PUBLIC STREET PLANS FOR

LEE'S SUMMIT R7 MIDDLE SCHOOL ON BAILEY RD. - OFF-SITE TRAFFIC IMPROVEMENTS, TRAFFIC SIGNAL AT HAMBLEN RD. & BAILEY RD. & GREENWAY TRAIL IMPROVEMENTS

CITY OF LEE'S SUMMIT
JACKSON COUNTY, MISSOURI

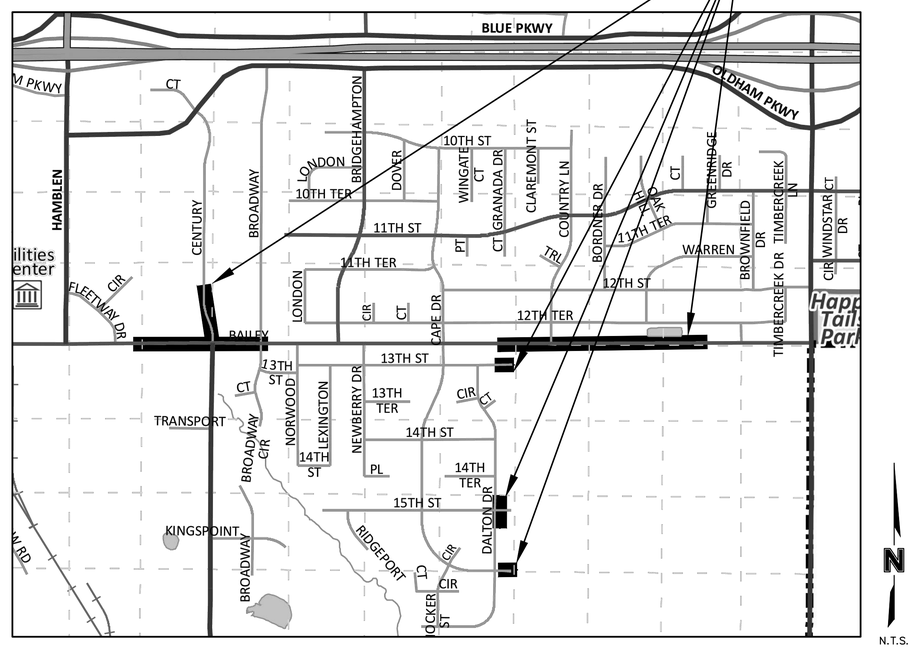
LEGEND

CPT	SURVEY CONTROL POINT		TRAFFIC SIGNAL BOX
	SURVEY BENCHMARK		TRAFFIC SIGNAL MANHOLE
TBM	SURVEY TEMPORARY BENCHMARK		TRAFFIC SIGNAL POLE W/ ARM
GM	GAS METER		TRAFFIC SIGNAL POLE
GAR	GAS RISER		TRAFFIC SIGNAL CONTROL BOX
	GAS MANHOLE	TS	TRAFFIC SIGNAL PEDESTAL
GR	GAS REGULATOR		ELECTRIC MANHOLE
TVP	TELEVISION PEDESTAL	EM	ELECTRIC METER
F	FIBER BOX	ER	ELECTRIC RISER
	FIBER PEDESTAL	E	ELECTRIC BOX
C	CABLE BOX		ELECTRIC CABINET
CV	CABLE VAULT	J	ELECTRIC JUNCTION BOX
TP	TELEPHONE PEDESTAL	SPH	SPRINKLER HEAD
	STORM MANHOLE	SCV	SPRINKLER CONTROL VALVE
	STORM GRATE		WATER METER PIT
	SANITARY MANHOLE		FIRE HYDRANT
YL	YARD LIGHT	WM	WATER METER
LTP	LIGHT POLE	WV	WATER VALVE
	POWER POLE	FP	FLAG POLE
LPPP	POWER POLE W/ LIGHT		SIGN
	GUY WIRE		BOLLARD
BU	STUMP		WOOD POST
	BUSH		STEEL POST
	EVERGREEN TREE	COL	COLUMN
	DECIDUOUS TREE		BORE HOLE
	MAILBOX	FOV	FIBER OPTIC VAULT

- SECTION LINE
- PROPERTY LINE
- CENTER LINE
- PROPOSED ROW LINE
- EXISTING ROW LINE
- UTILITY EASEMENT
- 1371 EXISTING MAJOR CONTOUR
- 1371 EXISTING MINOR CONTOUR
- 1371 PROPOSED MAJOR CONTOUR
- 1371 PROPOSED MINOR CONTOUR
- TEL EXISTING TELEPHONE LINE
- EXISTING SANITARY LINE
- EXISTING STORM LINE
- G EXISTING GAS LINE
- W EXISTING WATER LINE
- EXISTING CHAIN LINK FENCE
- P-OH EXISTING OVERHEAD ELECTRIC
- P-UG EXISTING UNDERGROUND ELECTRIC
- GRADING LIMITS
- TEMPORARY CONSTRUCTION EASEMENT
- PROPOSED CHAIN LINK FENCE
- PROPOSED WOOD PRIVACY FENCE
- EXISTING TREELINE
- FO EXISTING FIBER OPTIC LINE
- CATV EXISTING CATV LINE
- PROPOSED UNDERDRAIN

ABBREVIATION TABLE

M.G.	MATCH GRADE
P	PAVEMENT
TC	TOP OF CURB
BC	BACK OF CURB
EP	EDGE OF PAVEMENT
R/W	RIGHT-OF-WAY
TCE	TEMPORARY CONSTRUCTION EASEMENT
PROP.	PROPOSED
EXIST.	EXISTING
TYP.	TYPICAL
(R)	REMOVAL
CONST.	CONSTRUCT
TBM	TEMPORARY BENCHMARK
CPT	CONTROL POINT
D.N.D.	DO NOT DISTURB
U.I.P.	USE IN PLACE
ADJ.	ADJUST
EL.	ELEVATION
ESMT.	EASEMENT
B-B	BACK OF CURB TO BACK OF CURB DIMENSION
SP.	SPECIAL
DT.	DITCH
STD.	STANDARD
PERM.	PERMANENT



LOCATION MAP

NOT TO SCALE

N.T.S.

DESIGN/POSTED SPEED:

RANSON ROAD = 45 MPH
BAILEY ROAD = 35 MPH
CENTURY DRIVE (NORTH OF BAILEY ROAD) = 25 MPH
CENTURY DRIVE (SOUTH OF BAILEY ROAD) = 40 MPH
SE 15TH STREET = 25 MPH
SE CAPE DRIVE = 25 MPH

MISSOURI ONE CALL SYSTEM

1-800-DIG-RITE OR 811

www.mo1call.com

THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!

UTILITY COMPANIES

WATER – LEE'S SUMMIT WATER UTILITIES
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
(816) 969-1900

WASTEWATER – LITTLE BLUE VALLEY SEWER DISTRICT
21208 E OLD ATHERTON ROAD
INDEPENDENCE, MO 640581
(816) 796-7660

ELECTRIC – EVERGY
1300 SE HAMBLEN ROAD
LEE'S SUMMIT. MO 66219
(888) 471-5275

GAS – SPIRE GAS
3025 SE CLOVER DR
LEE'S SUMMIT, MO 64082
(816) 969-2200

TELEPHONE – AT&T
1636 SE BLUE PKWY
LEE'S SUMMIT, MO 64063
(816) 600-5552

CABLE – SPECTRUM
188 NW OLDHAM PKWY
LEE'S SUMMIT, MO 64081
(866) 874-2389

FIBER OPTIC – GOOGLE FIBER
908 BROADWAY BLVD.
KANSAS CITY, MO 64105.
(913) 663-1900

INDEX OF SHEETS

PREPARED & SUBMITTED BY:

olsson
7301 W. 133RD STREET, SUITE 200
OVERLAND PARK, KANSAS 66213

RYAN B. FLEMING, P.E. — DATE 8/11/21
I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION. THE FOLLOWING DRAWINGS ARE INTENDED TO BE AUTHENTICATED BY MY SEAL: PE-2002003161

SHANNON JEFFRIES, P.E. — DATE 5/17/21
I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION. THE FOLLOWING DRAWINGS ARE INTENDED TO BE AUTHENTICATED BY MY SEAL: PE-2008000069

APPROVED BY:
CITY OF LEE'S SUMMIT

GEORGE BINGER, P.E. — DATE
CITY ENGINEER

olsson
Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170
Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI — RYAN B. FLEMING — NUMBER PE-2002003161 — 8-11-21 — PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

TITLE SHEET

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI 2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_TTL01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\GENERAL\T_TTL01_0200103.dwg USER: rhaller
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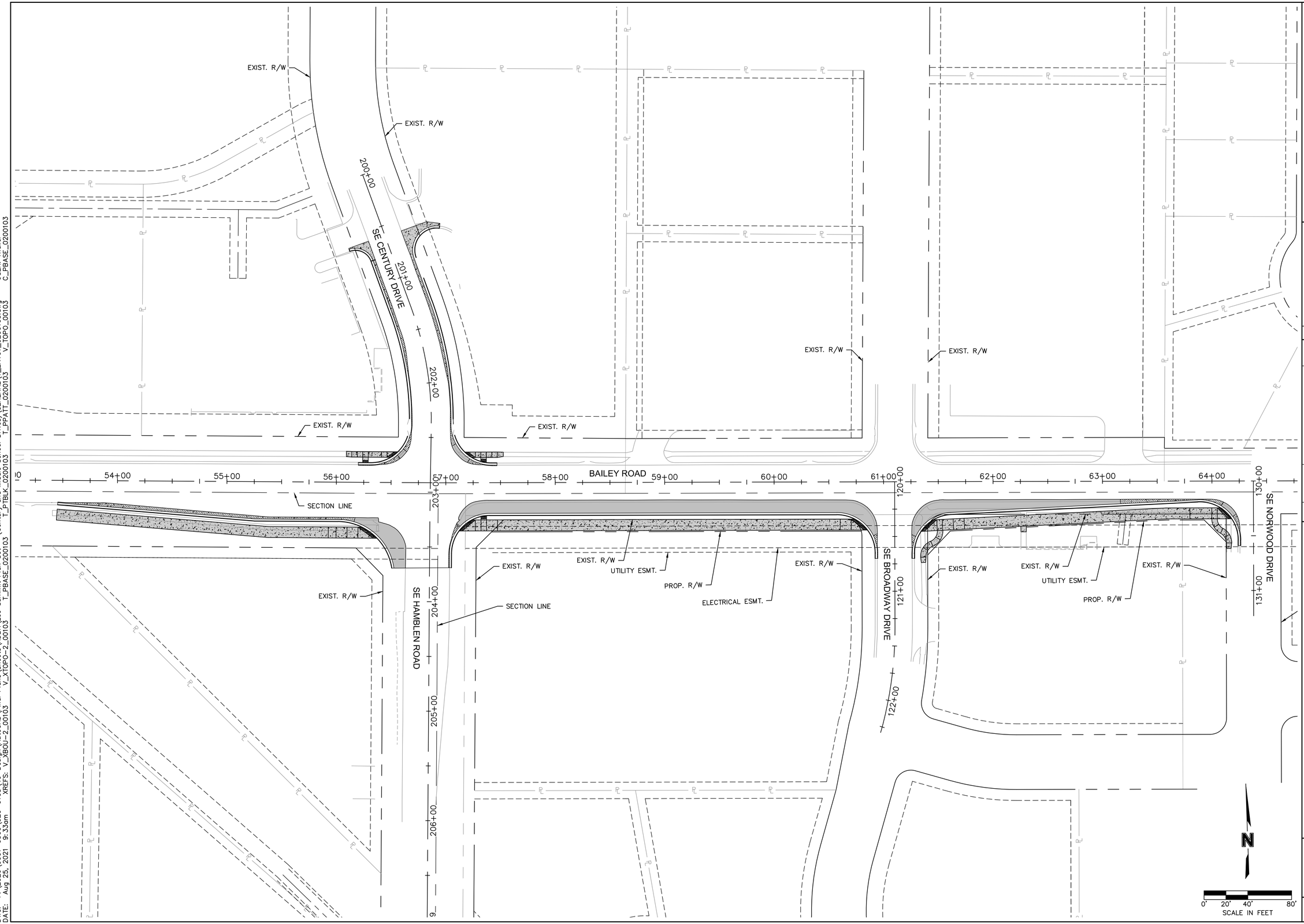

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GENERAL LAYOUT

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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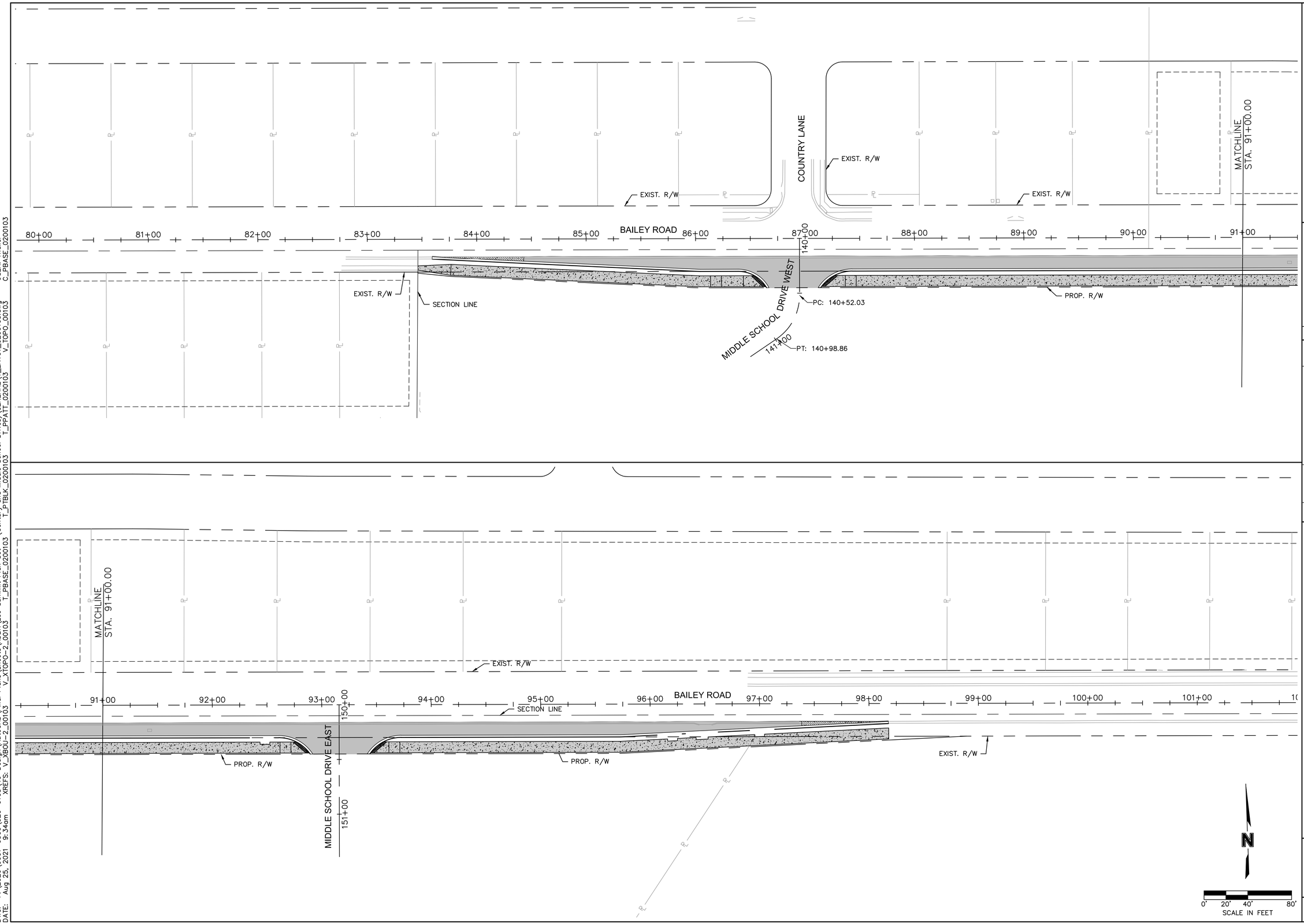

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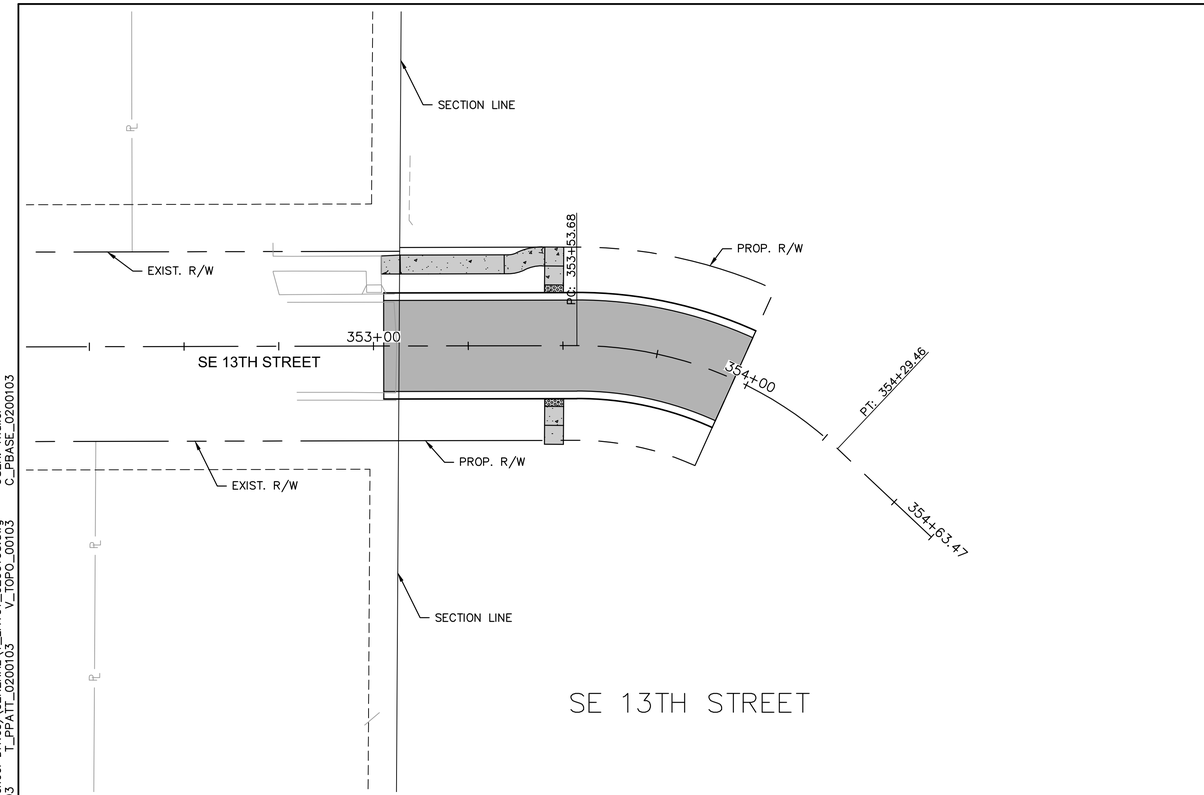

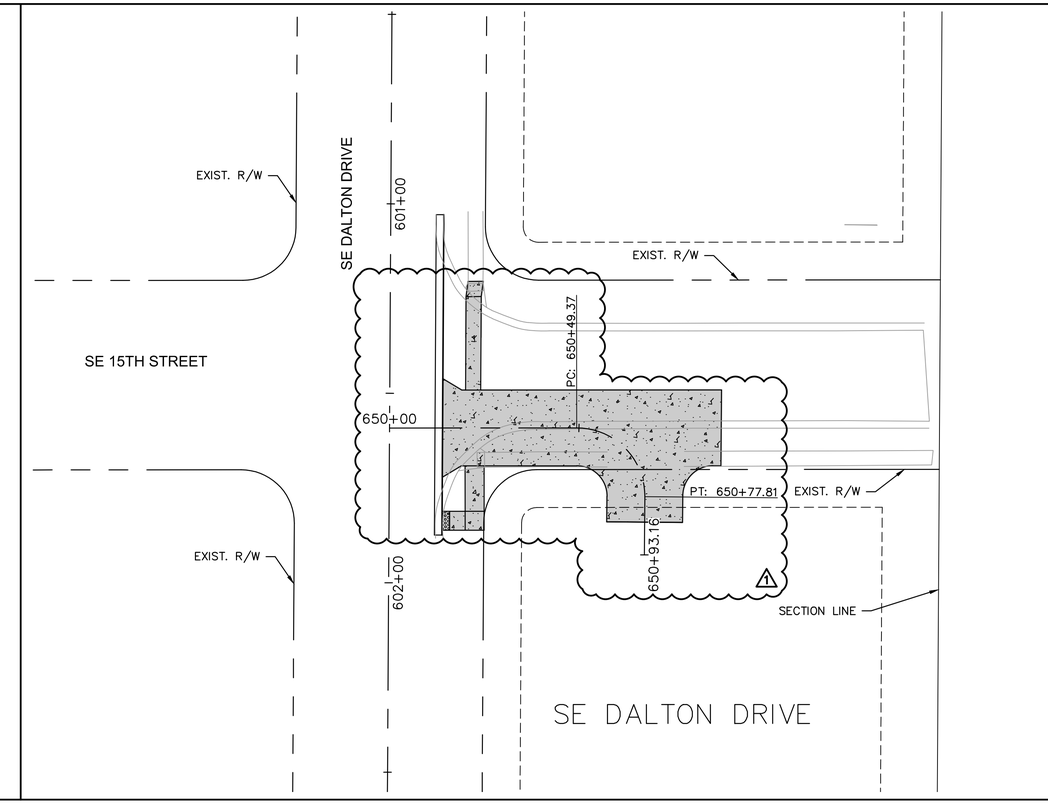

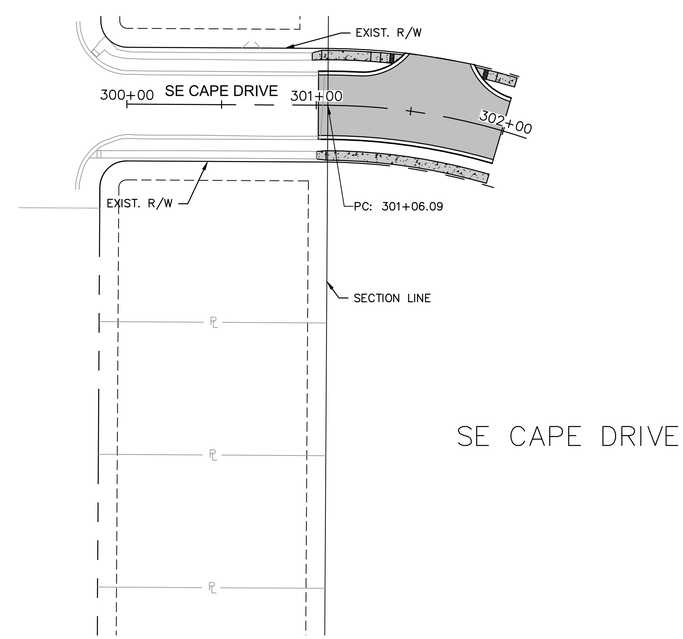

N

0' 20' 40' 80'
SCALE IN FEET

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OLSSON CONTROL INFORMATION:

Basis of coordinates shown hereon are based on Missouri state plane coordinate system, West Zone, and scaled to ground coordinates utilizing a combined adjustment factor of 0.9998986, holding Jackson County GPS Control Point JA-45 as a base point. Distances shown hereon are ground distances in US Survey Feet.

MO DNR JA-45:
KC Metro Aluminum GRS Disk set in concrete ±3" below pavement on shoulder of SE Ranson Rd. Stamped "JA-45".
N: 994990.346
E: 2834265.611
Elev.: 1046.26'

Olsson #100:
Set 1/2" Rebar with Olsson Control Cap. Set in the grass on the North Side of SE Bailey Rd.
N: 993598.83
E: 2831586.70
Elevation: 1032.16'
Ties:
1. SW 66.88' to the NE corner of the concrete sidewalk on the South side of SE Bailey Rd.
2. SSW 82.19' to the center of a power pole on the South side of SE Bailey Rd.
3. East 254.38' to the NW corner of a concrete curb inlet on the North side of SE Bailey Rd.
4. East ±298' to the centerline of Country Ln. on the North side of SE Bailey Rd.

Olsson #101:
Set 1/2" Rebar with Olsson Control Cap. Set in the grass on the North side of SE Bailey Rd.
N: 993561.11
E: 2832755.84
Elevation: 1014.26'
Ties:
1. East 80.94' to the NW corner of a concrete curb inlet on the North side of SE Bailey Rd.
2. SE 91.53' to the SW corner of a concrete curb inlet on the South side of SE Bailey Rd.
3. NE 94.82' to the SW corner of a concrete overflow structure on the South side of a pond on the North side of SE Bailey Rd.
4. West ±871' to the centerline of Country Ln. on the North side of SE Bailey Rd.

Olsson #102:
Set 1/2" Rebar with Olsson Control Cap. Set in the grass ±58' East of the East end of SE 15th St.
N: 992084.37
E: 2831530.63
Elevation: 1012.56'
Ties:
1. NW 67.97' to the center of a water valve on the North side of SE 15th St.
2. West 59.33' to the center of a sanitary manhole on the South side of SE 15th St.
3. WSW 57.28' to the SE corner of the East end of the concrete sidewalk on the South side of SE 15th St.
4. North ±15' to the Easterly prolongation of the centerline of SE 15th St.

Olsson #103:
Set 1/2" Rebar with Olsson Control Cap. Set in the grass ±62' East of the East end of SE Cape Dr.
N: 991553.72
E: 2831514.48
Elevation: 1000.43'
Ties:
1. NW 76.12' to the center of a telephone pedestal on the North side of SE Cape Dr.
2. SW 67.00' to the center of a water valve on the South side of SE Cape Dr.
3. SW 70.06' to the SE corner of the East end of the concrete sidewalk on the South side of SE Cape Dr.
4. North ±4' to the Easterly prolongation of the centerline of SE Cape Dr.

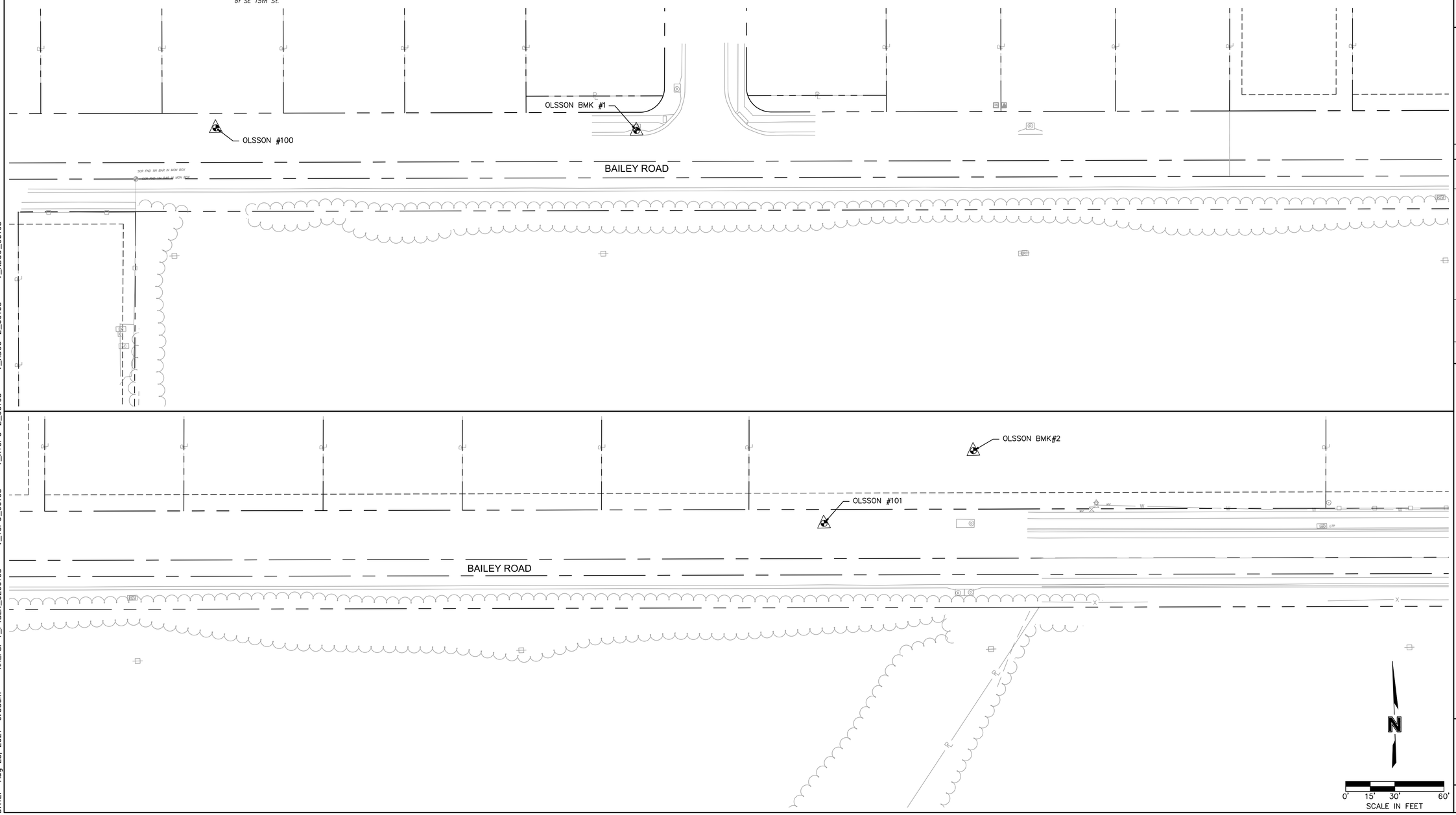
Basis of elevations shown hereon are based upon NAVD '88 utilizing MoDOT's continuously monitored GNSS system and holding the elevation of JA-45 elevation 1046.26'

Olsson Benchmark #1:
Set chiseled square cut on center front face of a curb inlet on North side of SE Bailey Rd. ±42' West of Country Ln.
Elevation: 1028.43'

Olsson Benchmark #2:
Set chiseled square cut on SE corner of overflow structure on South side of pond on North side of SE Bailey Rd.
±962' East of Country Ln.
Elevation: 1017.13'

Olsson Benchmark #3:
Set chiseled "+" cut on SSE flange bolt of fire hydrant in the NW quadrant of the intersection of SE 15th St. and SE Dalton Dr.
Elevation: 1016.27'

Olsson Benchmark #4:
Set chiseled square cut on edge of sidewalk at the West center of a curb inlet in the NW quadrant of the intersection of SE Cape Dr. and SE Dalton Dr.
Elevation: 999.24'



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RYAN B. FLEMING
NUMBER PE-2002003161
PROFESSIONAL ENGINEER
8-11-21

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SURVEY CONTROL

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
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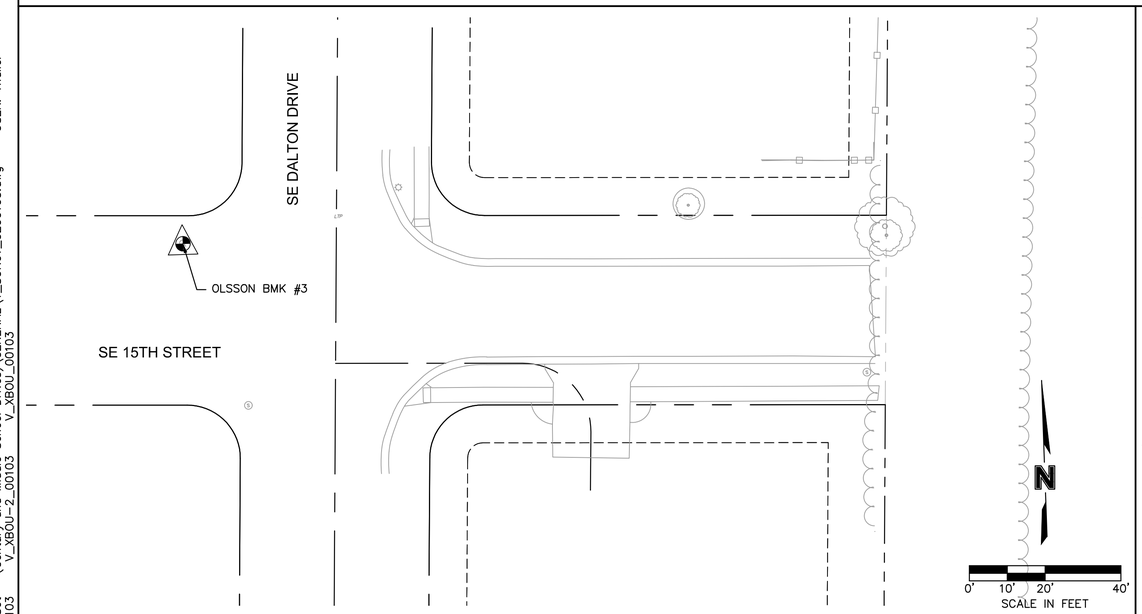

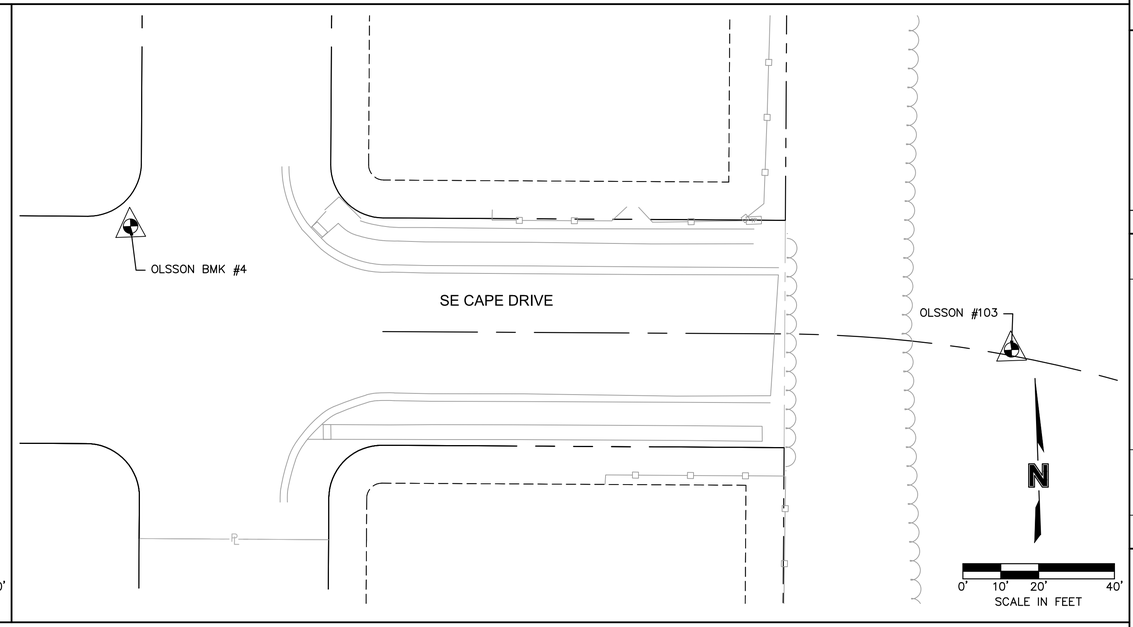

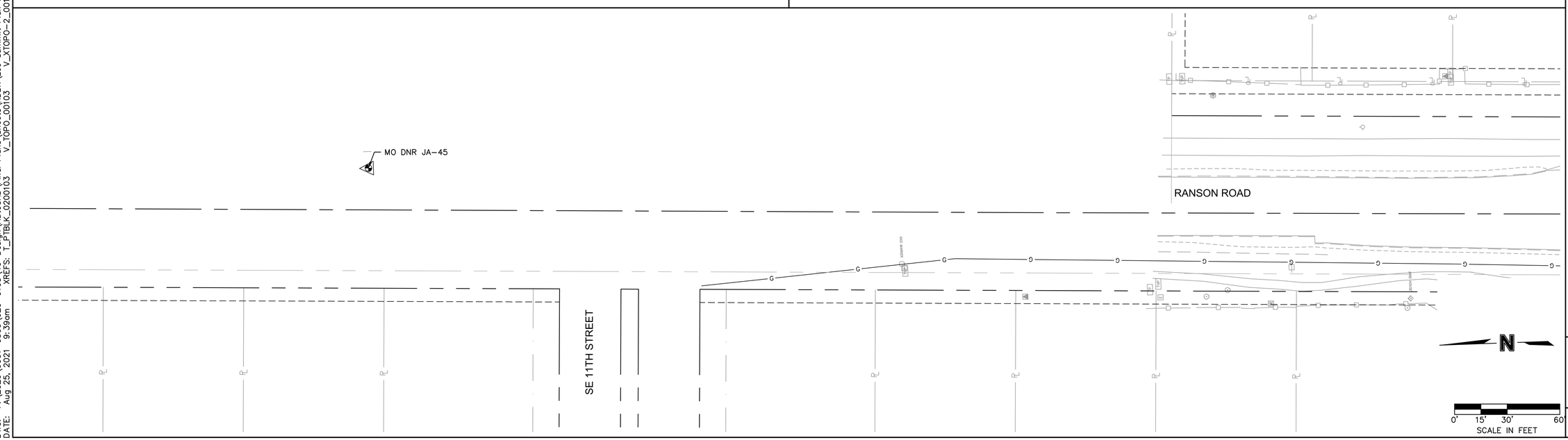

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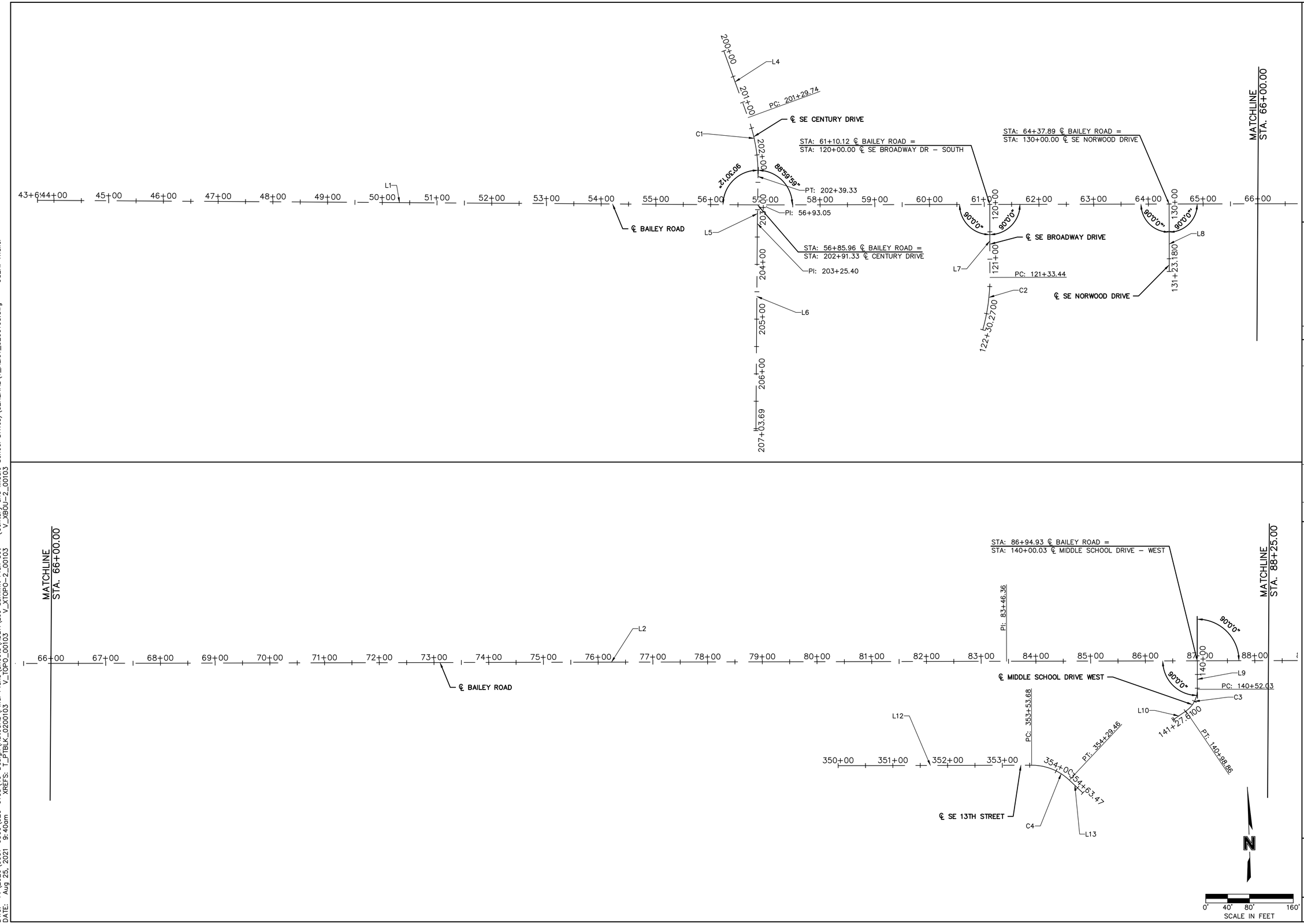

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

ALIGNMENT DATA

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

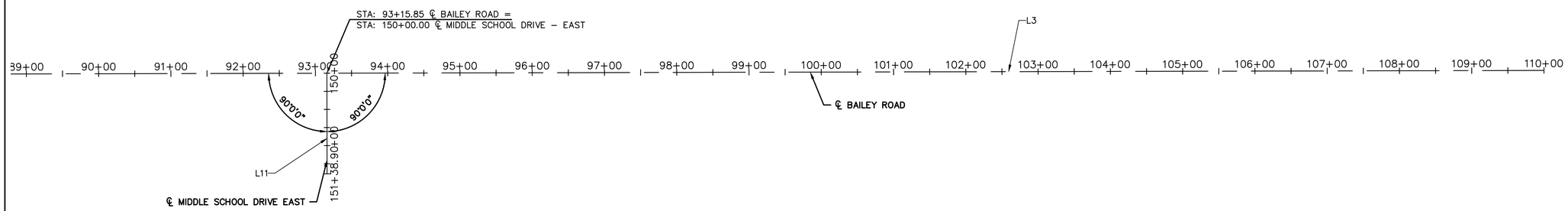
2021

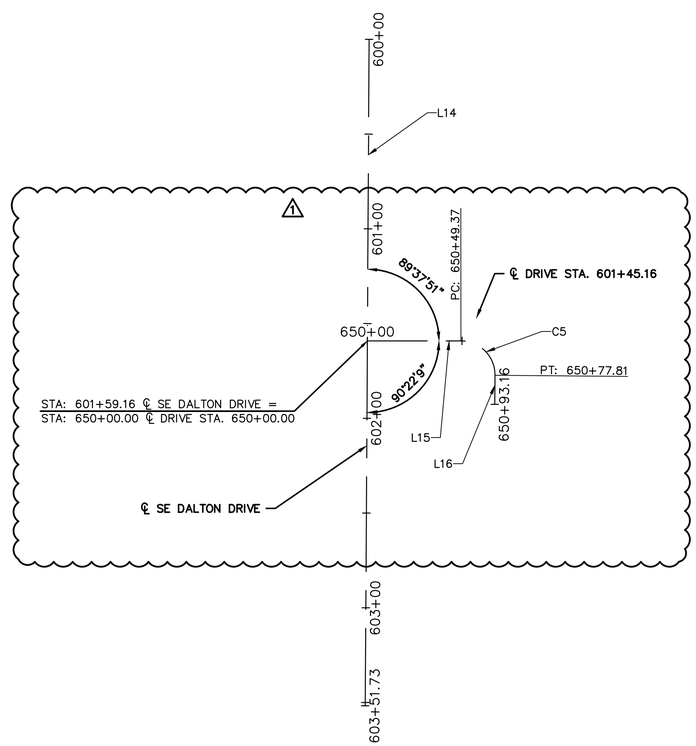
LEE'S SUMMIT, MISSOURI

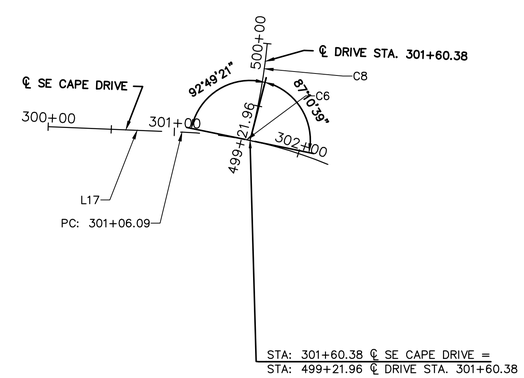
C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_ALI01_0200103
DATE: 2021-02-01

SHEET
7 OF 101

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set – (Century and Middle School Drives)\GENERAL\T_ALI01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 9:40am XREF'S: T_PTBLK_0200103 V_TOPO_00103 V_XTOPO-2_00103 V_XBOU-2_00103







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BAILEY ROAD

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		43+69.83 56+93.05	993720.5791 993665.9183	2827563.2008 2828885.2877	1323.22'	S87°37'57"E			
L2		56+93.05 83+46.36	993665.9183 993579.3187	2828885.2877 2831537.1864	2653.31'	S88°07'47"E			
L3		83+46.36 110+00.00	993579.3187 993492.7705	2831537.1864 2834189.4132	2653.64'	S88°07'52"E			

CENTURY DRIVE

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L4		200+00.00 201+29.74	993949.5212 993826.1730	2828826.1134 2828866.3338	129.74'	S18°03'35"E			
C1	PC= PI= PT=	201+29.74 201+85.15 202+39.33	993826.1730 993773.4896 993718.1456	2828866.3338 2828883.5125 2828880.7372	109.59'	S7°35'40"E	20°55'50"	55.41'	300.00'
L5		202+39.33 203+25.40	993718.1456 993632.1903	2828880.7372 2828876.4268	86.06'	S2°52'15"W			
L6		203+25.40 207+03.69	993632.1903 993254.2228	2828876.4268 2828860.7609	378.29'	S2°22'24"W			

SE BROADWAY DR - SOUTH

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L7		120+00.00 121+33.44	993652.3058 993518.9376	2829302.1366 2829297.7813	133.44'	S1°52'13"W			
C2	PC= PI= PT=	121+33.44 121+82.17 122+30.27	993518.9376 993470.2374 993423.8234	2829297.7813 2829296.1910 2829281.3591	96.83'	S9°47'46"W	15°51'05"	48.73'	350.00'

SE NORWOOD DRIVE

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L8		130+00.00 131+23.18	993641.6078 993518.4892	2829629.7349 2829625.7144	123.18'	S1°52'13"W			

MIDDLE SCHOOL DRIVE - WEST

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L9		140+00.00 140+52.03	993567.9501 993515.9461	2831885.5710 2831883.8740	52.03'	S1°52'08"W			
C3	PC= PI= PT=	140+52.03 140+77.50 140+98.86	993515.9461 993490.4928 993476.9095	2831883.8740 2831883.0434 2831861.5016	46.83'	S29°49'03"W	55°53'50"	25.47'	48.00'
L10		140+98.86 141+27.61	993476.9095 993461.5769	2831861.5016 2831837.1858	28.75'	S57°45'58"W			

MIDDLE SCHOOL DRIVE - EAST

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L11		150+00.00 151+38.90	993547.6988 993408.8714	2832506.1625 2832501.6323	138.90'	S1°52'08"W			

SE 13TH STREET

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L12		350+00.00 353+53.68	993399.5226 993387.9748	2831222.9266 2831576.4215	353.68'	S88°07'44"E			
C4	PC= PI= PT=	353+53.68 353+93.50 354+29.46	993387.9748 993386.6750 993358.3824	2831576.4215 2831616.2123 2831644.2218	75.78'	S66°25'14"E	43°25'01"	39.81'	100.00'
L13		354+29.46 354+63.47	993358.3824 993334.2128	2831644.2218 2831668.1496	34.01'	S44°42'43"E			

SE DALTON DRIVE

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L14		600+00.00 603+51.73	992250.3770 991898.9381	2831337.7063 2831323.4004	351.73'	S2°19'52"W			

DRIVE STA. 650+00.00

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L15		650+00.00 650+49.37	992091.3468 992089.6565	2831331.2327 2831380.5784	49.37'	S88°02'17"E			
C5	PC= PI= PT=	650+49.37 650+67.54 650+77.81	992089.6565 992089.0346 992070.8857	2831380.5784 2831398.7337 2831397.9452	28.44'	S42°46'31"E	90°31'33"	18.17'	18.00'
L16		650+77.81 650+93.16	992070.8857 992055.5518	2831397.9452 2831397.2790	15.35'	S2°29'16"W			

SE CAPE DRIVE

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L17		300+00.00 301+06.09	991564.3519 991560.0371	2831348.8128 2831454.8109	106.09'	S87°40'08"E			
C6	PC= PI= PT=	301+06.09 301+66.18 302+25.00	991560.0371 991557.5931 991534.4341	2831454.8109 2831514.8505 2831570.2976	118.91'	S77°30'00"E	20°20'17"	60.09'	335.00'

DRIVE STA. 301+60.38

NO.		STATION	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
C8	PC= PI= PT=	499+21.96 499+61.06 500+00.00	991553.4513 991591.3073 991630.2036	2831508.6475 2831518.4053 2831522.3256	78.04'	N10°06'17"E	8°41'56"	39.09'	514.00'

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GENERAL NOTES FOR CAPITAL IMPROVEMENTS PROJECTS
(REV. FEBRUARY 10, 2010)

1) PRELIMINARY INFORMATION:

a) CONSULT PARAGRAPH 6.12 OF THE EJCDC GENERAL CONDITIONS (C–700) FOR A COMPLETE LIST OF RECORD DOCUMENTS THAT THE CONTRACTOR SHALL MAINTAIN ON SITE.

b) PERMITS REQUIRED FOR THE WORK CAN BE FOUND IN SECTION 1010 OF THE GENERAL REQUIREMENTS (DIVISION 1).

c) CONSTRUCTION OF THE WORK SHOWN OR IMPLIED BY THIS SET OF DRAWINGS SHALL NOT BE INITIATED UNLESS ALL PRELIMINARY CONTRACT OBLIGATIONS ARE MET, AND THE OWNER IS NOTIFIED OF THE INTENT TO START THE WORK. SEE SECTION 1020 OF DIVISION 1.

d) ALL WORK SHALL BE CONFINED WITHIN THE CONSTRUCTION LIMITS OR AS OTHERWISE DIRECTED BY THE OWNER.

e) ANY WORK PERFORMED PRIOR TO ENGINEER'S REVIEW AND APPROVAL OF THE PERTINENT SUBMITTAL WILL BE AT THE SOLE EXPENSE AND RESPONSIBILITY OF CONTRACTOR. SUBMITTAL PROCEDURES AND REQUIREMENTS CAN BE FOUND IN PARAGRAPH 6.17 OF C–700 AND SECTIONS 1115 AND 1116 OF DIVISION 1.

f) OWNER IS DEFINED AS THE CITY OF LEE'S SUMMIT.

2) COORDINATION AND NOTIFICATIONS:

a) ANY TIME REFERENCES LISTED IN PARAGRAPH 2 ARE TYPICAL TIMELINES. CONSULT SECTION 1105 OF DIVISION 1 FOR PROJECT SPECIFIC TIMELINES, COORDINATION AND NOTIFICATION PROCESSES.

b) PRIOR TO ANY STREET CLOSURES, APPROPRIATE NOTIFICATIONS WILL BE DISTRIBUTED. THE CLOSURES OF ARTERIAL AND COLLECTOR STREETS WILL TYPICALLY CAUSE THE OWNER TO GENERATE A PRESS RELEASE AND DETOUR MAP. THIS IS TYPICALLY 14 CALENDAR DAYS.

c) THE REMOVAL OF TREES, SHEDS, FENCING OR OTHER ITEMS ON PRIVATE PROPERTY, NOT OTHERWISE SHOWN ON THESE PLANS, ARE NOT AUTHORIZED ON THIS PROJECT. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF ANY SUCH WORK IS PROPOSED. THE OWNER REQUIRES AT LEAST 14 CALENDAR DAYS TO NOTIFY PROPERTY OWNER RESIDENT, IN ORDER TO GIVE THEM OPPORTUNITY TO SALVAGE THESE ITEMS.

d) PRIOR TO DRIVEWAY DEMOLITION AND RECONSTRUCTION, CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE PROPERTY OWNER OR RESIDENT. THIS IS TYPICALLY 2 WORKING DAYS.

e) PRIOR TO SHUTTING DOWN A WATER MAIN, CONTRACTOR SHALL NOTIFY AND COORDINATE WITH THE PROPERTY OWNER OR RESIDENT. THIS IS TYPICALLY 2 WORKING DAYS.

f) CONTRACTOR SHALL NOT BE ALLOWED TO WORK WEEKENDS OR HOLIDAYS WITHOUT REQUESTING PRIOR APPROVAL FROM OWNER THREE WORKING DAYS IN ADVANCE.

g) BY ORDINANCE 17–42, WORKING HOURS WITHIN THE CITY OF LEE'S SUMMIT ARE 7:00 A.M. TO 10:00 P.M. REQUESTS TO WORK BEYOND THESE HOURS MUST BE FILED WITH THE OWNER ONE WEEK IN ADVANCE.

3) SURVEY:

a) IN ACCORDANCE WITH PARAGRAPH 4.05 OF C–700, OWNER OR ENGINEER SHALL PROVIDE ENGINEERING SURVEYS TO ESTABLISH REFERENCE POINTS FOR CONSTRUCTION WHICH IN THEIR JUDGMENT ARE NECESSARY TO ENABLE CONTRACTOR TO PERFORM THE WORK. CONTRACTOR IS RESPONSIBLE FOR LAYING OUT THE WORK AND SHALL SET THOSE STAKES NECESSARY TO CONSTRUCT THIS PROJECT. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, UNLESS LISTED IN THE BID TAB.

b) IN ACCORDANCE WITH PARAGRAPH 4.05 OF C–700, CONTRACTOR SHALL RESET ANY PERMANENT REFERENCE POINTS, PROPERTY CORNERS AND PROPERTY MONUMENTS THAT ARE DISTURBED DURING CONSTRUCTION. THESE POINTS AND MONUMENTS SHALL BE RESET BY A REGISTERED LAND SURVEYOR IN ACCORDANCE WITH STATE LAW. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK.

4) UNDERGROUND FACILITIES:

a) INFORMATION REGARDING UNDERGROUND FACILITIES IS APPROXIMATE AND WAS COMPILED USING INFORMATION PROVIDED BY THE FACILITY OWNER. CONSULT PARAGRAPH 4.04 OF C–700 FOR FURTHER INFORMATION.

b) UNLESS BORED, ALL UNDERGROUND UTILITIES (INCLUDING THE CONTRACTOR'S WORK) THAT CROSS UNDER PROPOSED STREET PAVEMENTS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF THE NEW PAVEMENT.

5) WATER, STORM & SANITARY SEWER:

a) WATER CAN BE PURCHASED FROM THE CITY'S WATER UTILITIES DEPARTMENT.

b) ALL MANHOLES, VALVE LIDS, METER LIDS, FIRE HYDRANTS AND AIR RELIEF ASSEMBLIES WITHIN THE CONSTRUCTION LIMITS SHALL BE RELOCATED OR ADJUSTED TO GRADE BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS. ALL VALVE RISERS IN PAVEMENT (WHETHER ADJUSTED, REPLACED OR PLACED) SHALL BE CAST IRON AND CONFORM TO THE SPECIFICATIONS. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, UNLESS LISTED IN THE BID TAB.

c) CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE FLOWS AROUND EACH SEGMENT OF PIPE THAT IS TO BE REPLACED OR REFURBISHED. CONTRACTOR SHALL HAVE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE WORK ON THE PIPE SEGMENT PRIOR TO ISOLATING THE SEWER SEGMENT AND BEGINNING BYPASS PUMPING OPERATIONS. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, UNLESS LISTED IN THE BID TAB.

6) ENVIRONMENTAL & SAFETY:

a) CONTRACTOR SHALL USE ADEQUATE DUST CONTROL MEASURES DURING ALL PHASES OF THE WORK. CONSULT SECTION 1145 IN DIVISION 1.

b) SILTATION AND EROSION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL SYSTEMS, REPLACING DAMAGED OR FAILED EROSION CONTROL DEVICES AND INSPECTING THE SITE IN ORDER TO REPAIR THE EROSION CONTROL SYSTEMS WITHIN 24 HOURS AFTER A SIGNIFICATION RAIN EVENT. GRADING ADJACENT TO PAVEMENTS SHALL BE LEFT THREE INCHES BELOW THE TOP OF PAVEMENT UNTIL IMMEDIATELY BEFORE SOD OR SEED IS PLACED. EROSION AND SEDIMENT CONTROL MUST BE IN PLACE PRIOR TO THE DISTURBANCE OF THE GROUND. FIELD ADJUSTMENTS TO EROSION AND SEDIMENT CONTROL MAY BE REQUIRED DEPENDING ON THE SITE CONDITIONS.

c) UNLESS WAIVED IN SECTION 1010, CONTRACTOR SHALL MAINTAIN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE IN ACCORDANCE WITH DNR REGULATIONS.

d) PROPERTY MAINTENANCE INFORMATION CAN BE FOUND IN SECTION 1145 OF DIVISION 1.

7) GRADING, REMOVALS & DAMAGED ITEMS:

a) INFORMATION ON SALVAGED MATERIAL CAN BE FOUND IN SECTION 1150 OF DIVISION 1.

b) NO BURNING IS ALLOWED ON THE SITE.

c) DRIVEWAYS, PARKING LOTS, SIDEWALKS, FENCES, IRRIGATION SYSTEMS AND OTHER ITEMS DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE DAMAGE OCCURRED. UNLESS WAIVED BY OWNER, ALL ITEMS REQUIRING REPLACEMENT SHALL BE REPLACED WITH NEW MATERIALS, AND ALL MATERIALS ARE SUBJECT TO OWNER'S APPROVAL. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, UNLESS LISTED IN THE BID TAB.

d) ALL FENCE REPLACEMENT SHOULD BE RELOCATED TO THE PROPERTY LINES, UNLESS THE EXISTING FENCE WAS LOCATED INSIDE OF THE PROPERTY LINES. FENCE INSIDE OF PROPERTY LINES SHOULD BE PLACED IN ITS ORIGINAL LOCATION. GATES AND FENCE CORNERS SHALL BE RE–ESTABLISHED AT THE ORIGINAL LOCATIONS, UNLESS INDICATED BY THE DRAWINGS. REMOVALS SHALL BE AS SHOWN ON THE DRAWINGS OR AS APPROVED BY OWNER. REMOVALS NOT APPROVED BY OWNER WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

e) ROOF DRAINS, UNDER DRAINS, SEPTIC LINES AND OTHER SMALL DRAINAGE LINES NOT SHOWN ON THE DRAWINGS THAT ARE UNCOVERED OR DAMAGED SHALL BE REPAIRED, AND THE POINT OF DISCHARGE SHALL BE PLACED NO CLOSER THAN FIVE FEET TO ANY ADJOINING PROPERTY LINE INCLUDING THE RIGHT–OF–WAY LINE (SECTION 16–413 OF THE CODE OF ORDINANCES). UNLESS DIRECTED BY THE CITY ENGINEER, NO DRAIN LINES SHALL BE CONNECTED TO THE STORM SEWER SYSTEM. MATERIALS AND LOCATION ARE SUBJECT TO OWNER'S APPROVAL. IF NO UNIT PRICE IS IN THE BID, THEN PAYMENT WILL BE NEGOTIATED PER THE CONTRACT DOCUMENTS.

f) MATERIALS THAT MAY BE CLASSIFIED AS UNSUITABLE OR REQUIRE UNDERGRADING SHALL BE DETERMINED BY THE OWNER OR THE OWNER'S REPRESENTATIVE. CONTRACTOR SHALL NOT MAKE THIS DETERMINATION.

g) All WASTE MATERIAL SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. ALL MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE. SAWCUTTING SHALL BE SUBSIDIARY TO OTHER BID ITEMS.

8) TRAFFIC:

a) UNLESS DIRECTED IN THE CONTRACT DOCUMENTS OR DRAWINGS, CONTRACTOR SHALL MAINTAIN TRAFFIC AND PEDESTRIAN ACCESS AT ALL TIMES.

b) APPROPRIATE TRAFFIC CONTROL DEVICES, SIGNAGE AND PAVEMENT MARKINGS SHALL BE ESTABLISHED AND MAINTAINED THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE MUTCD.

ADDITIONAL GENERAL NOTES:

1) ALL TREES TO BE GRUBBED ARE MARKED THUS "X". SPARE ALL TREES THAT ARE MARKED DND (DO NOT DISTURB) OR ANY TREES NOT MARKED AT ALL. EXCEPTIONALLY GOOD TREES SHALL BE SPARED BY ADJUSTING BACKSLOPE LINES DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ALL TREES WITHIN THE CONSTRUCTION LIMITS TO BE SAVED SHALL HAVE HEIR TRUNKS AND ROOT ZONE PHYSICALLY PROTECTED PRIOR TO CONSTRUCTION OPERATIONS BY METHODS APPROVED BY THE ENGINEER.

2) THE CONTRACTOR SHALL POTHOLE ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION OF ANY PORTION OF THE STORM SEWER, UNDERDRAINS, CONDUIT, AND ANY OTHER SUBSURFACE ELEMENTS OF THE PROJECT. THIS SURVEY INFORMATION SHALL BE FORWARDED TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION ON ANY SUBSURFACE ELEMENT ON THE PROJECT WITHOUT THE APPROVAL OF THE ENGINEER. THIS ITEM SHALL BE SUBSIDIARY TO OTHER BID ITEMS.

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RECAPITULATION OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
1	Mobilization	Lump Sum	1
2	Clearing and Grubbing	Lump Sum	1
3	Demolition and Removal	Lump Sum	1
4	Pavement, Asphaltic Surface (APWA Type 5-01) (2")	Sq.Yd.	3,528
5	Pavement, Asphaltic Base (APWA RC Type 5-01) (4")	Sq.Yd.	250
6	Pavement, Asphaltic Base (APWA RC Type 5-01) (5.5")	Sq.Yd.	459
7	Pavement, Asphaltic Base (APWA RC Type 5-01) (8")	Sq.Yd.	22
8	Pavement, Asphaltic Base (APWA RC Type 5-01) (10")	Sq.Yd.	3,239
9	Concrete Base Widening	Sq.Yd.	579
10	Aggregate Base (MoDOT Type 5) (4")	Sq. Yd.	2,948
11	Aggregate Base (MoDOT Type 5) (10")	Sq.Yd.	341
12	Aggregate Base (MoDOT Type 5) (12")	Sq. Yd.	4,369
13	Geogrid (Tensar TX140)	Sq. Yd.	4,709
14	Curb & Gutter (Type CG-1)	Lin. Ft.	3,248
15	Curb & Gutter (Type CG-2)	Lin. Ft.	85
16	Concrete Driveway (6")	Sq. Yd.	201
17	Concrete Driveway (8")	Sq.Yd.	32
18	Concrete Sidewalk (4")	Sq. Yd.	193
19	Concrete Sidewalk (6")	Sq. Yd.	2,307
20	Concrete ADA Ramps	Sq. Ft.	2,201
21	Dectectable Warning Surface	Sq. Ft.	388
22	Inlet (Curb) (5'x3')	Each	2
23	Inlet (Curb) (8'x4')	Each	3
24	Inlet (Curb) (10'x4')	Each	1
25	Junction Box (4'x4')	Each	1
26	Structure Modification	Each	2
27	30" Pipe Collar	Each	1
28	15" Storm Sewer (RCP Class III)	Lin. Ft.	461
29	30" Storm Sewer (RCP Class III)	Lin. Ft.	21
30	15" Storm Sewer (HDPE)	Lin. Ft.	2
31	End Section (15" RC)	Each	1
32	Erosion Control Devices	Lump Sum	1
33	Traffic Signal Installation (Bailey & Century)	Lump Sum	1
34	2" Conduit with Locate Cable and Pull String	Lin. Ft.	1,406
35	Class 1 Fiber Optic Pull Box	Each	5
36	Fiber Interface Panel with 250' Pigtail	Each	2
37	Ethernet Switch, Transition with Separate Power Source	Each	2
38	Single Mode Patch Cable	Each	8
39	Temporary Traffic Control	Lump Sum	1
40	Permanent Signing	Sq. Ft.	54
41	Sign Post	Each	12
42	Pavement Marking (4" Solid White Lane Line)	Lin. Ft.	3,019
43	Pavement Marking (4" Solid Yellow Line)	Lin. Ft.	7,600
44	Pavement Marking (12" Yellow Crosshatch Line)	Lin. Ft.	295
45	Pavement Marking (24" White Stop Line)	Lin. Ft.	122
46	Pavement Marking (6" White Crosswalk Line)	Lin. Ft.	488
47	Pavment Marking (White Right Turn Arrow)	Each	1
48	Pavment Marking (White Left Turn Arrow)	Each	17

1

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

RECAPITULATION OF QUANTITIES

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_QYT01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\GENERAL\T_QYT01_0200103.dwg USER: rhaller
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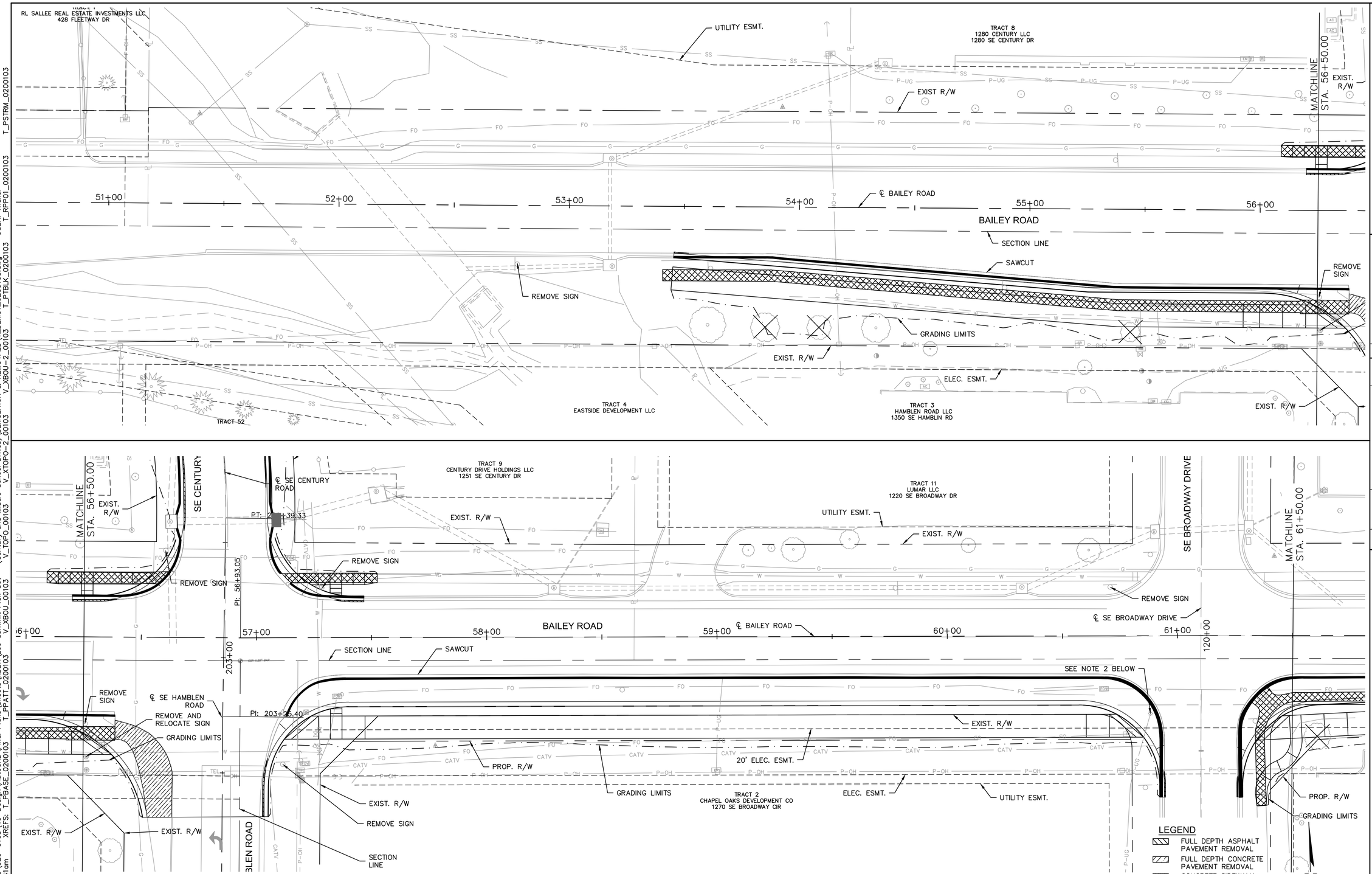

NOTE:

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2. STREET LIGHT RELOCATION BY OTHERS. CONTRACTOR SHALL COORDINATE WITH EVERGY (PHIL INGRAM 816-347-4339) FOR STREET RELOCATION.

LEGEND

- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH CONCRETE PAVEMENT REMOVAL
- CONCRETE SIDEWALK REMOVAL
- CURB REMOVAL
- STORM REMOVAL
- TREE REMOVAL
- HEDGE TREE REMOVAL
- SAWCUT
- GRADING LIMITS

N

0' 10' 20' 40'
SCALE IN FEET

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PROFESSIONAL ENGINEER
8-11-21

RYAN B. FLEMING
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REVISIONS

DEMOLITION & REMOVALS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
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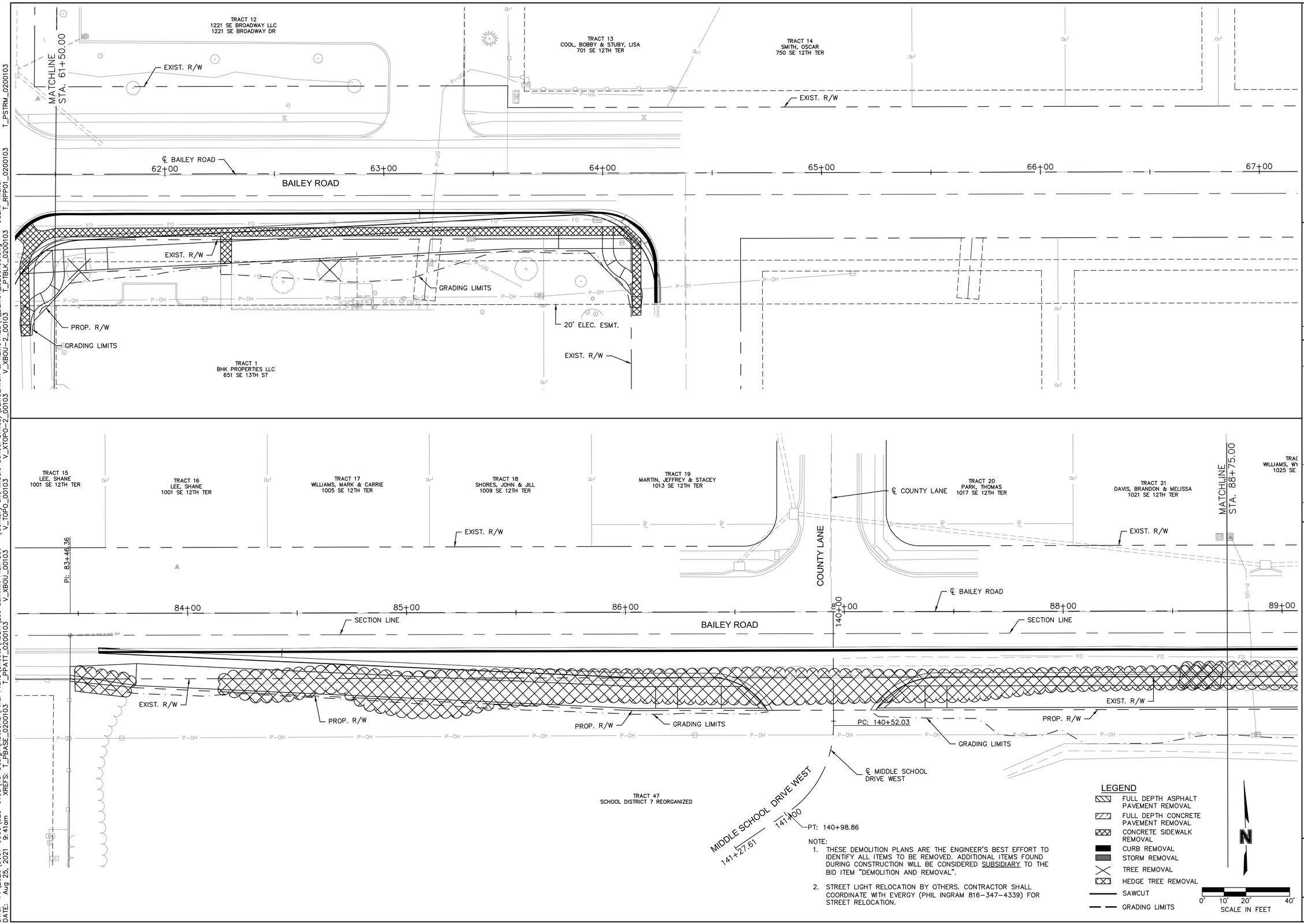

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LEGEND

- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH CONCRETE PAVEMENT REMOVAL
- CONCRETE SIDEWALK REMOVAL
- CURB REMOVAL
- STORM REMOVAL
- TREE REMOVAL
- HEDGE TREE REMOVAL
- SAWCUT
- GRADING LIMITS

N

0' 10' 20' 40'
SCALE IN FEET

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REVISIONS

DEMOLITION & REMOVALS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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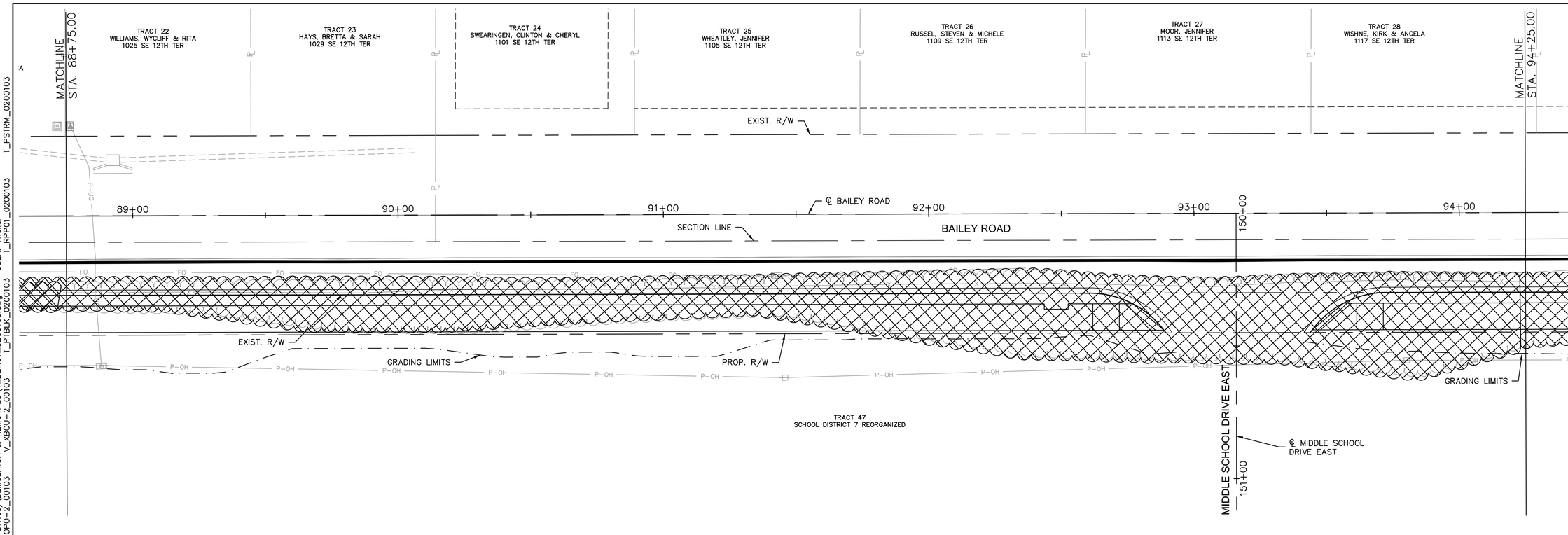

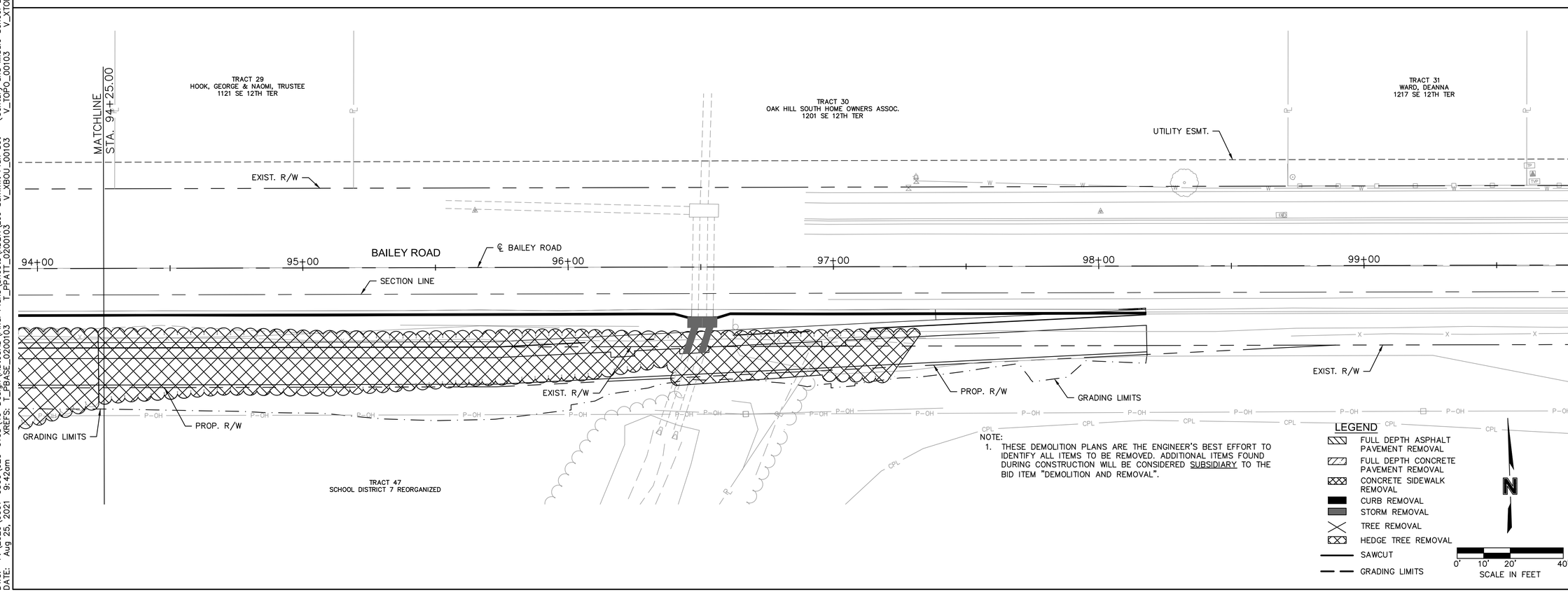

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LEGEND

- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH CONCRETE PAVEMENT REMOVAL
- CONCRETE SIDEWALK REMOVAL
- CURB REMOVAL
- STORM REMOVAL
- TREE REMOVAL
- HEDGE TREE REMOVAL
- SAWCUT
- GRADING LIMITS

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REVISIONS

DEMOLITION & REMOVALS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.:	001592
DRAWN BY:	MLW
CHECKED BY:	RPH
APPROVED BY:	RBF
QA/QC BY:	RBF
PROJECT NO.:	020-0103
DWG NO.:	T_DEM01_0200103
DATE:	2021-02-01

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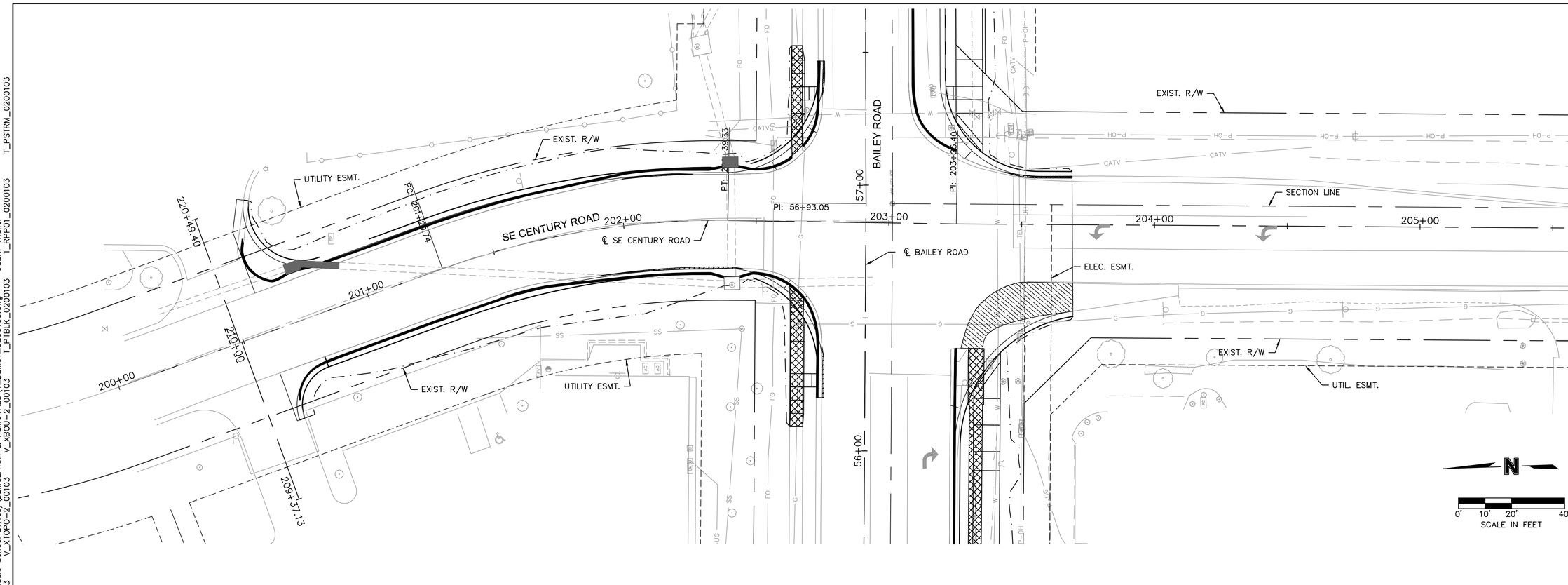

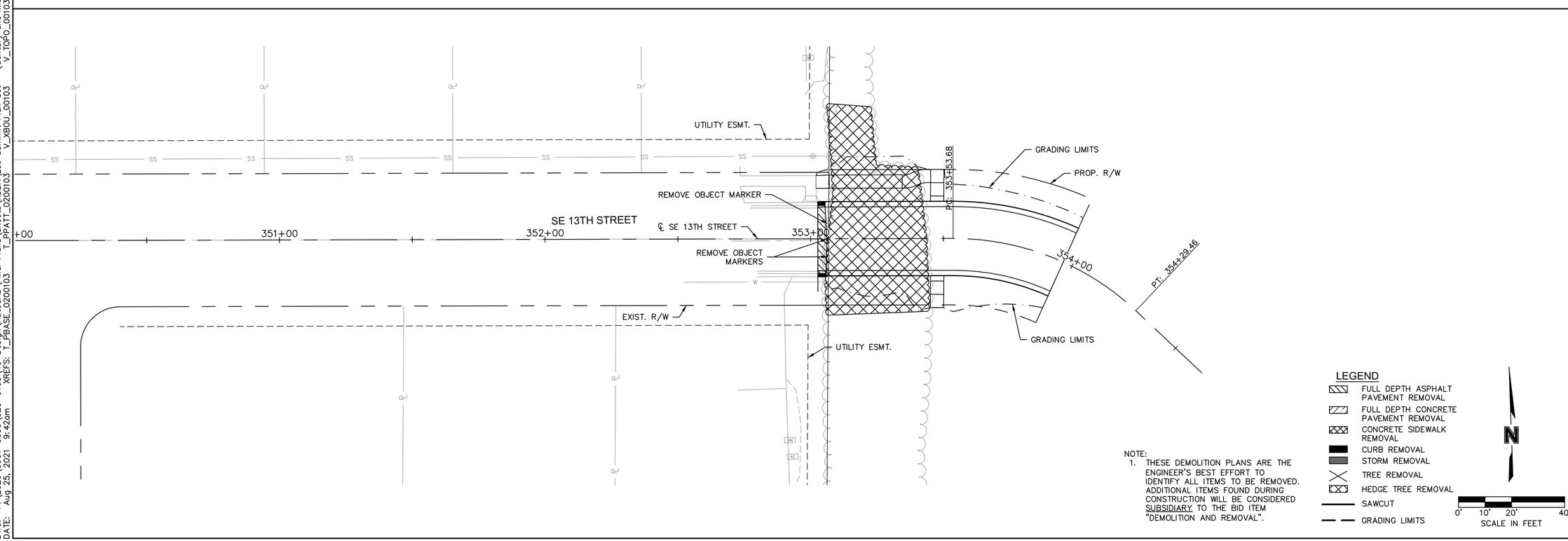

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8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

DEMOLITION & REMOVALS
CENTURY DRIVE & 13TH STREET

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_DEM01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DEMOLITION & REMOVALS\T_DEM01_0200103.dwg USER: rhaller
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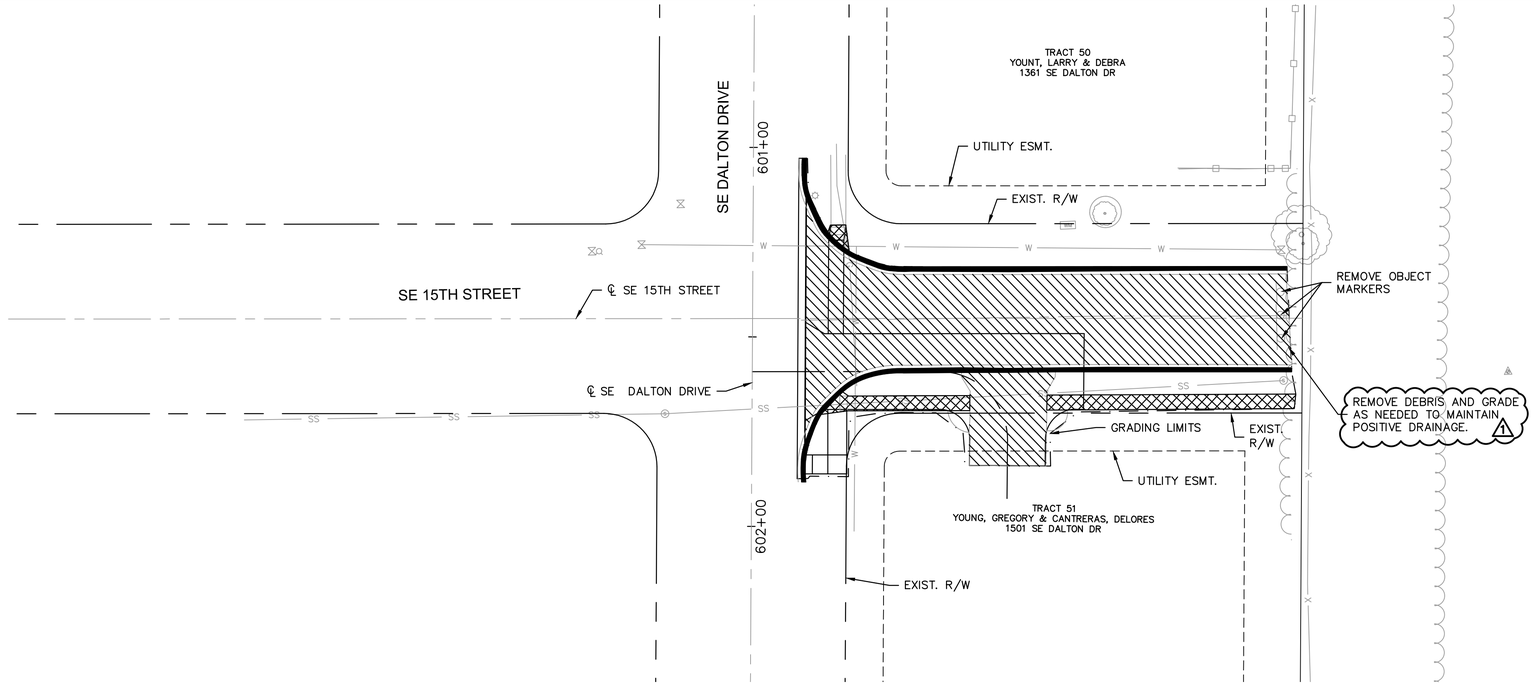

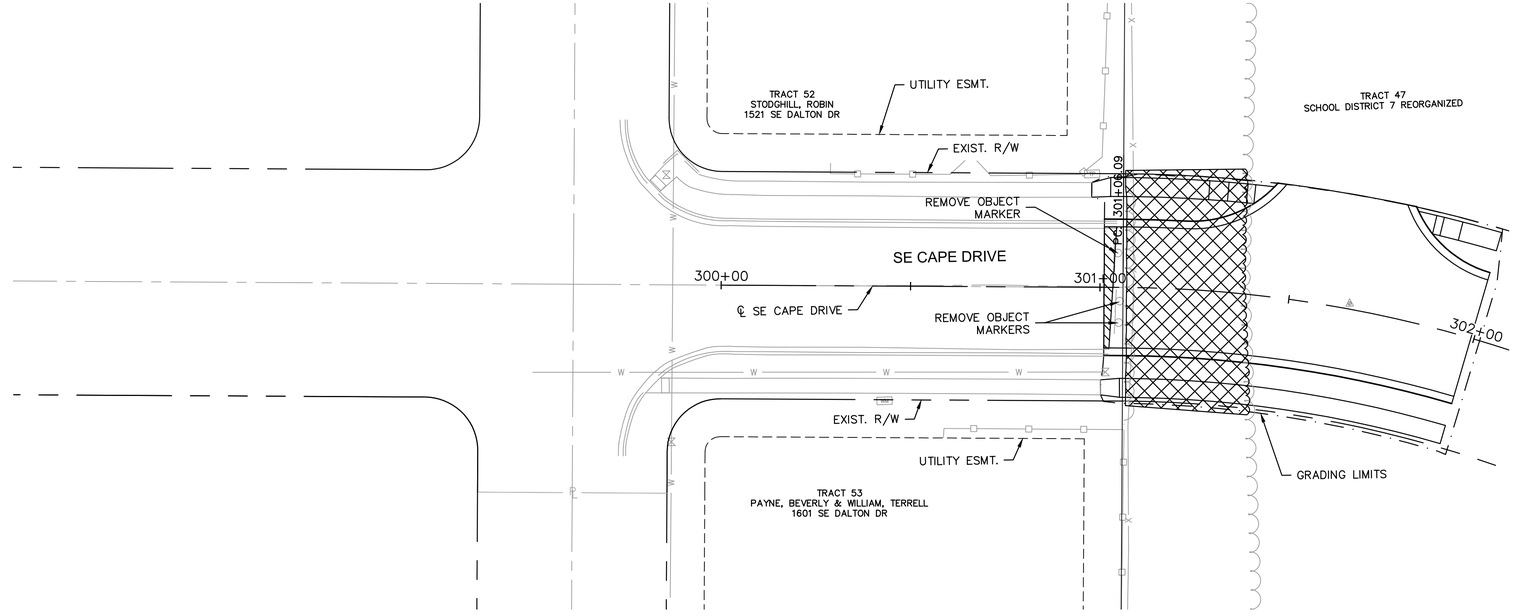

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- FULL DEPTH CONCRETE PAVEMENT REMOVAL
- CONCRETE SIDEWALK REMOVAL
- CURB REMOVAL
- STORM REMOVAL
- TREE REMOVAL
- HEDGE TREE REMOVAL
- SAWCUT
- GRADING LIMITS

N

0' 10' 20' 40'
SCALE IN FEET

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STATE OF MISSOURI
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8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

DEMOLITION & REMOVALS
15TH STREET & CAPE DRIVE

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
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APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
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DATE: 2021-02-01

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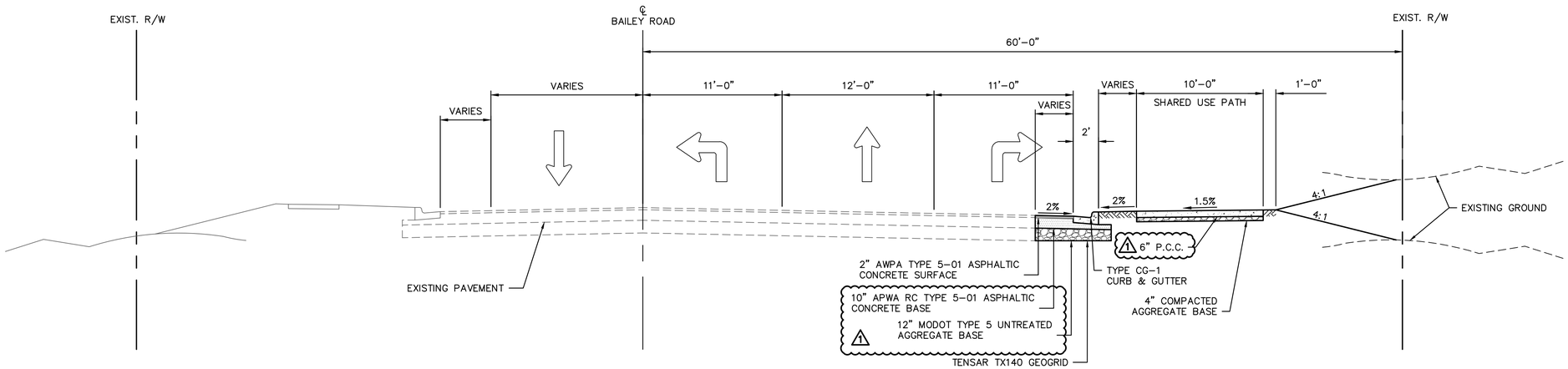
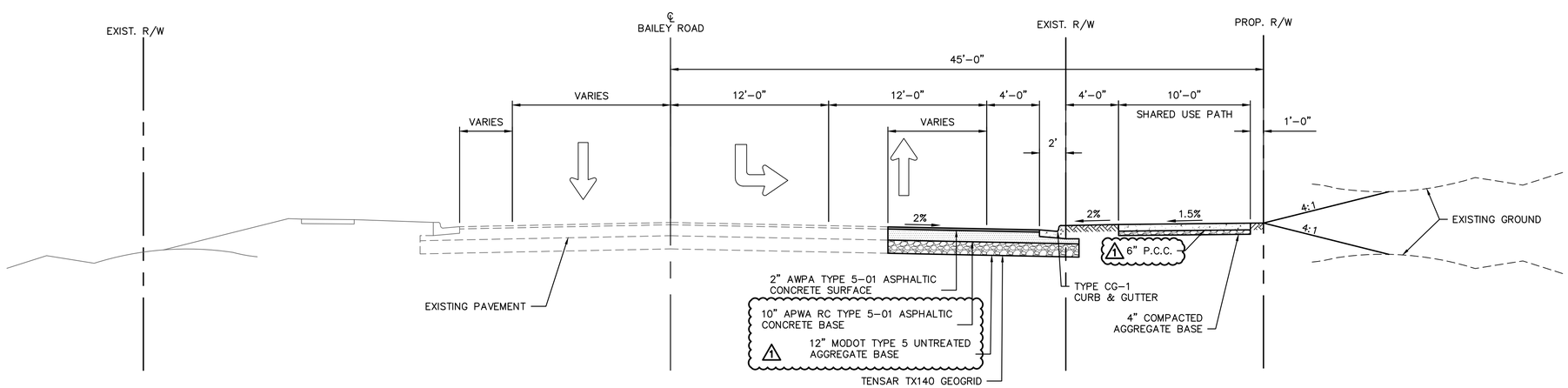
DATE: Aug 25, 2021 9:42am XREFS: T_PBASE_0200103 T_PPATT_0200103 V_XBOU_00103 V_TOPO_00103 V_XBOU-2_00103 V_XTOPO-2_00103 T_PTBLK_0200103 T_RPP01_0200103 T_PSTRM_0200103



TYPICAL SECTION
BAILEY ROAD

NOT TO SCALE

STA. 55+52.44 TO STA. 56+01.64



TYPICAL SECTION
BAILEY ROAD

NOT TO SCALE

STA. 57+40.02 TO STA. 60+57.12
STA. 86+04.25 TO STA. 86+38.73
STA. 87+41.54 TO STA. 92+60.53
STA. 93+71.24 TO STA. 95+72.70

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TYPICAL SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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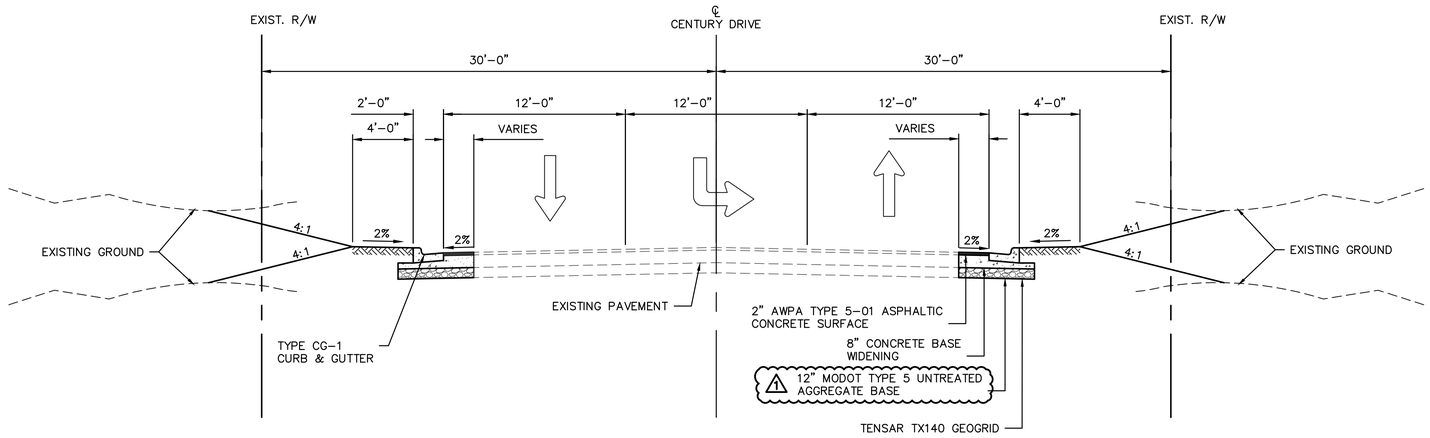
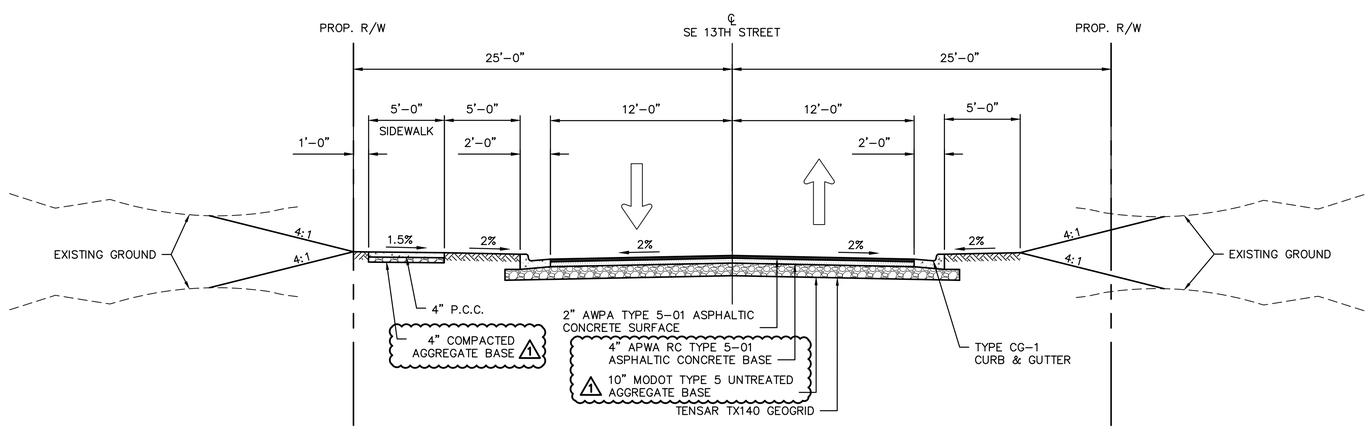


TYPICAL SECTION
SE CENTURY DRIVE

NOT TO SCALE

STA. 200+76.78 TO STA. 202+36.71



TYPICAL SECTION
SE 13TH STREET

NOT TO SCALE

STA. 353+02.70 TO STA. 353+35.59

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TYPICAL SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

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LEE'S SUMMIT, MISSOURI

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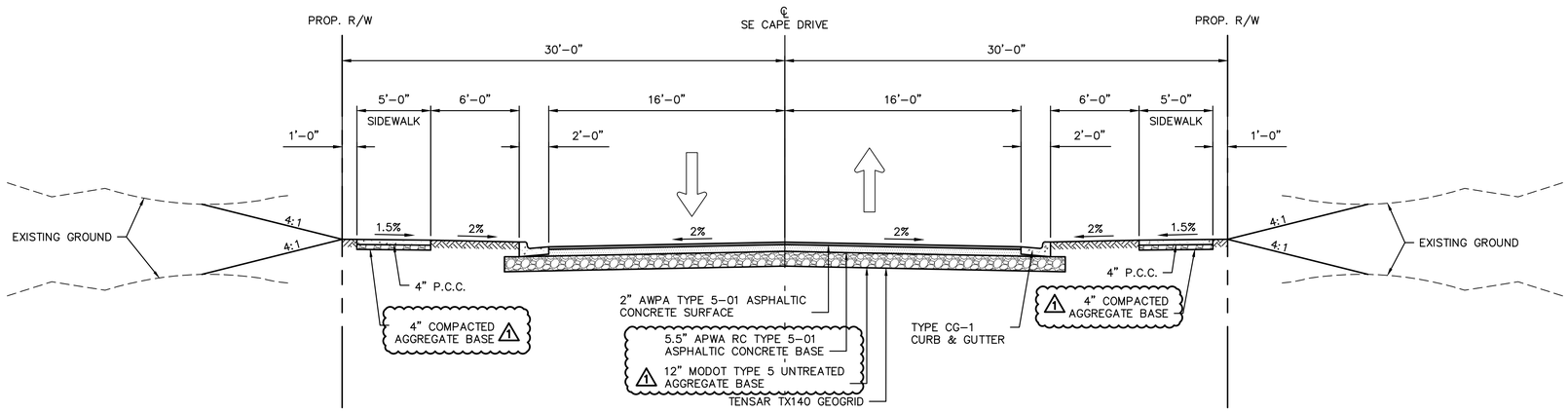

TYPICAL SECTION
SE CAPE DRIVE

NOT TO SCALE

STA. 301+01.09 TO STA. 301+21.99

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REVISIONS

TYPICAL SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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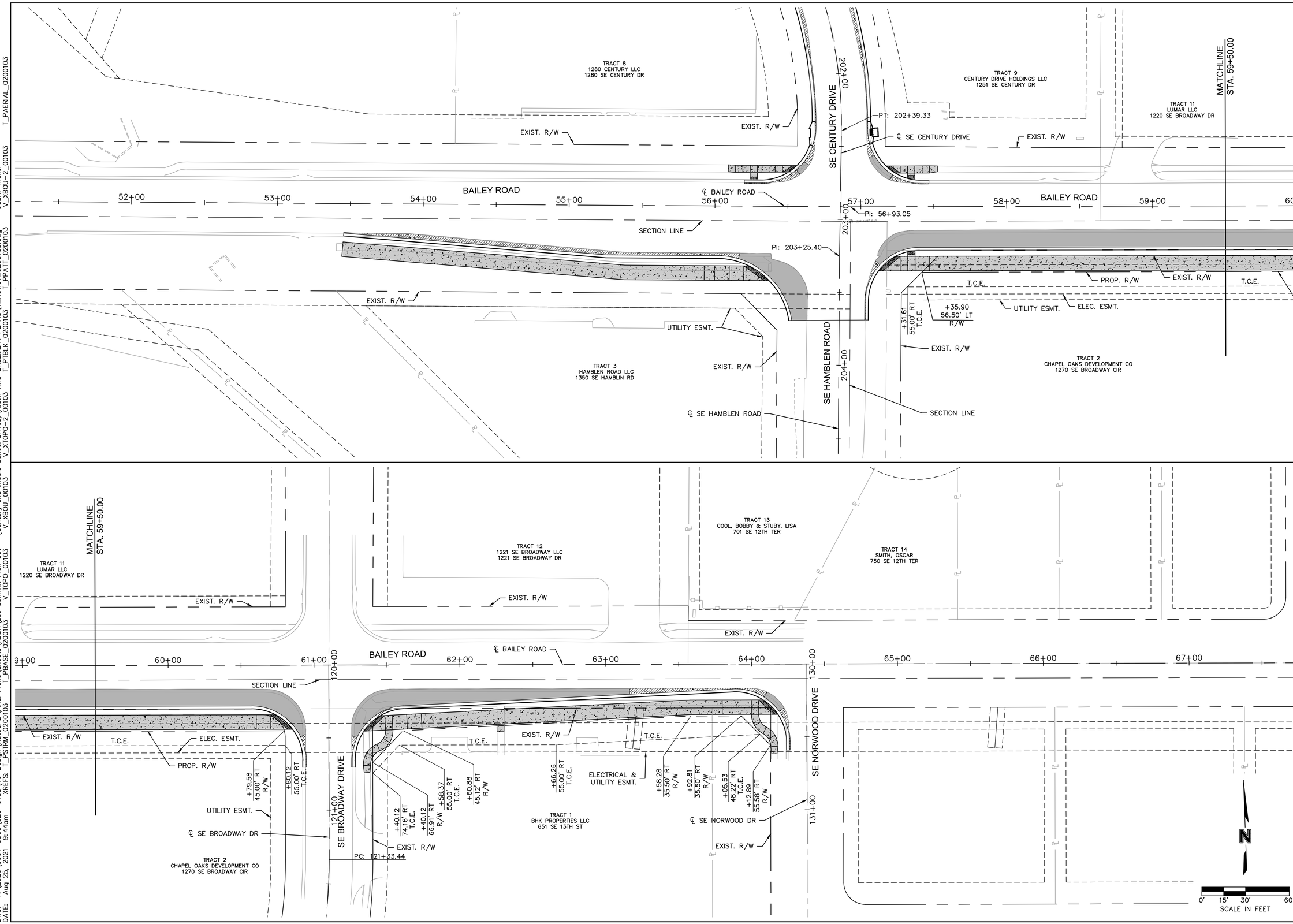

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REVISIONS

RIGHT OF WAY PLANS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
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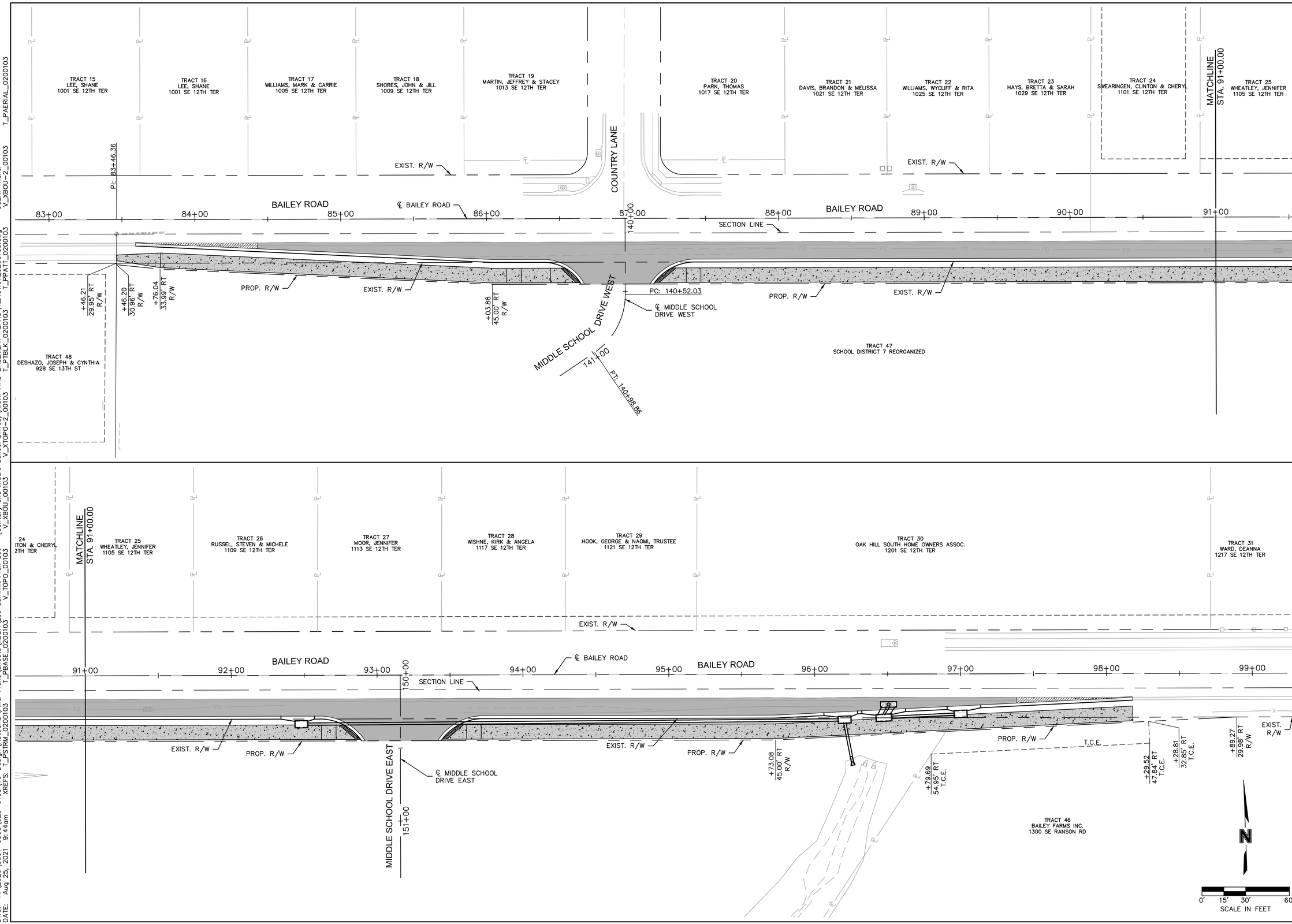

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USER: rhaller

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

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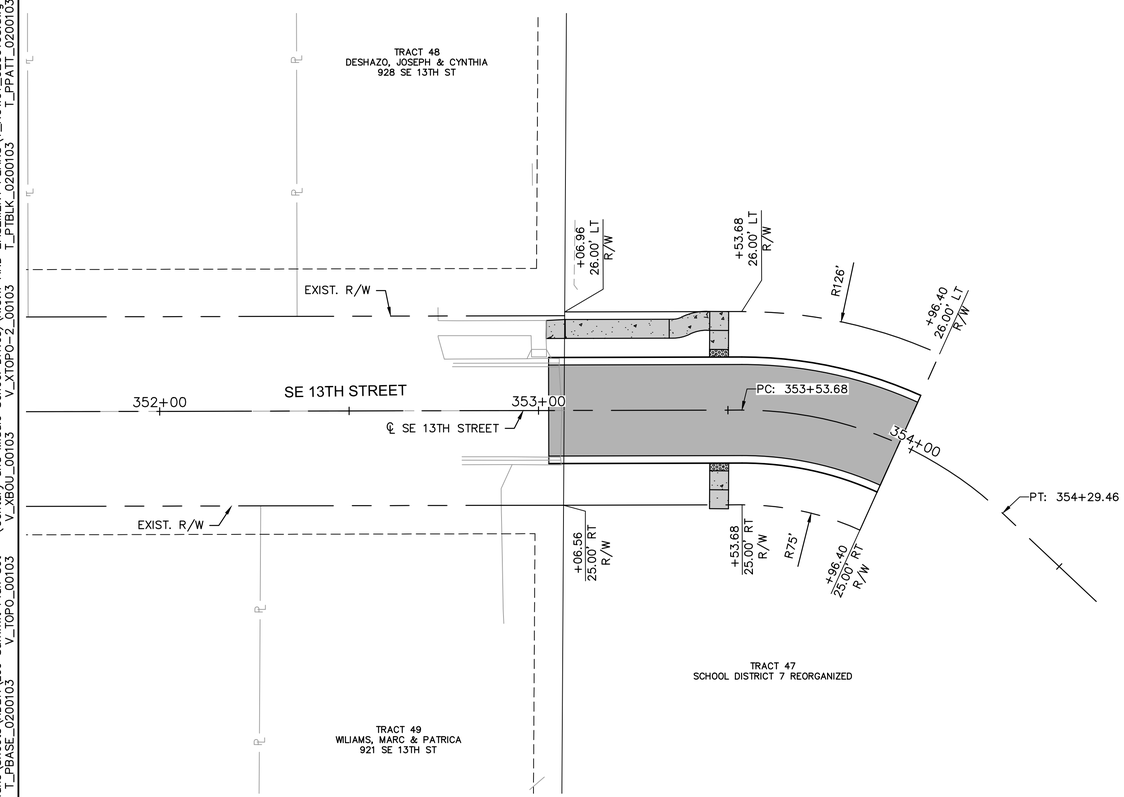
RIGHT OF WAY PLANS
BAILEY ROAD

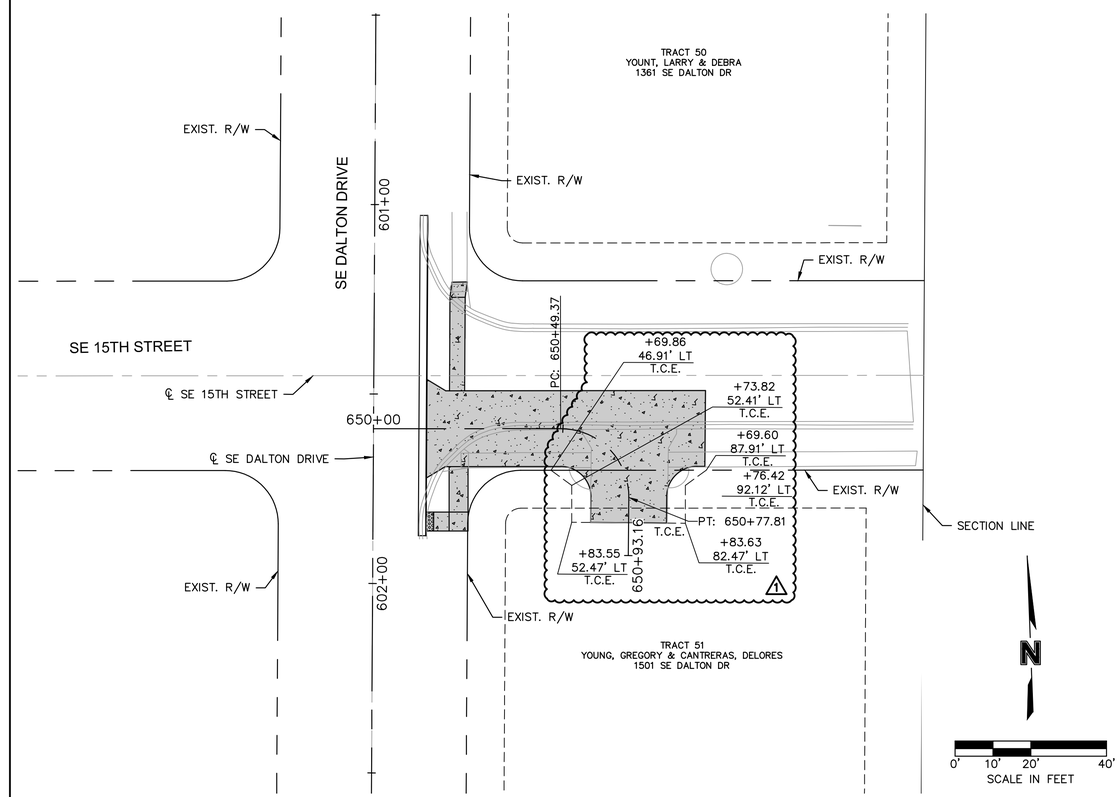
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.:	001592
DRAWN BY:	MLW
CHECKED BY:	RPH
APPROVED BY:	RBF
QA/QC BY:	RBF
PROJECT NO.:	020-0103
DWG NO.:	T_ROW01_0200103
DATE:	2021-02-01





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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER
PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

REVISIONS

RIGHT OF WAY PLANS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
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DWG NO.: T_ROW01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\R.O.W AND EASEMENT PLANS\T_ROW01_0200103.dwg USER: rhaller
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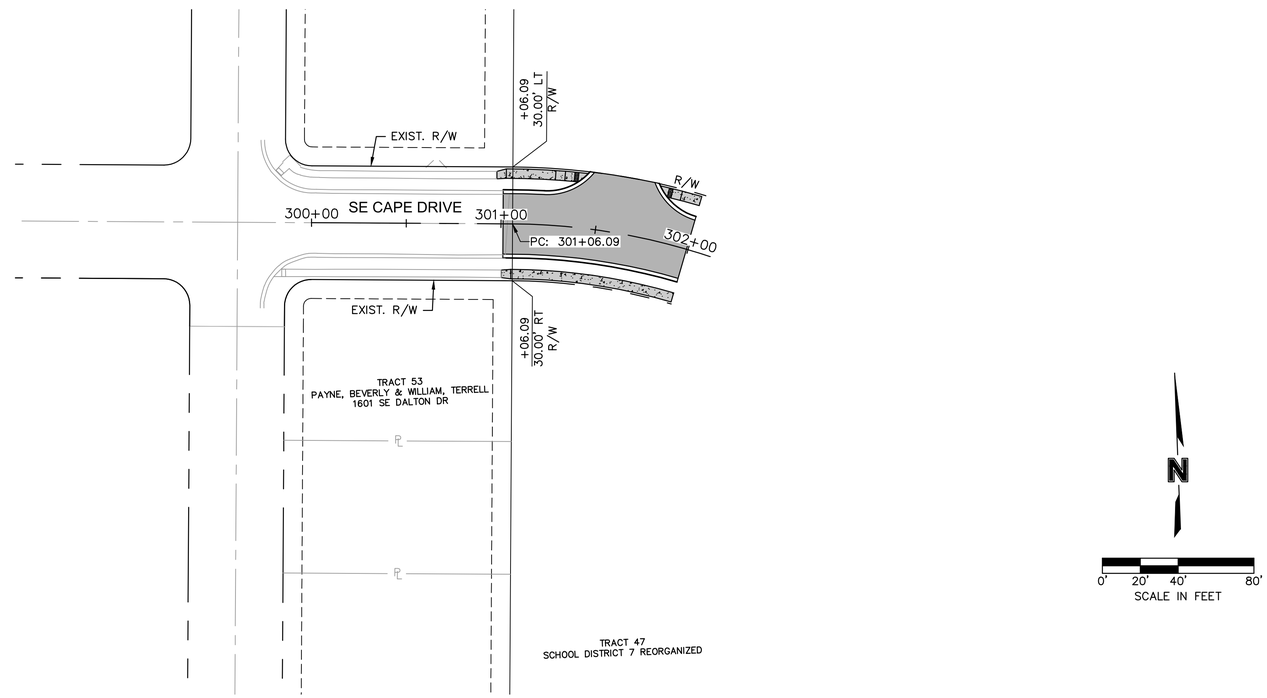

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RIGHT OF WAY PLANS
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LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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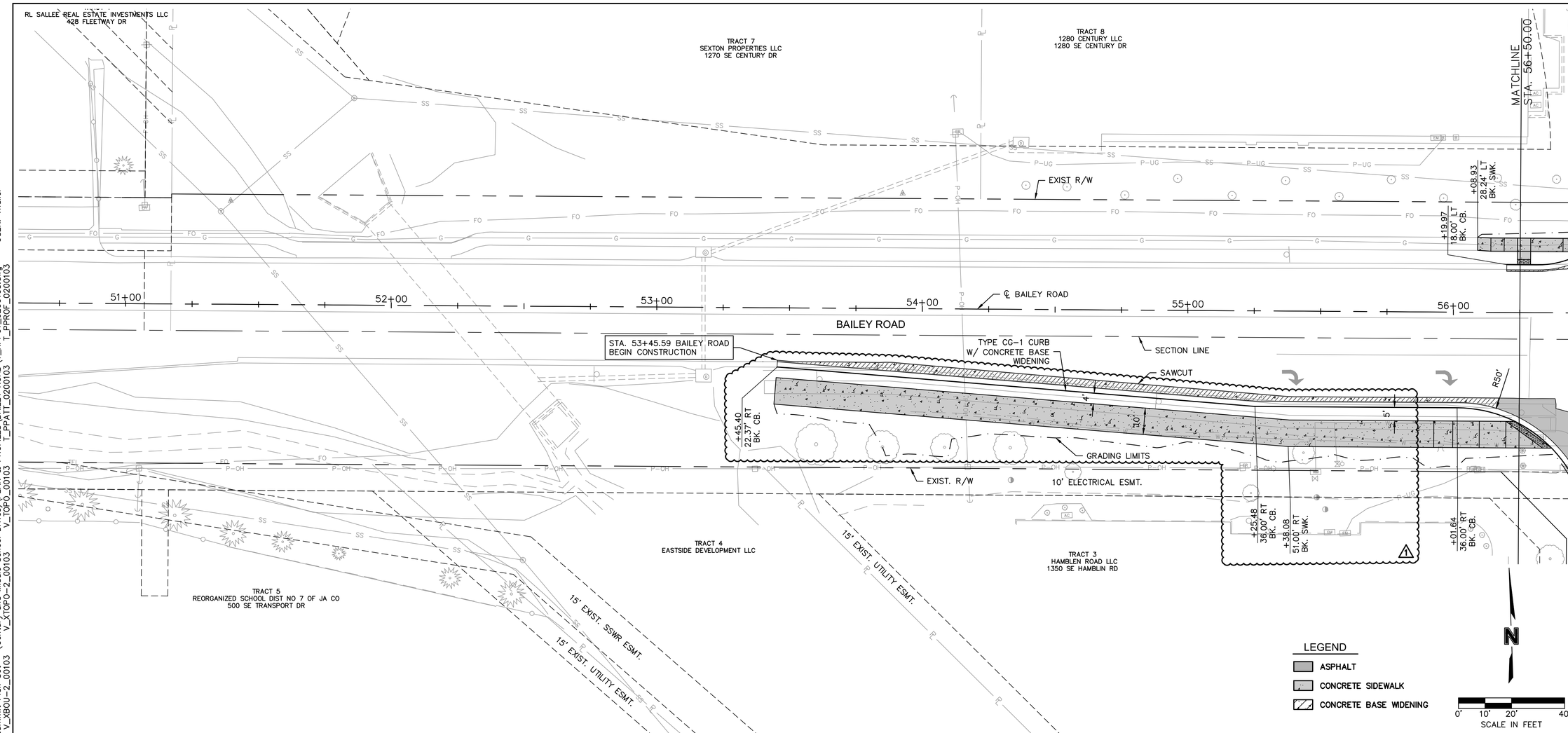
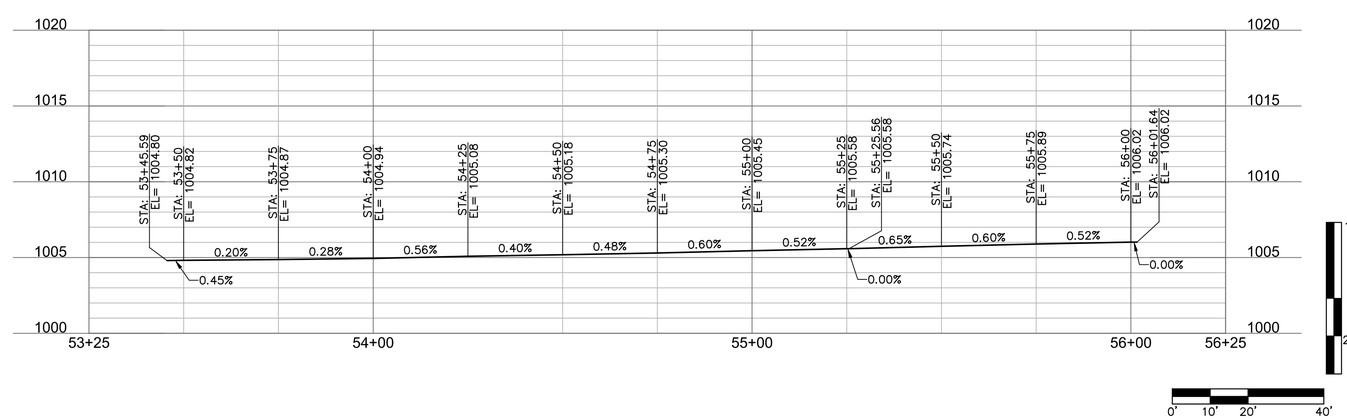


BAILEY ROAD RIGHT EDGE OF PAVEMENT



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PLAN & EDGE OF PAVEMENT PROFILE
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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PROJECT NO.:	020-0103
DWG NO.:	T_RPP01_0200103
DATE:	2021-02-01

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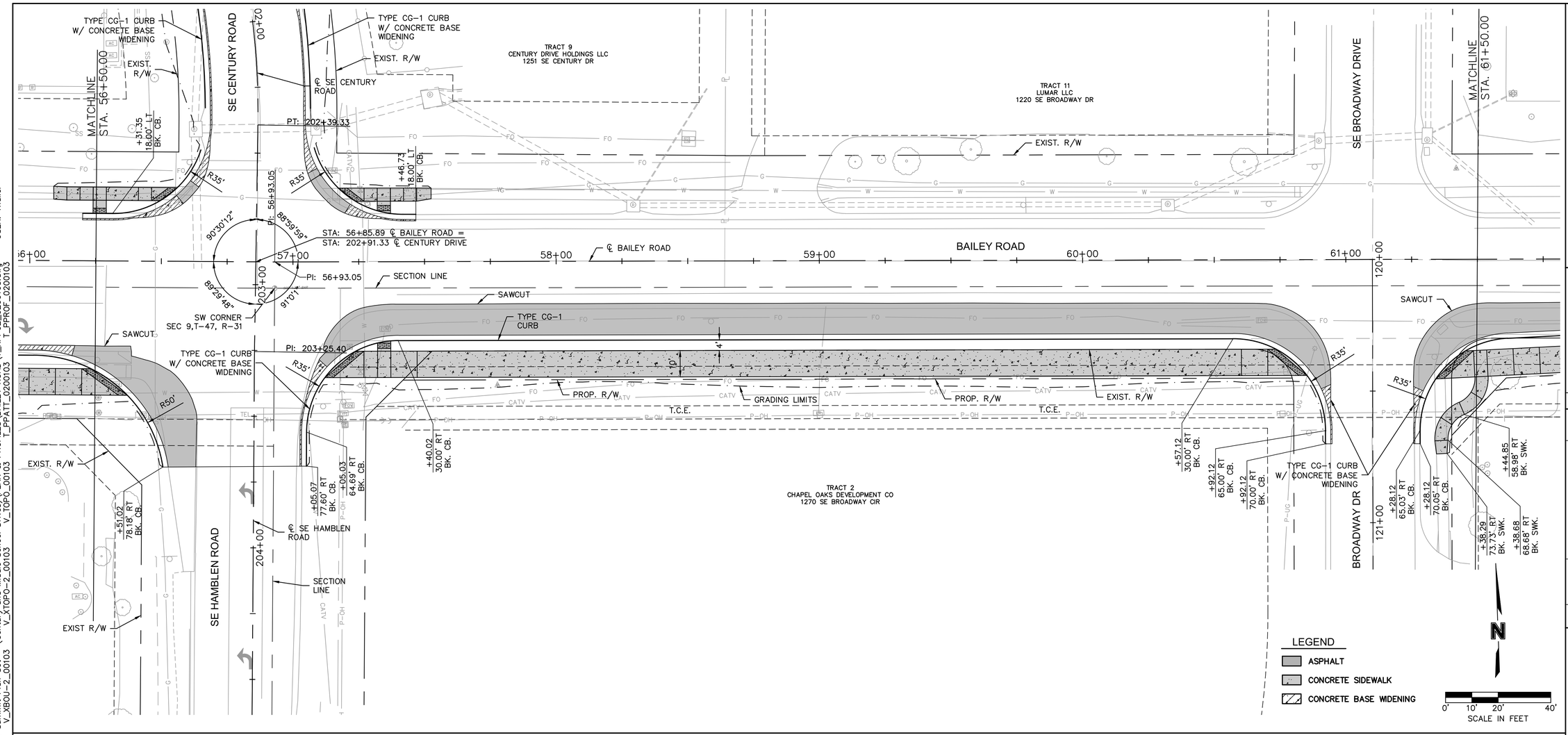
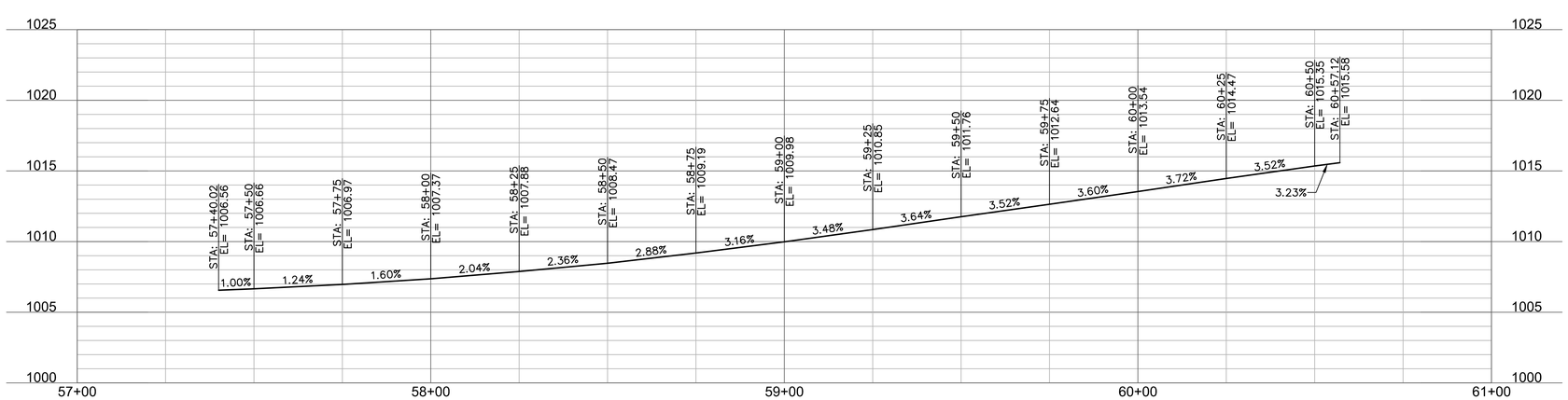


LEGEND

- ASPHALT
- CONCRETE SIDEWALK
- CONCRETE BASE WIDENING

0' 10' 20' 40'
SCALE IN FEET

BAILEY ROAD RIGHT EDGE OF PAVEMENT



10' 5' 2.5' 0'
0' 10' 20' 40'
SCALE IN FEET

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PLAN & EDGE OF PAVEMENT PROFILE
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_RPP02_0200103
DATE: 2021-02-01

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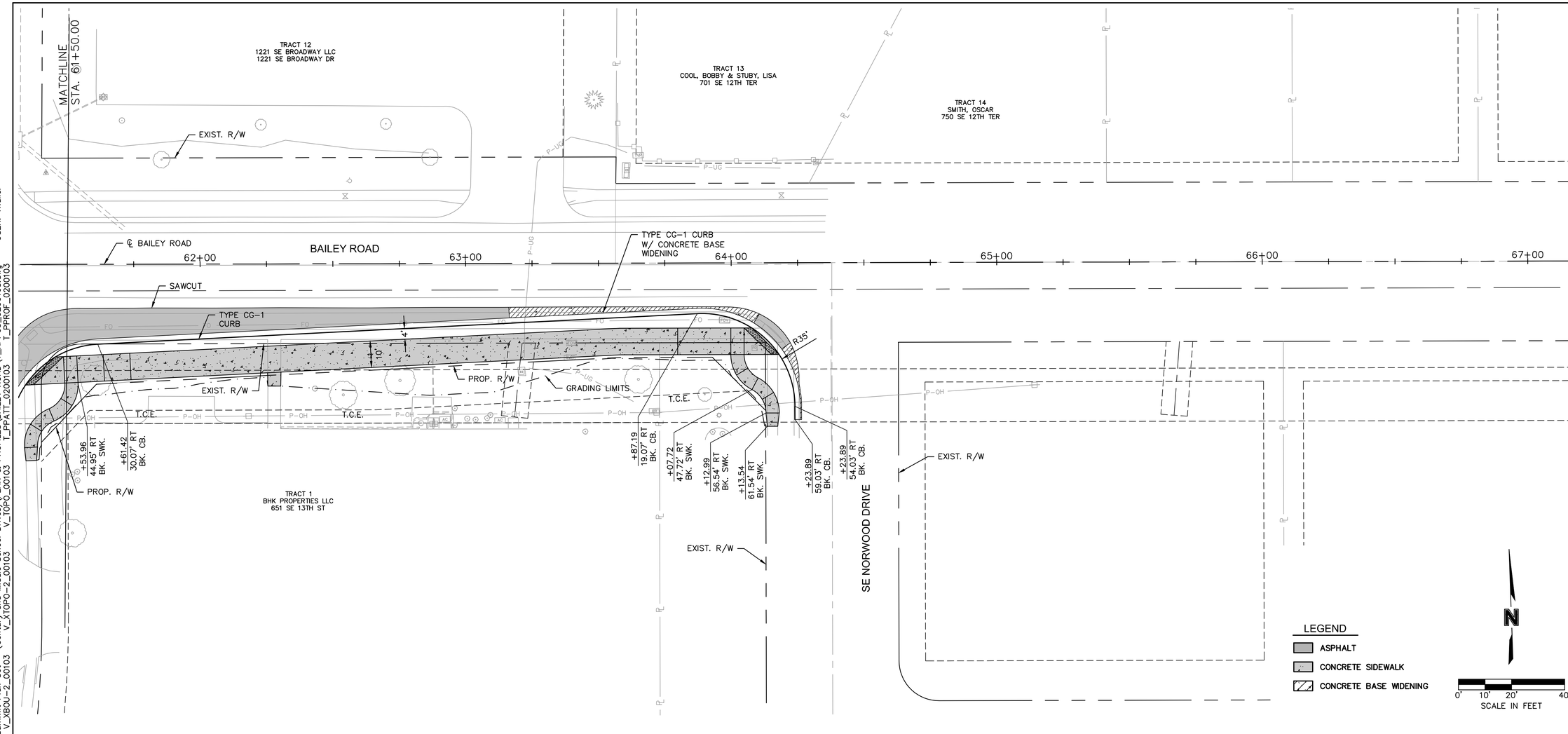
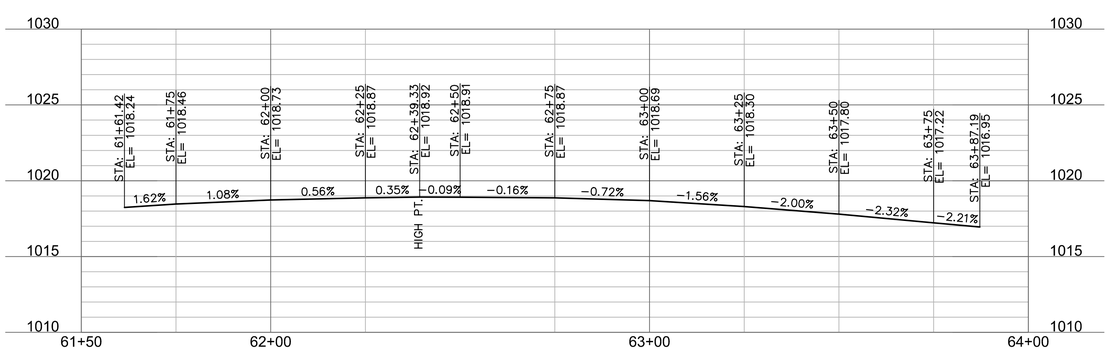


BAILEY ROAD RIGHT EDGE OF PAVEMENT



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BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

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SHEET
26 OF 101

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\PLAN & PROFILES\BAILEY ROAD\T_RPP03_0200103.dwg USER: rhaller
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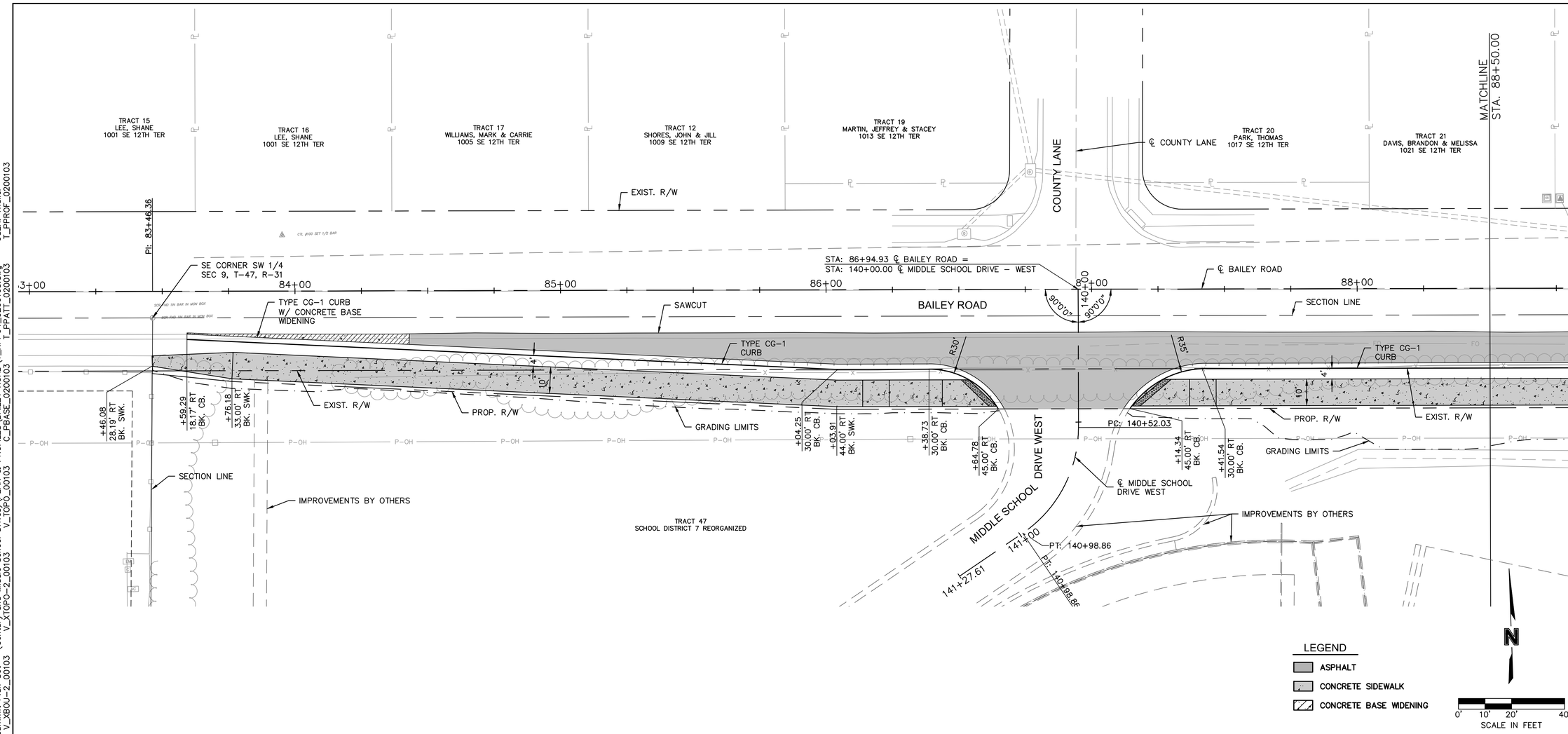

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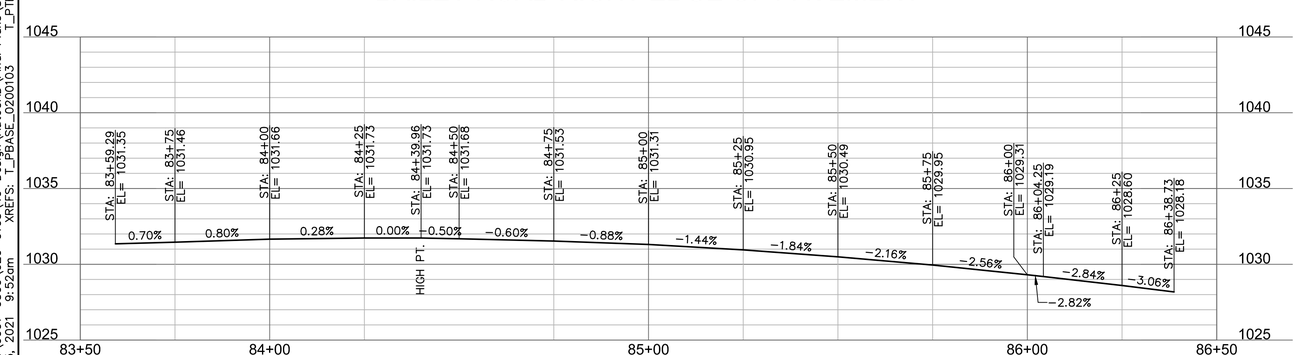
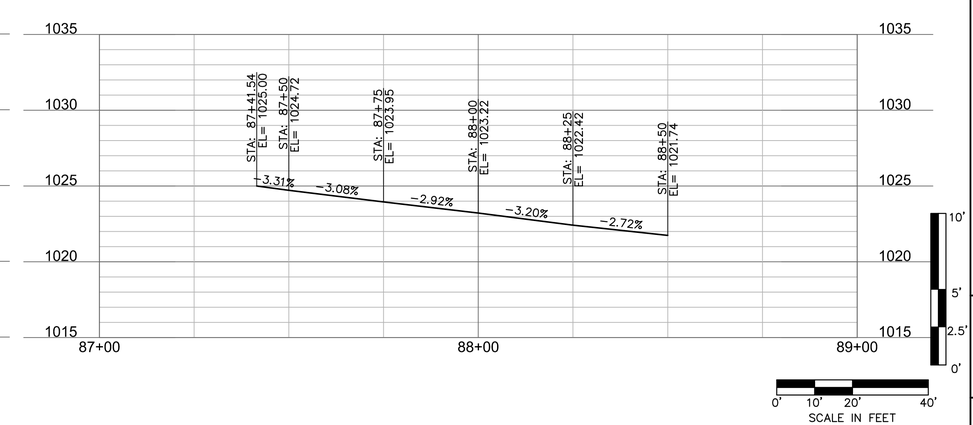


BAILEY ROAD RIGHT EDGE OF PAVEMENT



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BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

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C.O.A. NO.: 001592
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PROJECT NO.: 020-0103
DWG NO.: T_RPP04_0200103
DATE: 2021-02-01

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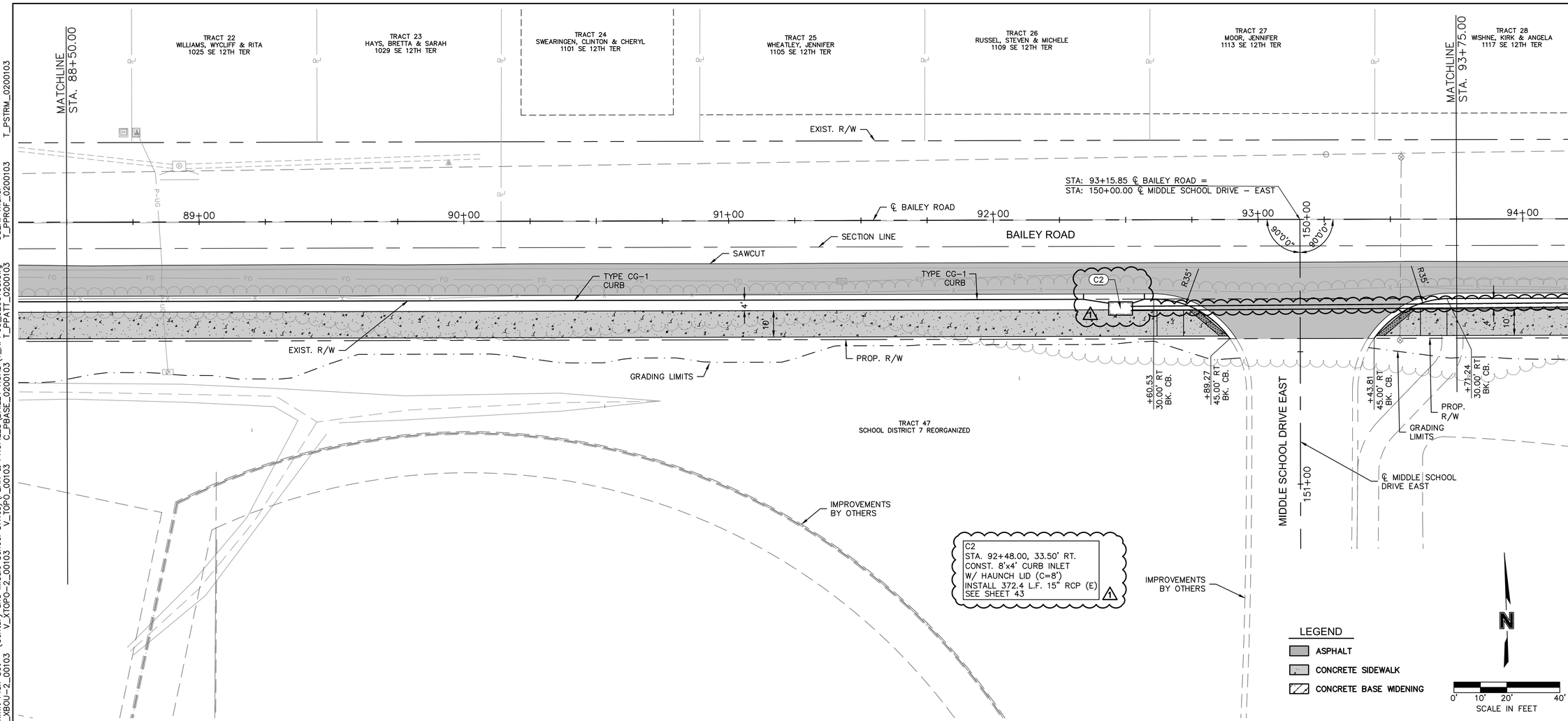

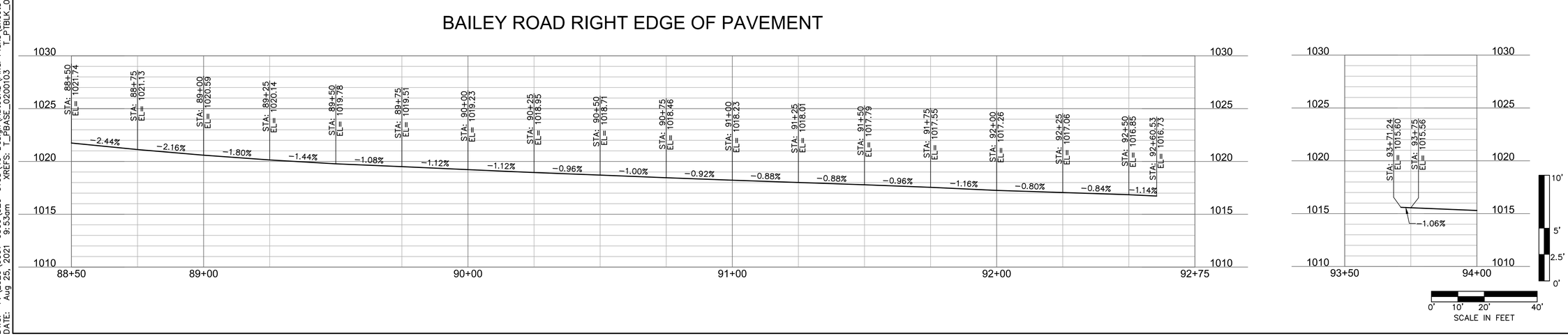

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PLAN & EDGE OF PAVEMENT PROFILE
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_RPP05_0200103
DATE: 2021-02-01

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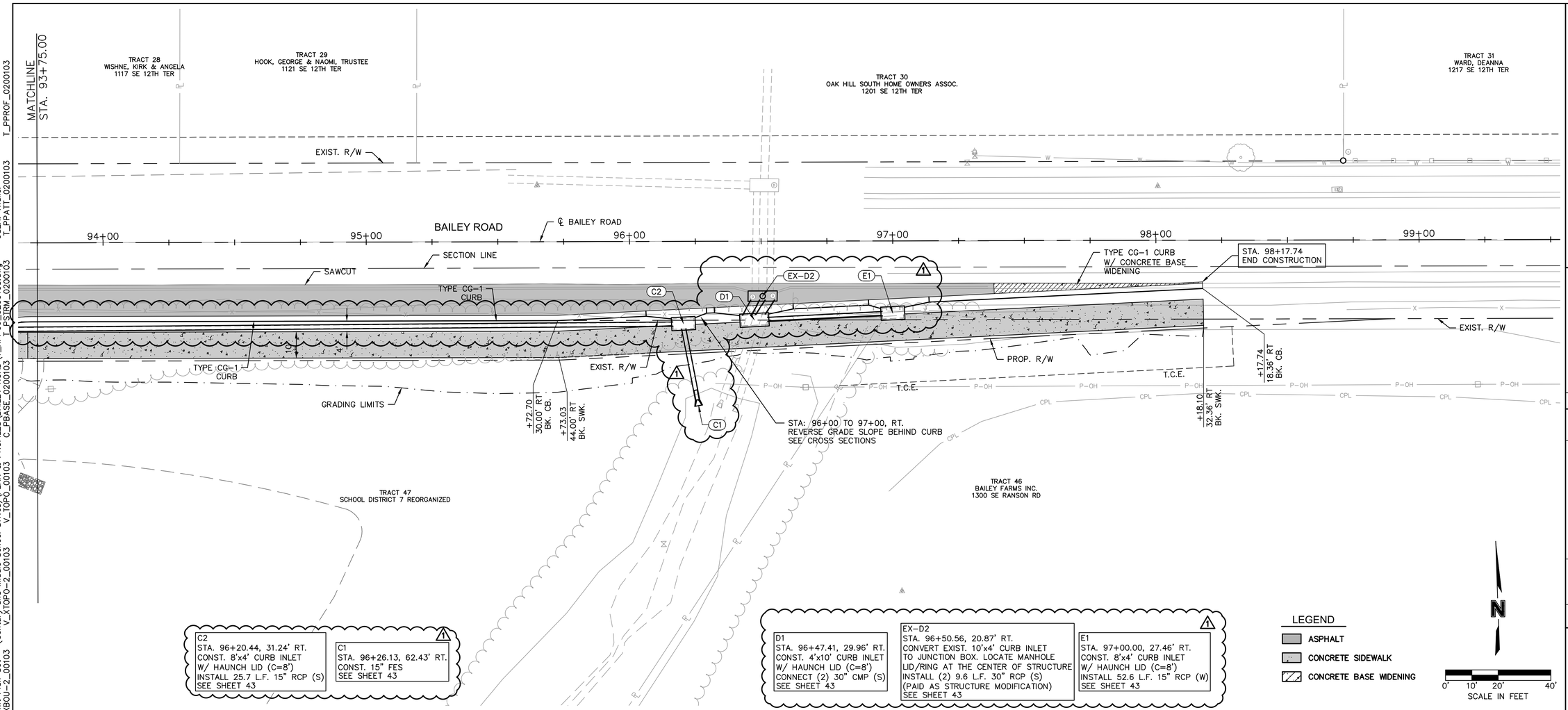
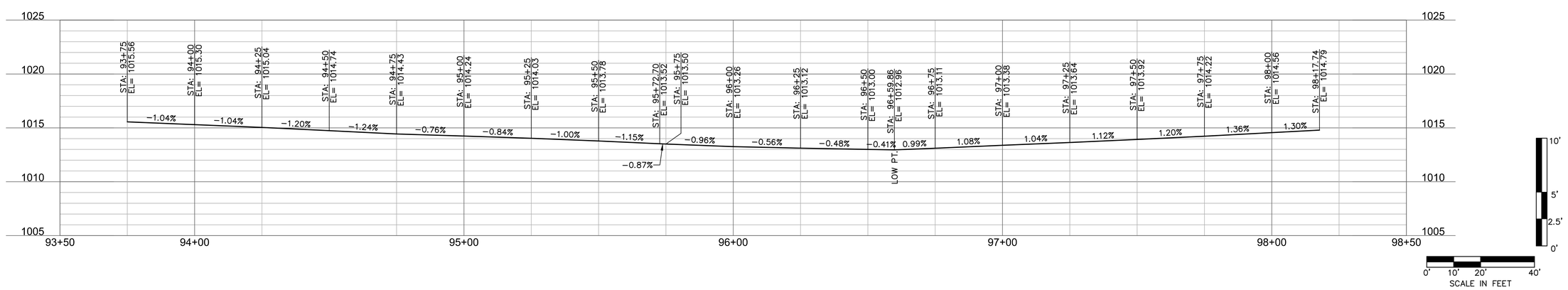


BAILEY ROAD RIGHT EDGE OF PAVEMENT



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PLAN & EDGE OF PAVEMENT PROFILE
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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DWG NO.: T_RPP06_0200103
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DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\PLAN & PROFILES\BAILEY ROAD\T_RPP06_0200103.dwg
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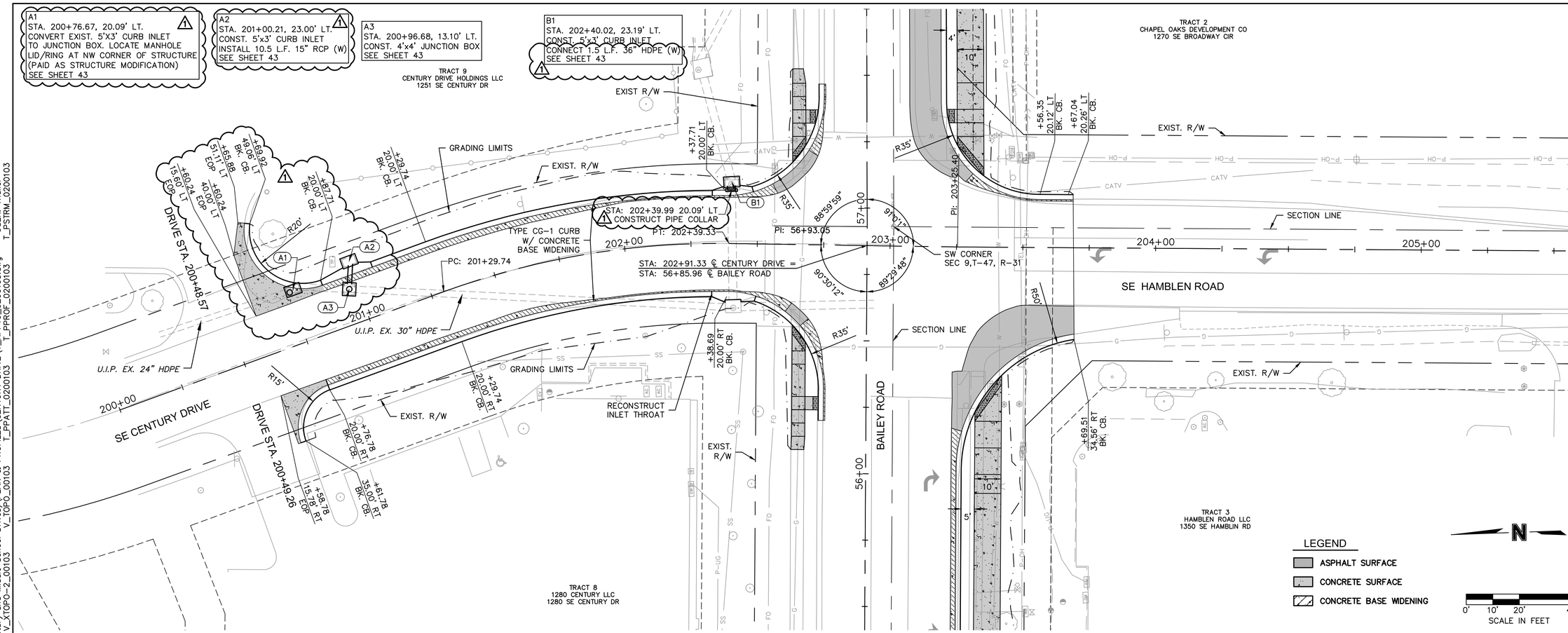
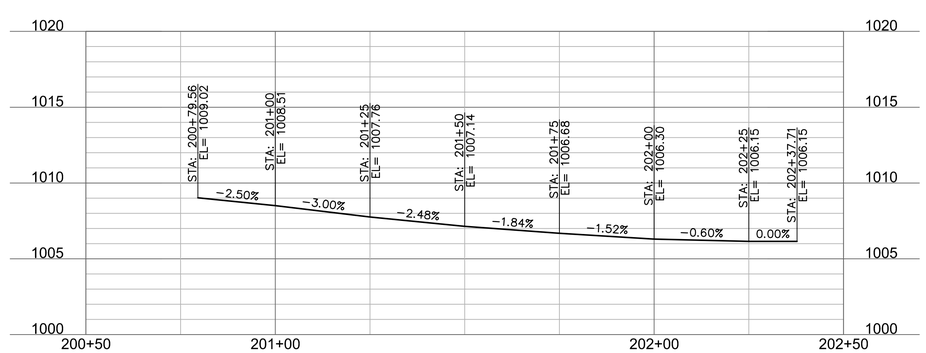


SE CENTURY DRIVE LEFT EDGE OF PAVEMENT



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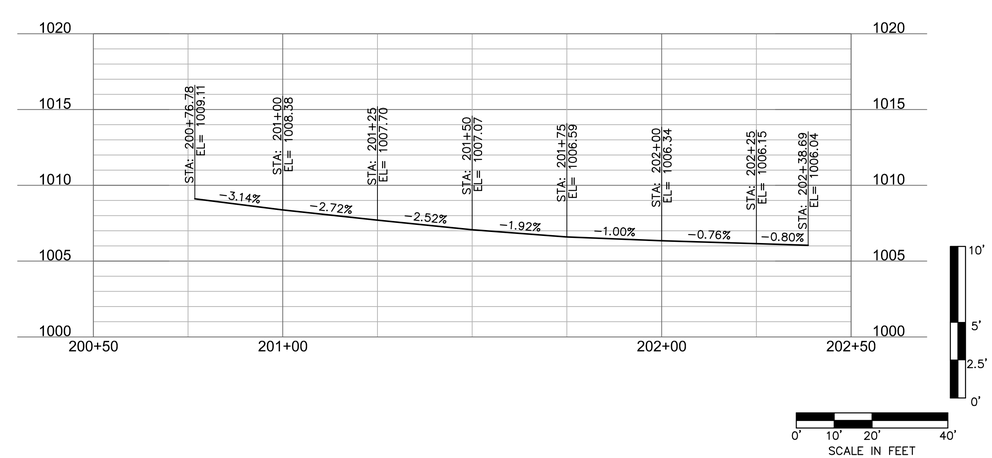

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PLAN & EDGE OF PAVEMENT PROFILE
CENTURY DRIVE

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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DWG NO.: T_RPP10_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\PLAN & PROFILES\CENTURY DRIVE\T_RPP10_0200103.dwg USER: rholler
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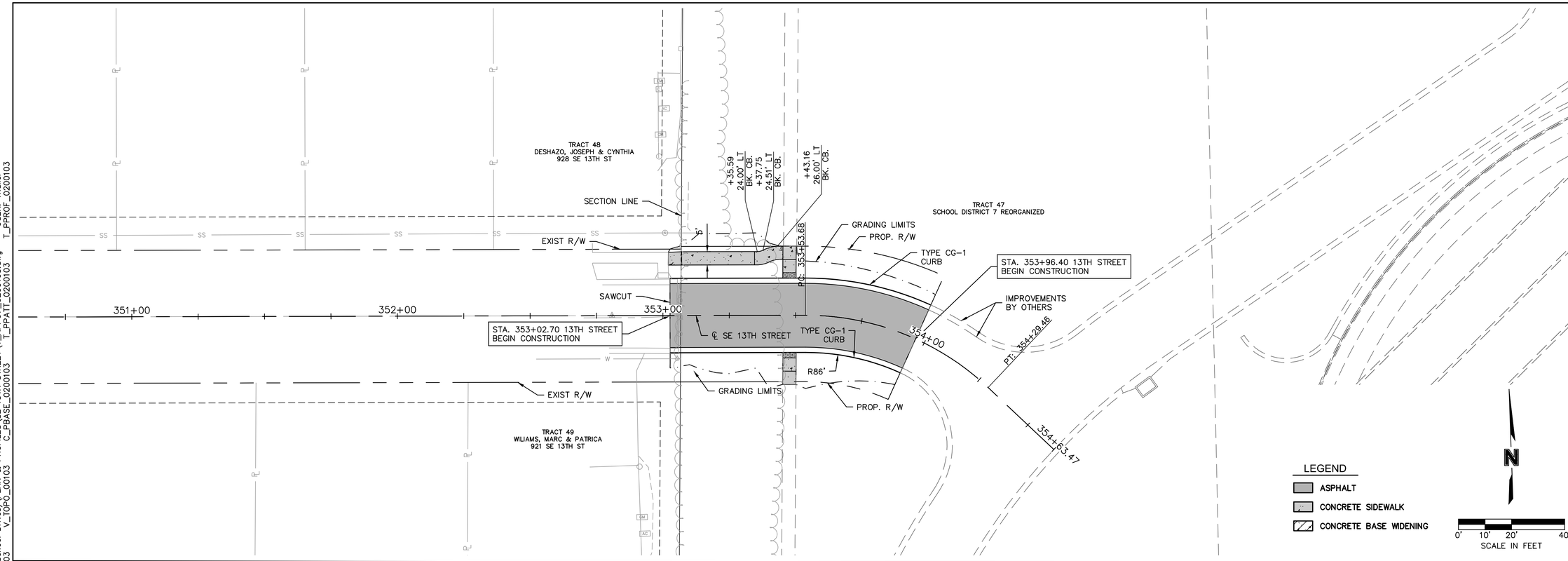
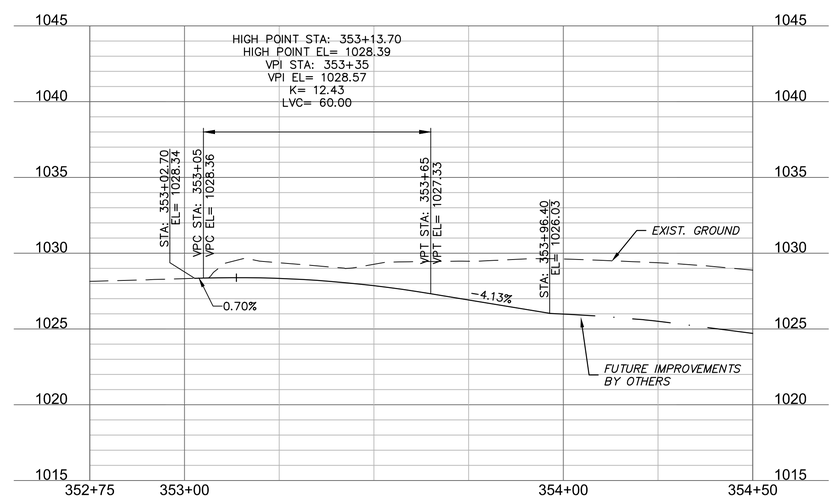


SE 13TH STREET



8' 4' 2' 0'
0' 10' 20' 40'
SCALE IN FEET

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SE 13TH STREET

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

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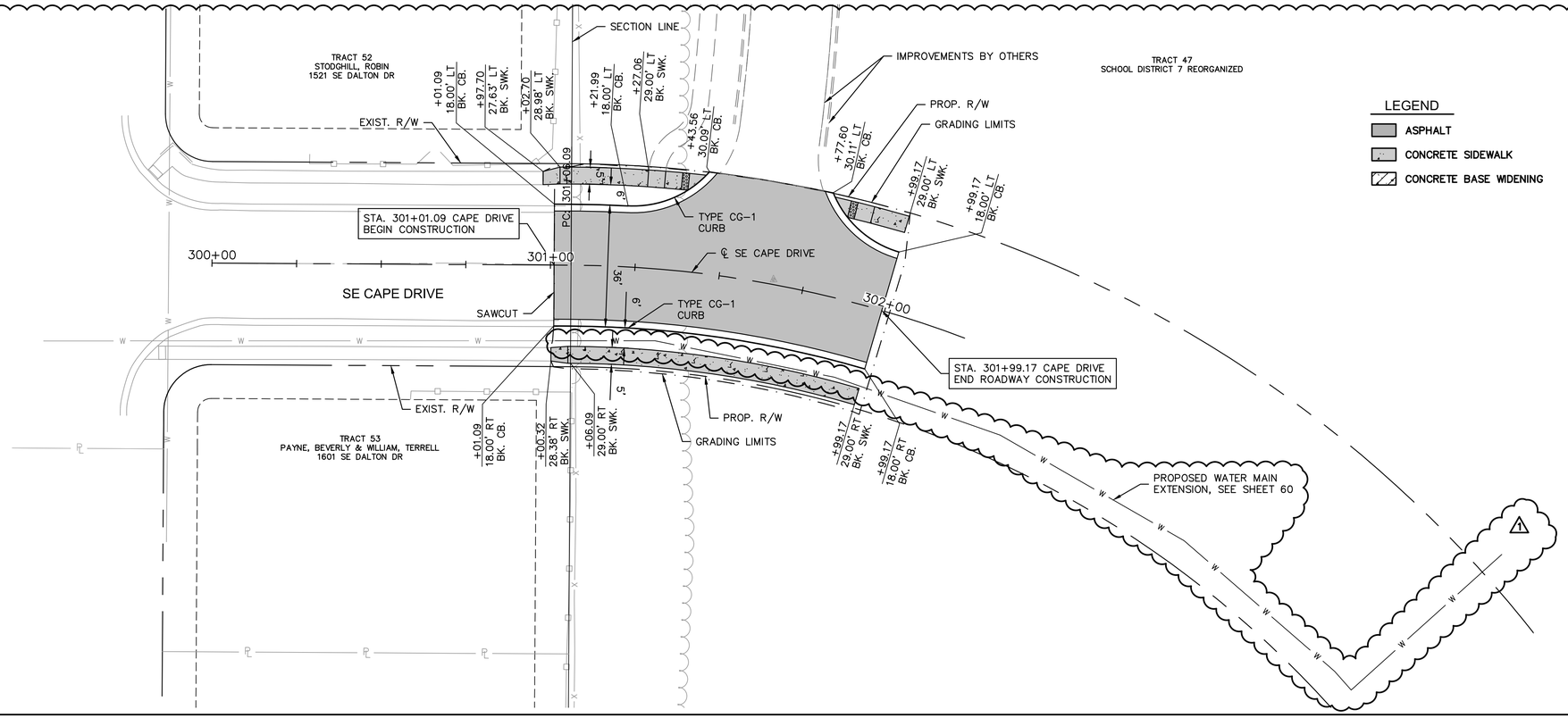
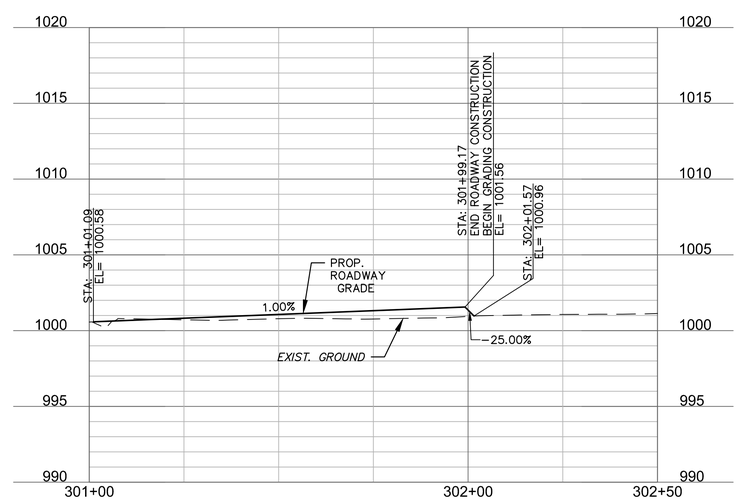
DATE: Aug 25, 2021 9:58am XREFS: T_PBASE_0200103 T_PTBLK_0200103 T_PPATT_0200103 C_PBASE_0200103 V_TOPO_00103 V_XBOU-2_00103 V_XTOPO-2_00103 T_PPROF_0200103



SE CAPE DRIVE



10' 5' 2.5' 0'
0' 10' 20' 40'
SCALE IN FEET

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PLAN & PROFILE
SE CAPE DRIVE

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_RPP09_0200103
DATE: 2021-02-01

SHEET
32 OF 101

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\PLAN & PROFILES\SE CAPE DRIVE\T_RPP09_0200103.dwg USER: rhiller
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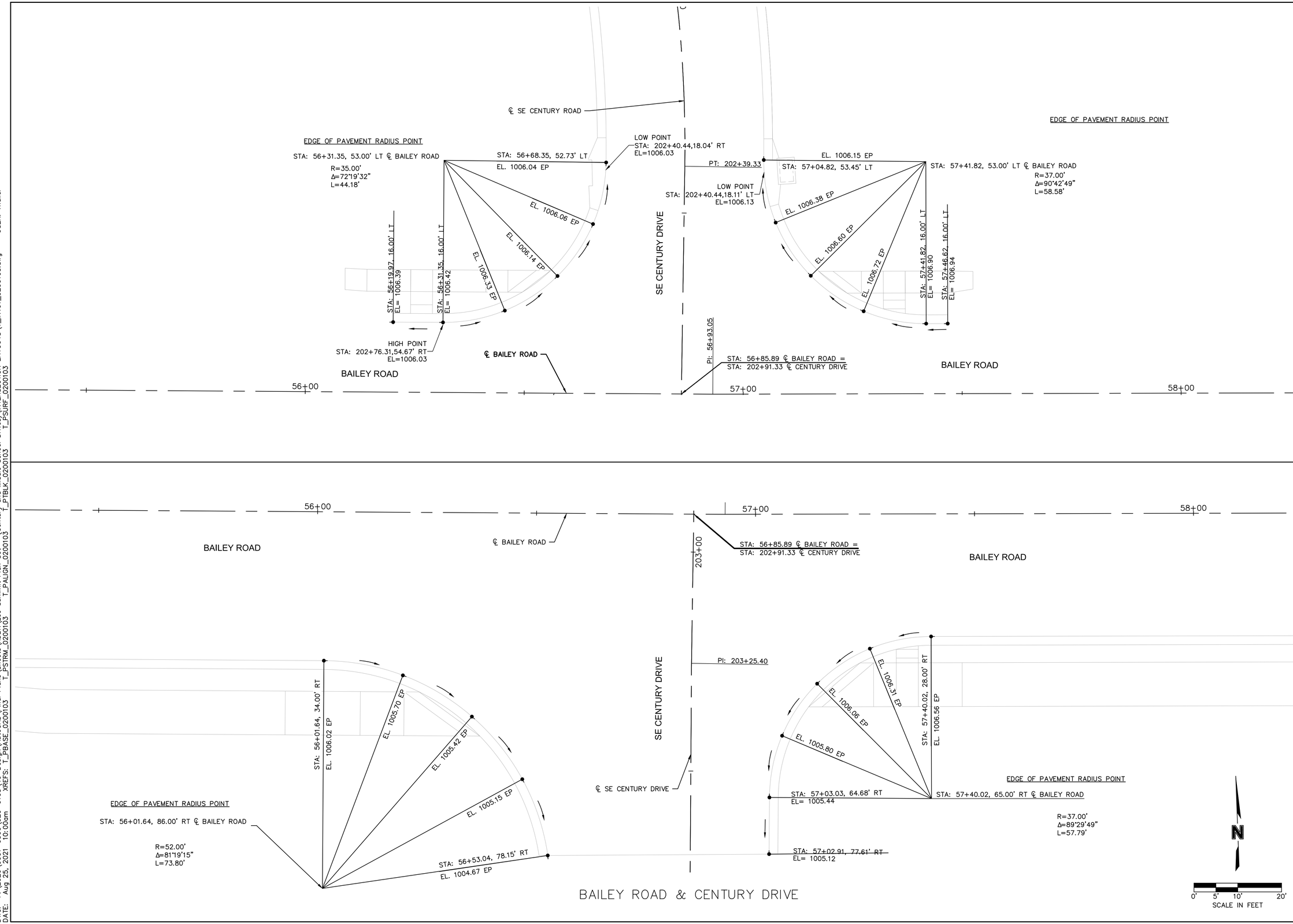

BAILEY ROAD & CENTURY DRIVE

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

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REVISIONS

INTERSECTION LAYOUTS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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PROJECT NO.: 020-0103
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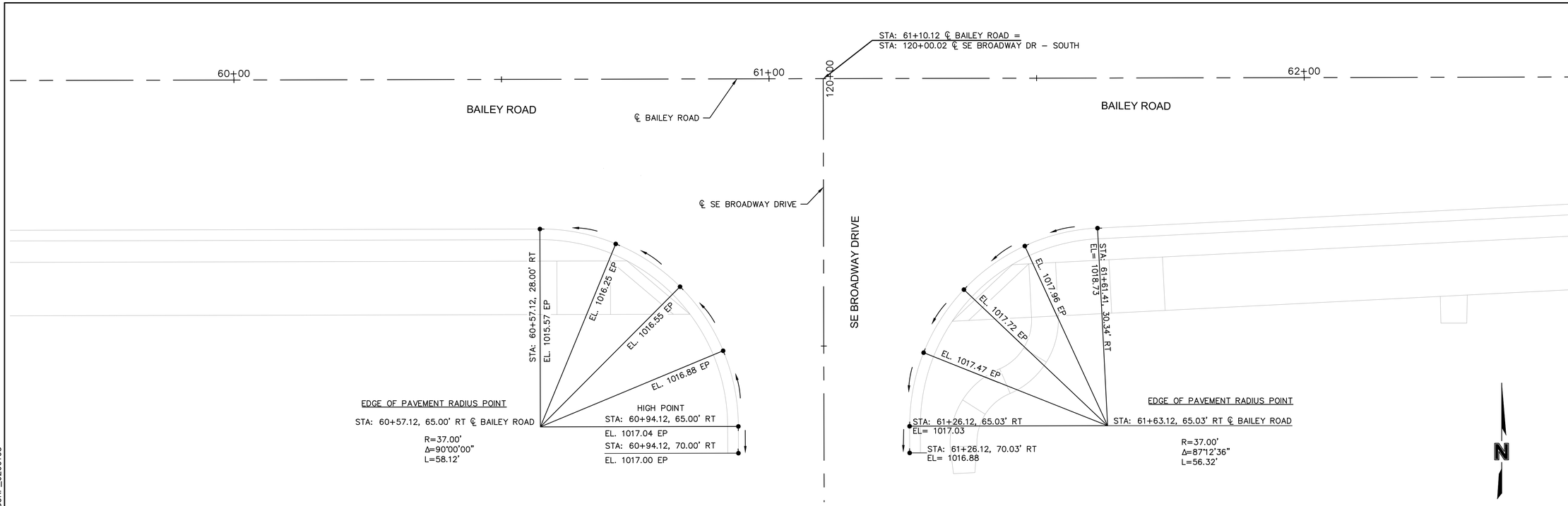
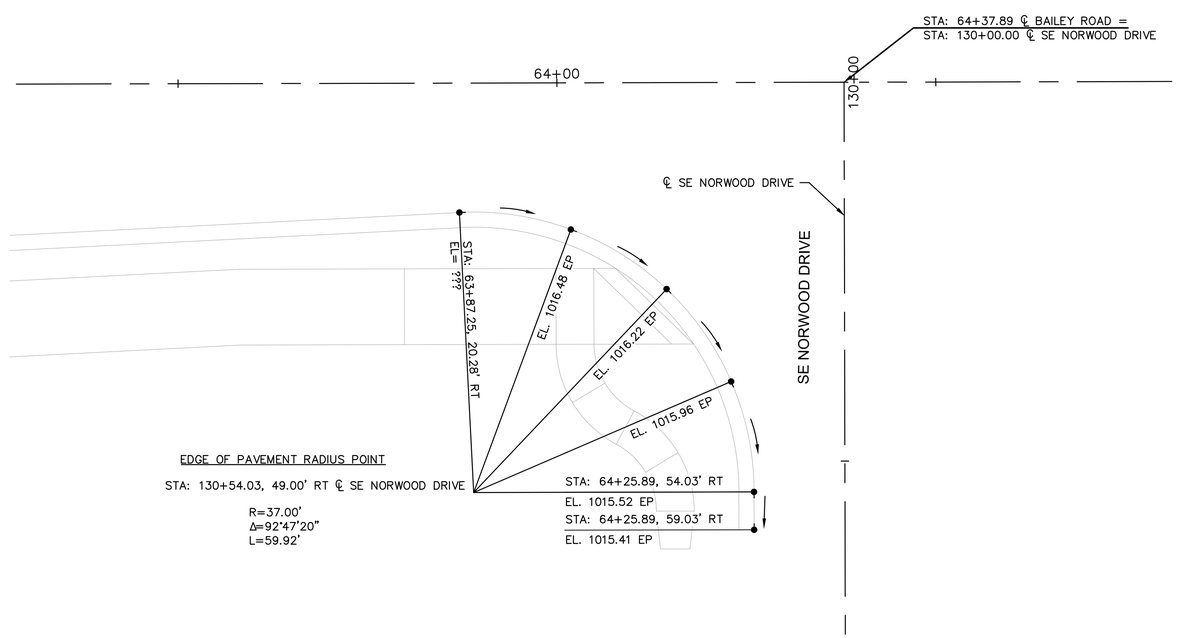


BAILEY ROAD & SE BROADWAY DRIVE



BAILEY ROAD & SE NORWOOD DRIVE

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2021

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DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\INTERSECTION LAYOUTS\T_INT01_0200103.dwg USER: rhaller
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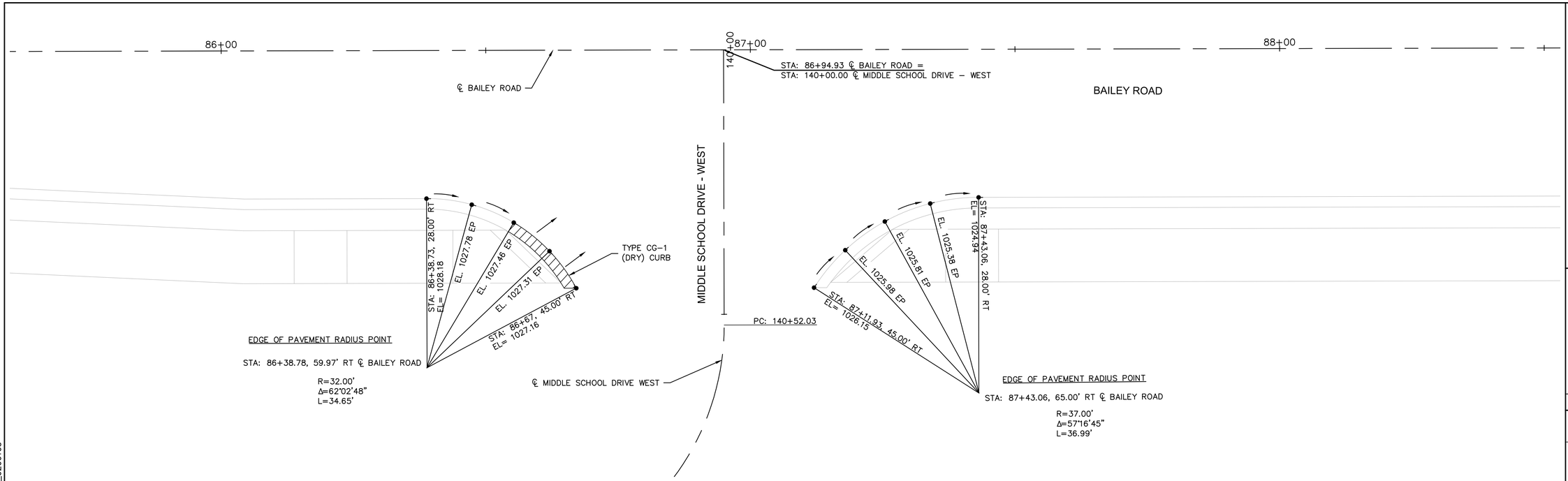

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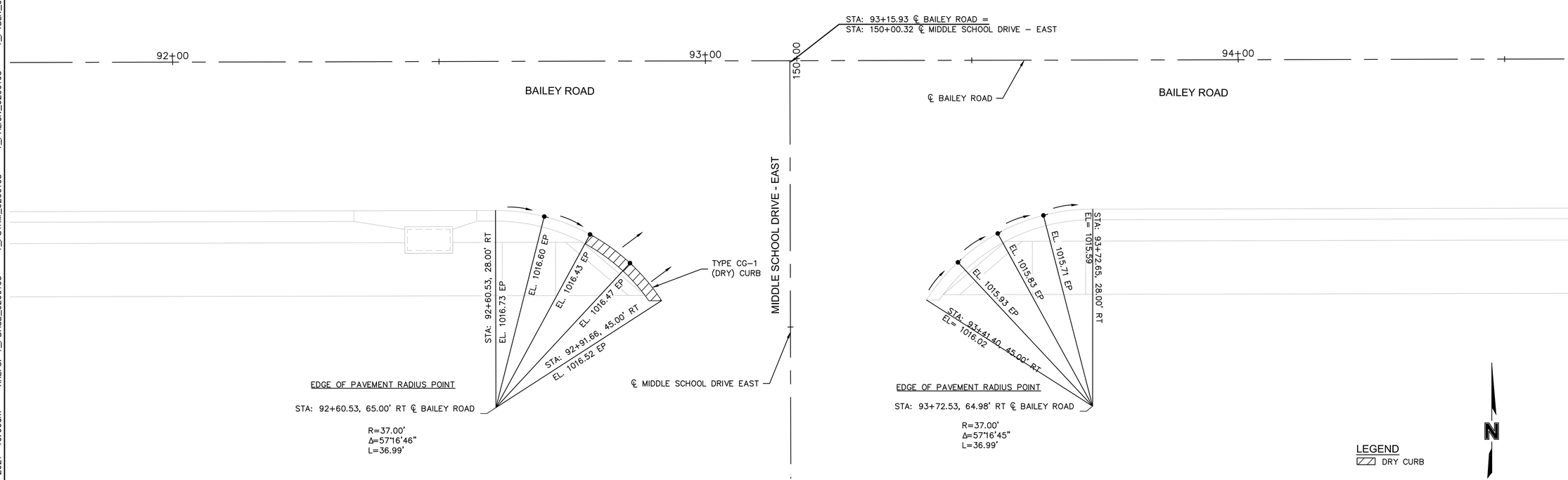

BAILEY ROAD & MIDDLE SCHOOL DRIVE – EAST

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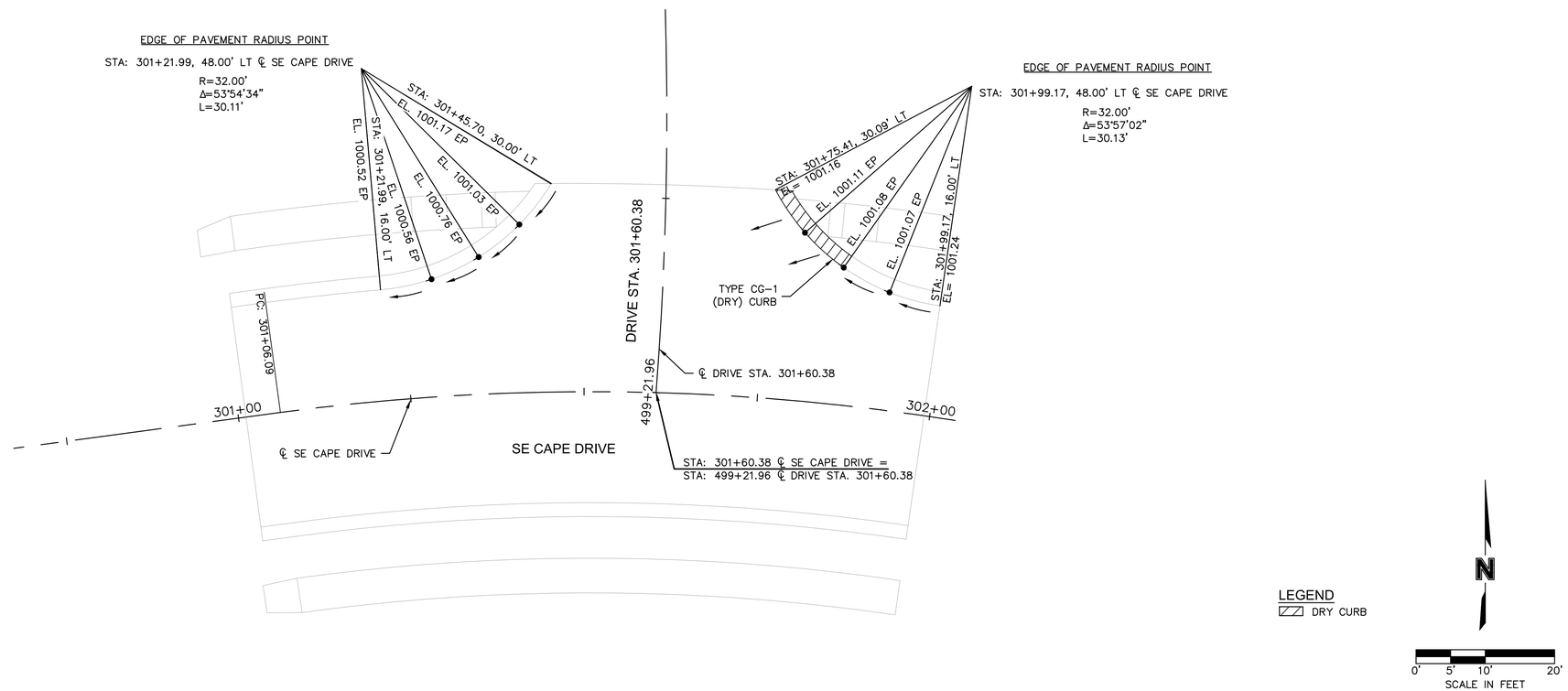

SE CAPE DRIVE & MIDDLE SCHOOL DRIVE

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DATE: Aug 25, 2021 10:00am XREFS: T_PBASE_0200103 T_PSTRM_0200103 T_PALIGN_0200103 T_PTBLK_0200103 T_PSURF_0200103

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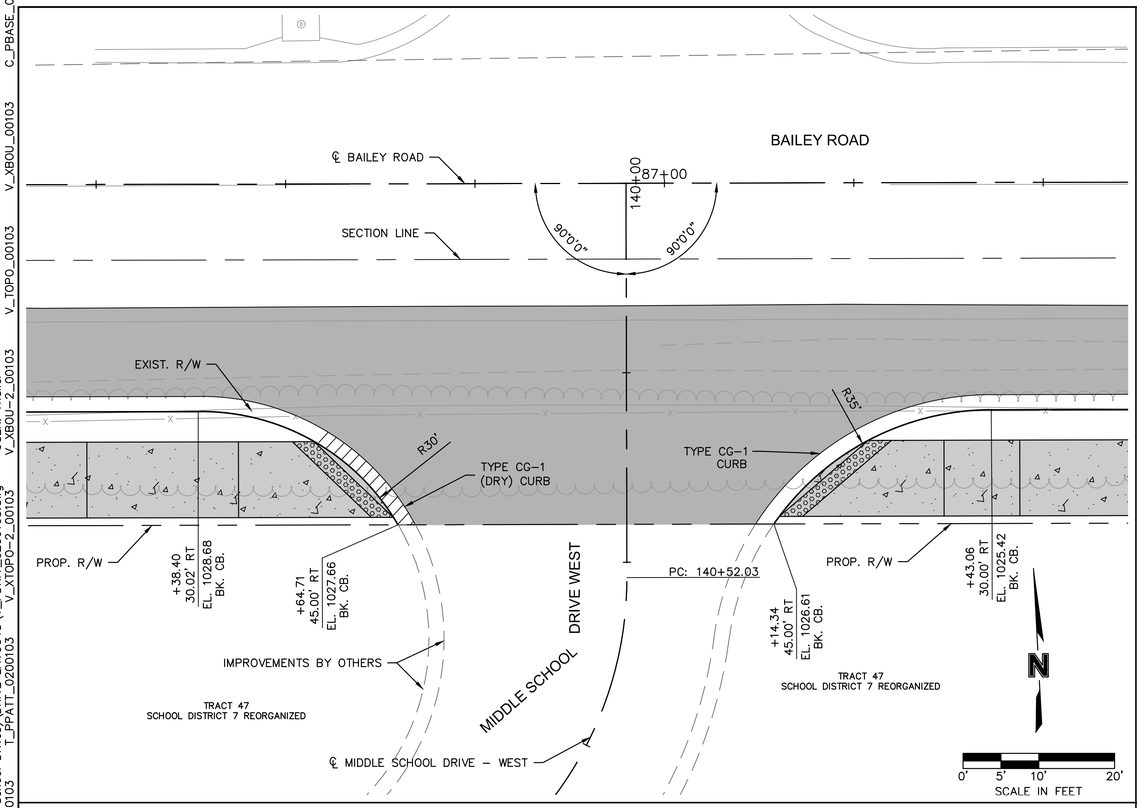
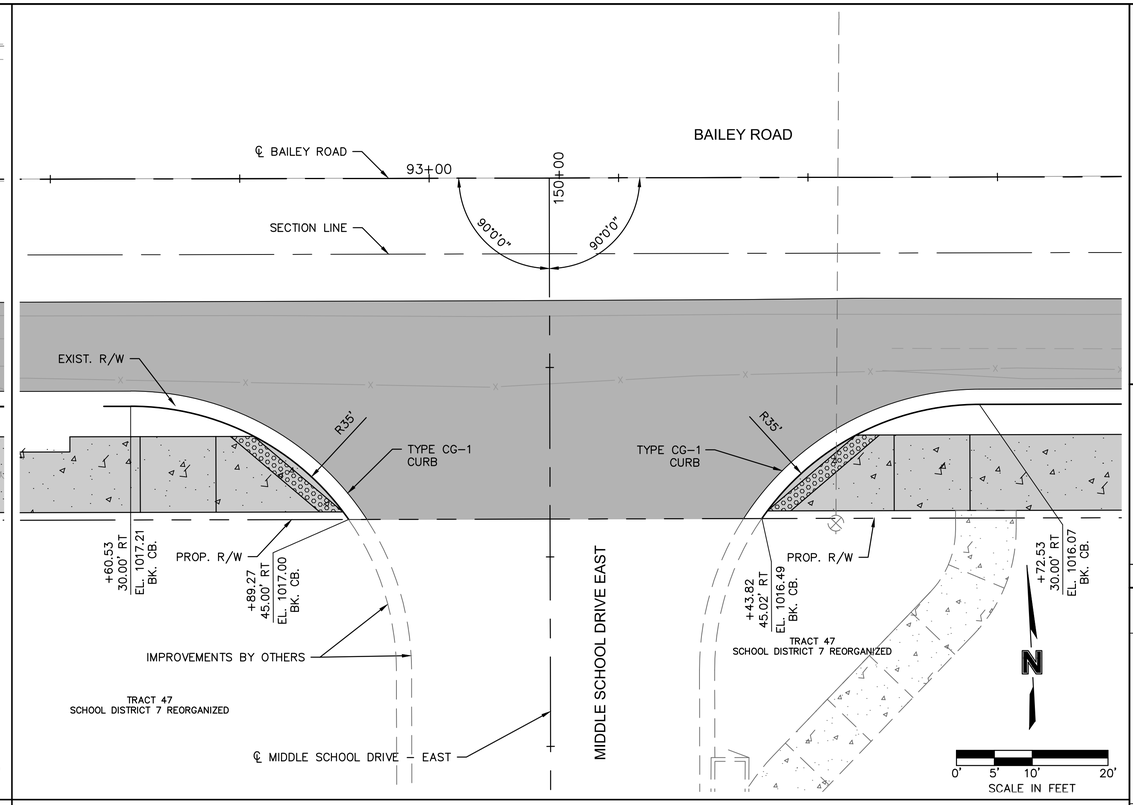
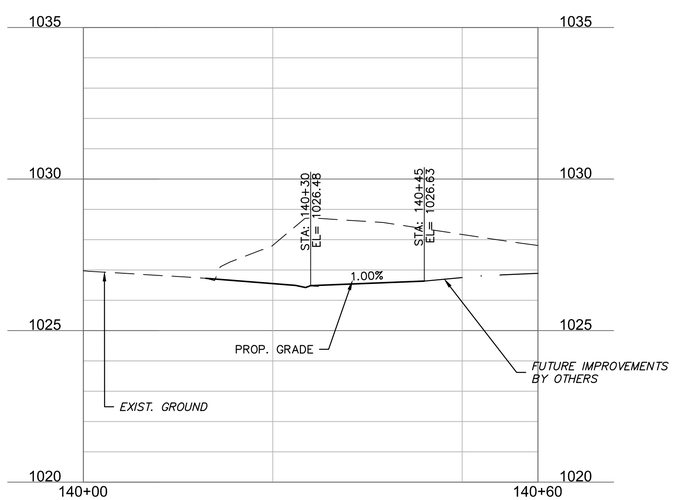
DATE: 2021-02-01





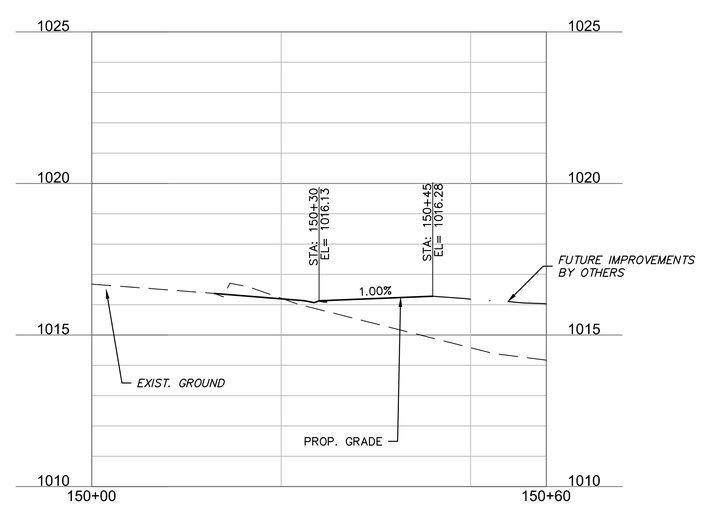
MIDDLE SCHOOL DRIVE - WEST



10' 5' 2.5' 0'

0' 5' 10' 20'
SCALE IN FEET

MIDDLE SCHOOL DRIVE - EAST



10' 5' 2.5' 0'

0' 5' 10' 20'
SCALE IN FEET

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DRIVEWAY LAYOUT

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_PDRIV_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DRIVE LAYOUTS\T_PDRIV_0200103.dwg
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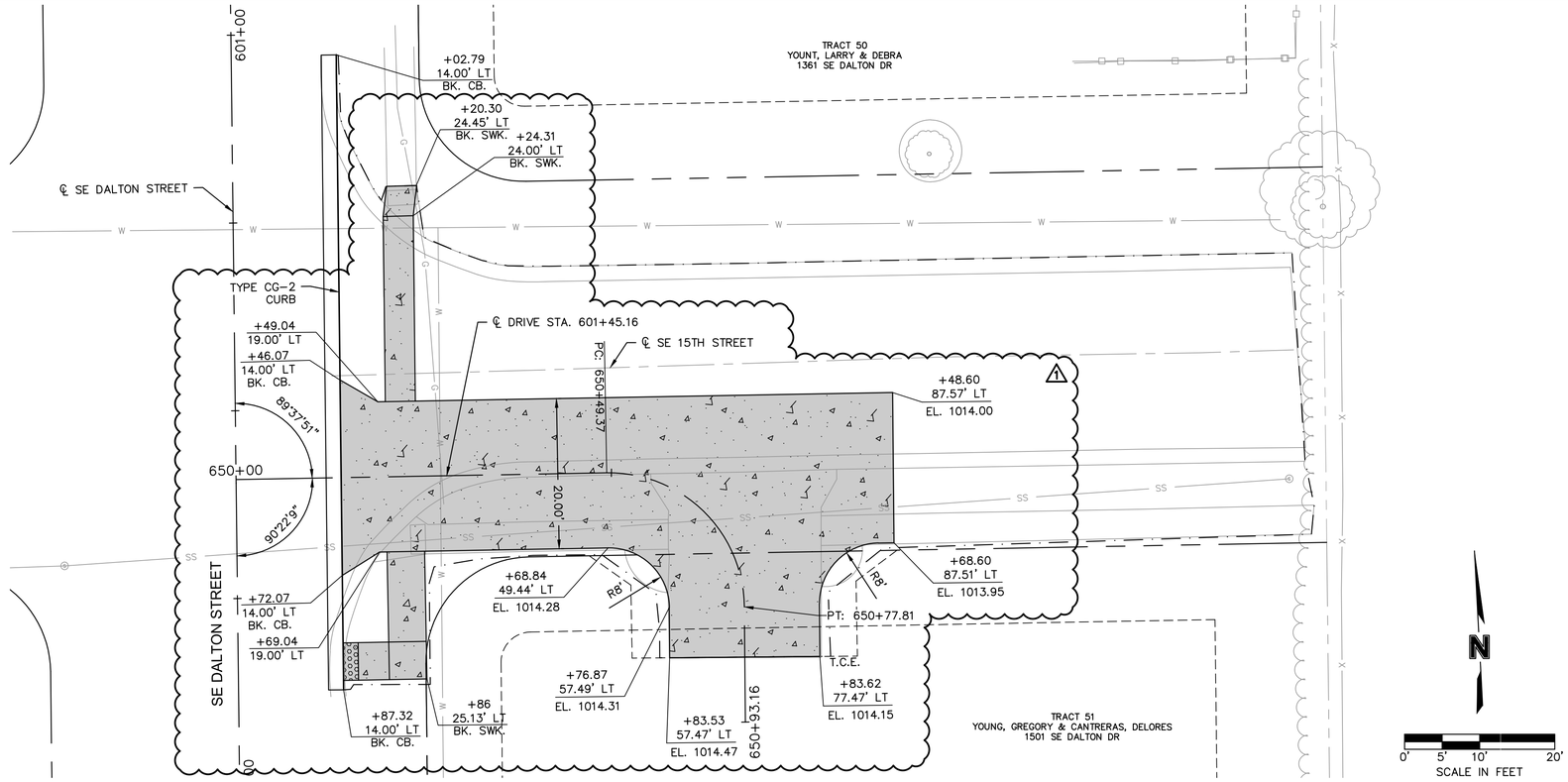

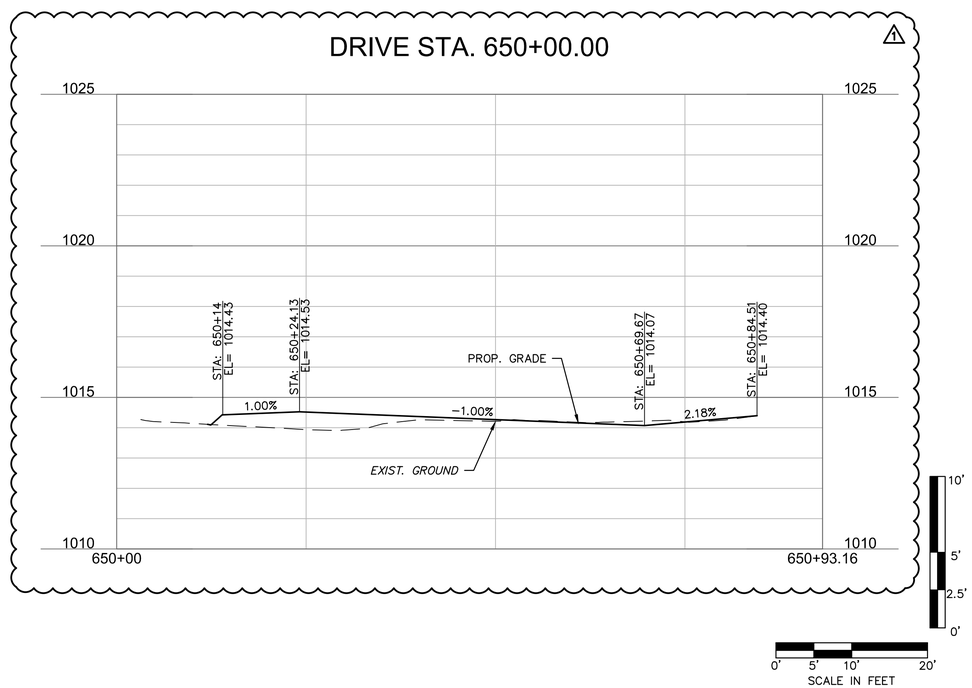

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1	08/25/2021	ASI #29	RPH

DRIVEWAY LAYOUT

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
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DATE: 2021-02-01

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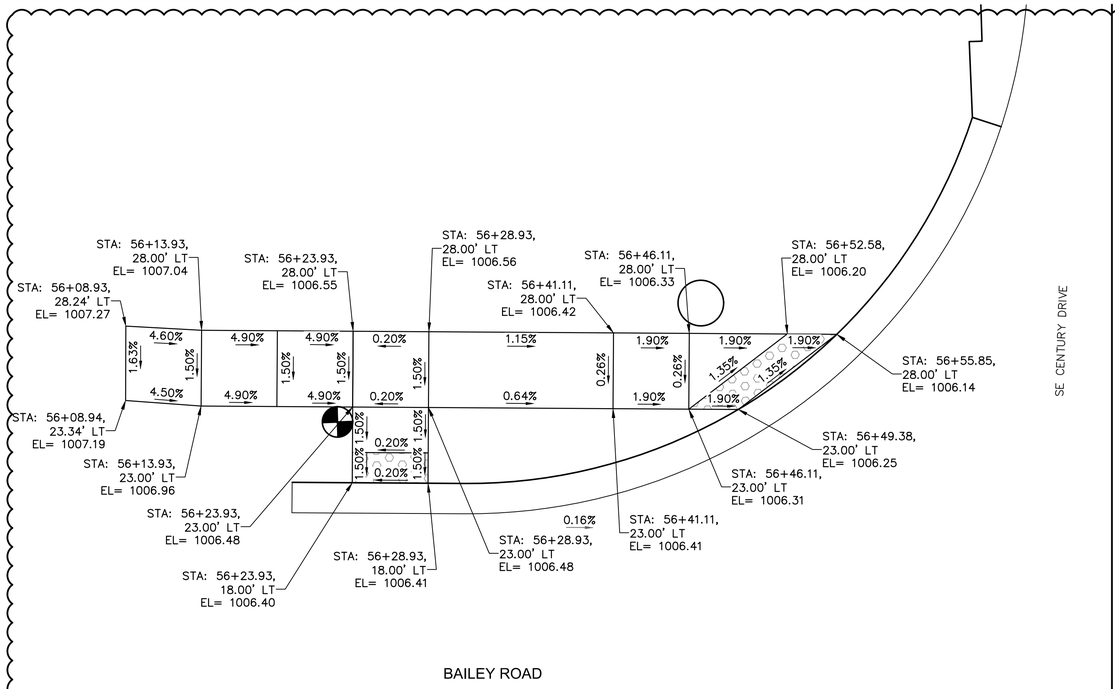
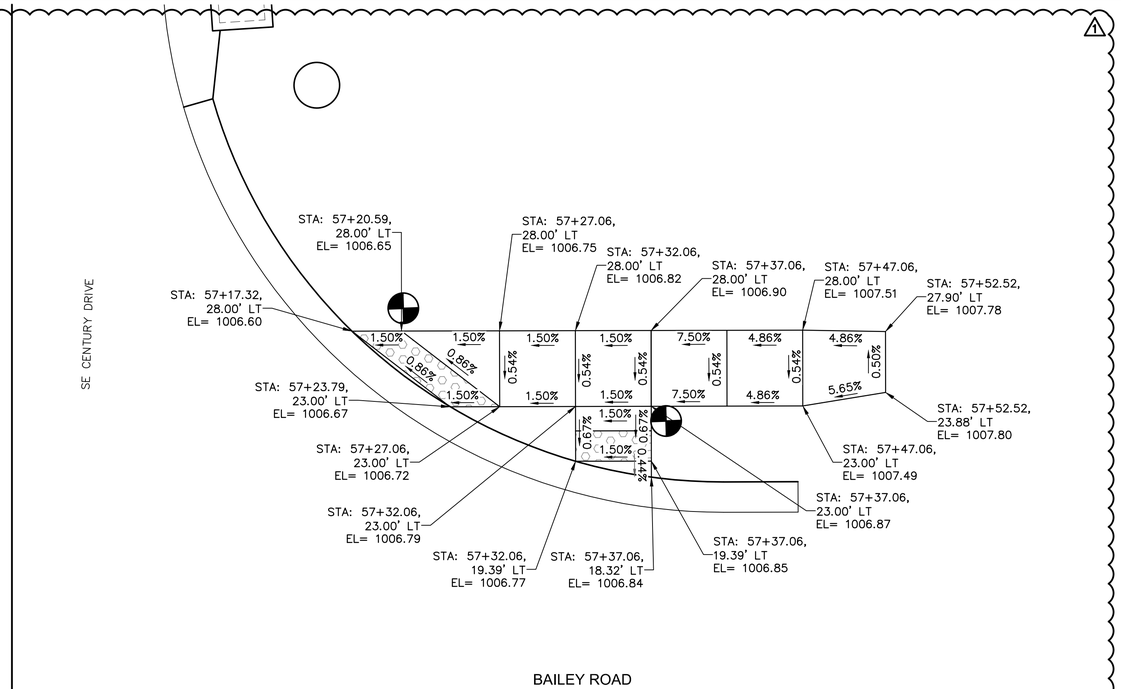
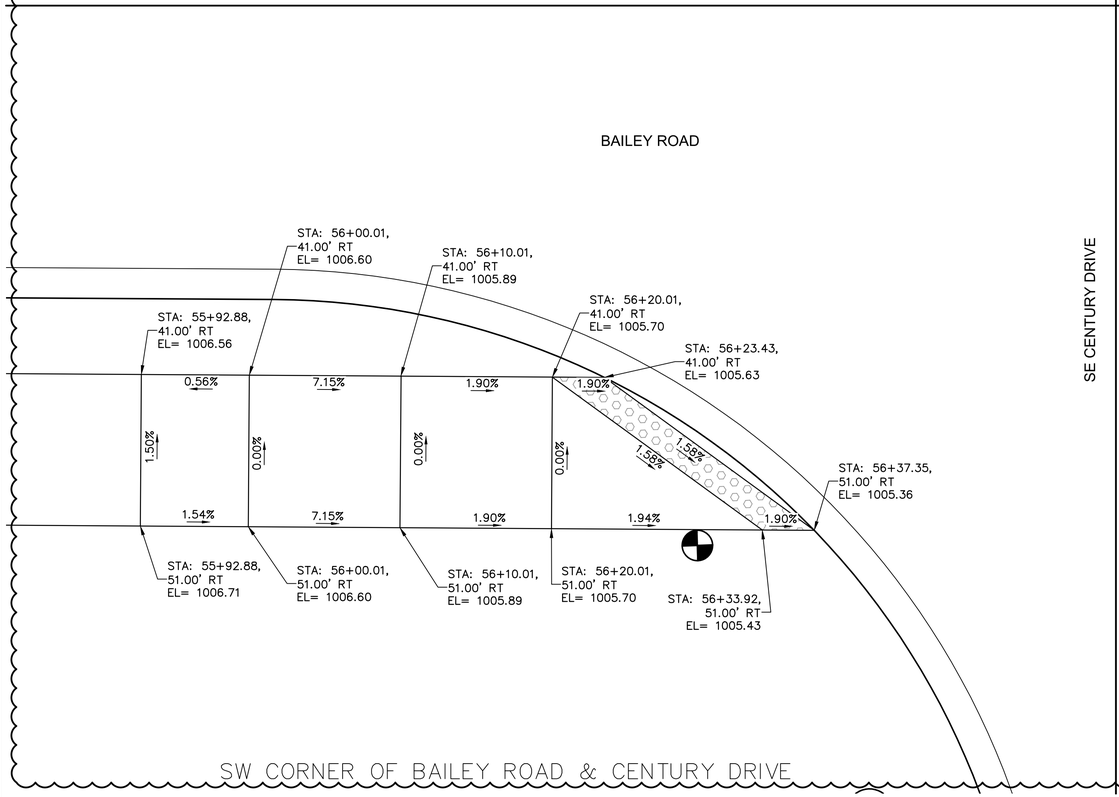


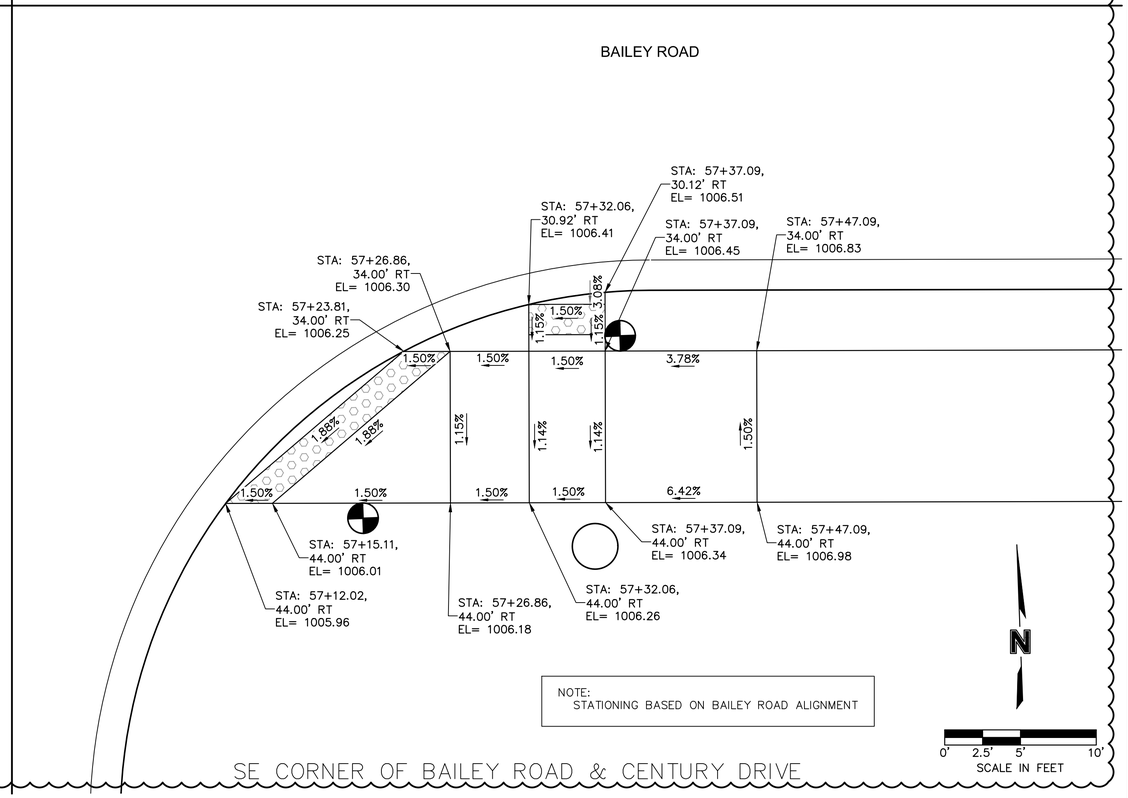
NW CORNER OF BAILEY ROAD & CENTURY DRIVE



NE CORNER OF BAILEY ROAD & CENTURY DRIVE



SW CORNER OF BAILEY ROAD & CENTURY DRIVE



NOTE:
STATIONING BASED ON BAILEY ROAD ALIGNMENT

SE CORNER OF BAILEY ROAD & CENTURY DRIVE

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SIDEWALK LAYOUTS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_SWK01_0200103_LS
DATE: 2021-02-01

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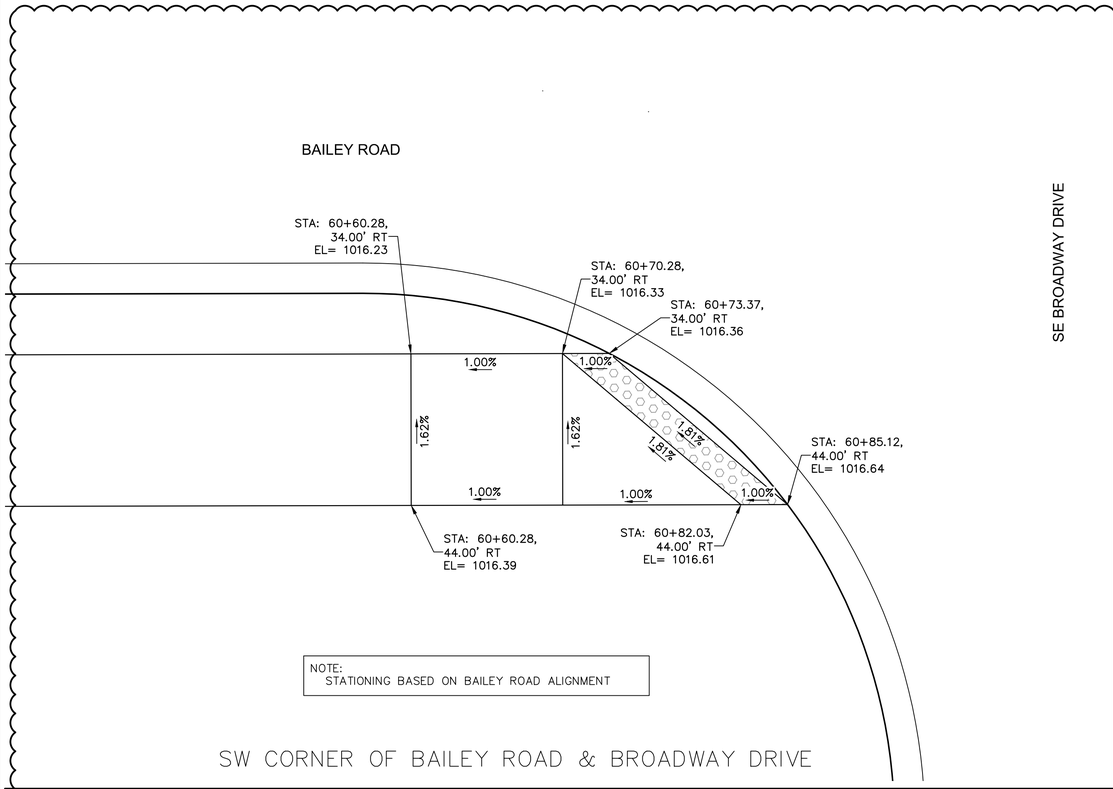
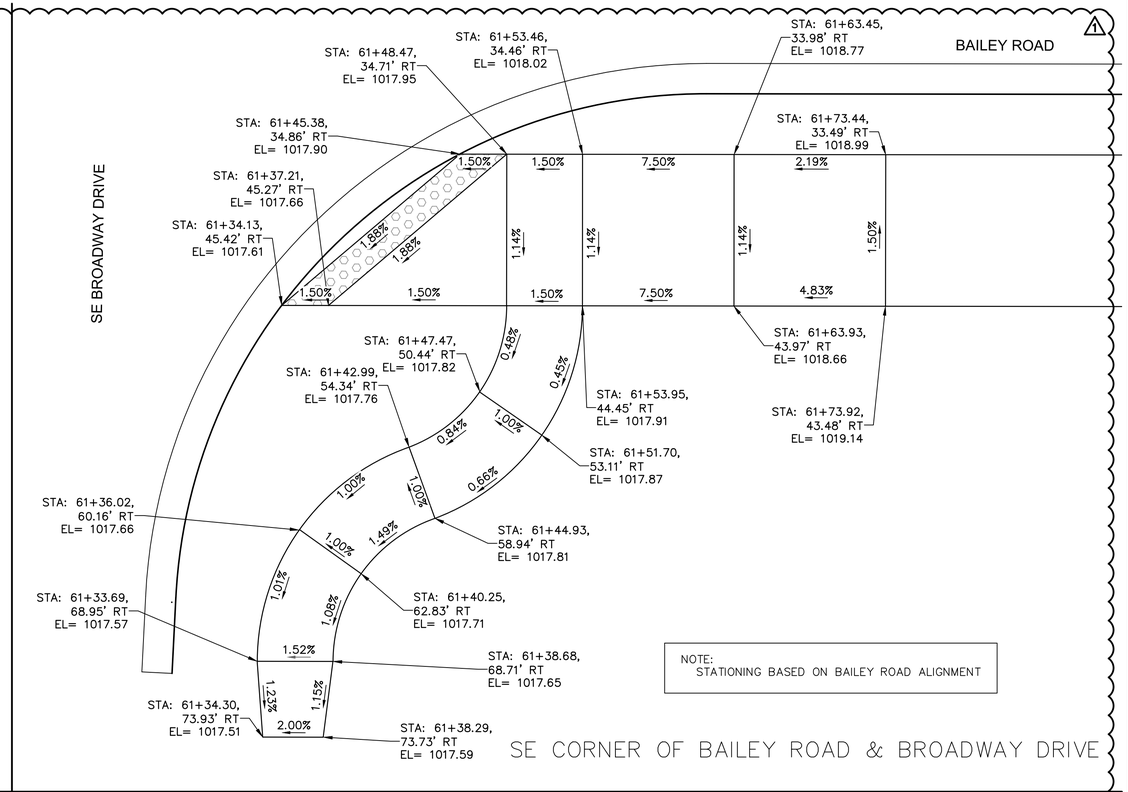
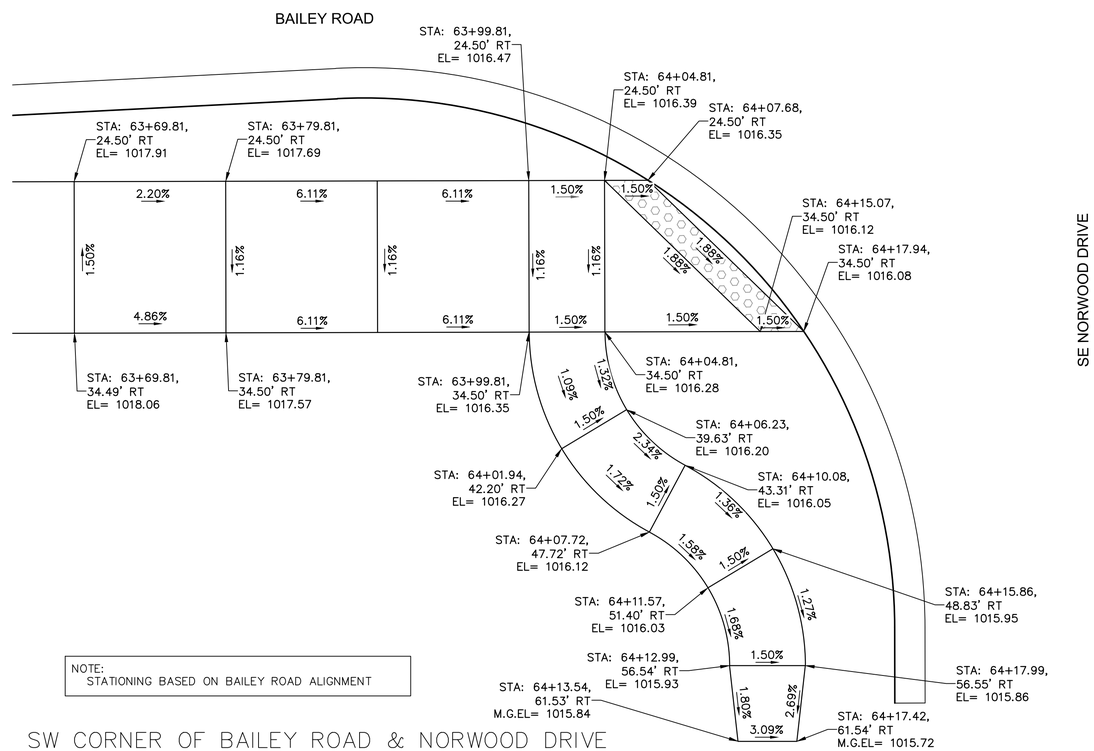


SW CORNER OF BAILEY ROAD & BROADWAY DRIVE



SE CORNER OF BAILEY ROAD & BROADWAY DRIVE



SW CORNER OF BAILEY ROAD & NORWOOD DRIVE

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SIDEWALK LAYOUTS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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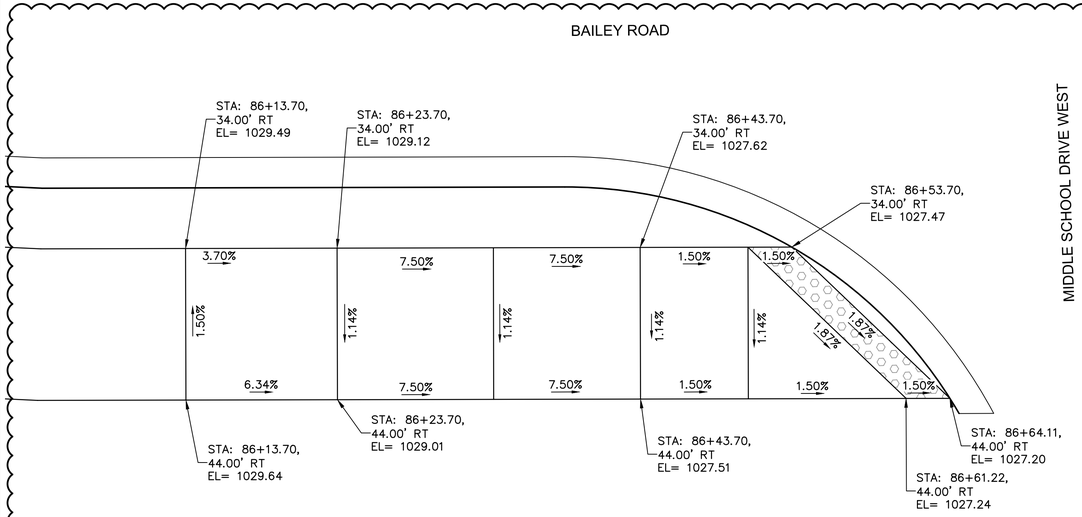
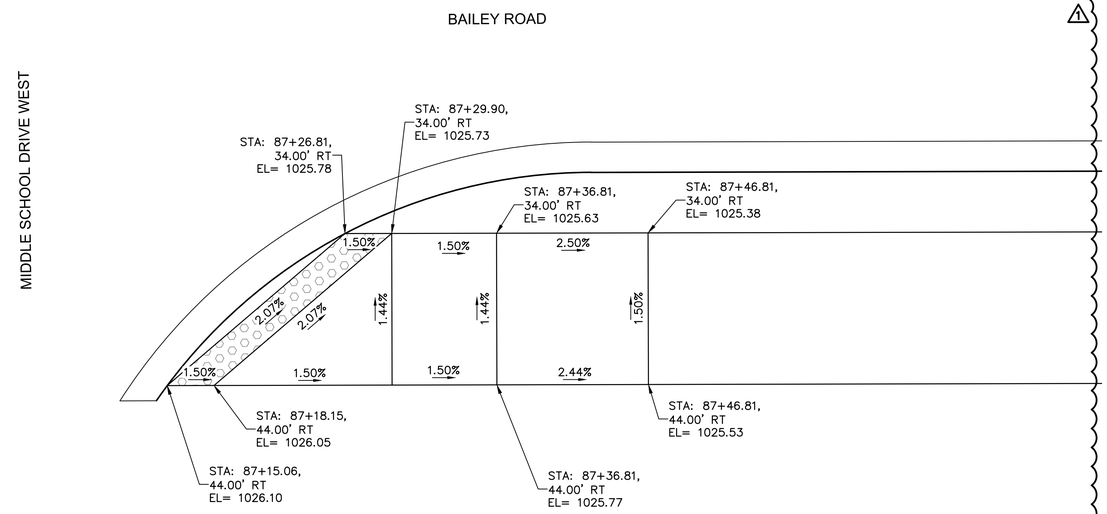


NOTE:
STATIONING BASED ON BAILEY ROAD ALIGNMENT

SW CORNER OF BAILEY ROAD & MIDDLE SCHOOL WEST



NOTE:
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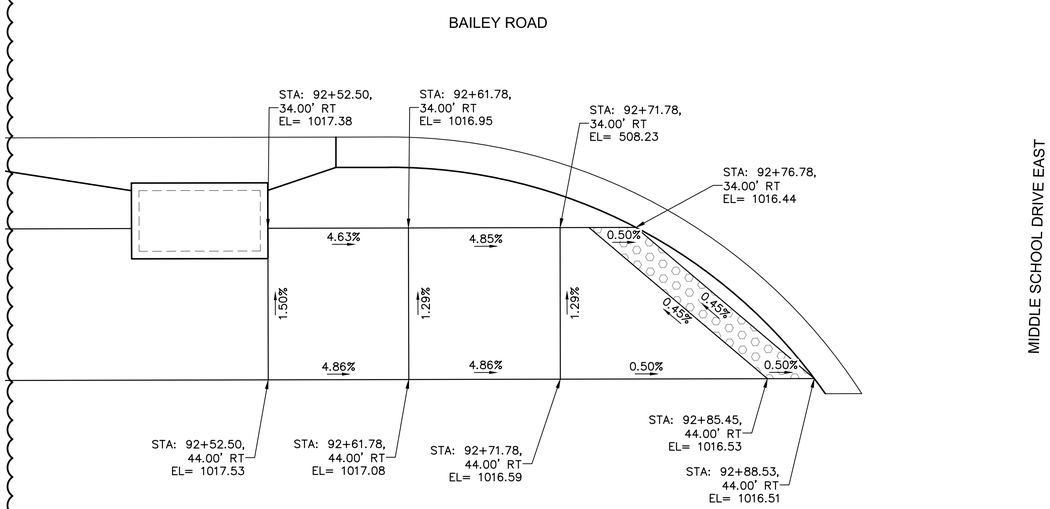
SE CORNER OF BAILEY ROAD & MIDDLE SCHOOL WEST



NOTE:
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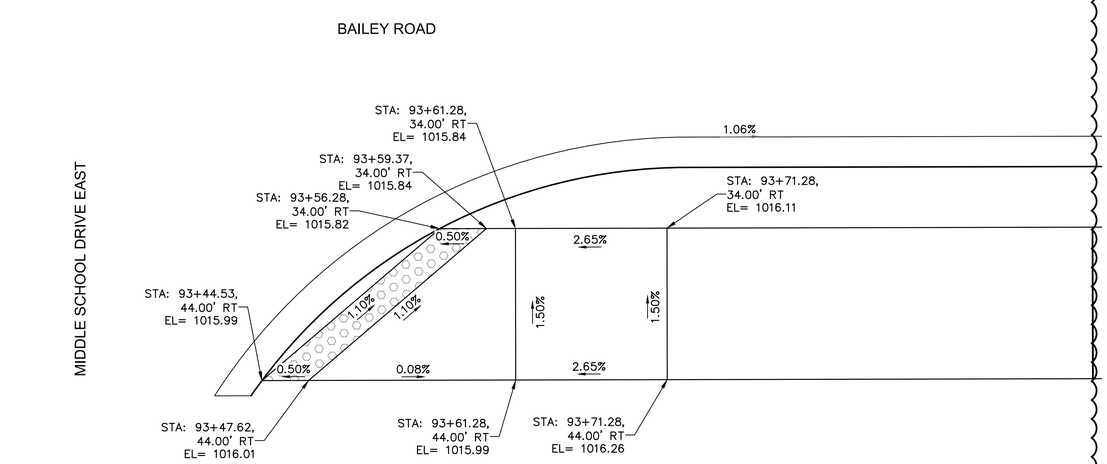
SW CORNER OF BAILEY ROAD & MIDDLE SCHOOL EAST



NOTE:
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SE CORNER OF BAILEY ROAD & MIDDLE SCHOOL EAST

N

0' 2.5' 5' 10'
SCALE IN FEET

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SIDEWALK LAYOUTS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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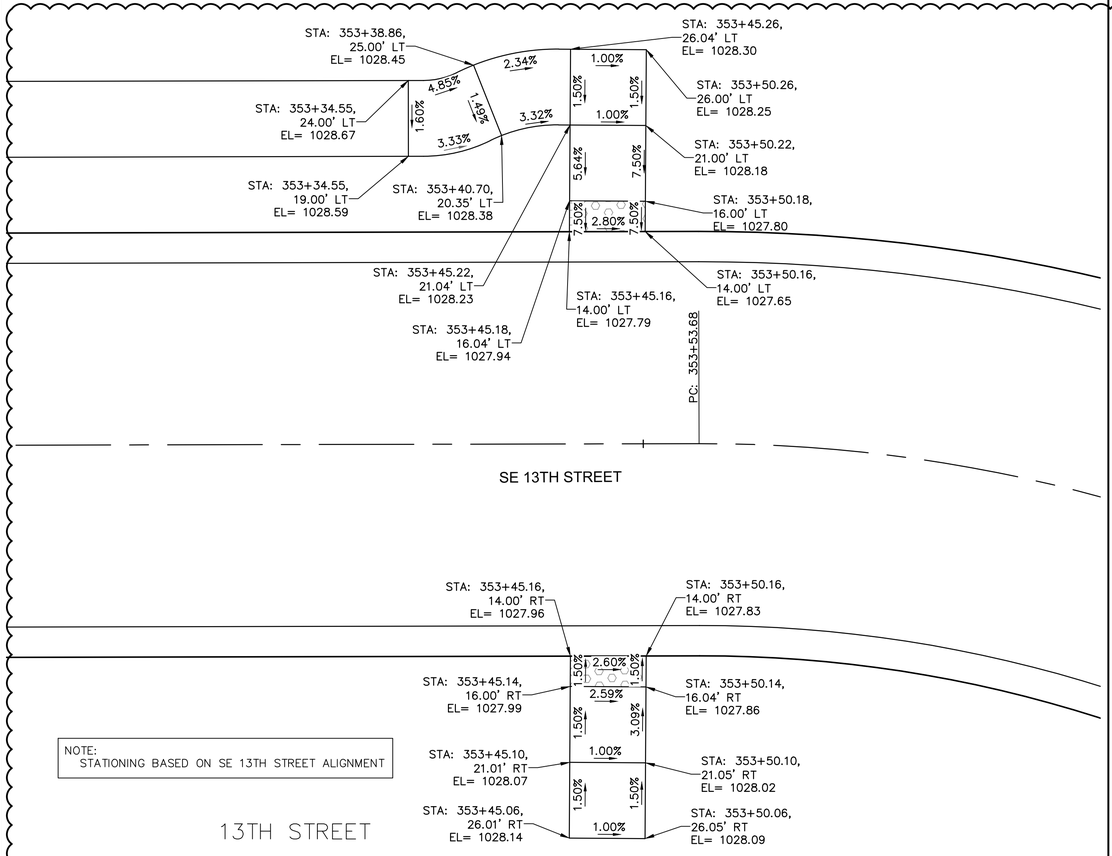

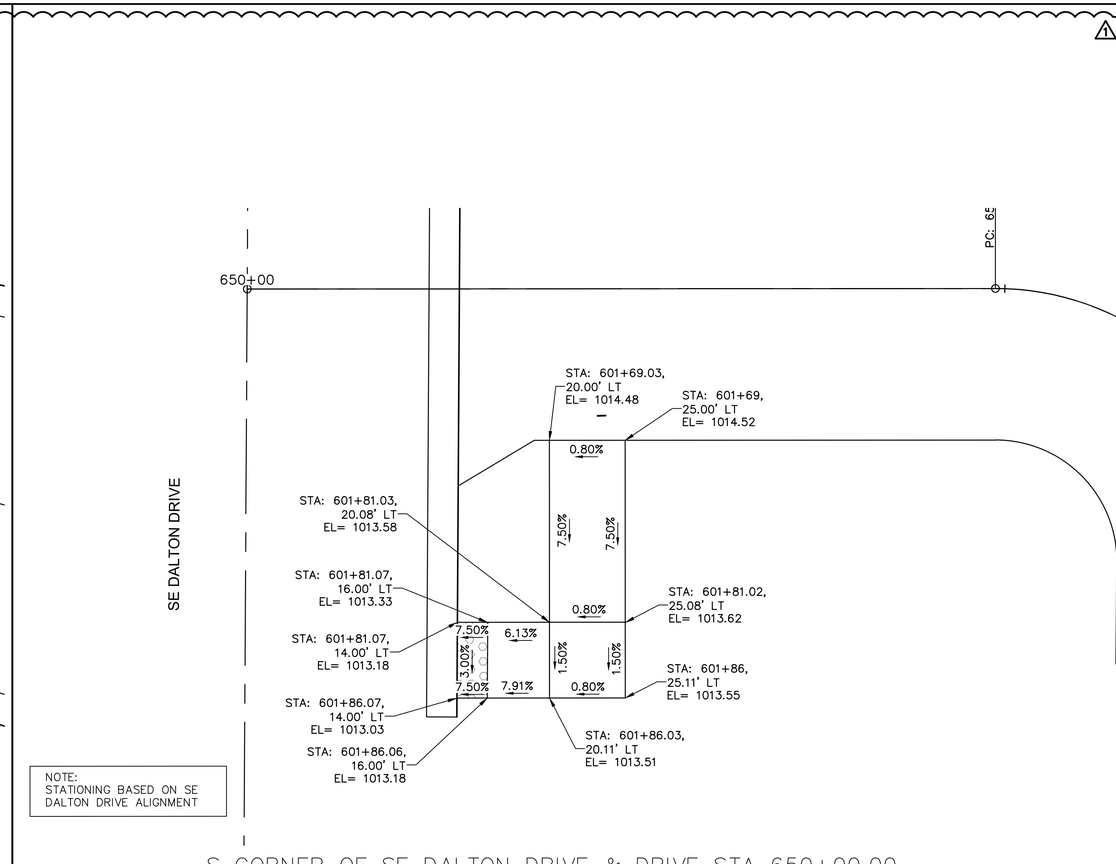

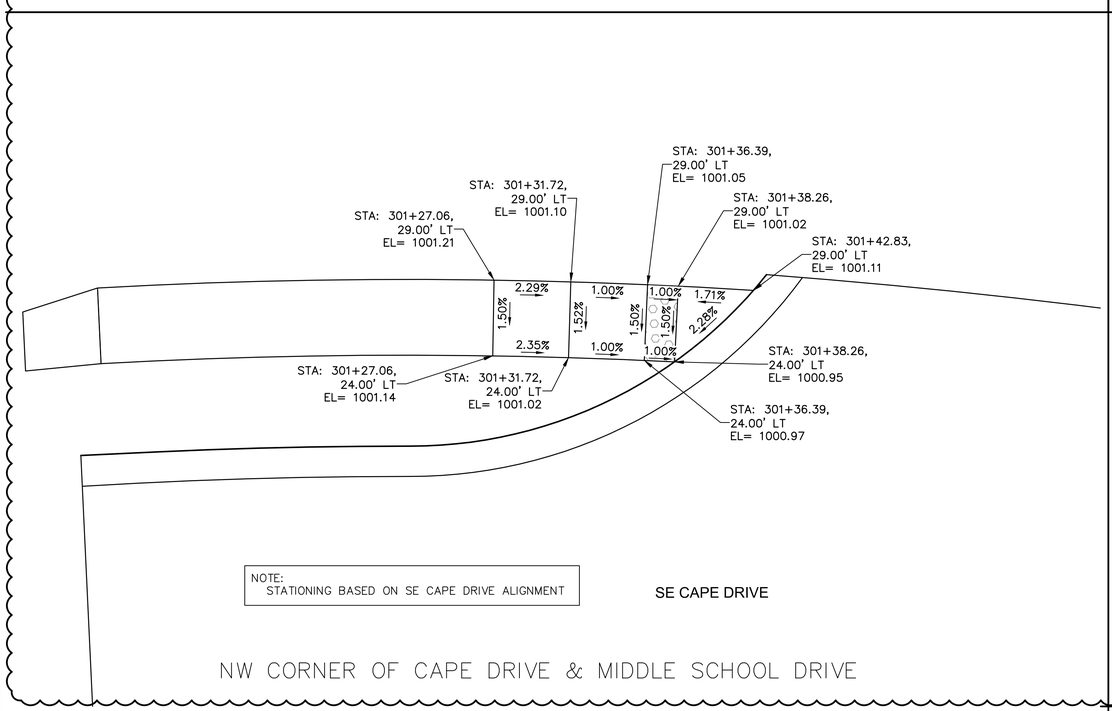

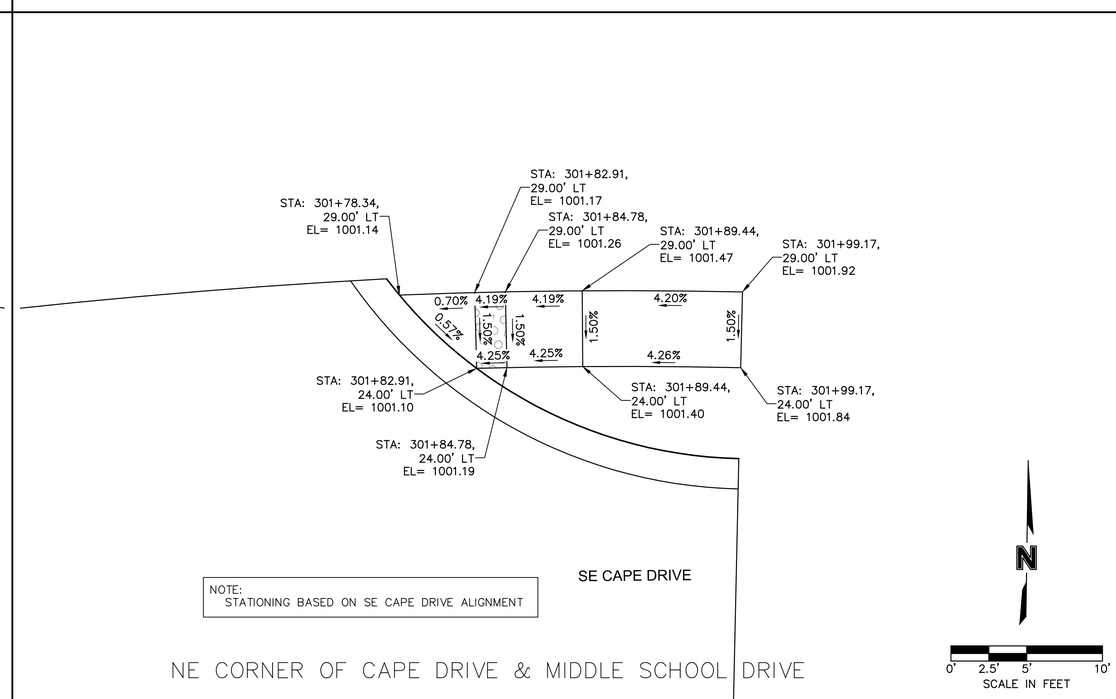

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DATE: Aug 25, 2021 10:05am XREFS: T_PBASE_0200103 T_PSTRM_0200103 T_PTBLK_0200103 V_XTOPO-2_00103 F_PBASE_0200103 T_PPATT_0200103

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

SIDEWALK LAYOUTS

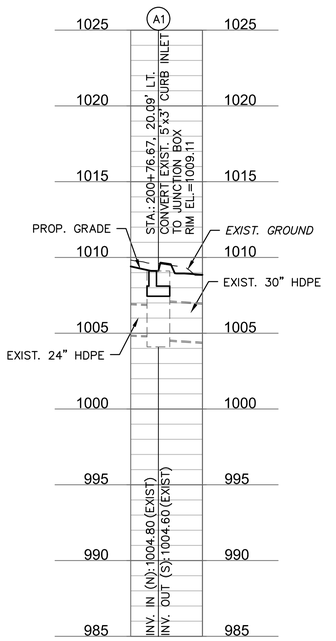
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

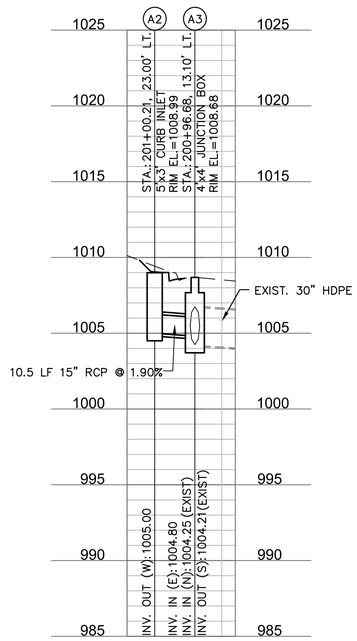
LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.:T_SWK01_0200103_LS
DATE: 2021-02-01

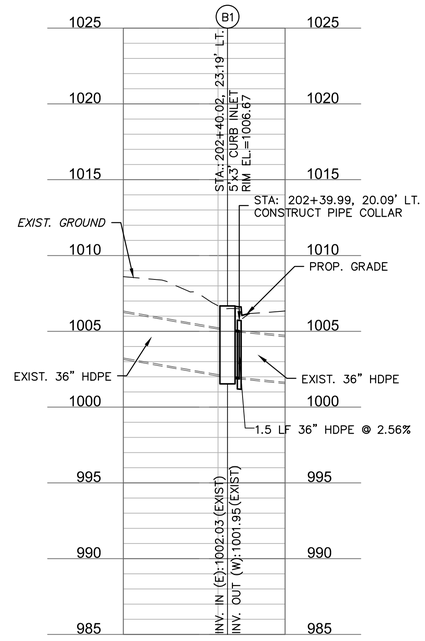
STORM LINE A



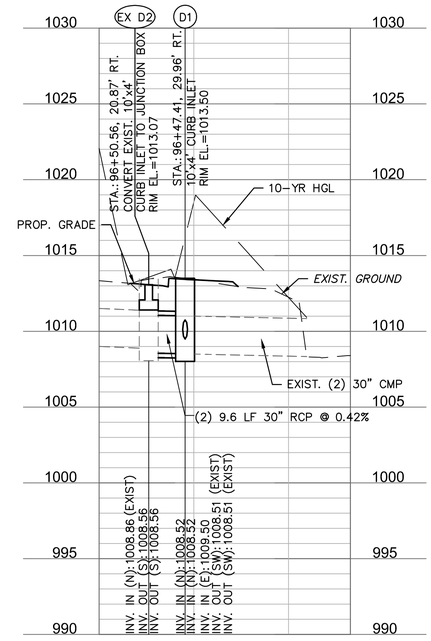
STORM LINE A



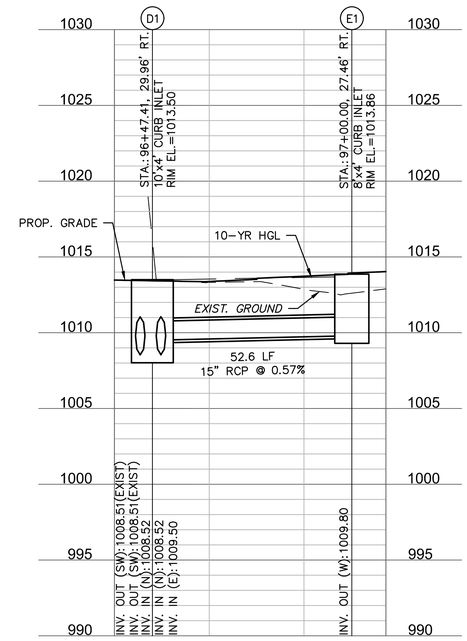
STORM LINE B



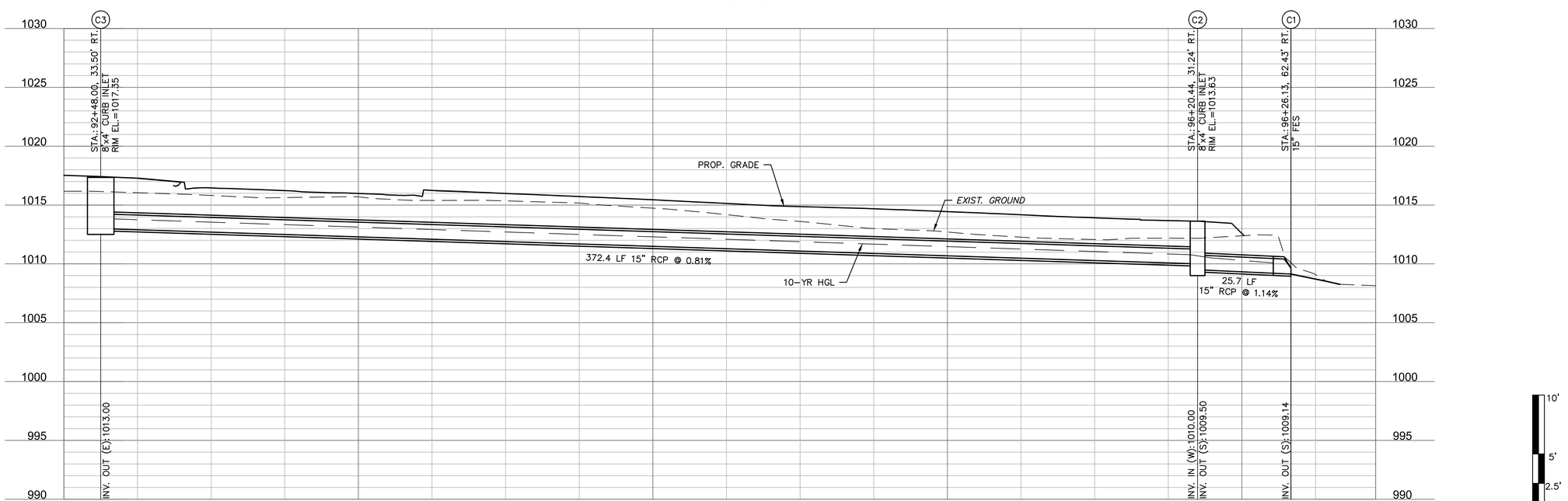
STORM LINE D



STORM LINE E



STORM LINE C



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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

STORM SEWER PROFILES

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_STRM01_0203004
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\STORM SEWER\T_STRM01_0203004.dwg USER: rhaller
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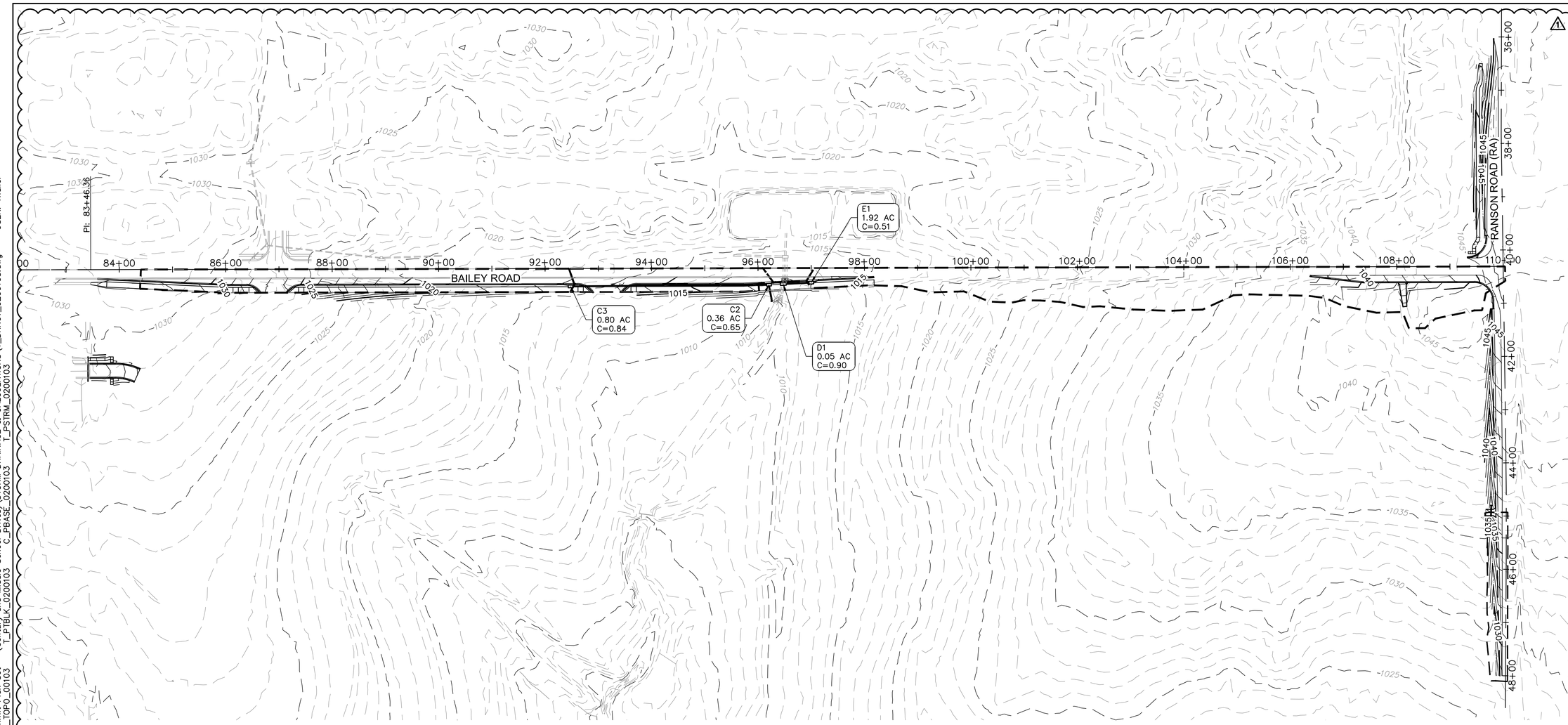

10 YEAR STORM SEWER STRUCTURES																			
Label	Inlet	Inlet Location	Elevation (Rim) (ft)	Elevation (Invert) (ft)	Inlet C	Inlet Drainage Area (acres)	Total Inlet Tc (min)	Local Intensity (in/h)	System Intensity (in/h)	System Rational Flow (cfs)	Curb Opening Length (ft)	Flow (Captured) (cfs)	Flow (Total Bypassed) (cfs)	Capture Efficiency (Calculated) (%)	Bypass Target	Longitudinal Slope (Inlet) (%)	Road Cross Slope (%)	Spread / Top Width (ft)	Depth (Gutter) (in)
C2	Standard Curb Inlet	On Grade	1,013.63	1,009.50	0.65	0.36	5.00	7.35	7.00	6.27	6.00	2.45	0.13	95.00	D1	0.51	2.00	10.80	2.60
C3	Standard Curb Inlet	On Grade	1,017.35	1,013.00	0.84	0.80	5.00	7.35	7.35	4.13	8.00	4.13	0.85	83.00	C2	1.09	2.00	12.00	2.90
D1	Standard Curb Inlet	In Sag	1,013.50	1,008.51	0.90	0.05	5.00	7.35	5.17	210.55	8.00	3.19	0.00	100.00	N/A	N/A	2.00	11.00	3.20
E1	Standard Curb Inlet	On Grade	1,013.86	1,009.80	0.51	1.92	9.80	6.12	6.12	3.82	8.00	3.82	2.27	62.70	D1	1.15	2.00	12.60	3.50

N

0' 50' 100' 200'
SCALE IN FEET

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STATE OF MISSOURI
RYAN B. FLEMING
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PE-2002003161
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RYAN B. FLEMING
MO. NO. PE-2002003161

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1	08/25/2021	ASI #29	RPH

DRAINAGE MAP &
STORM SEWER CALCULATIONS

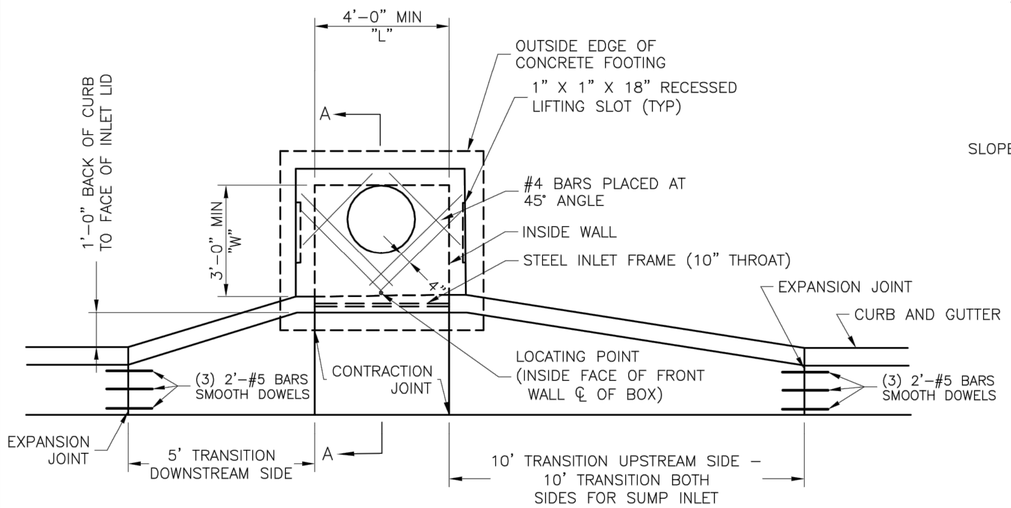
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

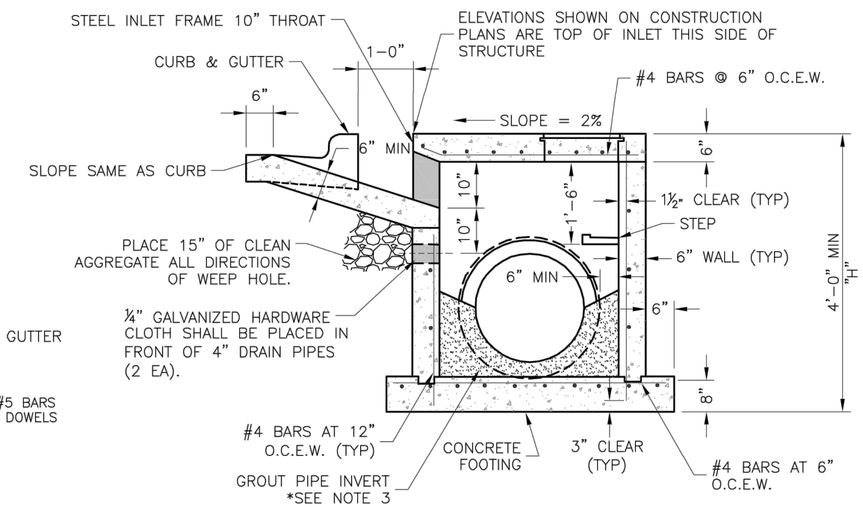
2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_DRN01_0200103
DATE: 2021-02-01

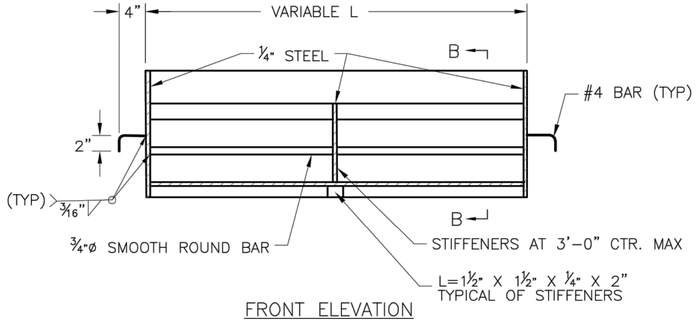
DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\STORM DRAINAGE & CALCULATIONS\T_DRN01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:06am XREFS: T_PBASE_0200103 C_PBASE_0200103 T_PSTRM_0200103 T_PDRN_0200103 V_TOPO_00103 T_PTBLK_0200103



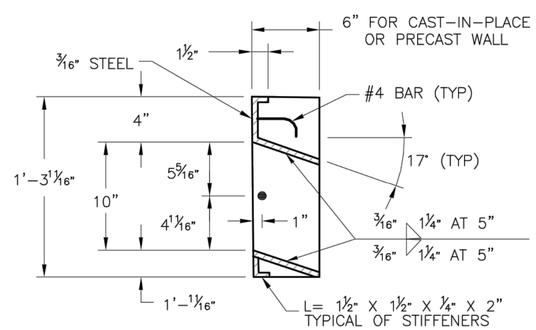
PLAN VIEW



SECTION A–A



FRONT ELEVATION



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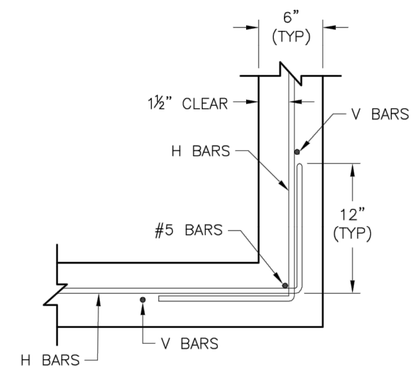
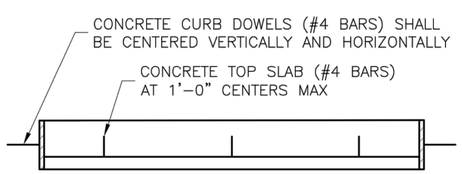


WALL CORNER DETAIL



PLAN VIEW

STEEL FRAME NOTES:

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

GENERAL NOTES:

1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

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

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

Sheet Name: CURB INLET DETAIL

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

STM-1

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE–2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

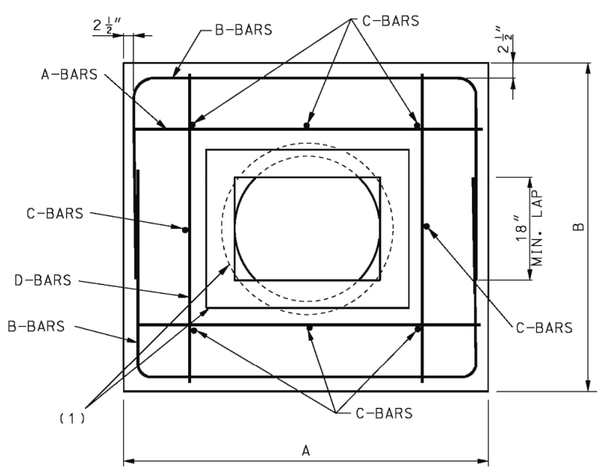
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

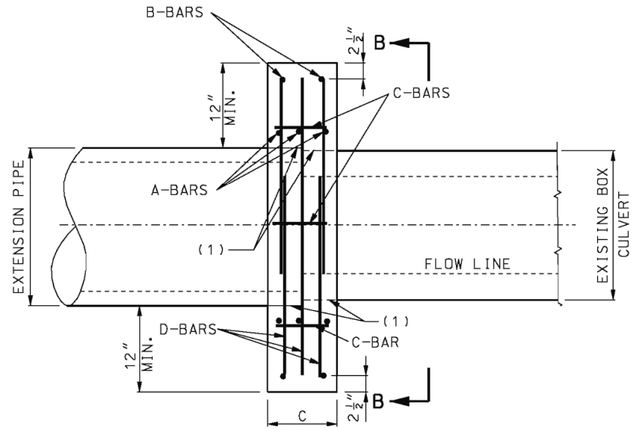
2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO: STRMDTL01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DETAILS\STORM SEWER DETAILS\T_STRMDTL01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:06am XREFS: T_PTBLK_0200103

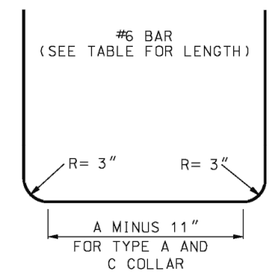


SECTION B-B

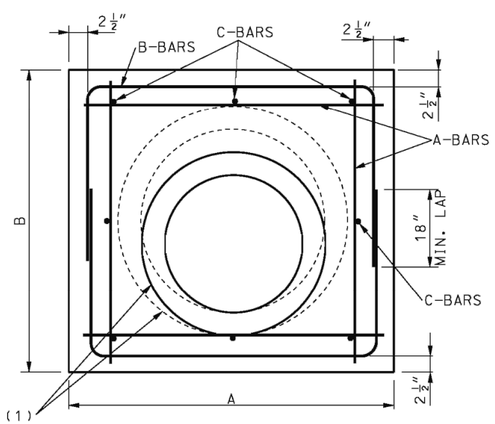


ELEVATION
(FOR BOX CULVERT TO PIPE)

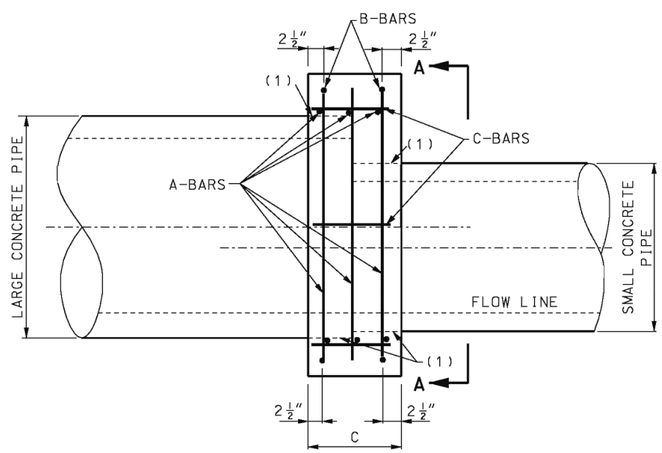
TYPE C COLLAR



BENDING DIAGRAM FOR B-BARS



SECTION A-A



ELEVATION
(FOR CONCRETE PIPE
TO CONCRETE PIPE)

TYPE A COLLAR

(1) ONE LAYER COMMERCIALLY AVAILABLE
55-POUND ROLL ROOFING.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
KATHRYN PHILLIPS HARVEY
NUMBER PE-23751
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

PIPE COLLARS

DATE EFFECTIVE: 10/01/2000
DATE PREPARED: 8/21/2009

604.40F

SHEET NO. 1 OF 2

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RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO: STRMDTL01_0200103
DATE: 2021-02-01

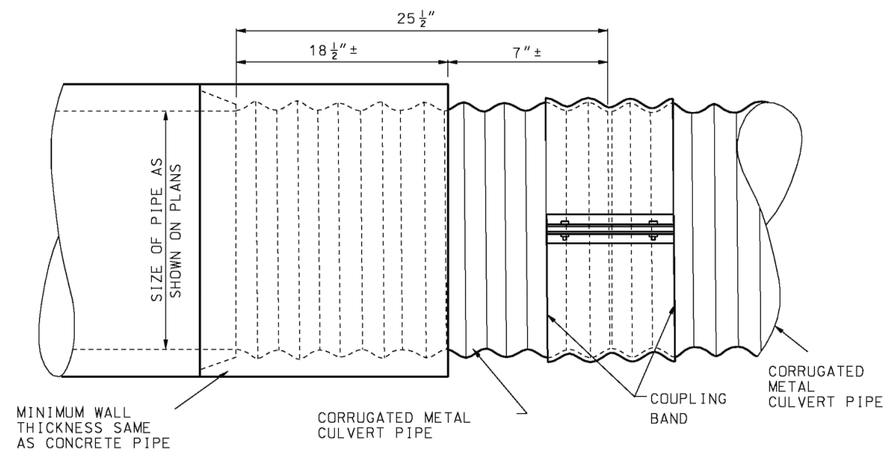
DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DETAILS\STORM SEWER DETAILS\T_STRMDTL01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:06am XREFS: T_PTBLK_0200103

TABLE OF DIMENSIONS

SIZE OF PIPE		DIMENSIONS		LENGTH OF BARS			QUANTITIES	
LARGE (IN.)	SMALL (IN.)	A & B (FT.-IN.)	C (FT.-IN.)	A(#5) 12 REQUIRED (FT.-IN.)	B(#6) 4 REQUIRED (FT.-IN.)	C(#4) 8 REQUIRED (FT.-IN.)	CONCRETE (CU. YD.)	STEEL (LBS.)
12	12	2-8	1-0	2-5	5-10	0-9	0.21	70
15	12 15	3-0	1-0	2-9	6-6	0-9	0.27 0.25	77
18	12 15 18	3-3	1-0	3-0	7-0	0-9	0.33 0.32 0.30	84
21	12 15 18	3-6	1-0	3-3	7-6	0-9	0.36 0.34 0.33	90
24	15 18 24	3-10	1-0	3-6	8-2	0-9	0.44 0.40 0.36	97
30	18 24 30	4-5	1-4	4-2	9-4	1-0	0.71 0.66 0.60	114
36	24 30 36	5-0	1-4	4-9	10-6	1-0	0.88 0.79 0.76	128
42	30 36 42	5-7	1-4	5-4	11-8	1-0	1.05 0.98 0.89	142
48	36 42 48	6-2	1-4	6-0	12-10	1-0	1.22 1.13 1.03	158
54	42 48 54	7-1	1-8	6-9	14-8	1-6	2.02 1.90 1.76	181
60	48 54 60	7-8	1-8	7-5	15-10	1-6	2.27 2.13 1.97	196
66	54 60 66	8-3	2-0	8-0	17-0	1-9	3.04 2.85 2.65	210
72	60 66 72	8-10	2-0	7-7	18-2	1-9	3.36 3.16 2.93	225

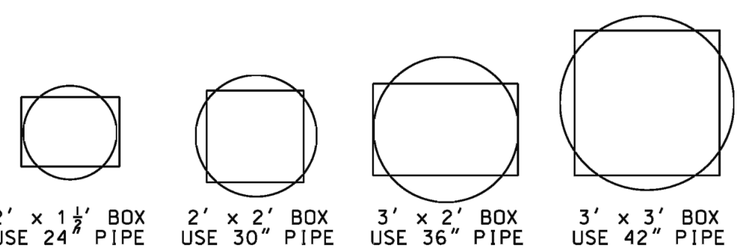
TABLE OF DIMENSIONS

BOX SIZE (FT.)	PIPE SIZE (IN.)	DIMENSIONS			LENGTH OF BARS				QUANTITIES	
		A (FT.-IN.)	B (FT.-IN.)	C (FT.-IN.)	A(#5) 6 REQUIRED (FT.-IN.)	B(#6) 4 REQUIRED (FT.-IN.)	C(#4) 8 REQUIRED (FT.-IN.)	D(#5) 6 REQUIRED (FT.-IN.)	CONCRETE (CU.YD.)	STEEL (LBS.)
2 x 1½	24	5-1	4-9	1-0	4-10	10-4	0-9	4-6	0.65	124
2 x 2	30	5-3	5-3	1-4	5-0	11-0	1-0	5-0	0.93	134
3 x 2	36	6-1	5-10	1-4	5-10	12-5	1-0	5-7	1.16	151
3 x 3	42	6-5	6-5	1-4	6-0	13-4	1-0	6-0	1.29	162



TYPE B COLLAR

(FOR CONCRETE PIPE TO CORRUGATED METAL PIPE)



PIPE PLACEMENT

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI — KATHRYN PHILLIPS HARVEY — NUMBER PE-23751 — PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

PIPE COLLARS

DATE EFFECTIVE: 10/01/2000
DATE PREPARED: 8/21/2009

604.40F

SHEET NO. 2 OF 2

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STATE OF MISSOURI — RYAN B. FLEMING — NUMBER PE-2002003161 — 8-11-21 — PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

STORM SEWER DETAILS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
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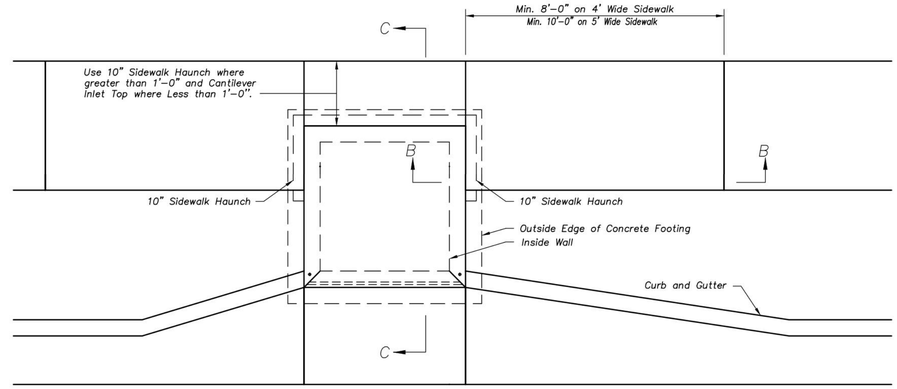
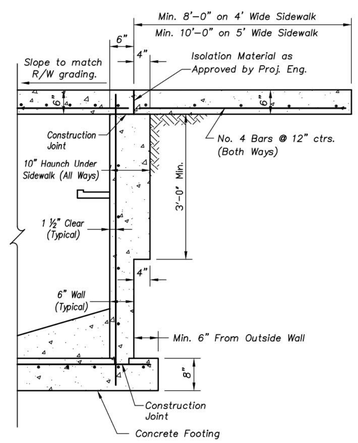
DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DETAILS\STORM SEWER DETAILS\T_STRMDTL01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:06am XREFS: T_PTBLK_0200103

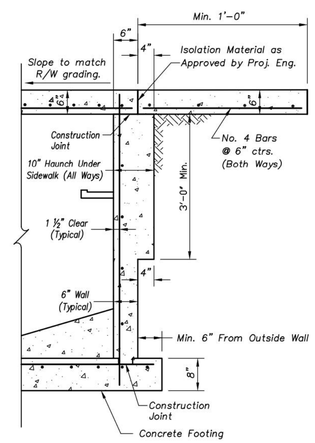


Plan
Not to Scale



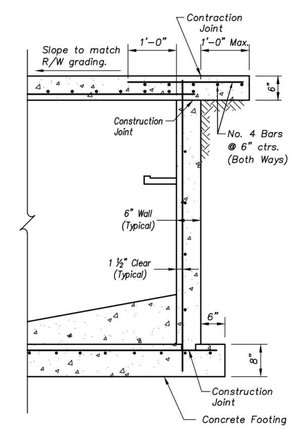
Section B–B
With Sidewalk Haunch

NOTE: Sidewalk Haunch is Subsidiary to the Curb Inlet Construction.



Section C–C
With Sidewalk Haunch Where Sidewalk Width > 1' Along Back of Inlet

NOTE: Sidewalk Haunch is Subsidiary to the Curb Inlet Construction.



Section C–C
With Cantilever Inlet Top Where Sidewalk Width < 1' Along Back of Inlet

NOTE: Sidewalk Haunch is Subsidiary to the Curb Inlet Construction.

CURB INLET WITH ADJOINING SIDEWALK

olsson
Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170
Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
PROFESSIONAL ENGINEER
8-11-21

RYAN B. FLEMING
MO. NO. PE–2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

REVISIONS

STORM SEWER DETAILS

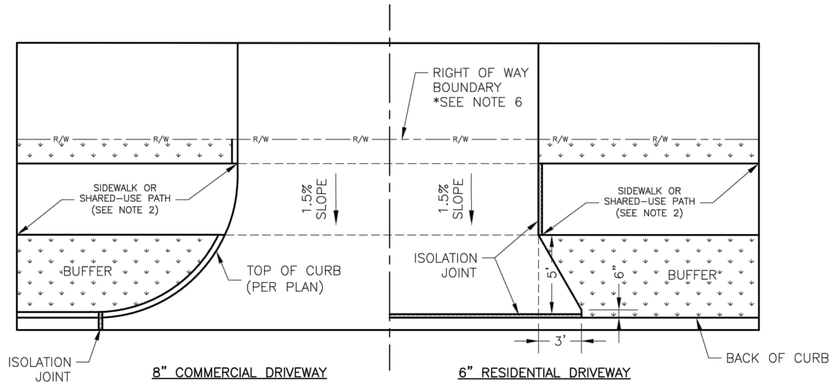
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

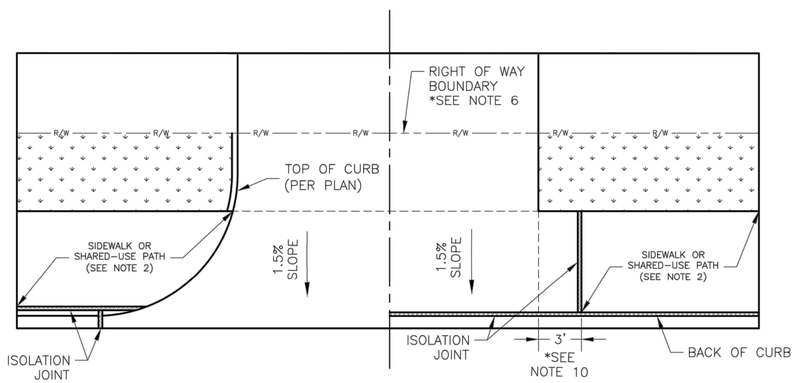
LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO: STRMDTL01_0200103
DATE: 2021-02-01

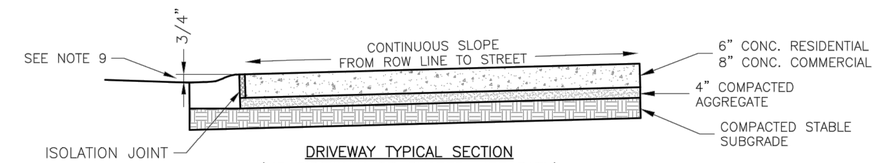
DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DETAILS\STORM SEWER DETAILS\T_STRMDTL01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:06am XREFS: T_PTBLK_0200103



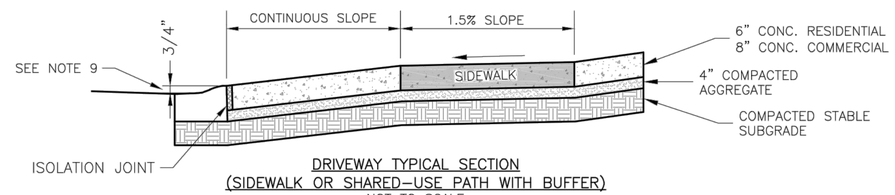
DRIVEWAY WITH BUFFER
NOT TO SCALE



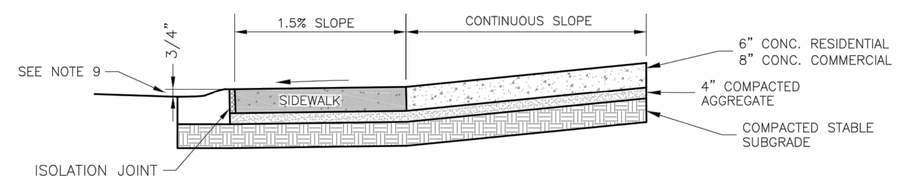
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



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



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



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

GENERAL NOTES

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

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

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

Sheet Name: DRIVEWAY DETAIL

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

GEN-1

olsson
Olsson Engineering - MO State Certificate of Authority #001592
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Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

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RYAN B. FLEMING
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LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
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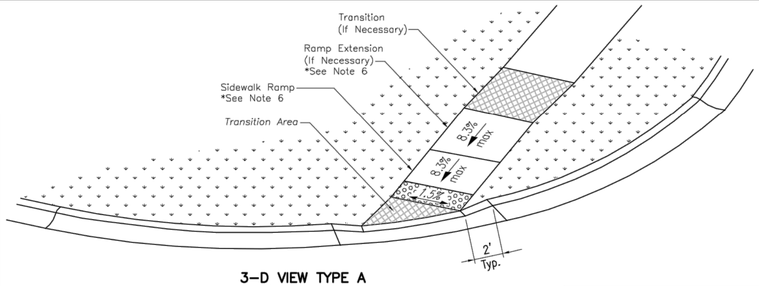
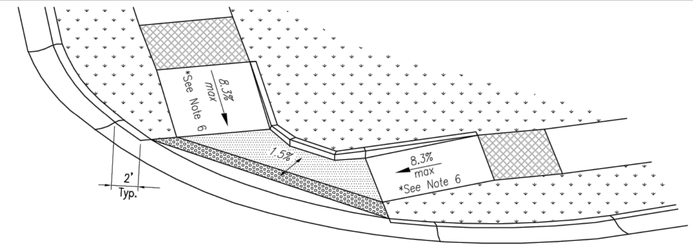


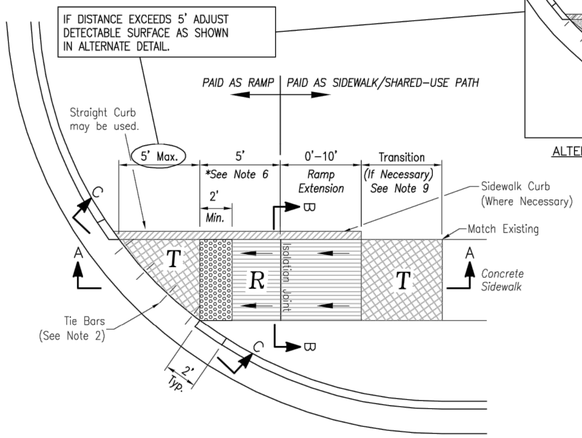
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND

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



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



TYPE A SIDEWALK/SHARED-USE RAMP
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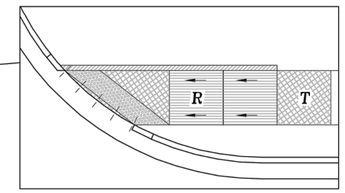
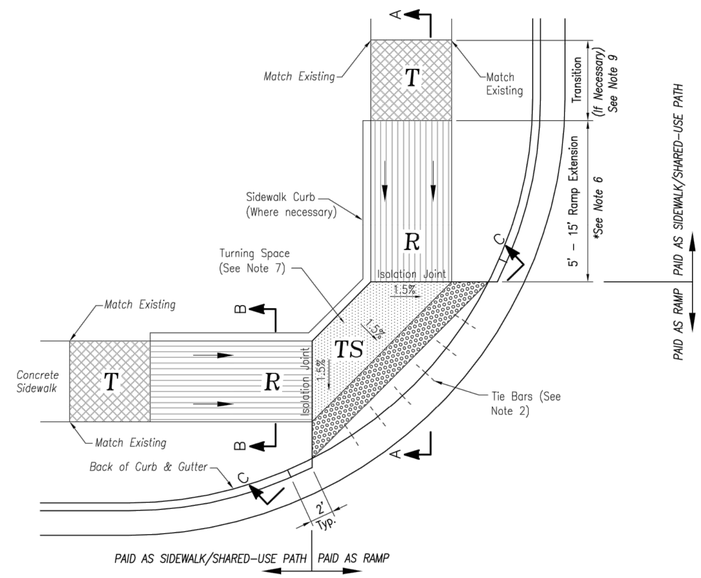


ALTERNATE DETECTABLE SURFACE LAYOUT

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

1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%

   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
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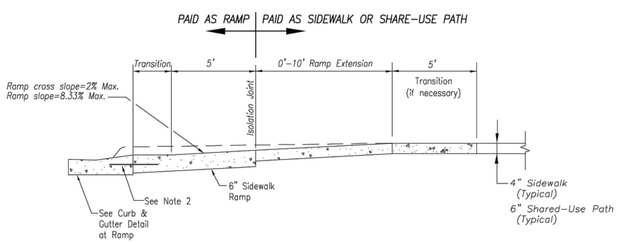
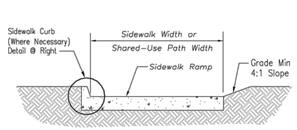
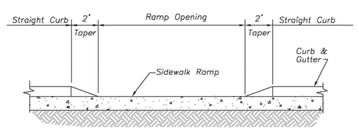


SECTION A-A

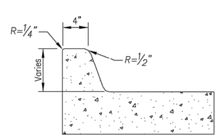


SECTION B-B



SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
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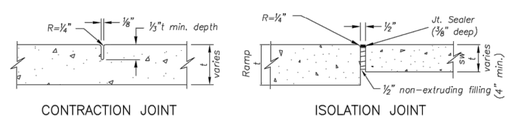
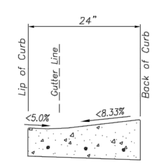


JOINT DETAILS
Not to Scale



CURB & GUTTER DETAIL AT RAMP
Not to Scale

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

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

Sheet Name:
ADA RAMP RETROFIT DETAIL

Drawn By: MJF
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GEN-3A

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LEE'S SUMMIT, MISSOURI

2021

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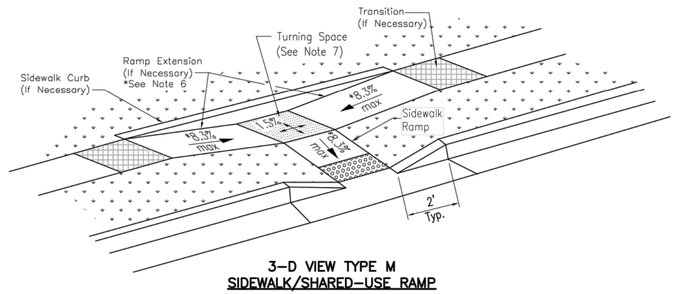
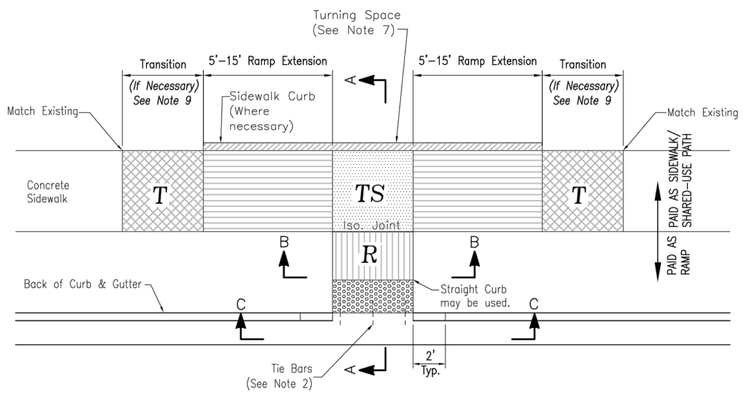


3-D VIEW TYPE M
SIDEWALK/SHARED-USE RAMP



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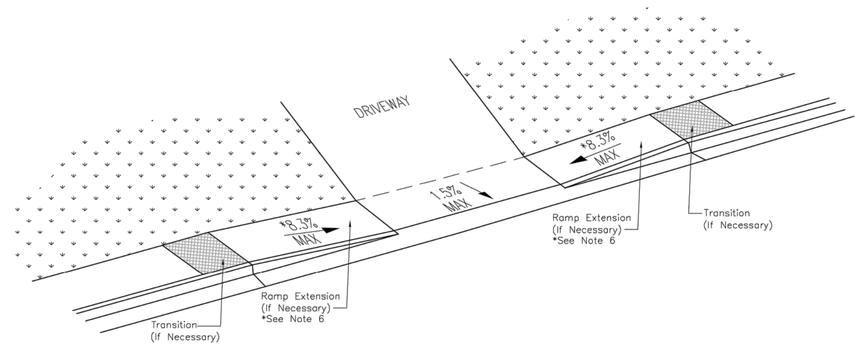
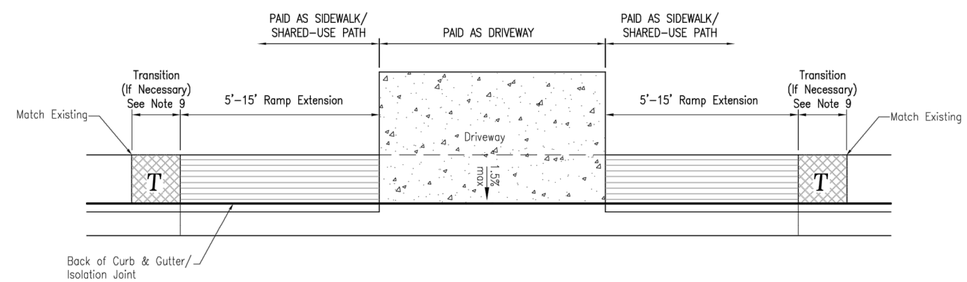
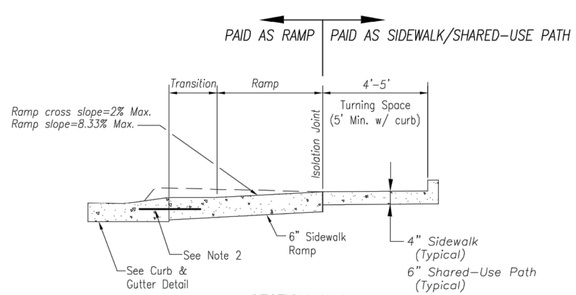


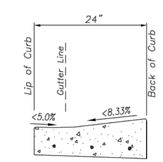
3-D VIEW SIDEWALK/SHARED-USE RAMP
AT DRIVEWAY



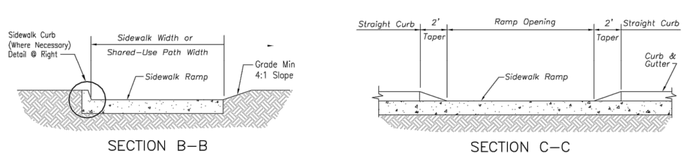
SIDEWALK/SHARED USE RAMP
AT DRIVEWAY WITH ADJOINING CURB



SECTION A–A



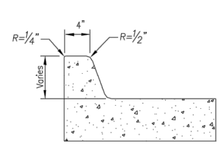
CURB & GUTTER DETAIL AT RAMP
Not to Scale



SECTION B–B

SECTION C–C

TYPE M SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION

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

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

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

Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
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BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DETAILS\STANDARD DETAILS\T_DTL01_0200103.dwg USER: rhaller
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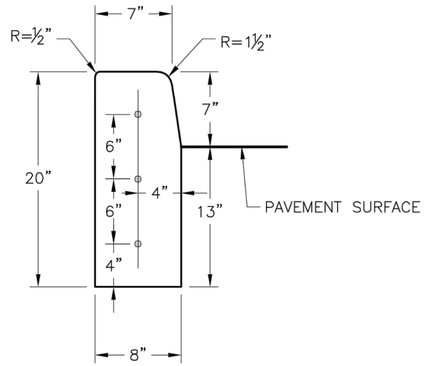
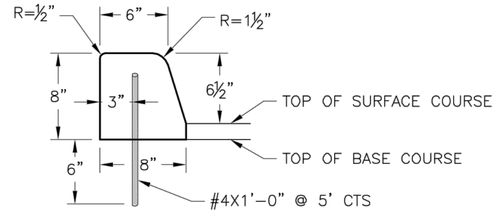
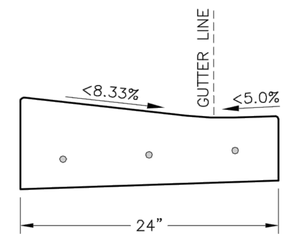


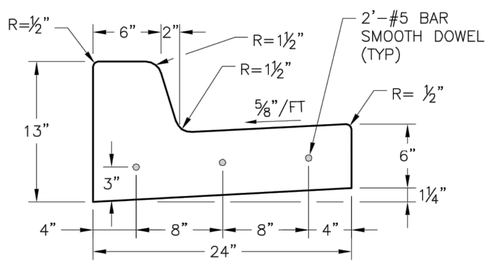
STRAIGHT CURB
(TYPE C–1)



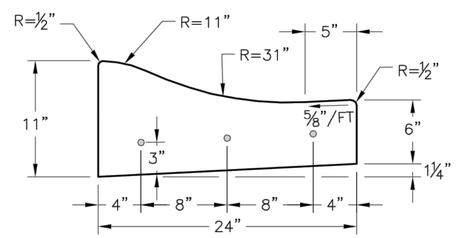
DOWELLED CURB
(TYPE DC)



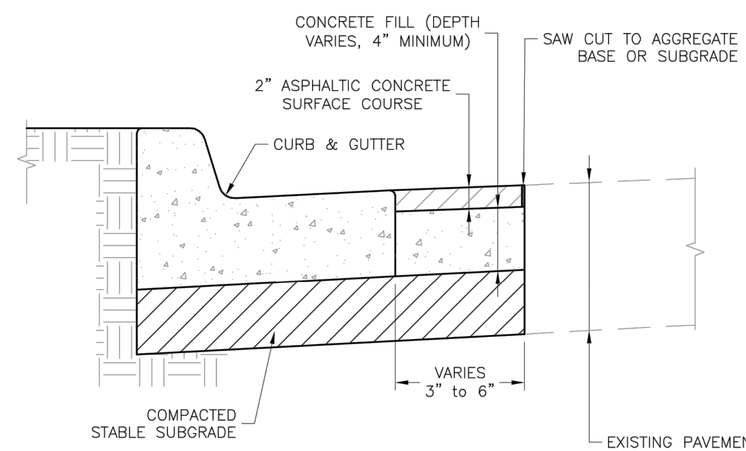
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



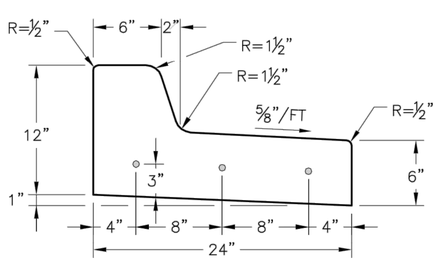
STRAIGHT BACK CURB &
GUTTER
(TYPE CG–1)



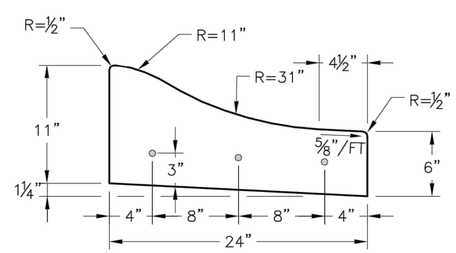
ROLL BACK CURB &
GUTTER
(TYPE CG–2)



CURB REPLACEMENT DETAIL



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



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

GENERAL NOTES

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

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

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

Sheet Name: CURB & GUTTER DETAIL

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

GEN-4

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NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
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STANDARD DETAILS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
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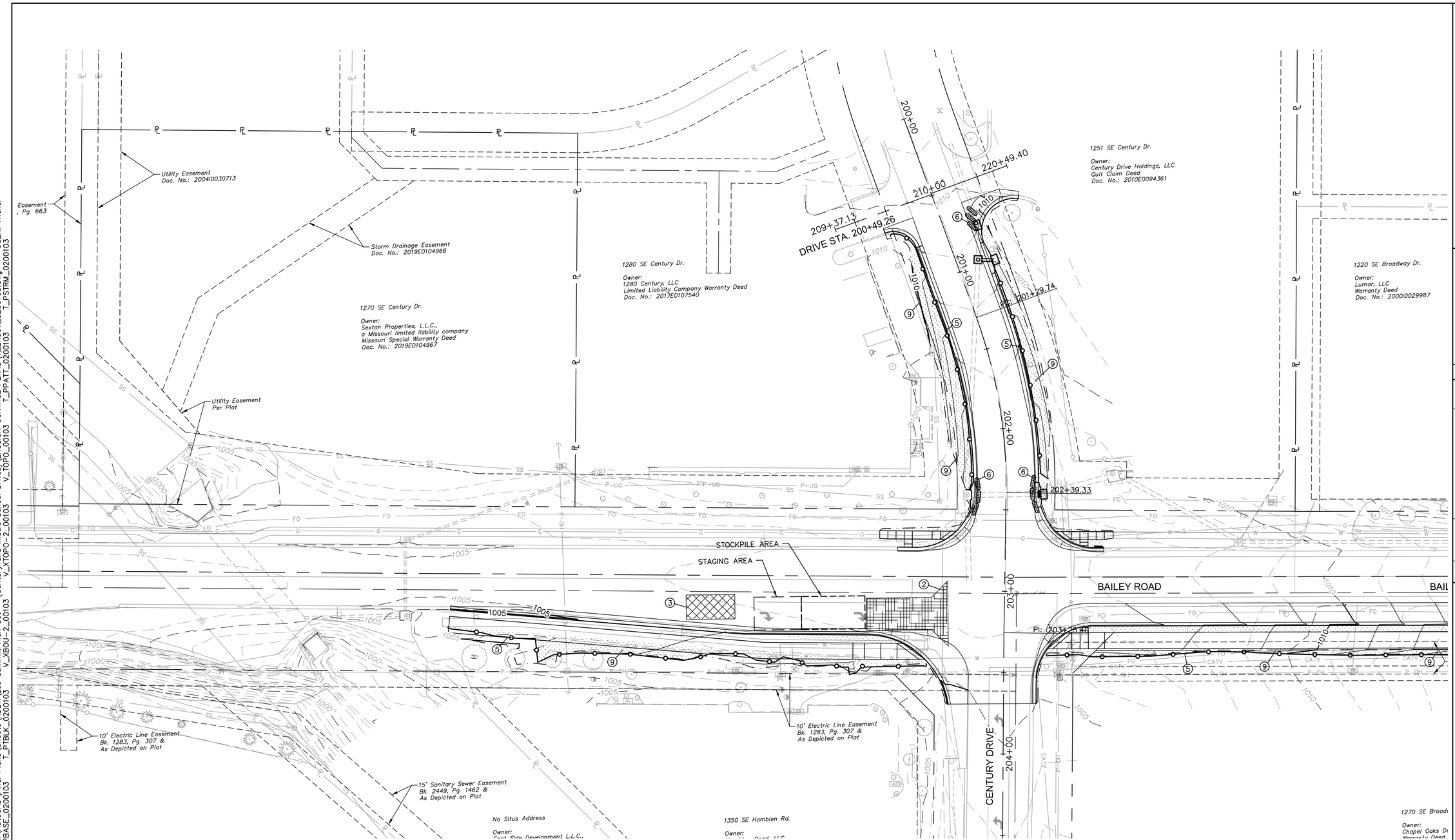

EROSION AND SEDIMENT CONTROL STAGING CHART

PROJECT STAGE	EROSION CONTROL PLAN BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
I – STORM SEWER INSTALLATION PRIOR TO ROADWAY GRADING	1	STAGING AREA	III	
	2	TEMPORARY CONSTRUCTION ENTRANCE	III	
	3	CONCRETE WASHOUT	III	
	4	TEMP. ROCK DITCH CHECK AND/OR BIO LOGS	IV	INSTALL BEFORE STORM SEWER INSTALLATION
	5	SILT FENCE/OR BIODEGRADABLE LOGS (9")	IV	
	6	CURB INLET PROTECTION	III	PER CURB INLET DETAIL
II – ROADWAY GRADING & SWALE GRADING	7	TEMP. ROCK DITCH CHECK AND/OR BIO LOGS	IV	PER DETAIL SHEET XX
III – PAVING	8	CURB INLET/AREA INLET PROTECTION	IV	GRAVEL FILTER BAGS
IV – STABILIZE SITE	9	SOD	N/A	

LEGEND

- SILT FENCE
- INLET PROTECTION
- TEMPORARY ROCK DITCH CHECKS
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SOD

N

0' 10' 20' 40'
SCALE IN FEET

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EROSION CONTROL PLAN

LEE'S SUMMIT MIDDLE SCHOOL #4
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2021

LEE'S SUMMIT, MISSOURI

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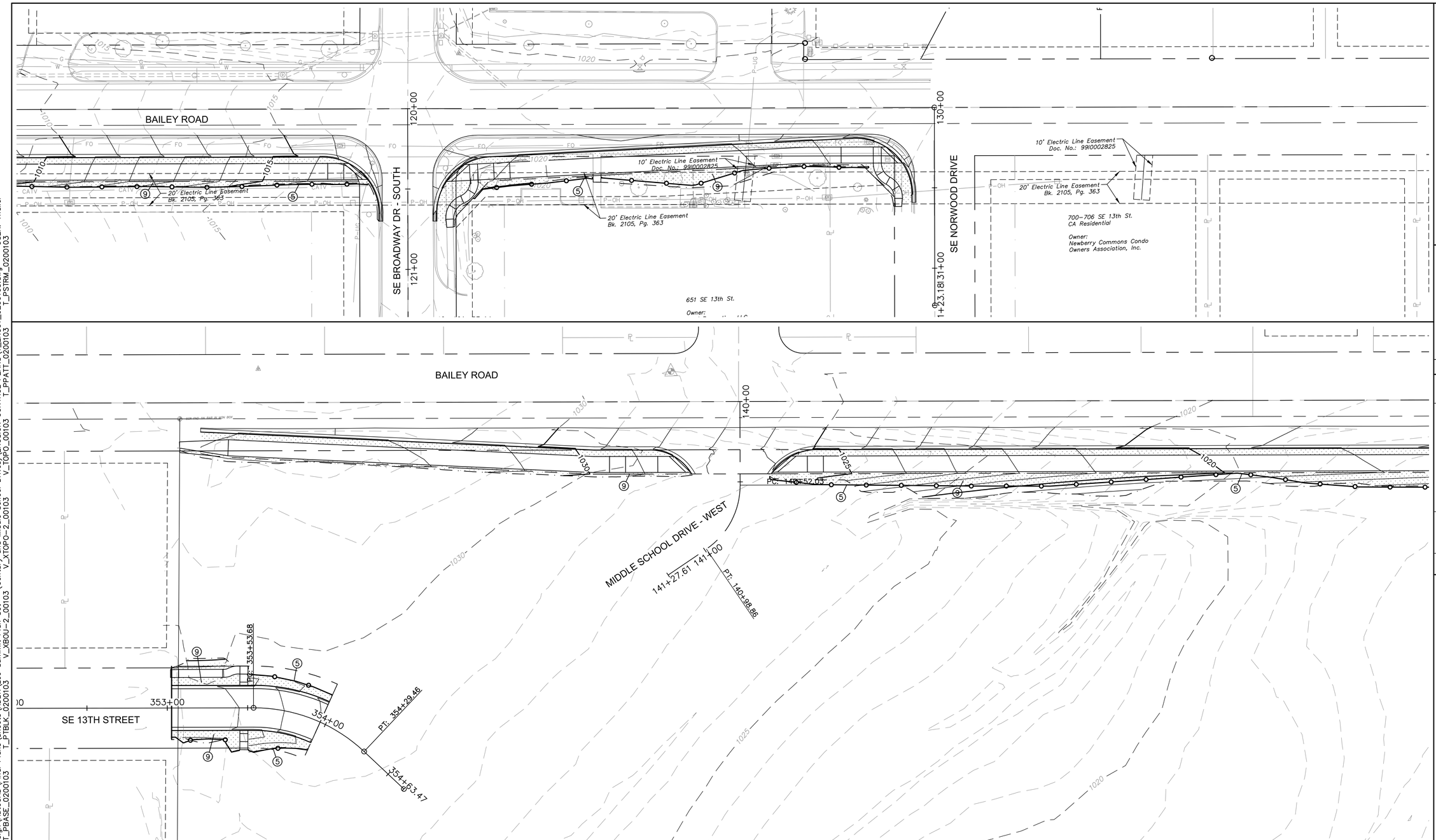

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IV – STABILIZE SITE	9	SOD	N/A	

LEGEND

- SILT FENCE
- INLET PROTECTION
- TEMPORARY ROCK DITCH CHECKS
- CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- SOD

N

0' 10' 20' 40'
SCALE IN FEET

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EROSION CONTROL PLAN

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

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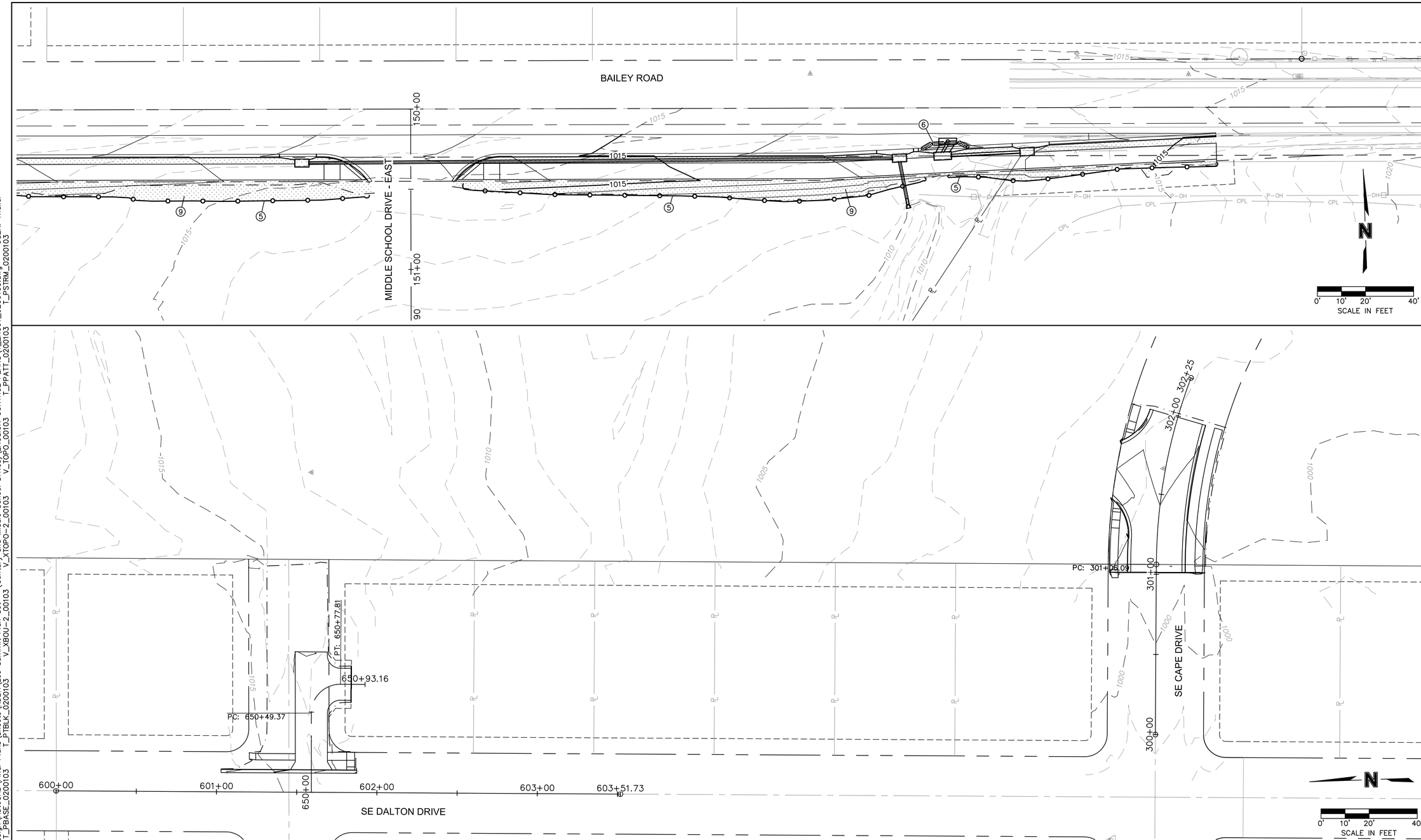

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LEGEND

- SILT FENCE
- INLET PROTECTION
- TEMPORARY ROCK DITCH CHECKS
- CONSTRUCTION ENTRANCE
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EROSION CONTROL PLAN

LEE'S SUMMIT MIDDLE SCHOOL #4
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2021

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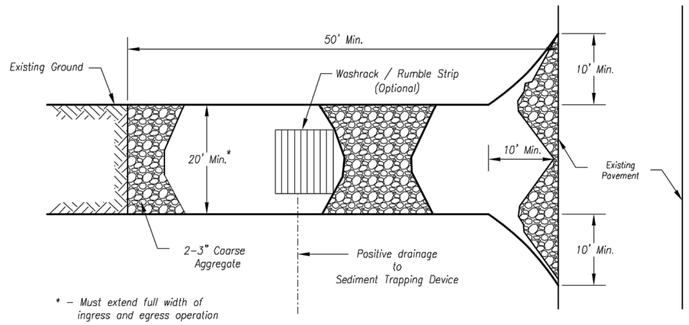

Plan View
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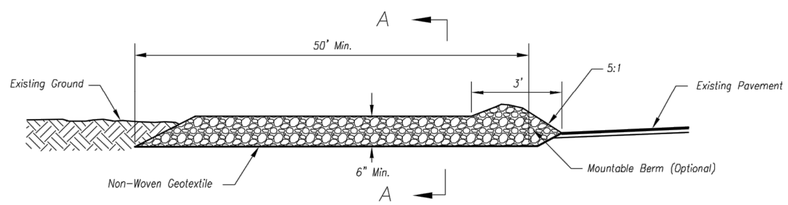

Side Elevation
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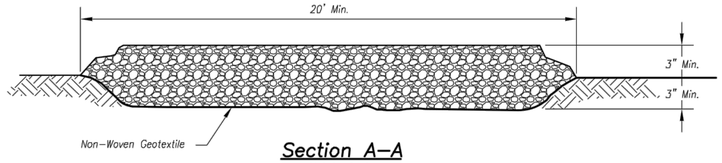


Section A-A
Not to Scale

Notes for Construction Entrance:

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

Maintenance for Construction Entrance:

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

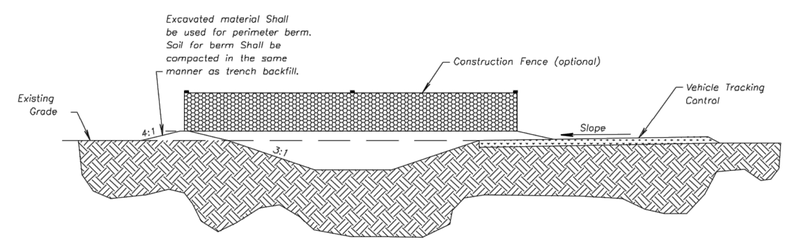
CONSTRUCTION ENTRANCE

Notes for Concrete Washout:

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

Maintenance for Concrete Washout:

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



CONCRETE WASHOUT

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01
ADOPTED: 10/24/2016

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EROSION CONTROL DETAILS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

2021

LEE'S SUMMIT, MISSOURI

C.O.A. NO.: 001592
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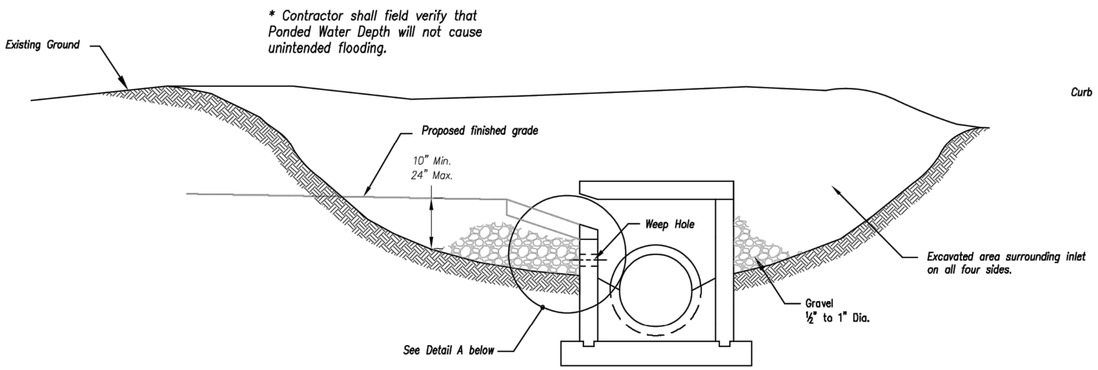
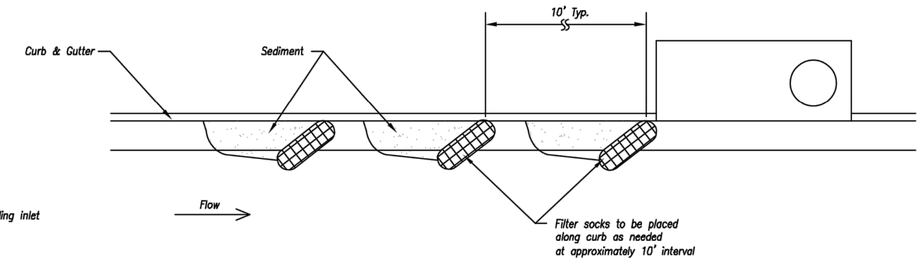
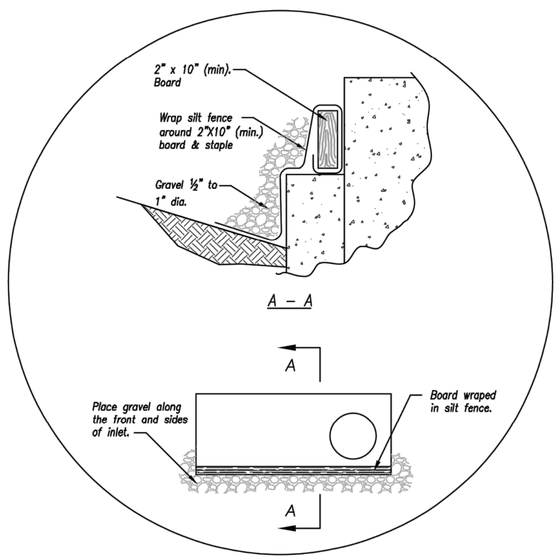




On Grade Curb Inlet Protection



Detail A

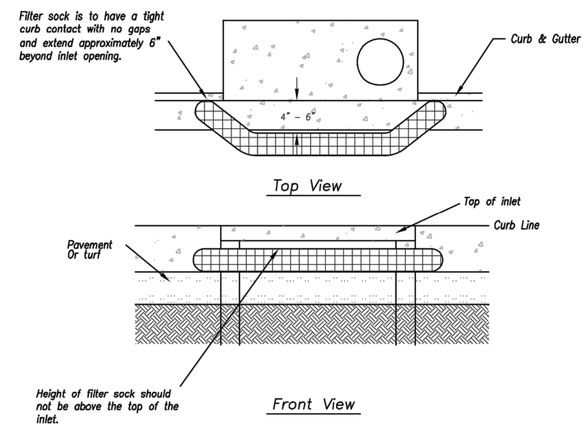
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

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



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION
KANSAS CITY METRO CHAPTER

CURB INLET PROTECTION

STANDARD DRAWING NUMBER ESC-06
ADOPTED: 10/24/2016

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LEE'S SUMMIT, MISSOURI

2021

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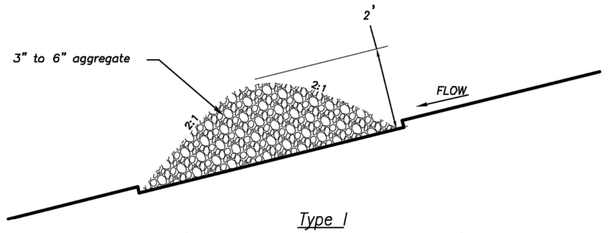
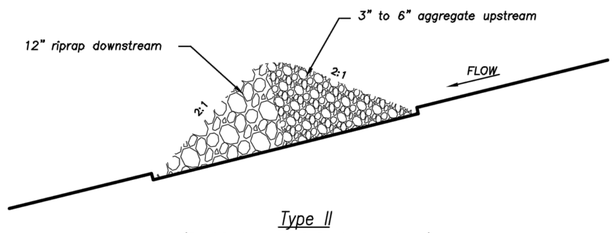


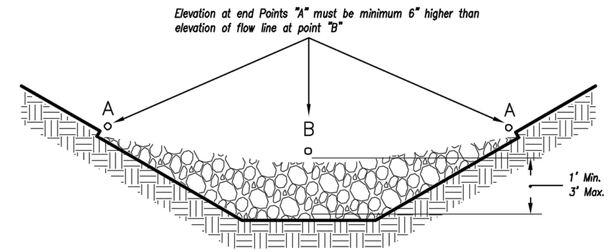
Type I
(2 Acres or less of Drainage Area)
Not to Scale



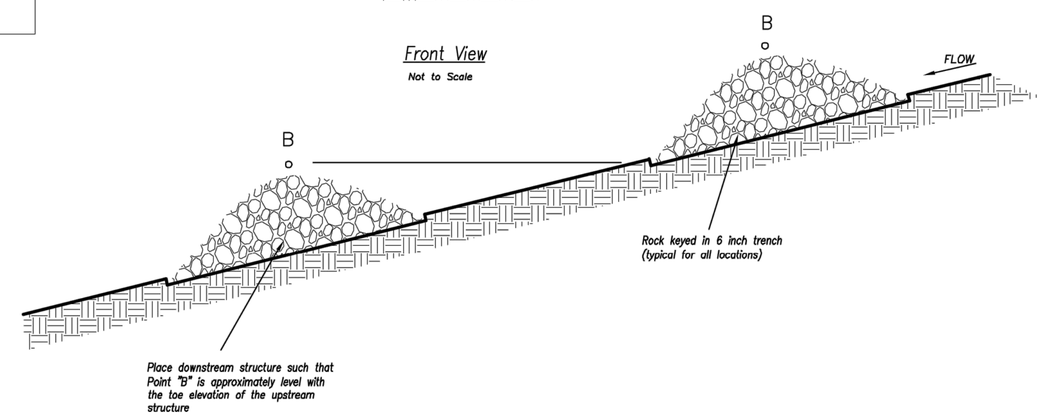
Type II
(2–10 Acres of Drainage Area)
Not to Scale

ROCK DITCH CHECK

Temporary Rock Ditch Check Spacing	
Ditch Centerline Slope (%)	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29
Note: Use this spacing only for Rock Ditch Checks.	



Front View
Not to Scale



Spacing Between Check Dams (all types)
Not to Scale

Notes:

1. Rock check dams shall be used only for drainage areas less that 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.

Maintenance:

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

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

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER
ROCK DITCH CHECKS
STANDARD DRAWING NUMBER ESC-10
ADOPTED: 10/24/2016

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Olsson Engineering - MO State Certificate of Authority #001592
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Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

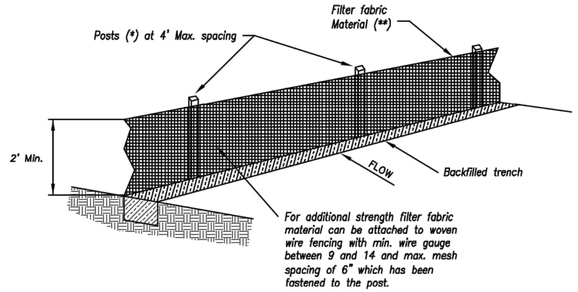
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

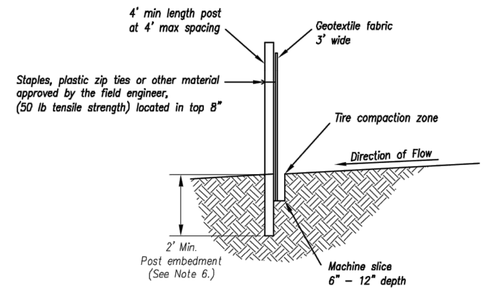
LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_ERCDTL01_0203004
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\DETAILS\EROSION CONTROL DETAILS\T_ERCDTL01_0203004.dwg USER: rhaller
DATE: Aug 25, 2021 10:08am XREFS: T_PTBLK_0200103





(*) POSTS

- MIN. LENGTH 4'
- HARDWOOD 1 3/16" x 1 3/16"
- NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
- STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

SILT FENCE DETAILS

Not to Scale

Notes:

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

Maintenance:

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

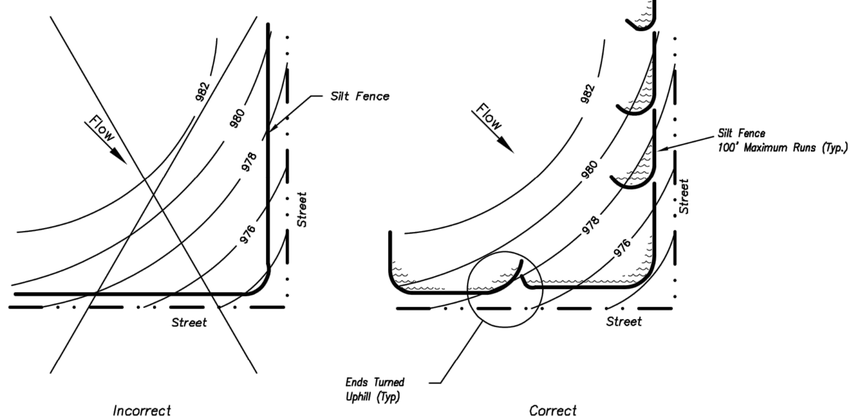
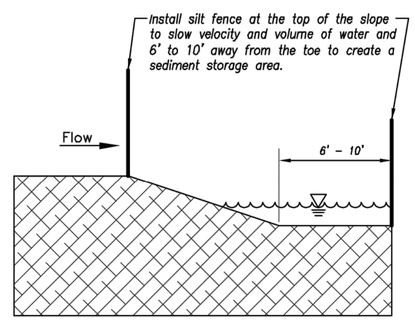
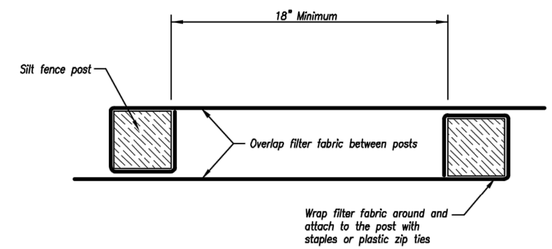


Figure A

SILT FENCE LAYOUT

Not to Scale





JOINING FENCE SECTIONS

Not to Scale

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

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter APWA AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING NUMBER ESC-03

ADOPTED: 10/24/2016

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STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
PROFESSIONAL ENGINEER
8-11-21

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

EROSION CONTROL DETAILS

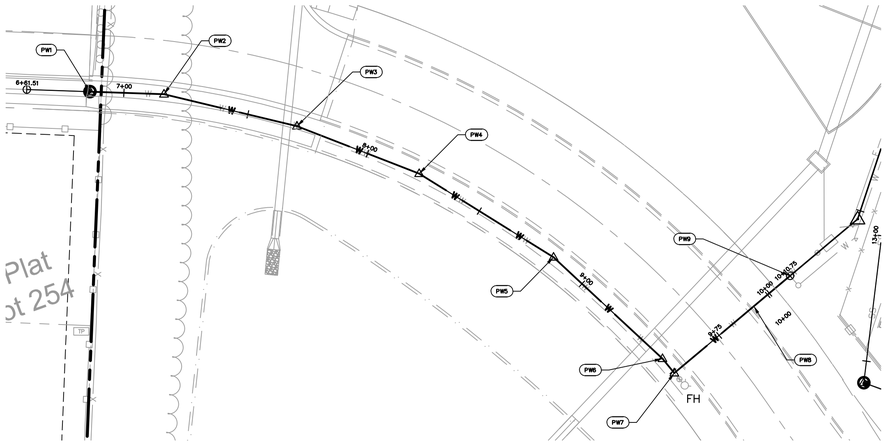
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

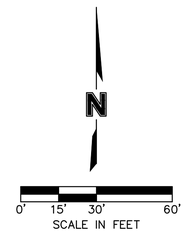
LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.:T_ERCDTL01_0203004
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set – (Century and Middle School Drives)\DETAILS\EROSION CONTROL DETAILS\T_ERCDTL01_0203004.dwg USER: rhaller
DATE: Aug 25, 2021 10:08am XREFS: T_PTBLK_0200103

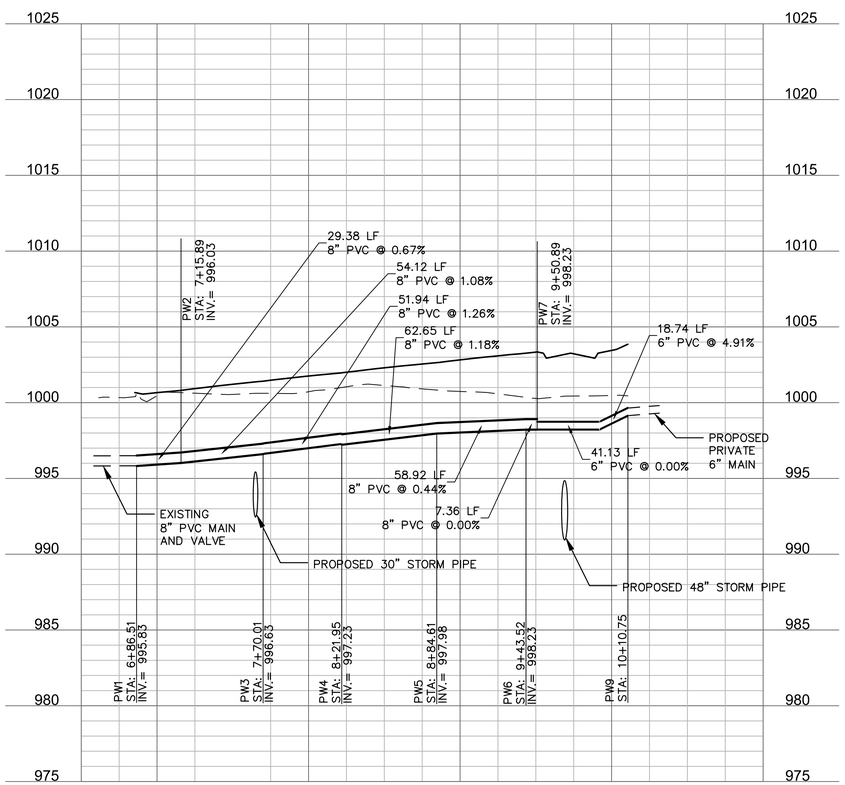




GENERAL NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARDS ANDSPECIFICATIONS *OF THE AMERICAN PUBLIC WORKS ASSOCIATION – KANSAS CITY METROPOLITAN CHAPTER (APWA–KC) AND* THE CITY OF LEE'S SUMMIT, MO, EXCEPT WHERE SHOWN OTHERWISE. NOTIFY ENGINEER OF DISCREPANCIES
2. PIPE AND FITTING MATERIALS USED IN THE CONSTRUCTION OF WATER MAINS SHALL BE POLYVINYL CHLORIDE (PVC) AWWA C900 AND AWWA C905

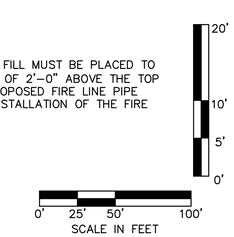
CAPE DRIVE PUBLIC WATER MAIN EXTENSION (6+50 - 11+00)



STRUCTURES	
ID	DESCRIPTION
PW1	CONNECT TO EXISTING VALVE 6+86.51, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 995.83 (8" PVC) N: 991537.881; E: 2831449.379
PW2	11.25 BEND WITH THRUST BLOCK 7+15.89, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 996.03 (8" PVC) INV OUT = 996.03 (8" PVC) N: 991536.851; E: 2831478.740
PW3	11.25 BEND WITH THRUST BLOCK 7+70.01, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 996.63 (8" PVC) INV OUT = 996.62 (8" PVC) N: 991524.226; E: 2831531.371
PW4	11.25 BEND WITH THRUST BLOCK 8+21.95, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 997.23 (8" PVC) INV OUT = 997.29 (8" PVC) N: 991505.415; E: 2831579.786
PW5	11.25 BEND WITH THRUST BLOCK 8+84.61, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 997.98 (8" PVC) INV OUT = 997.98 (8" PVC) N: 991472.333; E: 2831632.991
PW6	11.25 BEND WITH THRUST BLOCK 9+43.52, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 998.23 (8" PVC) INV OUT = 998.23 (8" PVC) N: 991432.192; E: 2831676.120
PW7	90 BEND WITH THRUST BLOCK, REDUCER, AND STANDARD FIRE HYDRANT ASSEMBLY 9+50.89, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 998.23 (6" PVC) INV OUT = 998.23 (8" PVC) N: 991426.518; E: 2831680.811
PW8	11.25 BEND WITH THRUST BLOCK 9+92.01, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION INV IN = 998.23 (6" PVC) INV OUT = 998.23 (6" PVC) N: 991452.963; E: 2831712.306
PW9	CONTINUE TO PRIVATE MAIN 10+10.75, 0.00' CAPE DRIVE PUBLIC WATER MAIN EXTENSION N: 991465.015; E: 2831726.659

LEGEND

COMPACTED FILL MUST BE PLACED TO A MINIMUM OF 2'–0" ABOVE THE TOP OF THE PROPOSED FIRE LINE PIPE PRIOR TO INSTALLATION OF THE FIRE LINE PIPE.



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Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI
TERRY M. PARSONS
NUMBER PE-2018010505
PROFESSIONAL ENGINEER
03/11/2021

TERRY M. PARSONS
MO. NO. PE–2018010505

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PUBLIC WATER MAIN EXTENSION (CAPE DRIVE)
PLAN & PROFILE

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

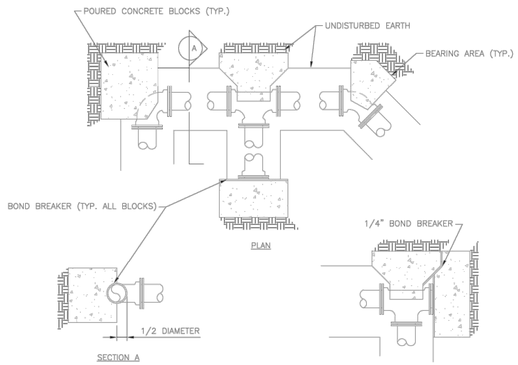
2021

C.O.A. NO.: 001592
DRAWN BY: RPH
CHECKED BY: RBF
APPROVED BY: TMP
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: C_UTL06_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\CONSTRUCTION DOCUMENTS\C_UTL06_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:09am XREFS: C_XBASE_0200103 C_PBASE_0200103 T_PSAS_0200103 V_XALT_00103 C_LSD01_0200103
C_PBASE_0200103 TMP C_PBASE02_0200103 T_PBASE_0200103 T_PTBLK_CIVIL_0200103

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

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

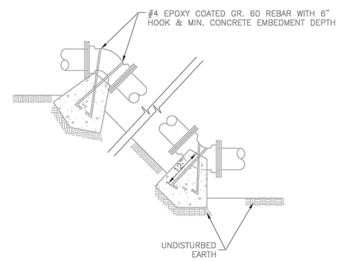


NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 01/2016 | Drawn By: JN | Checked By: DL
HORIZONTAL THRUST BLOCK — WAT-1

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4



NOTES:
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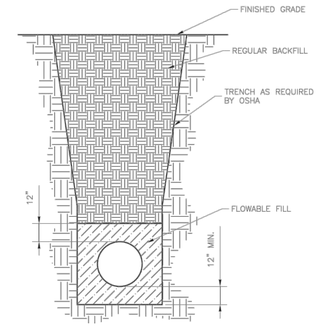
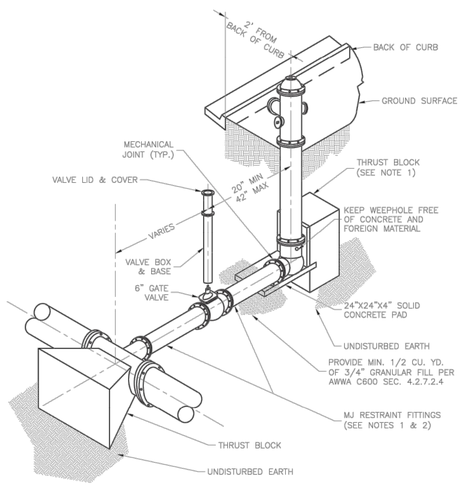
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: WAT-2 | Drawn By: JN | Checked By: DL
VERTICAL THRUST BLOCK — WAT-2



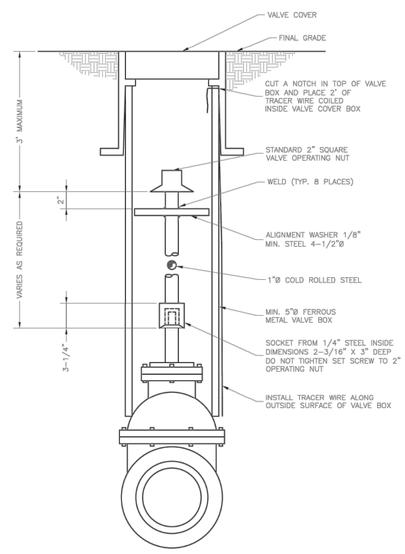
NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 01/2016 | Drawn By: JN | Checked By: DL
WATER TRENCH CHECK DETAIL — WAT-6



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

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 01/2016 | Drawn By: JN | Checked By: DL
HYDRANT - STRAIGHT SET — WAT-7



LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 01/2016 | Drawn By: JN | Checked By: DL
VALVE STEM EXTENSION AND VALVE BOX — WAT-9

olsson
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7301 West 133rd Street, Suite 200 TEL 913.381.1170 www.olsson.com
Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI — TERRY M. PARSONS — NUMBER PE-2018010505 — PROFESSIONAL ENGINEER — 08/11/2021

TERRY M. PARSONS
MO. NO. PE-2018010505

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

PUBLIC WATER MAIN EXTENSION (CAPE DRIVE)
STANDARD DETAILS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: RPH
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PROJECT NO.: 020-0103
DWG NO.: C_UTL06_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\GNCV\CONSTRUCTION DOCUMENTS\C_UTL06_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:09am XREFS: C_XBASE_0200103 C_PBASE_0200103 T_PSAS_0200103 V_XALT_00103 C_LSD01_0200103
C_PBASE_0200103_TMP C_PBASE02_0200103 T_PBASE_0200103 T_PTBLK_CIVIL_0200103

GENERAL NOTES:

1.The contractor shall have one (1) signed copy of the plans (approved by the City of Lee's Summit) and one (1) copy of the appropriate Design and Construction Standards and Specification at the job site at all times.

2. Construction of the improvements shown or implied by this set of drawings shall not be initiated or any part thereof undertaken until the Director of Public works or his agent is notified of such intent, and all required and properly executed bonds and contract agreements are received and approved by the City.

3. The Construction covered by these plans shall conform to all applicable standards and specifications of the Public Works Department of the City of Lee's Summit, Missouri, in current use. Specifically, but not exclusive to: Traffic Signal Specification: Section 2900.
Traffic Signal Standard Drawings: TS-1 through TS-10.

4. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit, Missouri.

5. Right-Of-Way limits should be cross checked by the Contractor and approved by the field inspector before undertaking any excavations at the site.

6.The contractor shall stake the location of all pole bases, pull boxes, and controller cabinet base, then provide the City one week notice prior to the start of construction, and subsequent construction activities, for inspection and approval. The contractor shall provide a work schedule, contact names, and phone numbers.

7. All locations indicated in drawings, including conduit runs are subject to adjustment to clear obstructions and to meet site conditions, if any, by the City.

8. Existence and location of any underground or overhead facilities shown on these drawings or reference to any soil conditions, if made, are approximate only. It is the Contractor's responsibility to verify all site conditions and to locate all utilities, including depth, before starting construction so that any adjustments to design can be made prior to pole ordering or fabrication. In addition, the Contractor shall avoid disruption of services provided by the utilities and shall insure that proper clearances (overhead and underground) are maintained for the duration of construction. The Contractor shall be fully responsible for any and all damages caused by failure to exactly locate and preserve all utilities.

9. The contractor shall coordinate with the City Traffic Engineer for any necessary changes to the traffic signals resulting from existing utilities or other construction issues.

10. Any equipment damaged during construction shall be replaced at the Contractor's expense.

11. Signal equipment shall not form an obstruction to the movement of pedestrian and wheelchair traffic and shall be ADA accessible. Where sidewalks are present, a minimum clear width of 48 inches shall be available for pedestrian and wheelchair movement. Pull boxes shall not be installed on wheelchair ramps.

12. Conduits to be placed outside of paved areas shall be trenched in place. If the project includes roadway improvements, the conduit shall be trenched after the roadway rough grade is established and prior to any final roadway paving, curb & gutter, median or sidewalk sections are placed. All compaction and backfill shall meet City of Lee's Summit requirements. At the option of the contractor, conduits may be bored outside paved areas, but there will be no adjustment to the unit prices for conduit installation and any change in cost would be the contractor's responsibility. Any conduit bore outside paved areas shall be done after roadway improvements are complete. Conduits to be placed within the limits of pavement shall be bored unless otherwise authorized by the City Traffic Engineer. If the project includes roadway improvements, the conduit shall be bored prior to any final roadway paving. Potholing for utilities on road bores after final paving will not be allowed.

13. The traffic signal controller, cabinet and related equipment, as specified for this project, shall be delivered to the City for testing prior to installation. All signal timings will be provided by the City Traffic Engineer. The Contractor shall coordinate material delivery and pick-up with the Public Works Operations Department (969-1870) at least 48 hours prior to transportation. A minimum of 2 weeks shall be permitted for testing between delivery and pick-up. The Contractor assumes all damage liability and should inspect all materials before and after transportation of equipment.

14. The Contractor shall coordinate all electrical power requirements and connection activities with the Utility Company, including location of the meter, circuitry and connection requirements, and powering up the complete system. The Contractor shall order the meter and pay electrical bills until Final Acceptance, at which time the Contractor shall coordinate with the City for transferring the electrical billing services to the City.

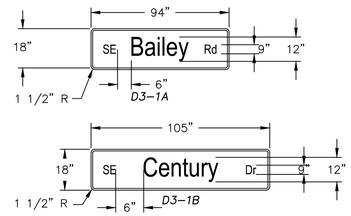
15. All disturbed surfaces shall be made good to match existing at the Contractor expense.

16. Contractor shall maintain at all times access for Emergency Vehicles and residents along the entire project .

17. Substantial completion of the traffic signals shall be defined as all components of the traffic signal operated fully and satisfactorily with red, yellow, and green cycles. Substantial completion shall allow for testing of the signals, including a flash period, prior to signals operating with cycles. Substantial completion shall also include the completion of all interconnect, sidewalk, curb ramp and removal work.

18. Final acceptance of traffic signals shall be defined as final written approval and acceptance by the City, including completion or correction of all punch list items and the traffic signals fully operational for a time period of fifteen (15) days, without any problem, as noted in the specifications. As-built plans shall be submitted prior to final acceptance by the City.

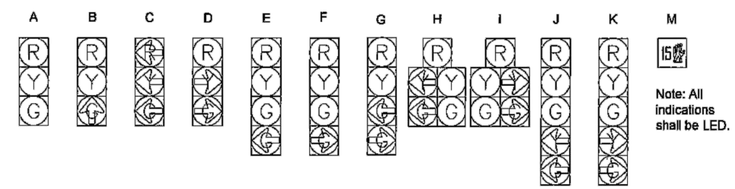
STREET NAME SIGN DETAIL



9" and 12" series "C", upper case/lower case with silver white, high intensity letters and 3/4" border on green, high intensity background

LEGEND

- Optically Limiting Traffic Signal Head
- Traffic Signal Head
- Traffic Signal Head With Backplate
- Pedestrian Signal Head
- Stop Line
- Lane Use
- Mast Arm Pole
- Signal Pedestal
- Traffic Controller Cabinet
- Pull Box
- Span Wire Signal Head
- Power Supply (Disconnect)
- Suggested Vehicle Detection Zone
- 65 Induction Loop Detector
- Push Button Detector
- Opticom Detector
- Magnatomer Detector
- Power Supply (Source)
- Conduit
- 71 Signal Face Number
- 7 Post Number
- 71 Detector Number
- 7 Pull Box Number
- PB24 Push Button Number
- Cobra Head Luminaire
- Vehicular Detection Camera



TYPICAL REGULATORY SIGN DETAIL

SIGN R10-12
24" X 30"

SIGN R10-3E
9" X 15"

Note: Sign R10-3E shall be provided for each push button.

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Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI SHANNON L. JEFFRIES NUMBER PE-2006000369 PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC SIGNAL PLAN
GENERAL NOTES & LEGEND

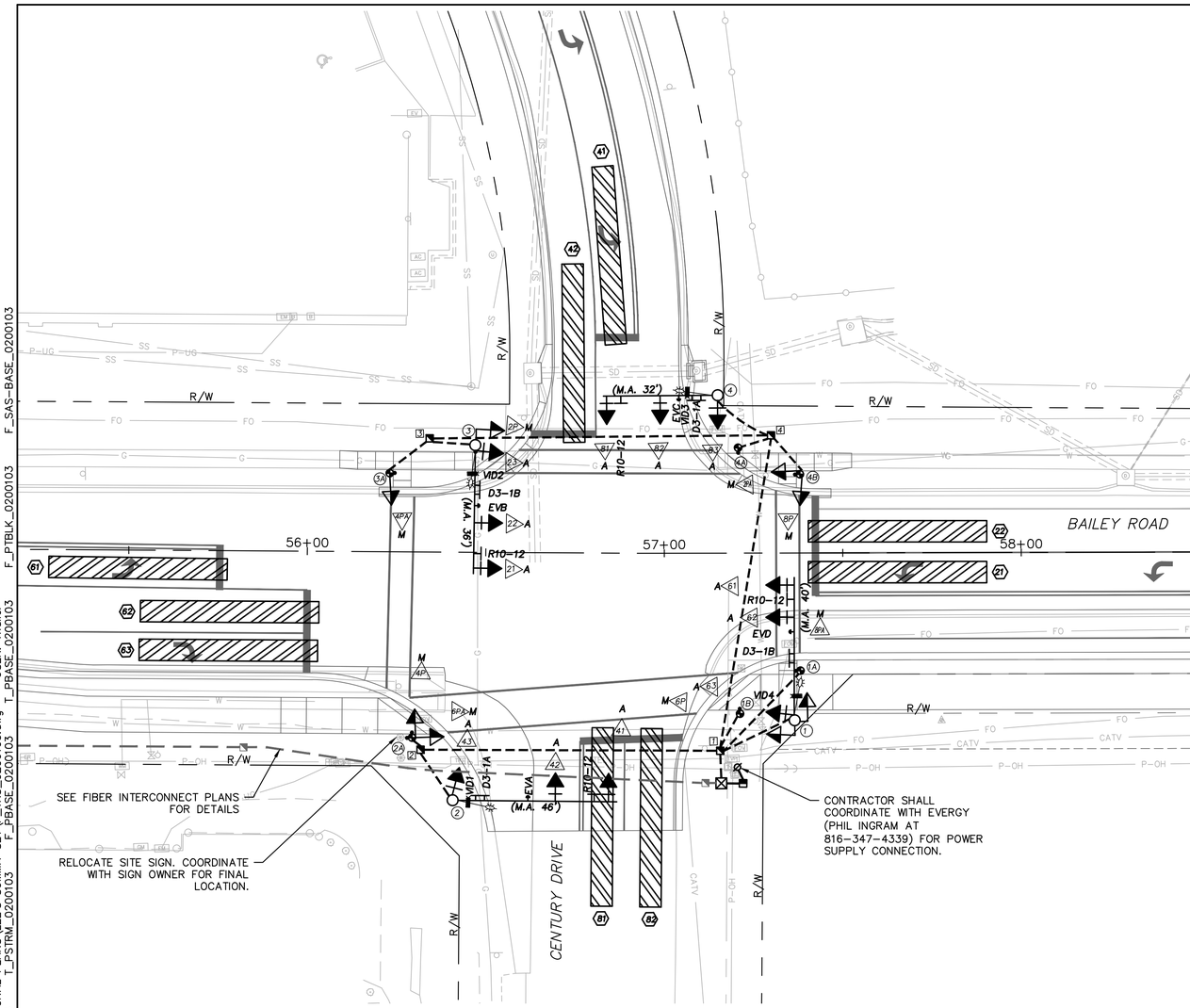
LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

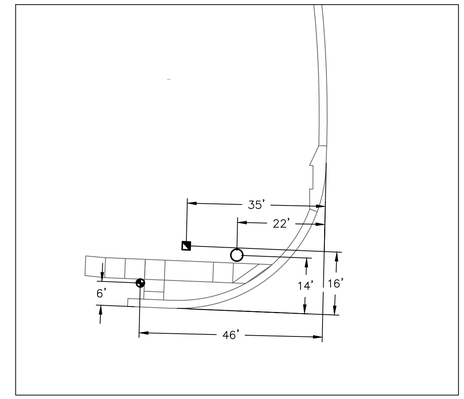
LEE'S SUMMIT, MISSOURI

2021

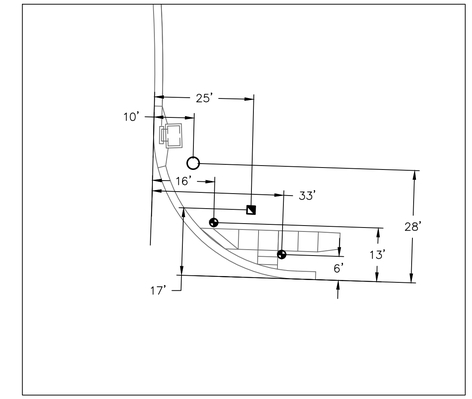
C.O.A. NO.: 001592
DRAWN BY: JRC
CHECKED BY: JAB
APPROVED BY: SLJ
QA/QC BY: THF
PROJECT NO.: 020-0103
DWG NO.: F_TRS_0200103
DATE: 8/25/2021

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\SIGNAL PLANS\LEE'S SUMMIT SET\F_TRS_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:10am XREFS: V_XTOPO-2_00103 V_XBOU-2_00103 T_PSTRM_0200103 T_PBASE_0200103 F_PBASE_0200103 F_PTBLK_0200103 F_SAS-BASE_0200103

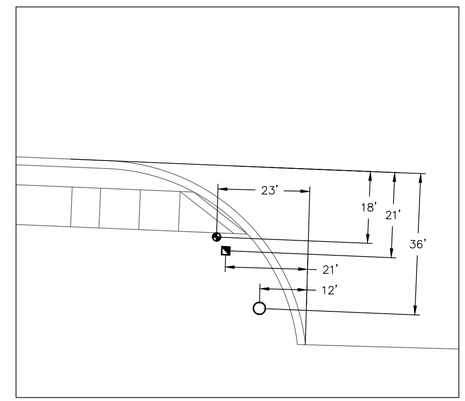




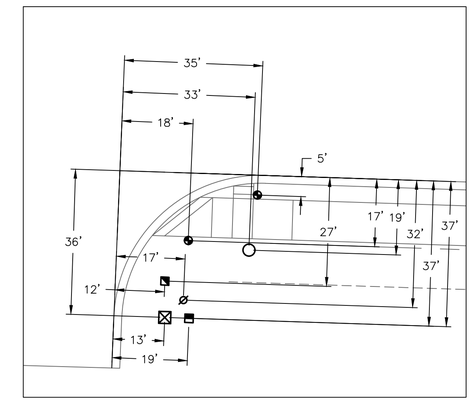
NW CORNER



NE CORNER



SW CORNER



SE CORNER

N

NOT TO SCALE

GENERAL NOTES:

1. Existing underground (U/G), overhead (OH) utilities and drainage structures have been plotted from available information and therefore, their locations must be considered approximate only. It is the responsibilty of the individual Contractors to exactly locate each utility before actual construction.

2. All construction methods and traffic signal equipment shall conform to the latest edition of the City of Lee's Summit Standard Specifications and Approved Products List.

3. Contractor shall stake the location of all traffic signal poles, conduit, controllers, service boxes and junction boxes to be installed. The Project Engineer shall inspect the staking prior to any excavation and/or construction. Minor relocation of equipment to avoid conflicts may be allowed with the approval of the Project Engineer.

4. All existing curb and gutter, sidewalk, pavement, drainage structures, or ground damaged during the traffic signal construction shall be replaced to match existing. This work will be considered SUBSIDIARY to the "Traffic Signal Installation" bid item.

5. Contractor shall coordinate signal turn-on with the City of Lee's Summit.

6. All traffic signal indications shall be L.E.D. (Light Emitting Diode.)

7. Contractor to verify location of power source with Evergy before construction.

N

0' 10' 20' 40'
SCALE IN FEET

SIGNAL PLAN

NEW EQUIPMENT TO BACK-OF-CURB DISTANCES

POLE, PULL BOX, POWER METER, AND CONTROLLER LOCATION

	STATION	O/S
1	57+36.40	46.9' RT.
1A	57+38.08	33.0' RT.
1B	57+21.09	45.0' RT.
1	57+15.56	55.4' RT.
2	56+41.12	69.5' RT.
2A	56+29.64	52.1' RT.
2	56+32.08	55.4' RT.
3	56+46.85	30.0' LT.

	STATION	O/S
3A	56+22.93	22.0' LT.
3	56+34.08	31.8' LT.
4	57+15.03	44.2' LT.
4A	57+20.71	29.5' LT.
4B	57+38.03	22.0' LT.
4	57+29.98	33.0' LT.
⊠	57+15.83	64.5' RT.
▬	57+21.93	64.5' RT.
∅	57+20.35	60.0' RT.

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STATE OF MISSOURI
SHANNON L. JEFFRIES
NUMBER PE-2006000069
PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC SIGNAL PLAN
BAILEY ROAD & CENTURY DRIVE

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

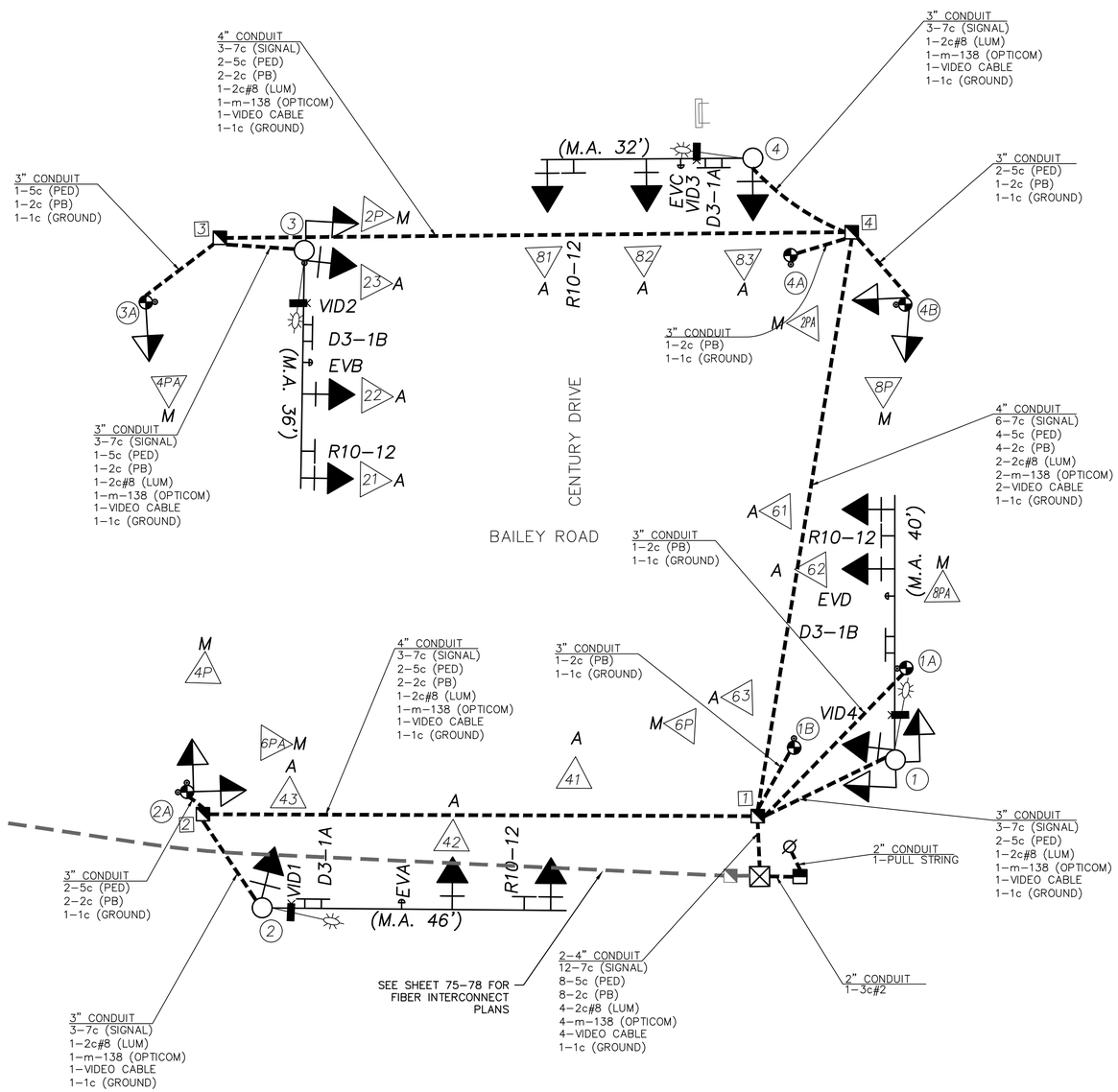
2021

C.O.A. NO.: 001592
DRAWN BY: JRC
CHECKED BY: JAB
APPROVED BY: SLJ
QA/QC BY: THF
PROJECT NO.: 020-0103
DWG NO.: T_TS_0200103
DATE: 8/25/2021

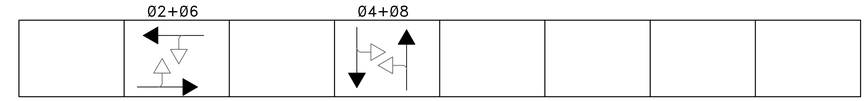
SHEET
63 OF 101

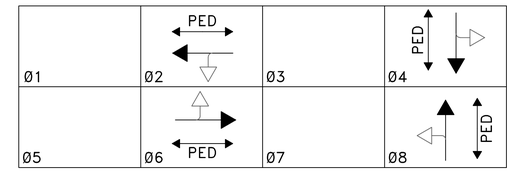
DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\SIGNAL PLANS\LEE'S SUMMIT SET\F_TRS_0200103.dwg
DATE: Aug 25, 2021 10:10am XREFS: V_XTOPO-2_00103 V_XBOU-2_00103 T_PSTRM_0200103 F_PBASE_0200103 T_PBASE_0200103 F_PTBLK_0200103 F_SAS-BASE_0200103
USER: rhaller

WIRING DIAGRAM



SEQUENCE





PHASE DIAGRAM

OUTPUT FILE ASSIGNMENTS

FR1	Ø1	Ø2	PED Ø2	Ø3	Ø4	PED Ø4	MONITOR
FR2							
FR3	Ø5	Ø6	PED Ø6	Ø7	Ø8	PED Ø8	
FR4							

1	2	3	4	5	6	7	8	9	10	11	12	13	14
		VIDEO DETECTION									PED Ø2	PED Ø4	FLH
											PED Ø6	PED Ø8	STOP TIME

FLASHING	OPERATIONS
EMERGENCY	SCHEDULED
FY-No Ø's	FY-No Ø's
FR-All Ø's	FR-All Ø's

POWER SUPPLY				
LOCATION	Power Supply Type	CIRCUIT BREAKER TRIP RATINGS		
		SERVICE DISCONNECT (2-POLE)	TRAFFIC SIGNAL (1-POLE)	LIGHTING (2-POLE)
SE CORNER	2-Circuit	40 AMP	40 AMP	15 AMP

Wiring and Phasing General Notes

1. All signals heads shall each be served by one 7c#14 cable extending from the head back to the controller. No cable splices are allowed, including at the base of the pole and inside pull boxes. Mast arm heads shall not be jumpered, so that additional 7c can be used for left-turn signal head if needed in the future.

2. A continuous 1c#6 AWG bare solid copper ground wire shall be provided in addition to ground rods. All grounding and ground rods shall be tied together using 1c#6 AWG bare solid copper wire to bond the system.

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STATE OF MISSOURI
SHANNON L. JEFFRIES
NUMBER PE-2006000069
PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

WIRING DIAGRAM
BAILEY ROAD & CENTURY DRIVE

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: JRC
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PROJECT NO.: 020-0103
DWG NO.: F_TRS_0200103
DATE: 8/25/2021

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\SIGNAL PLANS\LEE'S SUMMIT SET\F_TRS_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:10am XREFS: V_XTOPO-2_00103 V_XBOU-2_00103 T_PSTRM_0200103 F_PBASE_0200103 T_PBASE_0200103 F_PTBLK_0200103 F_SAS-BASE_0200103

POSTS

Post No.	Pedestal Pole Height (feet) 4'	8'	15'	Mast Arm Length (feet) 32'	36'	40'	46'	Signal Head Spacing* A	B	C	D	E	F	G	H	Luminaires Arm Length	Bracket Type	Mounting Height	150W 240V H.P.S. Type III	250W 240V H.P.S. Type III	Remarks
1						1		28.3'	9.0'							15'	CL	30'		1 **	
1A	1																				
1B	1																				
2							1	28.2'	14.9'							10'	CL	30'		1 **	
2A		1																			
3					1			21.1'	12.7'							10'	CL	30'		1 **	
3A		1																			
4				1				15.6'	15.1'							10'	CL	30'		1 **	
4A	1																				
4B		1																			
TOTALS	3	3		1	1	1	1													4 **	

*NOTE: Signal head spacing (feet) to be adjusted to site conditions and approved by the project inspector.
**Cobra-head luminaire w/250 watt H.P.S. equivalent led lamp.

SIGNAL HEADS

No. Post	Face	Opt. limited	Louvers	12" LED'S R	Y	G	Y←	G←	G↑	Y→	G→	Walk	Flash Don't Walk	W/DW	Countdown Indications	Visors Type Tun.	Cut Away	Sections Mounting 1 P	S	2 P	S	3 P	M	S	4 P	M	S	5 P	M	S
1	61			1	1	1										3							1							
1	62			1	1	1										3							1							
1	63			1	1	1										3						1								
1	6P														1			1												
1	8PA														1			1												
2	41			1	1	1										3							1							
2	42			1	1	1										3							1							
2	43			1	1	1										3						1								
2A	4P														1			1												
2A	6PA														1			1												
3	21			1	1	1										3							1							
3	22			1	1	1										3							1							
3	23			1	1	1										3						1								
3	2P														1			1												
3A	4PA														1			1												
4	81			1	1	1										3							1							
4	82			1	1	1										3							1							
4	83			1	1	1										3						1								
4B	8P														1			1												
4B	2PA														1			1												
TOTALS				12	12	12									8	36			8			4	8							

P – Pole Mounted Signal Head
M – Mast Arm Mounted Signal Head
S – Span Wire Mounted Signal Head

All indications shall be LED.

NOTE :
THE TRAFFIC SIGNAL SYSTEM SHALL BE COMPLETE AND THE CONTRACTOR SHALL FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS NECESSARY FOR THE SATISFACTORY OPERATION OF ELECTRICAL APPARATUS AND FOR COMPLETE OPERATION OF THE TRAFFIC SIGNAL SYSTEM WHETHER SPECIFICALLY MENTIONED OR NOT.

BASES AND PULL BOXES

NO. Post	Pull Box	Bases B8	B10	B13	C	EV	E	Power Supply	Conc. (C.Y.)	Pull Boxes Class 1	Class 2	Class 3
1				1					3.40			
1A					1				0.44			
1B					1				0.44			
	1											1
2				1					3.40			
2A					1				0.44			
	2										1	
3				1					3.40			
3A					1				0.44			
	3										1	
4			1						2.62			
4A					1				0.44			
4B					1				0.44			
	4											1
CONTR.						1		1	1.93			
TOTALS		1	3	6		1		1	17.39		2	2

1

CONTROLLER AND EQUIPMENT

	Totals
CABINET, PAD AND ACCESSORIES: NEMA Type P TS1 Cabinet; Fiber Optic Ready	1
CONTROLLER: Type 3608 M 60 EAGLE EPAC complete per plans, including software, NTCIP Rev 4.57. Controller shall be M 60 ATC Upgrade compatible. 1	1
EVP OPTICOM: GTT (COMPLETE SYSTEM)	1
VIDEO: Vantage Edge 2 or Approved Equal (COMPLETE SYSTEM)	1
Type 2 Power Supply w/Photocell (Utility Enclosure Pedestal)	1
Ground Rods	12
Fiber Optic Equipment – See Fiber Optic Plans	

SIGNS

SIGN	LEGEND	NO.	AREA (s.f.)	TOTAL (s.f.)
R10-12	LEFT TURN YIELD (GREEN BALL)	4	5.00	20.00
R10-3E	PEDESTRIAN CROSSING SIGN	8*	.94	7.50
D3-1A	BAILEY ROAD	2	11.75	23.50
D3-1B	CENTURY DRIVE	2	13.125	26.25
TOTALS				77.25

*Included with APS Push button assembly

CABLE

FROM	TO	Ground #6	Power/Lighting 3c-2	3c-8	2c-8	Control Type 20-1 2c-14	5c-14	7c-14	Lead-In Cable 4c-14	Interconnect Comm. Cable 3 pr #16	Emergency Pre-Emption Cable** m-138	Video Cable*	Remarks
⊠	21							288'					
⊠	22							276'					
⊠	23							248'					
⊠	2P						241'						
⊠	4PA						243'						
⊠	EVB										271'		
⊠	VID2											273'	
⊠	41							195'					
⊠	42							180'					
⊠	43							145'					
⊠	4P						125'						
⊠	6PA						125'						
⊠	EVA										172'		
⊠	VID1											170'	
⊠	61							105'					
⊠	62							96'					
⊠	63							61'					
⊠	6P						54'						
⊠	8PA						54'						
⊠	EVD										92'		
⊠	VID4											86'	
⊠	81							190'					
⊠	82							175'					
⊠	83							153'					
⊠	8P						140'						
⊠	2PA						140'						
⊠	EVC										170'		
⊠	VID3											178'	
⊠	POLE1A					60'							
⊠	POLE1B					40'							
⊠	POLE2A					244'							
⊠	POLE3					238'							
⊠	POLE3A					240'							
⊠	POLE4A					134'							
⊠	POLE4B					137'							
■	⊠		22'										
■	LUM1				91'								
■	LUM2				170'								
■	LUM3				273'								
■	LUM4				178'								
SYSTEM GRND		438'											
SUBTOTAL		438'	22'		712'	1093'	1122'	2112'			705'	707'	
TOTALS ***		460'	24'		748'	1048'	1179'	2218'			741'	743'	

1

* Rate included in video camera system. ** Rate included in Pre-Emption System. *** Includes 5% For Waste

CONDUIT

FROM	TO	Dist.	Bored 4"	Trenched 2"	2 1/2"	3"	4"	In Existing Trench 2"	2 1/2"	4"
∅	■	5'		15'						
■	⊠	6'		14'						
⊠	1	9'					13'			13'
1	2	84'	82'							
1	4	90'	88'							
4	3	96'	94'							
1	1	23'				25'				
1	1A	32'				34'				
1	1B	12'				14'				
2	2	17'				19'				
2	2A	4'				6'				
4	4	19'				21'				
4	4A	10'				12'				
4	4B	14'				16'				
3	3	13'				15'				
3	3A	15'				17'				
TOTALS			264'	29'		179'	13'			13'

*DETECTORS

DET. NO.	PHASE	PUSH BUTTON	OPTICOM NTCIP	VIDEO CAMERAS	LOOP (6X6)	LOOP (SIZE)
EVA			1			
EVB			1			
EVC			1			
EVD			1			
P2	2	1				
P2A	2	1				
P4	4	1				
P4A	4	1				
P6	6	1				
P6A	6	1				
P8	8	1				
P8A	8	1				
VID1				1		
VID2				1		
VID3				1		
VID4				1		
TOTALS	8	4	4			

*NOTES:
1. Push buttons shall be APS compatible

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STATE OF MISSOURI SHANNON L. JEFFRIES NUMBER PE-2006000069 PROFESSIONAL ENGINEER 05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	JAB

REVISIONS

QUANTITIES
BAILEY ROAD & CENTURY DRIVE

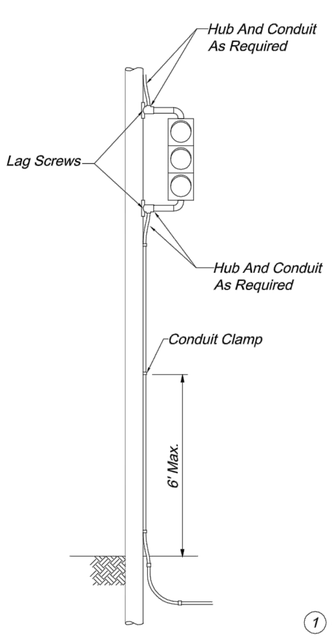
LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

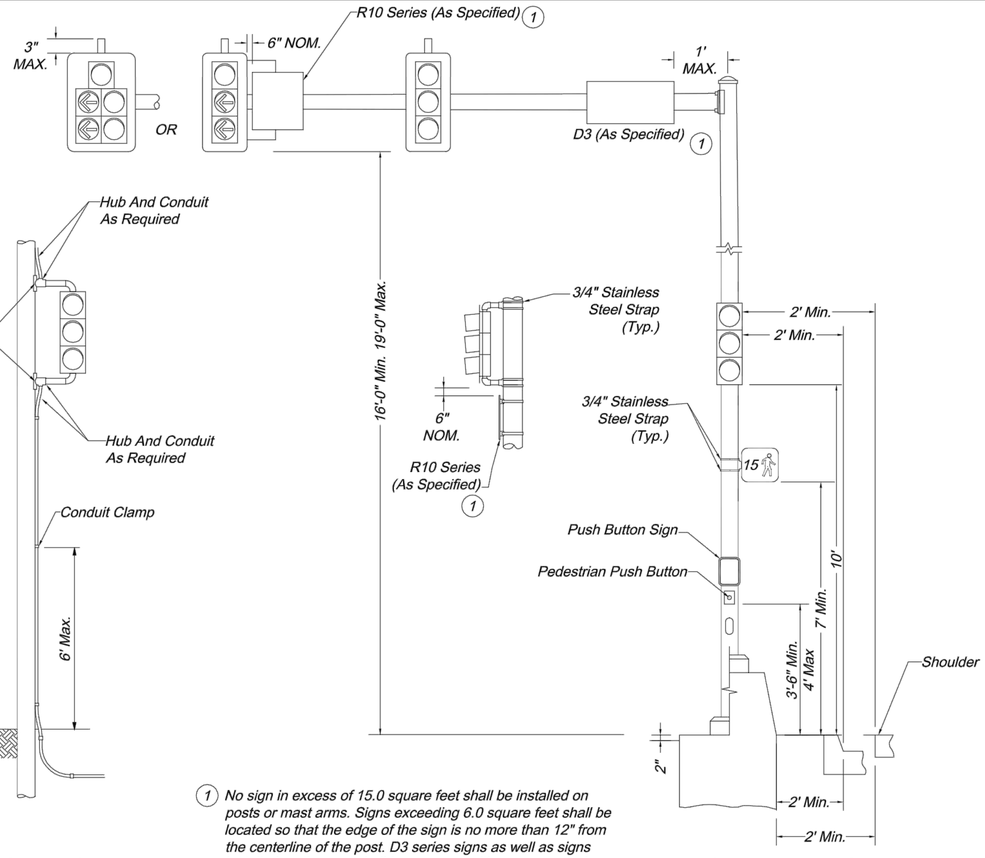
2021

C.O.A. NO.: 001592
DRAWN BY: JRC
CHECKED BY: JAB
APPROVED BY: SLJ
QA/QC BY: THF
PROJECT NO.: 020-0103
DWG NO.: T 35 (2010)
DATE: 8/25/2021

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFC\SIGNAL PLANS\LEE'S SUMMIT SET\F_TRS_0200103.dwg
DATE: Aug 25, 2021 10:10am XREFS: V_XTOPO-2_00103 V_XBOU-2_00103 T_PSTRM_0200103 F_PBASE_0200103 T_PBASE_0200103 F_PTBLK_0200103 F_SAS-BASE_0200103 USER: rhaller

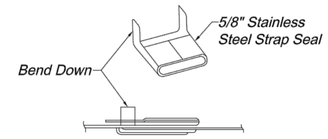


WOOD POLE MOUNTING

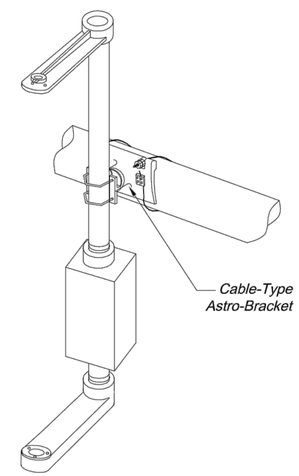


1 No sign in excess of 15.0 square feet shall be installed on posts or mast arms. Signs exceeding 6.0 square feet shall be located so that the edge of the sign is no more than 12" from the centerline of the post. D3 series signs as well as signs installed on the post shall be mounted with a strap type sign support. R10 series signs installed on the mast arm shall be mounted with an Astro-Bracket assembly.

MAST ARM POLE MOUNTING

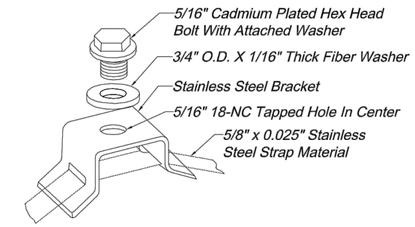


ENDS OF STRAP CLAMPED IN SEAL

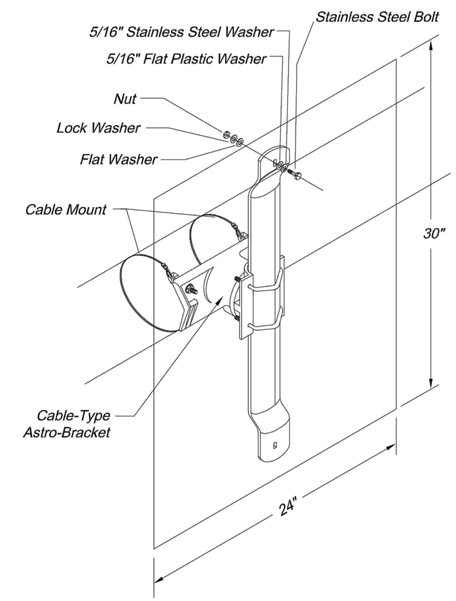


SIGNAL HEAD MAST ARM MOUNTING DETAIL

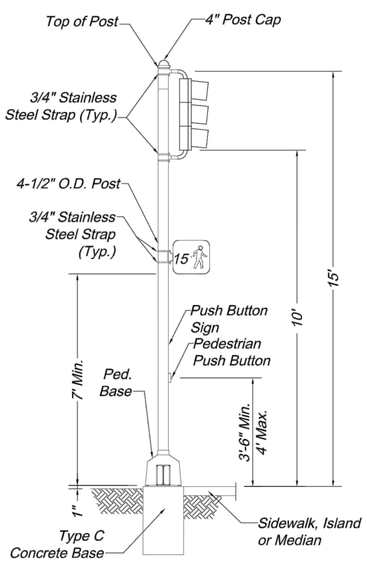
Astro-Brac Terminal Compartment Bracket Assembly
Note: Only cable type Astro-Brac will be allowed, no bands.

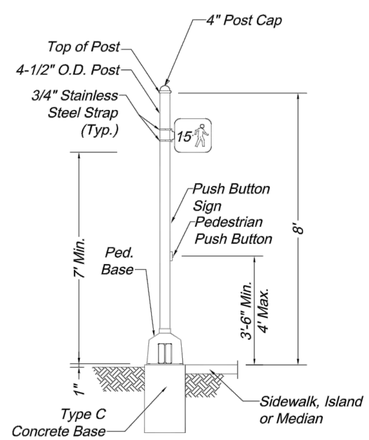


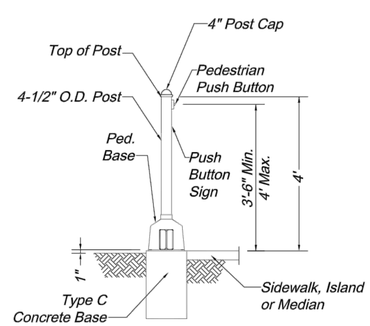
STRAP TYPE SIGN SUPPORT



MAST ARM SIGN MOUNTING DETAIL







PEDESTAL POST MOUNTINGS

General Notes:

All post wire outlets shall be deburred and equipped with bushings.

Backplates not shown in mounting diagrams for clarity.

Posts shall be grounded with #6 AWG bare copper wire from grounding bushing on conduit to grounding lug in post base if steel conduit is used. If Non-metallic conduit is used, provide #6 AWG wire from grounding lug in post to power supply ground buss in controller cabinet.

Leads from pedestrian signal lamps are connected to the signal head terminal compartment.

All signals shall be mounted vertically unless otherwise noted on the traffic signal plans.

Span wire mounted signals shall have a disconnect hanger.

Signal heads on mast arms shall be tilted forward from the top 3 to 7 degrees from vertical.

If a sign exceeds 42" in length, two supports are required: and if a sign exceeds 96" in length, three supports are required.

Mast arm mounted signals shall have a terminal compartment.

Side-mounted optically limiting heads shall have a minimum post clearance of 5-1/2".

Symbol for pedestrian lenses shall have a minimum height of 11"

Push button signs shall be mounted directly above the actuator, except for locations on 4' pedestals the sign shall be located directly below the actuator.

Signal appurtenances shall have a horizontal clearance no less than 2' from the face of a vertical curb or from the outside edge of a shoulder, except signals located in a median island.

See standard drawing TS-3 for base details.

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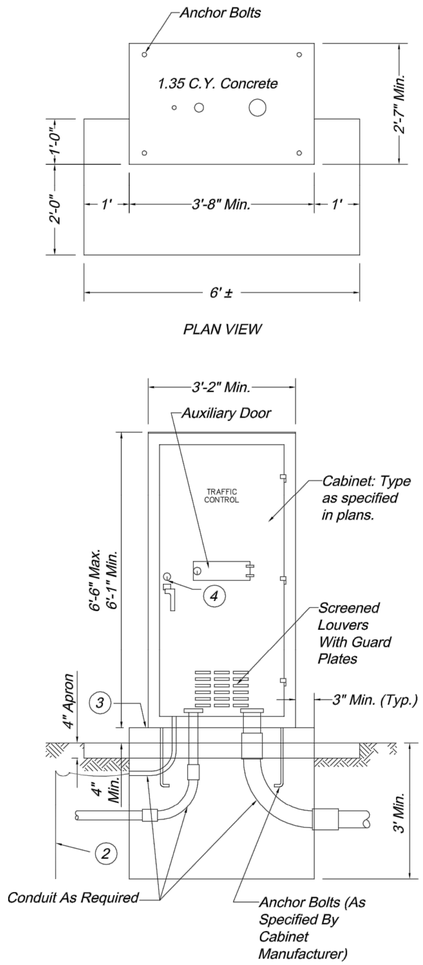
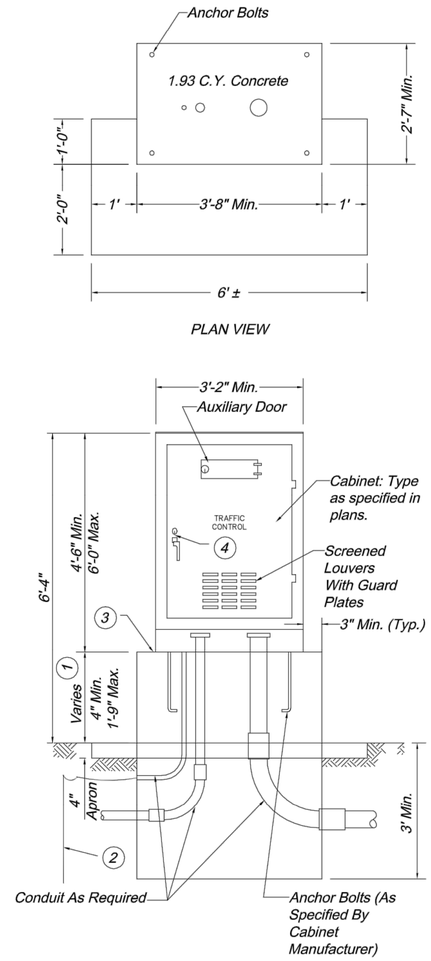
SIGNAL HEAD MOUNTING DETAILS

STANDARD DRAWING TS-1

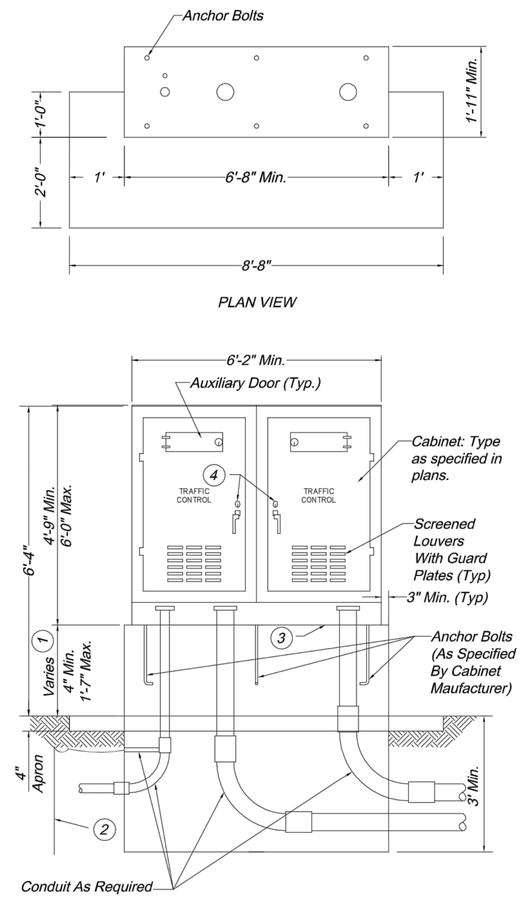
Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#



For Contoller Cabinets With Heights From 6'-1" To 6'-6"
TYPE E

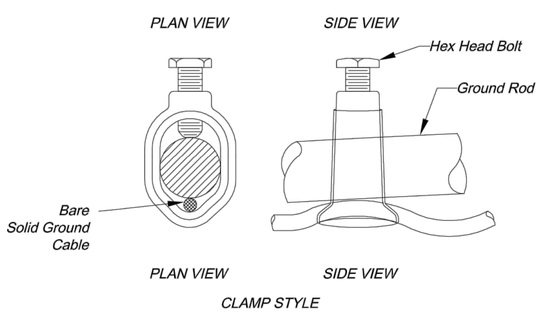


For Contoller Cabinets With Heights From 4'-4" To 6'-0"
TYPE EV

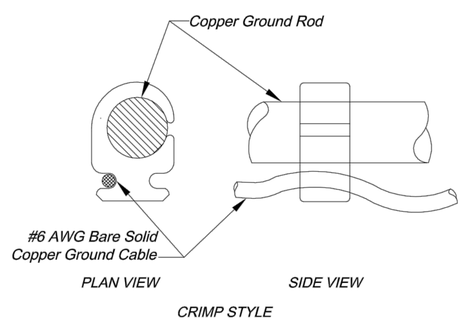


DOUBLE

CONTROLLER CABINETS AND BASE TYPES



CLAMP STYLE



CRIMP STYLE

GROUND ROD CLAMP CONNECTION DETAIL

Ground rod clamp shall be subsidiary to ground rod.

General Notes:

Traffic signal controller cabinet shall be oriented with the back of the controller cabinet facing the intersection, such that when the door is open the signal head indications can be viewed while looking inside the cabinet.

1. Dimension varies according to cabinet height.
2. Ground rod, 3/4" dia. x 8' min. If subsurface conditions exist which prohibit the placement of the ground rod in a vertical position, the rod may be driven at an oblique angle not to exceed 45 degrees from vertical or buried in a trench at least 30 in. deep. Connection to ground rod shall be clamp type as detailed.
3. Lifetime silicone caulk between cabinet and base.
4. #2 corbin lock.

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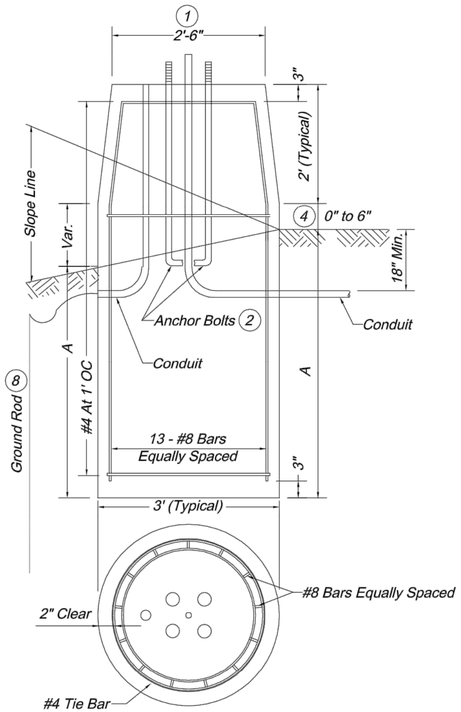
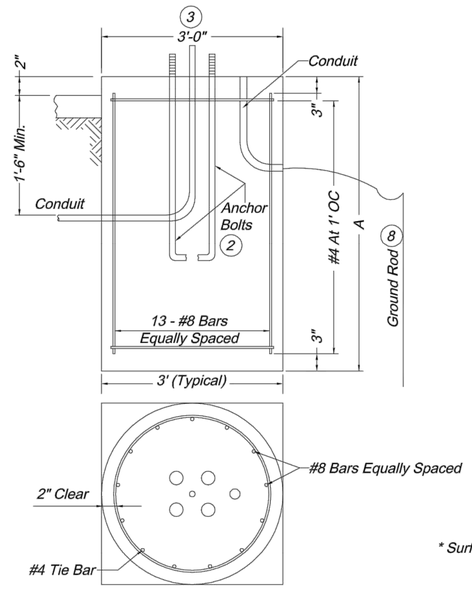
CONTROLLER CABINET & BASE DETAILS

STANDARD DRAWING TS-2

Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#

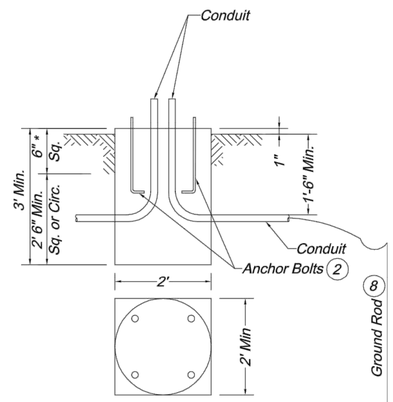


TYPE A



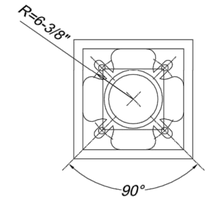
TYPE B

POST BASES

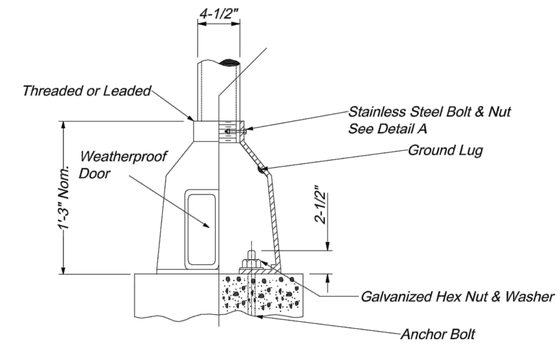


TYPE C

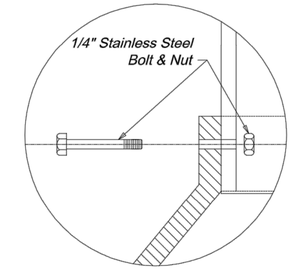
* Surface of Type C base to be constructed square for a depth of 6".



BOLT CIRCLE

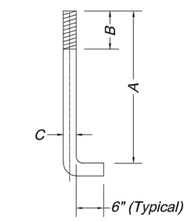


SQUARE
BOLT CIRCLE

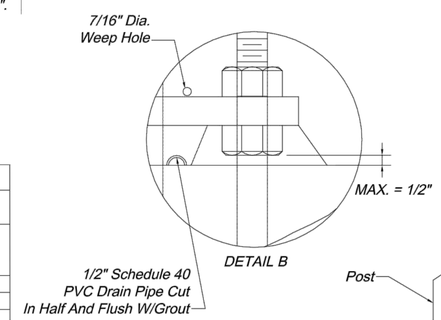


DETAIL A

CAST BASE



ANCHOR BOLT

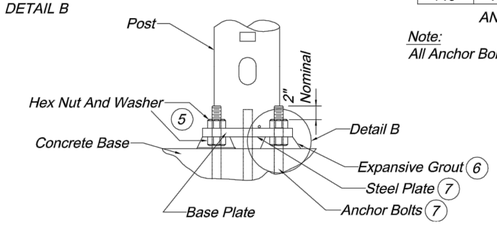


DETAIL B

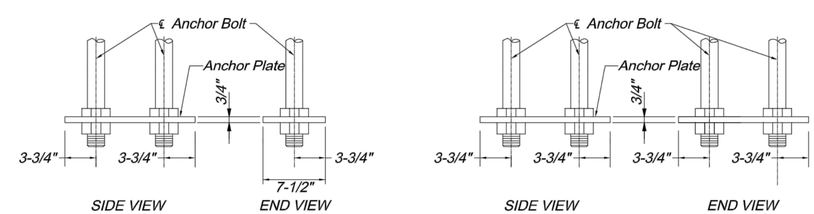
Bolt Length	Vert Ht. A	Thread Len. B	Dia. C
Inches	Inches	Inches	Inches
19	17	1.50	0.625
57	51	7.00	1.250
79	73	7.50	1.500
94	88	8.00	1.750
121	115	8.50	2.000
120	114	9.00	2.250
146	140	9.50	2.500

ANCHOR BOLT

Note:
All Anchor Bolts Shall Be Fully Galvanized.



STEEL PLATE AND ANCHOR BASE



OPTIONAL STEEL PLATE FOR ANCHOR BOLTS

POST BASES		
Post Type	Arm Length (Ft.)	Base Type
B, BL, C & CL	8 - 14	A-8 or B-8
B, BL, C & CL	15 - 34	A-10 or B-10
B, BL, C & CL	35 - 54	A-13 or B-13

Arm length determined by length of longest arm for Type B & BL signal posts.

Base Type A or B determined by location of post base.

Special Design Requirements:

Signal structures which will exceed the dimension limits shown on Standard Drawing TS-5 shall have its Post Base designed by a professional engineer and approved by the City Engineer (or designee). A set of drawings including specifications and design computations shall be submitted for record and reference. The submitted drawings and calculations shall be signed and sealed by a professional engineer in accordance with the laws relating to architects and professional engineers (Chapter 327, RSMO) and shall include a title block or summary sheet which lists and certifies that the foundation will meet the design criteria.

STEEL & CONCRETE REQUIREMENTS FOR POST BASES				
Bases		#8 Steel Bar		Conc. C.Y.
Type	A (10)	Length	Weight Lbs (11)	
A-8	8'-0"	9'-6"	399	2.53
A-10	10'-0"	11'-6"	481	3.06
A-13	13'-0"	14'-6"	604	3.84
B-8	8'-0"	7'-6"	317	2.09
B-10	10'-0"	9'-6"	400	2.62
B-13	13'-0"	12'-6"	523	3.40
C*				0.44

(10) Soil depth, no rock
(11) Include #4 tie bar

* Surface of Type C base to be constructed square for a minimal depth of 6".

BASE EMBEDMENT IN SOLID ROCK			
Solid Rock Encounter Point	Required Embedment For Base Type		
	A-8 B-8	A-10 B-10	A-13 B-13
At Surface	4'-6"	4'-9"	5'-9"
At One-Fourth Normal Depth	3'-6"	4'-0"	5'-0"
At One-Half Normal Depth	3'-0"	3'-3"	3'-3"
At Three-Fourths Normal Depth	1'-3"	1'-3"	1'-0"

1. Required embedment depths can be interpolated between encounter points for other solid rock encounter depths.
2. Normal lengths for anchor bolts and reinforcing steel will be required.
3. Core drill holes for anchor bolts and reinforcing steel in solid rock shall be provided. Core drill holes shall be twice the diameter of the anchor bolt and reinforcing steel diameter and to within 3 inches of the normal base depth.
4. If soil, shale, gravel, fractured rock, or voids are encountered during core drilling, the rock shall be removed to the point of encounter.
5. Anchor bolts and reinforcing steel shall be grouted in the core drill holes with non-shrink grout having a minimum strength of 9,000 pounds in 24 hours.
6. Straight anchor bolts of the length shown in the anchor bolt table under the column "bolt length"are adequate for use in grouted core drilled holes. No heat induced alteration or bending of anchor bolts will be permitted.

(1) If bolt circle is 22 inches or greater, use Type B base. If Type B base is used anywhere, all Type B, BL, C, and CL posts shall have Type B base. Base plate shall stay within the top of the post base diameter.

(2) Anchor bolt dimensions are shown on the manufacturer's approved drawings.

(3) Maximum bolt circle diameter is 26". Base plate shall stay within the top of the post base diameter.

(4) 0" to 6" variation in base height is for obtaining 16'-0" clearance. 0.13" C.Y. concrete and 3 lbs. reinforcing steel per 6".

(5) Posts shall be furnished with individual nut covers.

(6) Expansive grout shall be used between the post base plate and concrete base.

(7) Plate and bolt sizes shall be shown on fabricators shop drawings and shall be subject to approval.

(8) 3/4" x 8' minimum ground rod. If subsurface conditions exist which prohibit the placement of the ground rod in vertical position, the rod may be driven at an oblique angle not to exceed 45 degrees from vertical or buried in a trench at least 30 in. deep. Connection to ground rod shall be clamp type as detailed on standard drawing TS-2.

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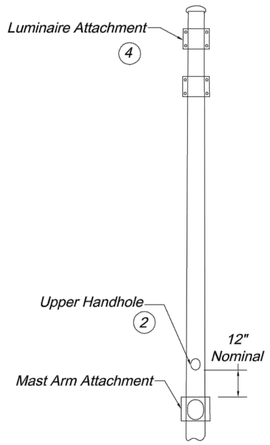
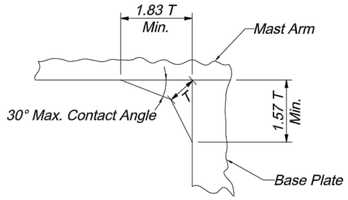
POST BASE DETAILS

STANDARD DRAWING TS-3

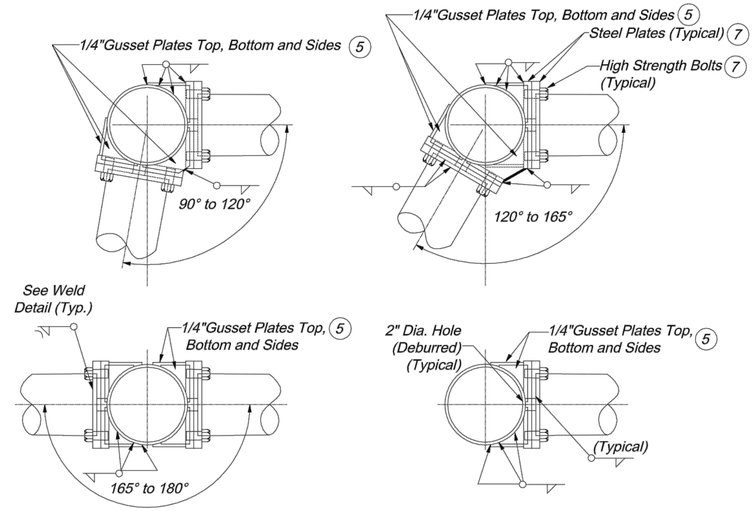
Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#



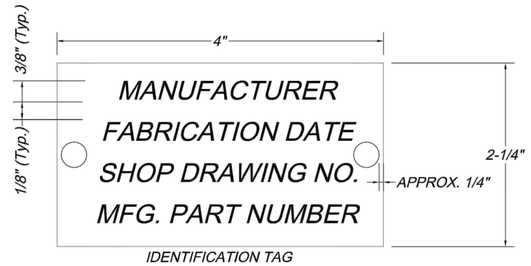
TYPE BL AND CL POSTS



WELD DETAIL



ARM ATTACHMENTS

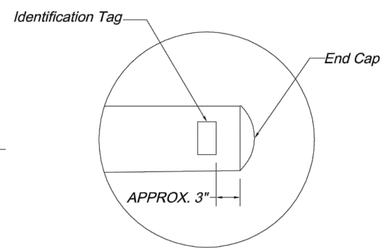


IDENTIFICATION TAG

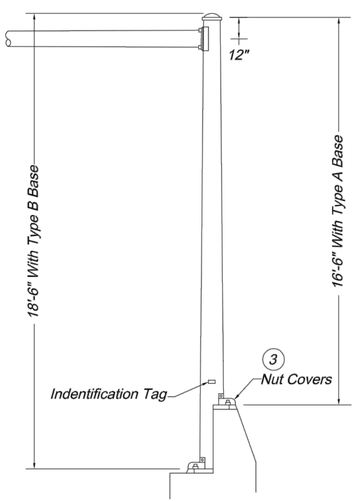
ID Tag Note:

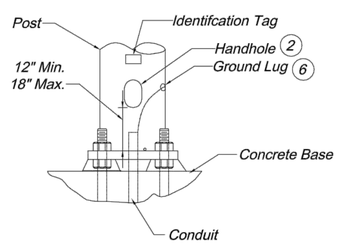
Tag shall be aluminum or stainless steel and attached to pole or mast arm using two rivets or stainless steel drive screws. ID tag holes shall be drilled prior to galvanizing.

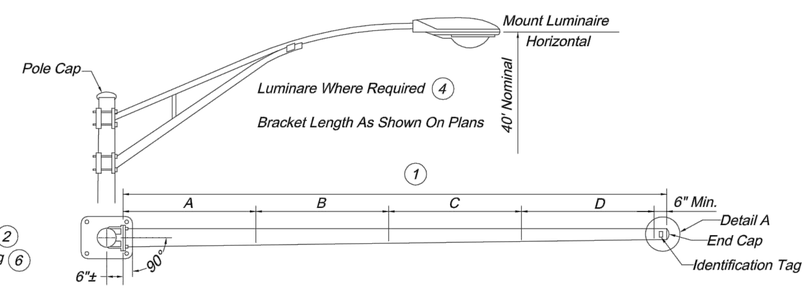
1. Arm Lengths shall not exceed 54 feet. See traffic signal plans for dimensions.
2. Handholes shall be approximately 4" x 6-1/2". Handhole frame shall be reinforced so that the pole strength is not reduced.
3. Posts shall be furnished with individual nut covers.
4. See street lighting standard details for typical bracket arm mounting for Type BL and Type CL posts.
5. Any openings between top and side gusset plates shall be sealed with lifetime caulk at time of installation.
6. Post shall be grounded from ground lug in post with #6 AWG bare copper wire to conduit system. Ground lug shall be 90° or 180° from the handhole.
7. Plate and bolt sizes shall be shown on fabricators shop drawings and shall be subject to approval.



DETAIL A

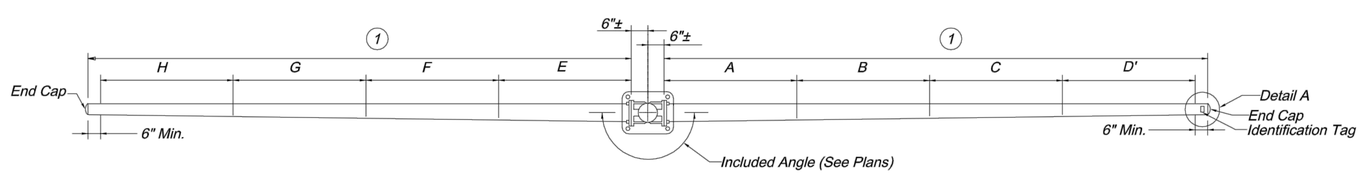






A, B, C, and D - Signal spacing as shown on the traffic signal plans.

TYPE C AND TYPE CL (WITH LUMINAIRE)



E, F, G, and H - Signal spacing as shown on the traffic signal plans.

A, B, C, and D - Signal spacing as shown on the traffic signal plans.

TYPE B AND TYPE BL (WITH LUMINAIRE)

General Notes:

Arms shall be raked up 0.25" per foot minimum. Arms shall be provided with a permanent marking indicating proper orientation for installation.

To determine left or right on Type B or C signal post, viewing position shall be from the center of the intersection being controlled and facing the signal involved.

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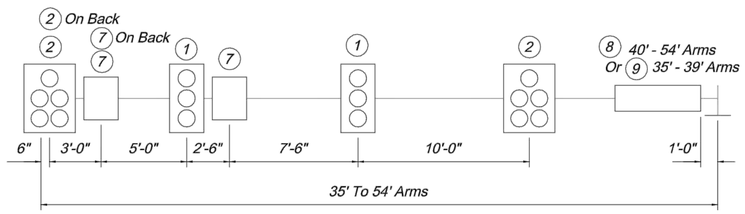
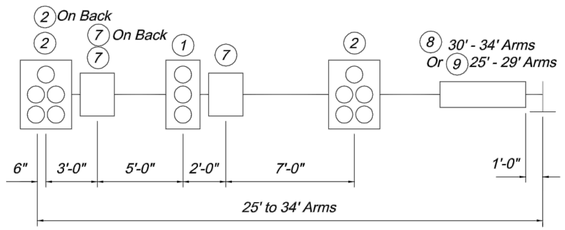
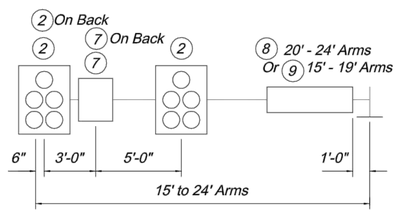
TUBULAR STEEL POST DETAILS

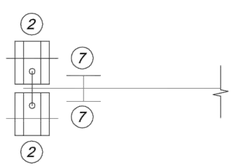
STANDARD DRAWING TS-4

Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#

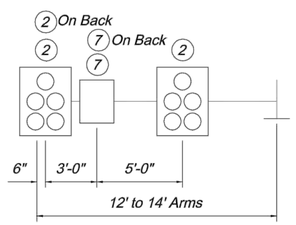


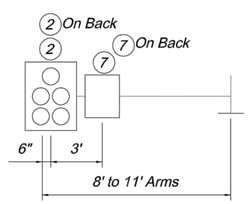




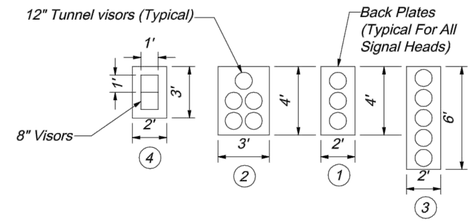


TYPICAL TOP VIEW





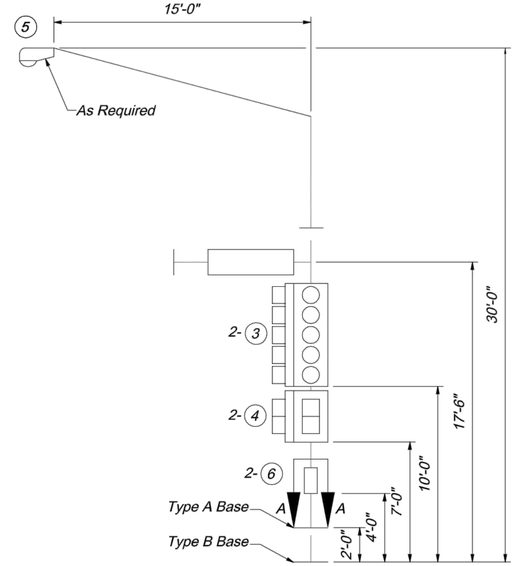
MAST ARM LOADING



Item No.	Description	Weight (Lbs.)*	Proj. Area (Sq. Ft.)	Surface Area (Sq. Ft.)
1	3-Section OL Head	60.0	8.0	32.5
2	5-Section OL Head	100.0	12.0	47.5
3	Vert. 5-Section OL Head	100.0	12.0	50.5
4	2-Section OL Head	40.0	6.0	23.0
5	150 Watt Luminaire	30.0	1.0	3.5
6	9" X 18" Sign	2.0	1.1	N/A
7	24" X 30" Sign	27.0	5.0	N/A
8	120" X 18" Sign	25.0	15.0	N/A
9	96" X 16" Sign 96" X 18" Sign 96" X 28" Sign	18.0 20.0 31.0	10.7 12.0 18.7	N/A N/A N/A

OL - Optically Limited
* Mounting Hardware Included

SECTION A-A



TYPICAL POST LOADING

Structural Design Requirements:

Structural supports shall be designed and fabricated to withstand their own loading and the attachment loading shown on this drawing or on the plans, whichever is greater. Structural members include posts, mast arms and luminaires bracket arms, as required.

Design of the structural supports shall be based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, 1994 or latest revision with these exceptions.

Minimum Design Wind Speed of 90 MPH at 30 Feet Above Ground.
Group Loading:

Loads	Percent of Allowable Stress*
Group I - DL	100
Group II - DL + W	133
Group III - DL + Ice + 0.5(W**)	133

**No load reduction factors shall be applied in conjunction with these increased allowable stresses.*
*** W to be computed on the basis of the wind pressure formula. 25 PSF (1197 Pa) minimum for W for Group III.*

*Signal structures which will exceed the dimension limits shown shall be designed by a professional engineer*** based on AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 2001, 4th Edition, including any interim with the criteria noted below:*

- *Minimum Basic Wind Speed 90 MPH at 30 Feet Above Ground*
- *Fatigue Category I*
- *50 Year Design Life.*
- *Shall not be specifically designed for truck induced wind gusts.*
- *Shall be specifically designed to resist periodic galloping forces.*

****A set of shop drawings including weld procedure specifications and design computations shall be submitted for record and reference. The submitted drawings and calculations shall be signed and sealed by a professional engineer in accordance with the laws relating to architects and professional engineers (Chapter 327, RSMO) and shall include a title block or summary sheet which lists and certifies that the product meets all of the specified design criteria.*

For Type B and BL posts. Ice and dead loading shall be based on the combined effect of design loading on each arm. Wind loading is applied as described in section 1.2.5(b) of the AASHTO Standard Specifications for Structural Supports,1994 or latest version.

General Notes:

Attachment locations are for structural design purposes only. Actual locations are shown on the plans.

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PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
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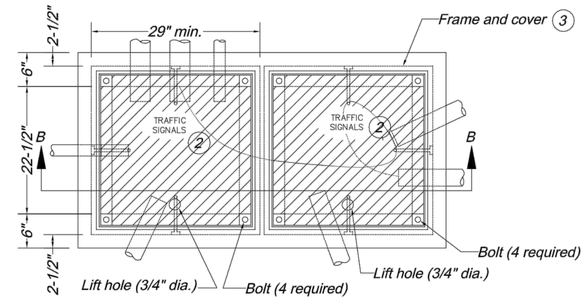
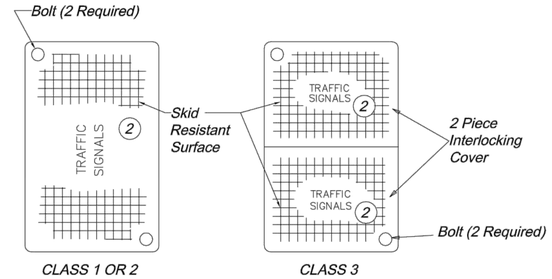
TUBULAR STEEL POST
DESIGN LOADING REQUIREMENTS

STANDARD DRAWING TS-5

Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#

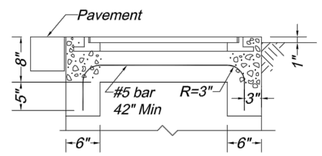
MINIMUM DESIGN LOADING FOR POST AND MAST ARM ATTACHMENTS

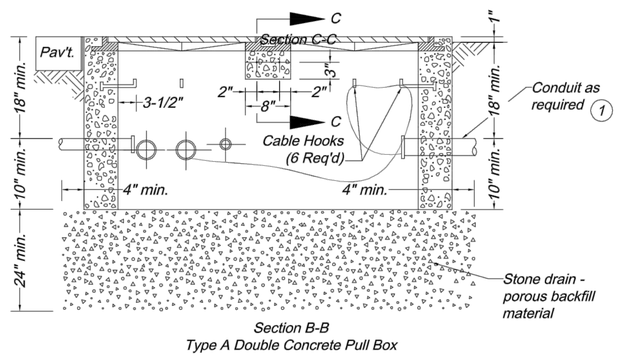




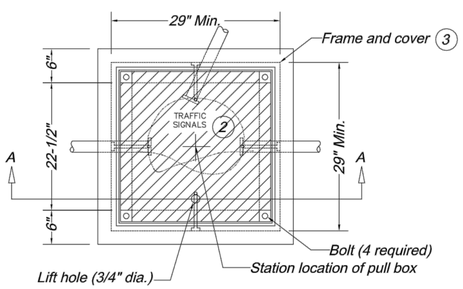
PREFORMED PULL BOX COVER

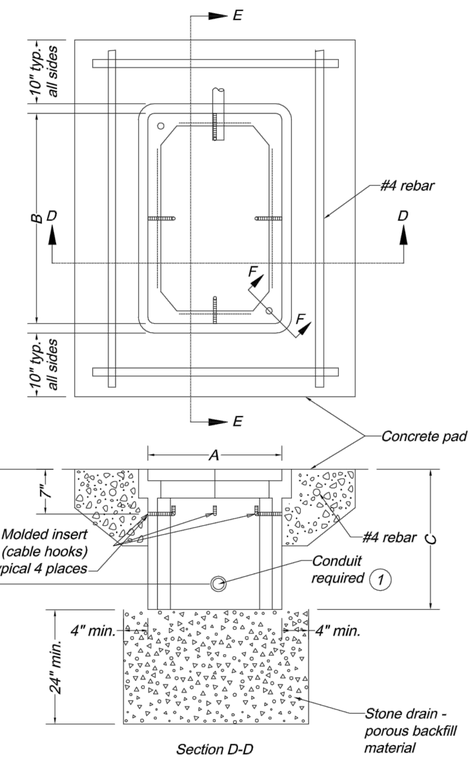
Number of Entering Conductors	Class	Preformed Pull Box Minimum Dimensions		
		A	B	C
< 23	1	17"	30"	20"
23 - 68	2	24"	36"	24"
> 68	3	30"	48"	24"



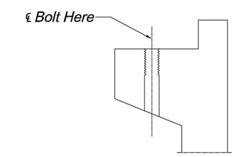


Section B-B
Type A Double Concrete Pull Box



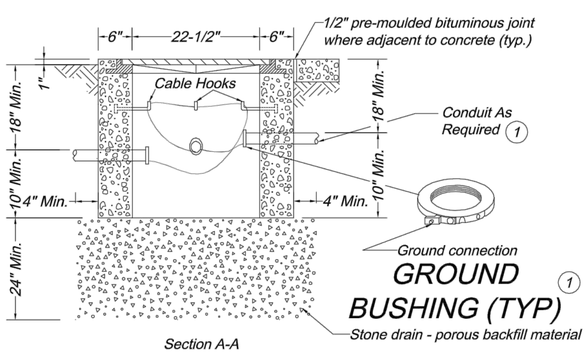


Section D-D



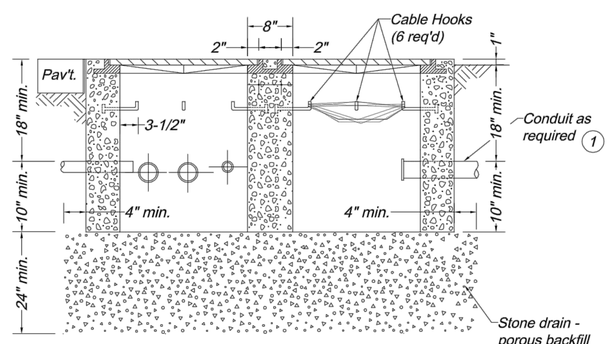
SECTION F-F

TYPICAL BOLT CLEANOUT



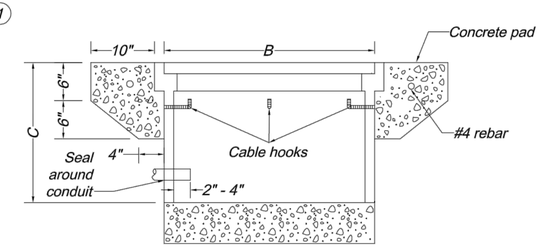
Section A-A
TYPE I DRAIN

SINGLE CONCRETE PULL BOX



Section B-B
Type B Double Concrete Pull Box

DOUBLE CONCRETE PULL BOX



Section E-E

PREFORMED PULL BOX

(1) All metal conduits shall be electrically bonded by a ground bushing and #6 AWG bare copper wire. For PVC , all ground wires shall be connected.

(2) Signal pull boxes shall be embossed "Traffic Signals."

(3) Pull box frames and covers shall be cast iron and the following minimum dimensions:

Frame Size:	29" x 29"
Opening Size:	22 1/2" x 22 1/2"
Frame Height:	4-1/4"
Frame Weight:	120 lbs.
Cover Size:	22-5/8" x 22-5/8"
Cover Thickness:	3/4"
Cover Weight:	140 lbs.

General Notes:

All dimensions shown are nominal.

Bolt cleanout detail shall be approved by the City Traffic Engineer.

All concrete shall be 3,000 PSI minimum, and shall be subsidiary to the pull box.

Pavement and subgrade shall be as shown on plans.

Stone drain material shall be 1/2" - 3/4" clean rock.

Lift opening required on all covers.

Preformed box walls may be either flared or vertical.

If an extension is used with a preformed box, the lip of the extension may be interior or exterior. The extension shall be compatible and from the same manufacturer.

If preformed pull boxes are specified, the contractor may use the standard concrete pull box in lieu of the Class 1 or 2 preformed pull box or the double concrete pull box, Type A, in lieu of the Class 3 preformed pull boxes.

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ENGINEERING DIVISION
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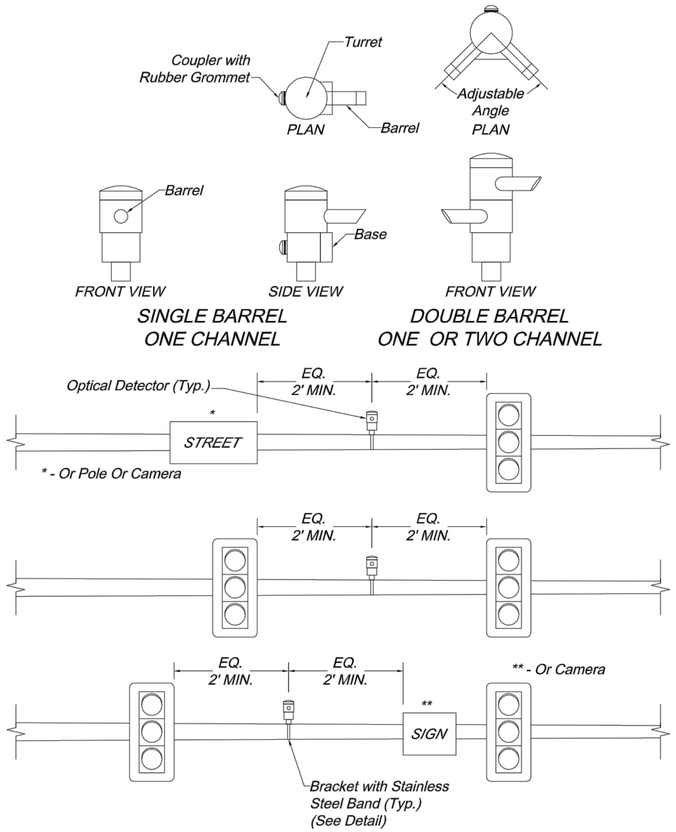
PULL BOX DETAILS

STANDARD DRAWING TS-6

Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#



WHEN MULTIPLE DETECTOR UNITS ARE MOUNTED ON THE SAME MAST ARM, THEY SHALL BE SPACED APPROXIMATELY 12 INCHES APART.

Emergency Vehicle Detection Notes:

1. The detector cable shall be continuous from the optical detector to the traffic signal controller. No splices shall be allowed.

2. The contractor shall label the optical detector cable in all pull boxes by channels as indicated on the plans. This shall be accomplished with aluminum tags attached to the cable with aluminum wire. No direct payment shall be made for this work.

3. Opticom shall be mounted inside the controller cabinet. Unless otherwise indicated on the plans, the placement of the optical detectors shall be centered between the signal heads and/or signal head and sign located on the mast arms. Further information on optical detector placement is shown in the details. The final placement of the optical detector may be adjusted for line of sight requirements.

4. The equipment manufacturer shall be responsible for providing onsite technical assistance to the contractor in final placement of the optical detectors, as well as in all the aspects of the system installation.

5. Preemption sequences and timings shall be developed by the equipment supplier. Timings shall be marked up on the timing sheets from the specific model of controller at each intersection and submitted for review by the City prior to implementation by the supplier. Pre-emption sequences shall use an all red interval or other methods to prevent the occurrence of "Yellow Traps" at intersections with protected/permitted left-turn phasing.

6. Preempts are to be assigned as follows unless otherwise indicated in the plans:

Direction	Preempt No.	Channel
Northbound	1	A
Southbound	2	B
Eastbound	3	C
Westbound	4	D

7. The Contractor shall install the equipment consistent with the equipment manufacturer's recommended installation procedures and interface diagrams in a neat and workmanlike manner. Emergency Vehicle Detection System shall be provided and installed by the contractor and shall consist of all detectors, processors, mounting brackets, etc for a fully operational system.

OPTICAL DETECTOR

Video Detection Notes:

1. The video detection system shall consist of video camera(s), video detection processor (VDP), cables, brackets, and all other materials necessary for a fully functional system.

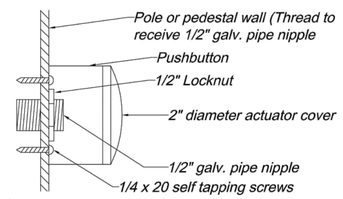
2. The video detection system shall include software that detects vehicles in multiple lanes of each direction using only one video camera. Detection Zones (DZ) shall be defined using only a video menu and a pointing device to define and place zones on a video image. Up to 24 DZ per camera shall be available.

3. The actual number and location of DZ shall be determined in the field by the City Traffic Engineer. The City reserves the right to have additional zones programmed or modify those shown based on the field programming period completed prior to turning on the signal.

4. Video cameras are to be mounted as shown on the traffic signal plans. If the camera is mounted on a Type BL or CL pole, the camera shall be mounted directly to the luminaire bracket arm. If the camera is mounted on a Type B or C pole, the camera shall be mounted on the mast arm using a 6-foot riser.

5. Video camera placement, adjustment, setup and initial programming shall be at the direction of the manufacturers representative. The manufacturers representative shall assist with identifying optical camera locations, system setup, programming, and turn-on.

VIDEO DETECTION

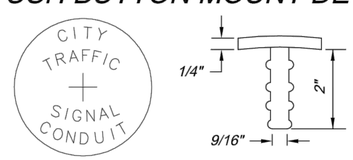


Push Button Notes:

1. Push buttons shall include 2 mounting brackets each and be of the type as noted in the plans.

2. Push buttons shall be ADA approved and weatherproof, mounted in accordance with standard drawing TS-1.

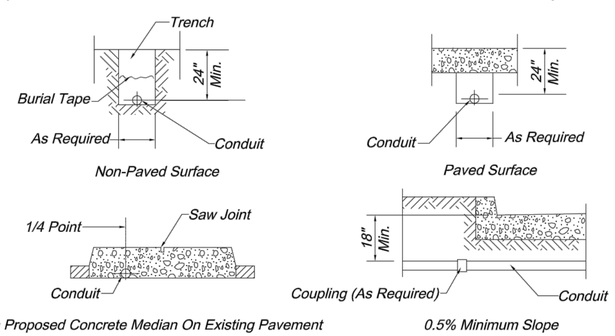
PUSH BUTTON MOUNT DETAIL



CONDUIT MARKER

Conduit Marker Notes:

1. Wherever a conduit passes beneath a curbed street, aluminum conduit markers shall be installed in the curb immediately over the conduit location. Conduit markers shall be furnished by the contractor as detailed and shall be installed in the top of the curb by drilling the curb and epoxying the conduit marker in place. Conduit markers shall be flush with the curb. Conduit markers shall be subsidiary to conduit.

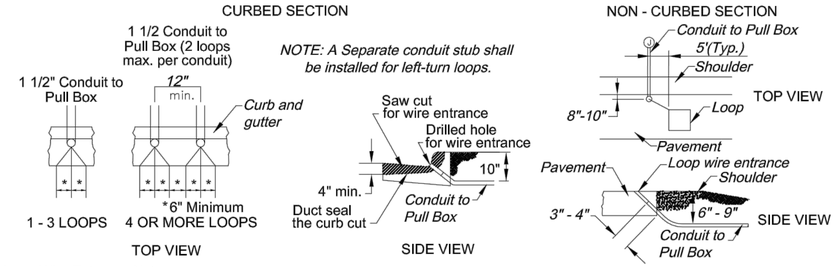


Conduit Location Notes:

1. Conduit shall be installed to drain, and if metallic all ends shall be threaded and capped.

2. The Contractor shall notify the City of Lee's Summit, Department of Public Works Traffic Division at (816) 969-1807 for inspection of the conduit installation. At least 24 hours notice shall be provided. The conduit shall not be covered unless inspected and approved by the Engineer or his authorized representative, so as to ensure proper depth, correct conduit material and proper conduit end treatment as described above.

CONDUIT LOCATIONS



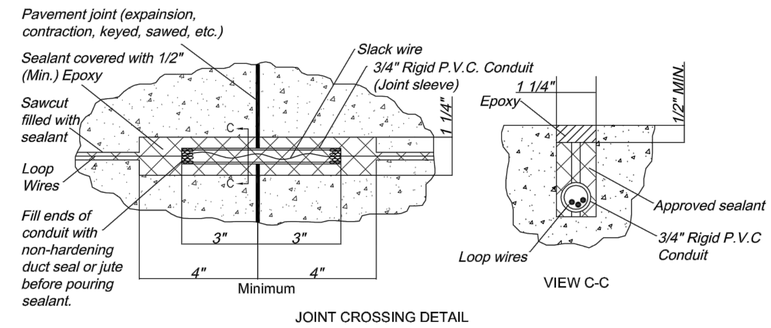
Loop Wire Entrance Notes:

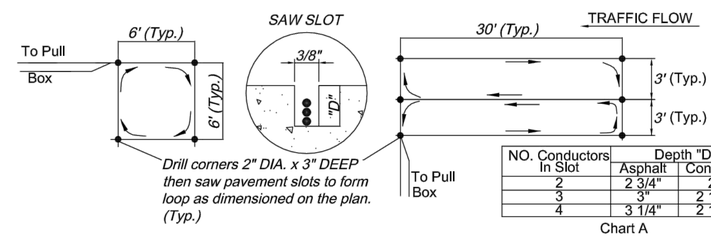
1. Saw cut in the curb and gutter section and conduit entrance to be sealed with a pliable, non-hardening duct sealant prior to application of loop sealant. No loop sealant shall be applied in the curb and gutter section or at conduit entrance.

2. Grout around conduit inserted into curb or pavement section.

3. Each loop shall have a separate lead-in-saw cut to the loop wire entrance in the curb or at the edge of pavement.

LOOP WIRE ENTRANCE DETAIL





NO. Conductors In Slot	Depth "D" Asphalt	Depth "D" Concrete
2	2 3/4"	2"
3	3"	2 1/4"
4	3 1/4"	2 1/2"

Chart A

TYPICAL TRANSVERSE LOOP (3 TURNS)

TYPICAL QUADRAPOLE LOOP (2-4-2 TURNS)

Loop Detection Notes:

1. Quadrapole loop to be one continuous wire placed in two turns. All loops to be wound in same direction, with start and end clearly marked at pull box.

2. Transverse loop to be one continuous wire placed in three turns. All loops to be wound in same direction, with start and end clearly marked at pull box.

3. Slot in pavement for loops to be cut $\frac{3}{8}$" wide at minimum depth "D" as indicated in Chart A. Slot in pavement for lead shall be $\frac{1}{2}$" wide at minimum depth "D". Fill slots with an approved asphalt sealer (asphalt pavement) or an approved elastic epoxy sealant (concrete pavement) to within $\frac{1}{8}$" of pavement surface.

4. Other than soldered type splice or splice made with wire nuts at their junciton, feeder cable and loop wire shall be of continuous run with no splices. All connections to be watertight with approved splice kits. Watertight connections shall extend to and encompass each outer jacket of the detector feeder and loop wire cables.

5. All leads for individual loops to be kept separate and loop wire between the loop and the feeder cable connection shall be twisted three turns per foot.

6. All loops shall be wet cut with equipment approved by the City Traffic Engineer.

7. Where loops are to be installed on projects involving either asphalt pavement construction or milling and overlay of an existing asphalt pavement, loops shall be installed in the base course prior to placement of the asphalt surface course.

8. If existing loops are to be abandoned and new loop installed, abandoned loop wires shall be removed or cut completely through along all slots parallel to vehicle flow.

9. Loops shall be #14 AWG stranded wire in pvc duct made up of 2 non-twisted turns in single slot or as recommended by manufacturer of the detector amplifier. Loop shall be placed in sawed slots in a figure eight manner with device which will not damage the wire insulation. Lead-in cable shall be 2-1c #14 AWG twisted.

LOOP DETECTION

CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
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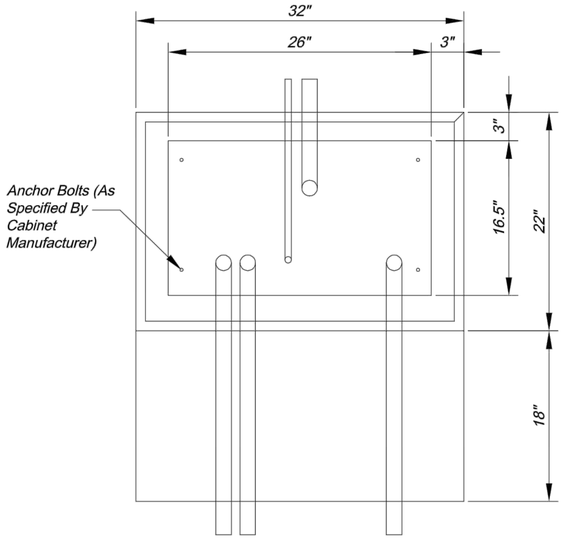
CONDUIT & DETECTION DETAILS

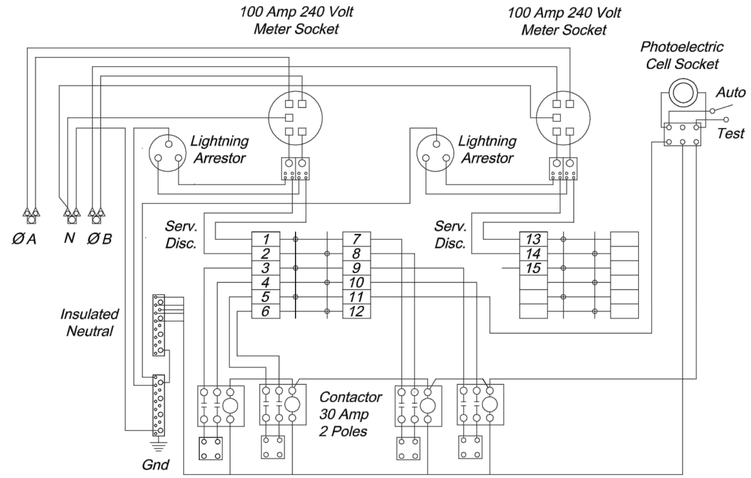
STANDARD DRAWING TS-7

Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#

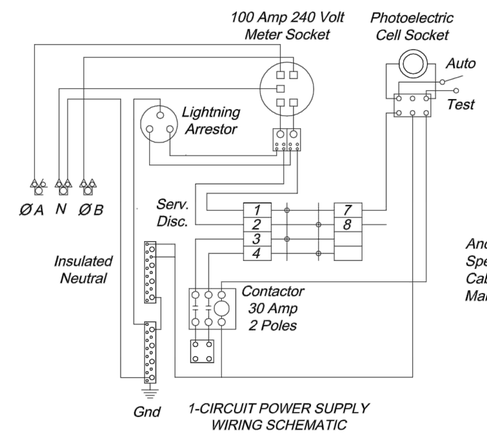
NOTES:
1. Photoelectric cell should be oriented to the north or east.
2. Seal around joint between cabinet and base with lifetime silicone caulk.
3. All exposed edges of the base should have a 1" chamfer
4. If base is adjacent to a traffic signal controller, raised portion of base (above finished grade) should be constructed to the same height as the signal controller base.
5. The street address with the power supply number below it should be labeled on the upper portion of the cabinet facing the street. The City will supply stickers for the Contractor to install.



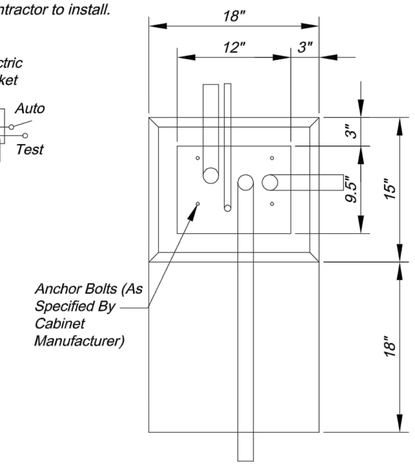
PLAN VIEW



DUAL METER POWER SUPPLY WIRING SCHEMATIC

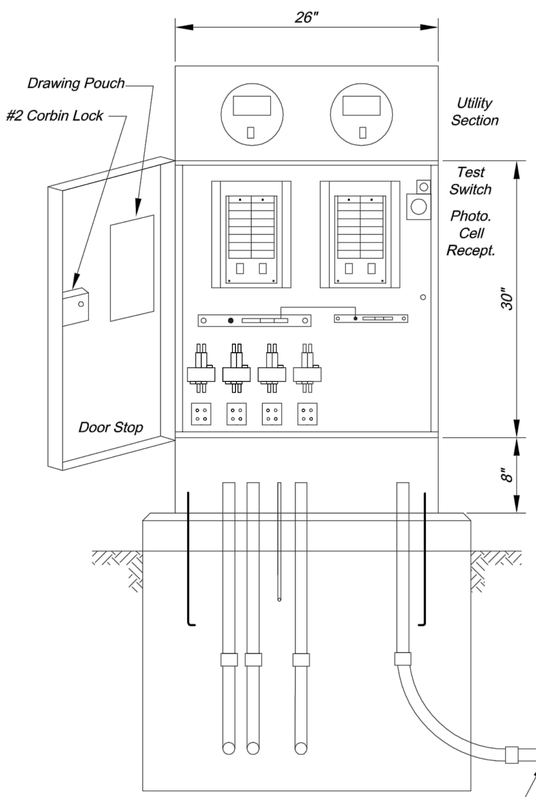


1-CIRCUIT POWER SUPPLY WIRING SCHEMATIC

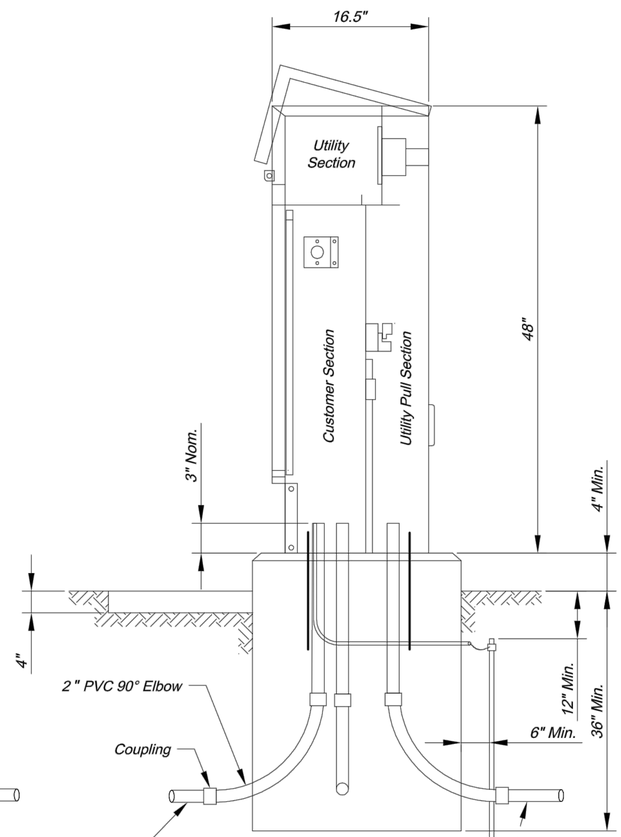


PLAN VIEW

FUSED CONTACTORS ARE NOT PERMITTED

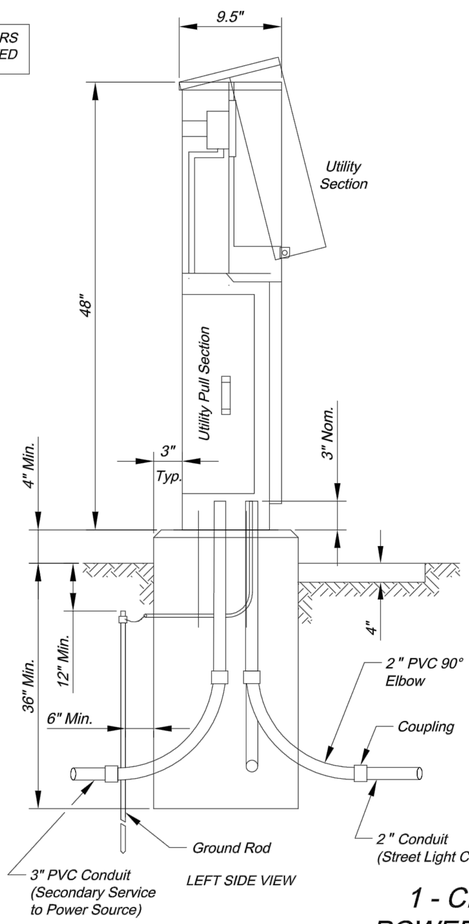


FRONT VIEW

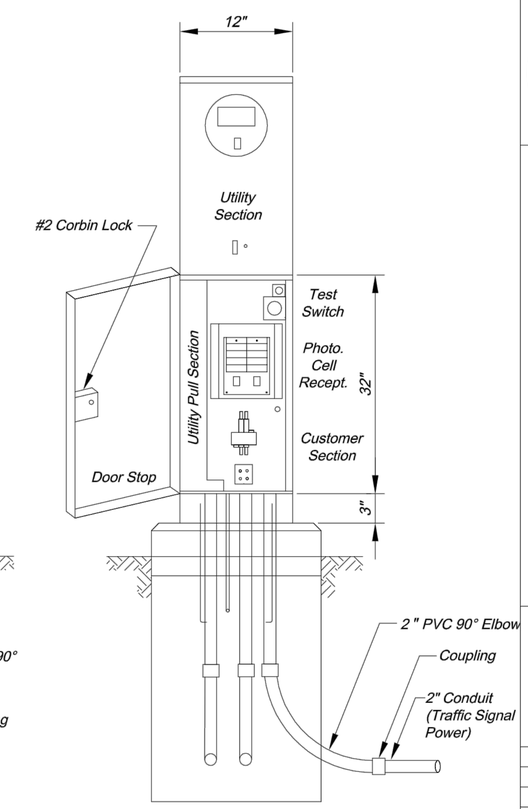


RIGHT SIDE VIEW

DUAL METER POWER SUPPLY



LEFT SIDE VIEW



FRONT VIEW

1 - CIRCUIT POWER SUPPLY

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ENGINEERING DIVISION
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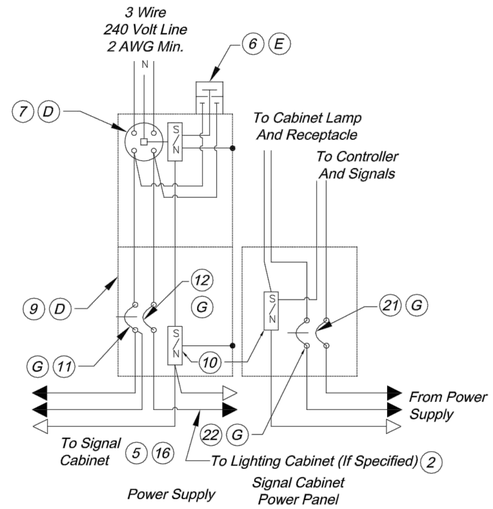
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

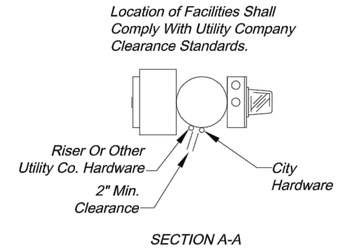
POWER SUPPLY ASSEMBLY
240/120 VOLT SERVICE

STANDARD DRAWING TS-8

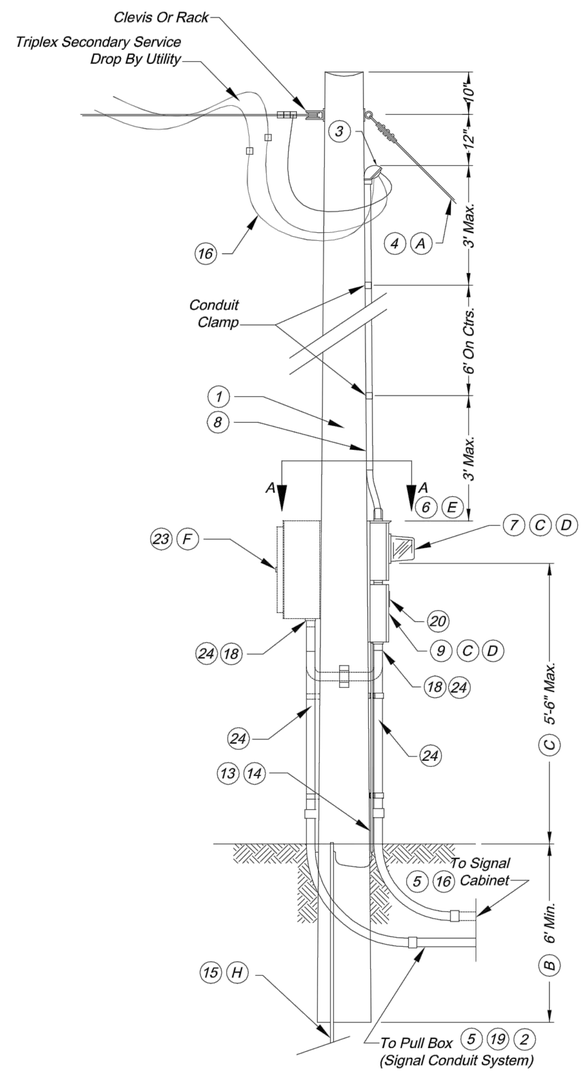
Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#



OVERHEAD SERVICE POWER SUPPLY
WIRING SCHEMATIC
SIGNALS AND/OR LIGHTING



SECTION A-A



OVERHEAD SERVICE POWER SUPPLY
TEMPORARY SIGNAL ONLY

LIST OF MATERIALS	
Item	Description
1	Service pole 30' min., Class IV wood, Contractor provided, City owned. *
2	#8 AWG Min. Cable, 600 volt *
3	Service entrance head
4	Guy cable, as required
5	2" min. rigid conduit with preformed elbows
6	Lightning arrestor, Valve type, 2 pole, 650 volt
7	240 volt Meter socket, 100 amp for signals
8	2" min. rigid conduit
9	Service disconnect box, Locking, Raintight, NEMA 4
10	Insulated, Groundable neutral, 200 amp minimum
11	Signal breaker, Single pole, 40 amp min., Type A or B
12	Lighting breaker, Single pole, 40 amp, Type A or B
13	Metal conduit, 1/2"
14	Ground wire, #2 AWG min.
15	Ground rod, 3/4" x 8' min.
16	#2 AWG min. cable, 600 volt
17	Reserved
18	Threaded conduit hub with sealing washers
19	Lighting cables *
20	Weatherproof adhesive label (signals) vinyl raised lettering
21	Type B controller and signal breaker, as specified.
22	Type B auxiliary breaker, 15 amp
23	Lighting control cabinet
24	2" Steel Conduit (minimum)
*	See plans

Notes

(A) Service pole shall be guyed when span of overhead wire exceeds 50'.

(B) Increase 1 foot for each 5 feet above 50 feet.

(C) Service disconnect boxes and meter boxes shall be aluminum or stainless steel. All hardware, hinges, catches, etc. shall be stainless steel. Meter socket and other equipment shall be U.L. approved, and conform to the requirements of the utility company providing power.

(D) Schematic diagram shall be mounted on insde of door.

(E) Utility company shall decide if lightning arresters are to be connected on the load or line side of the meter. The utility company shall also decide if the lightning arrester is terminated in the meter or disconnect cabinet. If terminated in the disconnect cabinet, it shall be installed on the connect cabinet.

(F) If lighting is specified, install lighting control on power supply.

(G) Breakers shall conform to the standard specifications.

(H) If subsurface conditions exist which prohibit the placement of the ground rod in vertical position, the rod may be driven at an oblique angle not to exceed 45 degrees from vertical or buried in a trench at least 30 in. deep. Connection to ground rod shall be clamp type as detailed on standard drawing TS-2.

General Notes:

For cable types and installation. See standard specifications.

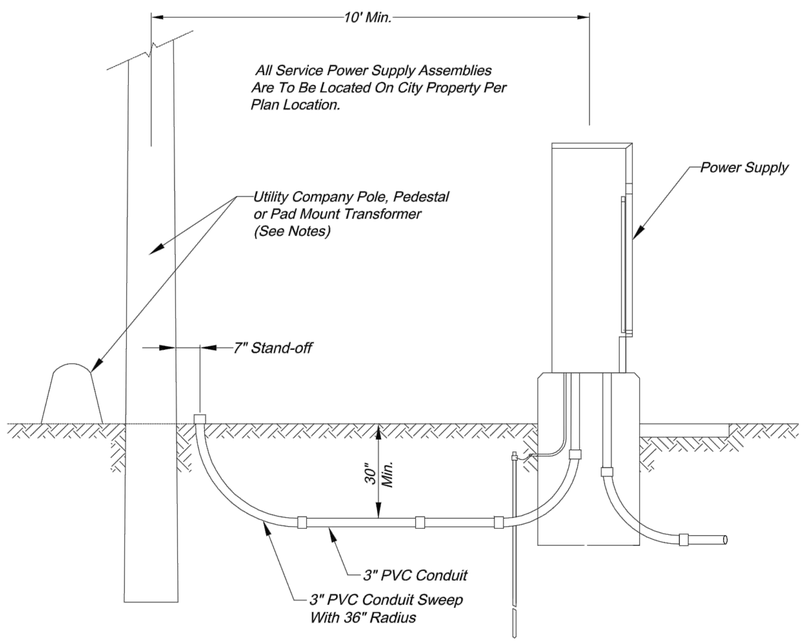
The type power supply assembly is shown on the plans or is designated on the contract.

The utility company shall be notified 30 days prior to date service will be required.

All openings in any utility enclosure, service box, or meter shall be covered and sealed with lifetime silicone caulk.

Contractor to provide sufficient number of ground rod(s) as required for maximum of 25 Ohms resistance to ground.

All materials required excluding reference items as shown on drawing shall be included in price bid for power supply assembly.



SECONDARY SERVICE CONNECTION DETAILS

NOTES:
1. Contractor shall install a conduit stub 24" to 6" above ground at utility poles. Conduit shall be stubbed to the side of the pole that will allow a direct run up the pole to the transformer without crossing other utility lines or cables. The end of the conduit shall be capped.
2. Contractor shall install conduit in a trench to within 24" of pedestals or pad mount transformers and leave a 36" x 36" x 36" access hole in the ground. Contractor shall keep open trench covered and promptly backfill access hole when service is completed.

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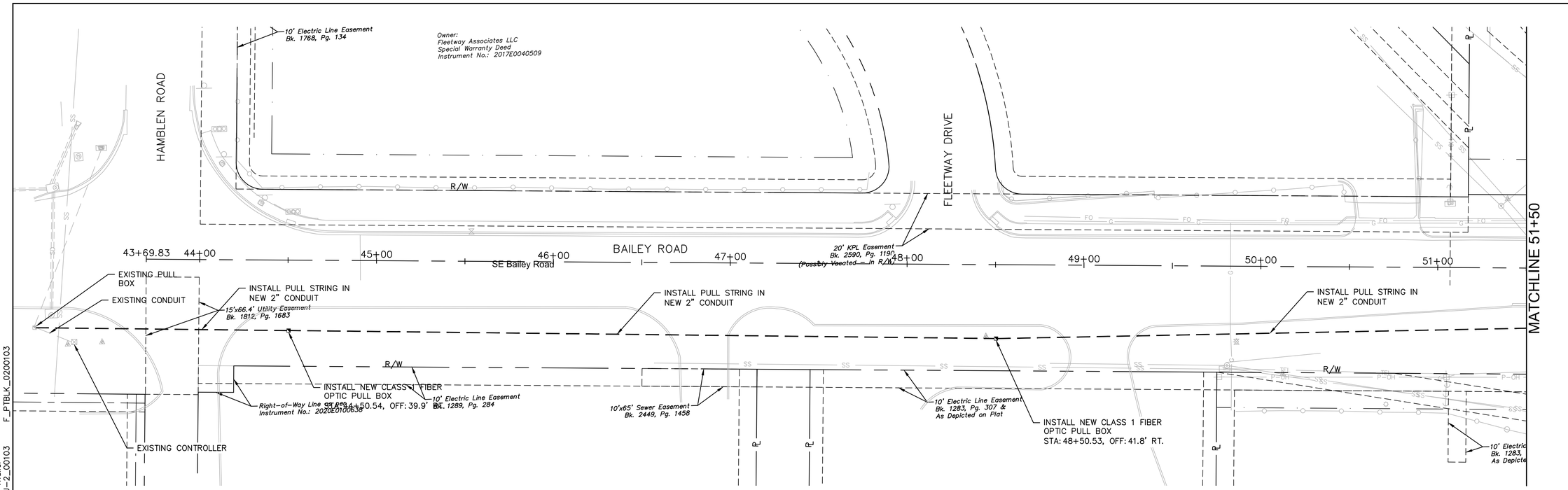
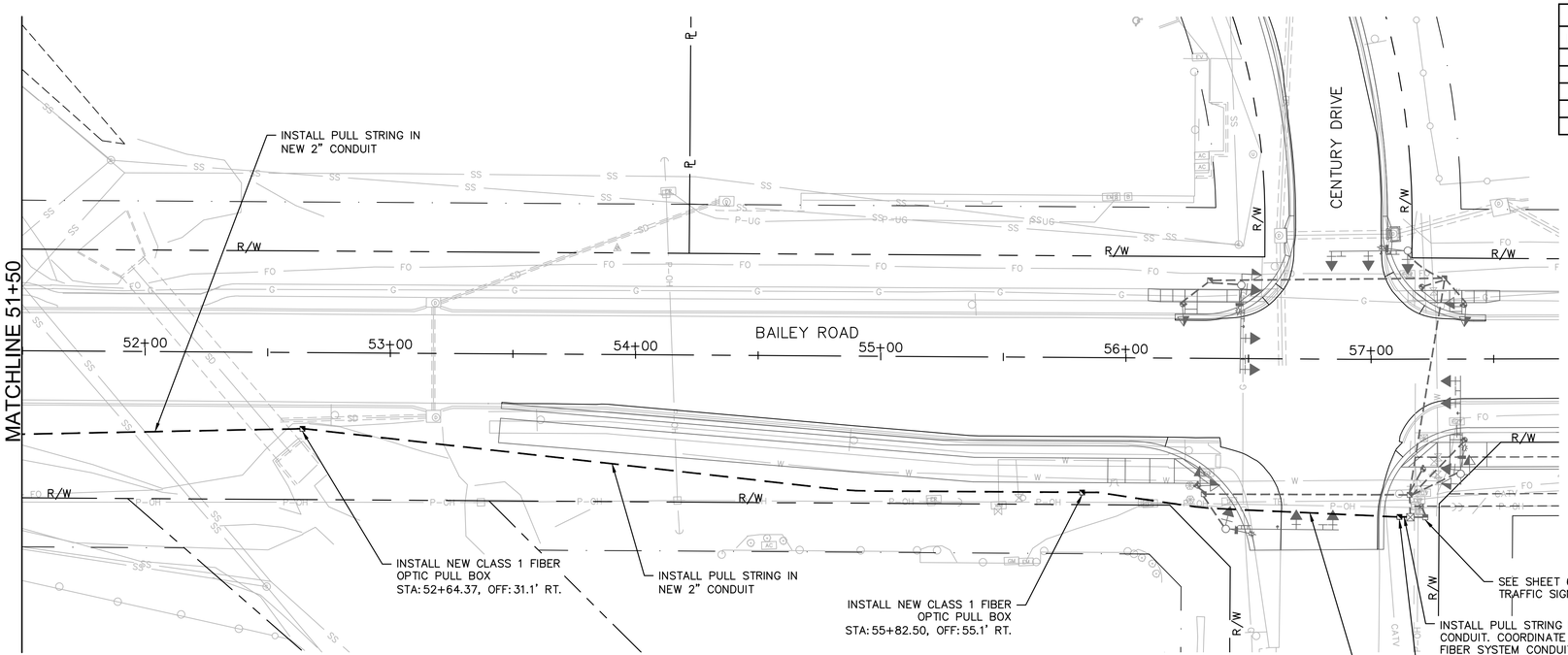
POWER SUPPLY ASSEMBLY
240/120 VOLT SERVICE

STANDARD DRAWING TS-9

Drawn By: AS
Checked By: MP
Date: 09/25/2009
Project#





QUANTITIES			
ITEM	ITEM DESCRIPTION	UNITS	QUANTITY
1.	2" CONDUIT WITH LOCATE CABLE AND PULL STRING	L.F.	1,406
2.	CLASS 1 FIBER OPTIC PULL BOX	EA.	5
3.	FIBER INTERFACE PANEL WITH 250' PIGTAIL	EA.	2
4.	ETHERNET SWITCH, TRANSITION WITH SEPARATE POWER SOURCE*	EA.	2
5.	SINGLE MODE PATCH CABLES	EA.	8

*EACH ETHERNET SWITCH SHALL INCLUDE:
ONE (1) COMTROL MP-1204-XT
ONE (1) MEAN WELL 240 DIN RAIL POWER SUPPLY
TWO (2) COMTROL 1200060 SFP MODULE

GENERAL NOTES:

1. A 1c#10 AWG THHN/THWN STRANDED COPPER LOCATING CABLE (RED) AND PULL STRING SHALL BE INSTALLED IN ALL CONDUITS AND IS CONSIDERED SUBSIDIARY TO THE CONDUIT BID ITEM.

2. CONTRACTOR TO INSTALL CONDUIT, PULL BOXES, PULL STRING, TRACER WIRE, AND CONNECTIONS TO INSIDE THE CABINET. ONCE COMPLETE CONTACT TIM SCHARFF AT CITY OF LEE'S SUMMIT IT DEPARTMENT 816-969-1234 TO COORDINATE INSTALLATION OF FIBER OPTIC CABLE.

3. FIBER OPTIC CONDUIT AND PULL BOX LOCATIONS MAY BE FIELD ADJUSTED (AS APPROVED BY THE ENGINEER) TO MAINTAIN ADEQUATE HORIZONTAL AND VERTICAL CLEARANCE FROM UNDERGROUND UTILITIES.

N

0' 15' 30' 60'
SCALE IN FEET

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Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI
SHANNON L. JEFFRIES
NUMBER PE-2006000369
PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	JAB

REVISIONS

FIBER INTERCONNECT
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

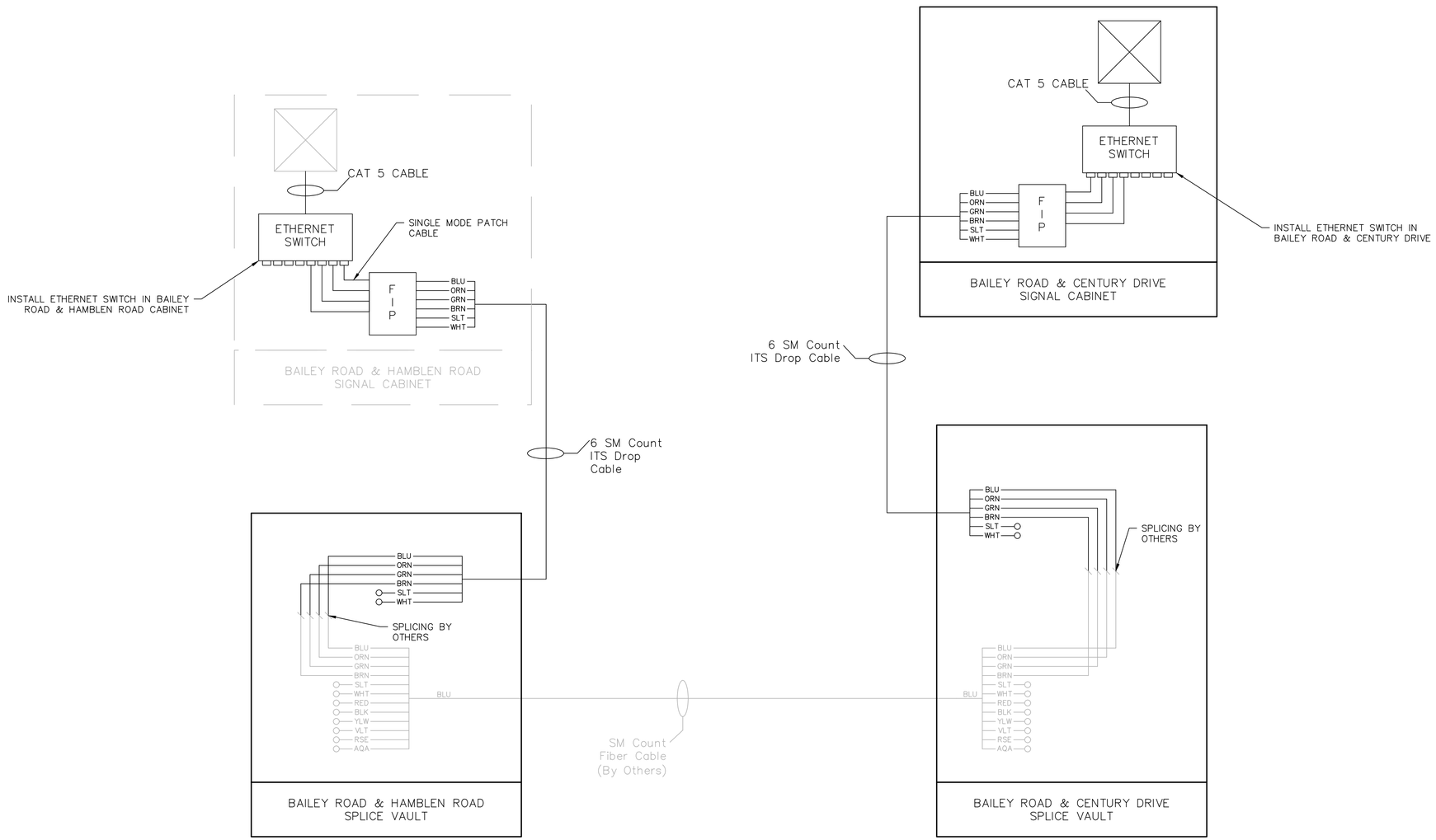
2021

C.O.A. NO.: 001592
DRAWN BY: JRC
CHECKED BY: JAB
APPROVED BY: SLJ
QA/QC BY: THF
PROJECT NO.: 020-0103
DWG NO.: F_FBI_0200103
DATE: 8/25/2021

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\FIBER PLAN\LEE'S SUMMIT SET\F_FBR_0200103.dwg
DATE: Aug 25, 2021 10:12am XREFS: T_PBASE_0200103 T_PSTRM_0200103 F_PBASE_0200103 V_XTOPO-2_00103 V_XBOU-2_00103 F_PTBLK_0200103
USER: rhaller

LEGEND

- INDIVIDUAL FIBER SPLICE
- FIIBER SPLICE OF EACH FIBER IN BUFFER TUBES
- UN-TERMINATED FIBER/BUFFER TUBE/CABLE
- EXISTING FIBER/BUFFER TUBE/CABLE
- PROPOSED FIBER/BUFFER TUBE/CABLE
- EXISTING FIBER DISTRIBUTION UNIT
- PROPOSED FIBER DISTRIBUTION UNIT
- PROPOSED FIBER INTERFACE PANEL
- PROPOSED ETHERNET SWITCH
- SIGNAL CONTROLLER



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SPLICE DIAGRAM
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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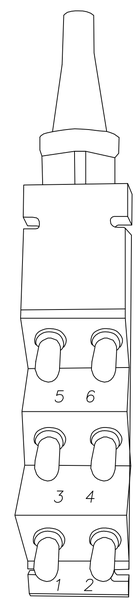
Fiber Optic General Notes

1. All material shall be from The City of Lee's Summit pre-approved materials list available at City Hall.
2. All traffic control in conjunction with the fiber optic construction shall be in conformance with the Manual on Uniform Traffic Control Devices and the Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations, latest revisions.
3. The Contractor shall stake the locations for all service boxes to be installed. The stations and offsets provided are to the center of the fiber optic equipment. The contractor shall provide elevations. If obstructions are encountered during installation, the contractor will re-stake those locations affected by the obstruction. The city fiber optic inspector shall inspect the staking prior to any excavation/construction.
4. The locations of existing underground utilities, if shown, are an approximate only and have not been independently verified. The Contractor shall be responsible for contacting all utility companies for locations of all underground lines prior to excavation and be fully responsible for any and all damages, which might occur as a result of the Contractor's failure to exactly locate and preserve any and all underground utilities.
5. The contractor shall call 1-800-DIG-RITE to obtain locates for street lighting, traffic signals, and fiber optic conduits/cables.
6. All cables in service boxes and poles shall be identified with color-coded tape as follows:
   - North Cable: Tape Color Code Blue
   - East Cable: Tape Color Code Yellow.
   - South Cable: Tape Color Code Purple
   - West Cable: Tape Color Code Red
7. Rock and shale may be encountered and thus the bid items shall reflect the extra work necessary to accomplish the installation. No additional payments ("extras") will be made for excavation of rock or shale and suitable backfill materials. All conduit trenches within rock/shale shall be backfilled with suitable material and properly compacted in accordance with the specifications.
8. Conduit shall be bored (by approved methods) in those areas outside of the street improvement limits. Multiple conduits cannot be pulled back through the same bore unless otherwise approved.
9. Continuous HDPE (orange) conduit (sized per plan) shall be installed between all service boxes prior to paving within the limits of the street improvements. Conduit splices between appurtenances shall not be allowed unless fusion couplings or other fusion methods are used.
10. The conduit placement shall be coordinated with the paving operation, when applicable. Conduit installation and conduit connections shall be inspected and approved by the City inspector. The contractor shall pay any and all extra costs of installing conduits by alternate construction methods after pavement has been placed or for any damages to pavement that may occur during conduit installation. All trenches for conduit under proposed paved surfaces (drives, streets and sidewalks) shall be backfilled with flowable fill unless otherwise directed, to below the proposed pavement surface.
11. The conduit shall be installed under underdrain pipe crossings and under the underdrain blankets. Refer to the street plans for underdrain pipe and blanket locations and appropriate details, if applicable.
12. All fiber optic fusion splices shall be made at an existing service box made in the presence of the inspector for approval.
13. The contractor shall take all precautions necessary to minimize the downtime of the existing systems to be modified. Any existing fiber optic system shall be maintained during construction as long as possible until the new system is installed and operating.
14. Damage to any existing fiber optic equipment due to construction shall be the responsibility of the contractor. The equipment shall be replaced or repaired (as directed by the City) with materials equal or better than the existing material.
15. All existing fiber optic equipment is to be used in place (U.I.P.) unless otherwise noted in the plans.
16. The contractor shall notify the City of Lee's Summit, MO, Department of Public Works (816) 969-1800 of the exact construction schedule so that inspection of the installation can be made.
17. The contractor shall be responsible for any damage to existing underground sprinkler systems during construction. All affected pipes or fittings shall be restored to original condition and location with new materials similar to existing. All restoration work shall be acceptable to the engineer and property owner.
18. All unpaved areas disturbed or damaged during construction shall be restored to the original condition. Unless otherwise directed, grassy areas shall be re-sodded.
19. Contractor shall use a polymer lubricating agent to facilitate conduit bores under paved streets. Failure to do so will result in a denial to retrieve bore head, in the case of loss, under any paved street by excavation methods.
20. A 1c#10 AWG THHN/THWN stranded copper locating cable (red) shall be installed in all conduits.
21. The ends of all conduit in service boxes shall be plugged with duct seal or spray foam.
22. All fusion splices shall be performed by the City of Lee's Summit.

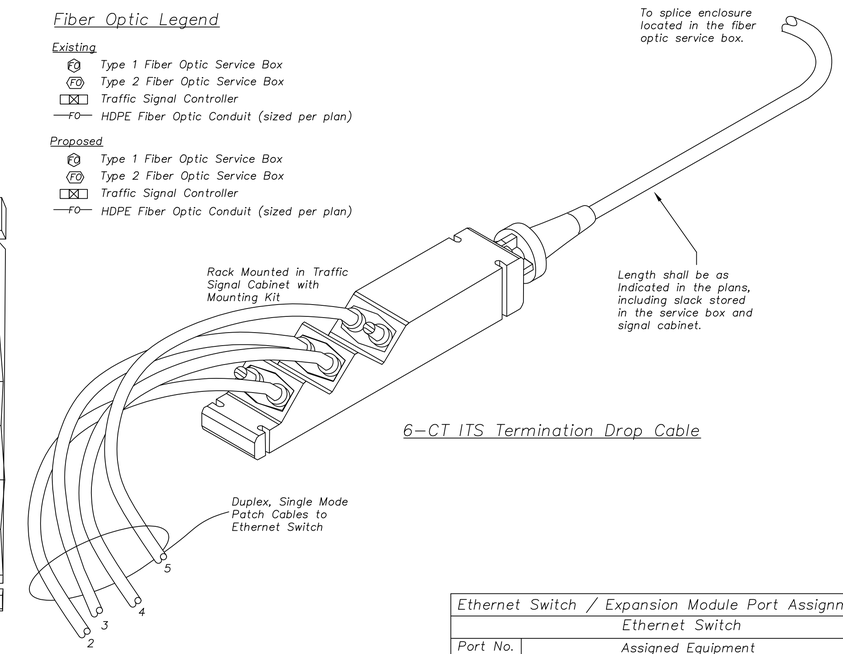
Fiber Optic Legend

Existing
- FO Type 1 Fiber Optic Service Box
- FO Type 2 Fiber Optic Service Box
- Traffic Signal Controller
- —FO— HDPE Fiber Optic Conduit (sized per plan)

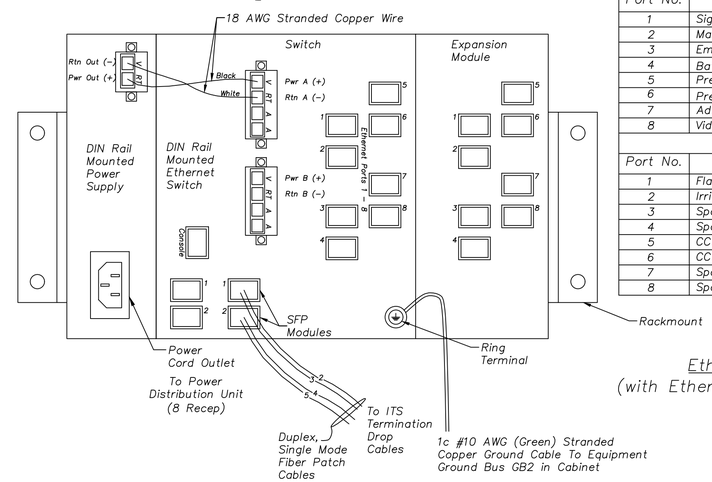
Proposed
- FO Type 1 Fiber Optic Service Box
- FO Type 2 Fiber Optic Service Box
- Traffic Signal Controller
- —FO— HDPE Fiber Optic Conduit (sized per plan)



Top View



6-CT ITS Termination Drop Cable



Ethernet Switch / Expansion Module Port Assignments	
Ethernet Switch	
Port No.	Assigned Equipment
1	Signal Controller
2	Malfunctioning Management Unit (MMU)
3	Emergency Vehicle Pre-emption (EVP)
4	Battery Backup / UPS
5	Presence Radar Detector Interface Module
6	Presence / Advance Radar Detector Interface Module
7	Advance Radar Detector Interface Module
8	Video Detection
Expansion Module	
Port No.	Assigned Equipment
1	Flashing School Beacons
2	Irrigation
3	Spare 1
4	Spare 2
5	CCTV Camera 1 PoE Injector
6	CCTV Camera 2 PoE Injector
7	Spare 3
8	Spare 4

Ethernet Switch & Power Supply Details
(with Ethernet Switch / Expanson Module Assignments)

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STATE OF MISSOURI SHANNON L. JEFFRIES NUMBER PE-2006000369 PROFESSIONAL ENGINEER 05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

FIBER DETAILS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: JRC
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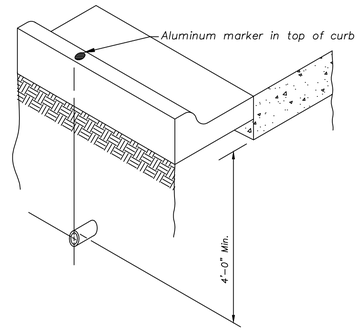
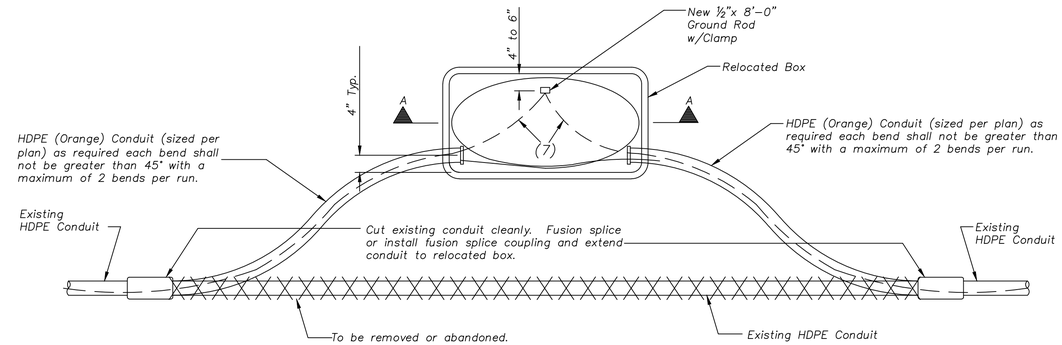
Conduit Marking Detail Notes:

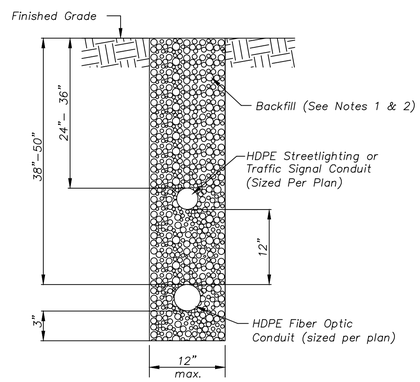
1. Conduit under all roadway surfaces shall be placed a minimum of 4'–0" below the bottom of pavement and shall extend to a junction box or service box. Refer to The City of Lee's Summit Horizontal Directional Drilling Guidelines Handbook, latest edition for further requirements for conduit installation under roadway surfaces. The conduit shall be installed to drain. All ends shall be capped if not used. An aluminum marker shall be placed in the top of the curb directly over the conduit. Aluminum markers will be furnished by The City of Lee's Summit.
2. The contractor shall notify the City of Lee's Summit, Department of Public Works Traffic Services Division, ???–????, For inspection of the conduit installation by the streetlighting inspector. at least 24 hours notice shall be provided. The conduit shall not be covered so as to ensure proper depth, correct conduit material, and proper conduit end treatment as described above.

Conduit Marking Detail

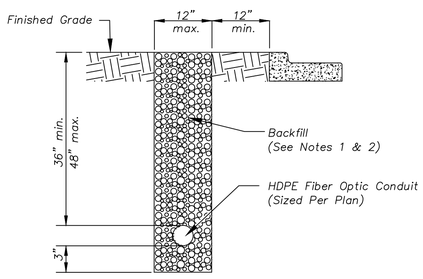




Plan (Conduit Position)
Relocated Box Installation Detail



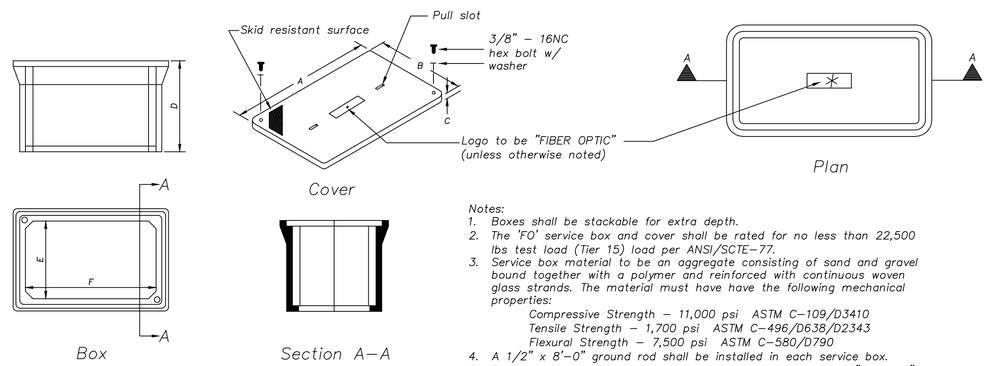
Trench w/Multiple Conduits in Unpaved Areas



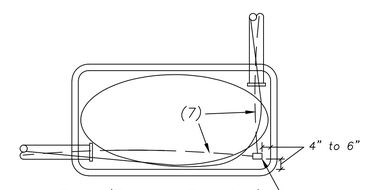
Trenching in Unpaved Areas

Trenching Details

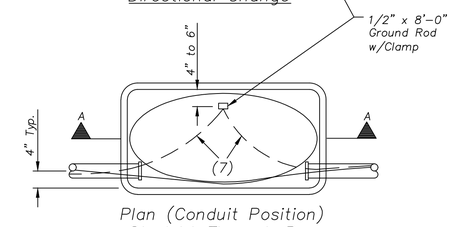
Notes:
1. All trenches for conduit under proposed paved surfaces shall be backfilled with flowable fill.
2. Backfill in unpaved areas shall be earth or AB–3 and free of rubble and rock. Conduits shall be pitched to drain.
3. If multiple conduits are installed, they shall have a minimum of 12" horizontal or vertical separation between them.



Notes:
1. Boxes shall be stackable for extra depth.
2. The 'FO' service box and cover shall be rated for no less than 22,500 lbs test load (Tier 15) load per ANSI/SCTE–77.
3. Service box material to be an aggregate consisting of sand and gravel bound together with a polymer and reinforced with continuous woven glass strands. The material must have have the following mechanical properties:
   Compressive Strength – 11,000 psi ASTM C–109/D3410
   Tensile Strength – 1,700 psi ASTM C–496/D638/D2343
   Flexural Strength – 7,500 psi ASTM C–580/D790
4. A 1/2" x 8'–0" ground rod shall be installed in each service box.
5. The conduit shall enter and exit the service box between 36" and 48" and shall be 4" centered off the edge of the service box wall. The fiber cable shall at no time have less that an 8" radius bend.
6. 18" min. layer of 1/2" clean crushed rock shall be constructed below the service box for drainage purposes.
7. 1c#10 AWG THHN/THWN (red) stranded copper locating cable.
8. The Type 2 fiber box shall have a two–piece overlapping cover.



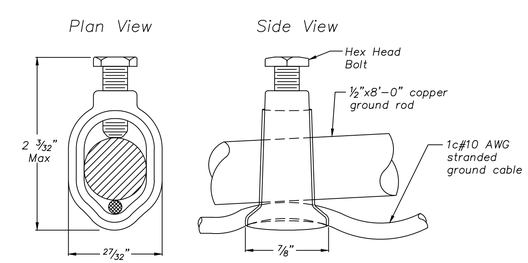
Plan (Conduit Position)
Directional Change



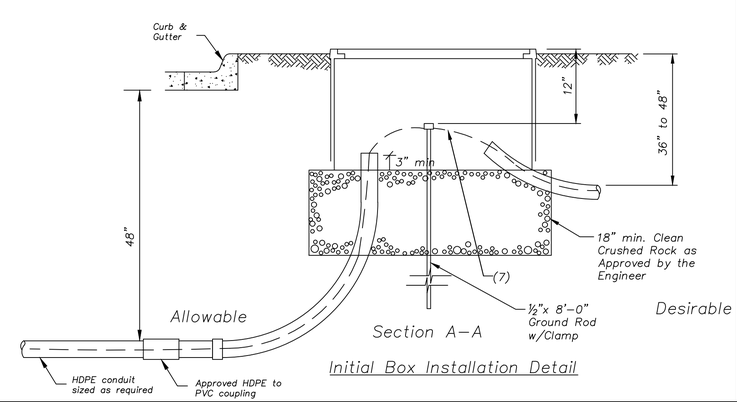
Plan (Conduit Position)
Straight Through Run

Box Type	Approximate Dimensions (inches)					
	A	B	C	D	E	F
Type 1 Fiber	35 5/8	24	3	24	22 1/4	33 7/8
Type 2 Fiber (8)	47 5/8	30 1/8	3	24	28 1/8	45 5/8

Fiberglass Reinforced Polymer Concrete
Fiber Optic Service Box Details



Ground Rod Clamp Connection Detail



Initial Box Installation Detail

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Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI SHANNON L. JEFFRIES NUMBER PE-2006000369 PROFESSIONAL ENGINEER 05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

FIBER DETAILS
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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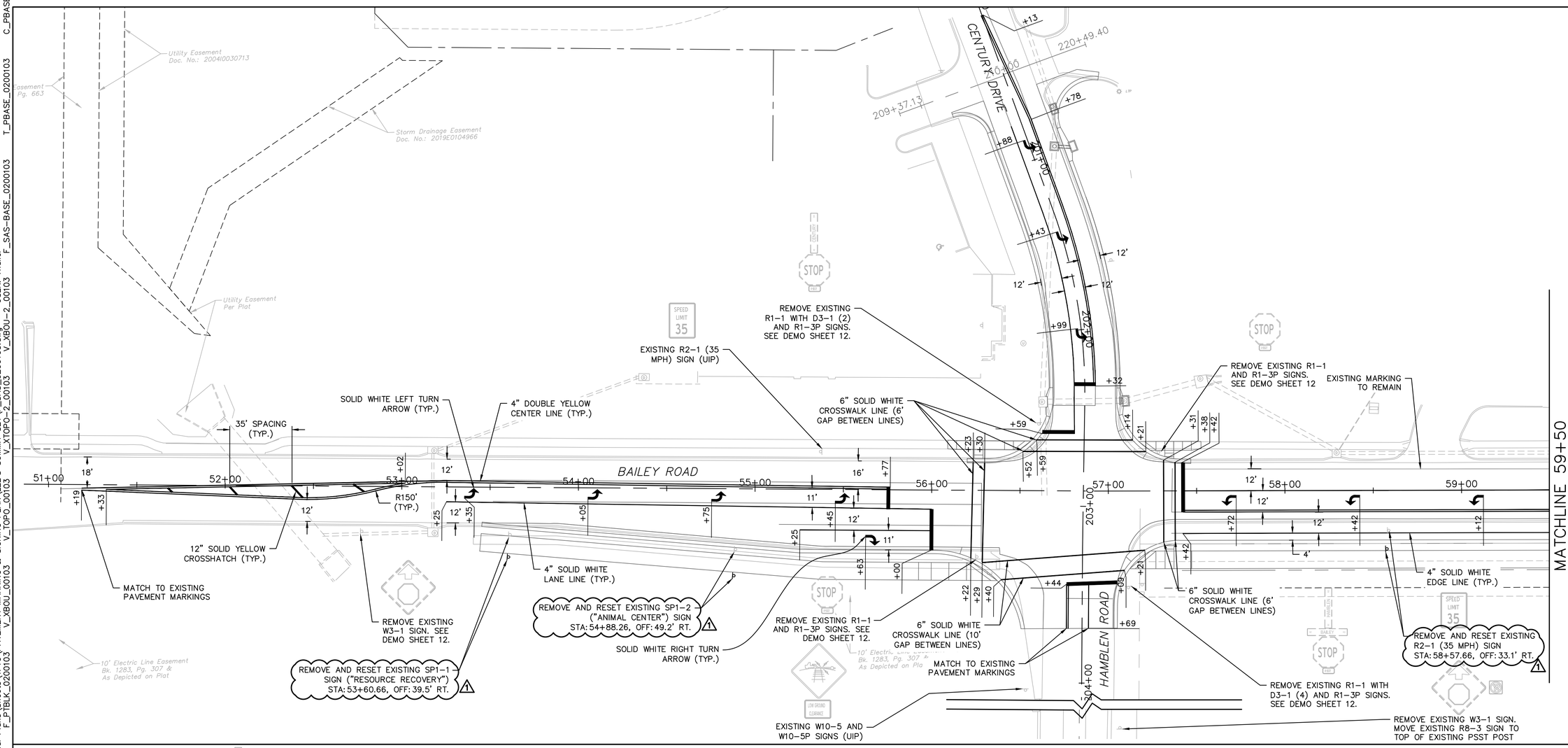

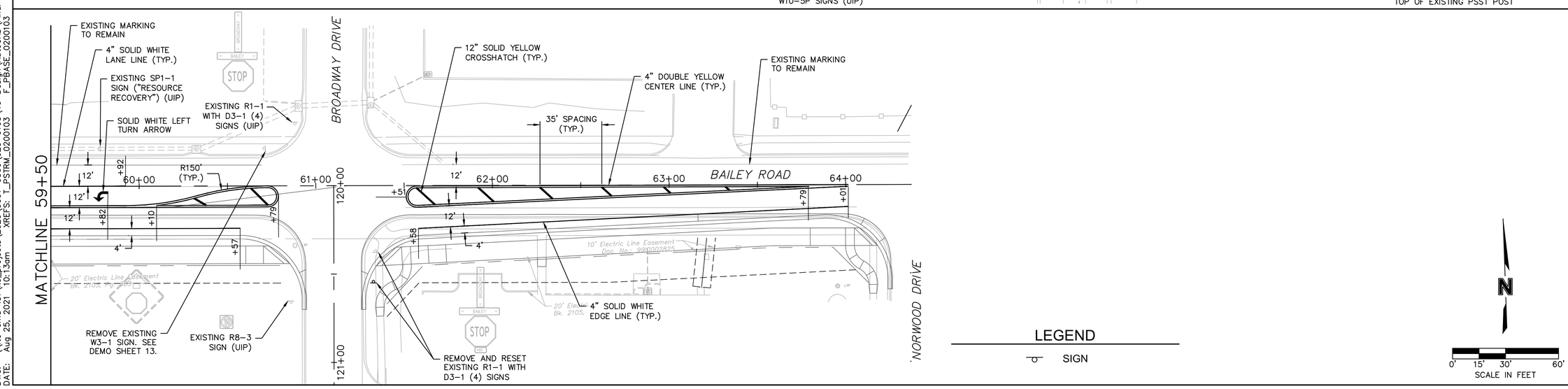

LEGEND

SIGN

N

0' 15' 30' 60'
SCALE IN FEET

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STATE OF MISSOURI
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PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	JAB

REVISIONS

PAVEMENT MARKING AND SIGNING PLAN
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
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79 OF 101

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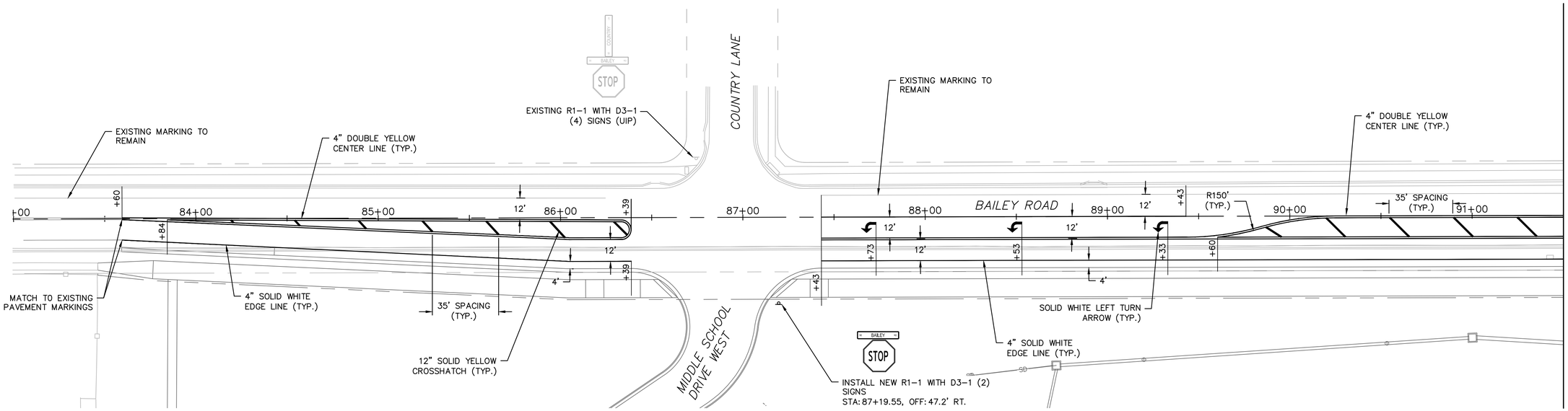

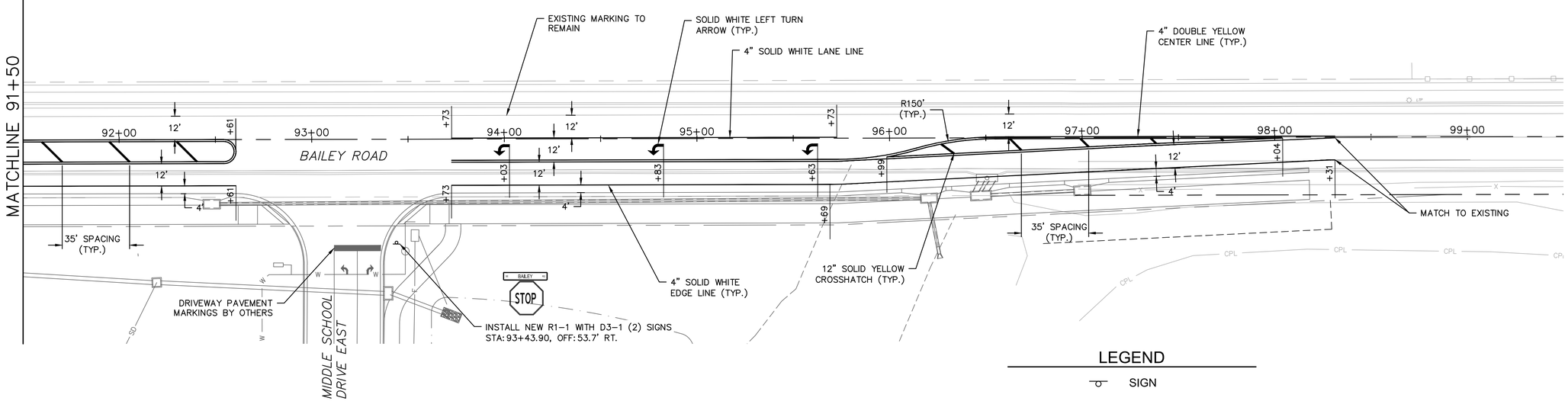

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PAVEMENT MARKING AND SIGNING PLAN
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
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LEE'S SUMMIT, MISSOURI

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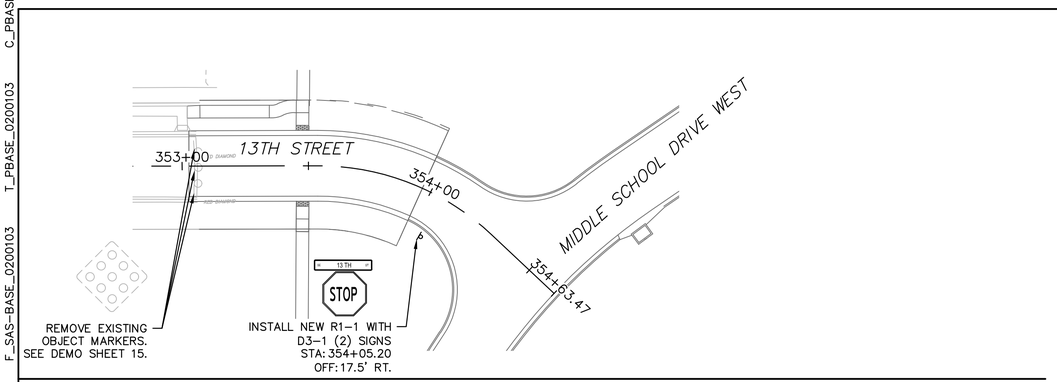
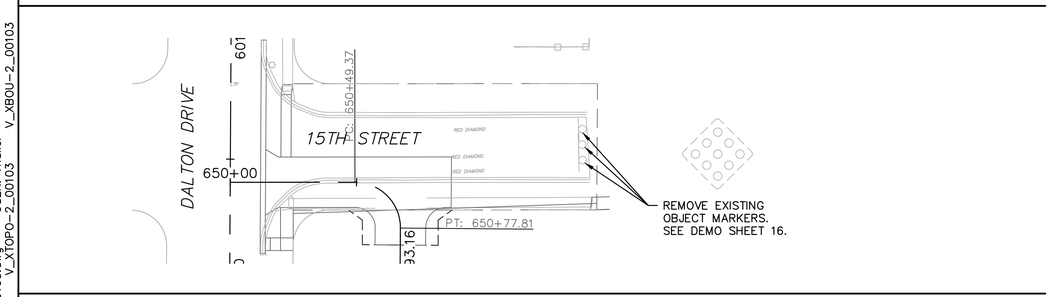
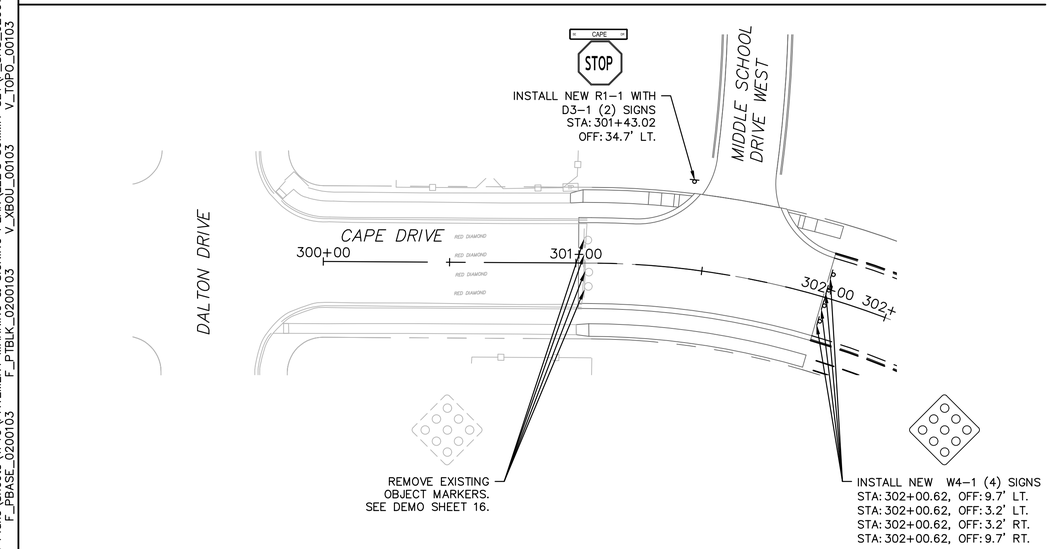
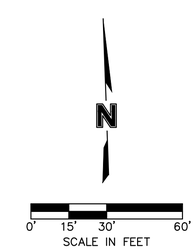






PERMANENT SIGNING SUMMARY

STATION	STREET REFERENCE	OFFSET FROM C/L	MUTCD DESIGNATION	SIGN SIZE	AREA (SF) MEP SIGNS	POST TYPE	REMARKS
53+60.66	BAILEY ROAD	39.5' RIGHT	SP1-1 (RESOURCE RECOVERY)	-	-	SQUARE	Remove and Reset on New Post
54+88.26	BAILEY ROAD	49.2' RIGHT	SP1-2 (ANIMAL CENTER)	-	-	SQUARE	Remove and Reset on New Post
-	BAILEY ROAD	-	R2-1 (35 MPH)	-	-	-	Use In Place
-	HAMBLEN ROAD	-	W10-5	-	-	-	Use In Place
-	HAMBLEN ROAD	-	W10-5P	-	-	-	Shared Post
-	HAMBLEN ROAD	-	R8-3	-	-	-	Move Existing Sign to Top of Existing Post
58+57.66	BAILEY ROAD	33.1' RIGHT	R2-1 (35 MPH)	-	-	SQUARE	Remove and Reset on New Post
-	BAILEY ROAD	-	SP1-1 (RESOURCE RECOVERY)	-	-	-	Use In Place
-	BROADWAY DRIVE	-	R1-1	-	-	-	Use In Place
-	BROADWAY DRIVE	-	D3-1 (BAILEY RD)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	D3-1 (BAILEY RD)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	D3-1 (BROADWAY DR)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	D3-1 (BROADWAY DR)	-	-	-	Shared Post
120+54.34	BROADWAY DRIVE	22.4' LEFT	R1-1	-	-	SQUARE	Remove and Reset on New Post
-	BROADWAY DRIVE	-	D3-1 (BAILEY RD)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	D3-1 (BAILEY RD)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	D3-1 (BROADWAY CIR)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	D3-1 (BROADWAY CIR)	-	-	-	Shared Post
-	BROADWAY DRIVE	-	R8-3	-	-	-	Use In Place
-	BAILEY ROAD	-	R1-1	-	-	-	Use In Place
-	BAILEY ROAD	-	D3-1 (BAILEY RD)	-	-	-	Shared Post
-	BAILEY ROAD	-	D3-1 (BAILEY RD)	-	-	-	Shared Post
-	BAILEY ROAD	-	D3-1 (COUNTRY LN)	-	-	-	Shared Post
-	BAILEY ROAD	-	D3-1 (COUNTRY LN)	-	-	-	Shared Post
87+19.55	BAILEY ROAD	47.2' RIGHT	R1-1	30"x30"	6.25	SQUARE	Install on New Post
-	BAILEY ROAD	-	D3-1 (BAILEY RD)	9" x 42"	2.63	-	Shared Post
-	BAILEY ROAD	-	D3-1 (BAILEY RD)	9" x 42"	2.63	-	Shared Post
93+43.90	BAILEY ROAD	53.7' RIGHT	R1-1	30"x30"	6.25	SQUARE	Install on New Post
-	BAILEY ROAD	-	D3-1 (BAILEY RD)	9" x 42"	2.63	-	Shared Post
-	BAILEY ROAD	-	D3-1 (BAILEY RD)	9" x 42"	2.63	-	Shared Post
354+05.20	13TH STREET	17.5' RIGHT	R1-1	30"x30"	6.25	SQUARE	Install on New Post
-	13TH STREET	-	D3-1 (13TH ST)	9" x 36"	2.25	-	Shared Post
-	13TH STREET	-	D3-1 (13TH ST)	9" x 36"	2.25	-	Shared Post
301+43.02	CAPE DRIVE	34.7' LEFT	R1-1	30"x30"	6.25	SQUARE	Install on New Post
-	CAPE DRIVE	-	D3-1 (CAPE DR)	9" x 36"	2.25	-	Shared Post
-	CAPE DRIVE	-	D3-1 (CAPE DR)	9" x 36"	2.25	-	Shared Post
302+00.62	CAPE DRIVE	9.7' LEFT	W4-1	18"x18"	2.25	SQUARE	Install on New Post
302+00.62	CAPE DRIVE	3.2' LEFT	W4-1	18"x18"	2.25	SQUARE	Install on New Post
302+00.62	CAPE DRIVE	3.2' RIGHT	W4-1	18"x18"	2.25	SQUARE	Install on New Post
302+00.62	CAPE DRIVE	9.7' RIGHT	W4-1	18"x18"	2.25	SQUARE	Install on New Post
TOTALS					54	12	



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Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170 www.olsson.com
Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI SHANNON L. JEFFRIES NUMBER PE-2006000369 PROFESSIONAL ENGINEER 05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	JAB

REVISIONS

PAVEMENT MARKING AND SIGNING PLAN
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: JRC
CHECKED BY: JAB
APPROVED BY: SLJ
QA/QC BY: THF
PROJECT NO.: 020-0103
DWG NO.: F_SAS_0200103
DATE: 8/25/2021

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\PAVEMENT MARKING & SIGNING PLAN\LEE'S SUMMIT SET\F_SAS_0200103.dwg
DATE: Aug 25, 2021 10:17am XREFS: T_PSTRM_0200103 F_PBASE_0200103 F_PTBLK_0200103 V_XBOU_00103 V_TOPO_00103 V_XTOPO-2_00103 V_XBOU-2_00103 F_SAS-BASE_0200103 T_PBASE_0200103 C_PBASE_02
USER: rhaller

PAVEMENT MARKING SUMMARY

STATION TO STATION		LOCATION	4" SOLID WHITE LANE LINE (LF)	4" BROKEN WHITE LANE LINE (LF)	8" DASHED WHITE EXTENSION LINE (LF)	4" SOLID YELLOW LINE (LF)	4" BROKEN YELLOW LANE LINE (LF)	12" YELLOW CROSSHATCH LINE (LF)	24" WHITE STOP LINE (LF)	6" WHITE CROSSWALK LINE (LF)	WHITE TURN ARROW (EA)	
											RT	LT
51+19	51+33	BAILEY ROAD				28						
51+33	53+02	BAILEY ROAD				678		26				
53+02	55+77	BAILEY ROAD				550						
53+25	56+00	BAILEY ROAD	275									4
55+25	56+00	BAILEY ROAD	75								1	
55+77	55+77	BAILEY ROAD							12			
56+00	56+00	BAILEY ROAD							23			
56+22	56+23	BAILEY ROAD								54		
56+29	56+30	BAILEY ROAD								56		
56+29	57+21	BAILEY ROAD								92		
56+40	57+09	BAILEY ROAD								70		
56+52	57+21	BAILEY ROAD								70		
56+59	57+14	BAILEY ROAD								55		
200+13	202+32	CENTURY DRIVE				442						
200+78	202+59	CENTURY DRIVE	179									3
202+32	202+32	CENTURY DRIVE							12			
202+59	202+59	CENTURY DRIVE							18			
203+44	203+44	CENTURY DRIVE							29			
203+44	203+69	CENTURY DRIVE	25									
203+44	203+69	CENTURY DRIVE				50						
57+31	57+31	BAILEY ROAD								47		
57+38	57+38	BAILEY ROAD								44		
57+42	57+42	BAILEY ROAD							28			
57+42	59+92	BAILEY ROAD	250									4
57+42	60+10	BAILEY ROAD				534						
57+42	60+57	BAILEY ROAD	315									
60+10	60+79	BAILEY ROAD				288		22				
61+51	63+79	BAILEY ROAD				926		51				
61+58	64+01	BAILEY ROAD	243									
63+79	64+01 1	BAILEY ROAD				44						
83+60	83+84	BAILEY ROAD				48						
83+60	86+39	BAILEY ROAD	280									
83+84	86+39	BAILEY ROAD				1030		53				
87+43	89+43	BAILEY ROAD	200									3
87+43	89+60	BAILEY ROAD				434						
87+43	92+61	BAILEY ROAD	518									
89+60	92+61	BAILEY ROAD				1218		115				
93+73	95+73	BAILEY ROAD	200									3
93+73	95+99	BAILEY ROAD				452						
93+73	98+31	BAILEY ROAD	459									
95+99	98+04	BAILEY ROAD				824		28				
98+04	98+31	BAILEY ROAD				54						
TOTALS			3019	0	0	7600	0	295	122	488	1	17

1

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Overland Park, KS 66213-4750 FAX 913.381.1174

STATE OF MISSOURI SHANNON L. JEFFRIES NUMBER PE-2006000069 PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	JAB

REVISIONS

PAVEMENT MARKING AND SIGNING PLAN
BAILEY ROAD

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: JRC
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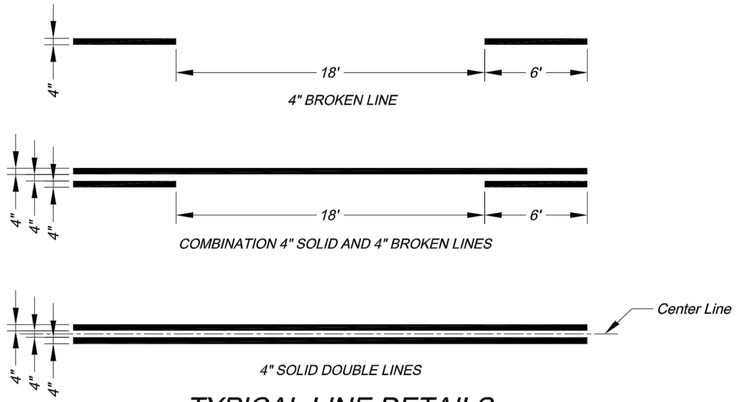
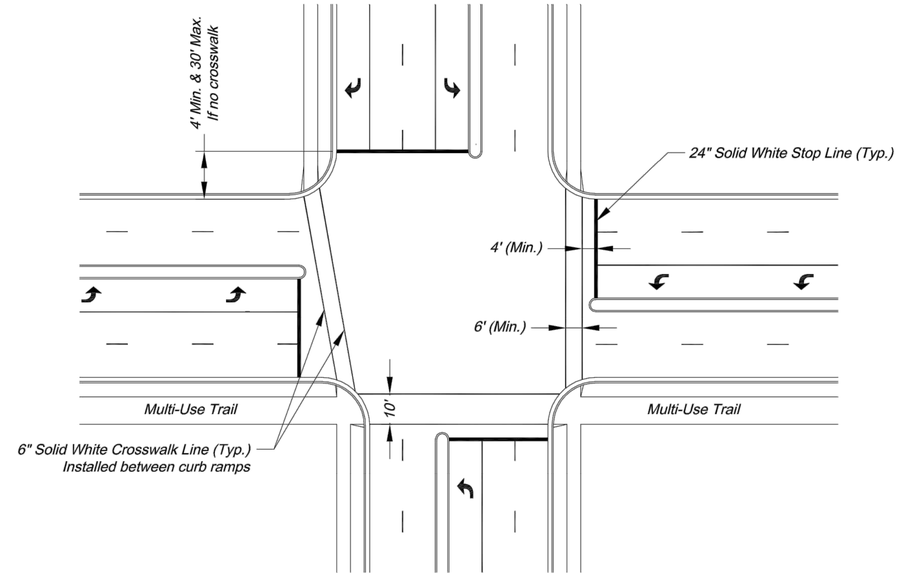
DATE: 8/25/2021

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\PAVEMENT MARKING & SIGNING PLAN\LEE'S SUMMIT SET\F_SAS_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:17am XREFS: T_PSTRM_0200103 F_PBASE_0200103 F_PTBLK_0200103 V_TOPO_00103 V_XTOPO-2_00103 V_XBOU-2_00103 F_SAS-BASE_0200103 T_PBASE_0200103 C_PBASE_02



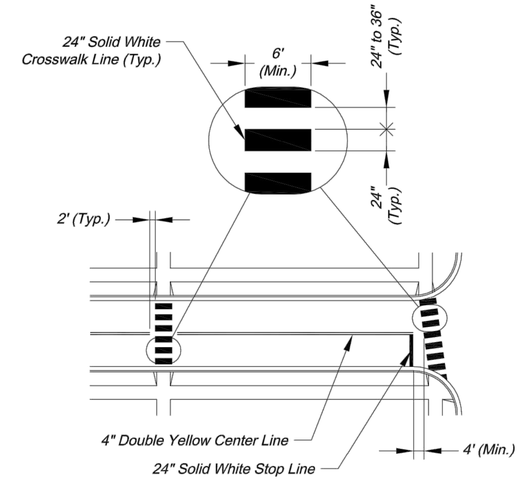
TYPICAL LINE DETAILS

NOTES:
1. All edge line, center line, and lane line pavement markings shall be 4" wide unless otherwise noted.
2. Edge lines shall be continuous solid white or yellow lines. Right side edge lines shall be solid white. Median or left side edge lines on divided roadways are to be solid yellow. Edge lines and center lines shall be continuous across driveways.

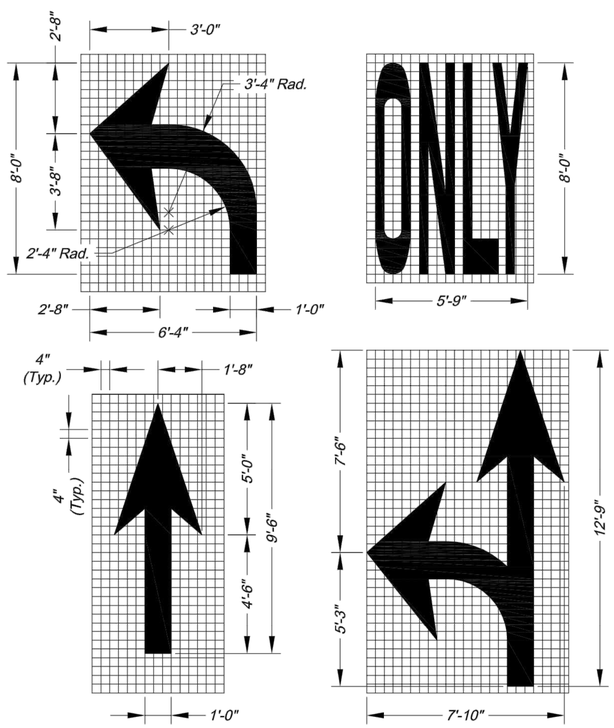


TYPICAL INTERSECTION MARKINGS

NOTES:
1. Transverse crosswalk lines shall be installed such that the distance between lines is at least 6 or 10 feet.
2. Stop lines are required at signalized intersections, on multi-lane stop controlled approaches, or in front of crosswalks at controlled intersections.

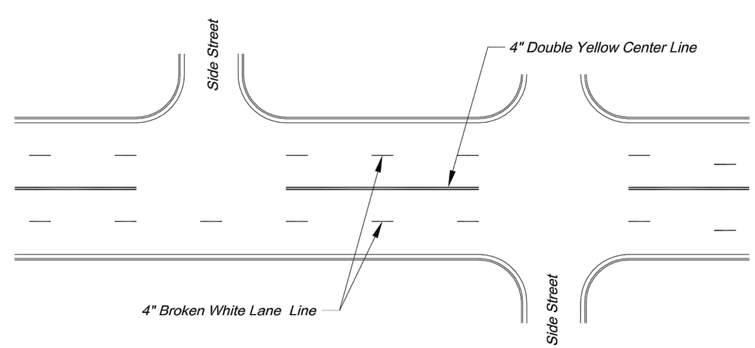


TYPICAL MIDBLOCK OR SCHOOL CROSS WALK

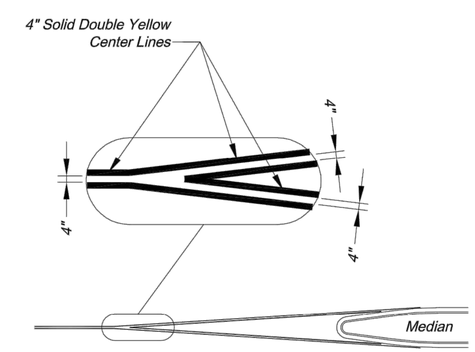


ARROW AND SYMBOL DETAILS

NOTES:
1. All arrow and symbol markings shall be white, and shall be centered in their respective traffic lanes.
2. Right-turn and combination right-turn/straight arrows are reverse of arrows shown.



TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

PAVEMENT MARKING GENERAL NOTES:
1. All pavement markings shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
2. All words and symbols shall conform to the latest edition of Standard Alphabets for Highway Signs and Pavement Markings printed by the U.S. Department of Transportation, Federal Highway Administration.
3. Pavement markings, either temporary or permanent are required at all times if the roadway is open to traffic.
4. All pavement markings that conflict with the desired markings shall be completely removed. Removals shall not leave the road surface scarred with an image that misleads traffic. Any excess damage or scarring of pavement shall be repaired at the Contractor's expense.
5. The proposed permanent markings shall be laid out by the Contractor in advance of the marking installation. Markings shall not be applied until the layout has been approved by the City Traffic Engineer.
6. Center lines shall be marked on all undivided arterial streets, and any other undivided street with more than two lanes and/or a speed limit of 30 mph or more.
7. Edge lines shall be marked on all non-curbed streets.

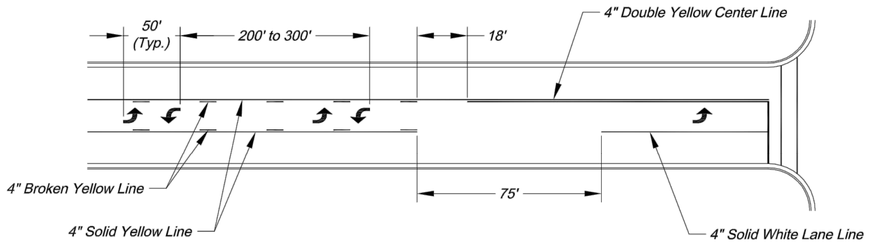
CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:

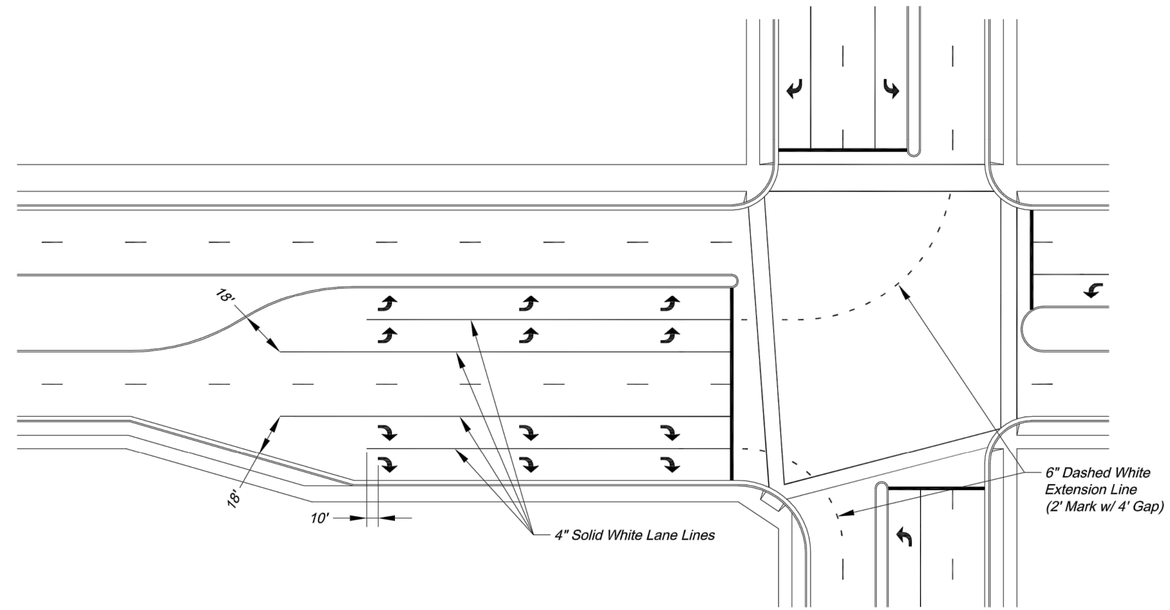
ROADWAY MARKING DETAILS

Sheet Name: STANDARD DRAWING PM-1

Drawn By: AS
Checked By: JW
Date: 09/09/2009
Project#

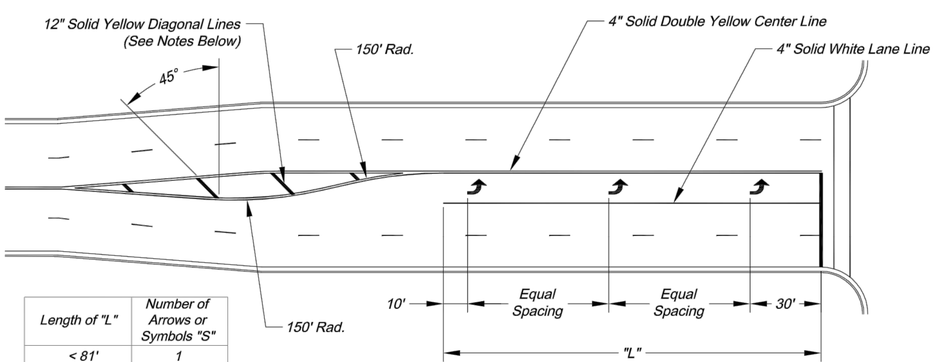


TYPICAL MARKINGS FOR TWO-WAY LEFT-TURN LANE



TYPICAL DUAL TURN LANE MARKINGS

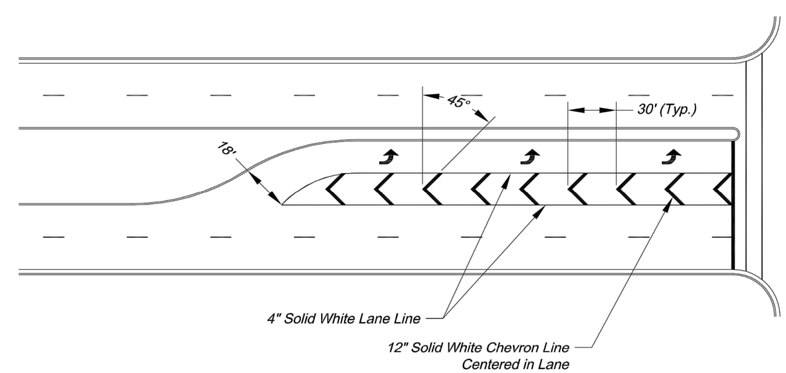
NOTE:
1. Dashed extension lines shall not extend through crosswalks.



Length of "L"	Number of Arrows or Symbols "S"
< 81'	1
81' - 120'	2
121' - 200'	3
201' - 280'	4
281' - 360'	5
361' - 440'	6

TYPICAL TURN LANE MARKINGS

NOTES:
1. Diagonal lines are required between centerlines if the width of the area between the center lines is greater than 12' and/or the length of the area between center lines is greater than 250'.
2. Diagonal lines should be spaced at 5' increments, equal to the posted speed limit.
3. Equal Spacing is calculated as (L - 40) / (S - 1).
4. When a through lane of traffic terminates as a mandatory turn lane, Arrow and "ONLY" symbols should be marked in the turn lane, in alternating order. The first and last symbols should be Arrows.



TYPICAL STRIPED OUT TURN LANE MARKINGS

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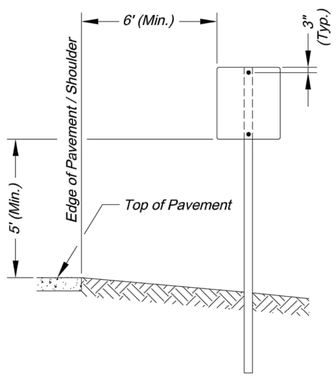
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project:

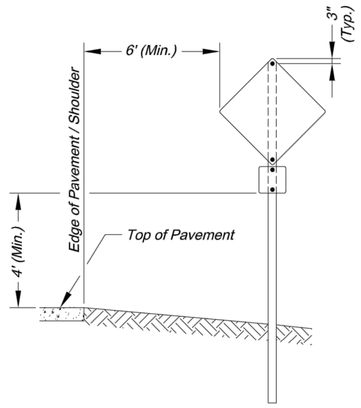
INTERSECTION MARKING DETAILS

Sheet Name: STANDARD DRAWING PM-2

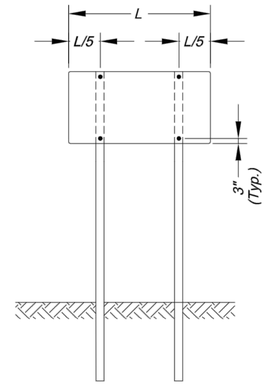
Drawn By: AS
Checked By: JW
Date: 09/09/2009
Project#



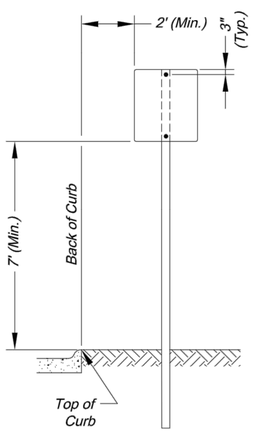
SIGN INSTALLATION FOR NON-CURBED STREET



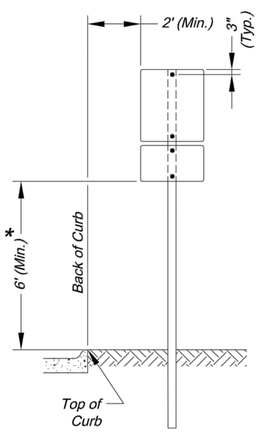
SIGN INSTALLATION WITH AUXILARY SIGN FOR NON-CURBED STREET



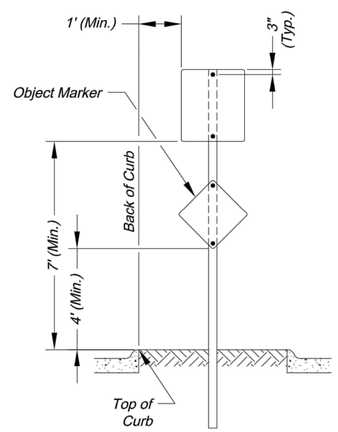
SIGN INSTALLATION WITH TWO SIGN POSTS



SIGN INSTALLATION FOR CURBED STREET



SIGN INSTALLATION WITH AUXILARY SIGN FOR CURBED STREET

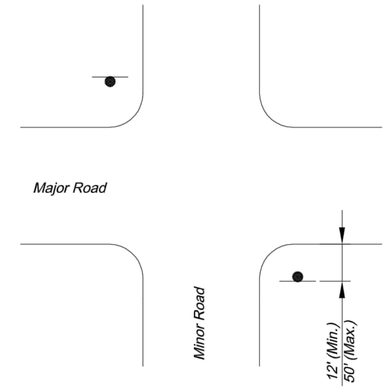


SIGN INSTALLATION FOR RAISED MEDIANS

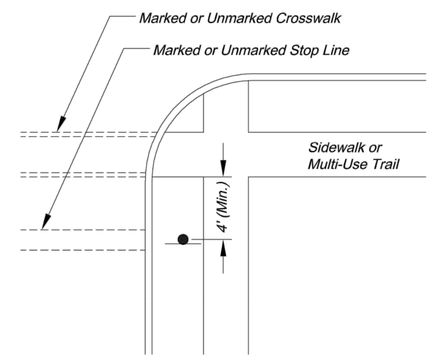
SIGN MOUNTING DETAILS

* The height to the bottom of a sign when it is located in a pedestrian walkway or extends into a walkway shall be a minimum of 80 inches above the walkway.

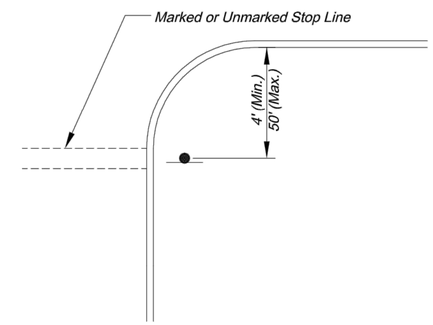
NOTE:
1. Generally, the sign mounting height should not be more than 1' greater than the minimum mounting height.



NON-CURBED INTERSECTION INSTALLATION

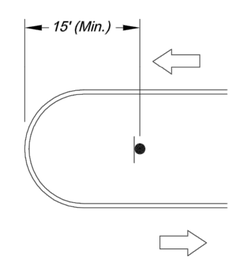


INTERSECTION WITH SIDEWALK / MULTI-USE TRAIL INSTALLATION



CURBED INTERSECTION INSTALLATION

CONTROL SIGN LOCATION



TYPICAL MEDIAN SIGN LOCATION

MEDIAN SIGN LOCATION

NOTES:
1. A 4" P.V.C. sleeve shall be installed in new concrete medians at each location where a sign is to be installed.
2. For existing concrete medians, a 4" hole shall be cored into the concrete.

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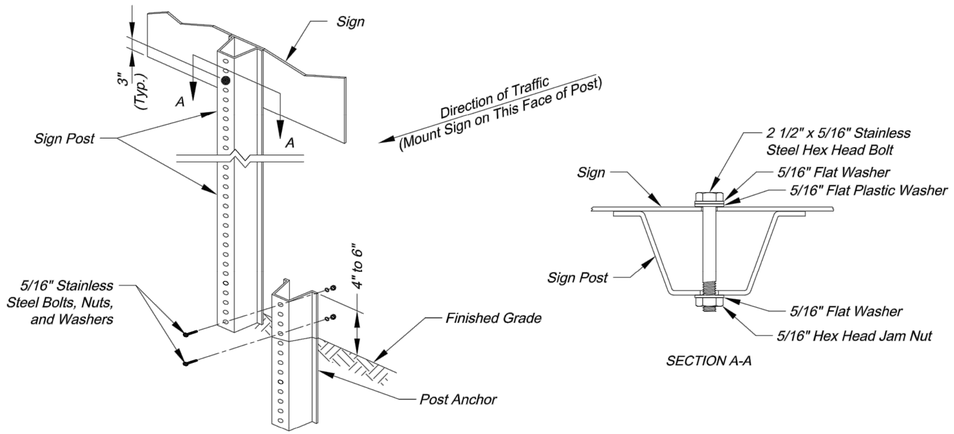
Project:

SIGN MOUNTING DETAILS

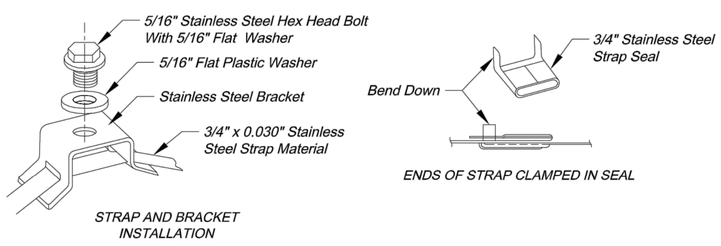
Sheet Name: STANDARD DRAWING SN-1

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#



U-STEEL POST DETAILS

U-STEEL POST NOTES:
1. Splice shall be positioned entirely between finished grade line and 18" above finished grade line. Only one splice will be allowed per post.
2. U-Steel post shall be 3 lb./ft., galvanized according to ASTM A123.
3. U-Steel post can be used for installation of signs with an area of less than 2.5 square feet.
4. All posts shall be embedded a minimum of 3 feet.

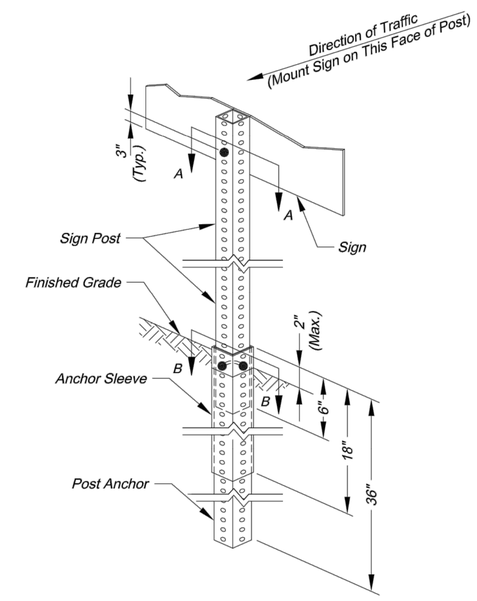


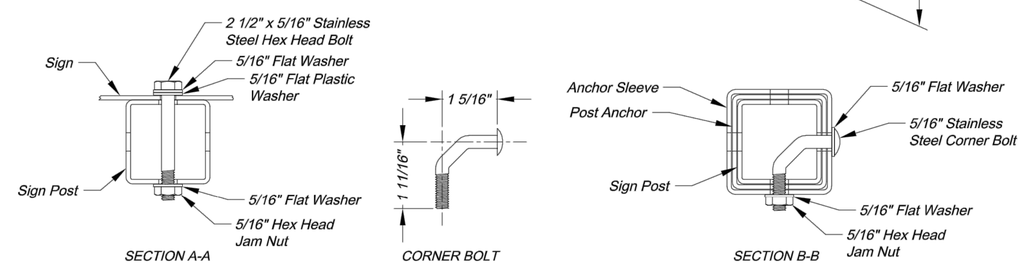
STRAP TYPE SIGN SUPPORT DETAILS

METAL POLE SIGN MOUNTING NOTES:
1. Signs on metal poles shall be attached with two brackets and stainless steel bands.
2. Holes in sign for attachment to the mounting brackets shall be offset a minimum of 2 inches from the edge of the sign.
3. Holes in sign shall be located such that the sign is level.
4. All strap, bracket, and seal materials should be Type 201 stainless steel.

PERMANENT SIGNING GENERAL NOTES:
1. All signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).
2. The Contractor is responsible for avoiding any and all utilities when installing sign posts, whether the utility is indicated on the plans or not.
3. All workmanship and materials shall be subject to the inspection and approval of the Public Works Department of the City of Lee's Summit.
4. The Contractor shall stake the location of all sign posts to be installed. The City Inspector shall inspect the staking prior to installation. Minor relocation to avoid conflicts may be allowed with the approval of the City Traffic Engineer or designee.
5. Signs shown to be installed on the side of metal poles shall be mounted with stainless steel straps or wing brackets as detailed. No signs are to be installed on wood poles. See Traffic Signal Standard Drawings for the installation of signs on mast arms.
6. All post mounted signs shall be installed with breakaway anchors according to the Standard Drawings.
7. All existing signs will be used in place during construction and protected from damage unless otherwise indicated in the plans. If the Contractor damages any existing sign or posts during construction, the Contractor will be required to replace the damaged materials with new signs or posts of the same type and size at the Contractor's expense. The Contractor shall be responsible for removing and storing any signs that are to be reinstalled on the project. All equipment shall be reinstalled in good condition.
8. Existing permanent signs and posts removed by the Contractor for construction purposes which are not to be reinstalled shall be delivered to the City's Public Works Maintenance Facility (1971 SE Hamblen Road). The Contractor shall be responsible for removing and storing equipment in good condition and is fully responsible for the equipment until it is delivered.
9. All Stop, Yield, or street name signs shall be maintained in a conspicuous location for the driving public. All Stop and Yield signs removed for construction purposes can be temporarily erected in reflectorized drums (no less than 7 feet above the pavement surface) until they can be reinstalled. Any temporary Stop or Yield sign installation to be left in place overnight will require prior approval from the City Inspector.

SQUARE STEEL POST INSTALLATION SEQUENCE:
1. Sign post anchor driven partially into the ground using a drive cap with a sledge or power equipment.
2. Anchor sleeve slipped over anchor and drive into the ground together with the sign post anchor.
3. Insert sign post into the post anchor and bolt in place.





SQUARE STEEL POST DETAILS

SQUARE STEEL POST NOTES:
1. Square steel sign posts and break-away anchor shall consist of the following materials:
   - Sign Post - 14 Ga. 2" x 2" Square Steel Post
   - Post Anchor - 12 Ga. 2 ¼" x 2 ¼" x 36" Square Steel Post
   - Anchor Sleeve - 12 Ga. 2 ½" x 2 ½" x 18" Square Steel Post
2. 14 Gauge posts must meet a certified minimum yield strength of 60,000 psi.
3. In all installations the first hole above the finished grade line on the sign post, anchor, and anchor sleeve must be in line for the insertion of the corner bolt.
4. The maximum area for one sign post is 9.0 square feet. A sign or combination of signs with an area greater than 9.0 square feet will require two posts. Also, signs with a width greater than 36" (not including 36" x 36" diamond shaped signs) will require two posts.

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:

SIGN POST DETAILS

Sheet Name: STANDARD DRAWING SN-2

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#

STANDARD ABBREVIATION LISTS

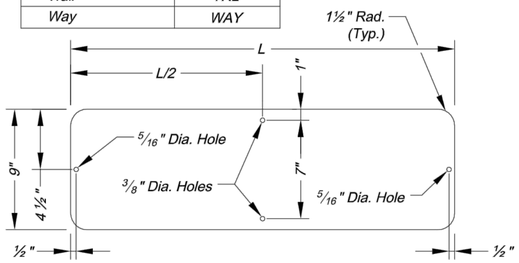
Named Streets	
Avenue	AVE
Boulevard	BLVD
Circle	CIR
Creek	CR
Court	CT
Crossing	XING
Drive	DR
Highway	HWY
Lane	LN
Parkway	PKWY
Place	PL
Road	RD
Street	ST
Terrace	TER
Trail	TRL
Way	WAY

Numbered Streets	
First	ST
Second	ND
Third	RD
Fourth to Tenth	TH

STREET NAME SIGN QUANTITIES

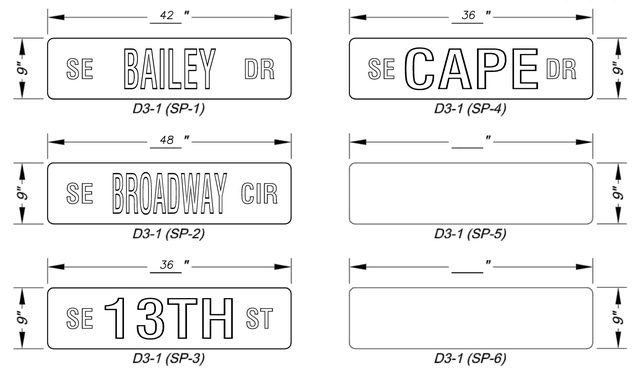
Sign Designation	Sign Size	Sign Area (Sq. Ft.)	Number	Quantity (Sq. Ft.)
D3-1 (BAILEY RD)	9" x 42"	2.63	4	10.50
D3-1 (BROADWAY CIR)	9" x 48"	3.00	0	0.00
D3-1 (13TH ST)	9" x 36"	2.25	2	4.50
D3-1 (CAPE DR)	9" x 36"	2.25	2	4.50

1 UPDATED QUANTITY TABLE 08/25/2021

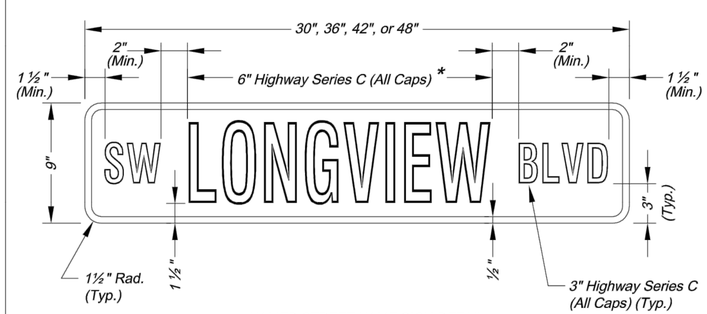


STREET NAME SIGN BLANK DETAILS

For Mounting on Square Steel Posts

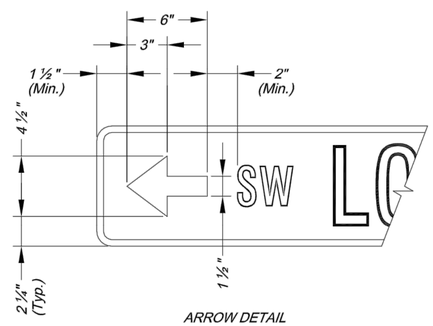


PROJECT SIGN DETAILS

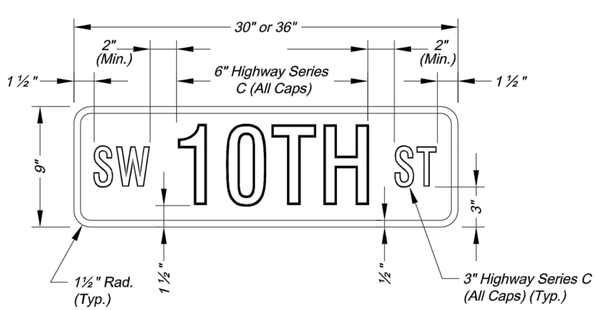


NAMED STREET NAME SIGN DETAIL

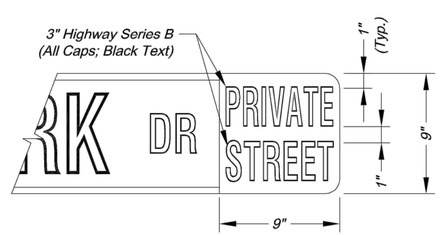
* Use Highway Series B (All Caps) in lieu of series C if necesary to fit text on a 36" sign blank.



ARROW DETAIL



NUMBERED STREET NAME SIGN DETAIL

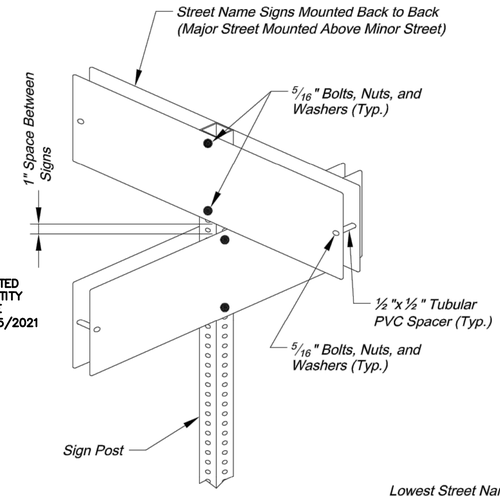


PRIVATE STREET TAG DETAIL

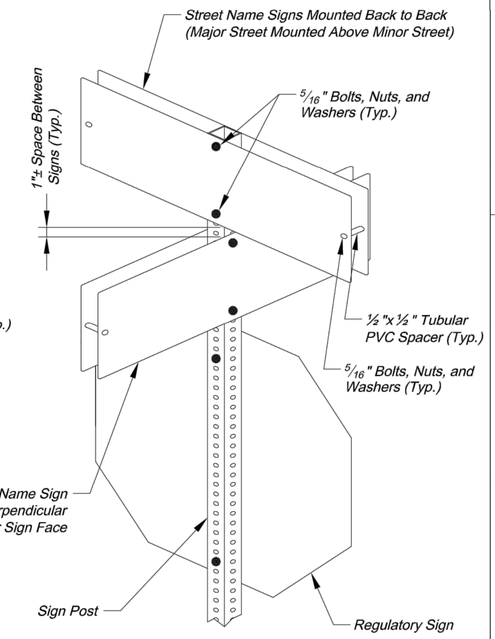
NOTES:

1. For all street name signs, the legend shall be white and the background shall be green.
2. Arrows shall be added to street name signs where the name of a street changes at an intersection. Street name signs with arrows are to be installed on each side of the intersection to indicate the change in names. Arrows shall be white.
3. The "PRIVATE STREET" tag should be added to the end of street name signs to indicate where a street that is outside the right-of-way intersects a public street. The background for the "PRIVATE STREET" tag shall be yellow.

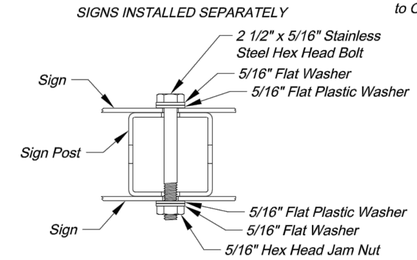
STREET NAME SIGN FACE DETAILS



SIGNS INSTALLED SEPARATELY

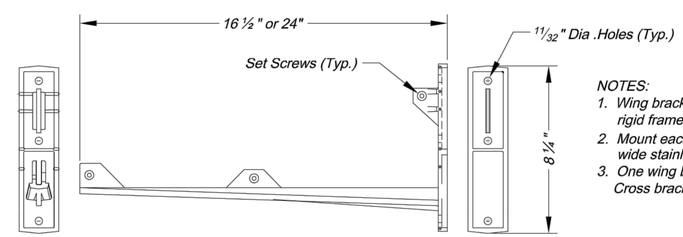


SIGNS INSTALLED WITH OTHER SIGNS



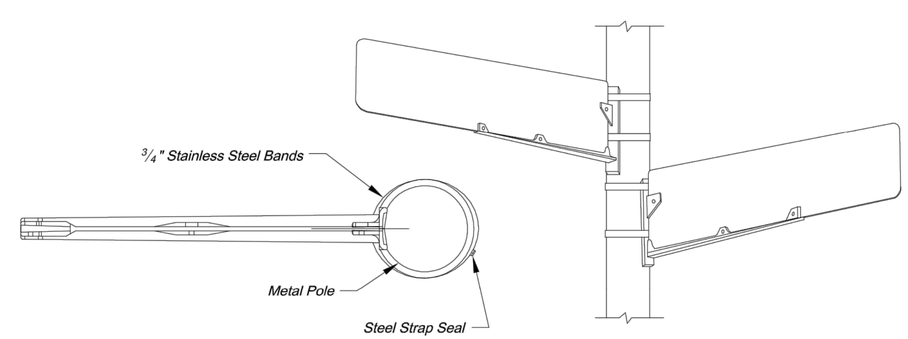
PLAN VIEW

SQUARE STEEL POST MOUNTING DETAILS



NOTES:

1. Wing bracket shall be an L-shaped cantilever of T-beam rigid frame 380-3 aluminum alloy construction.
2. Mount each wing bracket to metal pole using two ¾" wide stainless steel straps.
3. One wing bracket shall be installed per each sign. Cross brackets are not allowed.



WING BRACKET MOUNTING DETAILS

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:

STREET NAME SIGN DETAILS

Sheet Name: STANDARD DRAWING SN-3

Drawn By: AS
Checked By: JW
Date: 08/26/2009
Project#

CONSTRUCTION PHASING:

PHASING LEGEND

- PHASE 1 WORK AREA
- PHASE 2 WORK AREA
- PHASE 3 WORK AREA

GENERAL NOTES:

1) SEE SHEET 89 FOR MINIMUM TAPER LENGTHS, TEMPORARY SIGNAGE, AND OTHER TRAFFIC CONTROL REQUIREMENTS.

2) DURING ALL PHASES OF CONSTRUCTION, CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC (ONE LANE EACH DIRECTION) ON ALL ADJACENT ROADWAYS WITH 10' MINIMUM LANE WIDTHS.

PHASE 1:
CONSTRUCT BAILEY ROAD IMPROVEMENTS. SHIFT TRAFFIC TO NORTH HALF OF BAILEY ROAD AND MAINTAIN TWO-WAY TRAFFIC (ONE LANE EACH DIRECTION) ON BAILEY ROAD AND ON ALL SIDES STREETS. MAINTAIN 10' MIN. LANE WIDTH. SEE SHEET 89 FOR TAPER, TEMPORARY SIGNAGE, AND OTHER TRAFFIC CONTROL REQUIREMENTS.

PHASES 2A AND 2B:
CONSTRUCT CENTURY DRIVE IMPROVEMENTS ONE HALF AT A TIME (E.G. WEST HALF, THEN EAST HALF). MAINTAIN TWO-WAY TRAFFIC (ONE LANE EACH DIRECTION) ON CENTURY DRIVE WITH 10' MIN. LANE WIDTH.

PHASE 3:
CONSTRUCT MIDDLE SCHOOL ROADWAY CONNECTIONS WITH 13TH STREET, 15TH STREET, AND CAPE DRIVE. SEE "TYPICAL STREET CLOSURE (NO ACCESS ALLOWED)" DETAIL ON SHEET 89 FOR SIDE STREET AND MAINLINE TRAFFIC CONTROL REQUIREMENTS. NOTE, PHASE 3 WORK MAY BE CONSTRUCTED SIMULTANEOUSLY WITH PRECEDING PHASE IF DESIRED.

N

NOT TO SCALE

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Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170
Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI
SHANNON L. JEFFRIES
NUMBER PE-2008000369
PROFESSIONAL ENGINEER
05.13.2021

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

TRAFFIC CONTROL PLAN

LEE'S SUMMIT MIDDLE SCHOOL #4
PUBLIC ROAD IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

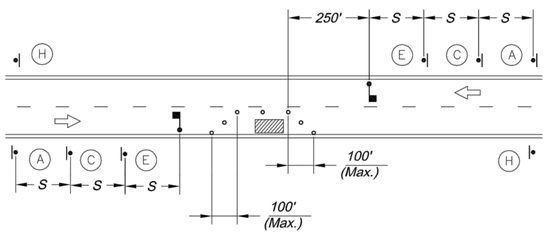
2021

C.O.A. NO.: 001592
DRAWN BY: JRC
CHECKED BY: JAB
APPROVED BY: SLJ
QA/QC BY: THF
PROJECT NO.: 020-0103
DWG NO.: F_TRF_0200103
DATE: 8/25/2021

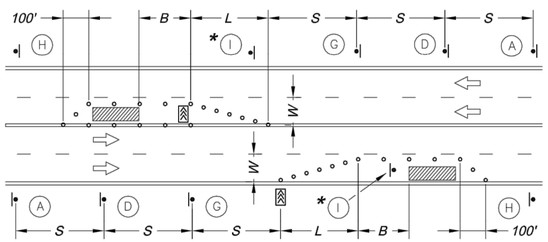
DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\TFTC\TRAFFIC CONTROL PLAN\LEE'S SUMMIT SET\F_TRF_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:17am XREFS: F_PTBLK_0200103

SYMBOL LEGEND

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

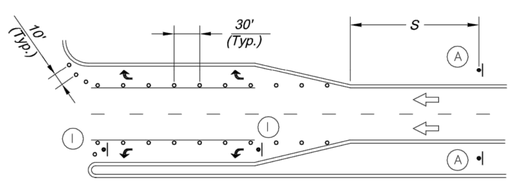


LANE CLOSURE - TWO LANE STREET



LANE CLOSURE - FOUR LANE STREET

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



TURN LANE CLOSURE

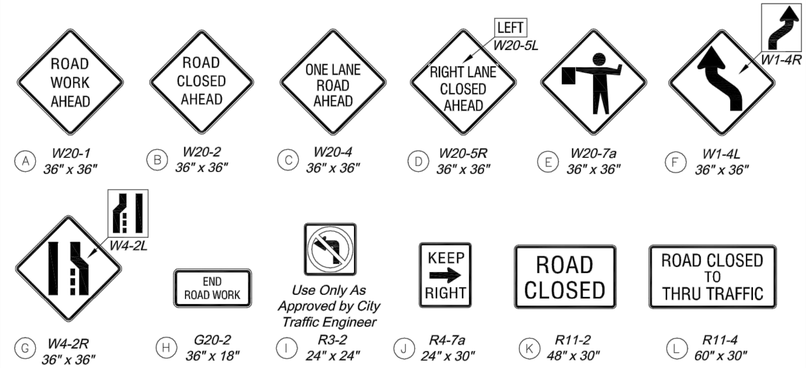
Sign Spacing "S"	
Speed Limit (mph)	Spacing (Feet)
25	100
30 - 35	250
≥ 40	350

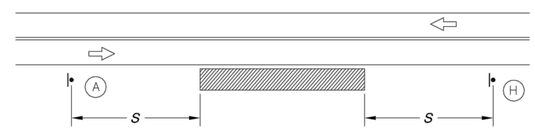
Taper Dimensions (Feet)				
Speed Limit (mph)	Minimum Taper Length "L", per Lane Width "W"			Minimum Number of Channelizers
	10	11	12	
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13

Guidelines for Length of Longitudinal Buffer Space "B"	
Speed Limit (mph)	Length (Feet)
25	35
30	55
35	85
40	120
45	170

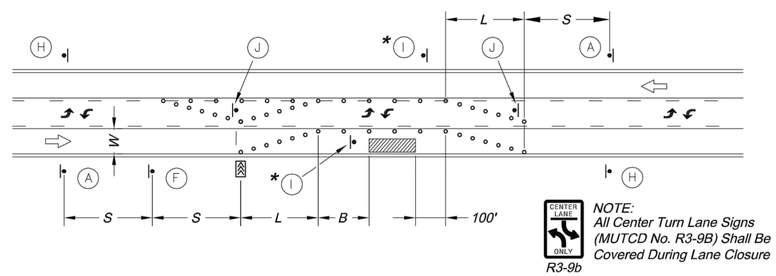
Maximum Channelizer Spacing		
Speed Limit (mph)	Within Taper (Feet)	Outside Taper (Feet)
25	25	50
30	30	60
35	35	70
40	40	80
45	45	90

SIGN LEGEND





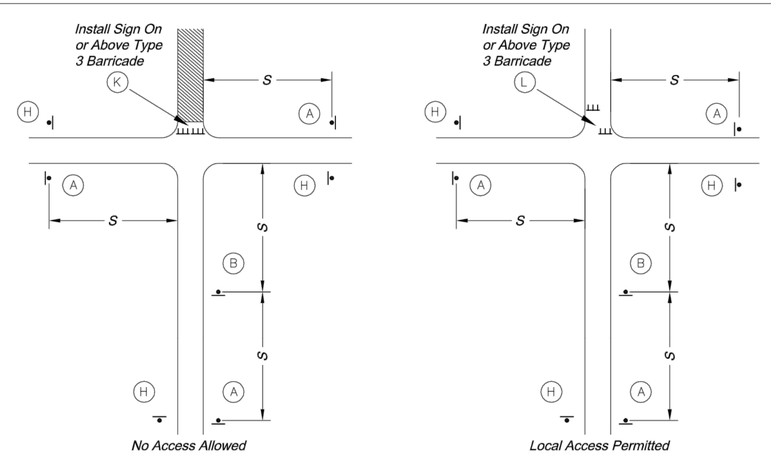
TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET



NOTE:
All Center Turn Lane Signs (MUTCD No. R3-9B) Shall Be Covered During Lane Closure

LANE CLOSURE - THREE LANE STREET

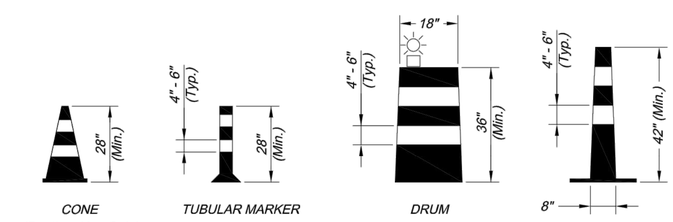
* Install Signs Every 200 Feet Throughout the Closed Lane or As Needed



TYPICAL STREET CLOSURE

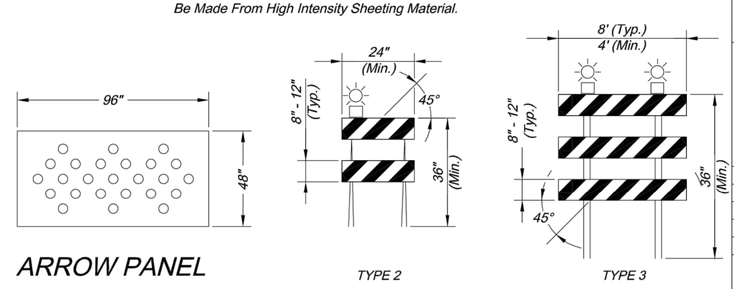
GENERAL NOTES:

1. 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).
2. 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.
3. 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.
4. 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.
5. Trim-lines are the City's preferred channelizing device. Cones may not be used at nighttime.
6. Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
7. 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.
8. Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. 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).
15. 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.
16. No traffic signal shall be altered or modified in any way without a plan approved by the City Traffic Engineer.
17. 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.
18. 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.
19. 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:
    - A) Employ another agency to correct deficiencies in traffic control devices and deduct the cost from the Contractor's pay estimate,
    - B) Stop the work until deficiencies are corrected,
    - C) Suspend all pay estimates until deficiencies are corrected, or
    - D) Place the Contractor in default.



CHANNELIZERS

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



ARROW PANEL

BARRICADES

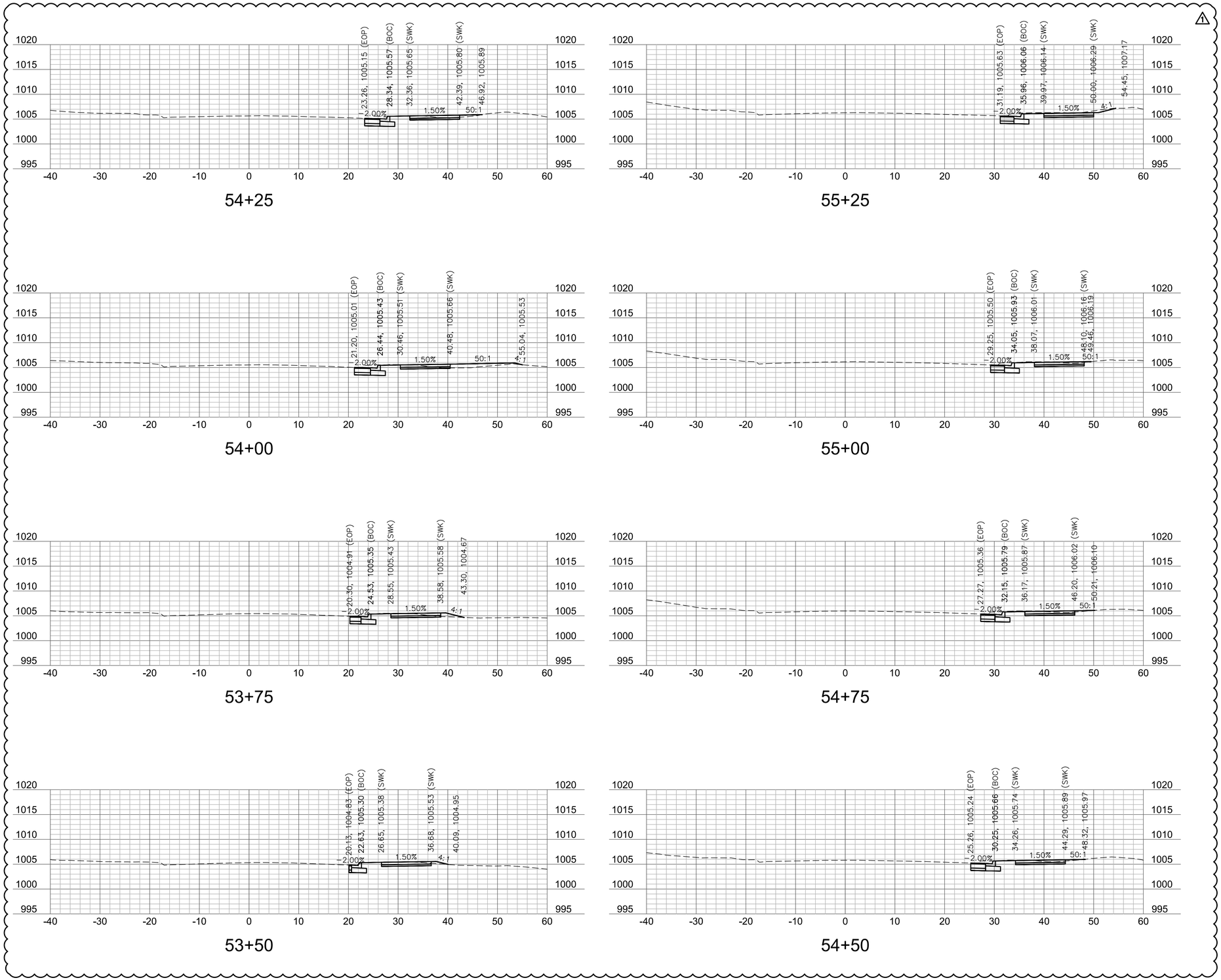
CITY OF LEE'S SUMMIT
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MISSOURI 64063
PHONE: (816) 969-1800 FAX: (816) 969-1809

Project: BAILEY ROAD

TRAFFIC CONTROL DETAILS

Sheet Name: STANDARD DRAWING TC-1

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



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DATE: Aug 25, 2021 10:18am XREFS: T_PBASE_0200103 T_PTBLK_0200103

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Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170
Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

REVISIONS

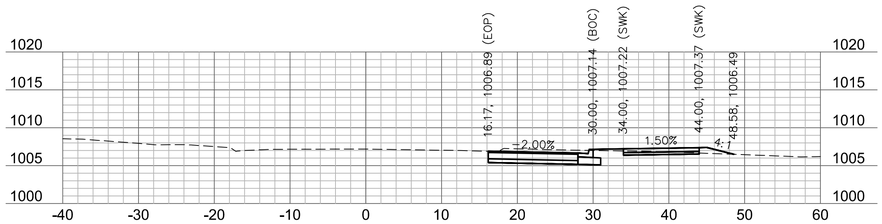
BAILEY ROAD
CROSS SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

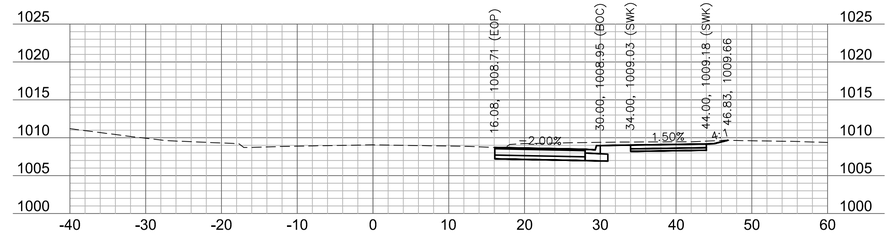
LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_XSC01_0200103
DATE: 2021-02-01



57+50



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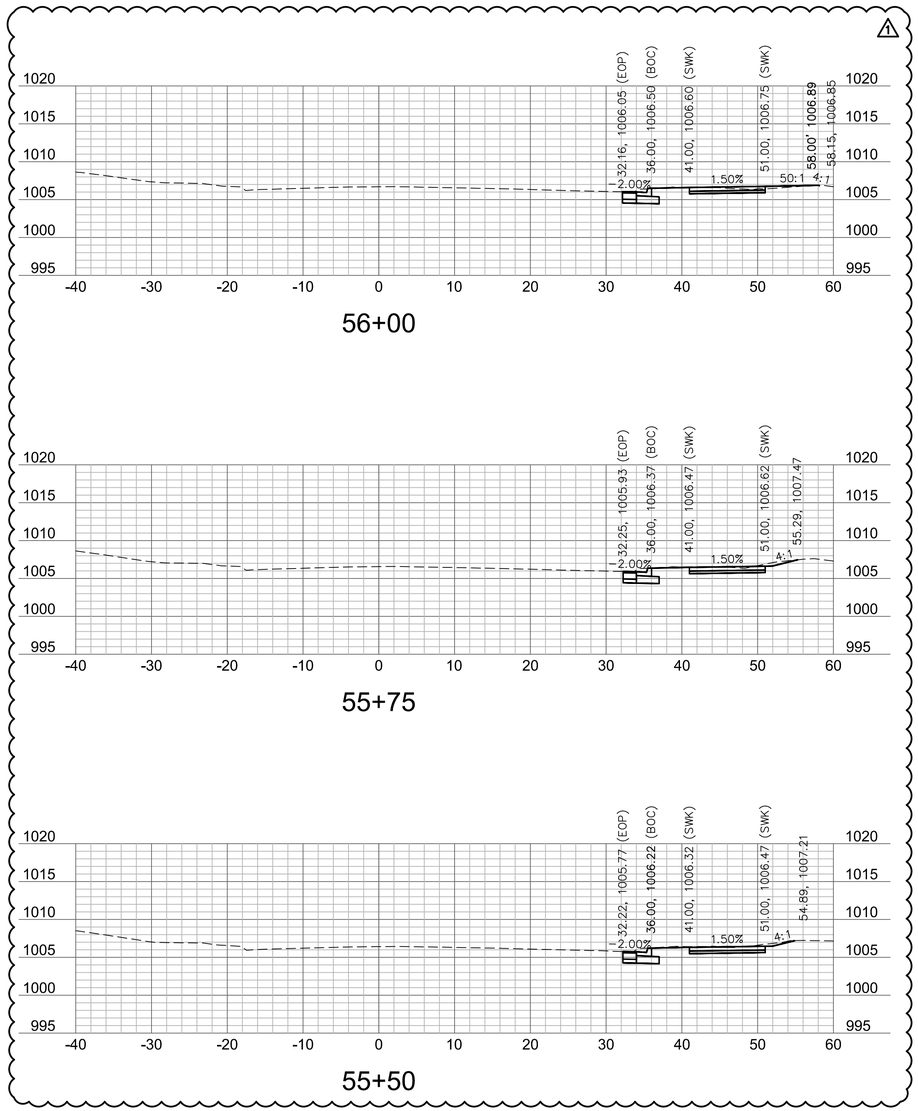

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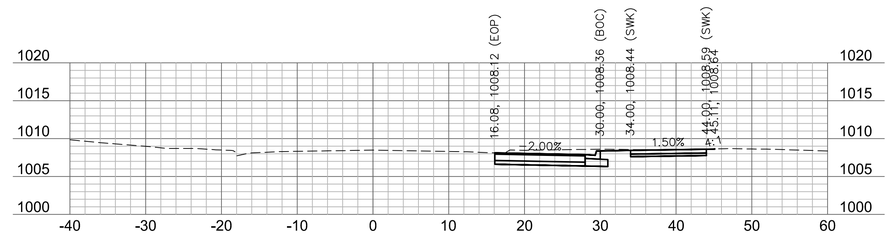

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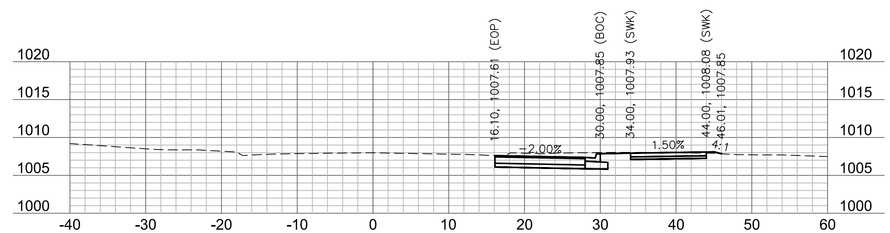

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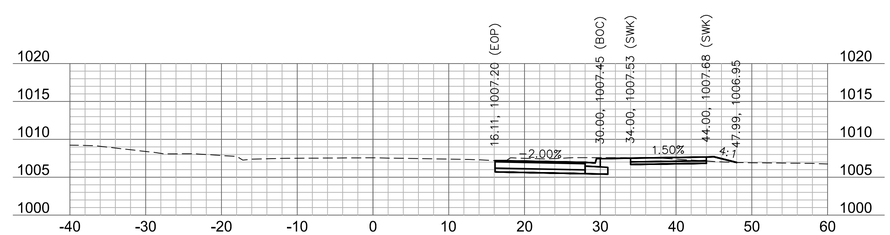

57+75

20'
10'
5'
0'

0' 5' 10' 20'
SCALE IN FEET

olsson

Olsson Engineering - MO State Certificate of Authority #001592
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STATE OF MISSOURI
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NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	08/25/2021	ASI #29	RPH

REVISIONS

BAILEY ROAD
CROSS SECTIONS

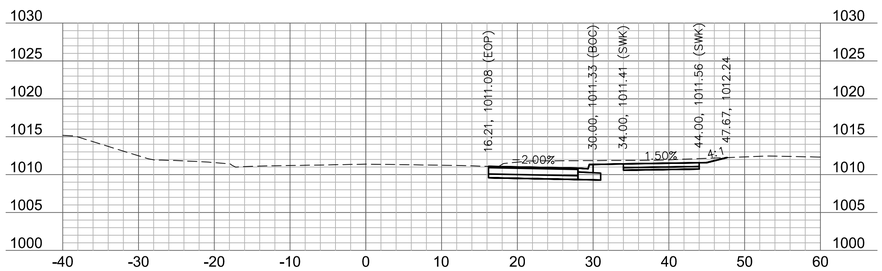
LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_XSC01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\CROSS SECTIONS\T_XSC01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:18am XREFS: T_PBASE_0200103 T_PTBLK_0200103



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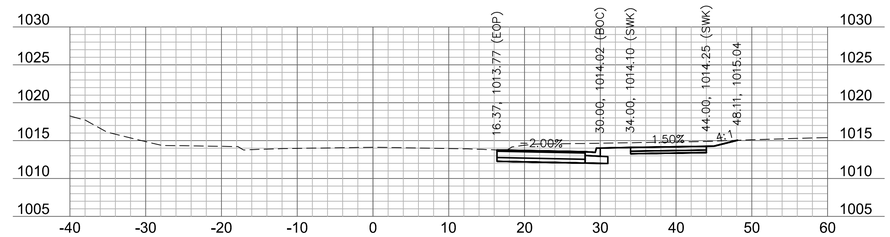

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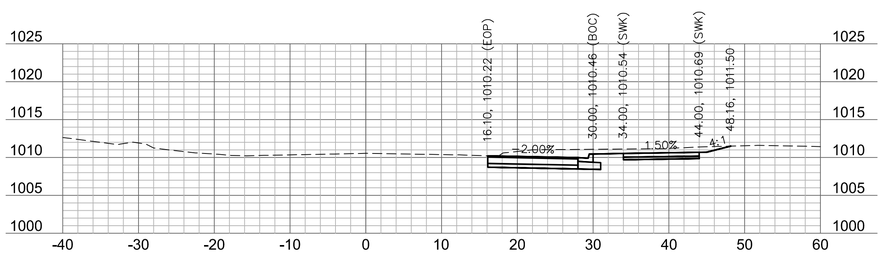

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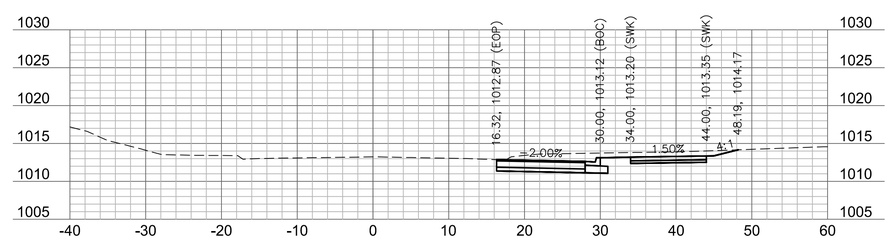

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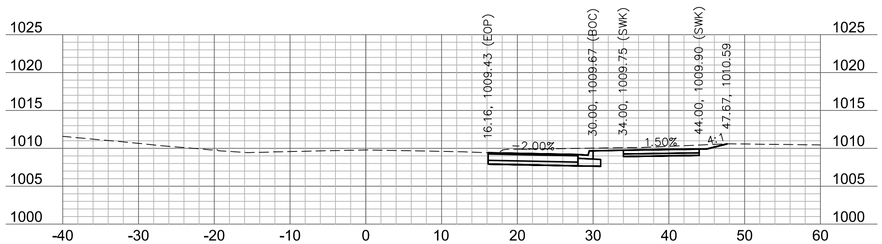

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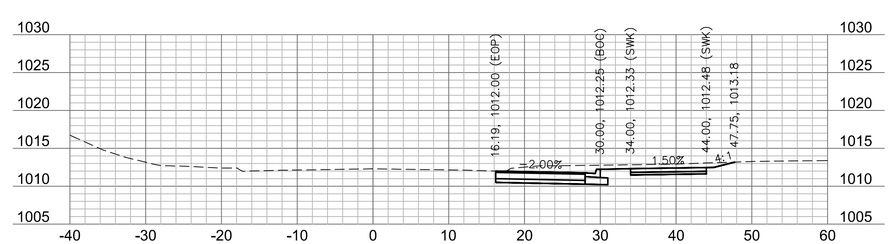

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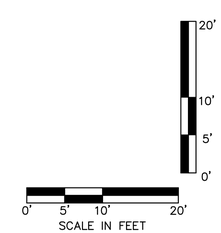

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BAILEY ROAD
CROSS SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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DRAWN BY: MLW
CHECKED BY: RPH
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QA/QC BY: RBF
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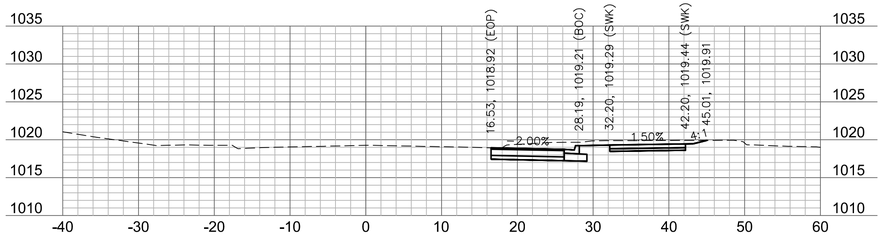

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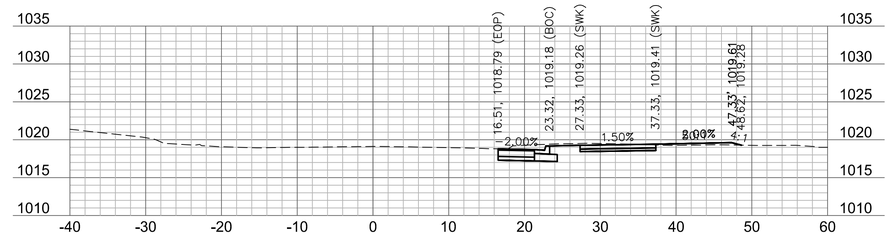

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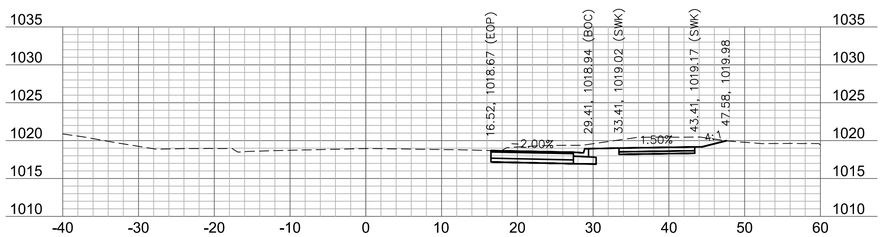

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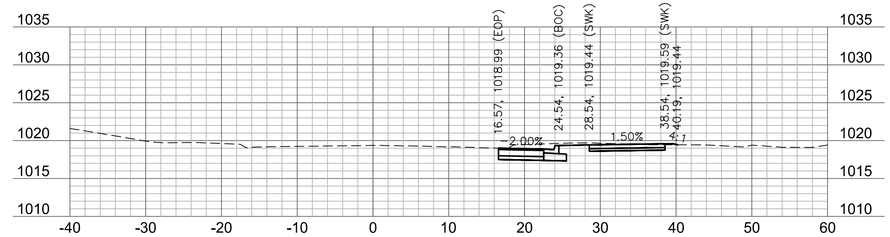

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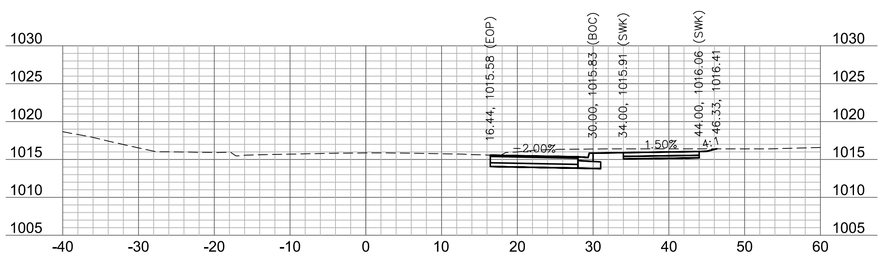

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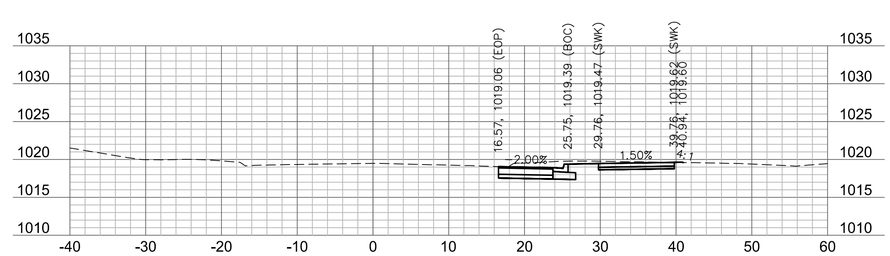

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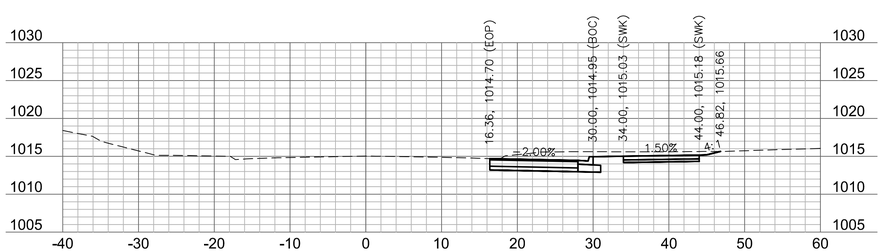

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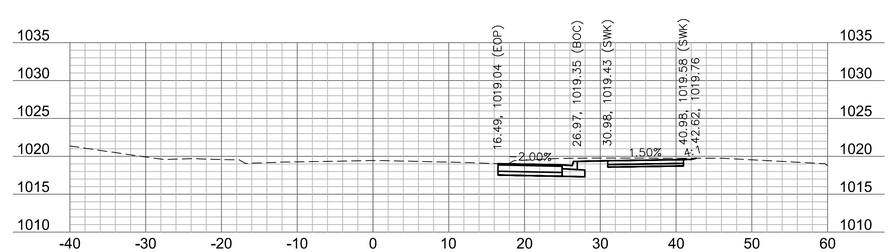

62+25

0' 5' 10' 20'
SCALE IN FEET

20'
10'
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8-11-21

RYAN B. FLEMING
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BAILEY ROAD
CROSS SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_XSC01_0200103
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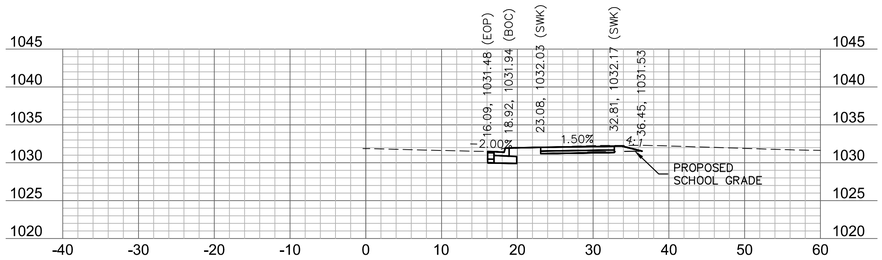

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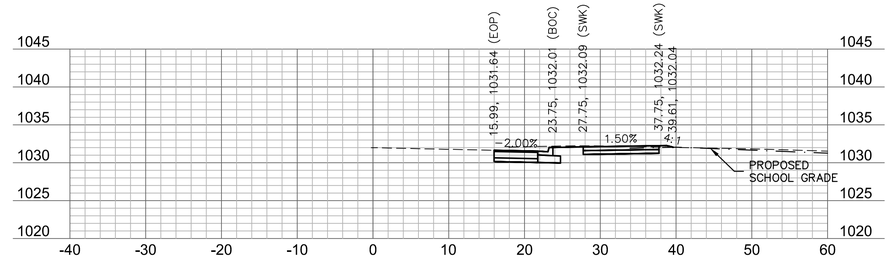

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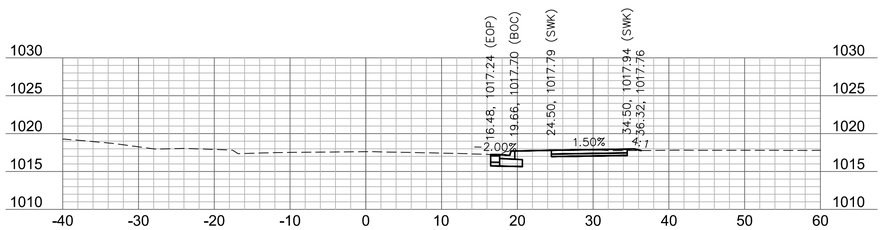

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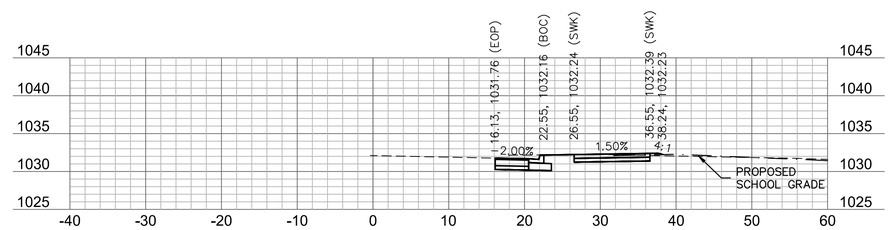

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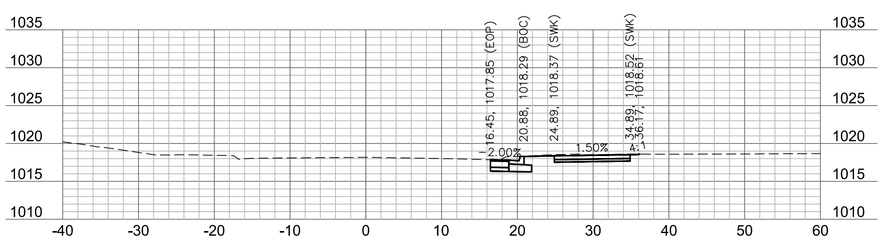

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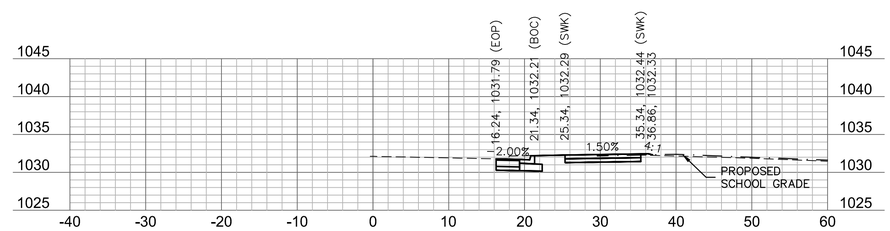

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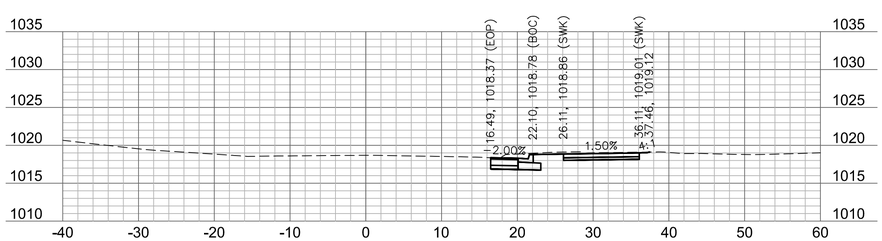

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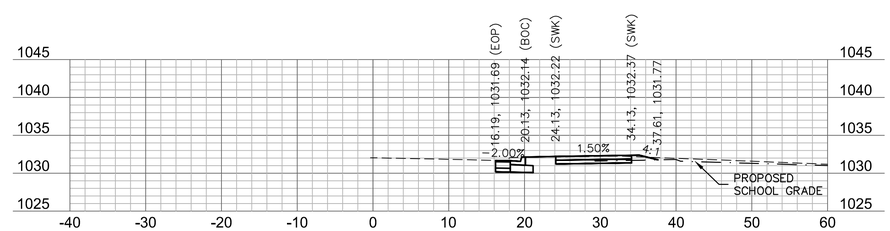

84+00

0' 5' 10' 20'
SCALE IN FEET

20'
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olsson

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RYAN B. FLEMING
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REVISIONS

BAILEY ROAD
CROSS SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
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PROJECT NO.: 020-0103
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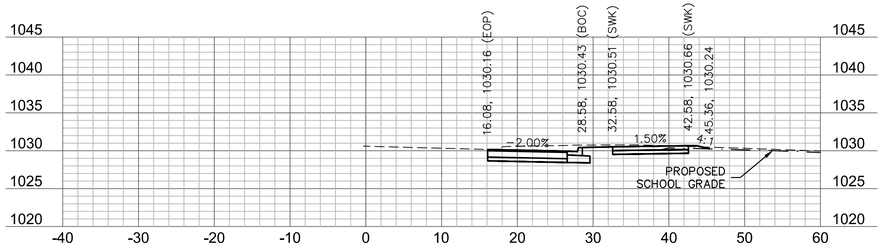

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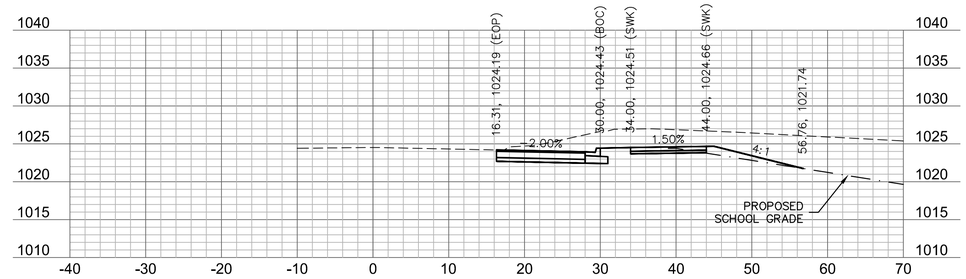

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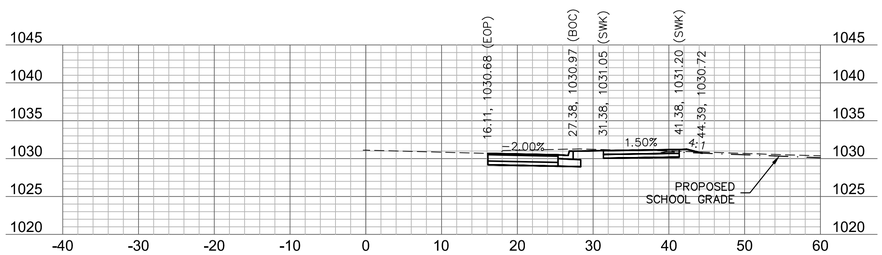

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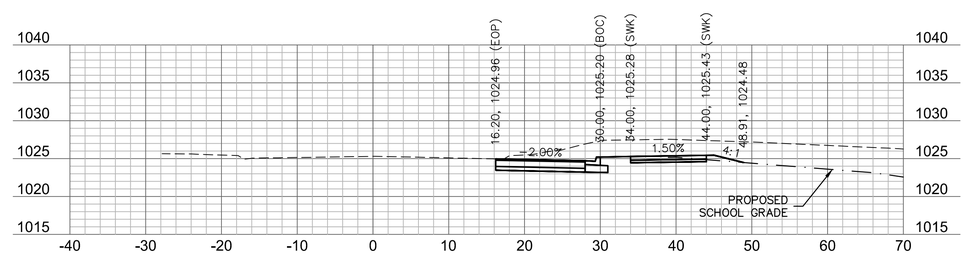

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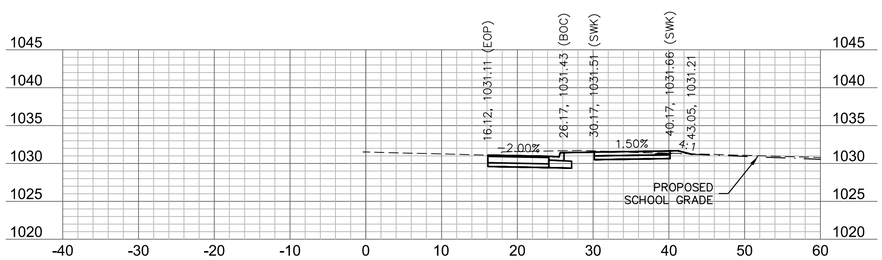

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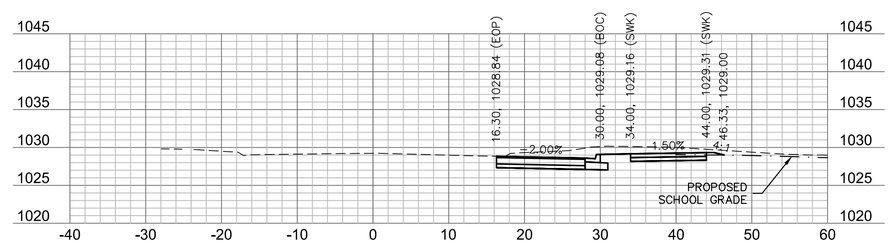

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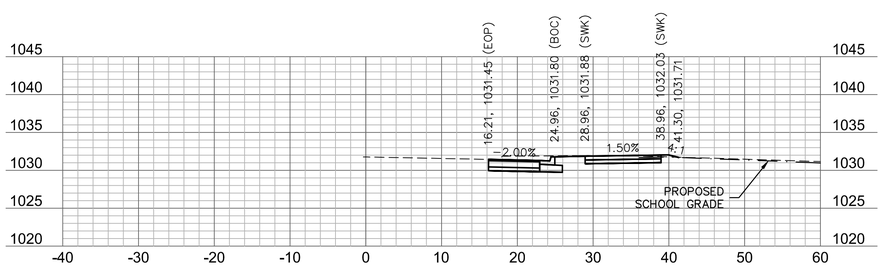

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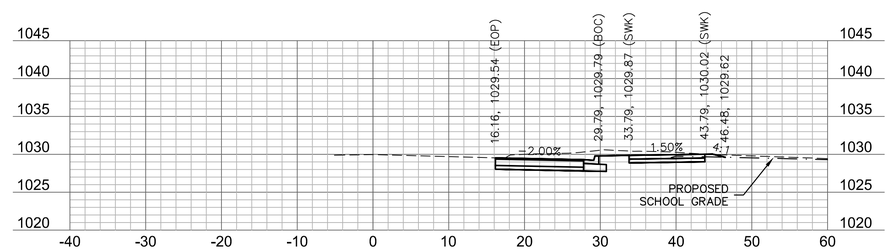

86+00

0' 5' 10' 20'
SCALE IN FEET

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LEE'S SUMMIT, MISSOURI

2021

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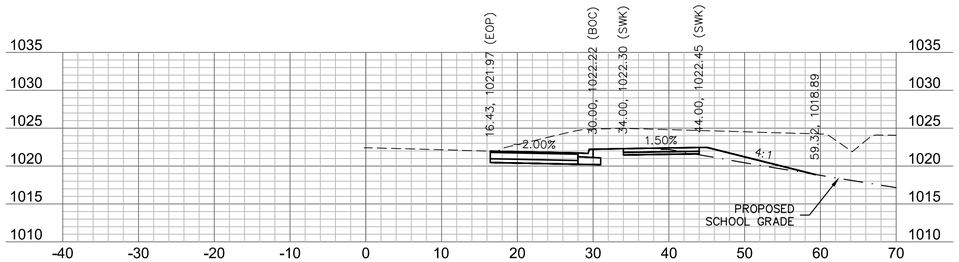

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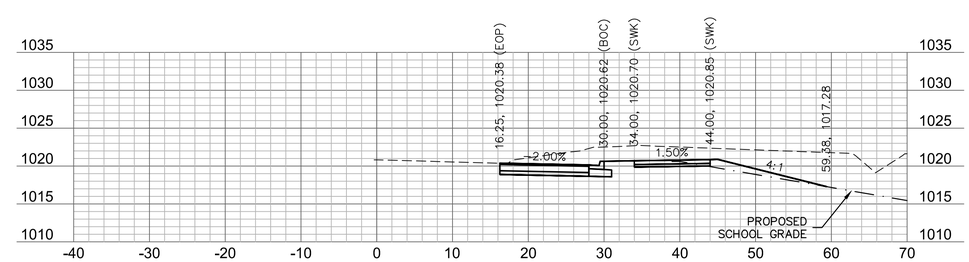

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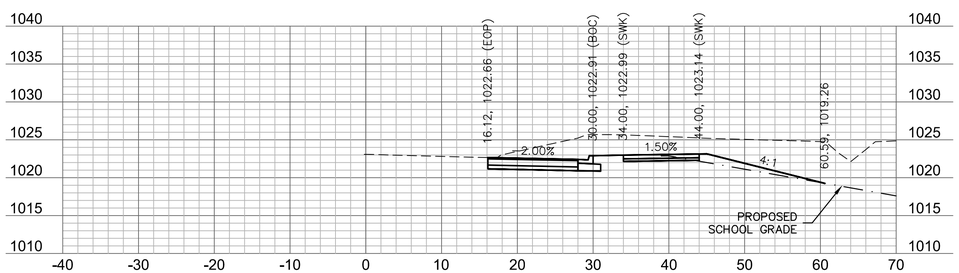

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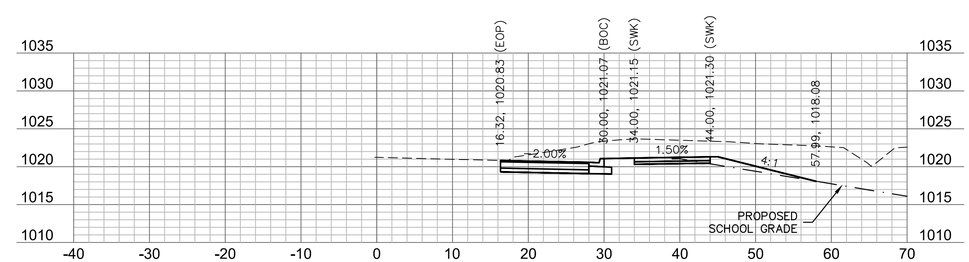

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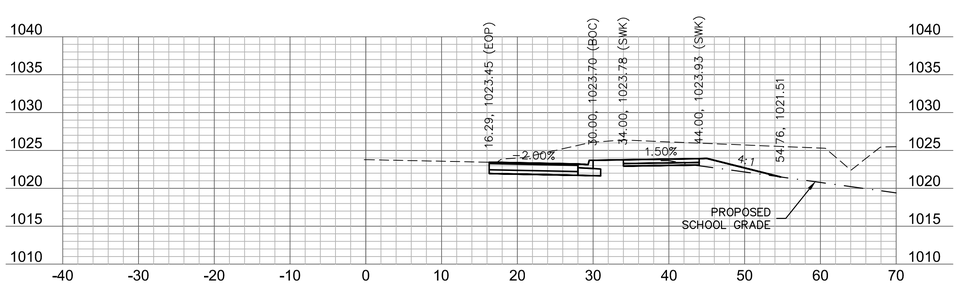

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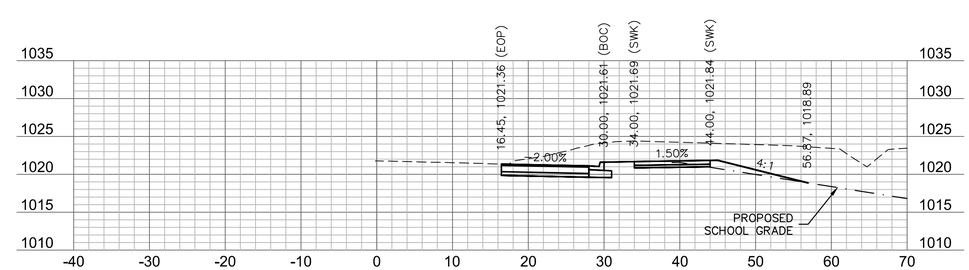

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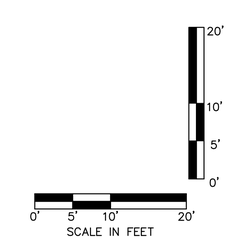

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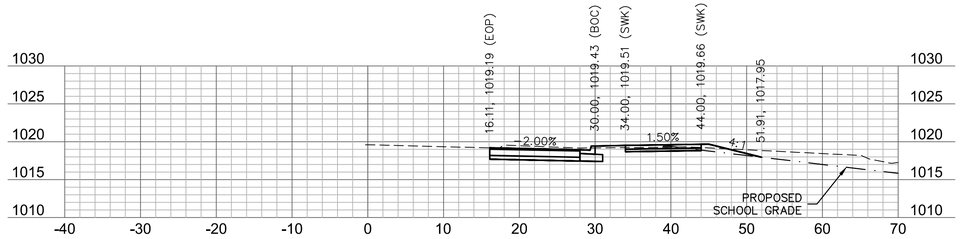
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.: 001592
DRAWN BY: MLW
CHECKED BY: RPH
APPROVED BY: RBF
QA/QC BY: RBF
PROJECT NO.: 020-0103
DWG NO.: T_XSC01_0200103
DATE: 2021-02-01

DWG: F:\2020\0001-0500\020-0103\40-Design\AutoCAD\Final Plans\Sheets\RDBR\Lee Summit Plan Set - (Century and Middle School Drives)\CROSS SECTIONS\T_XSC01_0200103.dwg USER: rhaller
DATE: Aug 25, 2021 10:19am XREFS: T_PBASE_0200103 T_PTBLK_0200103



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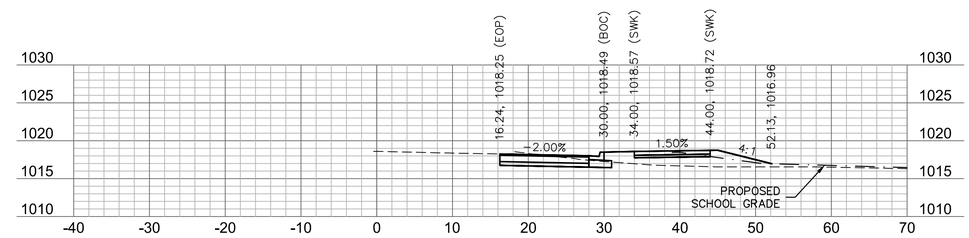

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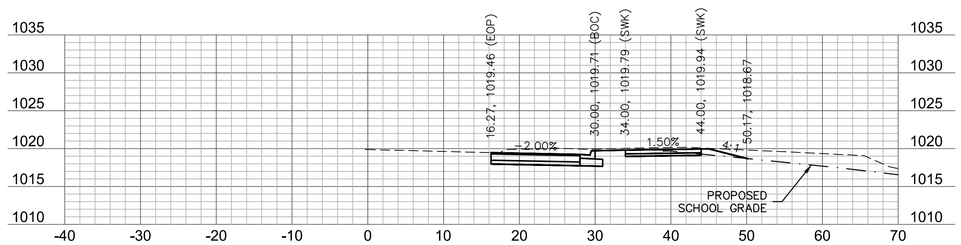

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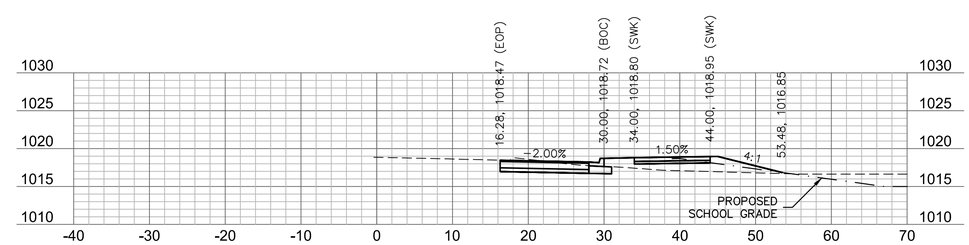

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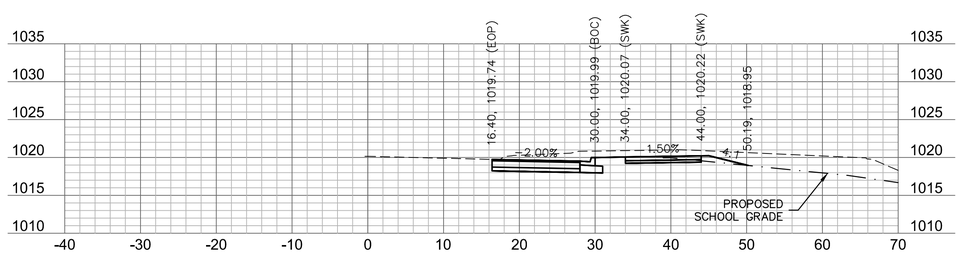

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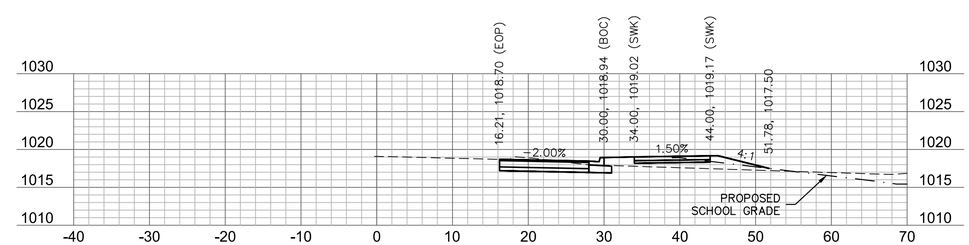

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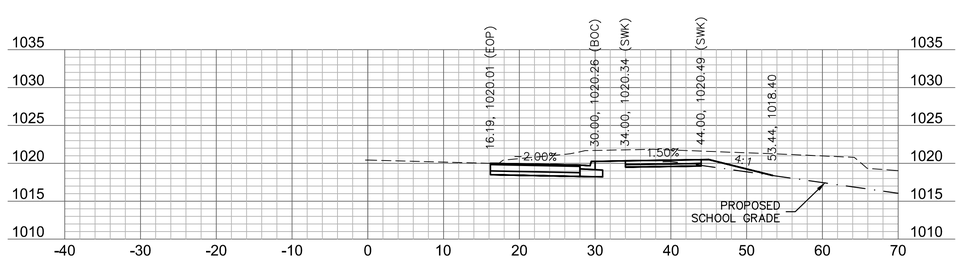

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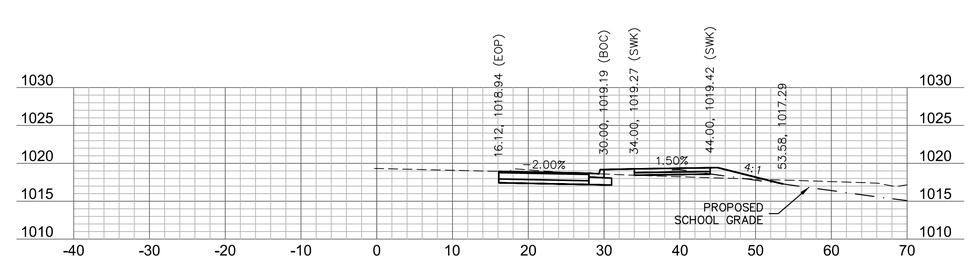

90+50

0' 5' 10' 20'
SCALE IN FEET

20'
10'
5'
0'

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Olsson Engineering - MO State Certificate of Authority #001592
7301 West 133rd Street, Suite 200 TEL 913.381.1170
Overland Park, KS 66213-4750 FAX 913.381.1174 www.olsson.com

STATE OF MISSOURI
RYAN B. FLEMING
NUMBER PE-2002003161
8-11-21
PROFESSIONAL ENGINEER

RYAN B. FLEMING
MO. NO. PE-2002003161

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

BAILEY ROAD
CROSS SECTIONS

LEE'S SUMMIT MIDDLE SCHOOL #4
BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

C.O.A. NO.:	001592
DRAWN BY:	MLW
CHECKED BY:	RPH
APPROVED BY:	RBF
QA/QC BY:	RBF
PROJECT NO.:	020-0103
DWG NO.:	T_XSC01_0200103
DATE:	2021-02-01

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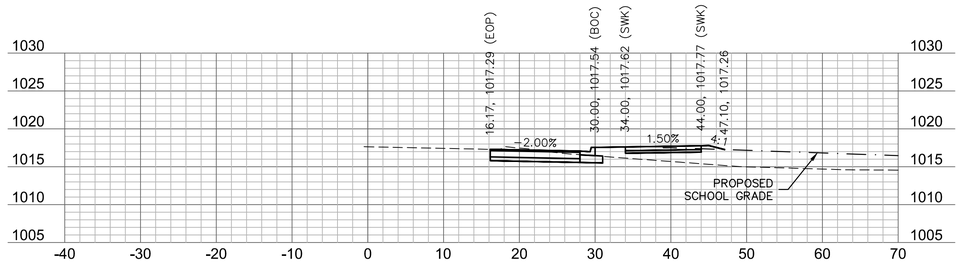

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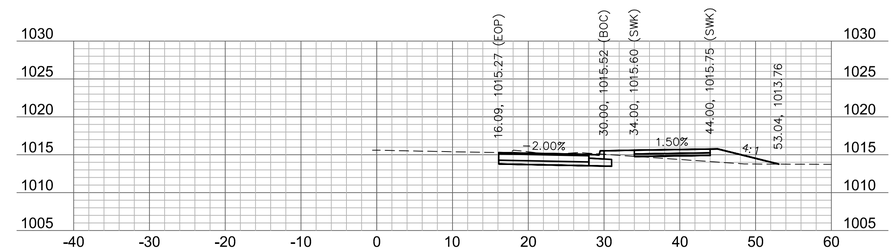

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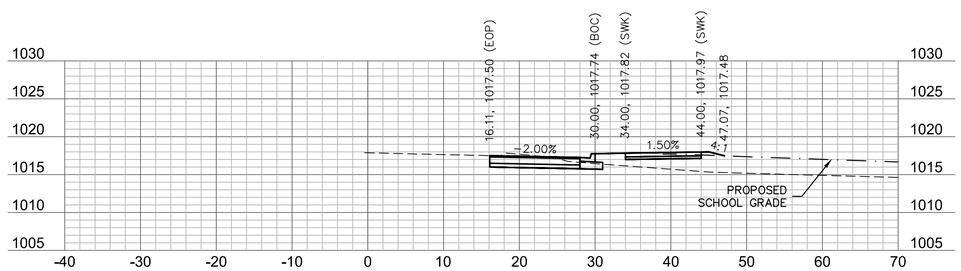

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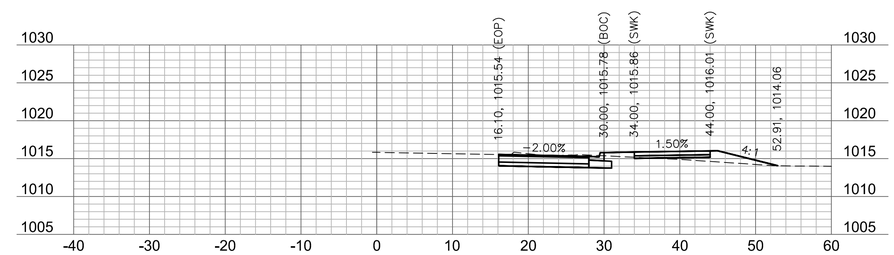

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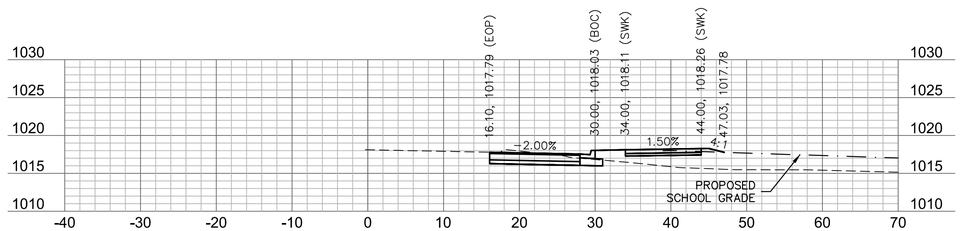

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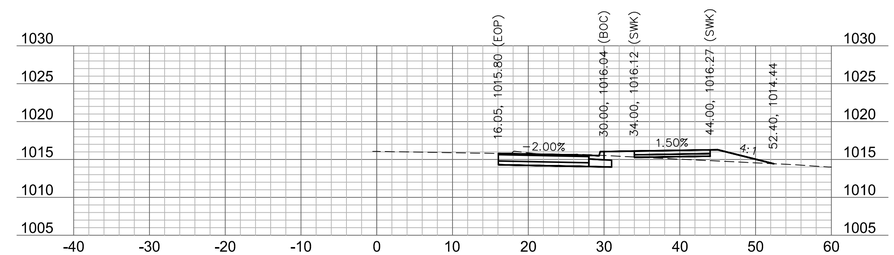

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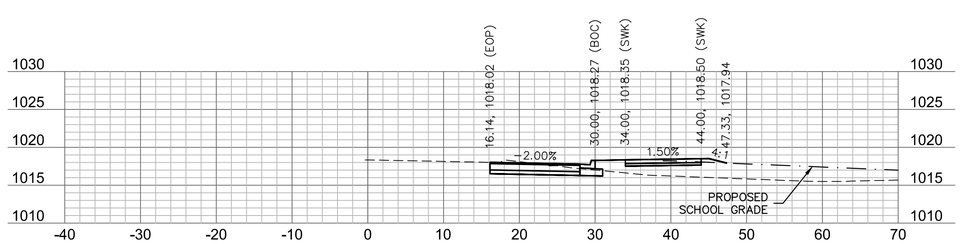

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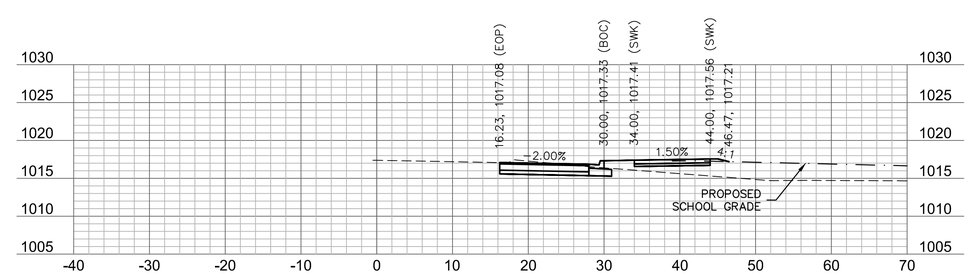

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BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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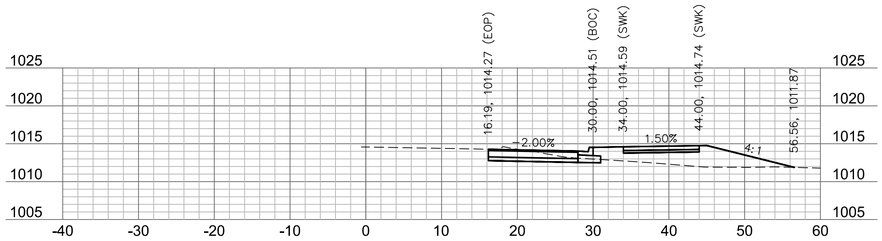

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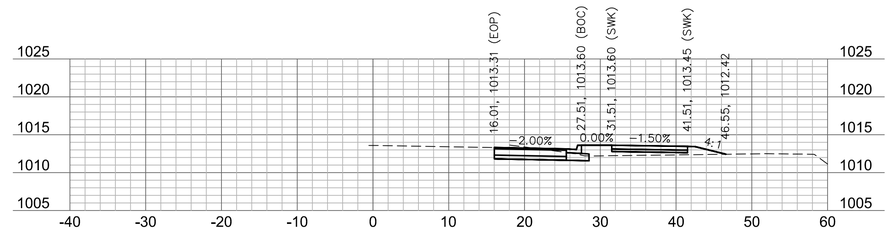

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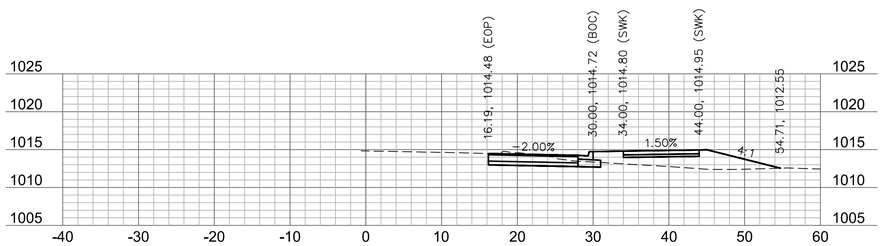

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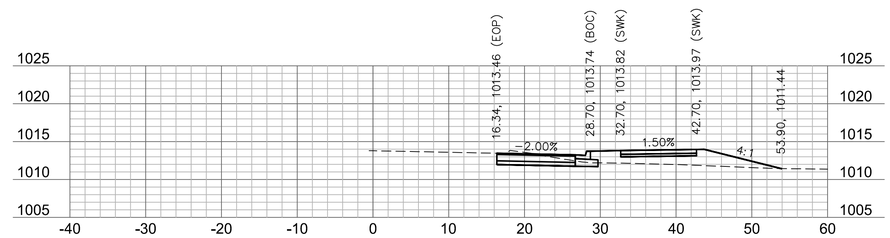

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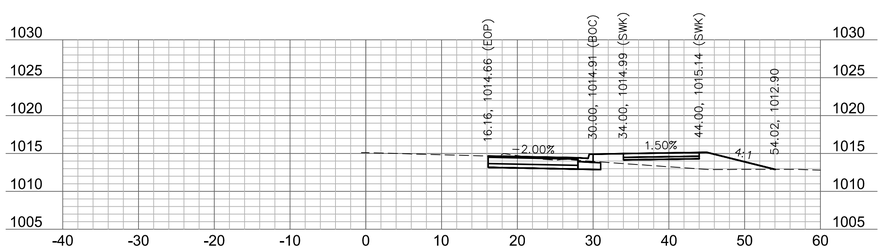

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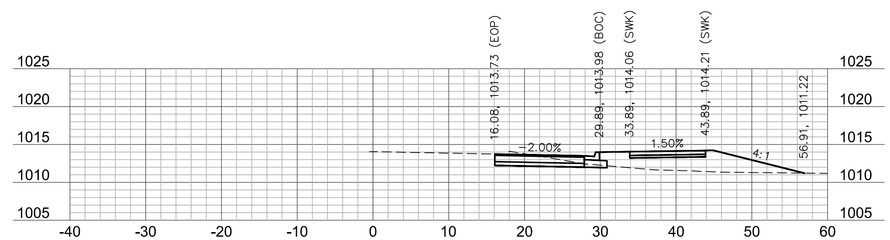

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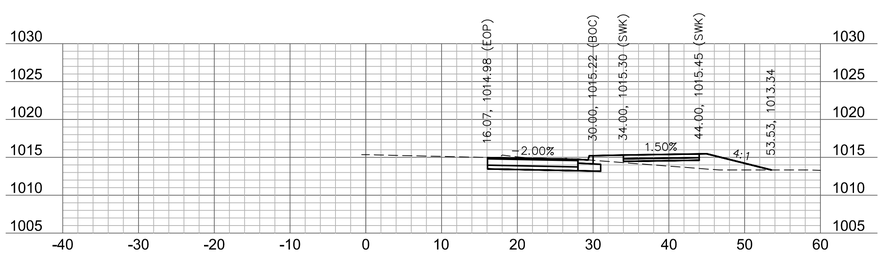

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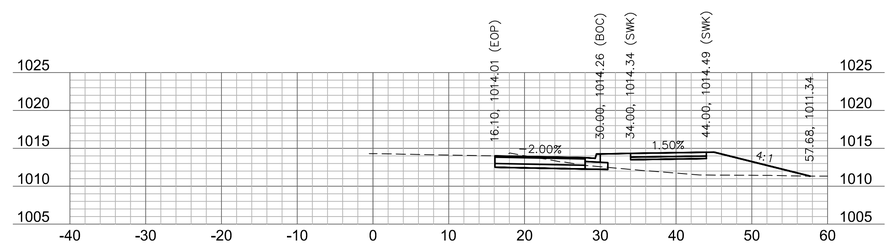

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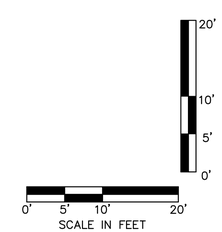

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CROSS SECTIONS

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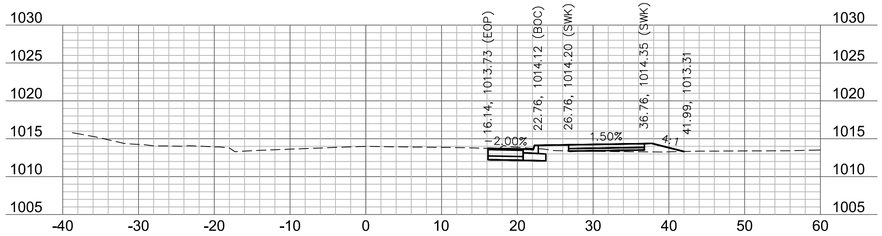

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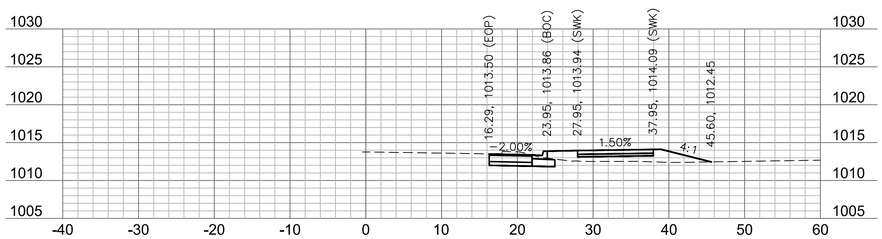

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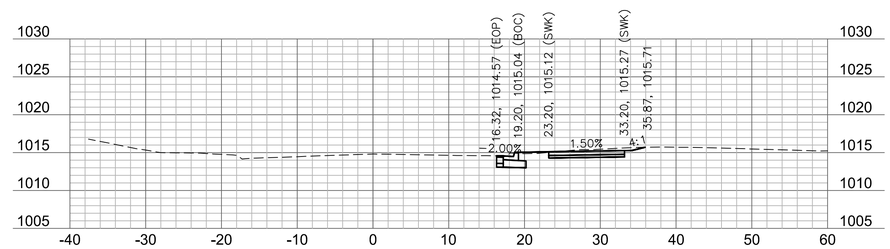

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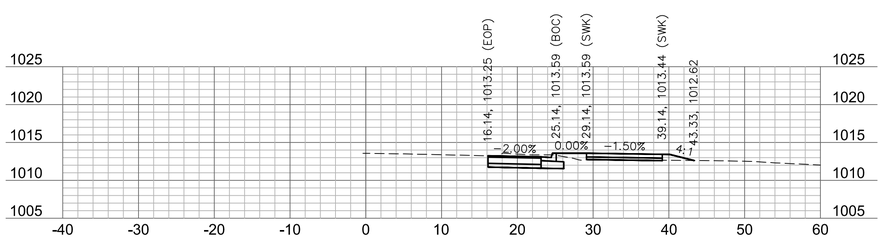

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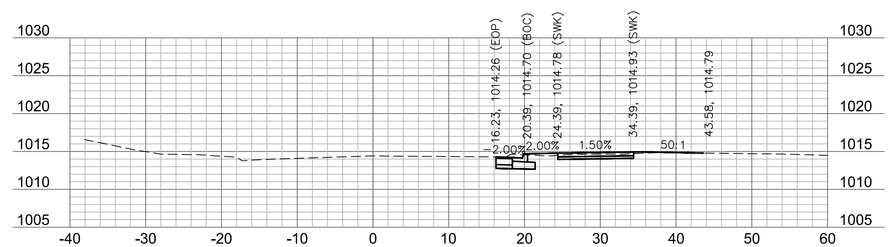

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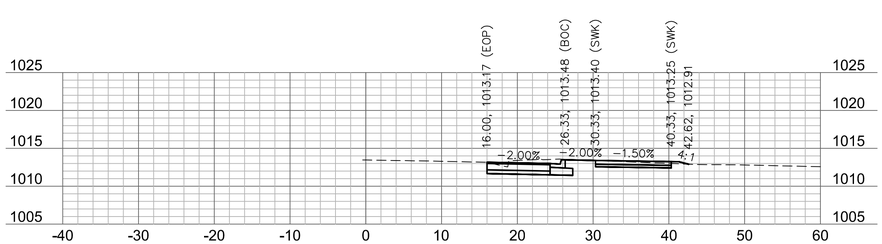

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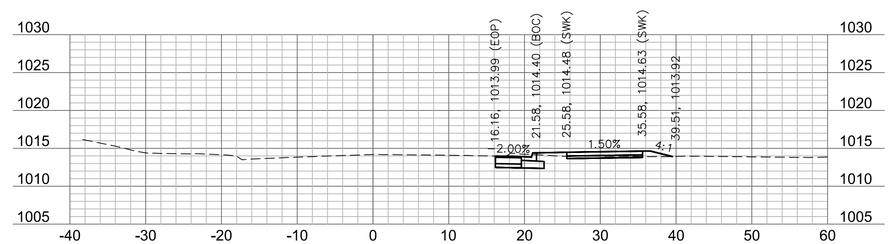

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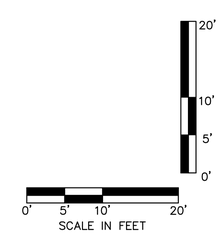

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BAILEY ROAD PUBLIC IMPROVEMENTS

LEE'S SUMMIT, MISSOURI

2021

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SHEET
100 OF 101

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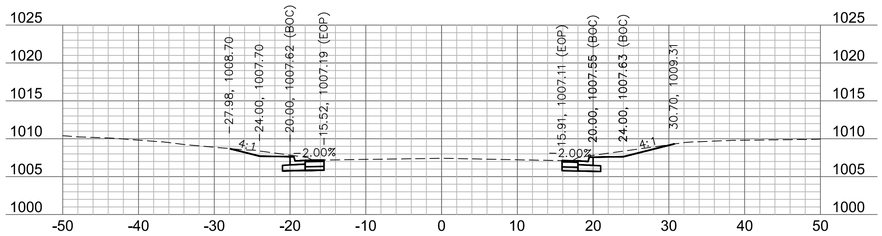

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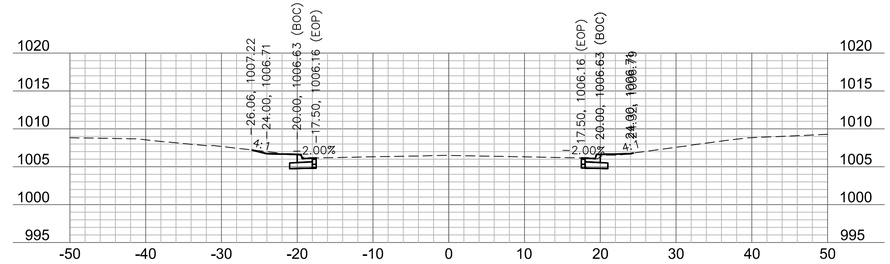

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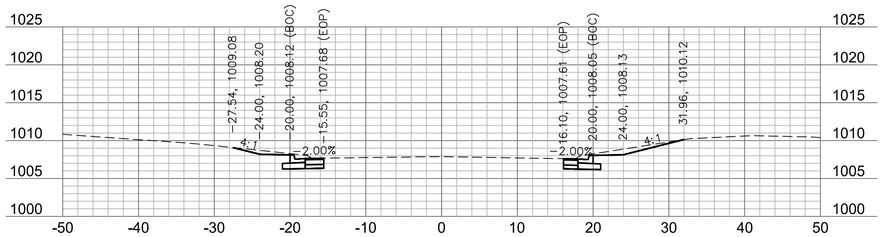

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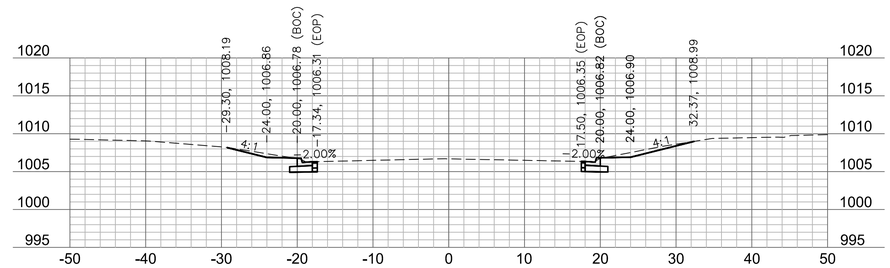

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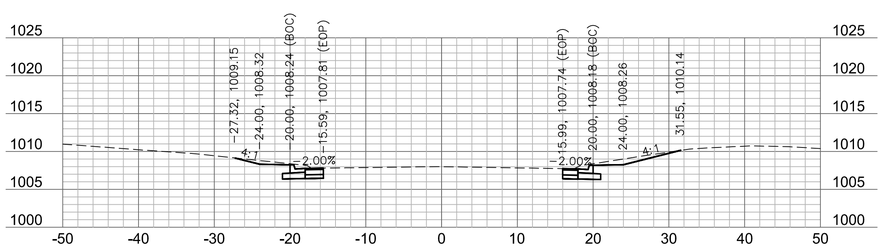

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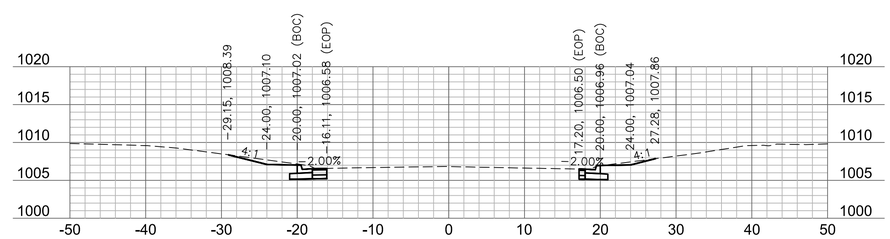

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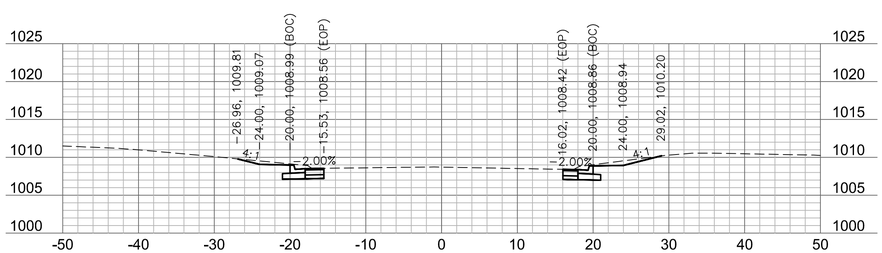

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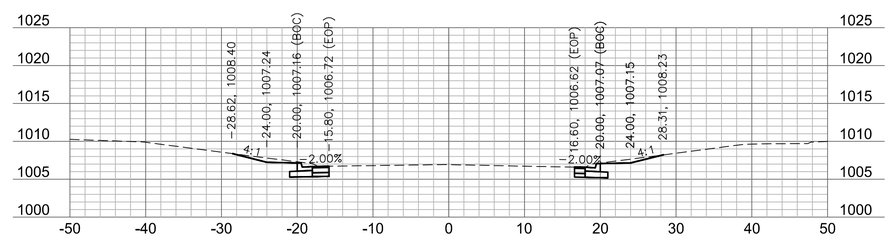

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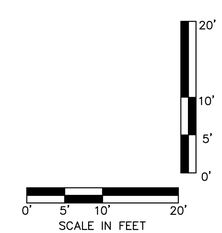

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SE CENTURY DRIVE
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