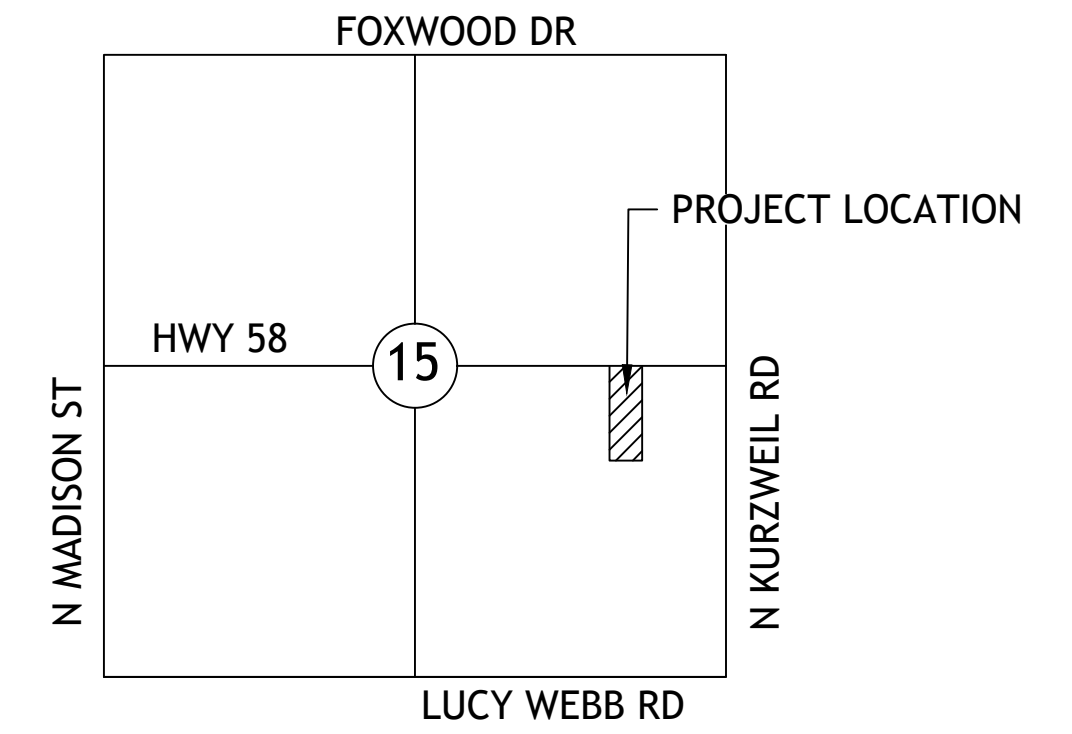


# SOUTH TOWN STORAGE, LLC

## PHASE I & II

### A PROPOSED SITE PLAN IN THE CITY OF RAYMORE, CASS COUNTY, MISSOURI

# PLANS & SPECIFICATIONS



SECTION MAP  
SEC. 15 TW. 46 RNG. 32

**ABBREVIATIONS**

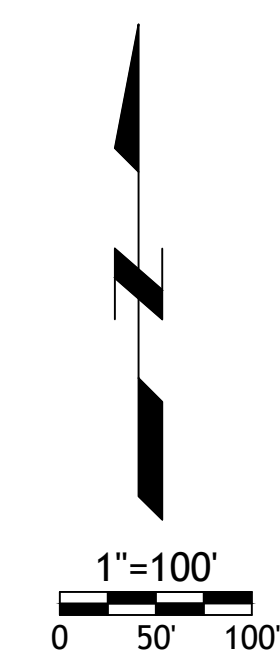
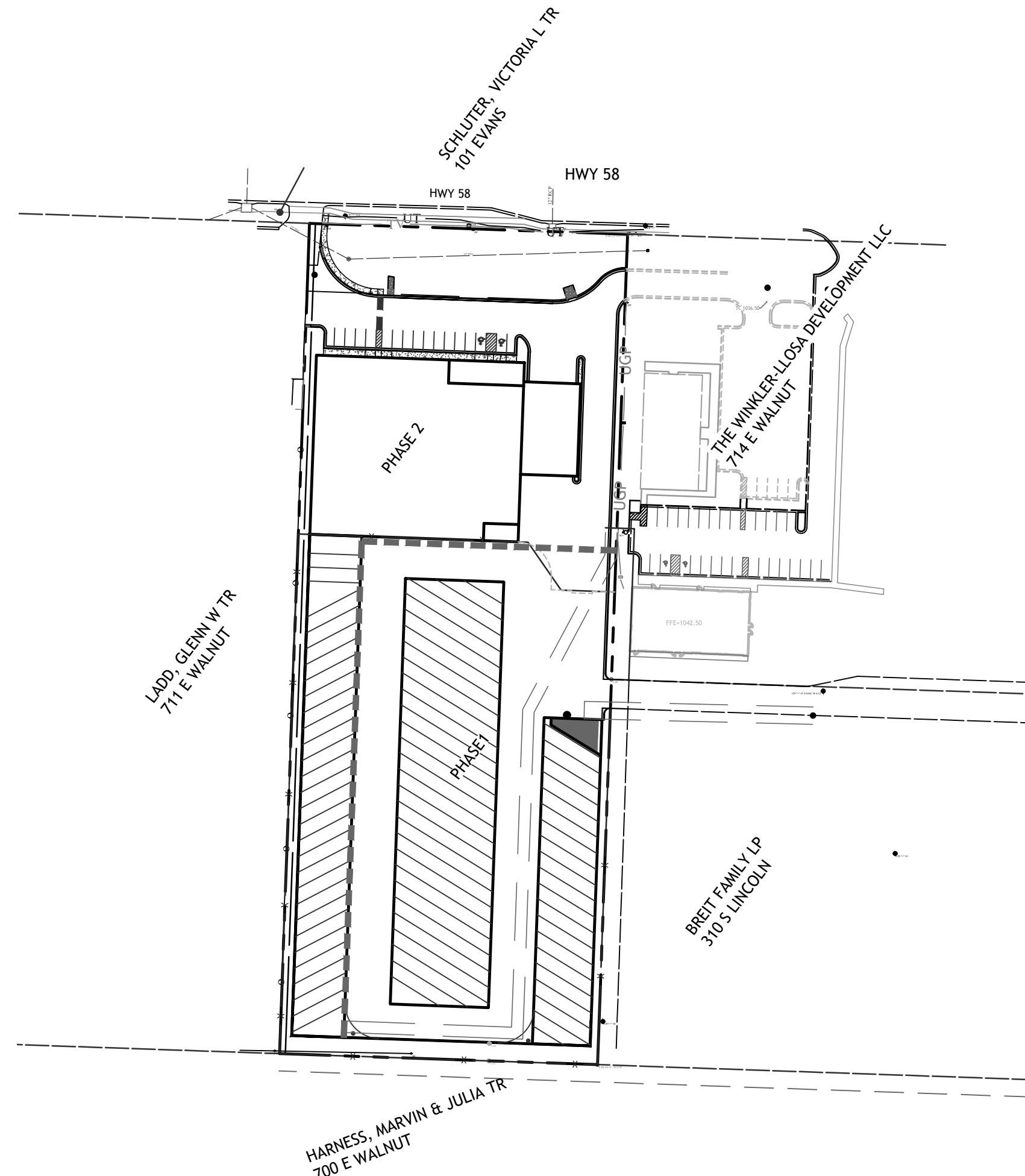
Ac.	= ACRES
BLDG	= BUILDING
BOB	= BOTTOM OF BANK
BOC	= BACK OF CURB
BW	= BOTTOM OF WALL
CB	= CATCH BASIN
C.F.	= CUBIC FEET
CM	= CONCRETE MONUMENT
CMP	= CORRUGATED METAL PIPE
CN	= CURVE NUMBER
CO	= CLEANOUT
DIA, Ø	= DIAMETER
DIP	= DUCTILE IRON PIPE
EG	= EXISTING GRADE
EL, ELEV	= ELEVATION
ESMT	= EASEMENT
EX	= EXISTING
FES	= FLARED END SECTION
FG	= FINISHED GRADE
FF	= FINISHED FLOOR
FL	= FLOW LINE
FM	= FORCE MAIN
FOC	= FACE OF CURB
HDPE	= HIGH DENSITY POLYETHYLENE
INV	= INVERT
IPF	= IRON PIPE FOUND
IPS	= IRON PIPE SET
LAT	= LATERAL
LF	= LINEAR FEET
MAX	= MAXIMUM
MIN	= MINIMUM
MH	= MANHOLE
NTS	= NOT TO SCALE
OC	= ON CENTER
PL	= PROPERTY LINE
PR	= PROPOSED
PVC	= POLY-VINYL CHLORIDE
RCP	= REINFORCED CONCRETE PIPE
R/W	= RIGHT-OF-WAY
SAN.	= SANITARY
SB	= SOIL BORING
S.F.	= SQUARE FEET
SS	= SANITARY SEWER
STA	= STATION
SW	= SIDEWALK
TC	= TOP OF CURB
TE	= TOP ELEVATION
TOB	= TOP OF BANK
TP	= TEST PIT
TYP.	= TYPICAL
TW	= TOP OF WALL
X/S	= CROSS SECTION



**UTILITIES INVOLVED**

AT&T	816-275-1640
Kansas City Power & Light	816-471-5275
KCPL Business Office	816-221-2323
Southern Star Central Gas	913-310-7615
Comcast	866-771-2281
Spire	816-537-4681
Raymore Engineering Department	816-331-1852
Missouri One Call	1-800-Dig-Rite
Water/Sanitary City of Raymore	816-331-2377

THE PURPOSE OF THESE PLANS IS TO DETAIL THE PROPOSED SITE IMPROVEMENTS NECESSARY TO CONSTRUCT 2 SOLAR READY CANOPY'S FOR RV STORAGE, ONE COVERED RV STORAGE BUILDING, A CLIMATE CONTROLLED STORAGE BUILDING AND A DRIVE THRU CAR WASH. THE ARCHITECTURAL DESIGN OF THESE IS BY OTHERS.



**OWNER'S CERTIFICATION**

I HEREBY CERTIFY THAT I AM THE LEGAL REPRESENTATIVE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE PLAN WAS MADE AT MY DIRECTION, THAT I ACKNOWLEDGE THE SAME TO BE MY ACT, AND DESIRE THE PLAN TO BE DEVELOPED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

SOUTH TOWN STORAGE, LLC DATE

**ENGINEER'S CERTIFICATION**

I, THOMAS R. BARTOSIEWICZ, P.E. HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI, AND THAT THE INFORMATION SHOWN HEREON HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF REPRESENTS GOOD ENGINEERING PRACTICES AS REQUIRED BY THE APPLICABLE LAWS OF THE STATE OF MISSOURI.

THOMAS R. BARTOSIEWICZ, P.E. DATE:

**BASIS OF BEARINGS:**

MISSOURI COORDINATE SYSTEM OF 1983 WEST ZONE

**PHASE I IMPROVEMENTS**

CANOPY AREA	45,380sf
STORAGE SPACES	
12'X85'	23
12'X50'	18
TOTAL	41

**PHASE II IMPROVEMENTS**

ENCLOSED RV STORAGE	36
12'X45'	
CLIMATE CONTROLLED STORAGE	27,900sf
REGULAR	
PARKING SPACES (9'X18')	17 (INCLUDES 2 ADA SPACES)
OFFICE	1,300sf
LOADING AREA	450sf
CLIMATE CONTROLLED STORAGE	26,850sf
TOTAL	27,900sf

**INDEX OF SHEETS**

1. COVER SHEET
2. LAYOUT PLAN
3. UTILITY PLAN
4. OVERALL GRADING PLAN
5. PHASE 1 GRADING PLAN
6. EROSION CONTROL PLAN
7. EROSION DETAILS
8. DETAILS
9. DETAILS
10. LANDSCAPE PLAN
11. TRAFFIC CONTROL
12. TRAFFIC DETAILS

**DEVELOPER:**

SOUTH TOWN STORAGE, LLC  
P.O. BOX 107  
RAYMORE, MO 64083

**SURVEYOR**

HUFFMAN & ASSOCIATES  
16112 SLATER AVE  
BELTON, MO 64012  
(816) 322-4544

**ENGINEER**

SITE ENGINEERING CONSULTANTS, LLC  
5251 W116th PL, SUITE 200,  
LEAWOOD, KANSAS 66211  
(913) 515-7209

**LEGAL DESCRIPTION:**

LOT 3, BUSH INDUSTRIAL PARK, A SUBDIVISION IN RAYMORE, CASS COUNTY, MISSOURI, ACCORDING TO THE RECORDED PLAT THEREOF, OF RECORD IN PLAT BOOK 12 AT PAGE 193.

**NOTES:**

- A CROSS ACCESS DEDICATION IS OFFERED BY THIS SITE PLAN FOR ACCESS TO ADJACENT PROPERTIES
- ACCESS WAYS WITHIN THIS SITE PLAN ARE TO BE PRIVATE AND ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS.
- CONTOUR ELEVATIONS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83).
- LOCATION AND SIZE OF STORMWATER FACILITIES IS AS SHOWN.

**GENERAL NOTES**

1. THE PERIMETER SURVEY AND TOPOGRAPHIC SURVEY SHOWN ON THIS SITE PLAN WAS TAKEN FROM A PERIMETER SURVEY PREPARED BY MIKE HUFFMAN DATED FEBRUARY 19, 2020 AND SEALED BY MO PLS MIKE HUFFMAN.
2. ACCORDING TO FIRM PANEL 29037C0037F, DATED JANUARY 1, 2013, THE PROPERTY IS LOCATED IN FLOOD ZONE X. "AREA OF MINIMAL FLOOD HAZARD".
3. THE PROPERTY IS ZONED "M1" PER RAYMORE UNIFIED DEVELOPMENT ORDINANCE.  
SETBACKS:  
FRONT 30', REAR 20', SIDE 10'  
MAXIMUM HEIGHT 80'
4. PUBLIC WATER TO BE PROVIDED BY CITY OF RAYMORE.
5. PUBLIC SANITARY SEWER TO BE PROVIDED BY THE CITY OF RAYMORE.
6. EXISTING UTILITIES SHOWN ARE BASED UPON THE BEST AVAILABLE INFORMATION. PLEASE CALL MO ONE CALL 800-DIG-RITE PRIOR TO ANY EARTH DISTURBING ACTIVITIES
7. TOTAL STORAGE SPACED PROPOSED: 77 BUS STALLS
8. ALL PROPOSED LIGHTING WILL BE IN ACCORDANCE WITH SITE LIGHTING PLAN
9. OUTDOOR TRASH STORAGE IS NOT PROPOSED. IF AN OUTDOOR TRASH CONTAINERS ARE ADDED IT WILL BE ENCLOSED ON THREE SIDES.
10. THERE ARE NO KNOWN ENVIRONMENTALLY SENSITIVE LANDS ON-SITE OR WITHIN FIVE- HUNDRED (500) FEET OF THE SITE INCLUDING BUT NOT LIMITED TO WETLANDS, HABITAT AREAS, HILLSIDES, STEEP SLOPES, LAKES, TREED OR FORESTED AREAS, BROWNFIELD SITES AND STREAMS AND STREAM CORRIDORS WHICH COULD BE AFFECTED BY THIS DEVELOPMENT.
11. A TRAFFIC MEMO WAS PREPARED BY KELLER ENGINEERING DATED 3-8-21 TRIP DATA: 278

Table 1: Trip Generation (ITE Trip Generation, 10<sup>th</sup> Edition)

ITE Code	New Land Use	Size	Average Daily Trips		AM Peak Hour Trips					PM Peak Hour Trips						
			Rate	Total	Rate	% In	% Out	In	Out	Total	Rate	% In	% Out	In	Out	Total
151	Storage (canopy)	45.4 KSF	1.51	69	0.10	60%	3	40%	2	5	0.17	47%	4	53%	4	8
150	Storage (climate controlled)	27.9 KSF	1.74	48	0.17	77%	4	23%	1	5	0.19	27%	1	73%	4	5
948	Car Wash	3.2 KSF	*	230	*	50%	12	50%	12	24	14.20	50%	23	50%	23	46
Subtotal				348			19		15	34			28		31	59
20% Internal Capture				-70			-4		-3	-7			-6		-6	-12
Total				278			15		12	27			22		25	47

KSF = Thousand Square Feet

\* The Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition does not provide detailed data on Average Daily Trips (ADT) or AM Peak Hour Trips for the car wash land use (ITE Code 948). As such, 50% of the PM peak hour trip generation rate was used for the AM peak hour and 5 times the PM peak hour total trips were used for the ADT.



**TITLE:**

COVER SHEET (PHASE 1 & 2)

**PROJECT:**

SOUTH TOWN STORAGE, LLC

PREPARED FOR:  
SOUTH TOWN STORAGE, LLC

COUNTY PIN NO.: 04-05-15-400-000-001.004

SEC.15 TWP46, RNG32

COUNTY: CASS CO

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\*ENGINEERING\*SERVICES\*  
**SITE ENGINEERING**  
CONSULTANTS, LLC  
PROFESSIONAL ENGINEERING COMPANY  
5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
(913) 515-7209 \* FAX (816) 760-2379  
"TODAY'S TECHNOLOGY\*YESTERDAY'S QUALITY"

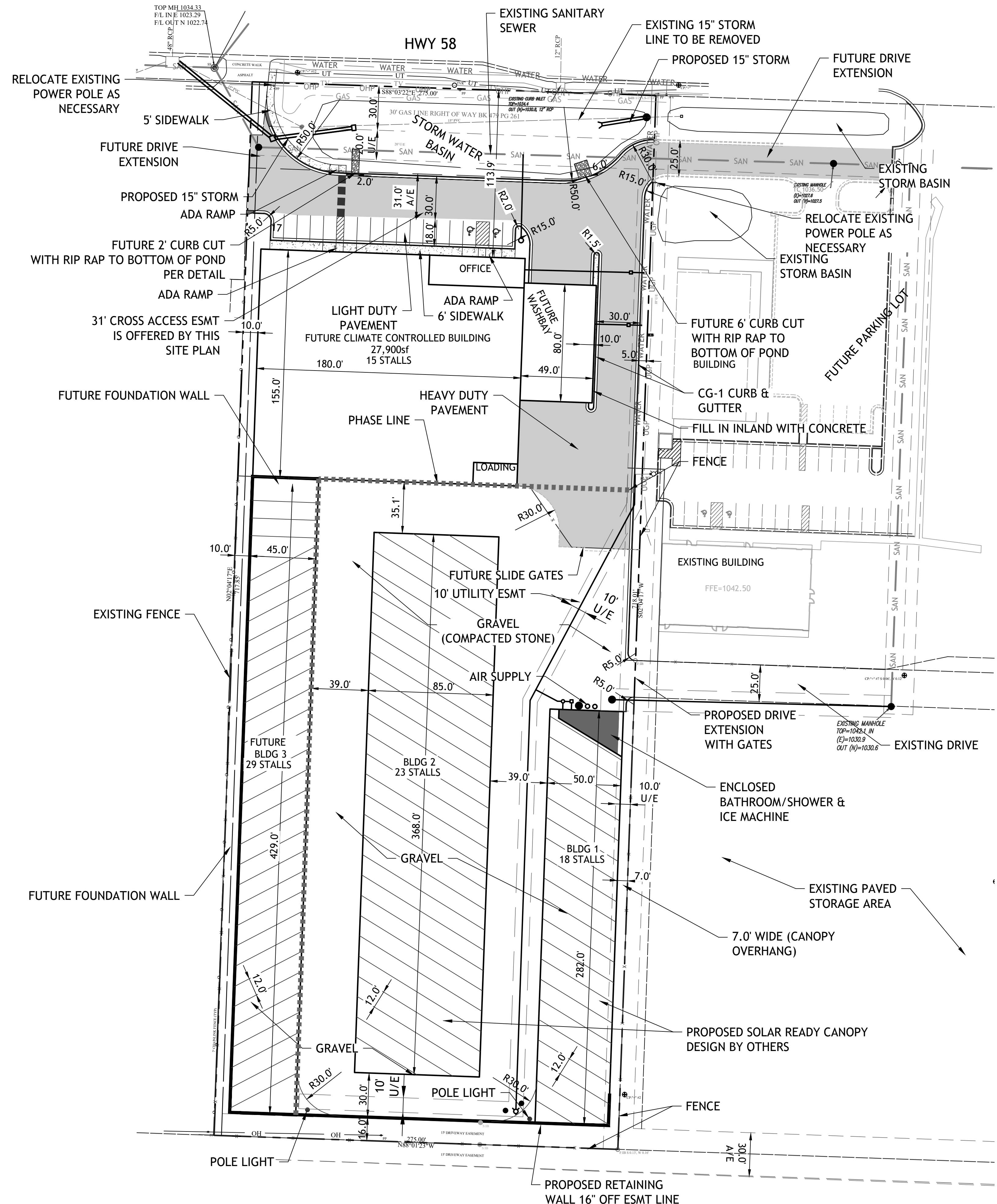
DATE	REVISION	CHKD.
3-26-21	CITY COMMENTS	TB
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
		SCALE: 1"=40'
		PROJECT No.: 0059
		SHEET No.: 1

**NOTE:**  
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

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**EXCAVATION**

- EXCAVATION SHALL CONSIST OF THE REMOVAL AND FINAL DISPOSAL, AS FURTHER SPECIFIED, OF ALL MATERIALS EXCEPT THOSE SPECIFIED UNDER CLEARING AND GRUBBING AND TRENCH EXCAVATION TAKEN FROM WITHIN THE LIMITS OF THE WORK CONTRACTED FOR AND NECESSARY FOR THE PREPARATION AND CONSTRUCTION OF VARIOUS ELEMENTS OF THE WORK, ON THE LINES AND GRADES SHOWN ON THE PLANS, PROFILES, AND CROSS-SECTIONS OR AS DIRECTED. IT SHALL INCLUDE THE GRADING AND COMPACTING OF THE EMBANKMENT, AND THE CLEANING AND SLOPING OF THE EMBANKMENT, AND CUT SLOPES TO THE REQUIRED LINES AND GRADES. EXCAVATION ALSO INCLUDES THE SALVAGING AND STOCKPILING OF TOPSOIL FOR RE-USE. THE BACKFILLING OF AREAS WHEN UNSUITABLE MATERIAL HAS BEEN REMOVED, THE FINAL DRESSING OF THE SLOPES, DITCHES AND SHOULDERS, AND THE REMOVAL AND DISPOSAL OF ALL MATERIAL NOT OTHERWISE PROVIDED FOR SO THAT THE PROJECT WILL BE COMPLETED IN A NEAT AND WORKMANLIKE MANNER.
- EXCAVATION SHALL BE MADE IN ACCORDANCE WITH THESE STANDARDS AND SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, AND TYPICAL CROSS-SECTIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER, AND NO ALLOWANCE WILL BE MADE FOR MATERIAL EXCAVATED BEYOND OR BELOW SUCH LINES AND GRADES UNLESS IT HAS BEEN SO ORDERED. ALL SUITABLE MATERIAL REMOVED AS EXCAVATION SHALL BE USED IN THE FORMATION OF EMBANKMENTS, SLOPES, ETC., BEFORE SECURING OR HAULING ANY BORROW UNLESS SPECIFICALLY APPROVED BY THE SOIL ENGINEER. NO UNSUITABLE MATERIAL OF ANY DESCRIPTION WILL BE ALLOWED IN THE FORMATION OF EMBANKMENTS. ALL SLOPES OF CUTS AND EMBANKMENTS, DITCHES AND WATERWAYS SHALL BE CLEANED AND CLEARED OF OBSTRUCTION AND SHALL BE LEFT IN A NEAT AND TRIMMED CONDITION.
- PRIOR TO THE GENERAL GRADING OPERATION, THE CONTRACTOR SHALL REMOVE TOPSOIL FROM AREAS AS REQUIRED FOR EACH PROJECT, AND STOCKPILE IT AS DESIGNATED ON THE PLANS FOR REUSE IF THE TOPSOIL IS SUITED FOR REUSE. SILT FENCE SHALL BE PLACED AROUND THE AREAS OF THE STOCKPILE.
- THE SUBGRADE FOR PAVING AND STRUCTURES SHALL BE PROPERLY SHAPED AND UNIFORMLY AND THOROUGHLY COMPACTED IN CONFORMITY WITH THE LINES AND GRADES SHOWN ON THE PLANS AND/OR ESTABLISHED IN THE FIELD BEFORE ANY SUBBASE, BASE OR SURFACING MATERIAL IS PLACED. THE SUBGRADE SHALL BE FREE FROM BOULDERS, LARGER ROCKS, MUCK, VEGETATION, OR OTHER MATERIALS THAT WOULD PROVE DETRIMENTAL TO THE ROAD DEPRESSIONS THAT DEVELOP DURING THE ROLLING SHALL BE FILLED WITH SUITABLE MATERIAL AND THE SUBGRADE SHALL BE ROLLED ON UNTIL DEPRESSIONS DEVELOP. WHERE EXCAVATION TO THE FINISHED GRADED SECTION RESULTS IN A SUBGRADE OR SLOPES ON UNSUITABLE SOIL, THE SOILS ENGINEER MAY REQUIRE THE CONTRACTOR TO REMOVE THE UNSUITABLE MATERIALS AND BACKFILL TO THE FINISHED GRADED SECTION WITH APPROVED MATERIAL.
- WHEN DIRECTED, TEST ROLLING SHALL BE PERFORMED UPON THE PREPARED SUBGRADE FOR PAVING AND STRUCTURES PRIOR TO THE PLACEMENT OF ANY BASE OR SUBBASE MATERIAL. TEST ROLLING SHALL BE PERFORMED WITH SELF-PROPELLED EQUIPMENT, WHICH SHALL BE OF THE SIZE, TYPE AND WEIGHT THAT WILL REVEAL ANY SOFT, YIELDING, OR SPONGY AREAS. THE EQUIPMENT SHALL BE RUN LONGITUDINALLY SO THAT THERE SHALL NOT BE OVER 18" OF UNROLLED AREA BETWEEN THE TIRE STRIPS. IF, IN THE OPINION OF THE SOILS ENGINEER, THERE ARE AREAS TO BE REMOVED OR UNDERCUT, THEY MAY BE ORDERED EXCAVATED AND REPLACED. HOWEVER, AS DETERMINED BY THE SOILS ENGINEER, AREAS WHICH BECOME SOFT, OR SPONGY DUE TO THE CONTRACTOR'S METHODS OF OPERATION, THEY SHALL BE REMOVED AND/OR REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE SUBGRADE MUST BE MAINTAINED IN SUCH CONDITION THAT IT WILL DRAIN. ALL FACILITIES NECESSARY FOR COMPLETE DRAINAGE OF THE CONSTRUCTION AREAS SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR. IN NO CASE SHALL VEHICLES BE ALLOWED TO TRAVEL IN A SINGLE TRACK AND FORM RUTS IN THE SUBGRADE, AND IF ANY SHARP IRREGULARITIES ARE FORMED, THE SUBGRADE SHALL BE SCARIFIED AND RECOMPACTED.
- ALL SURPLUS MATERIALS EXCAVATED AND SUITABLE WASTE OF EVERY DESCRIPTION SHALL BE USED IN OR TO WIDEN EMBANKMENTS, FLATTEN SIDE SLOPES, OR BE DEPOSITED IN SUCH PLACES AS MAY BE DIRECTED; OR THIS MATERIAL AND ALL OTHER MATERIALS NOT PERMITTED IN THE EMBANKMENTS, ETC., SHALL BE HAULED FROM WITHIN THE LIMITS OF THE SITE AND DISPOSED OF AS PER STATE, FEDERAL AND LOCAL CRITERIA.



**CLEARING AND GRUBBING**

- CLEARING AND GRUBBING SHALL CONSIST OF CLEARING, GRUBBING, REMOVING AND DISPOSING OF ALL VEGETATION AND DEBRIS WITHIN THE LIMITS OF DISTURBED AREAS, EXCEPT SUCH OBJECTS AS ARE DESIGNATED TO REMAIN OR ARE TO BE REMOVED IN ACCORDANCE WITH OTHER SECTIONS OF THESE PLANS. THIS WORK SHALL ALSO INCLUDE THE PRESERVATION FROM INJURY OR DEFACEMENT OF ALL VEGETATION, TREES, AND OBJECTS DESIGNATED TO REMAIN.
- THE CONTRACTOR SHALL PERFORM THE WORK OF CLEARING AND GRUBBING SO AS TO REMOVE ONLY MATERIAL HEREIN SPECIFIED AND, IF HE CHOOSES TO DO SUCH WORK WITH MECHANICAL EQUIPMENT AND REMOVES AND WASTES SUITABLE MATERIAL. REQUIRED ON THE PROJECT, ANY SUITABLE MATERIAL REMOVED WITH THE CLEARED AND GRUBBED MATERIAL SHALL BE REPLACED BY THE CONTRACTOR. ALL MATERIALS REMOVED BY THE CLEARING AND GRUBBING OPERATION SHALL BE REMOVED FROM THE PROJECT OR OTHERWISE DISPOSED OF AS SPECIFIED OR DIRECTED BY THE DEVELOPER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH ALL APPLICABLE REGULATIONS OF THE CITY OF RAYMORE.
- TREES DESIGNATED TO REMAIN  
-THE DEVELOPER SHALL DESIGNATE SUCH TREES, SHRUBBERY AND PLANTS WHICH ARE NOT TO BE REMOVED AND THE CONTRACTOR SHALL PROTECT THEM FROM ANY DAMAGE. IF ANY SUCH TREES, SHRUBBERY OR PLANTS ARE DAMAGED, THEY SHALL BE REPLACED OR REPAIRED BY A COMPETENT TREE SURGEON. PAINT REQUIRED FOR CUT OR SCARRED SURFACES OF TREES OR SHRUBS SELECTED FOR RETENTION SHALL BE APPROVED ASPHALTUM BASE PAINT PREPARED ESPECIALLY FOR TREE SURGERY.
- DISPOSAL OF TREES, STUMPS, BRUSH, RUBBISH, ETC.  
-ALL TREES, TIMBER, STUMPS, BRUSH, RUBBISH OR OTHER MATERIAL TO BE REMOVED FROM THE SITE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND ALL MATERIALS REMOVED FROM THE SITE IN ACCORDANCE WITH THESE REQUIREMENTS SHALL BE SALVAGED, OR DISPOSED OF OUT OF SIGHT FROM THE SITE. ANY BURNING SHALL BE DONE WITHIN THE REQUIREMENTS OF STATE OR LOCAL LAWS OR REGULATIONS AND BE UNDER COMPLETE CONTROL AT ALL TIMES.
- PREPARATION OF GROUND SURFACE  
-GRADING OPERATIONS SHALL NOT BE STARTED IN ANY AREA, UNTIL ALL OPERATIONS OF CLEARING AND GRUBBING WITHIN THE AFFECTED AREA HAVE BEEN COMPLETED. IN AREAS WHERE EXCAVATION IS TO BE MADE, THE GROUND SHALL BE CLEARED OF ALL LIVING OR DEAD TREES, STUMPS, BRUSH, OR OTHER OBJECTIONABLE MATERIAL. ALL EMBEDDED STUMPS, ROOT MATS, ETC., SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN 2 FEET BELOW THE SUBGRADE OR SLOPE SURFACES. ALL DEPRESSIONS MADE BELOW THE SUBGRADE OR SLOPE SURFACES BY THE REMOVAL OF STUMPS OR ROOTS SHALL BE BACKFILLED WITH APPROVED MATERIAL AND COMPACTED AS DIRECTED. IN AREAS WHERE EMBANKMENT IS TO BE MADE 5 FEET OR MORE IN DEPTH, TREES AND STUMPS SHALL BE CUT OFF AS CLOSE TO THE GROUND AS IS PRACTICABLE, BUT NOT TO EXCEED 6 FEET ABOVE THE GROUND SURFACE. NEAR THE TOE OF EMBANKMENT SLOPES, NO STUMP SHALL EXTEND ABOVE A POINT 1 FOOT BENEATH THE SLOPE SURFACE. AREAS WHERE EMBANKMENT IS TO BE MADE LESS THAN 5 FEET DEEP, ALL TREES, STUMPS, BRUSH, ROOT MAT, AND DEBRIS SHALL BE REMOVED, GRUBBED OR BLASTED FROM THE GROUND AND ALL THESE MATERIALS SHALL BE GRUBBED IN THE MANNER REQUIRED WHERE EXCAVATION IS TO BE MADE.
- UNLESS OTHERWISE DIRECTED, THE SITE SHALL BE CLEARED, FLUSH WITH THE GROUND, OF ALL TREES, BRUSH, SHRUBS, DOWN TIMBER, ROTTEN WOOD, RUBBISH AND OTHER OBJECTIONABLE DEBRIS AND VEGETATION. IN ADDITION, SUCH LIVE TREES AS MAY INTERFERE WITH SIGHT DISTANCE, EITHER VERTICALLY OR HORIZONTALLY, SHALL BE CLEARED FROM THESE AREAS.

**SITE DATA:**

TOTAL SITE	4.53ac (197,430sf)
TOTAL CANOPIES	66,830sf
TOTAL ENCLOSED BUILDINGS	27,900sf
CAR WASH	3,200sf
<b>TOTAL</b>	<b>97,930</b>
GRAVEL AREA	123,386sf
ASPHALT	26,525sf
<b>TOTAL</b>	<b>149,911sf</b>
TOTAL IMPERVIOUS AREA	247,841sf
TOTAL OPEN SPACE	19,352sf = (9.8%)
PHASE 1 PARKING	41 BUS STALLS
COMPLETE BUILD OUT	77 BUS STALLS
CAR PARKING	17 STALLS

PROPERTY IMPROVEMENTS WILL BE FENCED

TITLE:  
SITE PLAN PHASE 1 & 2

PROJECT:  
SOUTH TOWN STORAGE, LLC  
PREPARED FOR:  
SOUTH TOWN STORAGE, LLC  
COUNTY PIN NO.: 04-05-15-400-000-001.004  
SEC.15 TWP46, RNG32  
COUNTY: CASS CO

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\*ENGINEERING\*SERVICES\*

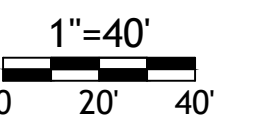
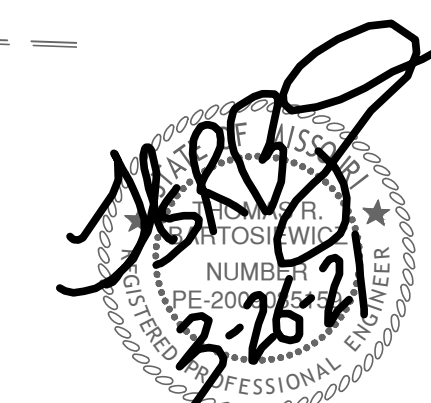
**SITE ENGINEERING CONSULTANTS, LLC**

PROFESSIONAL ENGINEERING COMPANY  
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"TODAY'S TECHNOLOGY \* YESTERDAY'S QUALITY"

DATE	REVISION	CHKD.
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
SCALE: 1"=40'		PROJECT No.: 0059
SHEET No.: 2		

NOTE:  
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

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**SANITARY SEWER MATERIALS**

1. SANITARY SEWER PIPE SHALL BE PVC, SDR 26 WITH PUSH ON TYPE JOINTS USING FLEXIBLE ELASTOMERIC SEALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. FITTINGS SHALL BE OF THE SAME MATERIAL AS THE PIPE IN WHICH THEY ARE INSTALLED OR APPROVED EQUAL.

2. MANHOLES SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 WITH O-RING JOINTS CONFORMING TO ASTM C443 AND C361. THE MANHOLES SHALL UTILIZE A-LOCK GASKETS OR EQUAL, CAST INTEGRALLY IN THE WALL AND LOCATED AS REQUIRED FOR SEWER PIPE CONNECTIONS. MANHOLE STEPS SHALL BE PS-48 POLYPROPYLENE. COAT ALL EXTERIOR MANHOLE SURFACES IN ACCORDANCE WITH TNEC SYSTEM 46-61 OR EQUAL.

3. PRIOR TO PURCHASE OR INSTALLATION, THE CONTRACTOR SHALL SUBMIT IN A TIMELY MANNER SHOP DRAWING OF AT LEAST THE FOLLOWING ITEMS AND SYSTEMS TO THE ENGINEER FOR REVIEW.

- A. PIPE AND FITTINGS
- B. MANHOLES, FRAMES AND COVERS (IF REQUIRED)
- C. DETECTION TAPE
- D. SEPTIC TANK

4. SELECT BORROW SHALL BE BORROW IN ACCORDANCE WITH MISSOURI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

5. CONCRETE SHALL BE CLASS A PORTLAND CEMENT CONCRETE, CONFORMING TO THE MATERIALS, DESIGN AND CONTROL REQUIREMENTS OF THE MISSOURI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

**CONSTRUCTION METHODS**

1. ALL SEWER MAINS AND APPURTENANCES SHALL BE INSTALLED AND PLACED INTO SERVICE IN CONFORMANCE WITH ASTM D2321. THE MANUFACTURER'S RECOMMENDATIONS AND THE RECOMMEND STANDARDS FOR SEWAGE WORK, "10 STATE STANDARDS" LATEST EDITION.

2. MAINTAIN MINIMUM 10 FOOT HORIZONTAL AND 18 INCH VERTICAL SEPARATION BETWEEN ALL CONCRETE ENCASEMENT 10 FEET EITHER SIDE OF WATER MAIN.

3. DETECTION AND WARNING TAPE SHALL BE PLACED BETWEEN 18 INCHES AND 24 INCHES ABOVE THE FORCE MAIN WHEN PVC PIPE IS BEING INSTALLED. AT NO TIME SHALL IT BE PLACED AT A DEPTH LESS THAN 6 INCHES. DETECTION AND WARNING TAPE SHALL BE OF THE METALLIC TYPE WITH METAL FOIL RUNNING THE FULL LENGTH AND WIDTHS. FOIL SHALL BE ENHANCED IN A HIGH VISIBILITY, COLOR CODED, INSERT PLASTIC JACKET WITH CONTINUOUS IDENTIFICATION LEGENDS CLEARLY IMPRINTED ON IT. FOR SEWER SYSTEMS THE COLOR SHALL BE "SAFETY PRECAUTION GREEN" WITH THE LEGEND READING "CAUTION BURIED SEWER LINE BELOW".

4. TRENCHES SHALL BE EXCAVATED TO THE NECESSARY WIDTH AND DEPTH AND MUST BE DRY DURING PIPE PLACEMENT AND BACK. BACKFILL SHALL BE THE MATERIAL EXCAVATED. PROVIDED IT IS FREE OF ORGANIC MATTER, HEAVY CLAY, DEBRIS, ETC.. THE BACKFILL IS TO BE HAND TAMPED TO AT LEAST 12 INCHES ABOVE THE TOP OF THE PIPE AND SHALL BE MECHANICALLY TAMPED IN 8 INCH LIFTS TO FINISHED GRADE. EACH LIFT SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY.

5. IT IS INTENDED THAT EXCAVATED MATERIAL BE USED FOR BACKFILL. IN THE EVENT REQUIRED COMPACTING CANNOT BE ACHIEVED OR THE MATERIAL IS UNSUITABLE IN OTHER RESPECTS, SLUMPS, TRASH, ETC.. THE BACKFILL MATERIAL WILL BE SUITABLY PROVIDED FROM OFF-SITE SOURCES, AT NO ADDITIONAL COST.

6. PAVED AREAS DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED EQUAL OR BETTER THAN THAT DISTURBED.

7. REPLACE ALL SIGNS, MAIL BOXES, ECT. THAT ARE REMOVED DURING CONSTRUCTION.

**ACCEPTANCE TESTING**

1. GRAVITY SEWERS SHALL BE SUBJECT TO MIRROR-LIGHT TESTING TO DETERMINE THAT THE ALIGNMENT IS STRAIGHT AND TRUE. SEWERS NOT ALLOWING THE PASSAGE OF REFLECTED LIGHT SHALL NOT BE ACCEPTED.

2. ALL SEWERS ABOVE THE GROUNDWATER LINE SHALL BE TESTED BY THE EXFILTRATION METHOD. DURING EXFILTRATION TESTING THE MAXIMUM INTERNAL PIPE PRESSURE AT THE LOWEST END SHALL NOT BE EXCEED 25 FEET OF WATER. ALL SEWER BELOW THE GROUNDWATER LINE SHALL BE TESTED BY THE INFILTRATION METHOD. THE MAXIMUM ALLOWABLE LEAKAGE THE LOW PRESSURE AIR TEST MAY BE USED AS AN ALTERNATIVE METHOD ACCEPTANCE TEST. THE ENGINEER SHALL DETERMINE ACCEPTANCE CRITERIA FOR ALL TESTS.

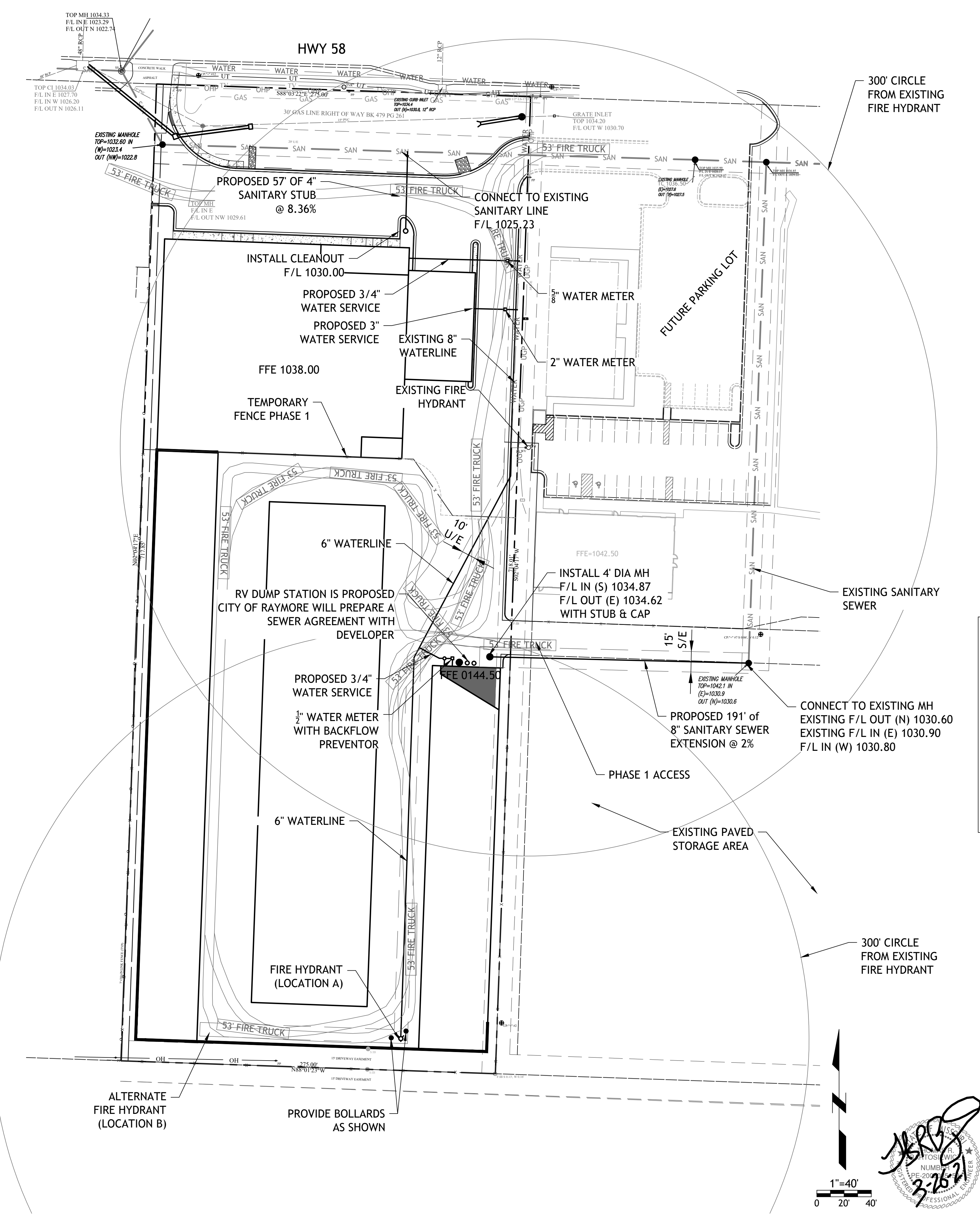
3. MANHOLES SHALL BE FREE FROM FOREIGN MATERIALS AND INFILTRATION. THE CONTRACTOR SHALL REPAIR TO THE FULL SATISFACTION OF THE ENGINEER ANY OBSERVED LEAKAGE IN THE MANHOLES.

4. THE CONTRACTOR SHALL GUARANTEE THAT ALL WORKMANSHIP, MATERIALS, AND WORK PERFORMED UNDER THE CONTRACT, SHALL BE IN STRICT ACCORDANCE WITH THE DRAWING, SPECIFICATION AND OTHER CONTRACT DOCUMENTS. THIS GUARANTEE SHALL BE FOR A PERIOD OF ONE YEAR FROM AND AFTER DATE OF COMPLETION AND ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL REPAIR, CORRECT OR REPLACE AS REQUIRED, PROMPTLY AND WITHOUT CHARGE, ALL WORK, EQUIPMENT AND MATERIAL, OR PARTS THEREOF, WHICH FAIL TO BE GUARANTEE, OR WHICH IN ANY WAY FAIL TO COMPLY WITH OR FAIL TO BE IN STRICT ACCORDANCE WITH THE TERMS AND PROVISIONS AND REQUIREMENTS OF THE CONTRACT DURING SUCH ONE YEAR PERIOD.

NOTE: A LOCK BOX CONTAINING KEYS FOR FIRE DEPARTMENT ACCESS SHALL BE PROVIDED. THE LOCK BOX SHALL BE LISTED OR APPROVED BY THE STATE OR CITY FIRE MARSHAL FOR THE INTENDED USE AND INSTALLED IN SUCH A MANNER THAT THE FIRE DEPARTMENT WILL HAVE ACCESS TO THE BOX. CONTACT THE LOCAL FIRE CHIEF FOR ORDERING INFORMATION AND LOCATION OF BOX ON BUILDING.

NOTE: THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

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- GENERAL NOTES:**
- 1) ALL WATER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF RAYMORE UTILITIES CONSTRUCTION SPECIFICATIONS AND ALL AMENDMENTS THERETO.
  - 2) INSTALL PIPE AROUND BENDS PER MANUFACTURERS RECOMMENDATIONS
  - 3) IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN THE APPROVAL AND THE ACCEPTANCE OF THE WATER MAINS BY CITY OF RAYMORE. AND THE DEPARTMENT OF PUBLIC HEALTH, OFFICE OF DRINKING WATER IF REQUIRED UPON COMPLETION OF CONSTRUCTION.
  - 4) EXISTING UTILITIES ARE IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONTACT UTILITY ONE CALL AT 1-800-DG-RITE (3) THREE DAYS PRIOR TO CONSTRUCTION IN ORDER TO VERIFY AND ALLOW FOR THEIR LOCATION AND DEPTH IN THE FIELD.
  - 5) CONTRACTOR SHALL DEPRESS WATER LINE AS REQUIRED WITH APPROVED FITTINGS TO AVOID CONFLICTS WITH STORM SEWERS, CULVERTS AND SANITARY PLANS .
  - 6) THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY AND ALL DAMAGES DONE TO THEM DUE TO THEIR NEGLIGENCE SHALL BE IMMEDIATELY AND COMPETENTLY REPAIRED AT THEIR EXPENSE.
  - 7) ALL NECESSARY PERMITS, LICENSES, INSURANCE, ETC. REQUIRED BY LOCAL, STATE, OR FEDERAL LAWS SHALL BE PROVIDED BY THE CONTRACTOR.
  - 8) PLAN LOCATION AND DIMENSIONS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
  - 9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF DAMAGED OR DESTROYED LANDSCAPE.
  - 10) ALL INSTALLATIONS SHALL USE PRESSURE WATER PIPE CLASS 150 (SDR-18) C-900 AWWA APPROVED FURNISHED IN 20 FOOT LENGTHS WITH INTEGRAL BELLS OR AS INDICATED ON THE CONTRACT DRAWINGS. ALL PIPE MUST BE NSF-PW APPROVED. WHERE REQUIRED, HIGH DEFLECTION COUPLINGS SHALL BE USED.
  - 11) ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE MISSOURI STATE FIRE PREVENTION REGULATIONS.
  - 12) CONTRACTOR TO FIELD VERIFY EXISTING HYDRANT LOCATION AND CORRECT SPACING OF PROPOSED FIRE HYDRANTS.
  - 13) CITY OF RAYMORE SHALL BE RESPONSIBLE FOR PROVIDING FLOW TEST DATA TO THE STATE FIRE MARSHAL. FLOW TEST SHALL HAVE BEEN PERFORMED WITHIN THE PAST YEAR.
  - 14) ALL FITTINGS TO BE MJ WITH RETAINER GLANDS.
  - 15) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT (UPON COMPLETION OF INSTALLATION OF WATER DISTRIBUTION SYSTEMS) AS-BUILT DRAWINGS TO CITY OF RAYMORE IN DRAWING FORMAT ON A REMOVABLE DRIVE.
  - 16) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT (UPON COMPLETION OF INSTALLATION OF THE WATER DISTRIBUTION SYSTEMS) AS-BUILT DRAWINGS INCLUDING PROFILES TO THE DEPARTMENT OF PUBLIC HEALTH, OFFICE OF DRINKING WATER, IF REQUIRED.
  - 17) ALL PROPOSED FIRE HYDRANTS TO BE B-62-B, UNLESS OTHERWISE SPECIFIED.
  - 18) HYDRANT LOCATION SHOWN CAN BE MODIFIED AT THE DISCRETION OF THE CITY OF RAYMORE ( TO LOCATION B) AT THE EXPENSE OF THE DEVELOPER.

**FIRE MARSHAL NOTES:**

<p>1. OWNER/DEVELOPER: SOUTH TOWN STORAGE, LLC P.O. BOX 107 RAYMORE, MO 64083</p> <p>2. CIVIL/SITE ENGINEER: SITE ENGINEERING CONSULTANTS, LLC 5251 W116TH PLACE, SUITE 200 LEAWOOD, KANSAS 66211 Phone:(913) 515-7209 Fax:(816) 760-2379 c/o ENGINEER</p> <p>3. APPLICANT: SOUTH TOWN STORAGE, LLC P.O. BOX 107 RAYMORE, MO 64083</p> <p>4. TAX MAP NUMBER: 04-05-15-400-000-001.004</p>	<p>5. PROJECT NAME: SOUTH TOWN STORAGE</p> <p>6. INTENDED USE: RV STORAGE</p> <p>7. WATER SUPPLIER: CITY OF RAYMORE</p> <p>8. MAX HEIGHT OF BUILDING: 40'</p> <p>9. BUILDING CONSTRUCTION TYPE: CONSTRUCTION</p> <p>10. SPRINKLER SYSTEM: PER CODE</p> <p>11. ALL FIRE LANES, FIRE HYDRANTS, AND FIRE DEPARTMENT CONNECTIONS SHALL BE MARKED IN ACCORDANCE WITH THE STATE FIRE PREVENTION REGULATIONS</p>
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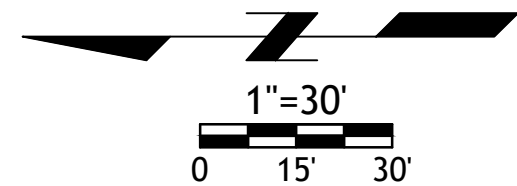
**TITLE:**  
UTILITY & FIRE ACCESS PLAN PHASE 1 & 2

**PROJECT:**  
SOUTH TOWN STORAGE, LLC  
PREPARED FOR:  
SOUTH TOWN STORAGE, LLC  
COUNTY PIN NO.: 04-05-15-400-000-001.004  
SEC.15 TWP46, RNG32  
COUNTY: CASS CO

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**\*ENGINEERING\*SERVICES\***  
**SITE ENGINEERING CONSULTANTS, LLC**  
PROFESSIONAL ENGINEERING COMPANY  
5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
(913) 515-7209 \* FAX (816) 760-2379  
"TODAY'S TECHNOLOGY\*YESTERDAY'S QUALITY"

DATE	REVISION	CHKD.
3-26-21	CITY COMMENTS	TB
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
SCALE: 1"=40'		PROJECT No.: 0059
SHEET No.: 3		



**VEGETATIVE STABILIZATION WITH TEMPORARY SEEDING:**

**LIME** - APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TO 2 TON PER ACRE. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL.

**FERTILIZER** - APPLY 10-10-10 FERTILIZER AT THE RATE OF 600 LBS PER ACRE. APPLY FERTILIZER UNIFORMLY AND INCORPORATE INTO THE TOP 4 - 6 INCHES OF SOIL.

**SEEDING:**

SPECIES	SEEDING RATES (PER ACRE)(LBS/1000 SQ. FT.)	PLANTING DEPTH (INCHES)	SEEDING DATES
RYE	2 - bu. 3.2	1-2	2/1 - 4/30 & 8/15 - 11/30

**MULCHING** - APPLY UNROTTED SMALL GRAIN STRAW AT THE RATE OF 1 - 2 TONS PER ACRE OR 70-90 LBS PER 1000 SQ. FT. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY.

**VEGETATIVE STABILIZATION WITH PERMANENT SEEDING**

**LIME** - APPLY DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL.

**FERTILIZER** - APPLY 10-10-10 FERTILIZER AT THE RATE OF 1000 LBS PER ACRE. APPLY FERTILIZER UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL.

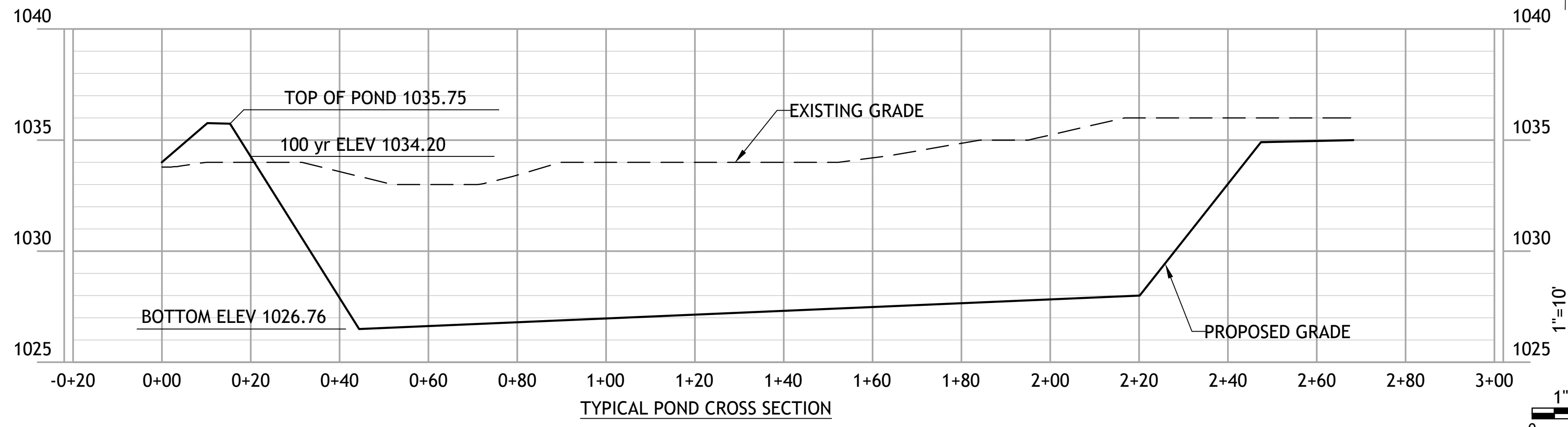
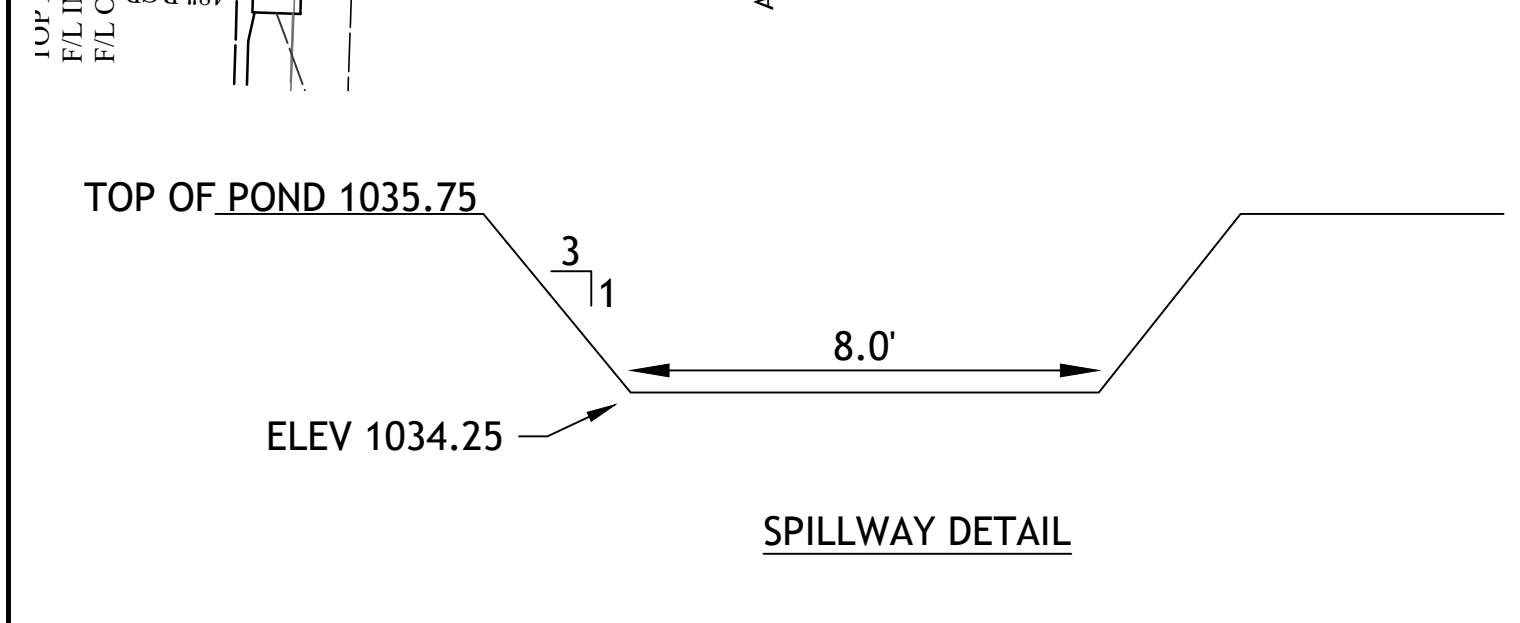
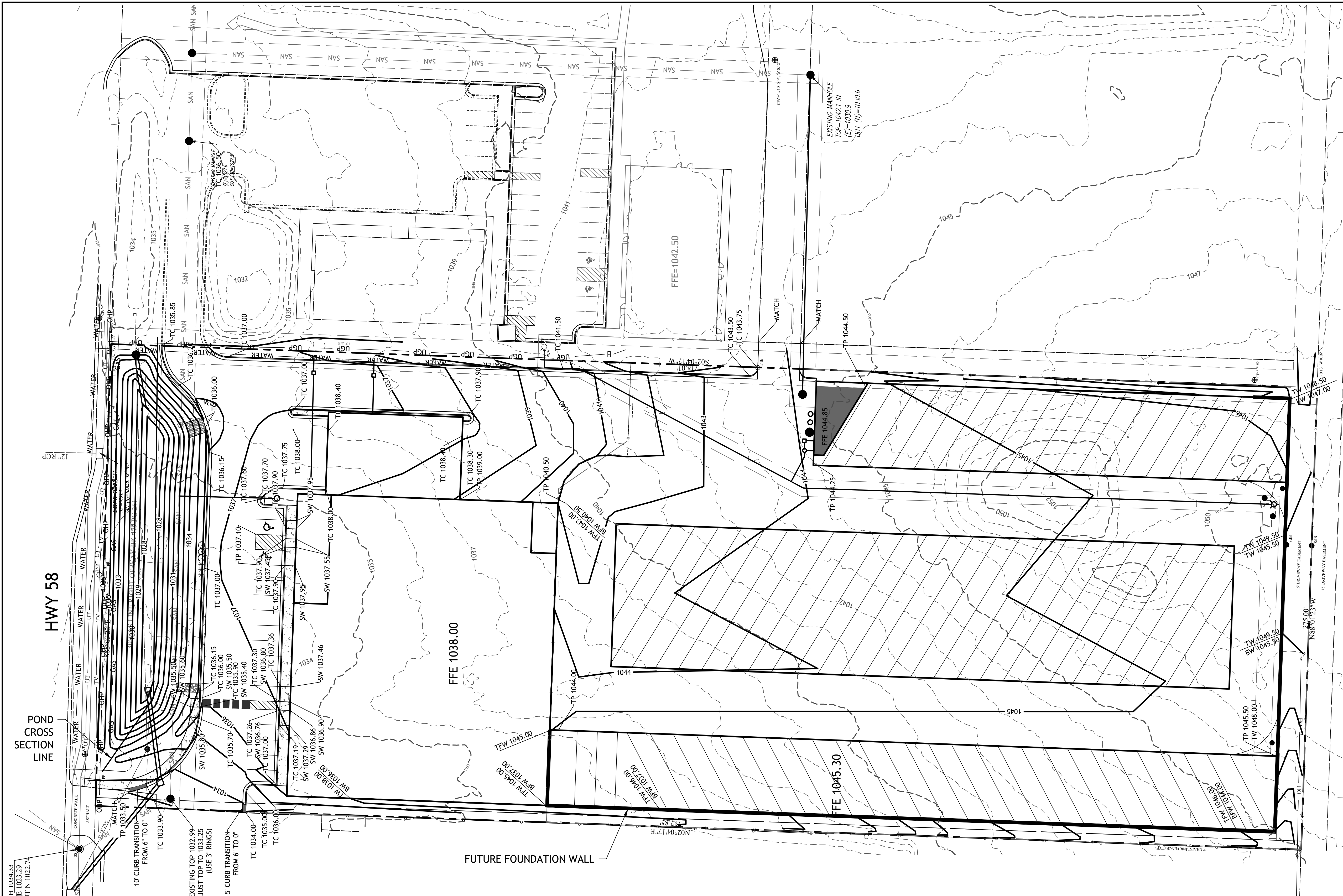
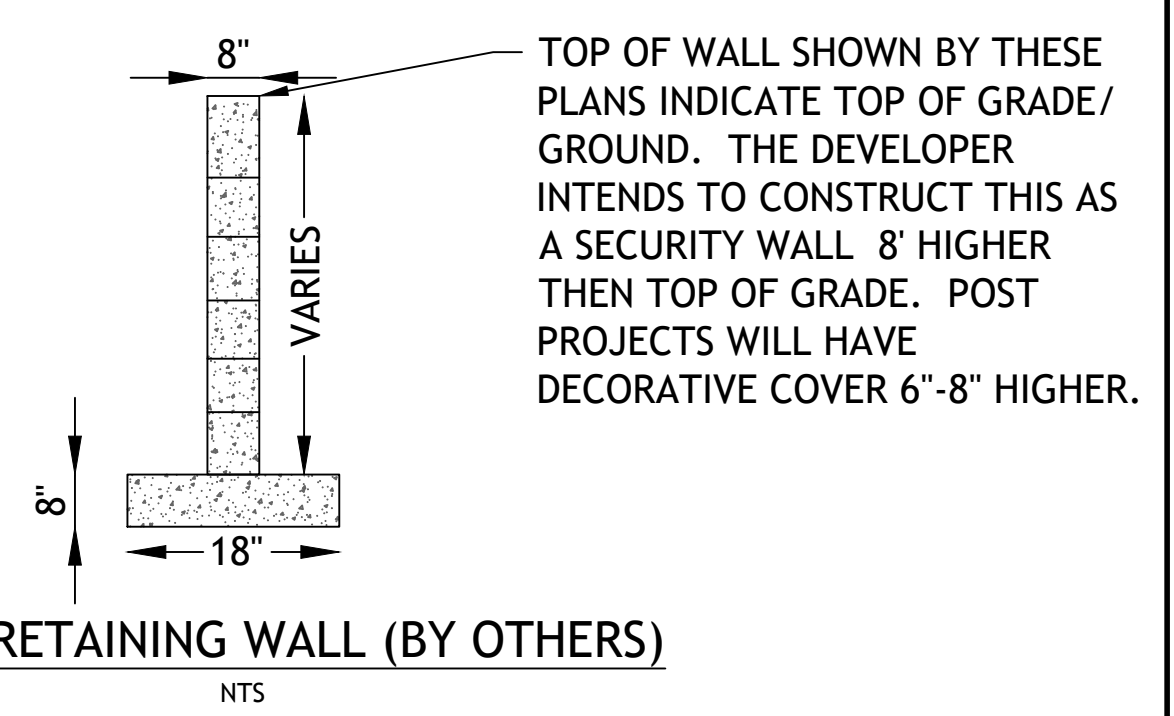
**SEEDING:**

SEEDING MIXTURE (USE CERTIFIED SEED)	SEEDING RATE (LBS/ACRE)(LBS / 1000 SQ. FT.)	SEEDING DATES
KENTUCKY BLUEGRASS (50%)	45 1.0	2/1 - 4/30 &
RED TOP (10%)	9 0.2	8/15 - 10/31
RED FESCUE (40%)	36 0.8	

**MULCHING** - APPLY UNROTTED SMALL GRAIN STRAW AT THE RATE OF 1 - 2 TONS PER ACRE, OR 70-90 LBS PER 1000 SQ. FT. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY.

**NOTE:** SITE PREPARATION, SOIL PREPARATION, MULCH ANCHORING, IRRIGATION, MAINTENANCE AND DUST CONTROL, SHOULD IT BECOME NECESSARY, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH TEMPORARY AND PERMANENT SEEDING.

**NOTE:**  
CONTRACTOR RESPONSIBLE FOR PROVIDING MODULAR BLOCK RETAINING WALL CONSTRUCTION DRAWINGS SEALED BY A MISSOURI STATE PROFESSIONAL ENGINEER



**TITLE:**  
OVERALL GRADING PLAN

**PROJECT:**  
SOUTH TOWN STORAGE, LLC

**PREPARED FOR:**  
SOUTH TOWN STORAGE, LLC

**COUNTY PIN NO.:** 04-05-15-400-000-001.004

**SEC.15 TWP46, RNG32**

**COUNTY:** CASS CO

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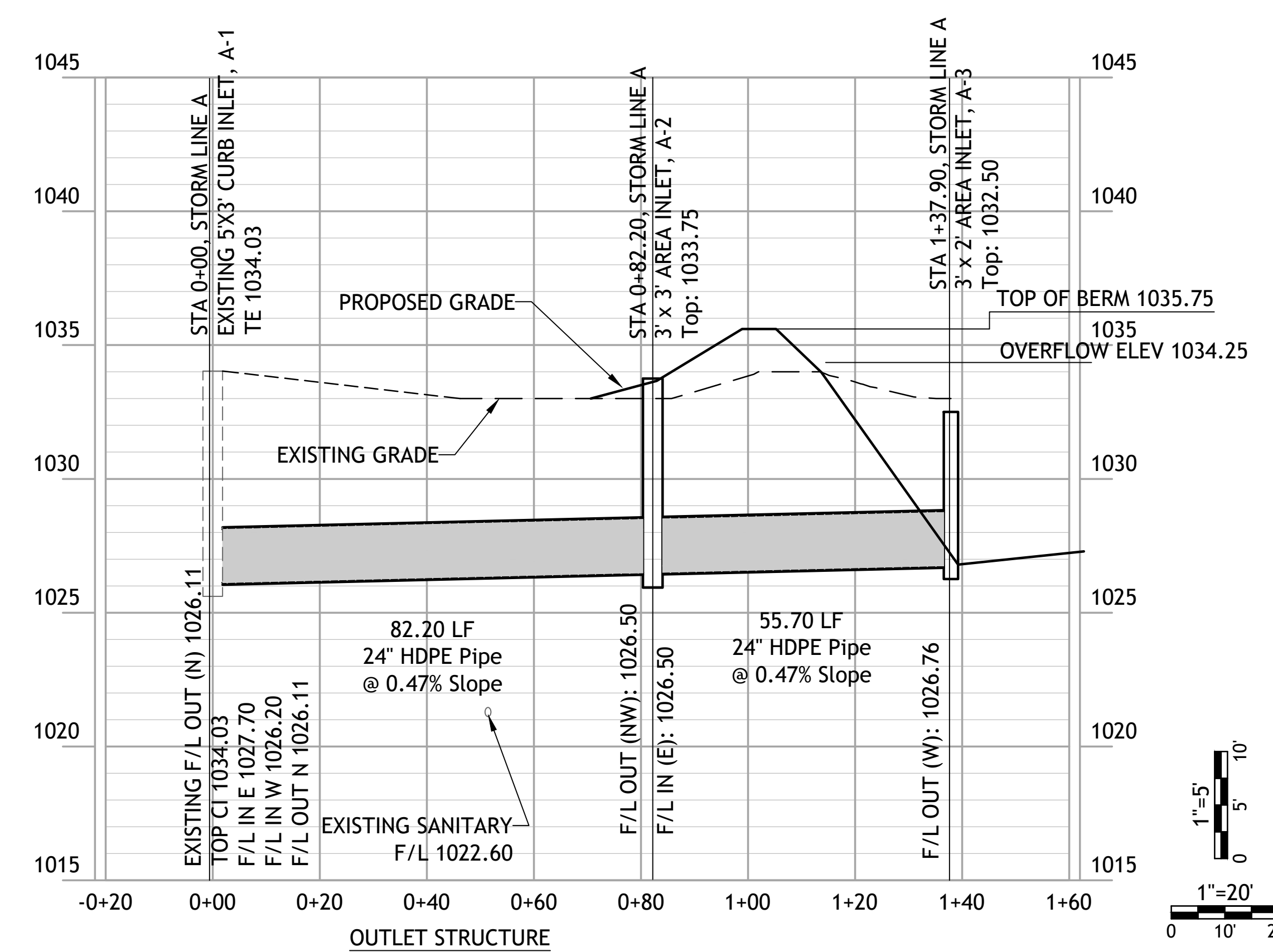
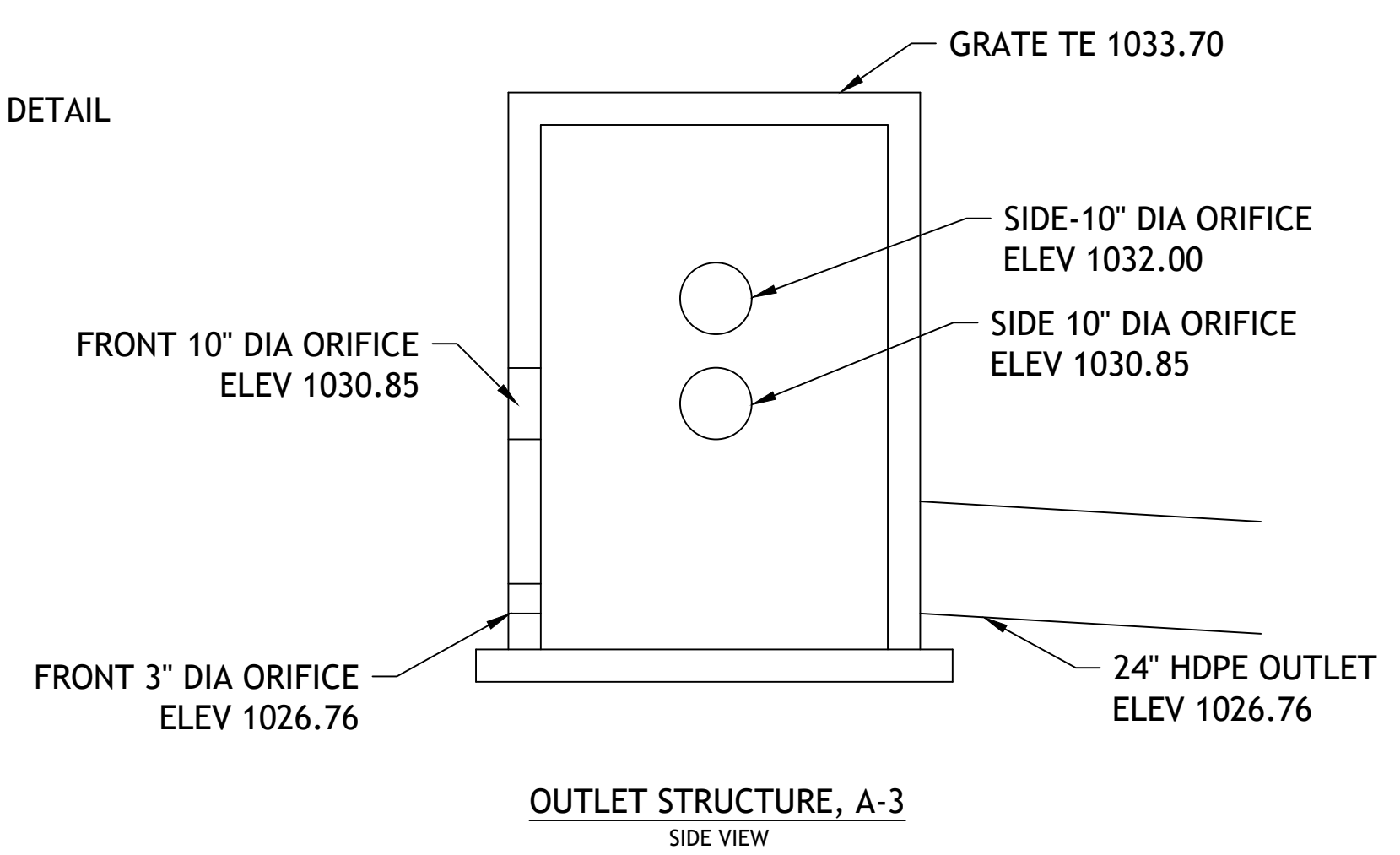
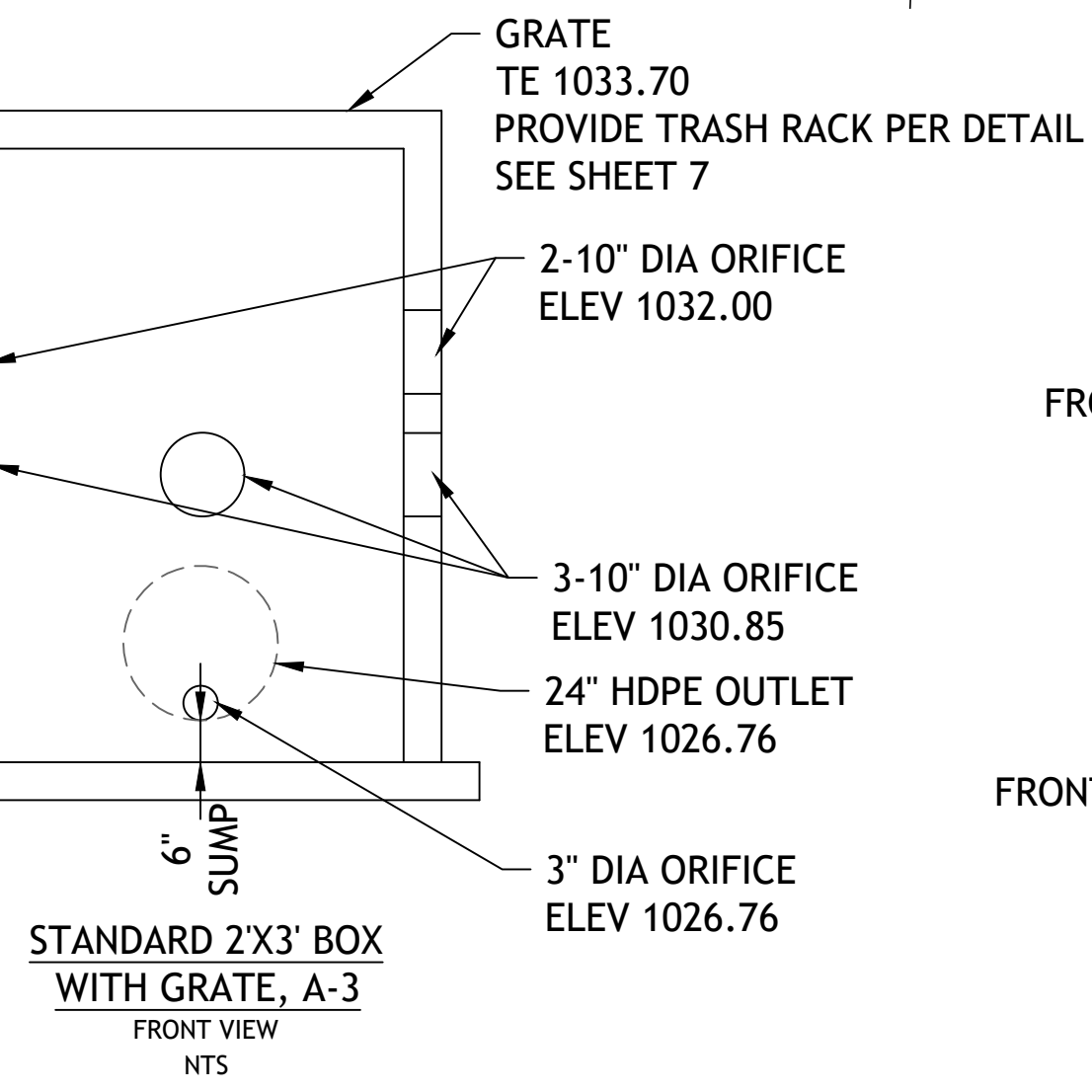
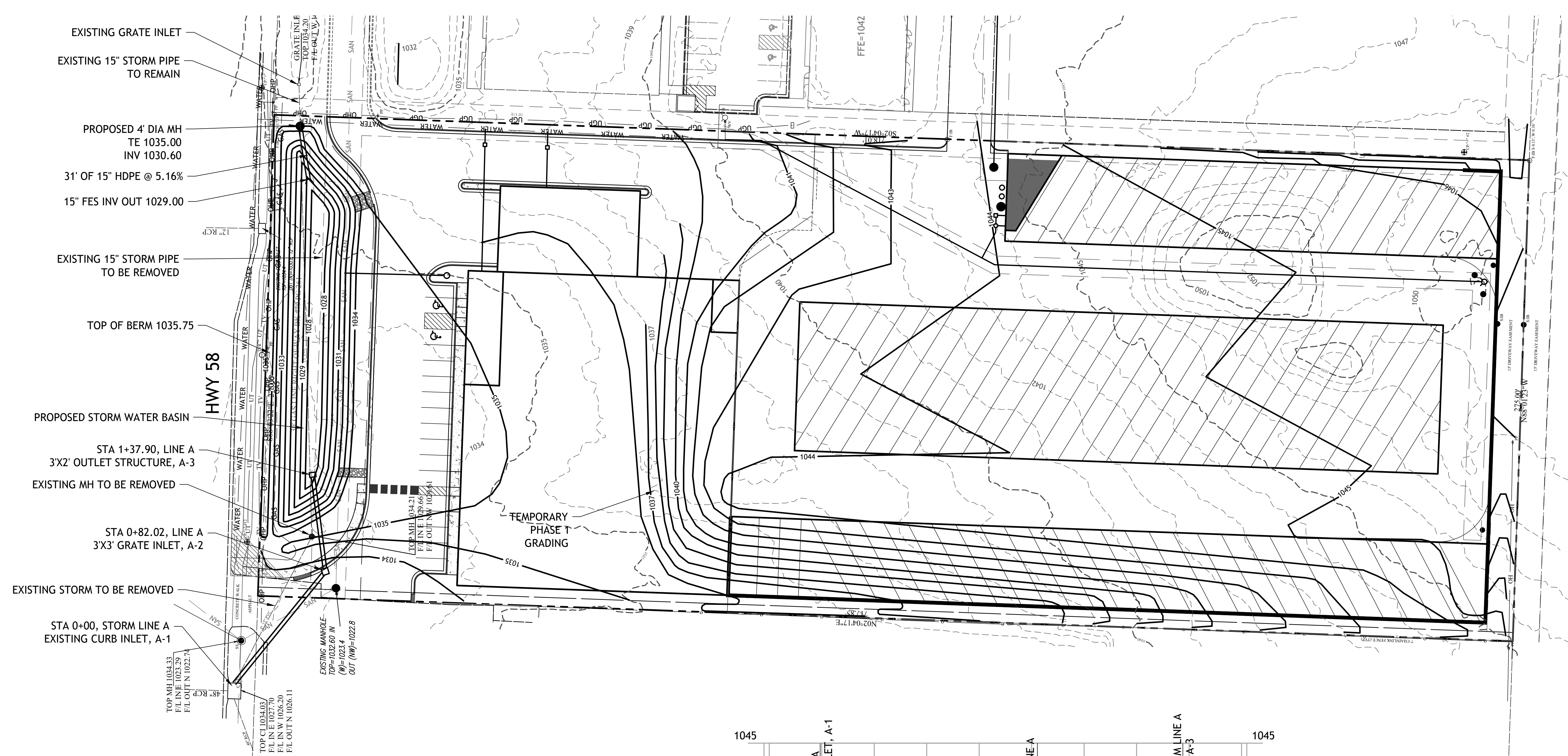
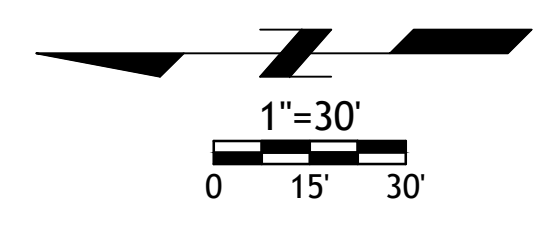
**\*ENGINEERING\*SERVICES\***  
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PROFESSIONAL ENGINEERING COMPANY  
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"TODAY'S TECHNOLOGY\*YESTERDAY'S QUALITY"

DATE	REVISION	CHKD.
3-26-21	CITY COMMENTS	TB

**DRAWN BY:** GO **CHECKED BY:** TRB **DATE:** 3-1-21 **SCALE:** 1"=30' **PROJECT No.:** 0059 **SHEET No.:** 4

**NOTE:**  
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TITLE:  
PHASE 1 GRADING PLAN / STORM LINE PROFILE  
PROJECT:  
SOUTH TOWN STORAGE, LLC  
PREPARED FOR:  
SOUTH TOWN STORAGE, LLC  
COUNTY PIN NO.: 04-05-15-400-000-001.004  
SEC.15 TWP46, RNG32  
COUNTY: CASS CO



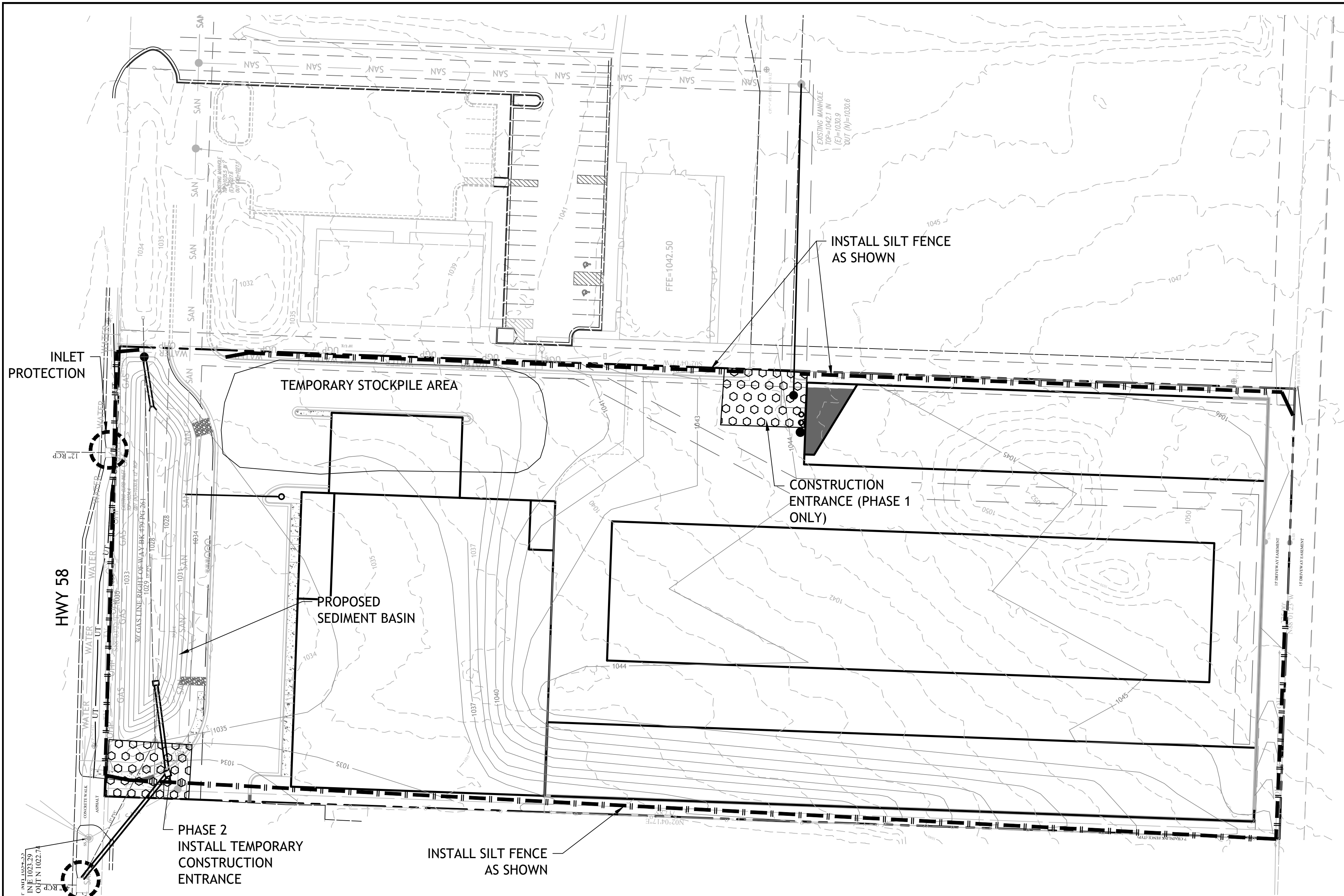
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DATE	REVISION	CHKD.
3-26-21	CITY COMMENTS	TB
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
SCALE: 1"=30'	PROJECT No.: 0059	SHEET No.: 5



### GENERAL SEDIMENT AND STORMWATER NOTES

- ALL NECESSARY PERMITS, LICENSES, BONDS, INSURANCE POLICIES, ETC. REQUIRED BY LOCAL STATE AND/OR FEDERAL LAWS SHALL BE PROVIDED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- LIMITS OF DISTURBANCE MUST BE DELINEATED IN THE FIELD. TOTAL DISTURBED ACREAGE= 4.50+ ACRES. THE LIMITS OF DISTURBANCE SHALL BE CLEARLY DEFINED AT ALL TIMES DURING CONSTRUCTION. (BREAK DOWN PER PHASE(S) IF APPLICABLE).
- SHOULD QUESTIONS ARISE REGARDING THE MAINTENANCE OF EROSION AND SEDIMENT CONTROL PRACTICES, THE SITE CONTRACTOR SHALL CONTACT THE CONSULTING ENGINEER EXPEDITIOUSLY FOR TECHNICAL ASSISTANCE.
- THE CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SEDIMENT OF DEBRIS LADEN RUNOFF OR WIND FROM LEAVING THE SITE. PERIMETER CONTROLS SHALL BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTAIN AND CONTROL SEDIMENT FROM LEAVING THE SITE. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED HALF OF THE EFFECTIVE CAPACITY OF THE CONTROL. IN ADDITION, THE CONTRACTOR MAY NEED TO ADJUST OR ALTER MEASURES IN TIMES OF ADVERSE WEATHER CONDITIONS, OR AS DIRECTED BY THE CITY INSPECTOR.
- ALL PERIMETER CONTROLS FOR EROSION AND SEDIMENT SHALL BE IN PLACE PRIOR TO ANY OTHER LAND DISTURBING ACTIVITIES.
- A CONCRETE WASHOUT STATION AND STAGING AREA INCLUDING DUMPSTER(S) SHALL BE PROVIDED NEAR THE CONSTRUCTION ENTRANCE IN A LOCATION ACCEPTABLE TO THE CONTRACTOR. THIS LOCATION SHALL BE APPROVED BY THE CITY DURING THE PRE CONSTRUCTION MEETING.

#### VEGETATIVE STABILIZATION WITH TEMPORARY SEEDING:

LIME - APPLY DOLOMITIC LIMESTONE AT THE RATE OF 1 TO 2 TON PER ACRE. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL.

FERTILIZER - APPLY 10-10-10 FERTILIZER AT THE RATE OF 600 LBS PER ACRE. APPLY FERTILIZER UNIFORMLY AND INCORPORATE INTO THE TOP 4 - 6 INCHES OF SOIL.

#### SEEDING:

SPECIES	SEEDING RATES (PER ACRE)(LBS/1000 SQ. FT.)	PLANTING DEPTH (INCHES)	SEEDING DATES
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MULCHING - APPLY UNROTTED SMALL GRAIN STRAW AT THE RATE OF 1 - 2 TONS PER ACRE OR 70-90 LBS PER 1000 SQ. FT. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY.

#### VEGETATIVE STABILIZATION WITH PERMANENT SEEDING

LIME - APPLY DOLOMITIC LIMESTONE AT THE RATE OF 2 TONS PER ACRE. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL.

FERTILIZER - APPLY 10-10-10 FERTILIZER AT THE RATE OF 1000 LBS PER ACRE. APPLY FERTILIZER UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL.

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NOTE: SITE PREPARATION, SOIL PREPARATION, MULCH ANCHORING, IRRIGATION, MAINTENANCE AND DUST CONTROL, SHOULD IT BECOME NECESSARY, SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH TEMPORARY AND PERMANENT SEEDING.

#### PRE-BULK GRADING EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

- NOTIFY THE CITY OF RAYMORE FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION AND ARRANGE A PRE-CONSTRUCTION MEETING.
- INSTALL THE STABILIZED CONSTRUCTION ENTRANCE AT THE LOCATION SHOWN ON THE PLAN. REFER TO THE STANDARD DETAIL FOR MINIMUM SPECIFICATIONS.
- CLEAR AND GRUB AREAS DESIGNATED FOR PERIMETER EROSION AND SEDIMENT CONTROLS.
- INSTALL SILT FENCE PER PLAN OR AS DIRECTED BY THE SITE SUPERINTENDENT.
- CONSTRUCT THE STORM WATER BASIN TO THE DIMENSIONS SHOWN ON THE PLAN REFER TO THE STANDARD DETAIL FOR MINIMUM SPECIFICATIONS. INSTALL OUTLET PIPES AND DEWATERING STRUCTURES.
- TOPSOIL SHALL BE STOCKPILED AT THE LOCATION SHOWN ON THE PLAN. THE TOPSOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE.
- CONTACT THE ENGINEER AND ARRANGE FOR A PERIMETER CONTROL INSPECTION.

#### POST-BULK GRADING EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION

- AFTER INITIAL PERIMETER CONTROLS HAVE BEEN INSPECTED AND APPROVED, ROUGH GRADE SITE IN ACCORDANCE WITH ITEM 2 BELOW. ALL DISTURBED AREAS ARE TO RECEIVE TEMPORARY STABILIZATION IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION REQUIREMENTS.
- INSTALL ACCESSWAYS AS SHOWN TO ROUGH GRADE PER THE ROW SECTION DETAIL. A REGISTERED ENGINEER WITH A BACKGROUND IN GEOTECHNICAL ENGINEERING MUST APPROVE THE METHOD & SUITABILITY OF ALL MATERIALS WITH THE ROW.
- INSTALL SITE UTILITIES INCLUDING: SANITARY SEWER, WATER DISTRIBUTION, STORM SEWER, ETC. CATCH BASINS SHALL BE FITTED WITH INLET PROTECTION FILTERS TO PREVENT SEDIMENT FROM ENTERING THE STORM SEWER.
- INSTALL RIP-RAP APRONS IN STORM BASIN AND AT THE END OF PROPOSED CURB CUTS AS SHOWN ON THE PLAN IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS. ALL RIP-RAP SHALL BE UNDERLAIN WITH FILTER FABRIC.
- CONSTRUCT IMPERVIOUS AREAS, STABILIZE WITH BASE COURSE AND COMPLETE FINAL GRADING OF SITE. ALL FINAL GRADED AREAS ARE TO RECEIVE PERMANENT STABILIZATION IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION REQUIREMENTS.
- AFTER SITE STABILIZATION HAS BEEN ACHIEVED AND UPON APPROVAL BY THE ENGINEER, REMOVE ACCUMULATED SEDIMENT FROM THE STORM WATER BASIN. REFER TO THE STORMWATER POND CONVERSION SEQUENCE FOR PERMANENT STORMWATER MANAGEMENT INSTALLATION REQUIREMENTS.

#### STORMWATER POND CONVERSION SEQUENCE OF CONSTRUCTION

- DEWATER & EXCAVATE THE STORMWATER MANAGEMENT BASINS IN ACCORDANCE WITH THE ELEVATIONS SHOWN ON THE LINES AND GRADES PLAN.
- INSTALL THE OUTLET STRUCTURES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STORMWATER MANAGEMENT PLAN.
- FINAL GRADE ALL DISTURBED AREAS AND STABILIZE IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION REQUIREMENTS.
- SEDIMENT CONTROL DEVICES ARE TO BE KEPT FREE FROM SEDIMENT AND PROPERLY MAINTAINED THROUGHOUT CONSTRUCTION.
- TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES CAN BE REMOVED ONLY AFTER APPROVAL BY THE ENGINEER & CITY OF RAYMORE JACKS INSPECTOR.

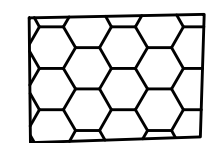
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#### EROSION AND SEDIMENT CONTROL NOTES:

- THE CITY OF RAYMORE MUST BE NOTIFIED IN WRITING FIVE (5) DAYS PRIOR TO COMMENCING WITH CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLAN.
- REVIEW AND APPROVAL OF SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS ON THE APPROVED PLAN.
- IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE APPROPRIATE REVIEW AUTHORITY.
- THE CITY OF RAYMORE RESERVES THE RIGHT TO ENTER PRIVATE PROPERTY FOR PURPOSES OF PERIODIC SITE INSPECTION.
- FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, TOPSOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROPOSED SITE.
- ALL EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH THE STATE OF MISSOURI & CITY OF RAYMORE EROSION AND SEDIMENT CONTROL REGULATIONS.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN AND REPAIR ALL STORMWATER AND SEDIMENT CONTROL PRACTICES DURING CONSTRUCTION AND UTILITY INSTALLATION.
- IT SHALL BE THE OWNER'S RESPONSIBILITY TO MAINTAIN THE PROPERTY DURING THE PLAN REVIEW AND APPROVAL PROCESS. IT SHALL BE THE OWNERS RESPONSIBILITY TO MAINTAIN STORMWATER FACILITY.
- AS-BUILT SURVEYS AND DRAWINGS ARE TO BE SUBMITTED TO THE CITY WITHIN 120-DAYS OF STORMWATER MANAGEMENT FACILITY COMPLETION.
- APPROVAL OF A SEDIMENT AND STORMWATER PLAN DOES NOT GRANT NOR IMPLY A RIGHT TO DISCHARGE STORMWATER RUNOFF. THE OWNER/DEVELOPER IS RESPONSIBLE FOR ACQUIRING ANY AND ALL AGREEMENTS, EASEMENTS, ETC., NECESSARY TO COMPLY WITH STATE DRAINAGE AND OTHER APPLICABLE LAWS.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAINFALL. MAINTENANCE MUST BE PERFORMED AFTER EACH INSPECTION AS NECESSARY. ANY ERODED AREAS SHALL BE STABILIZED AND ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF ACCORDING TO PLAN.
- THE EROSION AND SEDIMENT CONTROL OBJECTIVES WILL BE ACHIEVED BY MINIMIZING EXPOSURE TIME OF POTENTIALLY ERODIBLE SOILS TO RUNOFF, AND INSTALLATION OF THE TEMPORARY AND PERMANENT CONSERVATION MEASURES IN PROPER SEQUENCE WITH CONSTRUCTION.
- TOPSOIL STOCKPILED ON THE SITE SHALL BE STABILIZED WITH SEED AND MULCH WITHIN 5 CALENDAR DAYS OF PLACEMENT OF THE TOPSOIL. THE TEMPORARY TOPSOIL STOCKPILE SHALL BE USED FOR FINAL GRADING OF SITE ALL REMAINING STOCKPILED MATERIAL, IF APPLICABLE SHALL BE REMOVED FROM THE SITE IN AN APPROVED MANNER.
- CONTRACTOR SHALL TAKE CARE NOT TO "TRACK" MUD OFF SITE WITH CONSTRUCTION VEHICLES AND EQUIPMENT.
- ALL AREAS NOT STABILIZED BY STONE BASE COARSE OR PAVING ARE TO BE STABILIZED ACCORDING TO THE STABILIZATION SCHEDULE IMMEDIATELY AFTER DESIGN GRADE IS ACHIEVED. HYDRO SEEDING IS RECOMMENDED WHERE SLOPES EXCEED 3:1.
- IN THE EVENT EARTHWORK OPERATIONS ARE HALTED FOR THE WINTER MONTHS, BEFORE FINAL GRADING AND SEEDING OF ALL DISTURBED AREAS ARE COMPLETED, THOSE AREAS ARE TO BE STABILIZED PER THE STABILIZATION GUIDELINES OR STABILIZED WITH A MULCH, OR TACKED WITH A CHEMICAL ADHESIVE.
- EROSION CONTROL MATTING SHALL BE USED ON ALL SLOPES THAT ARE 3:1 (3 UNITS HORIZONTAL TO 1 UNIT VERTICAL) OR GREATER AND IN AREAS OF CONCENTRATED FLOW WHERE GRADES EXCEED 1% AND IN DISTURBED AREAS WHERE HIGHLY ERODIBLE SOILS ARE PRESENT. EROSION CONTROL BLANKET SHALL BE TYPE S-150 AS MANUFACTURED BY NORTH AMERICAN GREEN OR AN APPROVED EQUIVALENT.
- IF DUST CONTROL BECOMES A PROBLEM, METHODS SUCH AS MULCHING, OR SPRINKLING WATER SHALL BE IMPLEMENTED.
- SILTSACK INLET PROTECTION IS TO BE USED FOR CATCH BASIN PROTECTION OR APPROVED EQUAL.
- ALL FILTER FABRIC TO BE USED UNDER RIP-RAP SHALL BE Mirafi 600X OR APPROVED EQUIVALENT.

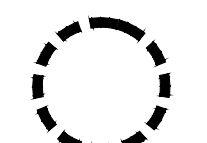
### LEGEND



TEMPORARY CONSTRUCTION ENTRANCE, EC1



SILT FENCE



INLET PROTECTION

TOTAL DISTURBED AREA 4.50ac

TITLE:  
EROSION CONTROL PLAN PHASE 1

PROJECT:  
SOUTH TOWN STORAGE, LLC  
PREPARED FOR:  
SOUTH TOWN STORAGE, LLC  
COUNTY PIN NO.: 04-05-15-400-000-001.004  
SEC.15 TWP46, RNG32  
COUNTY: CASS CO

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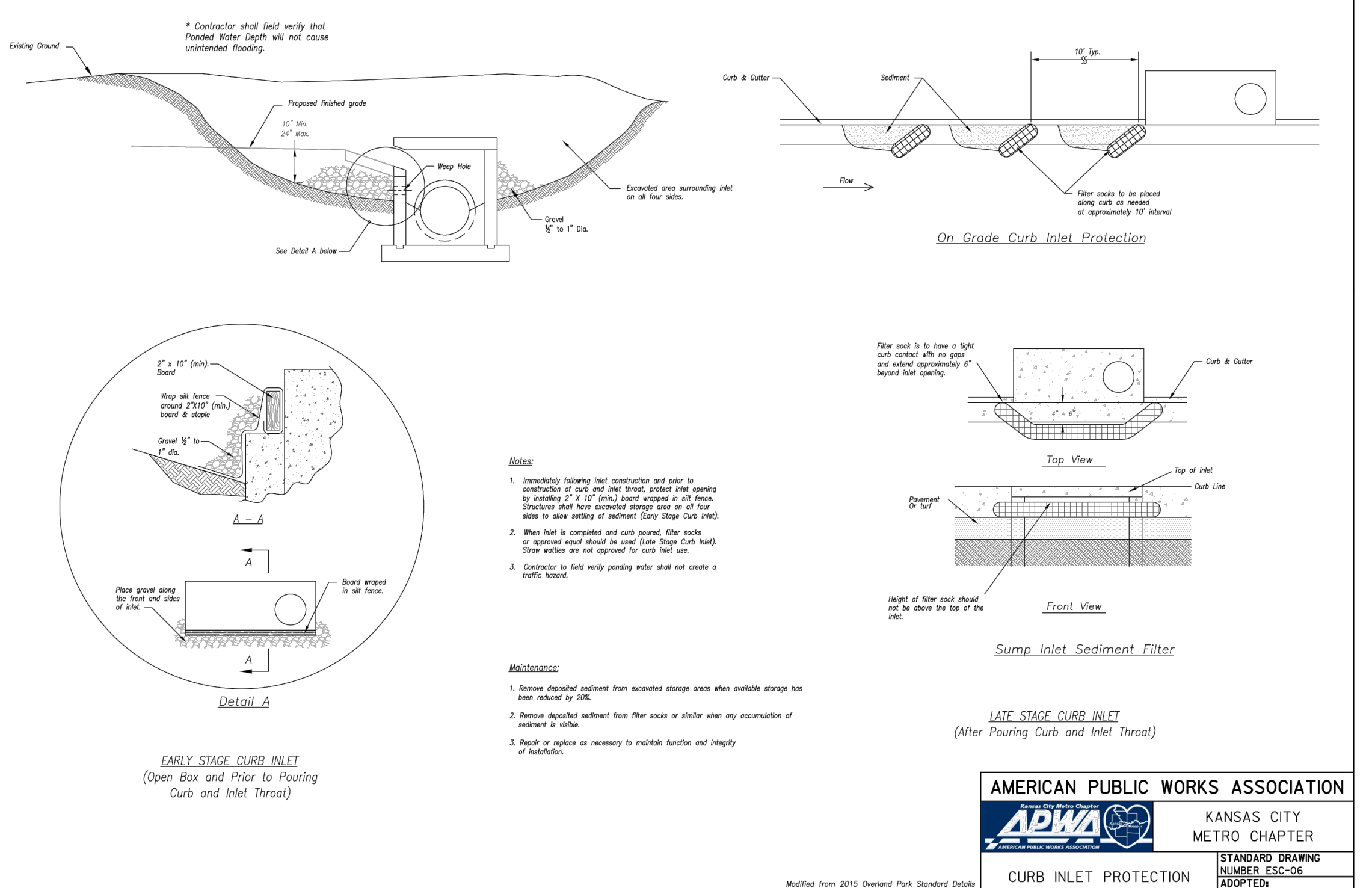
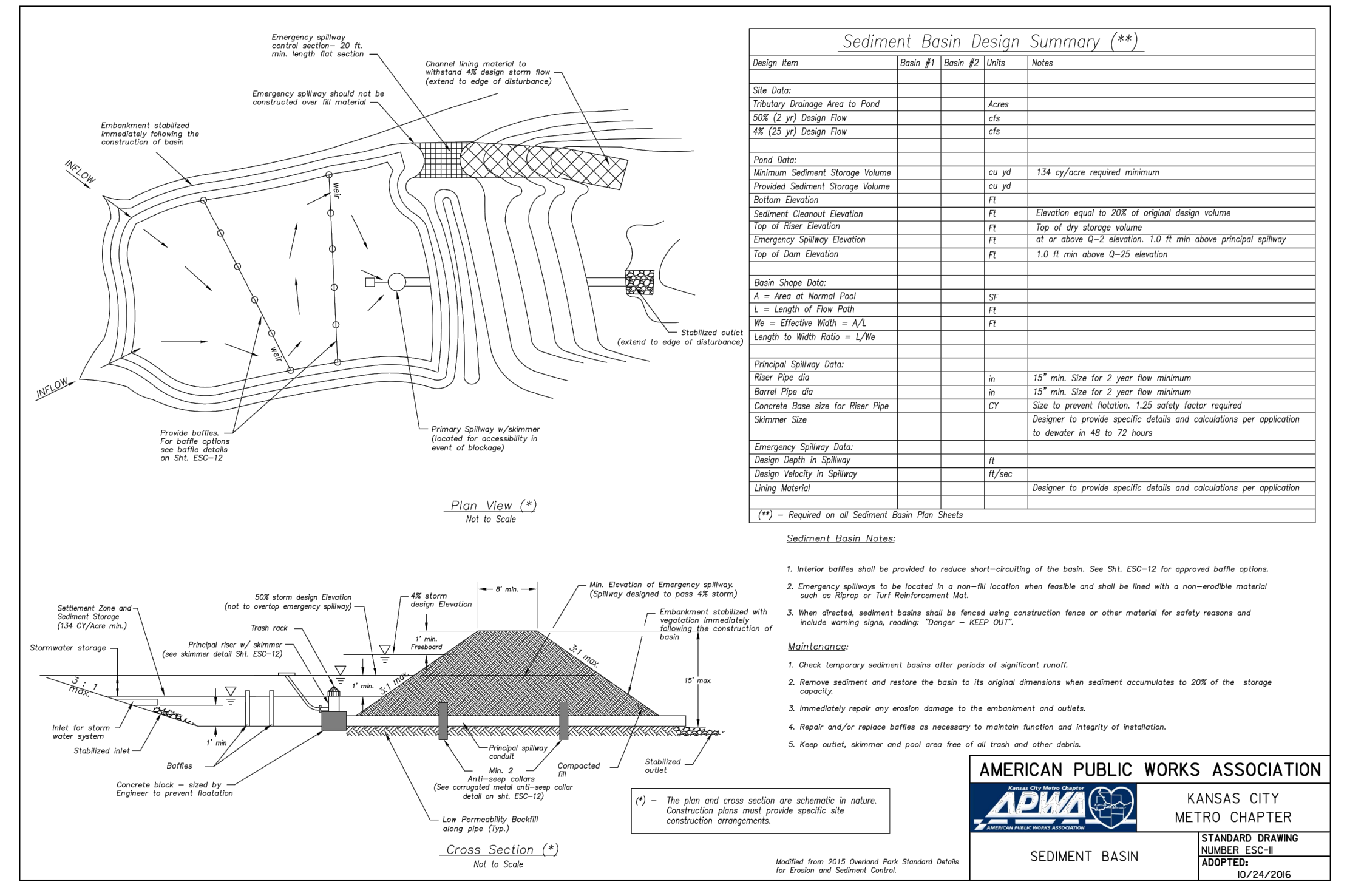
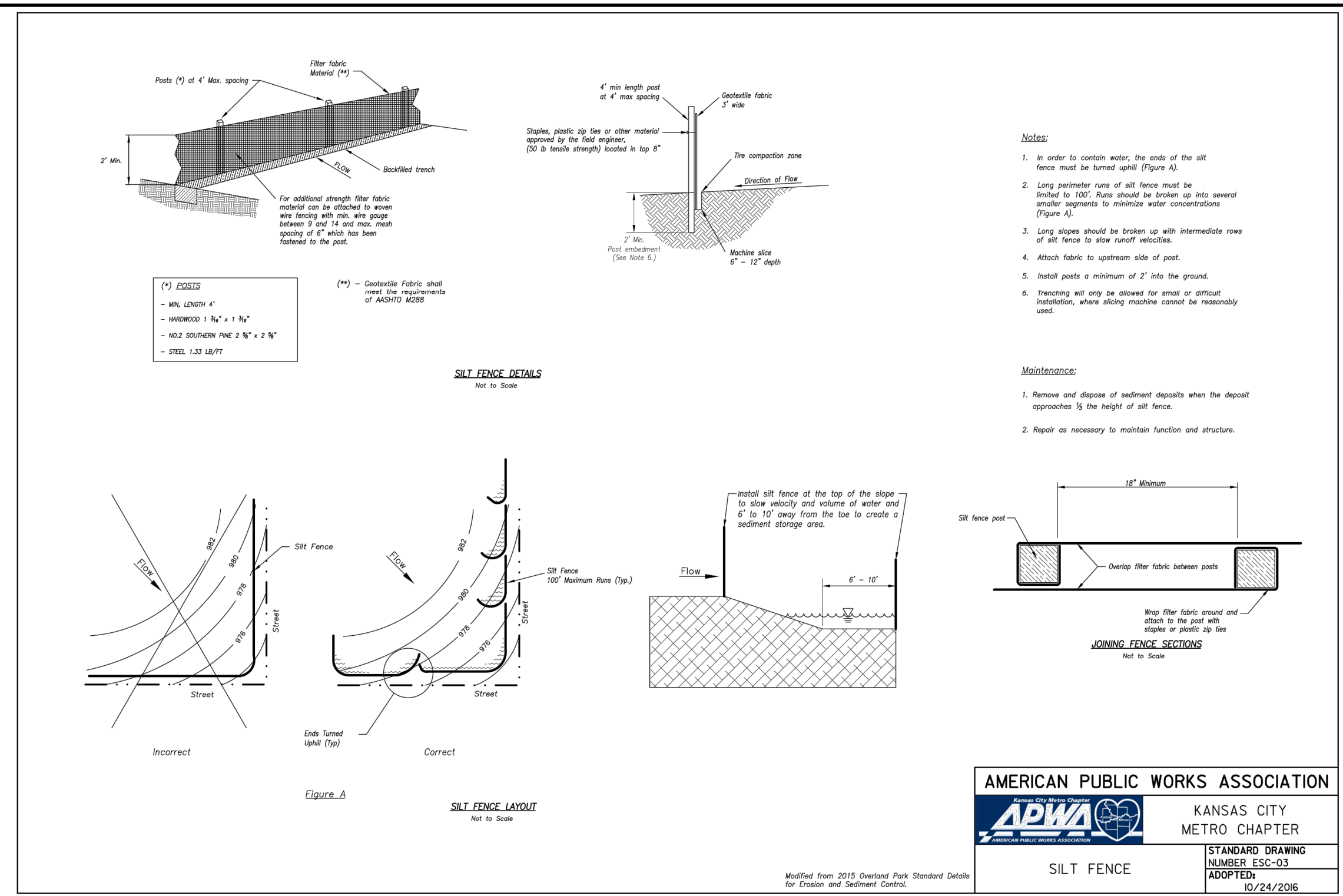
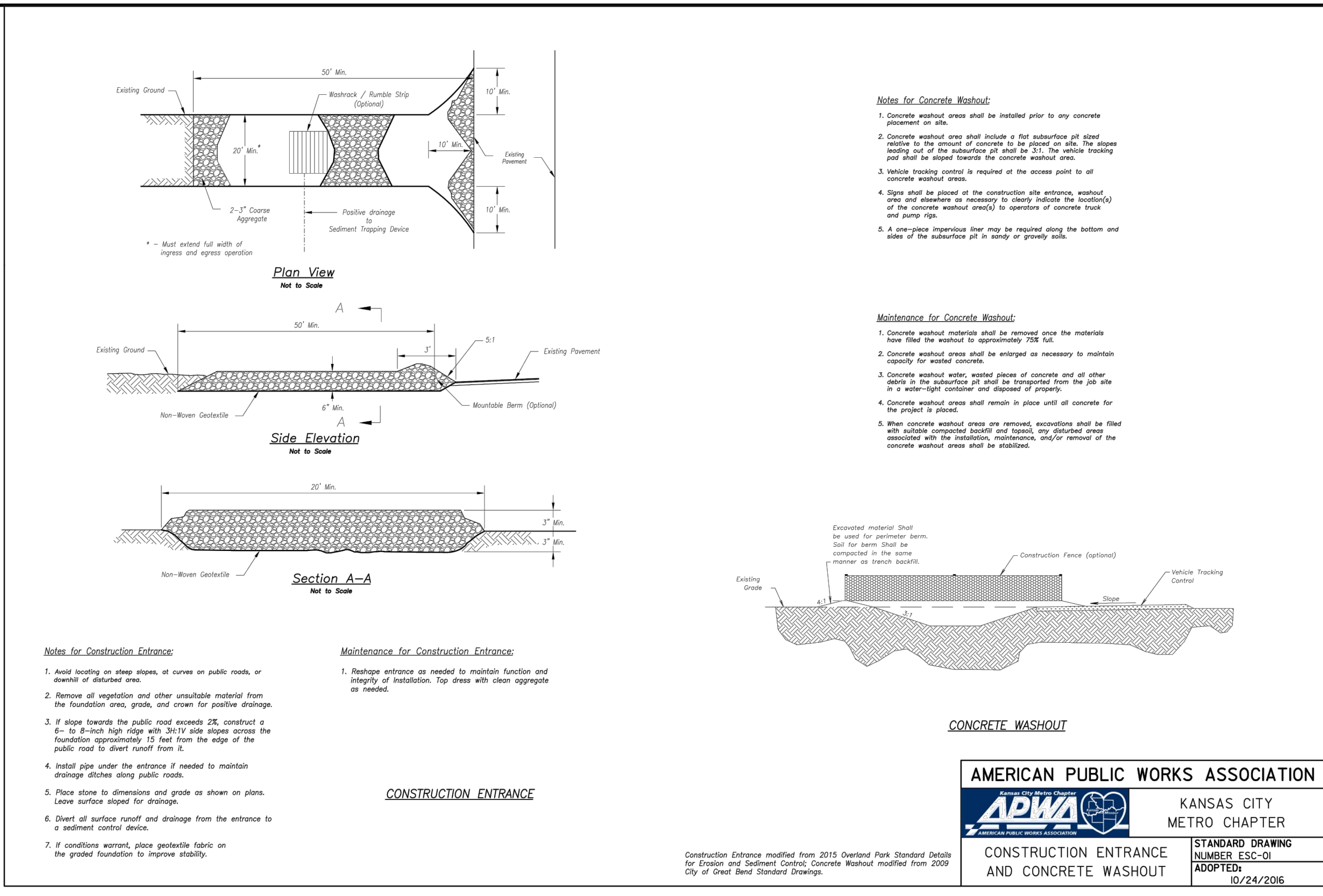
\*ENGINEERING\*SERVICES\*  
**SITE ENGINEERING**  
CONSULTANTS, LLC

PROFESSIONAL ENGINEERING COMPANY  
5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
(913) 515-7209 \* FAX (816) 760-2379  
"TODAY'S TECHNOLOGY\*YESTERDAY'S QUALITY"

3-26-21	CITY COMMENTS	TB
DATE	REVISION	CHKD.
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
SCALE: 1"=30'	PROJECT No.: 0059	SHEET No.: 6

1"=40'  
0 20' 40'





## Agri Drain CORPORATION BAR GUARDS™

**THE BAR GUARD INTAKE IS AN EXCELLENT CHOICE IN ANY SITUATION WHERE A LOW PROFILE, HIGH CAPACITY INTAKE IS REQ.**

**ITS UNIQUE DESIGN HELPS KEEP INTAKES FROM PLUGGING W/ CROP RESIDUE OR ANY OTHER TYPE OF TRASH.**

**THE BAR GUARD MAY ALSO PROTECT A POND FROM RODENT ENTRY.**

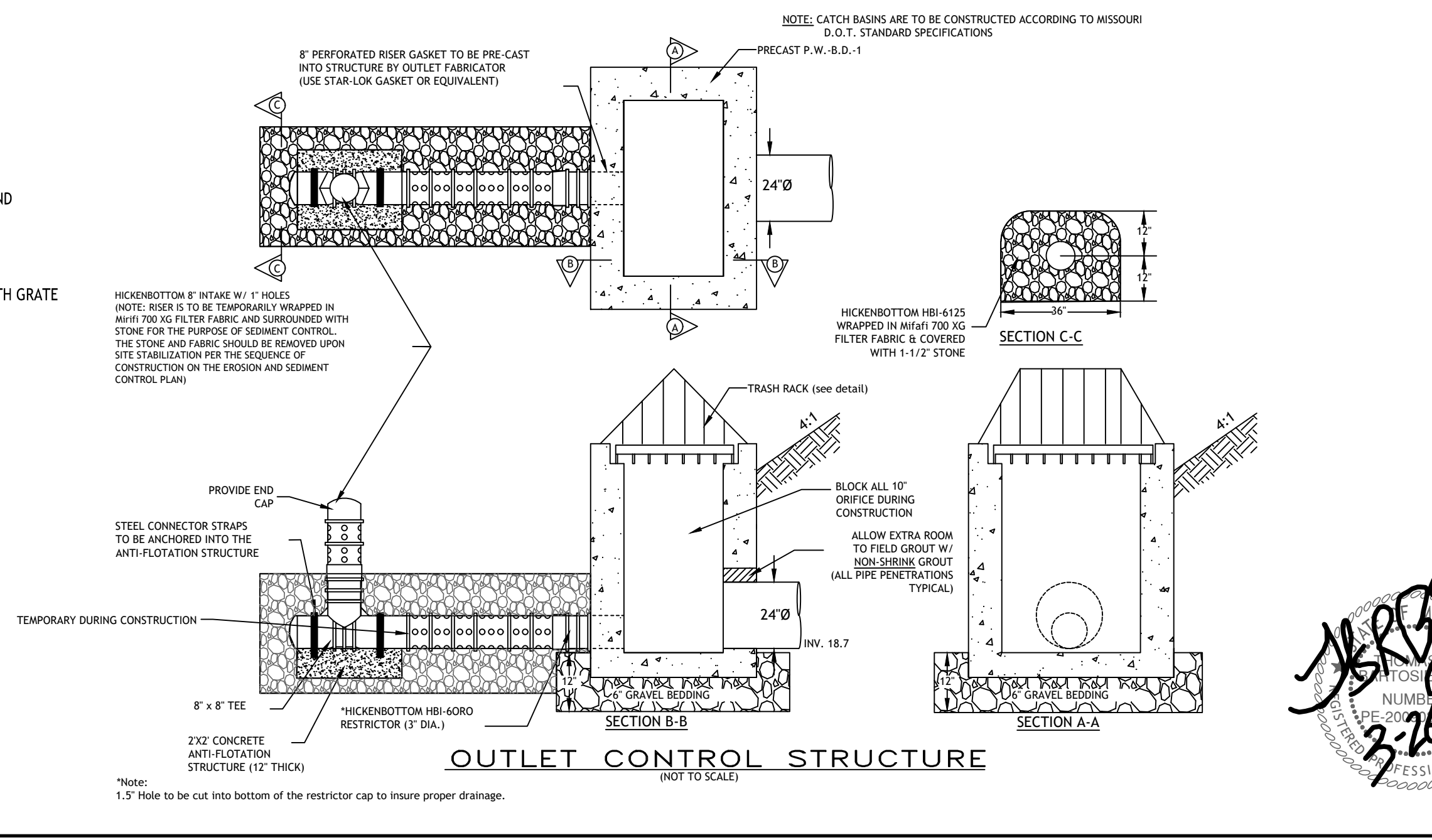
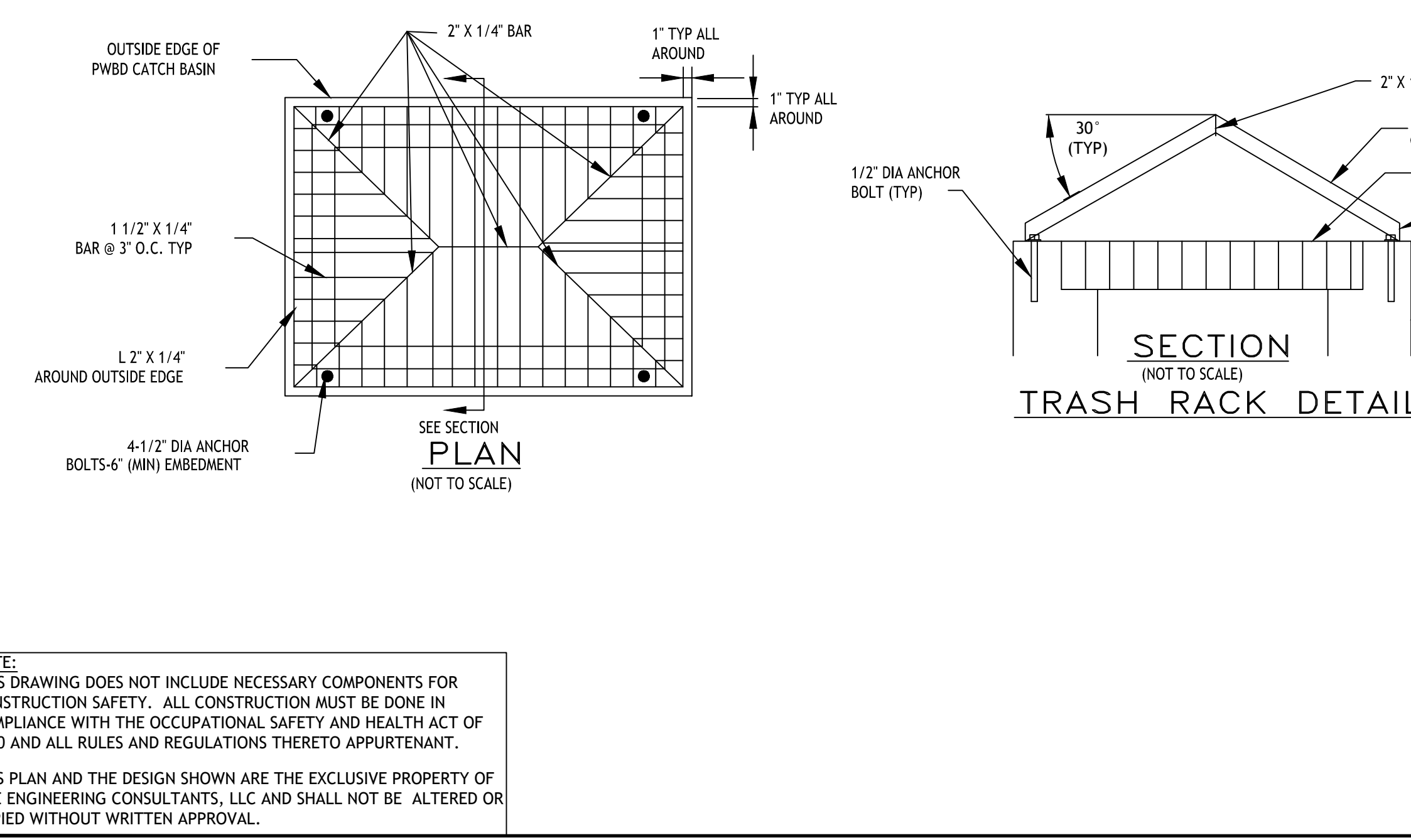
**CONSTRUCTED OF 1/4" STEEL (5/16" STEEL ON 15" AND LARGER SIZES) FOR DURABILITY.**

**YELLOW POWDER COATED FINISH RESISTS CORROSION AND IS BRIGHTER FOR BETTER VISIBILITY.**

Size	Price	Size	Price	Size	Price
4"	\$16	10"	\$22	18"	\$44
5"	\$17	10"-H*	\$22	21"	\$52
6"	\$18	12"	\$28	24"	\$60
8"	\$19	12"-H*	\$32	30"***	\$95
8"-H*	\$19	15"	\$36	36"***	\$125

\*SPECIAL SIZED BAR GUARDS TO FIT HICKENBOTTOM INTAKES.  
 \*\*SPECIAL SIZED BAR GUARDS IN 2 PIECES. TWO HALVES BOLT TOGETHER (BOLTS, WASHERS, & NUTS ARE INCLUDED).

1462 340th Street\*P.O.Box 458\*Adair, Iowa 50002  
 Ph-1-800-232-4742 Fax- 1-800-282-3353



CHOOSE (5) 10" SIZE FOR ORIFICE TRASH RACKS IN OUTLET STRUCTURE

**ALTERNATE TEMPORARY DEWATERING DEVICE (NOT TO SCALE)**

OUTLET STRUCTURE

CAP END UNLESS EQUAL TO OR GREATER THAN ELEVATION OR PRIMARY RISER

T.O.B.

MIN. 6" Ø RISER W/ 1" Ø HOLES

FILTER CLOTH OVER WIRE MESH

2" STONE CORE CONTINUOUS BAND

BOTTOM OF TEMP. SEDIMENT TRAP

\* 1" HOLES- 6" SPACING HORIZ & VERT

**TITLE:**  
EROSION CONTROL DETAILS

**PROJECT:**  
SOUTH TOWN STORAGE, LLC

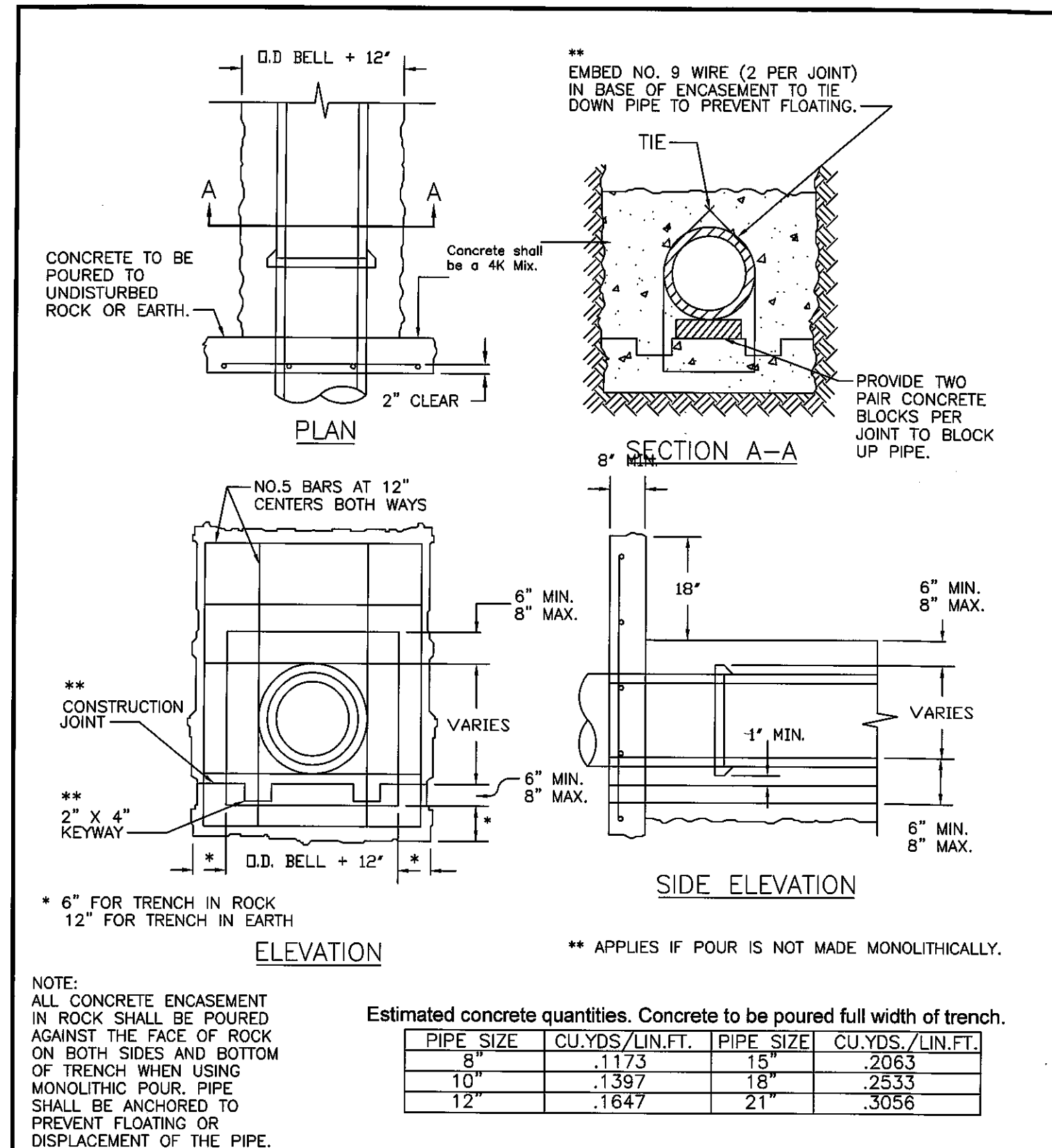
**PREPARED FOR:**  
SOUTH TOWN STORAGE, LLC

COUNTY PIN NO.: 04-05-15-400-000-001.004  
 SEC.15 TWP46, RNG32  
 COUNTY: CASS CO

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\*ENGINEERING\*SERVICES\*  
**SITE ENGINEERING CONSULTANTS, LLC**  
 PROFESSIONAL ENGINEERING COMPANY  
 5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
 (913) 515-7209 \* FAX (816) 760-2379  
 "TODAY'S TECHNOLOGY\*YESTERDAY'S QUALITY"

DATE: 3-26-21  
 CITY COMMENTS: TB  
 DATE: REVISION: CHKD.  
 DRAWN BY: GO  
 CHECKED BY: TRB  
 DATE: 3-1-21  
 SCALE: 1"-30"  
 PROJECT No.: 0059  
 SHEET No.: 7



Estimated concrete quantities. Concrete to be poured full width of trench.

PIPE SIZE	CU. YDS./LIN. FT.	PIPE SIZE	CU. YDS./LIN. FT.
8"	.1173	15"	.2063
10"	.1397	18"	.2533
12"	.1647	21"	.3056

Engineering Department  
City of Raymore  
100 Municipal Circle  
Raymore, MO 64083  
816-331-1852 Fax 816-331-8067

**CITY OF RAYMORE**

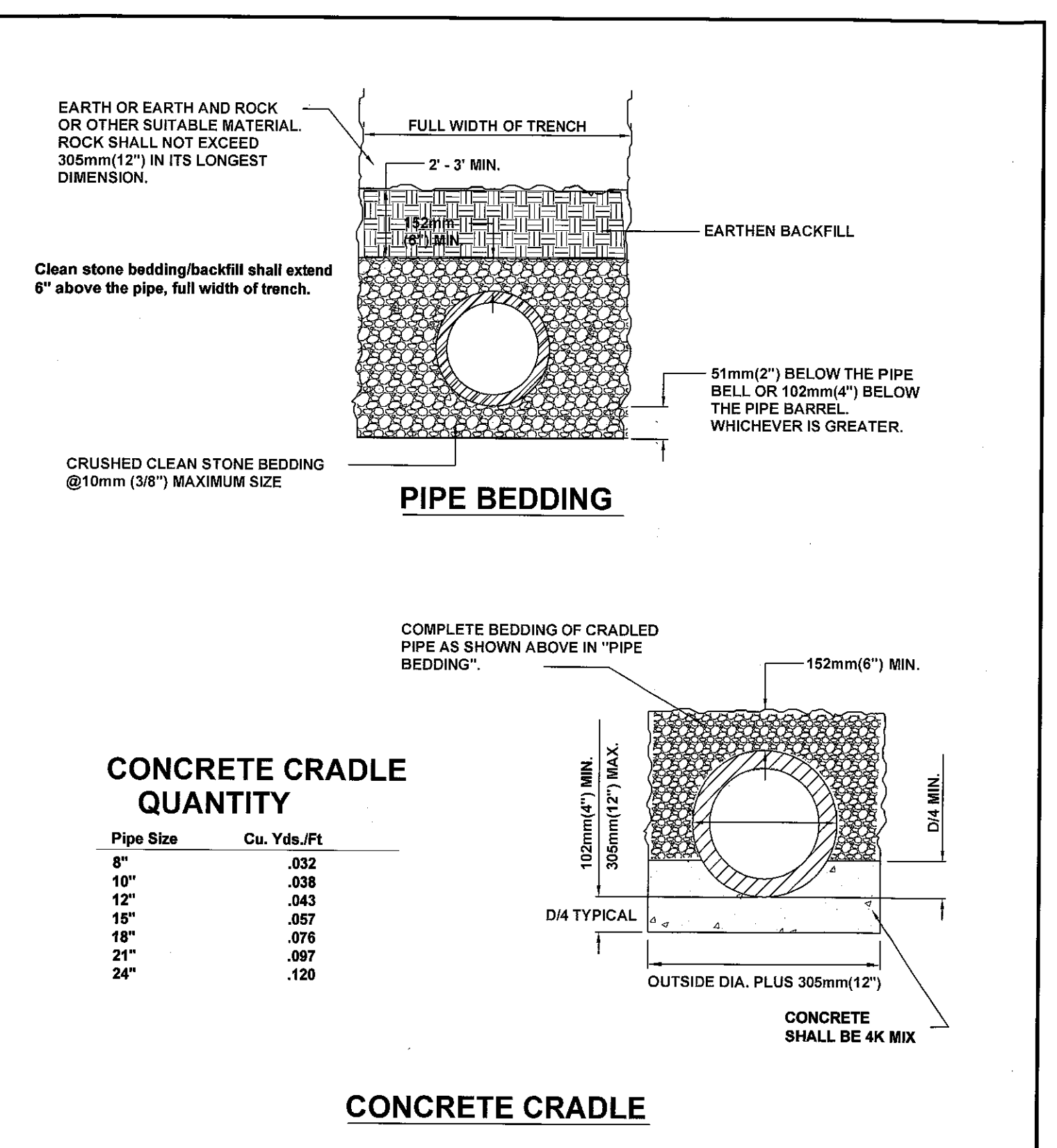
PIPE ENCASMENT AND COLLAR

SIZE A FSCM NO. DWG NO. San - 6 REV

CHECKED DATE

APPROVED

SCALE NONE SHEET 1 OF 1



Engineering Department  
City of Raymore  
100 Municipal Circle  
Raymore, MO 64083  
816-331-1852 Fax 816-331-8067

**CITY OF RAYMORE**

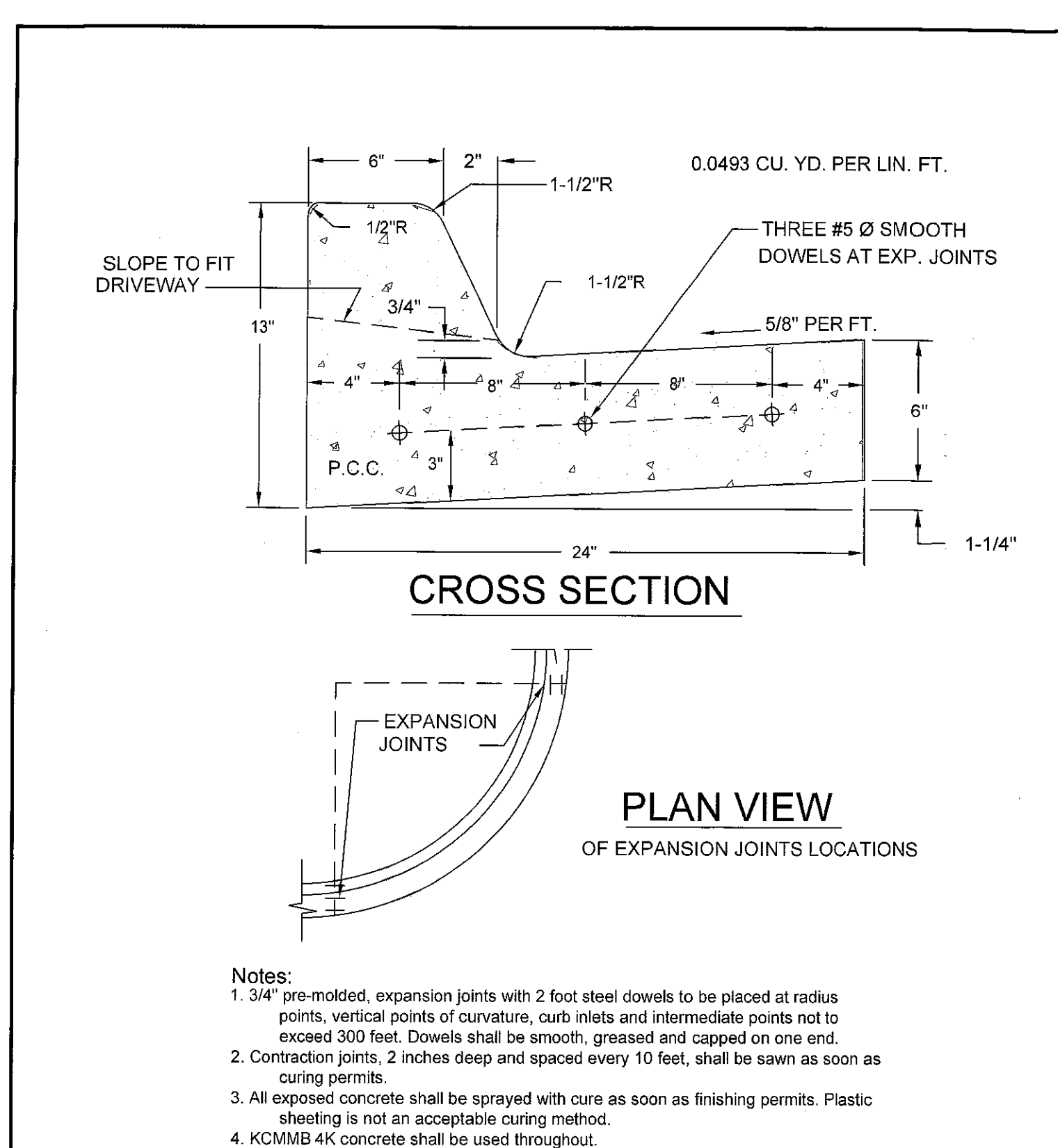
PIPE BEDDING & CRADLE FOR SANITARY SEWER PIPE

SIZE A FSCM NO. DWG NO. San - 8 REV

CHECKED DATE

APPROVED

SCALE NONE SHEET 1 OF 1



Engineering Department  
City of Raymore  
100 Municipal Circle  
Raymore, MO 64083  
816-331-1852 Fax 816-331-8067

**CITY OF RAYMORE**

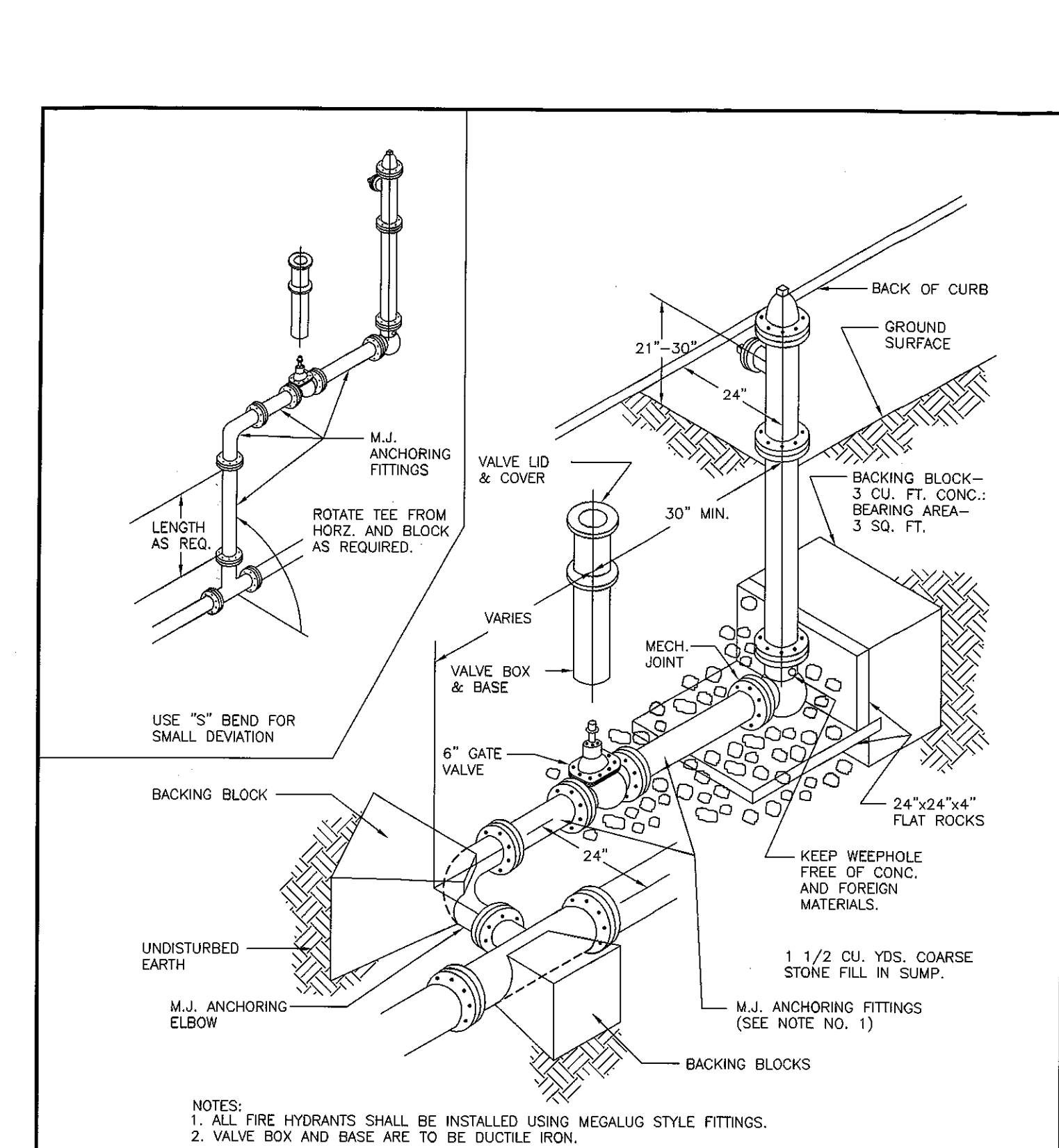
STRAIGHT BACK CURB & GUTTER (CG - 1)

SIZE A FSCM NO. DWG NO. St - 7 REV

CHECKED DATE

APPROVED

SCALE NONE SHEET 1 OF 1



Engineering Department  
City of Raymore  
100 Municipal Circle  
Raymore, MO 64083  
816-331-1852 Fax 816-331-8067

**CITY OF RAYMORE**

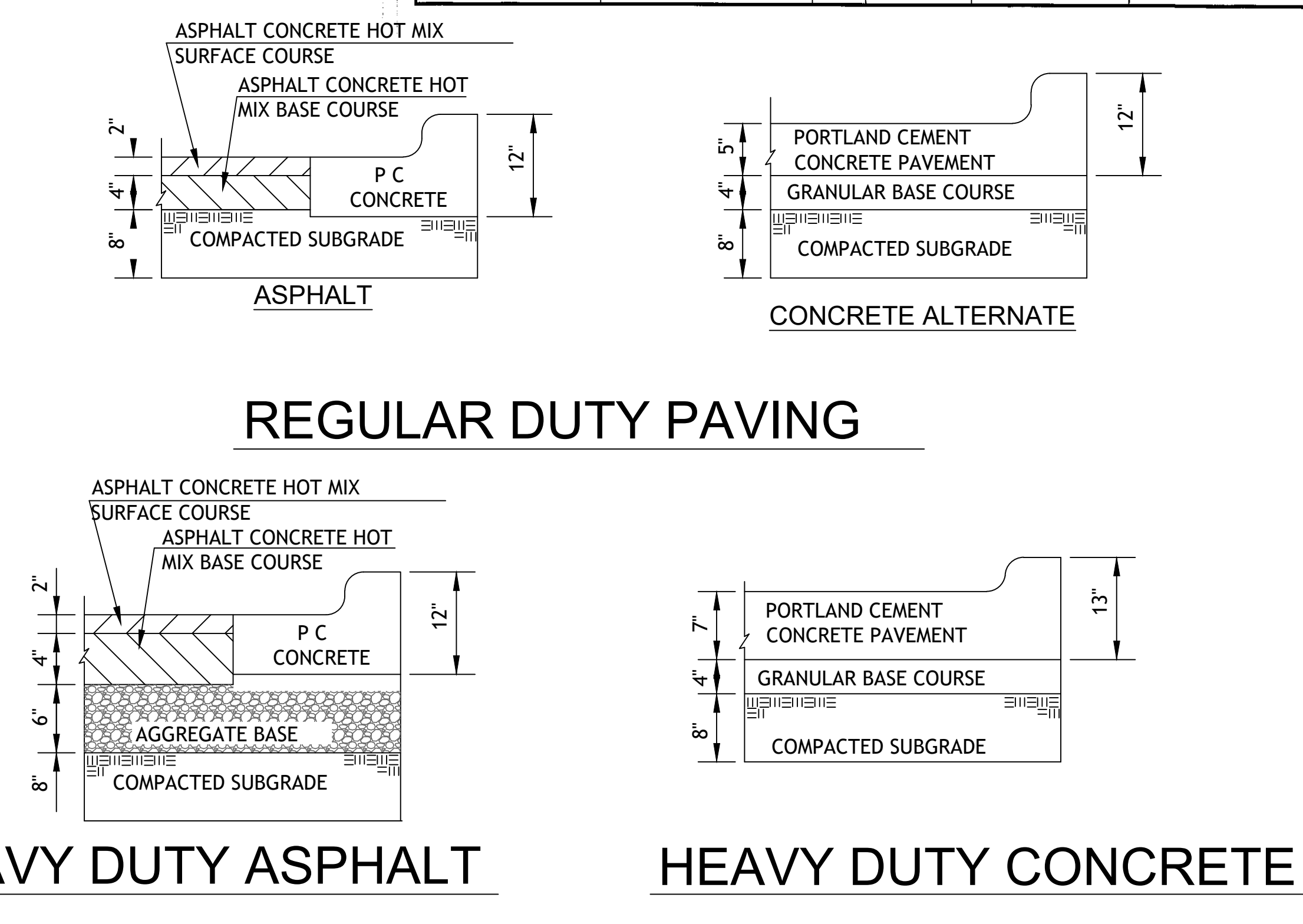
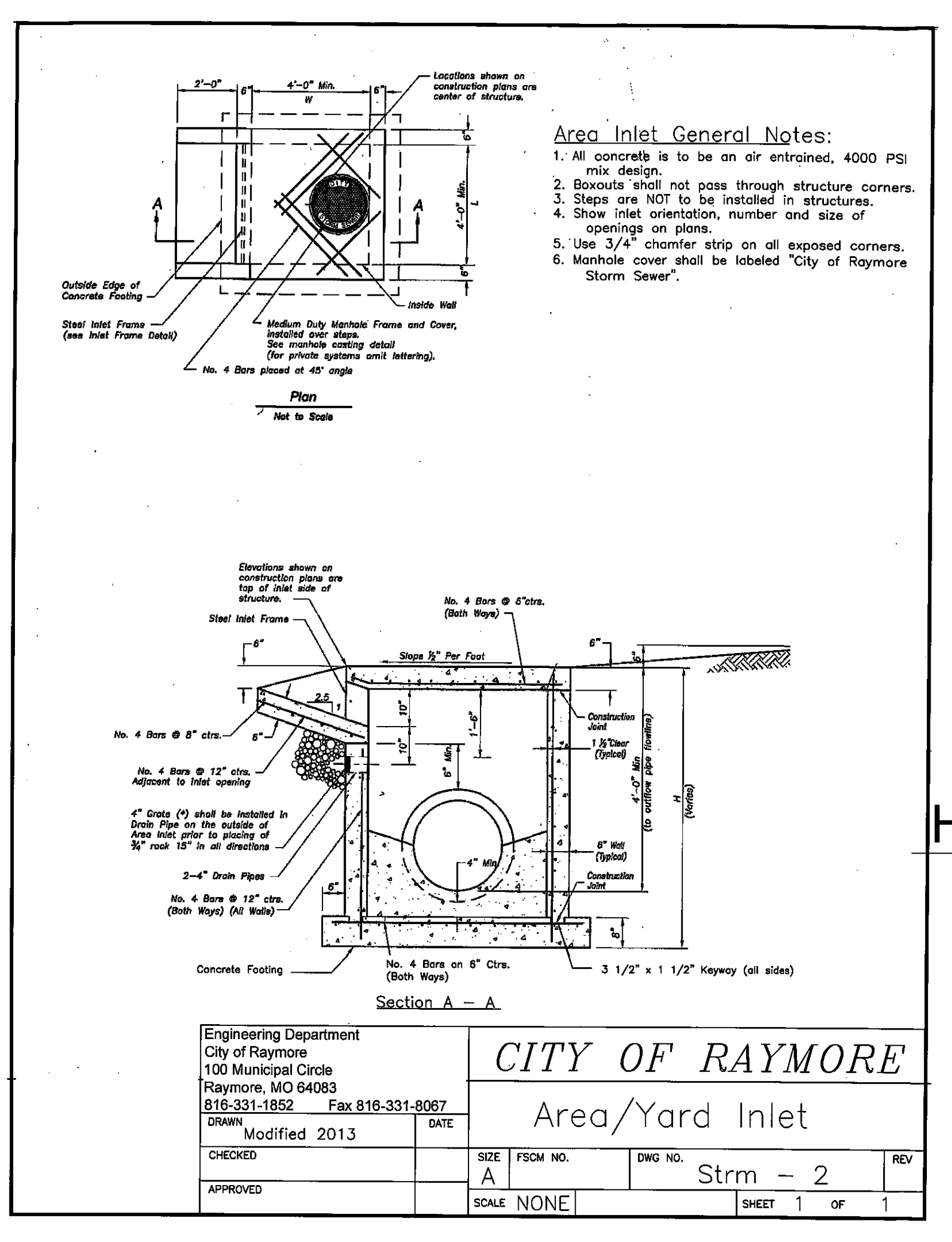
TYPICAL HYDRANT INSTALLATION WITH 90° BEND (TYPE "A")

SIZE A FSCM NO. DWG NO. Wtr - 1 REV

CHECKED DATE

APPROVED

SCALE NONE SHEET 1 OF 1



- FLEXIBLE PAVEMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- ASPHALT SURFACE COURSE - APWA TYPE 3-01  
ASPHALT BASE COURSE - APWA TYPE 1-01  
AGG BASE-MODOT TYPE 5
- PORTLAND CEMENT CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS WITH 6% ENTRAINED AIR ±2% AND SHALL MEET OR EXCEED THE SPECIFICATIONS SET FORTH IN THE LATEST EDITION OF THE KANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- HEAVY DUTY CONCRETE IS AN OPTIONAL PAVEMENT FOR DETAIL 041 HEAVY DUTY ASPHALT. WHEN PLANS SPECIFY DETAIL 042 NO ALTERNATES ARE ALLOWED.



TITLE:  
SITE CONSTRUCTION DETAILS

PROJECT:  
SOUTH TOWN STORAGE, LLC

PREPARED FOR:  
SOUTH TOWN STORAGE, LLC

COUNTY PIN NO.: 04-05-15-400-000-001.004

SEC.15 TWP46, RNG32

COUNTY: CASS CO

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**ENGINEERING SERVICES\***

**SITE ENGINEERING CONSULTANTS, LLC**

PROFESSIONAL ENGINEERING COMPANY

5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
(913) 515-7209 \* FAX (816) 760-2379  
"TODAY'S TECHNOLOGY \* YESTERDAY'S QUALITY"

DATE: 3-26-21  
CITY COMMENTS: TB

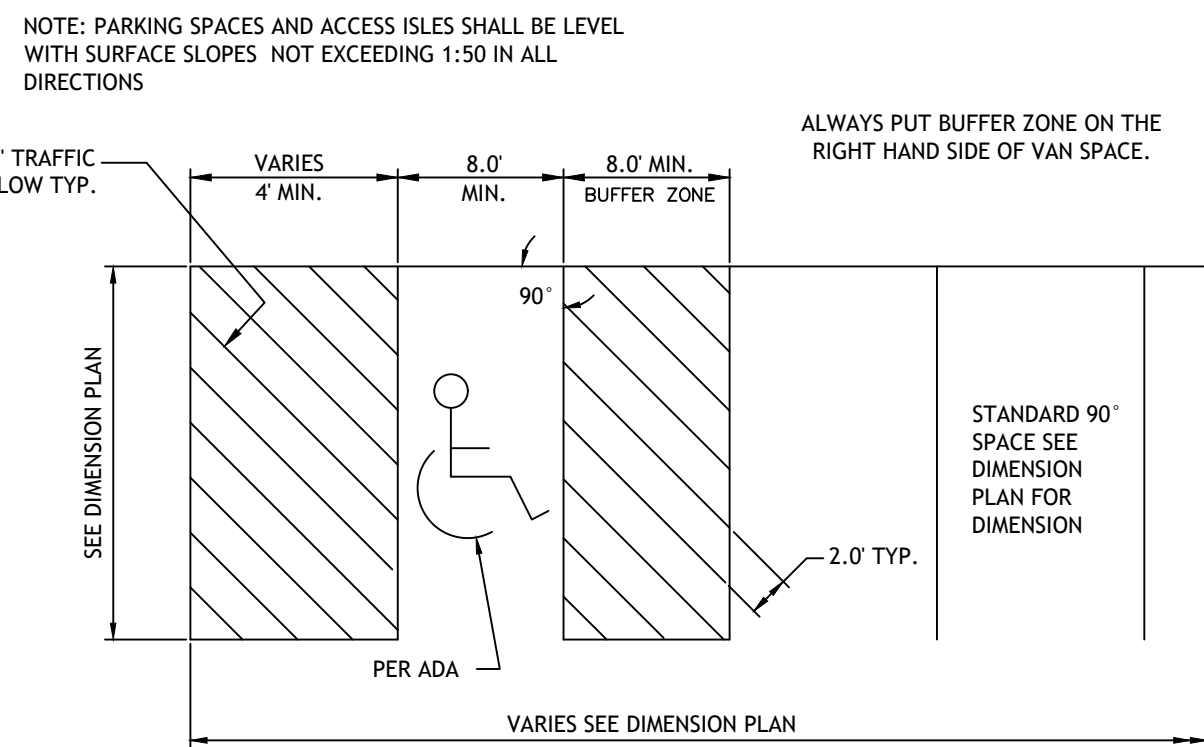
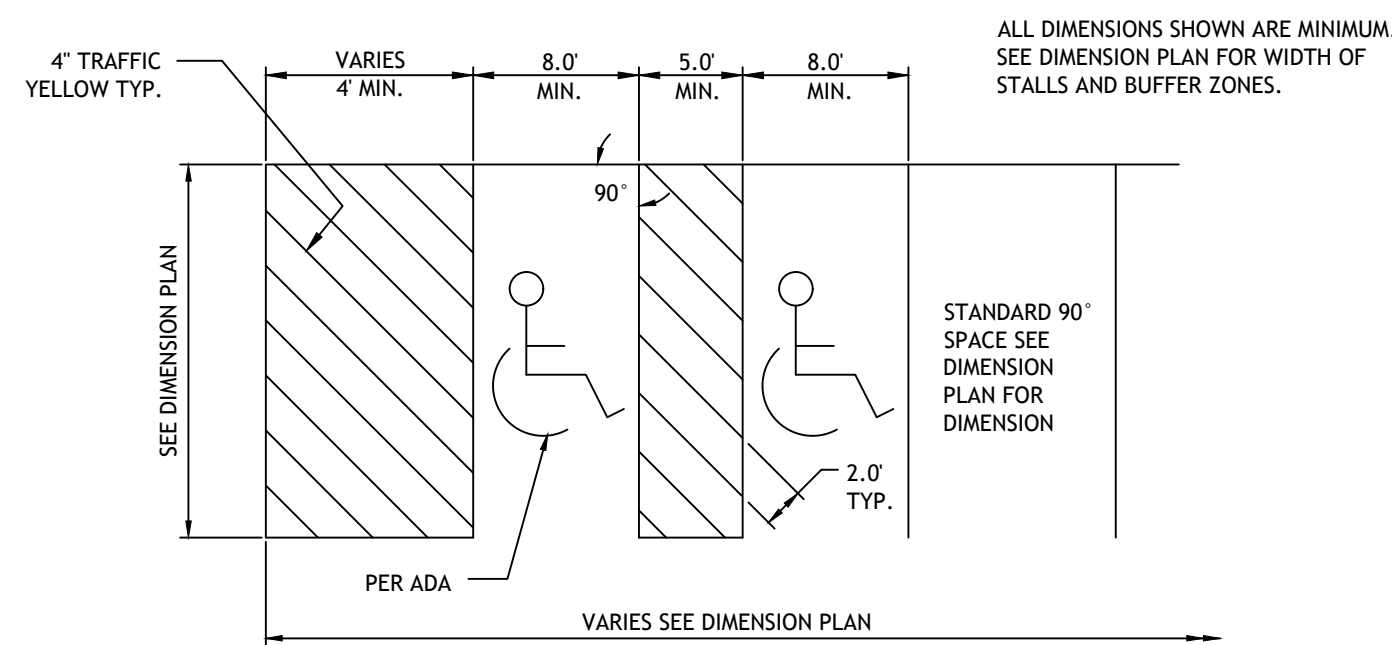
DATE: REVISION: CHKD.

DRAWN BY: GO CHECKED BY: TRB DATE: 3-1-21 SCALE: 1"=30' PROJECT No.: 0059 SHEET No.: 8

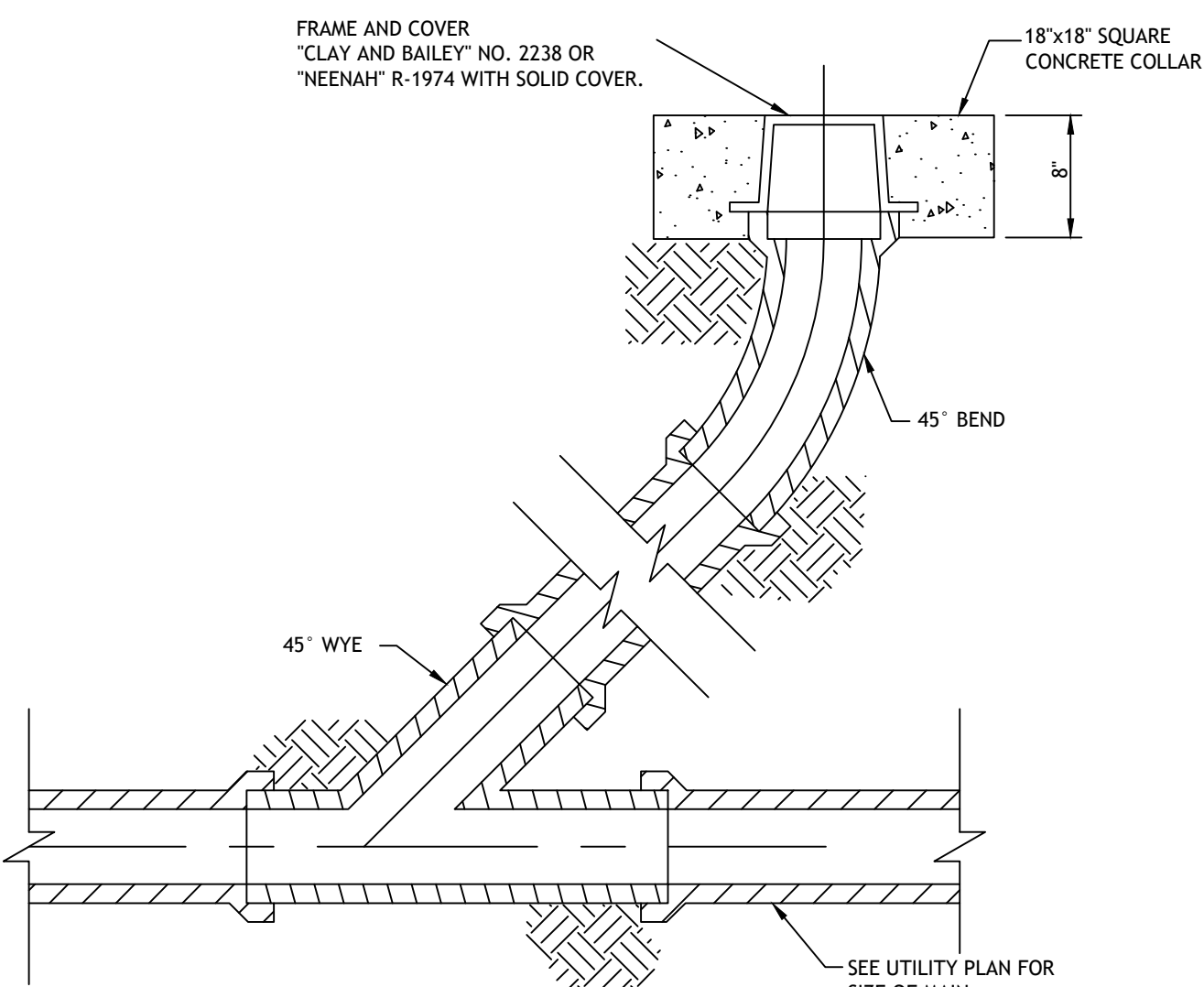
NOTE: THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.

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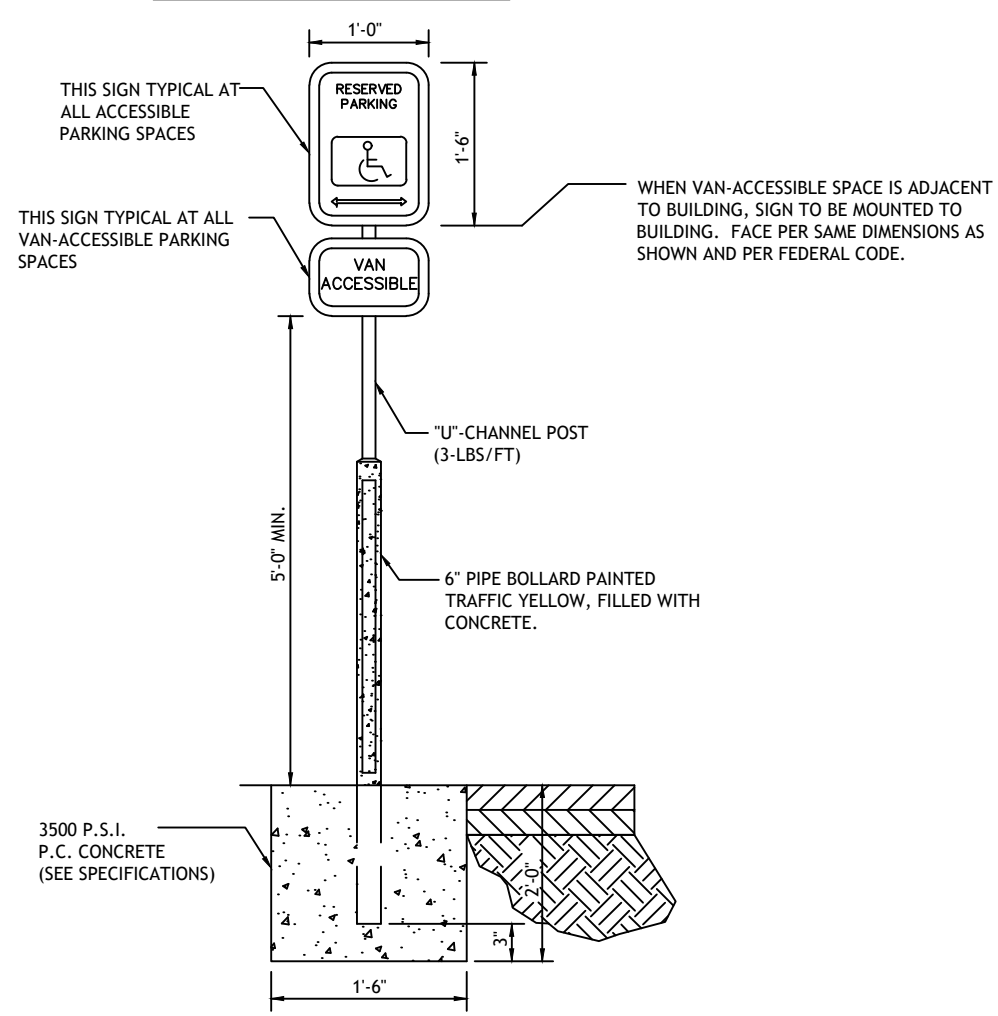




**90° ACCESSIBLE & VAN ACCESSIBLE SPACE STRIPING**

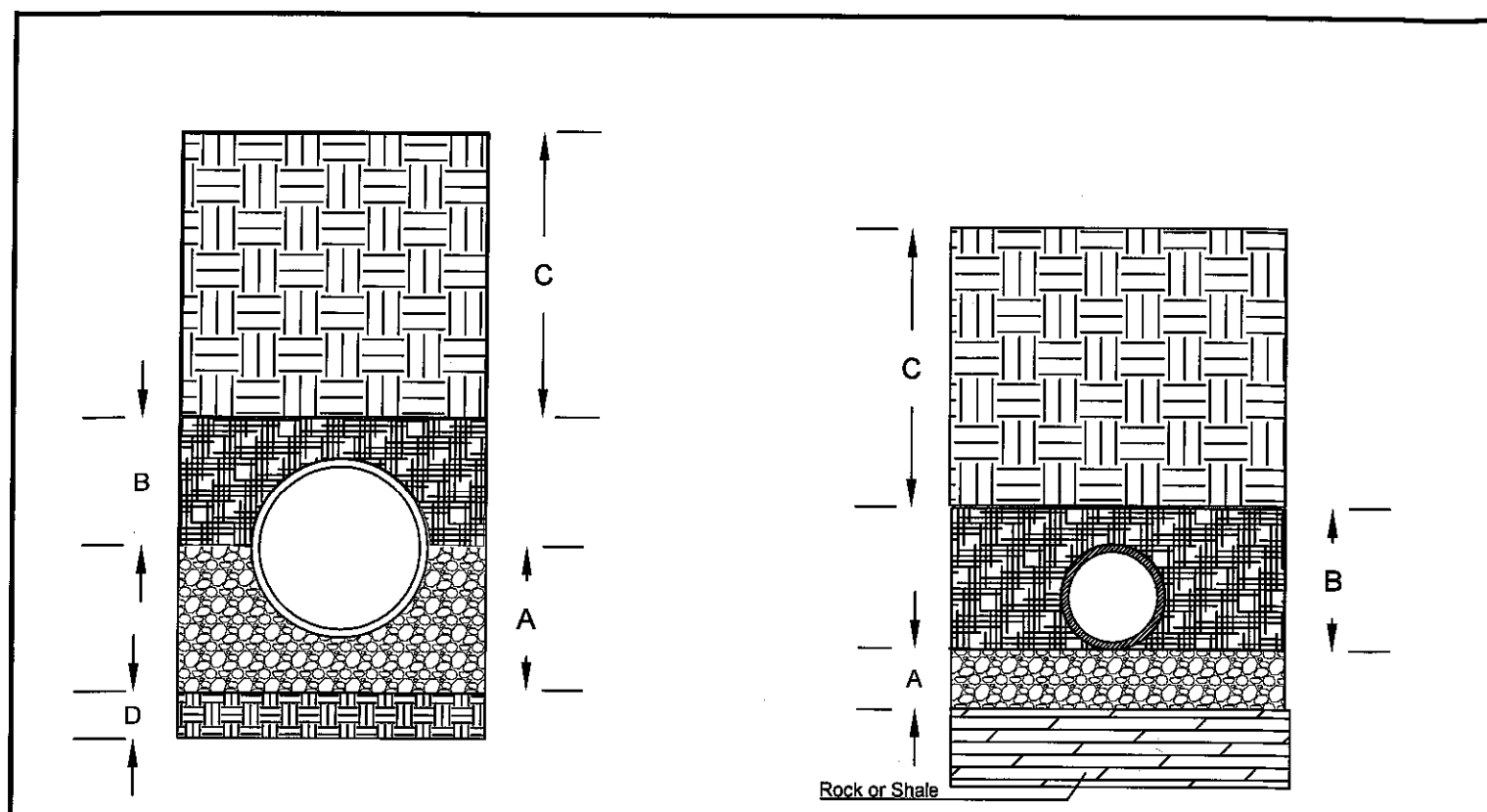


**CLEAN-OUT**



**ACCESSIBLE PARKING SIGN**

NOTE: THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT. THIS PLAN AND THE DESIGN SHOWN ARE THE EXCLUSIVE PROPERTY OF SITE ENGINEERING CONSULTANTS, LLC AND SHALL NOT BE ALTERED OR COPIED WITHOUT WRITTEN APPROVAL.



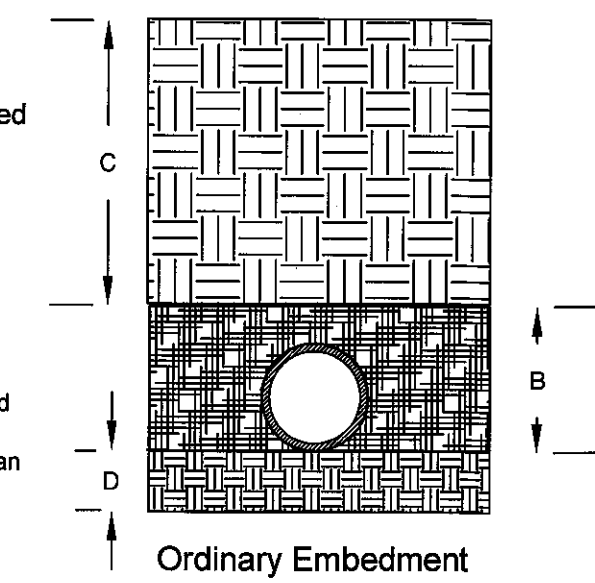
Embedment for Pipe 24" and Larger Embedment for Pipe in Rock or Shale

**Legend**

"A" - 3/8" to 1/2" clean gravel placed to a minimum depth of 4" below bell.  
 "B" - Loosely compacted backfill, free of rock or shale, placed to a depth covering the pipe by 6".  
 "C" - Compacted backfill.  
 "D" - Undisturbed earth

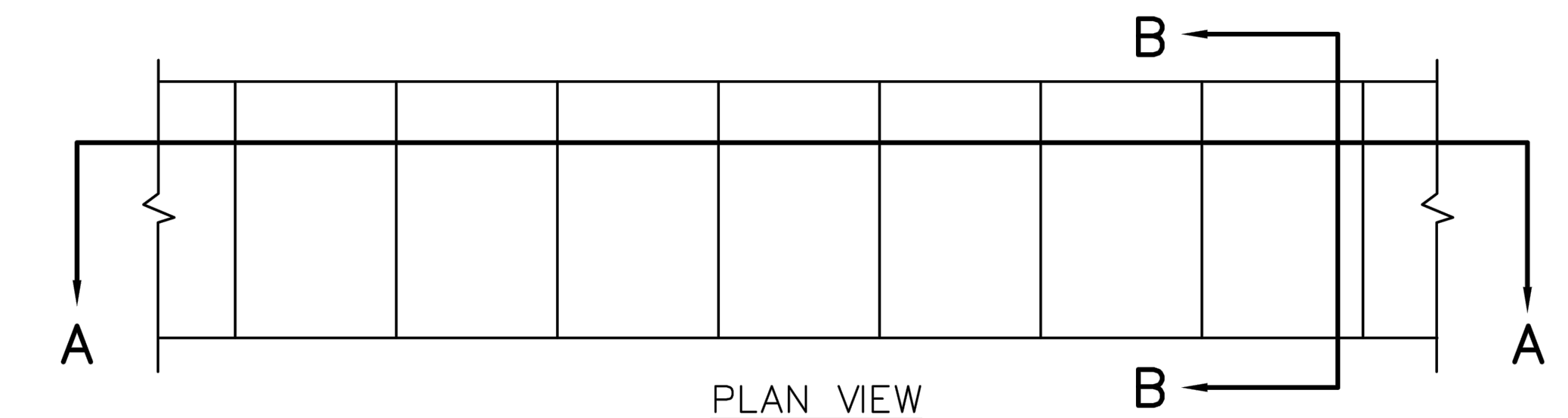
**Notes:**

1. Ductile iron pipe 12" in diameter and larger shall be polywrapped and taped as per spec.
2. Rock and shale shall be over-excavated to a depth where gravel can be placed to a depth of 4" below the bell.

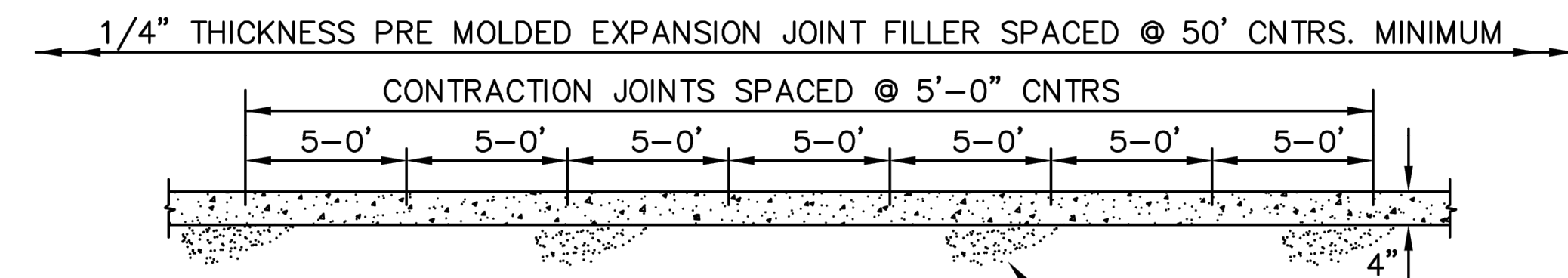


Ordinary Embedment

Engineering Department City of Raymore 100 Municipal Circle Raymore, MO 64083 816-331-1852 Fax 816-331-8087		<b>CITY OF RAYMORE</b>	
DRAWN: Modified 2013 DATE:		EMBEDMENTS FOR WATER MAINS	
CHECKED:	SIZE: A	FSCM NO.:	Wtr - 6
APPROVED:	SCALE: NONE	DWG NO.:	REV
		SHEET: 1	OF: 1

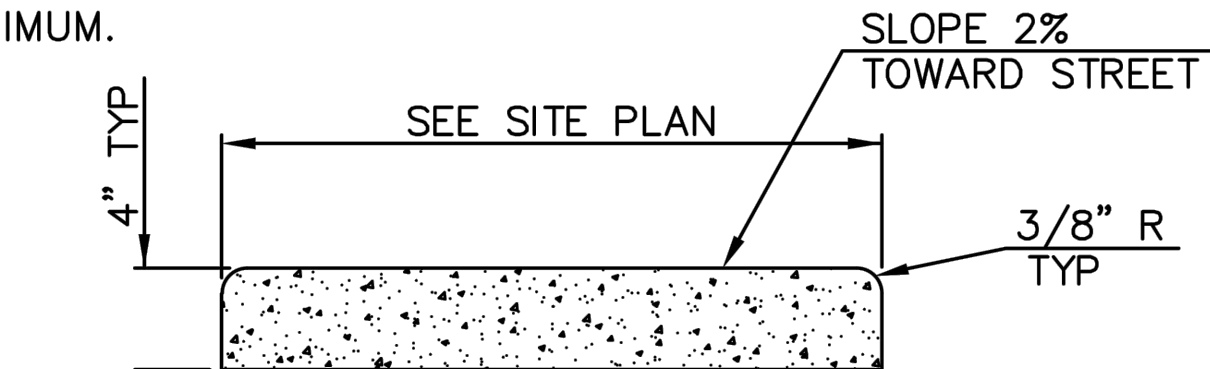


PLAN VIEW



SECTION A-A

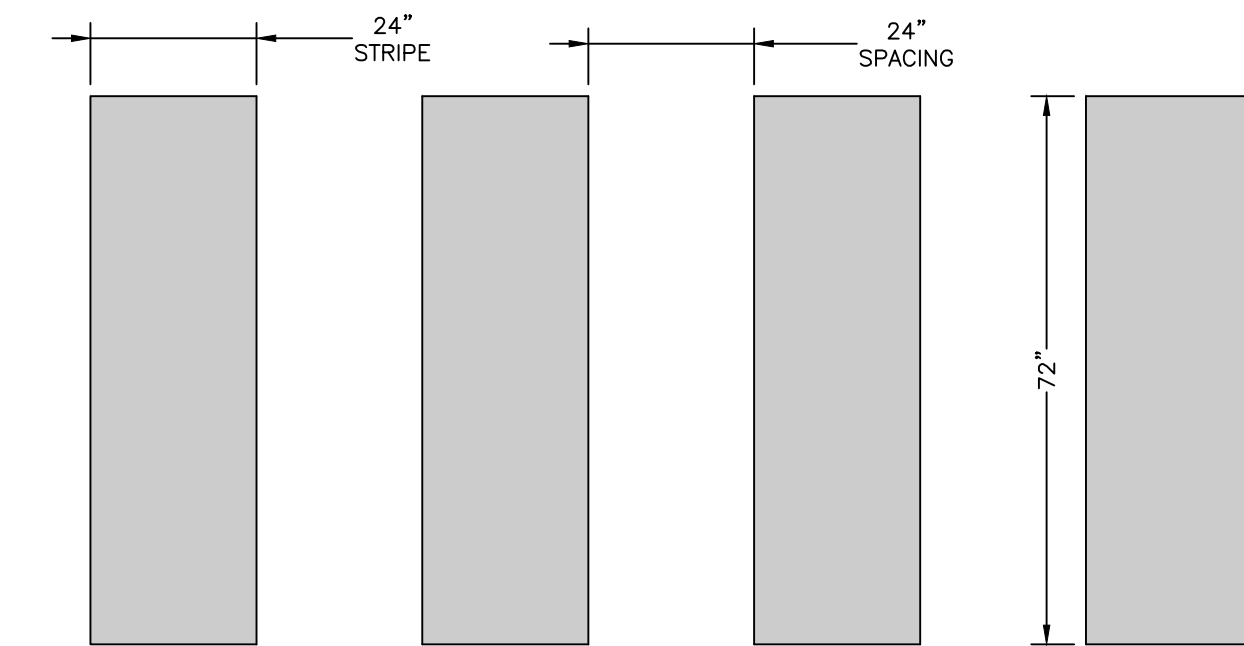
NOTE: WHERE SIDEWALKS ARE INTEGRAL WITH DRIVE ENTRANCES INCREASE DEPTH TO 6" AND PROVIDE REINFORCING USING 6x6 #10 WIRE MINIMUM.



SECTION B-B

**CONCRETE SIDEWALK**

NOTE: CONCRETE SHALL BE CLASS A WITH f'c = 3000 PSI.



STRIPING OF CROSSWALK SHALL BE THERMO  
 MAXIMUM CROSS SLOPE IS NOT TO EXCEED 2% NOR MAXIMUM LONGITUDINAL SLOPE EXCEED 1:12

**PEDESTRIAN CROSSWALK DETAIL (NO SCALE)**

TITLE:  
 SITE CONSTRUCTION DETAILS (PHASE 1)

PROJECT:  
 SOUTH TOWN STORAGE, LLC  
 PREPARED FOR:  
 SOUTH TOWN STORAGE, LLC  
 COUNTY PIN NO.: 04-05-15-400-000-001.004  
 SEC.15 TWP46, RNG32  
 COUNTY: CASS CO

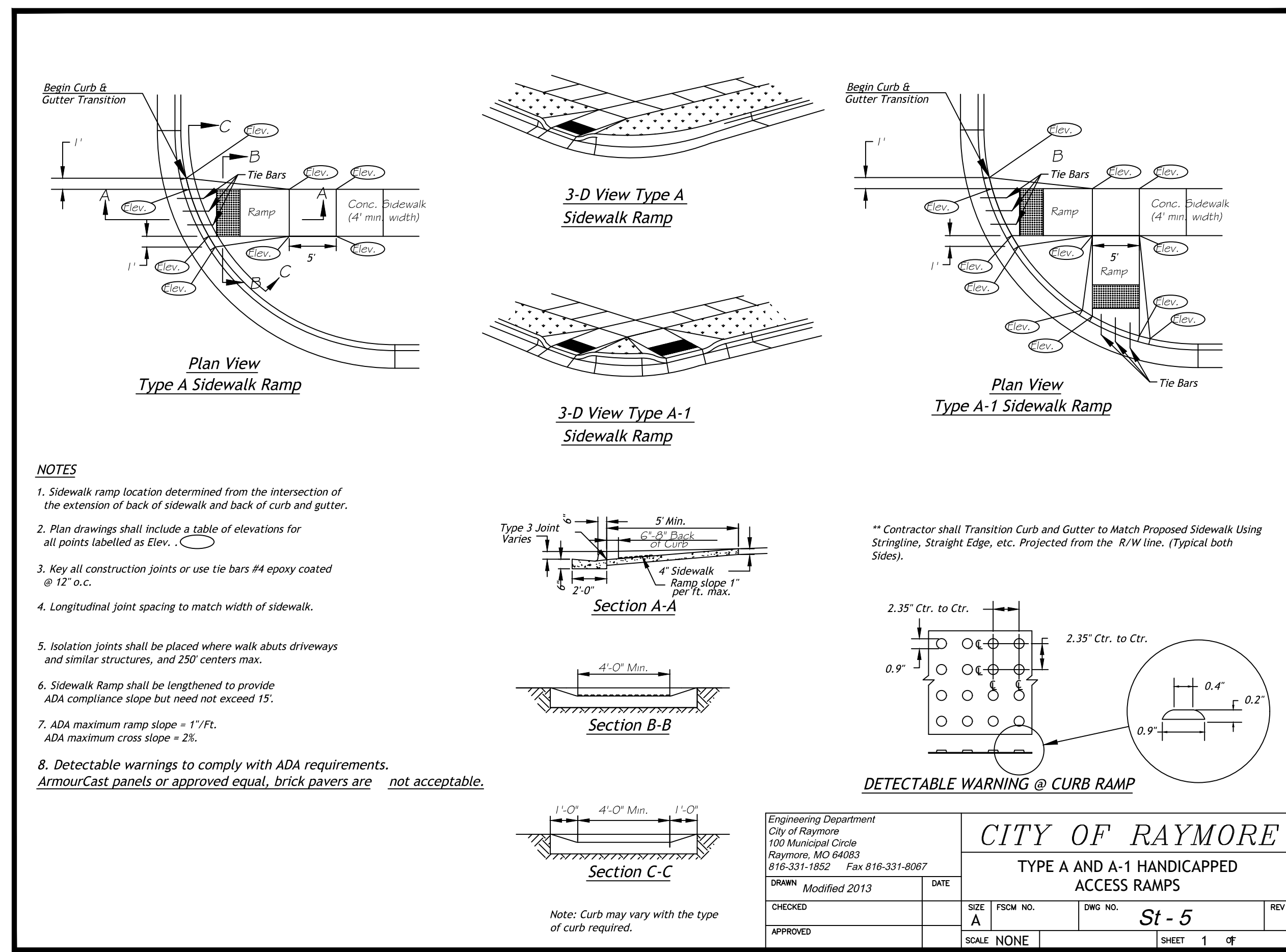
DATE	REVISION	CHKD.
3-26-21	CITY COMMENTS	TB
DATE	REVISION	CHKD.
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
		SCALE: 1"=30'
		PROJECT No.: 0059
		SHEET No.: 9

\*ENGINEERING\*SERVICES\*

**SITE ENGINEERING CONSULTANTS, LLC**

PROFESSIONAL ENGINEERING COMPANY

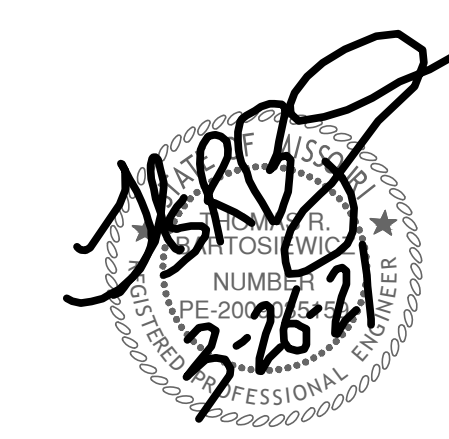
5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
 (913) 515-7209 \* FAX (816) 760-2379  
 "TODAY'S TECHNOLOGY \* YESTERDAY'S QUALITY"



**NOTES**

1. Sidewalk ramp location determined from the intersection of the extension of back of sidewalk and back of curb and gutter.
2. Plan drawings shall include a table of elevations for all points labelled as Elev.
3. Key all construction joints or use tie bars #4 epoxy coated @ 12" o.c.
4. Longitudinal joint spacing to match width of sidewalk.
5. Isolation joints shall be placed where walk abuts driveways and similar structures, and 250' centers max.
6. Sidewalk Ramp shall be lengthened to provide ADA compliance slope but need not exceed 15'.
7. ADA maximum ramp slope = 1"/12". ADA maximum cross slope = 2%.
8. Detectable warnings to comply with ADA requirements. ArmourCast panels or approved equal, brick pavers are not acceptable.

Engineering Department City of Raymore 100 Municipal Circle Raymore, MO 64083 816-331-1852 Fax 816-331-8087		<b>CITY OF RAYMORE</b>	
DRAWN: Modified 2013 DATE:		TYPE A AND A-1 HANDICAPPED ACCESS RAMP	
CHECKED:	SIZE: A	FSCM NO.:	St - 5
APPROVED:	SCALE: NONE	DWG NO.:	REV
		SHEET: 1	OF: 1





**LANDSCAPE DATA:**  
 NORTH PROPERTY 275'  
 REQUIRED  
 1 SHADE / 40' STREET FRONTAGE = 7  
 PROVIDED 7

**INTERIOR PARKING**  
 17 PARKING STALLS  
 REQUIRED  
 1 SHADE 3 SHRUBS / 10 PARKING STALLS  
 1 TREES AND 3 SHRUBS

**PROVIDED**  
 2 SHADE  
 6 SHRUBS

**LANDSCAPE NOTES**  
 CONTRACTOR REQUIRED TO LOCATE ALL UTILITIES BEFORE INSTALLATION TO BEGIN.

Contractor shall verify all landscape material quantities and shall report any discrepancies to the Landscape Architect prior to installation.

No plant material substitutions are allowed without Landscape Architect or Owners approval.

Contractor shall guarantee all landscape work and plant material for a period of one year from date of acceptance of the work by the Owner. Any plant material which dies during the one year guarantee period shall be replaced by the contractor during normal planting seasons.

Contractor shall be responsible for maintenance of the plants until completion of the job and acceptance by the Owner.

Successful landscape contractor shall be responsible for design that complies with minimum irrigation requirements, and installation of an irrigation system. Irrigation system to be approved by the owner before starting any installation.

All plant material shall be specimen quality stock as determined in the "American Standards For Nursery Stock" published by The American Association of Nurseryman, free of plant diseases and pest, of typical growth of the species and having a healthy, normal root system.

Sizes indicated on the plant list are the minimum, acceptable size. In no case will sizes less than specified be accepted.

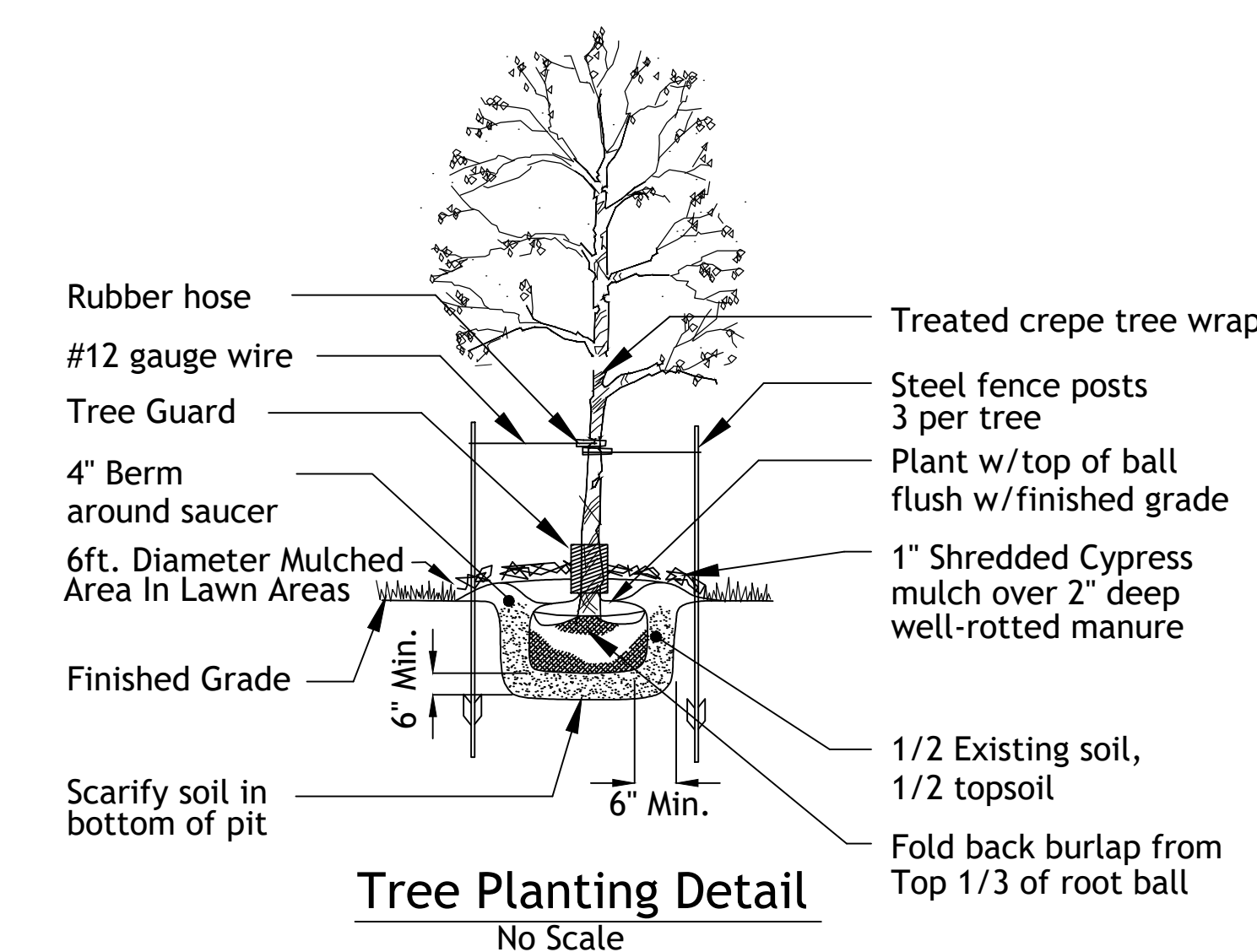
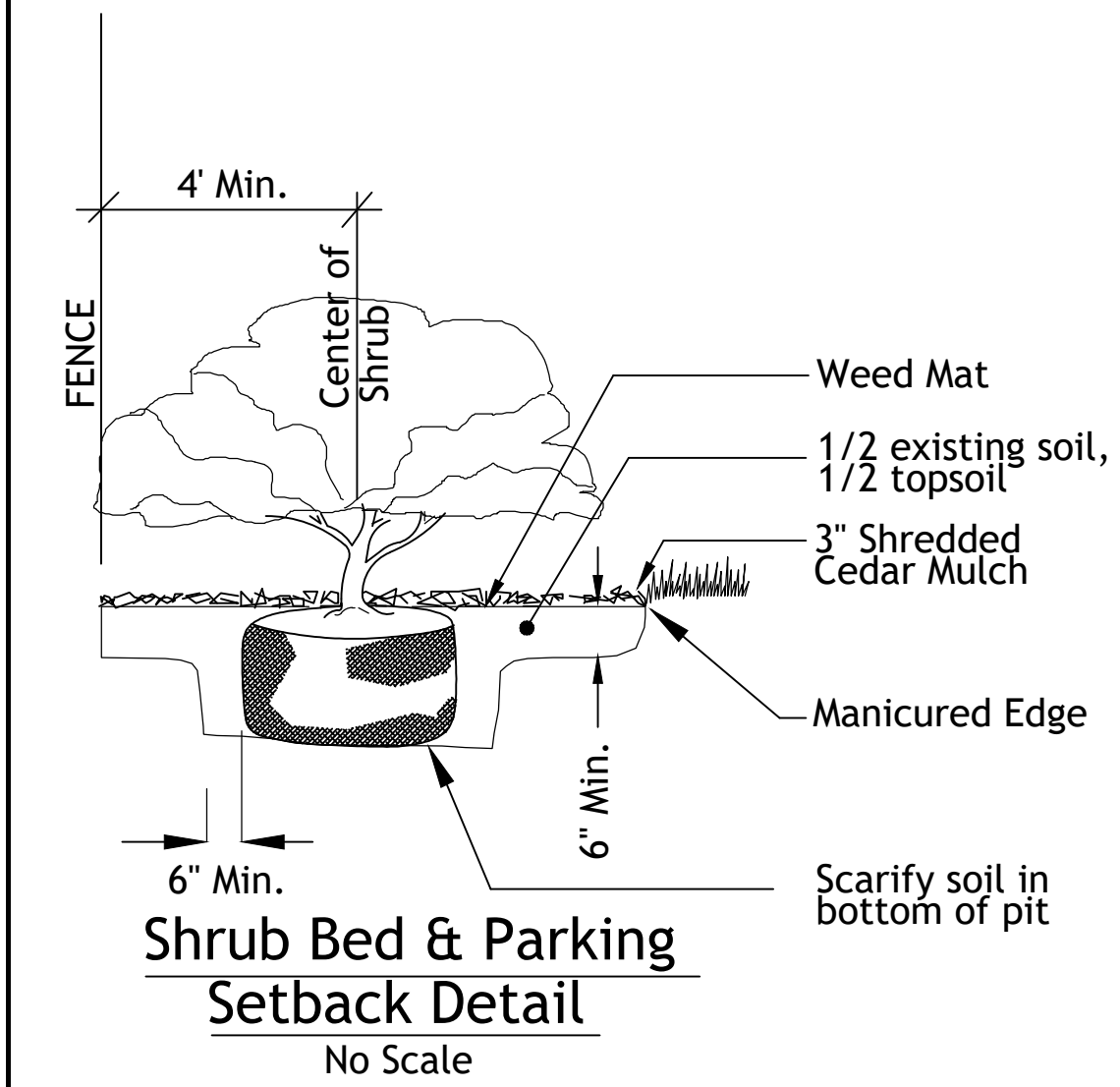
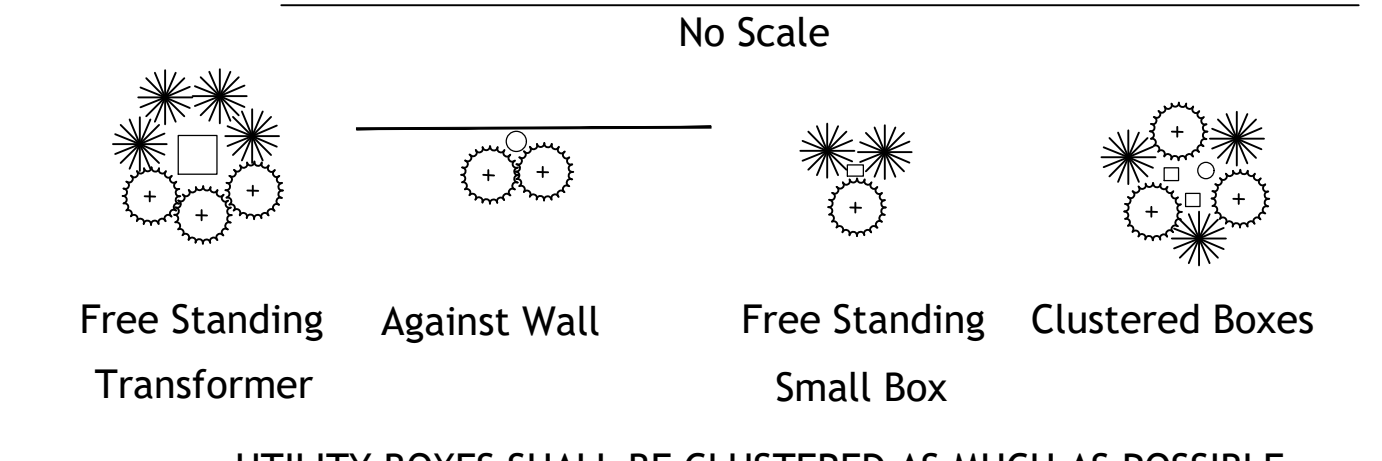
All shrub beds within lawn areas to receive a manicured edge.

All shrub beds shall be mulched with 3" of shredded cedar mulch.

All sod areas to be fertilized & sodded with a Turf-Type-Tall Fescue seed blend.

All seed areas shall be hydro-seeded with a Turf-Type-Tall Fescue seed blend.

**Typical Utility Box Screening Details**



**Tree List**

Symbol	Quantity	Common Name	Botanical Name	Size	Condition	Spacing
	10	Skyline Honeylocust	Gleditsia Triacanthos 'Skyline'	2" cal	BB	As Shown

**Shrub List**

Symbol	Quantity	Common Name	Botanical Name	Size	Condition	Spacing
	3	Dwarf Winged Euonymus	Euonymus Alatus 'Compactus'	18"-24"sp.	Cont.	4'o.c.
	3	Morning Light Maiden Grass	Miscanthos Sinensis 'Morning Light'	3 gal.	Cont.	4'o.c.

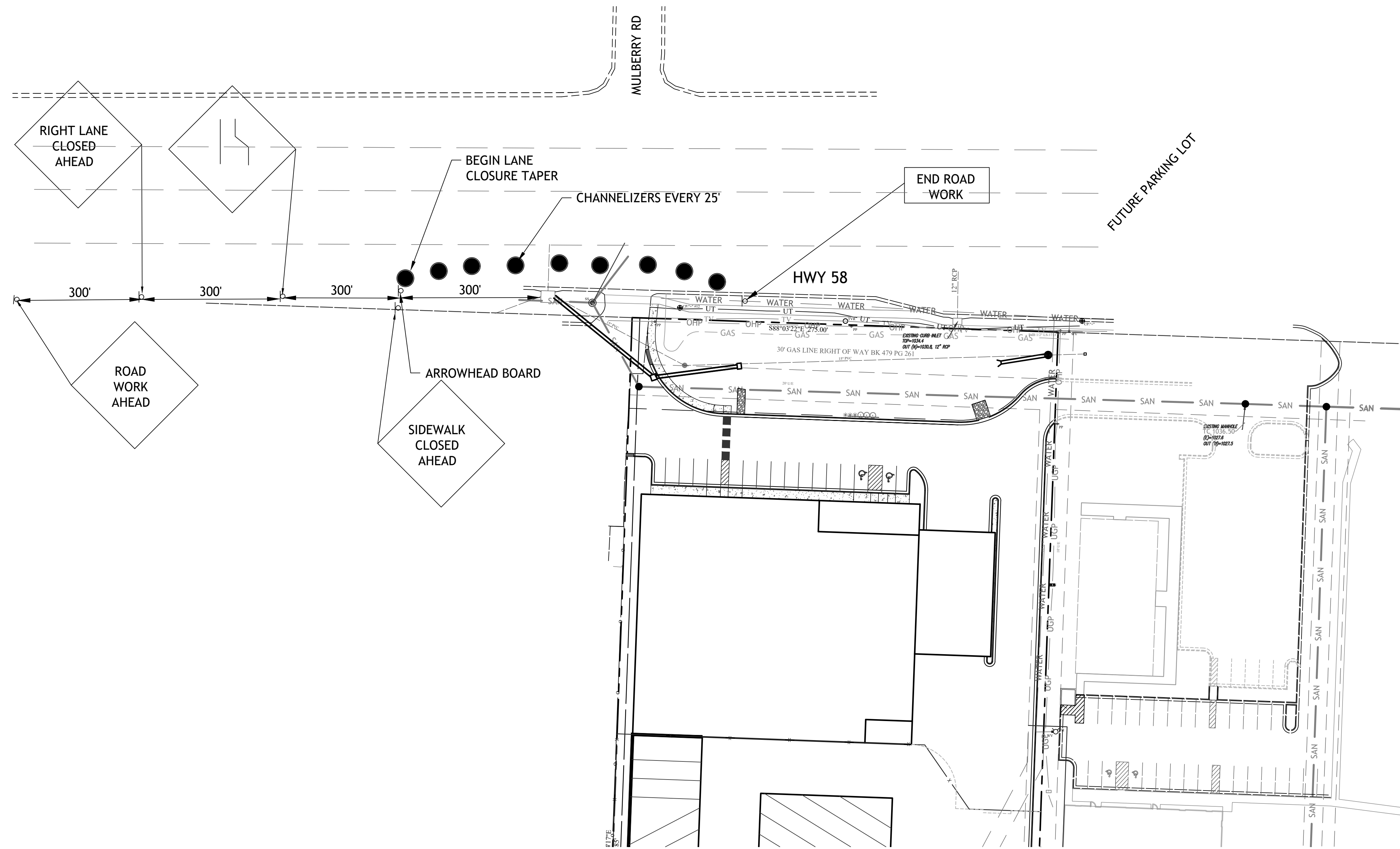
**TITLE:**  
 LANDSCAPE PLAN  
**PROJECT:**  
 SOUTH TOWN STORAGE, LLC  
 PREPARED FOR:  
 SOUTH TOWN STORAGE, LLC  
 COUNTY PIN NO.: 04-05-15-400-000-001.004  
 SEC.15 TWP46, RNG32  
 COUNTY: CASS CO



**NOTE:**  
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 5251 W116th PL, SUITE 200, LEAWOOD, KANSAS 66211  
 (913) 515-7209 \* FAX (816) 760-2379  
 "TODAY'S TECHNOLOGY \* YESTERDAY'S QUALITY"

DATE: 3-1-21  
 SCALE: 1"=30'  
 PROJECT No.: 0059  
 SHEET No.: 10



NOTE:  
 THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERETO APPURTENANT.  
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TITLE:  
**TRAFFIC CONTROL**

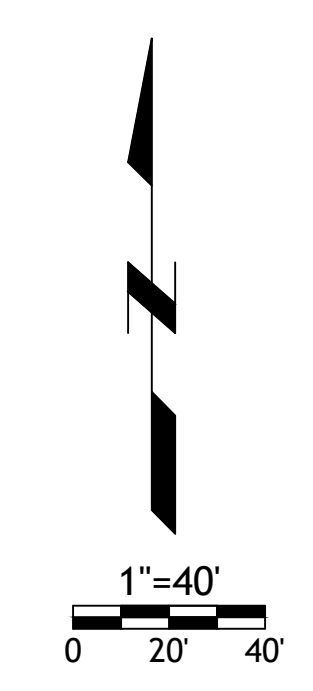
PROJECT:  
**SOUTH TOWN STORAGE, LLC**

PREPARED FOR:  
**SOUTH TOWN STORAGE, LLC**

COUNTY PIN NO.: 04-05-15-400-000-001.004

SEC.15 TWP46, RNG32

COUNTY: CASS CO



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\*ENGINEERING\*SERVICES\*

**SITE ENGINEERING CONSULTANTS, LLC**

PROFESSIONAL ENGINEERING COMPANY

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DATE	REVISION	CHKD.
3-26-21	CITY COMMENTS	TB

DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21	SCALE: 1"=40'	PROJECT No.: 0059	SHEET No.: 11
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**SYMBOL LEGEND**

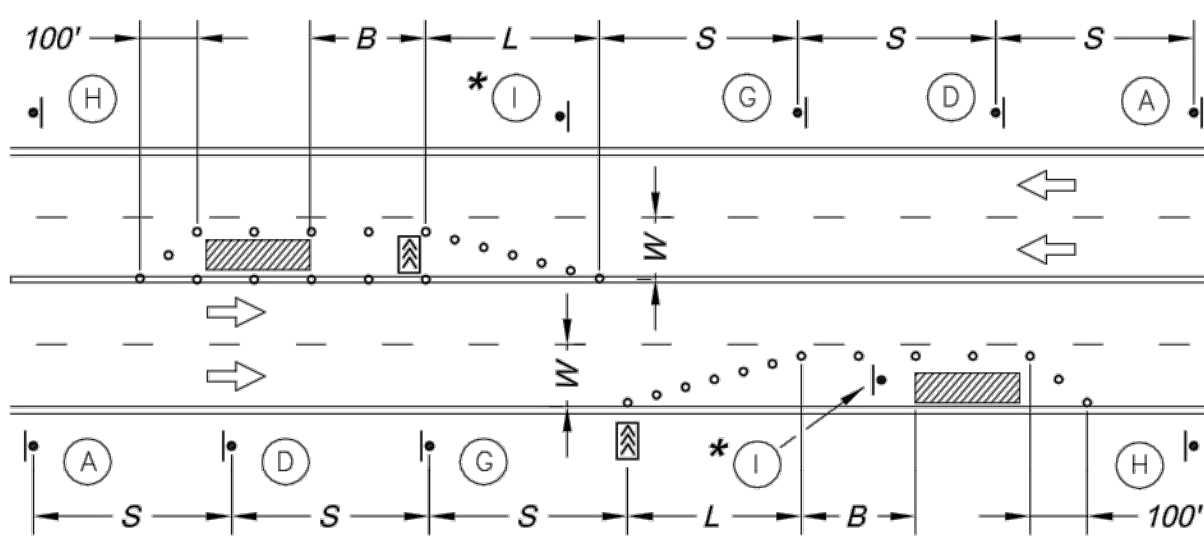
- Work Area
- Channelizer
- Sign
- Arrow Panel
- Barricade
- Flagger
- Direction of Travel

**SIGN LEGEND**

**GENERAL NOTES:**

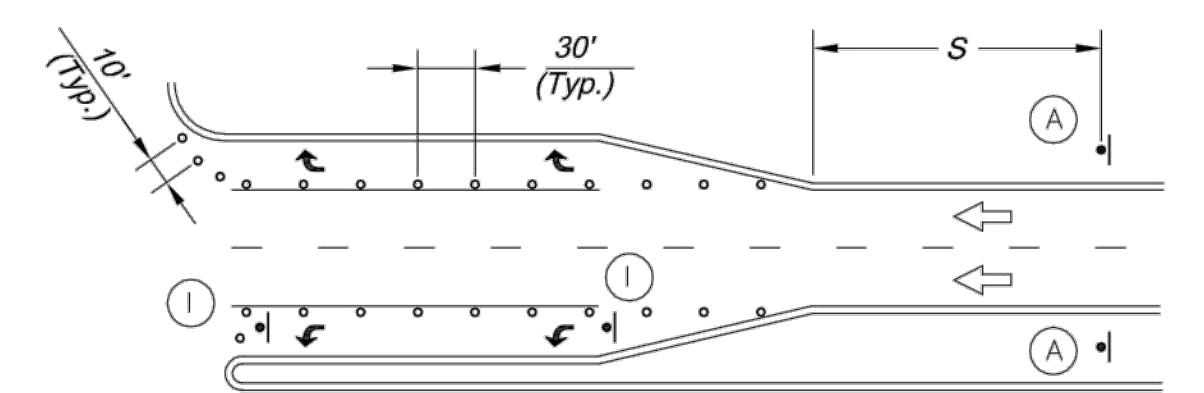
- All signs, barricades, channelizers, markings and other traffic control devices shall conform to the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
- All traffic control devices shall be standard in size, shape, color, and message, in good condition, and retro-reflectORIZED. All signs shall be securely mounted with height and lateral location as described in the MUTCD.
- Warning lights shall be used on barricades in place at night and on warning signs which alert drivers about a change in alignment, traffic control, lane closure, or road closure.
- Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic, or where construction activities impose a restriction on traffic, as directed by the City Traffic Engineer. Where flaggers are used, advance signing shall be erected as shown in the details or as specified in the MUTCD. Flaggers shall meet the requirements in the MUTCD in regard to character, training, attire, and behavior.
- Trim-lines are the City's preferred channelizing device. Cones may not be used at nighttime.
- Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
- The Contractor shall use barricades, street plates, or fencing as needed to effectively shield pedestrian and vehicular traffic from exposed objects, excavations, and construction activities.
- Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
- No street shall be closed without the approval of the City Traffic Engineer. The Contractor shall notify the City Traffic Engineer at least 7 days in advance of any street closure. If a detour route around the closure is to be provided, all detour signing shall be as shown on a plan approved by the City Traffic Engineer.
- Construction vehicles parked along streets shall be located within the work area (traffic control) or where otherwise normally permitted. Construction materials, including traffic control and vehicles shall not restrict sight distance for vehicles exiting at streets or drives.
- Construction materials shall be kept off of sidewalks, consolidated in one location within City right-of-way, and removed daily unless otherwise approved by the Inspector. Dirt, mud, and other construction debris on streets and sidewalks shall be removed immediately.
- The Contractor shall not perform any work that will restrict vehicular traffic in any way between the hours of 7:00 a.m. and 9:00 a.m. or 4:00 p.m. and 6:00 p.m. Monday through Friday unless otherwise indicated in the specifications.
- All travel lanes should be at least 11 feet wide unless otherwise authorized by the City Traffic Engineer. A "Narrow Lanes" sign shall be installed in advance of a lane width reduction to less than 11 feet.
- All edge drop-offs of more than 2 inches and less than 4 inches should be protected by a wedge or barrier and all edge drop-offs greater than 4 inches shall have edge protection (see Traffic Control Specifications for edge treatment requirements).
- The "Workers" symbolic sign (MUTCD No. W21-1a) may be used instead of the "Road Work Ahead" sign for work with a duration of 12 hours or less. The "End Road Work" sign is not required to be installed after the "Workers" sign.
- No traffic signal shall be altered or modified in any way without a plan approved by the City Traffic Engineer.
- The Contractor shall be responsible for maintaining all traffic control devices on an around-the-clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
- The traffic control requirements shown on these plans are minimum requirements only and do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the Contractor of his responsibility for selecting the proper traffic control devices and implementation procedures that will assure the safety of drivers, pedestrians, and workers at all times.
- Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the City Traffic Engineer or representative, the City may take one or more of the following actions:
  - Employ another agency to correct deficiencies in traffic control devices and deduct the cost from the Contractor's pay estimate.
  - Stop the work until deficiencies are corrected.
  - Suspend all pay estimates until deficiencies are corrected, or
  - Place the Contractor in default.

**LANE CLOSURE - TWO LANE STREET**



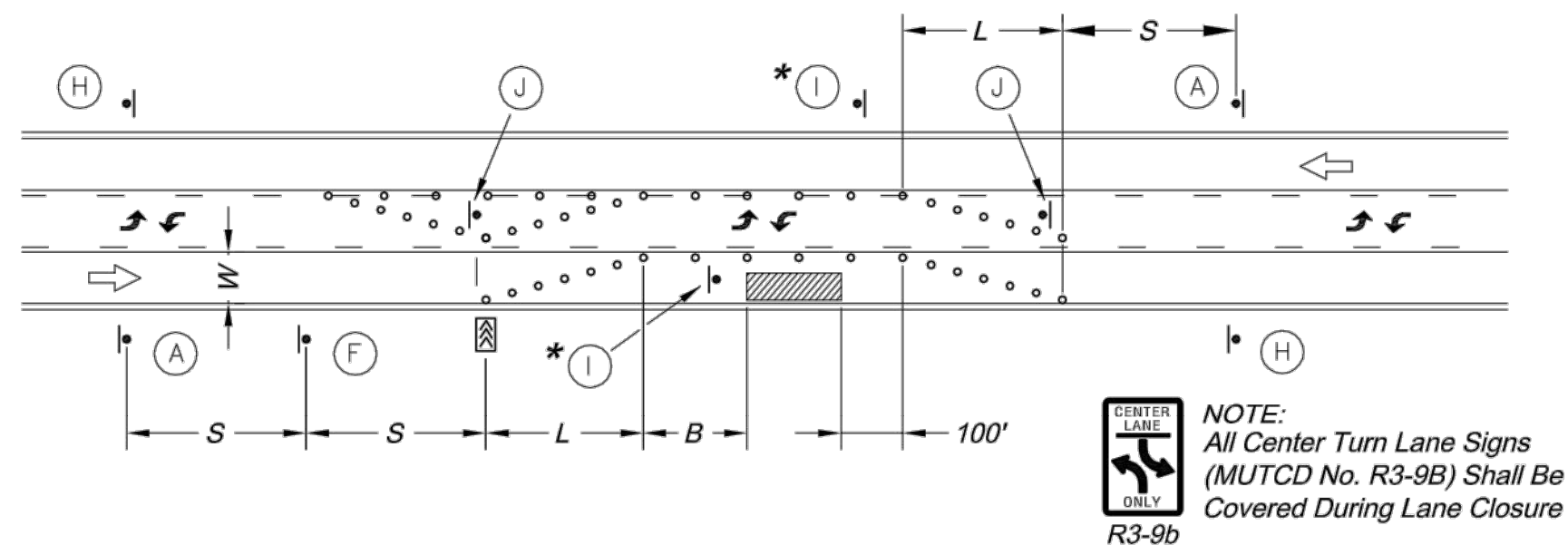
**LANE CLOSURE - FOUR LANE STREET**

\* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



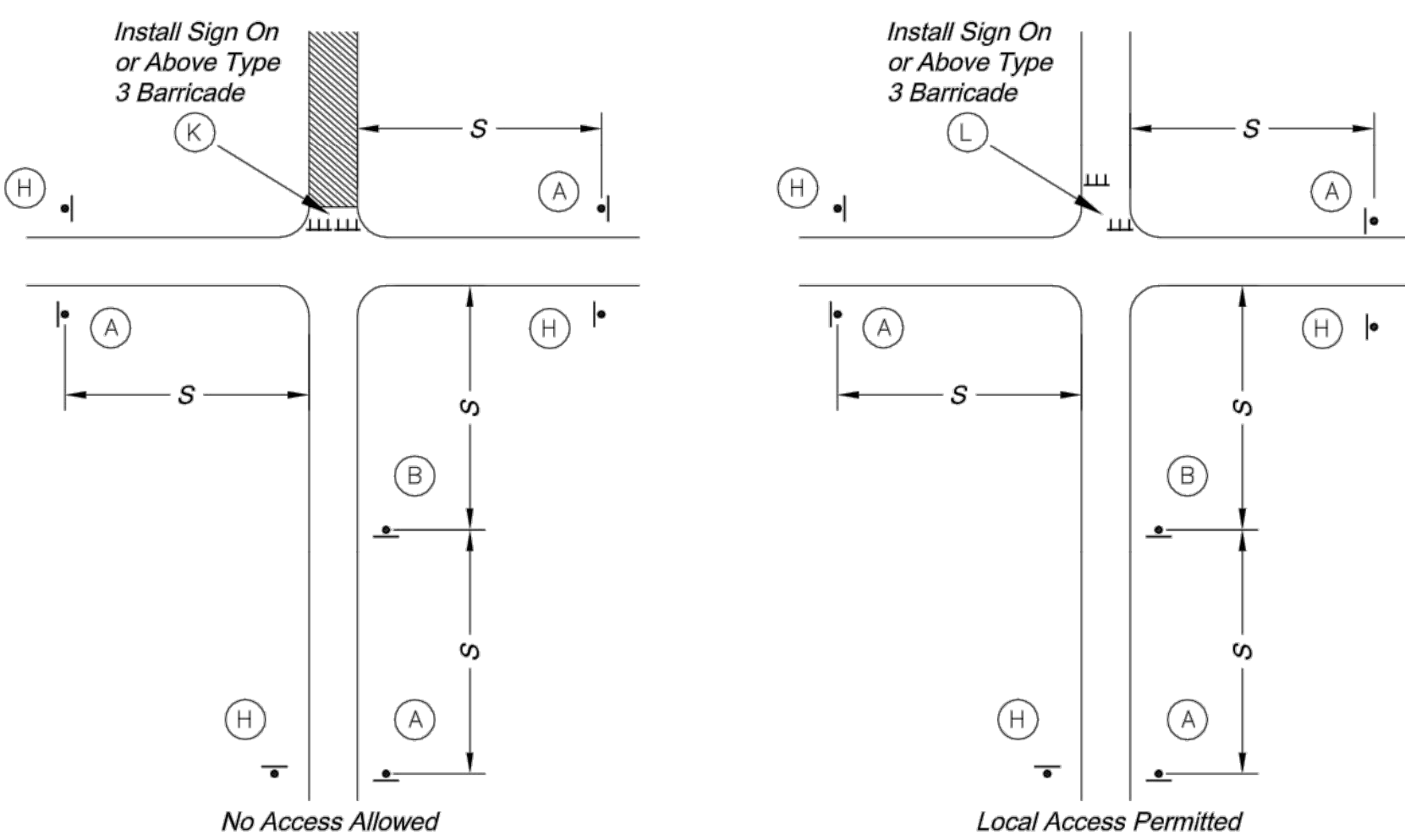
**TURN LANE CLOSURE**

**TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET**

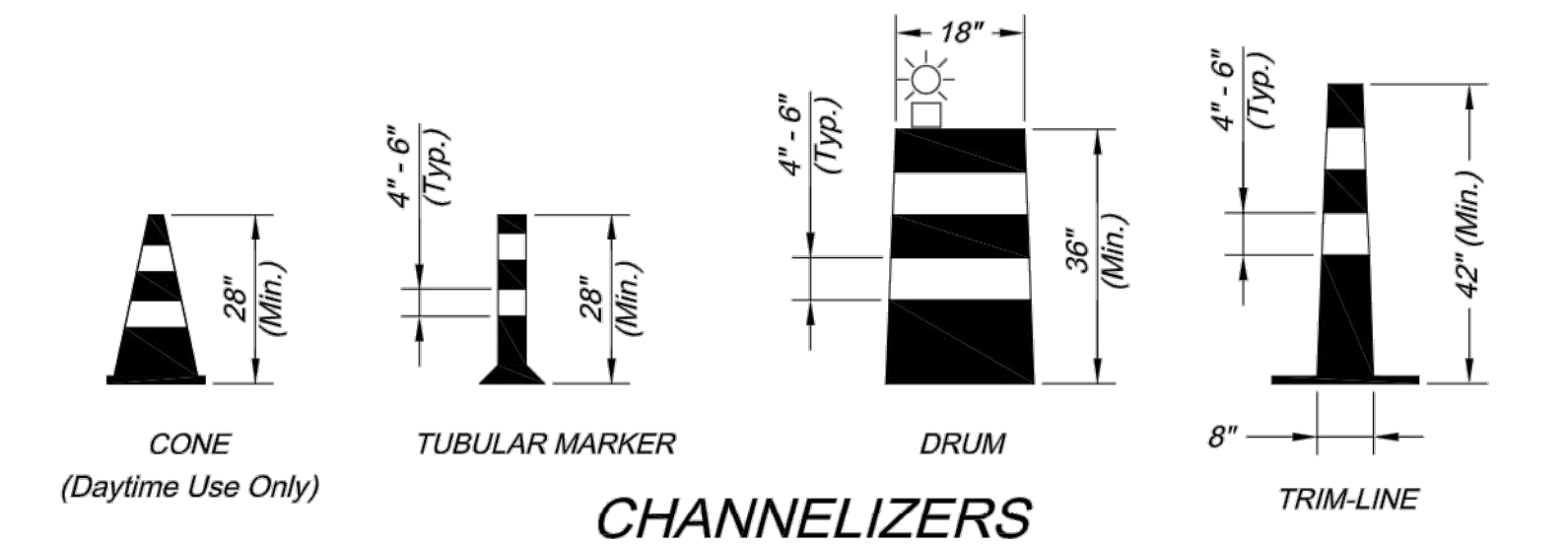


**LANE CLOSURE - THREE LANE STREET**

\* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed

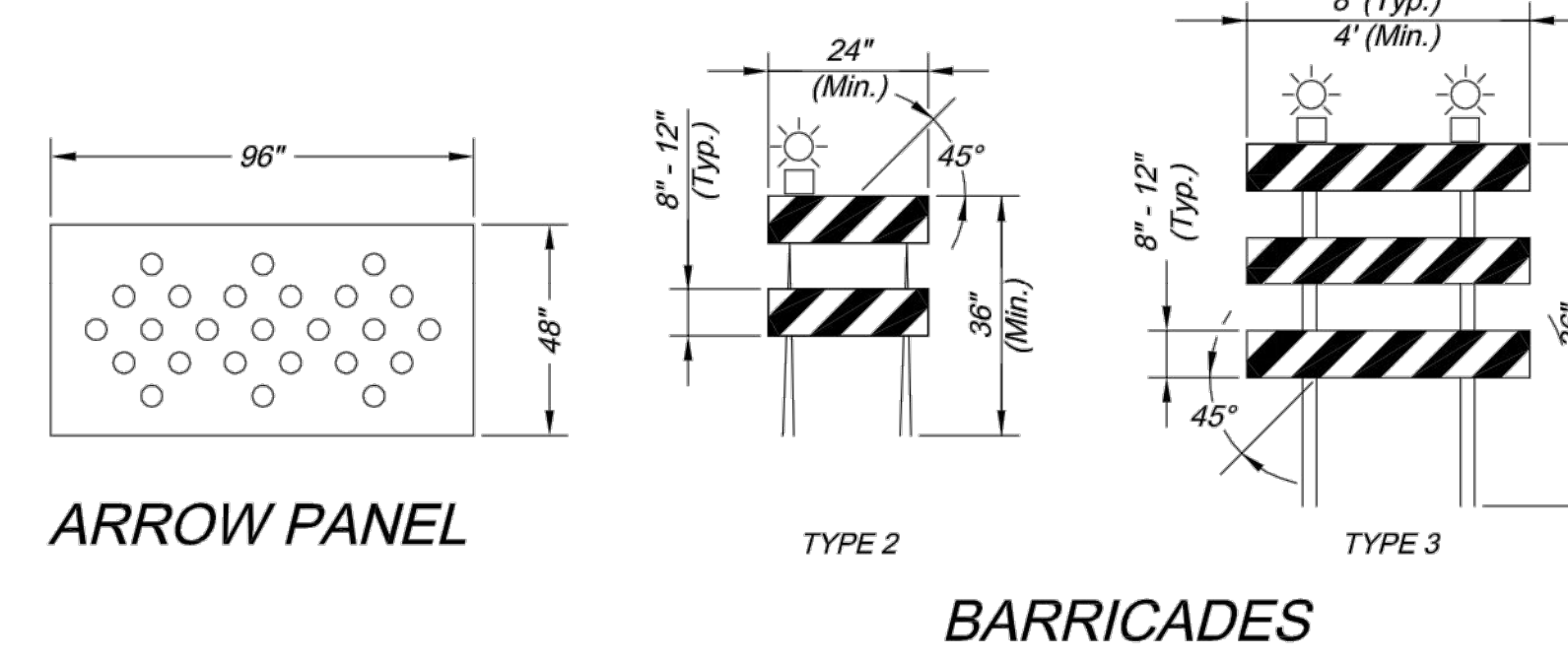


**TYPICAL STREET CLOSURE**



**CHANNELIZERS**

NOTE: White Bands On Barricades and Channelizers Shall Be Made From High Intensity Sheeting Material.



**BARRICADES**

Sign Spacing "S"		Taper Dimensions (Feet)				
Speed Limit (mph)	Spacing (Feet)	Speed Limit (mph)	Minimum Taper Length "L", per Lane Width "W"		Minimum Number of Channelizers	
25	100	25	105	115	125	6
30 - 35	250	30	150	165	180	7
≥ 40	350	35	205	225	245	8
		40	270	295	320	9
		45	450	495	540	13

Guidelines for Length of Longitudinal Buffer Space "B"		Maximum Channelizer Spacing		
Speed Limit (mph)	Length (Feet)	Speed Limit (mph)	Within Taper (Feet)	Outside Taper (Feet)
25	35	25	25	50
30	55	30	30	60
35	85	35	35	70
40	120	40	40	80
45	170	45	45	90

CITY OF LEE'S SUMMIT  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION  
220 SE GREEN STREET  
LEE'S SUMMIT, MISSOURI 64063  
PHONE: (816) 969-1800 FAX: (816) 969-1809



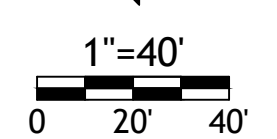
Project: **TRAFFIC CONTROL DETAILS**  
Sheet Number: STANDARD DRAWING TC-1

Drawn By: JIW  
Checked By: MP  
Date: 12-10-2008  
Project No.: X

x OF x  
**X**

TITLE:  
**TRAFFIC DETAILS**

PROJECT:  
**SOUTH TOWN STORAGE, LLC**  
PREPARED FOR:  
**SOUTH TOWN STORAGE, LLC**  
COUNTY PIN NO.: 04-05-15-400-000-001.004  
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3-26-21	CITY COMMENTS	TB
DRAWN BY: GO	CHECKED BY: TRB	DATE: 3-1-21
SCALE: 1"=40'	PROJECT No.: 0059	SHEET No.: 12

