more than 5% slope unless otherwise noted. All pavements within ADA parking areas shall not exceed 2% total slope. All grades around building shall be held down 6" from finish floor and slope away another 6" in 10 feet. Contractor shall notify engineer prior to final subgrade construction of any areas not within this slope requirement.
- TESTING AND INSPECTION: Owner's Independent Testing Laboratory (ITL) shall make tests of earthwork during construction and observe the placement of fills and other work performed on this project to verify that work has been completed in accordance with Geotechnical Engineering Report, Project Specifications and within industry standards. The ITL will be selected by the owner and the cost of testing will be the owner's responsibility.
- CLASSIFICATION: All excavation shall be considered unclassified. No separate or additional payments shall be made for rock excavation.
- PERMANENT RESTORATION: All areas disturbed by earthwork operations shall be sodded, unless shown otherwise by the landscaping plan or erosion control plan.
- UTILITIES: The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
- LAND DISTURBANCE: The contractor shall adhere to all terms & conditions as outlined in the EPA or applicable state N.P.D.E.S. permit for storm water discharge associated with construction activities. Refer to project S.W.P.P. requirements.

FLOOD NOTE:

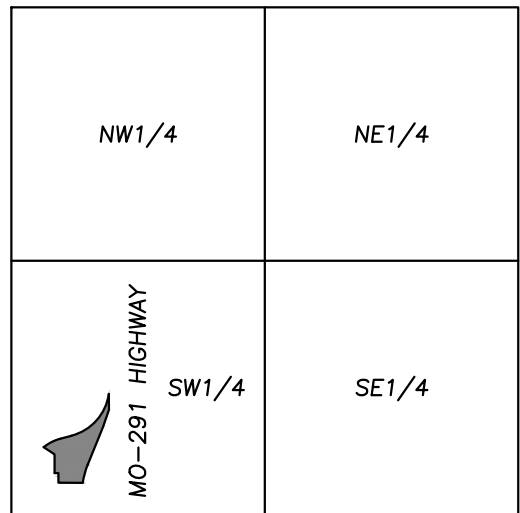
THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C04366, AND DATED JANUARY 20, 2017.

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MDOOT VRS
1. FOUND "1" CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF ADJACENT PROPERTY.
ELEVATION = 987.14
2. SET "1" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT PARKING LOT TO THE NORTH AT NORTHWEST CORNER OF SURVEYED PROPERTY.
ELEVATION = 990.19

LEGEND

- PL PROPERTY LINE
- LL LOT LINE
- R/W RIGHT-OF-WAY
- 2' CURB & GUTTER
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION
- LG LIP OF GUTTER
- TC TOP OF CURB
- SW SIDEWALK
- ME MATCH EXISTING
- HP HIGH POINT
- LP LOW POINT
- P TOP OF PAVEMENT
- TE TOP OF STRUCTURE
- GR GROUND ELEVATION
- BS BOTTOM OF STEPS
- TS TOP OF STEPS
- BW BOTTOM OF WALL
- TW TOP OF WALL
- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- PROPOSED RETAINING WALL



MO-150 HIGHWAY
VICINITY MAP
SEC. 29-47-31



Earthwork Summary 291 and SW Market Street 2/1/2022

Raw Excavation	6,238 Cu. Yds.
In Place Compaction (+15%)	-11,052 Cu. Yds.
Pavement Adjustment	747 Cu. Yds. (assume 10" of additional excavation)
Building Adjustment	533 Cu. Yds. (assume 24" of additional excavation)
On Site Net	-3,534 Cu. Yds.

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



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OVERALL GRADING PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	Revisions:	By	App.
DATE: 10-14-21	DRAWNMR	1.	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
CHECKED: DAF	APPROVED: JOC	2.	04-06-22	REVISED PER CITY COMMENTS	SNH	DAF
CERTIFICATE OF AUTHORIZATION		3.	04-15-22	REVISED PER CITY COMMENTS	SNH	DAF
LAND SURVEYING - LS-82						
ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING - 200701028						
ENGINEERING - 200700329						

SHEET

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\\phelps-servers\projects\p\210639.dwg User: daniel finn Date: 04/15/2022 Time: 3:56pm Layout: 1



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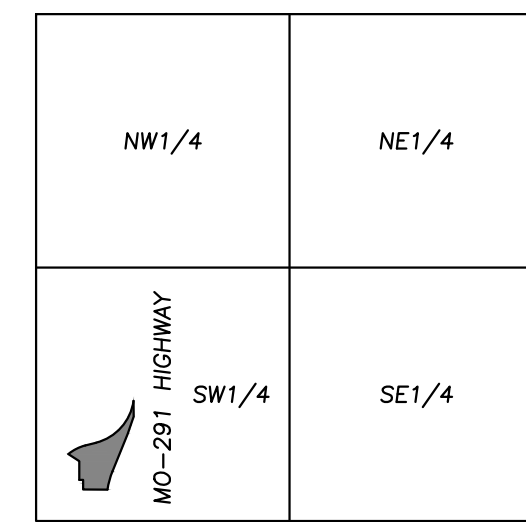
GRADING SHALL NOT EXCEED
3:1 SLOPE AT ANY LOCATION

FLOOD NOTE:

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BENCHMARK:

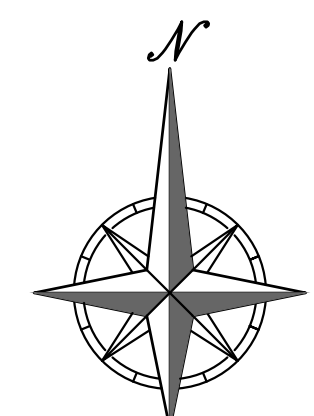
VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS
1. FOUND "C" CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF ADJACENT PROPERTY.
ELEVATION = 987.14
2. SET "C" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT PARKING LOT TO THE NORTH AT NORTHWEST CORNER OF SURVEYED PROPERTY.
ELEVATION = 990.19



VICINITY MAP
SEC. 29-47-31

LEGEND

- PL PROPERTY LINE
- LL LOT LINE
- R/W RIGHT-OF-WAY
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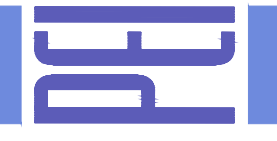


SCALE: 1"=10'
0' 10' 20'



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ENLARGED GRADING PLAN

MARKET STREET CENTER
M291 AND SW MARKET STREET

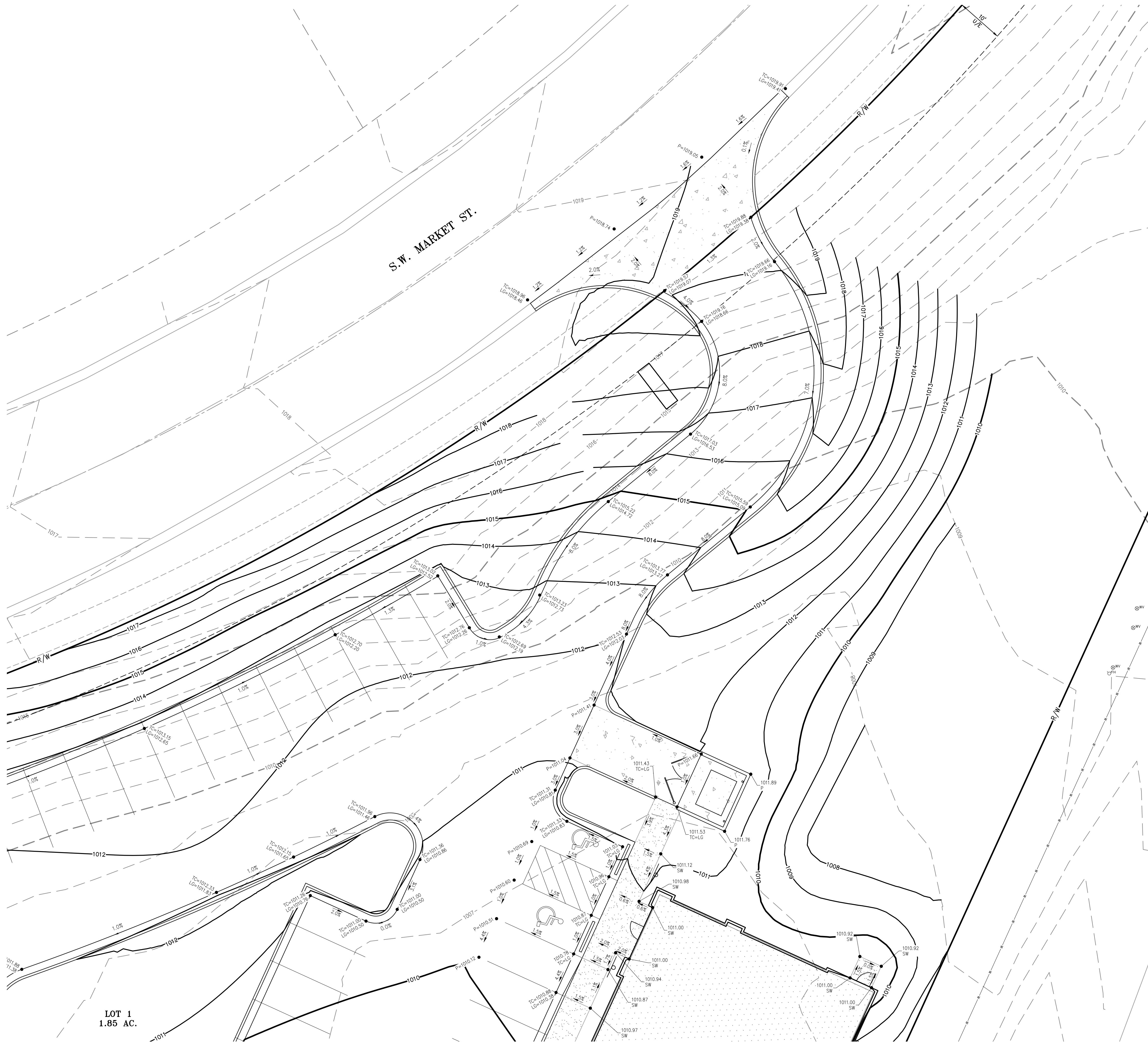
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

App.	Revision:	SNH	DAF	App.
SNH	DAF	REVIEWED PER CITY COMMENTS	03-16-22	DAF
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SHEET

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Know what's below.
Call before you dig.

UTILITY NOTES:
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GRADING SHALL NOT EXCEED
3:1 SLOPE AT ANY LOCATION

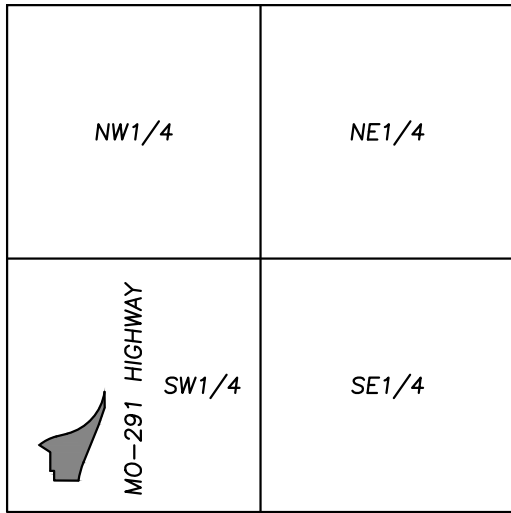
FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0436G, AND DATED JANUARY 20, 2017.

BENCHMARK:

VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS

- FOUND "C" CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF ADJACENT PROPERTY.
ELEVATION = 987.14
- SET "C" CUT IN SOUTHWEST CORNER OF BACK OF CURB IN ADJACENT PARKING LOT TO THE NORTH AT NORTHWEST CORNER OF SURVEYED PROPERTY.
ELEVATION = 990.19



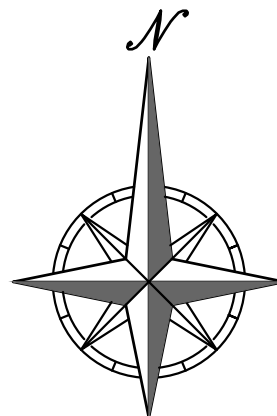
VICINITY MAP
SEC. 29-47-31



SCALE: 1"=2000'

LEGEND

- PL — PROPERTY LINE
- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION
- LG — LIP OF GUTTER
- TC — TOP OF CURB
- SW — SIDEWALK
- ME — MATCH EXISTING
- HP — HIGH POINT
- LP — LOW POINT
- P — TOP OF PAVEMENT
- TE — TOP OF STRUCTURE
- GR — GROUND ELEVATION
- BS — BOTTOM OF STEPS
- TS — TOP OF STEPS
- BW — BOTTOM OF WALL
- TW — TOP OF WALL
- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- PROPOSED RETAINING WALL

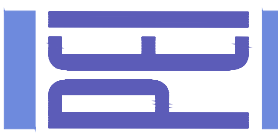


SCALE: 1"=10'
0' 10' 20'



PHILIPS ENGINEERING, INC.
1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax (913) 393-1165
www.philipsengineering.com

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IMPLEMENTATION



ENLARGED GRADING PLAN

MARKET STREET CENTER
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	Date	03-16-22	By	App.
DATE: 10-14-21	DRAWN BY: JDC	03-16-22	03-16-22	SNH	DAF
CHECKED: DAF	APPROVED: JDC	04-06-22	04-06-22	SNH	DAF
CERTIFICATE OF AUTHORIZATION		04-15-22	04-15-22	SNH	DAF
LAND SURVEYING - LS-82					
ENGINEERING - E-361					
CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING - 200701728					
ENGINEERING - 200700399					

SHEET

C2.2

\\phelps-servers\projects\p\210639\dwg\permit plans\grading enlarged.dwg Layout:3 Apr 15, 2022 - 3:56pm Daniel Finn



Know what's below.
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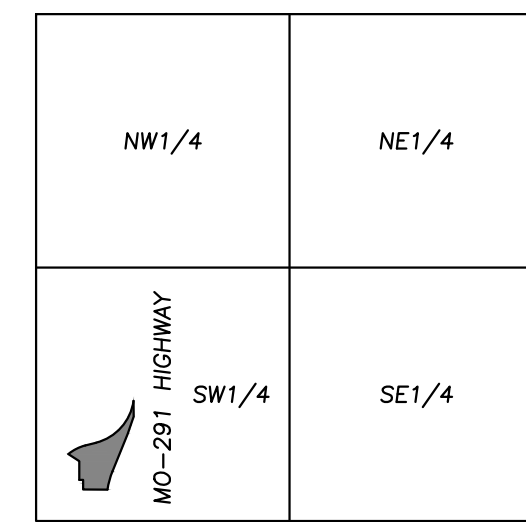
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3:1 SLOPE AT ANY LOCATION

FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C0436G, AND DATED JANUARY 20, 2017.

BENCHMARK:

- VERTICAL DATUM = NAVD88 BASED ON GPS OBSERVATION USING MODOT VRS
- FOUND "C" CUT IN CONCRETE SIDEWALK AT SOUTHWEST CORNER OF ADJACENT PROPERTY.
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ELEVATION = 990.19



MO-150 HIGHWAY
VICINITY MAP
SEC. 29-47-31



LEGEND

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- LL — LOT LINE
- R/W — RIGHT-OF-WAY
- 2' CURB & GUTTER
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION
- LG — LIP OF GUTTER
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- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- PROPOSED RETAINING WALL



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



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ENLARGED GRADING PLAN

MARKET STREET CENTER
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	Revisions:	By	App.
DATE:	10-14-21	DRAWN/MR	1.	03-16-22	SNH	DAF
CHECKER:	DAF	APPROVED/JDC	2.	04-06-22	SNH	DAF
CERTIFICATE OF AUTHORIZATION			3.	04-15-22	SNH	DAF
LAND SURVEYING - LS-82						
ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING-200701028						
ENGINEERING-200700039						

SHEET

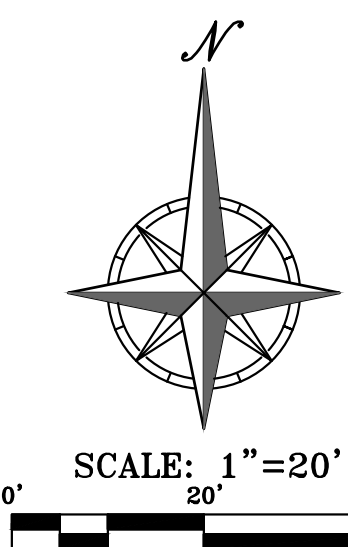
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\\phelps-engineering\projects\p2106339\dwg\permit\plans\ADA PLAN.dwg Layout:1 Apr 15, 2022 3:56pm Donal Finn



LEGEND

- PL PROPERTY LINE
- LL LOT LINE
- R/W- RIGHT-OF-WAY
- 2' CURB & GUTTER
- 920 EXISTING CONTOURS
- 918 PROPOSED CONTOURS
- PROPOSED SPOT ELEVATION
- LG UP OF GUTTER
- TC TOP OF CURB
- SW SIDEWALK
- ME MATCH EXISTING
- HP HIGH POINT
- LP LOW POINT
- P TOP OF PAVEMENT
- TE TOP OF STRUCTURE
- GR GROUND ELEVATION
- BS BOTTOM OF STEPS
- TS TOP OF STEPS
- BW BOTTOM OF WALL
- TW TOP OF WALL
- EXISTING STORM SEWER
- PROPOSED STORM PIPE
- PROPOSED WET CURB & GUTTER
- PROPOSED DRY CURB & GUTTER
- PROPOSED RETAINING WALL
- PROPOSED ADA ROUTE



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PLANNING
ENGINEERING
IMPLEMENTATION

ADA PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	2106339	No.	Date	Revisions:
DATE: 10-14-21	DRAWN: MR	1.	03-16-22	REVISED PER CITY COMMENTS
CHECKED: DAF	APPROVED: JDC	2.	04-06-22	REVISED PER CITY COMMENTS
CERTIFICATE OF AUTHORIZATION		3.	04-15-22	REVISED PER CITY COMMENTS
LAND SURVEYING - LS-82				
ENGINEERING - E-SF				
CERTIFICATE OF AUTHORIZATION				
LAND SURVEYING-20070128				
ENGINEERING-20070028				

SHEET
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1270 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax: (913) 393-1165
www.phelpsengineering.com

JUDD DAVID
CIVIL ENGINEER
NUMBER
PE-29850
04/15/22



Know what's below.
Call before you dig.

UTILITY NOTES:
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LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP

LOT 2
MARKET STREET COMMONS
LOTS 1-3
WAL-MART CORP

INSTALL NEW PUBLIC SSMH
END OF PUBLIC SEWER MAIN EXTENSION
(RE: PUBLIC SANITARY SEWER PLANS)

CONNECT 1-1/4" FORCE MAIN TO
8" PVC PUBLIC SANITARY SEWER MAIN
W/ WYE CONNECTION 10 FEET DOWNSTREAM
CENTER OF PUBLIC SANITARY SEWER MAIN
FG=1013.20
FL 8" PVC=1009.28

PROPOSED PUBLIC SANITARY
SEWER MAIN EXTENSION
(RE: PUBLIC SANITARY SEWER PLANS)

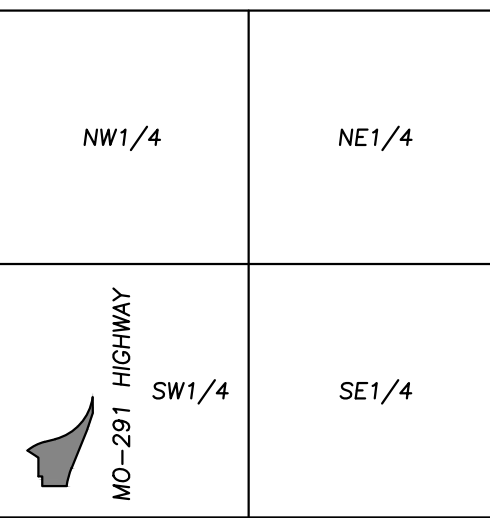
PIPE DISCHARGE TO REMAIN.

PIPE DISCHARGE AND
WING WALLS TO REMAIN.

PROPOSED
DETENTION BASIN

TRACT A
0.60 AC.

STATE LIGHTING VAULT
ON CONC. PAD



VICINITY MAP
SEC. 29-47-31

UTILITY NOTES:

- The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to coordinate with and relocate &/or remove all existing utilities which conflict with the proposed improvements shown on the plans.
- The construction of storm sewers on this project shall conform to the requirements of the City's Technical Specifications and Design Criteria.
- The contractor shall field verify the exact location and elevation of the existing storm sewer lines and the existing elevation at locations where the proposed storm sewer collects or releases to existing ground. If discrepancies are encountered from the information shown on the plans, the contractor shall contact the design engineer. No pipes shall be laid until direction is received from the design engineer.
- It will be the contractors responsibility to field adjust the top of all manholes and boxes as necessary to match the grade of the adjacent area. Tops of existing manholes shall be raised where necessary, and to be 6-inches above finished ground elevations in non-paved areas. No separate or additional compensation will be made to the contractor for making final adjustments to the manholes and boxes.
- Inlet locations, horizontal pipe information and vertical pipe information is shown to the center of the structure. Deflection angles shown for storm sewer pipes are measured from the center of curb inlets and manholes. The contractor shall adjust the horizontal location of the pipes to go to the face of the boxes. All roof drains shall be connected to storm sewer structures. Provide cleanouts on roof drain lines at 100' max. Spacing and at all bend points. Do not connect roof drains directly to storm sewer pipe.
- The contractor shall be responsible for furnishing and installing all fire and domestic water lines, meters, backflow devices, pits, valves and all other incidentals required for a complete operable fire protection and domestic water system. All costs associated with the complete water system for the buildings shall be the responsibility of the contractor. All work shall conform to the requirements of City.
- The contractor shall be responsible for furnishing and installing all sanitary sewer service lines from the buildings to the public line. All work shall conform to the requirements of the City.
- The contractor will be responsible for securing all permits, bonds and insurance required by the contract documents, City, and all other governing agencies (including local, county, state and federal authorities) having jurisdiction over the work proposed by these construction documents. The cost for all permits bonds and insurance shall be the contractors responsibility and shall be included in the bid for the work.
- By the use of these construction documents the contractor hereby agrees that he/she shall be solely responsible for the safety of the construction workers and the public. The contractor agrees to hold the engineer and owner harmless for any and all injuries, claims, losses or damages related to the project.
- The Contractor shall be responsible for furnishing all materials, tools and equipment and installation of electrical power, telephone and gas service from a point of connection from the public utility lines to the building structures. This will include all conduits, service lines, meters, concrete pads and all other incidentals required for a complete and operational system as required by the owner and the public utilities. Refer to building plans for exact tie-in locations of all utilities. Contractor shall verify connection points prior to installation of utility line.
- All fill material is to be in place, compacted, and consolidated before installation of proposed utilities. On-site geotechnical engineer shall provide written confirmation that this requirement has been met and that utilities may proceed in the fill areas. All utilities are to be placed in trench conditions.
- Contractor shall notify the utility authorities inspectors 48 hours before connecting to any existing line.
- Water lines shall be as follows (unless otherwise shown on plans):
 - Pipe sizes less than 3-inches that are installed below grade and outside building shall comply with the following:
 - Seamless Copper Tubing: Type "K" soft copper, ASTM B88.
 - Fittings: Wrought copper (95.5 Tin Antimony solder joint), ASME B 16.22.
 - Pipe sizes 3-inches Through 48-inches that are installed below grade and outside building shall comply with one of the following:
 - Gray Cast Iron Water Pipe: ANSI A21.6, thickness class 52.
 - Fittings: Either mechanical joint or push-on joint, AWWA C110 or AWWA C111.
 - Elastomeric gaskets and lubricant: ASTM F477.
 - Cement Mortar Lining, AWWA C104.
 - Ductile Iron Water Pipe: AWWA C151, thickness class 50.
 - Fittings: Either mechanical joint or push-on joint, AWWA C110 or AWWA C111.
 - Elastomeric gaskets and lubricant: ASTM F477.
 - Cement Mortar Lining, AWWA C104.
 - Polyvinyl Chloride (PVC) Water Pipe: Pipe, AWWA C900, rated DR 18 (Class 150), continually marked as required.
 - Elastomeric gaskets and lubricant: ASTM F477 for smaller pipes.
 - Pipe joints: Integrally molded bell ends, ASTM D3139.
 - Trace wire: Magnetic detectable conductor, (#12 Copper) brightly colored plastic covering imprinted with "Water Service" in large letters.
- Minimum trench width shall be 2 feet.
- Contractor shall maintain a minimum of 42" cover on all waterlines. All water line joints are to be mechanical joints with thrust blocking as called out in specifications and construction plans. Water mains and service lines shall be constructed in accordance to waterline's specifications for commercial services.
- All waterlines shall be kept min. ten (10') apart (parallel) from sanitary sewer lines or manholes. Or when crossing, on 24" vertical clearance (outside edge of pipe to outside edge of pipe) of the water line above the sewer line is required.
- Sanitary conflicts will be resolved prior to permit issuance.
- In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing (or encased in concrete this same distance), the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 24" clearance. Meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
- All underground storm, sanitary, water and other utility lines shall be installed, inspected and approved before backfilling. Failure to have inspection approval prior to backfill will constitute rejection of work.
- All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service. Contractor shall coordinate with all utility companies for installation requirements and specifications.
- Refer to building plans for site lighting electrical plan, irrigation, parking lot security system and associated conduit requirements. Coordinate with Owner that all required conduits are in place & tested prior to paving.
- When a building utility connection from site utilities leading up to the building cannot be made immediately, temporarily mark all such site utility terminations.
- Refer to the building plans for site lighting electrical requirements, including conduits, pole bases, pull boxes, etc.

UTILITY COMPANIES:

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

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

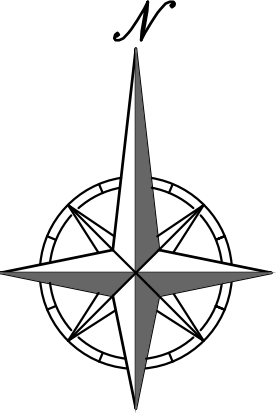
STORM SEWER (PUBLIC WORKS DEPARTMENT) (816) 969-1800
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

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

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

LEGEND

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



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OVERALL UTILITY PLAN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	By	App.
DATE: 10-14-21	DRAWN: MR	1.	03-16-22	SNH	DAF
CHECKER: DAF	APPROVED: JDC	2.	04-06-22	SNH	DAF
CERTIFICATE OF AUTHORIZATION		3.	04-15-22	SNH	DAF
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CERTIFICATE OF AUTHORIZATION					
CERTIFICATE OF AUTHORIZATION					
CERTIFICATE OF AUTHORIZATION					
CERTIFICATE OF AUTHORIZATION					
CERTIFICATE OF AUTHORIZATION					
CERTIFICATE OF AUTHORIZATION					

SHEET

C3



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4.5X6 CURB INLET
T.E.=1014.34
FL(SW)20MP=1005.08
FL(W)36"HOPE=1003.07
FL(SE)48"RCP=1001.92

SITE BENCHMARK
ELEVATION=1014.34

CONC.

ASPHALT

S.W. MARKET ST.

LOT 1
1.85 AC.

LOT 2
2.58 AC.

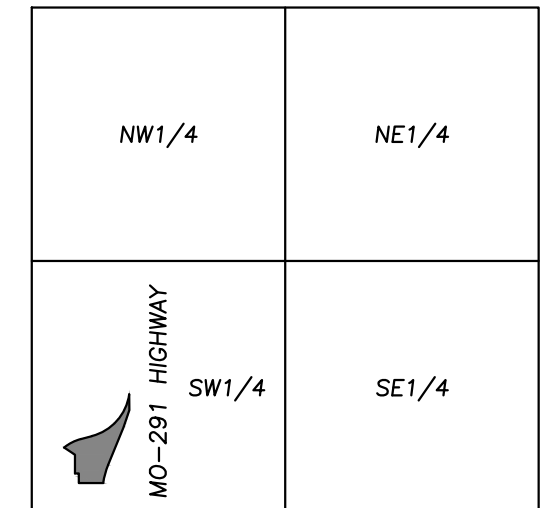
TEMPORARY PRIVATE ESENTIAL
DO NOT DISTURB (ESENTIAL)

TENANT A
4,200 S.F.
FFE=1011.00

TENANT B
3,000 S.F.
FFE=1009.00

LEGEND

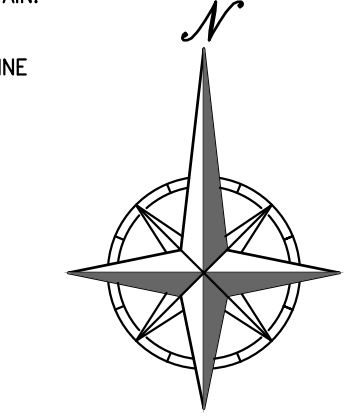
- PL PROPERTY LINE
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- R/W RIGHT-OF-WAY
- CATV EXISTING CABLE TELEVISION LINE
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- OHP EXISTING OVERHEAD POWER LINE
- OHT EXISTING OVERHEAD TELEPHONE LINE
- SS EXISTING SANITARY SEWER LINE
- SS EXISTING STORM SEWER LINE (& SIZE)
- BT EXISTING BURIED TELEPHONE LINE
- W-6" EXISTING WATER LINE (& SIZE)
- G PROPOSED GAS LINE
- BE PROPOSED BURIED ELECTRIC LINE
- SS PROPOSED SANITARY SEWER LINE
- OHP PROPOSED OVERHEAD POWER LINE
- BT PROPOSED BURIED TELEPHONE LINE
- W PROPOSED WATER LINE (& SIZE)



VICINITY MAP
SEC. 29-47-31



SCALE:
1"=200'



SCALE: 1"=20'
0' 20' 40'

UTILITY KEY NOTES:

- D1 PROPOSED ROOF DRAIN CONNECTION. RE: ARCH PLANS FOR DOWNSPOUT LOCATIONS. CONNECT DOWNSPOUTS TO EXTERNAL UNDERGROUND STORM LINE.
- D2 INSTALL 8" HOPE PRIVATE STORM SEWER @ 1.0% MINIMUM SLOPE.
- D3 CONNECT TO PROPOSED PRIVATE CURB INLET.
FL IN (E) 8"=1003.12
FL OUT (S) 15"=1002.54
- D4 INSTALL PRIVATE STORM STRUCTURE. SEE STORMWATER PLAN & PROFILES FOR RIM ELEVATION & INVERT ELEVATIONS.
- E1 FOLLOW ELECTRIC COMPANY WORK ORDER AND SPECIFICATIONS FOR PRIMARY ELECTRICAL SERVICE ROUTING AND CONNECTION TO EXISTING.
- E2 INSTALL CONCRETE SECTIONALIZER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH ELECTRIC COMPANY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- E3 INSTALL CONCRETE TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH ELECTRIC COMPANY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD AND CONDUIT AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.
- E4 ELECTRIC ENTRY INTO BUILDING. FOLLOW ELECTRIC COMPANY REQUIREMENTS (RE: BUILDING ELECTRICAL PLAN).
- E5 CONTRACTOR TO INSTALL CONDUITS TO MONUMENT SIGN (RE: BUILDING ELECTRICAL PLANS FOR POWER REQUIREMENTS).
- G1 GAS ENTRY WITH GAS METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYPING OF INDIVIDUAL METER. SIZE OF GAS MAIN SHALL BE AS DETERMINED BY UTILITY OR AS SHOWN ON BUILDING PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE & INSTALLATION OF GAS SERVICE LINE.
- W1 CONTRACTOR TO COORDINATE 1" TAP ON EXISTING MAIN FOR DOMESTIC SERVICE LINE (2 LOCATIONS) WITH THE CITY. THE CITY SHALL PERFORM THE TAP OF THE EXISTING MAIN. CONTACT CITY FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER AND SYSTEM DEVELOPMENT FEES ASSESSED BY CITY.
- W2 INSTALL 1" DOMESTIC WATER METER PIT PER CITY REQUIREMENTS (2 LOCATIONS). THE CITY SHALL PROVIDE THE METER, THE PIT, AND ALL OTHER MATERIALS NECESSARY FOR THE INSTALLATION. CONTRACTOR TO COORDINATE AND PAY ALL FEES. INSTALLATION BY THE CONTRACTOR'S PLUMBER SHALL BE IN ACCORDANCE WITH CITY STANDARDS.
- W3 1-1/2" DOMESTIC WATER LINE ENTRY TO BUILDING (2 LOCATIONS). CONTRACTOR TO TRANSITION FROM 1" DOMESTIC WATER LINE TO 1-1/2" DOMESTIC WATER LINE DOWNSTREAM OF WATER METER. DOMESTIC WATER LINE SHALL BE 1-1/2" SPT TYPE K COPPER. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH THE DEVELOPMENT SERVICES INSPECTOR.
- W4 CONTRACTOR TO COORDINATE 1" TAP ON EXISTING MAIN FOR IRRIGATION LINE WITH CITY. THE CITY SHALL PERFORM THE TAP OF THE EXISTING MAIN. CONTACT CITY FOR TAPPING REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN TAP. OWNER WILL REIMBURSE CONTRACTOR FOR ACTUAL METER AND SYSTEM DEVELOPMENT FEES ASSESSED BY CITY.
- W5 INSTALL 1" IRRIGATION METER PIT PER CITY REQUIREMENTS. THE CITY SHALL PROVIDE THE METER, THE PIT, AND ALL OTHER MATERIALS NECESSARY FOR THE INSTALLATION. CONTRACTOR TO COORDINATE AND PAY ALL FEES. INSTALLATION BY THE CONTRACTOR'S PLUMBER SHALL BE IN ACCORDANCE WITH CITY STANDARDS.
- W6 1-1/2" IRRIGATION LINE ENTRY TO BUILDING. CONTRACTOR TO TRANSITION FROM 1" IRRIGATION LINE TO 1-1/2" IRRIGATION LINE DOWNSTREAM OF WATER METER. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE SUCH AS BACKFLOW PREVENTION DEVICES (RE: BUILDING PLANS), GATE VALVES, REDUCERS, BENDS, TEES, ETC., WHICH MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH THE DEVELOPMENT SERVICES INSPECTOR.
- W7 EXISTING PUBLIC FIRE HYDRANT TO REMAIN.
- W8 CONTRACTOR TO INSTALL 12"x12"x6" CUT-IN TEE FOR PROPOSED 6" PRIVATE FIRE LINE. CONTRACTOR TO CONTACT CITY FOR CONNECTION REQUIREMENTS. CONTRACTOR TO PAY ALL FEES FOR WATER MAIN CONNECTION.
- W9 6" PRIVATE FIRE LINE ENTRY TO BUILDING (UPSTREAM OF BACKFLOW PREVENTION DEVICE). BACKFLOW PREVENTION DEVICE SHALL BE LOCATED INSIDE BUILDING (RE: BUILDING PLANS FOR BACKFLOW PREVENTION DEVICE DETAILS AND SPECIFICATIONS).
- W10 6" PRIVATE FIRE LINE EXIT FROM BUILDING (DOWNSTREAM OF BACKFLOW PREVENTION DEVICE).
- W11 CONTRACTOR TO INSTALL 6" PRIVATE FIRE LINE FROM BUILDING TO NEW PRIVATE FIRE HYDRANT. PRIVATE FIRE HYDRANT SHALL BE PAINTED RED. SEE SHEET 082, "PRIVATE FIRE HYDRANT" DETAIL.
- W12 INSTALL 6" GATE VALVE.
- T1 CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE TELEPHONE COMPANY FOR THE INSTALLATION OF BURIED TELEPHONE LINES. CONTRACTOR TO PROVIDE THREE (3) - 4" PVC SCH. 40 CONDUITS FROM BUILDING TO R/W. CONTRACTOR TO TERMINATE IN QUADZITE BOX WITH PULL STRING FROM BUILDING TO TELEPHONE FEED POINT. CONTRACTOR TO VERIFY EXACT ROUTING AND FEED POINT WITH TELEPHONE COMPANY.
- S1 CONNECT TO BLDG. INTERIOR PLUMBING SANITARY SEWER LINE (RE: MEP PLANS)
FG=1008.00
FL 4"=1005.35
- S2 INSTALL 16 L.F. 4" PVC SANITARY SEWER SERVICE LINE (SDR-26) @ 2.0% MIN. SLOPE.
- S3 INSTALL E1 DUAL GRINDER PUMPS (MODEL WH472-77) WITH POLYETHYLENE TANK AND E/ONE SENTRY ADVISOR ALARM PANEL.
TE=1008.72
FL 4" IN=1005.03
FL 1-1/4" OUT=1005.52
- S4 INSTALL 1-1/4" HOPE PRIVATE SANITARY SEWER FORCE MAIN.
- S5 INSTALL CHECK VALVE ON 4" SANITARY SEWER SERVICE LINE WITH VALVE BOX ACCESSIBLE AT GRADE.
- X1 UTILITY CROSSING
FG=1008.54
8" STORM FL=1003.44
1-1/4" SANITARY FL=1005.44
(1.3' VERTICAL CLARENCE)
- X2 UTILITY CROSSING
FG=1008.70
FL 1-1/2" WATER LINES (3)=1002.65
8" STORM FL=1003.76
(1.0' VERTICAL CLARENCE)
- X3 UTILITY CROSSING
FG=1007.40
FL 6" FIRE LINE=1002.65
8" STORM FL=1004.15
(1.0' VERTICAL CLARENCE)



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ENLARGED UTILITY PLAN

MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	DATE	03-16-22	NO.	1	DATE	03-16-22	BY	App.
CHECKED	DAF	APPROVED	JDC	2	04-06-22	REVISIONS	REVISED PER CITY COMMENTS	SNH	DAF
CORROBORATE	OF AUTHORIZATION	3	04-15-22	REVISED PER CITY COMMENTS	SNH	DAF			
LAND SURVEYING	- LS-82								
ENGINEERING	- E-361								
CERTIFICATE OF AUTHORIZATION									
LAND SURVEYING	-200701028								
ENGINEERING	-200700239								

SHEET

C3.1

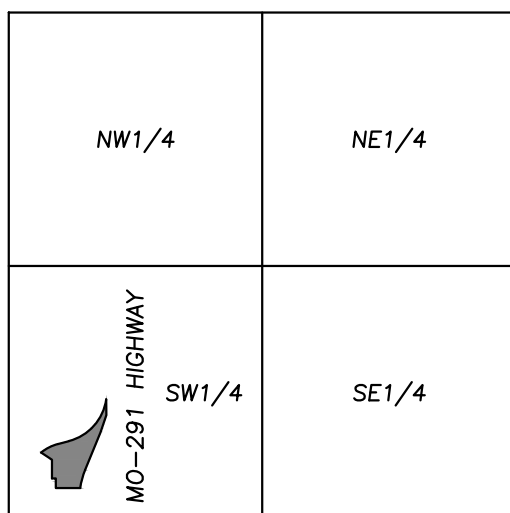
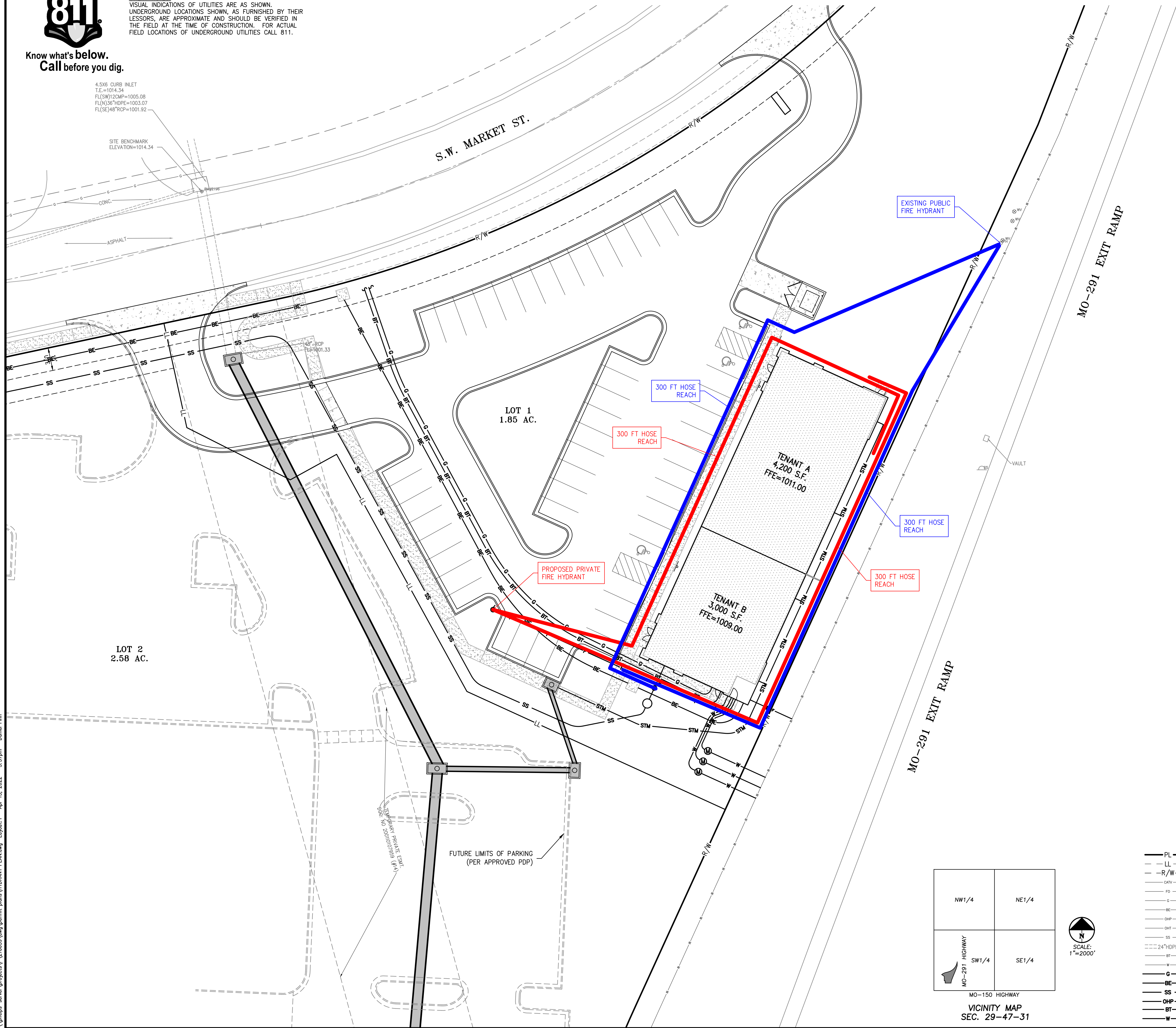


Know what's below.
Call before you dig.

4.5X6 CURB INLET
T.E.=1014.34
FL(SW)20MP=1005.08
FL(N)36"HOPE=1003.07
FL(SE)48"RCP=1001.92

SITE BENCHMARK
ELEVATION=1014.34

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



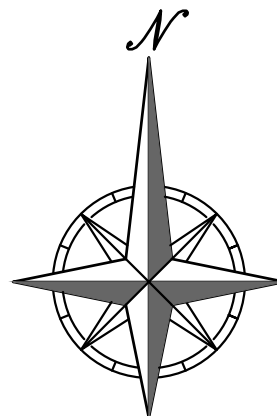
VICINITY MAP
SEC. 29-47-31



SCALE: 1"=2000'

LEGEND

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

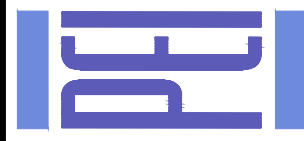


SCALE: 1"=20'
0' 20' 40'



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FIRE HOSE PLAN

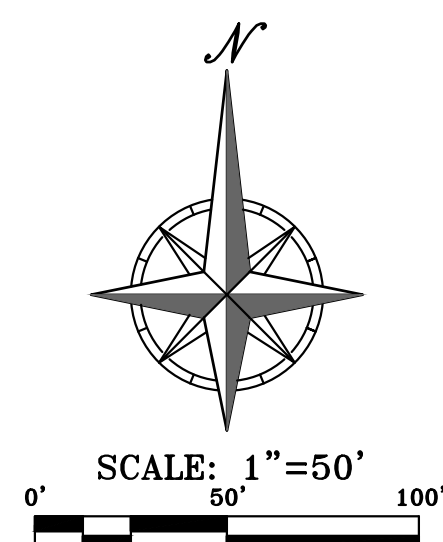
MARKET STREET CENTER
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

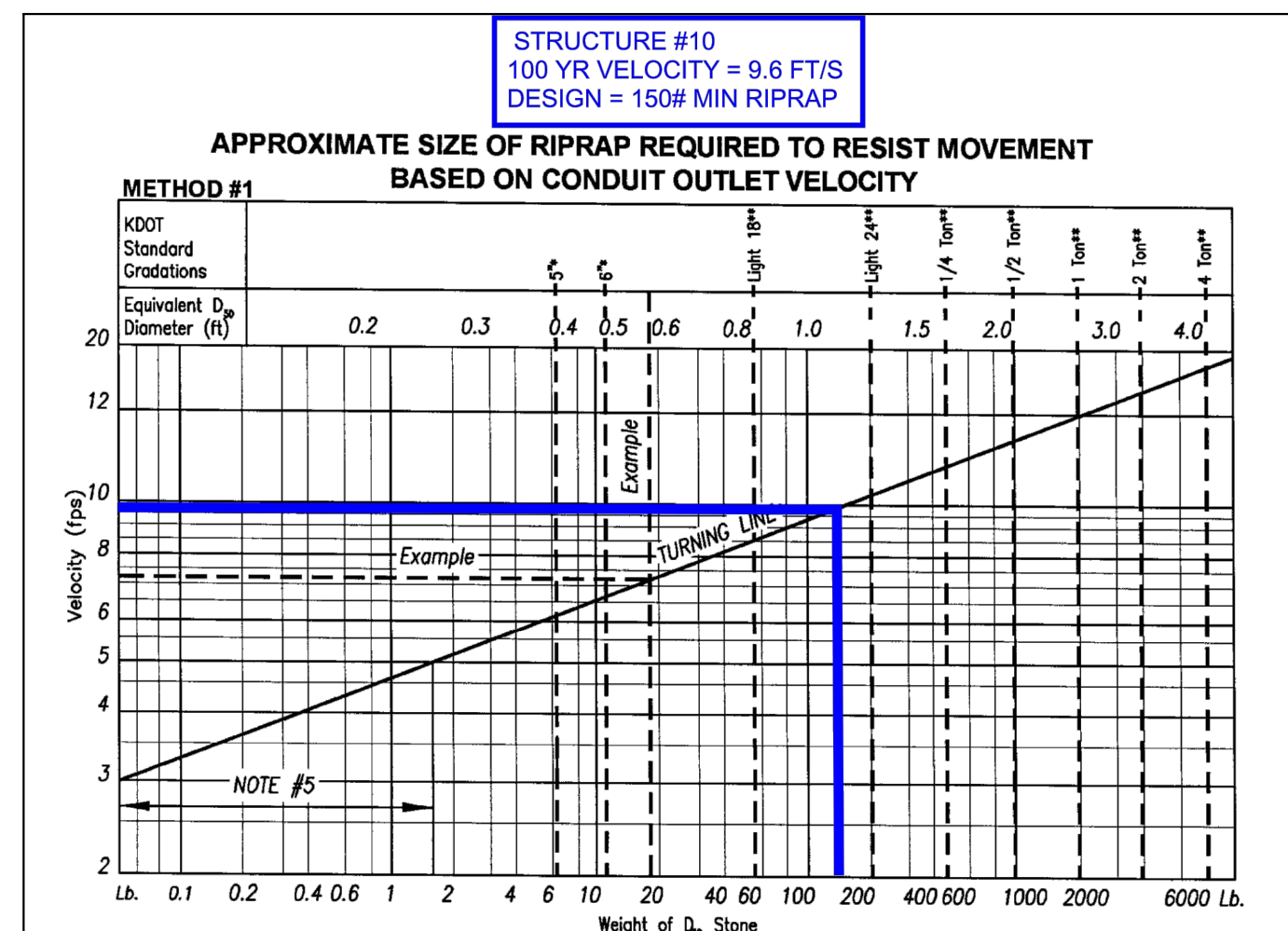
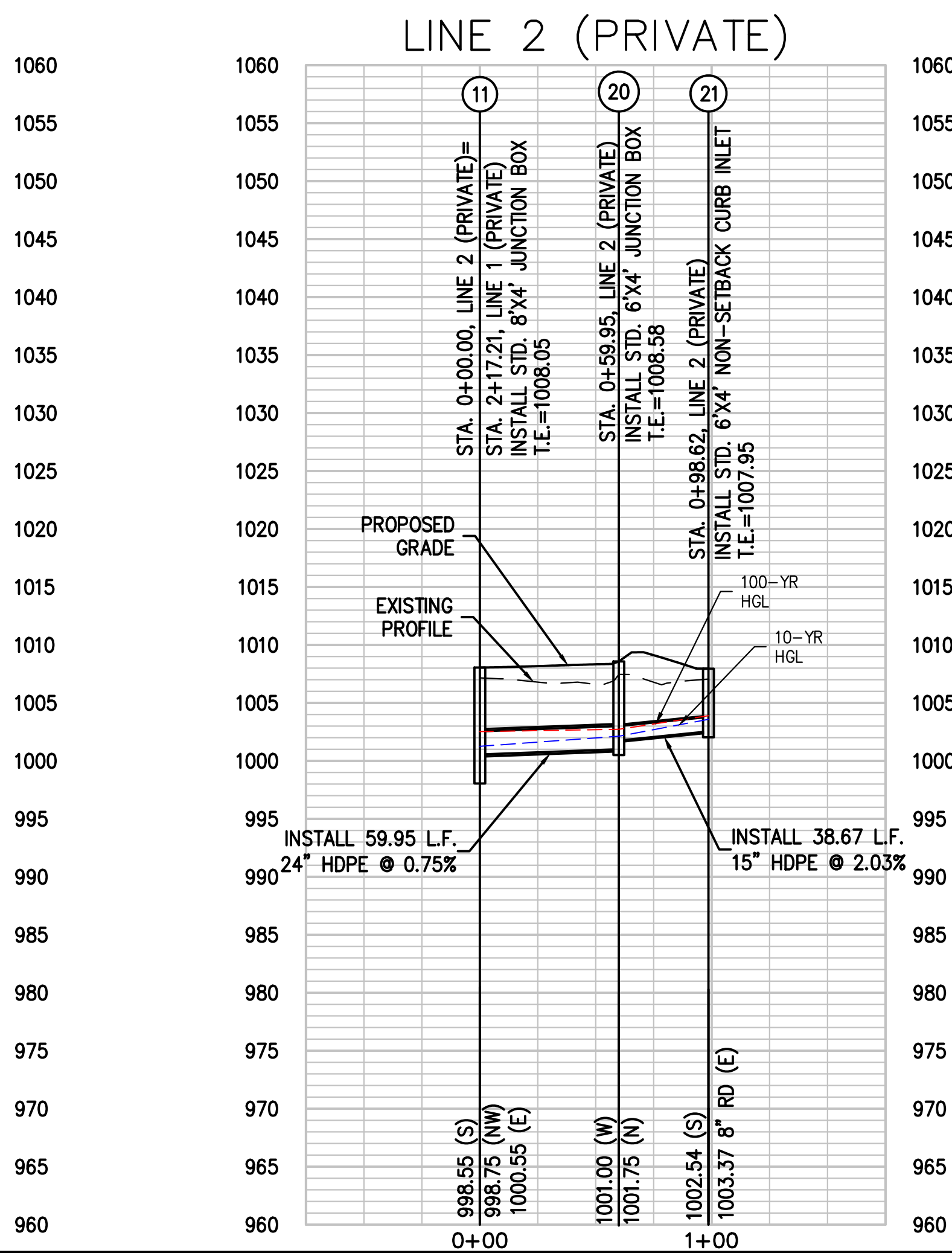
PROJECT NO.	210639	No.	Date	Revisions:	By	App.
DATE: 10-14-21	DRAWN: MR	1.	03-16-22	REVISED PER CITY COMMENTS	SNH	DAF
CHECKED: DAF	APPROVED: JDC	2.	04-06-22	REVISED PER CITY COMMENTS	SNH	DAF
CERTIFICATE OF AUTHORIZATION		3.	04-15-22	REVISED PER CITY COMMENTS	SNH	DAF
LAND SURVEYING - LS-82						
ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING-200700128						
ENGINEERING-200700039						

SHEET

C3.2



SCALE: 1"=50' HORIZ.
1"= 5' VERT.



\\phelps-engineering\projects\210639\dwg\permit\plans\DRAINAGE MAP.dwg Layout1 1 Apr 15, 2022 - 3:57pm Daniel Fenn

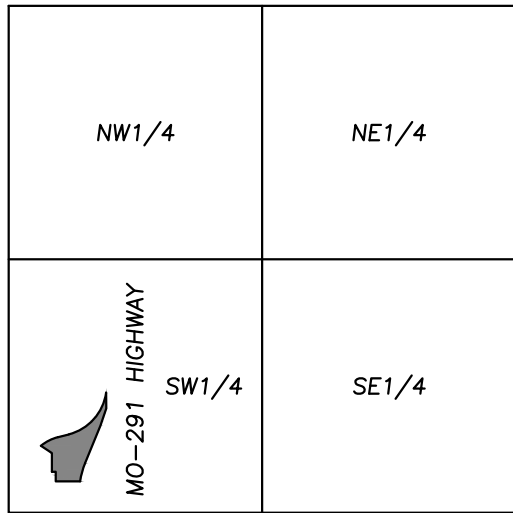
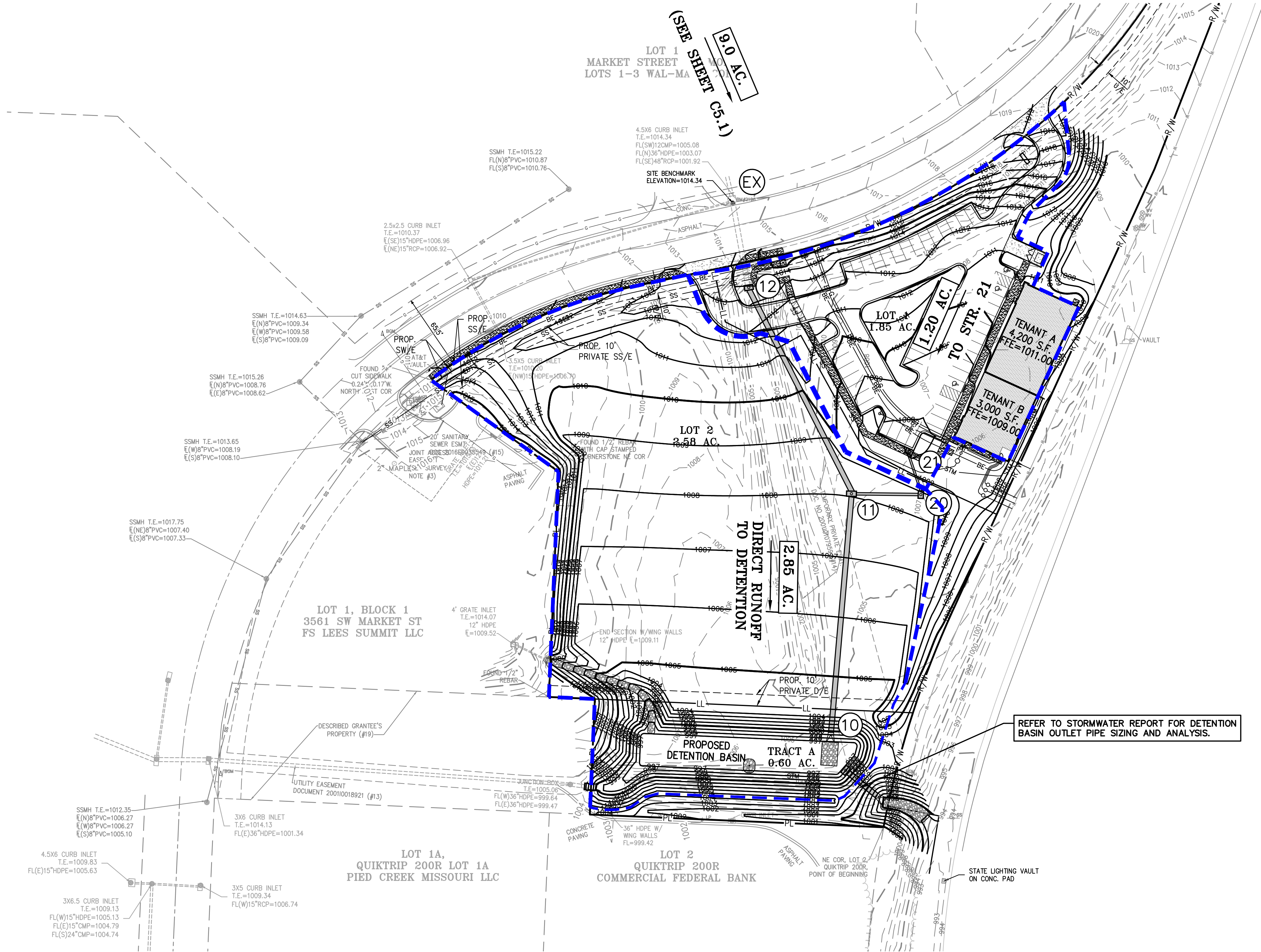
FLOOD NOTE:

THIS PROPERTY LIES WITHIN ZONE X, DEFINED AS AREA OF MINIMAL FLOOD HAZARD, AS SHOWN ON THE FLOOD INSURANCE RATE MAP PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF LEE'S SUMMIT, MISSOURI, COMMUNITY NO. 290174, JACKSON COUNTY, MISSOURI, MAP NO. 29095C05326, AND DATED JANUARY 20, 2017



Know what's below.
Call before you dig.

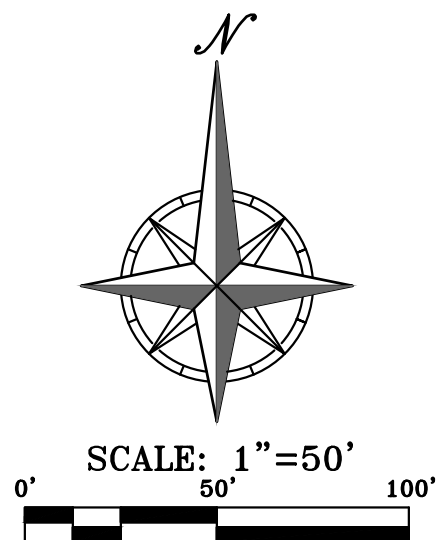
UTILITY NOTES:
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UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.



- LEGEND**
- XXX--- EXISTING CONTOURS
 - XXX--- PROPOSED CONTOURS
 - XXX--- DENOTES DRAINAGE AREA
 - XXX--- DENOTES FLOW DIRECTION
 - XXX--- DENOTES DRAINAGE AREA TO STRUCTURE
 - XXX--- DENOTES STRUCTURE NUMBER

STORM DRAINAGE CALCULATIONS

DESIGN CRITERIA: K ₂₆ = 1.1; K ₁₀₀ = 1.25; n = 0.013 (RCP); STORM FREQUENCY = 25 YEAR; A _I = AREA INLET; J.B. = JUNCTION BOX; C.I. = CURB INLET; C.C. = CURB CUT; G.I. = GRATE INLET; HEIGHT OF STRUCTURE = RIM ELEV MINUS FLOWLINE OUT.																									
I. RUNOFF											III. PIPE DESIGN													REMARKS	
N L U I M B E R	S T R U C T U R E	INCREMENTAL			CUMULATIVE		SYSTEM TIME OF CONCENTRATION "T _c " AT STRUCTURE (MIN)	RAINFALL INTENSITY "I _a " / "I _m " (IN/HR)	ANTECEDENT PRECIPITATION FACTOR "K ₂₅ " / "K ₁₀₀ "	RUNOFF "Q ₂₅ " / "Q ₁₀₀ " (CFS)	STRUCTURE				PIPE										
		RUNOFF COEFFICIENT "C"	AREA "A" (ACRES)	C x A	AREA "A" (ACRES)	C x A					Upstream Structure Number	Downstream Structure Number	Upstream Structure Rim Elevation	Height of Structure (FT)	Diameter "D" (IN)	Length "L" (FT)	Upstream Invert Elevation	Downstream Invert Elevation	Slope "S" (FT/FT)	Travel Time in Pipe "TT" (min)	Velocity Full V _f (FPS)	Runoff Q ₂₅ (CFS)	Runoff Q ₁₀₀ (CFS)		Full Flow Q _c (CFS)
1	12	0.81	13.73	11.12	13.73	11.12	5.00	8.53	1.10	104.3	12	11	1013.94	12.81	48	199.26	1001.13	998.75	0.0119	0.27	12.5	104.3	143.5	157.0	
								10.32	1.25	143.5															
	11	0.81	0.00	0.00	14.93	12.09	5.00	8.53	1.10	113.4	11	10	1008.05	9.50	48	207.41	998.55	997.10	0.0070	0.36	9.6	113.4	156.0	120.1	
2								10.32	1.25	156.0															
	22	0.81	1.20	0.97	1.20	0.97	5.00	8.53	1.10	9.1	22	21	1007.95	5.41	15	38.67	1002.54	1001.75	0.0204	0.08	7.6	9.1	12.5	9.2	
								10.32	1.25	12.5															
	21	0.81	0.00	0.00	1.20	0.97	5.00	8.53	1.10	9.1	21	11	1008.58	7.58	24	59.95	1001.00	1000.55	0.0075	0.16	6.3	9.1	12.5	19.6	
								10.32	1.25	12.5															



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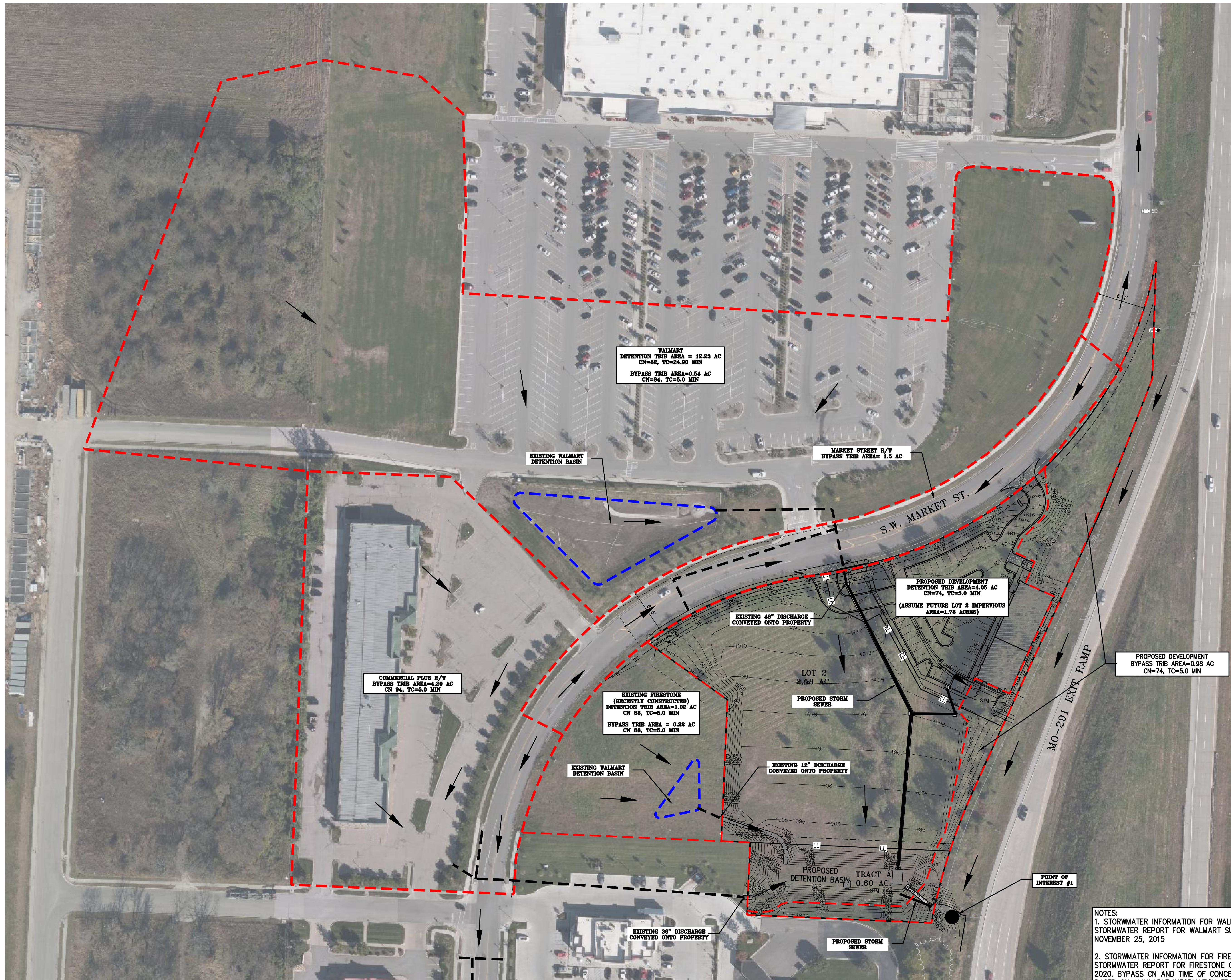
DRAINAGE MAP
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	1	Date	03-16-22	By	App.
DATE: 10-14-21	DRAWN: MR	1	1	03-16-22	1	SNH	DAF
CHECKED: DAF	APPROVED: JDC	2	2	04-06-22	2	SNH	DAF
CERTIFICATE OF AUTHORIZATION	LAND SURVEYING - LS-82	3	3	04-15-22	3	SNH	DAF
ENGINEERING - E-361							
CERTIFICATE OF AUTHORIZATION	LAND SURVEYING - LS-82						
ENGINEERING - E-361							

SHEET

C5

\\phelps-engineering\projects\210639.dwg User: daniel.finn Date: 04/15/2022 Time: 3:57pm



LEGEND

- DRAINAGE AREA
- DETENTION BASIN
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- DENOTES FLOW DIRECTION

SCALE: 1"=60'

0' 60' 120'

NOTES:

1. STORMWATER INFORMATION FOR WALMART PROPERTY FROM APPROVED STORMWATER REPORT FOR WALMART SUPERCENTER NO. 4590-01 DATED NOVEMBER 25, 2015

2. STORMWATER INFORMATION FOR FIRESTONE PROPERTY FROM APPROVED STORMWATER REPORT FOR FIRESTONE COMPLETE AUTO CARE DATED MAY 01, 2020. BYPASS CN AND TIME OF CONCENTRATION FOR FIRESTONE ASSUMED BASED ON AVAILABLE INFORMATION FROM STORMWATER REPORT.

OFF-SITE DRAINAGE AREA MAP

MARKET STREET CENTER
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO. 210639
DATE: 10-14-21
CHECKED: DAF
CORPORATE DATE OF AUTHORIZATION: 10-14-21
LAND SURVEYING: E-SR
ENGINEERING: E-SR
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI
CITY ENGINEER: 202001028
CITY ENGINEER: 202001028

Revisions:	By	Date	No.
1. REVISED PER CITY COMMENTS	SNH	03-16-22	1.
2. REVISED PER CITY COMMENTS	SNH	04-06-22	2.
3. REVISED PER CITY COMMENTS	SNH	04-15-22	3.

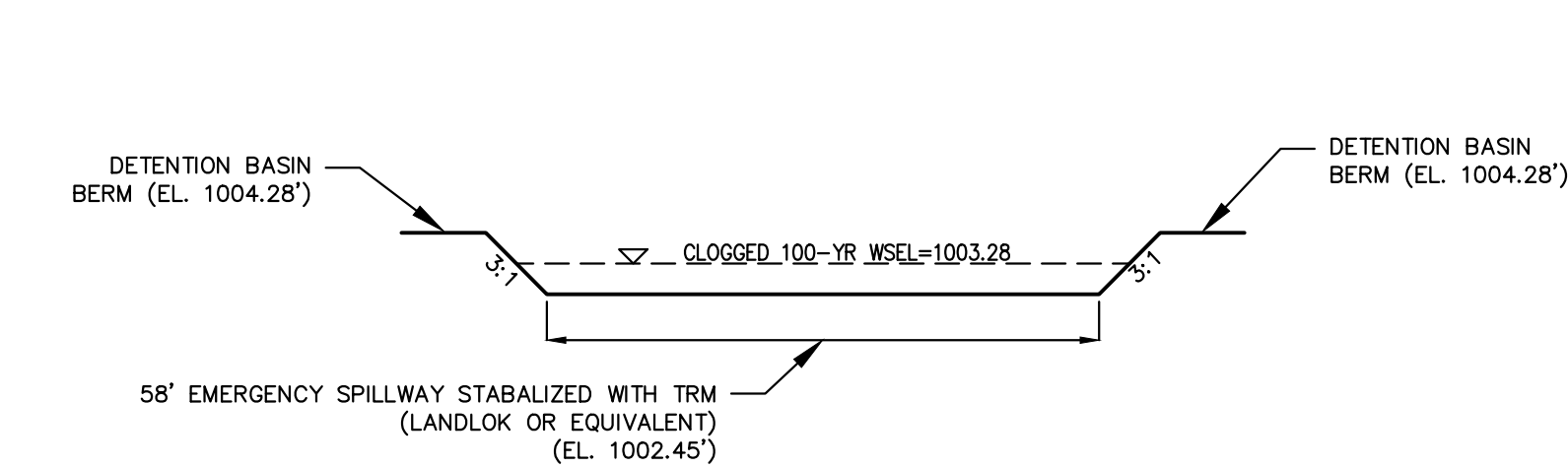
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PEI

STATE OF MISSOURI
JUDITH A. DAVIS
CLERK OF THE COURT
NUMBER
PE-20850
04/15/22

SHEET
C5.1



EMERGENCY SPILLWAY
TYPICAL SECTION

100-YEAR EMERGENCY SPILLWAY DESIGN

100-Year Inflow Q_{100} = 116.64 cfs
100-Year WSEL = 1001.95'

Emergency Spillway Elevation = 1002.45' (0.5 ft above 100-year WSEL)
Emergency Spillway Width = 50'

 $Q = CLH^{1.5}$ 116.64 = (3.1)(50)(H)^{1.5}
Clogged 100-Year Emergency Spillway Flow Depth, H = 0.75'
Clogged 100-Year WSEL = 1003.20'

Detention Basin Berm Elevation = 1004.20' (1.0 ft above clogged 100-year WSEL)

Design Procedure Form: WQV 40 Hour Drawdown Calculations
Main Worksheet

Designer: DAF
Checked By: JDC
Company: Phelps Engineering, Inc.
Date: 2/4/2022
Project: 291 and Market Street
Location: Lee's Summit MO

I. Basin Water Quality Volume

Step 1) Tributary area to EDW, A_T (ac) A_T (ac) = 4.05

Step 2) Calculate WQv using methodology in Section 6
WQv (ac-ft) = 0.26
WQv (cf) = 11,467

IIa. Water Quality Outlet Type

Step 1) Set water quality outlet type:
Type 1 = single orifice
Type 2 = perforated riser or plate
Type 3 = v-notch weir
Outlet Type = 1

Vb. Water Quality Pool Outlet, Single Orifice

Step 1) Depth of water quality volume above permanent pool, Z_{WQ} (ft) Z_{WQ} (ft) = 2.5

Step 2) Average head of water quality volume over invert of orifice, H_{WQ} (ft) H_{WQ} (ft) = 1.3
 $H_{WQ} = 0.5 * Z_{WQ}$

Step 3) Average water quality outflow rate, Q_{WQ} (cfs) Q_{WQ} (cfs) = 0.08
 $Q_{WQ} = (WQv * 43,560) / (40 * 3,600)$

Step 4) Set value of orifice discharge coefficient, C_o
 $C_o = 0.66$ when thickness of riser/weir plate is = or < orifice diameter
 $C_o = 0.80$ when thickness of riser/weir plate is > orifice diameter
 $C_o = 0.66$

Step 5) Water quality outlet orifice diameter (minimum of 4 inches), D_o (in) D_o (in) = 1.57
 $D_o = 12 * 2 * (Q_{WQ} / (C_o * \pi * (2 * g * H)^{0.5}))^{0.5}$
(If orifice diameter < 4 inches, use outlet type 2 or 3)

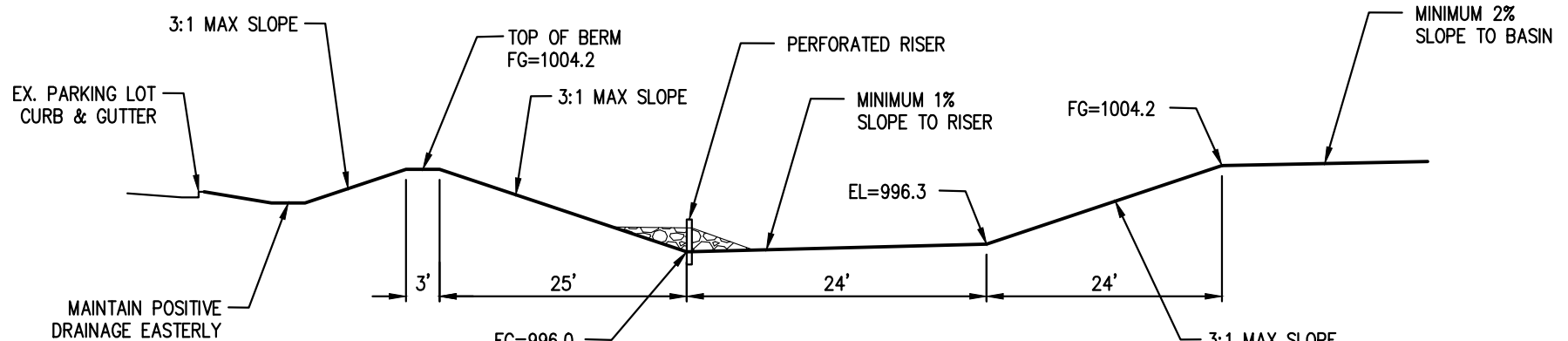
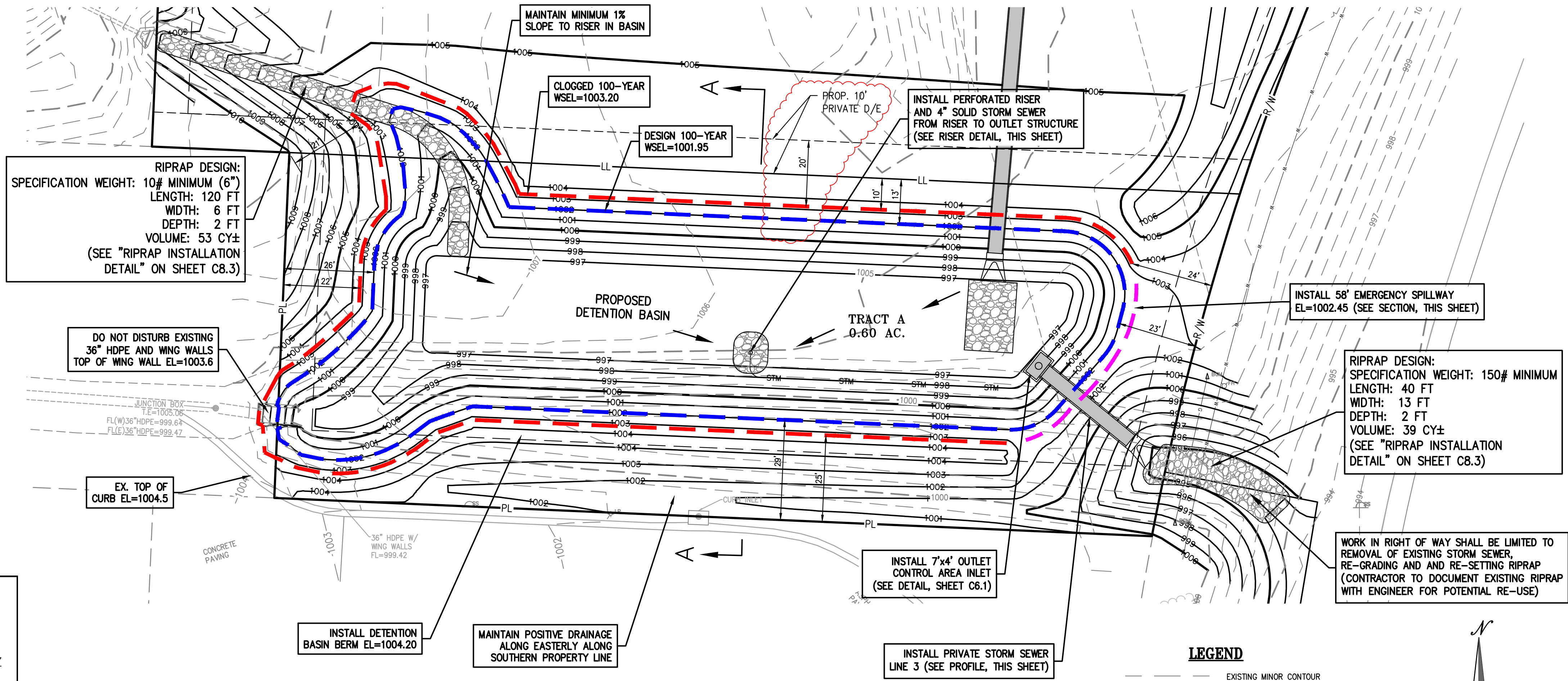
Step 6) To size outlet orifice for EDW with an irregular stage-volume relationship, use the Single Orifice Worksheet

Proposed Detention Basin Stage/Storage		
Elevation	Surface Area (sf)	Storage Volume (cf)
996	0	0
997	5,095	2,548
998	6,517	8,354
999	8,135	15,680
1,000	9,810	24,652
1,001	11,528	35,321
1,002	13,346	47,758
1,003	14,829	61,846

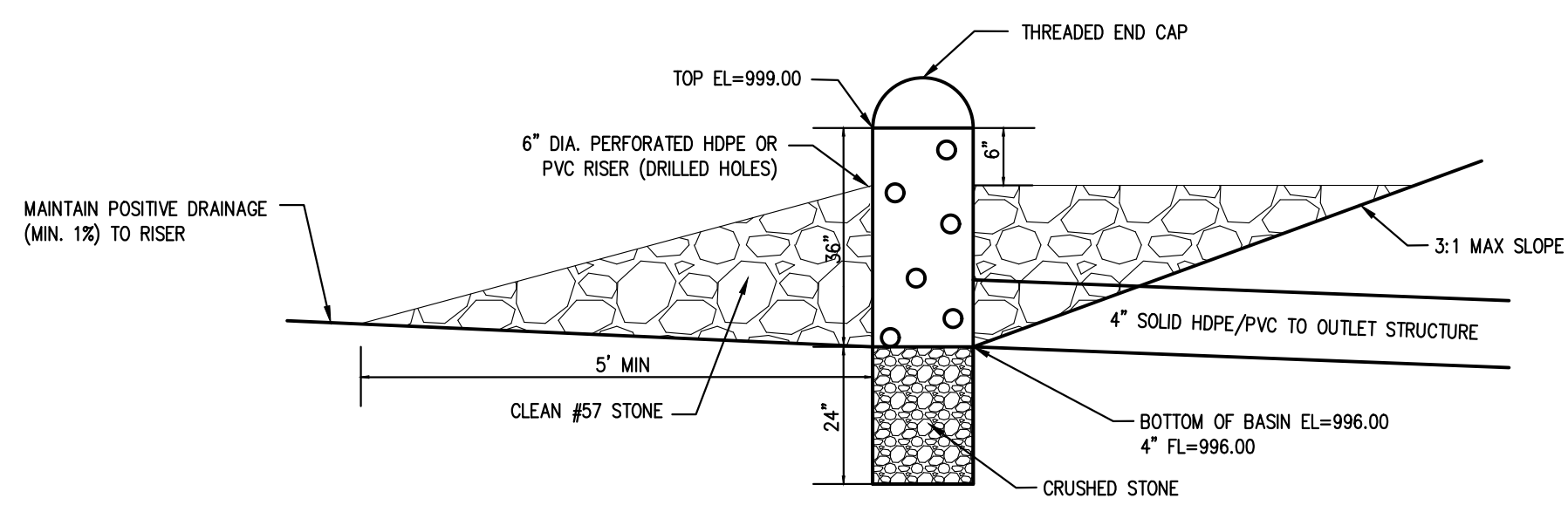
APWA Release Rate Summary						
	Site Area ¹ (acre)	Allowable Peak Rate (cfs/acre)	Allowable Peak Discharge (cfs)	Detention Outflow (cfs)	Offsite Detention Inflow (cfs) "Pass Thru"	Detention Outflow Attributed to Site (cfs)
2-Year	4.05	0.50	2.03	32.14	30.21	1.93
10-Year	4.05	2.00	8.10	55.99	47.97	8.02
100-Year	4.05	3.00	12.15	85.81	73.73	12.08

POI #1 Existing vs Proposed		
	Existing Peak Discharge (cfs)	Proposed Peak Discharge (cfs)
2-Year	37.66	33.87
10-Year	61.80	59.80
100-Year	94.73	92.26

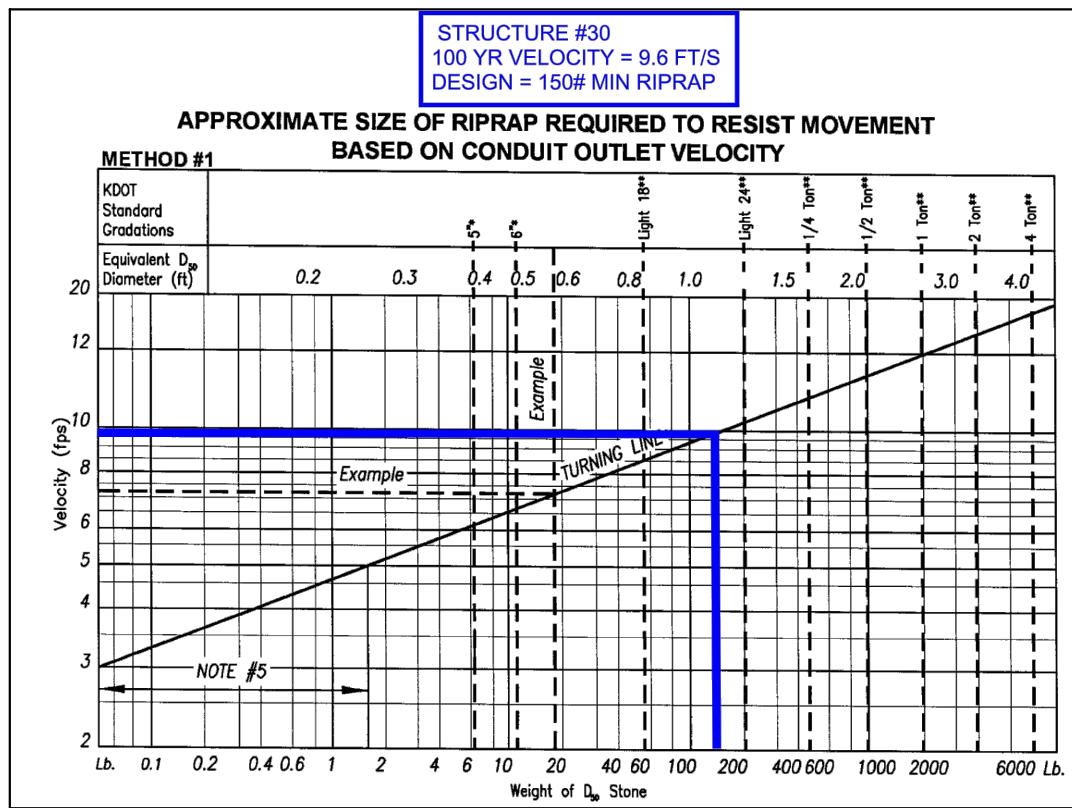
Proposed Hydraulic Results						
	Onsite Detention Inflow (cfs)	Offsite Detention Inflow (cfs) "Pass Thru"	Total Detention Inflow (cfs)	Detention Outflow (cfs)	WSEL (ft.)	POI #1 Peak Discharge (cfs)
2-Year	16.54	30.21	46.75	32.14	1,000.04	33.87
10-Year	27.90	47.97	75.87	55.99	1,000.90	59.80
100-Year	42.91	73.73	116.64	85.81	1,001.95	92.26



DETENTION BASIN SECTION A-A

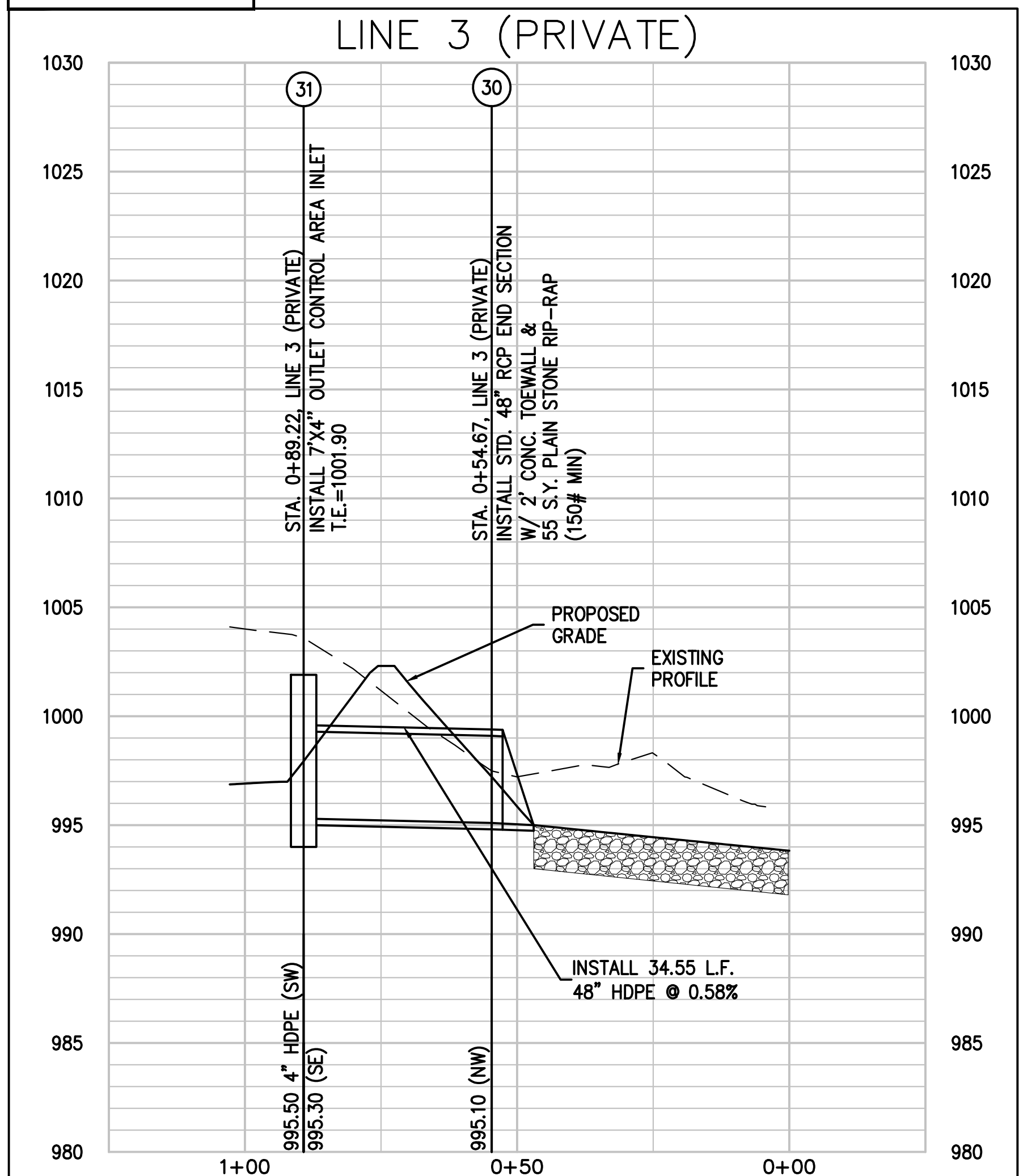


RISER DETAIL (WEST VIEW)
Not To Scale



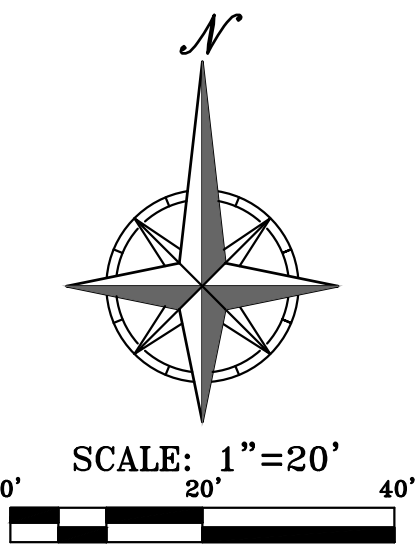
STRUCTURE #30 - RIPRAP SIZE CALCULATION

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



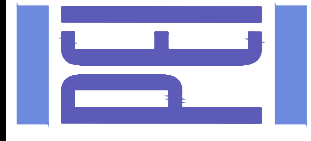
LEGEND

- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 100-YEAR WSE
- CLOGGED 100-YEAR WSE
- EMERGENCY SPILLWAY
- PROPOSED STORM PIPE



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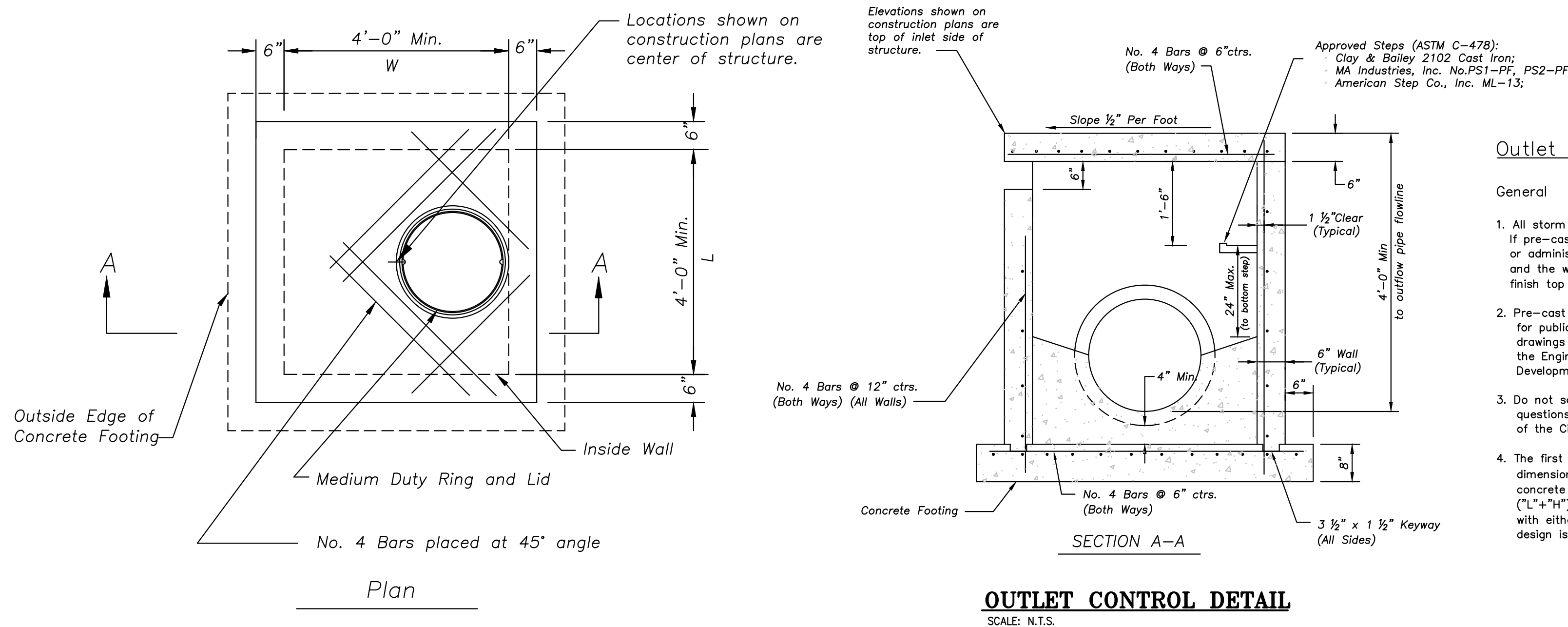
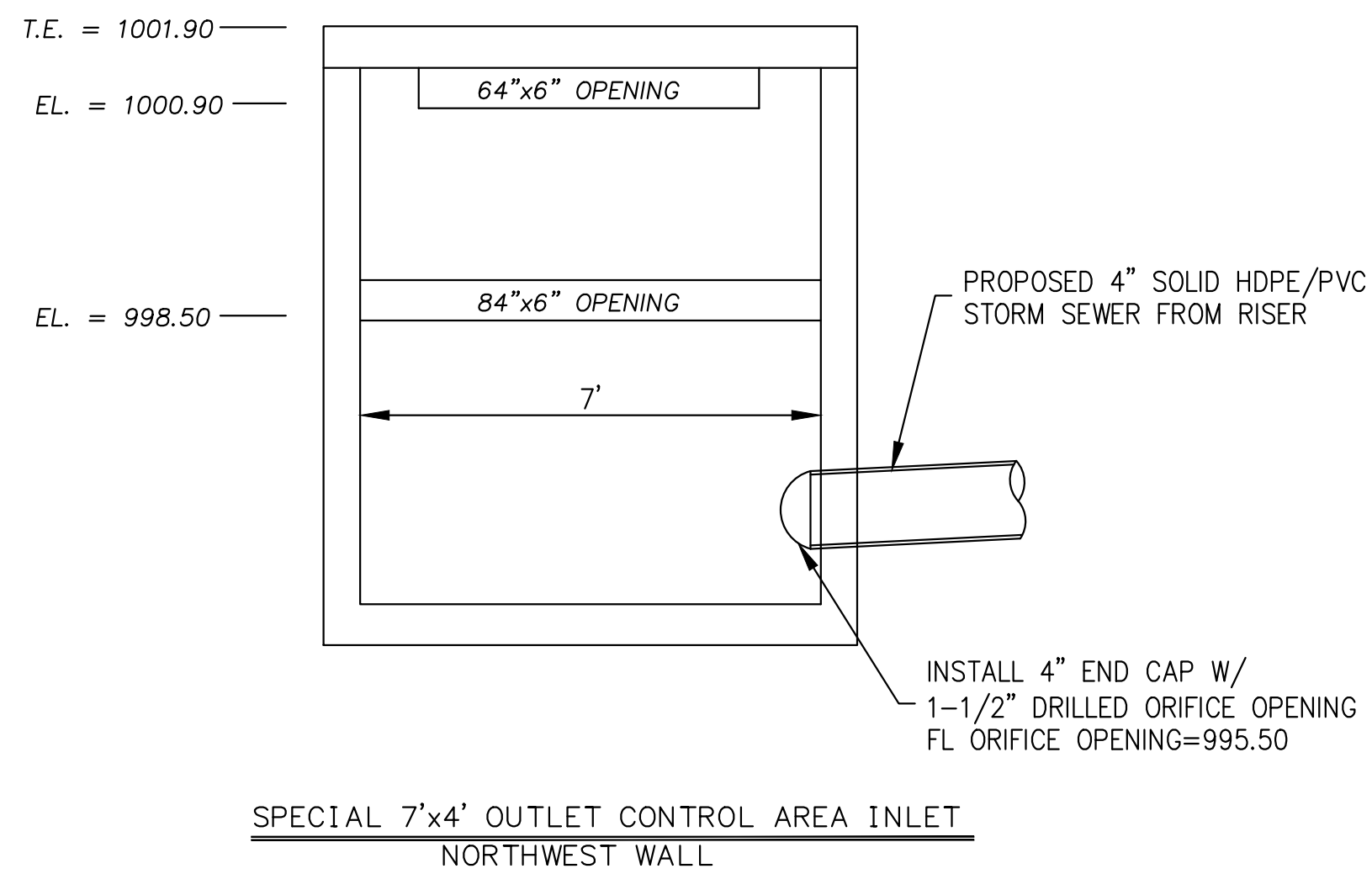
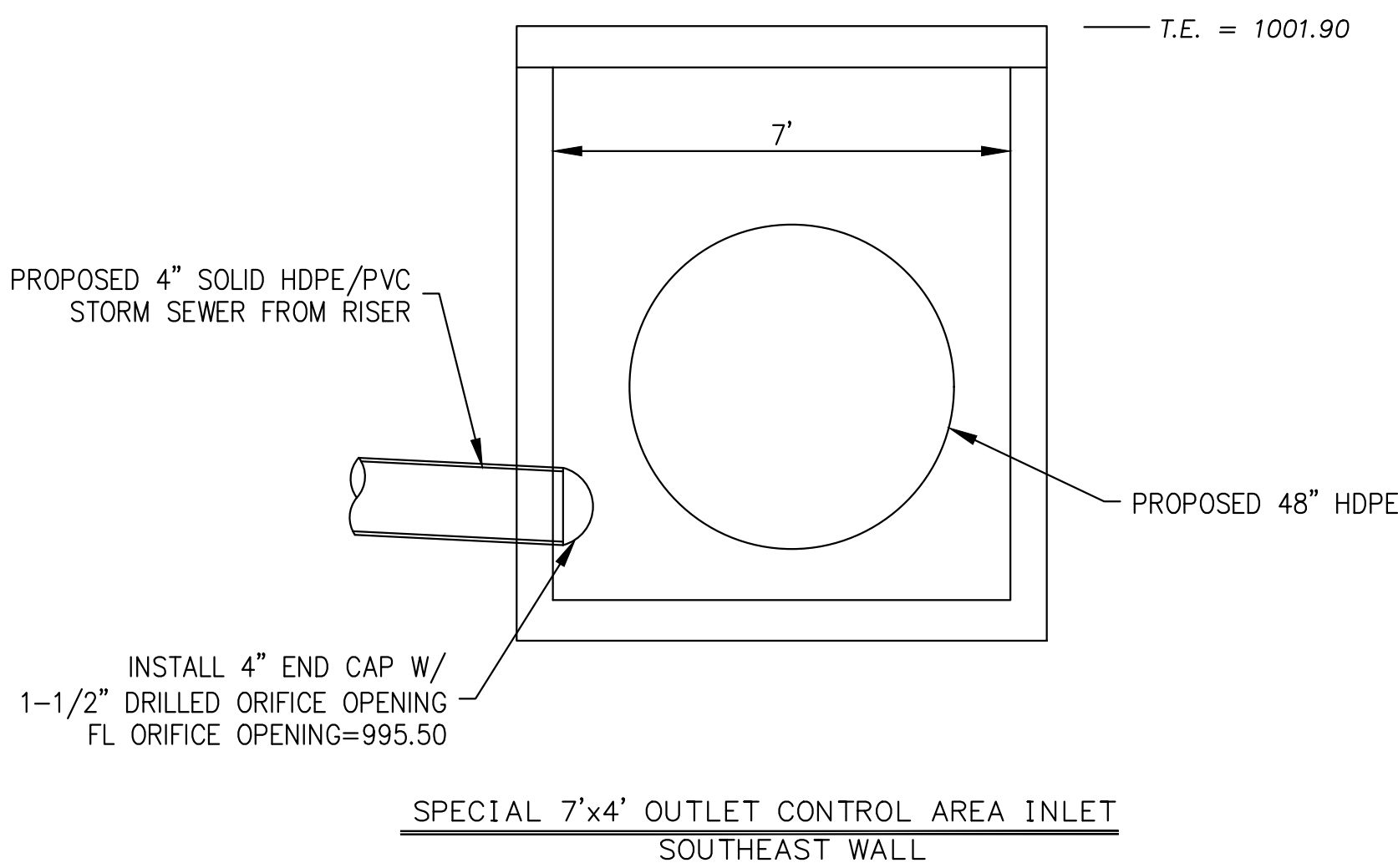
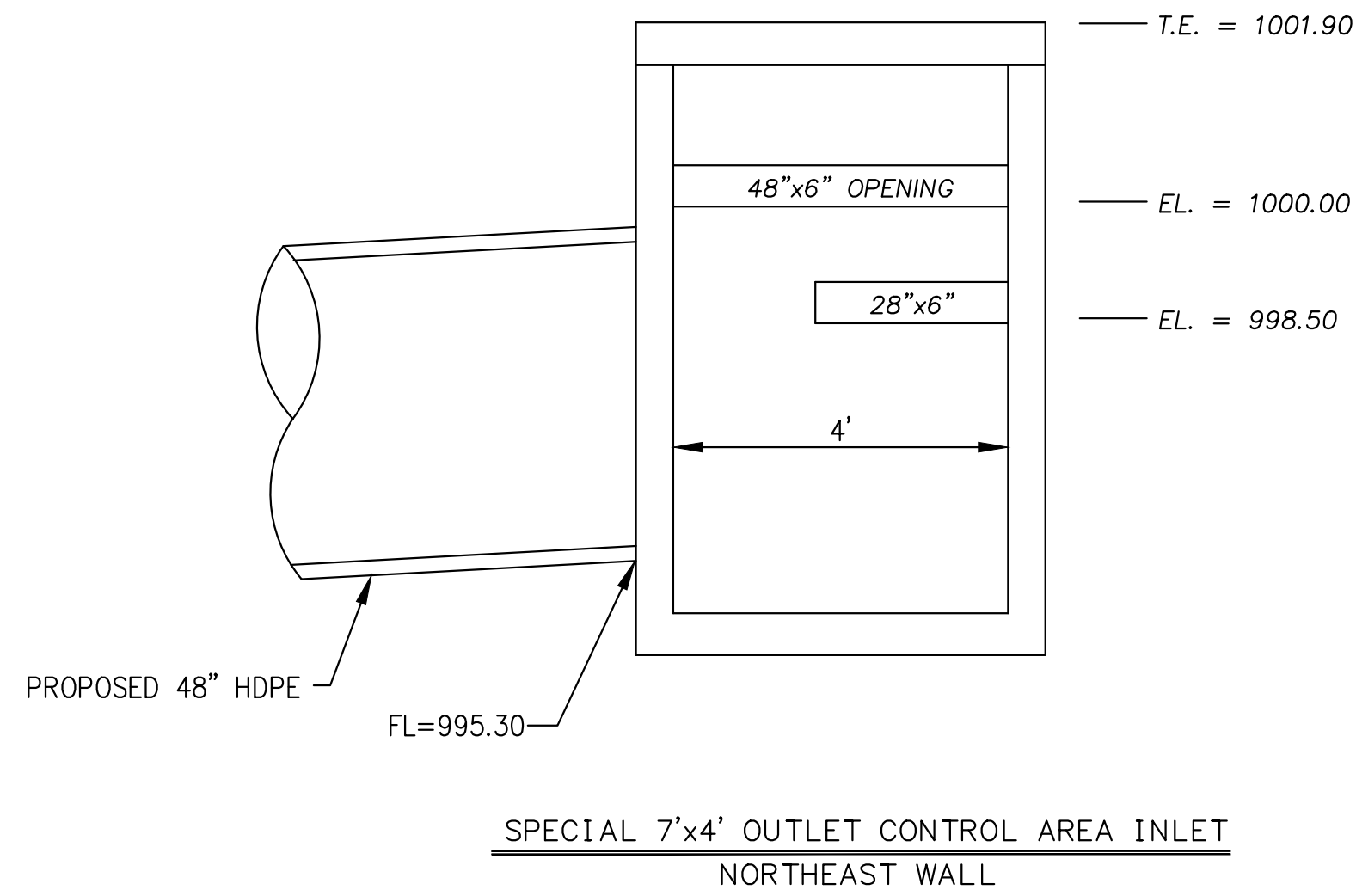
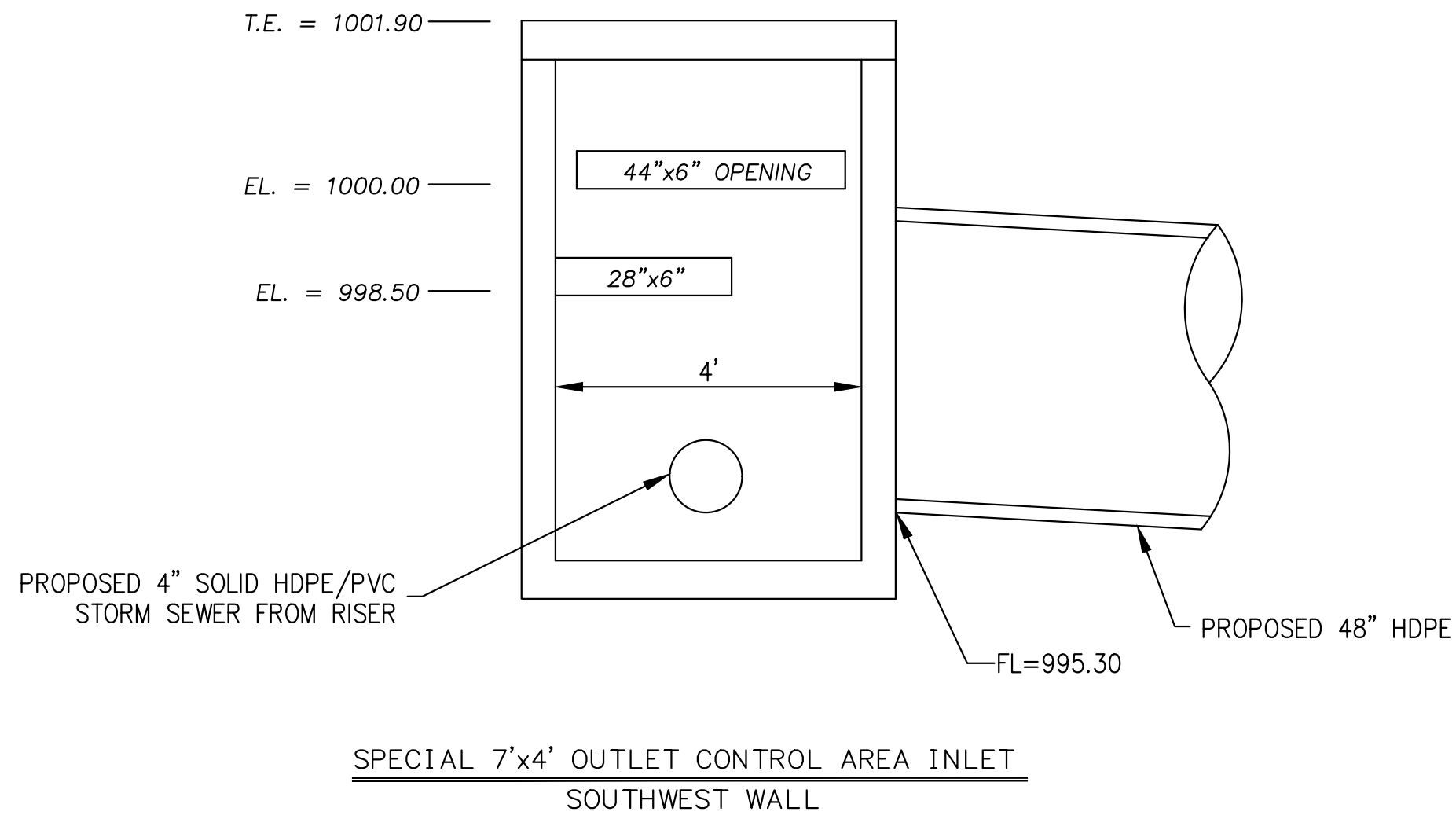
EXTENDED DRY DETENTION BASIN
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	App.	By	App.	Revisions:
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CORPORATE DATE OF AUTHORIZATION				3.	04-15-22
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ENGINEERING - E-361					
CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING-200701028					
ENGINEERING-200700339					

SHEET

C6

\\phelps-sewa\projects\210639\dwg\permit plans\OUTLET CONTROL BASIS.dwg Layout 2 Apr 15, 2022 3:58pm Daniel Finn



Outlet Control Structure Notes

General

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

Concrete

- Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the **Lee's Summit** Municipal Code.
- Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, except as modified in the **Lee's Summit** Municipal Code.

Reinforcing Steel

- Reinforcing steel shall be new billet, minimum Grade 60 as per ASTM A615, and shall be bent cold.
- All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of $\pm \frac{1}{8}$ " shall be permitted.
- All lap splices not shown shall be a minimum of 40 bar diameters in length.

- All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
- All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

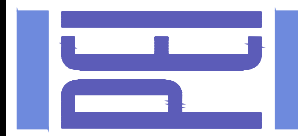
Construction

- The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
- Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
- Material selection and compaction requirements for backfill around structures shall be as specified in the Manual of Infrastructure Standards, as promulgated by the City Engineer.



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OUTLET STRUCTURE DETAILS

MARKET STREET CENTER
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	No.	Date	By	App.
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ENGINEERING - E-361					
CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING-200701028					
ENGINEERING-200700339					

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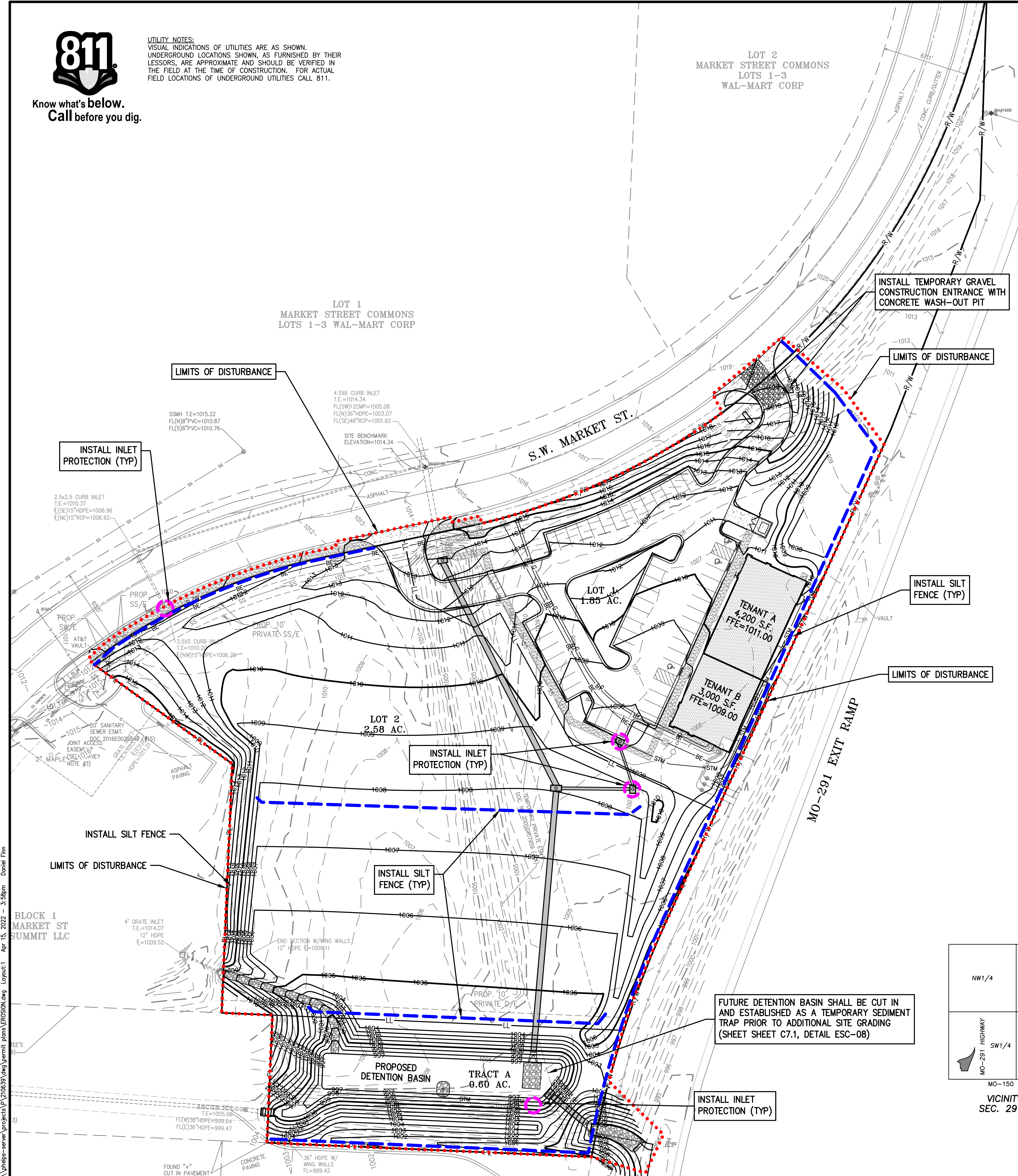


Know what's below.
Call before you dig.

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

LOT 2
MARKET STREET COMMONS
LOTS 1-3
WAL-MART CORP

LOT 1
MARKET STREET COMMONS
LOTS 1-3 WAL-MART CORP



EROSION AND SEDIMENT CONTROL GENERAL NOTES:

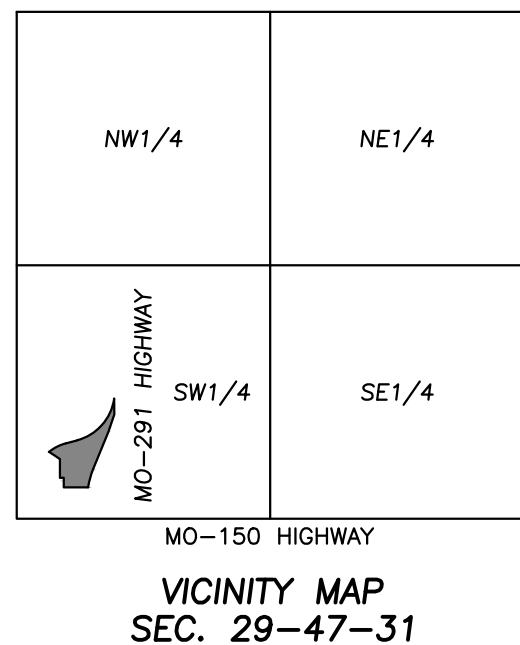
- Prior to Land Disturbance activities, the contractor shall:
 - Delimitate the outer limits of any tree or stream preservation designated to remain with construction fencing.
 - Construct a stabilized entrance/parking/delivery area and install all perimeter sediment controls on the site.
 - Install and request the inspection of the preconstruction erosion and sediment control measures designated on the approved erosion and sediment control plan.
 - Land disturbance work shall not proceed until there is a satisfactory inspection.
 - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, placement of physical barriers or other means acceptable to the contractor and the City inspector.
- Erosion and sediment control devices protecting the public right-of-way shall be installed as soon as the right-of-way has been backfilled and graded.
- The contractor shall comply with all requirements of City Ordinances or State permit requirements, such as:
 - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
 - The contractor shall perform inspections of erosion and sediment control measures at least once every 14 days and within 24 hours following each rainfall event of 1/2" or more within any 24-hour period.
 - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The log shall be available for review by the City, the State of Missouri, or other authorities having jurisdiction.
- The contractor shall maintain installed erosion and sediment control devices on a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, tree preservation areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel. Failure to do so is a violation of the provisions of City Ordinances and State permit requirements.
- The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMP's in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
- Concrete wash or rinsewater from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc., may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place and excess water evaporated or infiltrated into the ground.
- Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials store outside must be in closed and sealed water-proof containers and located outside of drainageways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

MAINTENANCE: ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

- INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
- ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
- SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.
- THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
- THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

STAGING CHART				
Project Stage	Order	BMP Description	Remove after Stage:	Notes:
Phase I	A. Prior to Land Disturbance and During Construction.	① Sediment Fence	D	Place downstream project site perimeter. (APWA ESC-10)
		② Constr Entrance & Staging Area	D	Maintain during all construction. Include concrete washout. (APWA ESC-01)
		③ Inlet Protection at Existing Inlets	D	Install inlet protection. (APWA Details ESC-06 & ESC-07)
Phase II	B. Temporary Sediment Trap	④ Temporary Sediment Trap	C	Establish temporary sediment trap prior to additional site grading. (APWA Details ESC-09)
	C. Mass Grading & Utility Installation	⑤ Inlet Protection at Proposed Inlets	D	Install inlet protection. (APWA Details ESC-06 & ESC-07)
Phase III	D. Final Stabilization Prior to closure of Land Disturbance Permit	Final Stabilization	N/A	Final Stabilization of all disturbed areas.

Refer to Overall Grading Plan and Landscape Plan for final contours and final land cover.



DISTURBED AREA = 4.7± ACRES

LEGEND

- STABILIZED ROCK ENTRANCE
- LIMITS OF DISTURBED AREA
- PROPOSED SILT FENCE
- CULVERT INLET PROTECTION



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EROSION CONTROL PLAN

MARKET STREET CENTER

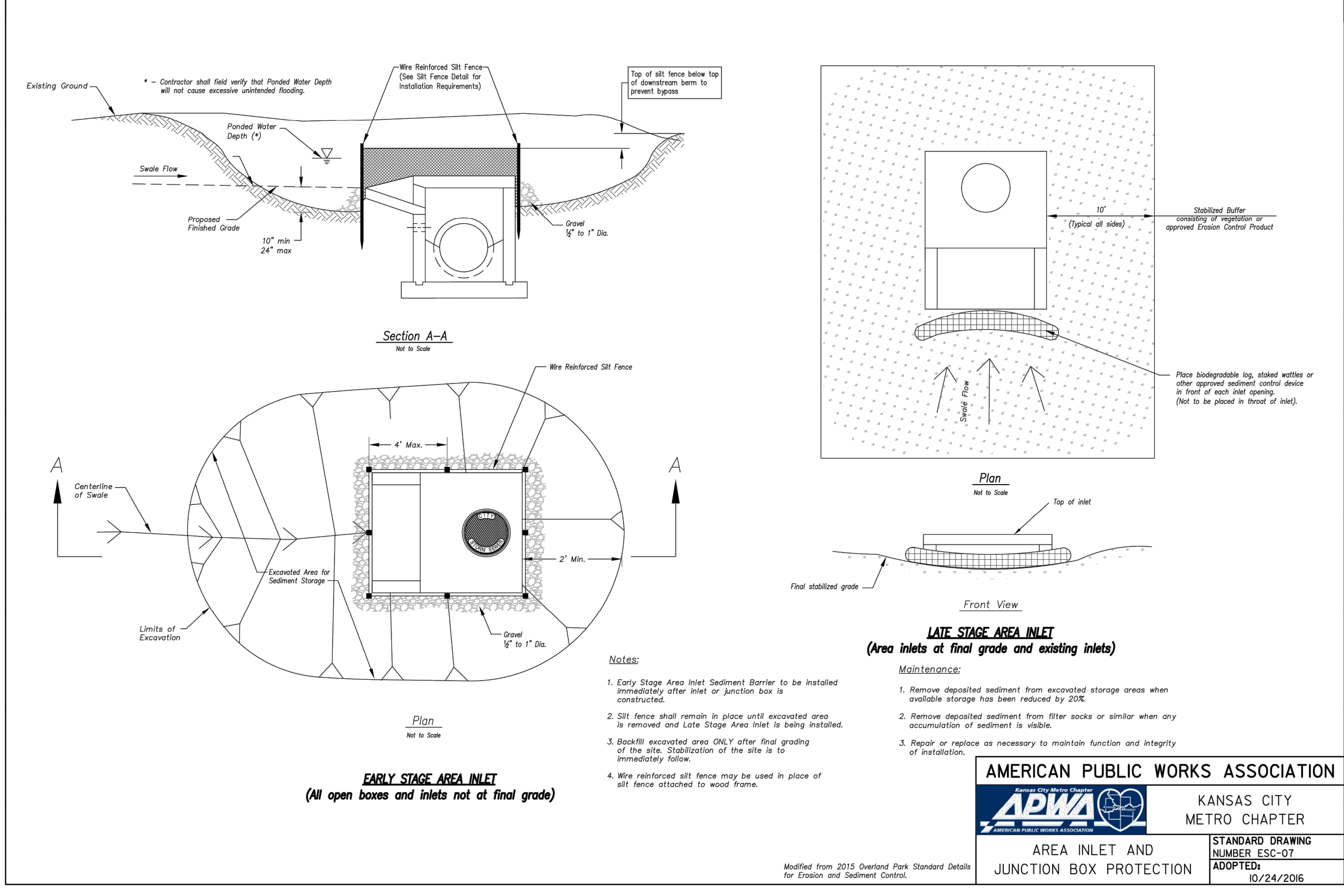
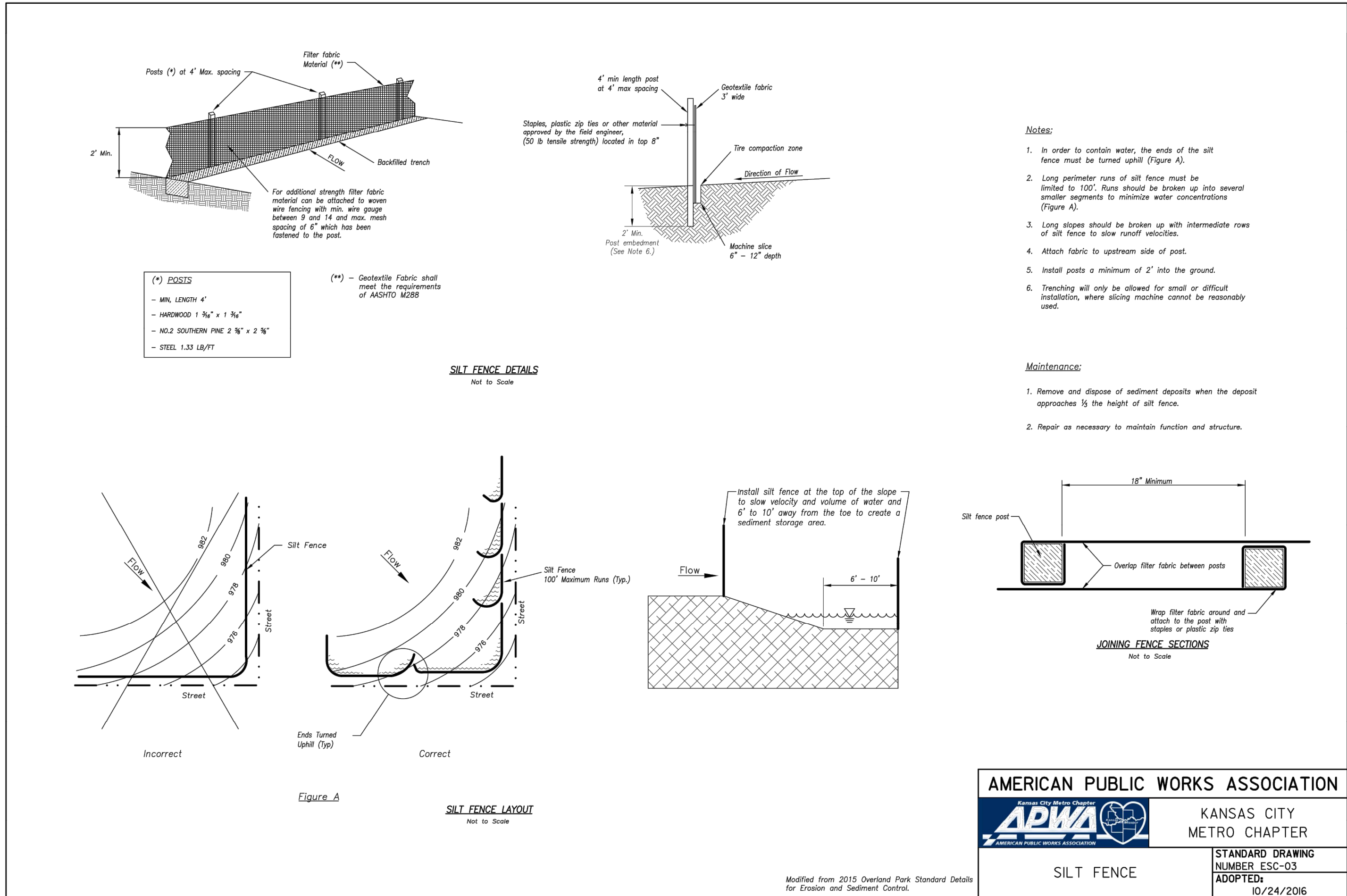
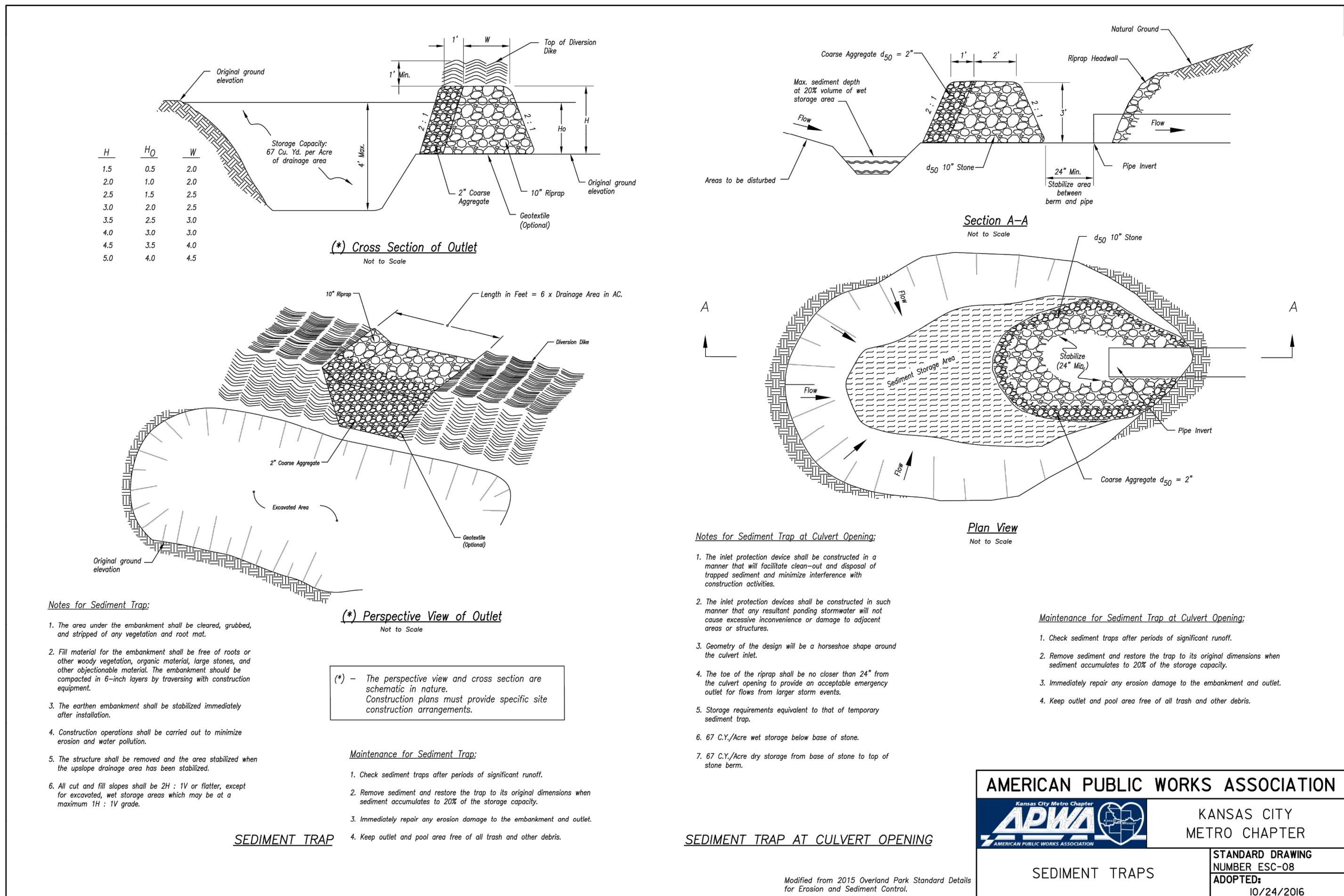
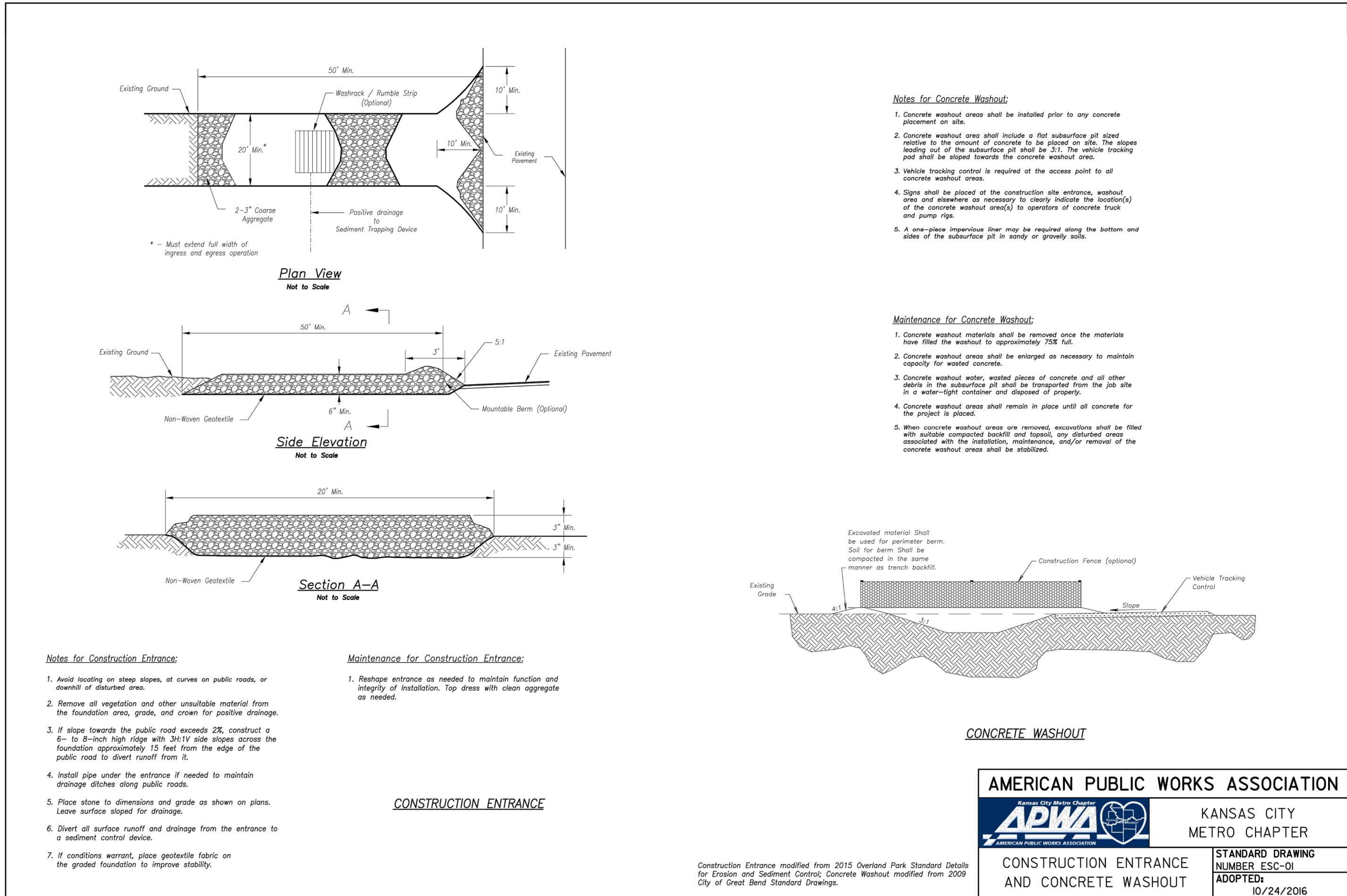
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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ENGINEERING - E-361						
CERTIFICATE OF AUTHORIZATION						
LAND SURVEYING - 200701028						
ENGINEERING - 200700339						

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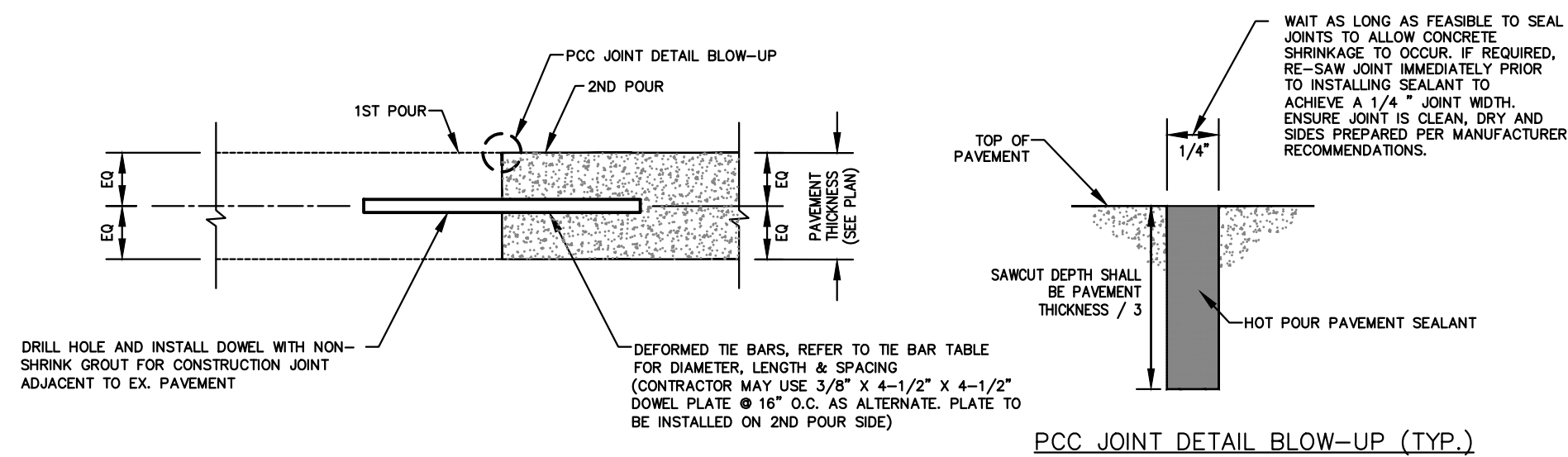
Dowel size*			
Slab depth, in. (mm)	Dowel diameter, in. (mm)	Dowel embedment, in. (mm) ¹	Total dowel length, in. (mm) ²
5 (125)	3/8 (16)	5 (125)	12 (300)
6 (150)	3/4 (19)	6 (150)	14 (360)
7 (180)	7/8 (22)	6 (150)	14 (360)
8 (200)	1 (25)	6 (150)	14 (360)
9 (230)	1-1/8 (29)	7 (180)	16 (400)

*All dowels spaced at 12 in. (300 mm) centers.

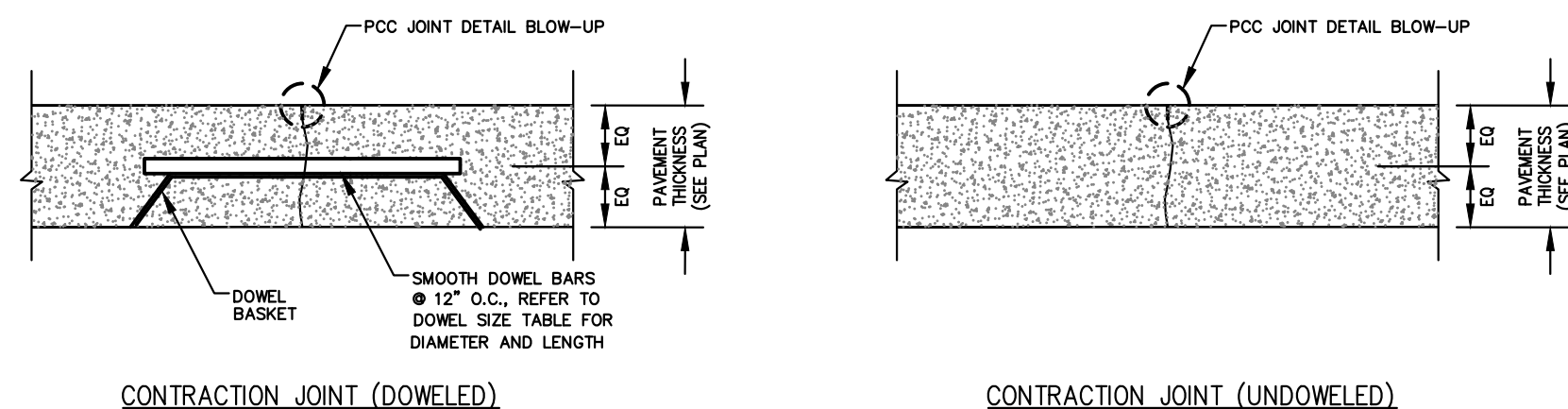
¹On each side of joint.

²Allowance made for joint openings and for minor errors in positioning dowels.

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

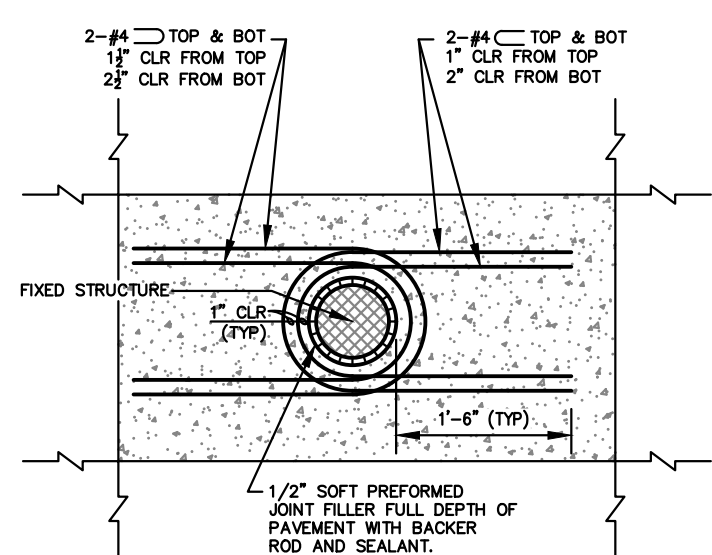


CONSTRUCTION JOINT



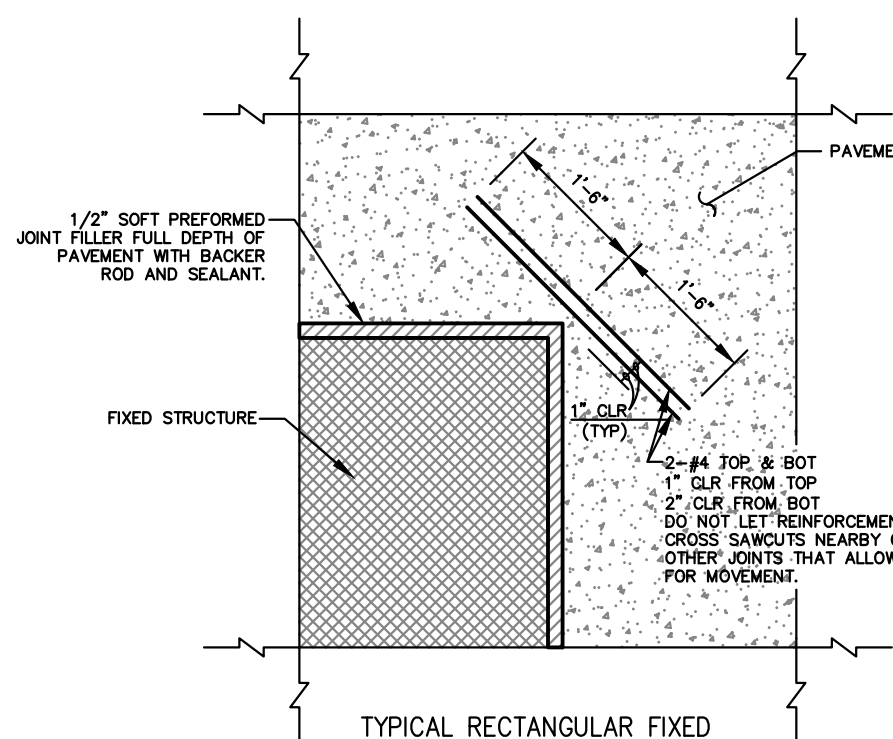
CONCRETE JOINT DETAILS

SCALE: N.T.S.



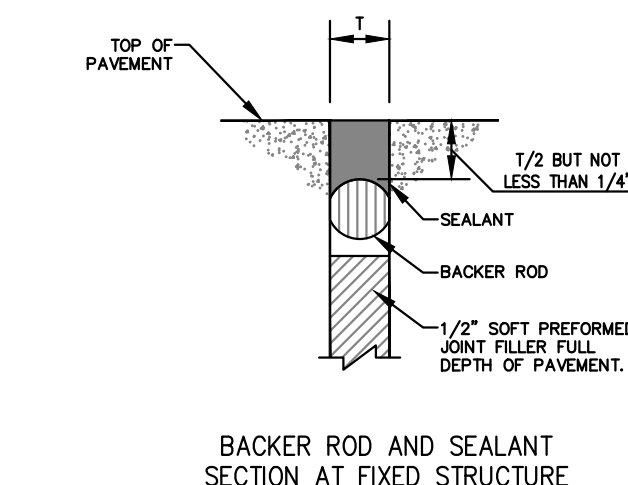
TYPICAL ROUND FIXED STRUCTURE PLAN DETAIL

USES: MANHOLES, LIGHT POLE BASES AND BOLLARDS

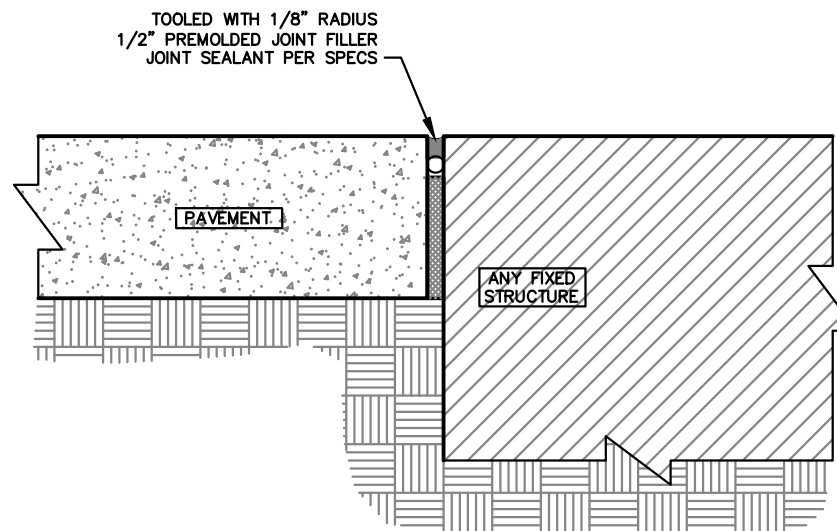


TYPICAL RECTANGULAR FIXED STRUCTURE PLAN DETAIL

USES: BUILDINGS, RETAINING WALLS/DOCK WALLS AND DROP INLETS



BACKER ROD AND SEALANT SECTION AT FIXED STRUCTURE



ISOLATION JOINT

NOTES:

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

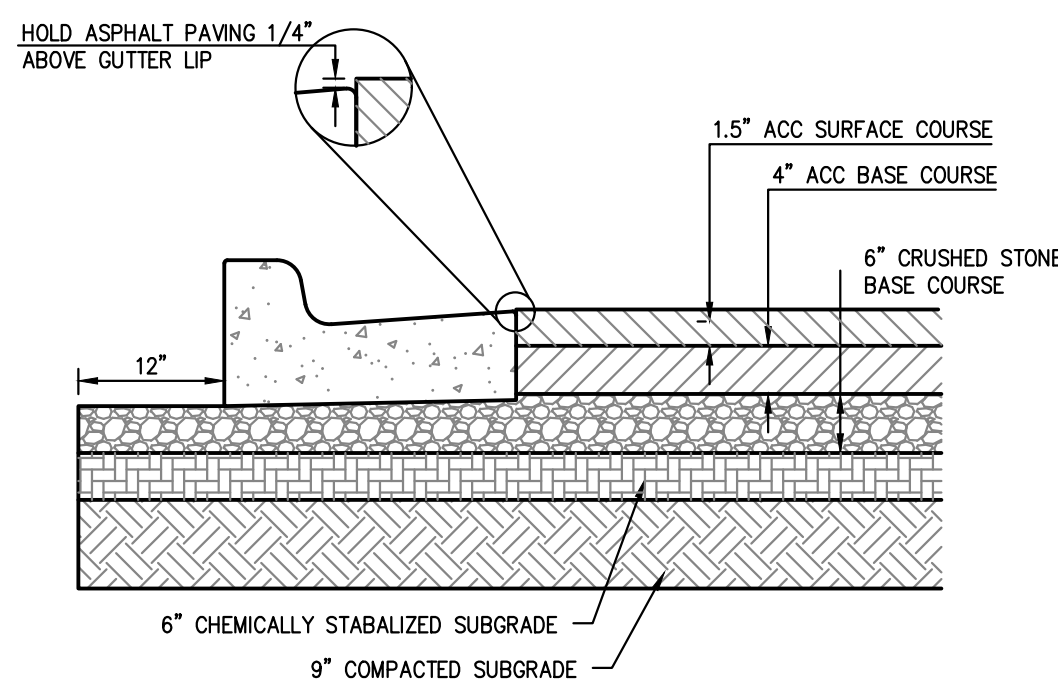
PAVEMENT IS NOT CONSIDERED A FIXED STRUCTURE.

ISOLATION JOINT DETAILS

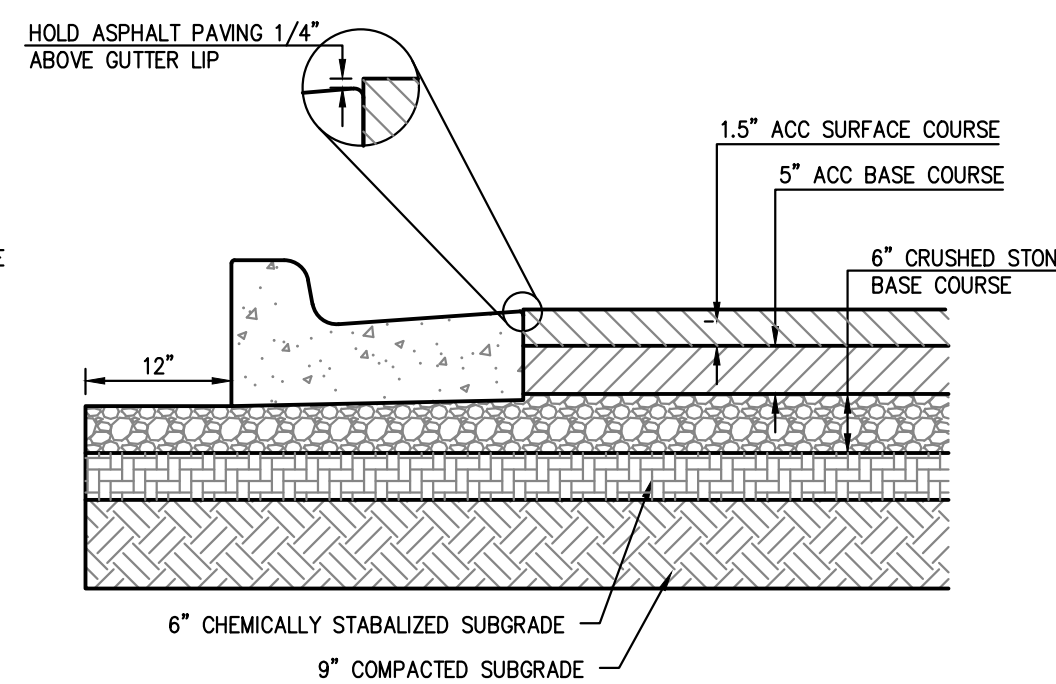
SCALE: N.T.S.

GENERAL PAVING NOTES:

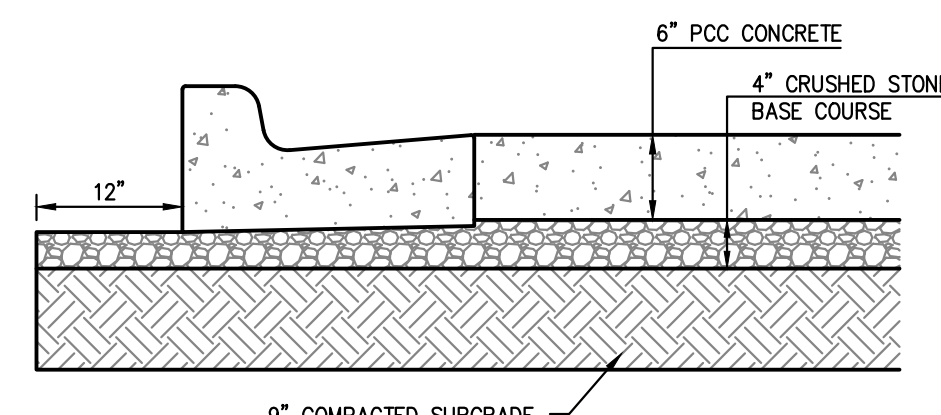
- PRIOR TO PLACEMENT OF GRANULAR BASE OR ASPHALT, PROOF ROLL AND RE-COMPACT THE EXPOSED SURFACES UP TO A MINIMUM LATERAL DISTANCE OF TWO (2) FEET OUTSIDE THE PAVEMENT. ANY LOCALIZED SOFT, WET, OR LOOSE AREAS IDENTIFIED DURING THE PROOF ROLLING SHOULD BE REPAIRED PRIOR TO PAVING. FILL MATERIAL SHOULD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



STANDARD ASPHALT PAVING



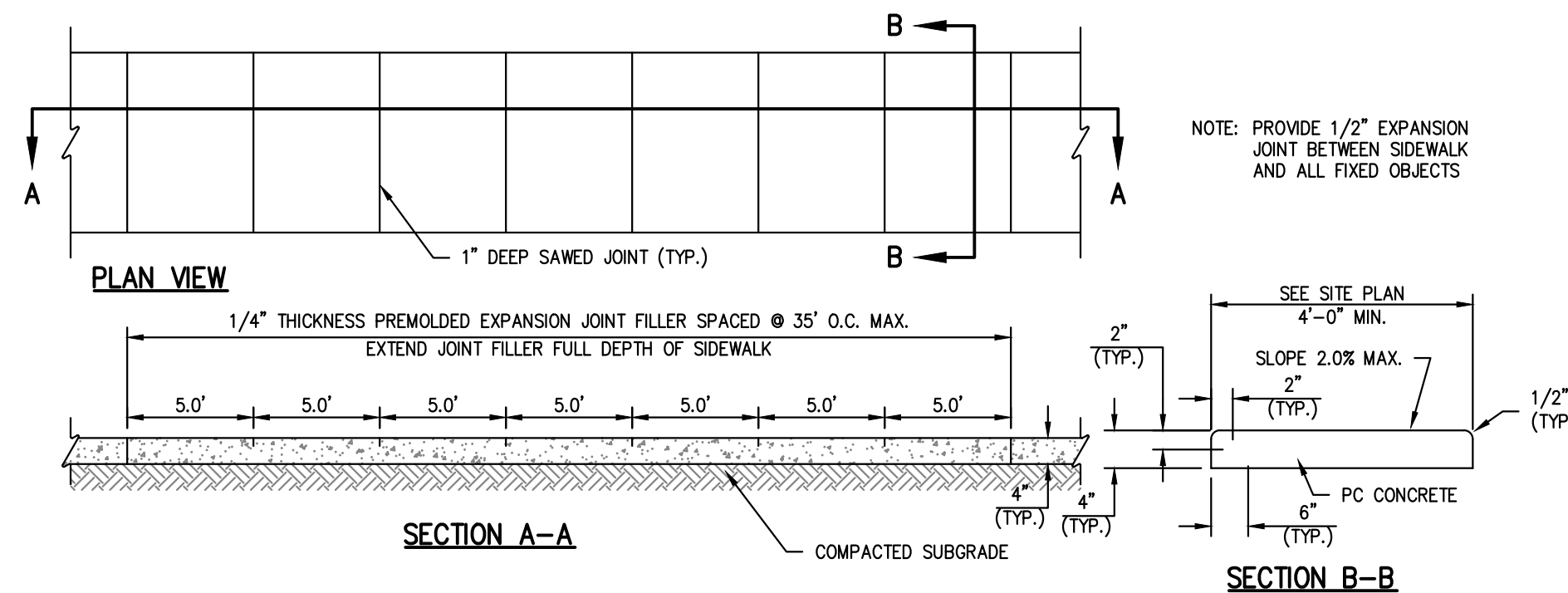
HEAVY DUTY ASPHALT PAVING



CONCRETE PAVING

PAVING SECTIONS

SCALE: N.T.S.

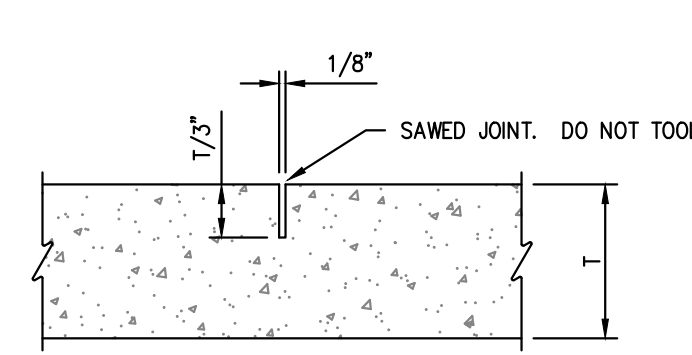


NOTE:

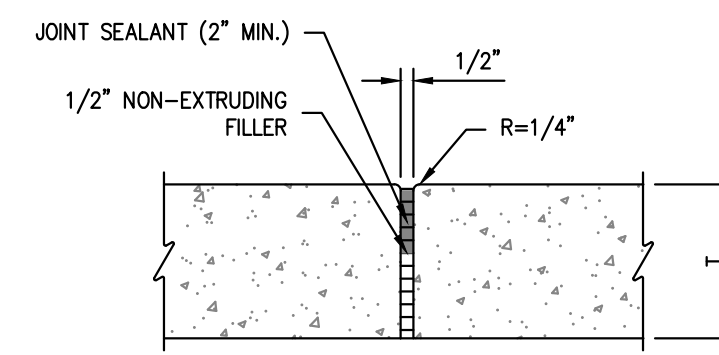
- USE KANSAS CITY MATERIALS METRO BOARD (KCMMB) MIX DESIGN SPECIFICATIONS FOR 4,000 P.S.I. AIR ENTRAINED CONCRETE FOR ALL PRIVATE SIDEWALKS.

PRIVATE CONCRETE SIDEWALKS (NON REINFORCED)

SCALE: N.T.S.



TYPE A JOINT

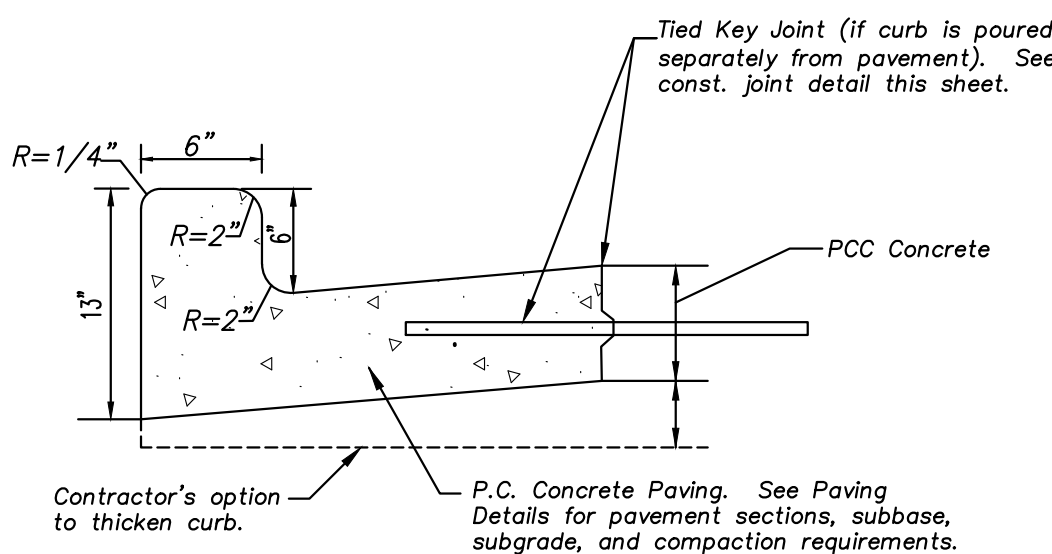


TYPE B JOINT

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

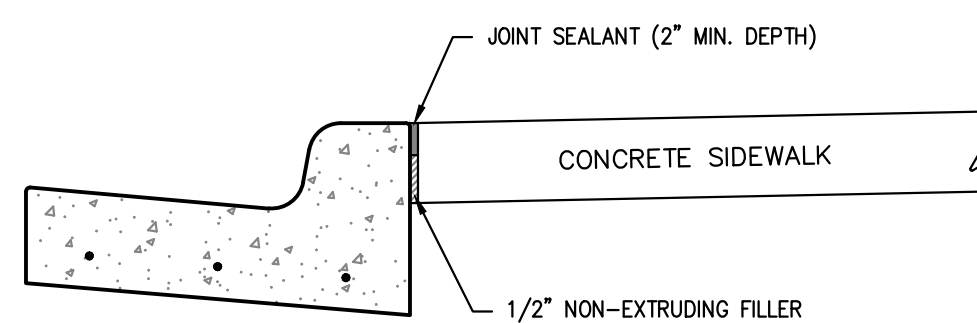
CONCRETE SIDEWALK JOINT DETAILS

SCALE: N.T.S.



MONOLITHIC CONCRETE CURB DETAIL

SCALE: N.T.S.



ALL OTHER DETAILS SAME AS SHOWN PER THIS SHEET.

SIDEWALK AT CURB DETAIL

SCALE: N.T.S.



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STANDARD DETAILS

MARKET STREET CENTER

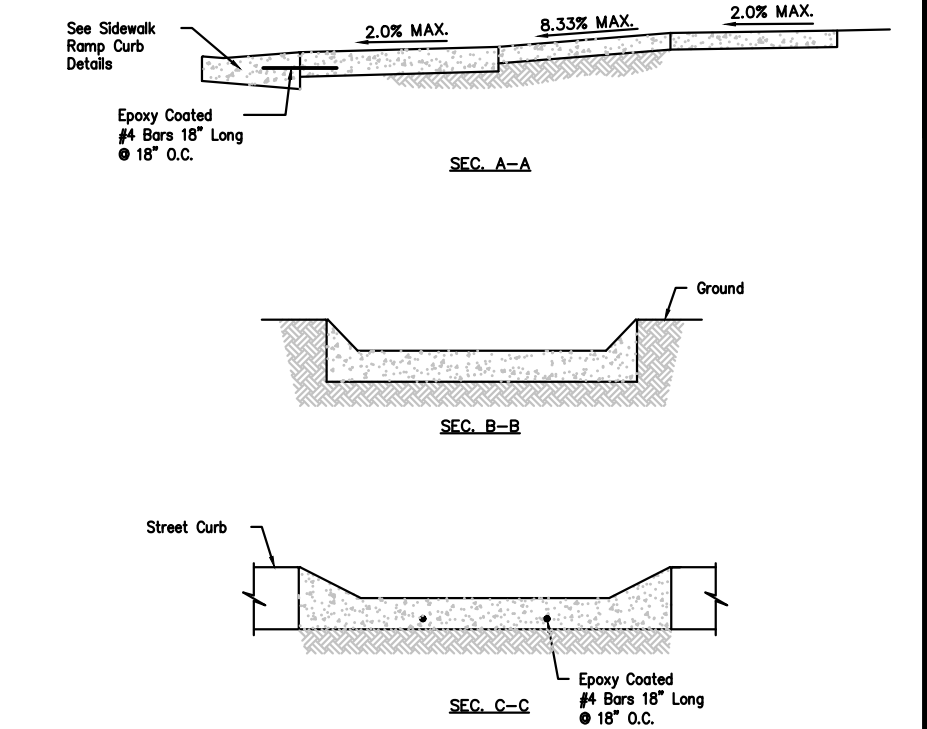
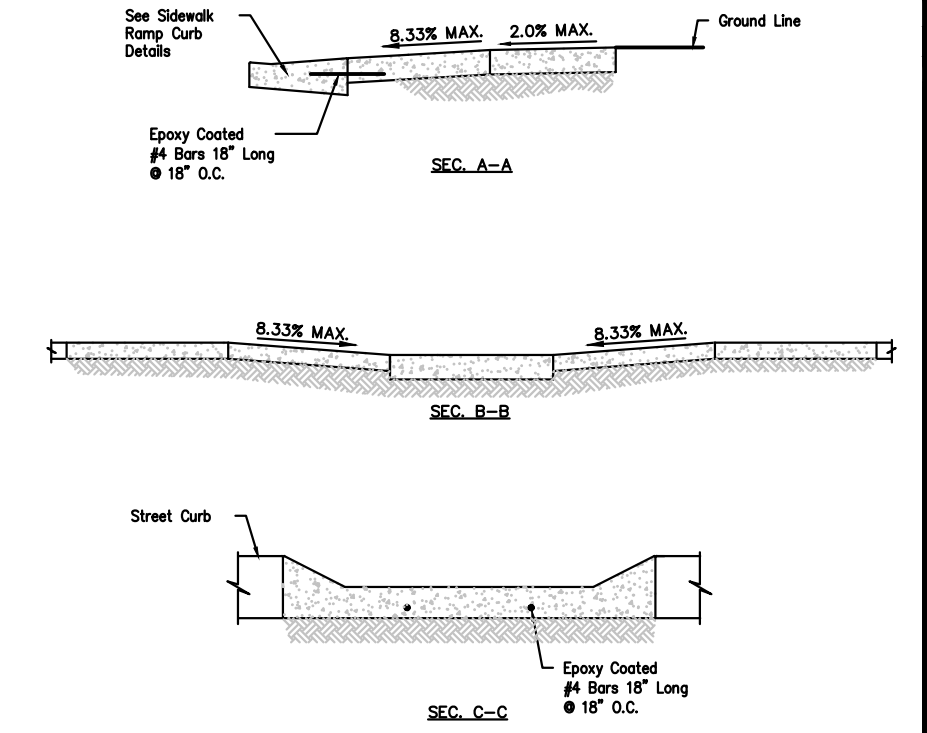
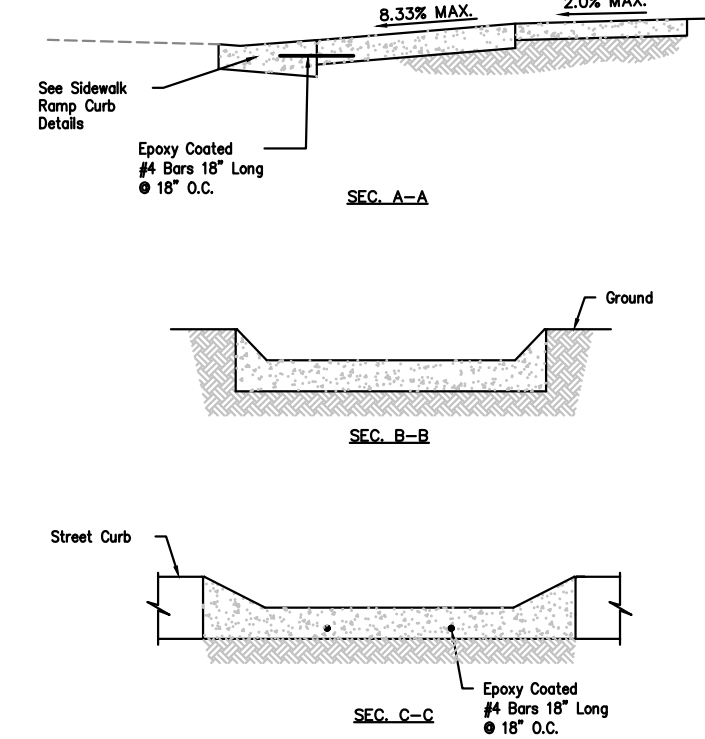
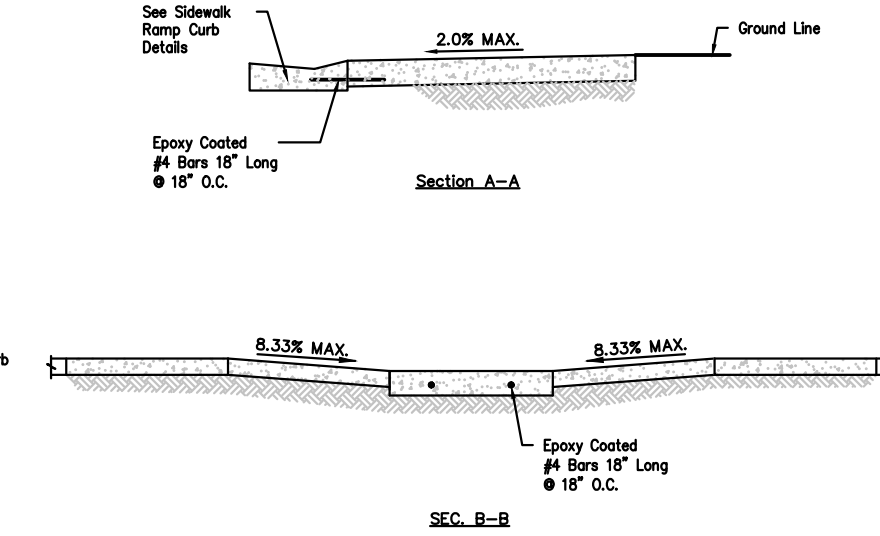
M291 AND SW MARKET STREET

CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

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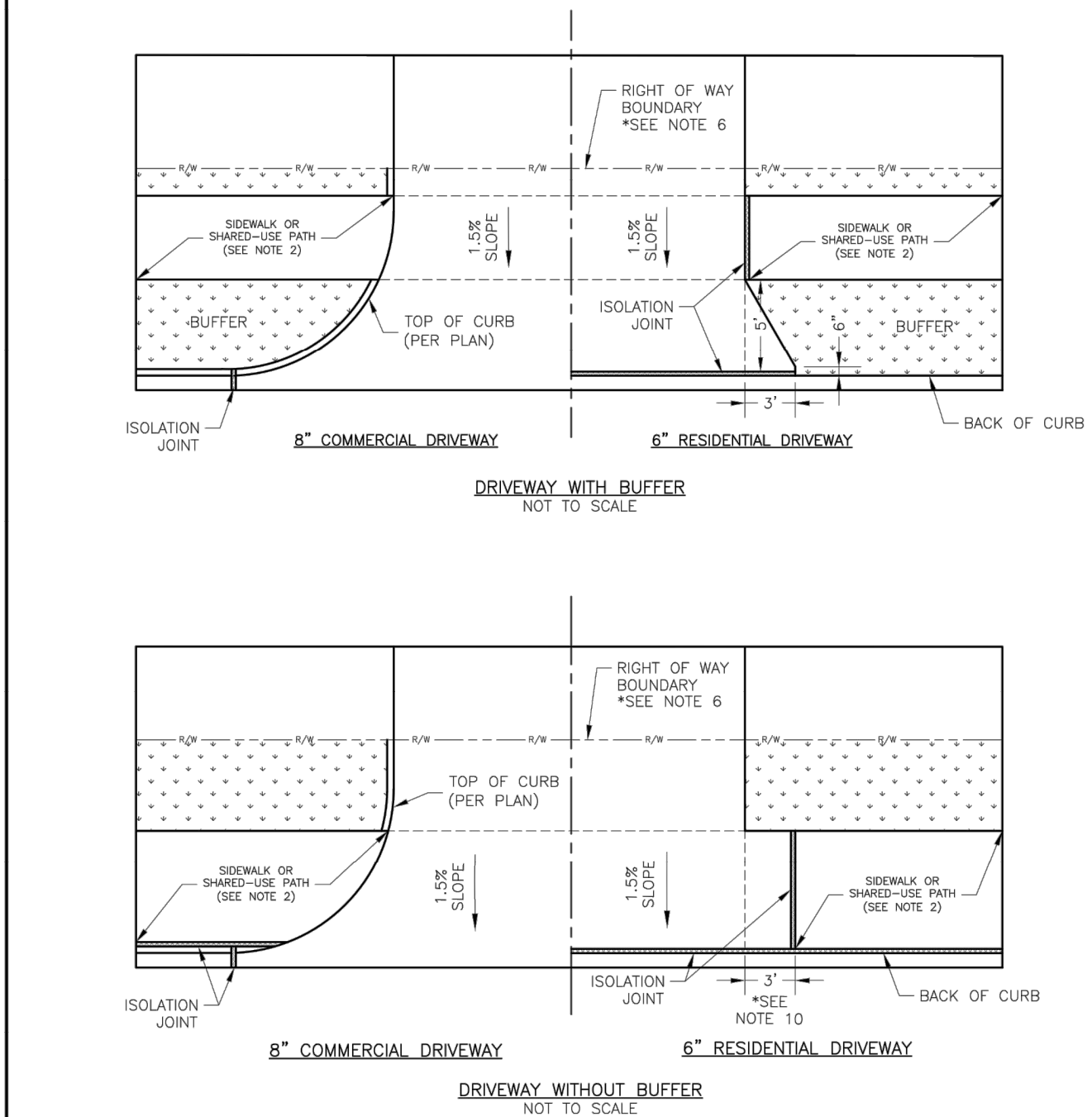
C8



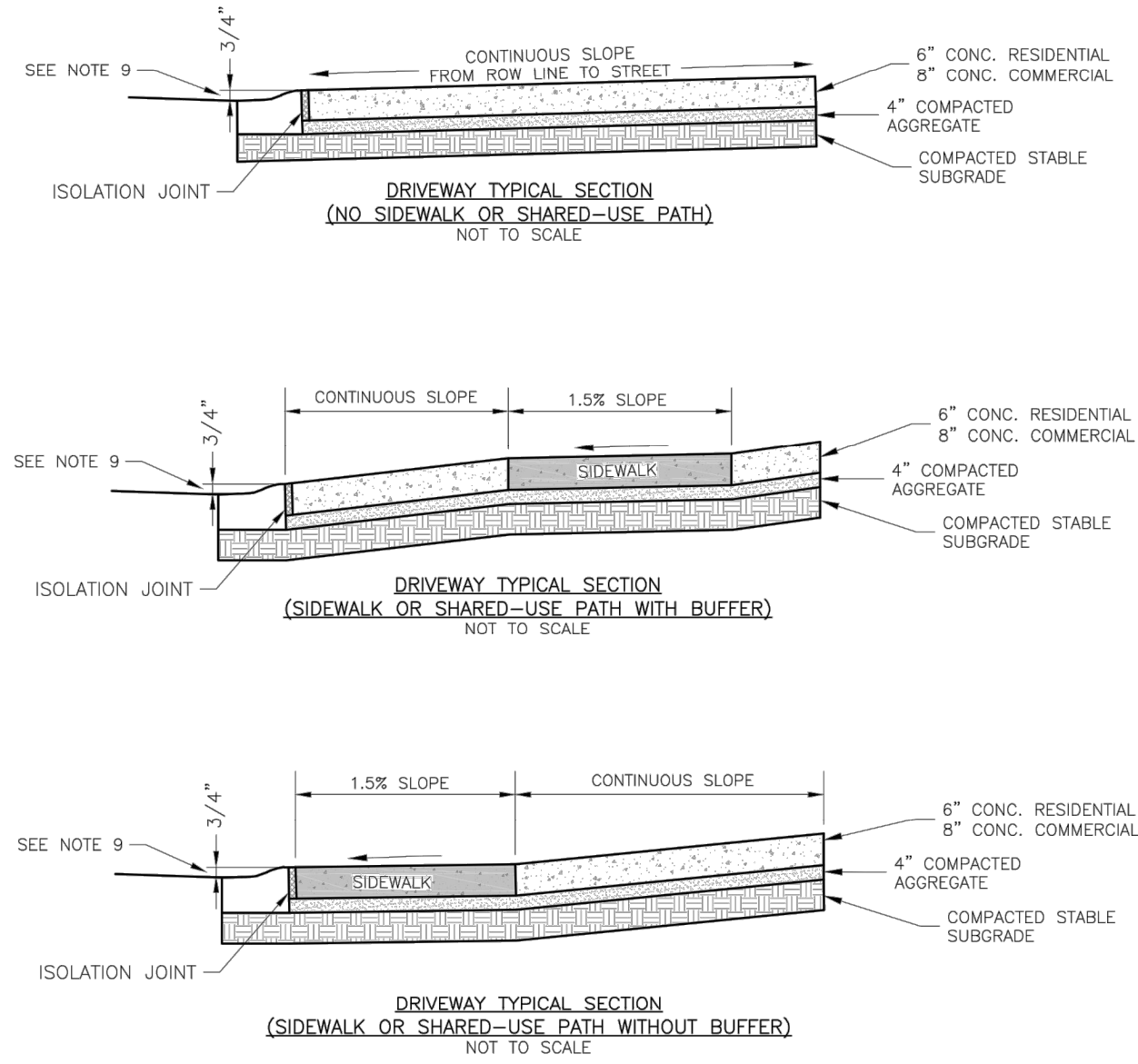
PRIVATE SIDEWALK RAMPS
SCALE: N.T.S.



\\phelps-serv\projects\210639.dwg Lee's Summit Plans - PRIVATE.dwg Layout:PAVE 3 Apr 15, 2022 - 3:58pm Daniel Finn



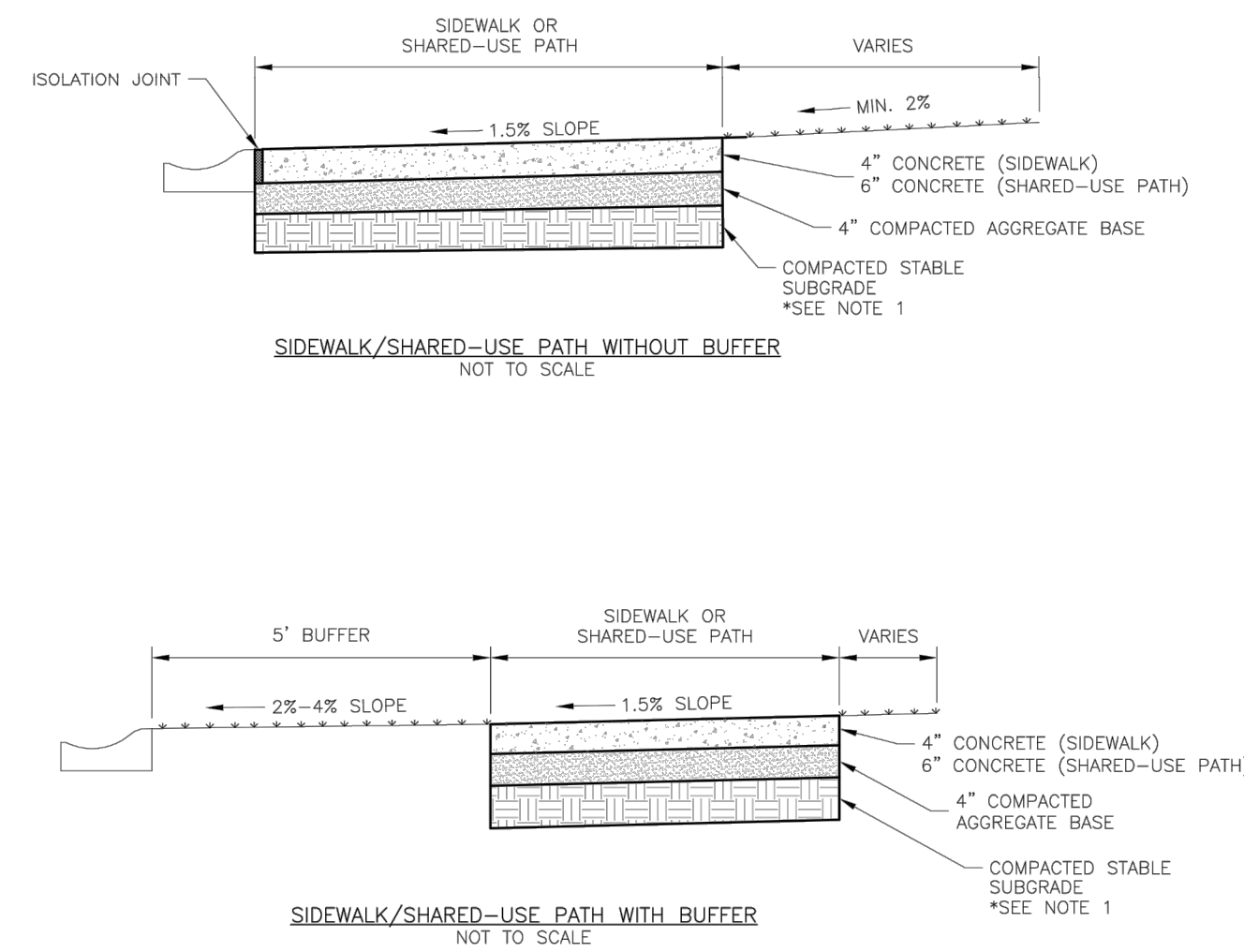
- GENERAL NOTES:
- SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
 - ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-38, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
 - JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
 - KCMBB 4K CONCRETE MIX IS REQUIRED FOR ALL CURVES.
 - COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMBB 4K CONCRETE MIX.
 - RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMBB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEEDS TO BE APPROVED BY CITY INSPECTOR.
 - A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
 - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
 - $\frac{3}{4}$ " FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
 - SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
 - THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.



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

PROJECT NO. 210639
DATE: 04/17
DRAWN BY: MFP
CHECKED BY: DL
DATE: 04/17
DATE: 04/17
DATE: 04/17

GEN-1



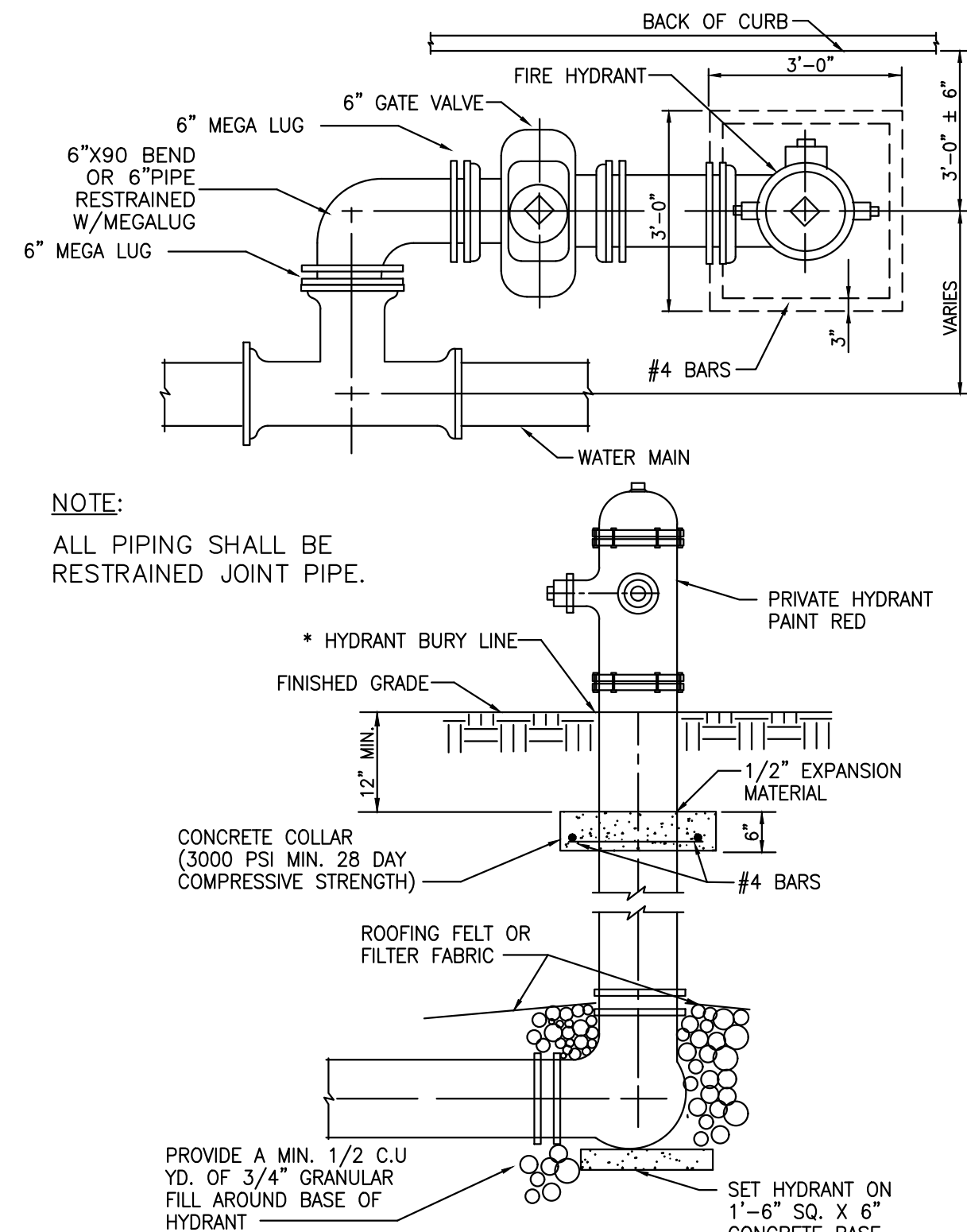
- GENERAL NOTES:
- SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
 - 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
 - KCMBB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
 - ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
 - AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
 - AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
 - SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
 - SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
 - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.



LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION 1200 SE GREEN STREET LEE'S SUMMIT, MO 64063

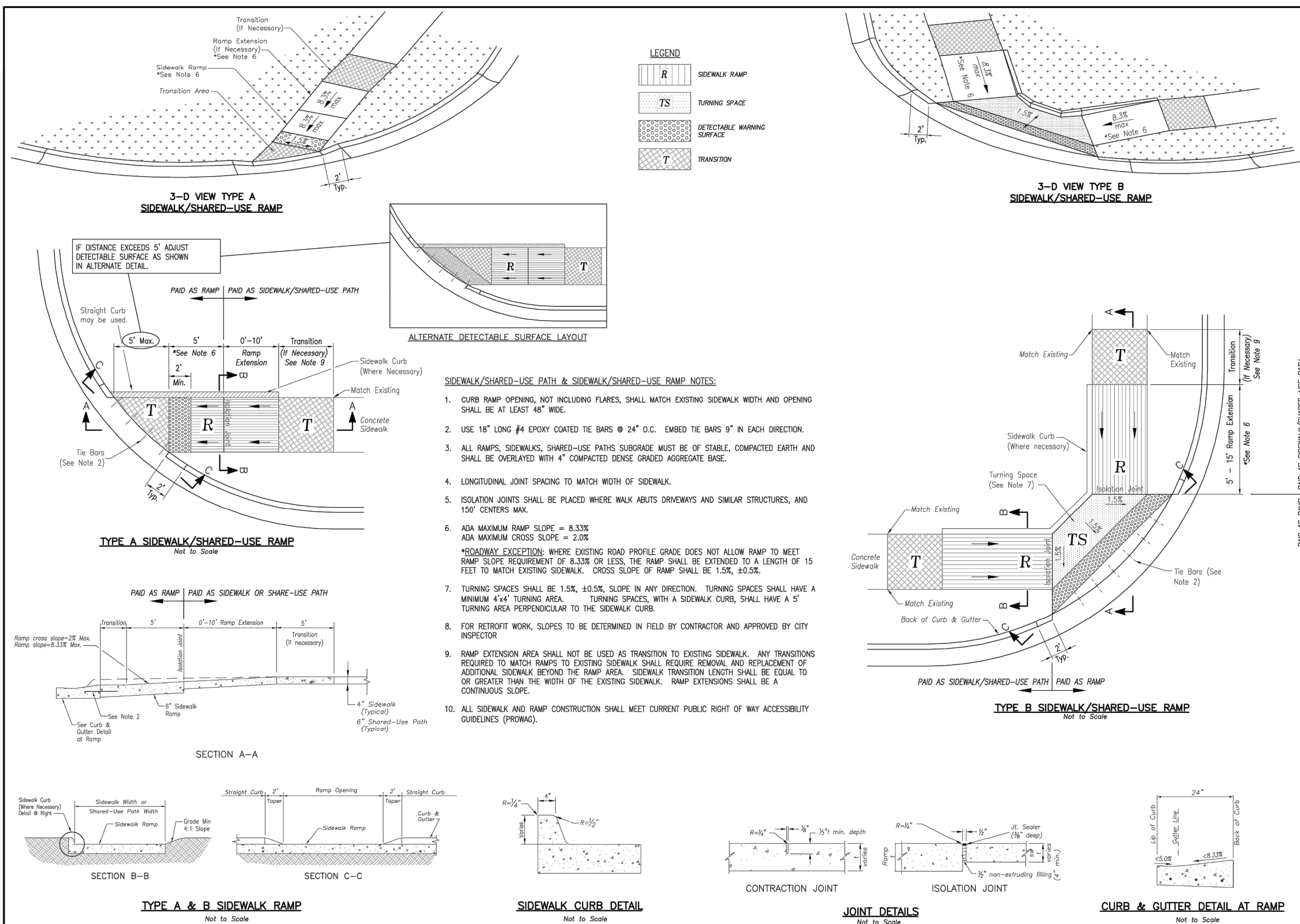
DATE: 04/17
DRAWN BY: MFP
CHECKED BY: DL

GEN-2



NOTE:
ALL PIPING SHALL BE RESTRAINED JOINT PIPE.

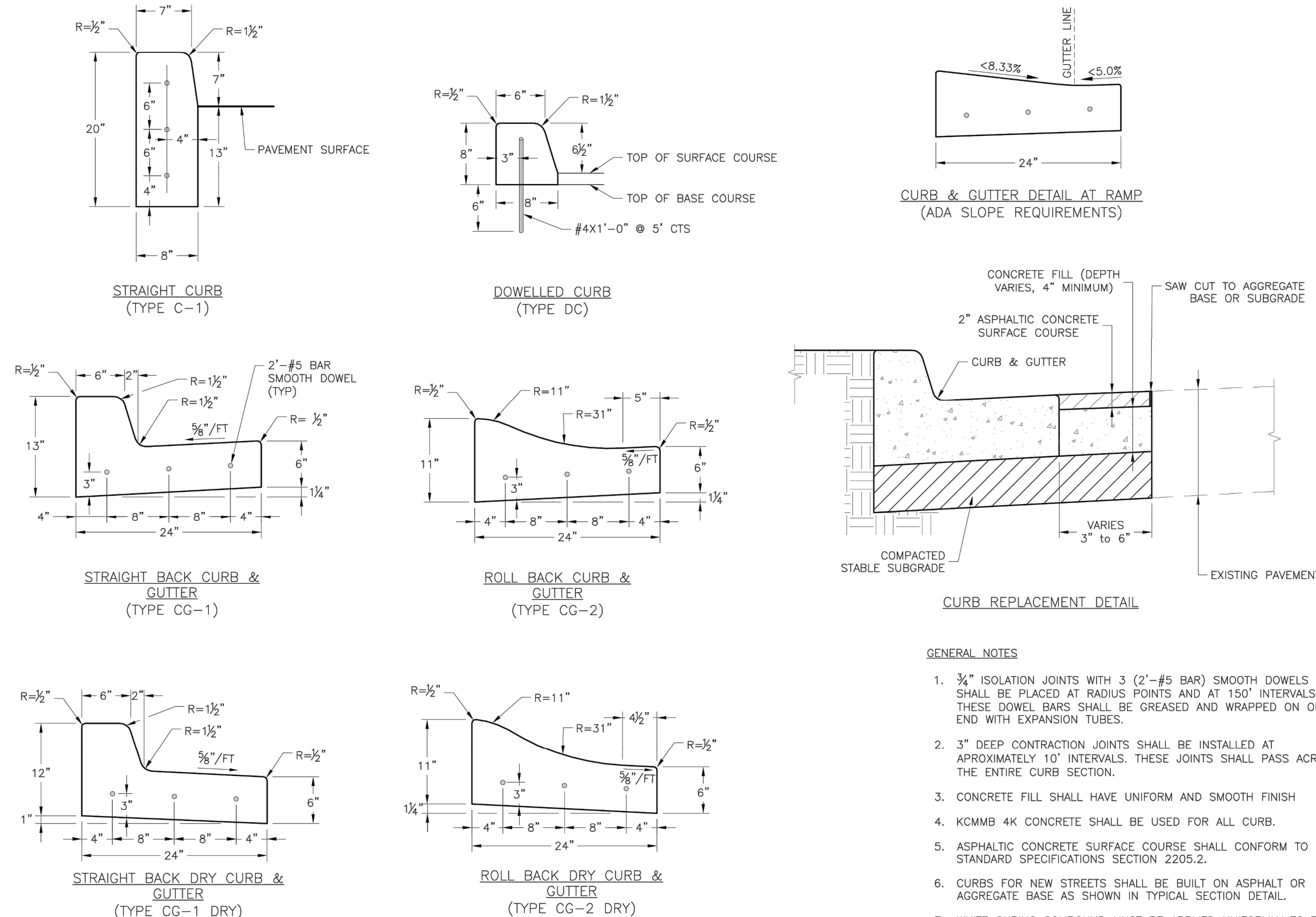
NOTE:
WHEN FIRE HYDRANT'S GATE VALVE EXCEEDS THE DISTANCE OF 5'-0" FROM CENTER OF GATE VALE TO CENTERLINE OF TEE. GATE VALVE SHALL BE ASSEMBLED TO WATER MAIN'S TEE.



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

PROJECT NO. 210639
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DATE: 04/17
DATE: 04/17
DATE: 04/17

GEN-3A



- GENERAL NOTES:
- $\frac{3}{8}$ " 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.
 - 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
 - CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH.
 - KCMBB 4K CONCRETE SHALL BE USED FOR ALL CURB.
 - ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
 - CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
 - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

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

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GEN-4



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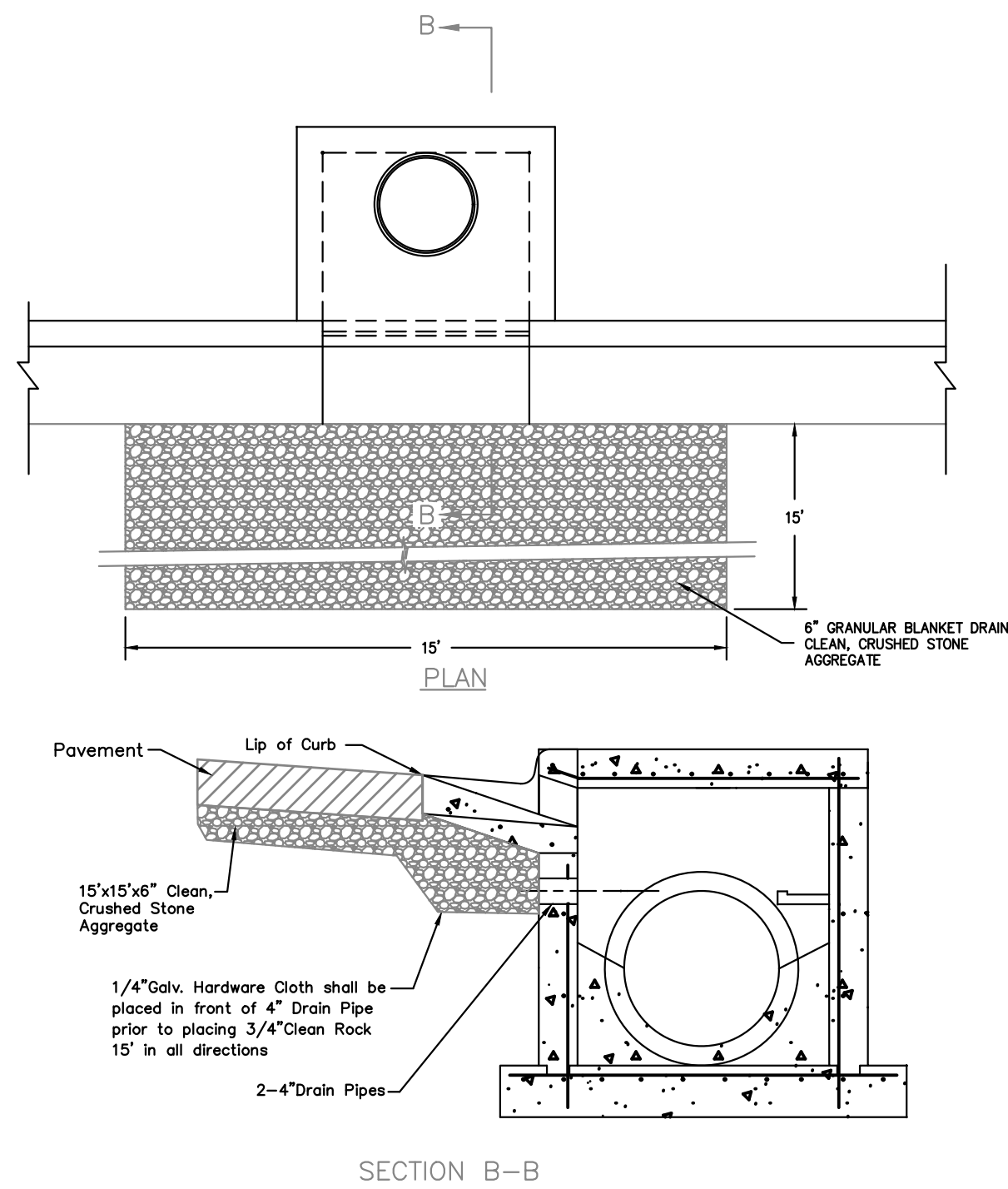


STANDARD DETAILS
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	DATE	REVISIONS	BY	APP.
210639	03-16-22	1. REVISED PER CITY COMMENTS	SNH	DAF
	04-06-22	2. REVISED PER CITY COMMENTS	SNH	DAF
	04-15-22	3. REVISED PER CITY COMMENTS	SNH	DAF

SHEET

C8.2



GRANULAR BLANKET DRAIN ADJACENT TO CURB INLETS
SCALE: N.T.S.

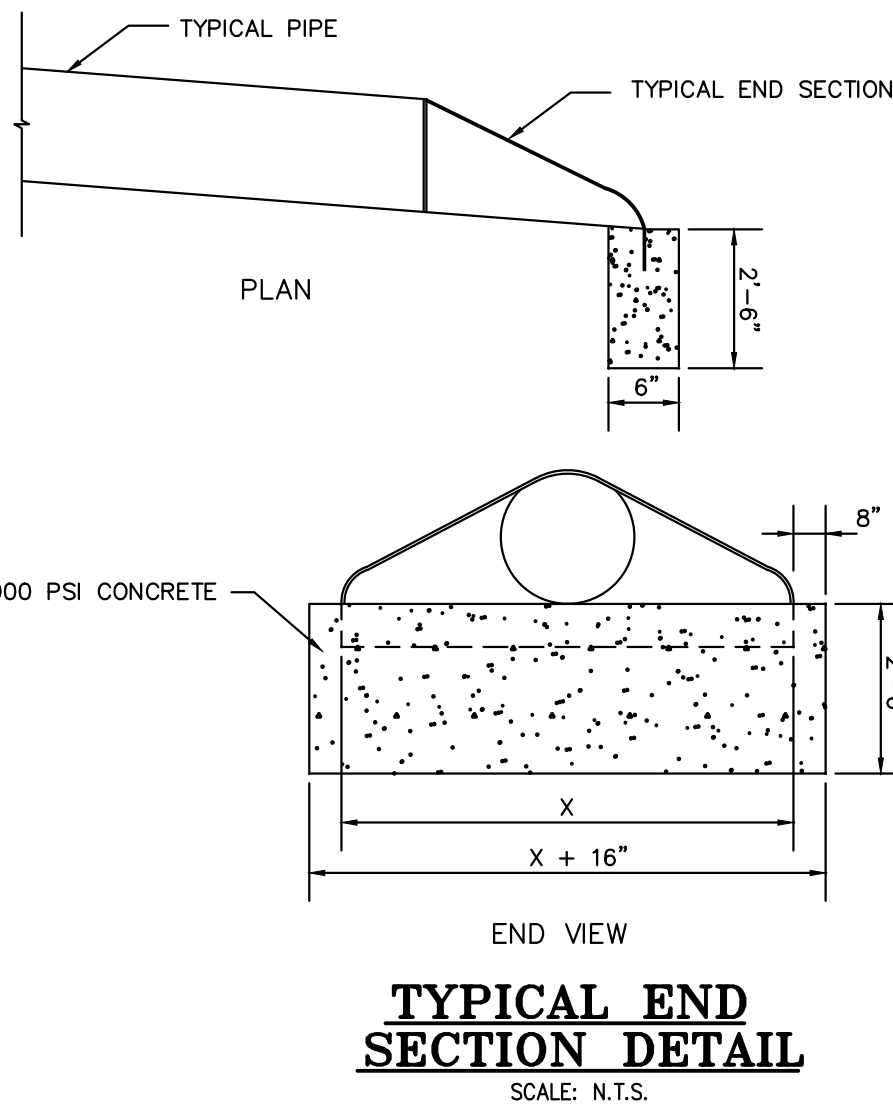


TABLE OF EMBEDMENT DEPTH BELOW PIPE		
D	OR SOIL	MIN. ROCK
LESS THAN 60"	4"	6"
60" OR LARGER	6"	12"

LEGEND
D NOMINAL PIPE SIZE
a EMBEDMENT BELOW PIPE
GRANULAR EMBEDMENT

TRENCH BEDDING

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

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

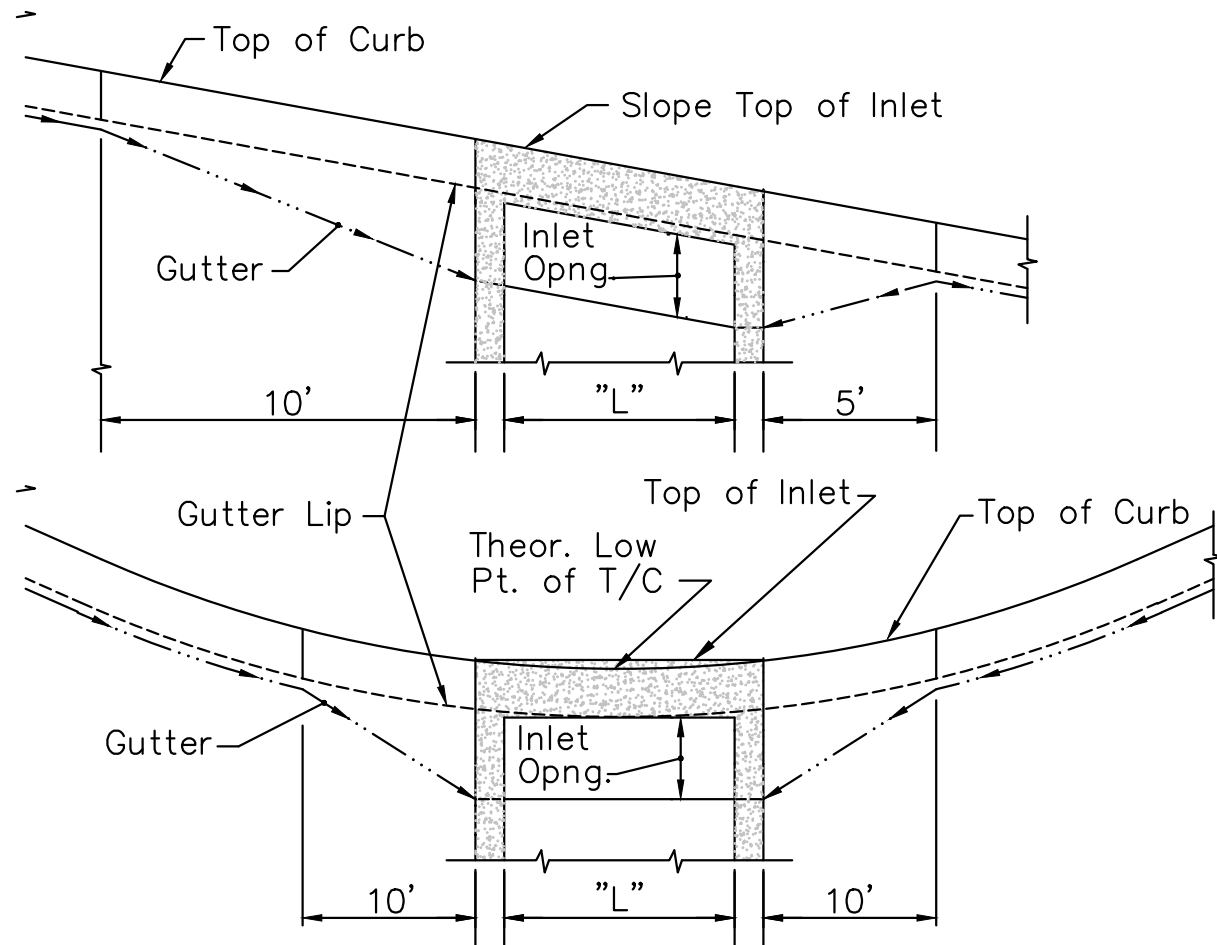
GRANULAR EMBEDMENT FROM THE TOP OF PIPE DOWN SHALL BE COMPACTED TO 85% MAXIMUM DENSITY AS DETERMINED BY ASTM D 698.

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

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

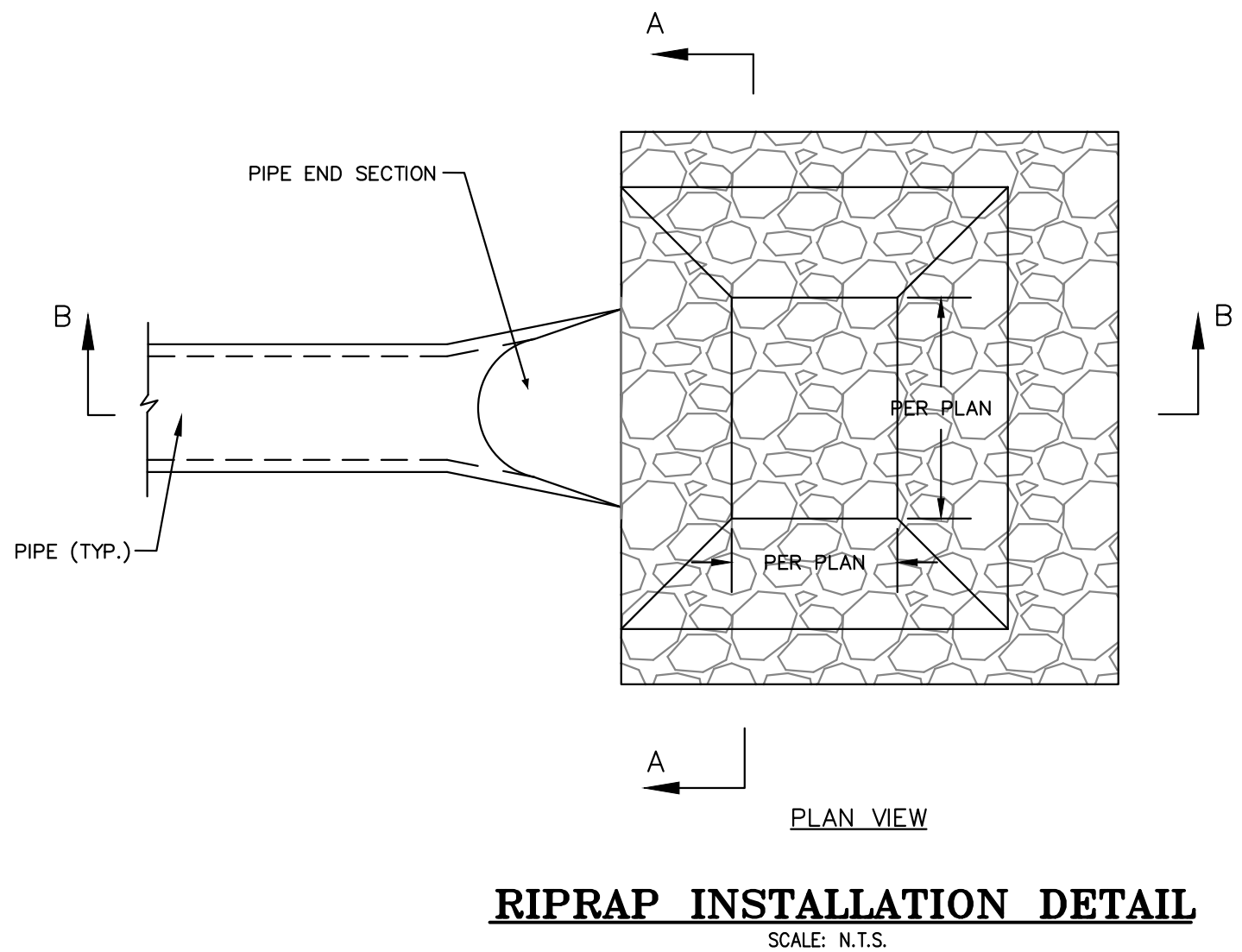
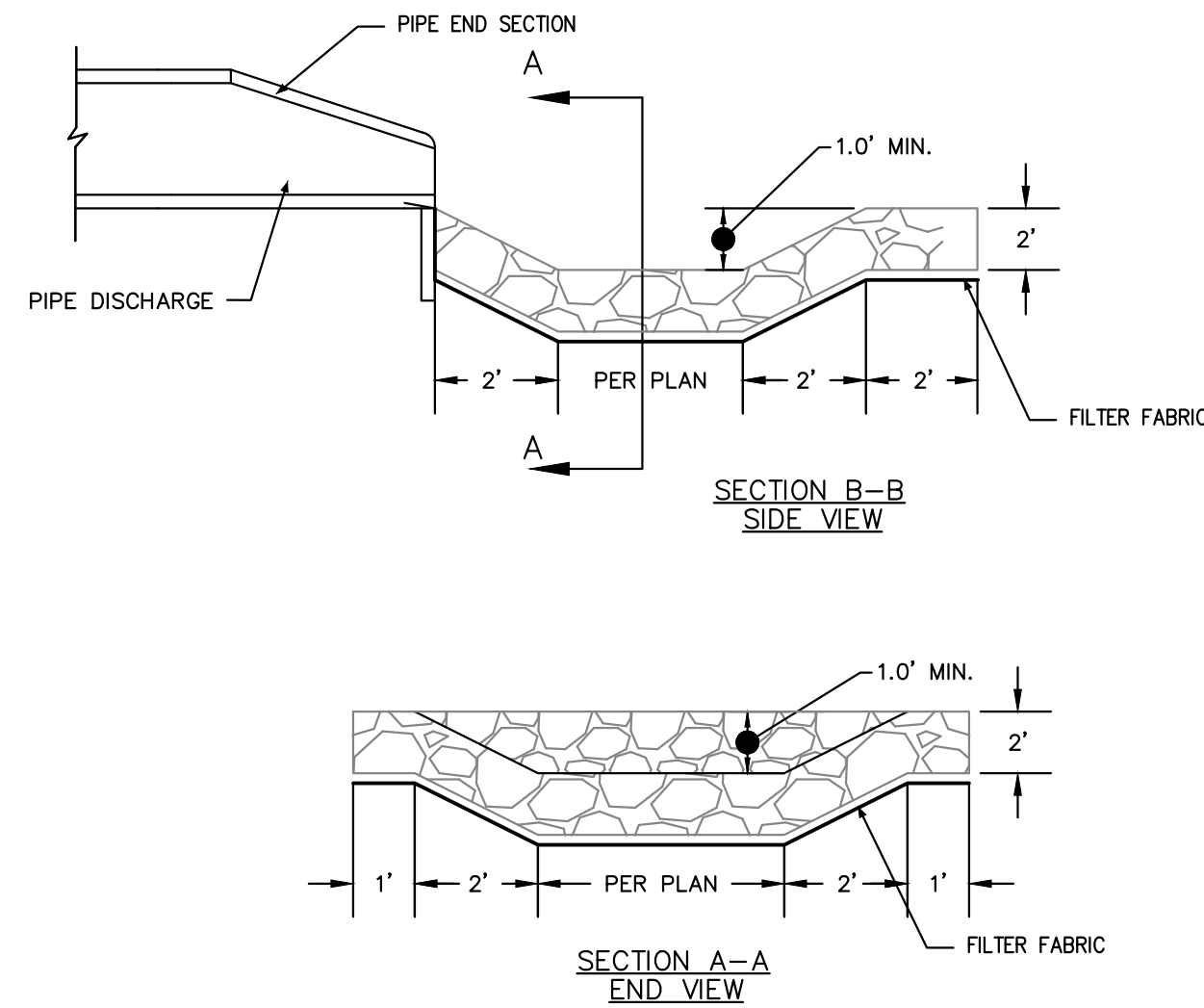
3. TRENCH WIDTHS SHALL BE LIMITED BELOW AN ELEVATION OF ONE (1) FOOT ABOVE THE TOP OF THE INSTALLED PIPE AS FOLLOWS: NOT LESS THAN FIFTEEN (15) INCHES NOR MORE THAN TWENTY-FOUR (24) INCHES GREATER THAN THE NOMINAL OUTSIDE DIAMETER OF THE PIPE.

EMBEDMENTS FOR STORM SEWER PIPE
SCALE: N.T.S.

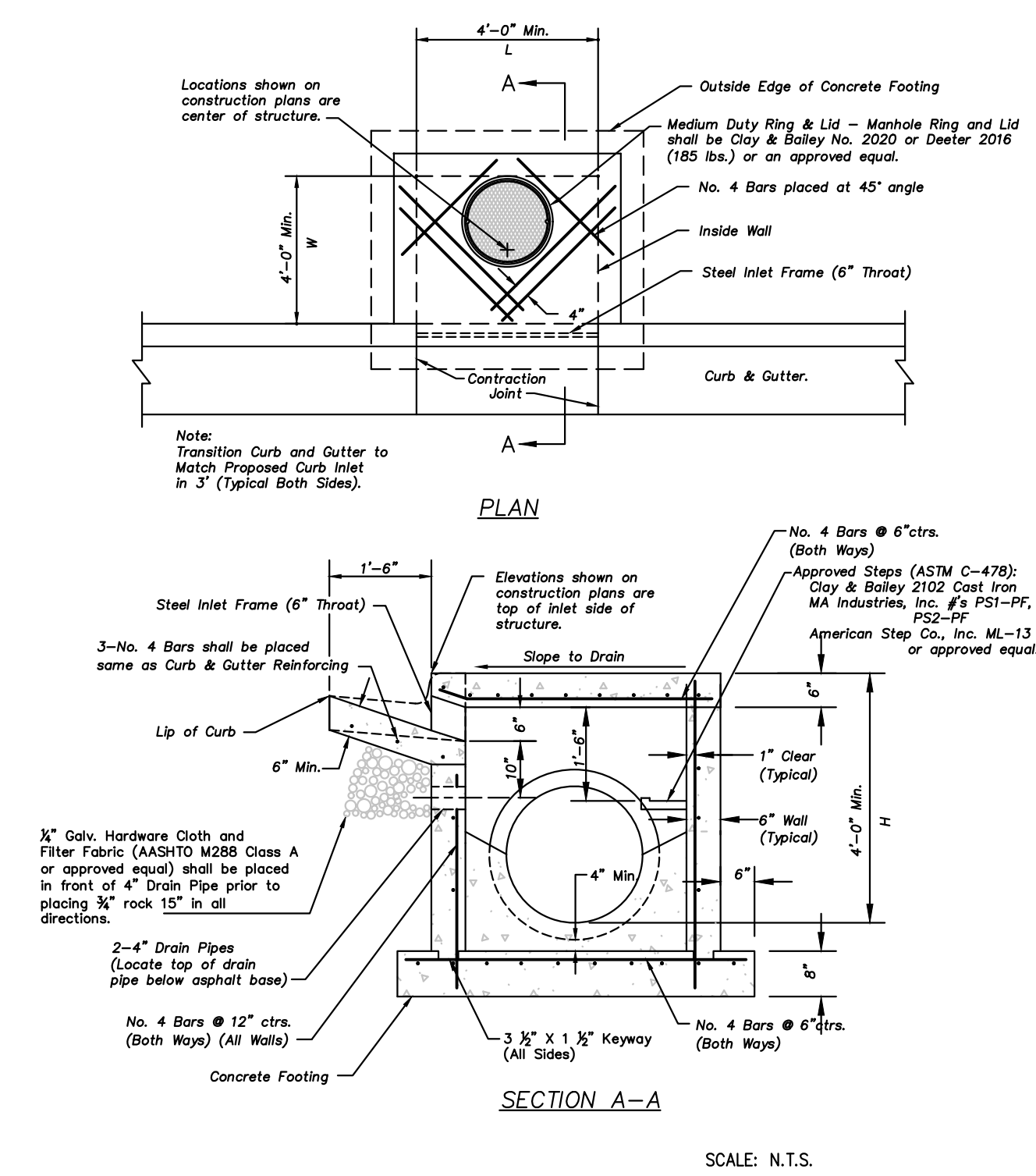


ALL CURB INLETS SHALL CONFORM TO THE GRADE OF THE ADJACENT ROAD/CURB AND BE SET PER THIS DETAIL SHOWN THUS.

INLET SETTING DIAGRAM
SCALE: N.T.S.



RIPRAP INSTALLATION DETAIL
SCALE: N.T.S.



Non-Setback Curb Inlet Notes

General

1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the top shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the City Engineer.
2. Pre-cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects.
3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"x"W") and ("W"x"H") less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.
5. Concrete used in this work shall be KCMBAK, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the City of Olathe.
6. Concrete construction shall meet the applicable requirements of the City of Olathe's Technical Specifications.
7. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
8. Bevel all exposed edges with 3/4" triangular mauling.

Concrete

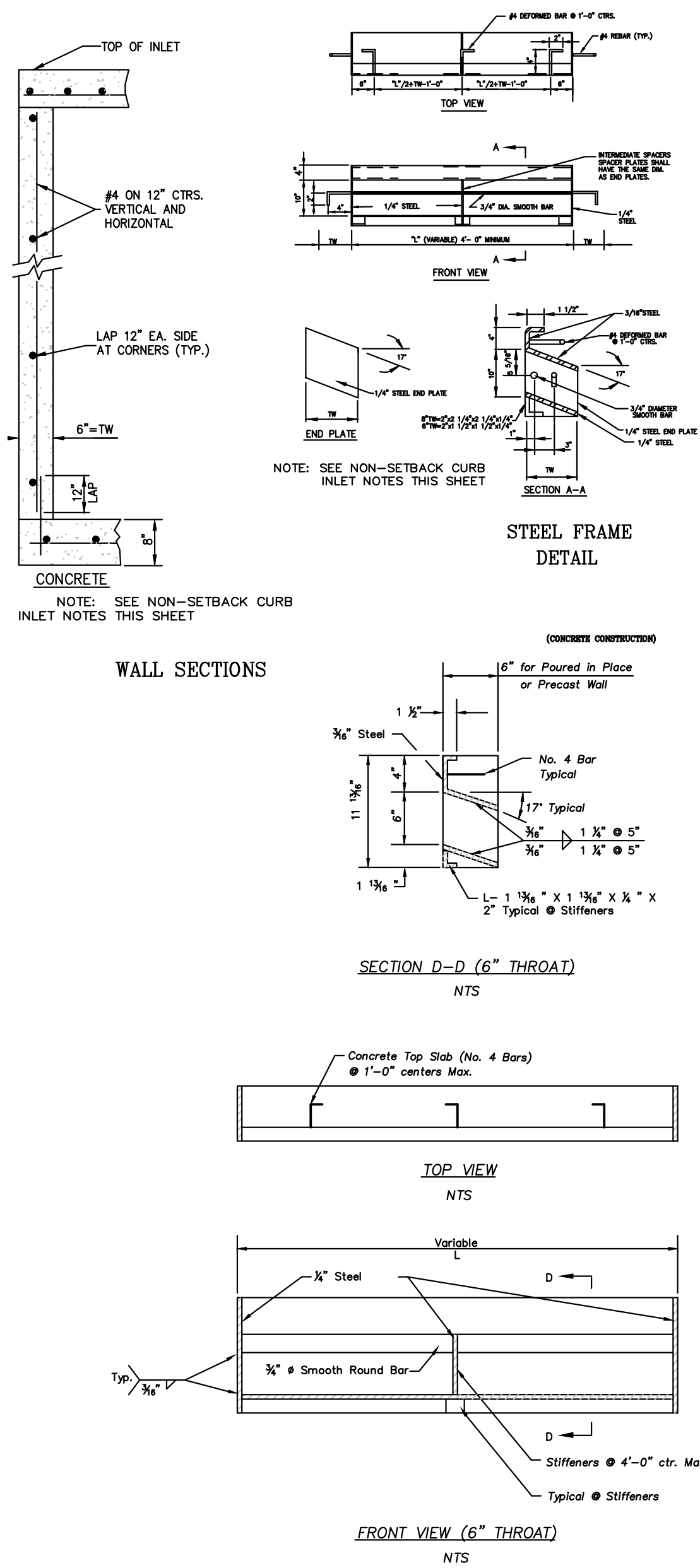
Reinforcing Steel

9. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
10. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.
11. All lap splices not shown shall be a minimum of 40 bar diameters in length.
12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sliding of dowels into fresh or partially hardened concrete will not be acceptable.

Construction

14. The bottom slab shall be at least 24 hours old before placing sidewalk concrete. All sidewalk forms shall remain in place a minimum of 24 hours after sidewalks are poured before removal, and after removal shall be immediately treated with membrane curing compound.
15. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
16. Material selection and compaction requirements for backfill around structures shall be as specified in City of Olathe's Technical Specifications.

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



- Steel Inlet Frame Notes:
1. All welds shall be performed in accordance with appropriate AWS Specifications and Procedures.
 2. All welds on exposed surfaces shall be dressed so as to provide a pleasing finished appearance.
 3. The entire frame shall be hot dip zinc coated in accordance with ASTM A-123.



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STANDARD DETAILS
MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PROJECT NO.	210639	Date	03-16-22	By	App.
DATE	10-14-21	DRAWN BY	1. SNH	DAF	
CHECKED	DAF	APPROVED	2. JDC	04-06-22	SNH
CERTIFICATE OF AUTHORIZATION		REVISED PER CITY COMMENTS			
LAND SURVEYING - LS-82		REVISED PER CITY COMMENTS			
ENGINEERING - E-361					
CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING-200701028					
ENGINEERING-200700029					

SHEET

C8.3

WH472/WR472

General Features

The model WH472 or WR472 grinder pump station is a complete unit that includes: two grinder pumps, check valve, polyethylene tank, controls, and alarm panel. Designed specifically for higher-flow applications where local codes dictate higher storage requirements. The lower portion of the tank has a smaller diameter, tapered down to a dish-shaped bottom. The tank access opening is ideally sized for smaller diameter, low-profile covers for minimal "footprint."

- Rated for flows of 3500 gpd (13,249 lpd)
- 476 gallons (1802 liters) of capacity
- Standard outdoor heights range from 77 inches to 122 inches

The WH472 is the "hardwired," or "wired," model where a cable connects the motor controls to the level controls through watertight penetrations.

The WR472 is the "radio frequency identification" (RFID), or "wireless," model that uses wireless technology to communicate between the level controls and the motor controls.

Operational Information

Motor

1 hp, 1,725 rpm, high torque, capacitor start, thermally protected, 120/240V, 60 Hz, 1 phase

Inlet Connections

4-inch inlet grommet standard for DWV pipe. Other inlet configurations available from the factory.

Discharge Connections

Pump discharge terminates in 1.25-inch NPT female thread. Can easily be adapted to 1.25-inch PVC pipe or any other material required by local codes.

Discharge

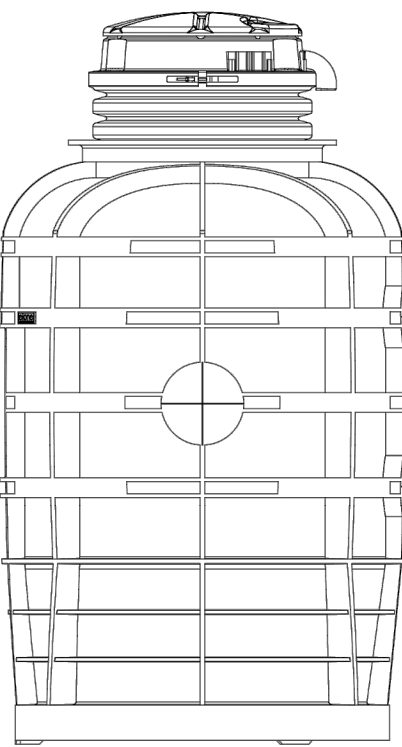
15 gpm at 0 psig (0.95 lps at 0 m)
11 gpm at 40 psig (0.69 lps at 28 m)
7.8 gpm at 80 psig (0.49 lps at 56 m)

Accessories

E/One requires that the Uni-Lateral, E/One's own stainless steel check valve, be installed between the grinder pump station and the street main for added protection against backflow.

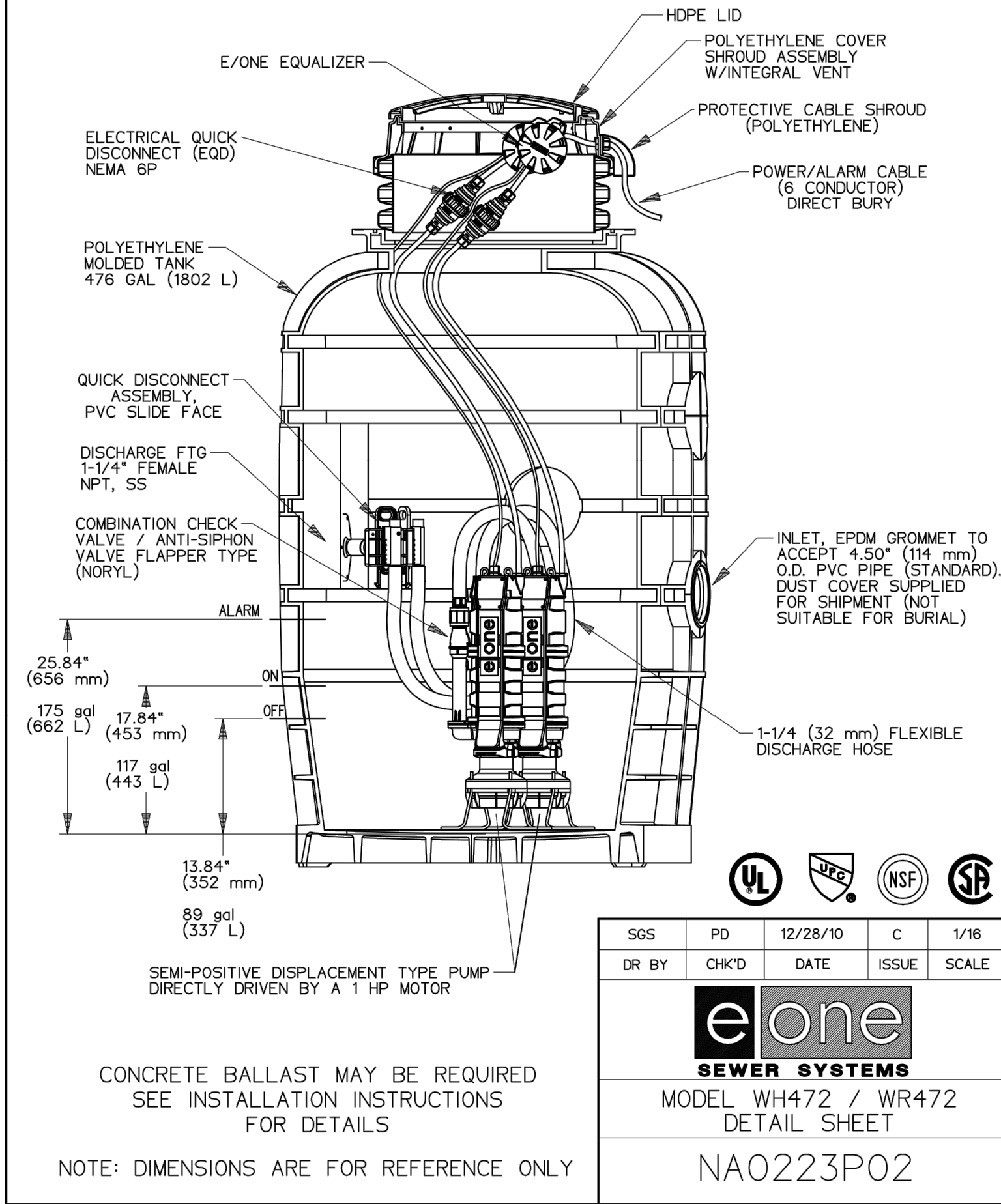
Alarm panels are available with a variety of options, from basic monitoring to advanced notice of service requirements.

The Remote Sentry is ideal for installations where the alarm panel may be hidden from view.

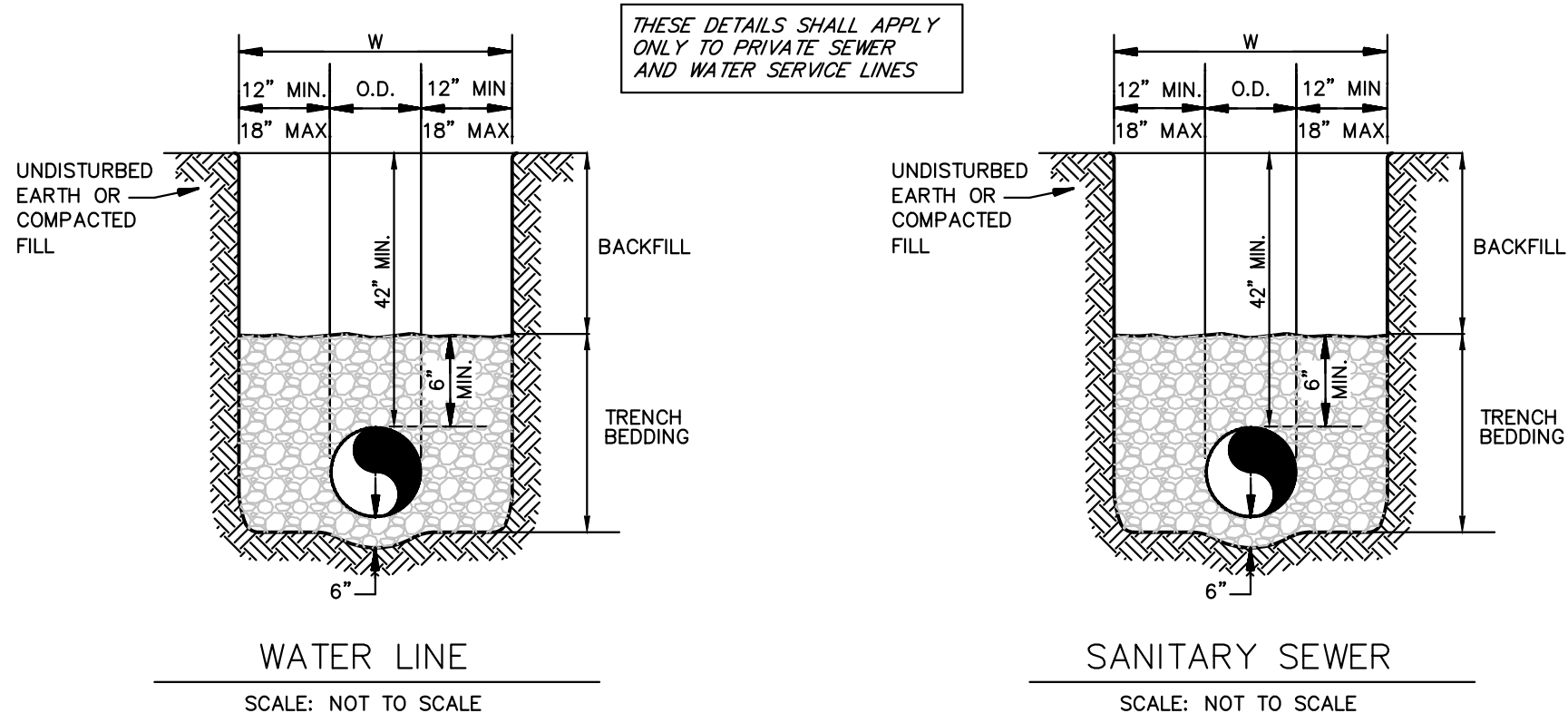


NA0223P01 Rev E

OPTIONS : ☐ WH472 (HARD WIRED LEVEL CONTROLS)
☐ WR472 (WIRELESS LEVEL CONTROLS)



GRINDER PUMP SYSTEM TO INCLUE E/ONE SENTRY ADVISOR ALARM PANEL.



REQUIREMENTS PER APWA 2100 AS FOLLOWS:

Sanitary Sewer Bedding Material Gradation Limits (% Passing)	
Sieve Size	3/4"
1"	100
3/4"	90 - 100
3/8"	20 - 55
No. 4	0 - 5
No. 8	0 - 2

Storm Sewer Bedding Material Gradation Limits (% Passing)			
Sieve Size	3/4"	1/2"	3/8"
1"	100		
3/4"	90 - 100	100	
1/2"		80 - 100	
3/8"	20 - 55	40 - 77	100
No. 4	0 - 10	0 - 15	30 - 40
No. 8	0 - 5	0 - 5	0 - 4

Waterline Bedding Material Gradation (% Passing)			
Sieve Size	Type 1 (1/2")	Type 2 (Buckshot)	Type 3 (Man. Sand)
3/4"	95 - 100		
3/8"	40 - 60	100	
1/4"		90 - 100	
No. 4	60 - 80	85 - 100	100
No. 50	0 - 5	10 - 25	
No. 200		0 - 10	0 - 10

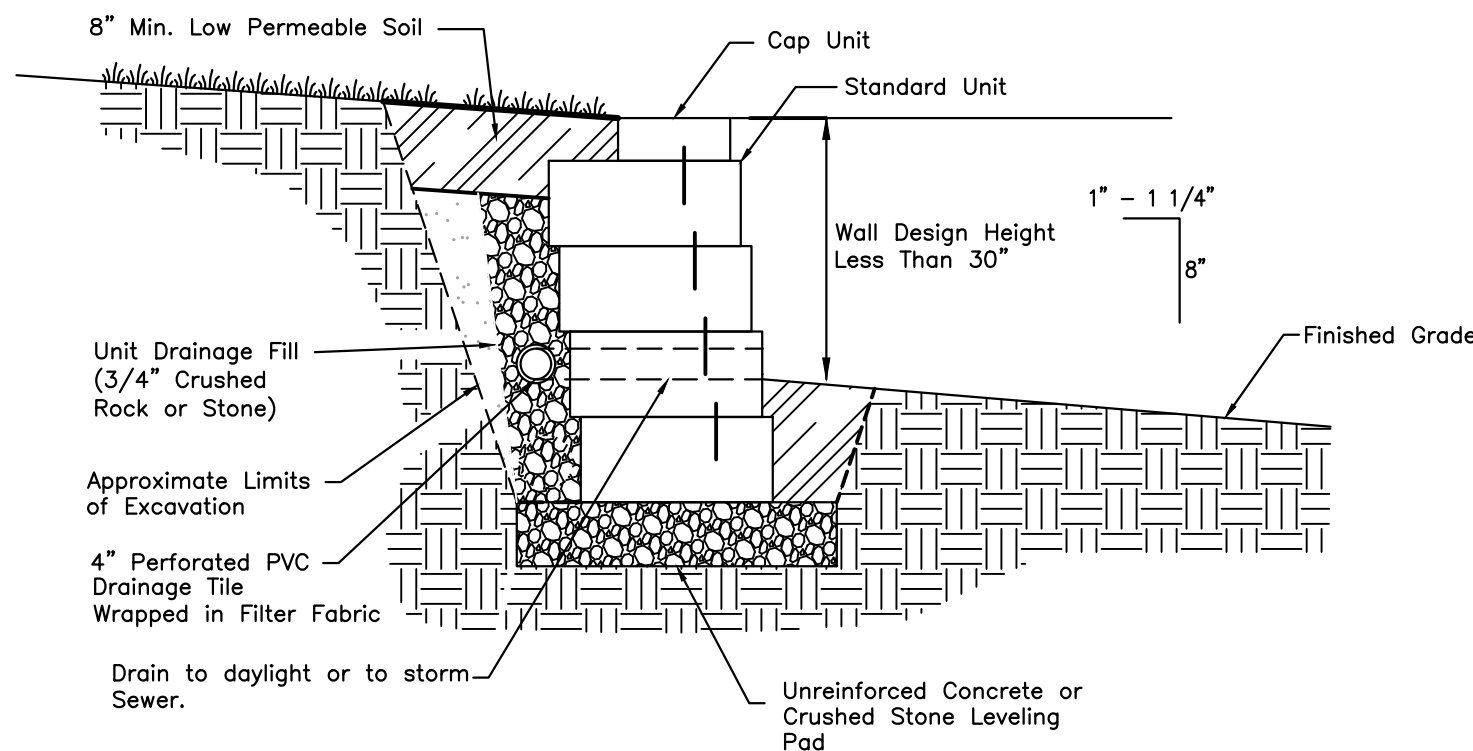
Trench Backfill

- Backfill shall not be placed when material contains frost, is frozen, or a blanket of snow prevents proper compaction.
- The Contractor shall remove from the project site waste material, trees, organic material, rubbish, or other deleterious materials.
- All trash and debris shall be removed from the pipeline excavation prior to backfilling.
- Backfill material shall be carefully placed to avoid damage to or displacement of the pipe, other utilities or structures.
- Unless otherwise specified, all trenches and excavations around structures shall be backfilled to the original ground surface.
- Outside of paved areas, the backfill material shall be placed in layers not exceeding 8-inches in loose thickness and be compacted to at least 90% of maximum density. Compaction testing shall be at the discretion of the Engineer.
- The method of compaction and the equipment used shall be appropriate for the material to be compacted and shall not transmit damaging shocks to the pipe.
- The combination of the thickness of the layer, the method of compaction and the type of compaction equipment used shall be at the discretion of the Contractor subject to obtaining the required densities.

Pipe Embedment: All water, sanitary sewer, and storm sewer pipe shall be bedded in bedding aggregate as specified herein.

- Bedding shall cover the entire width of trench.
- The first layer of bedding placed on the bottom of excavation shall be in accordance with Figures 1 through 3.
- Bedding at bottom of trench, in the middle 1/3 of trench under the pipe shall be loose.
- After pipe is placed, bedding material shall be placed in layers in accordance with manufacturer's recommendations.
- Second layer of bedding material shall be placed under the lower haunches of the pipe up to the springline (center of pipe). Material shall be spaced to be placed under haunches and compacted at the springline elevation prior to placing additional bedding material.
- The third layer of bedding material shall be placed to 12 inches over the top of pipe.
- Contractor shall take measures to prevent pipe from floating during placement of bedding material so that pipe maintains proper rise and grade as shown on the Plans.

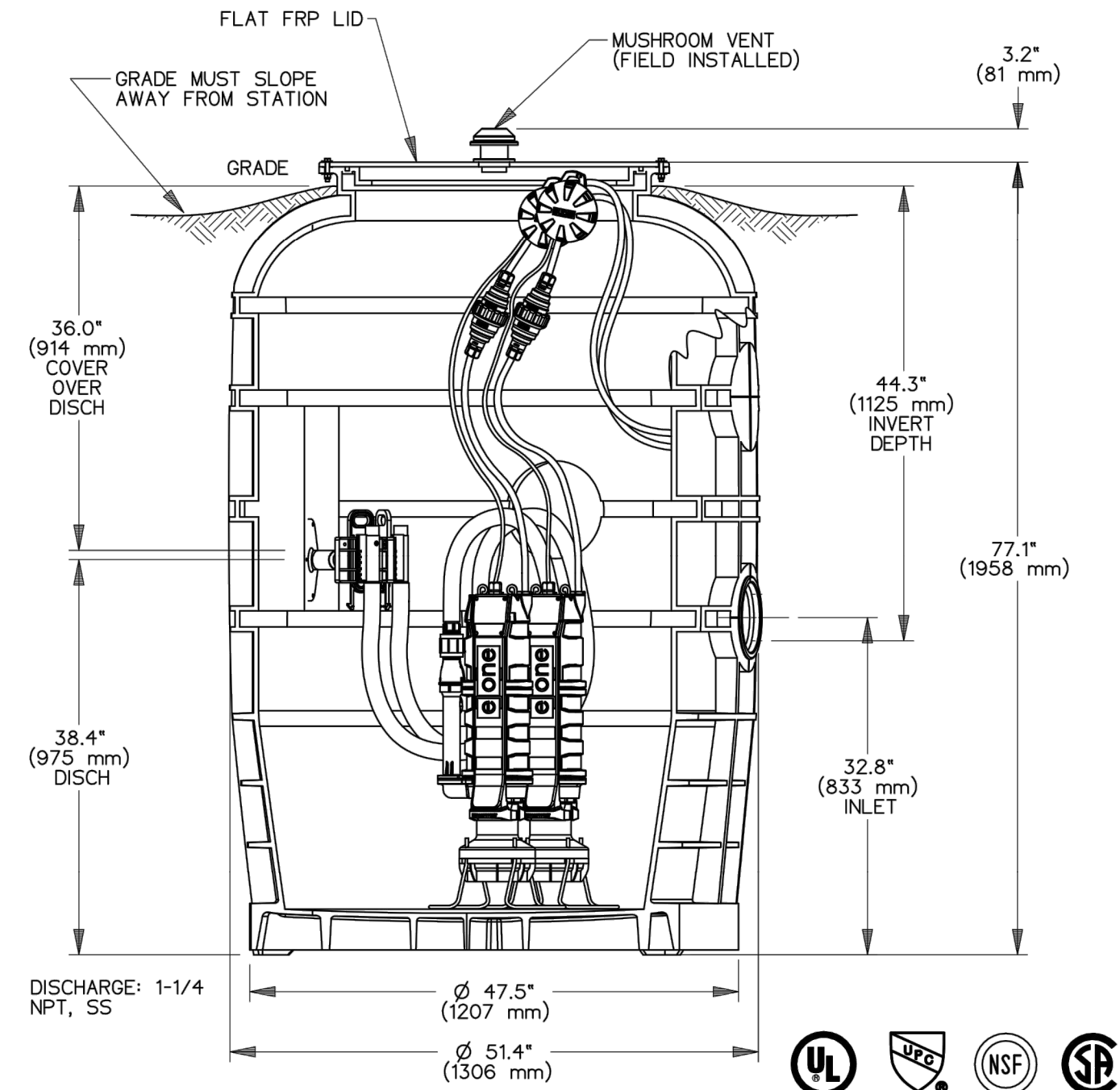
UTILITY TRENCH AND BEDDING



LANDSCAPE RETAINING WALL

SCALE: N.T.S.

OPTIONS : ☐ WH472-77 (HARD WIRED LEVEL CONTROLS)
☐ WR472-77 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED
SEE INSTALLATION INSTRUCTIONS
FOR DETAILS

NOTE: DIMENSIONS ARE FOR REFERENCE ONLY

SGS	PD	12/28/10	B	1/16
DR BY	CHK'D	DATE	ISSUE	SCALE
MODEL WH472-77 / WR472-77				
NA0223P03				



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STANDARD DETAILS

MARKET STREET CENTER
M291 AND SW MARKET STREET
CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

Revisions:		By		App.	
No.	Date	Revised	Per City Comments	SNH	DAF
1.	03-16-22	REVIS	PER CITY COMMENTS	SNH	DAF
2.	04-06-22	REVIS	PER CITY COMMENTS	SNH	DAF
3.	04-15-22	REVIS	PER CITY COMMENTS	SNH	DAF
PROJECT NO. 210639					
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CHECKER: DAF					
APPROVED: JDC					
CERTIFICATE OF AUTHORIZATION					
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CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING-200701028					
ENGINEERING-200700208					

SHEET

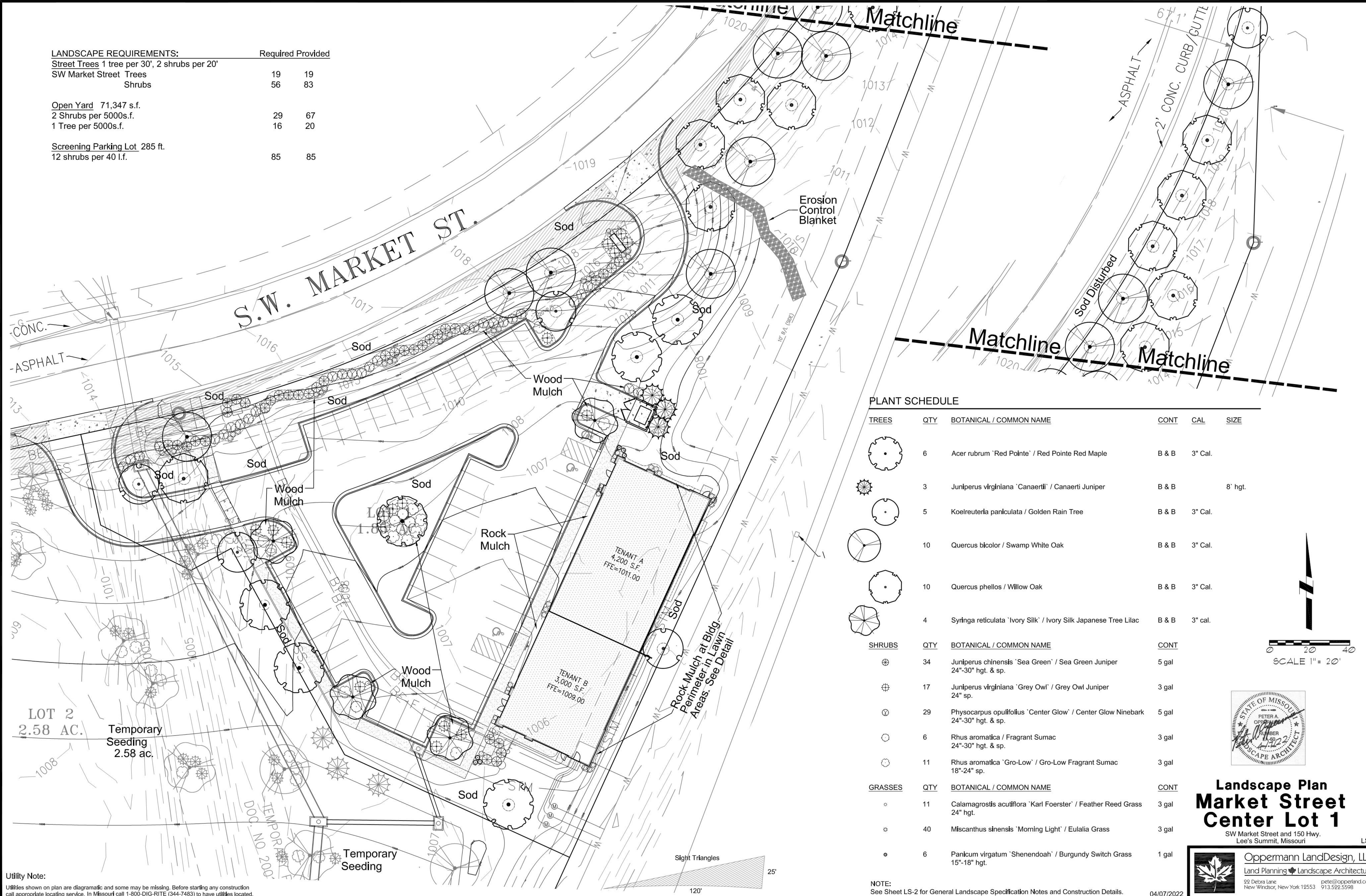
C8.4

LANDSCAPE REQUIREMENTS:

	Required	Provided
Street Trees 1 tree per 30', 2 shrubs per 20'		
SW Market Street Trees	19	19
Shrubs	56	83

Open Yard 71,347 s.f.		
2 Shrubs per 5000s.f.	29	67
1 Tree per 5000s.f.	16	20

Screening Parking Lot 285 ft.		
12 shrubs per 40 l.f.	85	85



PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	6	Acer rubrum 'Red Pointe' / Red Pointe Red Maple	B & B	3" Cal.	
	3	Juniperus virginiana 'Canaerti' / Canaerti Juniper	B & B		8' hgt.
	5	Koelreuteria paniculata / Golden Rain Tree	B & B	3" Cal.	
	10	Quercus bicolor / Swamp White Oak	B & B	3" Cal.	
	10	Quercus phellos / Willow Oak	B & B	3" Cal.	
	4	Syringa reticulata 'Ivory Silk' / Ivory Silk Japanese Tree Lilac	B & B	3" cal.	
SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT		
	34	Juniperus chinensis 'Sea Green' / Sea Green Juniper 24"-30" hgt. & sp.	5 gal		
	17	Juniperus virginiana 'Grey Owl' / Grey Owl Juniper 24" sp.	3 gal		
	29	Physocarpus opulifolius 'Center Glow' / Center Glow Ninebark 24"-30" hgt. & sp.	5 gal		
	6	Rhus aromatica 'Fragrant Sumac' 24"-30" hgt. & sp.	3 gal		
	11	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac 18"-24" sp.	3 gal		
GRASSES	QTY	BOTANICAL / COMMON NAME	CONT		
	11	Calamagrostis acutiflora 'Karl Foerster' / Feather Reed Grass 24" hgt.	3 gal		
	40	Miscanthus sinensis 'Morning Light' / Eulalia Grass	3 gal		
	6	Panicum virgatum 'Shenendoah' / Burgundy Switch Grass 15"-18" hgt.	1 gal		

Utility Note:
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NOTE:
See Sheet LS-2 for General Landscape Specification Notes and Construction Details.

04/07/2022



Landscape Plan
Market Street
Center Lot 1

SW Market Street and 150 Hwy.
Lee's Summit, Missouri



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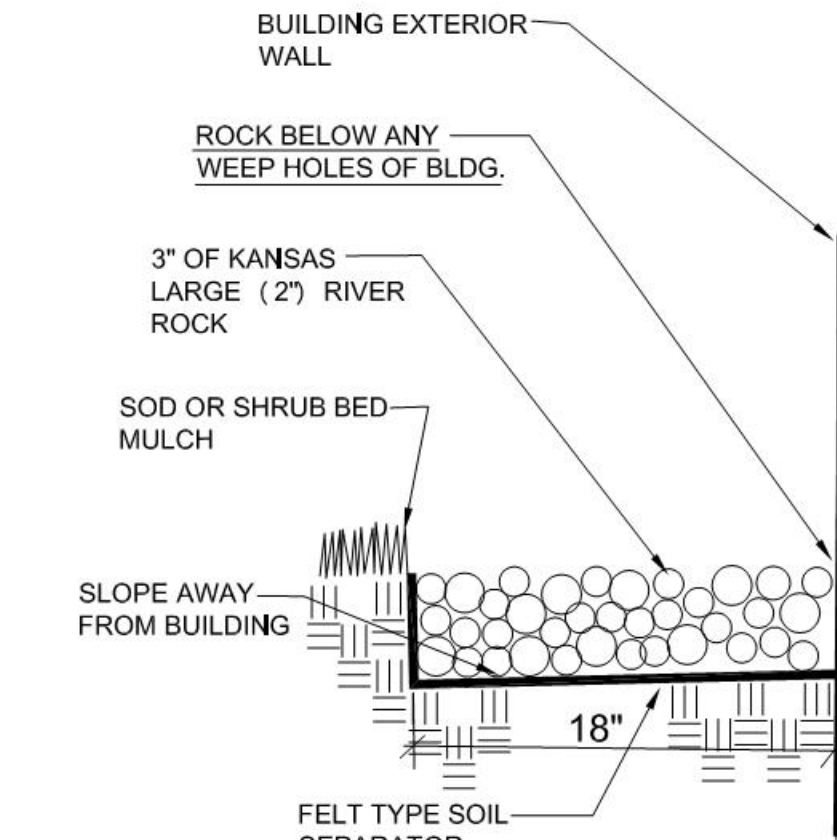
LS-1

Dedicated Design Irrigation System:

1. If an irrigation system is not provided with the Landscape Plans, the Contractor is to design a 100 percent coverage irrigation system, including comprehensive engineering analysis by a qualified Professional Engineer, using performance requirements and design criteria indicated per Owner's direction. Design shall include all public right-of-way and be approved by owner prior to construction.
2. Irrigation Contractor to design and install irrigation system and shall include all required components including, but not limited to, rain shut off sensor, controller, taps, backflow preventers, all approvals, and all fees required by city. Components to be manufactured by Rainbird or Hunter unless alternate manufacturer is expressly approved by the Owner or Owner's Representative.
3. Irrigation Contractor shall submit a copy of plan to Owner's Representative or Project Landscape Architect for review prior to installation of system.
4. Irrigation Contractor shall conduct a training session with the owner (or representatives) demonstrating the operation of the system and the controller. As part of this training, Contractor shall provide one spring start-up and one fall shut-down of the system.
5. Irrigation system shall be tested and approved by Owner's Representative or Landscape Architect prior to backfilling trenches. Irrigation system shall be fully operational prior to the installation of any plant materials.
6. All planting beds shall be watered by a DRIP irrigation system.
7. General Contractor to supply all power required to operate irrigation system.
8. Irrigation Contractor shall notify Owner's Representative or Project Landscape Architect of any changes to irrigation conduit locations or sizes.
9. It is the Landscape Contractor's responsibility to determine water application rates and timer cycling. The Irrigation Contractor will instruct the Owner on the operation and programming of the controller.
10. All zones and main lines will be pressure-tested at the time of installation and again prior to building turnover. Results shall be submitted in writing to Project Landscape Architect and Owner or Owner's Representative.
11. Irrigation shall not spray on building, sidewalks, and drives.
12. Irrigation controller location shall be coordinated with other wall-mounted service panels per Owner's approval.
13. Landscape Contractor shall hand-water all trees, and turf grass areas until substantial completion.
14. Treegator bags (or approved equal) shall be used for all proposed trees on site.

Transplant Additives:

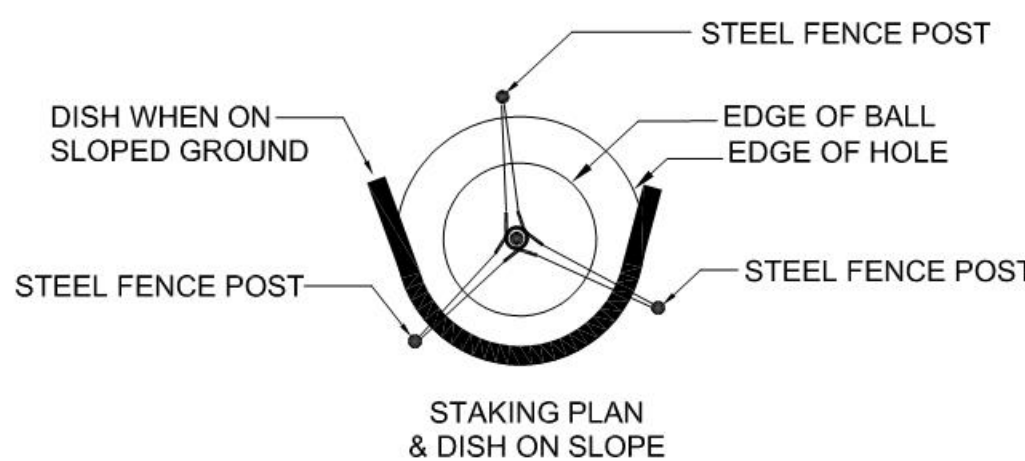
1. Apply a commercial transplant additive (approved by the Landscape Architect) to all trees, shrubs and groundcover at rates recommended by the manufacturer during the planting. This item shall be subsidiary to other planting items.
2. Transplant additive shall be Horticultural Alliance "DIEHARD Transplant" (or approved equal) mycorrhizal fungal transplant inoculant or equivalent equal containing the appropriate species of mycorrhizal fungi and bacteria, fungi stimulant, water retaining agents, mineral & organic nutrients and Inert Ingredients.
3. Demonstrate installation of all transplant additives for this project to the Landscape Architect. Provide actual additive product as evidence of sufficient quantity of product. (Empty product bags to be stockpiled for inspection by the Landscape Architect prior to disposal).
4. Number of transplant additive packets per tree, shrub or groundcover shall be applied according to the manufacturer's recommended rates and instructions. For all plants the packet mix shall be evenly distributed into the upper approximately 8" of backfill soil next to the rootball. Do not place mix in the bottom of the planting pit.
5. Furnishing and application of transplant additive shall be subsidiary to the planting operations.



BUILDING ROCK EDGE

NO SCALE

*PLACE ROCK AROUND ENTIRE BLDG. PERIMETER WHEREVER THERE IS NOT CONCRETE OR ASPHALT



DIRECTION OF TREE STAKES:
ONE SOUTHEAST
ONE SOUTHWEST
ONE NORTH

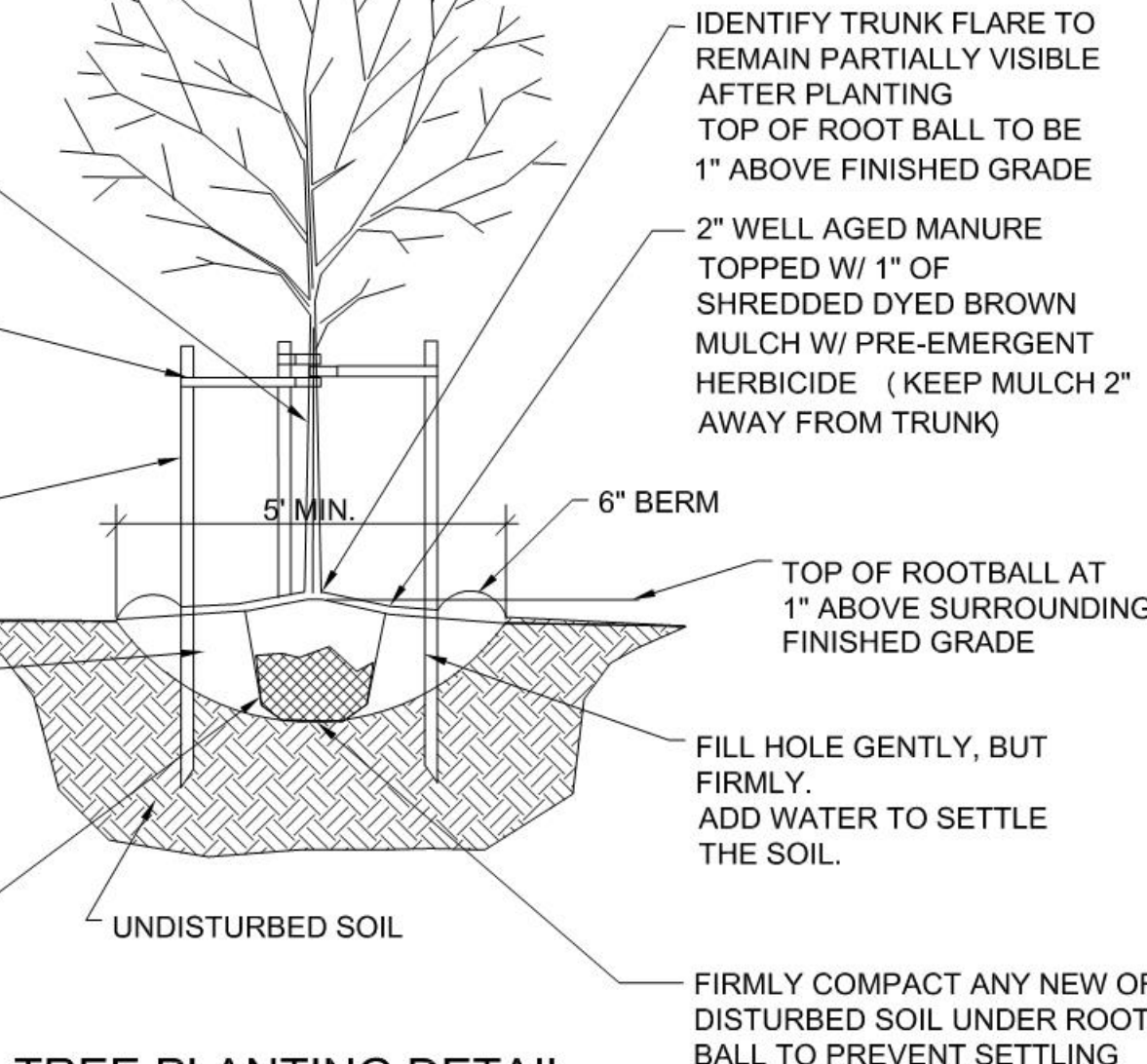
PLASTIC SPIRAL TREE WRAP COIL FROM BASE TO LOWEST BRANCHES

WEBBED ARBOR TIE TAPE LOOP AROUND TREE TO BE 6"-8" LARGER THAN TRUNK DIAMETER

(3) 6" STEEL "T" POSTS

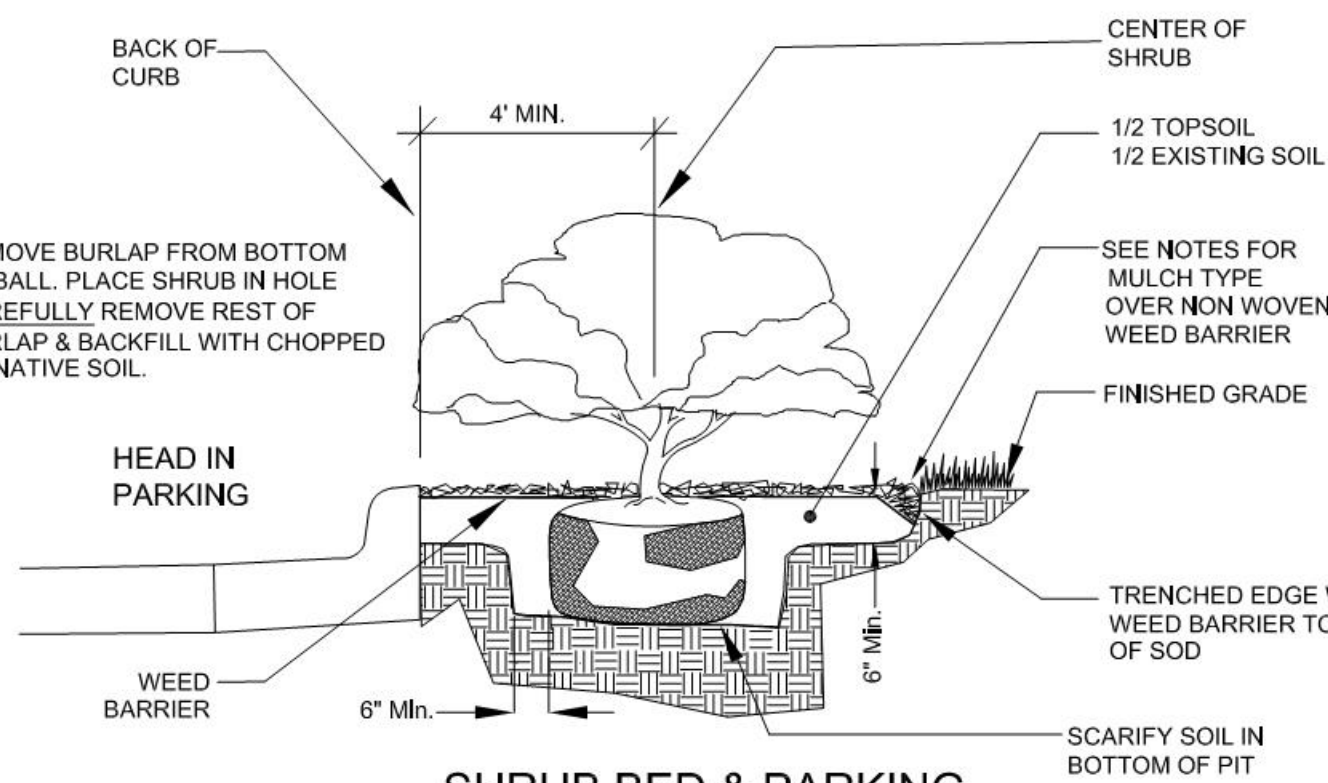
DIG SHALLOW, BROAD HOLE: 3 TIMES THE DIAMETER OF ROOT BALL AND ONLY AS DEEP AS ROOT BALL. BACKFILL WITH 1/2 EXISTING SOIL AND 1/2 TOPSOIL.

CUT AND REMOVE BURLAP (REMOVE METAL CAGE FROM SIDES AND TOP OF BALL)



TREE PLANTING DETAIL

NO SCALE

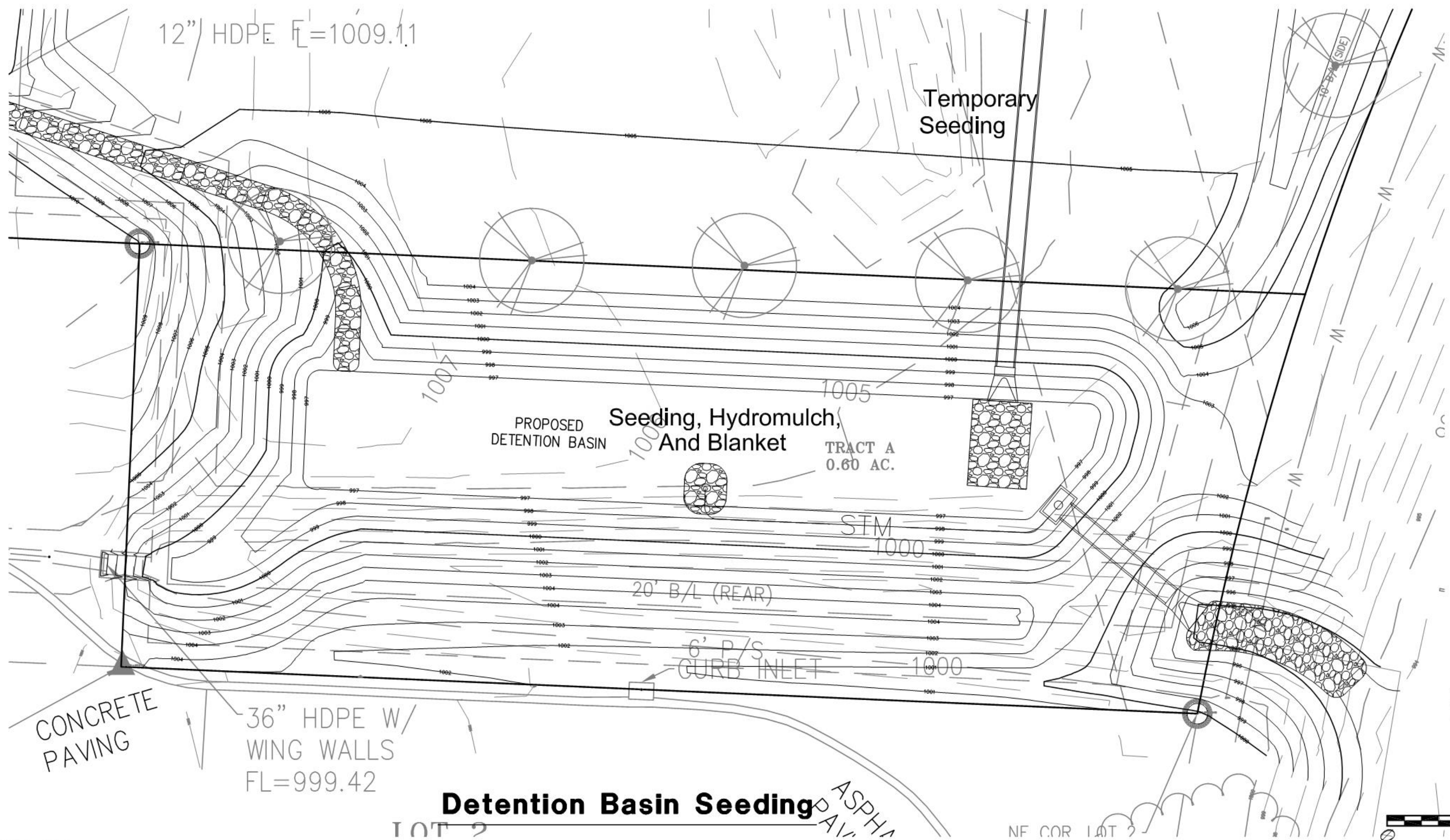


SHRUB BED & PARKING SETBACK DETAIL

NO SCALE

GENERAL LANDSCAPE NOTES:

1. CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UTILITIES BEFORE STARTING ANY WORK.
2. CONTRACTOR SHALL VERIFY ALL LANDSCAPE MATERIAL QUANTITIES AND SHALL REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL MAKE NO SUBSTITUTIONS WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.
4. CONTRACTOR SHALL STAKE LAYOUT PLAN IN THE FIELD AND SHALL HAVE THE LAYOUT APPROVED BY THE LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH THE INSTALLATION.
5. ALL LANDSCAPE BEDS SHALL BE TREATED WITH THE PRE-EMERGENT HERBICIDE PRE M 60 DG (GRANULAR) OR AN APPROVED EQUAL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
6. ALL LANDSCAPE BEDS SHALL RECEIVE A TRENCHED EDGE. SEE SHRUB PLANTING DETAIL.
7. FERTILIZER FOR FESCUE SODDED AND SEEDED LAWN, TREES AND CONTAINER STOCK AREAS SHALL BE A BALANCED FERTILIZER BASED ON RECOMMENDATIONS FROM A SOIL TEST SUPPLIED BY THE LANDSCAPE CONTRACTOR FROM AN APPROVED TESTING LAB.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE PLANTS UNTIL COMPLETION OF THE JOB AND ACCEPTANCE BY THE OWNER.
9. CONTRACTOR SHALL WARRANTY ALL LANDSCAPE WORK AND PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF THE WORK BY THE OWNER.
10. CONTRACTOR SHALL PROVIDE MAINTENANCE OF ALL TREES AND SHRUBS FOR A PERIOD OF ONE YEAR AFTER THE DATE OF SUBSTANTIAL COMPLETION IF CONTRACTED BY THE OWNER.
11. ANY PLANT MATERIAL WHICH DIES DURING THE ONE YEAR WARRANTY PERIOD SHALL BE REPLACED BY THE CONTRACTOR DURING NORMAL PLANTING SEASONS.
12. ALL PLANT NAMES ON THE PLANT LIST CONFORM TO THE STANDARDIZED PLANT NAMES PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE OR TO NAMES GENERALLY ACCEPTED IN THE NURSERY TRADE.
13. ALL PLANT MATERIAL SHALL BE SPECIMEN QUALITY STOCK AS DETERMINED IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, FREE OF PLANT DISEASES AND PESTS, OF TYPICAL GROWTH OF THE SPECIES AND HAVING A HEALTHY, NORMAL ROOT SYSTEM.
14. SIZES INDICATED ON THE PLANT LIST ARE THE MINIMUM, ACCEPTABLE SIZE. IN NO CASE WILL SIZES LESS THAN THE SPECIFIED SIZES BE ACCEPTED.
15. PLANTS SHALL NOT BE PRUNED PRIOR TO DELIVERY TO THE SITE OR AFTER INSTALLATION EXCEPT FOR THOSE BRANCHES THAT HAVE BEEN DAMAGED IN SOME WAY.
16. PLANTS SHALL NOT HAVE NAME TAGS REMOVED PRIOR TO FINAL INSPECTION.
17. ALL PLANTINGS SHALL RECEIVE A COMMERCIAL TRANSPLANT ADDITIVE PER MANUFACTURER'S RECOMMENDED RATES AND INSTRUCTIONS FOR APPLICATION.
18. ROCK MULCH SHALL BE 3" DEPTH OF KANSAS LARGE 2" SIZE AVAILABLE FROM STURGIS MATERIALS OR APPROVED EQUAL, OVER A FELT TYPE SOIL SEPARATOR CUT INTO THE GROUND WITH A TRENCHED EDGE. SEE TREE DETAIL FOR DIFFERENT MULCH AROUND TREES.
19. WOOD MULCH SHALL BE 3" OF DYE BROWN SHREDDED HARDWOOD OVER A FELT TYPE SOIL SEPARATOR.
20. SEE PLANTING DETAILS FOR SOIL MIX IN PLANTING HOLES.
21. SOD SHALL BE A TURF-TYPE-TALL FESCUE GRASS BLEND. CONTRACTOR SHALL BE RESPONSIBLE FOR AN ACCEPTABLE STAND OF TURF TO BE APPROVED BY THE OWNER AND/OR LANDSCAPE ARCHITECT.
22. PERMANENT SEEDING SHALL BE A TURF-TYPE-TALL FESCUE BLEND WITH 10% PERENNIAL RYE DRILL SEED AT A RATE OF 9#/1000S.F. AND HYDRO MULCHED AS A SEPARATE OPERATION AT A RATE OF 2000#/ACRE OF VIRGIN WOOD FIBRE WITH A DYED BLUE TACKIFIER. CONTRACTOR SHALL BE RESPONSIBLE FOR AN ACCEPTABLE STAND OF TURF GRASS OF AT LEAST 90% COVERAGE OF SOIL SURFACE PER SQUARE FOOT.
23. SEEDING OPERATIONS OF DETENTION BASIN BESIDES DRILL SEEDING AND HYDROMULCH, SHALL INCLUDE NORTH AMERICAN GREEN SC150BN EROSION BLANKET INSTALLED PER MANUFACTURER'S SPECIFICATIONS. APPLY SAME BLANKET NE OF BUILDING WHERE SHOWN.
24. TEMPORARY SEEDING AREAS SHALL BE THE SAME SEED, HYDROMULCH AND METHODS EXCEPT DRILL SEED AT A RATE OF 5 POUNDS PER 1000 S.F.
25. SUCCESSFUL LANDSCAPE BIDDER SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF AN IRRIGATION SYSTEM TO BE APPROVED BY THE OWNER PRIOR TO CONSTRUCTION.



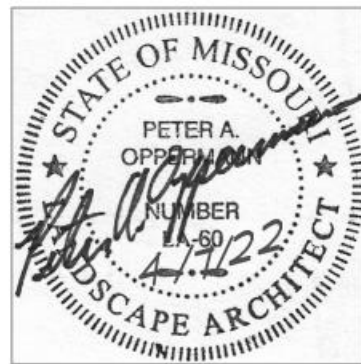
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