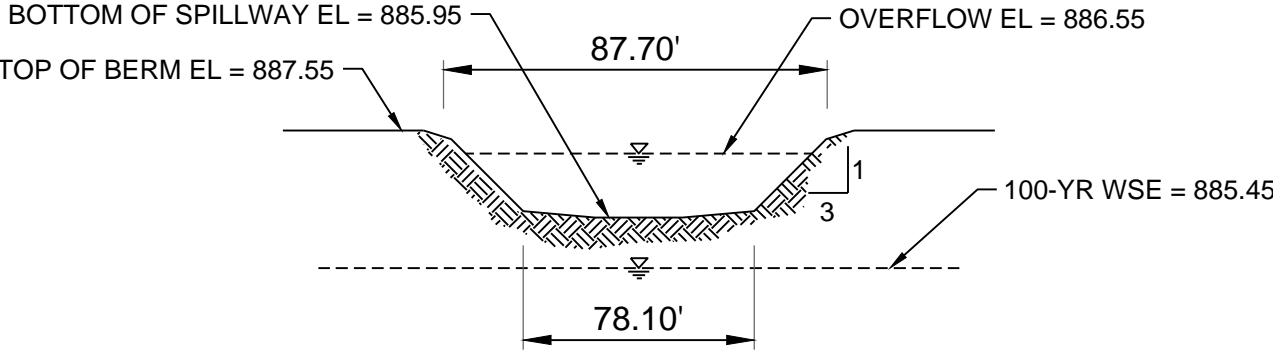


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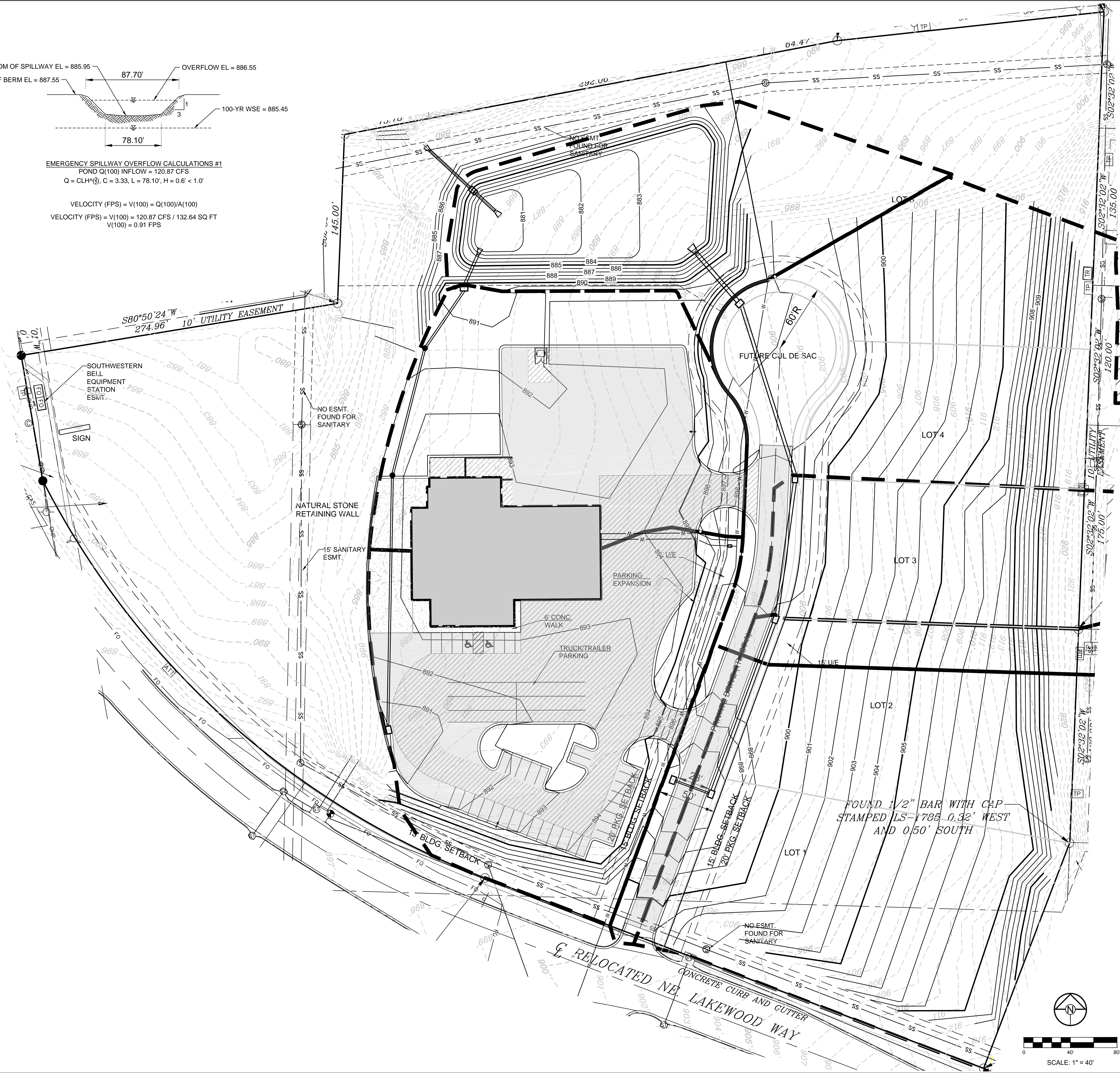
GRADING NOTES:

1. NO EDGE DRAINS OR UNDERDRAINS ARE INDICATED BEHIND THE CURBS. OWNER SHOULD CONSIDER THE INSTALLATION OF UNDERDRAINS DUE TO THE IRRIGATION OF GREENSPACE AREAS OF THE SITE.
2. RECOMMEND A GEOTECHNICAL ENGINEER REVIEW ALL EARTHWORK ACTIVITY TO MAKE SURE RECOMMENDATIONS IN GEOTECHNICAL REPORT ARE FOLLOWED.
3. PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT, GEOTECHNICAL ENGINEER MUST APPROVE SUBGRADE IN WRITTEN FORM TO THE OWNER AND PROJECT ENGINEER.
4. ALL UTILITY INSTALLATIONS UNDER PAVED AREAS MUST BE COMPACTED AS PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND/OR GEOTECHNICAL REPORT.
5. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
6. EXISTING TOPOGRAPHY SHOWN AS ESTABLISHED FROM BASE SURVEY PREPARED BY R.L. BUFORD & ASSOCIATES LLC - VERIFY GRADES PRIOR TO COMMENCEMENT OF GRADING AND CONSTRUCTION ACTIVITIES. NO ADDITIONAL MONEY WILL BE PAID FOR HAUL-IN OR HAUL-OFF OF MATERIAL.
7. ALL ROCK, CONCRETE, ASPHALT, TREE, BRUSH, ETC. TO BE REMOVED AS A PART OF THE PROJECT CONSTRUCTION SHALL BE DISPOSED OF BY THE GRADING CONTRACTOR AND SHALL BE A SUBSIDIARY OBLIGATION OF THE CONTRACT. THE GRADING CONTRACTOR IS ALSO RESPONSIBLE FOR ALL GRADING ON THE SITE INCLUDING THE MANIPULATION OF THE EXCESS DIRT MATERIAL THAT WAS LEFT ALONG THE SEWER TRENCHES. THE COST FOR THIS WORK WILL BE INCLUDED IN THE LUMP SUM FEE FOR GRADING.
8. ENTIRE PROJECT SHALL BE LEFT IN A MOWABLE CONDITION. ALL DISTURBED AREAS SHALL BE SEEDED & MULCHED AS PER PROJECT REQUIREMENTS. ALL DISTURBED AREAS WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL BE SODDED IN COMPLIANCE WITH THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS AND MUNICIPAL CODE.
9. THE CONTRACTOR SHALL PROVIDE FOR POSITIVE DRAINAGE AWAY FROM BUILDINGS AND SIDEWALKS AT ALL TIMES.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS. ANY PROPERTY CORNERS DISTURBED OR DAMAGED BY GRADING ACTIVITIES SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.



EMERGENCY SPILLWAY OVERFLOW CALCULATIONS #1
POND Q(100) INFLOW = 120.87 CFS
 $Q = CLH^{\frac{2}{3}}$, C = 3.33, L = 78.10', H = 0.6' < 1.0'

VELOCITY (FPS) = $V(100) = Q(100)/A(100)$
VELOCITY (FPS) = $V(100) = 120.87 \text{ CFS} / 132.64 \text{ SQ FT}$
 $V(100) = 0.91 \text{ FPS}$



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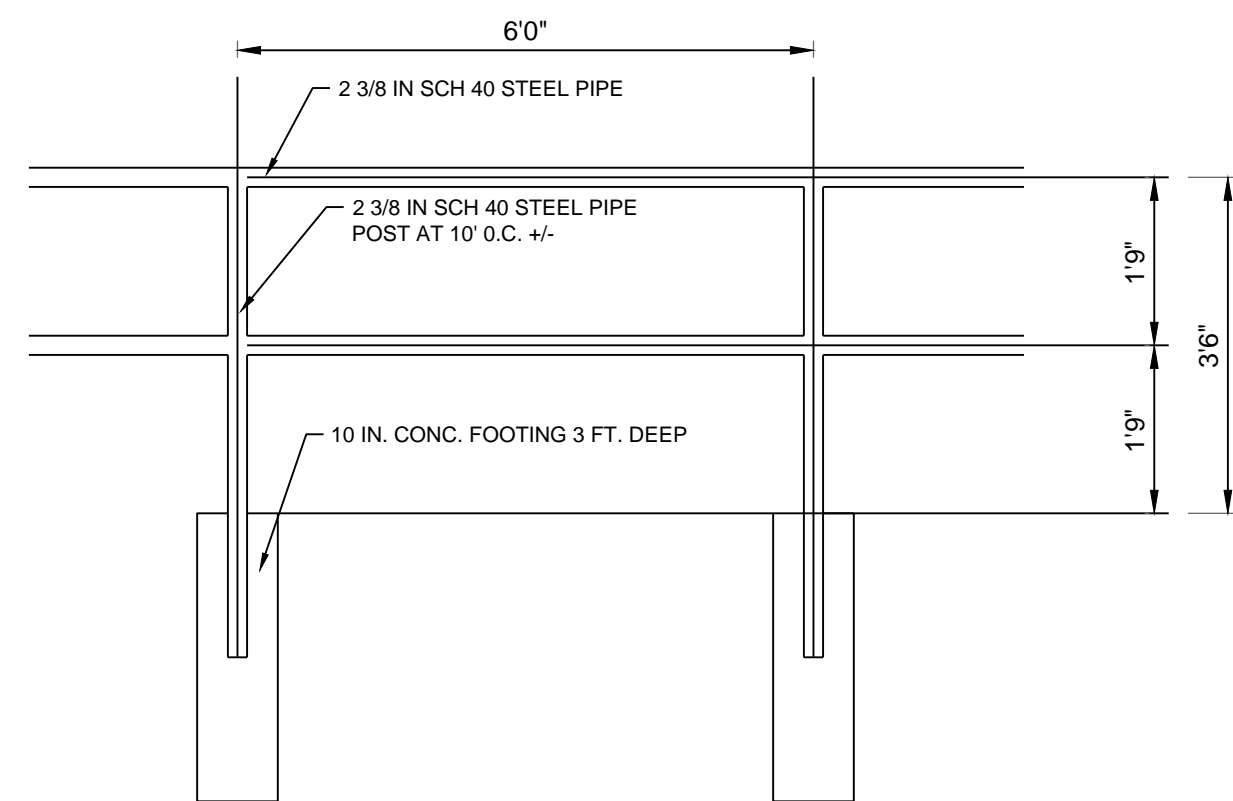
**COLEMAN EQUIPMENT
FINAL DEVELOPMENT PLAN**
4101 NE LAKEWOOD WAY
LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
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DATE PREPARED:	9-22-17
PROJ. NUMBER:	17-019

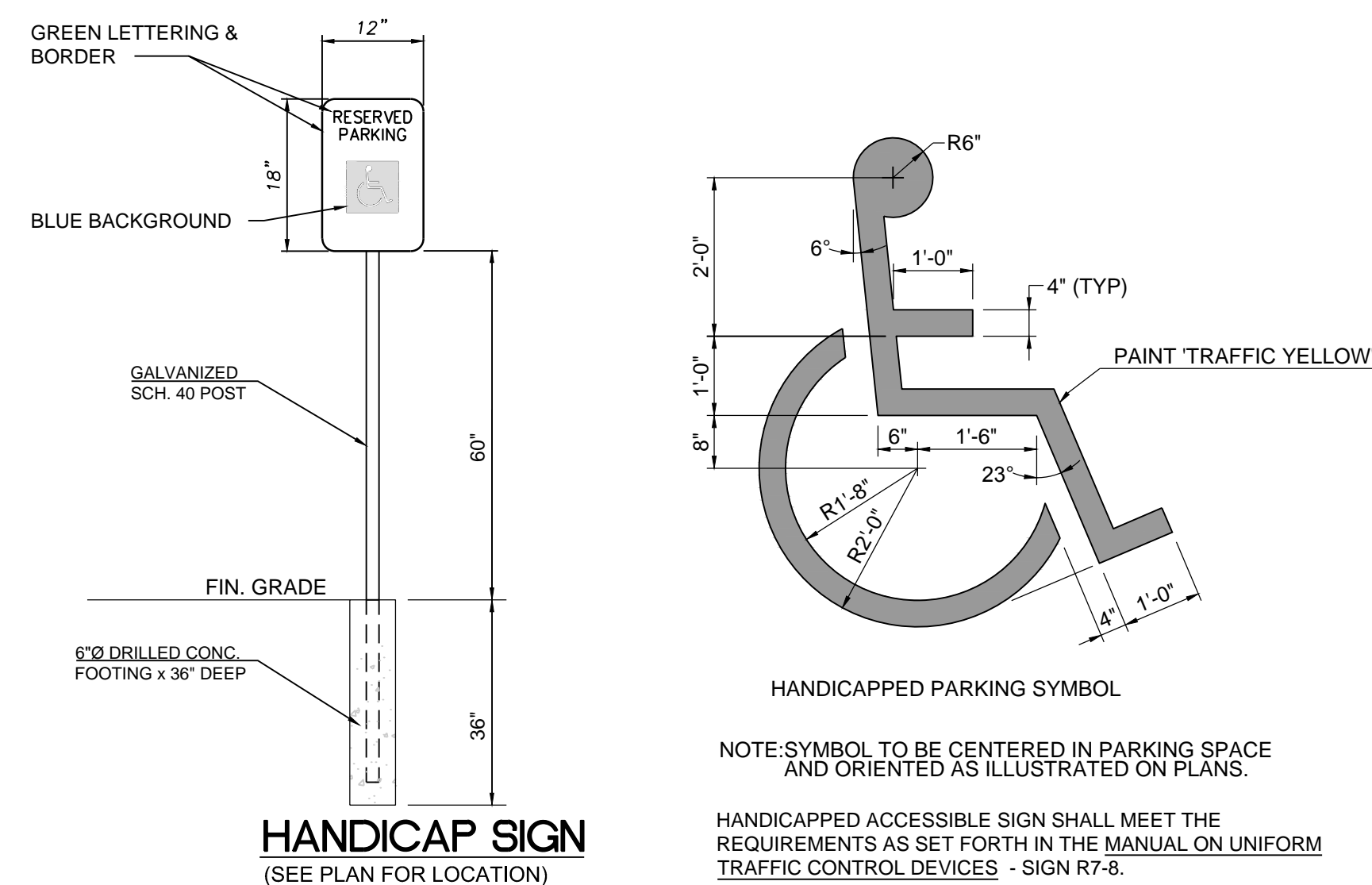
GRADING PLAN

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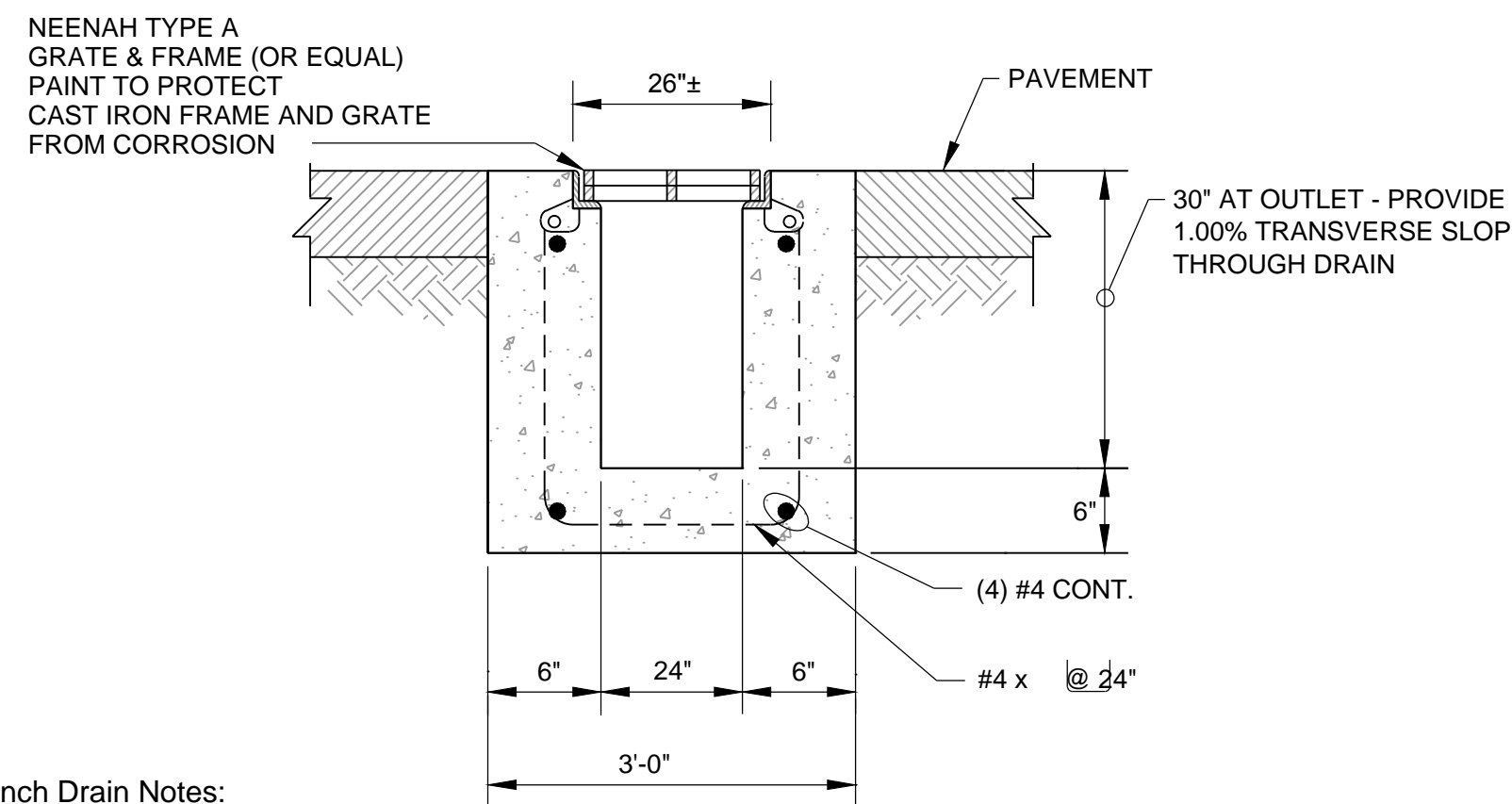
1 TYPICAL RAIL ALONG RETAINING WALL

NOT TO SCALE



2 HANDICAP SYMBOL & SIGNAGE DETAILS

NOT TO SCALE



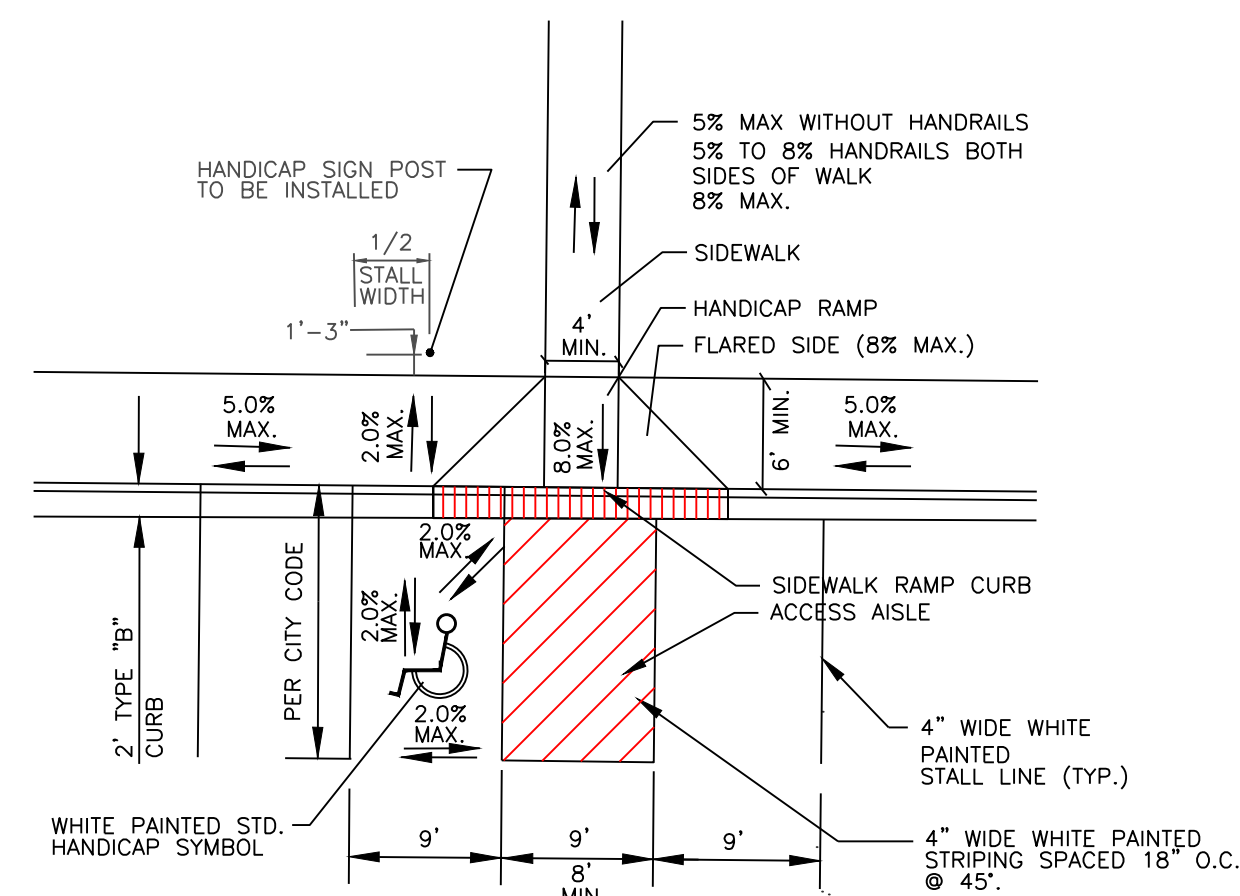
Trench Drain Notes:

General

1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height "2" below the finish top elevation, or as directed by City Engineer.
2. Pre-cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects. Pre-cast shop drawings for privately financed projects are to be submitted to the Engineering Services Division of the Planning and Development Services Department.
3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.
4. Concrete used in this work shall be KCMHB4K, as approved by the Kansas City Metropolitan Materials Board.
5. Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, except as modified in the Overland Park Municipal Code.
6. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
7. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
8. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of $\frac{1}{8}$ " shall be permitted.
9. All lap splices not shown shall be a minimum of 40 bar diameters in length.
10. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
11. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.
12. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.

3 TYPICAL - CAST-IN-PLACE TRENCH DRAIN DETAIL

NOT TO SCALE



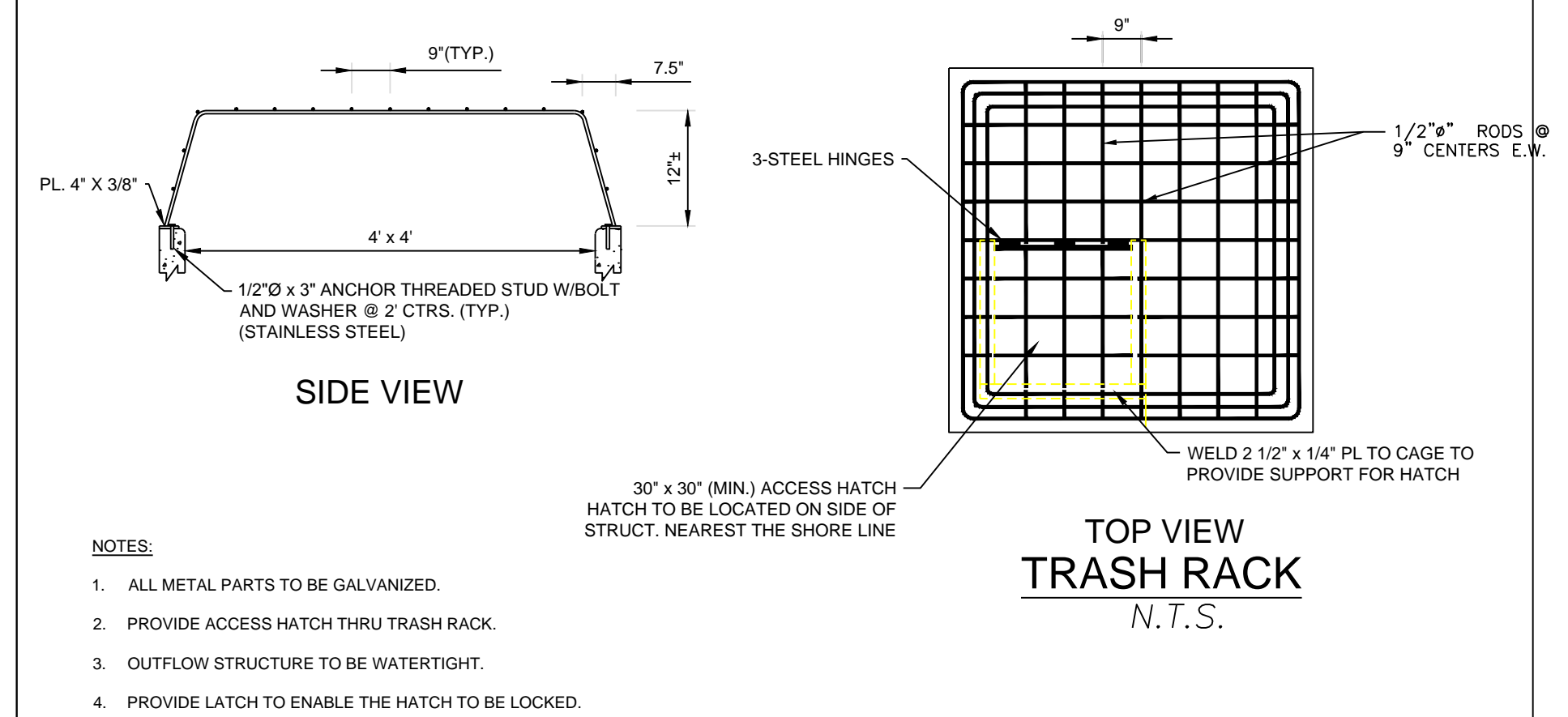
4 TYPICAL VAN ACCESSIBLE SPACE AND ACCESS AISLE

NOT TO SCALE

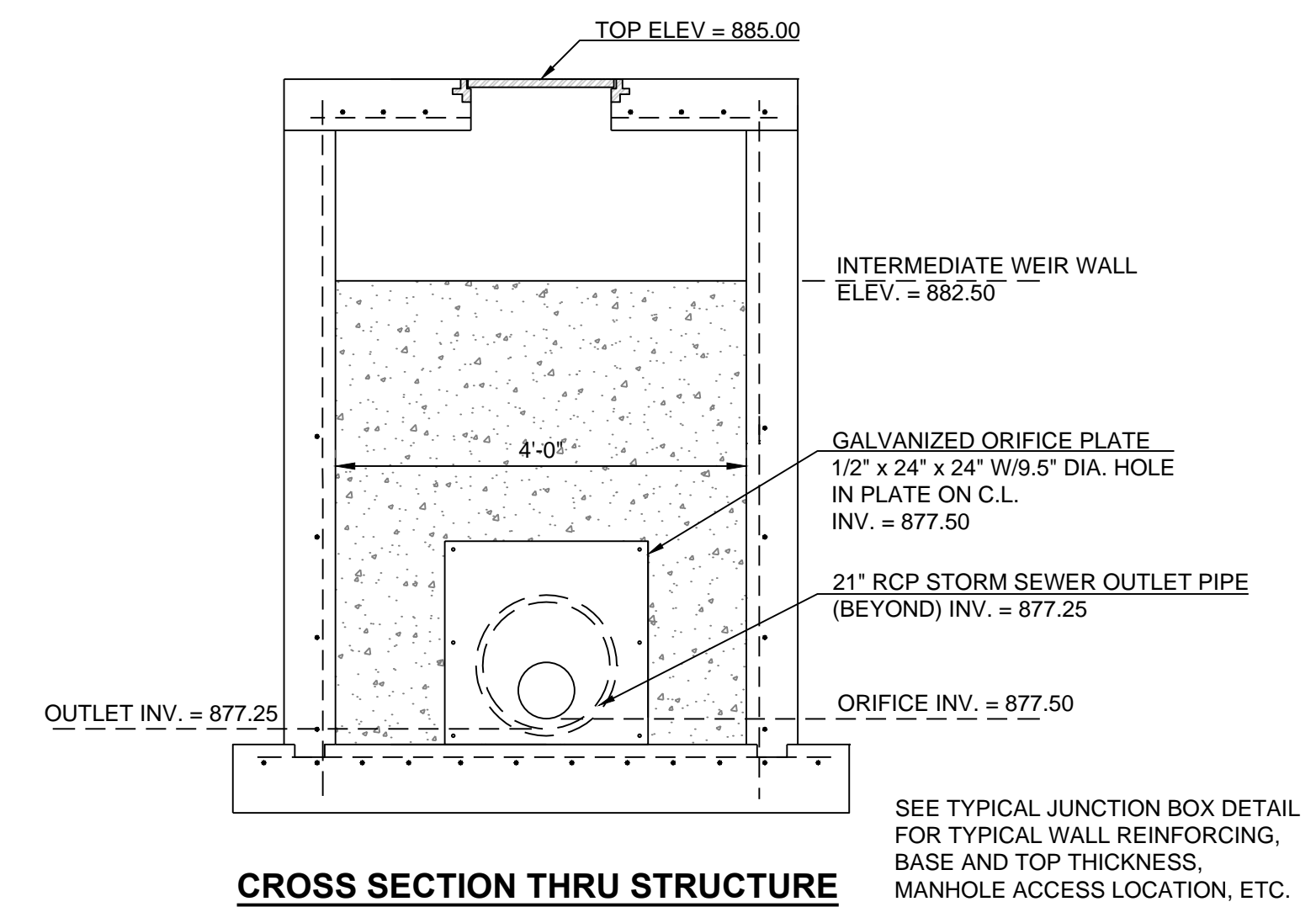


5 WALL DETAIL

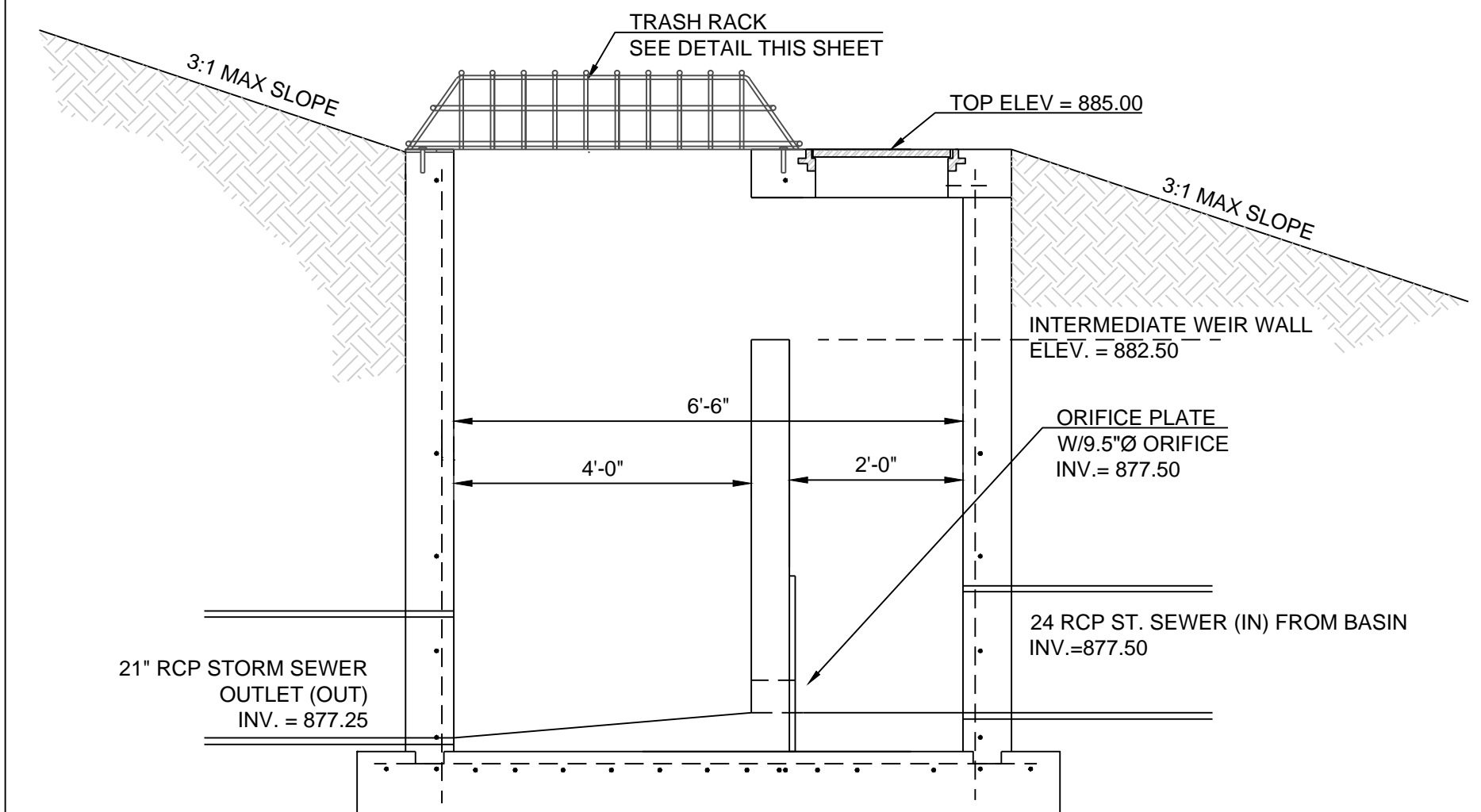
NOT TO SCALE



6 OUTLET STRUCTURE - TRASH RACK DETAILS



CROSS SECTION THRU STRUCTURE



LONGITUDINAL SECTION THRU STRUCTURE

 DETAILS @ DETENTION OUTLET STRUCTURE

NOT TO SCALE

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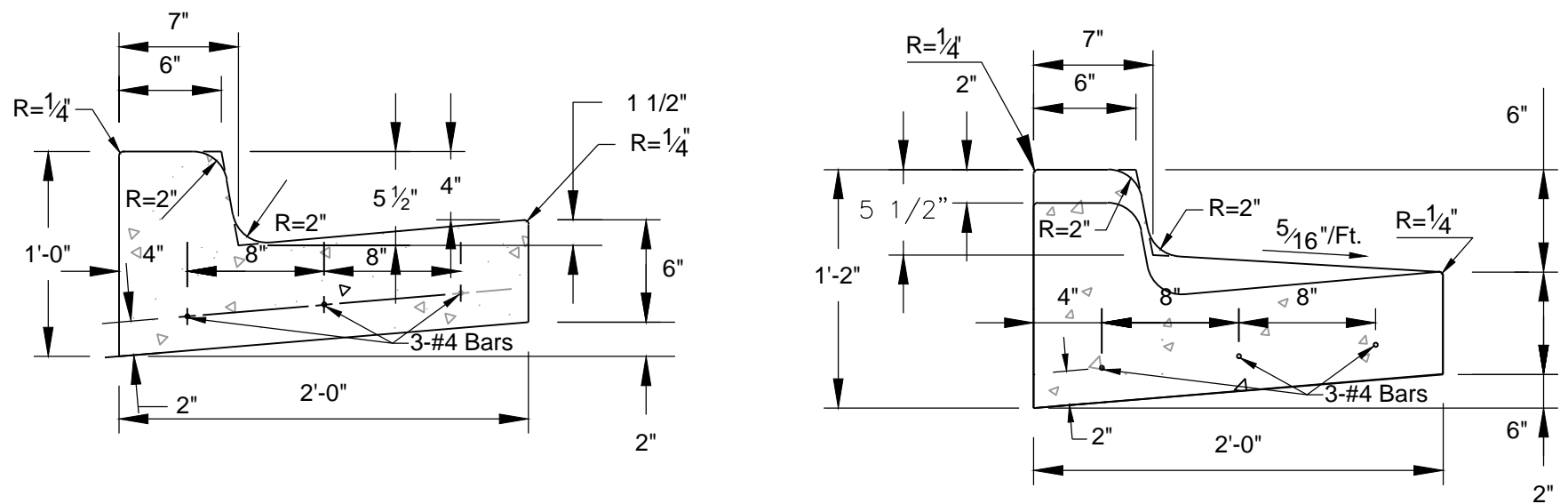
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SITE DETAILS

SHEET

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PLAN REVIEW/BID SET



TYPE B CURB

TYPE B DRY CURB

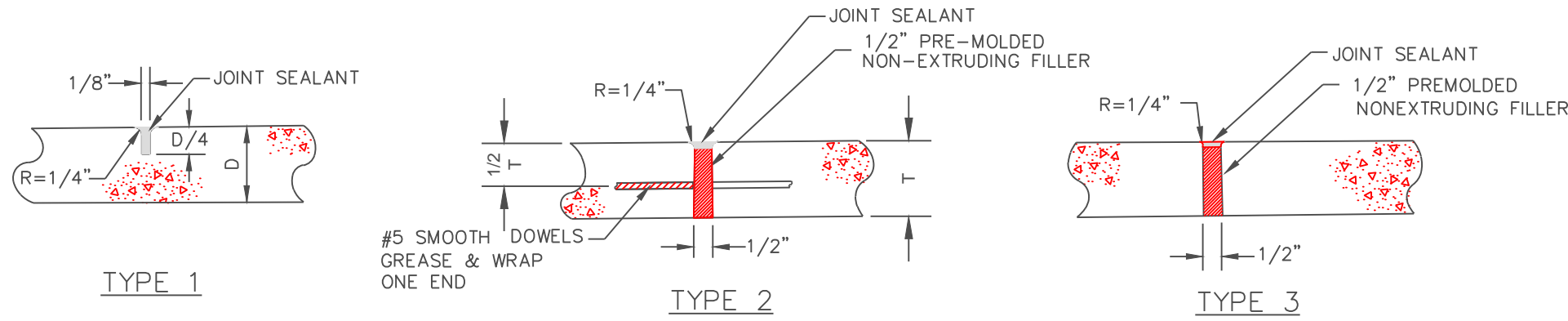
NOTE: in transitions, water shall flow from the gutter of Type "B" curb to the lip of Type "B-Dry" curb at 0.5% min. slope.

NOTES:

- Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, are incorporated except as otherwise noted.
- 1/2" pre-molded expansion joints shall be placed at points of curvature, curb returns, curb inlets, and at 250' centers. Contraction joints shall be 2" deep, and placed at 15' intervals equally spaced between expansion joints. KCMMB-4K concrete will be used throughout unless noted otherwise.
- Steel reinforcement may be omitted from curb & gutter placed on a minimum of 4" of asphaltic concrete.

1 TYPICAL CONCRETE CURB DETAILS

NOT TO SCALE

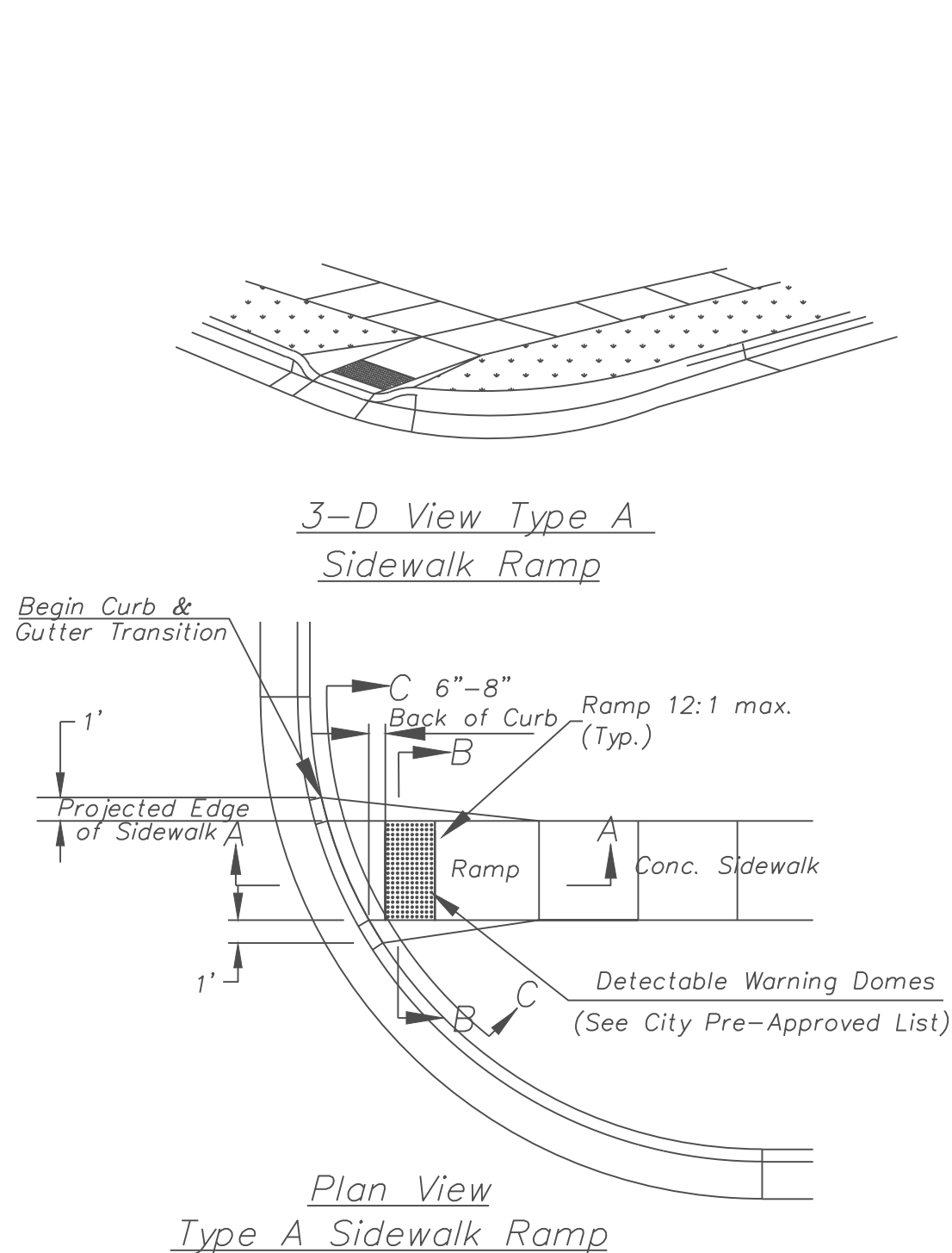


NOTES:

- TYPE 1 JOINTS MAY BE CONSTRUCTED WITH A GROOVING TOOL OR WITH A CONCRETE SAW AFTER THE CONCRETE IS SET.
- TYPE 1 JOINTS SHALL BE SPACE TO EQUAL THE WIDTH OF THE SIDEWALK.
- TYPE 2 JOINTS SHALL BE PLACED @ ALL P.C.'s, P.T.'s AND TRANSITIONS, AND WHERE NEW WALK TIES INTO EXISTING WALK.
- SMOOTH BARS SHALL BE 24" LONG.
- TYPE 3 JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE AND IN AREAS WHERE DOWEL BARS ARE NOT REQUIRED BY THE ENGINEER.

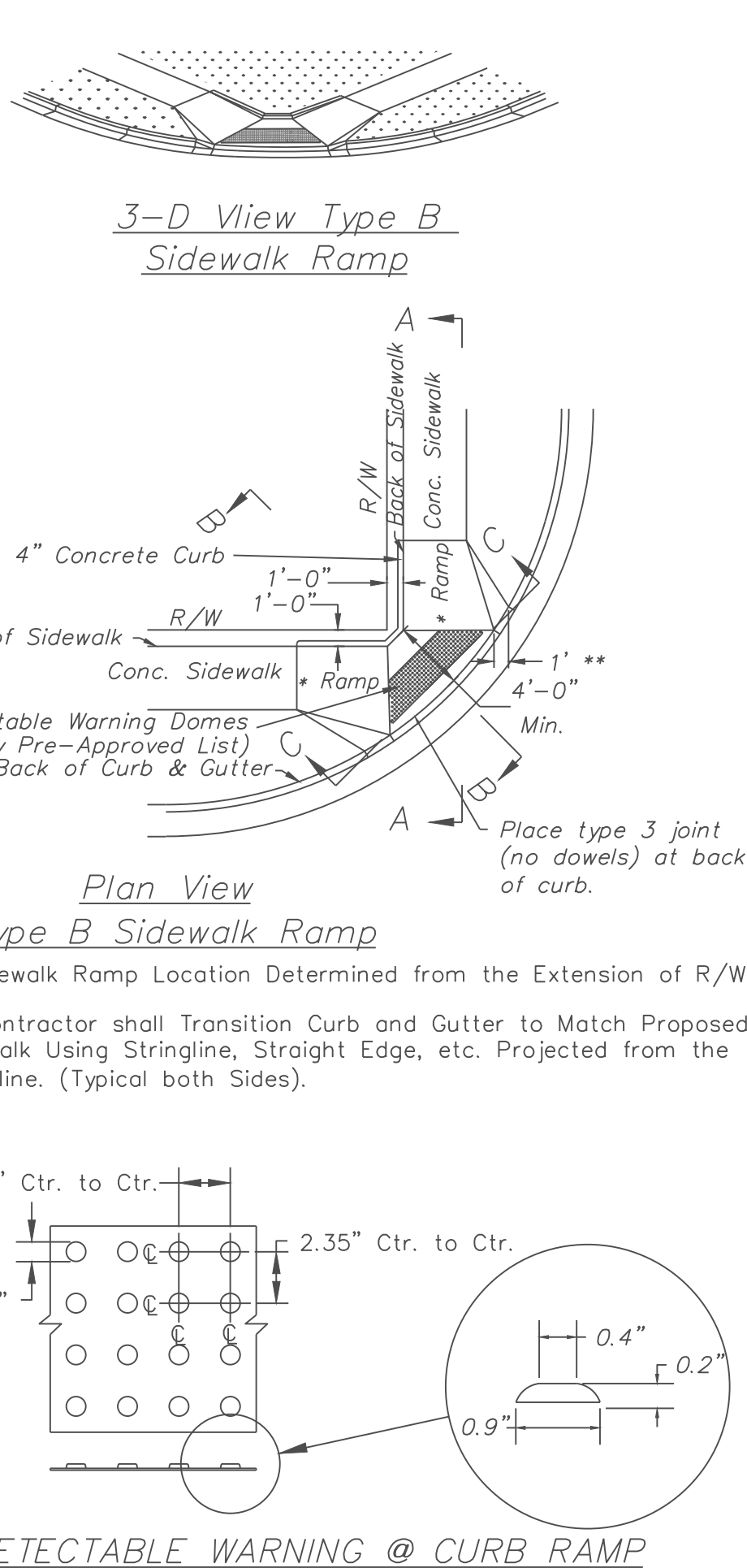
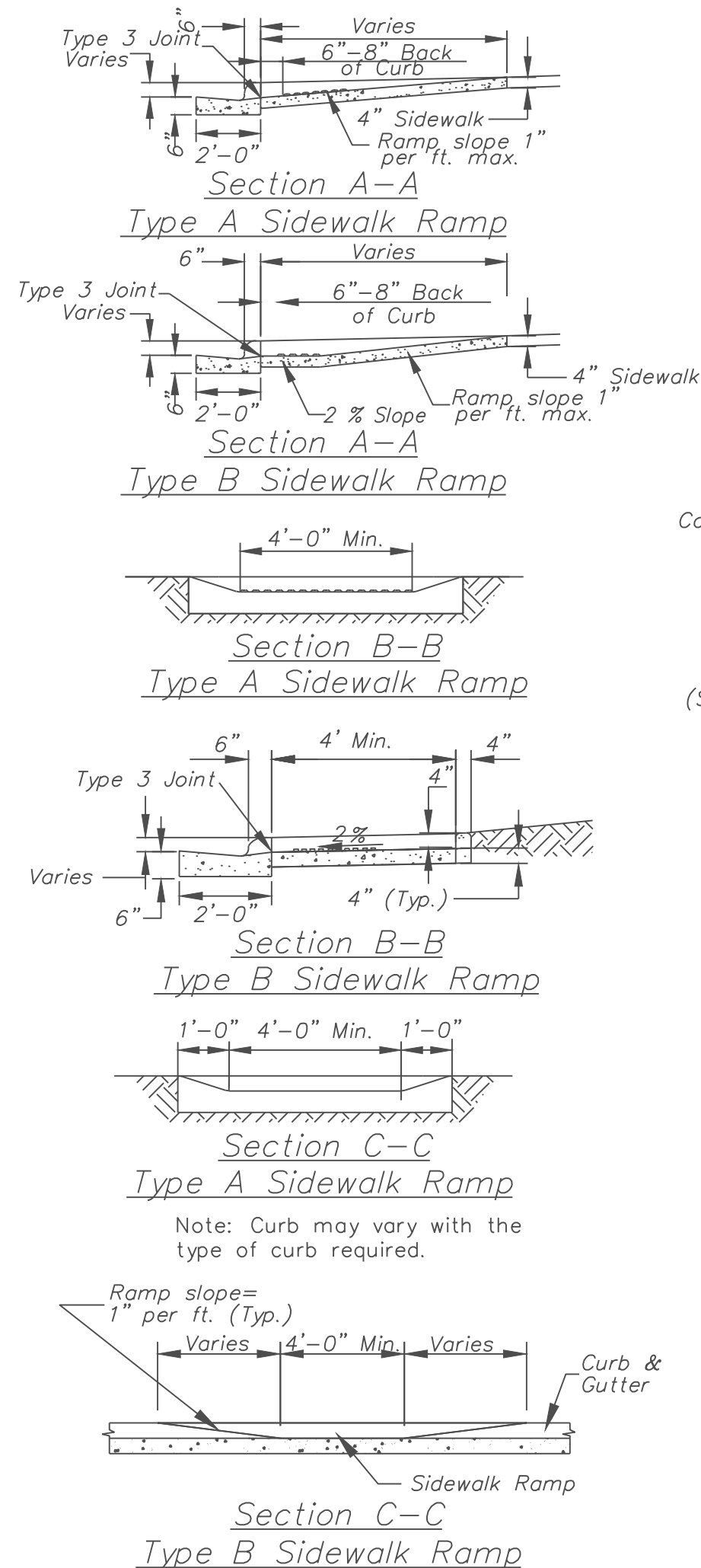
2 TYPICAL - CONCRETE PAVEMENT JOINT DETAILS

NOT TO SCALE

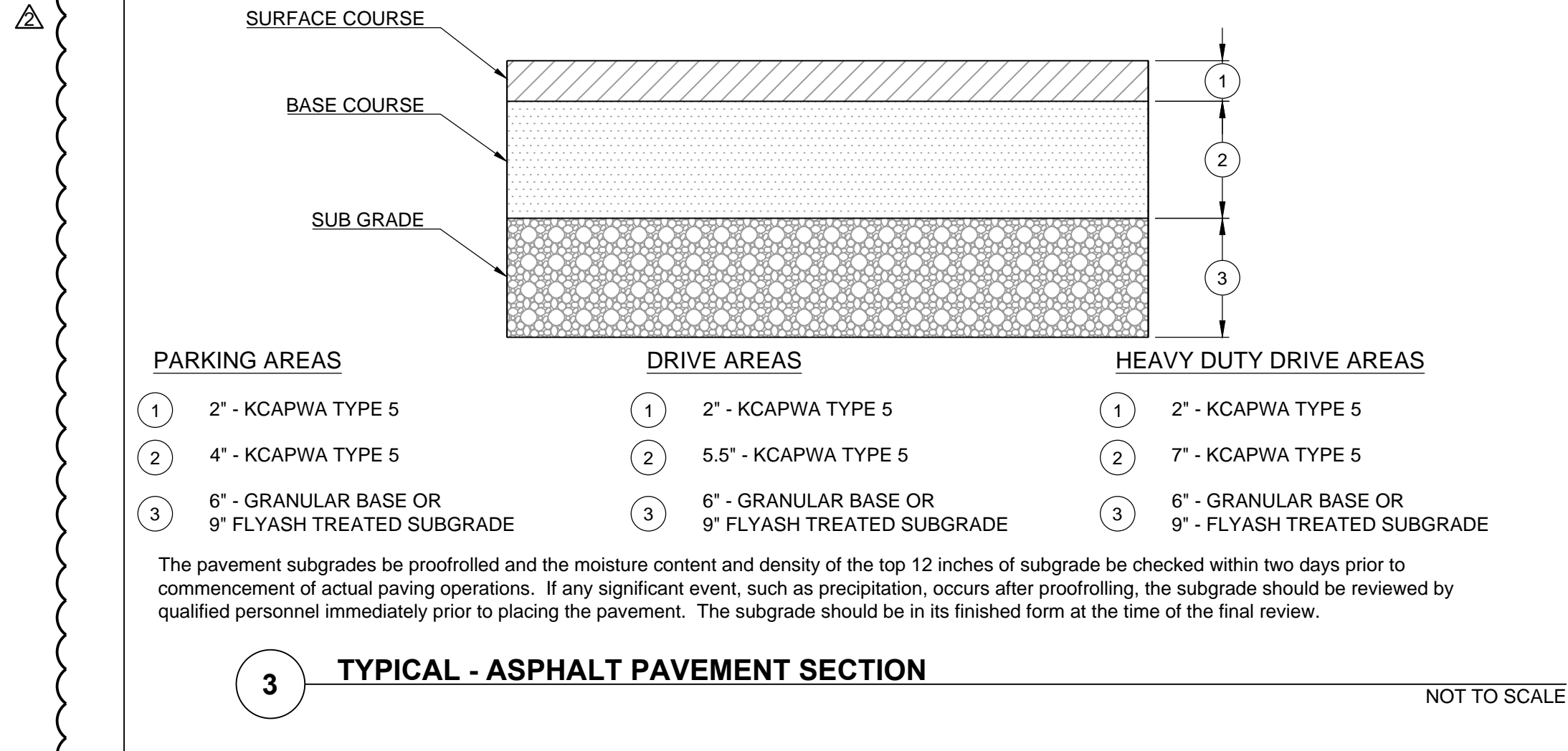


NOTES

- Surface texture shall be a coarse broom finish, transverse to the slope of the ramp.
- Use of type "B" ramps shall be restricted to locations where it is not feasible to use type "A".
- All concrete shall be kcmmb-4k.
- The sidewalk shall have a coarse-textured, wood float, and broom finish.
- When the Contractor intends to use Brick Pavers w/truncated domes for the truncated domes, installation shall be in accordance with the detail titled Truncated Dome Brick Pavers.

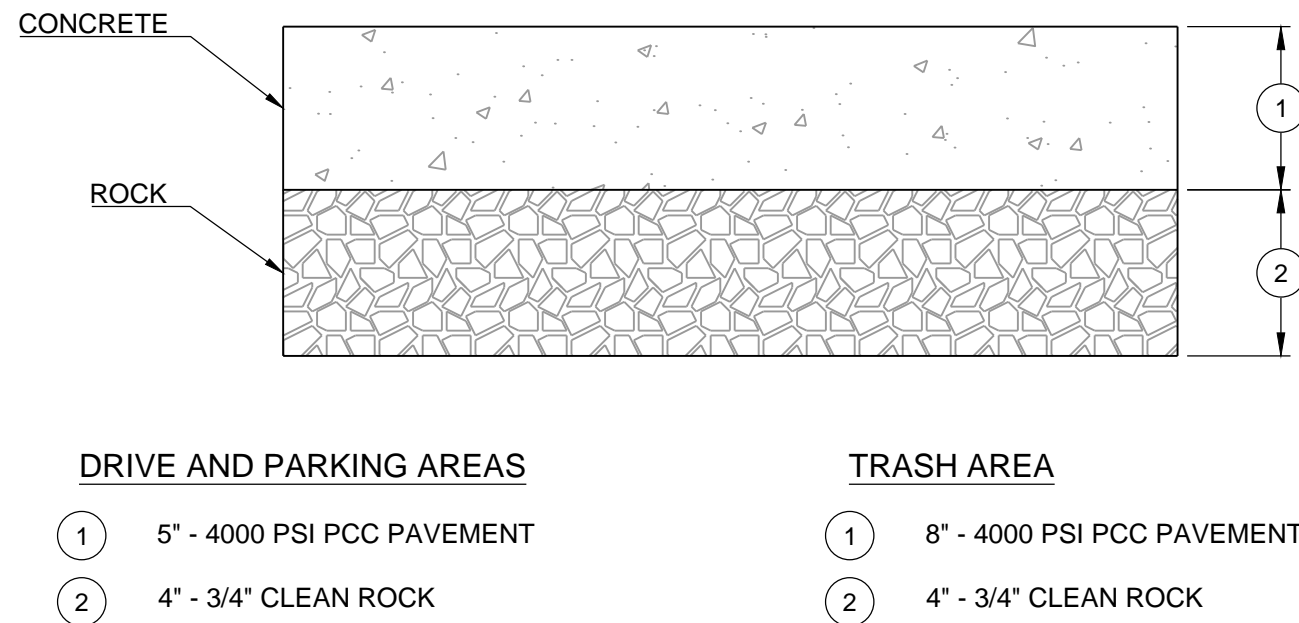


SIDEWALK AND HANDICAPPED RAMP DETAILS



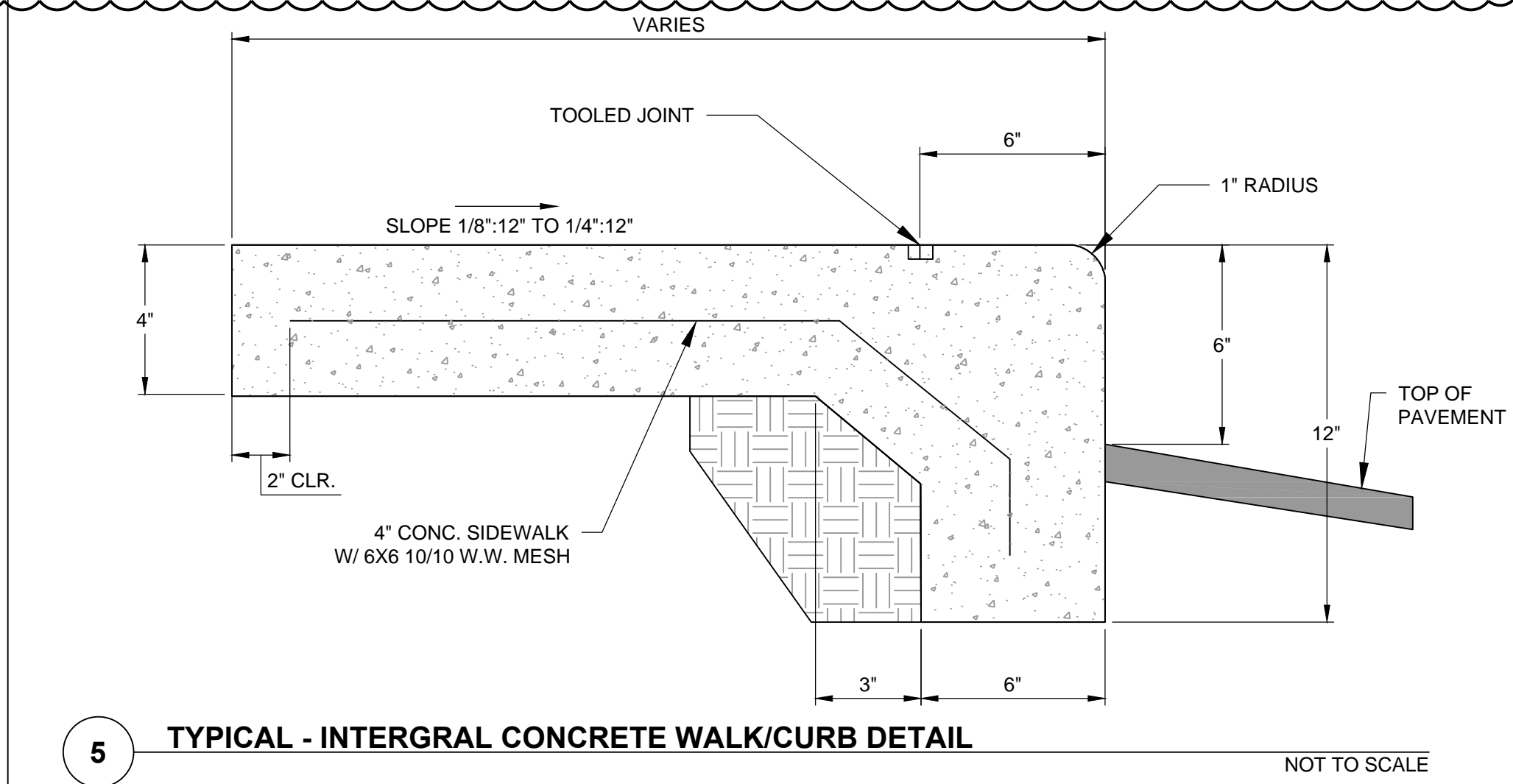
3 TYPICAL - ASPHALT PAVEMENT SECTION

NOT TO SCALE



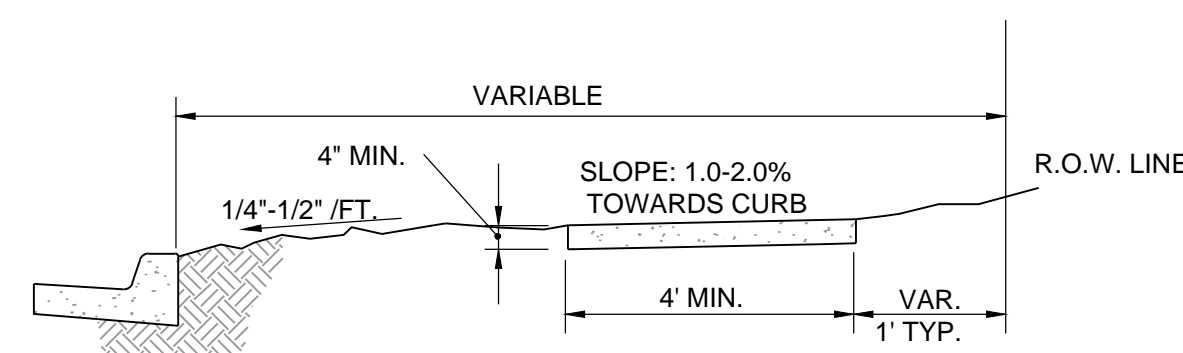
4 TYPICAL - CONCRETE PAVEMENT SECTION

NOT TO SCALE



5 TYPICAL - INTERGRAL CONCRETE WALK/CURB DETAIL

NOT TO SCALE



NOTES:

- JOINTS SHALL BE FORMED AT RIGHT ANGLES TO THE ALIGNMENT OF THE SIDEWALK AND TO THE DEPTHS INDICATED BELOW.
- THE SIDEWALK SHALL BE MARKED OFF INTO SQUARE STONES BY CONTRACTION JOINTS. CONTRACTION JOINTS SHALL BE ONE-EIGHTH (1/8) INCH WIDE BY ONE (1) INCH DEEP AND MAY BE FORMED BY TOOLING OR BY USE OF A CONCRETE SAW.
- EXPANSION JOINTS SHALL BE FORMED BY A ONE-HALF (1/2) INCH THICK PREFORMED JOINT FILLER, EXTENDING THE FULL DEPTH OF THE SLAB, AND SECURED SO THAT THEY ARE NOT MOVED BY DEPOSITING AND COMPACTING THE CONCRETE AT THESE JOINTS. 3/4" JOINT FILLER WILL BE USED WHEN SPACING EXCEEDS 100'.
- EXPANSION JOINTS SHALL BE PLACED WHERE SIDEWALK ABUTS OTHER STRUCTURES AND SHALL NOT BE SPACED MORE THAN 50 FEET APART ON STRAIGHT RUNS FOR HAND LAID SIDEWALK AND NOT MORE THAN 200 FEET APART ON STRAIGHT RUNS FOR MACHINE LAID SIDEWALKS.

6 TYPICAL CONCRETE SIDEWALK DETAIL

NOT TO SCALE

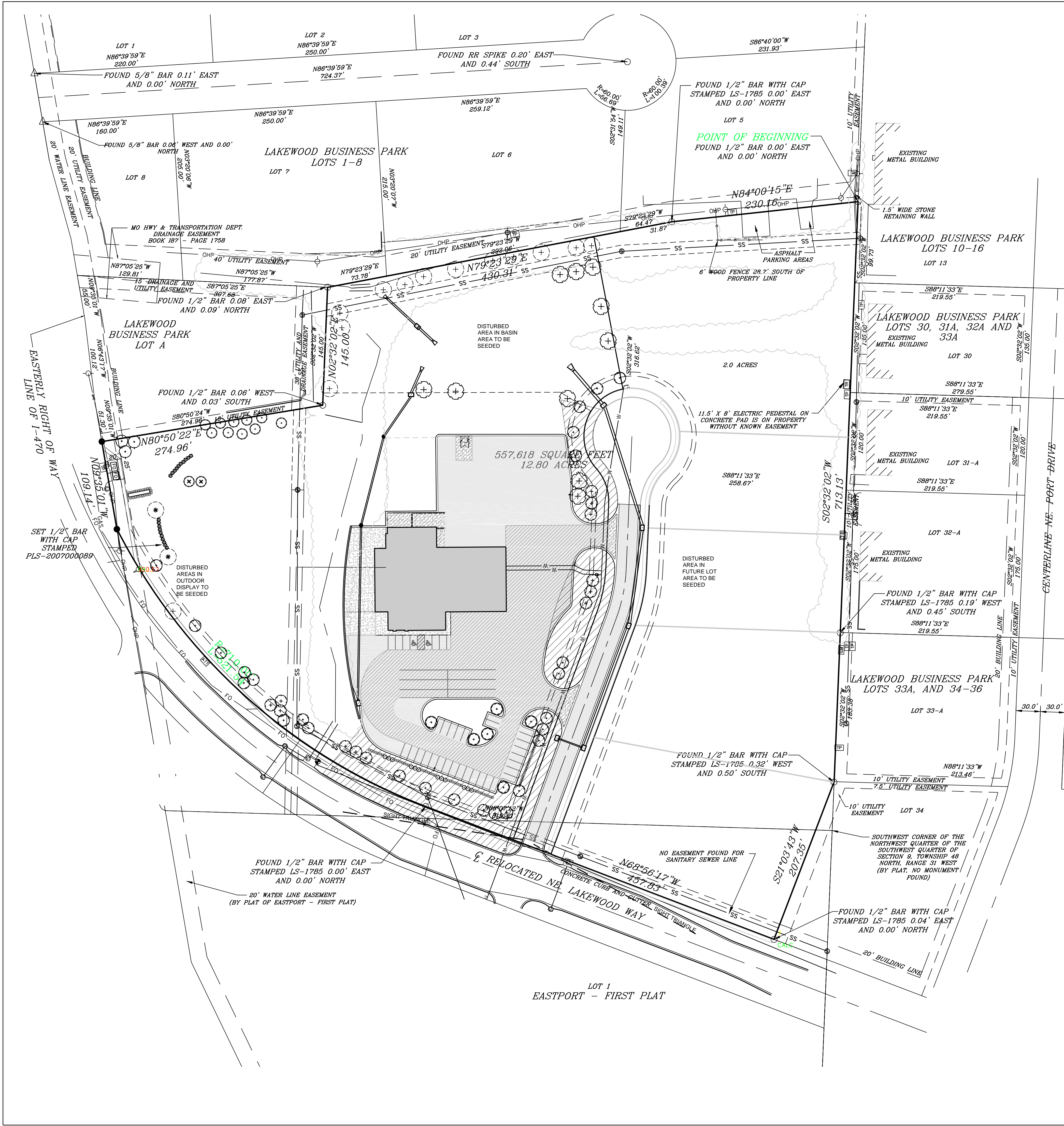
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PROJ. NUMBER:	17-019

SITE DETAILS

SHEET

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OF



LANDSCAPE DATA LOT 1 ONLY

STREET FRONTAGE LANDSCAPE

LAKEWOOD WAY TREES REQUIRED(1 PER 30')(745.37/30)
LAKEWOOD WAY TREES PROVIDED
PRIVATE DRIVE TREES REQUIRED(1 PER 30')(502.31/30)
PRIVATE DRIVE TREES PROVIDED

25 TREES
24 NEW TREES & 1 EXISTING TREE
17 TREES
17 NEW TREES

LAKEWOOD WAY SHRUBS REQUIRED(1 PER 20')(745.37/20)
LAKEWOOD WAY SHRUBS PROVIDED
PRIVATE DRIVE SHRUBS REQUIRED(1 PER 20')(502.31/20)
PRIVATE DRIVE SHRUBS PROVIDED

37 SHRUBS
37 SHRUBS(PARKING LOT SCREEN)
25 SHRUBS
25 SHRUBS(PARKING LOT SCREEN)

SITE LANDSCAPE REQUIRED

TREES REQUIRED (1 PER 5,000 S.F. OF OPEN SPACE)(292,504.24,500/5000)
TREES PROVIDED

54 TREES
54 TREES
22 EXISTING TREES ALONG NORTH BNDY
32 NEW TREES
107 SHRUBS
107 SHRUBS(77 FOR PARKING LOT SCREEN)

PARKING LOT LANDSCAPE

LANDSCAPE AREA REQUIRED(5% OF PARKING AREA)(32,052.8X.05)
LANDSCAPE AREA PROVIDED
TREES REQUIRED(1 PER ISLAND)
TREES PROVIDED
SCREENING(2.5 FT. HT ALONG ENTIRE FRONTAGE ADJ. TO STREET)

1,602.64 S.F.
3,934.67 S.F.
6 TREES
6 TREES
77 SHRUBS

NOTES:

- UTILITY INFORMATION SHOWN IS DESIGNED LOCATION OR LOCATIONS BASED ON UTILITY LOCATES. AS BUILT LOCATIONS MAY VARY. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO COMMENCING LANDSCAPE INSTALLATION. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS OR OBSTRUCTIONS.
- QUANTITIES INDICATED ON THE PLAN ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. THE PLAN QUANTITIES AND NUMBER OF SYMBOLS SHALL SUPERSEDE QUANTITIES IN THE SCHEDULE.
- ALL PLANT MATERIAL SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS AND ANSI A60.1 THE AMERICAN STANDARD SPECIFICATION FOR NURSERIES STOCK.
- ALL TREES SHALL MEET THE SIZE REQUIREMENTS OF THE LEE'S SUMMIT ORDINANCE. ALL TREES SHALL BE CALLIPERED AND UNDERSIZED TREES SHALL BE REJECTED.
- ALL SHRUBS TO BE UTILIZED FOR SCREENING SHALL BE 24" HEIGHT AT TIME OF PLANTING.
- ALL PLANTING BEDS CONTAINING SHRUBS, GROUND COVER, PERENNIALS, ANNUALS SHALL BE IN A PLANTING BED WITH 3" MIN. DEPTH OF MULCH AND A "V-CUT" EDGE.
- ALL TREES SHALL HAVE A MIN. 3 FT. DIA. AREA THAT HAS 3" MIN. DEPTH OF WOOD MULCH.
- ALL TURF AREAS SHALL BE SOODED UNLESS INDICATED ON THE PLANS.
- ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN SHALL REQUIRE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT AND THE CITY OF LEE'S SUMMIT, PRIOR TO INSTALLATION.
- THE LANDSCAPE ARCHITECT AND OWNER SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SODDING OPERATIONS.
- INSTALLATION AND MAINTENANCE OF LANDSCAPING SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS.
- ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A MINIMUM CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT OF 1 FT. FOR PERENNIALS AND GROUND COVER AND 1.5 FT. FOR SHRUBS. A 2 FT. CLEARANCE(4 FEET FROM BACK OF CURB TO THE CENTER OF SHRUB)FOR CAR OVERHANG IS REQUIRED AT ALL PARKING ISLANDS AND PERIMETERS.
- AFTER COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND SOD THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT THAT THE WORK IS COMPLETE AND READY FOR REVIEW. THE LANDSCAPE ARCHITECT SHALL REVIEW THE LANDSCAPE INSTALLATION TO DETERMINE COMPLIANCE WITH THE APPROVED PLANS. WHEN THE LANDSCAPE INSTALLATION MEETS THE REQUIREMENTS OF THE APPROVED PLAN, THE LANDSCAPE ARCHITECT SHALL PROVIDE A SIGNED AND SEALED LETTER TO THE CITY STATING THAT ALL LANDSCAPE PLANTINGS HAVE BEEN INSTALLED PER THE APPROVED PLAN.
- ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT (MECHANICAL, ELECTRICAL AND/OR TELEPHONE CABINETS), TRANSFORMERS, AIR CONDITIONING UNITS, ETC. SHALL BE SCREENED FROM PUBLIC VIEW BY INSTALLING FIVE SEA GREEN JUNIPERS EVENLY SPACED AROUND THE PERIMETER. FINAL LOCATION OF ANY EQUIPMENT SHALL BE DETERMINED AND VERIFIED WITH THE FINAL DESIGN AND PERMITTING OF THE PROJECT.
- ALL ROOFTOP EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW WITH AN ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING AND INTEGRAL TO THE OVERALL APPEARANCE OF THE BUILDING.

SHADE TREES

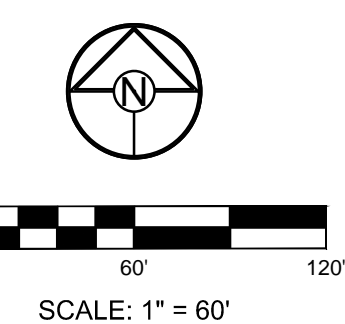
+	AFA	23 EA.	Acer x freemanii 'Armstrong'	Armstrong Maple	3' Cal.	B&B
-	APC	3 EA.	Acer platanoides 'Crimson King'	Crimson King Norway Maple	3' Cal.	B&B
+	QRR	15 EA.	Quercus robur x bicolor(aka x warei) 'Long'	Regal Prince Oak	3' Cal.	B&B
+	UXF	10 EA.	Ulmus x Frontier	Frontier Elm	3' Cal.	B&B
+	ZSM	6 EA.	Zelkova serrata 'Musashino'	Musashino Columnar Zelkova	3' Cal.	B&B

SHRUBS

o	BSW	84 EA.	Buxus sinica var. insularis 'Wintergreen' fka a microphylla	Wintergreen Boxwood	5 gal.	Cont.
o	JHH	20 EA.	Juniperus horizontalis 'Hughes'	Hughes Juniper	5 gal.	Cont.
o	VCK	12 EA.	Viburnum carlesii 'Korean Spice'	Koreanspice Viburnum	5 gal.	Cont.

EXISTING TREES

- + - - * - x
- EXISTING SHADE TREE THAT ARE 2" CAL. MINIMUM
— EXISTING EVERGREEN TREE THAT ARE 2" CAL. MINIMUM
— EXISTING SHADE TREE TO BE REMOVED
— EXISTING EVERGREEN TREE TO BE REMOVED



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LANDSCAPE PLAN

SHEET

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OF