

PRELIMINARY DESIGN CHECK

OAKLAND GRAVEL ROAD SIDEWALK

TAP 2101513

EXISTING SURVEY LEGEND

LINWORK	SS SANITARY SEWER	949 INTERMEDIATE CONTOUR
FS SANITARY SEWER FORCE MAIN	950 INDEX CONTOUR	
ST STORM SEWER	--- PROPERTY LINE	
R WATER	R/W RIGHT OF WAY	
E UNDERGROUND ELECTRIC	SECTION LINE	
OE OVERHEAD ELECTRIC	EASEMENT	
C UNDERGROUND COMMUNICATIONS	GUARD RAIL	
OC OVERHEAD COMMUNICATIONS	FIELD FENCE	
T UNDERGROUND TELEPHONE	CHAIN LINK FENCE	
OT OVERHEAD TELEPHONE	WOODEN FENCE	
FO UNDERGROUND FIBER OPTIC	SILT FENCE	
OFS OVERHEAD FIBER OPTIC	AGRICULTURE LINE	
UV UNDERGROUND TV/CABLE	EDGE OF TREES	
OVS OVERHEAD TV/CABLE	TOP/BOTTOM OF SLOPE	
G GAS	ROAD CENTERLINE	
TR TRAFFIC	WATERWAY FLOWLINE	
	LIMIT LIMITS OF DISTURBANCE	

UTILITY QUALITY LEVELS:
UTILITY QUALITY LEVELS ARE BASED ON THE CI/ASCE 38-02 STANDARD.

UTILITY QUALITY LEVEL A:
PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES

UTILITY QUALITY LEVEL B:
INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES.

UTILITY QUALITY LEVEL C:
INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

UTILITY QUALITY LEVEL D:
INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

ADDITIONALLY IN THE CASE OF MULTIPLE OWNERS OF THE SAME UTILITY TYPE SAID UTILITIES WILL BE ABBREVIATED WITH AN OWNER NUMBER (1, 2, 3, ETC) AND REFERENCED IN THE IOWA ONE CALL UTILITY INFORMATION SECTION.

EXAMPLES:
C1(B) UNDERGROUND COMMUNICATIONS- OWNER 1
C2(B) UNDERGROUND COMMUNICATIONS- OWNER 2

TYPICAL HATCHING		
SIDEWALK (MATERIAL NOTED)	PERMEABLE PAVER	
CONCRETE	WATER	
ASPHALT	BUILDING OUTLINE	
RIP RAP	LANDSCAPING	
GRAVEL	MULCH LANDSCAPING	
GRASS	ROCK LANDSCAPING	

ABBREVIATIONS		
CP CONTROL POINT	CI CAST IRON PIPE	
BM BENCHMARK	DI DUCTILE IRON PIPE	
ROW RIGHT-OF-WAY	CMP CORRUGATED METAL PIPE	
GU GUTTER	HDPE HIGH-DENSITY POLYETHYLENE PIPE	
CL CENTERLINE	VCP VITRIFIED CLAY PIPE	
ASPH ASPHALT	PVC POLYVINYL CHLORIDE PIPE	
PCC CONCRETE	RCP REINFORCED CONCRETE PIPE	
FL FLOWLINE	UNK UNKNOWN	
RIM ELEVATION AT RIM	DH DRILL HOLE	
W WITH	RBC REBAR W/ PLASTIC CAP	
TYP TYPICAL	IPC IRON PIPE W/ PLASTIC CAP	
FND FOUND	MON MONUMENT	
FF FINISHED FLOOR	PK PK NAIL	

ONE CALL UTILITY INFORMATION:
LOCATE TICKET #S: 240440288, 240440288

ELECTRIC	
AC AIR CONDITIONING UNIT	
BB BREAKER BOX	
E ELECTRIC MANHOLE	
EM ELECTRIC METER	
E ELECTRIC PEDESTAL	
HP HEAT PUMP	
GAS	
GM GAS MARKER	
GM GAS METER	
GV GAS VALVE	
GENERAL SITE FEATURES	
B BOLLARD	
F FLAGPOLE	
FL FLOOD LIGHT	
GUY WIRE	
M MAILBOX	
SD SIGN- DOUBLE POST	
SS SIGN- SINGLE POST	
S SOILBORE	
SL STREET LIGHT	
U UTILITY POLE	
UW UTILITY POLE W/ STREET LIGHT	
U UNKNOWN MANHOLE	

STORM SEWER	
BI BEEHIVE INLET	
DC DOUBLE CURB INLET	
SC SINGLE CURB INLET	
AD AREA DRAINAGE INLET	
FE FLARED END SECTION	
SM STORM MANHOLE	
SP STAND PIPE	
SSC STORM SEWER CLEANOUT	
SO SIDE OPENING AREA INLET	
TELECOMMUNICATIONS	
CH COMPOSITE HANDHOLE	
FO FIBER OPTIC MARKER	
SD SATELLITE DISH	
TM TELEPHONE MANHOLE	
TP TELEPHONE PEDESTAL	
TB TV/CABLE BOX	
TVM TV/CABLE MANHOLE	
TRAFFIC	
PS PEDESTRIAN SIGNAL	
SC SIGNAL CONTROL CABINET	
TB TRAFFIC BOX	
TH TRAFFIC HANDHOLE	
TM TRAFFIC MANHOLE	
TS TRAFFIC SIGNAL	
TSW TRAFFIC SIGNAL W/ STREET LIGHT	

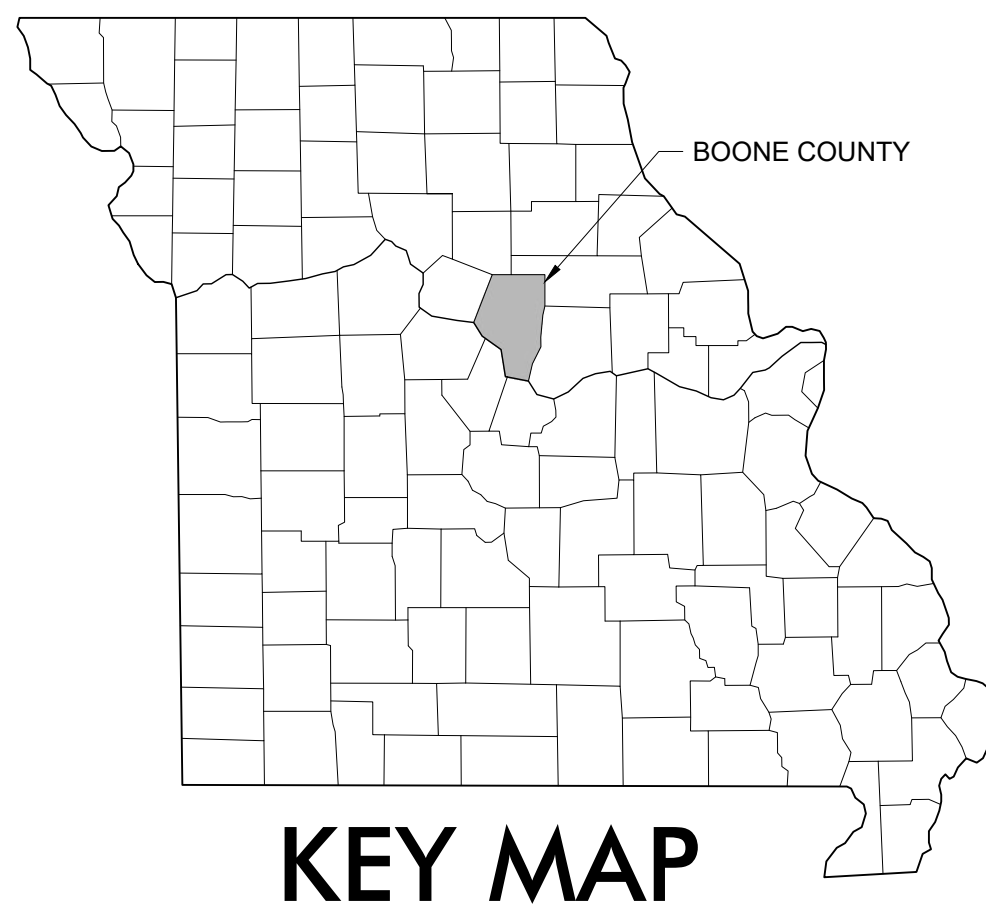
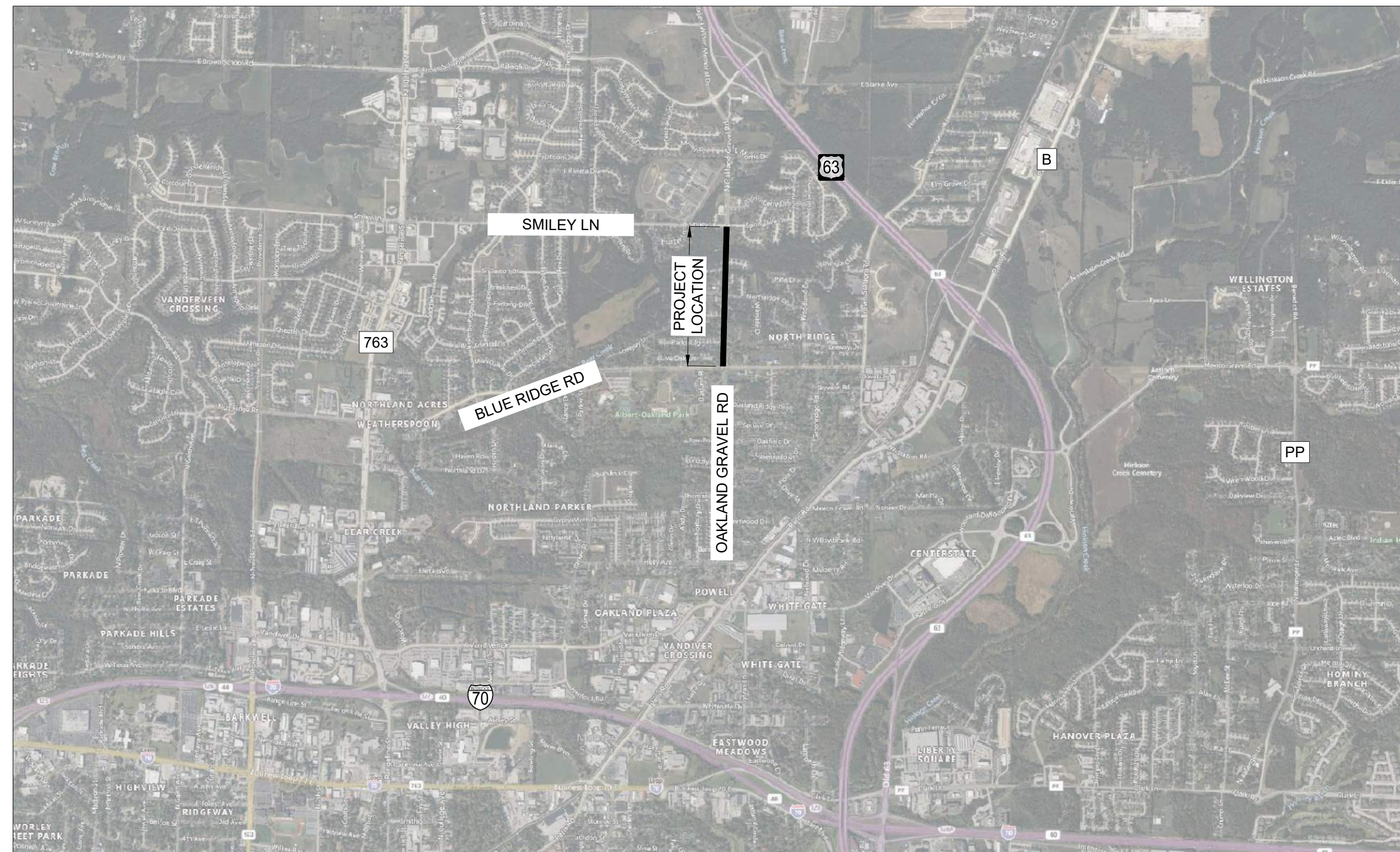
MONUMENTS	
B BENCHMARK	
B TEMP BENCHMARK (TEMPORARY)	
CP CONTROL POINT	
CX CUT X FOUND	
CX CUT X SET	
MF MONUMENT FOUND (FIRST TYPE)	
MS MONUMENT FOUND (SECOND TYPE)	
MS MONUMENT SET (FIRST TYPE)	
MS MONUMENT SET (SECOND TYPE)	
SC SECTION CORNER FOUND	
SC SECTION CORNER SET	
T T POST	
WP WOODEN POST	

RAILROAD	
MLM MAINLINE MILE MARKER	
PS POINT OF SWITCH	
RS RAILROAD SIGNAL	
SANITARY SEWER	
SSC SANITARY SEWER CLEANOUT	
SSM SANITARY SEWER MANHOLE	
STL SEPTIC TANK LID	

DEMOLITION	
RX REMOVE TREE	

UTILITY WARNING
THE UTILITIES DEPICTED ON THIS DOCUMENT HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR RECORDS OBTAINED. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN COMPRISE ALL SUCH ITEMS IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES OR SUBSURFACE FEATURES SHOWN ARE IN THE EXACT LOCATION INDICATED EXCEPT WHERE NOTED AS QUALITY LEVEL A.

SHEET INDEX	
#	TITLE
1	PRELIMINARY DESIGN-COVER
2	PRELIMINARY DESIGN-PLAN 1
3	PRELIMINARY DESIGN-PLAN 2
4	PRELIMINARY DESIGN-PLAN 3
5	PRELIMINARY DESIGN-DETAILS 1
6	PRELIMINARY DESIGN-DETAILS 2



UTILITY CONTACTS	
ELECTRIC CITY OF COLUMBIA, WATER & LIGHT 701 E. BROADWAY COLUMBIA, MISSOURI 65201 573-874-2489	NATURAL GAS AMEREN MISSOURI 2001 MAGUIRE BLVD. COLUMBIA, MISSOURI 65201 573-876-3028
ELECTRIC BOONE ELECTRIC COOPERATIVE 1413 RANGELINE STREET COLUMBIA, MO 65201 573-449-4181	SEWER CITY OF COLUMBIA, SEWER UTILITY 701 E. BROADWAY COLUMBIA, MISSOURI 65201 573-874-2489
WATER CITY OF COLUMBIA, WATER & LIGHT 701 E. BROADWAY COLUMBIA, MISSOURI 65201 573-874-2489	SEWER BOONE COUNTY REGIONAL SEWER DISTRICT 1314 N. 7TH STREET COLUMBIA, MO 65201 573-443-2774
WATER PUBLIC WATER SUPPLY DISTRICT #9 391 E. BROADWAY COLUMBIA, MISSOURI 65201 573-474-9521	TELECOMMUNICATION SOCKET TELECOM 2703 CLARK LANE COLUMBIA, MISSOURI 65202 573-817-0000
TELECOMMUNICATION AT&T TRANSMISSION 800-252-1113	TELECOMMUNICATION BRIGHTSPEED 833-363-2360

- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH "CITY OF COLUMBIA STREET, STORM DRAIN AND SANITARY SEWER SPECIFICATIONS AND STANDARDS" (CURRENT EDITION).
- KNOWN UNDERGROUND UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. OTHER UTILITIES MAY EXIST.
- 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-__ SEEDING AND TS-__ EROSION CONTROL.
- REMOVE ALL PAVEMENT SURFACES, INLETS, PIPES AND SIDEWALKS WITHIN THE CONSTRUCTION LIMITS AS PER TS-__, EXCEPT THOSE NOTED TO REMAIN. THE FIELD INSPECTOR SHALL VERIFY REMOVALS.
- 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. ASPHALTIC "COLD MIX" SHALL BE USED AS A TEMPORARY PATCH OVERNIGHT. TEMPORARY PATCHING SHALL BE CONSIDERED INCIDENTAL TO THE WORK.
- 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). SIGNING SHOWN AS MINIMUM REQUIREMENTS FOR ADJACENT ROADWAYS SHALL BE INSTALLED PRIOR TO IMPROVEMENTS. CONTRACTOR RESPONSIBLE FOR ADDITIONAL SIGNING, MARKING, OR DELINEATORS FOR SITE SPECIFIC CONSTRUCTION PHASING TO COMPLY WITH MUTCD GUIDELINES.

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	Mission Provide safe, sustainable Infrastructure that promotes positive communities.
	701 East Broadway P.O. Box 6015 Columbia, MO 65205 (573) 875-2489
Shane Steven Creech Registered Professional Engineer PE-2007011061	Approved By _____ Director of Public Works Date _____

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NOTICE:
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans and Specifications.

MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253
EXPIRES: DECEMBER 31, 2024

**** PRELIMINARY ****
NOT FOR CONSTRUCTION

Ryan Fuller
MO PE-2016001250
December 9, 2024

REVISIONS

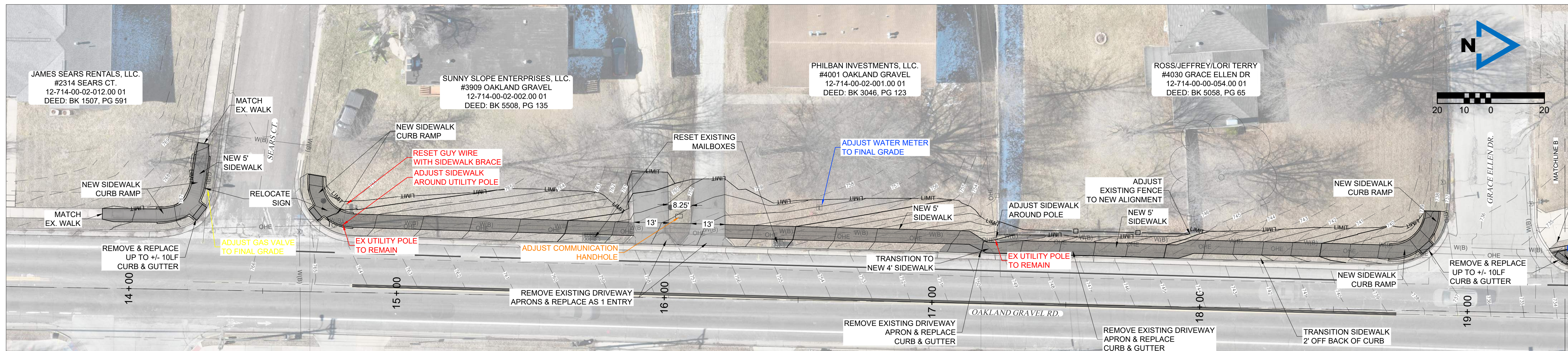
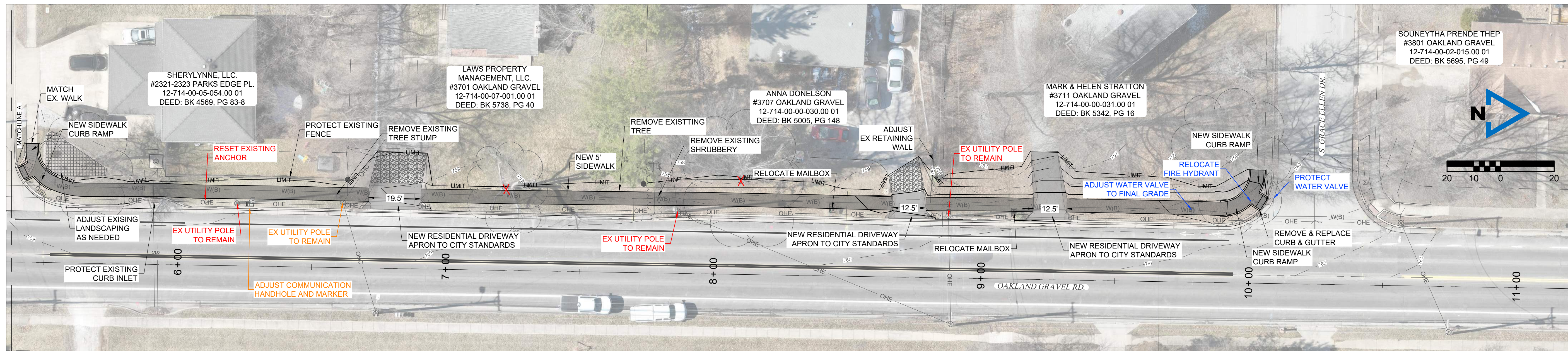
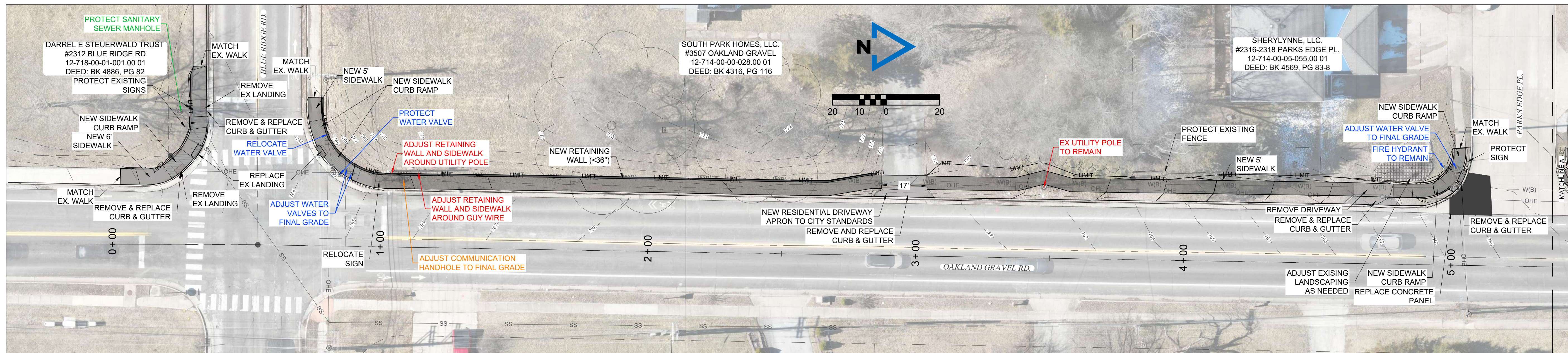
PROJECT INFO
2023002047

ENGINEER: JHT
DRAWN BY: SMH
CHECKED BY: RAF

OAKLAND GRAVEL ROAD SIDEWALK
COLUMBIA, MISSOURI
TAP 2101513

PRELIMINARY DESIGN-COVER

DRAWING NO.
1



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PROJECT INFO
2023002047

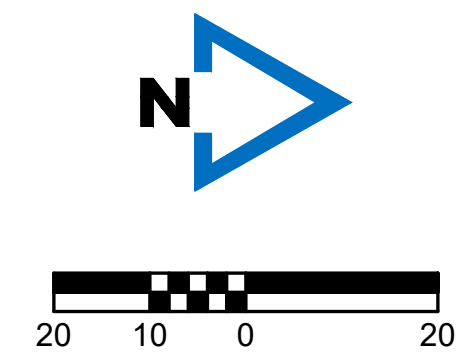
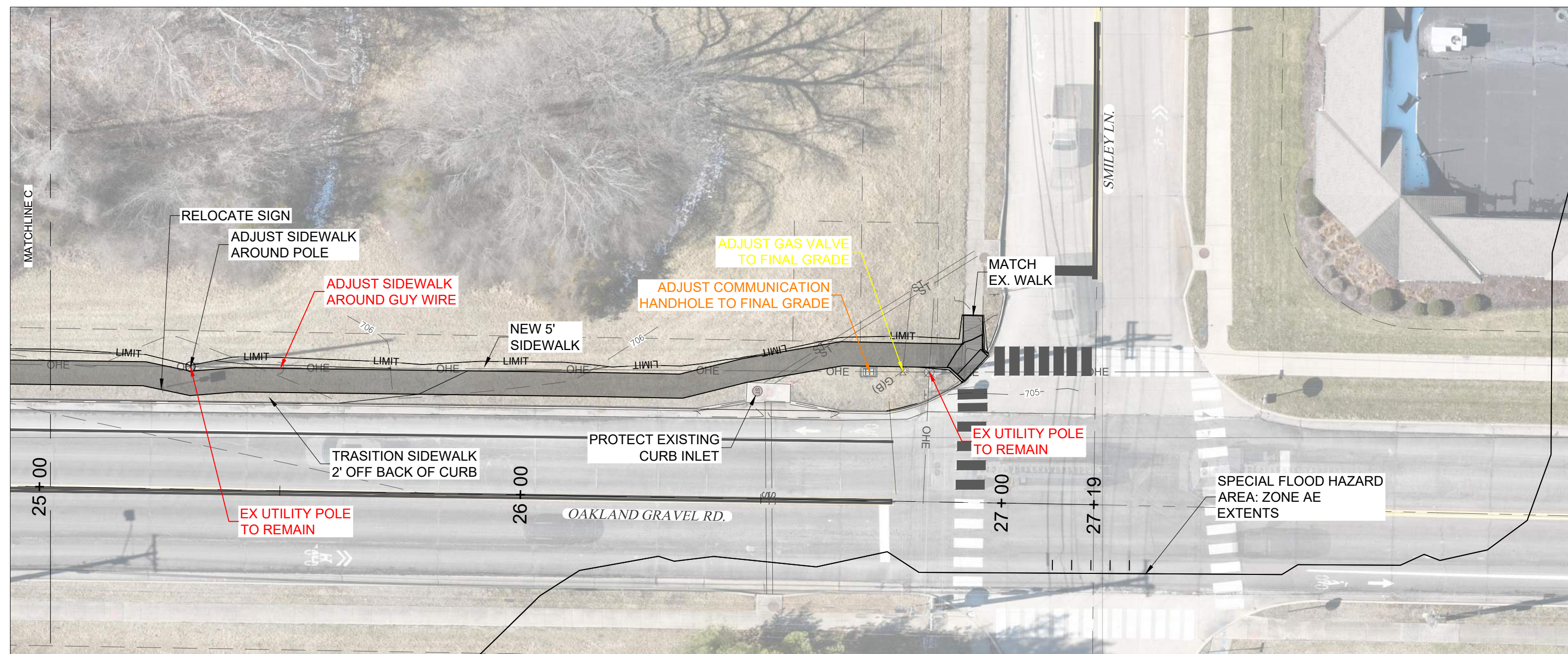
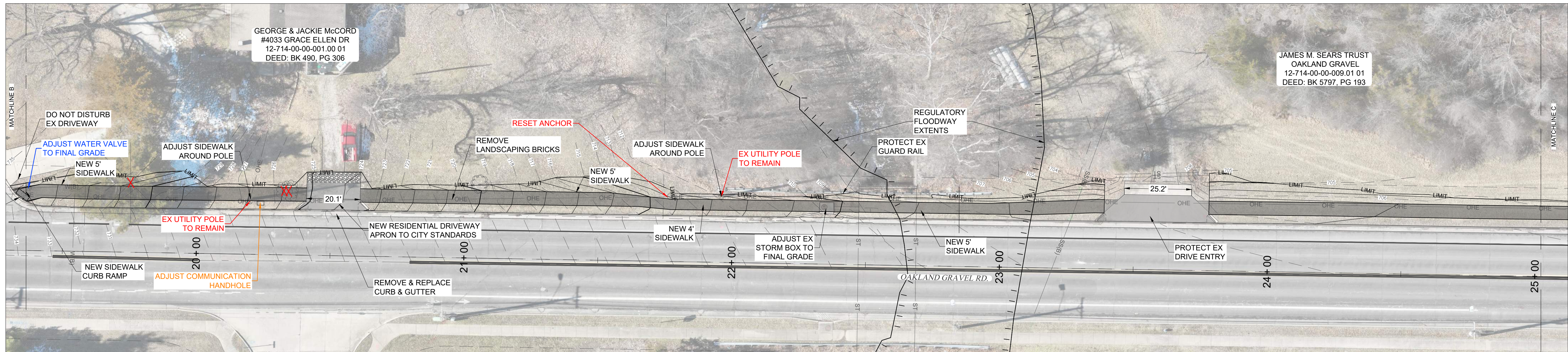
ENGINEER	DRAWN BY	CHECKED BY
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OAKLAND GRAVEL SIDEWALK
COLUMBIA, MISSOURI
TAP 2101513

PRELIMINARY DESIGN-PLAN 1

DRAWING NO.
2

P:2023002047-04-DRAWINGS\08-EXHIBITS-CONCEPTS\2023002047 PRELIMINARY-CHECK PLANS.DWG



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NOT FOR CONSTRUCTION

Ryan Fuller
 MO PE-2016001250
 December 9, 2024

REVISIONS

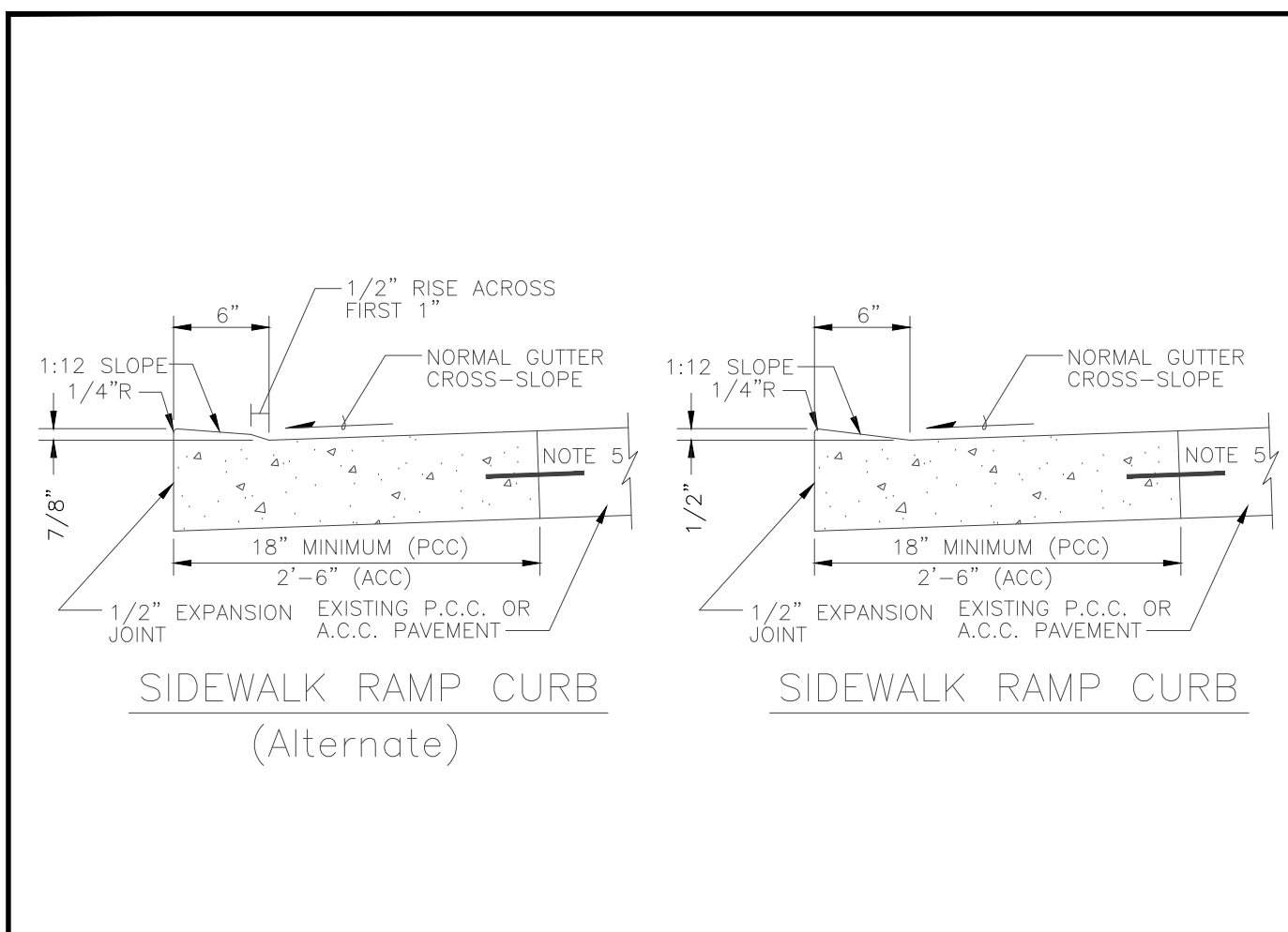
PROJECT INFO
 2023002047

ENGINEER	DRAWN BY	CHECKED BY
###	###	###

**OAKLAND GRAVEL SIDEWALK
 COLUMBIA, MISSOURI
 TAP 2101513
 PRELIMINARY DESIGN-PLAN 2**

DRAWING NO.
3

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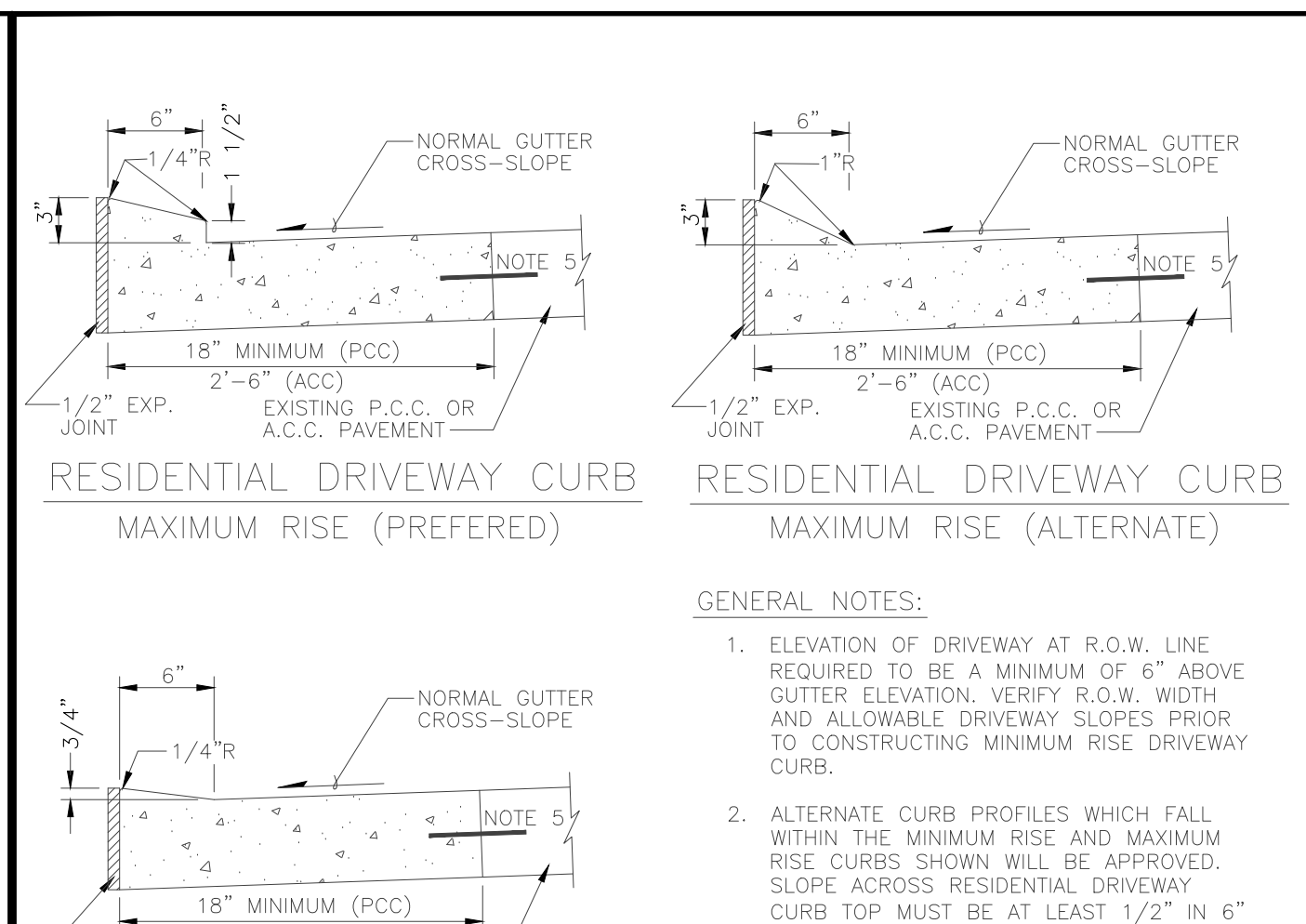
SIDEWALK RAMP CURB (Alternate)

PCC PAVEMENT NOTES:

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

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



RESIDENTIAL DRIVEWAY CURB MAXIMUM RISE (PREFERRED)

RESIDENTIAL DRIVEWAY CURB MAXIMUM RISE (ALTERNATE)

RESIDENTIAL DRIVEWAY CURB MINIMUM RISE

GENERAL NOTES:

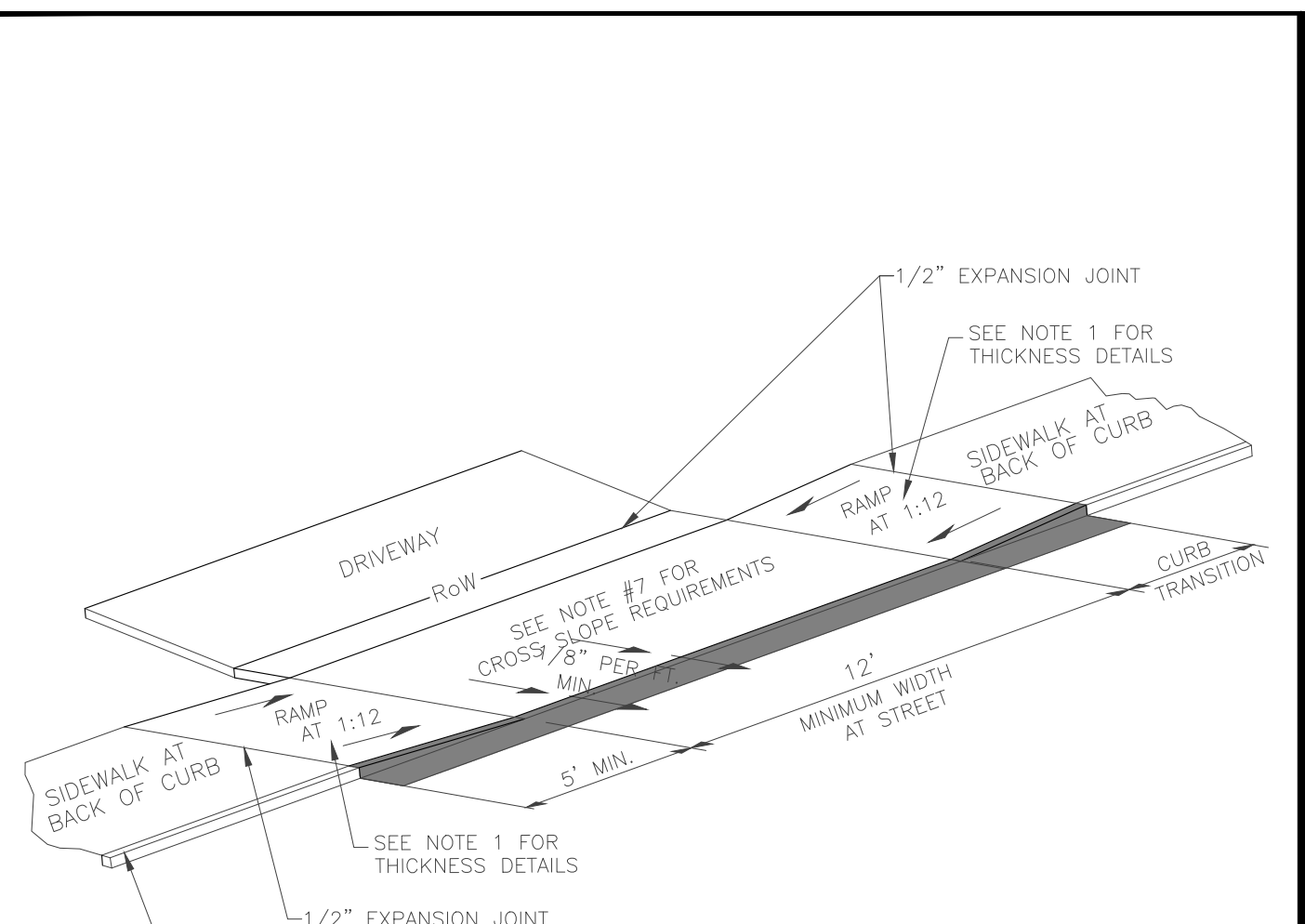
- ELEVATION OF DRIVEWAY AT R.O.W. LINE REQUIRED TO BE A MINIMUM OF 6" ABOVE GUTTER ELEVATION. VERIFY R.O.W. WIDTH AND ALLOWABLE DRIVEWAY SLOPES PRIOR TO CONSTRUCTING MINIMUM RISE DRIVEWAY CURB.
- ALTERNATE CURB PROFILES WHICH FALL WITHIN THE MINIMUM RISE AND MAXIMUM RISE CURBS SHOWN WILL BE APPROVED. SLOPE ACROSS RESIDENTIAL DRIVEWAY CURB TOP MUST BE AT LEAST 1/2" IN 6" TOWARD THE STREET.
- 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.

PCC PAVEMENT NOTES:

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- PAVEMENT THICKNESS SHALL MATCH EXISTING. BASE SHALL MATCH EXISTING.
- EXPANSION JOINTS AND CONTRACTION JOINTS SHALL BE PLACED AT LOCATIONS SIMILAR TO THE PAVEMENT WHICH WAS REMOVED.
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ACC PAVEMENT NOTES:

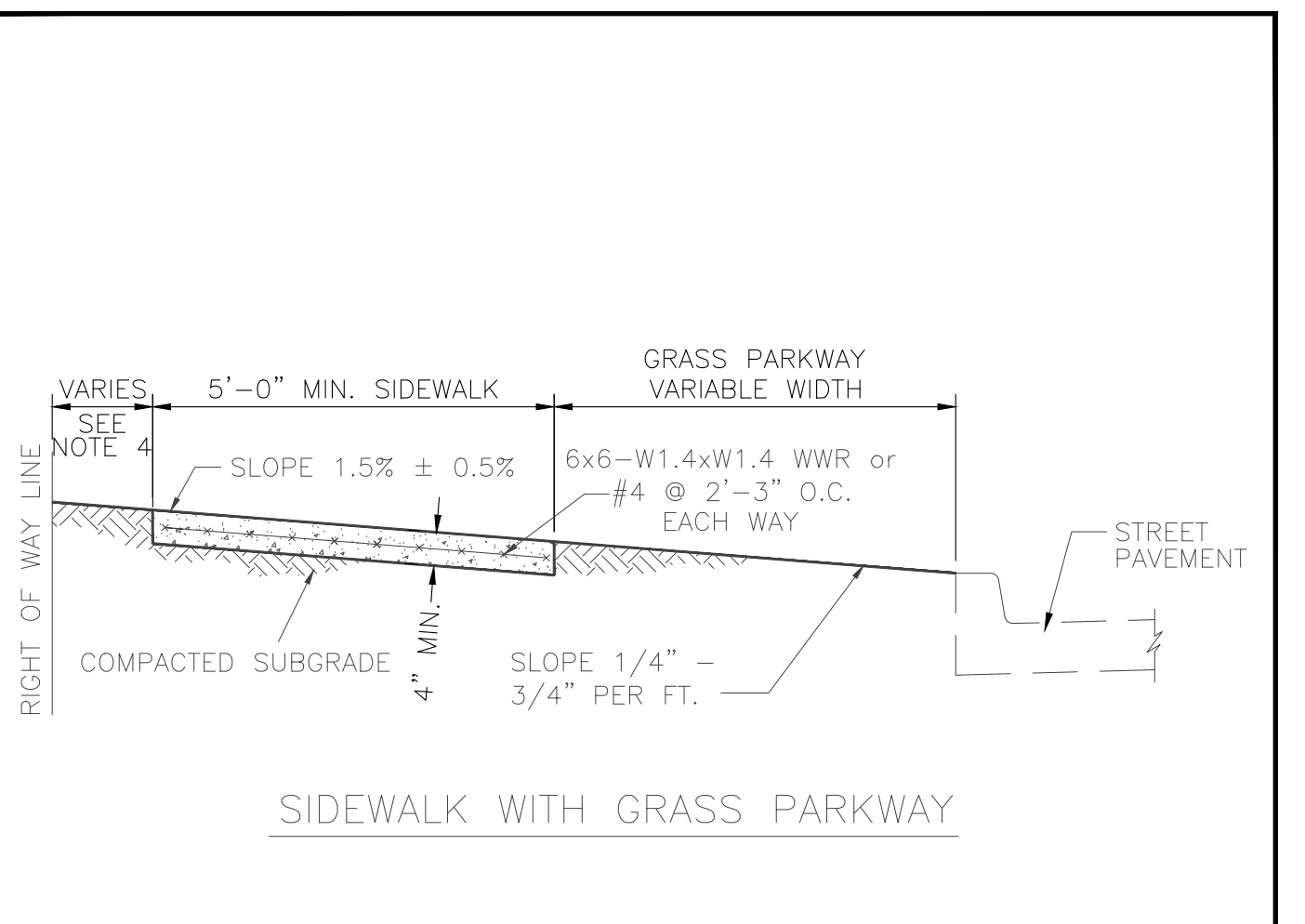
- CONCRETE SHALL BE MoDOT PAVEMENT CONCRETE.
- GUTTER THICKNESS SHALL MATCH EXISTING. BASE SHALL MATCH EXISTING.
- EXPANSION JOINTS AND CONTRACTION JOINTS SHALL BE PLACED AT LOCATIONS SIMILAR TO THE CURB AND GUTTER WHICH WAS REMOVED.
- CURB EDGE SHALL BE TOOLED WITH 1/4" RADIUS
- WHERE EXISTING PAVEMENT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



SIDEWALK DRIVEWAY DETAIL Sidewalk at Back of Curb

NOTE:

- RAMP SHALL BE 6" THICK MoDOT PAVEMENT CONCRETE FOR RESIDENTIAL, 7" THICK MoDOT PAVEMENT CONCRETE FOR COMMERCIAL.
- EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
- DRIVEWAY CROSS SLOPE SHALL NOT EXCEED 2.00%.
- ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
- REPLACE STANDARD CURB SECTION DRIVEWAY CURB SECTION - DETAIL 400.02 OR 400.03
- RAMP LENGTH IS DEPENDENT UPON 1:12 MAX. SLOPE AT 5' MINIMUM TRANSITION AREA. USE FLATTER WHEN POSSIBLE.
- A PEDESTRIAN ACCESSIBLE ROUTE SHALL BE PROVIDED THAT IS 4'-0" WIDE MINIMUM WITH A CROSS SLOPE OF 1.5% ± 0.5% (MAXIMUM CROSS SLOPE OF 2.0%).
- DRIVEWAY MAY BE REINFORCED AT OWNERS OPTION. ON CITY BID PROJECTS DO NOT REINFORCE.



SIDEWALK WITH GRASS PARKWAY

NOTE:

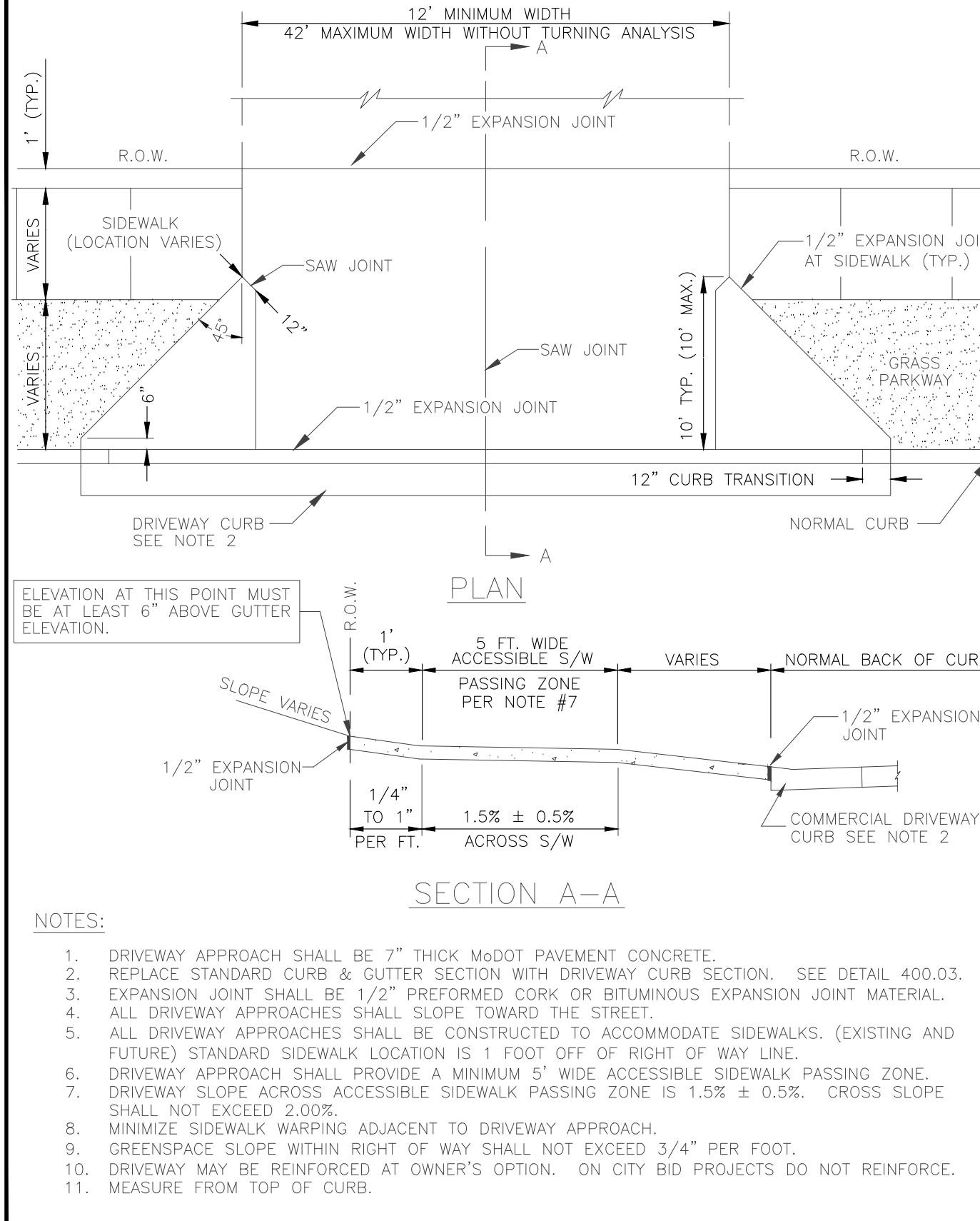
- SIDEWALK SHALL BE 4" THICK MoDOT PAVEMENT CONCRETE.
- INSTALL 1/2" EXPANSION JOINTS AT INTERSECTIONS, RAMPS, STRUCTURES, DRIVEWAY APPROACHES, OR EVERY 100'.
- INSTALL TRANSVERSE SAW JOINTS AT SPACING EQUAL TO SIDEWALK WIDTH.
- STANDARD SIDEWALK PLACEMENT IS 12" FROM RIGHT OF WAY LINE.
- NO STEEL TO BE PLACED THROUGH EXPANSION JOINT.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2.00%.
- DAMAGED SIDEWALK MUST BE PINNED TO EXISTING SIDEWALK.
- WWR OR REBAR SHALL BE ACCURATELY PLACED AND FIRMLY HELD IN PLACE DURING CONCRETE PLACEMENT BY APPROVED METHODS, SEE SECTION 238.9.

Approved	10/01/16	Date		CURB DETAILS (Sidewalk Ramp)	400.01
Revisions					

Approved	10/01/16	Date		CURB DETAILS (Residential Driveway)	400.02
Revisions					

Approved	07/01/20	Date		SIDEWALK DRIVEWAY DETAIL Sidewalk at Back of Curb	410.07
Revisions					

Approved	07/01/20	Date		SIDEWALK	420.01
Revisions					



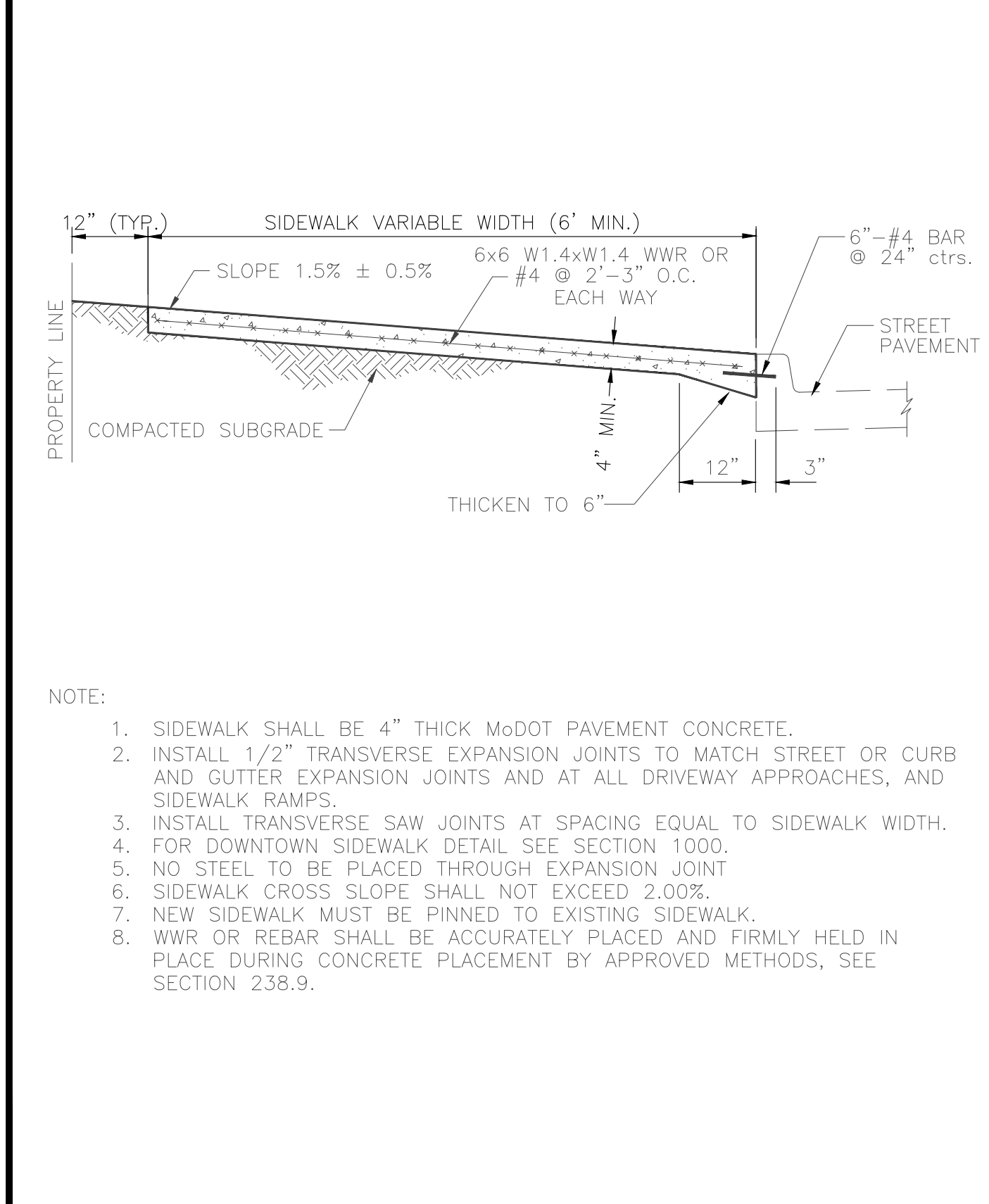
DRIVE APPROACH (Commercial)

PLAN

SECTION A-A

NOTES:

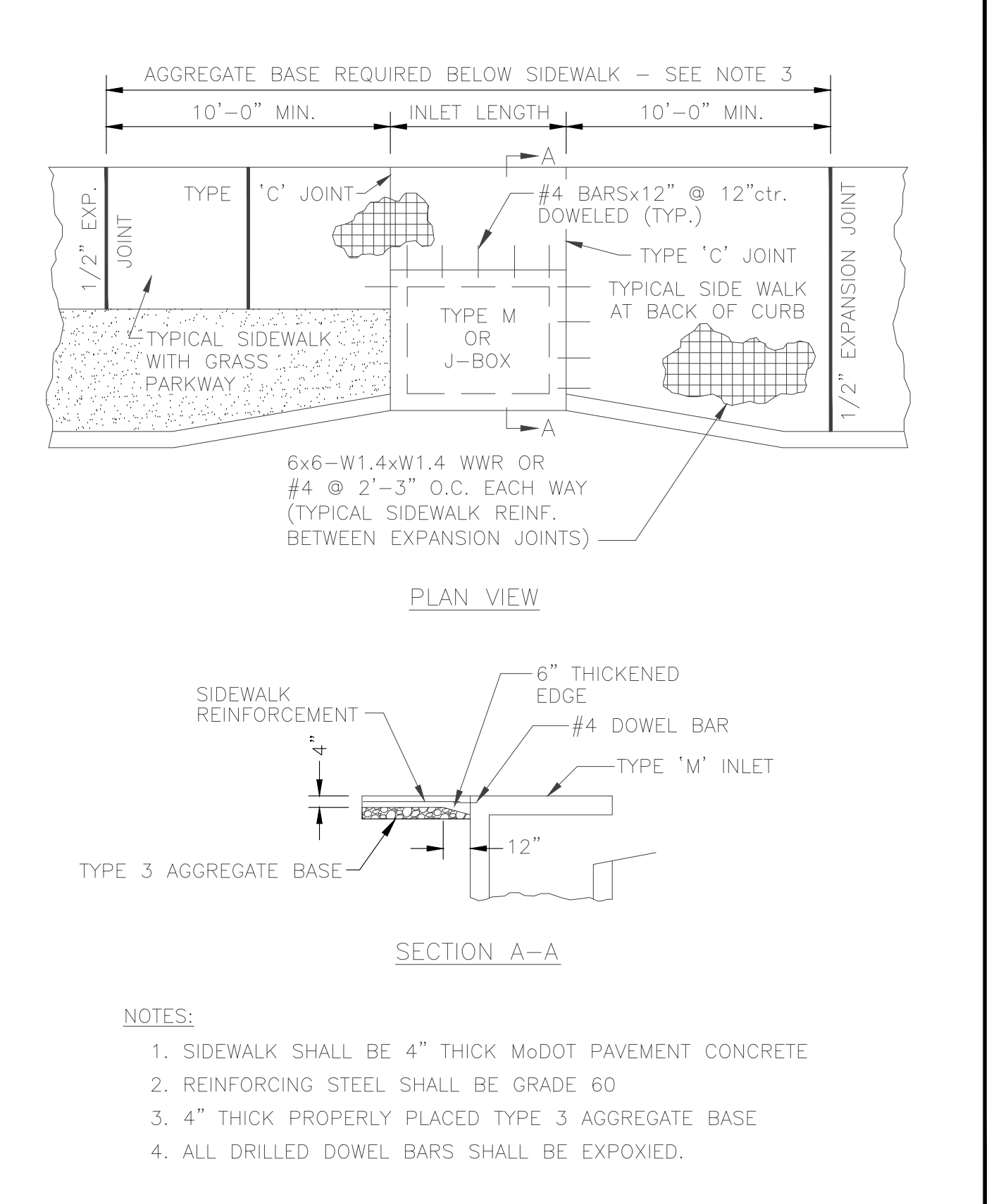
- DRIVEWAY APPROACH SHALL BE 7" THICK MoDOT PAVEMENT CONCRETE.
- REPLACE STANDARD CURB & GUTTER SECTION WITH DRIVEWAY CURB SECTION. SEE DETAIL 400.03.
- EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
- ALL DRIVEWAY APPROACHES SHALL SLOPE TOWARD THE STREET.
- ALL DRIVEWAY APPROACHES SHALL BE CONSTRUCTED TO ACCOMMODATE SIDEWALKS. (EXISTING AND FUTURE) STANDARD SIDEWALK LOCATION IS 1 FOOT OFF OF RIGHT OF WAY LINE.
- DRIVEWAY APPROACH SHALL PROVIDE A MINIMUM 5' WIDE ACCESSIBLE SIDEWALK PASSING ZONE.
- DRIVEWAY SLOPE ACROSS ACCESSIBLE SIDEWALK PASSING ZONE IS 1.5% ± 0.5%. CROSS SLOPE SHALL NOT EXCEED 2.00%.
- MINIMIZE SIDEWALK WARPING ADJACENT TO DRIVEWAY APPROACH.
- GREENSPACE SLOPE WITHIN RIGHT OF WAY SHALL NOT EXCEED 3/4" PER FOOT.
- DRIVEWAY MAY BE REINFORCED AT OWNER'S OPTION. ON CITY BID PROJECTS DO NOT REINFORCE.
- MEASURE FROM TOP OF CURB.



SIDEWALK AT BACK OF CURB

NOTE:

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



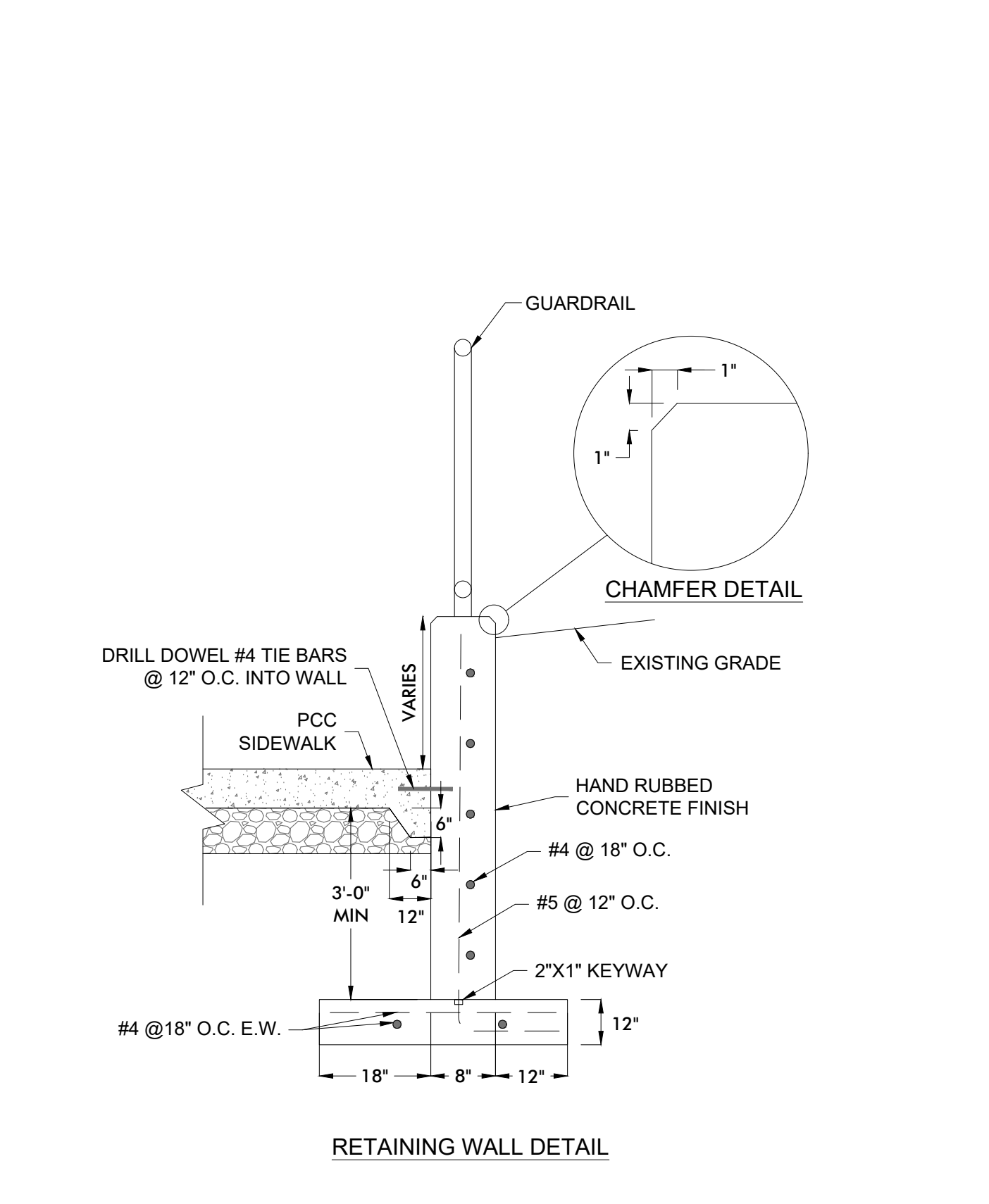
SIDEWALK REINFORCEMENT AT DRAINAGE STRUCTURE

PLAN VIEW

SECTION A-A

NOTES:

- SIDEWALK SHALL BE 4" THICK MoDOT PAVEMENT CONCRETE
- REINFORCING STEEL SHALL BE GRADE 60
- 4" THICK PROPERLY PLACED TYPE 3 AGGREGATE BASE
- ALL DRILLED DOWEL BARS SHALL BE EXPOXIED.



RETAINING WALL DETAIL

Approved	07/01/20	Date		DRIVE APPROACH (Commercial)	410.03
Revisions					

Approved	07/01/20	Date		SIDEWALK AT BACK OF CURB	420.02
Revisions					

Approved	10/01/16	Date		SIDEWALK REINFORCEMENT AT DRAINAGE STRUCTURE	420.03
Revisions					

McCLURE™

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MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253 EXPIRES: DECEMBER 31, 2024

**** PRELIMINARY ** NOT FOR CONSTRUCTION**

Ryan Fuller
MO PE-2016001250
December 9, 2024

REVISIONS

OAKLAND GRAVEL SIDEWALK COLUMBIA, MISSOURI TAP 2101513

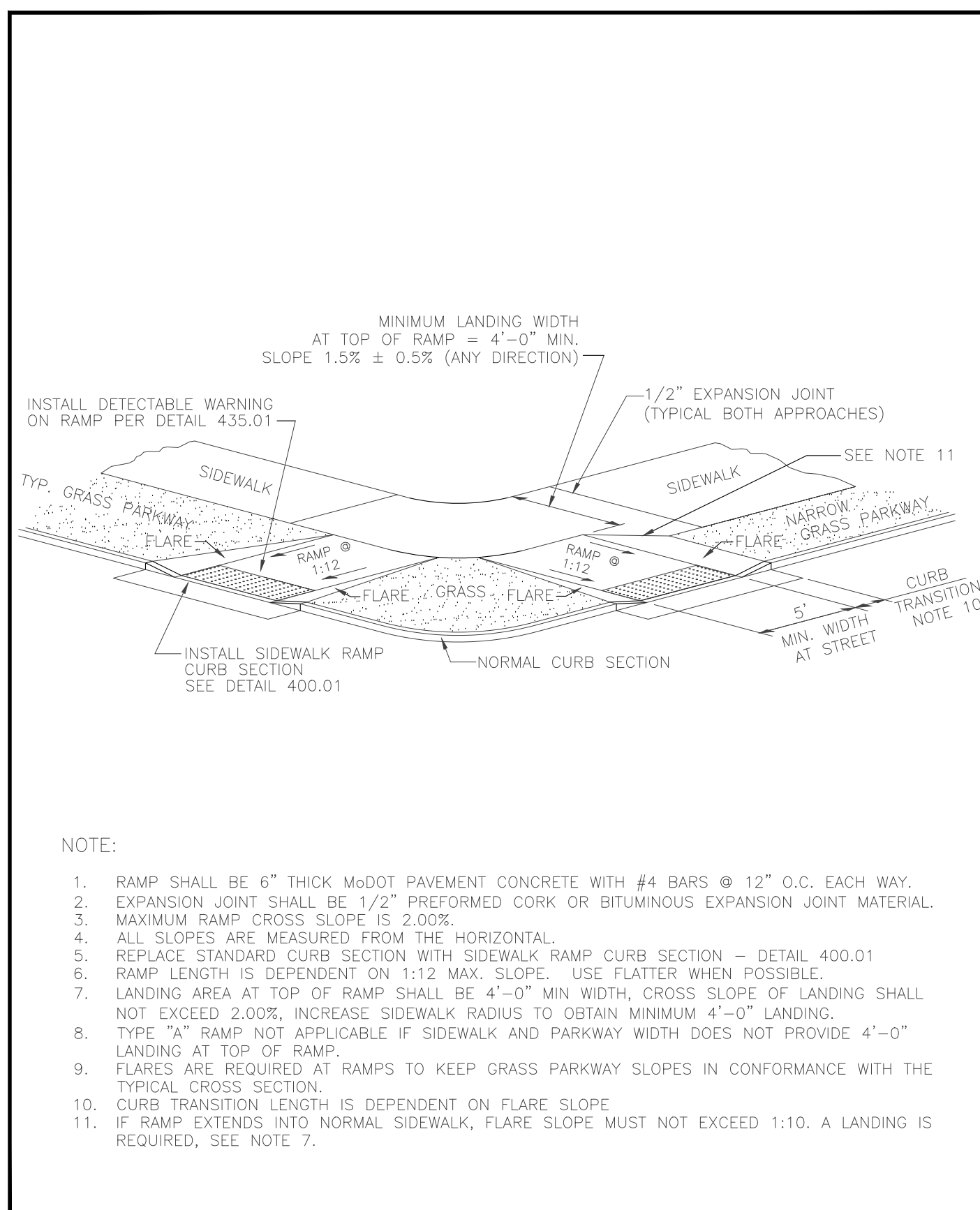
PRELIMINARY DESIGN-DETAILS 1

PROJECT INFO
2023002047

ENGINEER: ### DRAWN BY: ### CHECKED BY: ###

DRAWING NO. 4

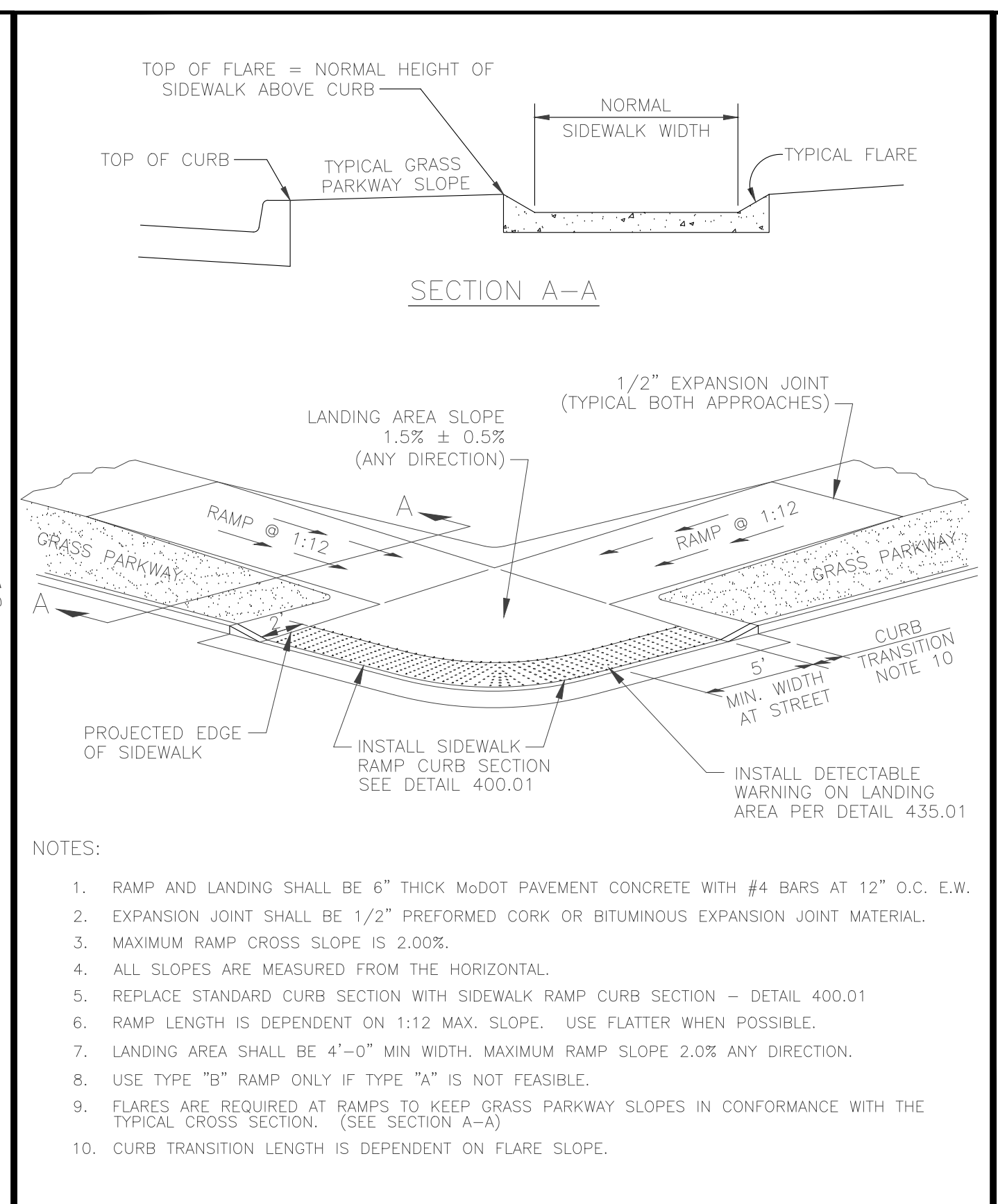
P:2023002047/04-DRAWINGS/08-EXHIBITS-CONCEPTS/2023002047 PRELIMINARY-CHECK PLANS.DWG



- NOTE:
- RAMP SHALL BE 6" THICK MODOT PAVEMENT CONCRETE WITH #4 BARS @ 12" O.C. EACH WAY.
 - EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
 - MAXIMUM RAMP CROSS SLOPE IS 2.00%.
 - ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
 - REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
 - RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
 - LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.00%, INCREASE SIDEWALK RADIUS TO OBTAIN MINIMUM 4'-0" LANDING.
 - TYPE "A" RAMP NOT APPLICABLE IF SIDEWALK AND PARKWAY WIDTH DOES NOT PROVIDE 4'-0" LANDING AT TOP OF RAMP.
 - FLARES ARE REQUIRED AT RAMP TO KEEP GRASS PARKWAY SLOPES IN CONFORMANCE WITH THE TYPICAL CROSS SECTION.
 - CURB TRANSITION LENGTH IS DEPENDENT ON FLARE SLOPE.
 - IF RAMP EXTENDS INTO NORMAL SIDEWALK, FLARE SLOPE MUST NOT EXCEED 1:10. A LANDING IS REQUIRED, SEE NOTE 7.

Approved	07/01/20	Date
Revisions		

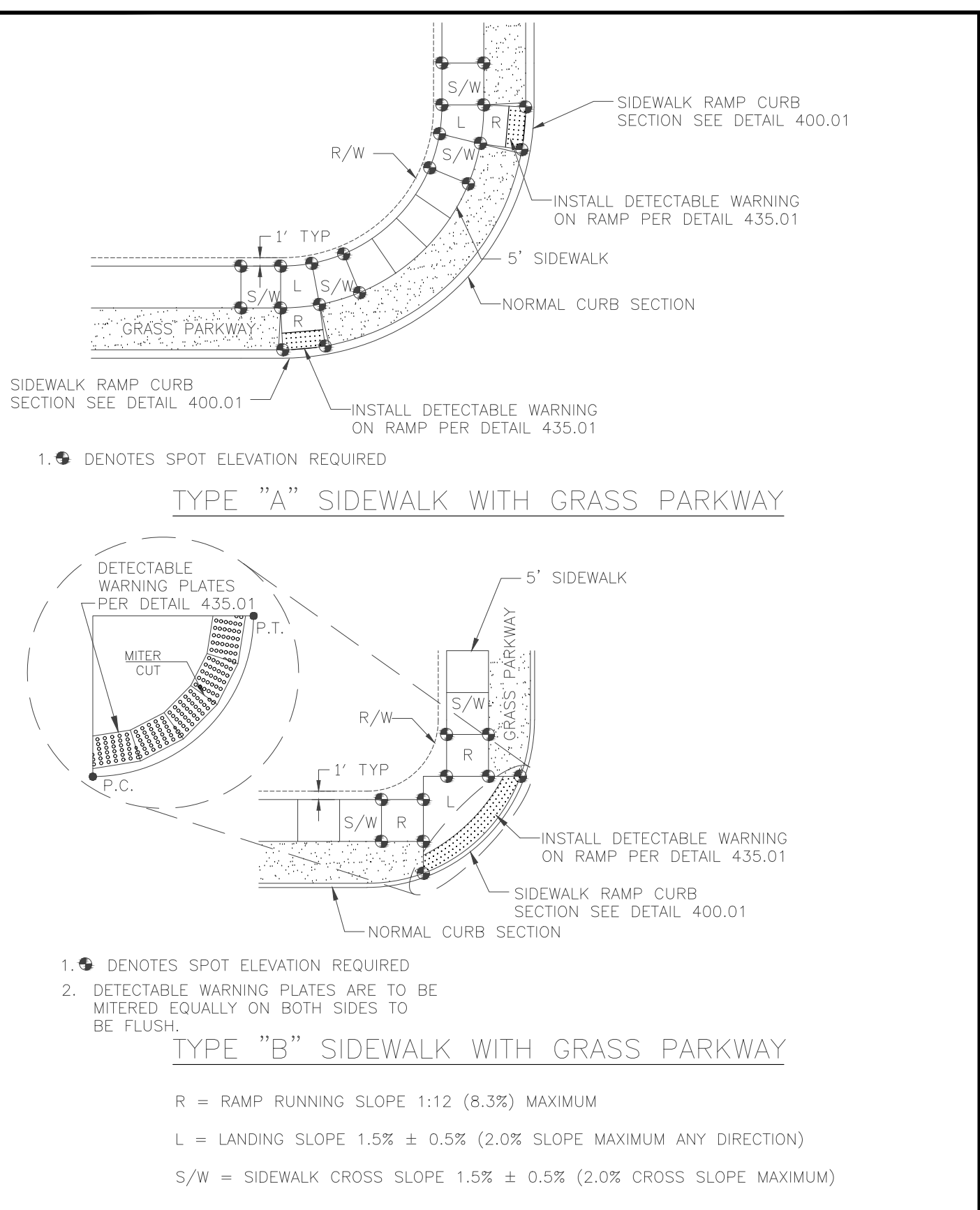
	SIDEWALK RAMP Sidewalk with Grass Parkway (Type A)	430.01
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- NOTE:
- RAMP AND LANDING SHALL BE 6" THICK MODOT PAVEMENT CONCRETE WITH #4 BARS AT 12" O.C. E.W.
 - EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
 - MAXIMUM RAMP CROSS SLOPE IS 2.00%.
 - ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
 - REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
 - RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
 - LANDING AREA SHALL BE 4'-0" MIN WIDTH. MAXIMUM RAMP SLOPE 2.0% ANY DIRECTION.
 - USE TYPE "B" RAMP ONLY IF TYPE "A" IS NOT FEASIBLE.
 - FLARES ARE REQUIRED AT RAMP TO KEEP GRASS PARKWAY SLOPES IN CONFORMANCE WITH THE TYPICAL CROSS SECTION. (SEE SECTION A-A)
 - CURB TRANSITION LENGTH IS DEPENDENT ON FLARE SLOPE.

Approved	07/01/20	Date
Revisions		

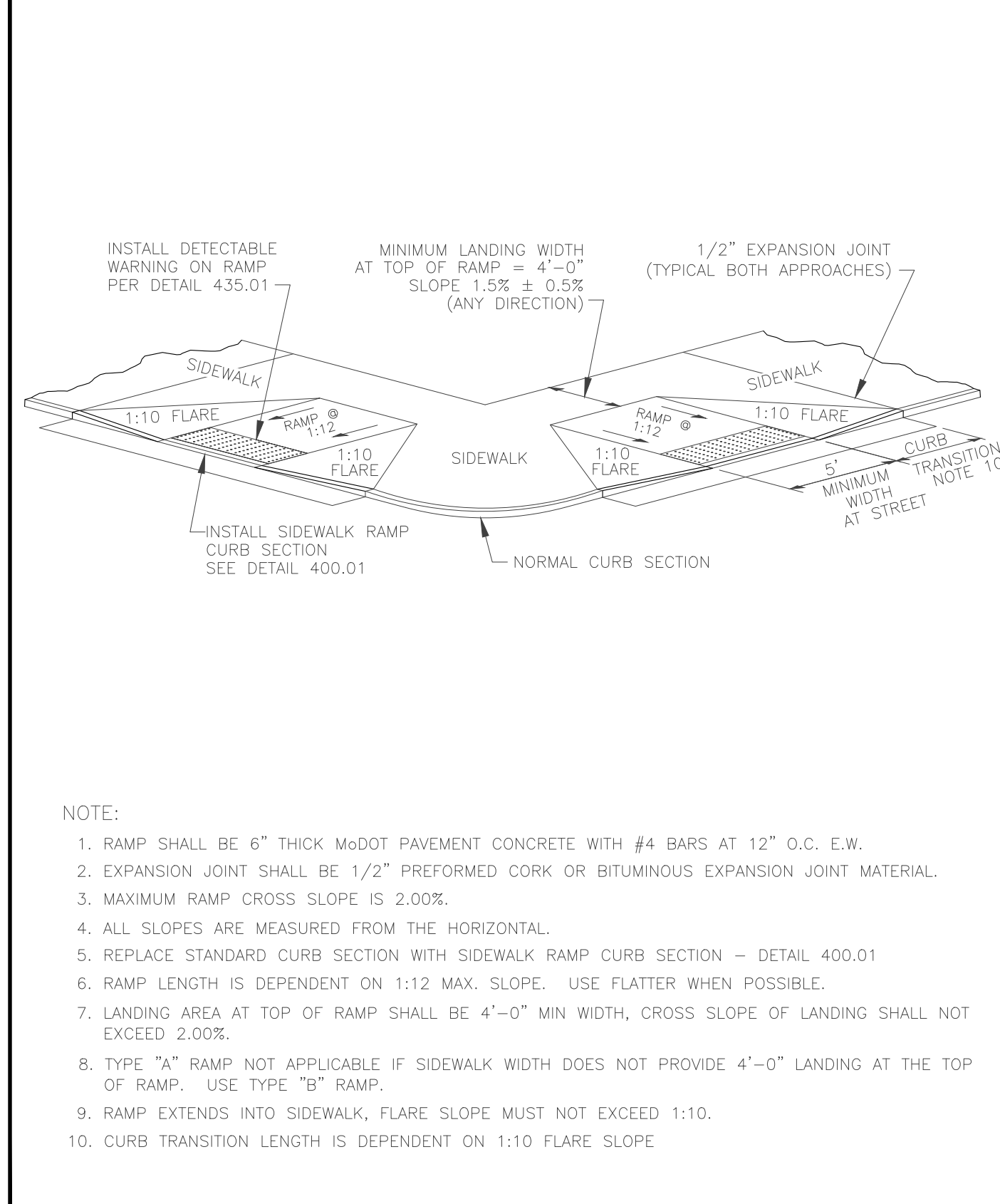
	SIDEWALK RAMP Sidewalk with Grass Parkway (Type B)	430.02
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- NOTE:
1. DENOTES SPOT ELEVATION REQUIRED
 2. DETECTABLE WARNING PLATES ARE TO BE MITERED EQUALLY ON BOTH SIDES TO BE FLUSH.
- R = RAMP RUNNING SLOPE 1:12 (8.3%) MAXIMUM
 L = LANDING SLOPE 1.5% ± 0.5% (2.0% SLOPE MAXIMUM ANY DIRECTION)
 S/W = SIDEWALK CROSS SLOPE 1.5% ± 0.5% (2.0% CROSS SLOPE MAXIMUM)

Approved	07/01/20	Date
Revisions		

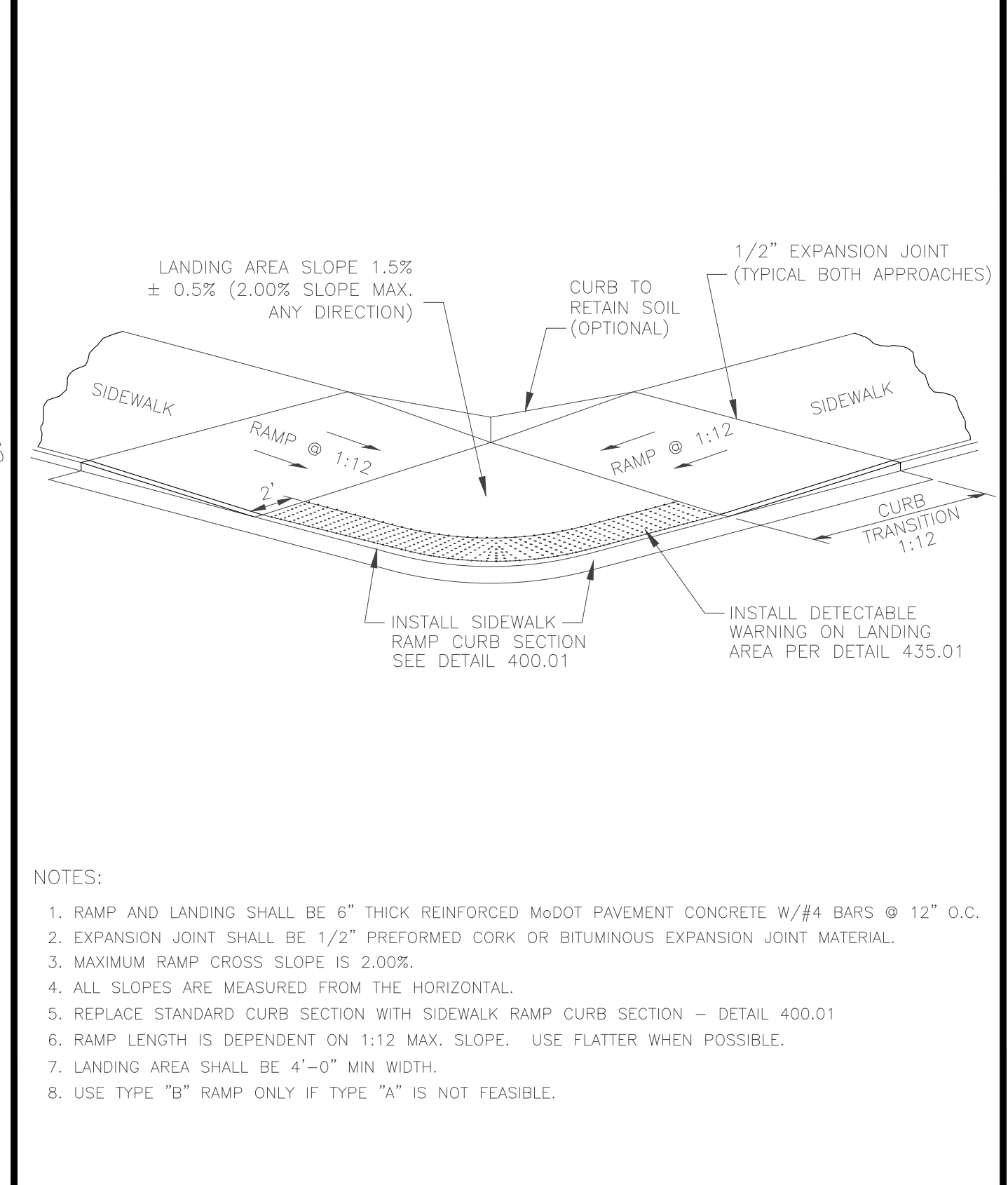
	SIDEWALK RAMP PLAN VIEW Sidewalk with Grass Parkway (Type A & B)	430.03
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- NOTE:
- RAMP SHALL BE 6" THICK MODOT PAVEMENT CONCRETE WITH #4 BARS AT 12" O.C. E.W.
 - EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
 - MAXIMUM RAMP CROSS SLOPE IS 2.00%.
 - ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
 - REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
 - RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
 - LANDING AREA AT TOP OF RAMP SHALL BE 4'-0" MIN WIDTH, CROSS SLOPE OF LANDING SHALL NOT EXCEED 2.00%.
 - TYPE "A" RAMP NOT APPLICABLE IF SIDEWALK WIDTH DOES NOT PROVIDE 4'-0" LANDING AT THE TOP OF RAMP. USE TYPE "B" RAMP.
 - RAMP EXTENDS INTO SIDEWALK, FLARE SLOPE MUST NOT EXCEED 1:10.
 - CURB TRANSITION LENGTH IS DEPENDENT ON 1:10 FLARE SLOPE

Approved	07/01/20	Date
Revisions		

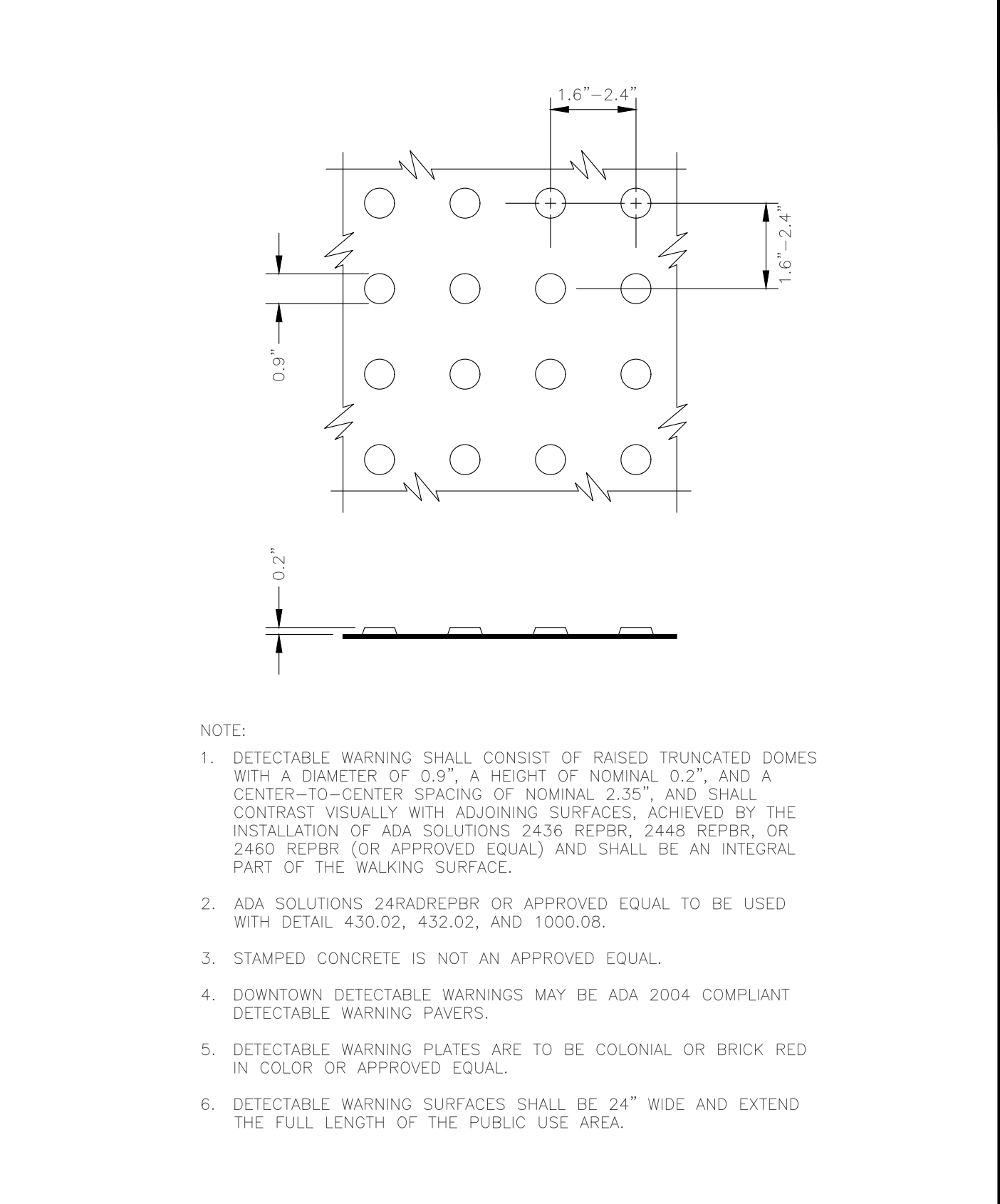
	SIDEWALK RAMP Sidewalk at Back of Curb (Type A)	432.01
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- NOTE:
- RAMP AND LANDING SHALL BE 6" THICK REINFORCED MODOT PAVEMENT CONCRETE W/#4 BARS @ 12" O.C.
 - EXPANSION JOINT SHALL BE 1/2" PREFORMED CORK OR BITUMINOUS EXPANSION JOINT MATERIAL.
 - MAXIMUM RAMP CROSS SLOPE IS 2.00%.
 - ALL SLOPES ARE MEASURED FROM THE HORIZONTAL.
 - REPLACE STANDARD CURB SECTION WITH SIDEWALK RAMP CURB SECTION - DETAIL 400.01
 - RAMP LENGTH IS DEPENDENT ON 1:12 MAX. SLOPE. USE FLATTER WHEN POSSIBLE.
 - LANDING AREA SHALL BE 4'-0" MIN WIDTH.
 - USE TYPE "B" RAMP ONLY IF TYPE "A" IS NOT FEASIBLE.

Approved	07/01/20	Date
Revisions		

	SIDEWALK RAMP Sidewalk at Back of Curb (Type B)	432.02
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- NOTE:
- 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.
 - ADA SOLUTIONS 24RADREPBR OR APPROVED EQUAL TO BE USED WITH DETAIL 430.02, 432.02, AND 1000.08.
 - STAMPED CONCRETE IS NOT AN APPROVED EQUAL.
 - DOWNTOWN DETECTABLE WARNINGS MAY BE ADA 2004 COMPLIANT DETECTABLE WARNING PAVERS.
 - DETECTABLE WARNING PLATES ARE TO BE COLONIAL OR BRICK RED IN COLOR OR APPROVED EQUAL.
 - DETECTABLE WARNING SURFACES SHALL BE 24" WIDE AND EXTEND THE FULL LENGTH OF THE PUBLIC USE AREA.

Approved	10/01/16	Date
Revisions		

	DETECTABLE WARNING	435.01
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MISSOURI CERTIFICATE OF AUTHORITY NO. E-2006023253
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**** PRELIMINARY ****
 NOT FOR CONSTRUCTION

Ryan Fuller
 MO PE-2016001250
 December 9, 2024

REVISIONS

PROJECT INFO
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ENGINEER DRAWN BY CHECKED BY
 ### ##

OAKLAND GRAVEL SIDEWALK
 COLUMBIA, MISSOURI
 TAP 2101513

PRELIMINARY DESIGN-DETAILS 2

DRAWING NO.
 5

P:2023002047/04-DRAWINGS/08-EXHIBITS-CONCEPTS/2023002047 PRELIMINARY-CHECK PLANS.DWG