

Administrative Site Review Application

Planning and Development Customer Service Center • One Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2500



This form is required when submitting site plans as referenced in Unified Development Ordinance (UDO) Section 10.2.8. Please check the appropriate building types and include the plan checklist document when submitting.

Office Use Only: Case #: _____ Planner (print): _____

Please review UDO Section 10.2.8. to determine the site plan tier. If assistance determining a Site Plan Tier is needed a Site Plan Tier Verification request can be submitted online via the [Permit and Development Portal](#). (Note: There is a fee for this verification service.)

Site Plan Tier: Tier Two Site Plan Tier Three Site Plan

Building and Development Type (Check all that apply)		Site Transaction History
<input type="checkbox"/> Detached <input type="checkbox"/> Attached <input type="checkbox"/> Townhouse <input type="checkbox"/> Apartment <input type="checkbox"/> Tiny house <input type="checkbox"/> Open lot	<input type="checkbox"/> General <input type="checkbox"/> Mixed use <input type="checkbox"/> Civic <input type="checkbox"/> Cottage Court <input type="checkbox"/> Frequent Transit Development Option	Subdivision case #: _____ Scoping/sketch plan case #: _____ Certificate of Appropriateness #: _____ Board of Adjustment #: _____ Zoning Case #: _____ Design Alternate #: _____

GENERAL INFORMATION

Development name: _____

Inside City limits? Yes No

Property address(es): _____

Site P.I.N.(s): _____

Please describe the scope of work. Include any additions, expansions, and uses (UDO 6.1.4).

Current Property Owner(s):

Company: _____ Title: _____

Address: _____

Phone #: _____ Email: _____

Applicant Name (If different from owner. See “who can apply” in instructions):

Relationship to owner: Lessee or contract purchaser Owner’s authorized agent Easement holder

Company: _____ Address: _____

Phone #:	Email:
NOTE: please attach purchase agreement or contract, lease or easement when submitting this form.	
Developer Contact:	
Company:	Title:
Address:	
Phone #:	Email:
Applicant Name:	
Company:	Address:
Phone #:	Email:

DEVELOPMENT TYPE + SITE DATE TABLE (Applicable to all developments)	
SITE DATA	BUILDING DATA
Zoning district(s) (please provide the acreage of each):	Existing gross floor area (not to be demolished):
Gross site acreage:	Existing gross floor area to be demolished:
# of parking spaces proposed:	New gross floor area:
Max # parking permitted (7.1.2.C):	Total sf gross (to remain and new):
Overlay District (if applicable):	Proposed # of buildings:
Existing use (UDO 6.1.4):	Proposed # of stories for each:
Proposed use (UDO 6.1.4):	Proposed # of basement levels (UDO 1.5.7.A.6)

STORMWATER INFORMATION	
Imperious Area on Parcel(s): Existing (sf) _____ Proposed total (sf) _____	Impervious Area for Compliance (includes ROW): Existing (sf) _____ Proposed total (sf) _____

RESIDENTIAL & OVERNIGHT LODGING DEVELOPMENTS	
Total # of dwelling units:	Total # of hotel bedrooms:
# of bedroom units: 1br _____ 2br _____ 3br _____ 4br or more _____	
# of lots:	Is your project a cottage court? <input type="radio"/> Yes <input type="radio"/> No
	A frequent transit development? <input type="radio"/> Yes <input type="radio"/> No

Continue to Applicant Signature Block on Page 4.

APPLICANT SIGNATURE BLOCK

Pursuant to state law (N.C. Gen. Stat. § 160D-403(a)), applications for development approvals may be made by the landowner, a lessee or person holding an option or contract to purchase or lease land, or an authorized agent of the landowner. An easement holder may also apply for development approval for such development as is authorized by the easement.

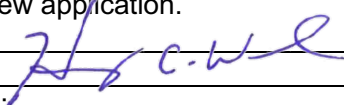
Acting as an authorized agent requires written permission from the property owner for the purposes of making this development approval and/or permit application. Written permission from the property owner to act as an authorized agent must be made available to the City of Raleigh upon request.

By submitting this application, the undersigned applicant acknowledges that they are either the property owner or one of the persons authorized by state law (N.C.G.S. 160D-403(a)) to make this application, as specified in the application. The undersigned also acknowledges that the information and statements made in the application are correct and the undersigned understands that development approvals are subject to revocation for false statements or misrepresentations made in securing the development approval, pursuant to N.C. Gen. Stat. § 160D-403(f).

The undersigned indicates that the property owner(s) is aware of this application and that the proposed project described in this application will be maintained in all respects in accordance with the plans and specifications submitted herewith, and in accordance with the provisions and regulations of the City of Raleigh Unified Development Ordinance.

The undersigned hereby acknowledges that, pursuant to state law (N.C.G.S. 143-755(b1)), if this permit application is placed on hold at the request of the applicant for a period of six consecutive months or more, or if the applicant fails to respond to comments or provide additional information requested by the City for a period of six consecutive months or more, then the application review is discontinued, and a new application is required to proceed and the development regulations in effect at the time permit processing is resumed shall apply to the new application.

Signature:



Date: 09.06.2024

Printed Name:

Signature:

Date:

Printed Name:

CRABTREE BOULEVARD APARTMENTS

ADMINISTRATIVE SITE REVIEW

CITY OF RALEIGH TRANSACTION #: _____

Administrative Site Review Application

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Site Plan Tier: Tier Two Site Plan Tier Three Site Plan

Building and Development Type (Check all that apply)		Site Transaction History
<input type="checkbox"/> Detached	<input type="checkbox"/> General	Subdivision case #: _____
<input type="checkbox"/> Attached	<input type="checkbox"/> Mixed use	Scoping/sketch plan case #: _____
<input type="checkbox"/> Townhouse	<input type="checkbox"/> Civic	Certificate of Appropriateness #: _____
<input checked="" type="checkbox"/> Apartment	<input type="checkbox"/> Cottage Court	Board of Adjustment #: _____
<input type="checkbox"/> Tiny house	<input type="checkbox"/> Frequent Transit Development Option	Zoning Case #: Z-85-23
<input type="checkbox"/> Open lot		Design Alternate #: _____

GENERAL INFORMATION

Development name: Crabtree Boulevard Apts.

Inside City limits? Yes No

Property address(es): 2321 Crabtree Blvd., Raleigh, NC 27604

Site P.I.N.(s): 1714581011

Please describe the scope of work. Include any additions, expansions, and uses (UDO 6.1.4).

New multi-story apartment building and surface parking.

Current Property Owner(s): Pigeon House Branch Partners, LLC

Company: Pigeon House Branch Partners, LLC Title: _____

Address: 122 Glenwood Avenue, Suite 200, Raleigh, NC 27603

Phone #: 919.427.0280 Email: Henry@lodendev.com

Applicant Name (if different from owner. See "who can apply" in instructions): Graham Smith

Relationship to owner: Lessee or contract purchaser Owner's authorized agent Easement holder

Company: Site Collaborative Address: 1620 Hillsborough St., Raleigh NC 27605

Phone #: 919.805.3586 Email: Graham@sitecollaborative.com

NOTE: please attach purchase agreement or contract, lease or easement when submitting this form.

Developer Contact: Henry Ward

Company: Loden Properties Title: _____

Address: 122 Glenwood Avenue, Suite 200, Raleigh, NC 27603

Phone #: 919.427.0280 Email: Henry@lodendev.com

Applicant Name: Graham Smith

Company: Site Collaborative Address: 1620 Hillsborough St., Raleigh NC 27605

Phone #: 919.805.3586 Email: Graham@sitecollaborative.com

DEVELOPMENT TYPE + SITE DATA TABLE (Applicable to all developments)

SITE DATA	BUILDING DATA
Zoning district(s) (please provide the acreage of each): OX-7-UL	Existing gross floor area (not to be demolished): 0
Gross site acreage: 1.99 AC (includes Fee Simple Purchase)	Existing gross floor area to be demolished: 21,280 SF
# of parking spaces proposed: 209	New gross floor area: 242,190 SF
Max # parking permitted (7.1.2.C): 273	Total sf gross (to remain and new): 242,190 SF
Overlay District (if applicable): N/A	Proposed # of buildings: 1
Existing use (UDO 6.1.4): Office	Proposed # of stories for each: 8 (includes basement)
Proposed use (UDO 6.1.4): Apartments	Proposed # of basement levels (UDO 1.5.7.A.6) 1

STORMWATER INFORMATION

Imperious Area on Parcel(s):	Imperious Area for Compliance (includes ROW):
Existing (sf) 38,620 Proposed total (sf) 63,782	Existing (sf) 38,620 Proposed total (sf) 70,679

RESIDENTIAL & OVERNIGHT LODGING DEVELOPMENTS

Total # of dwelling units: 164	Total # of hotel bedrooms: N/A
# of bedroom units: 1br 129 2br 35 3br N/A 4br or more N/A	
# of lots: 1	Is your project a cottage court? <input type="radio"/> Yes <input checked="" type="radio"/> No
	A frequent transit development? <input type="radio"/> Yes <input checked="" type="radio"/> No

APPLICANT SIGNATURE BLOCK

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Signature: Date: 09.06.2024
Printed Name: HENRY WARD
Signature: _____ Date: _____
Printed Name: _____



VICINITY MAP

SCALE: 1" =500'

SOLID WASTE SERVICES:

- SOLID WASTE ON SITE TO UTILIZE PRIVATE SERVICE.
- ALL ON-SITE AMENITIES RELATED TO GARBAGE DISPOSAL INCLUDING - BUT NOT LIMITED TO - DUMPSTER ENCLOSURE, PAVEMENT, AND CURB RADII SHALL COMPLY WITH THE CITY'S SOLID WASTE DESIGN MANUAL.

LIGHTING PLAN

- THIS PROJECT DOES NOT HAVE ANY ADDITIONAL PARKING LOT LIGHTING AT THIS TIME. LIGHTING FOR THE BUILDING WILL BE PROVIDED AT BUILDING PERMITS IN ACCORDANCE WITH SEC. 7.4

TREE CONSERVATION

- THE LOT SIZE IS UNDER 2 ACRES AND THEREFORE IS NOT REQUIRED TO PROVIDE A TREE CONSERVATION PLAN PER SEC. 9.1.2.

ADDITIONAL NOTES

- PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT, A PEDESTRIAN DETOUR AND TRAFFIC CONTROL PLAN MUST BE APPROVED AND PERMITS ISSUED WHEN THE SIDEWALK AND DRIVEWAY ARE REMOVED.

Right-of-Way Obstruction Notes:

- Lane and Sidewalk closures or detours:** Prior to any lane or sidewalk obstruction, the contractor or engineer shall submit a traffic control and/or pedestrian plan along with a Right-of-Way Services Application to request the obstruction prior to the start of work. rightofwayservices@raleighnc.gov for approval.
- The City of Raleigh requires an approved Right-of-Way Obstruction Permit for work on any public street or sidewalk and NCDOT road within Raleigh's Jurisdiction.
- All Traffic Control Signage and practices shall adhere to the Manual on Uniform Traffic Control, and the latest edition of the NCDOT "Standard Specification for Roadway Structures", NCDOT "Roadway Standard Drawing Manual", and the NCDOT supplement to the MUTCD.
- All public sidewalks must be accessible to pedestrians who are visually impaired and/or people with mobility concerns. Existing and alternative pedestrian routes during construction shall be required to be compliant with the Public Rights of Way Accessibility Guidelines (PROWAG), the ADA Standards for Accessible Design and the Manual on Uniform Traffic Control Devices (MUTCD).
- Prior to the start of work, the Client shall schedule a Pre-Construction meeting with the Engineering Inspections Coordinator to review the specific components of the approved plan, and ensure all permits are issued.
- All permits must be available and visible on site during the operation.

SITE DATA SUMMARY	
PROJECT NAME	CRABTREE BLVD. APARTMENTS
EXISTING STREET ADDRESS	2321 CRABTREE BLVD., RALEIGH, NC 27604
PROPOSED LOT AREA	1.99 AC (86,958 SF)
EXISTING LOT AREA	1.67 AC (72,745 SF)
FEE SIMPLE PURCHASE AREA (CITY PARCEL)	0.326 AC (14,213 SF)
CURRENT ZONING	OX-7-UL-CU
ZONING CONDITIONS	REFER TO CASE #Z-65-23
FRONTAGE	URBAN LIMITED
OVERLAY DISTRICT(S)	N/A
PIN	1714581011
REAL ID NUMBER	0120841
DEED BOOK / DEED PAGE	DB 019109 / DP 00196
EXISTING GROSS BUILDING AREA	21,280 SF
EXISTING BUILDING USE	OFFICE
PROPOSED GROSS BUILDING AREA	242,190 SF
PROPOSED BUILDING STORIES	8 STORIES (INCLUDES BASEMENT)
PROPOSED BUILDINGS USES	APARTMENTS
PROPOSED NUMBER OF UNITS	164
PROPOSED PARKING SPACES	209
PROPOSED SURFACE PARKING	65
PROPOSED GARAGE PARKING	144
EXISTING IMPERVIOUS AREA	38,620 SF
PROPOSED IMPERVIOUS AREA	70,679 SF (PARCEL + ROW)
NET CHANGE IN IMPERVIOUS AREA	32,059 SF (INCREASE)
TOTAL AREA DISTURBED	108,895 SF

CONTACT INFORMATION

PROPERTY OWNER
LODEN PROPERTIES
821 WAKE FOREST RD
RALEIGH, NC 27604
CONTACT: HENRY WARD
PHONE: 919.334.8976
EMAIL: HENRY@LODENDEV.COM

LANDSCAPE ARCHITECT
SITE COLLABORATIVE, INC.
1620 HILLSBOROUGH ST., SUITE 100
RALEIGH, NC 27605
CONTACT: GRAHAM H. SMITH
PHONE: 919.805.3586
EMAIL: GRAHAM@SITECOLLABORATIVE.COM

ARCHITECT
CLINE DESIGN ASSOCIATES
125 N. HARGETT ST.
RALEIGH, NC 27603
CONTACT: BRYAN JOHNSON
PHONE: 919.427.0280
EMAIL: BRYANJ@CLINEDESIGNASSOC.COM

CIVIL ENGINEER
SWIFT PARTNERS
424 S. DAWSON ST.
RALEIGH, NC 27627
CONTACT: ROSS MASSEY
PHONE: 828.735.1862
EMAIL: ROSS.MASSEY@SWIFT-PARTNERS.COM

SHEET INDEX

LANDSCAPE SHEETS	
COV	COVER SHEET
L101	EXISTING CONDITIONS
L102	DEMOLITION PLAN
L103	FIRE ACCESS PLAN
L104	SITE PLAN
L201	HARDSCAPE PLAN
L202	SITE DETAILS
L203	SITE DETAILS
L204	SITE DETAILS
L401	PLANTING PLAN
L402	PLANTING NOTES & LEGEND
CIVIL SHEETS	
C500	GRADING AND DRAINAGE PLAN
C510	SCM DETAILS I
C511	SCM DETAILS II
C600	UTILITY PLAN
C920	STORM DRAIN DETAILS
C930	UTILITY DETAILS

ARCHITECTURE SHEETS

A1-01	BASEMENT PLAN
A1-02	FIRST FLOOR PLAN
A1-03	SECOND FLOOR PLAN
A1-04	TYPICAL FLOOR PLAN
A2-01	BUILDING ELEVATION - NORTH (CRABTREE BLVD)
A2-02	BUILDING ELEVATION - EAST
A2-03	BUILDING ELEVATION - SOUTH
A2-04	BUILDING ELEVATION - WEST (TIMBER DR)



REUSE OF DOCUMENT
This document is the property of Site Collaborative Inc. The ideas and design incorporated on this document is an instrument of professional service and shall not be used for any other project without written authorization of Site Collaborative Inc.

CRABTREE BLVD. APARTMENTS
LODEN PROPERTIES
2321 Crabtree Blvd., Raleigh, NC 27604

SITE CO. PROJECT NUMBER:
22013

PROJECT PHASE:
ADMINISTRATIVE
SITE REVIEW
DATE: 09.06.2024

SHEET TITLE:

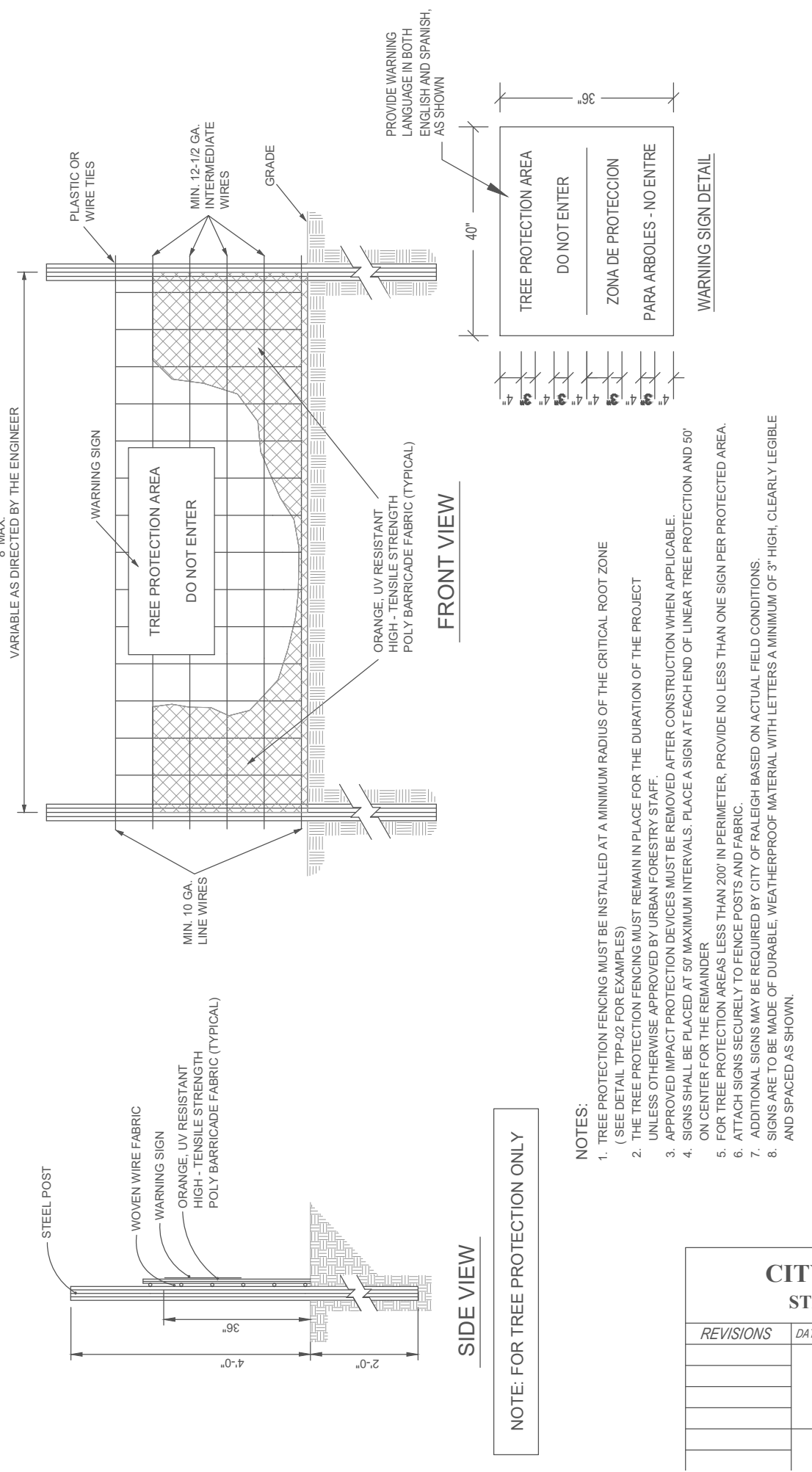
COVER

SHEET NUMBER:

COV

DEMOLITION LEGEND		
SYMBOL	KEY	DESCRIPTION
- - - - -	LOD	LIMITS OF DISTURBANCE
[Diagonal Hatching]	D1	BUILDING TO BE REMOVED COMPLETELY
[Cross-hatching]	D2	TREE TO BE REMOVED COMPLETELY
[Stippled]	D3	VEGETATION TO BE REMOVED COMPLETELY
[Dotted]	D4	ASPHALT PAVING AND BASE TO BE REMOVED COMPLETELY
[Cross-hatching]	D5	CONCRETE PAVING AND BASE TO BE REMOVED COMPLETELY
[Dotted]	D6	CONCRETE CURB & GUTTER TO BE REMOVED COMPLETELY
[Cross-hatching]	D7	WALL TO BE REMOVED COMPLETELY
[Stippled]	D8	MONUMENT SIGN TO BE REMOVED COMPLETELY
[Dotted]	D9	GRAVEL TO BE REMOVED COMPLETELY
[Cross-hatching]	D10	GRAVEL TO BE REMOVED COMPLETELY
[Circle with X]	R1	FIRE HYDRANT TO BE RELOCATED (PER CIVIL DWGS)
[Circle with X]	R2	POWER POLE TO BE RELOCATED
[Circle with X]	E1	UTILITY SERVICE (PER CIVIL DWGS)
[Circle with X]	E2	POWER POLE TO REMAIN

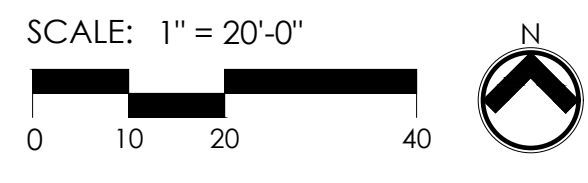
- DEMOLITION NOTES**
- THE CONTRACTOR SHALL NOTIFY THE N.C. ONE CALL CENTER AT 811 OR 1-800-632-4949 PRIOR TO STARTING WORK.
 - THE CONTRACTOR SHALL NOTIFY THE LOCAL GOVERNING PUBLIC UTILITIES DEPARTMENT PRIOR TO STARTING WORK.
 - ALL DEMOLITION, AND ANY SUBSEQUENT CONSTRUCTION, SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS SET FORTH AND APPROVED BY THE LOCAL GOVERNING MUNICIPALITY OR THE STATE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS.
 - THE CONTRACTOR SHALL NOT MAKE ANY LANE CLOSURES OR CHANGES TO THE EXISTING TRAVEL PATTERNS ON ANY PUBLIC STREET WITHOUT PRIOR APPROVAL FROM THE LOCAL GOVERNING MUNICIPALITY TRANSPORTATION DEPARTMENT AND/OR STATE TRANSPORTATION DEPARTMENT.
 - LANE CLOSURE, TRAFFIC CONTROL PLAN, OR PEDESTRIAN CONTROL PLAN TO BE COORDINATED WITH APPROPRIATE STAFF OF THE LOCAL GOVERNING MUNICIPALITY AND/OR STATE DEPARTMENT OF TRANSPORTATION PRIOR TO ANY CONSTRUCTION IN PUBLIC RIGHT-OF-WAY.
 - THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL REQUIREMENTS REGARDING REMOVAL AND DISPOSAL OF MATERIALS AND DEBRIS.
 - CONTRACTOR SHALL REFER TO CIVIL SHEETS FOR SANITARY SEWER AND WATER REMOVALS AND RELOCATIONS.
 - RELOCATION OF EXISTING UTILITIES TO BE COORDINATED WITH THE LOCAL UTILITY PROVIDER(S).
 - WHERE UTILITIES (TO BE REMOVED) IMPACT THE FOOTPRINT OF THE NEW BUILDING, CONTRACTOR SHALL EXCAVATE AND REMOVE AN ADDITIONAL 2 FEET OF SOILS TO EITHER SIDE OF PIPE, AND 1 FOOT BELOW TO REMOVE UNSUITABLE SOILS, IF UNSUITABLE SOILS EXIST.
 - CLEANOUTS LOCATED IN AREAS OF DEMOLITION OR SUBSEQUENT CONSTRUCTION THAT ARE TO REMAIN, SHALL BE PROTECTED FROM DAMAGE AND RAISED TO FLUSH WITH NEW GRADE.
 - ELECTRICAL OR GAS UTILITY SERVICES TO BE REMOVED SHALL BE REMOVED AND RELOCATED (AS INDICATED) BY THE UTILITY PROVIDER. CONTRACTOR SHALL SCHEDULE AND COORDINATE THIS WORK WITH THE APPROPRIATE SERVICE PROVIDER. ALL SERVICES SHOULD BE RE-INSTALLED PRIOR TO THE INSTALLATION OF PAVEMENT, SIDEWALKS, CURB AND GUTTER, OR OTHER PERMANENT FEATURES.
 - REMOVE EXISTING CONCRETE (WHERE REQUESTED) TO FIRST COLD JOINT OR SAWCUT JOINT TO OBTAIN A CLEAN EDGE FOR NEW CONSTRUCTION. SAWCUT EXISTING ASPHALT DRIVE AT LIMITS OF NEW CURBING TO OBTAIN A CLEAN EDGE.
 - CONTRACTOR SHALL RETAIN AND STOCKPILE CONCRETE WHEELSTOPS WHICH ARE IN USEABLE CONDITION FOR RE-INSTALLATION AT THE END OF THE PROJECT.
 - CONTRACTOR SHALL RESTORE THE LAYDOWN AND STAGING AREA TO ORIGINAL CONDITIONS AND TO THE SATISFACTION OF THE OWNER, PRIOR TO DEMOBILIZATION AT THE CONCLUSION OF THE PROJECT.
 - CLEAN SOILS SHALL BE UTILIZED FOR BACKFILL. COMPACTION OF THESE SOILS PERFORMED IN ACCORDANCE WITH SPECIFICATIONS, GEOTECHNICAL REPORT, AND SITE PLAN.
 - ALL FENCING TO BE REMOVED SHALL BE REMOVED AT NEXT NEAREST POLE.
 - ALL GRAVEL TO BE REMOVED (SURFACE OR SUBSURFACE) SHALL BE STOCKPILED AND REUSED ON SITE WHERE POSSIBLE.
 - ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL SUBGRADE MATERIALS DIRECTLY ASSOCIATED WITH ITEMS TO BE REMOVED.
 - ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF LEGALLY OFFSITE UNLESS OTHERWISE NOTED ON THIS PLAN.
 - ALL TREES TO BE REMOVED SHALL BE GROUND DOWN TO A MINIMUM DEPTH OF 12" BELOW PROPOSED FINISH GRADE.
 - ALL TREE PROTECTION FENCING SHALL REMAIN IN PLACE DURING DEMOLITION AND CONSTRUCTION.
 - CONTRACTOR SHALL NOT STOCKPILE SOILS OR CONSTRUCTION EQUIPMENT WITHIN ROOT ZONES OF EXISTING TREES TO REMAIN. ANY DAMAGED TREES SHALL BE REPLACED AT CONTRACTOR'S EXPENSE.



CONTACT INFORMATION:
CITY OF RALEIGH PARKS, RECREATION AND
CULTURAL RESOURCES DEPARTMENT
1000 W. GARRISON ST.
RALEIGH, NC 27603
WWW.RALEIGHNC.GOV

CITY OF RALEIGH STANDARD DETAIL		
REVISIONS	DATE BY WH	NOT TO SCALE

STANDARD TREE PROTECTION DETAIL
TPP-01



SITE LEGEND

SYMBOL	DESCRIPTION
A	EXISTING PROPERTY LINE
B	RIGHT-OF-WAY DEDICATION
C	ADJUSTED PROPERTY LINE (FEE SIMPLE PURCHASE AGREEMENT WITH CITY OF RALEIGH)
D	BUILDING SETBACK LINE
E	PARKING SETBACK LINE
F	EXISTING 5' WIDE SIDEWALK
G	EXISTING 5' WIDE PLANTING AREA (AVG.)
H	PROPOSED 6' WIDE SIDEWALK
I	PROPOSED 6' WIDE PLANTING AREA
J	WALL (6.5' MIN. HT.) TO MEET PROTECTIVE YARD REQUIREMENTS PER SEC. 3.5.3
K	FENCE (6.5' MIN. HT.) TO MEET PROTECTIVE YARD REQUIREMENTS PER SEC. 3.5.3
L	DUMPSTER ENCLOSURE IN BUILDING. MEETS SCREENING REQUIREMENTS PER SEC. 7.2.5
M	LONG-TERM BICYCLE PARKING IN BUILDING
N	SHORT-TERM BICYCLE PARKING

BUILD-TO (URBAN LIMITED)

CRABTREE BLVD. FRONTAGE (PRIMARY): 381'-4"
TIMBER DRIVE FRONTAGE (SIDE): 355'-6"

BUILD-TO CALCULATIONS:
CRABTREE BLVD. (50% WITHIN BUILD-TO)
REQUIRED: 381'-4" X 0.50 = 190'-8"
PROVIDED: 232'-8"
TIMBER DRIVE (25% WITHIN BUILD-TO)
REQUIRED: 355'-6" X 0.25 = 88'-10"
PROVIDED: 103'-8"

PROTECTIVE YARD

ZONING: OX-7-UL
ADJACENT ZONING: R-6
FRONTAGE: 272'-0"
PROPOSED YARD: TYPE 1 NARROW (10' AVERAGE WIDTH)
PROTECTIVE YARD CALCULATIONS:
REQUIRED: 272'-0" X 10 = 2,720 SF
PROVIDED: 6,102 SF

OUTDOOR AMENITY AREA

ZONING: OX-7-UL
PROPOSED USE: APARTMENTS (10% MIN.)
LOT AREA: 86,958 SF
AMENITY SPACE CALCULATIONS:
REQUIRED: 86,958 X 0.10 = 8,696 SF
PROPOSED: 9,474 SF

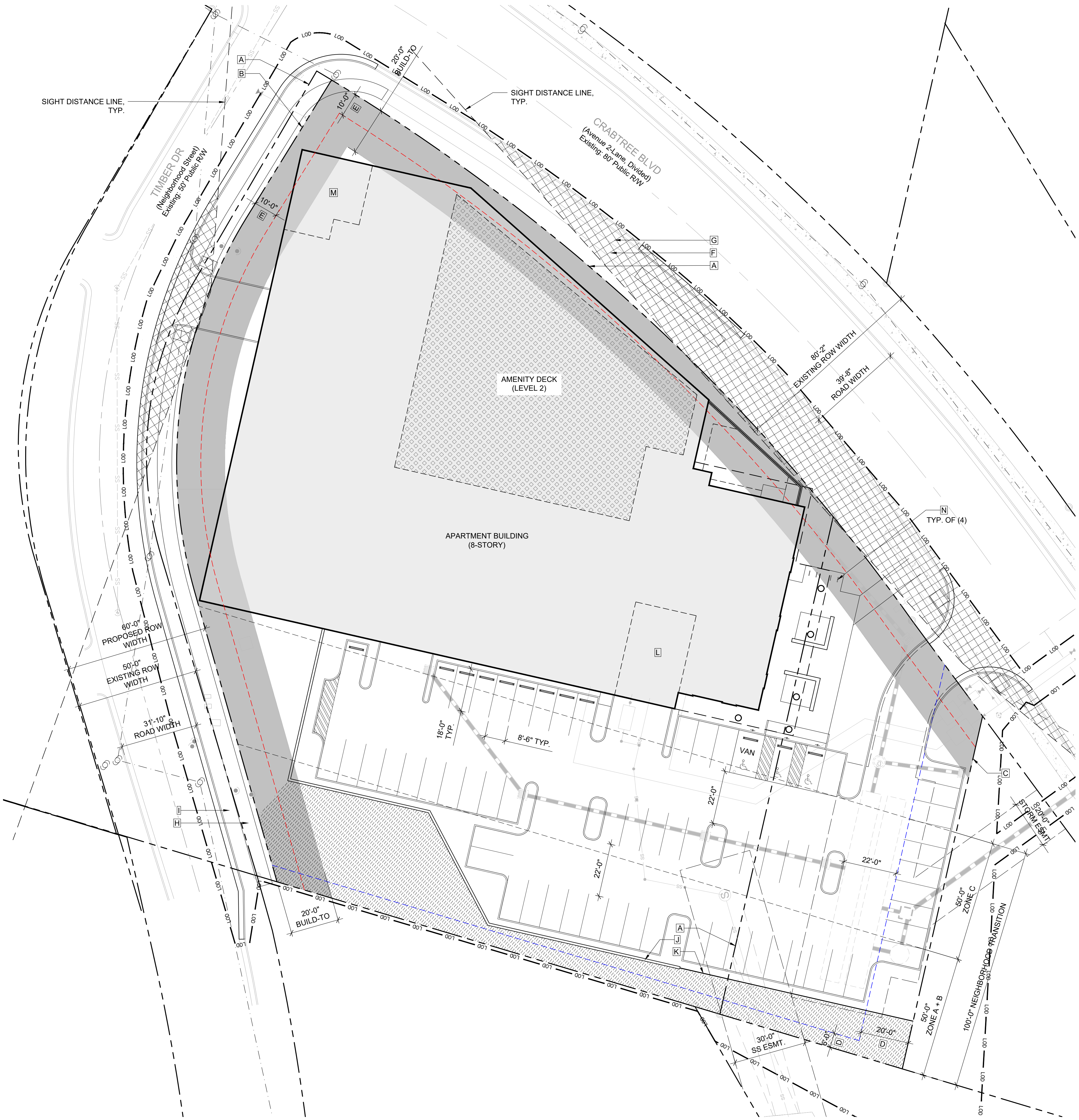
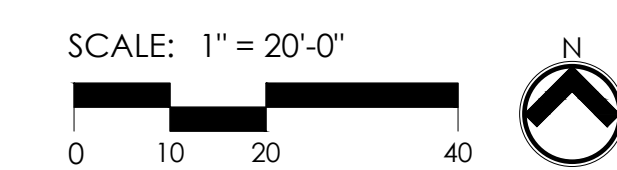
SIGHT DISTANCE

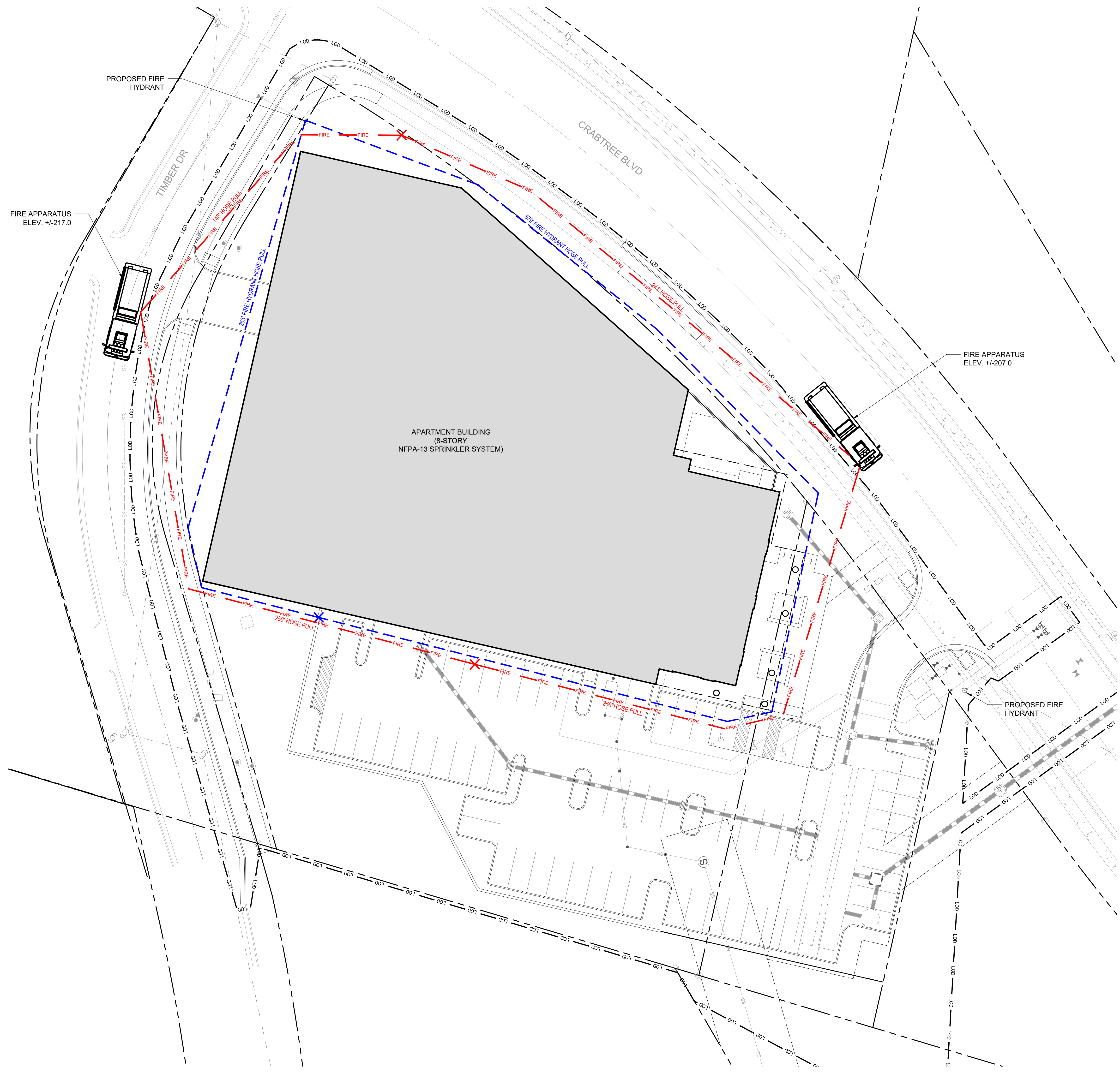
WITHIN THE AREA OF ABOVE DEFINED SIGHT TRIANGLE, THERE SHALL BE NO SIGHT OBSTRUCTING OR PARTLY OBSTRUCTING WALL, FENCE, SIGN, FOLIAGE, BERMS, OR PARKED VEHICLES BETWEEN THE HEIGHT OF 24 INCHES AND EIGHT FEET ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY IF NO CURBING EXISTS.

REQUIREMENTS PER STREET DESIGN MANUAL SEC. 12.6. (TABLE 18):
CRABTREE BLVD. (35 MPH)
LEFT TURN: 420'-0"
RIGHT TURN: 340'-0"
TIMBER DRIVE (25 MPH):
LEFT TURN: 280'-0"
RIGHT TURN: 240'-0"

VEHICLE PARKING					
USE	QTY.	DESCRIPTION (MAX.)	ALLOWED	PROVIDED	NOTE
MULTI-UNIT LIVING: 0-1 BEDROOM	129	1.5 SPACES / UNIT	194	130	65 DECK + 65 SURFACE
MULTI-UNIT LIVING: 2 BEDROOMS	35	2.25 SPACES / UNIT	79	79	DECK ONLY
TOTAL PARKING SPACES	164		273	209	
ACCESSIBLE PARKING SPACE (PER NC BUILDING CODE SEC. 1106.1)			7	12	9 DECK + 3 SURFACE

USE	BICYCLE PARKING (SHORT TERM)			BICYCLE PARKING (LONG TERM)		
	DESCRIPTION	REQUIRED	PROVIDED	DESCRIPTION	REQUIRED	PROVIDED
MULTI-UNIT LIVING	1 SPACE / 20 UNITS (MIN. 4)	8	8	1 SPACE / 7 BDRM.	28	38
TOTAL		8	8		28	38

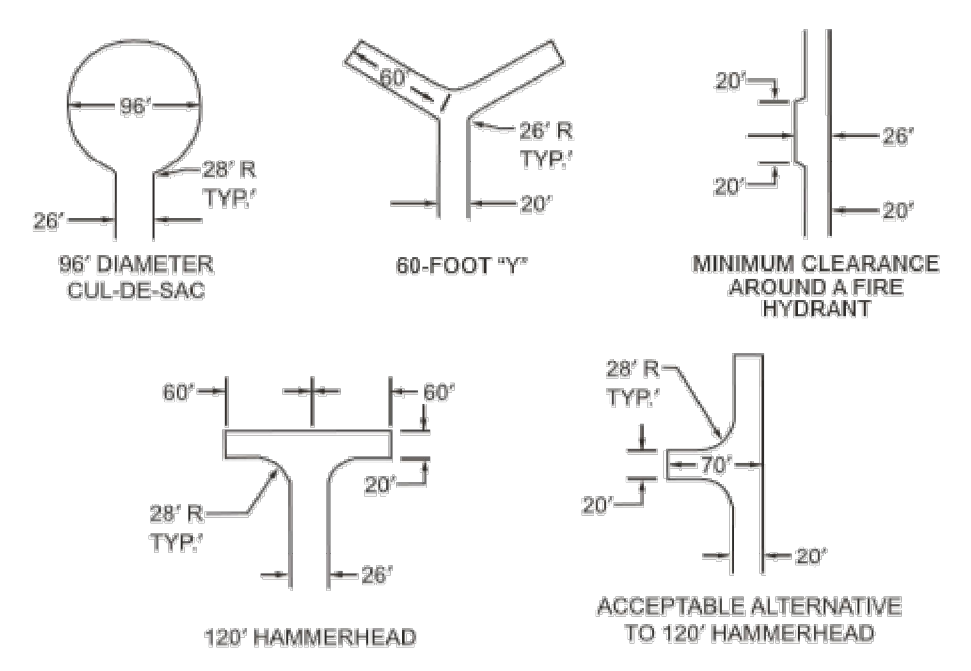




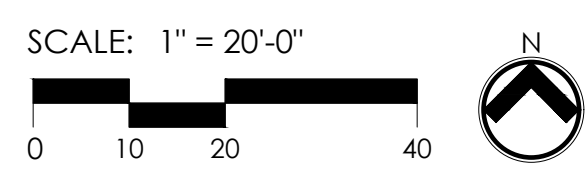
TECHNICAL BULLETIN CITY OF RALEIGH, N.C. www.raleighnc.gov		OFFICE OF THE FIRE MARSHAL		
Subject	Bulletin #	SECTION	PAGE	EFFECTIVE DATE
Fire Apparatus Access	TB-12	NCFCPC	1 of 3	5/1/2012
		PREPARED BY	Revision Date	
		Office of the Fire Marshal	11/17/2021	



- 1.0 **Purpose**
This policy is to provide an alternate method to meet the fire department apparatus access requirements in the North Carolina Fire Prevention Code (current adopted edition).
- 2.0 **Organization(s) Affected**
Raleigh Fire Department (Office of the Fire Marshal), site/civil engineers, contractors, architects.
- 3.0 **References**
Current adopted edition North Carolina Fire Prevention Code and International fire code commentary.
- 4.0 **Definitions**
 - 4.1 Unless otherwise stated, the following definitions shall, for the purposes of this technical bulletin, have the meanings as shown in 4.0.
 - 4.2 Inside turning radius: Radius of the smallest circle around which the vehicle can turn.
 - 4.3 Outside turning radius: (wall to wall) Radius of the smallest circle inside of which the entire vehicle can turn. This measurement takes into account any front overhang due to chassis, bumper extensions and aerial devices.
- 5.0 **Requirements**
 - 5.1 Approved fire apparatus access shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus road shall have an unobstructed width of not less than 20 feet except for approved security gates. An unobstructed vertical clearance of not less than 13 feet 6 inches. Approved fire apparatus access roads shall extend to within 150 feet of all portions of the facility and all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building. The fire code official may increase this distance to minimum of 200' if the building is equipped throughout with an approved NFPA 13 or NFPA 13R automatic sprinkler system.
 - 5.2 Fire apparatus access roads shall be designed and maintained to support the imposed loads of the fire apparatus (90,000 pounds). Roads shall be surfaced to provide all weather driving capabilities in such a way that excessive rain does not cause it to be flooded; degraded due to wash out and/or wash-boarding; or, sodden to such an extent that fire apparatus travel would become compromised. Alternatives to asphalt and concrete, such as interlocking pavers, may be used when approved and for limited applications. A graveled surface is not an acceptable alternative and will not be considered for an approved alternative method.
 - 5.3 The minimum required inside turning radius shall be 28 feet unless otherwise determined by the fire code official.
 - 5.4 Dead end fire apparatus access roads exceeding 150 feet shall be provided with an approved area for turning around fire apparatus.

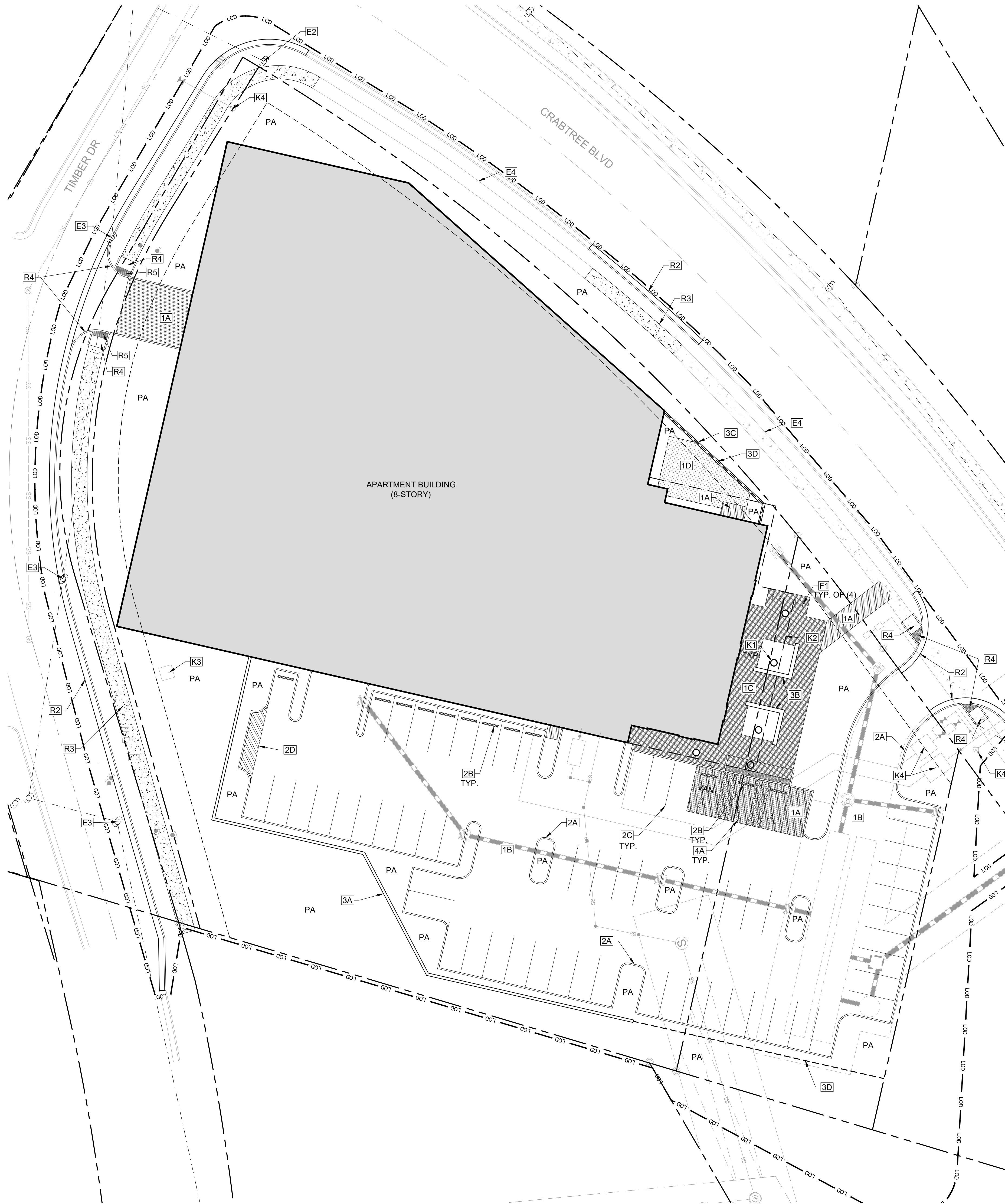


- 5.5 The grade of the fire apparatus access road shall not exceed 12 percent unless written permission is obtained from the fire code official.
- 5.6 Security gate installation across fire apparatus access roads shall be approved by the fire code official. Where security gates are installed they shall have an approved means of emergency operation.
- 5.7 Alternate access routes can be presented to the fire official for approval. Alternate plans must provide access for all fire apparatus in service with the Raleigh Fire Department (present and future).
- 6.0 **Goal:**
- 6.1 Our goal is to provide adequate emergency access for City of Raleigh Fire Apparatus to ensure that the fire departments mission of fire suppression, rescue, emergency medical services, and special services to all who live, visit, work, or invest in the city are provided without delay.
- 6.2 The goal of Alternate apparatus access is to provide flexibility to designers and allow both the owners needs and the needs of the fire department to be met in an approved manner.



CRABTREE BLVD. APARTMENTS
LODEN PROPERTIES
 2321 Crabtree Blvd., Raleigh, NC 27604

SITE CO. PROJECT NUMBER:
 22013
 PROJECT PHASE:
 ADMINISTRATIVE
 SITE REVIEW
 DATE: 09.06.2024
 SHEET TITLE:
FIRE ACCESS PLAN
 SHEET NUMBER:
L104

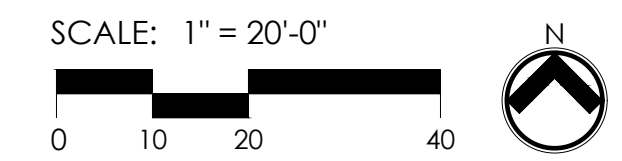


GENERAL SITE NOTES

- ALL CONSTRUCTION IN RIGHT-OF-WAY PER CITY OF RALEIGH STANDARD.
- SIDEWALKS ALONG RIGHT-OF-WAY ARE PUBLIC AND MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW VISION AND PEOPLE WITH MOBILITY DISABILITIES. EXISTING PEDESTRIAN ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION ARE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL PAVEMENTS TO SLOPE POSITIVELY AWAY FROM ALL BUILDINGS. PONDING OF WATER IS PROHIBITED.
- PROVIDE CONSTRUCTION JOINTS IN CONCRETE WALKWAYS AS SHOWN IN PLANS. IF NOT SHOWN ON PLANS - MAX SPACING @ 10'
- THROUGHOUT PROJECT SITE, ALL DIMENSIONS TO BE FIELD VERIFIED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCY. ALL DIMENSIONS ARE TO OUTSIDE FACE OF BUILDING, TO CENTERLINE, CENTER TO CENTER ON STRIPES, AND/OR FACE OF CURB, UNLESS OTHERWISE NOTED.
- BUILDING AND PUBLIC ROADWAY STAKE OUT SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR.
- GUARDRAILS MUST BE INSTALLED ON THE OPEN SIDES OF ELEVATED WALKING SURFACES THAT EXCEED 30 INCHES IN HEIGHT. ALL GUARDRAILS MUST BE A MINIMUM HEIGHT OF 42 INCHES ABOVE THE LEADING EDGE OF THE TREAD OR WALKING SURFACE. GUARDRAILS SHALL HAVE BALUSTERS SUCH THAT A 4 INCH DIAMETER SPHERE CANNOT PASS THROUGH ANY OPENING UP TO A HEIGHT OF 34 INCHES. FROM 34 INCHES TO 42 INCHES ABOVE THE WALKING SURFACE, A 8 INCH DIAMETER SPHERE SHALL NOT PASS.
- THE CONTRACTOR, AT ALL TIMES, MUST KEEP THE PREMISES FREE FROM ACCUMULATIONS OF WASTE, MATERIALS OR RUBBISH CAUSED BY THE CONTRACTOR, THE CONTRACTOR'S EMPLOYEES OR THE CONTRACTOR'S SUBCONTRACTOR. ALL DEBRIS SHALL BE REMOVED FROM THE PROJECT SITE ON A DAILY BASIS.
- IF DEPARTURES FROM THE DRAWINGS OR SPECIFICATIONS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITH THE EXPRESS WRITTEN PERMISSION OF THE OWNER.
- LANDSCAPE ARCHITECT AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND/OR METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
- EXISTING UTILITIES AND STRUCTURES SHOWN, BOTH UNDERGROUND AND ABOVE, ARE BASED ON A FIELD DATA PROVIDED TO LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES, UNDERGROUND LINES, AND STRUCTURES AS NECESSARY TO AVOID DAMAGING OR DESTROYING EXISTING SERVICES.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE ACTUAL AND EXACT LOCATION, SIZE, AND MATERIAL COMPOSITION OF ANY EXISTING WATER OR SEWER SERVICE PROPOSED FOR CONNECTION OR USE ON THIS PROJECT. THE RELOCATION OF ANY UTILITY SERVICES REQUIRED TO COMPLETE ANY PORTION OF THESE CONSTRUCTION PLANS.
- CONTRACTOR SHALL MAINTAIN AN "AS BUILT" SET OF DRAWINGS TO RECORD ANY FIELD CHANGES, ALONG WITH ANY PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER AT THE END OF THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH PERMITS AS ISSUED, AND ANY AND ALL APPLICABLE STATE, COUNTY AND LOCAL CODES.
- EXISTING IMPROVEMENTS DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED OR RESTORED TO THEIR ORIGINAL CONDITION, AND TO THE SATISFACTION OF THE OWNER OF THE IMPROVEMENTS.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, AND/OR ANY OTHER REQUIREMENTS WHICH MUST BE MET UNDER CONTRACT.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR DETAILS OF BUILDINGS AND BUILDING DIMENSIONS.
- CONTRACTOR SHALL COORDINATE CONSTRUCTION OF ALL UNDERGROUND UTILITIES FOR THIS PROJECT WITH THE OWNER'S REPRESENTATIVE PER ALL APPLICABLE REGULATIONS.
- CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTOR'S ON SITE AND UTILITY PROVIDERS DURING CONSTRUCTION TO ENSURE SMOOTH TRANSITION BETWEEN DISCIPLINES.
- ALL DEMOLITION, AND ANY SUBSEQUENT CONSTRUCTION, SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS SET FORTH AND APPROVED BY THE CITY OF RALEIGH. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. ALL TREE PROTECTION FENCING SHALL REMAIN IN PLACE DURING CONSTRUCTION.
- TRAFFIC CONTROLS FOR ANY UTILITY WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE PERFORMED IN COMPLIANCE WITH STANDARDS OF THE NORTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL CROSSWALK MARKINGS WITHIN RIGHT-OF-WAY SHALL BE CONSTRUCTED OF THERMOPLASTIC MATERIALS AND CONSTRUCTED IN ACCORDANCE WITH NCDOT SPECIFICATIONS. CONTRACTOR TO INSTALL CROSSWALKS IN SUCH A MANNER THAT CROSSWALKS ARE ALIGNED BETWEEN HANDICAP/WALKWAY ACCESS POINTS OR PERPENDICULAR TO THE ROADWAY / DRIVE LANE.
- ALL SIGNS AND PAVEMENT MARKINGS ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) AND NCDOT STANDARDS.
- ALL SIGNS SHALL USE PRISMATIC SHEETING THAT MEETS MINIMUM RETROREFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.

HARDSCAPE LEGEND

VEH.	PED.	SYMBOL	PROPOSED SITE ITEM	DETAIL/SHEET
		1A	C.I.P. CONCRETE PAVING	1/L202
		1B	ASPHALT PAVING	3/L202
		1C	PRECAST CONCRETE PAVING	8/L202
		1D	ARTIFICIAL TURF	4/L203
		1E	TRUNCATED DOMES	3/L204
		2A	C.I.P. CONCRETE CURB	4/L202
		2B	CONCRETE WHEEL STOP	7/L202
		2C	4" PARKING STRIPE	
		2D	ANGLED PARKING STRIPE	
		2E	METAL EDGE	1/L204
		3A	SEGMENTAL CONCRETE RETAINING WALL	3/L203
		3B	C.I.P. CONCRETE SEAT WALL	5/L203
		3C	C.I.P. CONCRETE RETAINING WALL	6/L203
		3D	DECORATIVE FENCE	2/L204
		4A	ADA PARKING STALL & SIGN	1&2 /L203
SYMBOL SITE FURNITURE				
		F1	BIKE RACK	
SYMBOL PROPOSED RIGHT-OF-WAY ITEMS				
		R1	ASPHALT PAVING	PER CIVIL
		R2	C.I.P. CONCRETE CURB & GUTTER	PER CIVIL
		R3	C.I.P. CONCRETE SIDEWALK	PER CIVIL
		R4	CURB RAMP	PER CIVIL
		R5	TRUNCATED DOMES	
SYMBOL BY OTHER CONSULTANTS				
		K1	BUILDING COLUMN	PER ARCH.
		K2	BUILDING OVERHANG	PER ARCH.
		K3	ELECTRICAL TRANSFORMER	PER ELECTRIC.
		K4	FIRE HYDRANT	PER CIVIL
		K5	BACKFLOW PREVENTER	PER CIVIL
		K6	UNDERGROUND SCM	PER CIVIL.
SYMBOL EXISTING SITE ITEM TO REMAIN				
		E1	EXISTING LIGHT POLE	
		E2	EXISTING POWER POLE	
		E3	EXISTING POWER POLE TO BE RELOCATED	
		E4	EXISTING SIDEWALK	
SYMBOL OTHER				
		PA	PLANTING AREA	
		TYP.	TYPICAL	
		---	L00 - LIMIT OF DISTURBANCE	
		---	PROPERTY LINE	



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CRABTREE BLVD. APARTMENTS
LODEN PROPERTIES
 2321 Crabtree Blvd., Raleigh, NC 27604

SITE CO. PROJECT NUMBER:
22013

PROJECT PHASE:
ADMINISTRATIVE
SITE REVIEW

DATE: 09.06.2024

SHEET TITLE:
HARDSCAPE PLAN

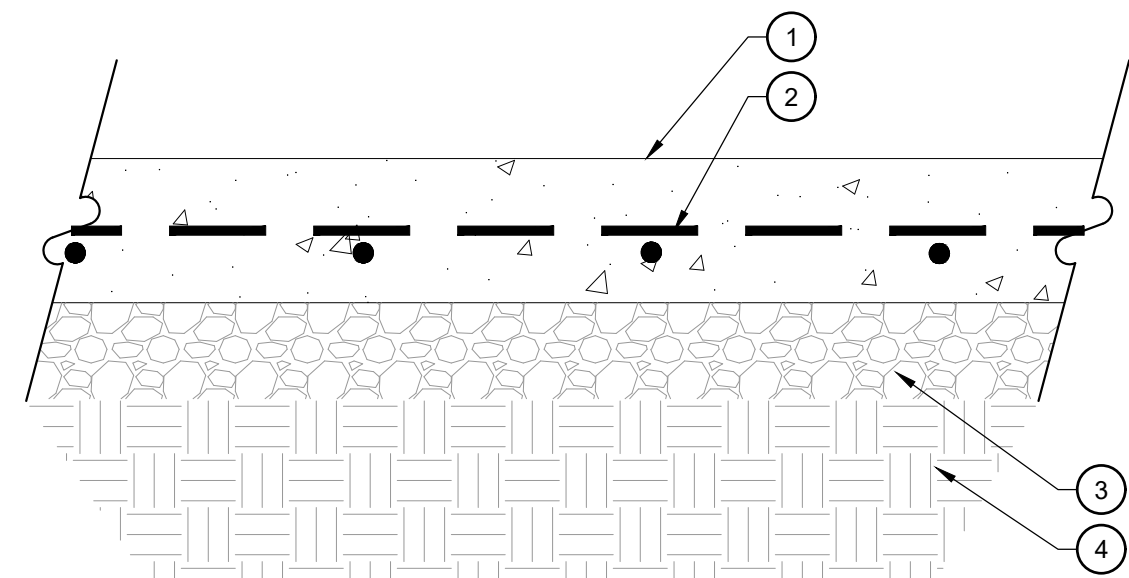
SHEET NUMBER:
L201

LEGEND

1. CAST-IN-PLACE CONCRETE, COLOR AND FINISH PER HARDSCAPE LEGEND
2. #4 REBAR, REINFORCEMENT PER TABLE BELOW
3. AGGREGATE BASE COURSE, THICKNESS PER TABLE BELOW
4. PREPARED SUBGRADE PER GEOTECHNICAL REPORT

NOTES

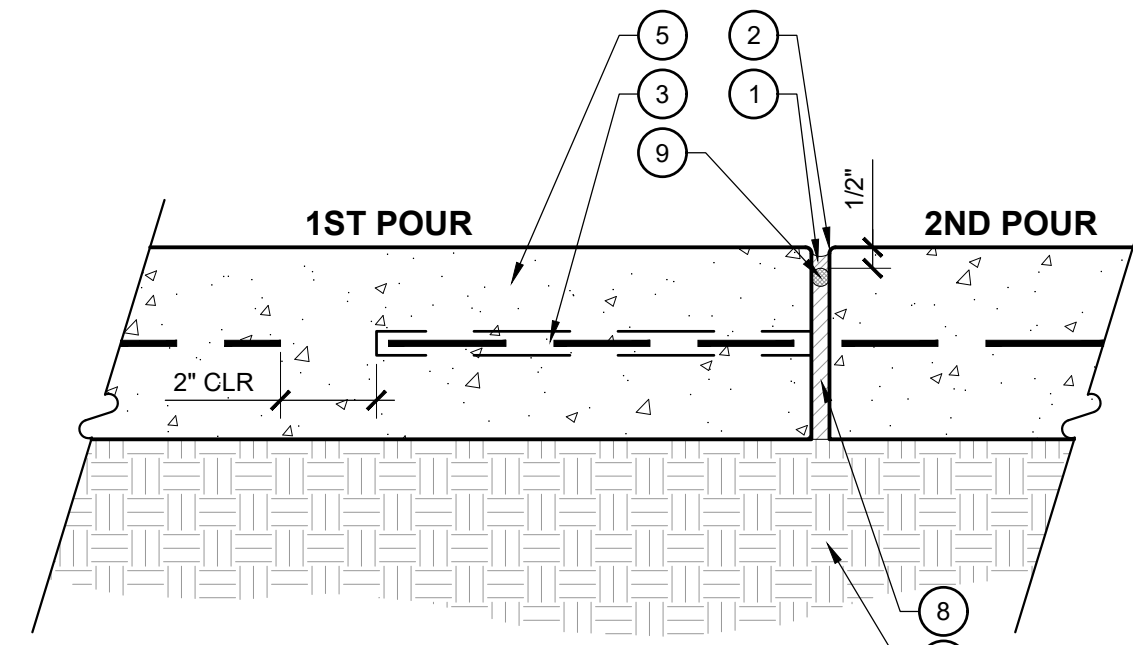
- A. CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT TO REVIEW FORMS PRIOR TO POURING
- B. IF NO GEOTECHNICAL REPORT IS AVAILABLE, COMPACT SUBGRADE TO 95% S.P.D.



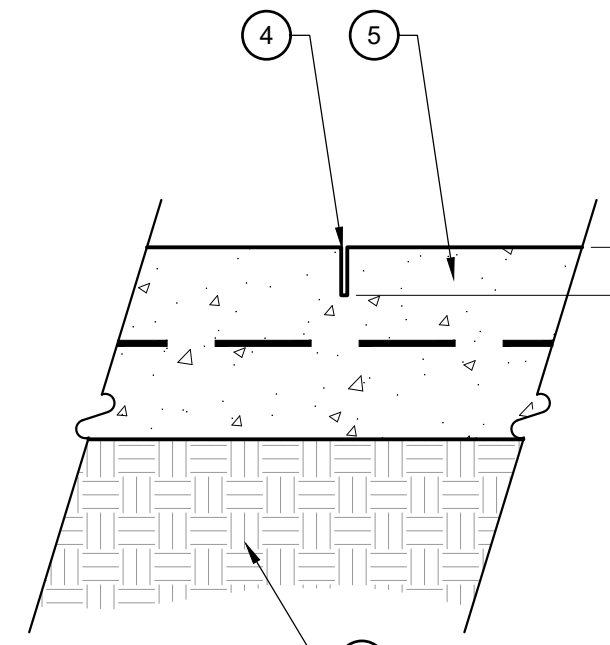
PAVEMENT TYPE	ABC (IN.)	REINFORCEMENT	CONCRETE (IN.)
SERVICE DRIVE AREA / DUMPSTER PAD	4	#4 @ 12" O.C., B.W.	8
ACCESSIBLE PARKING SPACES	4	#4 @ 12" O.C., B.W.	6
PEDESTRIAN SIDEWALKS	4	NONE	4

LEGEND

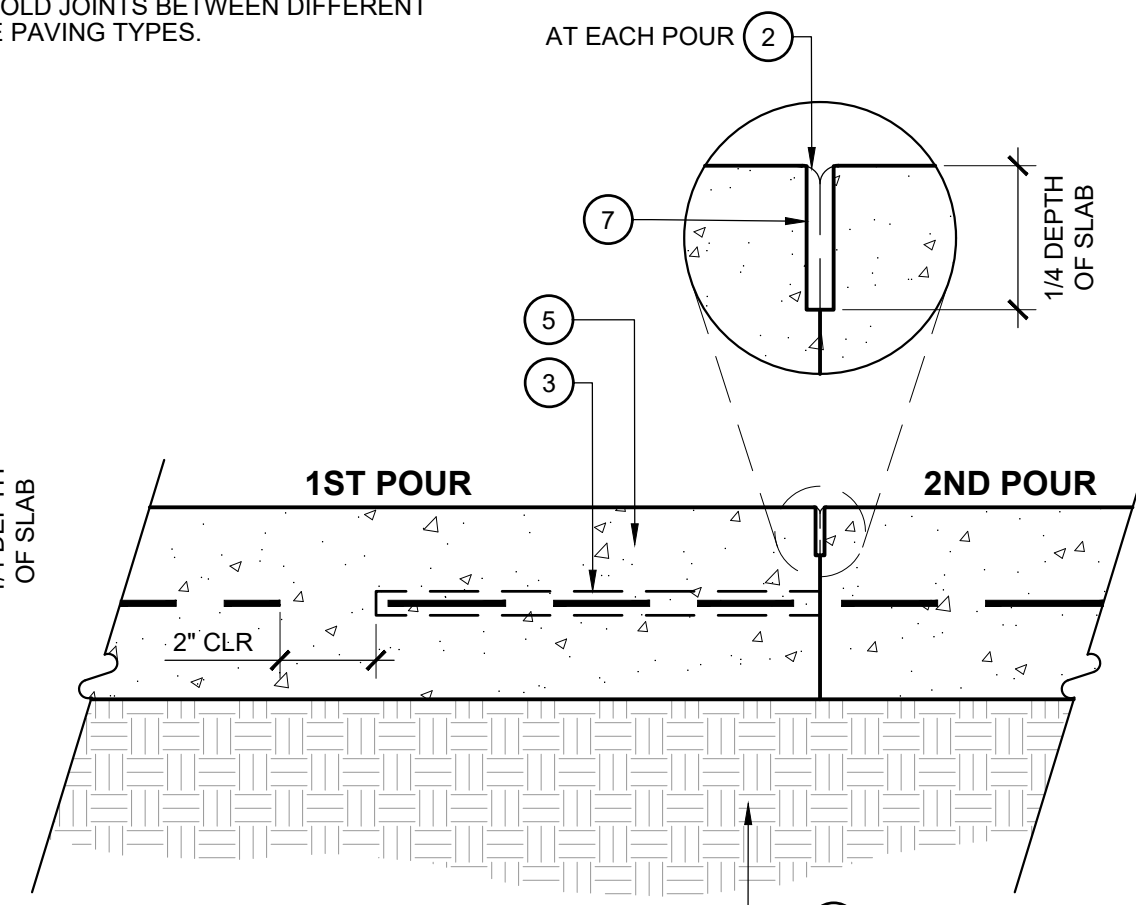
1. 3/8" EXPANSION JOINT W/ SEALANT DUSTED WITH DOUBLE-WASHED CONCRETE SAND WHILE WET PER SPECIFICATIONS, SAND COLOR TO MATCH COLOR OF ADJACENT CONCRETE COLOR
2. 1/8" RADIUS TOOLED EDGE
3. #4 18" STEEL DOWEL @ 18" O.C., CENTERED IN SLAB, SLEEVE ONE SIDE
4. 1/8" WIDE SAWCUT JOINT
5. C.I.P. CONCRETE PAVING PER DETAIL
6. BASE AND SUBGRADE PREPARATION PER GEOTECHNICAL REPORT
7. 3/16" WIDE SAWCUT JOINT, INSTALLED AFTER TOOLED EDGES
8. PREMOLDED FOAM EXPANSION JOINT FILLER PER SPECIFICATIONS
9. 5/8" DIA. POLYETHYLENE FOAM BACKER ROD



EXPANSION JOINT



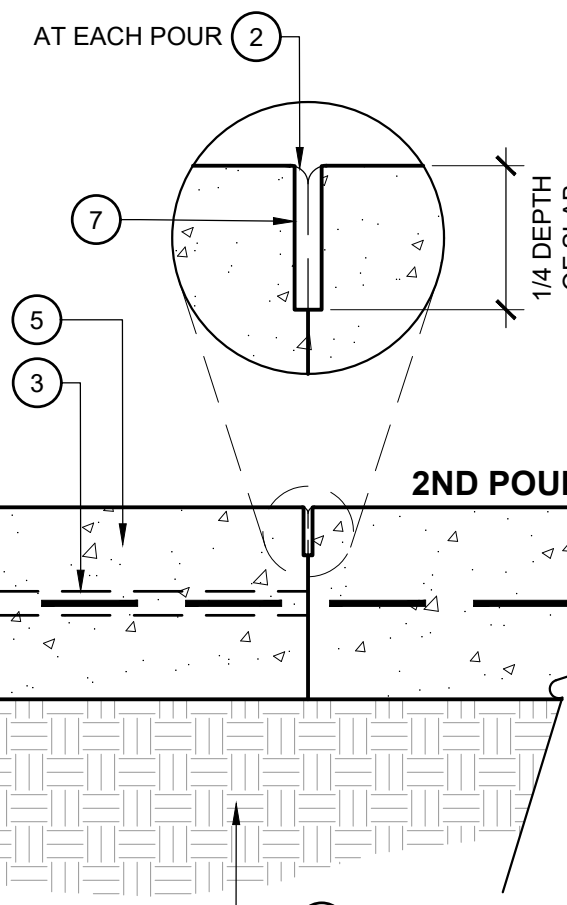
SAWCUT JOINT



COLD JOINT

NOTES

- A. PROVIDE EXPANSION JOINTS WHERE INDICATED ON THE DRAWINGS, AND WHERE PAVING ABUTS WALLS, CURBS, STEPS, RAMPS, AND OTHER VERTICAL APPURTENANCES. OMIT DOWELS WHERE ABUTTING WALLS, BUILDINGS, AND CURBS.
- B. ALL TOOLED EDGES OF EXPANSION JOINTS SHALL BE 1/4" RADIUS MAX.
- C. PROVIDE COLD JOINTS BETWEEN DIFFERENT CONCRETE PAVING TYPES.

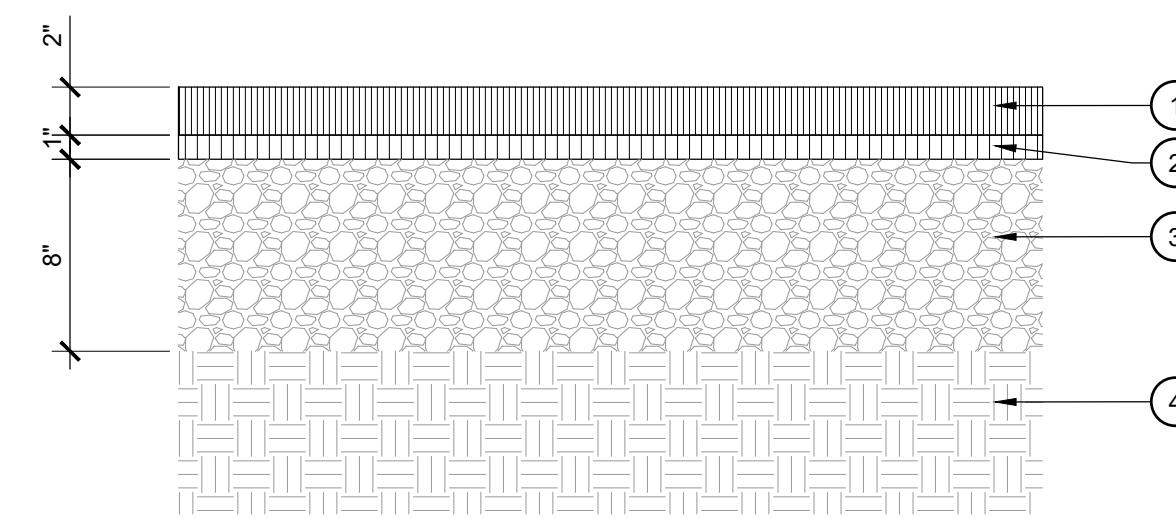


LEGEND

1. S-9.5B ASPHALT WEARING COURSE
2. SF-9.5A ASPHALT BASE COURSE
3. AGGREGATE BASE COURSE
4. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT

NOTES

- A. CONTRACTOR SHALL INFORM LANDSCAPE ARCHITECT OF ANY PAVING DESIGN CONFLICTS WITH GEOTECHNICAL REPORT PRIOR TO INSTALLATION
- B. IF NO GEOTECHNICAL REPORT IS AVAILABLE, COMPACT SUBGRADE TO 95% S.P.D.



HEAVY DUTY (DRIVE LANES AND PARKING AREAS)

1 CONCRETE PAVING

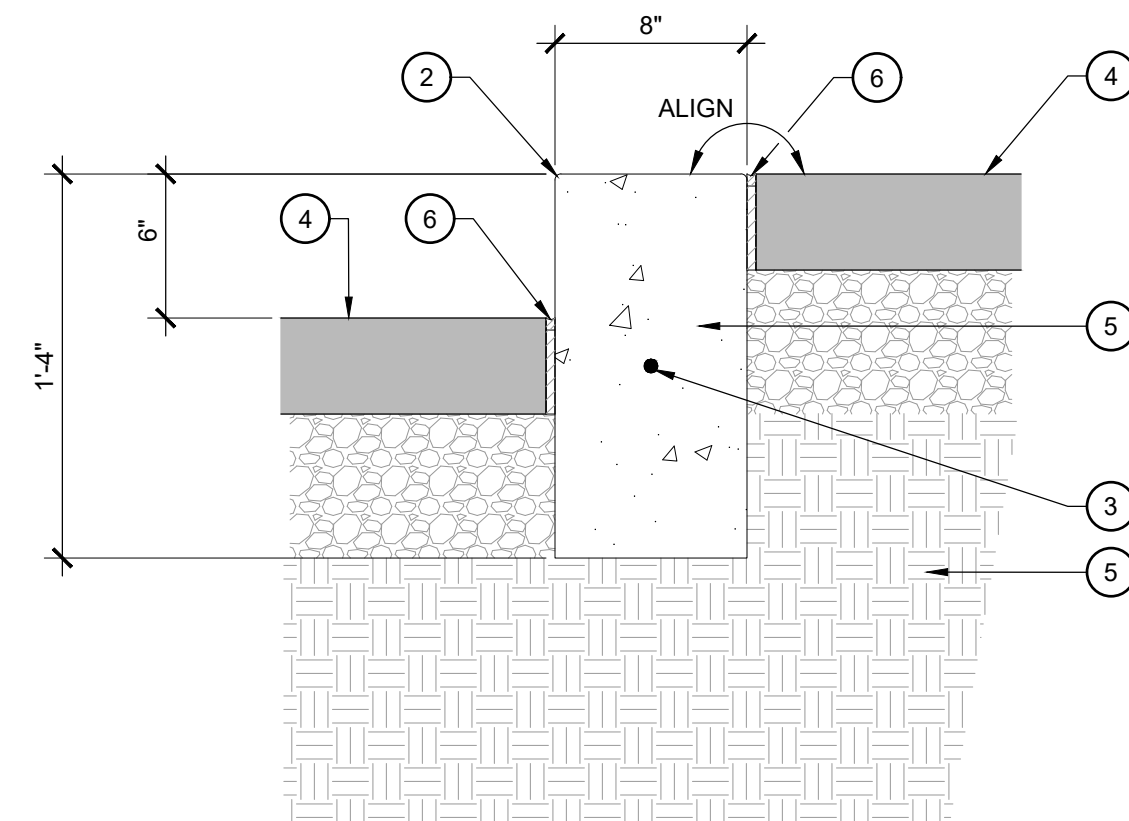
SCALE: 1-1/2" = 1'-0"

2 CONCRETE PAVING JOINTS

SCALE: 3" = 1'-0"

3 ASPHALT PAVING

SCALE: 1-1/2" = 1'-0"

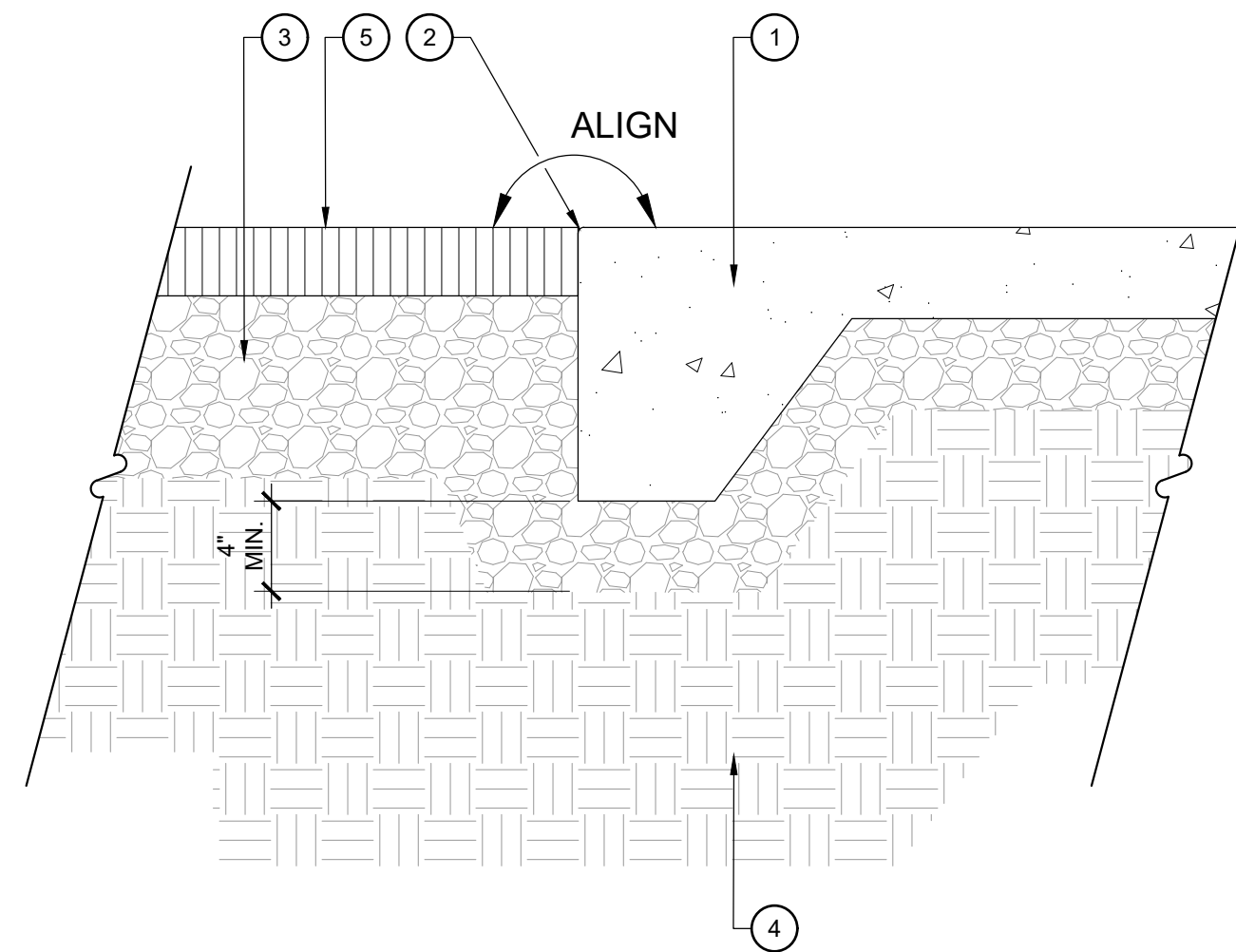


LEGEND

1. CAST-IN-PLACE CONCRETE, COLOR AND FINISH PER HARDSCAPE LEGEND
2. 1/4" RADIUS ALL EXPOSED EDGES
3. #4 REBAR HORIZ., CONTINUOUS, OVERLAP SPLICE 12" MIN.
4. ADJACENT PAVING PER HARDSCAPE PLAN
5. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
6. EXPANSION JOINT PER DETAIL (UTILIZE ONLY WHEN ADJACENT TO CONCRETE PAVING)

NOTES

- A. IF GEOTECHNICAL REPORT NOT AVAILABLE, COMPACT SUBGRADE TO 95% S.P.D.
- B. PROVIDE EXPANSION JOINT 30" O.C. THROUGH LENGTH OF CURB

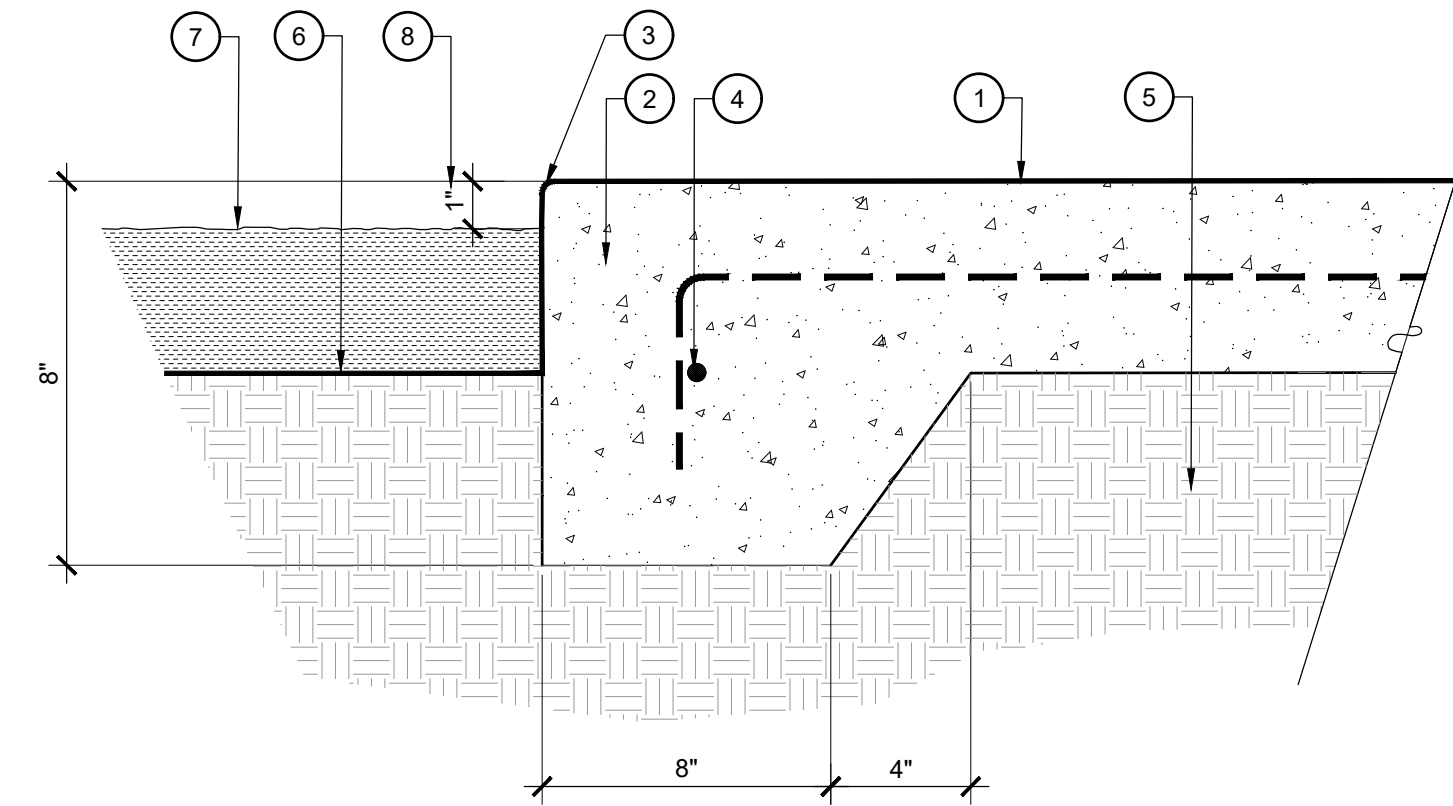


LEGEND

1. CONCRETE THICKENED EDGE
2. 1/4" RADIUS AT ALL EXPOSED EDGES
3. AGGREGATE BASE COURSE
4. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
5. ASPHALT PAVING PER DETAIL

NOTES

- A. IF NO GEOTECHNICAL REPORT AVAILABLE, COMPACT SUBGRADE TO 95% S.P.D.



LEGEND

1. CONCRETE PAVING PER DETAIL
2. THICKENED EDGE
3. 1/8" RADIUS TOOLED EDGE
4. #3 BAR CONTINUOUS, 48" LAPPED AND WIRED
5. COMPACTED SUBGRADE AND BASE REQUIREMENTS PER GEOTECHNICAL REPORT
6. FINISH GRADE AT PLANTING
7. FINISH SURFACE FOR MULCH, PER PLANS AND SPECIFICATIONS
8. 1" GAP NOT REQUIRED WHEN ADJACENT TO ASPHALT PAVING

NOTES

- A. THICKENED EDGE REQUIRED WHEREVER CONCRETE PAVING IS ADJACENT TO ASPHALT AREAS OF AT-GRADE PLANTING, LAWN, OR DECOMPOSED GRANITE
- B. IF NO GEOTECHNICAL REPORT AVAILABLE COMPACT SUBGRADE TO 95% S.P.D.

4 CONCRETE 8" CURB

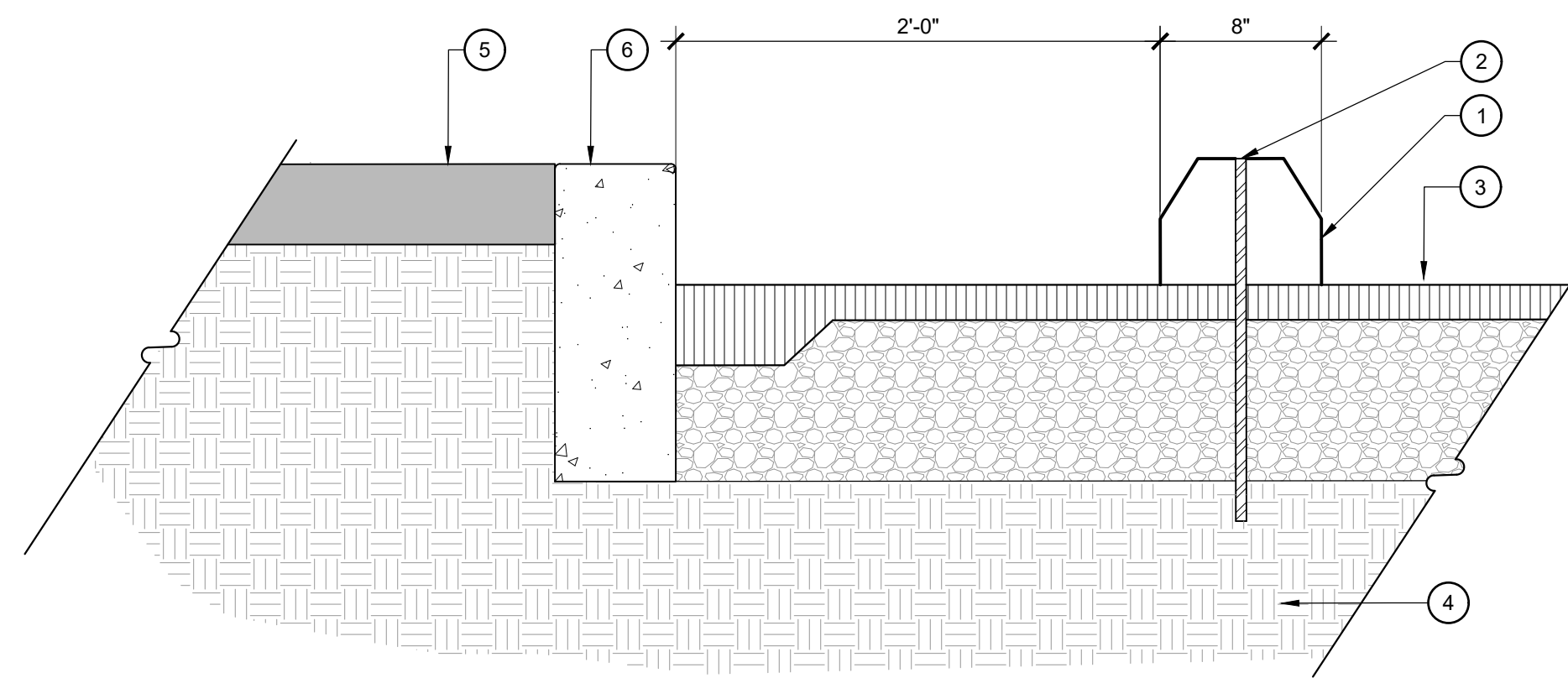
SCALE: 1-1/2" = 1'-0"

5 ASPHALT TO CONCRETE TRANSITION

SCALE: 1-1/2" = 1'-0"

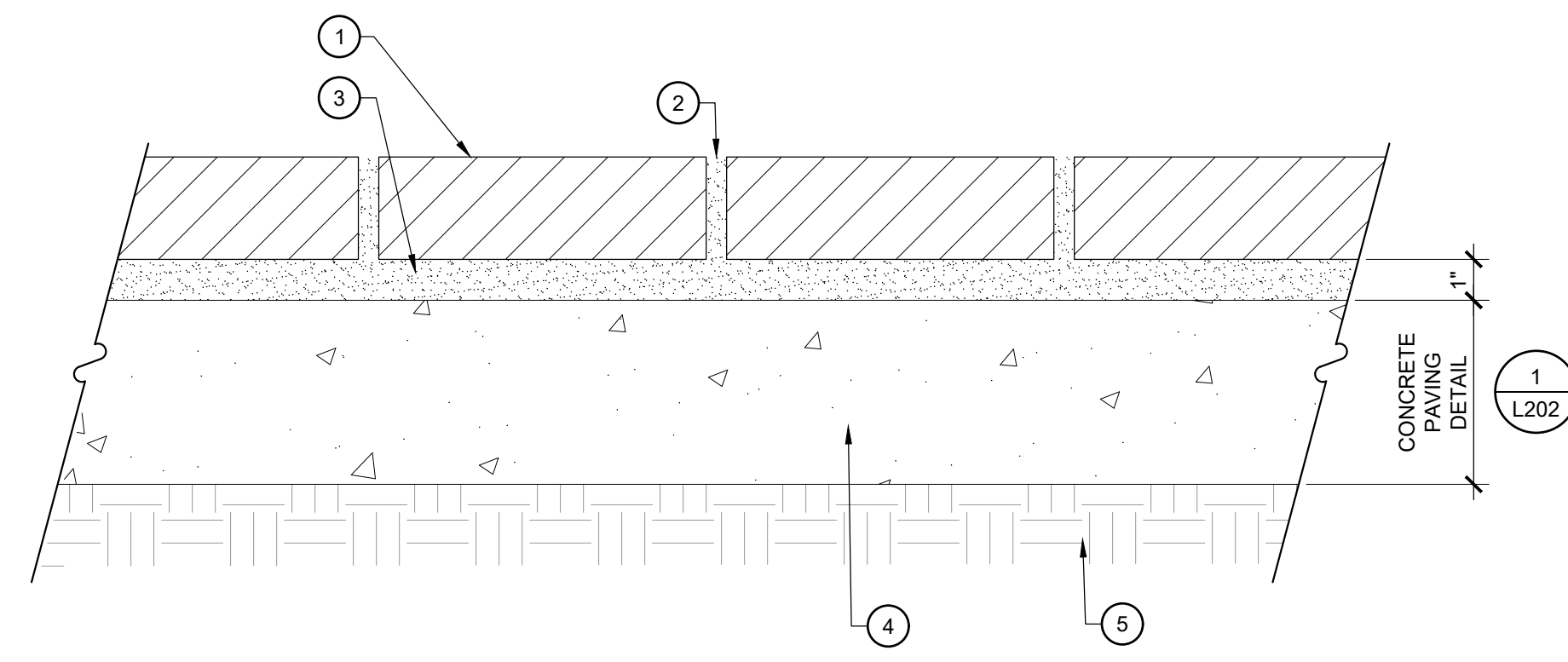
6 CONCRETE THICKENED EDGE

SCALE: 3" = 1'-0"



LEGEND

1. PRECAST CONCRETE WHEELSTOP
2. 5/8" DIA. REIN. BAR 18" LONG 2 PER WHEEL STOP
3. ASPHALT PAVING PER DETAIL
4. EXISTING SUBGRADE
5. ADJACENT PAVING PER HARDSCAPE PLANS
6. C.I.P. CONCRETE CURB PER DETAIL



LEGEND

1. PRECAST CONCRETE PAVER PER HARDSCAPE LEGEND
2. GROUT JOINTS, COLOR PER HARDSCAPE LEGEND
3. MORTAR SETTING BED
4. CONCRETE SUBBASE, REINFORCED PER DETAIL
5. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT

NOTES

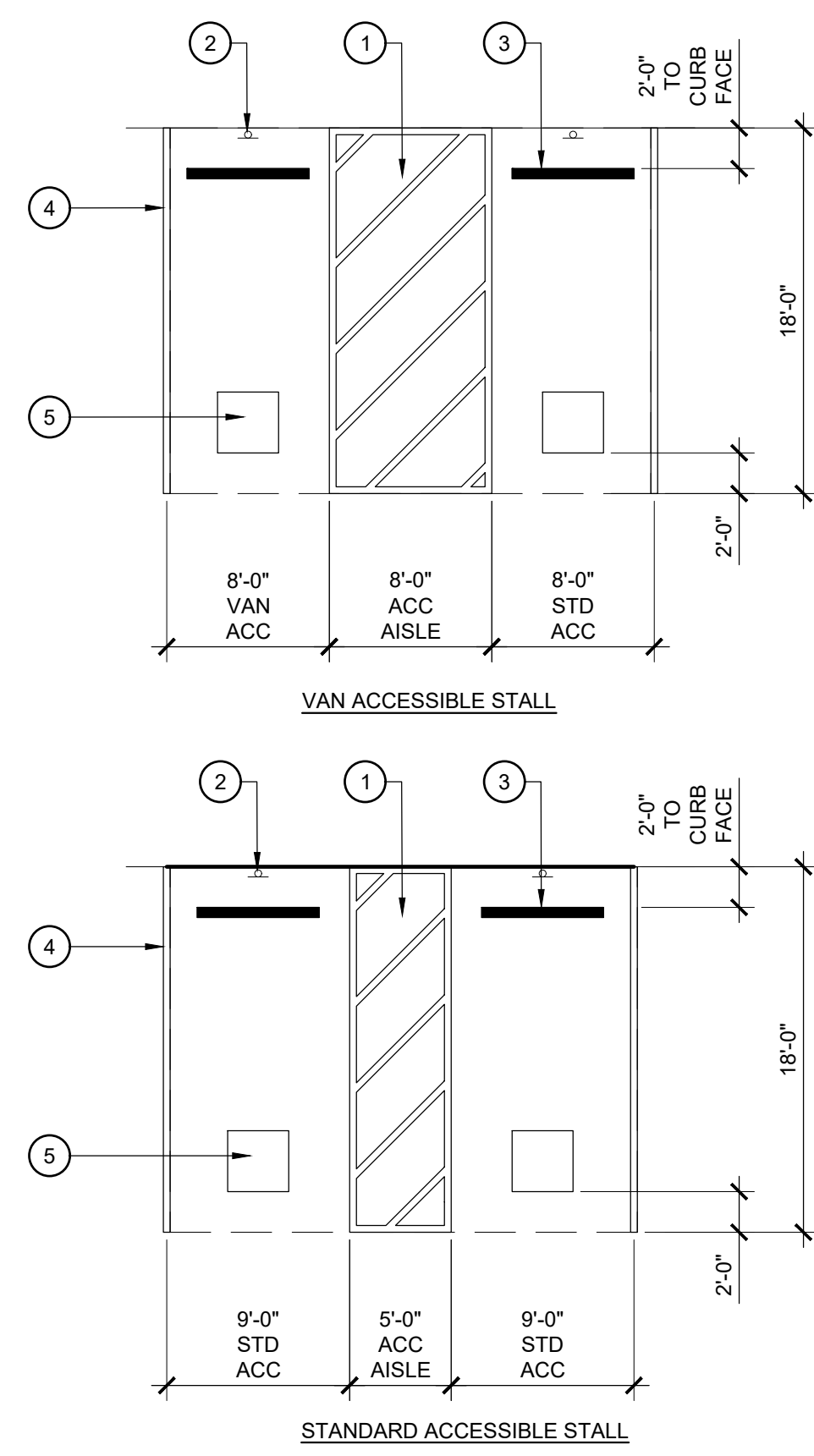
- A. IF GEOTECHNICAL REPORT NOT AVAILABLE, COMPACT SUBGRADE TO 95% S.P.D.
- B. REFER TO HARDSCAPE PLAN AND LEGEND FOR LAYOUT AND PATTERN OF PAVERS
- C. CONTRACTOR TO SUBMIT PAVER AND GROUT SAMPLE TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLATION
- D. FINISH SURFACE OF PAVERS SHALL BE LEVEL WITH ADJACENT PAVING.

7 CONCRETE WHEEL STOP

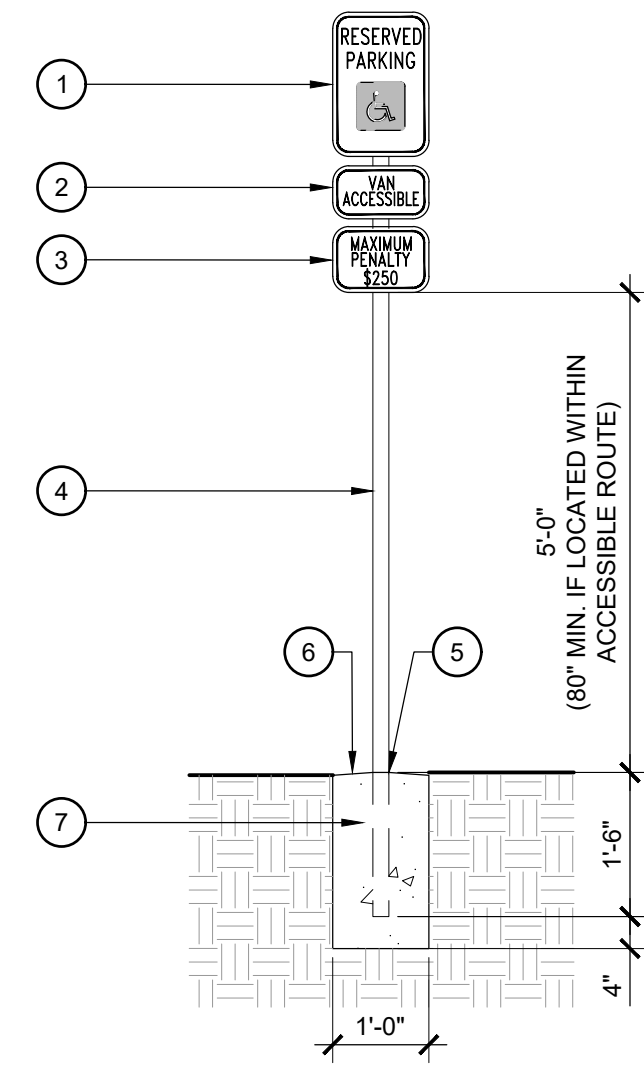
SCALE: 1-1/2" = 1'-0"

8 PRECAST CONCRETE PAVING

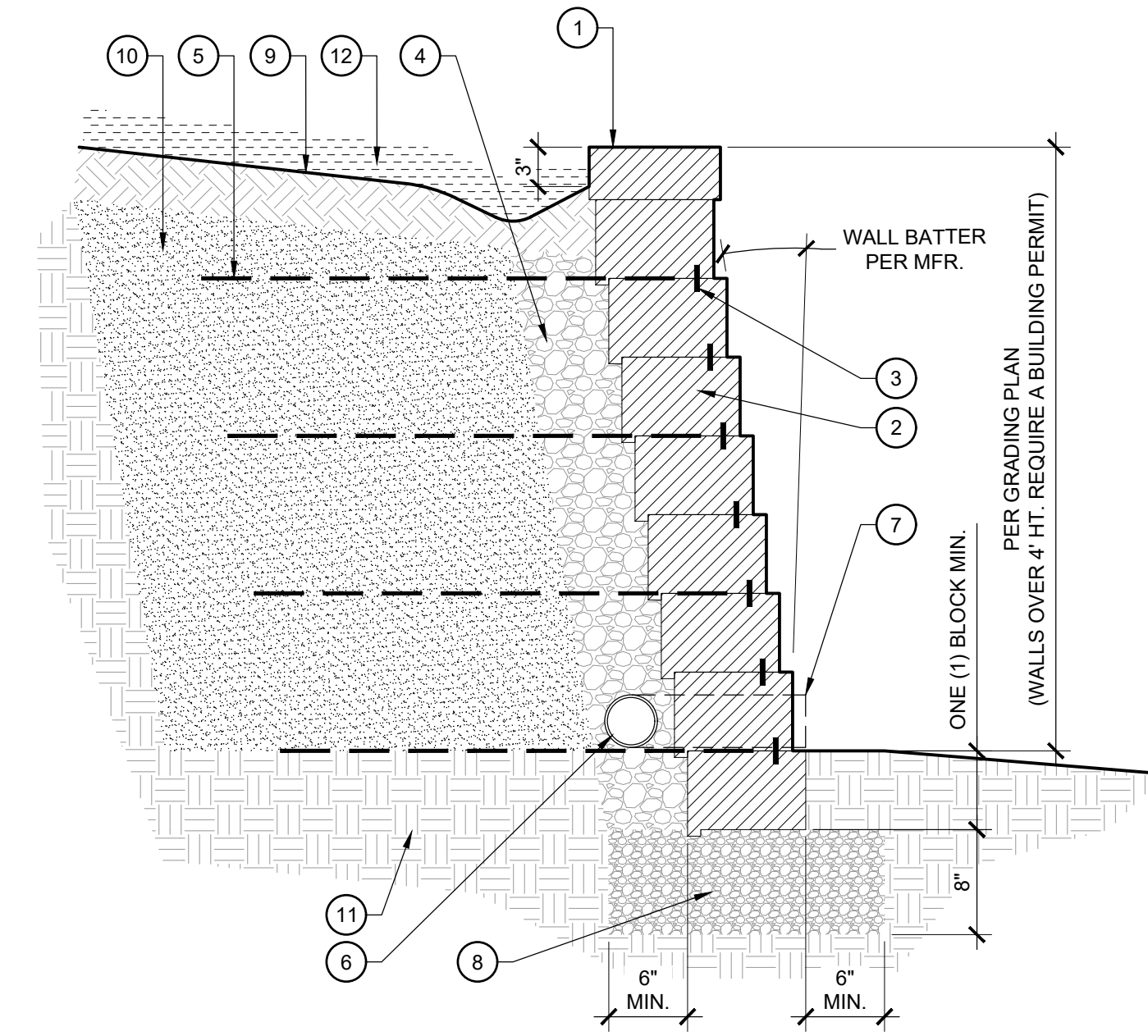
SCALE: 3" = 1'-0"



- LEGEND**
1. ACCESSIBLE AISLE TO BE CLEAR OF ALL OBSTRUCTIONS
 2. ACCESSIBLE SIGN PER DETAIL. SEE HARDSCAPE PLAN FOR LOCATION
 3. CONCRETE WHEELSTOP
 4. 4" WIDE WHITE STRIPE
 5. 36" X 36" INTERNATIONAL SIGN OF ACCESSIBILITY EMBLEM
- NOTES**
- A. CONTRACTOR SHALL VERIFY A MAX. SLOPE OF 2% IN ALL DIRECTIONS. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION



- LEGEND**
1. SIGN WITH INTERNATIONAL SIGN OF ACCESSIBILITY (MUTCD R7-8C)
 2. UTILIZE VAN ACCESSIBLE SIGN WHEN APPLICABLE
 3. PENALTY SIGN. WHEN VAN ACCESSIBLE SIGN NOT REQUIRED PLACE DIRECTLY BELOW INTERNATIONAL SIGN OF ACCESSIBILITY
 4. 2" DIA. OR U-CHANNEL GALVANIZED STEEL POST CENTERED ON POST
 5. NON-SHRINK GROUT POST TO FOOTER
 6. SLOPE TOP OF FOOTER AWAY FROM POST WHEN FOOTER IS IN A PLANTING AREA
 7. CAST-IN-PLACE CONCRETE FOOTER
- NOTES**
- A. HEIGHT OF R7-8C RESERVED PARKING SIGN AS PRESCRIBED BY N.C. DEPT. OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SECTION 2A-23, PART II



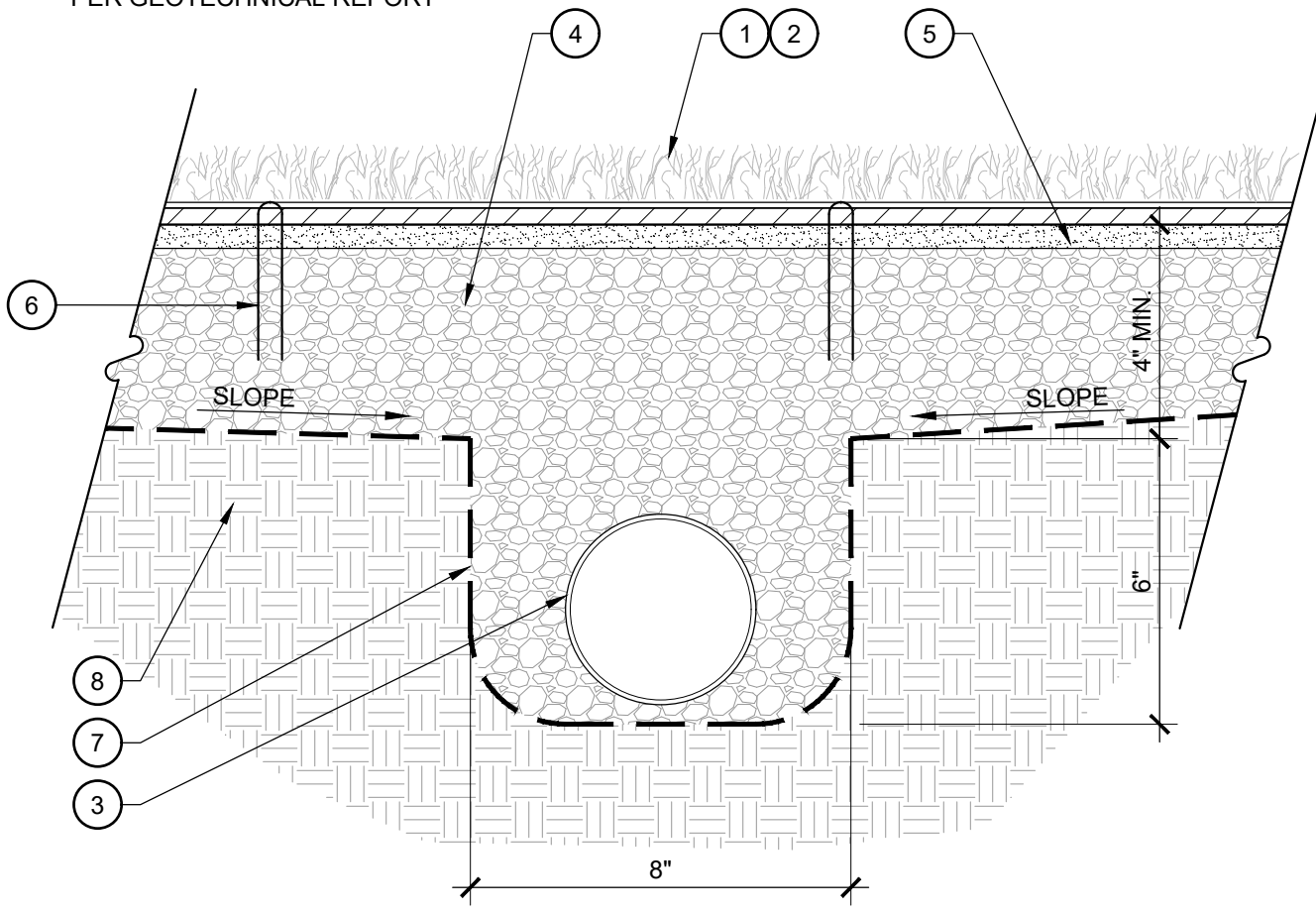
- LEGEND**
1. MODULAR CAP UNIT PER HARDSCAPE LEGEND
 2. MODULAR BLOCK UNIT PER HARDSCAPE LEGEND
 3. FIBERGLASS PIN
 4. NO. 57 DRAINAGE AGGREGATE
 5. MIRAFI GEOGRID OR EQUAL
 6. 4" PERFORATED HDPE PIPE WITH 2% MIN. SLOPE TO DAYLIGHT
 7. DRAIN OUTLET THROUGH WALL FACE 50' O.C. OR WHERE SHOWN ON PLANS
 8. AGGREGATE BASE COURSE LEVELING PAD
 9. FINISH GRADE AT PLANTING AREA
 10. REINFORCED SOIL, EXTENTS PER RETAINING WALL CONSULTANT
 11. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
 12. MULCH PER PLANS
- NOTES**
- A. WALLS ABOVE 4' HT. REQUIRE A BUILDING PERMIT
B. INSTALL PER RETAINING WALL CONSULTANT RECOMMENDATIONS

1 ACCESSIBLE PARKING SPOT
SCALE: 1/8" = 1'-0"

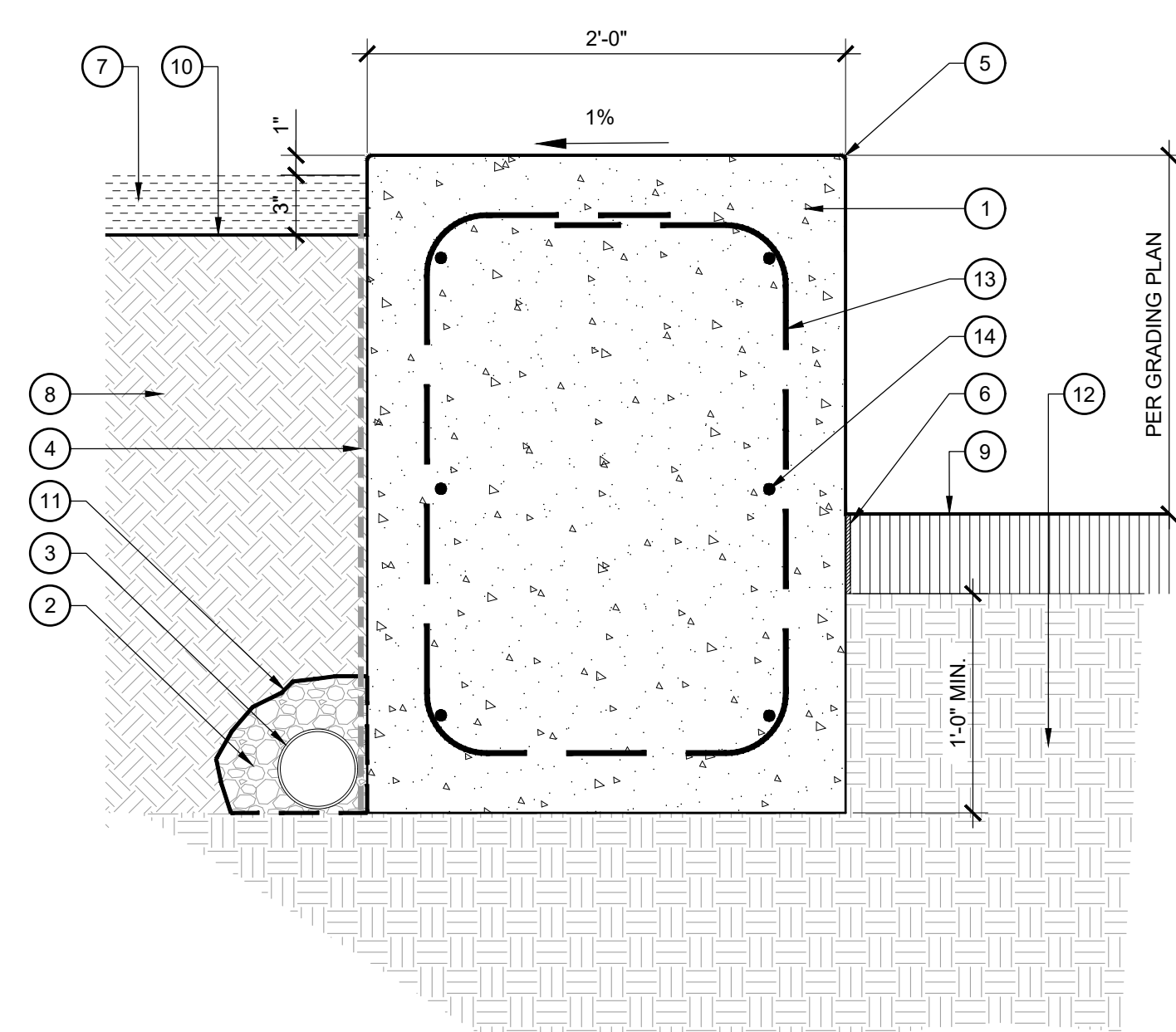
2 ACCESSIBLE PARKING SIGN
SCALE: 1/2" = 1'-0"

3 SEGMENTAL CONCRETE RETAINING WALL
SCALE: 1" = 1'-0"

- LEGEND**
1. ARTIFICIAL TURF PER CONSTRUCTION SCHEDULE
 2. INFILL AND BRUSH ARTIFICIAL TURF WITH ENVIROFILL. ENSURE TURF BLADES DO NOT LAY FLAT
 3. 4" DIA. CORRUGATED PERFORATED PIPE. CONNECT TO NEAREST STORM DRAIN LINE COURSE
 4. #57 COMPACTED WASHED AGGREGATE BASE COURSE
 5. 1/2" ASTM C33 SAND SETTING BED
 6. 6" ARTIFICIAL TURF STAPLE, ONE (1) PER 1 SQ.FT.
 7. GEOTEXTILE FILTER FABRIC, MIRAFI OR EQUAL
 8. COMPACTED SUBGRADE TO 95% STANDARD MAXIMUM DRY DENSITY (MDD), +/-3% OPTIMUM MOISTURE AS DETERMINED BY ASTM D-693, OR PER GEOTECHNICAL REPORT
- NOTES**
- A. INSTALL ARTIFICIAL TURF PER MANUFACTURER'S RECOMMENDATIONS
B. COORDINATE DRAIN PIPE LAYOUT WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION

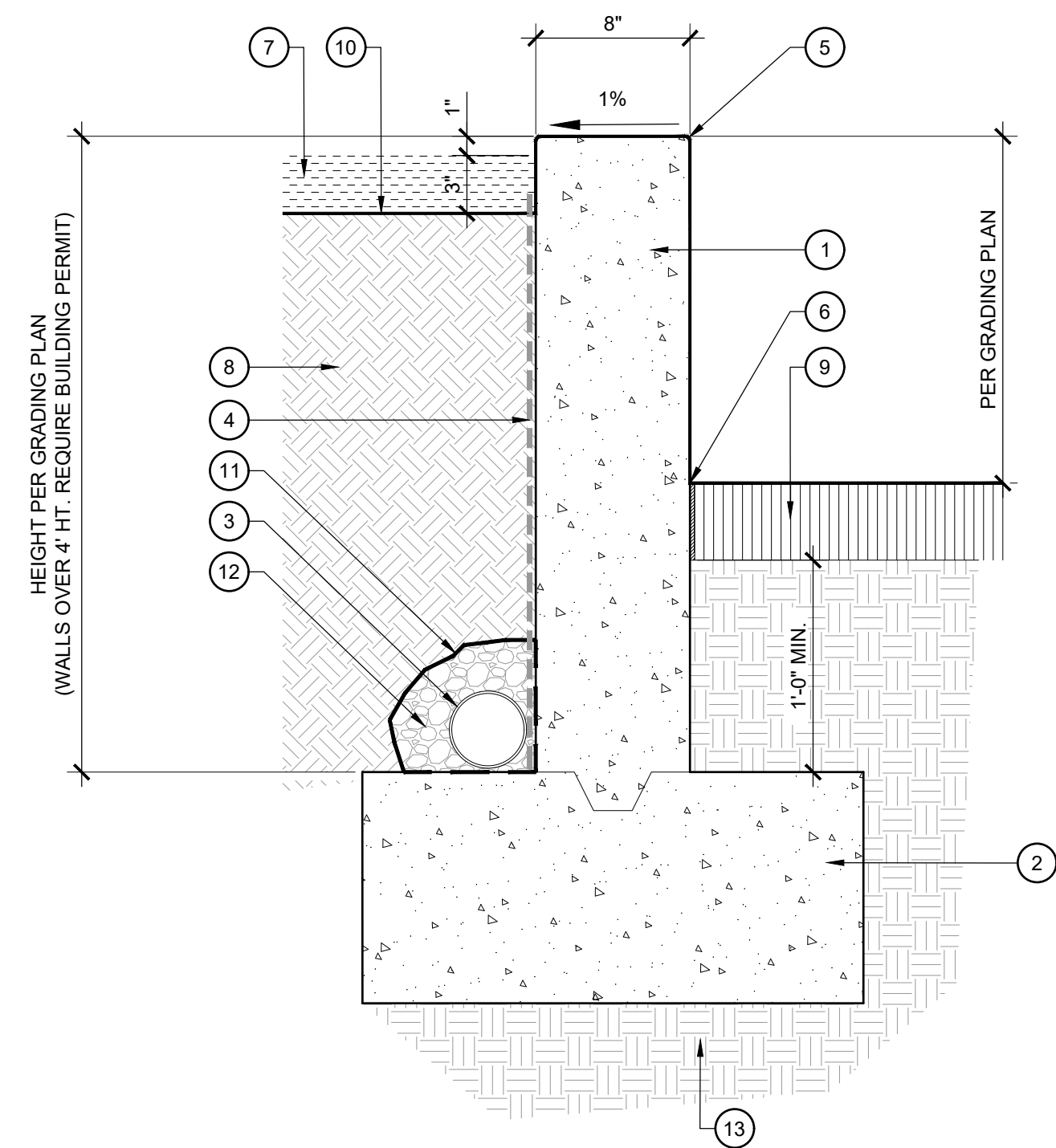


4 ARTIFICIAL TURF
SCALE: 3" = 1'-0"



5 C.I.P. CONCRETE SEAT WALL
SCALE: 1-1/2" = 1'-0"

- LEGEND**
1. C.I.P. CONCRETE RETAINING WALL PER HARDSCAPE LEGEND
 2. DRAINAGE AGGREGATE, 1 CU.FT. MIN. AROUND PIPE
 3. 4" DIA. PERFORATED HDPE PIPE, DAYLIGHT PER CIVIL ENGINEER
 4. WATERPROOFING AND DRAINAGE BOARD
 5. 1/4" RADIUS AT ALL EXPOSED EDGES
 6. EXPANSION JOINT PER DETAIL
 7. MULCH PER PLAN AND SPECIFICATIONS
 8. PLANTING SOIL PER SPECIFICATIONS
 9. ADJACENT CONCRETE PAVING OR PLANTING AREA PER PLANS
 10. FINISH GRADE AT PLANTING AREA
 11. GEOTEXTILE FABRIC, MIRAFI OR EQUAL
 12. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
 13. #3 REBAR AT 12" O.C.
 14. #5 REBAR HORIZONTAL, 18" LAP AT SPLICE
- NOTES**
- A. PROVIDE SHOP DRAWINGS PRIOR TO INSTALLATION



6 C.I.P. CONCRETE RETAINING WALL
SCALE: 1-1/2" = 1'-0"

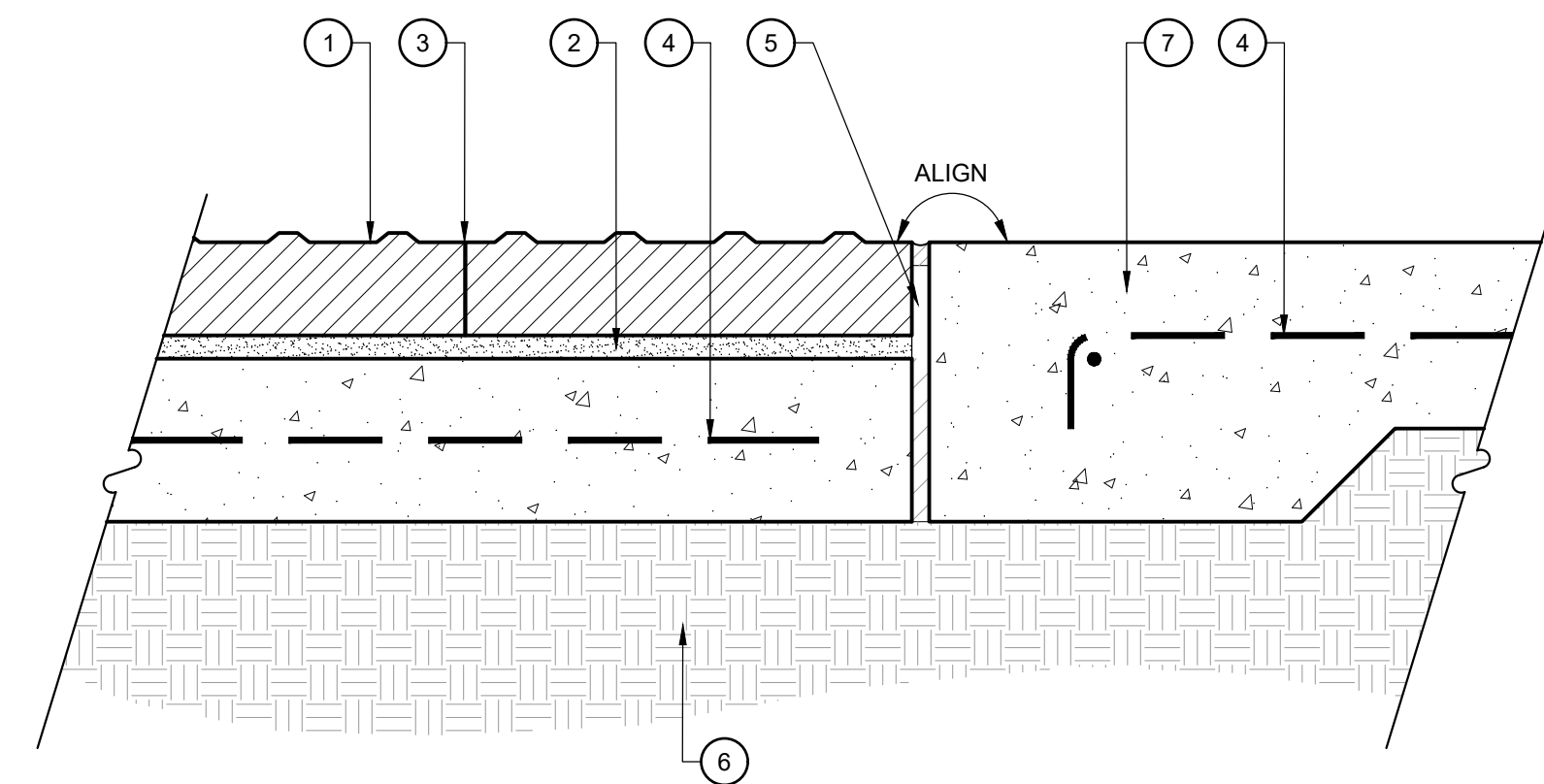
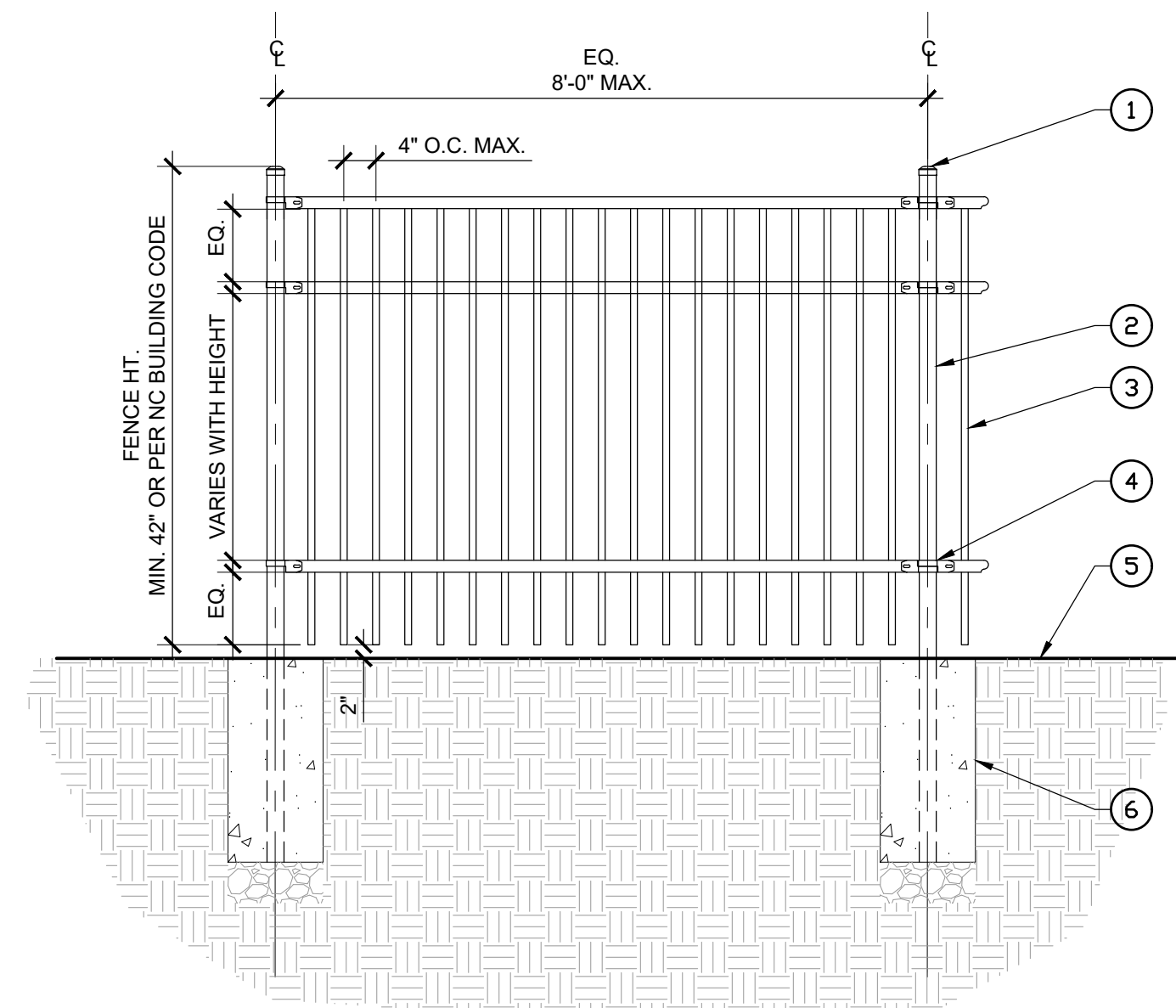
- LEGEND**
1. C.I.P. CONCRETE RETAINING WALL PER HARDSCAPE LEGEND, REINFORCEMENT PER STRUCTURAL ENGINEER
 2. CONCRETE FOOTING SIZE AND REINFORCEMENT PER STRUCTURAL ENGINEER
 3. 4" DIA. PERFORATED HDPE PIPE, DAYLIGHT PER CIVIL ENGINEER
 4. WATERPROOFING AND DRAINAGE BOARD
 5. 1/4" RADIUS AT ALL EXPOSED EDGES
 6. EXPANSION JOINT PER DETAIL (ONLY IF ADJACENT TO CONCRETE PAVING)
 7. MULCH PER PLAN AND SPECIFICATIONS
 8. PLANTING SOIL PER SPECIFICATIONS
 9. ADJACENT CONCRETE PAVING OR PLANTING AREA PER PLANS
 10. FINISH GRADE AT PLANTING AREA
 11. GEOTEXTILE FABRIC
 12. DRAINAGE AGGREGATE, 1 CU.FT. MIN. AROUND PIPE
 13. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
- NOTES**
- A. WALLS OVER 4' HEIGHT REQUIRE A BUILDING PERMIT

LEGEND

1. TERMINAL POST CAP
2. BLACK POWDER-COATED ALUMINUM POST (HEIGHT VARIES)
3. 1" BLACK POWDER-COATED ALUMINUM PICKET
4. BRACKET (MATCH FENCE MATERIAL & COLOR)
5. FINISH GRADE
6. FOOTER PER MANUFACTURER'S SPECIFICATION

NOTES

- A. ALL FENCE COMPONENTS TO BE BLACK POWDER-COATED ALUMINUM
- B. LOCATIONS PER PLANS OR AS DETERMINED BY OWNER
- C. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO PURCHASE
- D. FIELD VERIFY PRIOR TO INSTALLATION

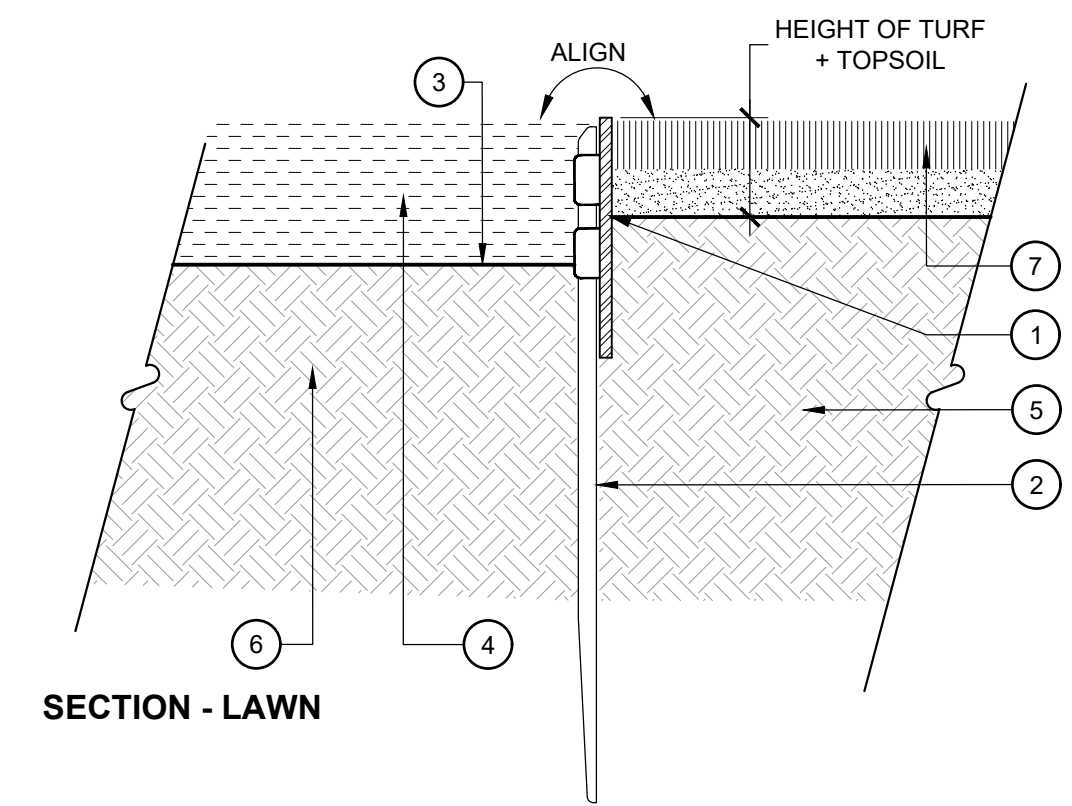


LEGEND

1. PRECAST CONCRETE DETECTABLE WARNING PAVERS PER HARDSCAPE LEGEND
2. MORTAR SETTING BED PER MANUFACTURER'S RECOMMENDATION
3. BUTT JOINT BETWEEN PAVERS
4. CONCRETE REINFORCEMENT PER GEOTECHNICAL REPORT
5. EXPANSION JOINT PER DETAIL
6. BASE AND SUBGRADE PREPARATION PER GEOTECHNICAL REPORT
7. CONCRETE THICKENED EDGE PER DETAIL

NOTES

- A. REFER TO HARDSCAPE PLAN AND LEGEND FOR LAYOUT AND PATTERN OF PAVERS.
- B. CONTRACTOR SHALL SUBMIT PAVER SAMPLE TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO ORDERING AND INSTALLATION.
- C. FINISH SURFACE OF DETECTABLE WARNING PAVERS SHALL BE LEVEL WITH ADJACENT PAVING.



LEGEND

1. METAL EDGING, REFER TO HARDSCAPE LEGEND FOR TYPE, COLOR, AND FINISH
2. METAL EDGING STAKE TO MATCH METAL EDGING, SPACE APPROX. 30" O.C.
3. FINISHED GRADE IN ADJACENT PLANTING AREA
4. MULCH IN PLANTING AREA
5. COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
6. AMENDED PLANTING SOIL PER SPECIFICATIONS
7. LAWN PER PLANTING PLAN

NOTES

- A. INSTALL EDGING AND STAKES PER MANUFACTURER'S RECOMMENDATIONS
- B. IF NO GEOTECHNICAL REPORT AVAILABLE COMPACT SUBGRADE TO 95% S.P.D.

1 METAL EDGE
 SCALE: 3" = 1'-0"

2 DECORATIVE FENCE
 SCALE: 1/2" = 1'-0"

3 TRUNCATED DOME
 SCALE: 3" = 1'-0"

PLANTING NOTES

- ROUGH GRADING TO BE COMPLETED PRIOR TO THE START OF PLANT INSTALLATION. SUBSTANTIAL COMPLETION SIGN-OFF BY LANDSCAPE ARCHITECT CONTRACTOR TO ENSURE NO CHANNELIZED FLOWS AROUND THE SITE.
- CONTRACTOR RESPONSIBLE FOR LOCATING ALL UTILITIES AND UNDERGROUND IMPEDIMENTS PRIOR TO BEGINNING PLANTING.
- ALL WEEDS, NON-NATIVE INVASIVE SPECIES, AND EXOTIC SPECIES LOCATED WITHIN THE PROJECT CONTRACTOR LIMITS SHALL BE ELIMINATED PRIOR TO PLANTING BED CREATION, PLANTING, AND SEEDING/SODDING OPERATIONS.
- PLANTING SHOULD OCCUR IMMEDIATELY AFTER CONSTRUCTION TO STABILIZE AREAS OF BARE SOIL.
- IT SHALL BE NOTED THAT ALL SECTIONS OF THE SITE THAT ARE SLOPED 3:1 OR HIGHER WILL BE COVERED WITH EROSION CONTROL STABILIZATION COIR FABRIC (WITH 1" SQUARE OPENINGS) PRIOR TO PLANTING TO ENSURE IMMEDIATE STABILIZATION. LANDSCAPE CONTRACTOR SHALL CUT FABRIC AT EACH PLANT LOCATION AND PLACE PLANTS ACCORDING TO PLAN. ALL FABRIC SHALL BE RE-STAKED PER ENGINEERS ORIGINAL DRAWINGS IMMEDIATELY AFTER PLANTING.
- PLANTS ARE TO BE PURCHASED BY BOTANICAL NAMES. THEY SHALL BE REPRESENTATIVE OF THEIR SPECIES, MEET ALL NOTED CONDITIONS OF SPECIFICATIONS, AND SHALL BE IN VIGOROUS GROWING CONDITION MEETING ANSI STANDARD Z60.
- LANDSCAPE ARCHITECT OR OWNER MAINTAINS RIGHT TO REJECT ANY PLANT DUE TO AESTHETICS OR STRUCTURAL DEFICIENCY AT ANY TIME.
- CONTRACTOR RESPONSIBLE FOR FURNISHING AND INSTALLING ALL PLANTS SHOWN ON PLANS IN LOCATIONS SHOWN. QUANTITIES GIVEN ON THE PLANT LEGEND ARE FOR CONTRACTOR'S CONVENIENCE ONLY. IF DISCREPANCIES OCCUR, THE PLANS SHALL OVERRULE THE PLANT LEGEND. CONTRACTOR SHALL LOCATE ALL PLANTS AWAY FROM KNOWN PERMANENT FIXTURES. IF CONFLICT ARISES WITH PLAN, CONTRACTOR SHALL NOTIFY PROJECT MANAGER OR DESIGNEE PRIOR TO PROCEEDING.
- ALL PLANT MATERIAL SHALL CONFORM TO OR EXCEED THE AMERICAN STANDARD FOR NURSERY STOCK (LATEST EDITION) AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL PLANT MATERIAL SHALL BE FREE OF ALL PESTS, DISEASES, AND CANKERS, IN HEALTHY CONDITION, AND FREE OF MECHANICAL DAMAGE AT THE TIME OF PLANTING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE A HEALTHY AND VIABLE PLANT AND THE PLANT SHALL BE REJECTED IF DEEMED UNHEALTHY OR UNFIT AT ANY TIME DURING THE CONTRACT OR WARRANTY DURATION.
- IF ANY PLANT/MATERIAL SUBSTITUTIONS ARE REQUESTED BY CONTRACTOR, THEN NOTICE SHALL BE GIVEN TO PROJECT MANAGER OR DESIGNEE AT MINIMUM SEVENTY-TWO (72) HOURS (NOT INCLUDING WEEKENDS) PRIOR TO DESIRED ORDERING DATE/TIME. WHEN SUBSTITUTIONS ARE REQUESTED BY CONTRACTOR, SUGGESTED ACCEPTABLE REPLACEMENTS SHALL ALSO BE PRESENTED AT TIME FOR FULL AND COMPLETE REVIEW BY LANDSCAPE ARCHITECT OR OWNER.
- BALLED AND BURLAPPED PLANTS/TREES TO BE PLANTED PRIOR TO CONTAINER OR BEDDING PLANTS.
- BALLED AND BURLAPPED MATERIAL SHALL COMPLY WITH THE FOLLOWING GUIDELINES:
 - TREES DESIGNATED B&B SHALL BE PROPERLY DUG WITH FIRM, NATURAL BALLS OF SOIL RETAINING AS MANY FIBROUS ROOTS AS POSSIBLE. IN SIZES AND SHAPES AS SPECIFIED IN THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1.
 - ROOT BALLS SHALL BE FIRMLY WRAPPED WITH NONSYNTHETIC, ROTTABLE BURLAP AND SECURED WITH NAILS AND HEAVY, NONSYNTHETIC TWINE.
 - ROOT COLLAR SHALL BE APPARENT AT SURFACE OF BALL, OR THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING EXCESS SOIL FROM THE TOP OF THE ROOTBALL.
 - REMOVE ALL BURLAP, LACING, AND WIRE BASKET FROM AT LEAST THE TOP 1/2 OF THE ROOTBALL AND DISCARD FROM PLANTING HOLE.
 - DO NOT MANEUVER BY TRUNK. HANDLE BY ROOT BALL ONLY.
- CONTAINERIZED PLANTS SHALL COMPLY WITH THE FOLLOWING GUIDELINES:
 - MATERIAL SHALL HAVE FIRM, NATURAL BALLS OF SOIL RETAINING AS MANY FIBROUS ROOTS AS POSSIBLE, IN SIZES AND SHAPES AS SPECIFIED IN THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1
 - ROOT COLLAR SHALL BE APPARENT AT SURFACE OF BALL, OR THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING EXCESS SOIL FROM THE TOP OF THE ROOTBALL.
 - REMOVE CONTAINER PRIOR TO PLANTING.
- TREES TO BE STAKED WILL BE DESIGNATED BY THE LANDSCAPE ARCHITECT. TREE STAKING FOR CANOPY AND LARGE EVERGREEN TREES SHALL NOT EXCEED 90 DAYS.
- PLANT BED PREPARATION:
 - ALL PLANT BEDS ARE TO RECEIVE A MINIMUM OF 4" OF APPROVED TOPSOIL TILLED IN TO A DEPTH OF 8" TO ENSURE INTEGRATION WITH EXISTING SOIL.
 - APPROVED TOPSOIL IS TO BE PREFERABLY FROM ON-SITE STOCKPILE FROM STRIPPING OPERATIONS - SEE EROSION AND SEDIMENT CONTROL PLANS.
 - IF ON-SITE TOPSOIL IS NOT AVAILABLE, CONTRACTOR SHALL PROVIDE TO SITE ACCORDINGLY.
- ALL MULCH TO BE CERTIFIED TO BE FREE OF WEEDS, NON-NATIVE INVASIVE SPECIES AND THEIR LARVAE. MULCH SAMPLE SUBMITTAL SHALL BE PROVIDED TO LANDSCAPE ARCHITECT BEFORE SITE DELIVERY.

SEEDING/SODDING NOTES

- ROUGH GRADING TO BE COMPLETED PRIOR TO THE START OF PLANT INSTALLATION. SUBSTANTIAL COMPLETION SIGN-OFF BY LANDSCAPE ARCHITECT CONTRACTOR TO ENSURE NO CHANNELIZED FLOWS AROUND THE SITE.
- ALL SEEDED/SODDED AREAS SHALL BE FINISHED GRADE AT THE THICKNESS OF THE SOD.
- NO SEEDED/SODDED AREAS SHALL BE SODDED UNTIL ALL OTHER CONSTRUCTION ACTIVITIES, INCLUDING PLANTING AND MULCHING HAVE OCCURRED AND LANDSCAPE ARCHITECT HAVE REVIEWED THE FINAL GRADING.
- SOD AREAS WILL BE ACCEPTED WHEN IN COMPLIANCE WITH ALL THE FOLLOWING CONDITIONS:
 - ROOTS ARE THOROUGHLY KNIT TO THE SOIL
 - ABSENCE OF VISIBLE JOINTS
 - ALL AREAS SHOW A UNIFORM STAND OF SPECIFIED GRASS IN HEALTHY CONDITION
 - AT LEAST 30 DAYS HAVE ELAPSED SINCE THE COMPLETION OF WORK UNDER THIS SECTION.
- QUALITY GUARANTEE:
 - SOD SHALL BE UNIFORM IN COLOR, LEAF TEXTURE, LEAF AND ROOT DENSITY, AND FREE FROM WEED, DISEASES, AND OTHER VISIBLE IMPERFECTIONS AT TIME OF FINAL ACCEPTANCE. GUARANTEE DOES NOT COVER DAMAGE AS A RESULT OF FERTILIZERS, PESTICIDES, OR OTHER APPLICATIONS NOT SUPERVISED BY THE CONTRACTOR OR AS A RESULT OF ACTS OF GOD OR VANDALISM.
 - SEED SHALL BE UNIFORM IN COLOR, LEAF TEXTURE, LEAF AND ROOT DENSITY, AND FREE FROM WEED, DISEASES, AND OTHER VISIBLE IMPERFECTIONS AT TIME OF FINAL ACCEPTANCE. GUARANTEE DOES NOT COVER DAMAGE AS A RESULT OF FERTILIZERS, PESTICIDES, OR OTHER APPLICATIONS NOT SUPERVISED BY THE CONTRACTOR OR AS A RESULT OF ACTS OF GOD OR VANDALISM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE SEED/SOD IS PROPERLY IRRIGATED DURING THE GROW-IN PERIOD AND SHALL BE RESPONSIBLE IF THE SOD SUFFERS IRREPARABLE HARM.
- SEED/SOD IS SUBJECT TO INSPECTION AND ACCEPTANCE. LANDSCAPE ARCHITECT AND/OR CLIENT RESERVES THE RIGHT TO REJECT AT ANY TIME OR PLACE PRIOR TO ACCEPTANCE, ANY WORK AND SOD WHICH IN THE LANDSCAPE ARCHITECTS OPINION FAILS TO MEET THESE SPECIFICATIONS REQUIREMENTS.
- SOD STANDARDS:
 - GENERAL: HEALTHY, THICK TURF HAVING UNDERGONE A PROGRAM OF REGULAR FERTILIZATION, MOWING AND WEED CONTROL; FREE OF OBJECTABLE WEEDS; UNIFORM IN GREEN COLOR, LEAF TEXTURE AND DENSITY; HEALTHY, VIGOROUS ROOT SYSTEM; INSPECTED AND FOUND FREE OF DISEASE, NEMATODES, PEST AND PEST LARVAE BY THE ENTOMOLOGIST OF THE STATE DEPARTMENT OF AGRICULTURE.
 - EACH PIECE OF SOD: SANDY-LOAM SOIL BASE THAT WILL NOT BREAK, CRUMBLE OR TEAR DURING SOD INSTALLATION.
 - THICKNESS: MINIMUM 3/4" THICK, EXCLUDING THE TOP GROWTH THATCH.
 - THATCH: NOT TO EXCEED 1/2" UNCOMPRESSED.
 - SIZE: CUT IN STRIPS 18" WIDE NO MORE THAN 24 HOURS PRIOR TO DELIVERY.
- SOD DELIVERY, STORAGE AND HANDLING GUIDELINES ARE AS FOLLOWS:
 - SOD SHALL BE DELIVERED ON PALLETS PROPERLY LOADED ON VEHICLES AND WITH ROOT SYSTEM PROTECTED FROM EXPOSURE TO SUN, WIND, AND HEAT IN ACCORDANCE WITH STANDARD PRACTICE AND LABELED WITH BOTANICAL AND COMMON NAME OF EACH GRASS SPECIES IN ACCORDANCE WITH FEDERAL SEED ACT. SOD THAT HAS BEEN DAMAGED BY POOR HANDLING OR IMPROPER STORAGE IS SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT OR OWNER.
 - PROTECT FROM DEHYDRATION, CONTAMINATION, FREEZING AND HEATING AT ALL TIMES. KEEP STORED SOD MOIST AND UNDER SHADE OR COVERED WITH MOISTENED BURLAP.
 - DO NOT DROP SOD ROLLS FROM CARTS, TRUCKS OR PALLETS.
 - DO NOT DELIVER MORE SOD THAN CAN BE INSTALLED WITHIN 36 HOURS.
 - DO NOT STACK SOD MORE THAN 2 FEET DEEP.
- SEED/SODDED BED PREPARATION:
 - ALL DEBRIS, ROCKS, ETC. LARGER THAN .5" ARE TO BE REMOVED PRIOR TO SEEDING/SODDING OR PLANTING.
 - ALL AREAS TO BE SEEDED/SODDED ARE TO RECEIVE A MINIMUM OF 2" OF APPROVED TOPSOIL TILLED INTO A DEPTH OF 4" TO ENSURE INTEGRATION WITH EXISTING SOIL.
 - APPROVED TOPSOIL IS TO BE PREFERABLY FROM ON-SITE STOCKPILE FROM STRIPPING OPERATIONS - SEE EROSION AND SEDIMENT CONTROL PLANS.
 - IF ON-SITE TOPSOIL IS NOT AVAILABLE, CONTRACTOR SHALL PROVIDE TO SITE ACCORDINGLY.

PLANT SCHEDULE

SYMBOL	REMARKS	BOTANICAL NAME	COMMON NAME	CALIPER	INSTALL HEIGHT	B&B OR CONT.	FORM	SPACING	QTY
TREES									
		<i>Amelanchier canadensis</i>	Canadian Serviceberry	---	6' MIN.	CONTAINER	2-3 TRUNKS	AS SHOWN	4
		<i>Cornus kousa</i>	Kousa Dogwood	---	6' MIN.	CONTAINER	2-3 TRUNKS	AS SHOWN	6
		<i>Crataegus viridis</i>	Green Hawthorn	2"	8-10' MIN.	CONTAINER	SINGLE LEADER	AS SHOWN	12
		<i>Gymnocladus dioicus</i>	Kentucky Coffeetree	3"	12-14' MIN.	B&B	SINGLE LEADER	AS SHOWN	7
		<i>Ilex opaca</i>	American Holly	---	10' MIN.	CONTAINER	SINGLE LEADER	AS SHOWN	4
		<i>Juniperus virginiana</i>	Eastern Redcedar	3"	10' MIN.	CONTAINER	SINGLE LEADER	AS SHOWN	4
		<i>Pistacia chinensis</i>	Chinese Pistache	3"	12-14' MIN.	B&B	SINGLE LEADER	AS SHOWN	7
		<i>Quercus palustris</i>	Pin Oak	3"	12-14' MIN.	B&B	SINGLE LEADER	AS SHOWN	11
SHRUBS									
		<i>Illicium parviflorum</i>	Anise Tree	AS SHOWN	24" MIN.	20" MIN.	EVERGREEN		51
		<i>Myrica cerifera</i>	Wax Myrtle	AS SHOWN	36" MIN.	32" MIN.	EVERGREEN		41
		<i>Prunus laurocerasus</i> 'Zabeliana'	Zabel English Laurel	AS SHOWN	30" MIN.	30" MIN.	EVERGREEN		67
GROUND COVERS									
	18" MIN. AT PLANTING	ACCENT PLANT MIX							3,773 sf
		<i>Calycanthus x 'Aphrodite'</i>	Aphrodite Sweetshrub	---					
		<i>Distylium x 'PHIDIST-II'</i>	Blue Cascade® Distylium	---					
		<i>Ilex verticillata</i> 'Winter Red'	Winter Red Winterberry	---					
		<i>Panicum virgatum</i>	Switch Grass	---					
		<i>Schizachyrium scoparium</i> 'The Blues'	The Blues Little Bluestem	---					
		<i>Sporobolus heterolepis</i> 'Tara'	Tara Prairie Dropseed	---					
	18" MIN. AT PLANTING	PARKING PLANT MIX							2,058 sf
		<i>Bouteloua gracilis</i> 'Blonde Ambition'	Blonde Ambition Blue Grama	---					
		<i>Ilex vomitoria</i> 'Nana'	Dwarf Yaupon Holly	---					
		<i>Muhlenbergia capillaris</i> 'Pink Cloud'	Pink Cloud Pink Muhly Grass	---					
		<i>Rhaphiolepis indica</i> 'Clara'	Clara Indian Hawthorn	---					
	18" MIN. AT PLANTING	MASS PLANT MIX							13,210 sf
		<i>Andropogon ternarius</i> 'Black Mountain'	Black Mountain Splitbeard Bluestem	---					
		<i>Callicarpa americana</i>	American Beautyberry	---					
		<i>Carex cherokeensis</i>	Cherokee Sedge	---					
		<i>Carex pensylvanica</i>	Pennsylvania Sedge	---					
		<i>Clethra alnifolia</i> 'Hummingbird'	Hummingbird Summersweet	---					
		<i>Itea virginica</i> 'Henry's Garnet'	Henry's Garnet Sweetspire	---					
		<i>Muhlenbergia capillaris</i> 'Pink Cloud'	Pink Cloud Pink Muhly Grass	---					
	18" MIN. AT PLANTING	EVERGREEN SCREEN							1,070 sf
		<i>Camellia sasanqua</i>	Sasanqua Camellia	---					
		<i>Ilex glabra</i> 'Shamrock'	Shamrock Inkberry Holly	---					
		<i>Illicium parviflorum</i> 'Florida Sunshine'	Florida Sunshine Anise Tree	---					
		<i>Prunus laurocerasus</i> 'Schipkaensis'	Schipka English Laurel	---					
TURF									
		<i>Cynodon dactylon x transvaalensis</i> 'Tifway 419'	Tifway 419 Bermudagrass	---					11,865



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CRABTREE BLVD. APARTMENTS
LODEN PROPERTIES
2321 Crabtree Blvd., Raleigh, NC 27604

SITE CO. PROJECT NUMBER:
22013

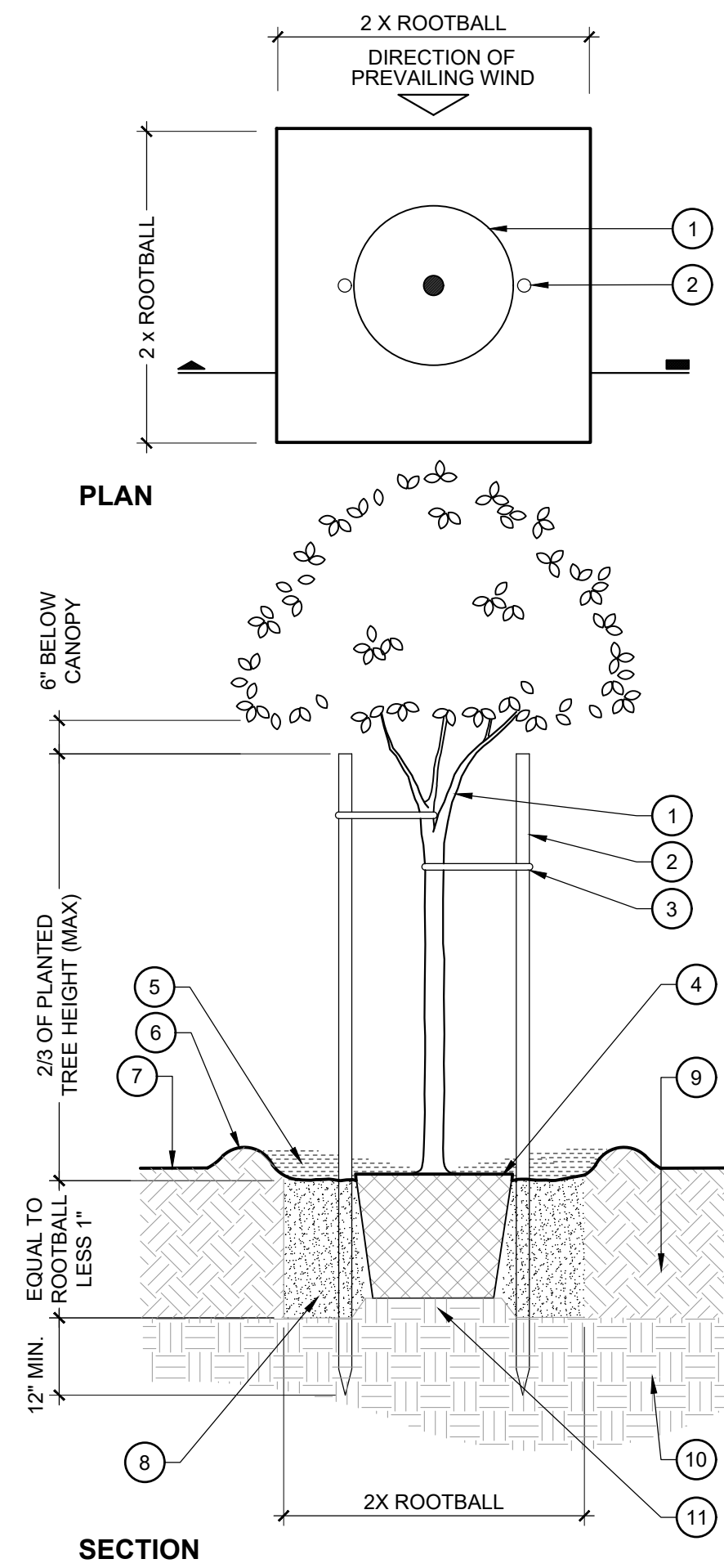
PROJECT PHASE:
ADMINISTRATIVE
SITE REVIEW

DATE: 09.06.2024

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SHEET TITLE:
PLANTING
SCHEDULE +
NOTES

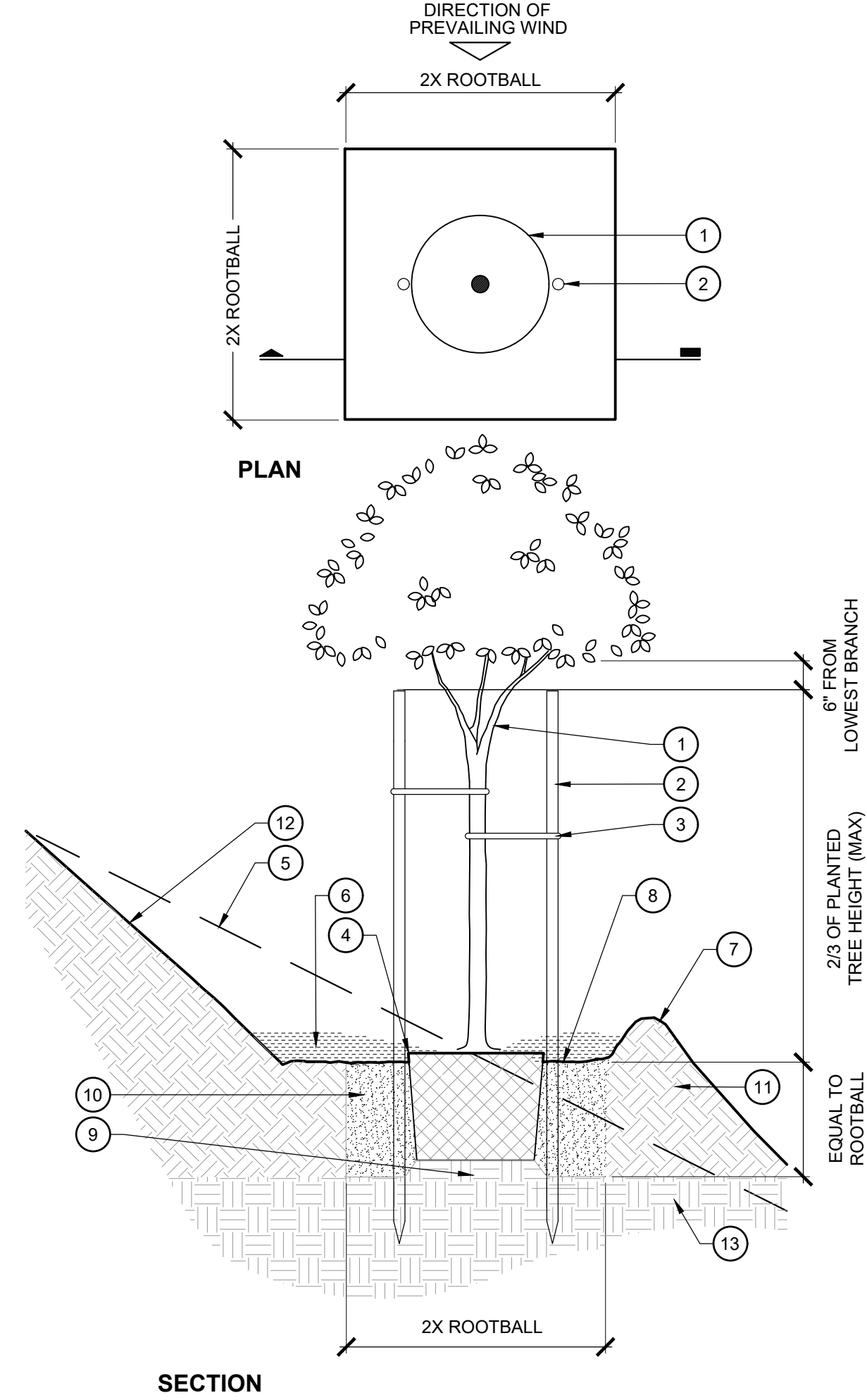
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1 TREE PLANTING - LEVEL
SCALE: 1/2" = 1'-0"

- LEGEND**
- TREE AND ROOTBALL PER PLAN
 - TREE STAKES PER SPECIFICATIONS
 - TREE TIES PER SPECIFICATIONS
 - SET ROOTBALL AT 2" ABOVE FINISH GRADE AT EXISTING SLOPE LEVEL
 - MULCH PER PLANS AND SPECIFICATIONS
 - 4" HIGH EARTH BERM AT EDGE OF PLANT PIT, FIRMLY COMPACTED
 - FINISHED GRADE
 - AMENDED SOIL PER SPECIFICATIONS
 - RIPPED AND RECOMPACTED SOIL AMENDED PER SPECIFICATIONS
 - EXISTING UNDISTURBED SOIL
 - PREPARED SUBGRADE PEDESTAL, SIZE PER ROOTBALL DIAMETER

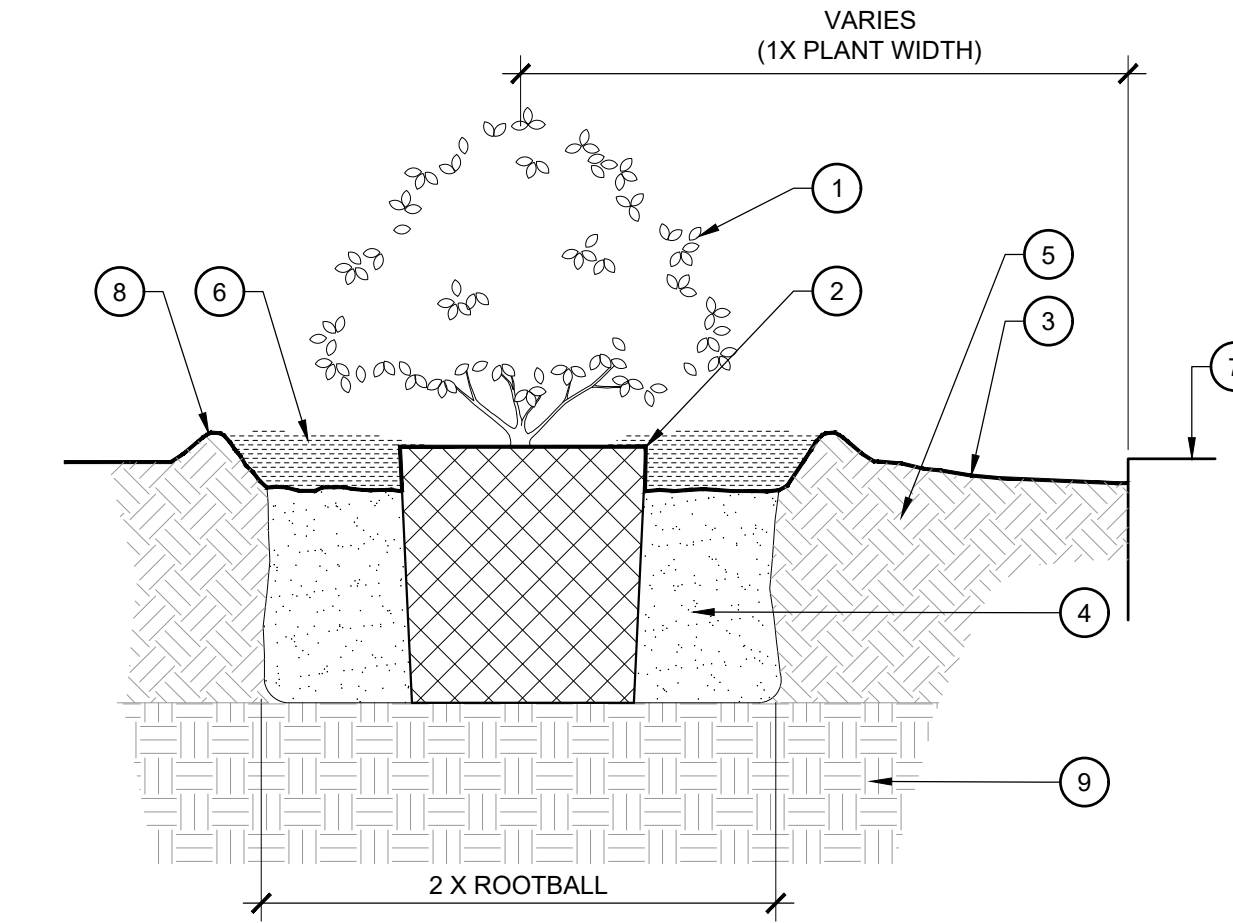
- NOTES**
- REFER TO PLANTING SPECIFICATION FOR ADDITIONAL INFORMATION
 - KEEP MULCH 12" AWAY FROM STEMS AND TAPER AT ROOTBALL
 - TAPER MULCH TO 2" DEPTH AT FLATWORK
 - SET ROOTBALL ON COMPACTED SOIL



2 TREE PLANTING - SLOPED
SCALE: 1/2" = 1'-0"

- LEGEND**
- TREE AND ROOTBALL PER PLAN
 - TREE STAKES PER SPECIFICATIONS
 - TREE TIES PER SPECIFICATIONS
 - SET ROOTBALL AT 2" ABOVE FINISH GRADE AT EXISTING SLOPE LEVEL
 - LINE OF SLOPE BEYOND/OR EXISTING SLOPE
 - MULCH PER PLANS AND SPECIFICATIONS
 - 4" HIGH EARTH BERM AT EDGE OF PLANT PIT, FIRMLY COMPACTED
 - PREPARED SUBGRADE PEDESTAL, SIZE TO MATCH ROOTBALL DIAMETER
 - AMENDED SOIL PER SPECIFICATIONS
 - RIPPED AND RECOMPACTED SOIL AMENDED PER SPECIFICATIONS
 - LAYBACK SLOPE BEHIND PLANT PIT AS NEEDED TO PREVENT SOIL SLUFFING
 - EXISTING UNDISTURBED SOIL

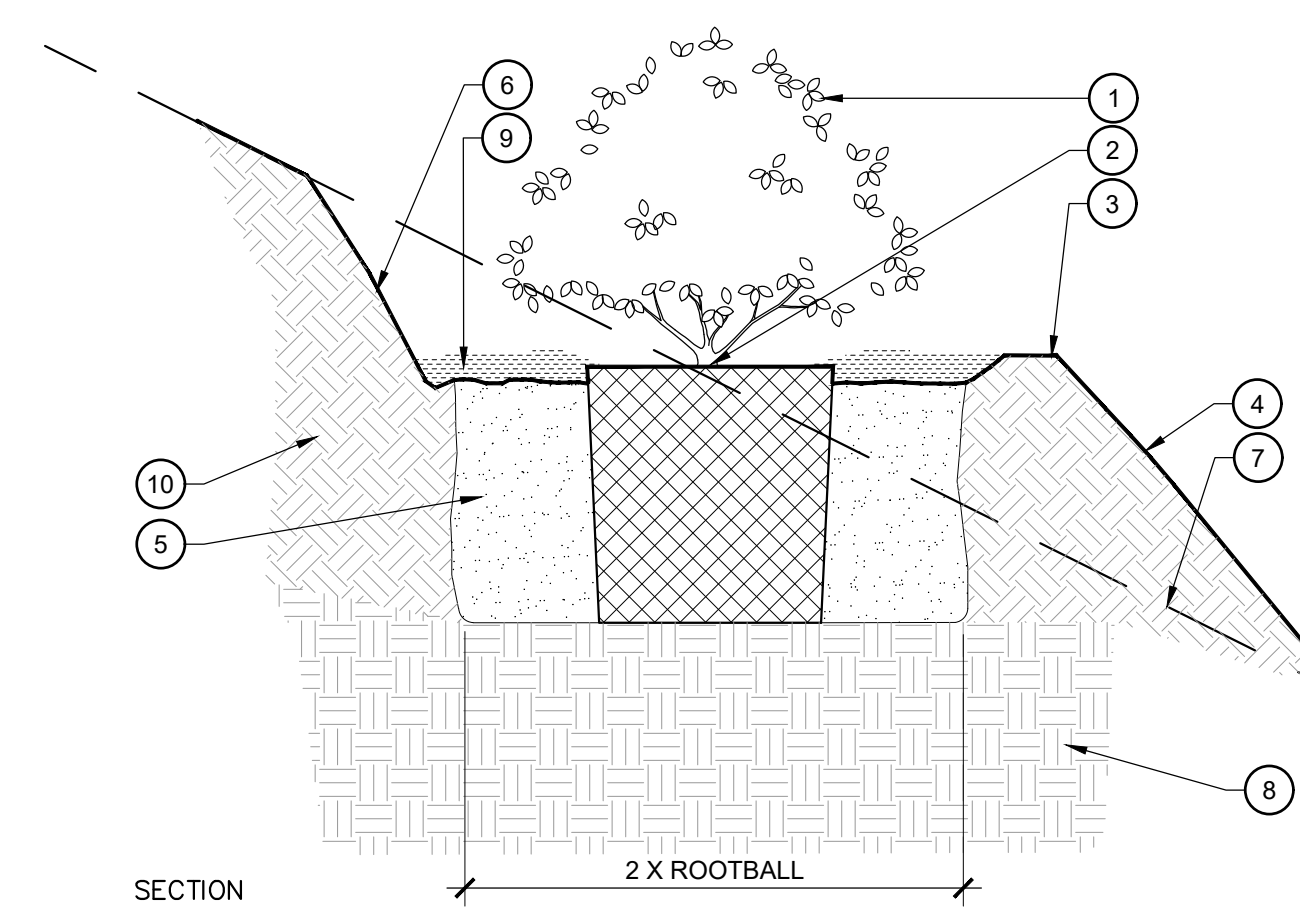
- NOTES**
- THIS DETAIL USED FOR SLOPES AT 2:1 AND GREATER
 - REFER TO PLANTING SPECIFICATION FOR ADDITIONAL INFORMATION
 - KEEP MULCH 12" AWAY FROM STEMS AND TAPER AT ROOTBALL
 - TAPER MULCH TO 2" DEPTH AT FLATWORK
 - SET ROOTBALL ON COMPACTED SOIL



3 SHRUB PLANTING - LEVEL
SCALE: 1" = 1'-0"

- LEGEND**
- SHRUB PER PLANS
 - SET ROOTBALL CROWN 1" ABOVE FINISH GRADE
 - FINISH GRADE
 - AMENDED SOIL PER SPECIFICATIONS
 - RIPPED AND RECOMPACTED SOIL AMENDED PER SPECIFICATIONS
 - MULCH PER PLANS AND SPECIFICATIONS, KEEP MULCH 4" - 6" FROM TRUNK, STEMS, AND TAPER AT ROOTBALL
 - ADJACENT FINISHED SURFACE PER HARDSCAPE PLAN
 - 4" TALL EARTH BERM @ EDGE OF PLANT PIT, FIRMLY COMPACTED, COMPACTED SUBGRADE PER SPECIFICATIONS

- NOTES**
- REFER TO PLANTING SPECIFICATION FOR ADDITIONAL INFORMATION
 - KEEP MULCH 6" AWAY FROM STEMS AND TAPER AT ROOTBALL
 - TAPER MULCH TO 2" DEPTH AT FLATWORK
 - SET ROOTBALL ON COMPACTED SOIL



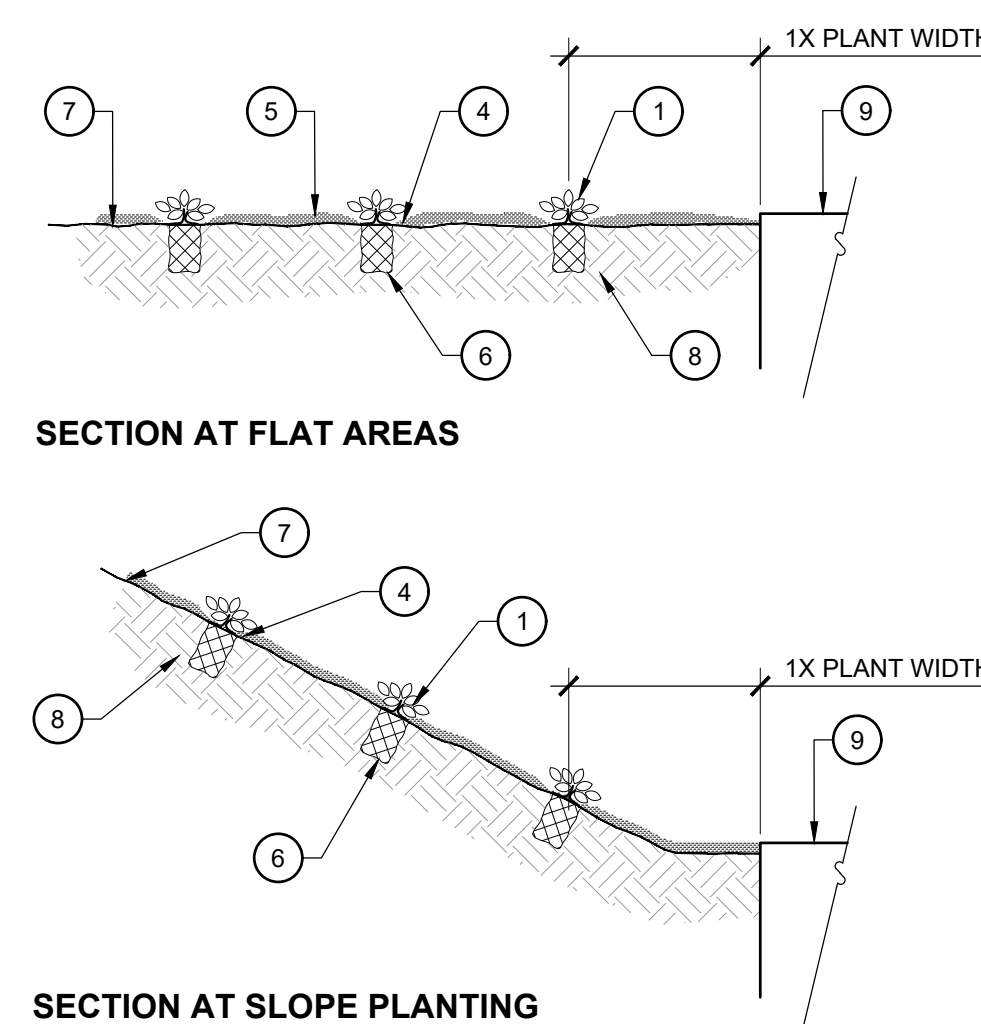
4 SHRUB PLANTING - SLOPED
SCALE: 1" = 1'-0"

- LEGEND**
- SHRUB PER PLANS
 - SET ROOTBALL CROWN 1" ABOVE FINISH GRADE
 - 6" TALL EARTH BERM @ EDGE OF PLANT PIT
 - FINISH GRADE
 - AMENDED SOIL PER SPECIFICATIONS
 - LAYBACK SLOPE BEHIND PLANT PIT
 - LINE OF SLOPE BEYOND
 - COMPACTED SUBGRADE PER GEOTECHNICAL REPORT
 - MULCH PER PLANS AND SPECIFICATIONS, KEEP MULCH 4" - 6" FROM TRUNK, STEMS, AND TAPER AT ROOTBALL
 - RIPPED AND RECOMPACTED SOIL AMENDED PER SPECIFICATIONS

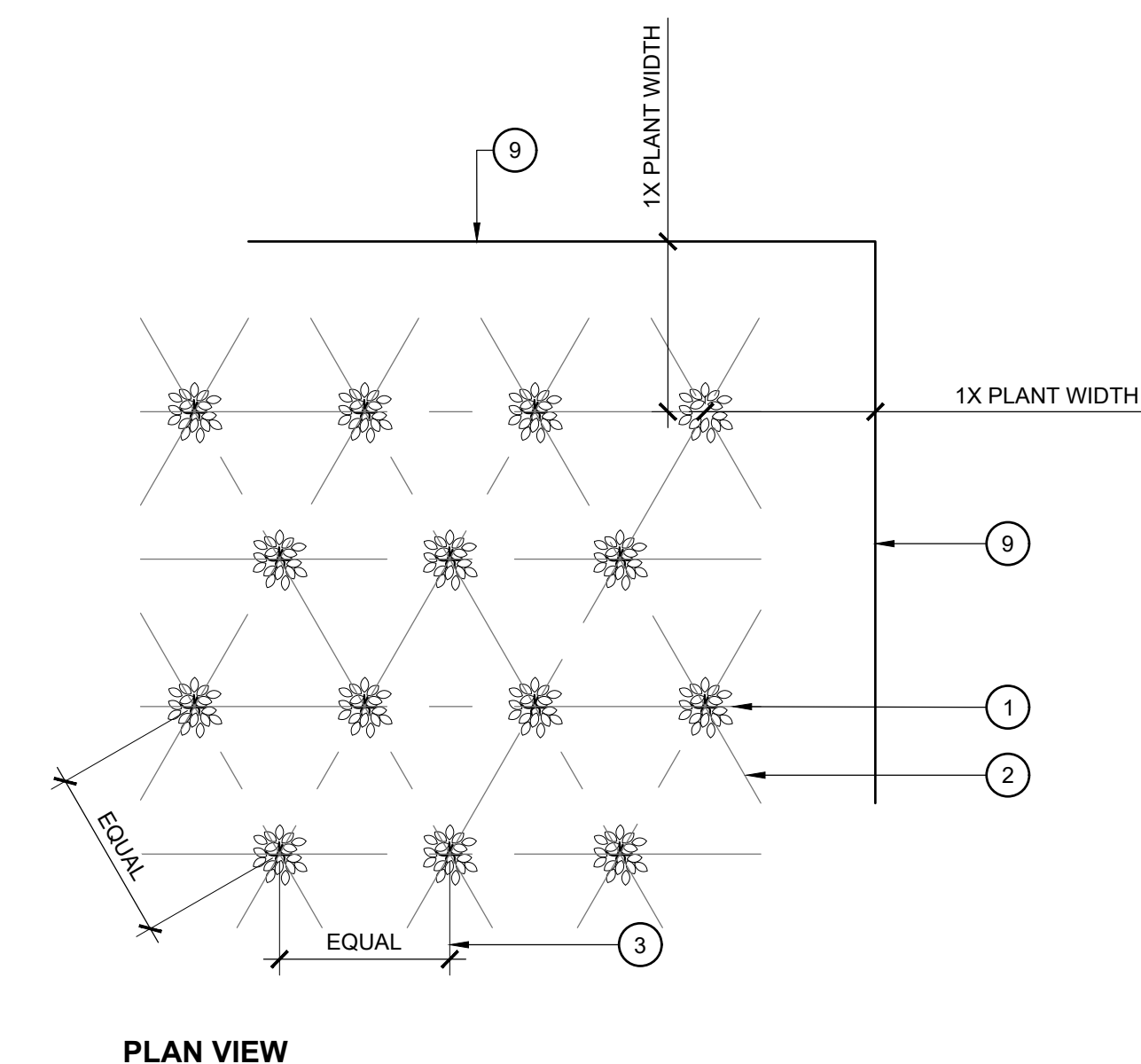
- NOTES**
- THIS DETAIL USED FOR SLOPES AT 2:1 AND GREATER
 - REFER TO PLANTING SPECIFICATION FOR ADDITIONAL INFORMATION
 - KEEP MULCH 6" AWAY FROM STEMS AND TAPER AT ROOTBALL
 - TAPER MULCH TO 2" DEPTH AT FLATWORK
 - SET ROOTBALL ON COMPACTED SOIL

- LEGEND**
- GROUNDCOVER PLANT
 - TRIANGULAR SPACING (TYP.), UNLESS OTHERWISE SPECIFIED
 - SPACING INDICATED PER PLANTING LEGEND
 - SET ROOTCROWN ABOVE FINISH GRADE
 - MULCH PER PLANS AND SPECIFICATIONS
 - ROOTBALL
 - FINISH GRADE
 - AMENDED SOIL PER SPECIFICATIONS
 - ADJACENT FINISHED SURFACE PER HARDSCAPE PLAN

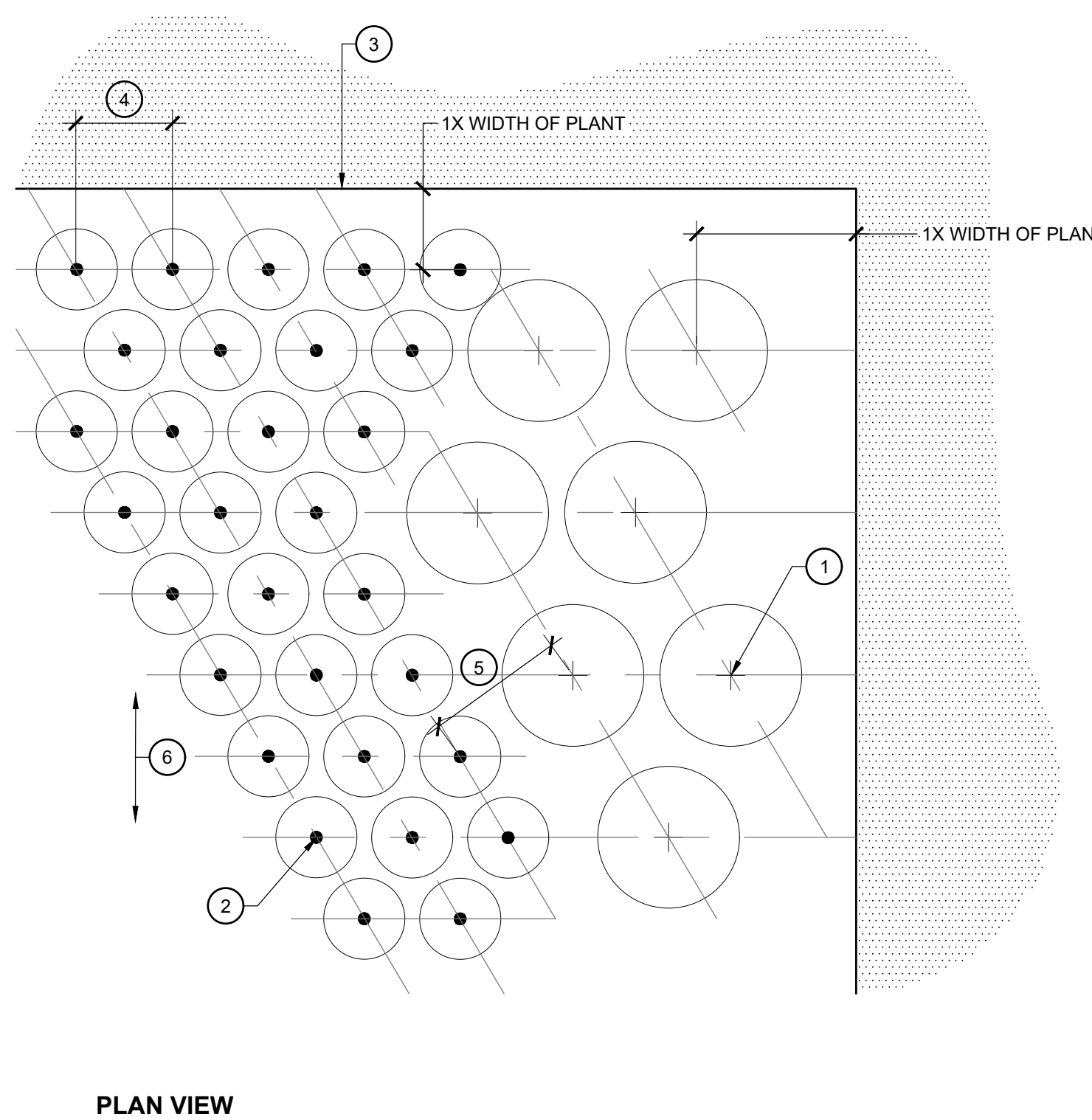
- NOTES**
- GROUNDCOVER ON SLOPES 3:1 AND STEEPER SHALL BE PLANTED AT 8" O.C. (MAX.)



5 GROUNDCOVER PLANTING
SCALE: 1" = 1'-0"



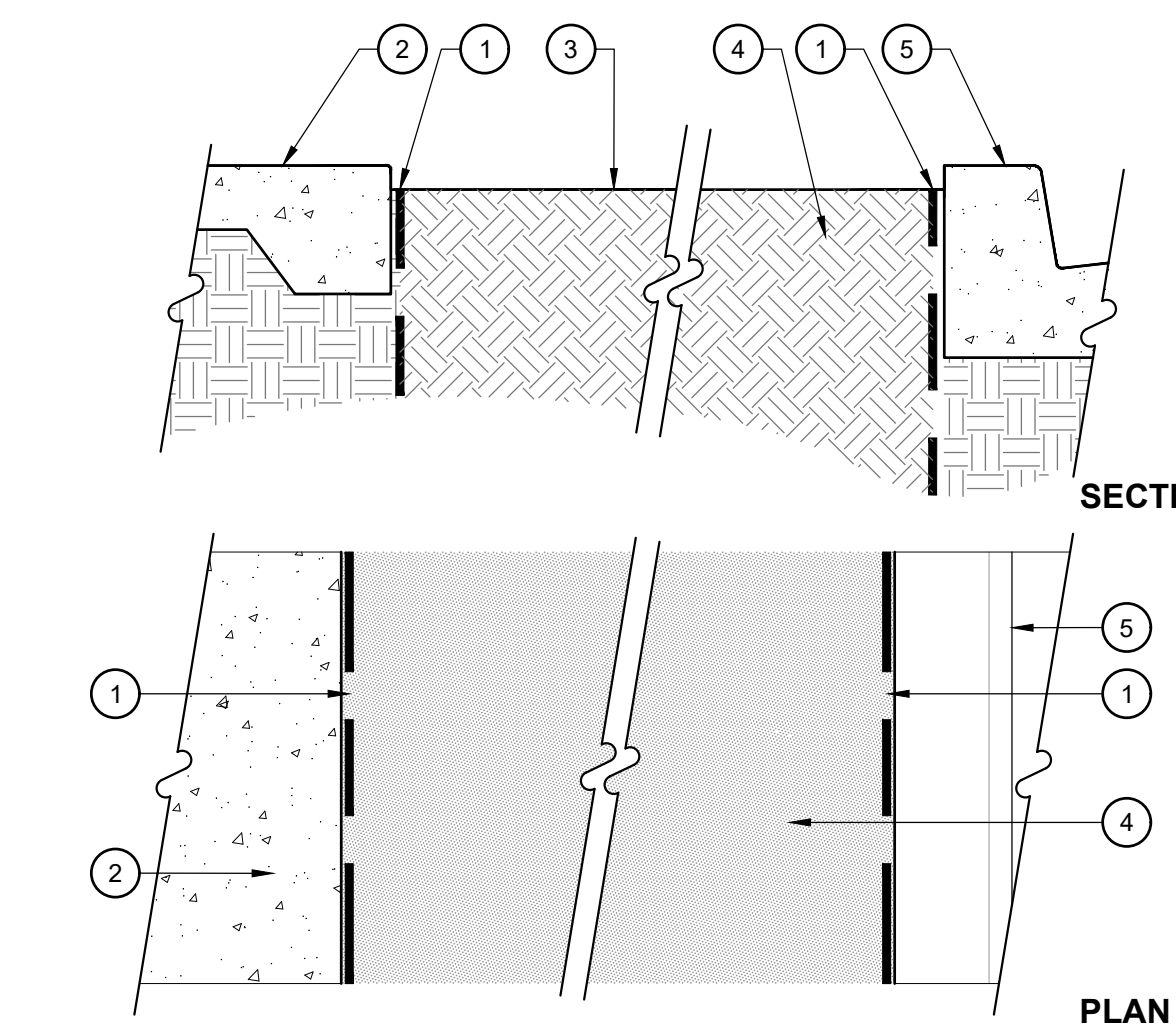
6 PLANT SPACING
SCALE: 1" = 1'-0"



- LEGEND**
- PLANT TYPE 1
 - PLANT TYPE 2
 - ADJACENT EDGE OF PAVING, WALL, OR OTHER HARDSCAPE OBSTRUCTION
 - ON CENTER SPACING BETWEEN INDIVIDUAL PLANTS; DISTANCE VARIES PER PLANT TYPE, REFER TO PLANTING LEGEND
 - WHERE DISTINCT PLANT TYPES ARE ADJACENT, PROVIDE THE GREATER O.C. SPACING DISTANCE
 - ORIENTATION OF TRIANGULAR SPACING TO SLOPES

- LEGEND**
- ROOT BARRIER ABUTTING PAVING OR MOW EDGE (10' LENGTH) CENTERED ON TREE TRUNK, HEIGHT PER SPECIFICATIONS
 - ADJACENT PAVING PER HARDSCAPE PLAN
 - FINISH GRADE IN PLANTING AREA
 - AMENDED SOIL PER SPECIFICATIONS
 - VEHICULAR CONCRETE CURB

- NOTES**
- INSTALL ROOTBARRIER WHEN TREES ARE WITHIN 5' OR LESS FROM ADJACENT HARDSCAPE
 - THIS ROOTBARRIER IS FOR USE IN ON-GRADE LANDSCAPE APPLICATIONS ONLY. REFER TO PLANTING SPECIFICATIONS FOR ROOT BARRIER PRODUCT AND SIZE.
 - REFER TO PLANTING PLANS FOR SPECIFIC HARDSCAPE/BARRIER LOCATION; DETAIL IS DIAGRAMMATIC.
 - TRIM TOP OF BARRIER TO BE 1/2" BELOW FINISHED GRADE.



7 ROOTBARRIER
SCALE: 1" = 1'-0"

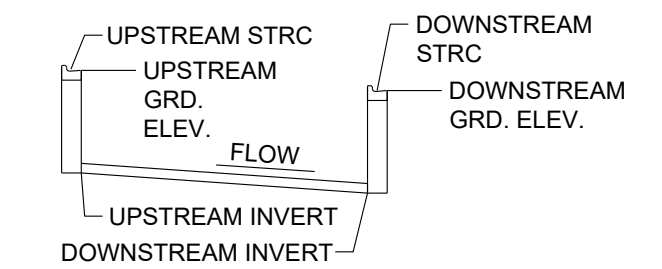
GRADING AND STORM DRAINAGE NOTES:

- CONTRACTOR SHALL REPORT ANY GRADE DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
- THE MAXIMUM SLOPE ALONG ANY HANDICAP ACCESSIBLE PATHWAY SHALL NOT EXCEED 5.0% AND SHALL NOT EXCEED A 2.0% CROSS SLOPE. HANDICAP RAMPS INDICATED ON PLANS SHALL BE A MAXIMUM OF 1/12 SLOPES WITH A MAXIMUM RISE OF 30" BETWEEN LANDINGS. NON-CURB CUT RAMPS SHALL HAVE HANDRAILS AND GUARDS PER DETAILS WITH 5' LANDINGS AT THE BOTTOM AND TOP OF RAMP.
- ALL PROPOSED ELEVATIONS SHOWN ARE EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL NEWLY CONSTRUCTED STORM DRAINAGE IMPROVEMENTS AND RECEIVING STORM DRAINAGE SYSTEMS REMAIN CLEAN OF SEDIMENT AND DEBRIS. PRIOR TO OWNER ACCEPTANCE OF SYSTEM, THE CONTRACTOR SHALL COORDINATE AND PROVIDE A VISUAL OBSERVATION VIDEO OF ALL STORM DRAINAGE IMPROVEMENTS 12" AND LARGER. THE VISUAL OBSERVATION SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE TWO (2) DVD COPIES OF THE ENTIRE DRAINAGE VISUAL OBSERVATION.
- PRIOR TO ISSUANCE OF A BUILDING CERTIFICATE OF OCCUPANCY THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE VIDEO INSPECTION OF THE STORM SEWER SYSTEM. (BOTH PUBLIC AND PRIVATE). THIS SUBMITTAL MAY NEED TO BE REVIEWED AND ACCEPTED BY THE LOCAL JURISDICTION PRIOR TO THE ISSUANCE OF THE BUILDING CO.
- REFER TO THE EROSION CONTROL DETAILS SHEET FOR THE SEQUENCE OF CONSTRUCTION
- INTERIM GRADING SHALL BE PROVIDED THAT ENSURES THE PROTECTION OF STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, AND WASHOUT.
- INTERIM GRADING SHALL BE PROVIDED TO DIRECT WATER AWAY FROM BUILDINGS AND PREVENT PONDING.
- THE ROOF LEADERS WHERE POSSIBLE TO UNDERGROUND STORM SYSTEM. CONTRACTOR TO FIELD VERIFY LOCATE AND INSTALL WHERE POSSIBLE OR AS SHOWN ON PLANS. WHERE ROOF LEADERS DAYLIGHT AT GRADE A SPLASH BLOCK APPROVED BY THE OWNER'S REPRESENTATIVE SHALL BE INSTALLED.
- MAXIMUM SLOPE ACROSS ANY HANDICAPPED PARKING SPACE AND AISLE SHALL NOT EXCEED 2% IN ANY DIRECTION.
- PROPOSED CONTOURS ARE APPROXIMATE. SPOT ELEVATIONS AND ROADWAY PROFILES SHALL BE USED IN CASE OF DISCREPANCY.
- PLACE BACKFILL AND FILL MATERIALS IN LAYER NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. PLACE BACKFILL AND FILL MATERIALS EVENLY ON ALL SIDES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE. COMPACT SOIL TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 FOR EACH LAYER OF BACKFILL OR FILL MATERIAL UP TO TWO FEET OF FINISHED GRADE. COMPACT SOIL TO NOT LESS THAN 98 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 FOR EACH LAYER OF BACKFILL OR FILL MATERIAL FOR THE FINAL TWO FEET.
- SITE GRADING IMMEDIATELY ADJACENT TO FOUNDATION OF BUILDING SHALL SLOPE NOT LESS THAN 1/20 AWAY FOR MINIMUM DISTANCE OF 10 FEET. ALTERNATIVE METHOD SHALL BE PROVIDED TO DIVERT WATER AWAY FROM FOUNDATION VIA SWALES SLOPED AT A MINIMUM OF 2% OR IMPERVIOUS SURFACES SLOPED AWAY A MINIMUM OF 2% AWAY FROM BUILDING.
- CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF EXISTING MANHOLES, METERS, VALVES, ETC. AS REQUIRED TO MEET NEW FINISHED GRADES.
- CONTRACTOR SHALL SLOPE GRADES TO ASSURE POSITIVE STORMWATER FLOW TO KEEP WATER FROM POOLING ALONG CURBS AND WALLS.
- TOP OF WALL ELEVATIONS INDICATE THE ELEVATION AT THE TOP OF THE CAP, UNLESS OTHERWISE NOTED.
- BOTTOM OF WALL ELEVATIONS INDICATE THE ELEVATION OF THE FINISHED GRADE.

STORM DRAINAGE NETWORK

- TYPE CODE:
AD = AREA DRAIN
S = FLARED END SECTION
JB = JUNCTION BOX
RI = RISER
YI = YARD INLET
CB = CATCH BASIN
CI = CURB INLET
CO = CLEANOUT
TD = TRENCH DRAIN

- TYPE CODE:
L-AD = AREA DRAIN
L-JB = JUNCTION BOX
L-TD = TRENCH DRAIN
L-CO = CLEANOUT



NOTES:

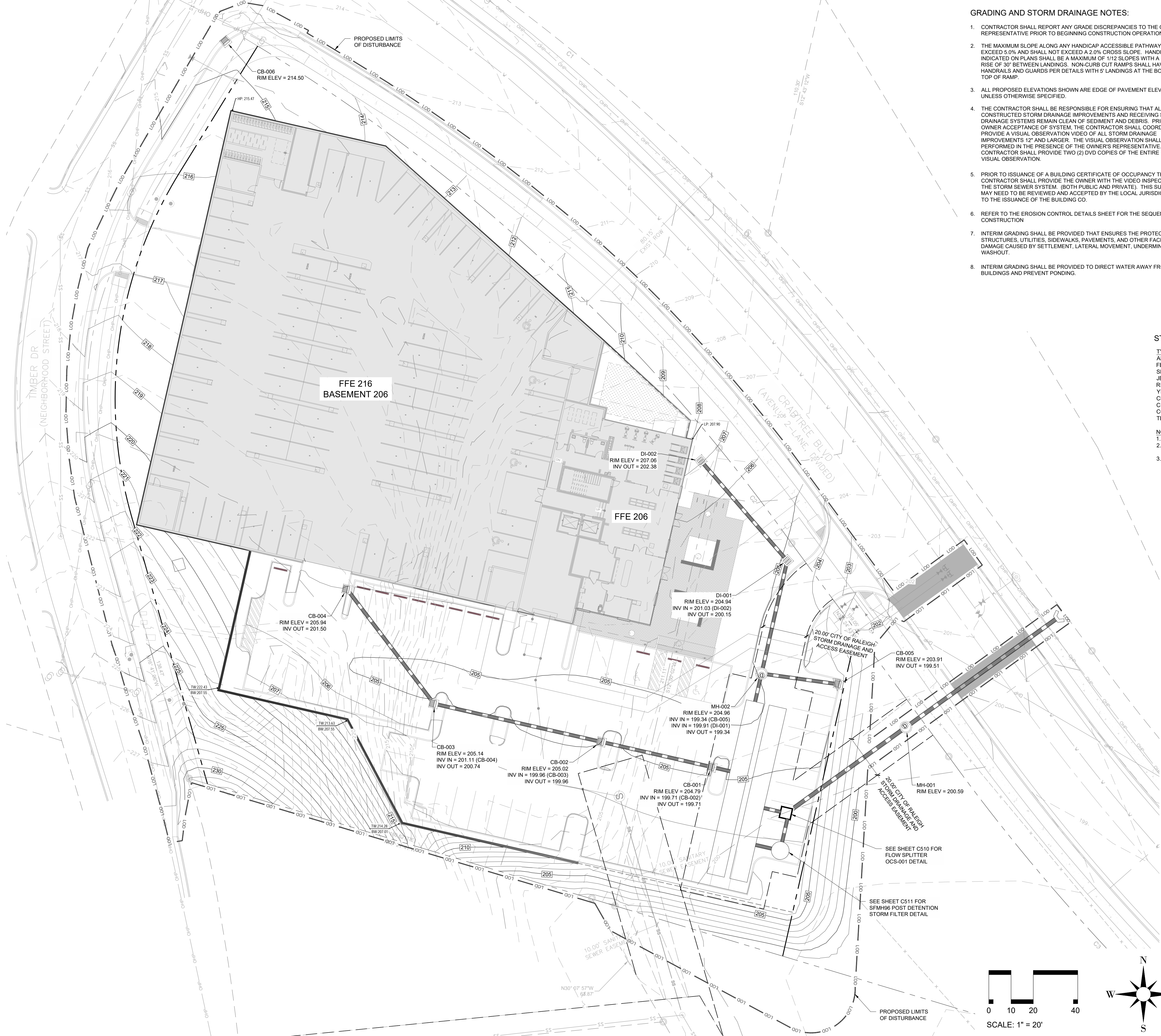
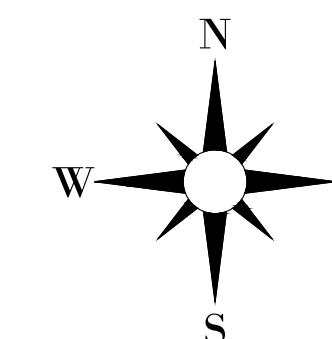
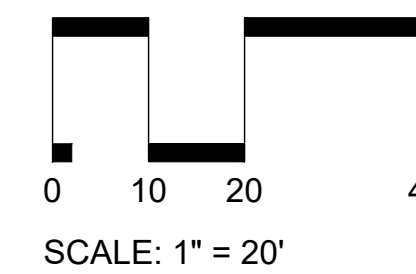
- STRUCTURES WITHIN NCDOT RIGHT-OF-WAY SHALL BE TO NCDOT STANDARDS.
- STRUCTURES NOT WITHIN RIGHT OF WAY SHALL EITHER ALL BE TO NCDOT STANDARDS OR SHALL ALL BE TO LOCAL JURISDICTIONAL STANDARDS.
- ALL STORM PIPES TO BE CLASS III RCP UNLESS OTHERWISE NOTED.

GRADING LEGEND:

- SYMBOL DESCRIPTION
- LOD LIMITS OF DISTURBANCE
 - 200 PROPOSED MAJOR CONTOUR
 - 200 PROPOSED MINOR CONTOUR
 - 200 EXISTING MAJOR CONTOUR
 - 200 EXISTING MINOR CONTOUR
 - PROPOSED STORM DRAINAGE
 - PROPOSED JUNCTION BOX
 - PROPOSED CATCH BASIN
 - PROPOSED AREA DRAIN
 - RIPRAP DISSIPATOR
 - FLOW DIRECTION
 - 44.50 PROPOSED ELEVATION
 - TC 44.50 TOP/BOTTOM OF CURB
 - BC 44.00
 - TW 46.00 TOP/BOTTOM OF WALL
 - BW 44.00

AVERAGE GRADE CALCULATION

PRIMARY STREET	CRABTREE BLVD
HIGH	215.47
LOW	207.90
AVERAGE	211.69

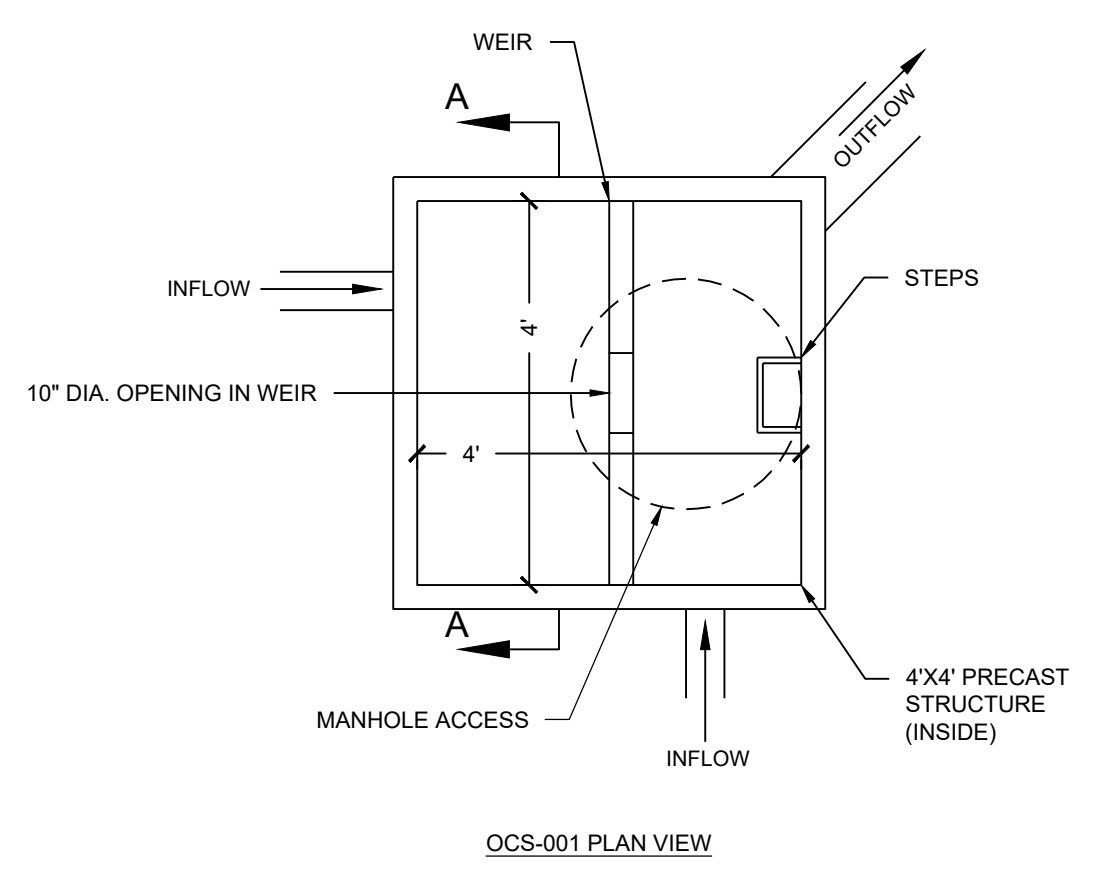
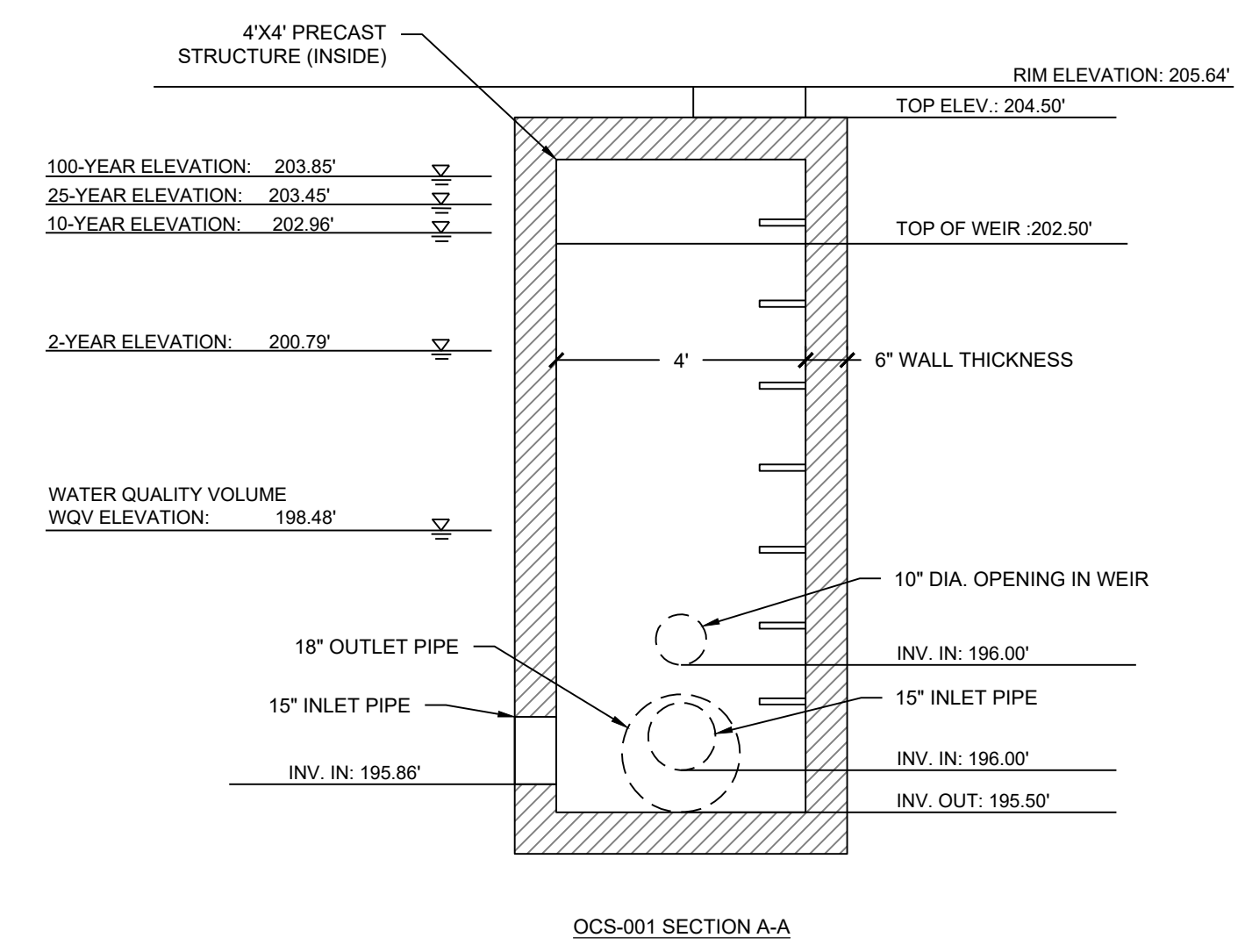
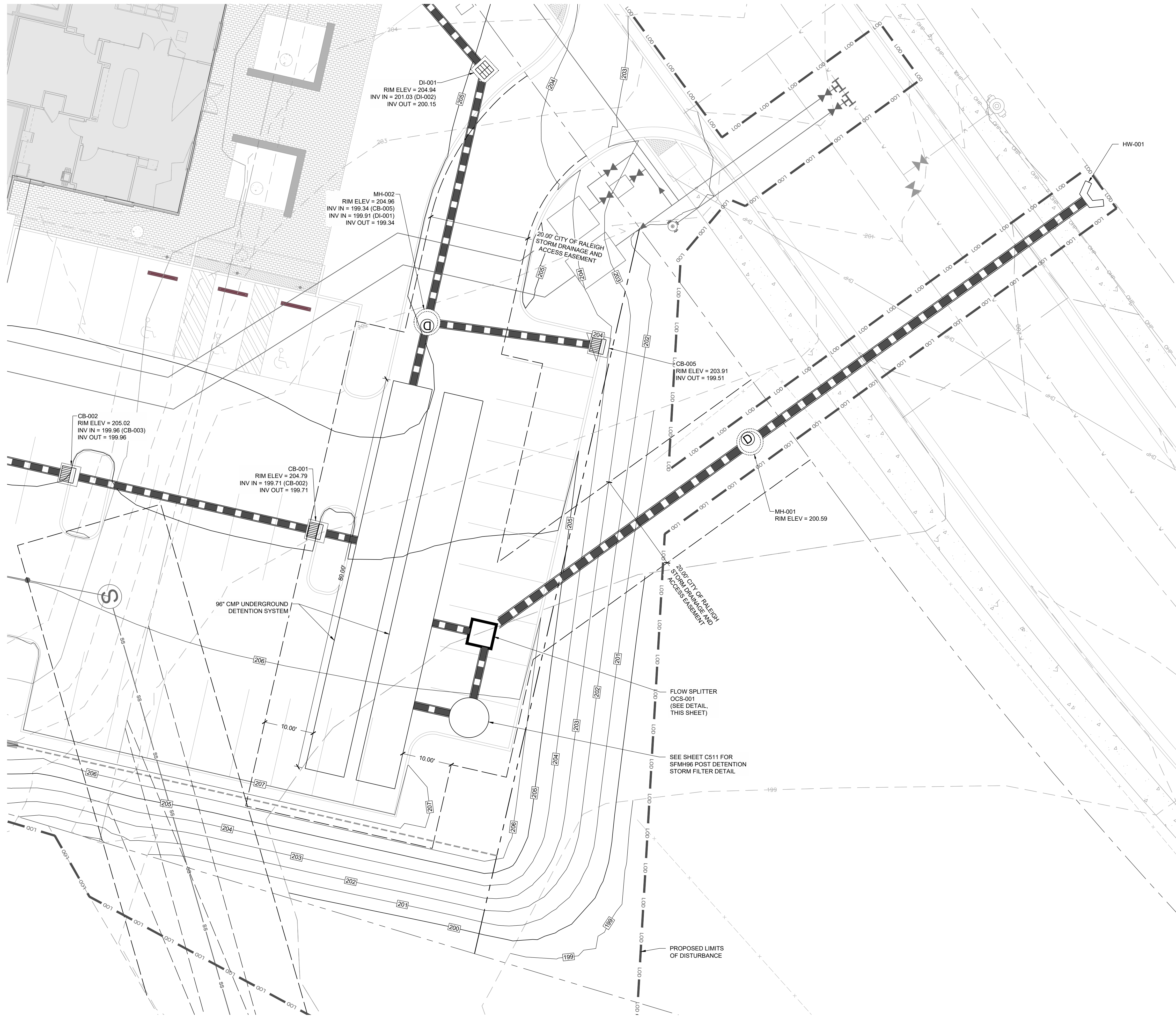


GENERAL NOTES:

1. PRECAST STRUCTURES SHALL CONFORM TO LATEST ASTM C-913 SPEC FOR "REINFORCED CONCRETE WATER AND WASTE WATER STRUCTURES."
2. CONCRETE PIPE FROM OCS-001 TO FES-001 SHALL HAVE O-RING SEALS WITH EXTERNAL BUTYL JOINT WRAP AT ALL JOINTS.
3. 30" BARREL CONNECTION TO BE INSTALLED USING Z-LOK STM CONNECTOR MEETING ASTM C-1478 (A-LOK PRODUCTS, TULLYTOWN, PA).
4. SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED BY THE ENGINEER BEFORE CONSTRUCTION.
5. GEOTECHNICAL ENGINEER SHALL MONITOR DAM AND OUTLET STRUCTURE INSTALLATION. ALL FILL AREAS SHALL BE COMPACTED TO 95% OF THE MATERIALS MAXIMUM DRY DENSITY UNLESS OTHERWISE DICTATED BY GEOTECHNICAL ENGINEER.
6. DRAINAGE AREA MUST BE STABILIZED PRIOR TO INSTALLATION PERMANENT STORMWATER CONTROL MEASURE.
7. PRIOR TO FINAL CERTIFICATE OF OCCUPANCY, SURVEYOR SEALED AS-BUILT DRAWINGS OF WATER QUALITY BASIN AND OUTLET STRUCTURE SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL AND WET POND TO PASS INSPECTION.
8. PER NCDEQ MANUAL, INTERIOR SLOPES MAY BE NO STEEPER THAN 3:1.

GRADING LEGEND:

SYMBOL	DESCRIPTION
---	LIMITS OF DISTURBANCE
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	EXISTING MAJOR CONTOUR
---	EXISTING MINOR CONTOUR
---	PROPOSED STORM DRAINAGE
⊙	PROPOSED JUNCTION BOX
⊞	PROPOSED CATCH BASIN
⊞	PROPOSED AREA DRAIN
⊞	RIPRAP DISSIPATOR
→	FLOW DIRECTION
44.50	PROPOSED ELEVATION
TC 44.50 BC 44.00	TOP/BOTTOM OF CURB
TW 46.00 BW 44.00	TOP/BOTTOM OF WALL



CRABTREE BLVD. APARTMENTS
LODEN PROPERTIES
 2321 Crabtree Blvd., Raleigh, NC 27604

SITE CO. PROJECT NUMBER:
 22013

PROJECT PHASE:
 ADMINISTRATIVE
 SITE REVIEW
 DATE: 09.06.2024

SHEET TITLE:
 SCM DETAILS I

SHEET NUMBER:
 C510

STORMFILTER DESIGN NOTES

STORMFILTER TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE MANHOLE STYLE IS SHOWN WITH THE MAXIMUM NUMBER OF CARTRIDGES (14). 6" OF DROP FROM INLET TO OUTLET IS REQUIRED FOR ALL CARTRIDGE SIZE OPTIONS.

CARTRIDGE SELECTION	27"	18"	LOW DROP
CARTRIDGE HEIGHT	27"	18"	18"
MINIMUM ACTIVATION HEAD (H)	3.0'	2.3'	1.8'
SPECIFIC FLOW RATE (PER NCDEQ MDC 2)	1.0 GPM/SF (ALL CARTRIDGE HEIGHTS)		
CARTRIDGE FLOW RATE	7.5 GPM (ALL CARTRIDGE HEIGHTS)		

PLAN VIEW
STANDARD OUTLET RISER
FLOWKIT-45A

FRAME AND COVER
N.T.S.

SECTION A-A

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH (1) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.conteches.com THESE DRAWINGS AND DETAILS WILL BE PROVIDED AFTER RECEIPT OF PROJECT LETTER OF INTENT AND/OR PURCHASE ORDER.
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 7'-0" (1524 mm) AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M30 AND BE CAST WITH THE CONTECH LOGO.
- FILTER CARTRIDGES SHALL BE MEDIA FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 1.5 INCHES (38 mm). FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 30 SECONDS.
- SPECIFIC FLOW RATE IS EQUAL TO THE FILTER TREATMENT CAPACITY (gpm/ft²) DIVIDED BY THE FILTER CONTACT SURFACE AREA (sq ft/ft²).
- STORMFILTER STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLY STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUPT INLET PIPES.
- CONTRACTOR TO PROVIDE AND INSTALL CONNECT OR TO THE OUTLET RISER STUB. STORMFILTER EQUIPPED WITH A DUAL DIAMETER HOPE OUTLET STUB AND SAND COLLAR. IF OUTLET PIPE IS LARGER THAN 8 INCHES (200 mm), CONTRACTOR TO REMOVE THE 8 INCH (200 mm) OUTLET STUB AT MOLDED-IN CUT LINE. COUPLING BY FERRODO OR EQUAL, AND PROVIDED BY CONTRACTOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.

CONTECH
ENGINEERED SOLUTIONS LLC
8025 Crabtree Pointe Dr., Suite 400, West Chester, OH 45099
800-338-1122 513-645-7000 513-645-7993 FAX

SFMH96
POST DETENTION STORMFILTER
DETAIL

CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER LENGTHS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

SCALE: N.T.S.

SPECIFICATION FOR DESIGNED DETENTION SYSTEM.

SCOPE: THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE DESIGNED DETENTION SYSTEM DETAILED IN THE PROJECT PLANS.

MATERIAL: THE MATERIAL SHALL CONFORM TO THE APPLICABLE REQUIREMENTS LISTED BELOW.

PIPE: THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE TO THE APPLICABLE REQUIREMENTS LISTED BELOW.

ALUMINIZED TYPE 2: AASHTO M-38 OR ASTM A-780

GALVANIZED: AASHTO M-38 OR ASTM A-780

POLYMER COATED: AASHTO M-245 OR ASTM A-782

ALUMINUM: AASHTO M-196 OR ASTM B-745

HANDLING AND ASSEMBLY: SHALL BE IN ACCORDANCE WITH NCSIPA NATIONAL CORRUGATED STEEL PIPE ASSOCIATION FOR ALUMINIZED TYPE 2, GALVANIZED OR POLYMER COATED STEEL. SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR ALUMINUM PIPE.

THE ALUMINUM COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M-197 OR ASTM B-744.

CONSTRUCTION LOADS: CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE MANUFACTURER'S OR NCSIPA GUIDELINES.

NOTES: THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR COORDINATION.

REINFORCING TABLE

Ø CMP RISER, INCHES	A	Ø B	REINFORCING	*BEARING PRESSURE (PSF)
24"	Ø 4"	20"	#5 @ 12" OCEW	2,410
30"	Ø 4.5"	24"	#5 @ 12" OCEW	1,780
36"	Ø 5"	28"	#5 @ 12" OCEW	2,120
42"	Ø 5.5"	32"	#5 @ 12" OCEW	1,530
48"	Ø 6"	36"	#5 @ 10" OCEW	1,880
	Ø 6"	36"	#5 @ 10" OCEW	1,350
	Ø 6"	44"	#5 @ 10" OCEW	1,720
	Ø 6"	44"	#5 @ 10" OCEW	1,210
	Ø 6"	50"	#5 @ 10" OCEW	1,600
	Ø 6"	50"	#5 @ 10" OCEW	1,100

** ASSUMED SOIL BEARING CAPACITY

ROUND OPTION PLAN VIEW

SQUARE OPTION PLAN VIEW

CONTECH
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8025 Crabtree Pointe Dr., Suite 400, West Chester, OH 45099
800-338-1122 513-645-7000 513-645-7993 FAX

805223 Crabtree Apts/Park
SCM #1 96" CMP Storage
Raleigh, NC

CMP DETENTION AND CMP DRAINAGE STANDARD BACKFILL SPECIFICATIONS

MATERIAL LOCATION	MATERIAL SPECIFICATION	DESCRIPTION
FILL ENVELOPE WIDTH	PER ENGINEER OF RECORD	MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE. THE SUGGESTED MINIMUM TRENCH WIDTH, OR EOR RECOMMENDATION: PIPE 12" - D + 16" PIPE 12" - 1.5D + 12"
FOUNDATION	AASHTO M 26.5.2 OR PER ENGINEER OF RECORD	PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND FOUNDATION BROUGHT BACK TO GRADE WITH A FILL MATERIAL APPROVED BY THE ENGINEER OF RECORD.
BEDDING	AASHTO M 43.3, 357.4, 487.5, 56.57 (APPROVED REGIONAL EQUIVALENTS INCLUDE CA-7)	ENGINEER OF RECORD TO DETERMINE IF BEDDING IS REQUIRED. PIPE MAY BE PLACED ON THE TRENCH BOTTOM OF A RELATIVELY LOOSE, NATIVE SUITABLE WELL GRADED GRANULAR MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, 2" MIN DEPTH. THE BEDDING MATERIAL MAY BE SUITABLE FOUNDATION SOILS CONFORMING TO AASHTO SOIL CLASSIFICATIONS AT, 42, OR 43 WITH MAXIMUM PARTICLE SIZE OF 3" PER AASHTO M 26.3.1 AND 12.4-1.3.
CRITICAL BACKFILL	AASHTO M 145: A-1, A-2, A-3	HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION WITHOUT SOFT SPOTS. BACKFILL SHALL BE PLACED IN 6" - 1" LOOSE LIFTS AND COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T 99. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A THREE LIFT (24") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE PLACED IN 6" - 1" LOOSE LIFTS AND COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T 99. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A THREE LIFT (24") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE PLACED IN 6" - 1" LOOSE LIFTS AND COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T 99. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A THREE LIFT (24") DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. 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CITY OF RALEIGH STANDARD UTILITY NOTES:

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION).
- UTILITY SEPARATION REQUIREMENTS:
 - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49).
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
- DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
- INSTALL COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
- INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75' LINEAR FEET MAXIMUM.
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
- GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC / BLDG PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. A CERTIFICATE OF COMPLIANCE SHALL ALSO BE OBTAINED FROM THE RW CROSS-CONNECTION COORDINATOR FOR EACH DEVICE PRIOR TO ISSUANCE OF A UC / BLDG PERMIT. CONTACT (919) 996-5923 OR CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
- NOTICE FOR PROJECTS WITH REPLACED OR OVERSIZED MAINS: IF THE CITY'S REIMBURSEMENT FOR AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT PROJECT IS \$250,000 OR GREATER - THE PROJECT MUST BE PUBLICLY BID.

SEWER NOTES:

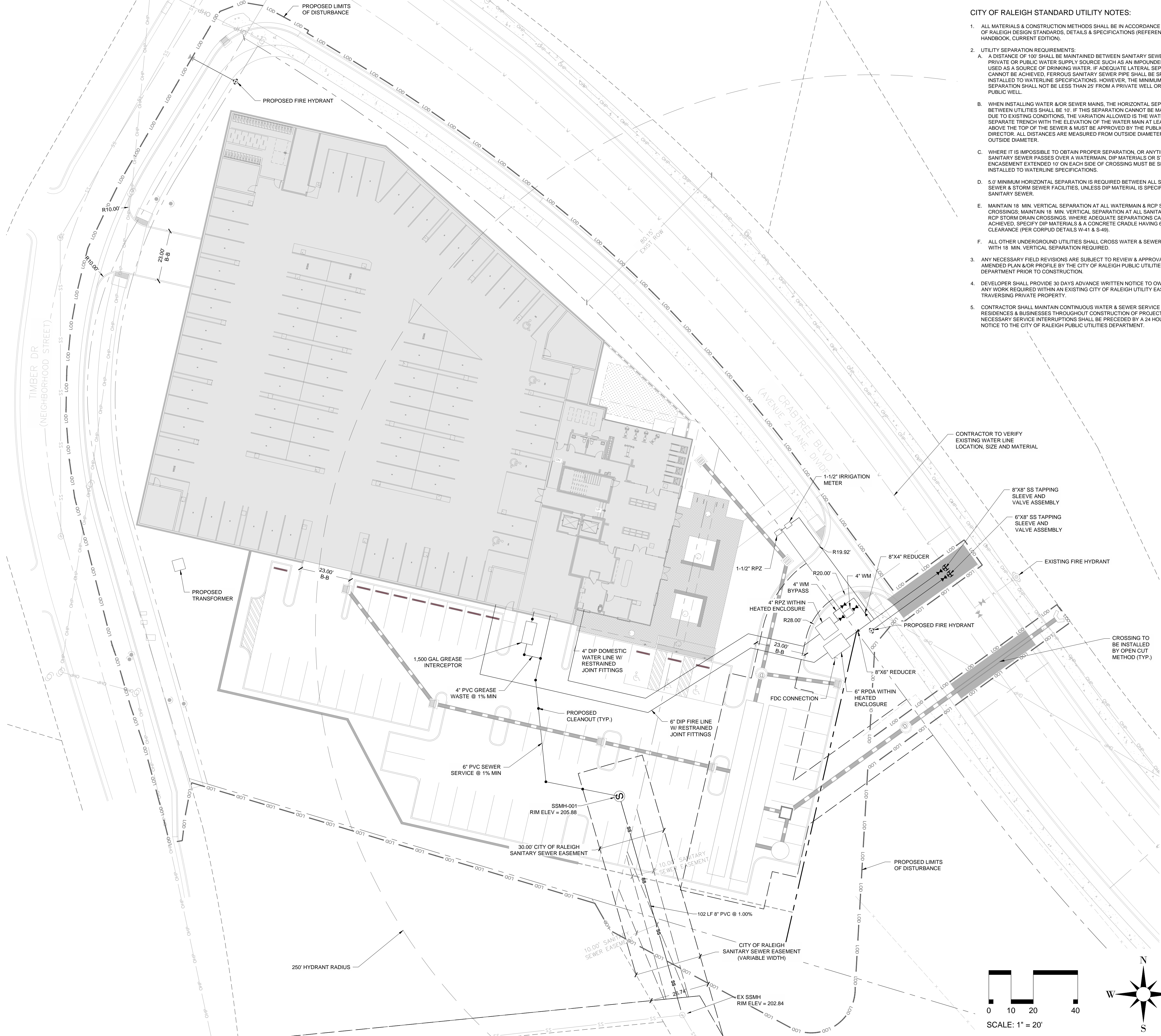
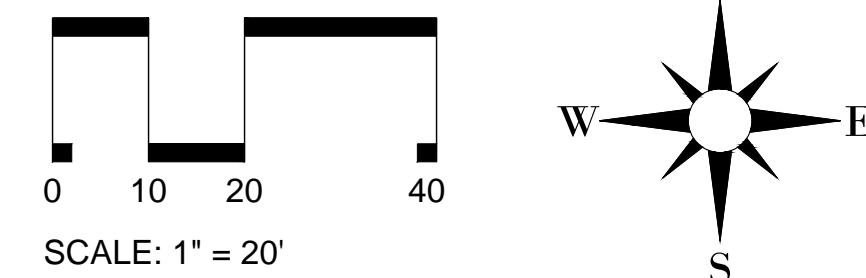
- SANITARY SEWER CLEANOUTS LOCATED IN PAVEMENT AREAS SHALL BE HEAVY DUTY TRAFFIC BEARING CASTINGS.
- UNLESS OTHERWISE NOTED, ALL SANITARY SEWER MANHOLES ARE 4' DIA.
- MANHOLES LOCATED IN PAVEMENT, CONCRETE OR OTHER TRAFFIC AREAS SHALL BE SET AT GRADE. MANHOLES LOCATED IN OTHER AREAS (I.E. GRASS OR WOODED AREAS) SHALL HAVE THEIR RIMS RAISED SIX INCHES ABOVE THE SURROUNDING GRADE. MANHOLES SUBJECT TO POSSIBLE WATER INFILTRATION SHALL HAVE WATERTIGHT, BOLTED LIDS.
- MINIMUM REQUIRED SLOPES FOR SEWER SERVICES:
 - 4" SEWER SERVICE - 2.00% SLOPE
 - 6" SEWER SERVICE - 1.00% SLOPE
 - 8" SEWER SERVICE - 0.50% SLOPE
- UNLESS OTHERWISE NOTED, LOCATE SANITARY SERVICE CLEANOUTS AT ALL HORIZONTAL OR VERTICAL CHANGES IN DIRECTION. MAXIMUM SPACING BETWEEN CLEANOUTS SHALL BE 75 FEET.
- SEWER LINES LESS THAN 3 FEET OF COVER SHALL BE CLASS 50 DUCTILE IRON PIPE. SEWER LINES WITH GREATER THAN 3 FEET OF COVER SHALL BE AS NOTED BELOW:
 - 4" SEWER SERVICE - SCH 80
 - 6" SEWER SERVICE - SCH 80
 - 8" SEWER SERVICE - SDR-35
- SEWER LINES UNDER CONSTRUCTION SHALL BE PROTECTED FROM DIRT, DEBRIS OR OTHER CONTAMINANTS ENTERING THE NEW SYSTEM. A MECHANICAL PLUG SHALL BE UTILIZED BOTH IMMEDIATELY UPSTREAM OF THE NEW CONSTRUCTION AND AT THE FIRST MANHOLE DOWNSTREAM IN THE EXISTING SYSTEM. EXISTING STRUCTURES, PIPING AND APPURTENANCES SHALL BE PROTECTED FROM ANY INFLOW OF WATER, DIRT OR DEBRIS DUE TO NEW CONSTRUCTION CONNECTING TO OR IN THE VICINITY OF THE EXISTING SYSTEM. CONTRACTOR TO REMOVE DEBRIS AND PLUG PRIOR TO OCCUPANCY.
- ALL MANHOLES COVERS SHALL BE PAINTED TO LOCAL JURISDICTIONAL REQUIREMENTS.

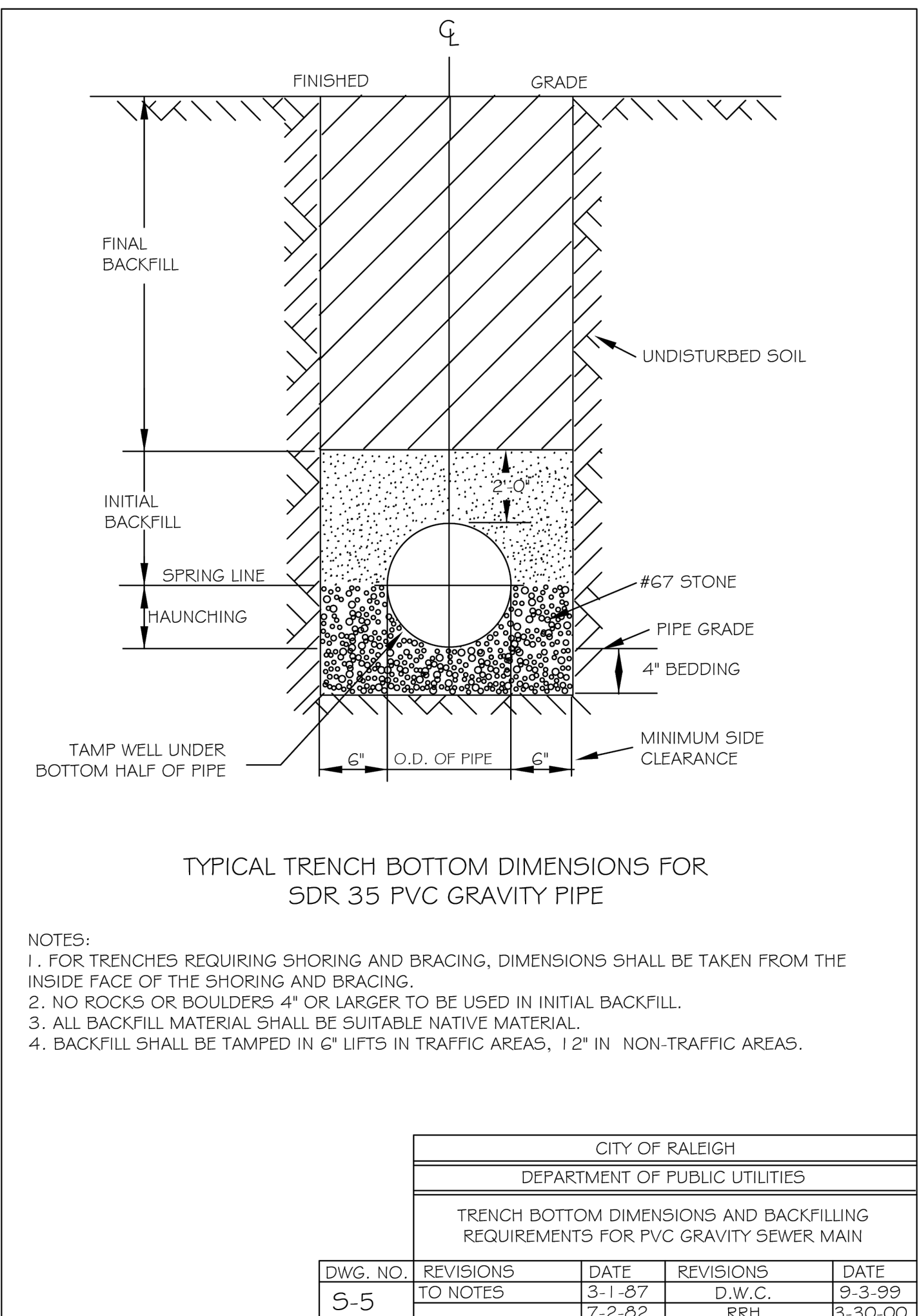
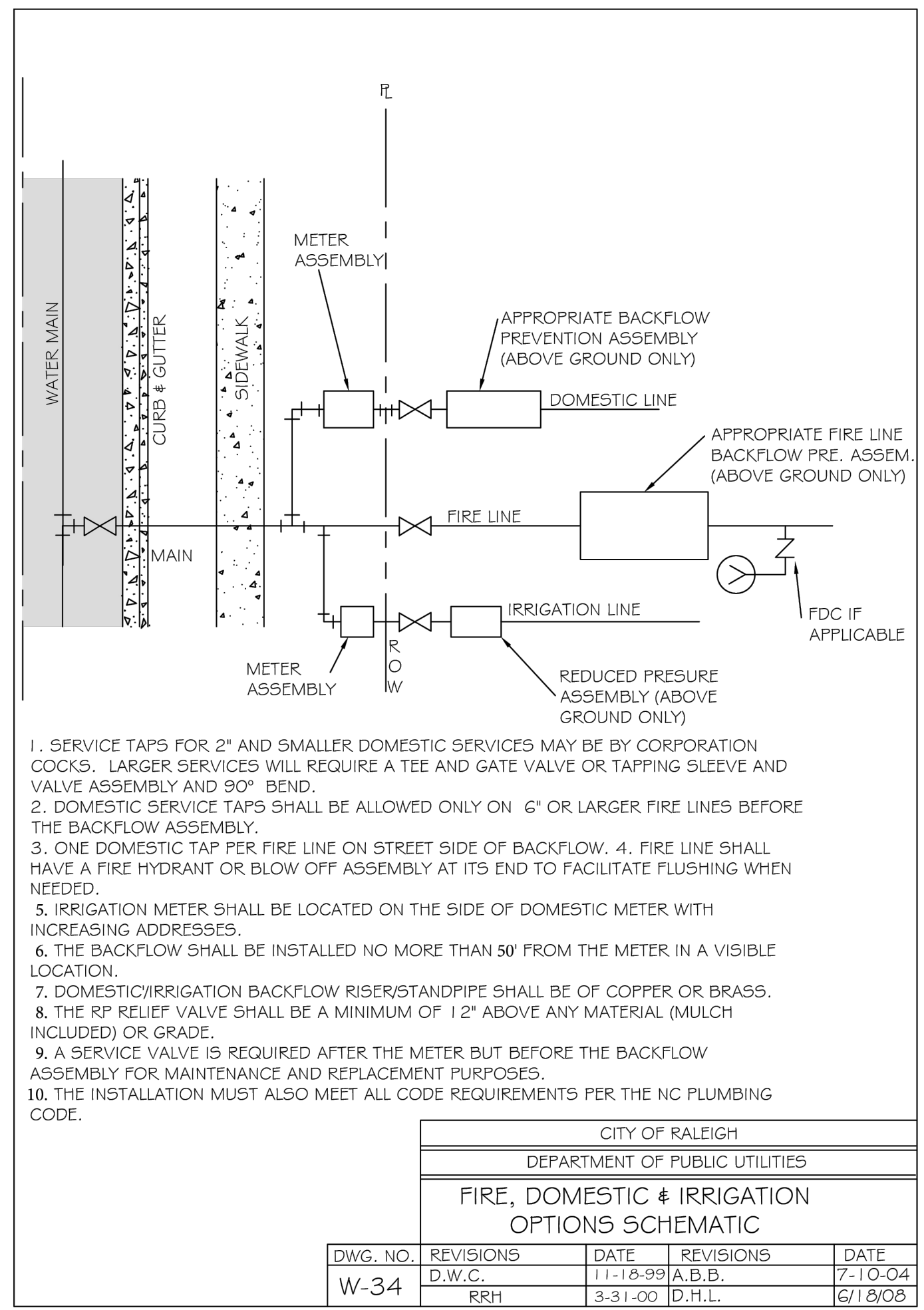
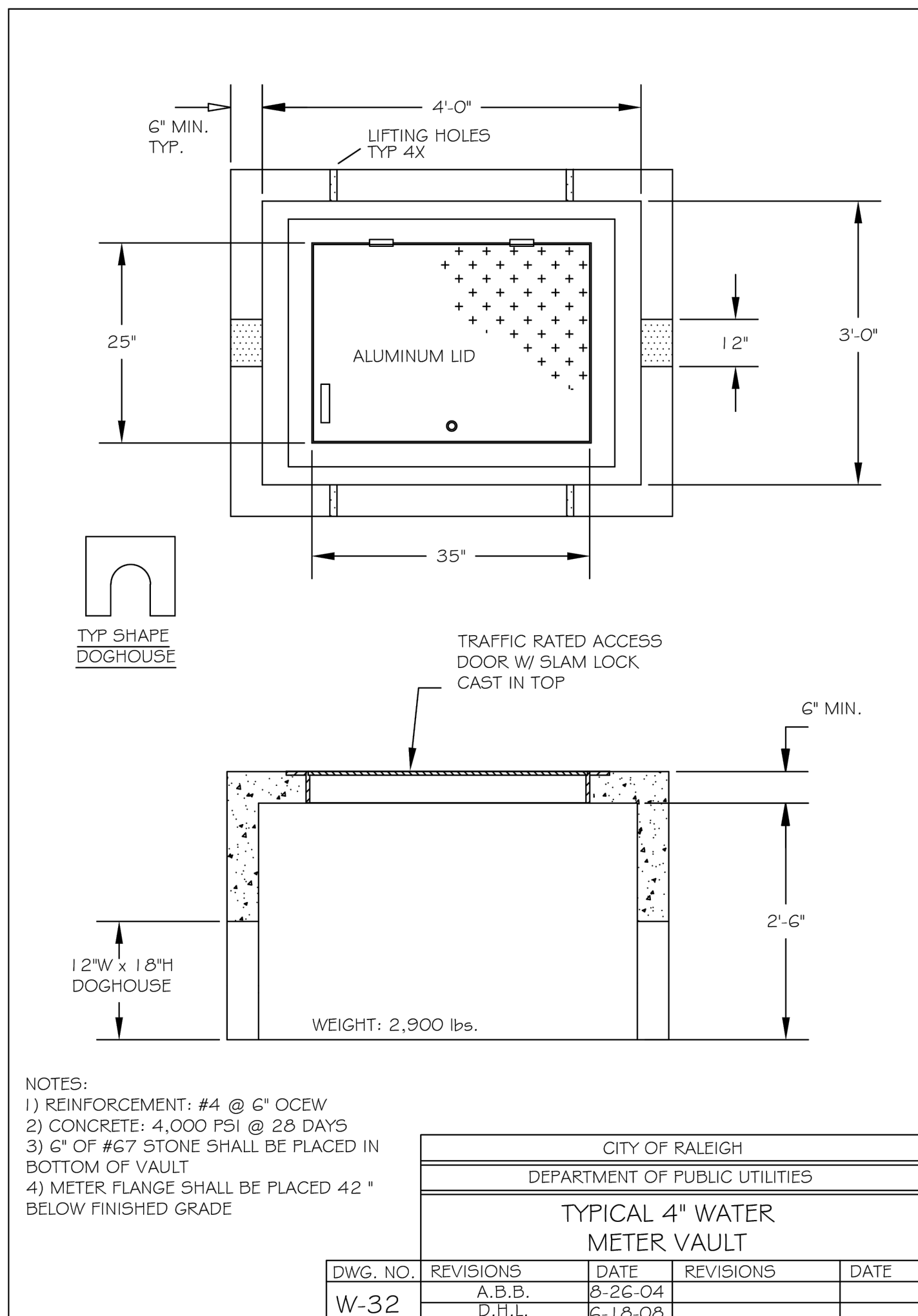
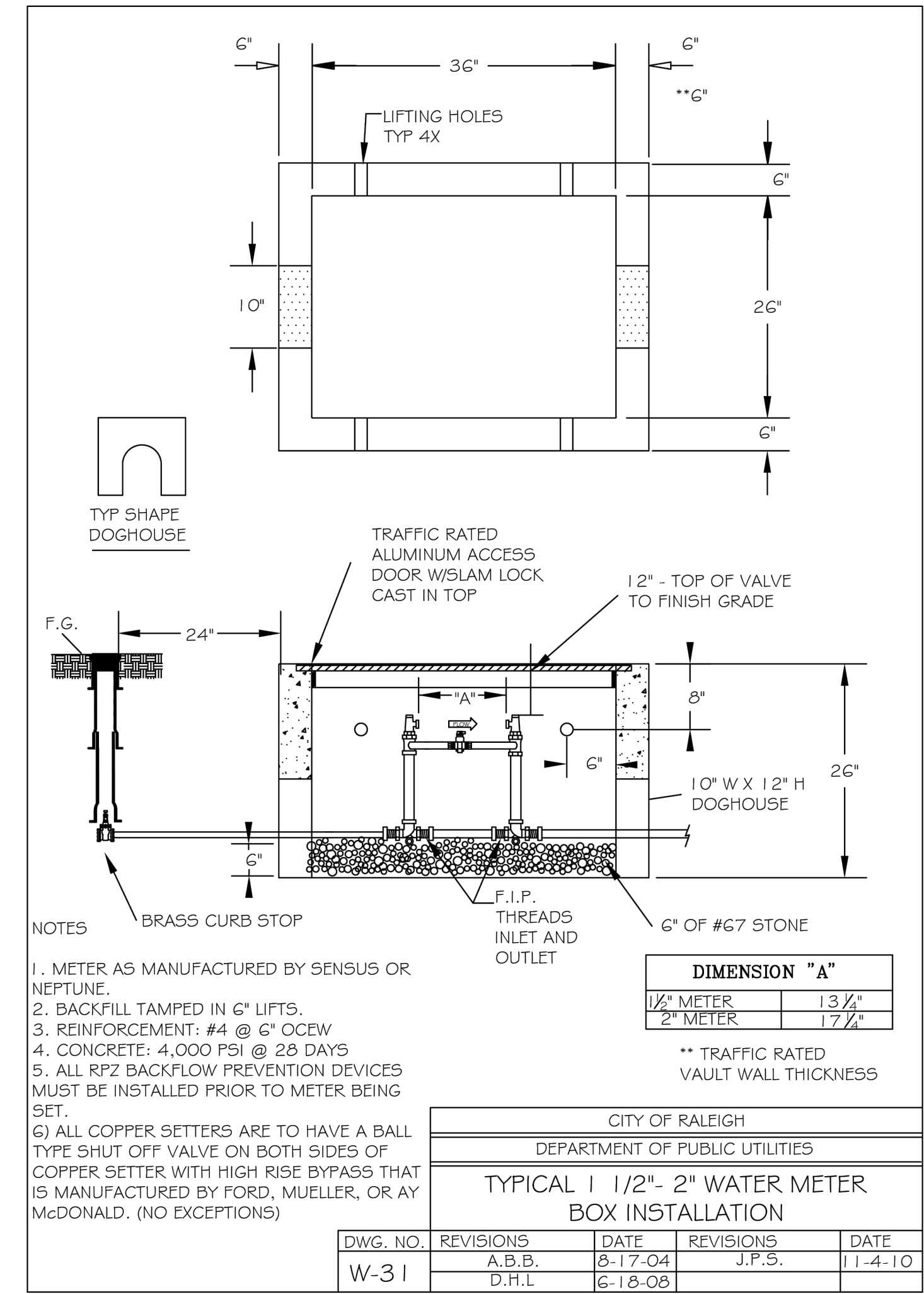
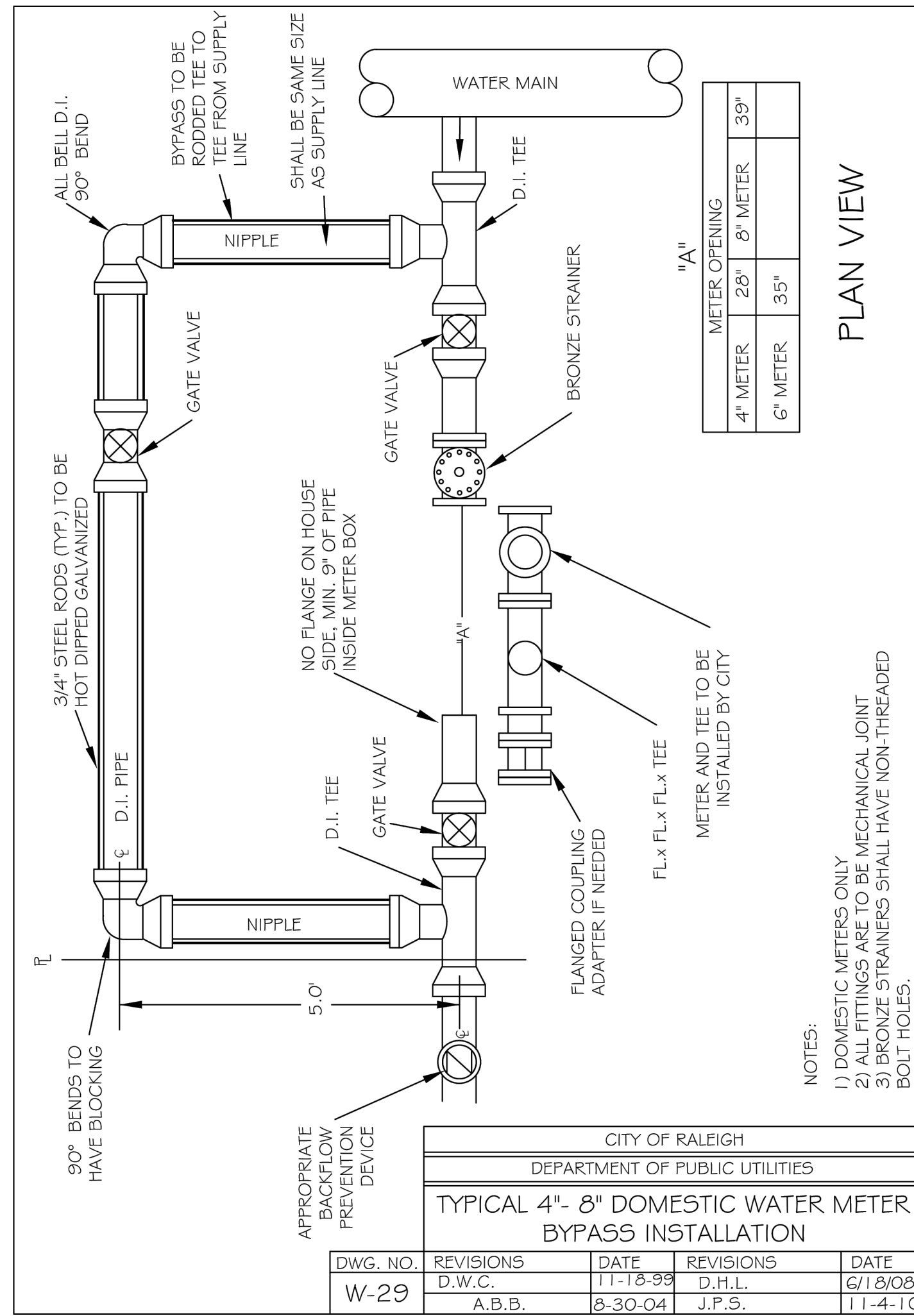
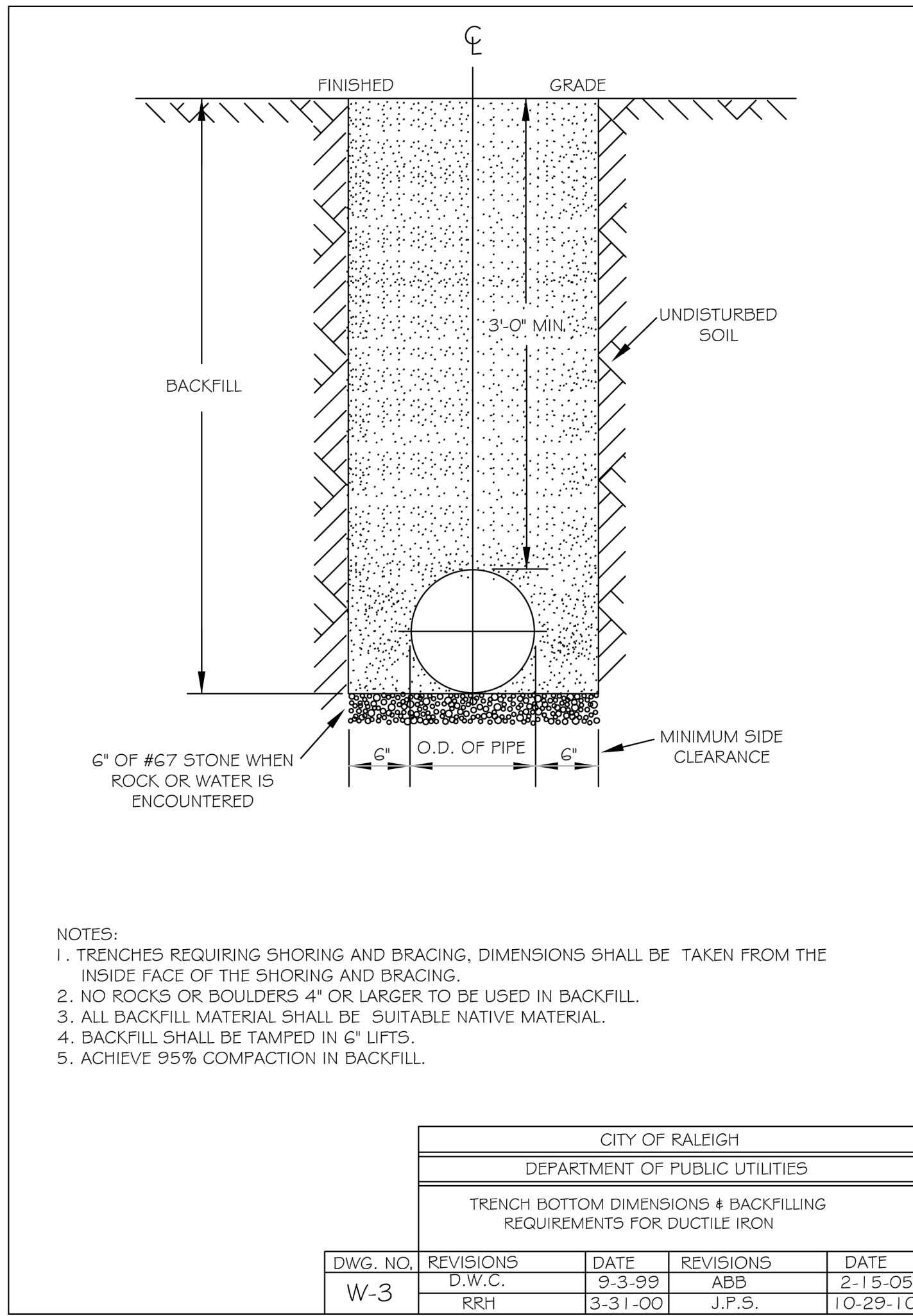
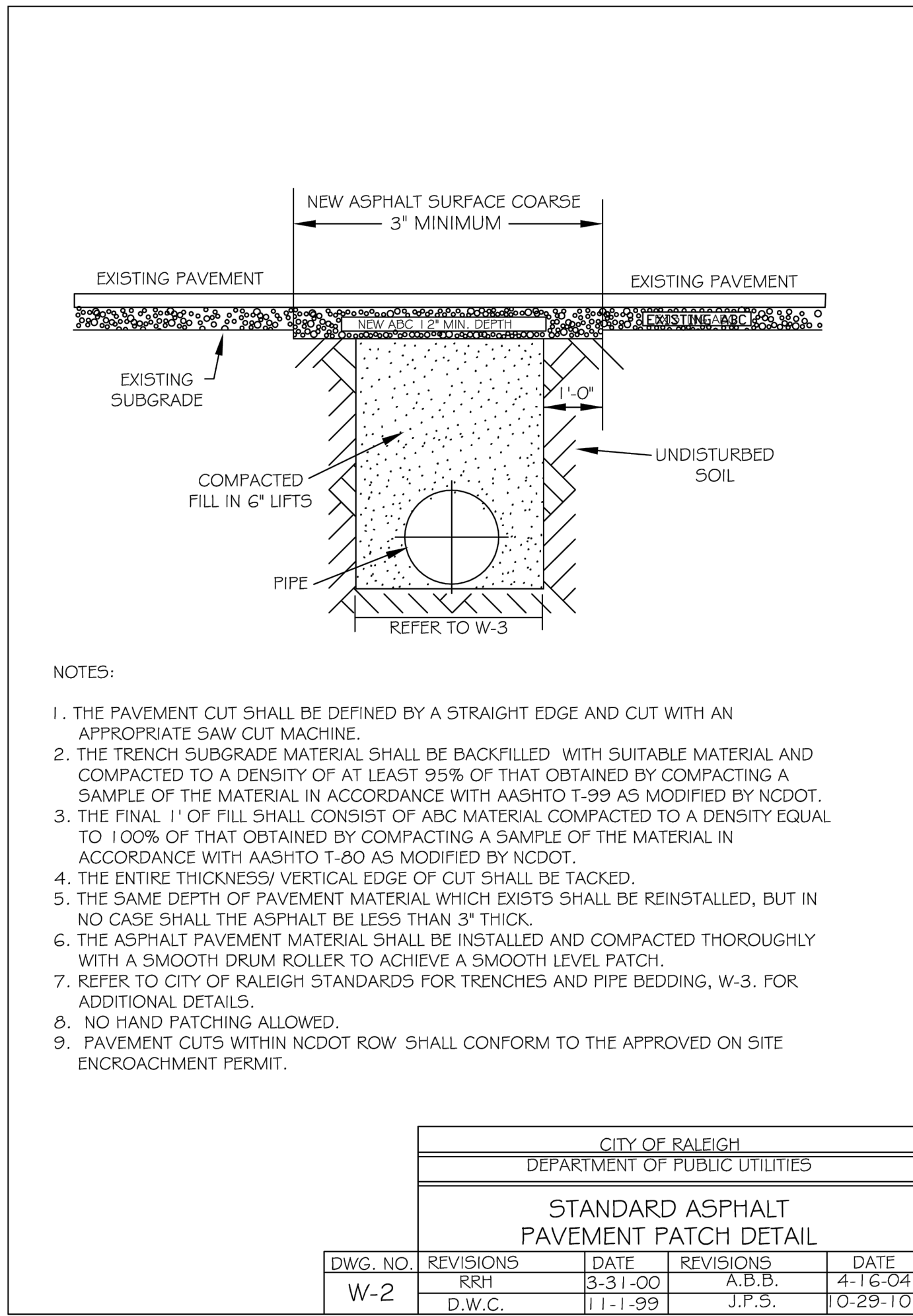
WATER NOTES:

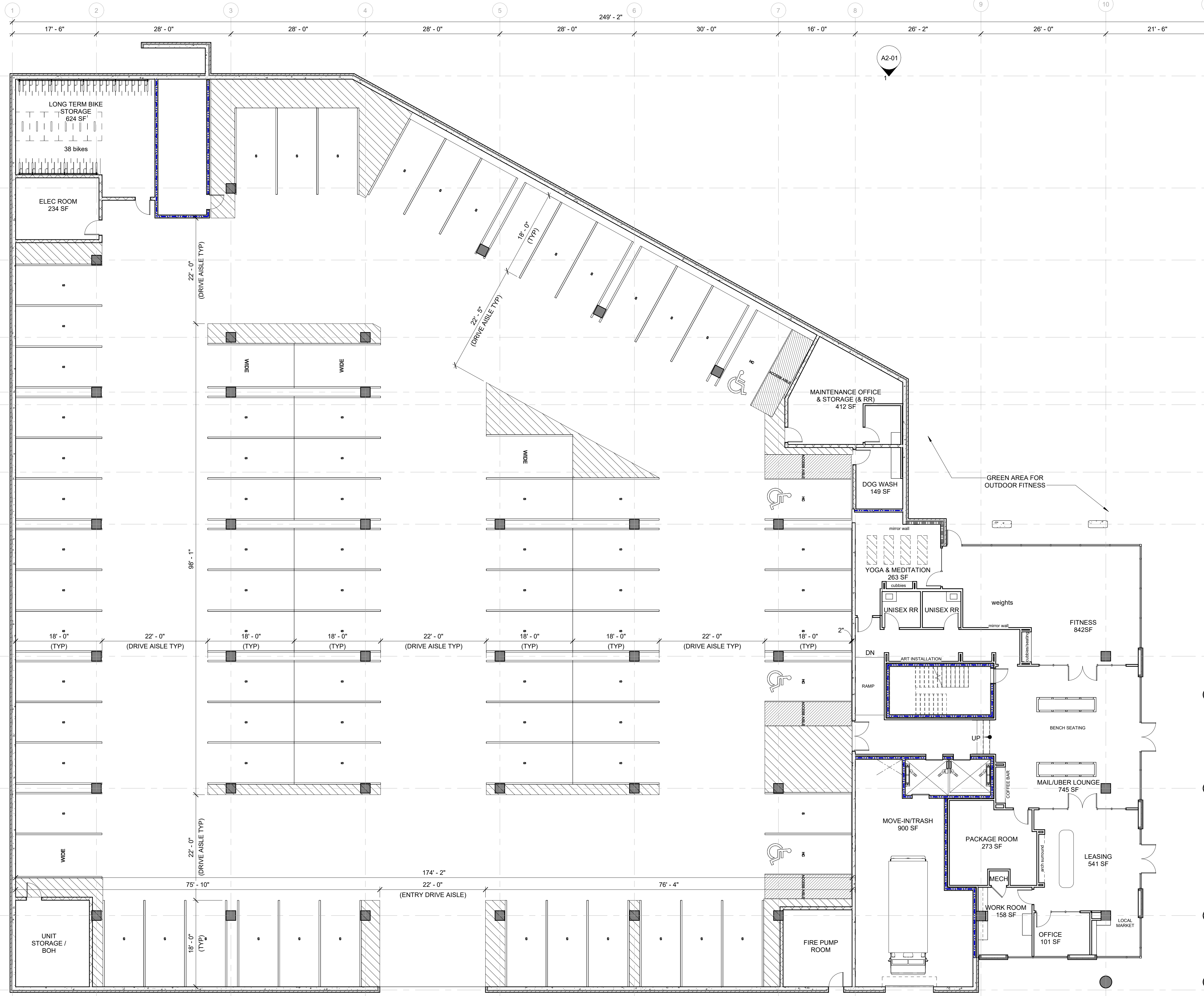
- AS INDICATED, ALL WATERLINES SHALL BE DUCTILE IRON PIPE MEETING THE REQUIREMENTS OF ANSI-AWWA C151 PRESSURE CLASS 350 OR SOFT COPPER TYPE K PIPE PER ASTM B88. IF PVC WATERLINES INDICATED ON THE PLANS IT SHALL MEET THE REQUIREMENTS OF AWWA C-900, CLASS 200.
- ALL WATERLINES SHALL HAVE A MINIMUM OF 3.5 FEET OF COVER.
- TESTING NOTES:
 - PRESSURE: LEAKAGE SHALL NOT EXCEED THE MAXIMUM ALLOWABLE LEAKAGE SPECIFIED IN AWWA C 600. MINIMUM TEST PRESSURE SHALL BE 150 PSI FOR DOMESTIC AND 200 PSI FOR FIRE PROTECTION.
 - BACTERIOLOGICAL: TWO SAMPLES FOR BACTERIOLOGICAL SAMPLING SHALL BE COLLECTED AT LEAST 24 HOURS APART. IF CONTAMINATION IS INDICATED, THEN THE DISINFECTION PROCEDURE AND TESTING SHALL BE REPEATED UNTIL SATISFACTORY RESULTS ARE OBTAINED.
- THE CHLORINE IN HEAVILY CHLORINATED WATER FLUSHED FROM MAINS NEEDS TO BE NEUTRALIZED BEFORE DISCHARGE. CONTRACTORS SHALL NEUTRALIZE HEAVILY CHLORINATED WATER FLUSHED FROM MAINS PRIOR TO DISCHARGE OR TRANSPORT ALL HEAVILY CHLORINATED WATER OFFSITE FOR PROPER DISPOSAL.
- PAINT VALVE COVERS, FIRE HYDRANTS AND OTHER WATER APPARATUS TO MEET THE LOCAL JURISDICTIONAL REQUIREMENTS.

UTILITY LEGEND:

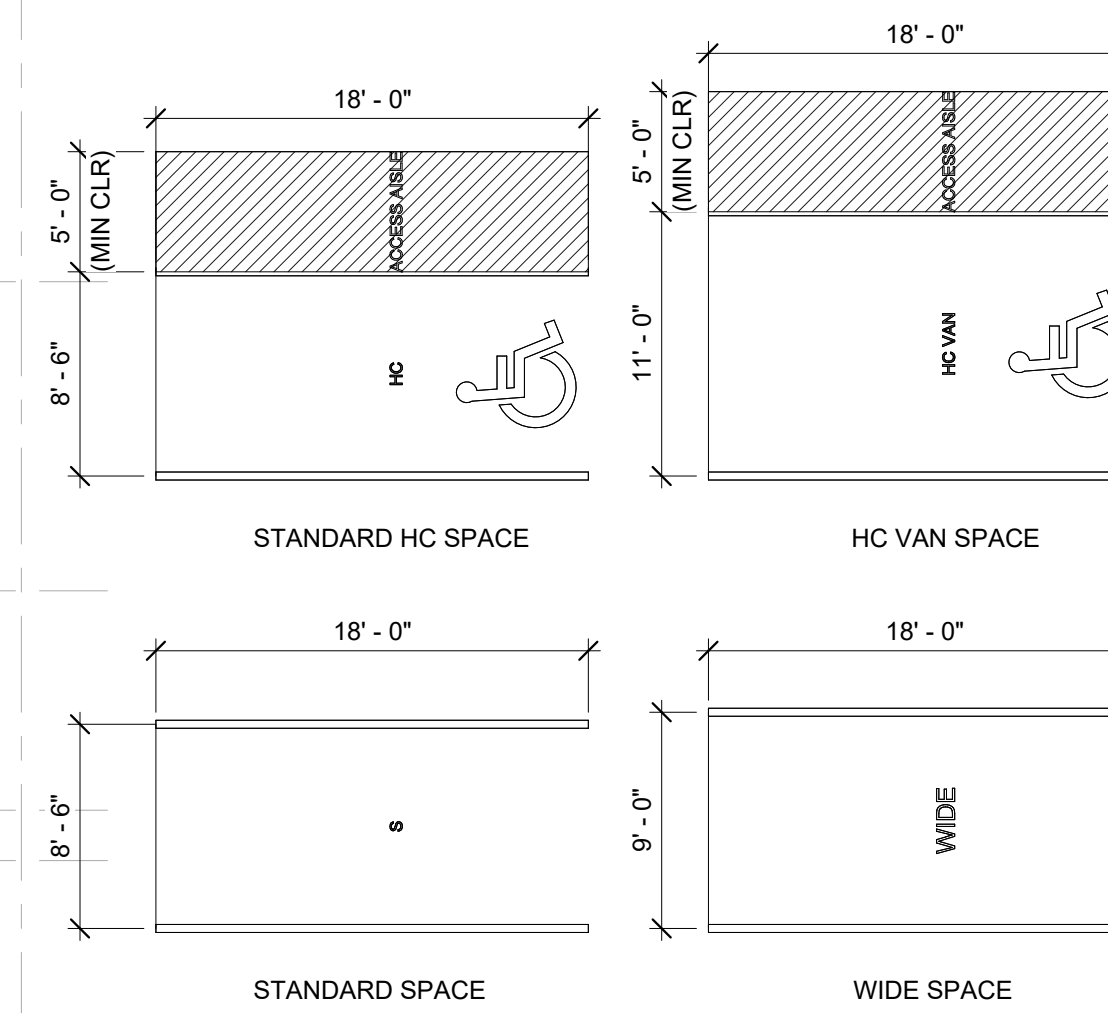
	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING SANITARY SEWER LINE
	PROPOSED SANITARY SEWER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE
	EXISTING SANITARY SEWER MANHOLE
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED CLEANOUT
	PROPOSED FDC
	PROPOSED BACKFLOW METER
	PROPOSED POST INDICATOR VALVE (PIV)
	GREASE INTERCEPTOR
	300' HYDRANT COVERAGE CIRCLE
	LIMITS OF DISTURBANCE



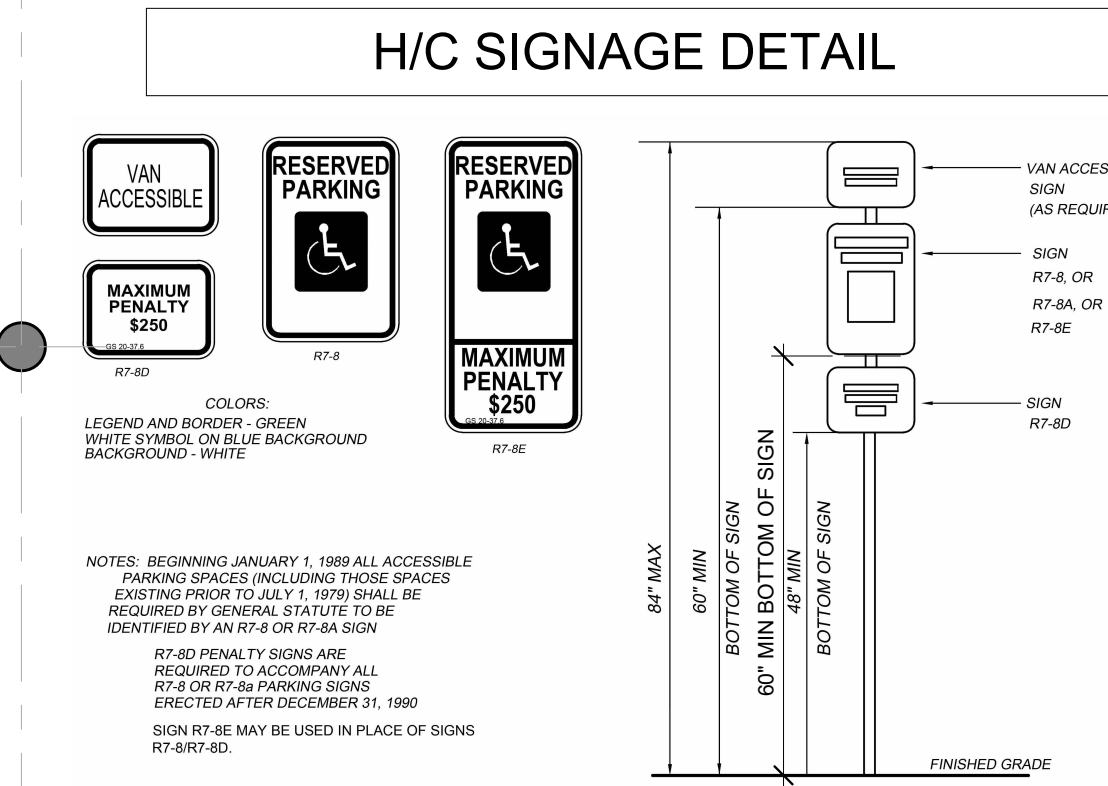




BIKE PARKING SCHEDULE		PARKING SCHEDULE BASEMENT		
PARKING SPACE	COUNT	PARKING SPACE	COUNT	
HORIZONTAL BIKE	6	BASEMENT	HANDICAP	4
VERTICAL BIKE	38		STANDARD	73
			WIDE	4
				85
			85	



PARKING SPACES TYP SIZES
1/8" = 1'-0"

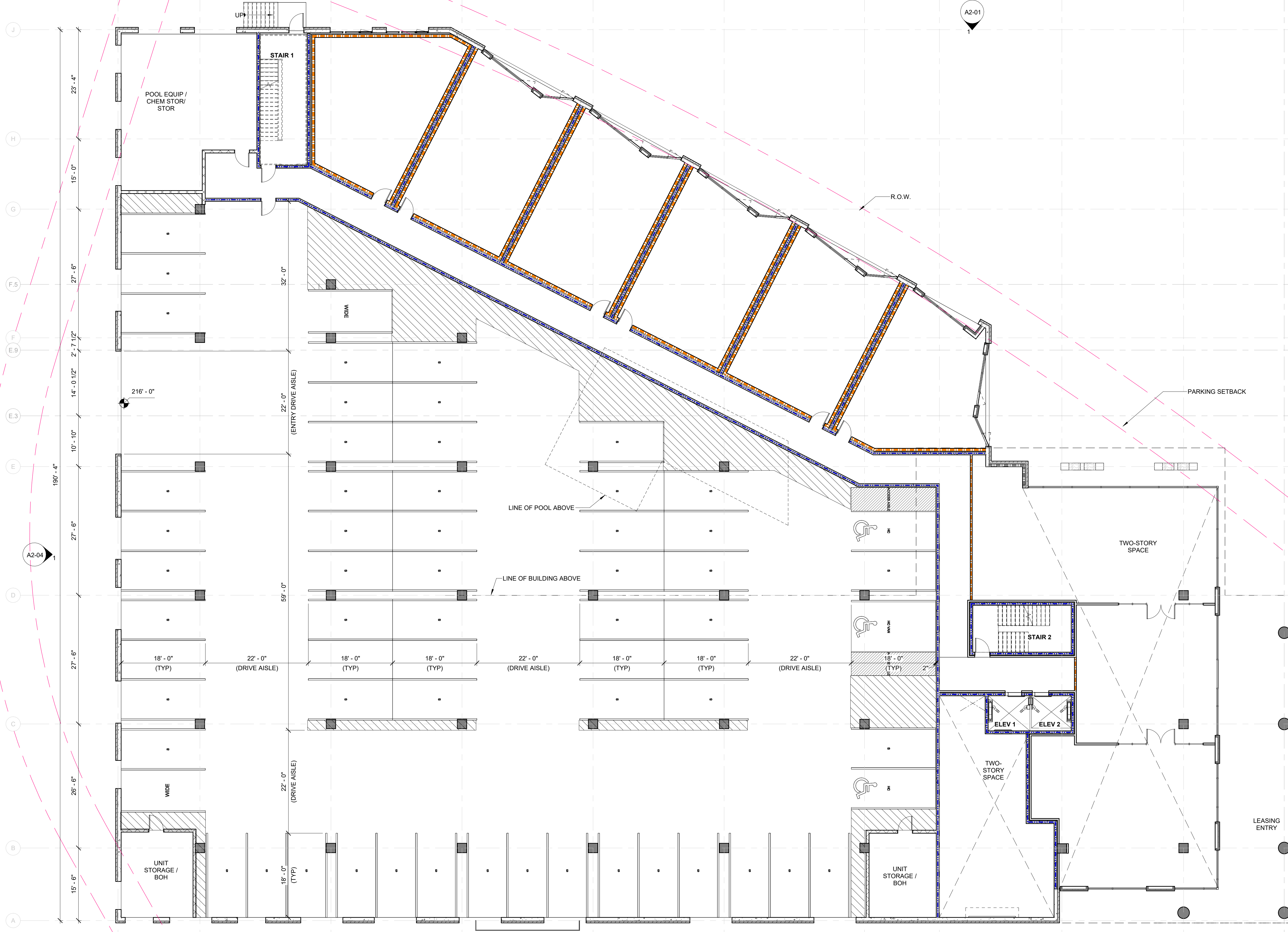


HC PARKING SIGNAGE DETAIL
1/4" = 1'-0"

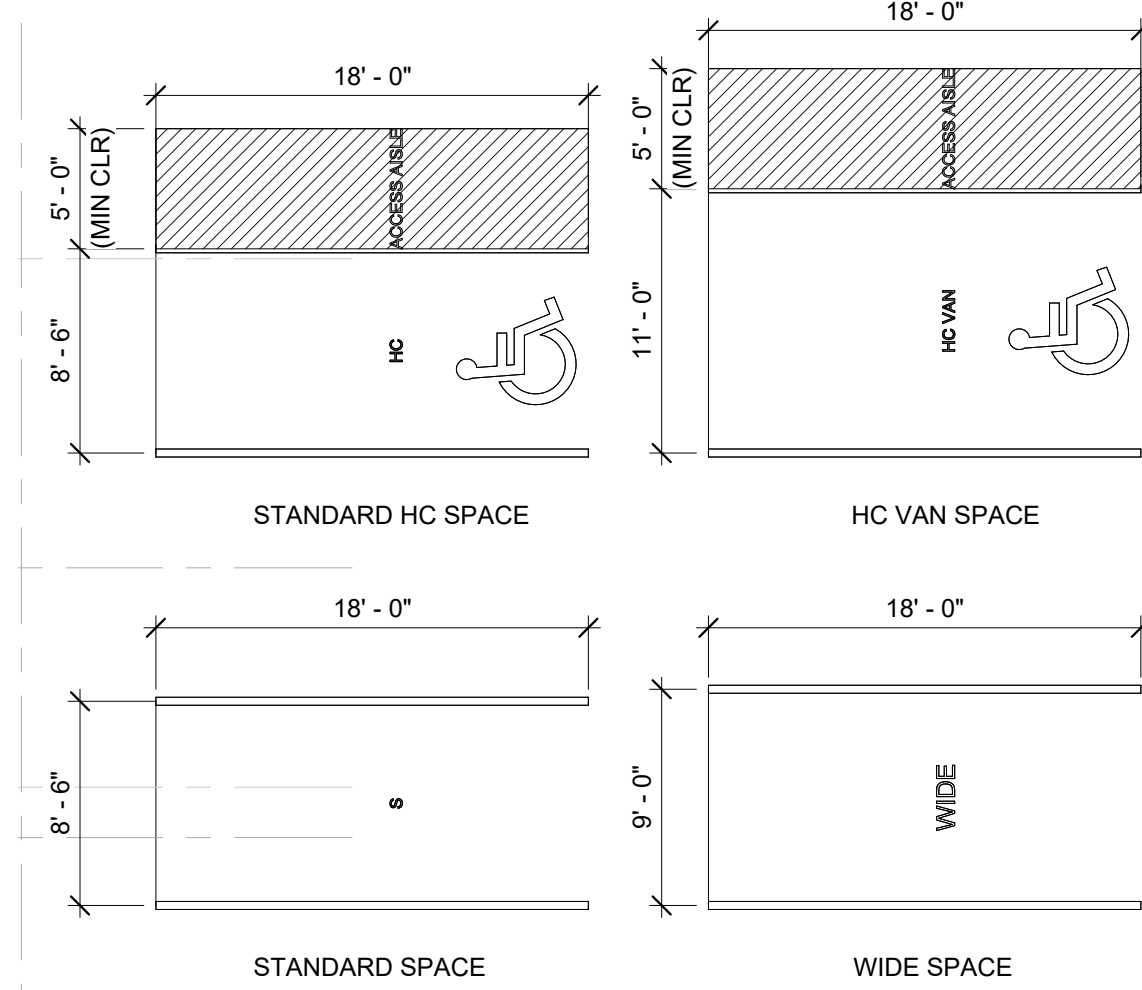


CRABTREE APARTMENTS
RALEIGH, NC

1 17'-6" 2 28'-0" 3 28'-0" 4 28'-0" 5 28'-0" 6 249'-2" 7 30'-0" 8 16'-0" 9 26'-2" 10 26'-0" 11 21'-6"



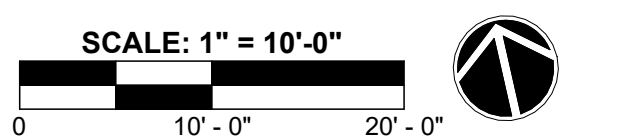
PARKING SCHEDULE 1ST FLOOR	
PARKING SPACE	COUNT
1ST FLOOR	
HANDICAP	2
HC VAN	1
STANDARD	58
WIDE	2
	65
	65



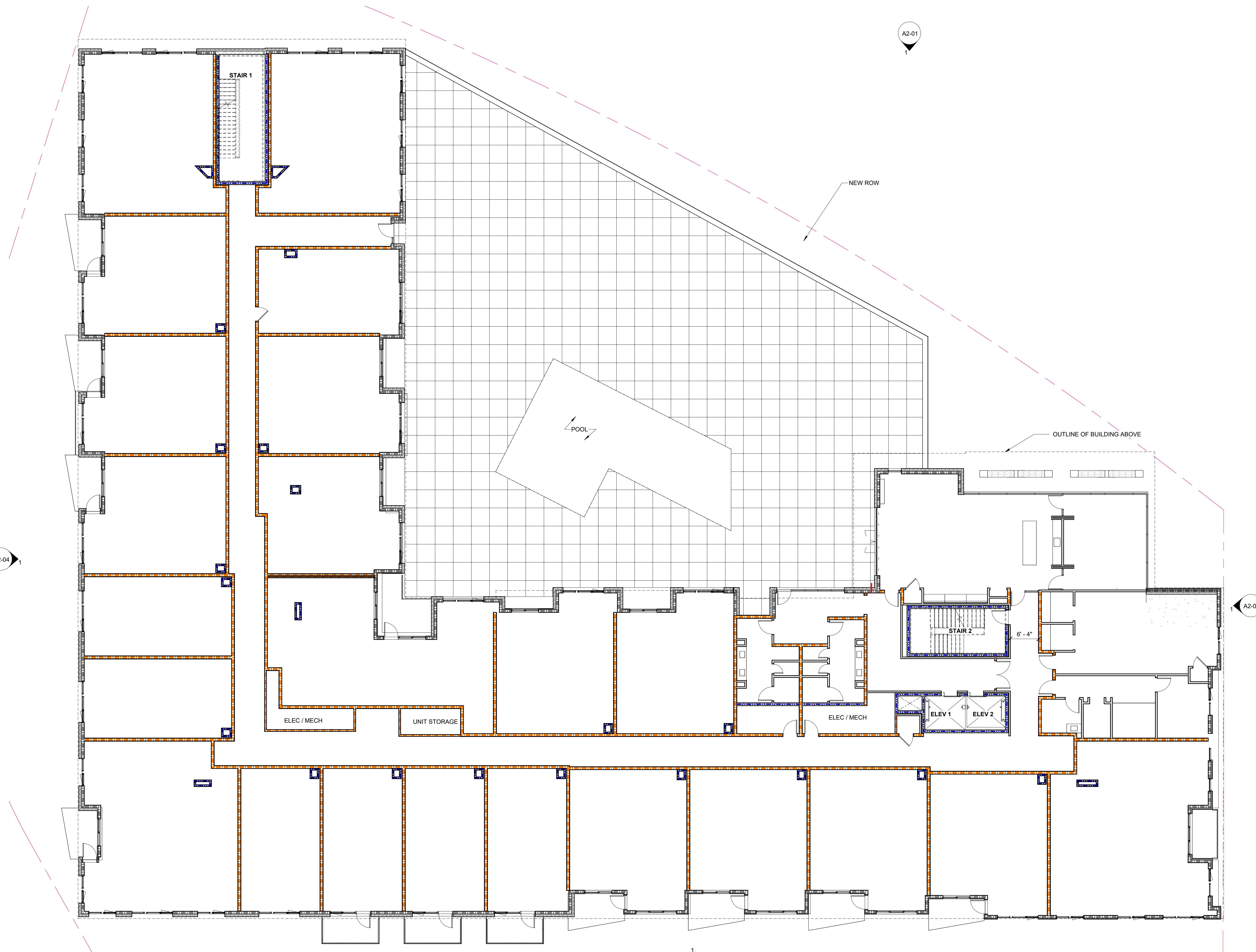
PARKING SPACES TYP SIZES
1/8" = 1'-0"



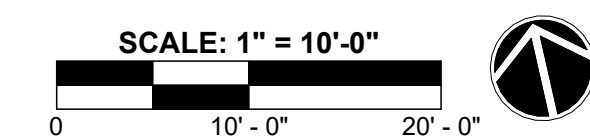
CRABTREE APARTMENTS
RALEIGH, NC



FIRST FLOOR PLAN A1-02
As indicated | 024017 | 09.05.2024

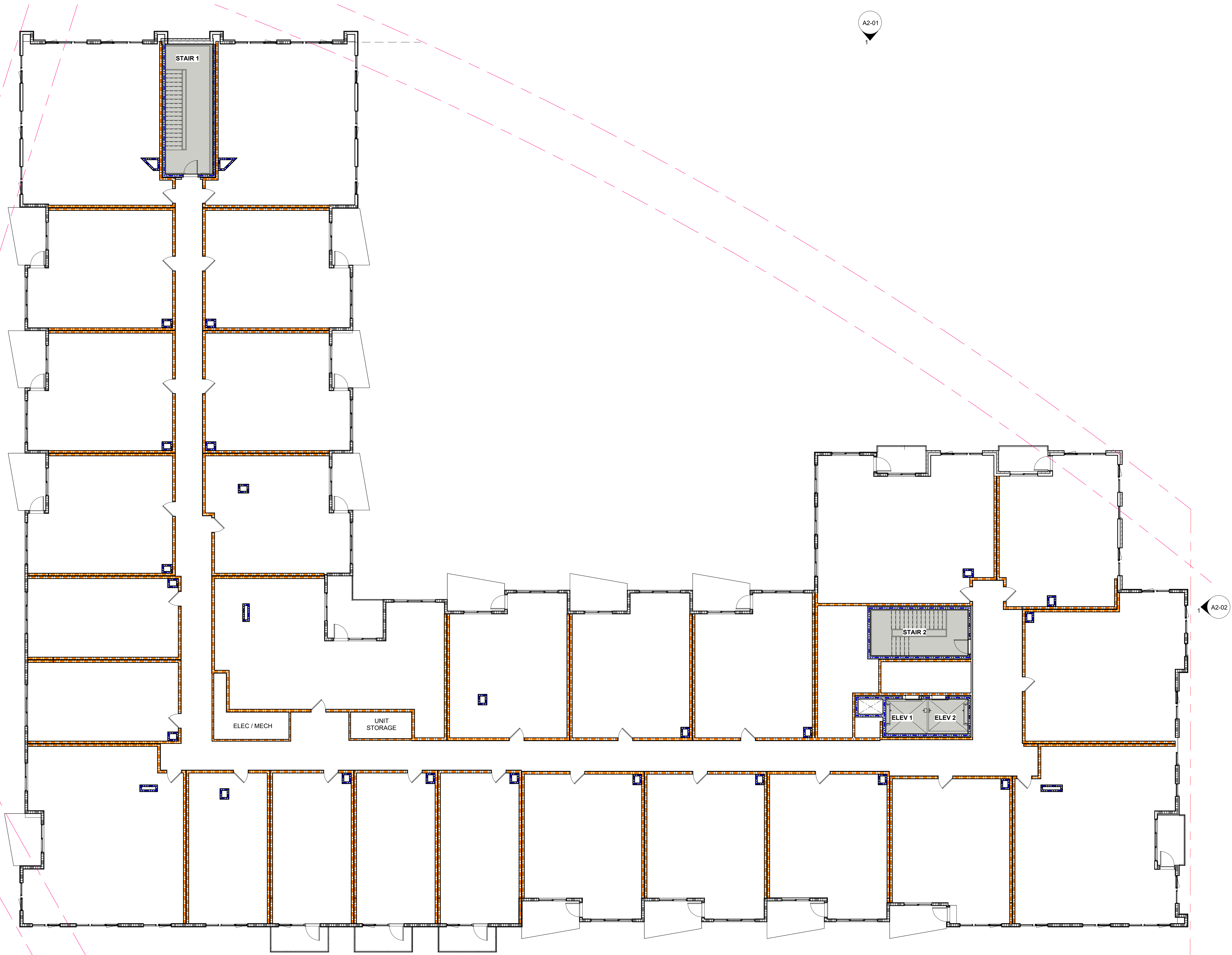


CRABTREE APARTMENTS
RALEIGH, NC

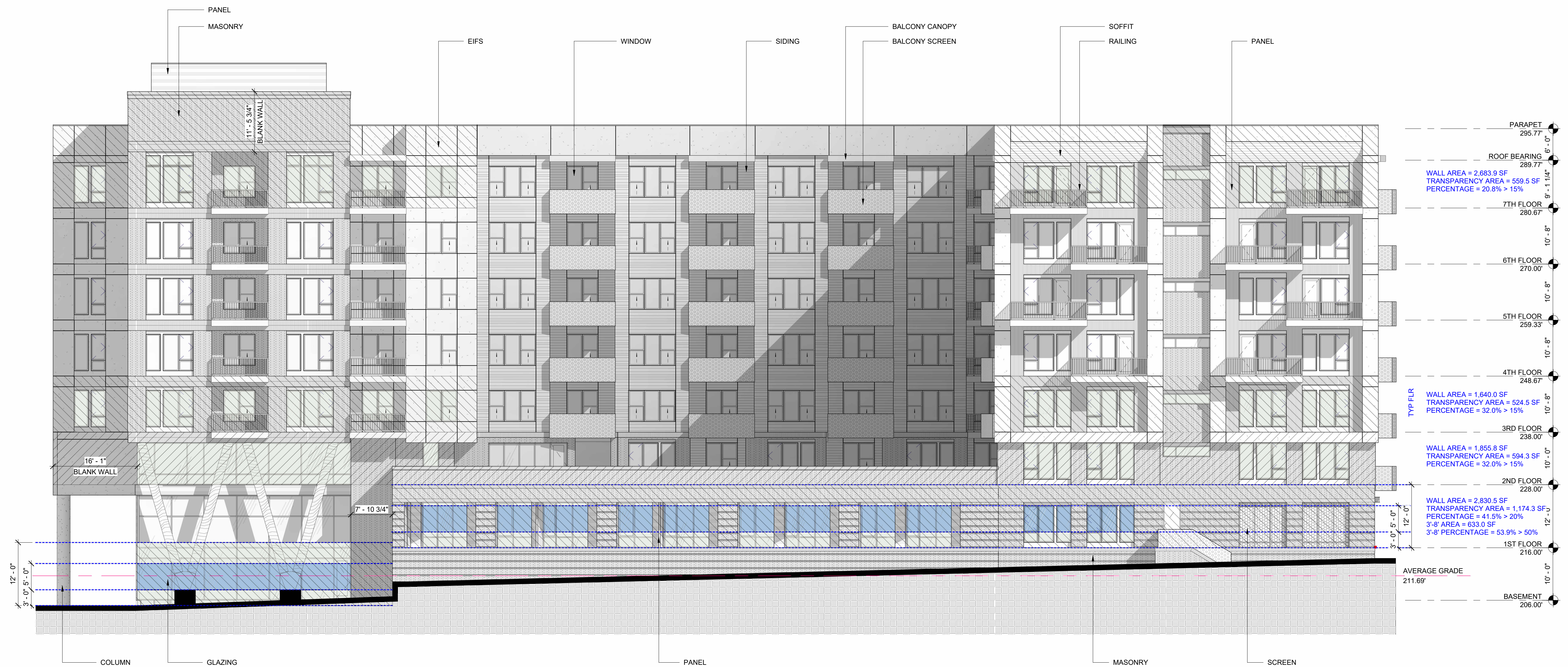


SECOND FLOOR PLAN A1-03

1" = 10'-0" | 024017 | 09.05.2024



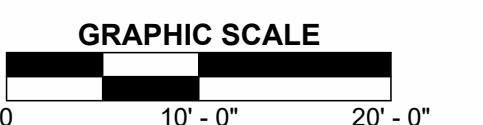
AVERAGE GRADE CALCULATION	
PRIMARY STREET	CRABTREE BLVD
HIGH	215.47
LOW	207.90
AVERAGE	211.69

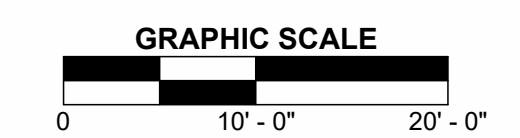


CRABTREE APARTMENTS
RALEIGH, NC

BUILDING ELEVATION - NORTH (CRABTREE BLVD) A2-01

1" = 10'-0" | 024017 | 09.05.2024





CRABTREE APARTMENTS
RALEIGH, NC

BUILDING ELEVATION - EAST A2-02

1" = 10'-0" | 024017 | 09.05.2024



