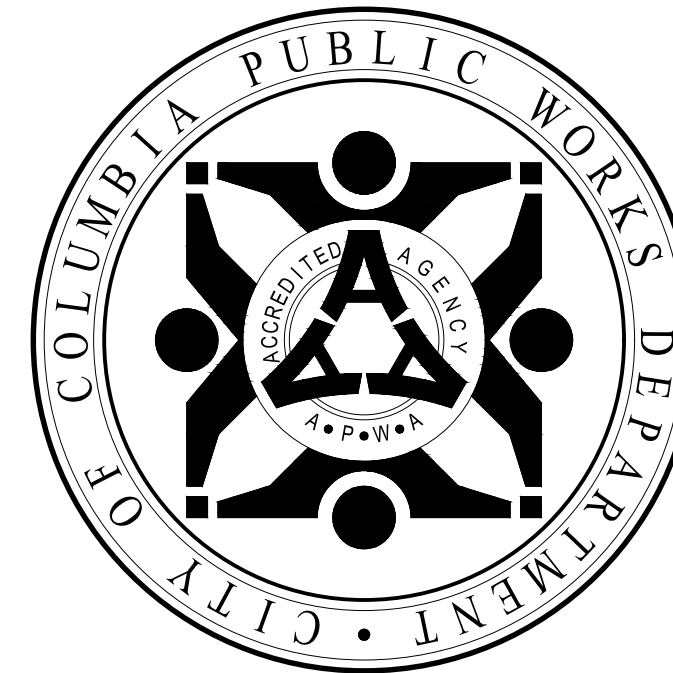


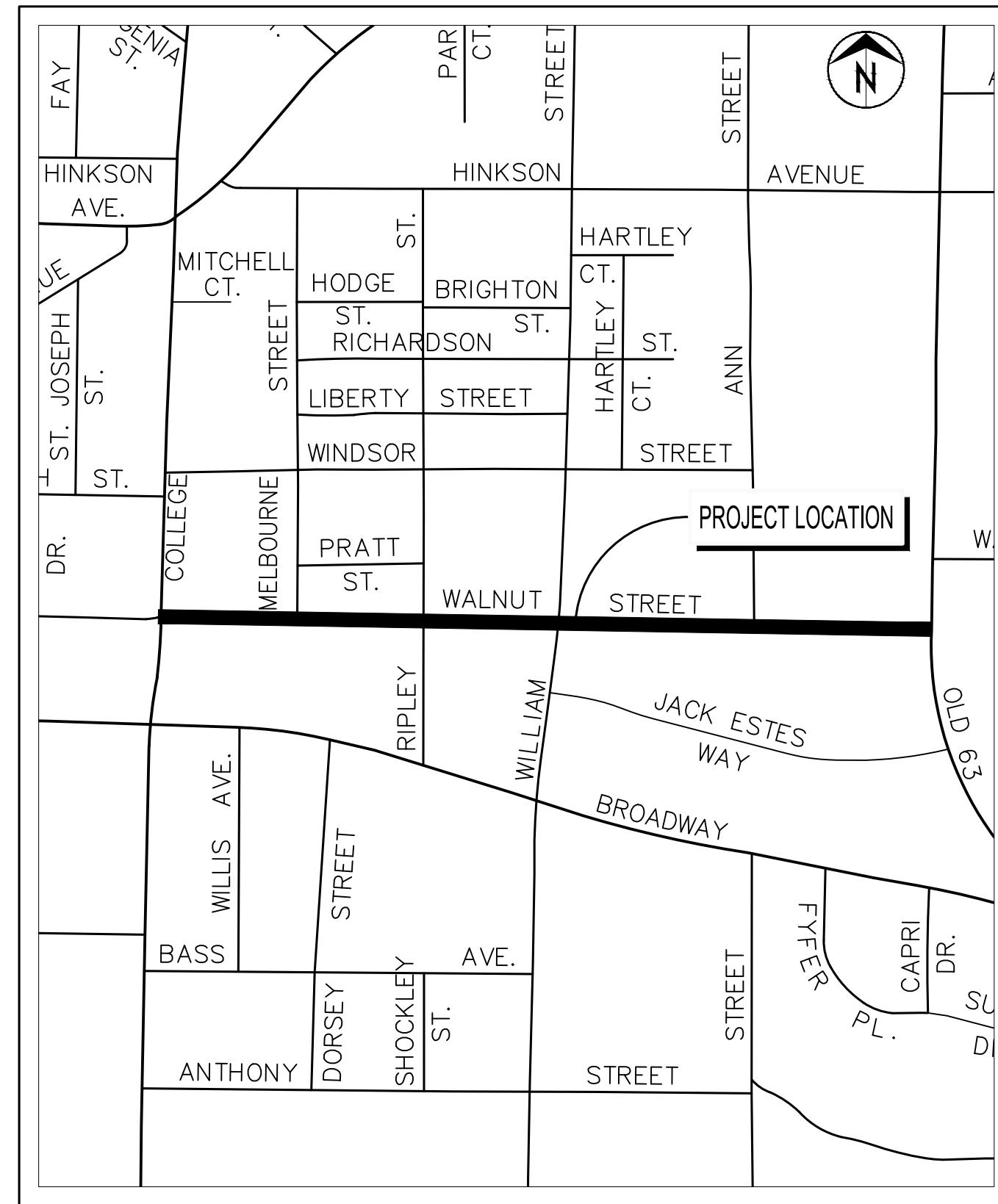
City of Columbia, Missouri

Department of Public Works



WALNUT STREET PROJECT

COLLEGE AVE. TO OLD 63 N RESURFACING



LOCATION MAP

SCALE: 1" = 500'

GENERAL NOTES

- All construction to be in accordance with "City of Columbia Street, Storm Drain and Sanitary Specifications" (Current edition).
- Known underground utilities are shown in their approximate locations. Other utilities may exist.
- All removal of driveway pavements should be verified by field engineer.
- All excavation to be in accordance with Sections 319.010-319.050, Revised Statutes of the State of Missouri. Such compliance shall not, however, excuse any person making any excavation from doing so in a careful and prudent manner, nor shall it excuse such person from liability for any damage or injury to underground utilities resulting from the excavation.
- All disturbed earth areas shall be restored as per TS-4 (Erosion Control) and TS-10 (Seeding and Mulching).
- Remove all pavement surfaces, inlets, pipes and sidewalks within the construction limits as per TS-3 (Removals), except those noted to remain. The field inspector shall verify removal of all driveway pavement.
- Removal of trees and bushes shall be verified by field inspectors. Exercise caution when working near the construction limits to minimize disturbance to adjacent trees and shrubs that are not being removed by construction activities.
- No open trenches will be allowed overnight outside of the "road closed" area. Asphaltic "cold mix" shall be used as a temporary patch overnight. Temporary patching shall be considered incidental to the work.

UTILITY COMPANIES:

TELEPHONE
CenturyLink
625 Cherry Street
Columbia, MO 65205
573-886-3505

WATER
City of Columbia
P.O. Box 6015
Water & Light Department
Columbia, MO 65205
573-874-7301

NATURAL GAS
Ameren Missouri
2001 Maguire Boulevard
Columbia, MO 65201
573-876-3063

ELECTRIC
City of Columbia
P.O. Box 6015
Water & Light Department
Columbia, MO 65205
573-874-7301

CABLE TELEVISION
Mediacom
901 N. College Avenue
Columbia, MO 65201
573-443-1536 ext 354

SANITARY SEWER
City of Columbia
P.O. Box 6015
Public Works Department
Columbia, MO 65205
573-874-7250

LOCATES
Missouri One Call Inc.
1022 B Northeast Drive
Jefferson City, MO 65109
1-800-344-7483

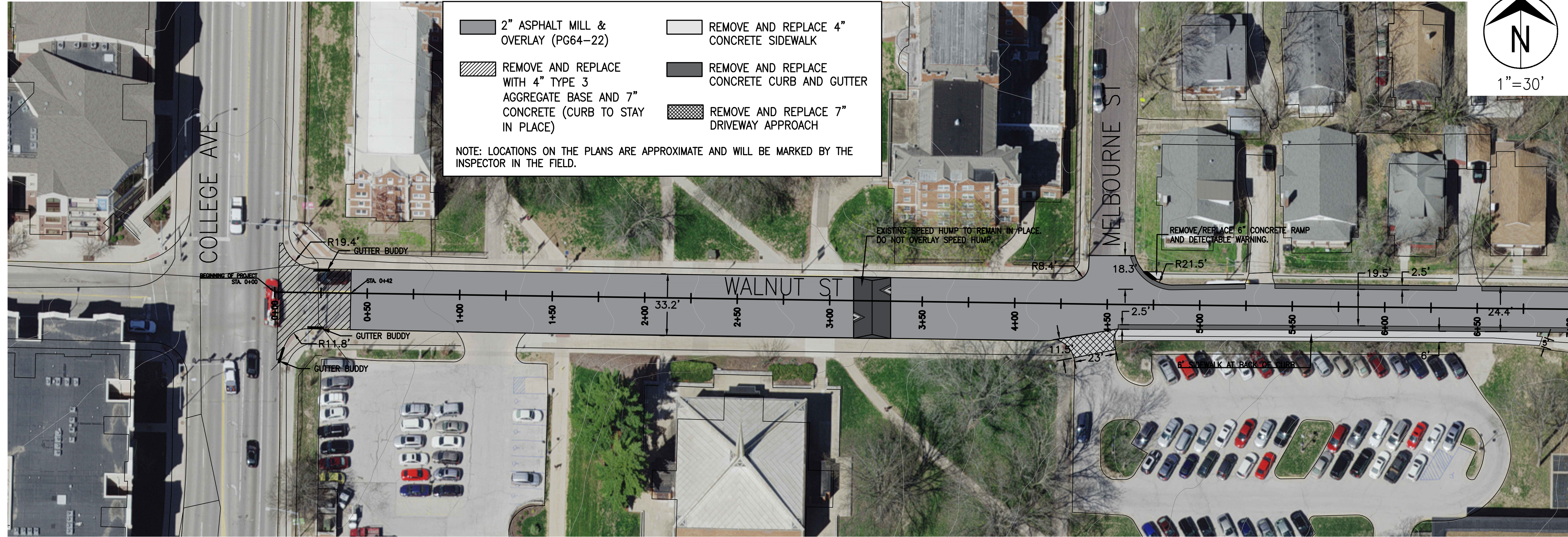
LEGEND OF SYMBOLS

POWER POLE	
TELEPHONE POLE	
GUY ANCHOR	
GUY POLE	
STREET LIGHT POLE	
YARD LIGHT (SOLAR)	
WATER METER	
GAS METER	
GAS VALVE	
WATER VALVE	
FIRE HYDRANT	
PIPE BREAKLINE	
SANITARY MANHOLE	
SANITARY CLEANOUT	
SANITARY LATERAL CLEANOUT	
TRAVERSE POINT	
MoDOT ROW MARKER	
BENCHMARK	
SIGN	
MAIL BOX	
PROPERTY IRON	
BUSH	
STUMP	
TREE REMOVAL	
TREE	
TREE LINE	
SILT FENCE/TREE PROTECT	
EXISTING PUBLIC SANITARY SEWER	
EXISTING SANITARY SEWER LATERAL	
EXISTING SANITARY SEWER TO BE ABANDONED	
PROPOSED SEWER MAIN AND LATERALS	
FENCE	
CABLE TELEVISION	
TELEPHONE	
ELECTRIC	
TELEPHONE OR ELECTRIC MANHOLE	
WATER MAIN	
GAS MAIN	
FIBER OPTIC	
FLOW LINE	
PROPERTY LINE	
LOT LINE	
EXISTING RIGHT OF WAY LINE	
EXISTING EASEMENT	
PERMANANT UTILITY EASEMENT	
PROPOSED SANITARY SEWER EASEMENT	
PROPOSED PERMANENT DRAINAGE EASEMENT	
PROPOSED RIGHT OF WAY	
TEMPORARY ACCESS EASEMENT	
TEMPORARY CONSTRUCTION EASEMENT	
GRADING LIMIT	

INDEX OF SHEETS	
Description	Sheet No.
Cover Sheet	1
Plan Sheets	2-3
Detail Sheet	4
Striping Plan Sheets	5-6
Traffic Control Sheet	7

		City of Columbia, Missouri	
Department of Public Works			
No.	Date	By	Revision
Project No. 00474	Des.	E.M.F.	Sheet
Scale: NONE	Dwn.	E.M.F.	1 of 7
Date: 7/6/2021	Chk.	A.A.A.	
WALNUT ST. RESURFACING PROJECT			David Allen Nichols Registered Professional Engineer E-24212
Approved By _____			
Director of Public Works		Date	

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No.	Date	By	Revision

Walnut St. - College to Old 63
Plan Sheet

City of Columbia, Missouri
Department of Public Works

David Allen Nichols
Registered Professional Engineer
E-24212

File No.	00474
Scale:	1" = 30'
Date:	07/06/2021
Des.	E.M.F.
Dwn.	E.M.F.
Chk.	A.A.A.

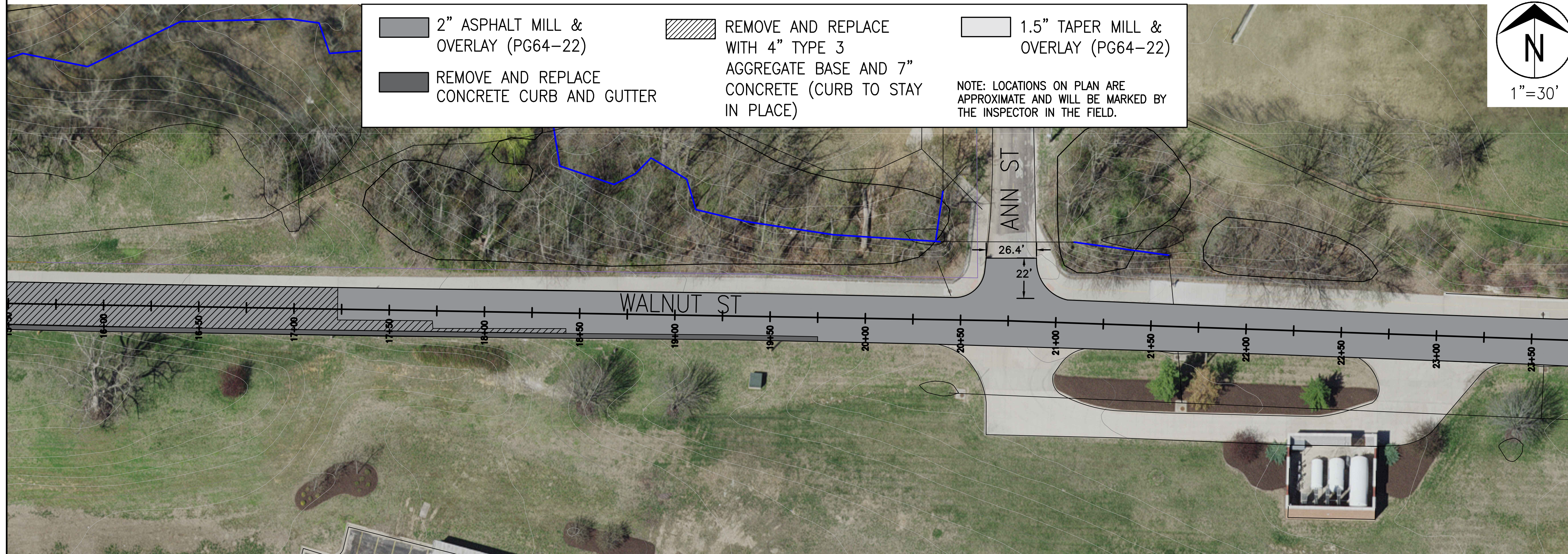
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2015 Orthophoto Source: Boone County Assessor

o:\caddpro\street\walnut st - college to old 63\design\walnut resurfacing design (7-6-21).dwg

2015 Orthophoto Source: Boone County Assessor

MATCHLINE 15+50



MATCHLINE 23+75

MATCHLINE 23+75



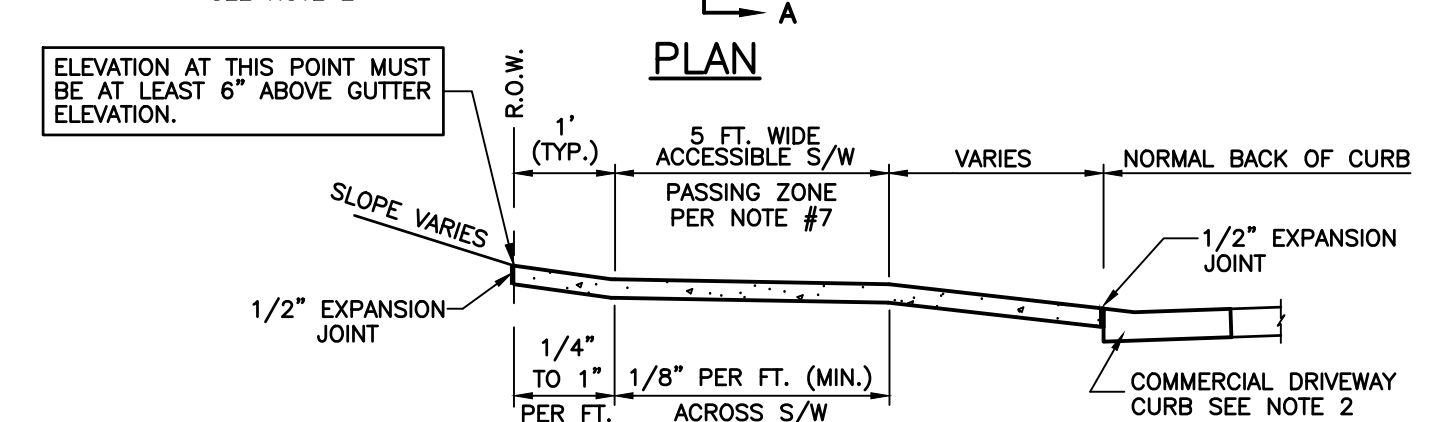
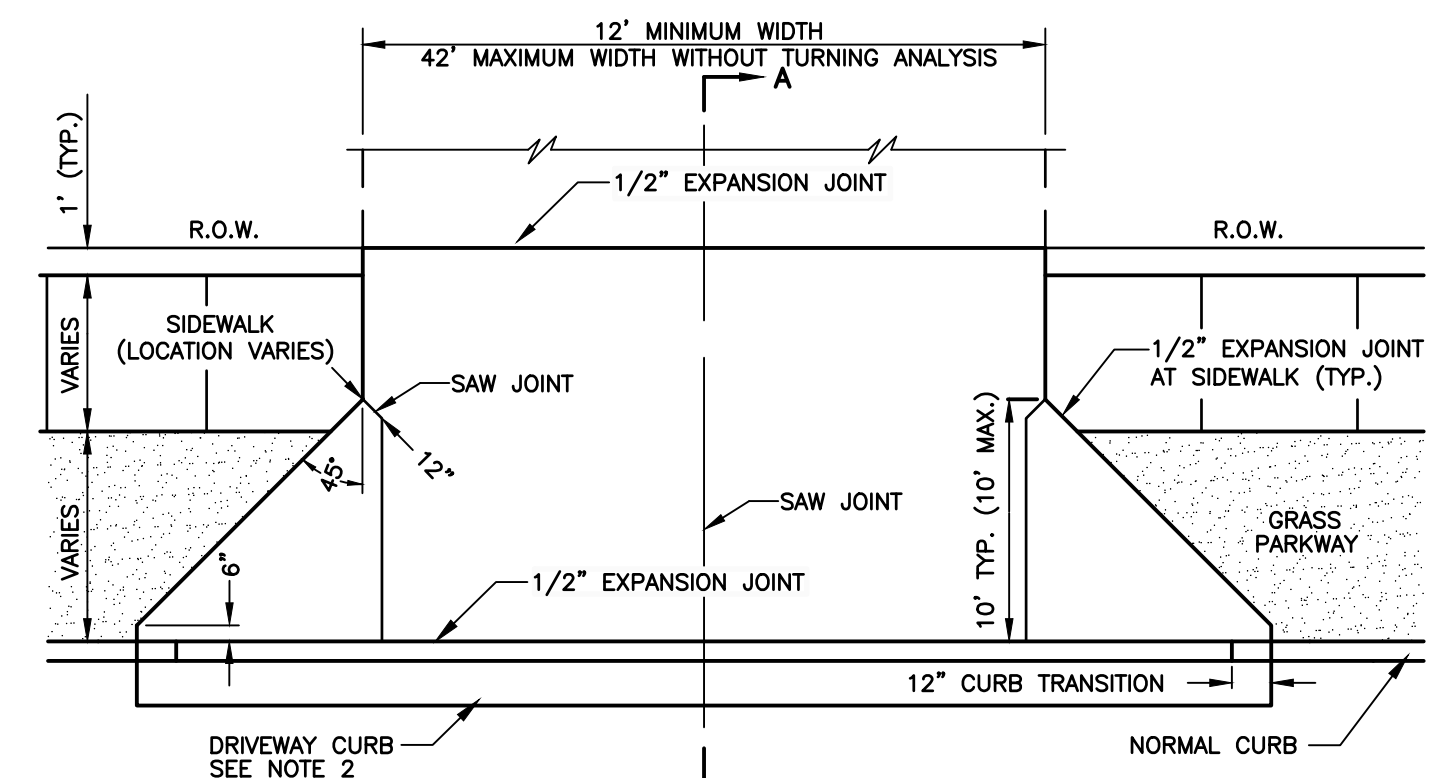
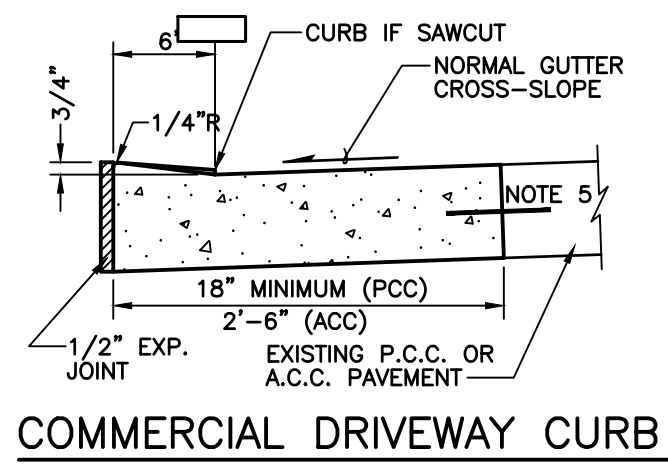
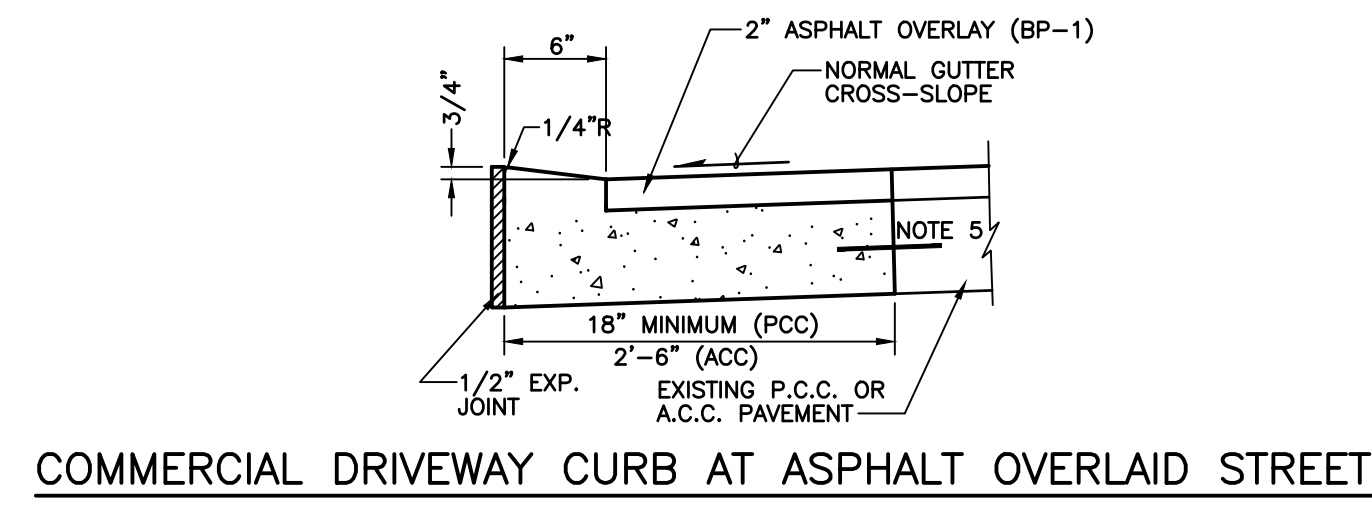
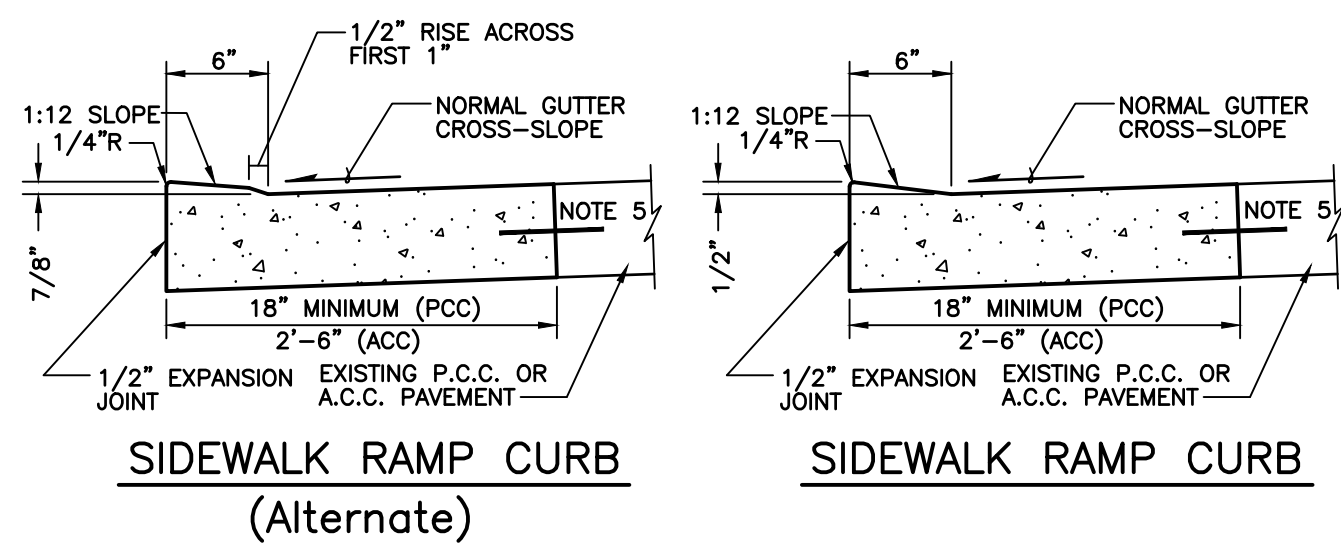
No.	Date	By	Revision

Walnut St. - College to Old 63
Plan Sheet

City of Columbia, Missouri
Department of Public Works

David Allen Nichols
Registered Professional Engineer
E-24212

File No. 00474
Scale: 1" = 30'
Date: 07/06/2021
Des. E.M.F.
Dwn. E.M.F.
Chk. A.A.A.



PCC PAVEMENT NOTES:

1. CONCRETE SHALL BE MoDOT PAVEMENT CONCRETE.
2. PAVEMENT THICKNESS SHALL MATCH EXISTING. BASE SHALL MATCH EXISTING.
3. EXPANSION JOINTS AND CONTRACTION JOINTS SHALL BE PLACED AT LOCATIONS SIMILAR TO THE PAVEMENT WHICH WAS REMOVED.
4. CURB EDGE SHALL BE TOOLED WITH 1/4" RADIUS.
5. WHERE EXISTING PAVEMENT IS P.C.C., LOW CURB REPLACEMENT SHALL BE DOWELLED INTO EXISTING. 12" LONG #4 BARS AT 24" CTR. ALL DRILLED DOWEL BARS SHALL BE EXPOXIED.

ACC PAVEMENT NOTES:

1. CONCRETE SHALL BE MoDOT PAVEMENT CONCRETE.
2. GUTTER THICKNESS SHALL MATCH EXISTING. BASE SHALL MATCH EXISTING.
3. EXPANSION JOINTS AND CONTRACTION JOINTS SHALL BE PLACED AT LOCATIONS SIMILAR TO THE CURB AND GUTTER WHICH WAS REMOVED.
4. CURB EDGE SHALL BE TOOLED WITH 1/4" RADIUS.

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4. CURB EDGE SHALL BE TOOLED WITH 1/4" RADIUS.

HORIZONTAL SAWING OF CURB IS ALLOWED AS AN ALTERNATIVE TO REMOVING AND REPLACING STANDARD CURB. HORIZONTAL SAWING MACHINE AND METHOD REQUIRES PRIOR APPROVAL. HORIZONTAL SAWING IS NOT ALLOWED ON CITY BID PROJECTS.

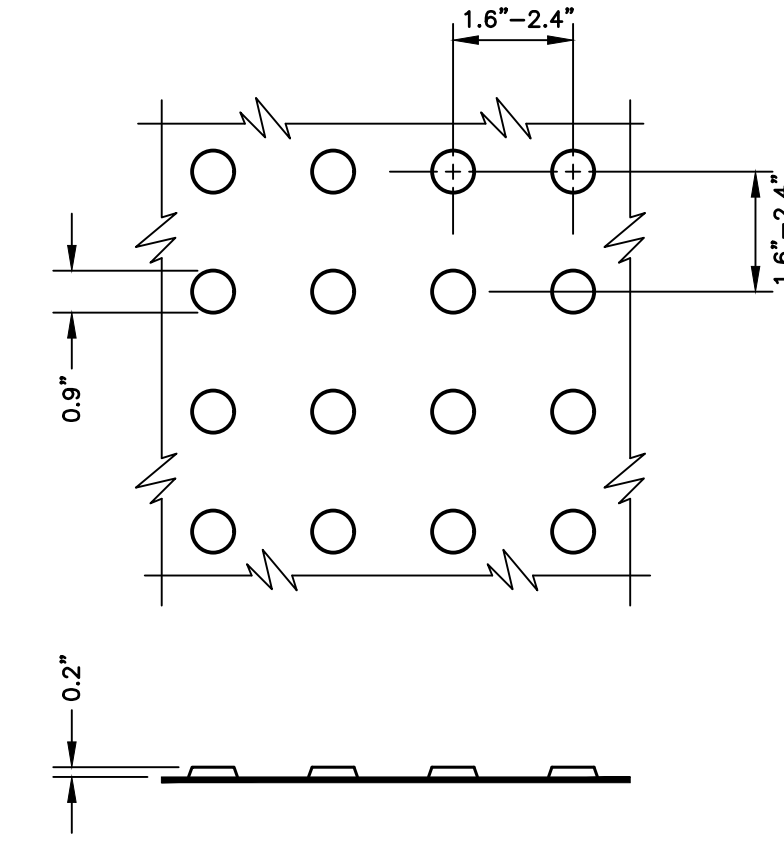
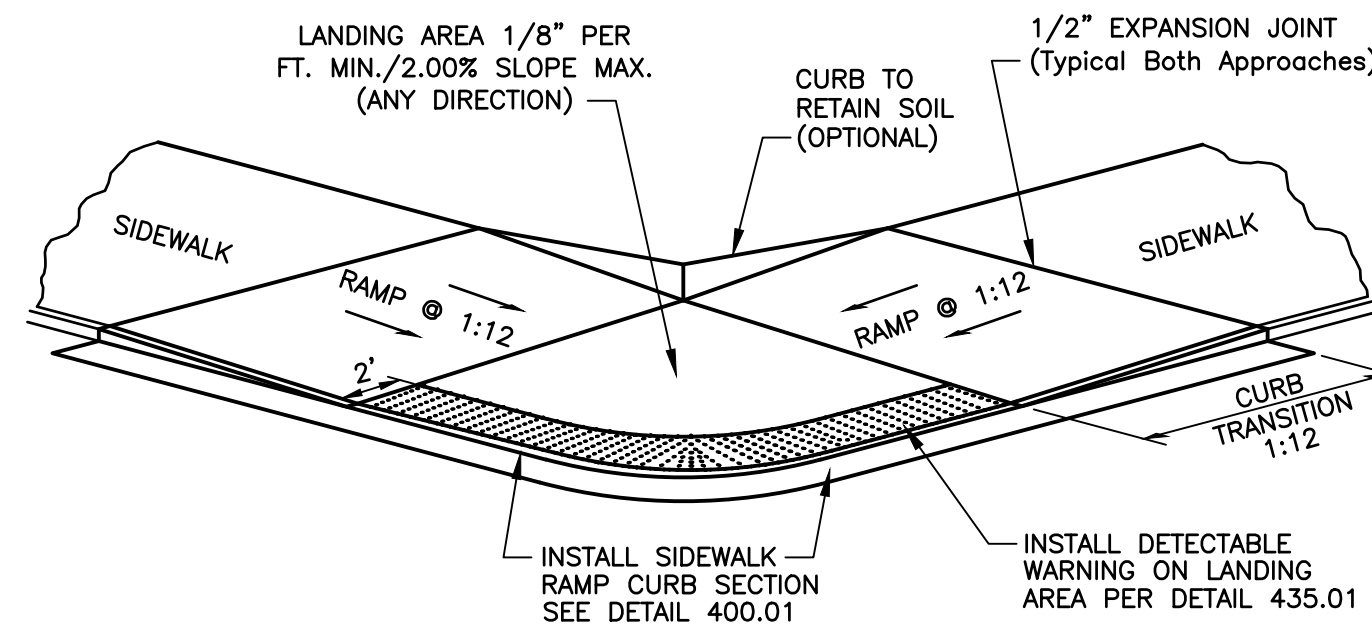
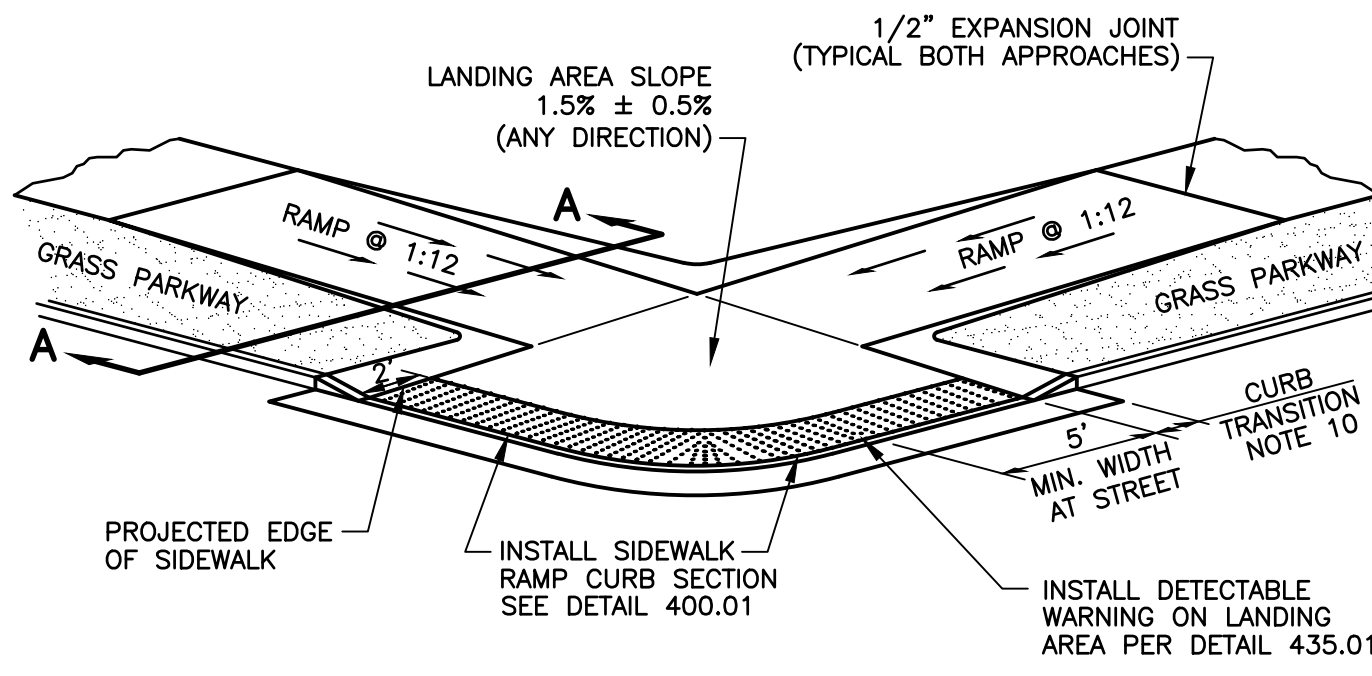
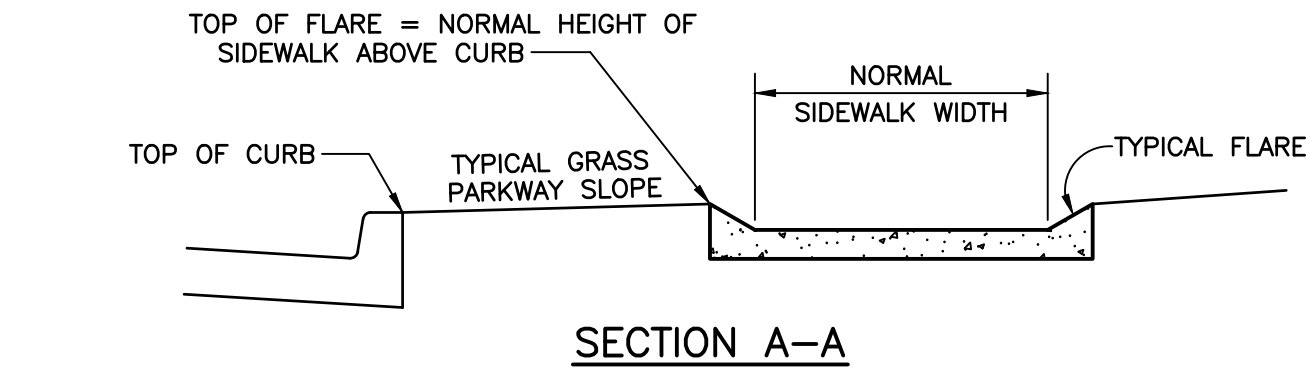
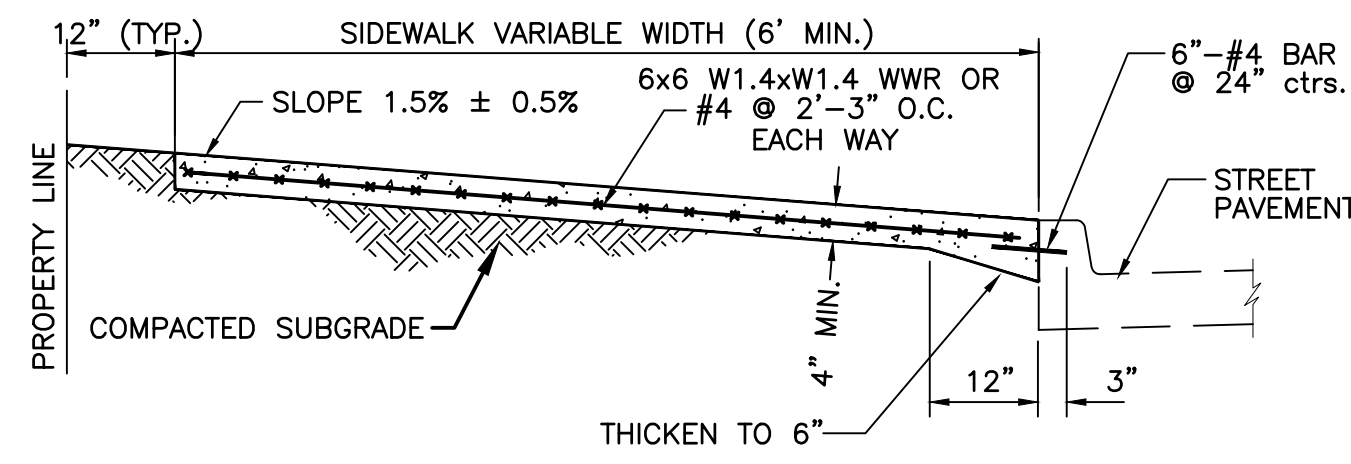
NOTES:

1. DRIVEWAY APPROACH SHALL BE 7" THICK MoDOT PAVEMENT CONCRETE.
2. REPLACE STANDARD CURB & GUTTER SECTION WITH DRIVEWAY CURB SECTION. SEE DETAIL 400.03.
3. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
4. ALL DRIVEWAY APPROACHES SHALL SLOPE TOWARD THE STREET.
5. ALL DRIVEWAY APPROACHES SHALL BE CONSTRUCTED TO ACCOMMODATE SIDEWALKS. (EXISTING AND FUTURE) STANDARD SIDEWALK LOCATION IS 1 FOOT OFF OF RIGHT OF WAY LINE.
6. DRIVEWAY APPROACH SHALL PROVIDE A MINIMUM 5' WIDE ACCESSIBLE SIDEWALK PASSING ZONE.
7. DRIVEWAY SLOPE ACROSS ACCESSIBLE SIDEWALK PASSING ZONE IS 1/8" PER FT. CROSS SLOPE SHALL NOT EXCEED 2.00%.
8. MINIMIZE SIDEWALK WARPING ADJACENT TO DRIVEWAY APPROACH.
9. GREENSPACE SLOPE WITHIN RIGHT OF WAY SHALL NOT EXCEED 3/4" PER FOOT.
10. DRIVEWAY MAY BE REINFORCED AT OWNER'S OPTION. ON CITY BID PROJECTS DO NOT REINFORCE.
11. MEASURE FROM TOP OF CURB.

CURB DETAILS (Sidewalk Ramp)

CURB DETAILS (Commercial Driveway)

DRIVEWAY (Commercial)



NOTE:

1. SIDEWALK SHALL BE 4" THICK MoDOT PAVEMENT CONCRETE.
2. INSTALL 1/2" TRANSVERSE EXPANSION JOINTS TO MATCH STREET OR CURB AND GUTTER EXPANSION JOINTS AND AT ALL DRIVEWAY APPROACHES, AND SIDEWALK RAMPS.
3. INSTALL TRANSVERSE SAW JOINTS AT SPACING EQUAL TO SIDEWALK WIDTH.
4. FOR DOWNTOWN SIDEWALK DETAIL SEE SECTION 1000.
5. NO STEEL TO BE PLACED THROUGH EXPANSION JOINT.
6. SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.00%.
7. NEW SIDEWALK MUST BE PINNED TO EXISTING SIDEWALK.
8. WWR OR REBAR SHALL BE ACCURATELY PLACED AND FIRMLY HELD IN PLACE DURING CONCRETE PLACEMENT BY APPROVED METHODS, SEE SECTION 238.9.

NOTES:

1. RAMP AND LANDING SHALL BE 6" THICK MoDOT PAVEMENT CONCRETE WITH #4 BARS AT 12" O.C. E.W.
2. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
3. MAXIMUM RAMP CROSS SLOPE IS 2.00%.
4. ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
5. REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
6. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
7. LANDING AREA SHALL BE 4'-0" MIN WIDTH. MAXIMUM RAMP SLOPE 2.0% ANY DIRECTION.
8. USE TYPE "b" RAMP ONLY IF TYPE "a" IS NOT FEASIBLE.
9. FLARES ARE REQUIRED AT RAMPS TO KEEP GRASS PARKWAY SLOPES IN CONFORMANCE WITH THE TYPICAL CROSS SECTION. (SEE SECTION A-A)
10. CURB TRANSITION LENGTH IS DEPENDENT ON FLARE SLOPE.

NOTES:

1. RAMP AND LANDING SHALL BE 6" THICK REINFORCED MoDOT PAVEMENT CONCRETE W/#4 BARS @ 12" O.C.
2. EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
3. MAXIMUM RAMP CROSS SLOPE IS 2.00%.
4. ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
5. REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
6. RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
7. LANDING AREA SHALL BE 4'-0" MIN WIDTH.
8. USE TYPE "b" RAMP ONLY IF TYPE "a" IS NOT FEASIBLE.

NOTE:

1. DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF 0.9", A HEIGHT OF NOMINAL 0.2", AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35", AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, ACHIEVED BY THE INSTALLATION OF ADA SOLUTIONS 2436 REPBR, 2448 REPBR, OR 2460 REPBR (OR APPROVED EQUAL) AND SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
2. ADA SOLUTIONS 24RADREPBR OR APPROVED EQUAL TO BE USED WITH DETAIL 430.02, 432.02, AND 1000.08.
3. STAMPED CONCRETE IS NOT AN APPROVED EQUAL.
4. DOWNTOWN DETECTABLE WARNINGS MAY BE ADA 2004 COMPLIANT DETECTABLE WARNING PAVERS.
5. DETECTABLE WARNING PLATES ARE TO BE COLONIAL OR BRICK RED IN COLOR OR APPROVED EQUAL.
6. DETECTABLE WARNING SURFACES SHALL BE 24" WIDE AND EXTEND THE FULL LENGTH OF THE PUBLIC USE AREA.

SIDEWALK AT BACK OF CURB

SIDEWALK RAMP Sidewalk with Grass Parkway

SIDEWALK RAMP Sidewalk at Back of Curb

DETECTABLE WARNING

Revision	
By	
Date	
No.	

Walnut St. - College to Old 63
Detail Sheet

City of Columbia, Missouri
Department of Public Works

David Allen Nichols
Registered Professional Engineer
E-24212

File No.	00474
Scale:	NONE
Date:	07/06/2021
Des.	E.M.F.
Dwn.	E.M.F.
Chk.	A.A.A.

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2015 Orthophoto Source: Boone County Assessor

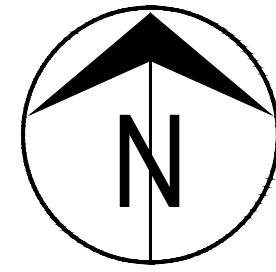
MATCHLINE 7+00



MATCHLINE 15+50



MATCHLINE 7+00



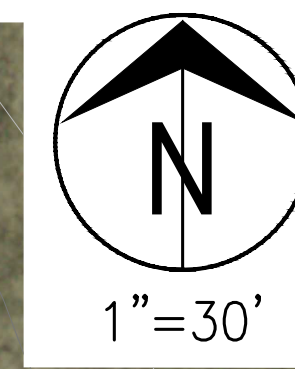
1" = 30'

No.	Date	By	Revision

Walnut St. - College to Old 63
Striping Plan Sheet

City of Columbia, Missouri
Department of Public Works

File No.	00474
Scale:	1" = 30'
Date:	07/06/2021
Des.	E.M.F.
Dwn.	E.M.F.
Chk.	A.A.A.



MATCHLINE 15+50



MATCHLINE 23+75

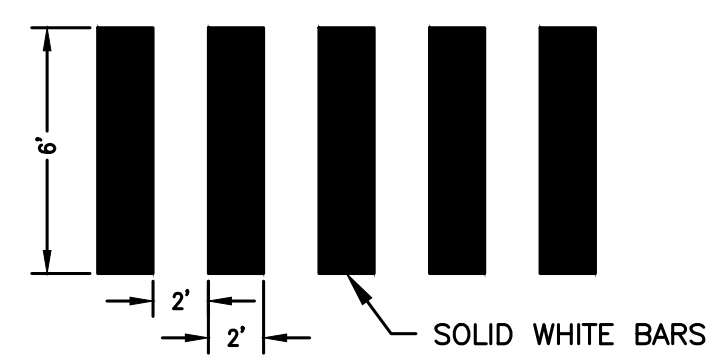
No.	Date	By	Revision

Walnut St. - College to Old 63
Striping Plan Sheet

City of Columbia, Missouri
Department of Public Works

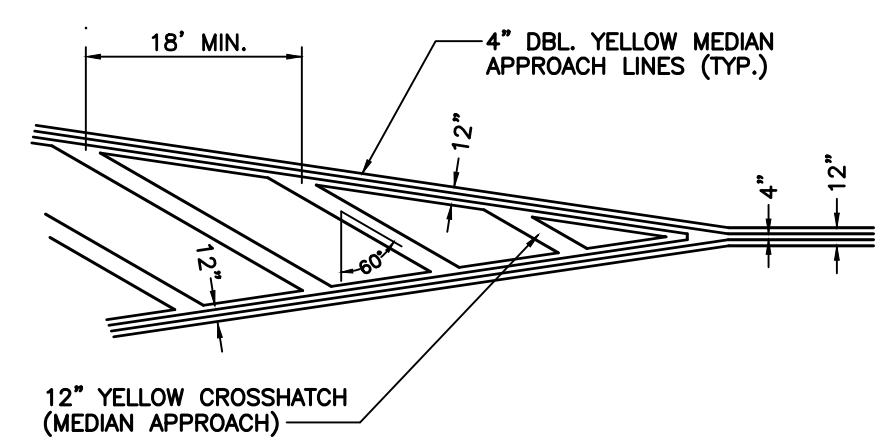
David Allen Nichols
Registered Professional Engineer
E-24212

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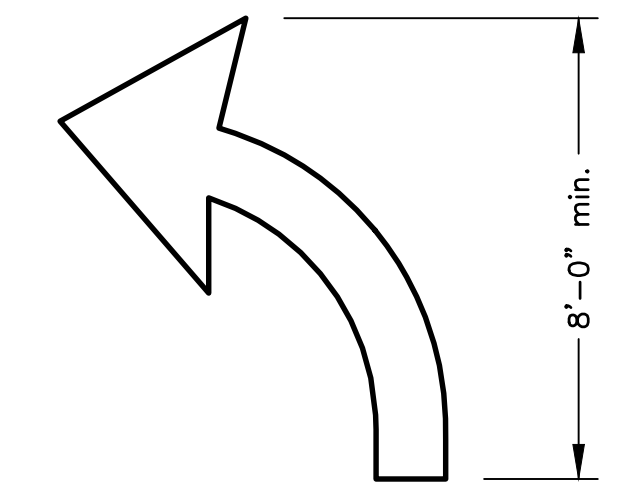
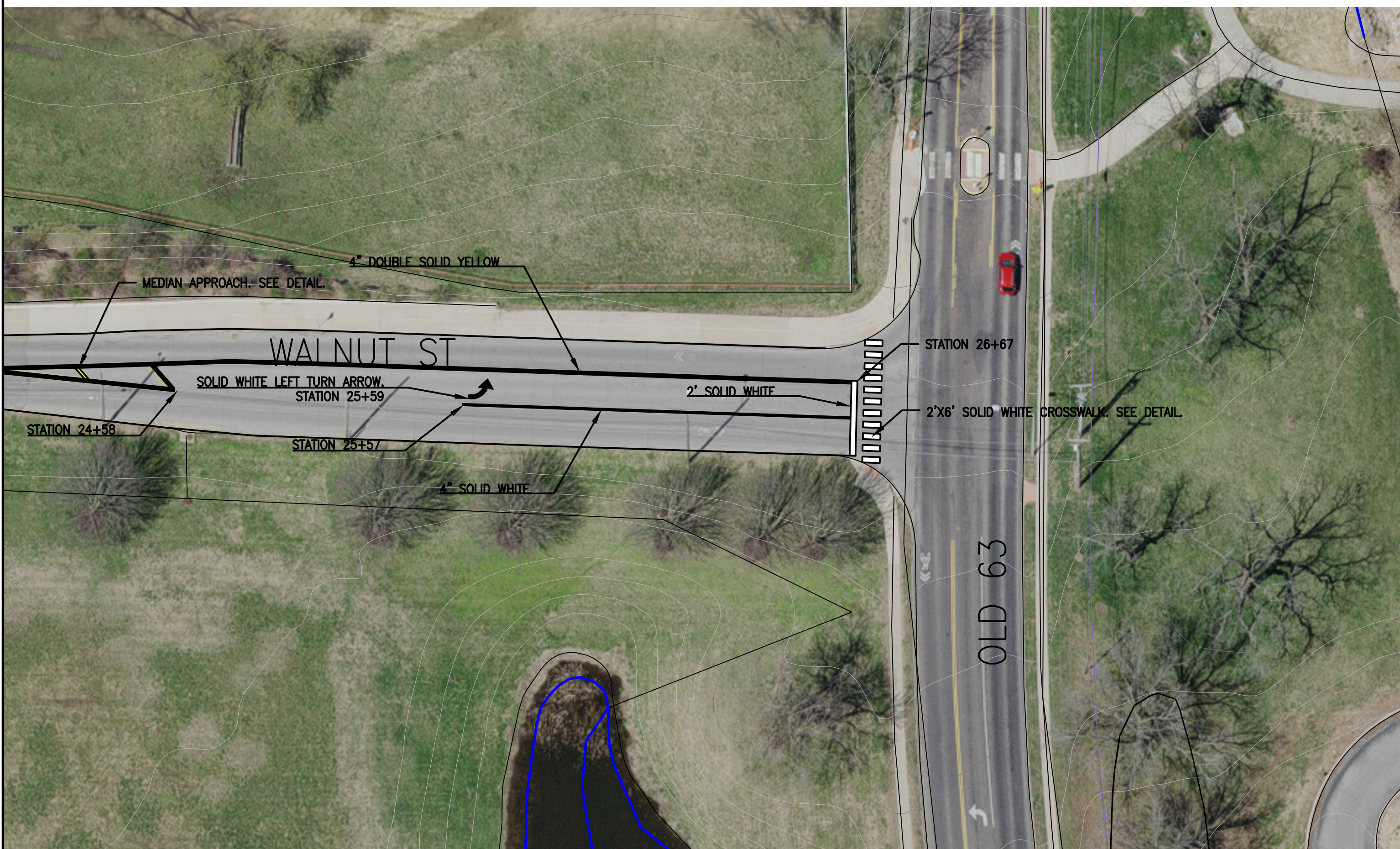
NOTE:
SHIFT BARS TO BEST FIT WHEEL PATHS
THROUGH CROSSWALK

CROSSWALK MARKINGS (TYP.)
(NOT TO SCALE)



MEDIAN APPROACH DETAIL

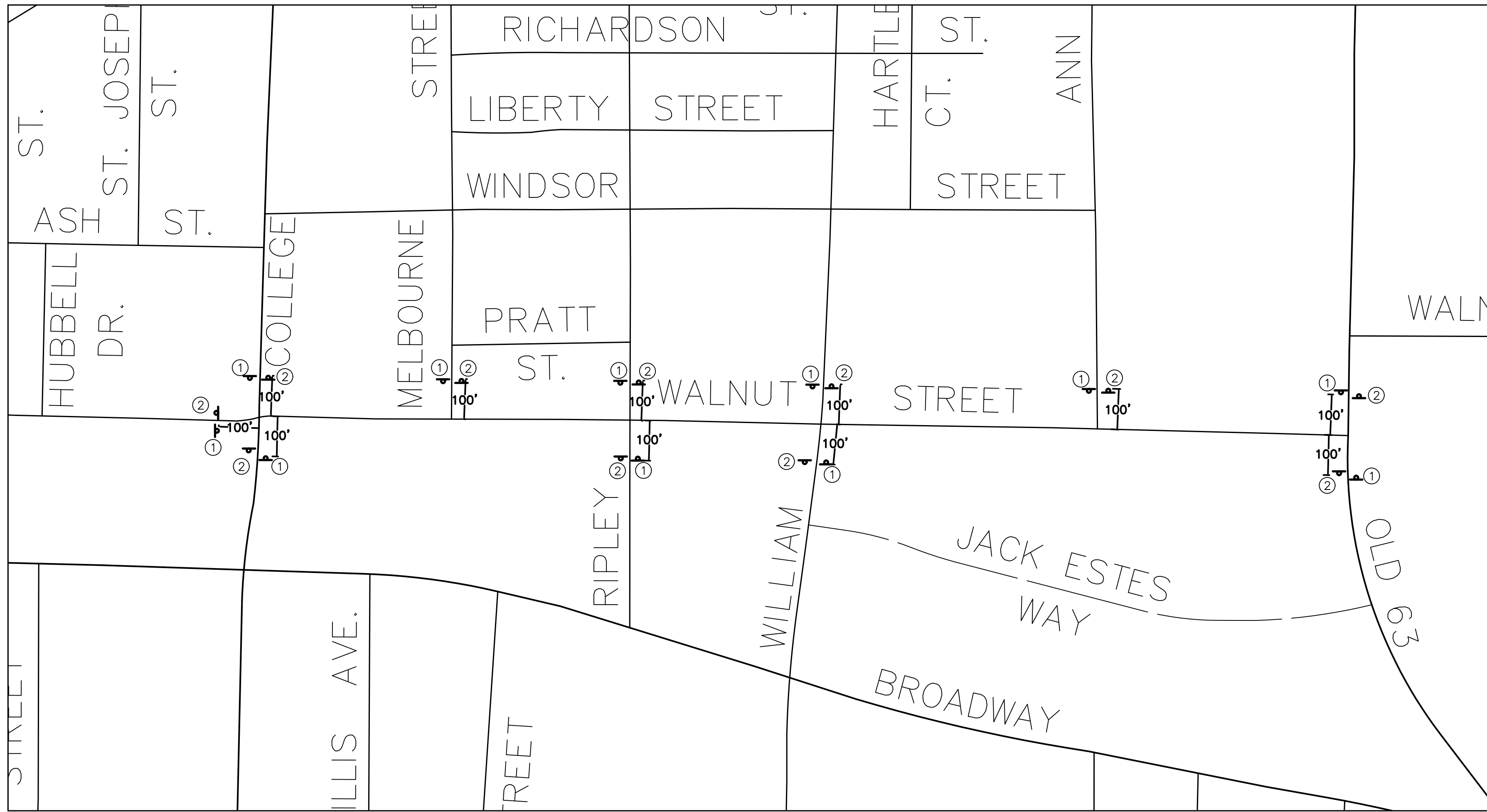
MATCHLINE 23+75



NOTE: All arrows shall comply with
current MUTCD Standards.
TURN ARROW DETAIL
(NOT TO SCALE)

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2015 Orthophoto Source: Boone County Assessor



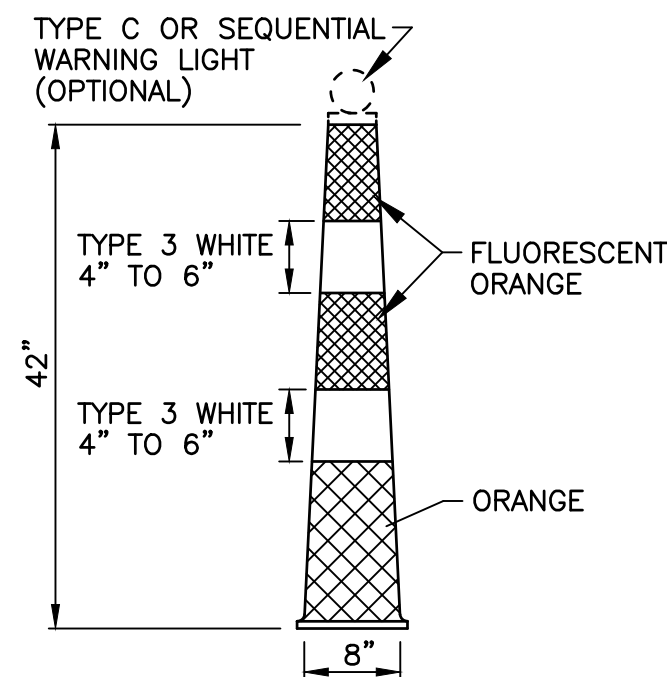
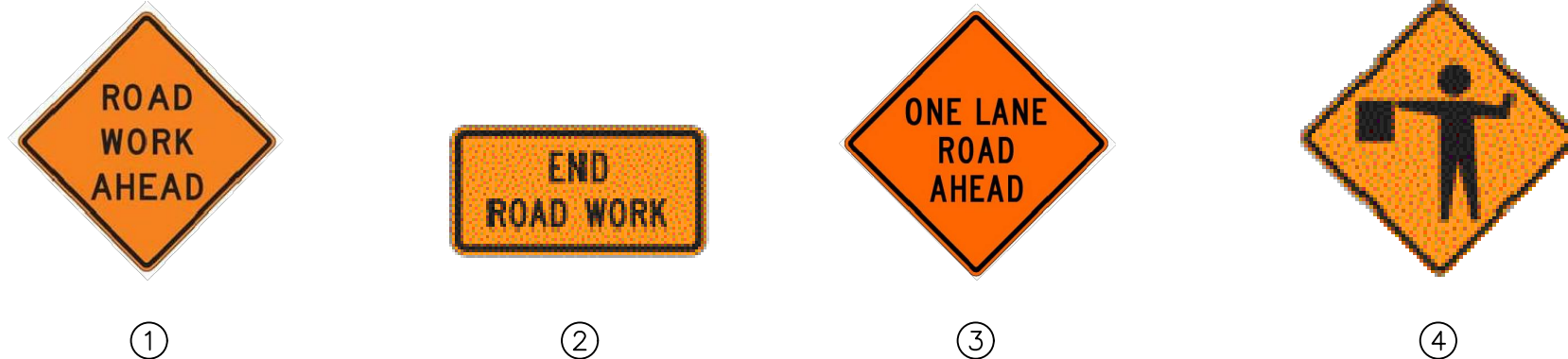
TRAFFIC CONTROL GENERAL NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL BARRICADES, SIGNS, OTHER TRAFFIC CONTROL DEVICES AND PLACEMENT THEREOF SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- THE CONTRACTOR SHALL NOTIFY THE CITY JOINT COMMUNICATIONS OFFICE OF ALL ROAD CLOSURES OR LANE REDUCTIONS IN ADVANCE. JOINT COMMUNICATIONS PHONE NUMBER IS (573) 874-7400.
- TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION. ACTUAL QUANTITIES WILL DEPEND ON THE CONTRACTOR'S CONSTRUCTION SEQUENCE AND PROGRESS. NO MEASUREMENT WILL BE MADE OF ACTUAL QUANTITIES. QUANTITIES SHOWN ARE APPROXIMATE.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES IN THE CONSTRUCTION ZONE TO THE MAXIMUM EXTENT PRACTICABLE.
- CONTRACTOR SHALL INSTALL AND MAINTAIN PROJECT SIGN SUPPLIED BY THE CITY THROUGHOUT CONSTRUCTION CONTRACT. SIGN SHALL BE REMOVED BY CONTRACTOR AT PROJECT COMPLETION.
- NO OPEN TRENCHES WILL BE ALLOWED OVERNIGHT OUTSIDE OF THE "ROAD CLOSED" AREA. ASPHALTIC "COLD MIX" SHALL BE USED AS A TEMPORARY PATCH OVERNIGHT. TEMPORARY PATCHING SHALL BE CONSIDERED INCIDENTAL TO THE WORK.
- ALL OPEN TRENCHES ARE TO BE BARRICADED WITH CONSTRUCTION FENCING.
- THE DISTANCE BETWEEN TEMPORARY TRAFFIC CONTROL SIGNS MAY BE ADJUSTED ACCORDING TO FIELD CONDITIONS.

TRAFFIC CONTROL PLAN

SCALE: 1"=200'

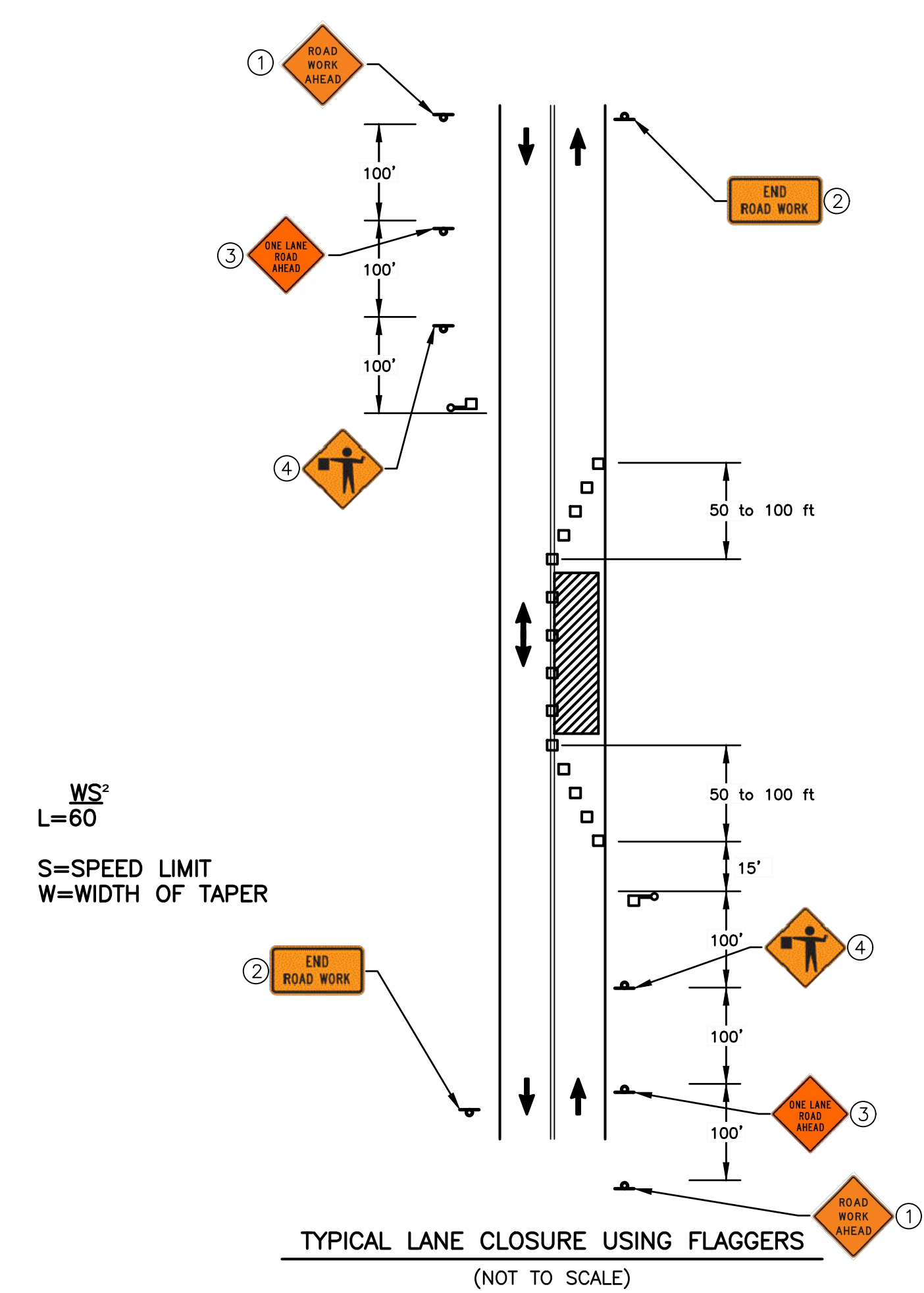
MUTCD CODE	DESCRIPTION	SIZE	QUANTITY
① W20-1	"ROAD WORK AHEAD"	36"x36"	6
② G20-2	"END ROAD WORK"	36"x18"	3
③ W20-4	"ONE LANE ROAD AHEAD"	36"x36"	2
④ W20-7	FLAGGER SIGN	36"x36"	2



REFLECTIVE SHEETING APPLIED TO CHANNELIZERS SHALL BE REBOUNDABLE MEETING ASTM D 4956.

TRIM LINE CHANNELIZER

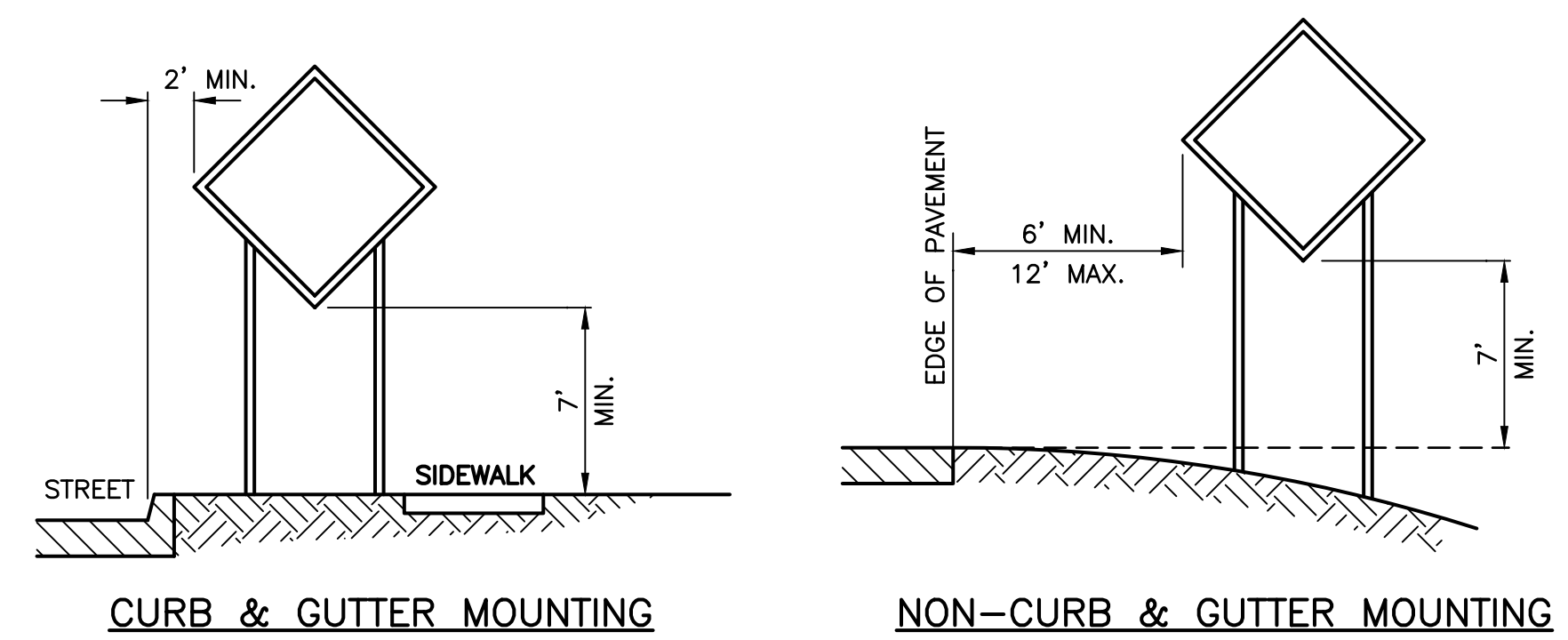
N.T.S.



TYPICAL LANE CLOSURE USING FLAGGERS (NOT TO SCALE)

LEGEND

- SIGN
- CHANNELIZER
- FLAGGER
- WORK ZONE



NOTE: SUPPORT POSTS SHALL NOT EXTEND ABOVE SIGN UNLESS DISTANCE PLAQUE OR WARNING LIGHTS ARE SPECIFIED.

SIGN MOUNTING

(NOT TO SCALE)

Revision	
By	
Date	
No.	

Walnut St. - College to Old 63
Traffic Control Sheet

City of Columbia, Missouri
Department of Public Works

David Allen Nichols
Registered Professional Engineer
E-24212

File No. 00474
Scale: NONE
Date: 07/06/2021
Des. E.M.F.
Dwn. E.M.F.
Chk. A.A.A.

o:\cadd\proj\street\walnut st - college to old 63\design\walnut resurfacing design (7-6-21).dwg

2011 Orthophoto Source: Boone County Assessor