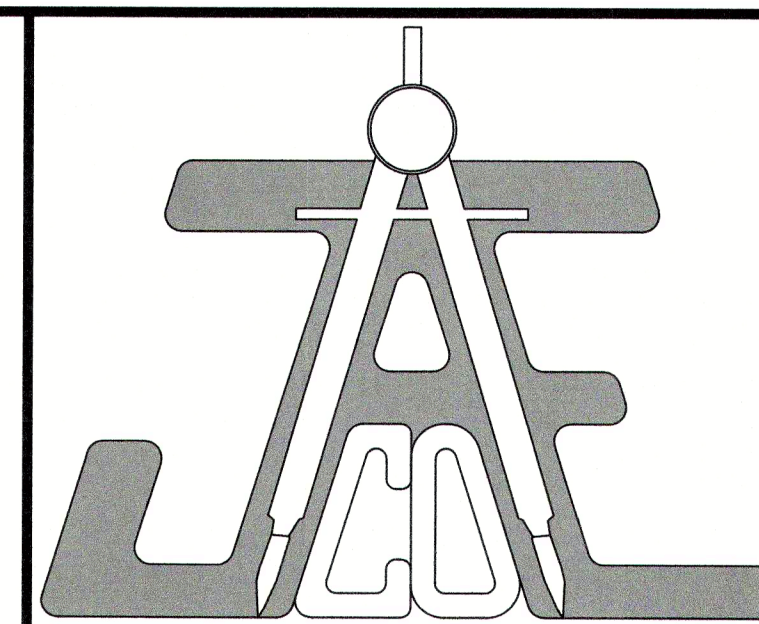


GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY LOCATION & ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
2. UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH AND / OR NCDOT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.

STRUCTURE TABLE

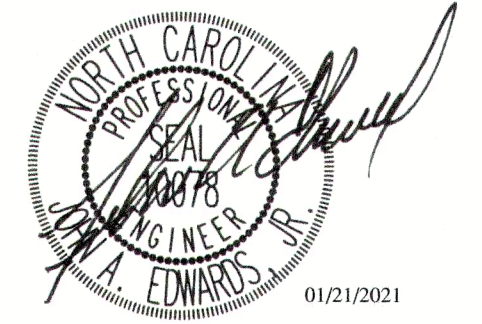
STRUCTURE ID	TYPE	STD. DETAIL	RIM	INVERT IN (U/S STR.)	INVERT OUT (D/S STR.)	PIPE OUT
A-10	DOGHOUSE MH	SW-10.05	416.96	409.61 (EX-2) 409.95 (A-12)	409.61 (EX-1)	32.25LF 30" @ 0.68%
A-12	MH	SW-10.05	419.36	411.20 (A-14)	411.10 (A-10)	224.85LF 24" RCP @ 0.51%
A-14	4"x4" RISER	SEE SHEET C-9.5	418.50		411.50 (A-12)	52.94LF 24" RCP @ 0.57%
A-16	FES			414.25 (A-17)		
A-17	MH	SW-10.05	420.71	414.80 (A-18)	414.70 (A-16)	87.00LF 24" RCP @ 0.52%
A-18	CB	SW-10.01 W/4530 GRATE (DOUBLE)	420.90	415.75 (A-20) 415.75 (A-44) 415.75 (A-38)	415.00 (A-17)	34.84LF 24" RCP @ 0.57%
A-20	CB	SW-10.01 W/4530 GRATE	421.18	416.15 (A-22) 416.15 (A-52)	416.05 (A-18)	56.34LF 15" RCP @ 0.53%
A-22	MH	SW-10.05	423.44	417.40 (A-24)	417.30 (A-20)	223.13LF 15" RCP @ 0.52%
A-24	CB	SW-10.01 W/4530 GRATE	421.95	417.90 (A-26) 417.90 (A-25)	417.80 (A-22)	76.43LF 15" RCP @ 0.52%
A-25	YI	SW-10.03	422.25		418.25 (A-24)	19.95LF 15" RCP @ 1.75%
A-26	CB	SW-10.01 W/4530 GRATE	421.72		418.05 (A-24)	27.54LF 15" RCP @ 0.54%
A-28	FES			414.75 (A-30)		
A-30	MH	SW-10.05	422.10	415.80 (A-32)	415.70 (A-28)	89.36LF 15" RCP @ 1.06%
A-32	MH	SW-10.05	422.31	416.70 (A-34)	416.60 (A-30)	80.39LF 15" RCP @ 1.00%
A-34	CB	SW-10.01	421.01	417.25 (A-36)	417.15 (A-32)	40.54LF 15" RCP @ 1.11%
A-36	CB	SW-10.01	421.34		417.55 (A-34)	28.44LF 15" RCP @ 1.05%
A-38	CB	SW-10.01 W/4530 GRATE	421.54	416.40 (A-40)	416.30 (A-18)	58.47LF 15" RCP @ 0.94%
A-40	CB	SW-10.01 W/4530 GRATE	421.86	416.80 (A-42)	416.70 (A-38)	31.80LF 15" RCP @ 0.94%
A-42	YI	SW-10.03	422.50		418.25 (A-40)	145.68LF 15" RCP @ 1.00%
A-44	CB	SW-10.01 W/4530 GRATE	421.02	416.05 (A-45)	415.95 (A-18)	37.82LF 15" RCP @ 0.53%
A-45	CB	SW-10.01 W/4530 GRATE	422.58	416.55 (A-46) 416.55 (A-45A)	416.45 (A-44)	79.97LF 15" RCP @ 0.50%
A-45A	YI	SW-10.03	421.40		417.00 (A-45)	24.48LF 15" RCP @ 1.84%
A-46	CB	SW-10.01 W/4530 GRATE	423.19	417.00 (A-48)	416.90 (A-45)	70.54LF 15" RCP @ 0.50%
A-48	CB	SW-10.01	422.81	417.35 (A-50)	417.25 (A-46)	42.45LF 15" RCP @ 0.59%
A-50	CB	SW-10.01	422.18		418.00 (A-48)	40.35LF 15" RCP @ 1.61%
A-52	CB	SW-10.01 W/4530 GRATE	421.05		416.59 (A-20)	27.07LF 15" RCP @ 1.63%



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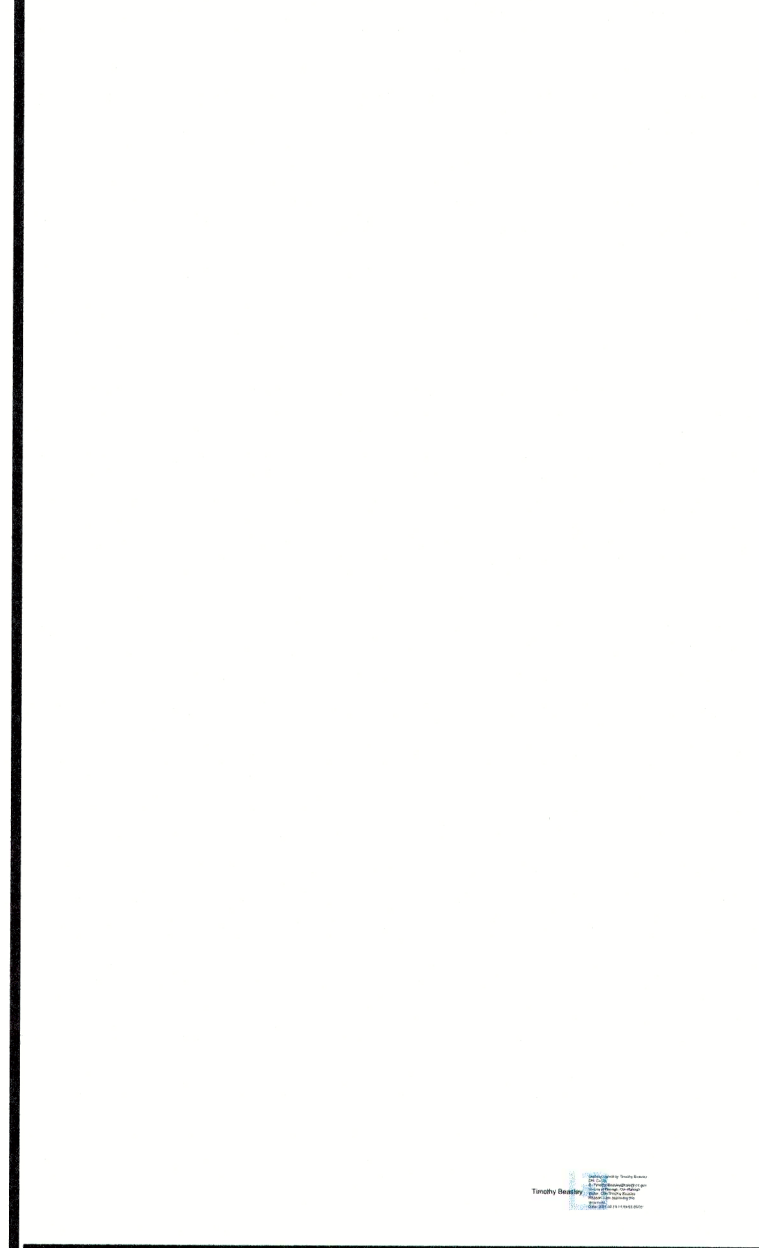


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6200 FALLS OF NEUSE ROAD
SUITE 10
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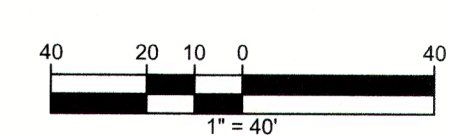
LEGEND



STORMDRAIN & STORMWATER MANAGEMENT PLAN

Revisions		
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAE CO #: 362-09
DRAWING SCALE: 1" = 40'
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020



C-6.0

STANDARD UTILITY NOTES (as applicable):

- 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 encasement 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.
- All 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 15 days advance 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 forcemains. 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 3/4" copper water service with 5/8" meter located within private ROW. 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 service @ 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 CORPUD FOG Program Coordinator prior to issuance of a Building Permit. Contact Stephen Calverley at (919) 996-2334 or Stephen.calverley@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. Contact Joanie Hartley at (919) 996-5923 or joanie.hartley@raleighnc.gov for more information.



Rolesville Ridge Dr. Plan
HORIZONTAL SCALE: 1" = 30'

GENERAL NOTES:

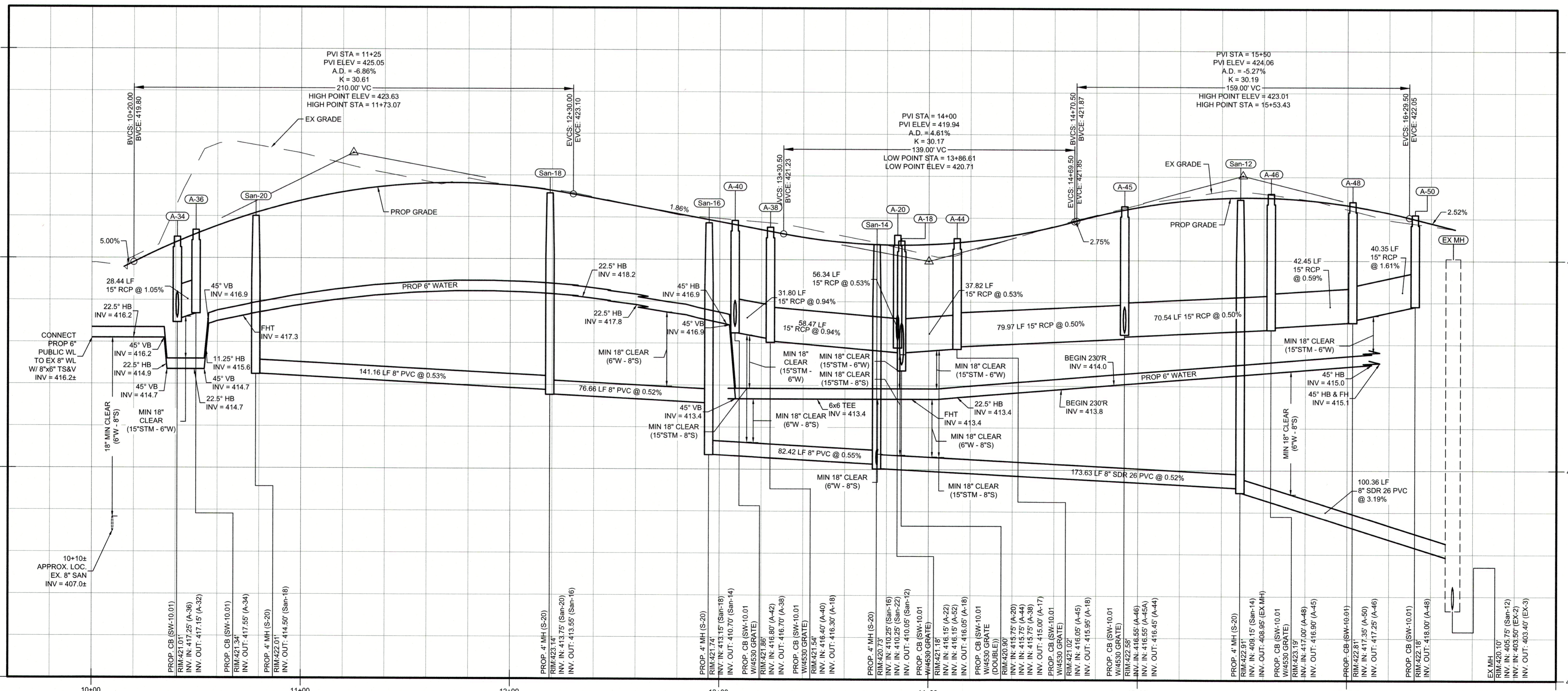
- CONTRACTOR TO FIELD VERIFY LOCATION & ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
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- 30' PUBLIC CITY OF RALEIGH WATERLINE EASEMENT AND 5' CITY OF RALEIGH WATERLINE EASEMENT TO EACH METER AND FIRE HYDRANT TO BE RECORDED.

ATTENTION CONTRACTORS:

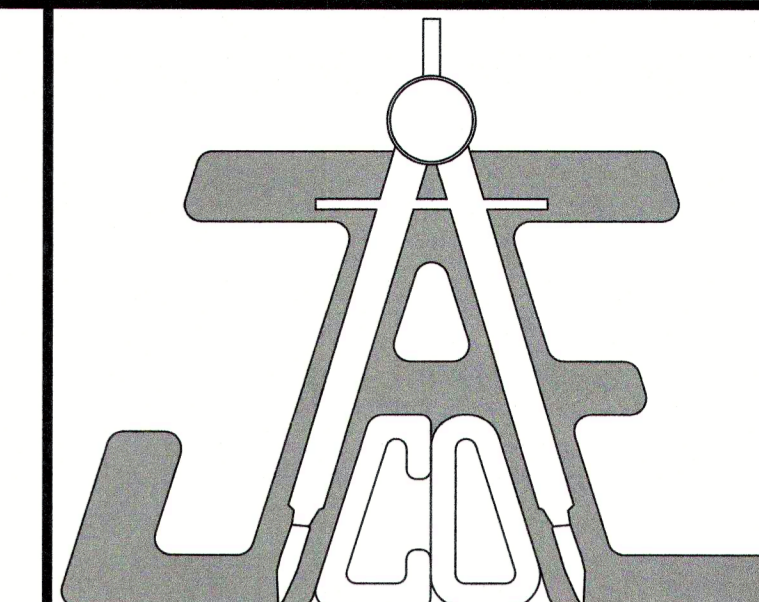
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the PUBLIC WORKS DEPARTMENT at (919) 996-2400 and the PUBLIC UTILITIES DEPARTMENT at (919) 996-2540 at least four business days prior to beginning any of their construction.

FAILURE to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstatement of any water or sewer facilities not inspected as a result of this notification failure.

FAILURE to call for inspection, install a Downstream Plug, have Permitted Plans on the jobsite, or any other Violation of CITY OF RALEIGH STANDARDS will result in a Fine and Possible Exclusion from future work in the CITY OF RALEIGH.



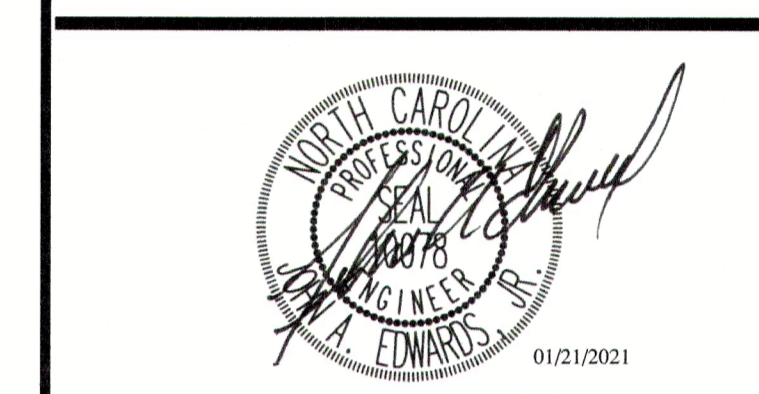
Rolesville Ridge Dr. Profile
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



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LEGEND

PROP WATER LINE	— W — W — W — W —
PROP SEWER LINE	— S — S — S — S —
EX SEWER LINE	— S — S — S — S —
EX WATER LINE	— W — W — W — W —

PLANS NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED BY CITY OF RALEIGH

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # W-3745

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CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

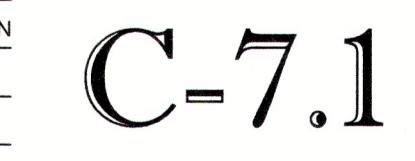
City of Raleigh Development Approval: _____
Raleigh Water Review Officer: _____

ROLESVILLE RIDGE RD PLAN & PROFILE

Revisions

Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO #: 362-09
DRAWING SCALE: AS SHOWN
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020



STANDARD UTILITY NOTES (as applicable):

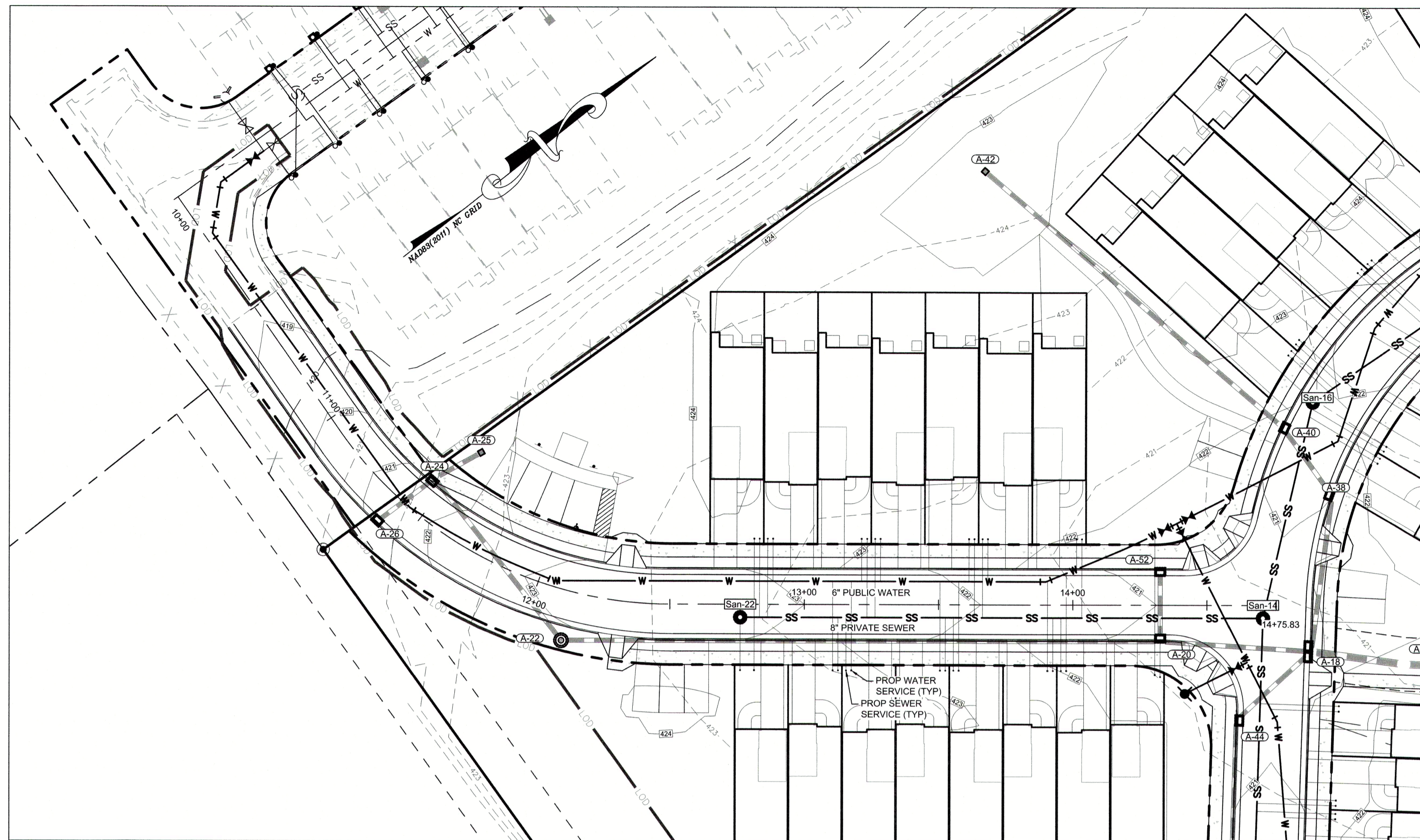
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GENERAL NOTES:

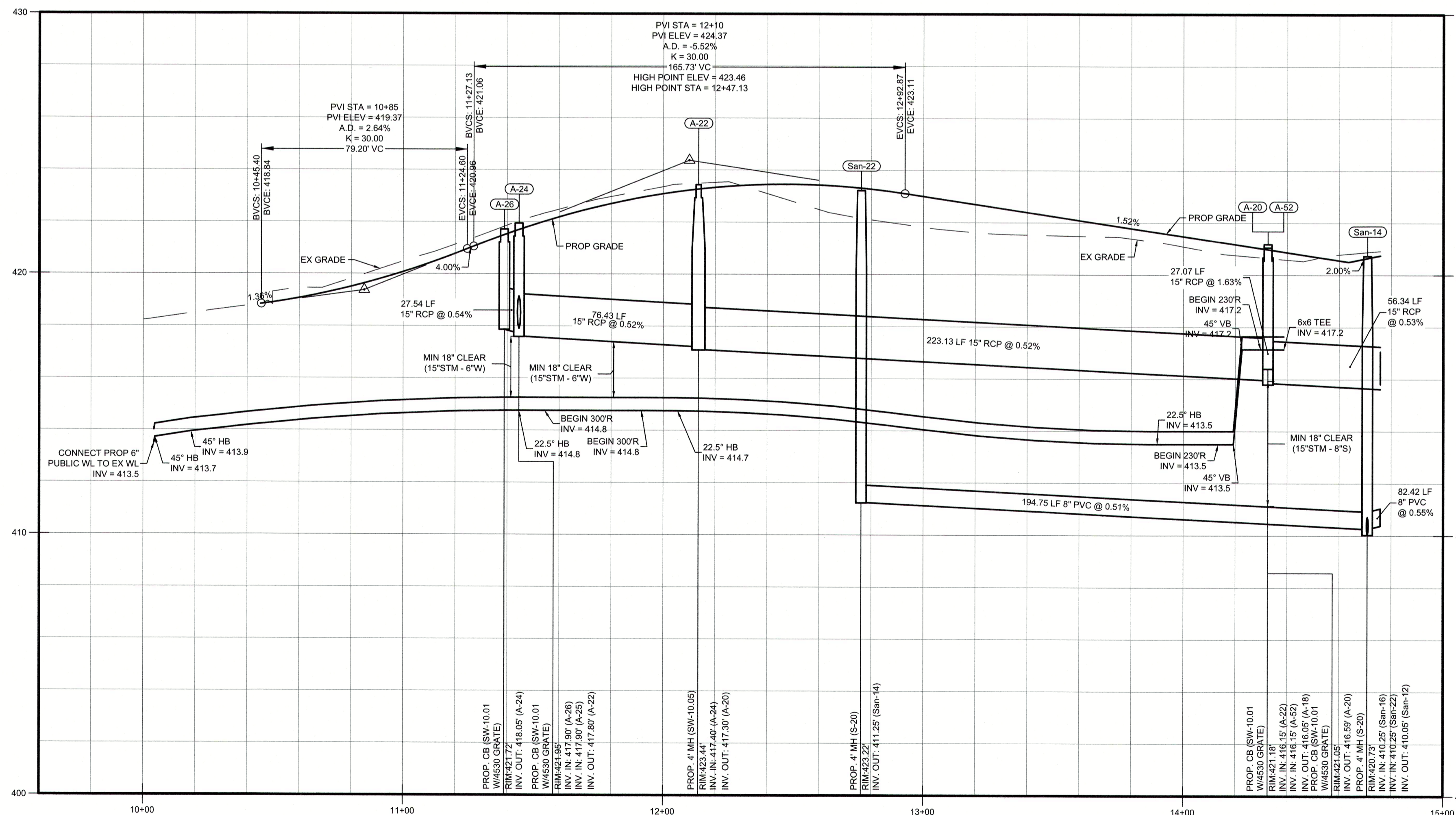
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ATTENTION CONTRACTORS:

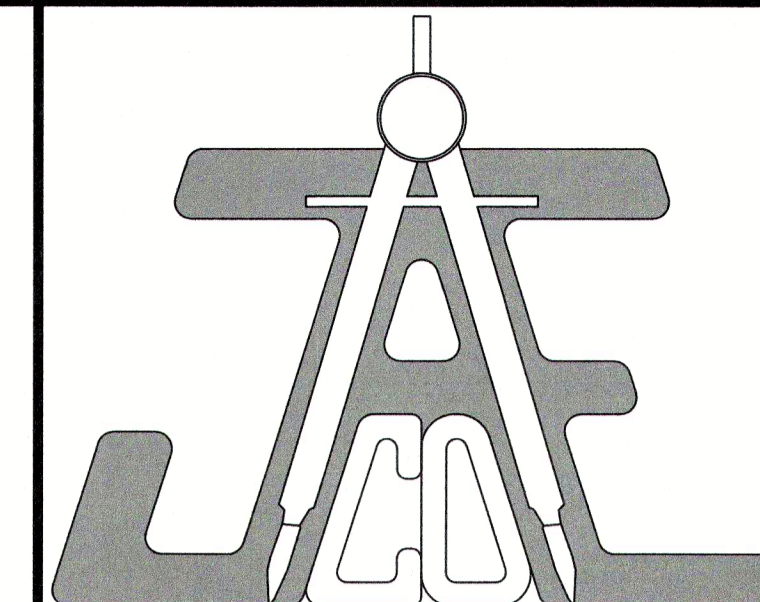
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the PUBLIC WORKS DEPARTMENT at (919) 996-2400 and the PUBLIC UTILITIES DEPARTMENT at (919) 996-4540 at least ten business days prior to beginning any of their construction. FAILURE to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure. FAILURE to call for inspection, install a Downstream Plug, have Permitted Plans on the jobsite, or any other Violation of CITY OF RALEIGH STANDARDS will result in a Fine and Possible Exclusion from future work in the CITY OF RALEIGH.



Rolesville Ridge Dr. Plan
HORIZONTAL SCALE: 1" = 30'



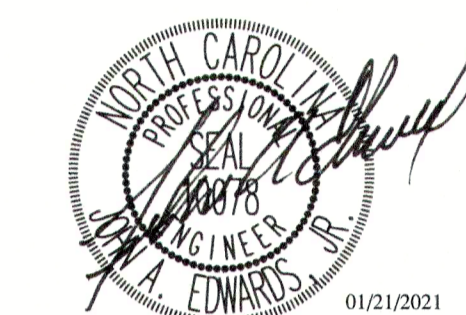
Short Ridge Way Profile
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 3'



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LEGEND

- PROP WATER LINE ——— W ——— W ——— W ——— W ———
- PROP SEWER LINE ——— SS ——— SS ——— SS ——— SS ———
- EX SEWER LINE - - - - - S - - - - - S - - - - - S - - - - - S - - - - - S - - - - -
- EX SEWER LINE - - - - - S - - - - - S - - - - - S - - - - - S - - - - - S - - - - -

PLANS NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED BY CITY OF RALEIGH

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # W-3745

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # S-4760(P)

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval _____ Raleigh Water Review Officer _____

SHORT RIDGE WAY PLAN & PROFILE

Revisions		
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO # 362-09

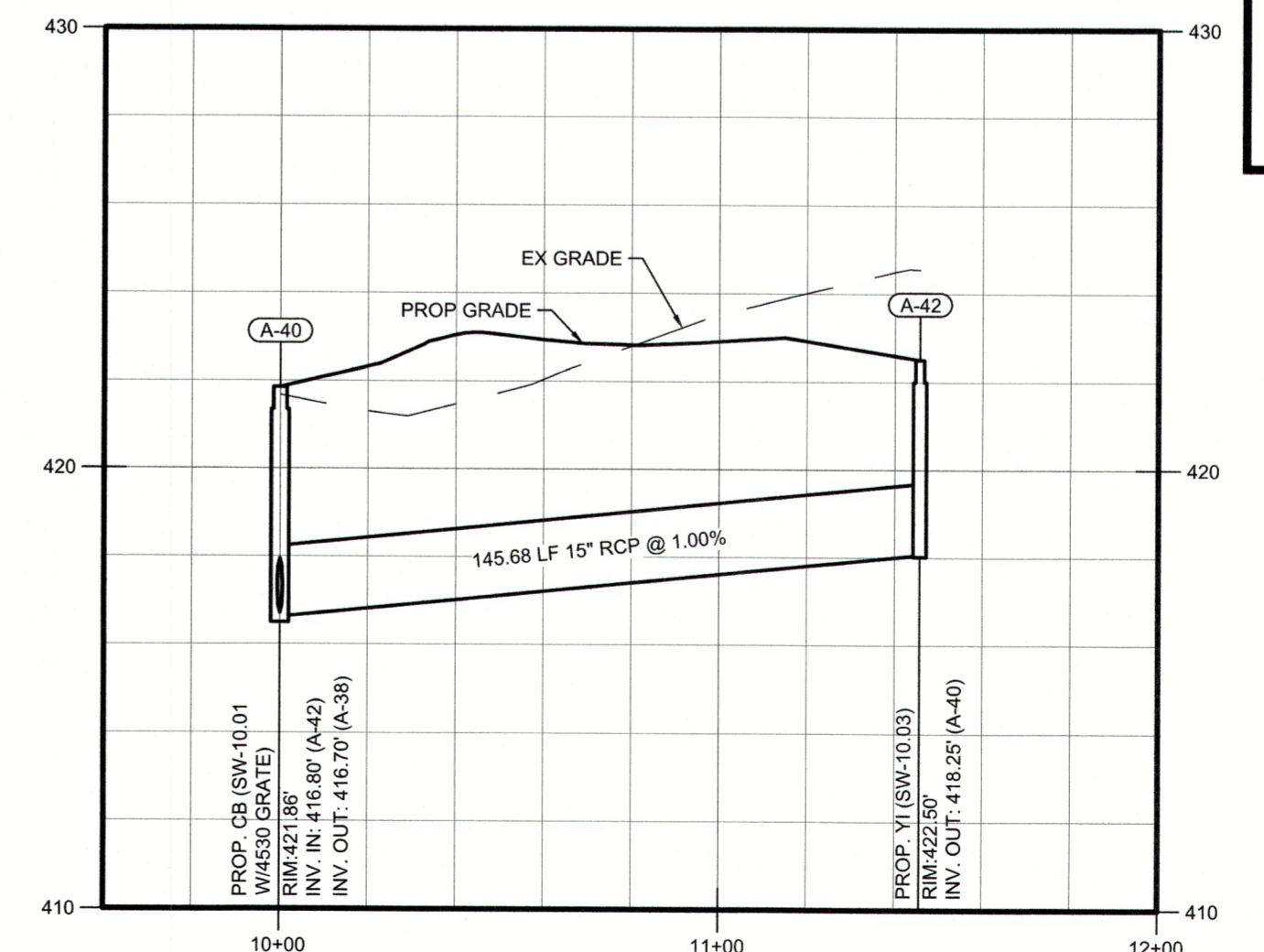
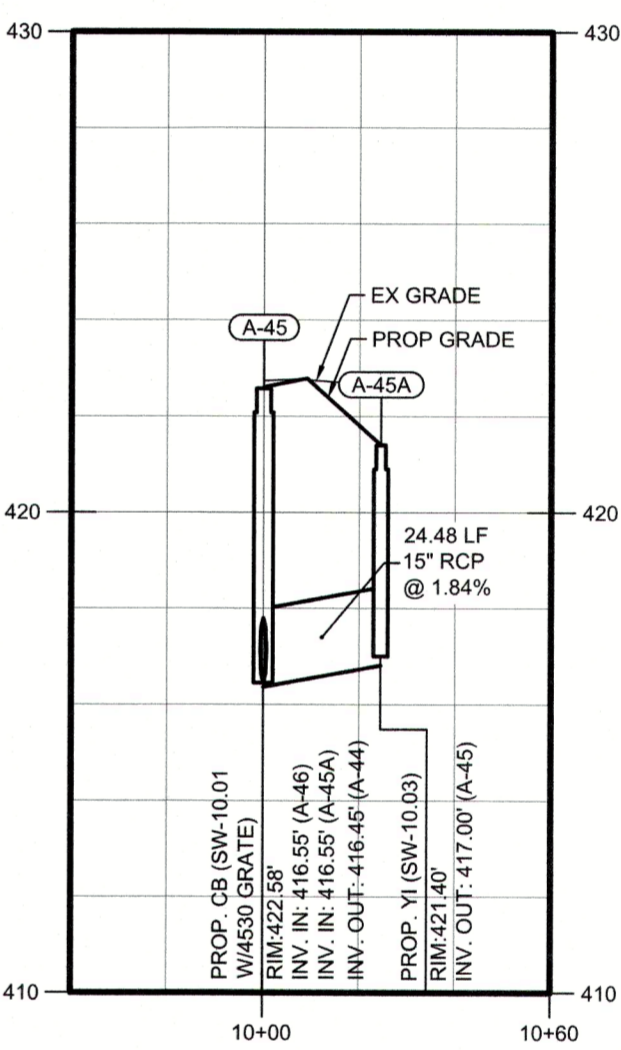
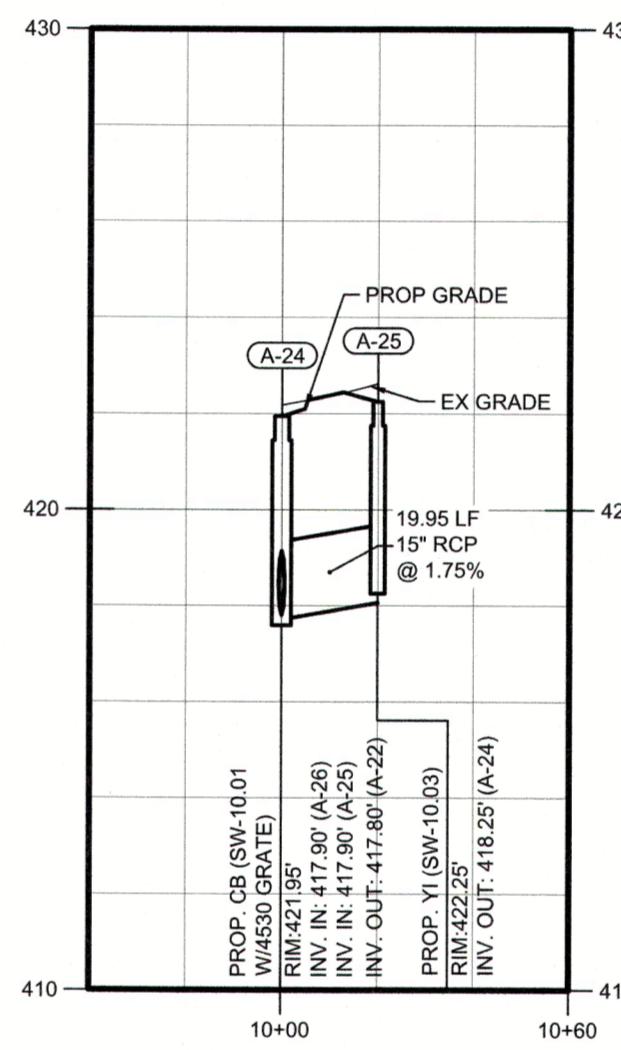
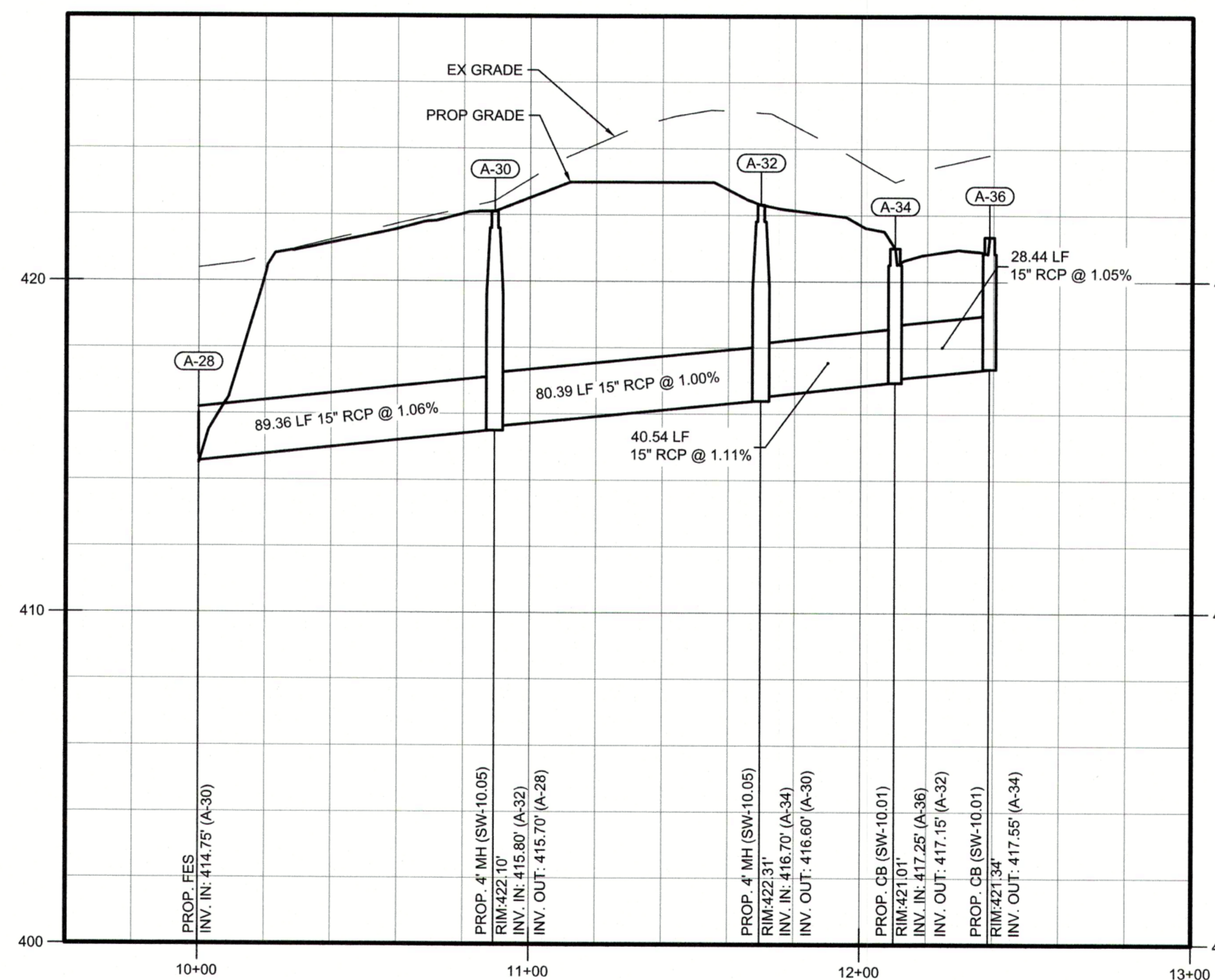
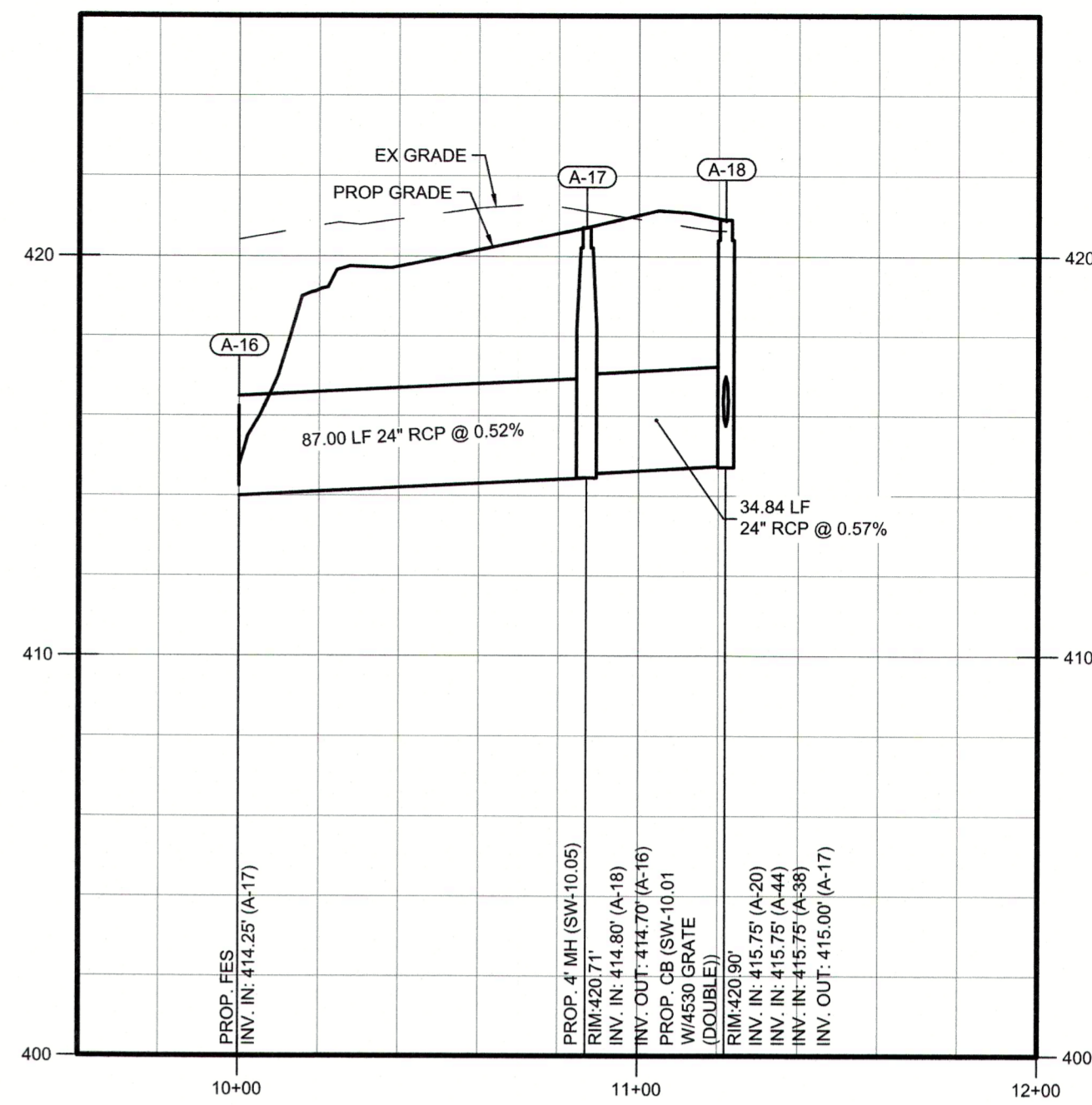
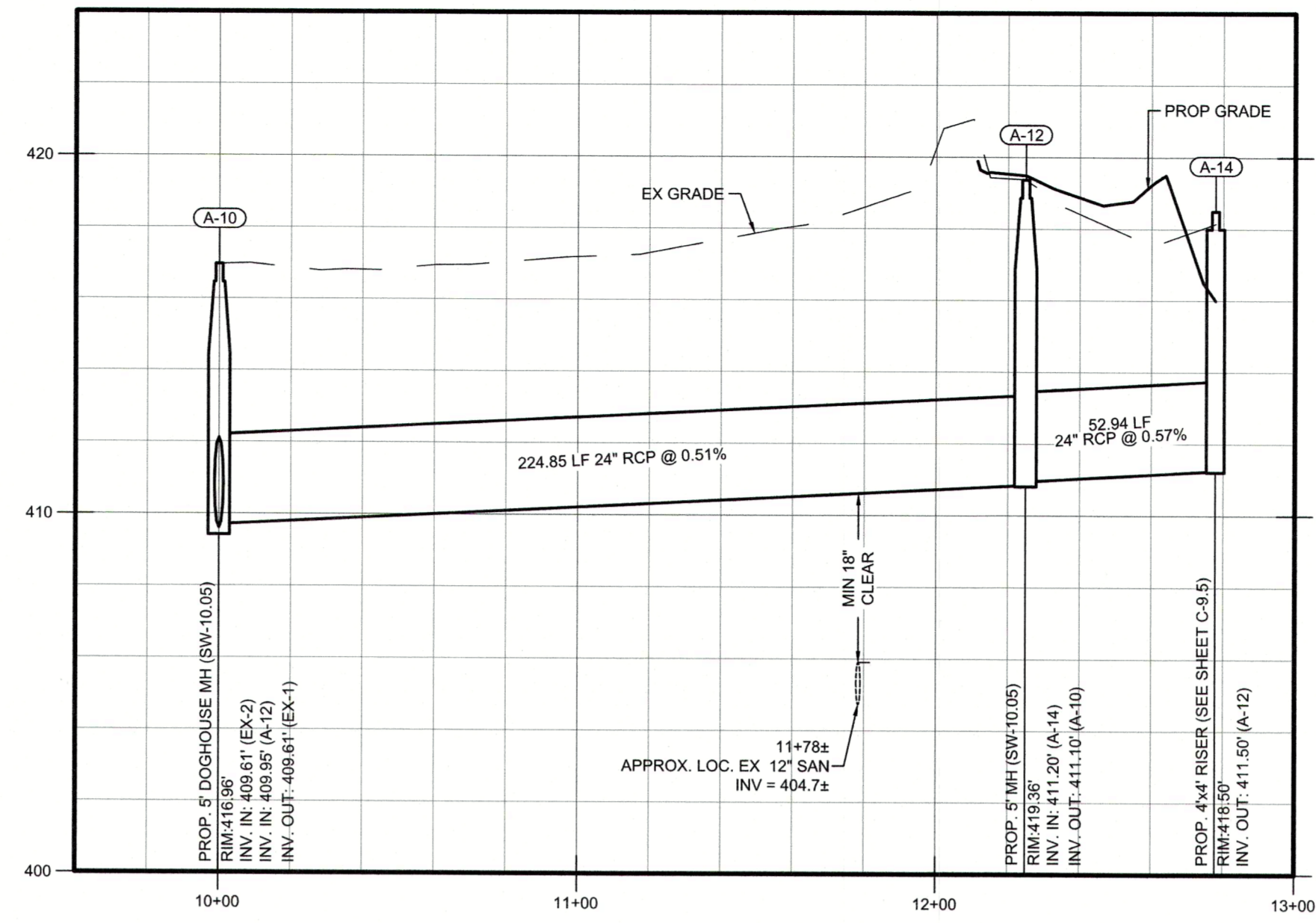
DRAWING SCALE: AS SHOWN

DRAWN BY: TT

CHECKED BY: JAE, JR.

DATE ISSUED: 06/22/2020

C-7.2

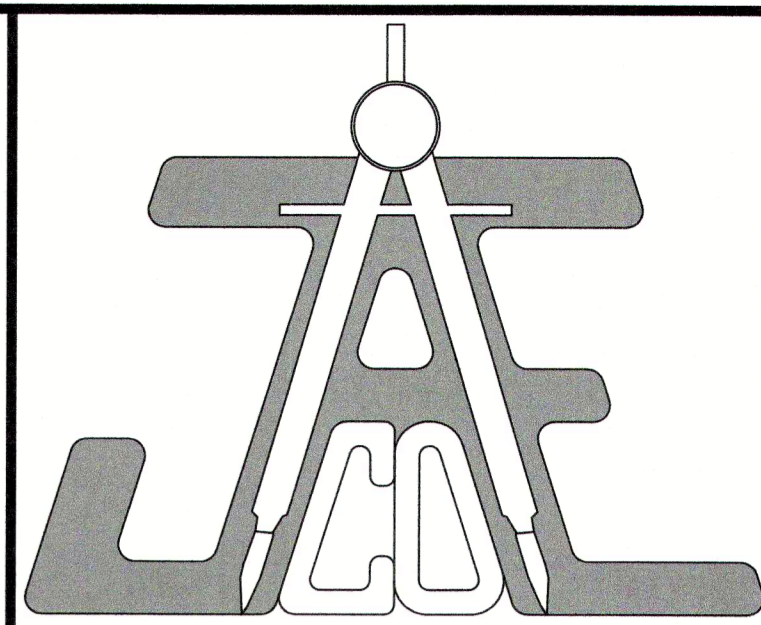


ATTENTION CONTRACTORS:

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the PUBLIC WORKS DEPARTMENT at (919) 998-2409 and the PUBLIC UTILITIES DEPARTMENT at (919) 998-4543 at least twenty-four hours prior to beginning any of their construction.

FAILURE to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

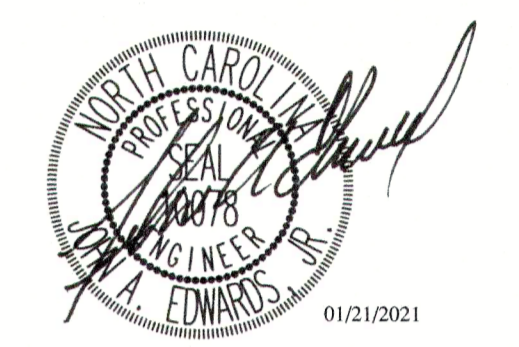
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Call before you dig.

LEGEND

PLANS NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED BY CITY OF RALEIGH

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The Material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # W-3745

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # S-4760(P)

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

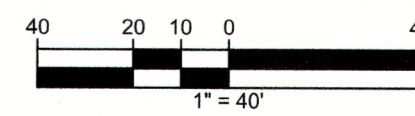
Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval _____
 Raleigh Water Review Officer

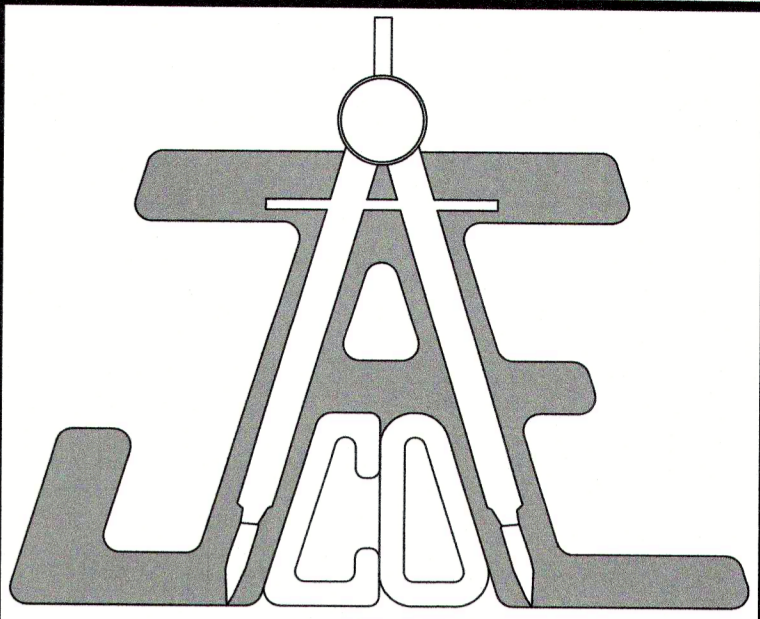
OUTFALL PROFILES

Revisions		
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO #: 362-09
 DRAWING SCALE: AS SHOWN
 DRAWN BY: TT
 CHECKED BY: JAE, JR.
 DATE ISSUED: 06/22/2020



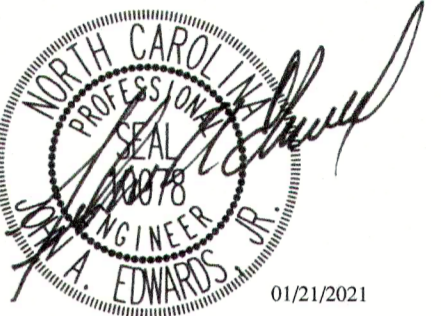
C-7.3



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Consulting Engineers and Land Surveyors

NC License F-0289
333 Wade Ave., Raleigh, N.C. 27605
Phone: (919) 828-4428
Fax: (919) 828-4711
E-mail: info@jaeco.com

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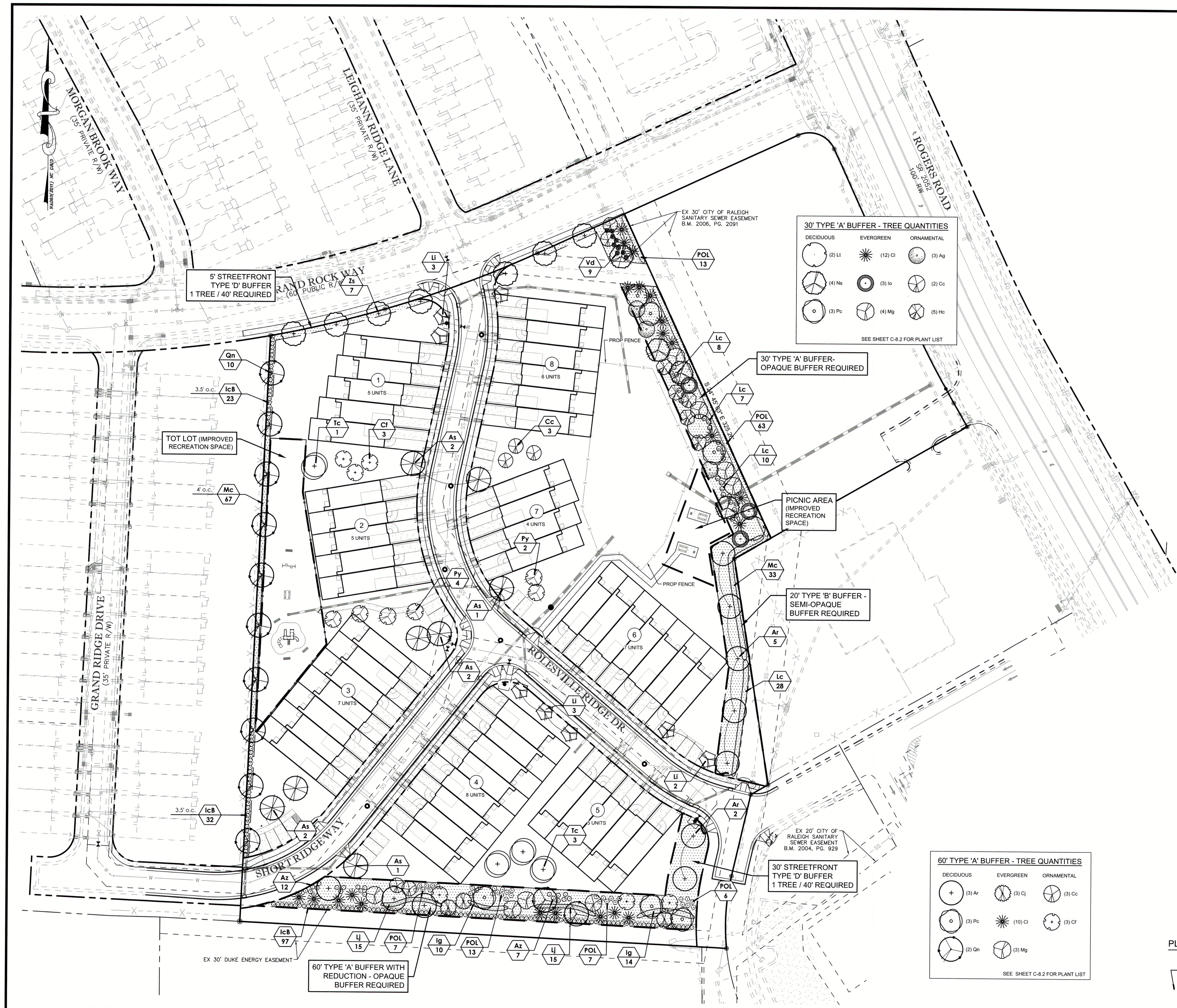
LEGEND

LANDSCAPE PLAN

Revisions		
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO # 382-09
DRAWING SCALE: 1" = 40'
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020

C-8.1



30' TYPE 'A' BUFFER - TREE QUANTITIES

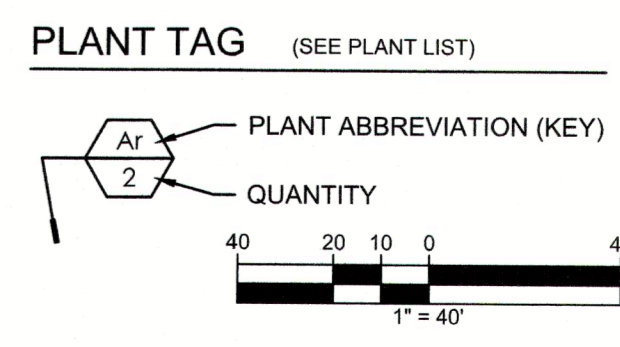
DECIDUOUS	EVERGREEN	ORNAMENTAL
(2) Lt	(12) Cl	(3) Ag
(4) Ns	(3) lo	(2) Cc
(3) Pc	(4) Mg	(5) Hc

SEE SHEET C-8.2 FOR PLANT LIST

60' TYPE 'A' BUFFER - TREE QUANTITIES

DECIDUOUS	EVERGREEN	ORNAMENTAL
(3) Ar	(3) Cj	(3) Cc
(3) Pc	(10) Cl	(3) Cf
(2) Qn	(3) Mg	

SEE SHEET C-8.2 FOR PLANT LIST



5' STREETFRONT
TYPE 'D' BUFFER
1 TREE / 40' REQUIRED

30' TYPE 'A' BUFFER-
OPAQUE BUFFER REQUIRED

PICNIC AREA
(IMPROVED
RECREATION
SPACE)

20' TYPE 'B' BUFFER -
SEMI-OPAQUE
BUFFER REQUIRED

30' STREETFRONT
TYPE 'D' BUFFER
1 TREE / 40' REQUIRED

60' TYPE 'A' BUFFER WITH
REDUCTION - OPAQUE
BUFFER REQUIRED

VEGETATED SHELF LANDSCAPING

SHALLOW LAND PLANTING

USE AT LEAST 3 VARIETIES AND PLANT A MINIMUM OF 6 CELLS OF AT LEAST 26 PLANTS EACH FOR A TOTAL OF 156 SHALLOW LAND PLANTS (SEE SCHEDULE FOR APPROVED PLANTS)

SHALLOW WATER PLANTING

USE AT LEAST 3 VARIETIES AND PLANT A MINIMUM OF 6 CELLS OF AT LEAST 23 PLANTS EACH FOR A TOTAL OF 138 SHALLOW WATER PLANTS (SEE SCHEDULE FOR APPROVED PLANTS)

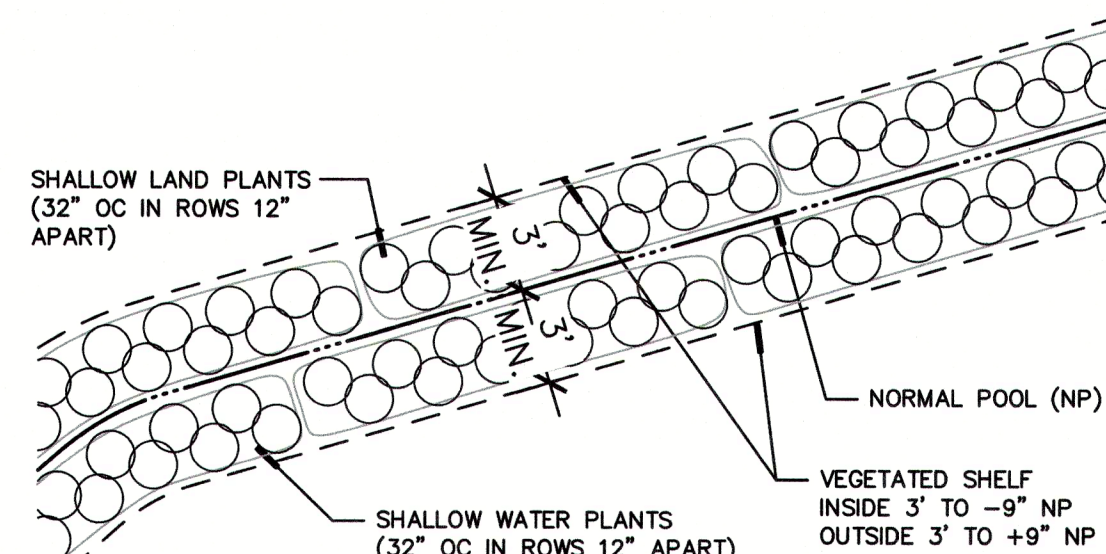
VEGETATED SHELF PLANT SCHEDULE

SHALLOW LAND

(Herb.)			
DI	Dichromena latifolia	White star grass	4-6" pot
Ef	Eupatorium fistulosum	Joe Pye weed	4-6" pot
Hg	Hibiscus grandiflorus	Velvet Mallow	4-6" pot
Hc	Hibiscus coccinea	Scarlet Rose Mallow	4-6" pot
Cg	Chelone glabra	White turtlehead	4-6" pot
Lc	Lobelia cardinalis	Cardinal flower	4-6" pot

SHALLOW WATER

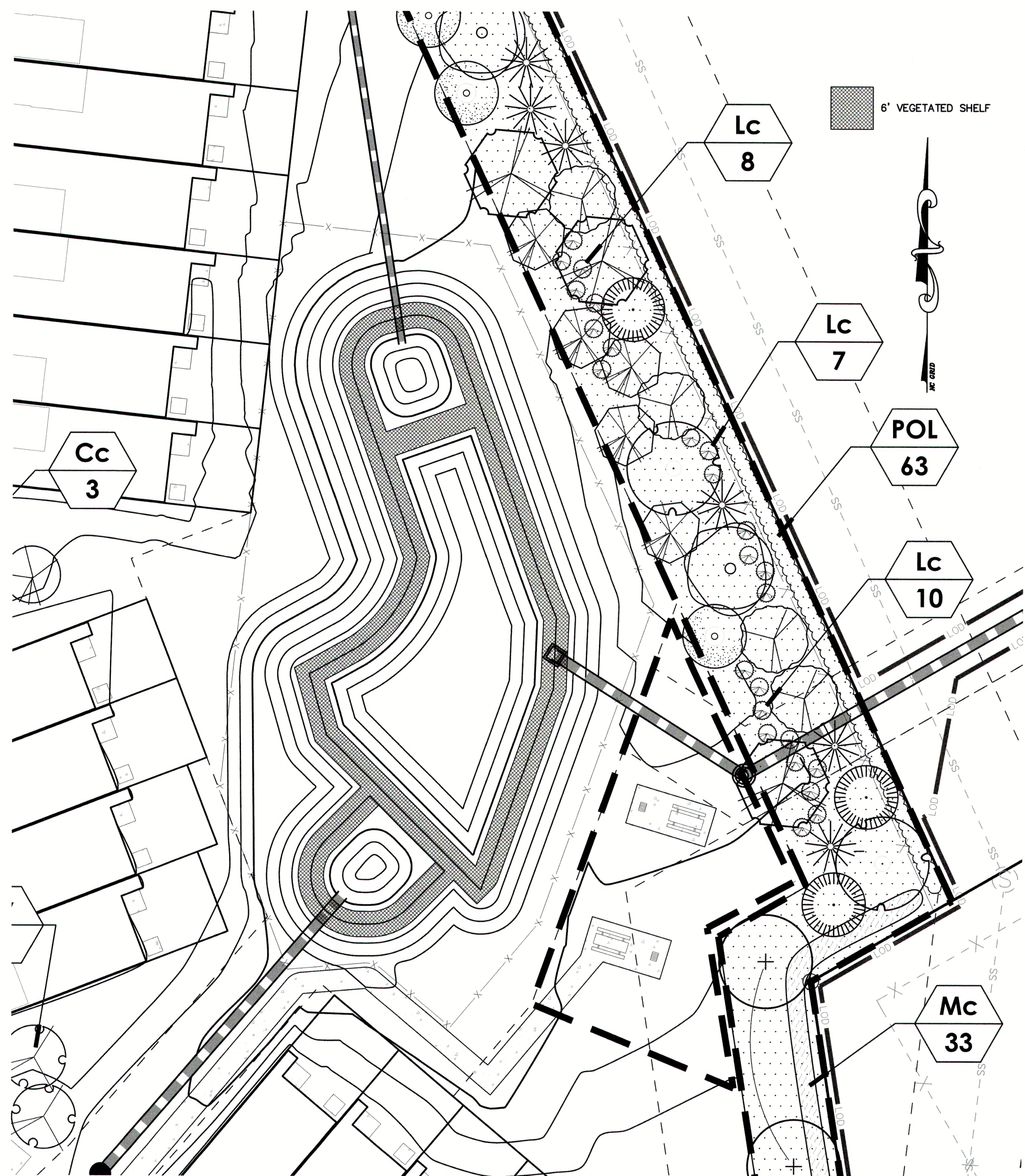
(Herb.)			
As	Acorus Spp	Sweet flag	4-6" pot
Iv	Iris versicolor	Blue flag Iris	4-6" pot
Pc	Pontederia cordata	Peckerel weed	4-6" pot
Pv	Peltandra virginica	Arrow arum	4-6" pot
Sl	Sagittaria longiloba	Arrowhead	4-6" pot
Je	Juncus effusus	Softrush	4-6" pot



WET POND VEGETATED SHELF PLANTING DETAIL NTS

WET POND AREA PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	MIN. CAL.	HT.	REMARKS
TREES						
Ar	3	Acer rubrum 'Red Sunset'	Red Maple	2"	12-14'	
Cc	6	Cercis canadensis	Redbud	2"	8-10'	
Io	3	Ilex opaca	Savannah Holly	2"	8-10'	
Lt	3	Liriodendron tulipifera	Tulip Poplar	2"	12-14'	
Mg	3	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia	2"	8-10'	
Td	4	Taxodium distichum	Bald Cypress	2"	12-14'	
SHRUBS						
IcB	22	Ilex cornuta 'Burfordii' 'Nana'	Dwarf Burford Holly	24"	3.5' o.c.	
PIO	35	Prunus l. 'Otto Luyken'	Otto Luyken Laurel	24"	3.5' o.c.	



WET POND LANDSCAPING

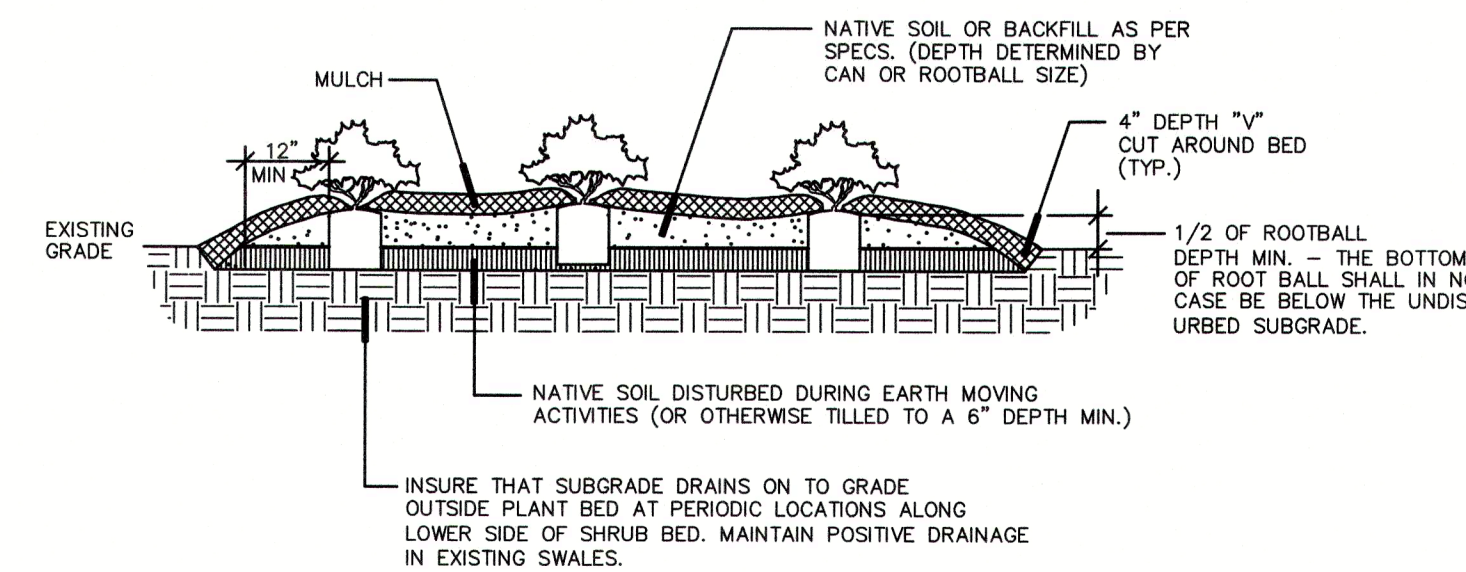
SCALE: 1"=20'

PLANT LIST (Sheet C-8.1)

Key	Botanical Name	Common Name	Qty	Cal	Height	Spread	Root	Remarks
SHADE TREES								
Ar	Acer rubrum 'October Glory'	October Glory Red Maple	10	2.5"	8' min.		BB	
As	Acer saccharum 'Legacy'	Legacy Sugar Maple	8	2.5"	8' min.		BB	
Lt	Liriodendron tulipifera	Tulip Poplar	2	2.5"	8' min.		BB	
Ns	Nyssa sylvatica	Black Gum	4	2.5"	8' min.		BB	
Pc	Pistachia chinensis	Chinese Pistache	6	2.5"	8' min.		BB	
Qn	Quercus nuttallii	Nuttall Oak	12	2.5"	8' min.		BB	
Tc	Tilia cordata 'Greenspire'	Greenspire Linden	4	2.5"	8' min.		BB	
Zs	Zelkova serrata 'Village Green'	Village Green Zelkova	7	2.5"	8' min.		BB	
EVERGREEN TREES								
Cj	Cryptomeria japonica 'Yoshino'	Yoshino Cryptomeria	3		8' min.		BB	
Cl	Callitropsis leylandii	Leyland Cypress	22		8' min.		BB	
Io	Ilex opaca 'Tinga'	Tinga American Holly	3		8' min.		BB	
Jv	Juniperus virginiana	Eastern Red Cedar			8' min.		BB	
Mg	Magnolia grandiflora 'Kay Parris'	Kay Parris Magnolia	7		8' min.		BB	
Pr	Prunus caroliniana	Carolina Cherry Laurel			8' min.		BB	
ORNAMENTAL TREES								
Ag	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	3	1.5"	8' min.		BB	
Cc	Cercis canadensis	Eastern Red Bud	8	1.5"	8' min.		BB	
Cf	Cornus florida 'Cherokee Princess'	Cherokee Princess Dogwood	6	1.5"	8' min.		BB	White
Hc	Hoslecia carolina 'Jersey Belle'	Jersey Belle Carolina Silverbell	5	1.5"	8' min.		BB	
Li	Lagerstroemia Whit II 'Dynamite'	Dynamite Crape Myrtle	8	1.5"	8' min.		BB	Multi-stem, Red
Py	Prunus yedoensis 'Yoshino'	Yoshino Cherry	6	1.5"	8' min.		BB	
SHRUBS								
Az	Azalea x indica 'Formosa'	Formosa Azalea	19		24"		Cont.	Lavender
IcB	Ilex cornuta 'Burfordii' 'Nana'	Dwf. Burford Holly	152		24"		Cont.	
Ig	Ilex glabra 'Shamrock'	Shamrock Inkberry Holly	24		24"		Cont.	
Lc	Loropetalum chinense 'Ruby'	Ruby Loropetalum	53		24"		Cont.	
Mc	Myrica cerifera	Wax Myrtle	100		24"		Cont.	
POL	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Cherry Laurel	109		24"		Cont.	
Vd	Viburnum davidii	David Viburnum	9		24"		Cont.	

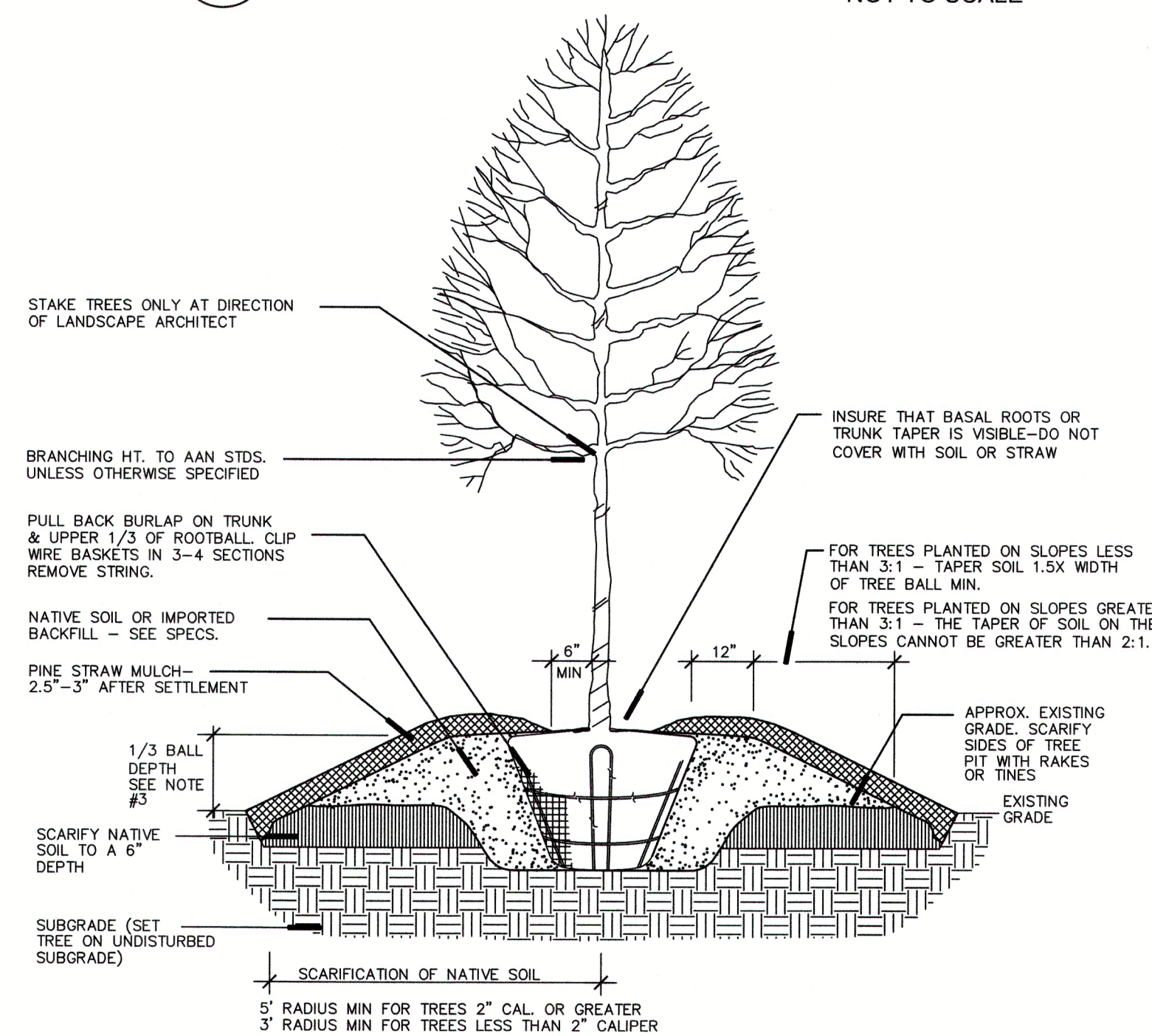
LANDSCAPE NOTES:

- B&B AS LISTED UNDER "ROOT" IN THE PLANT LIST INDICATES BALLED AND BURLAPPED.
- VERIFICATION OF TOTAL QUANTITIES AS SHOWN IN THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE PLANTING CONTRACTOR AND THE TOTAL QUANTITIES SHALL BE AS REQUIRED ON THE PLANTING PLAN.
- ALL TREES, SHRUBS, AND PLANTS SHALL CONFORM TO ACCEPTED STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
- PRUNING - THIN BRANCHES AND FOLIAGE (NOT ALL END TIPS) RETAINING NORMAL PLANT SHAPE. NEVER CUT EVERGREEN LEADER.
- ALL PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISH GRADE AS IT BORE TO GRADE IN NURSERY.
- ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
- VERIFICATION OF LOCATIONS OF UNDERGROUND UTILITIES IS RECOMMENDED PRIOR TO PLANTING.
- MULCH TO BE 4" HARDWOOD BARK MULCH.



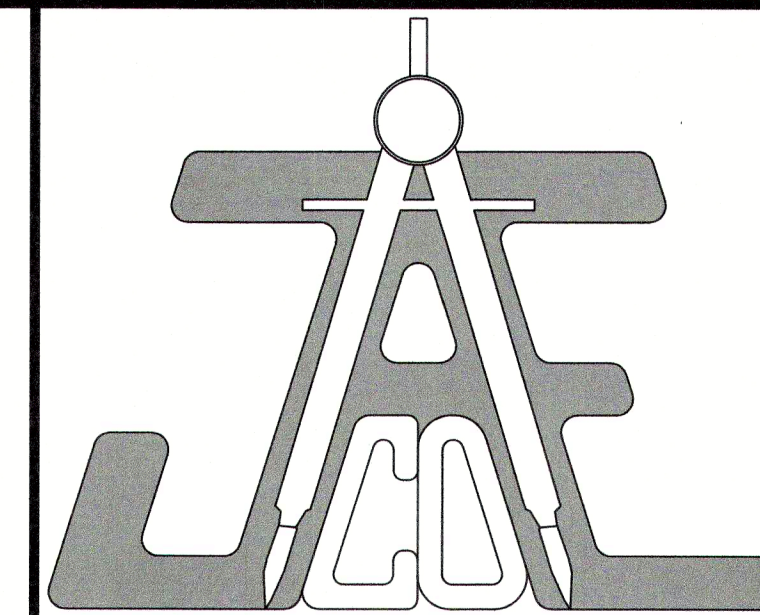
SHRUB PLANTING DETAIL

NOT TO SCALE



TREE PLANTING DETAIL

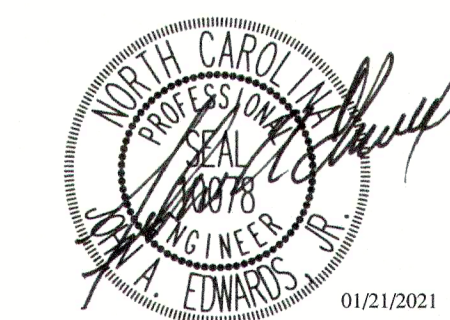
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NC License F-0289
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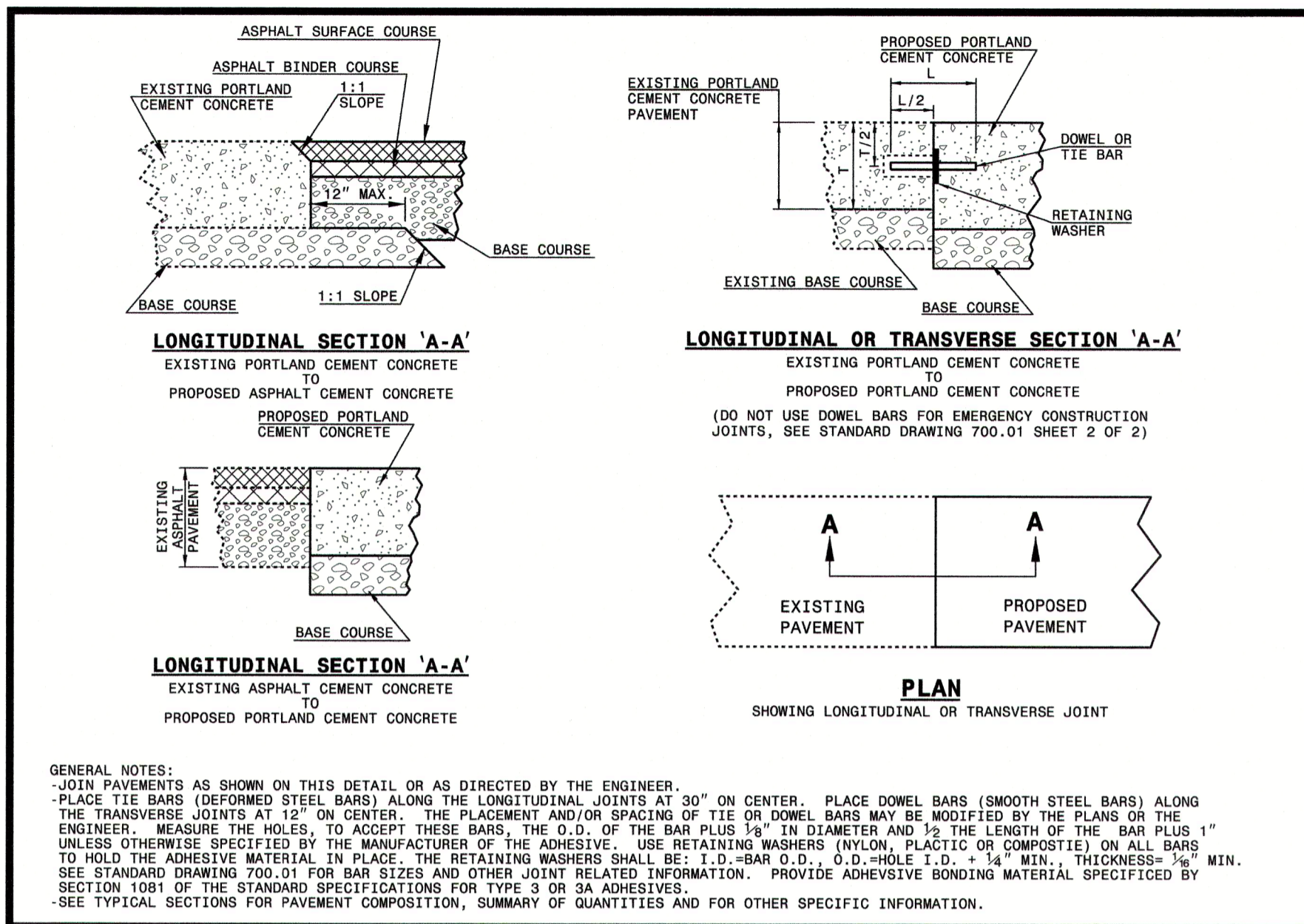
LEGEND

POND PLANTING, DETAILS, & PLANT LIST

Revisions		
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO #: 362-09
DRAWING SCALE: AS SHOWN
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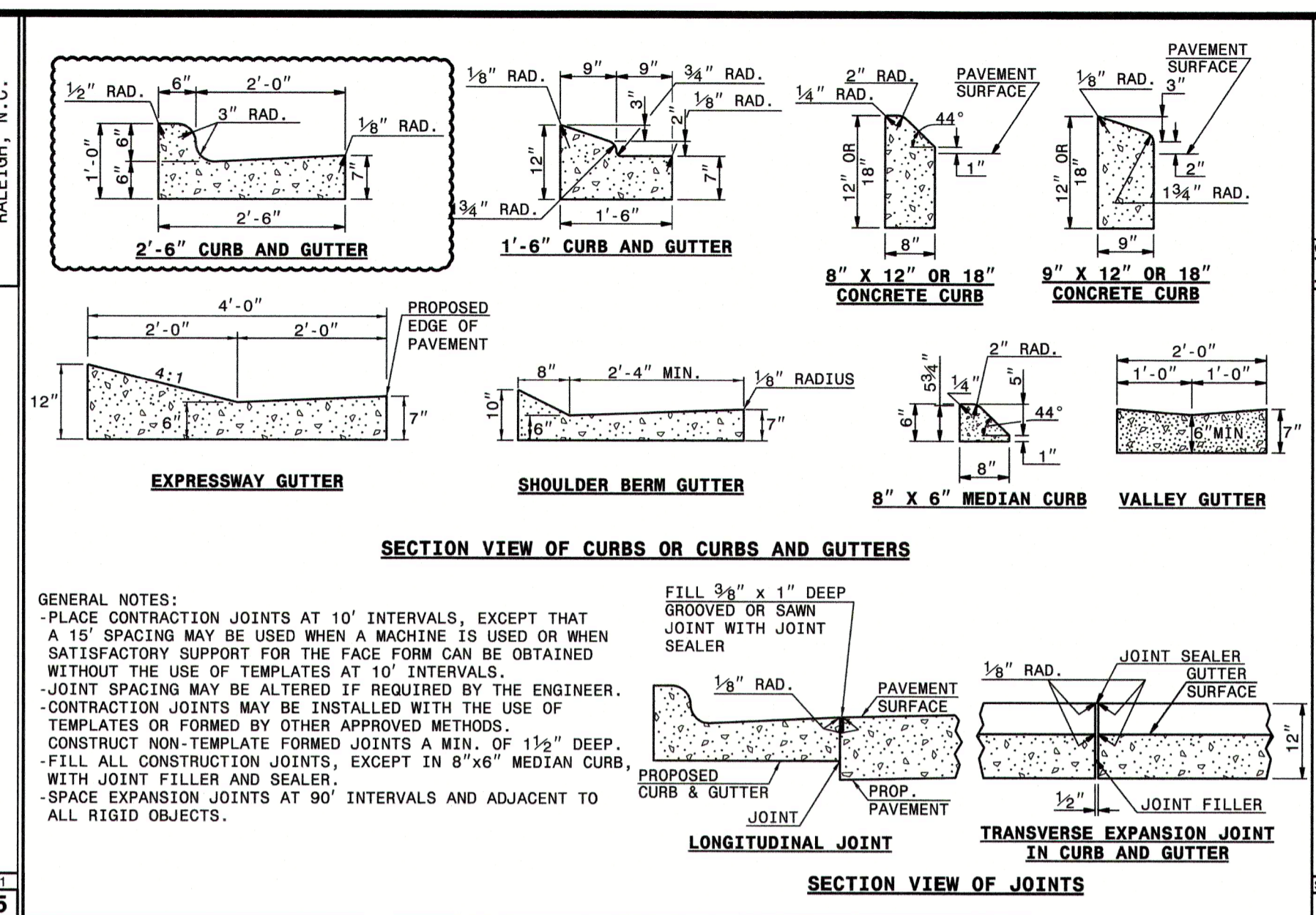
C-8.2



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
TYPING PROPOSED PAVEMENT
TO EXISTING PAVEMENT

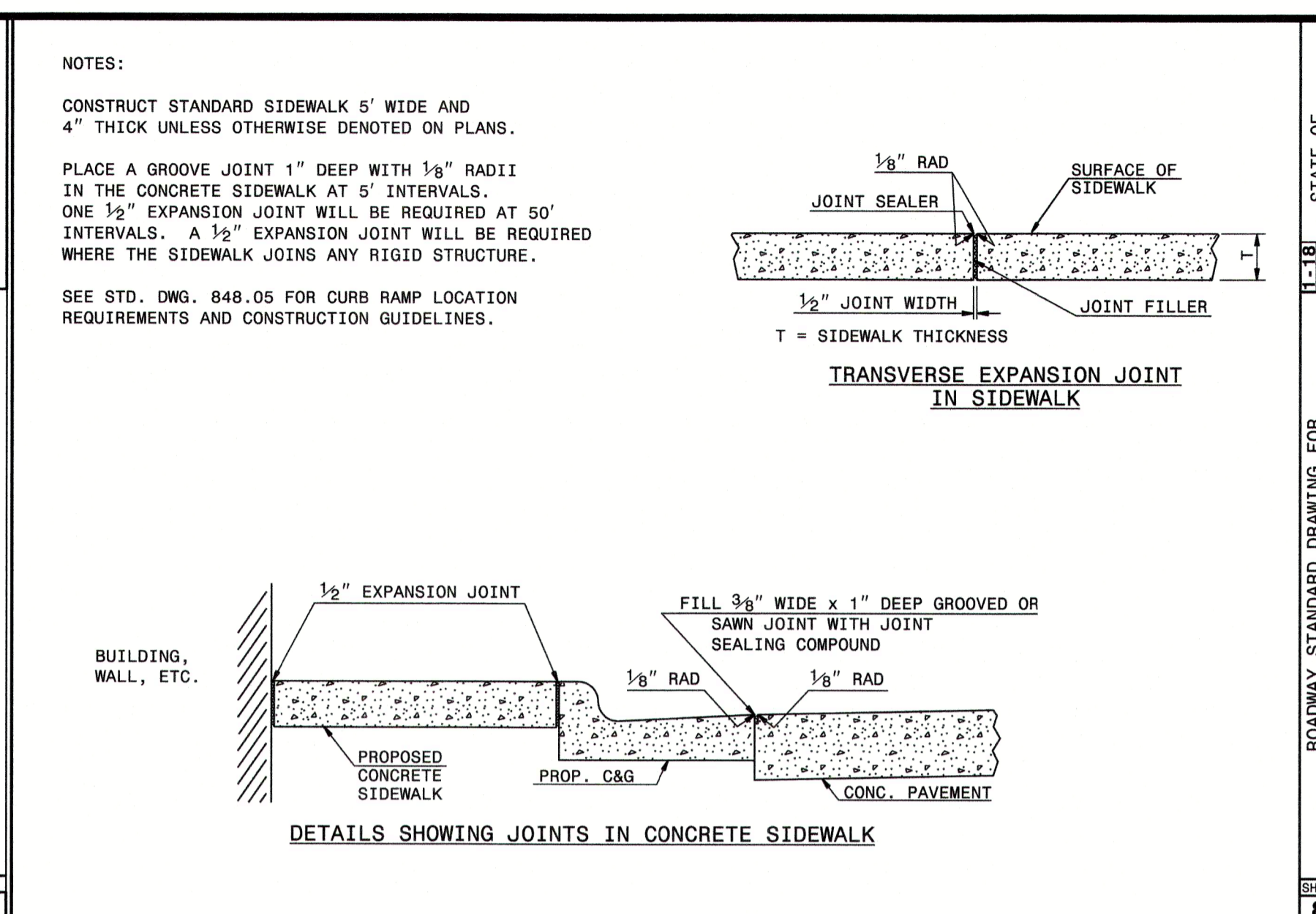
SHEET 1 OF 3
700.05



STATE OF NORTH CAROLINA
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER
AND CURB & GUTTER

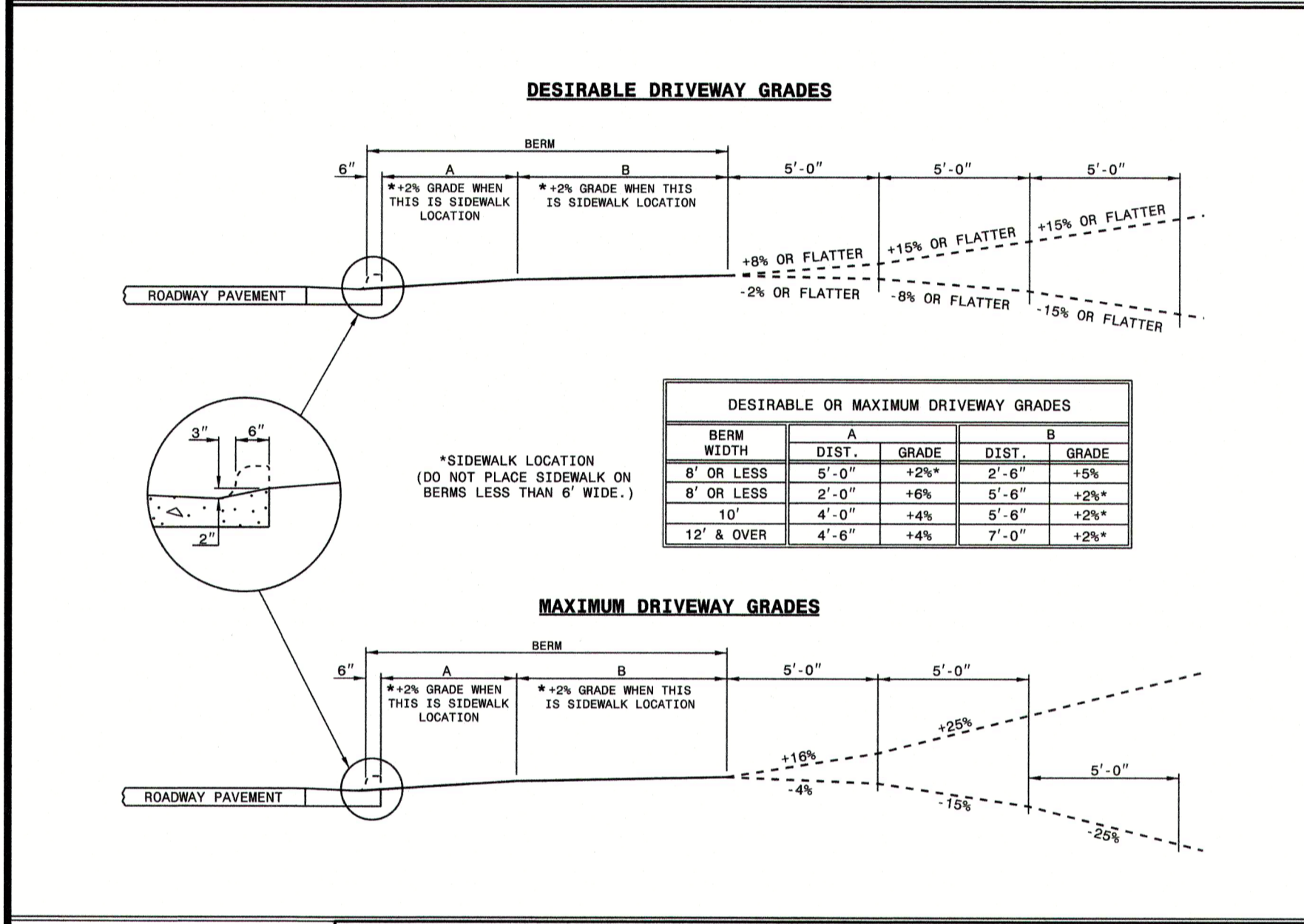
SHEET 1 OF 3
846.01



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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE SIDEWALK

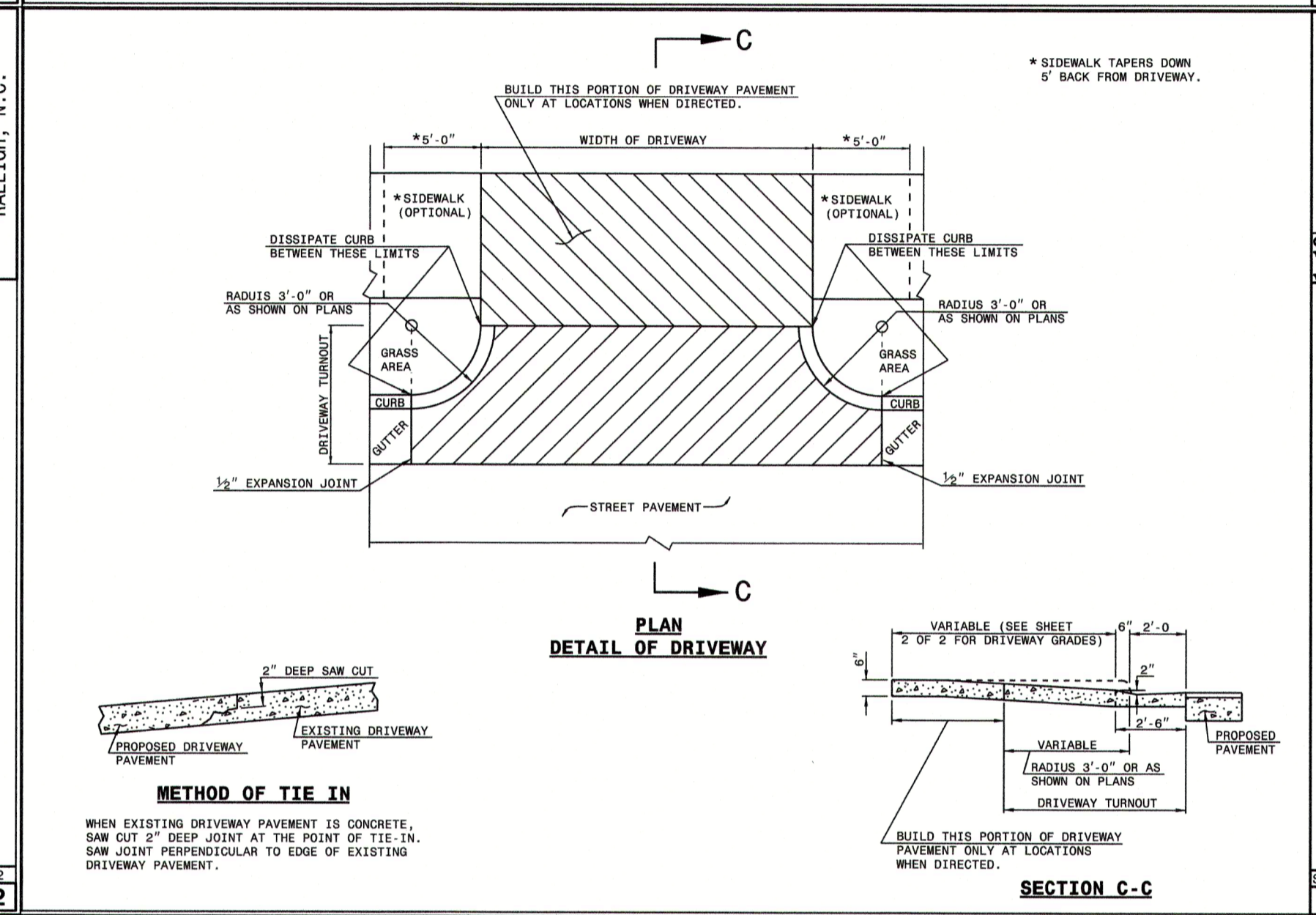
SHEET 1 OF 1
848.01



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
DRIVEWAY TURNOUT
DRIVEWAY GRADES

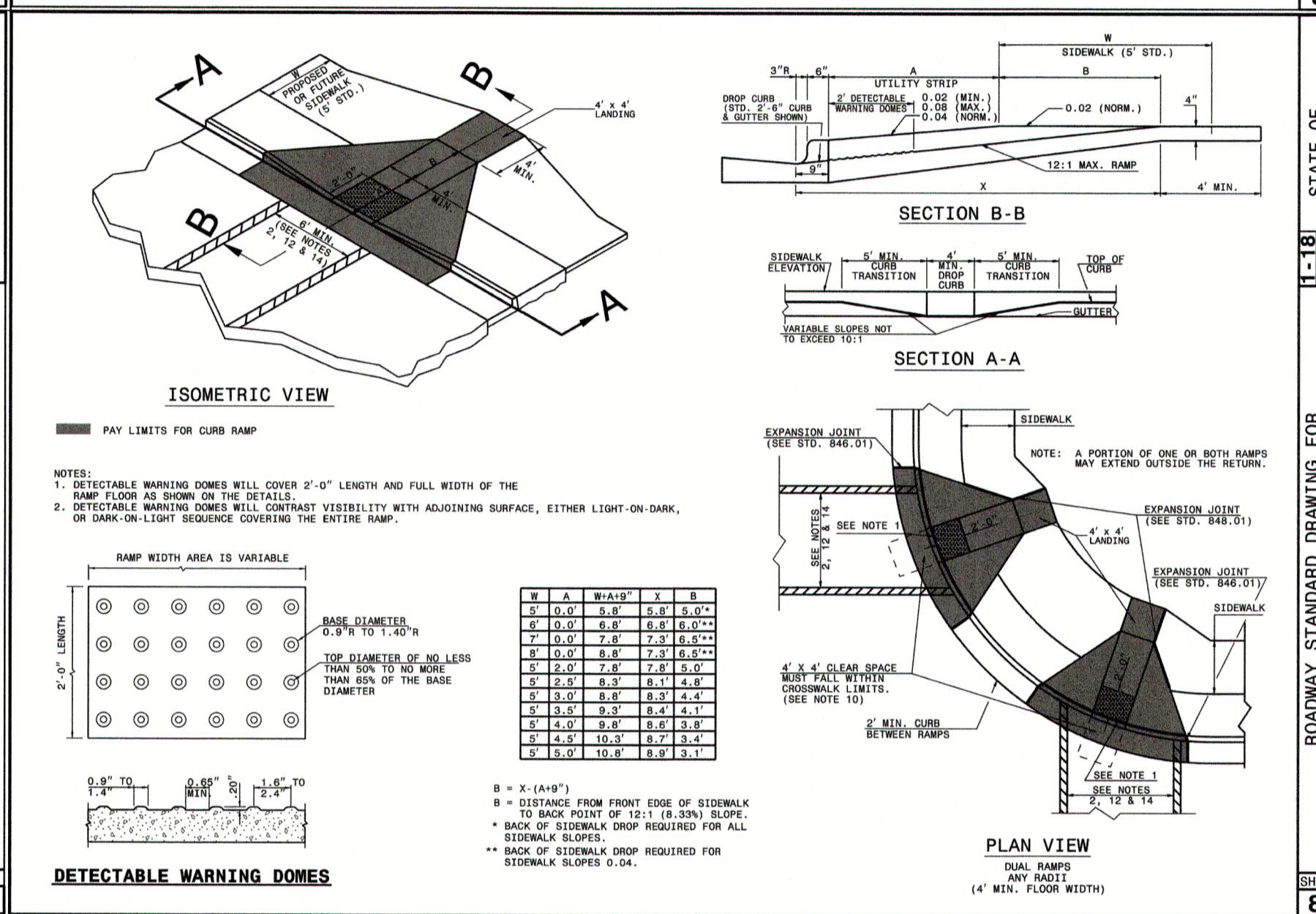
SHEET 2 OF 2
848.02



STATE OF NORTH CAROLINA
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
DRIVEWAY TURNOUT
RADIUS TYPE

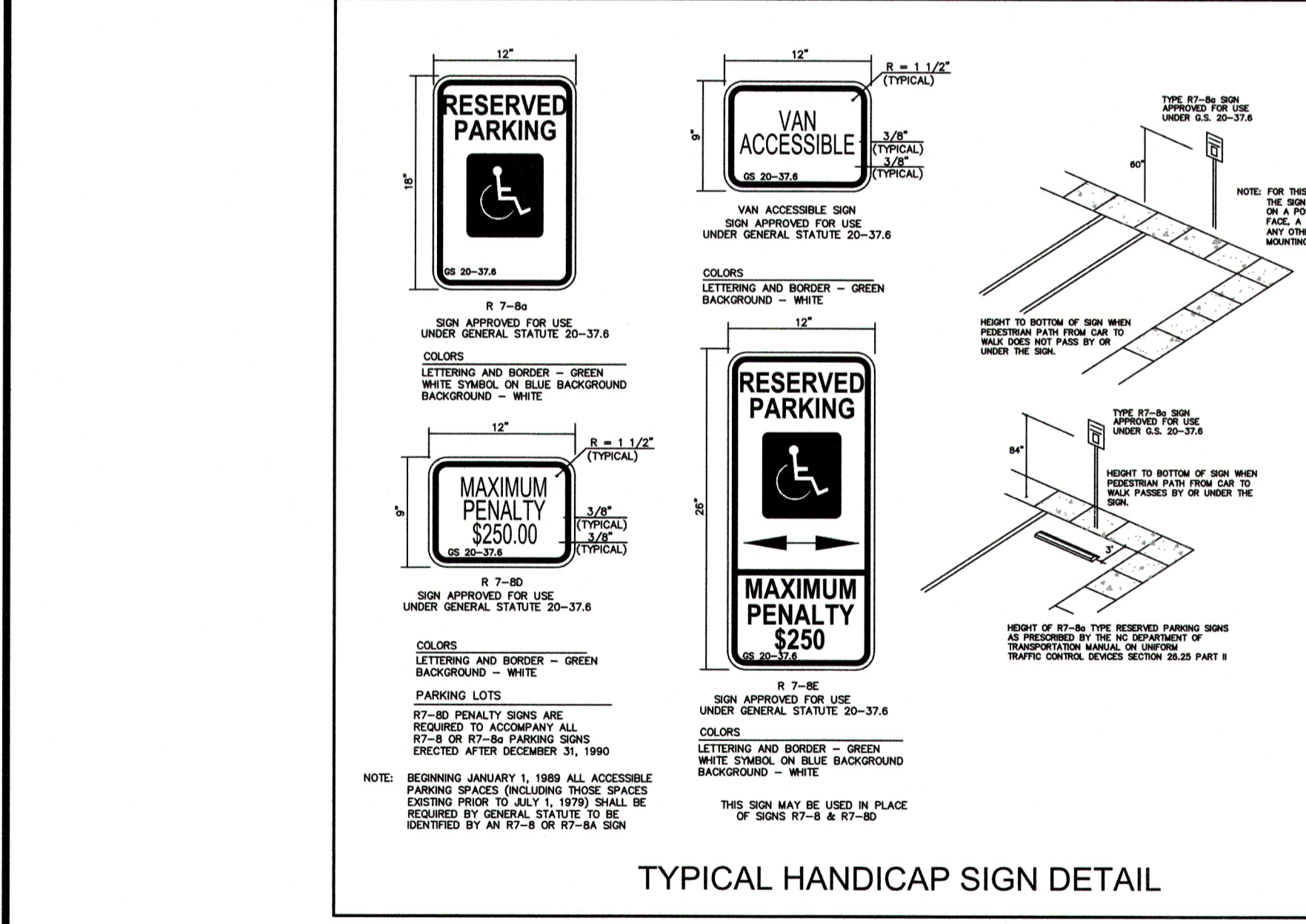
SHEET 1 OF 2
848.02



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CURB RAMP
PROPOSED CURB AND GUTTER

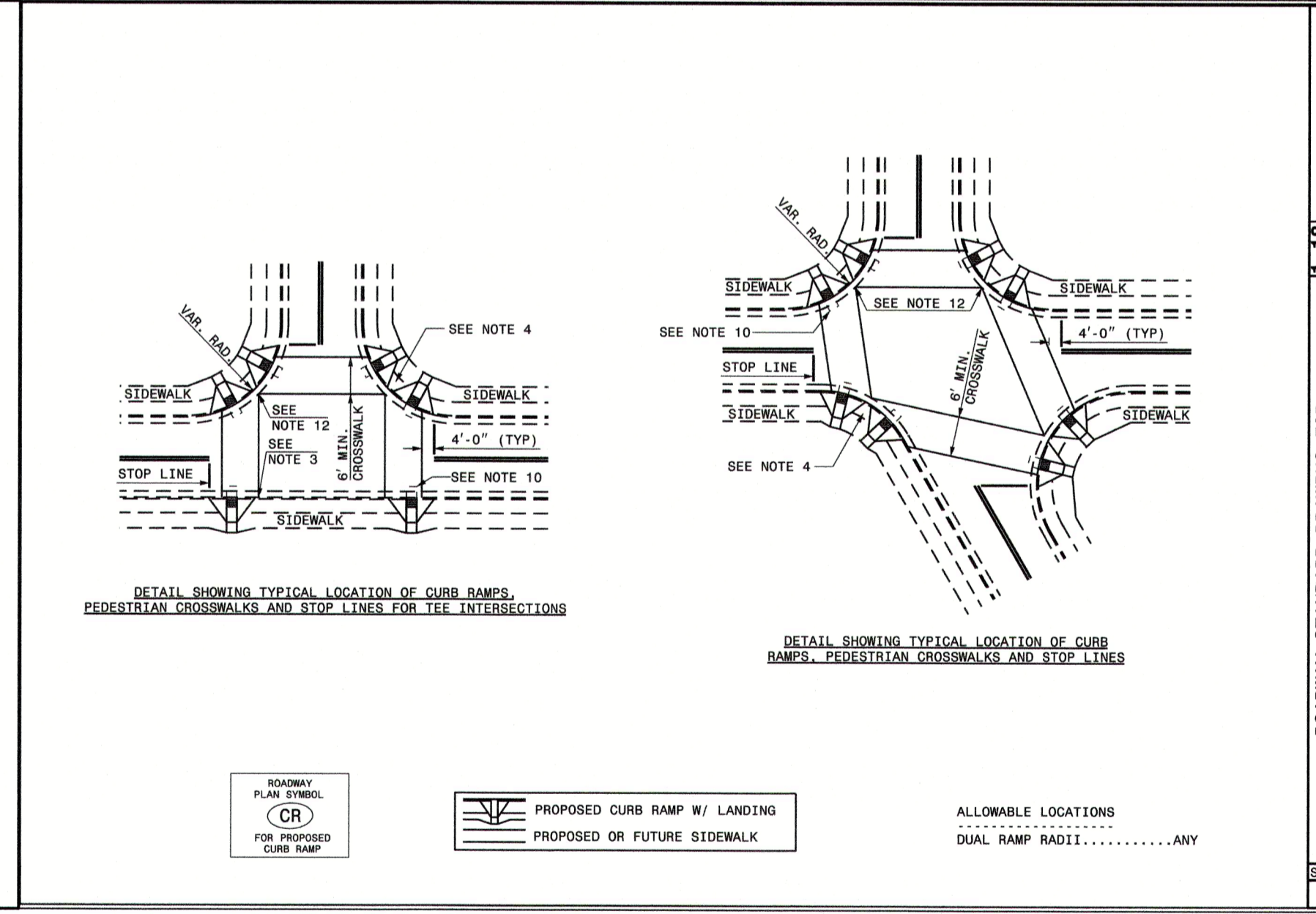
SHEET 1 OF 3
848.05



STATE OF NORTH CAROLINA
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RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CURB RAMP
PROPOSED CURB AND GUTTER

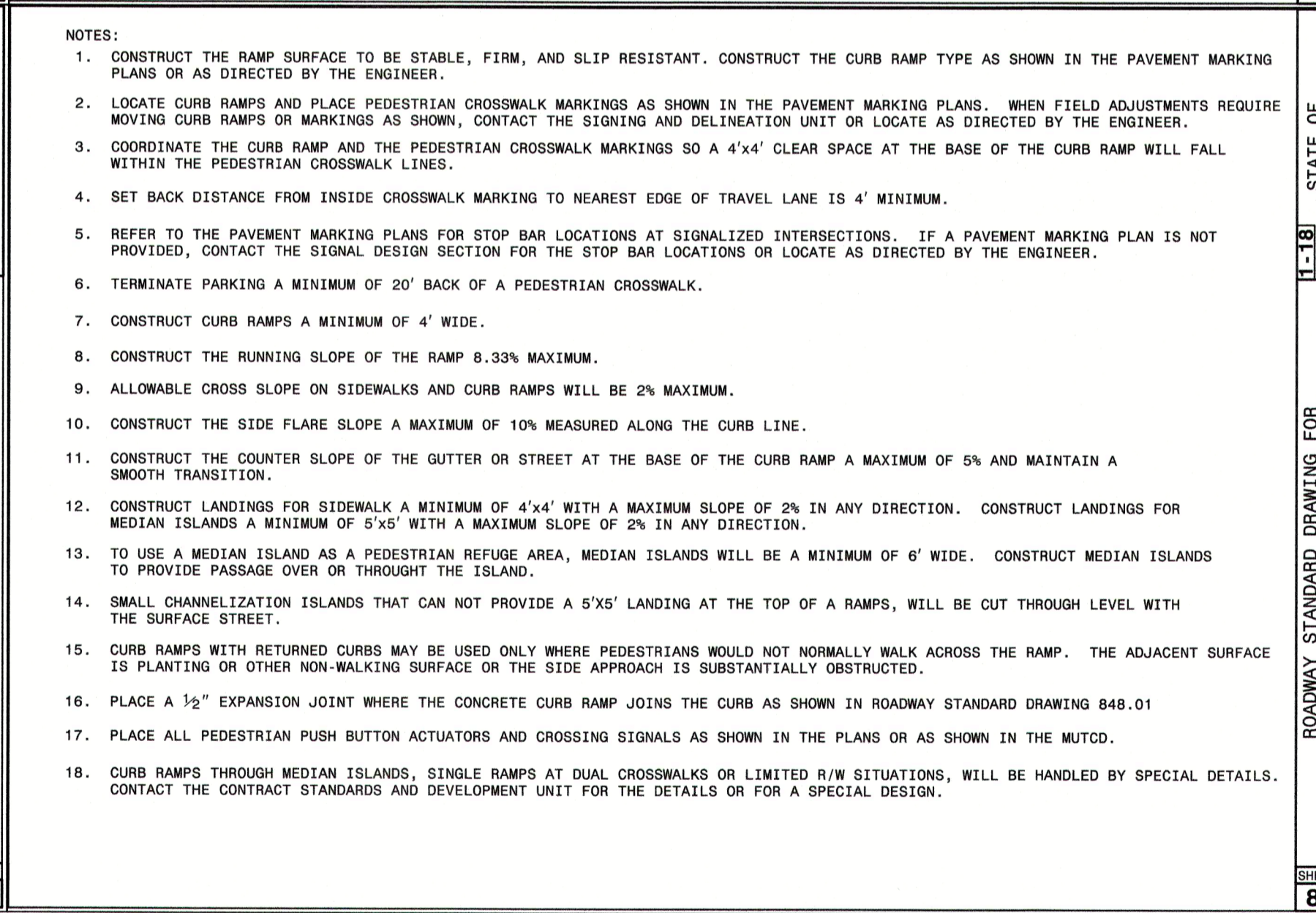
SHEET 3 OF 3
848.05



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ROADWAY STANDARD DRAWING FOR
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SHEET 3 OF 3
848.05



STATE OF NORTH CAROLINA
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SHEET 3 OF 3
848.05

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LEGEND

Revisions

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JAECO #: 362-09
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SITE DETAILS

C-9.1

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

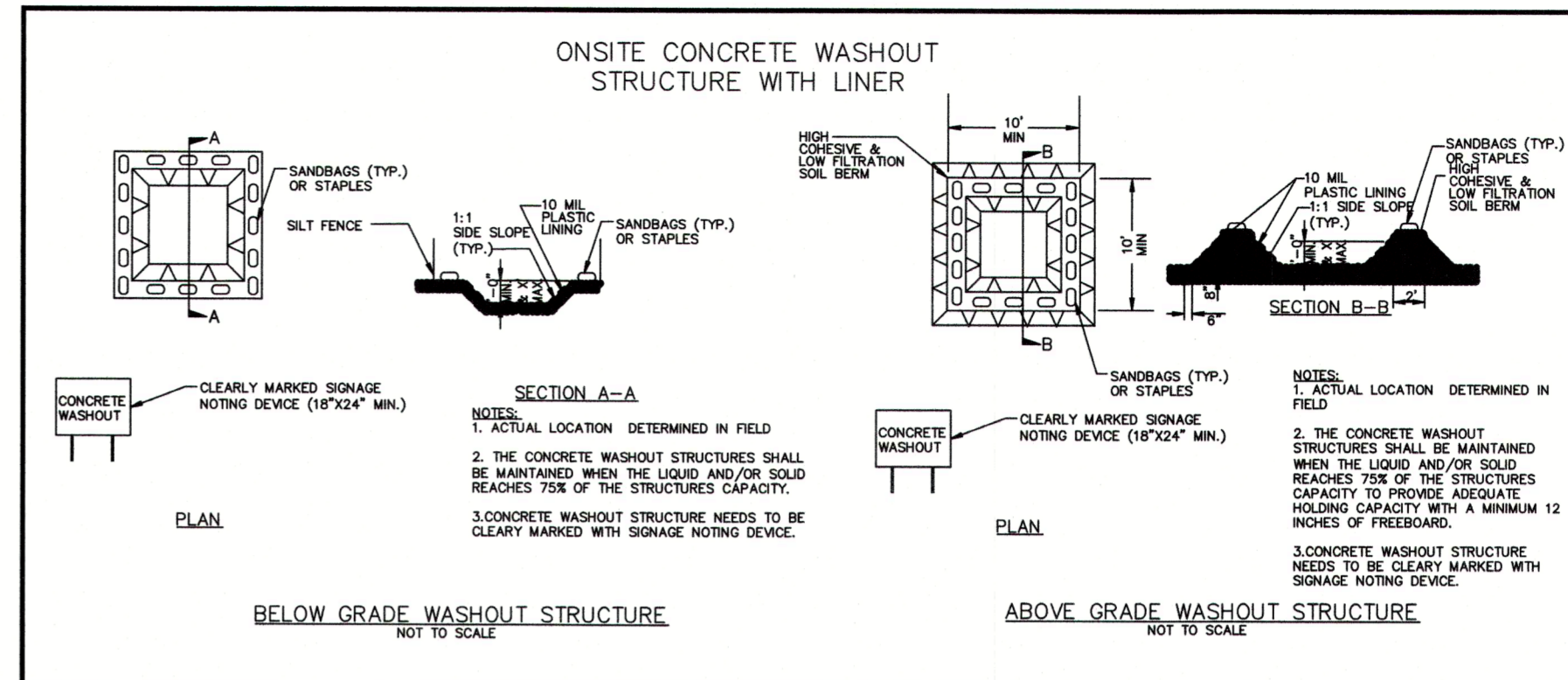
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

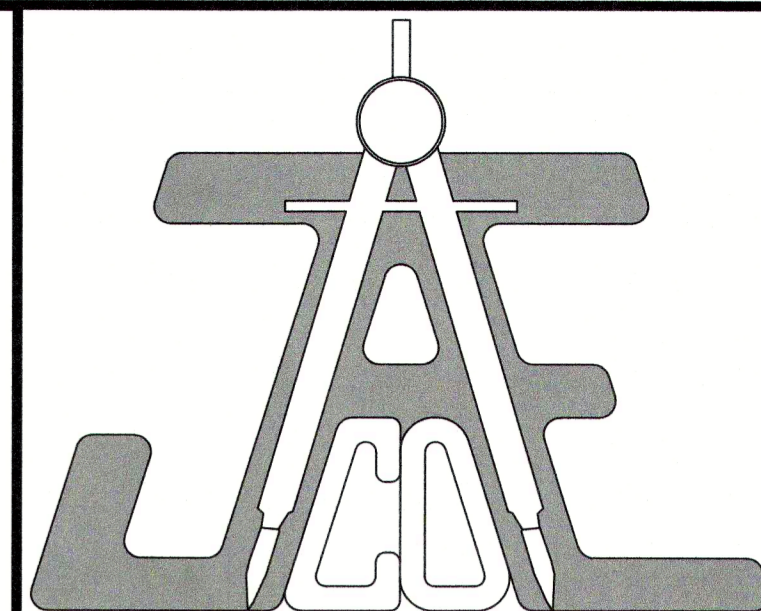
- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

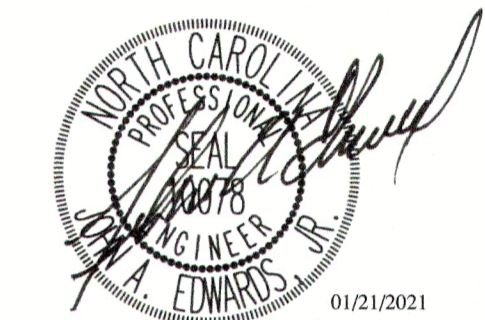
- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.



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LEGEND

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO # 362-09
DRAWING SCALE: AS SHOWN
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020

C-9.2

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

**PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

SECTION C: REPORTING

1. Occurrences that Must be Reported

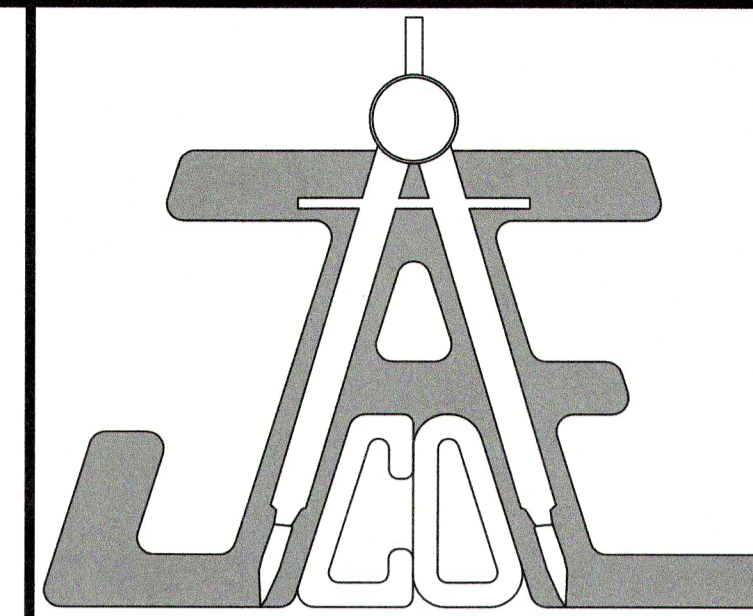
Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

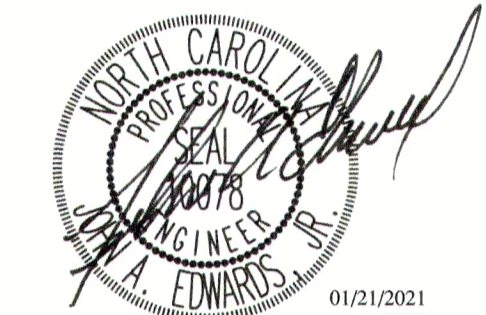
Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	<ul style="list-style-type: none"> Within 24 hours, an oral or electronic notification. Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). Division staff may waive the requirement for a written report on a case-by-case basis.



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LEGEND

**NCG01 NOTES AND
DETAILS**

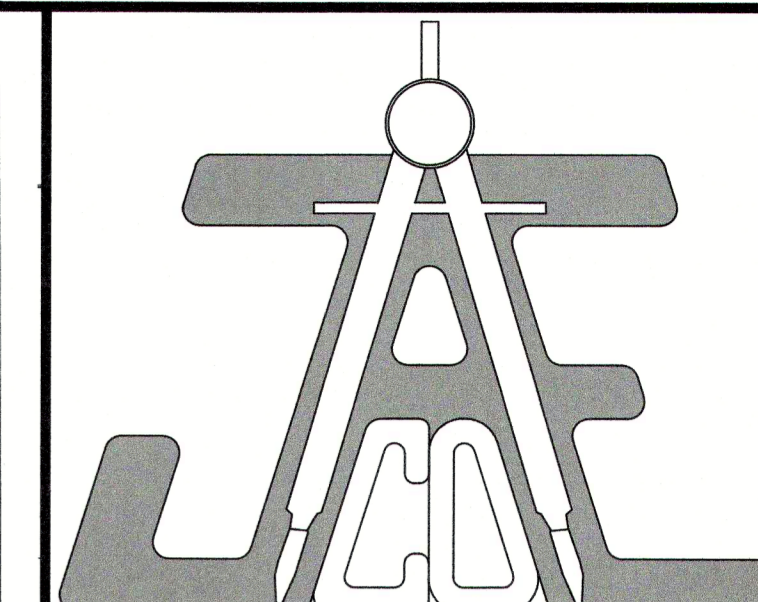
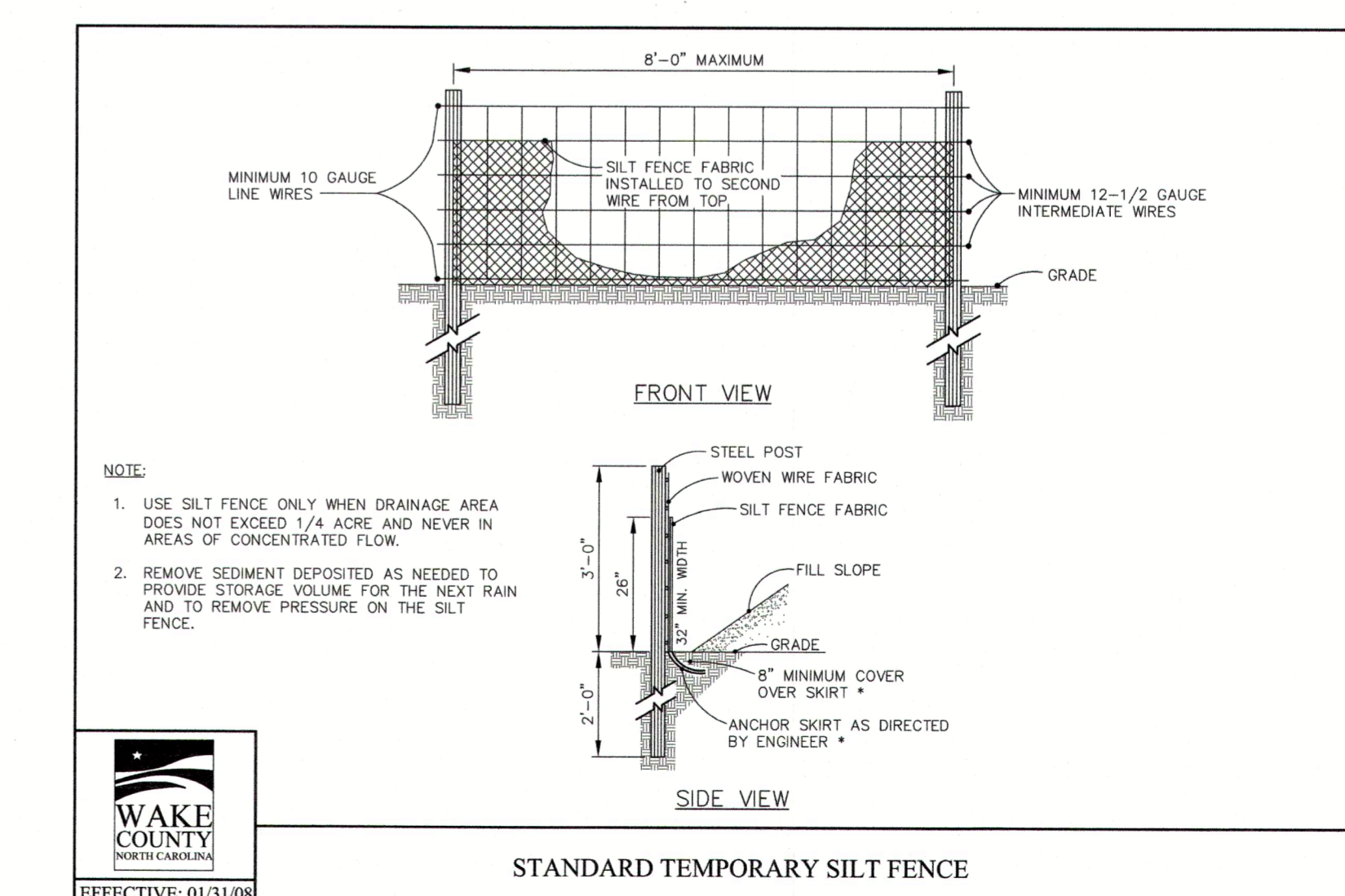
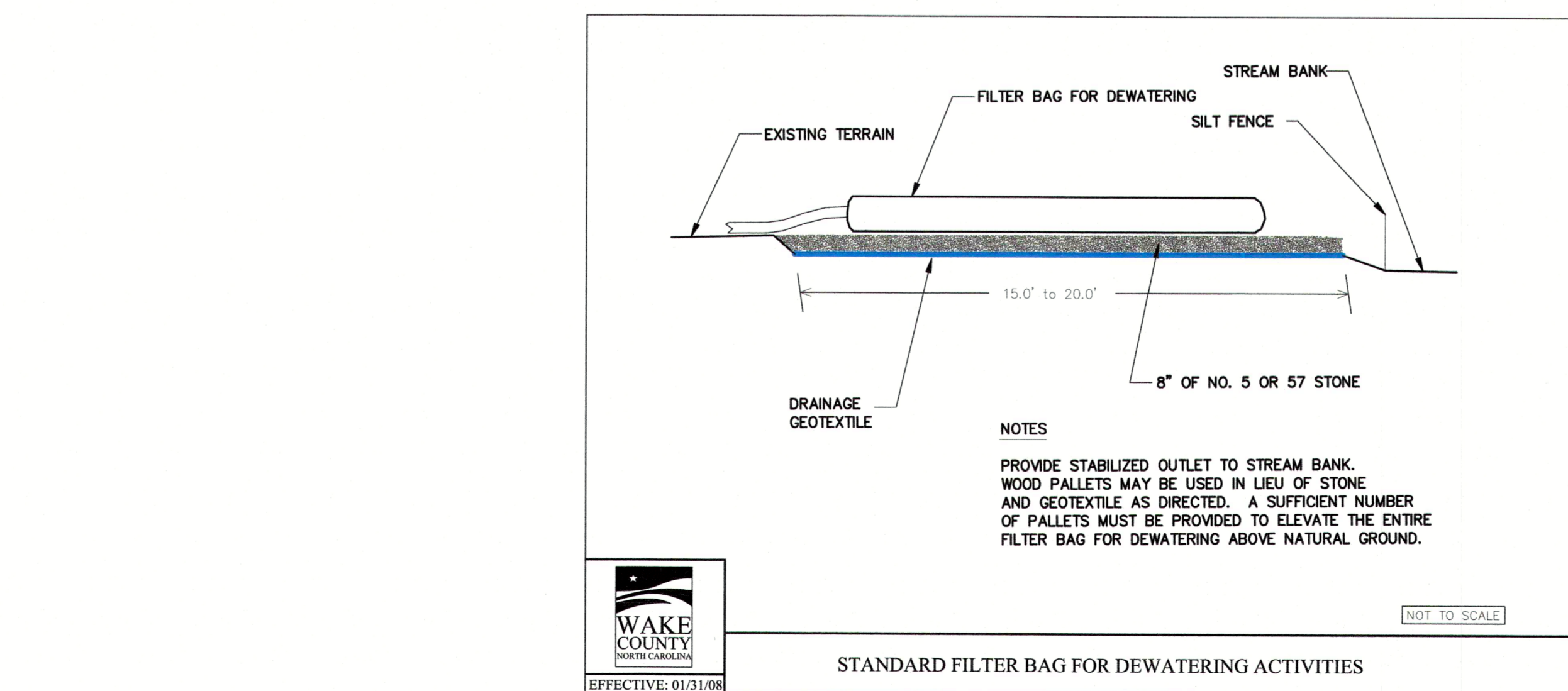
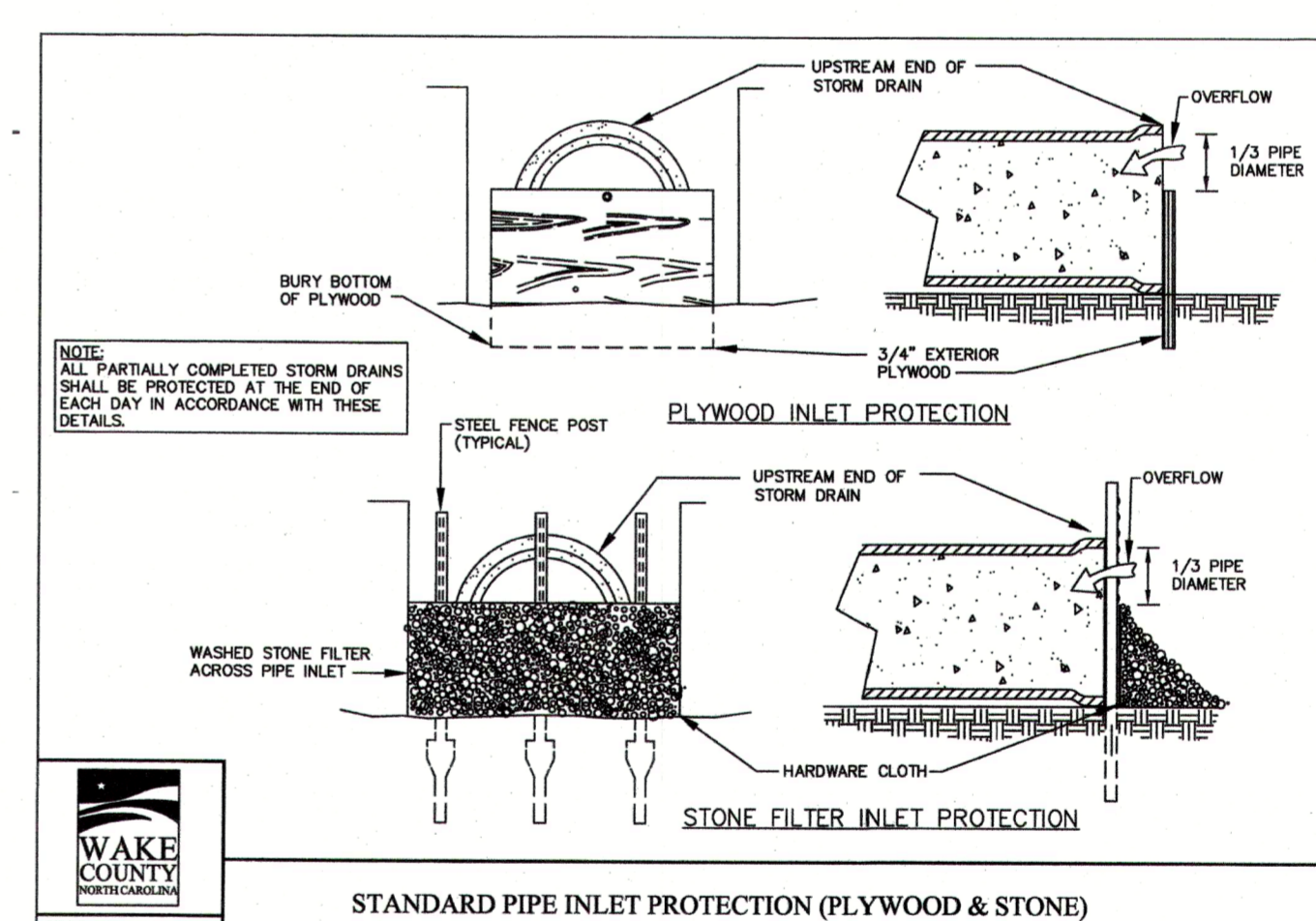
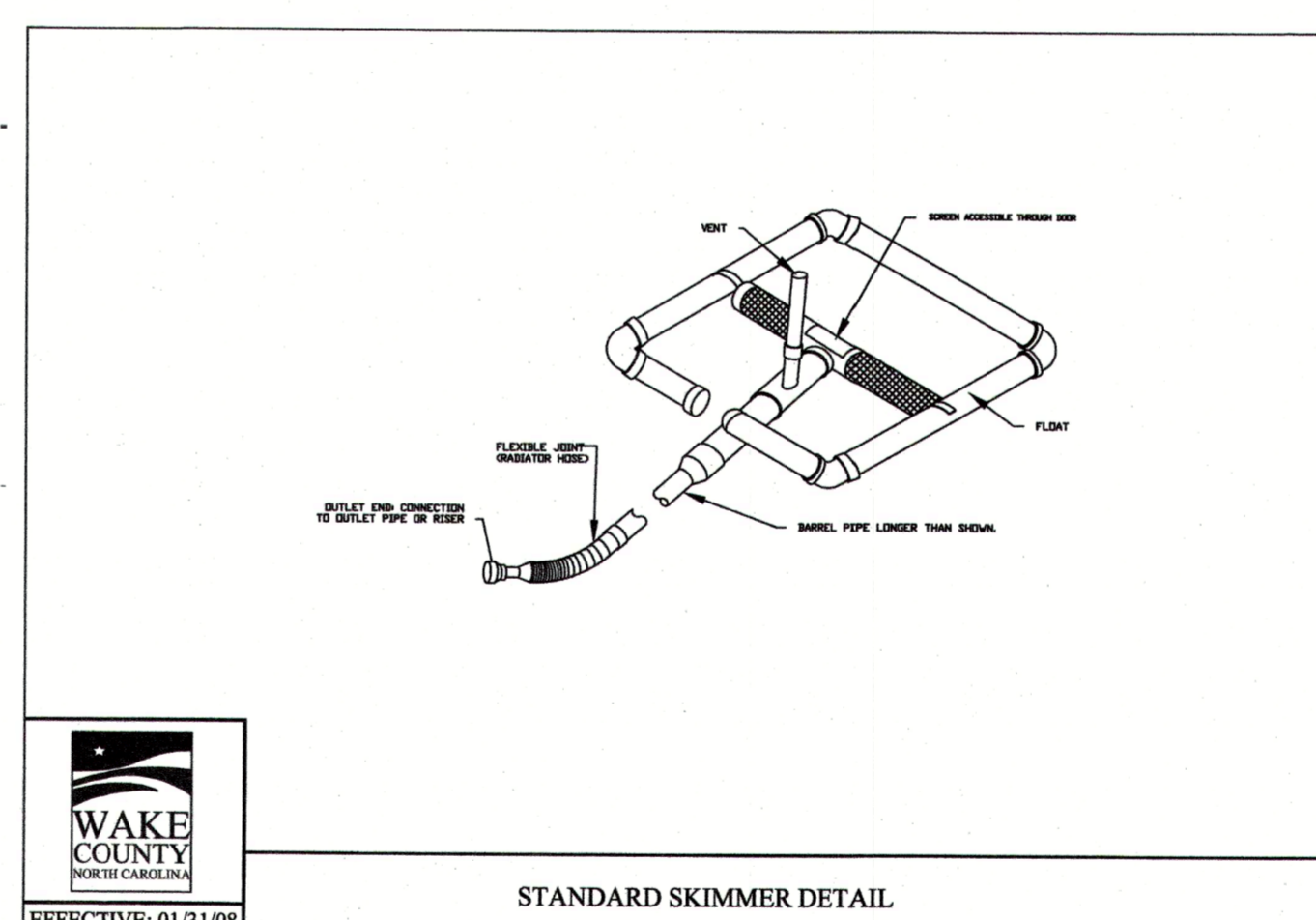
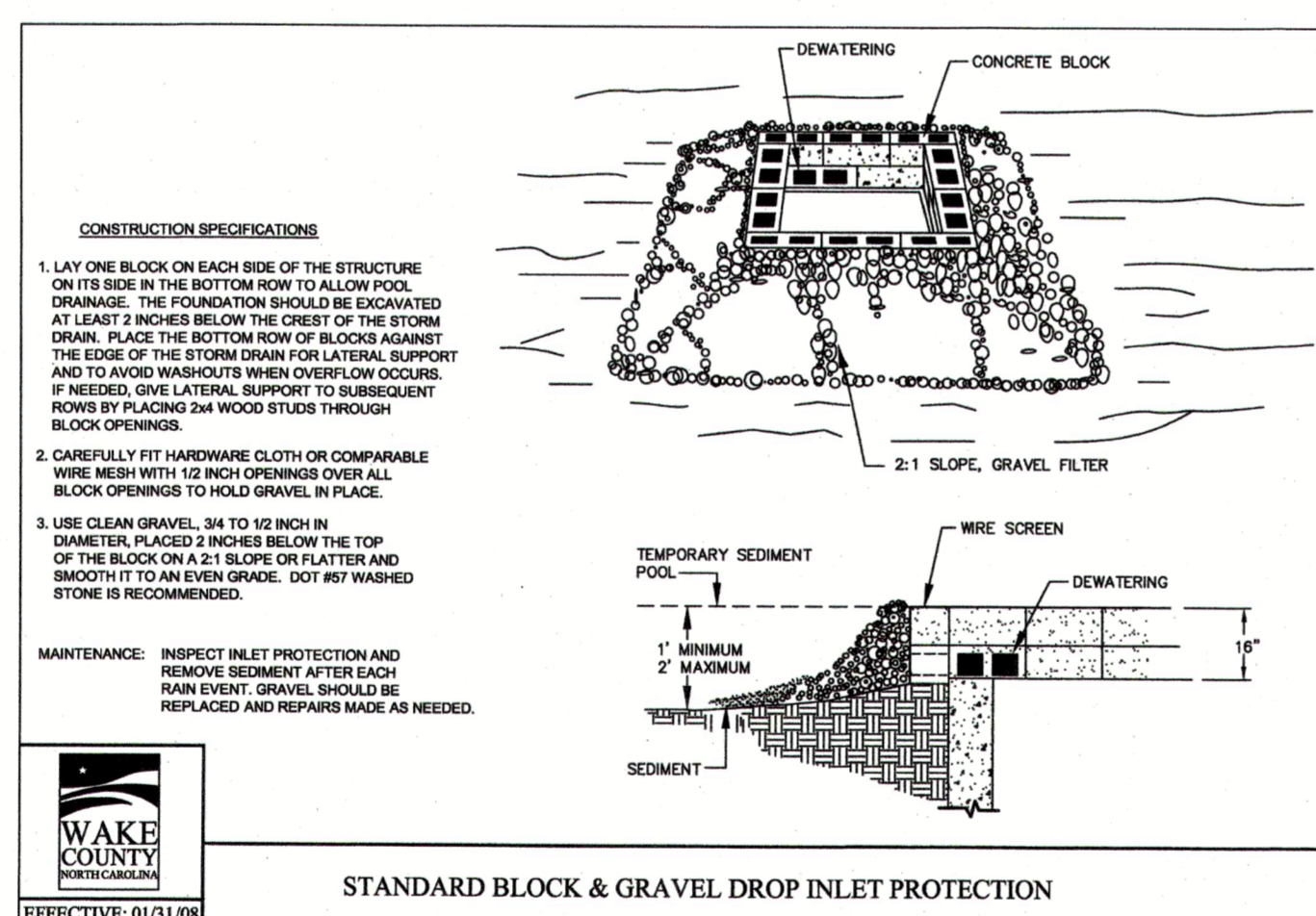
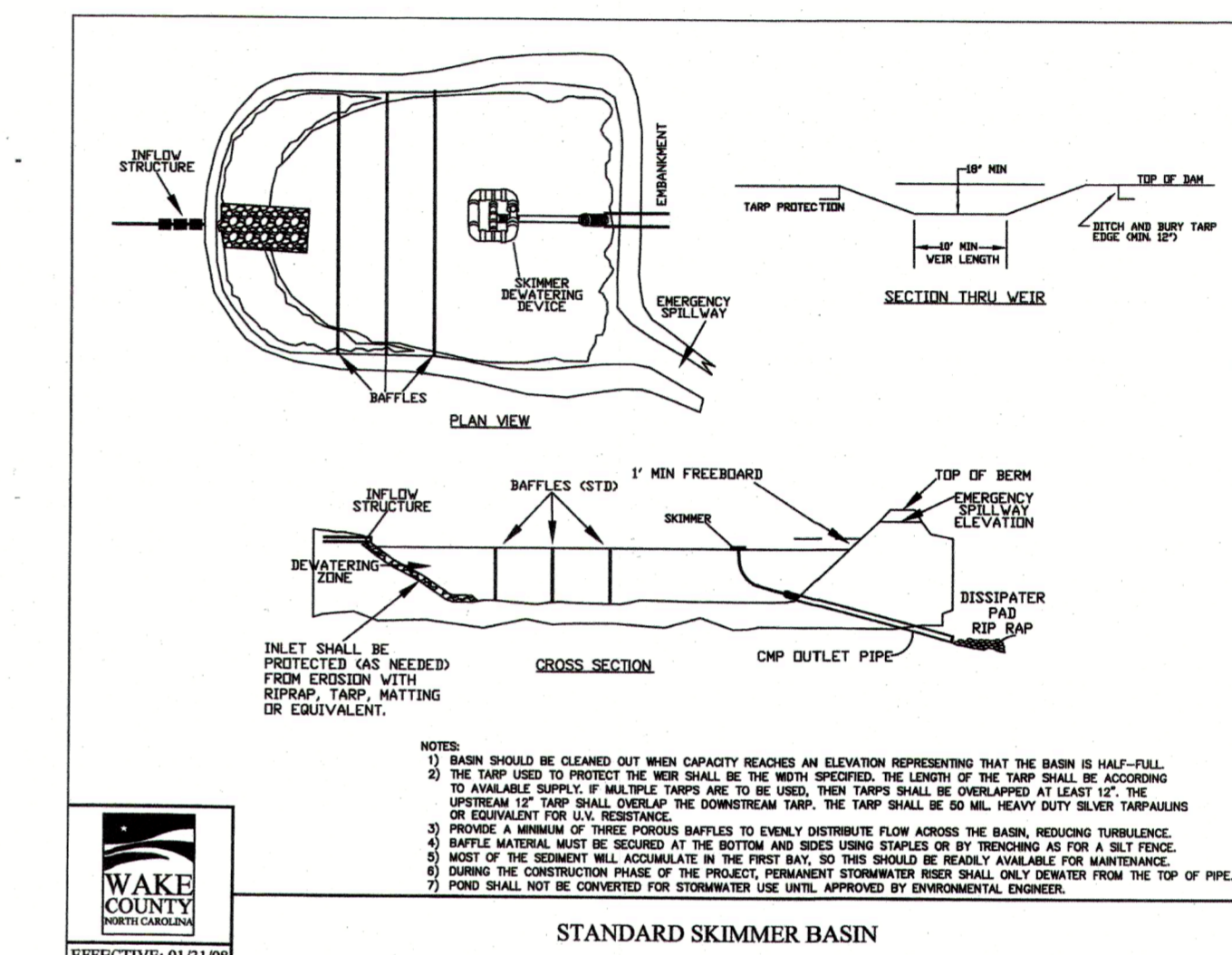
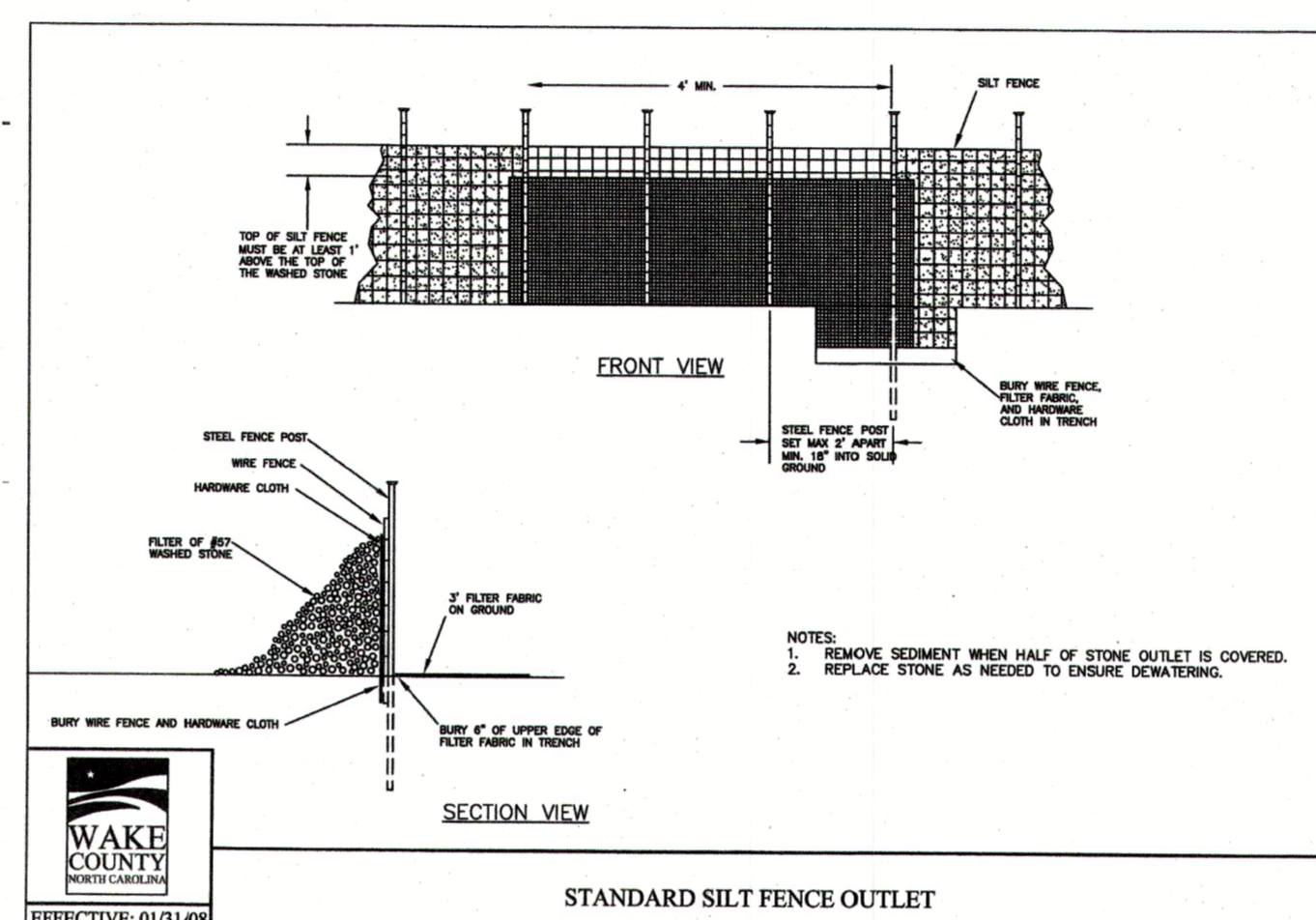
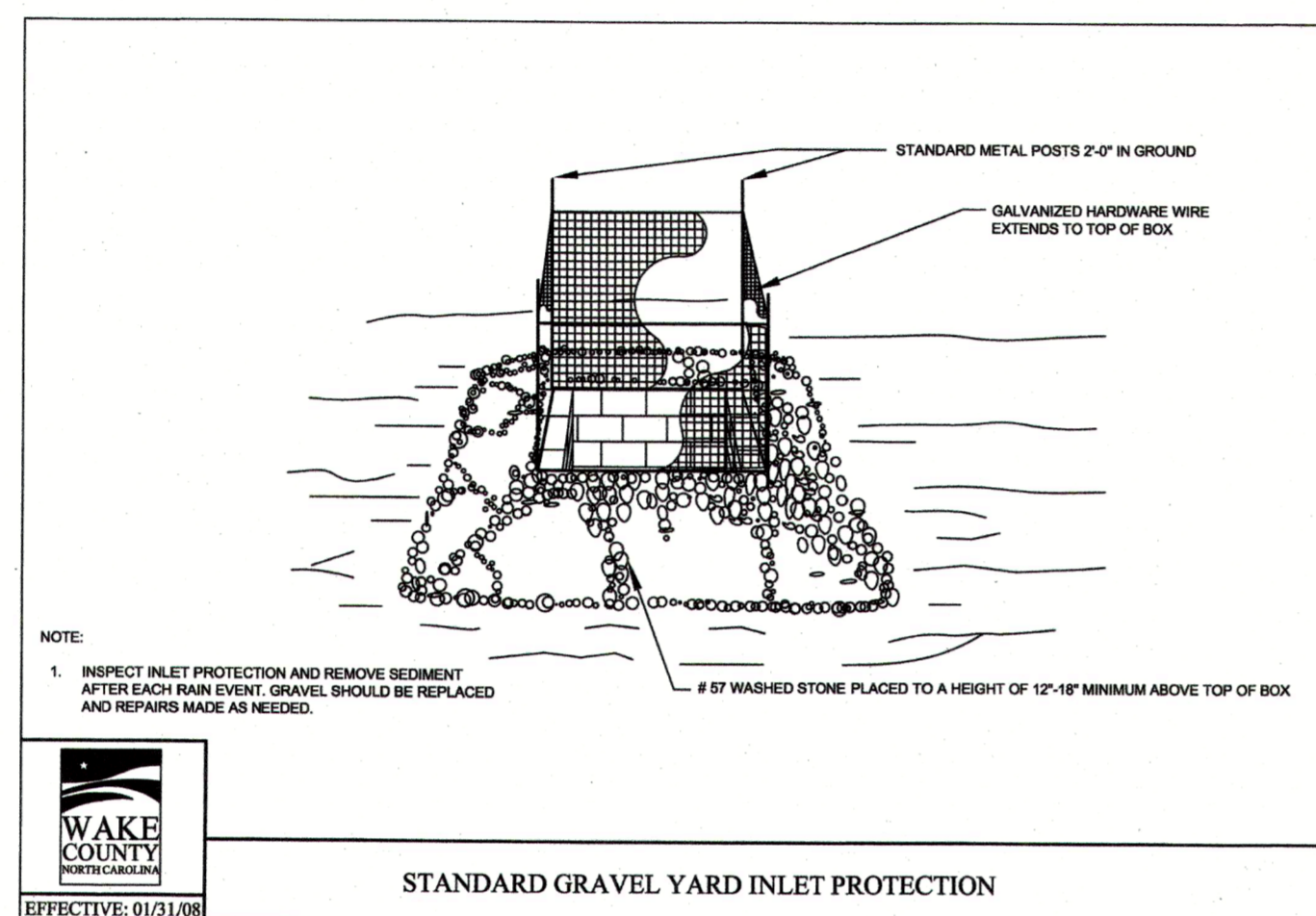
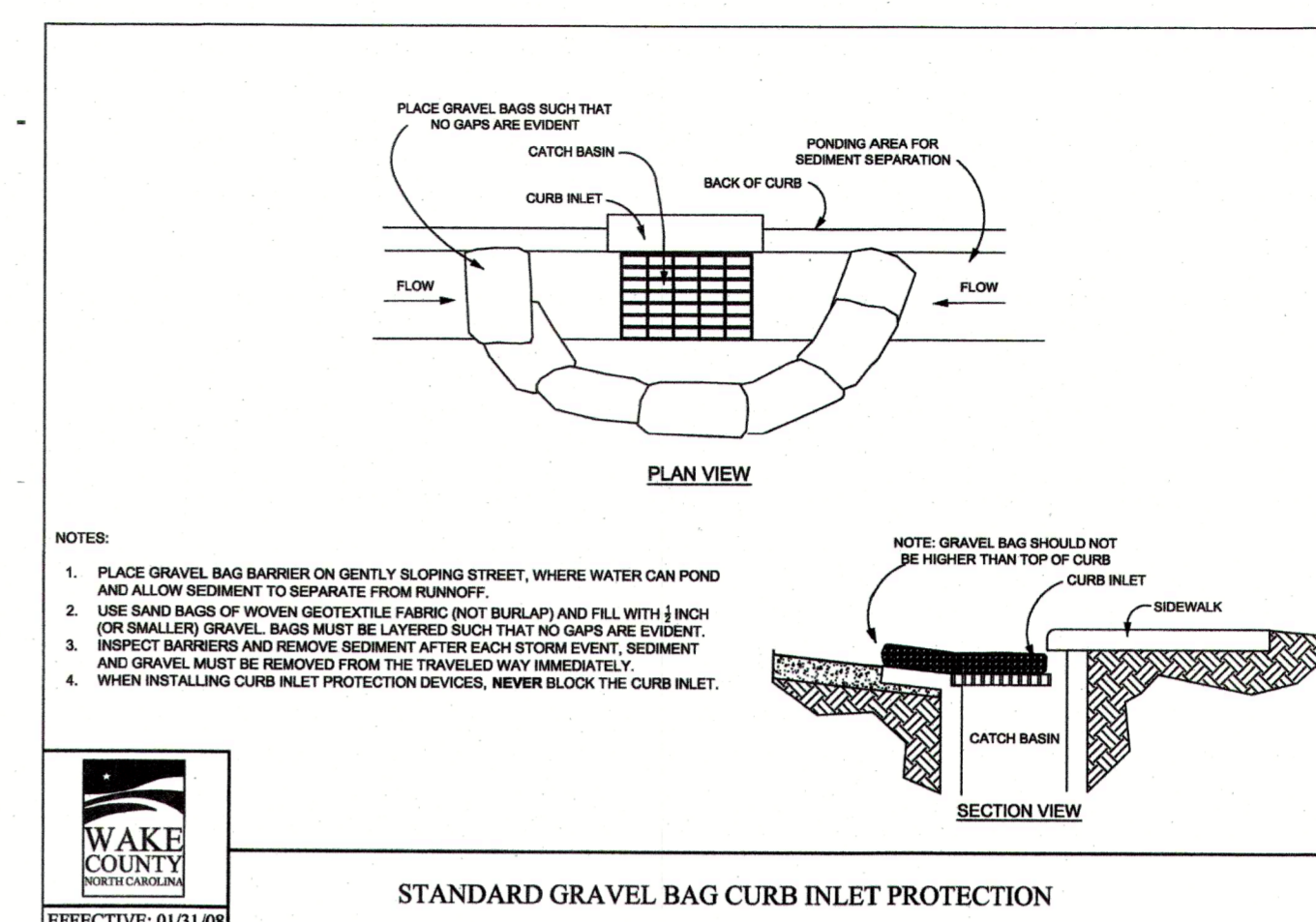
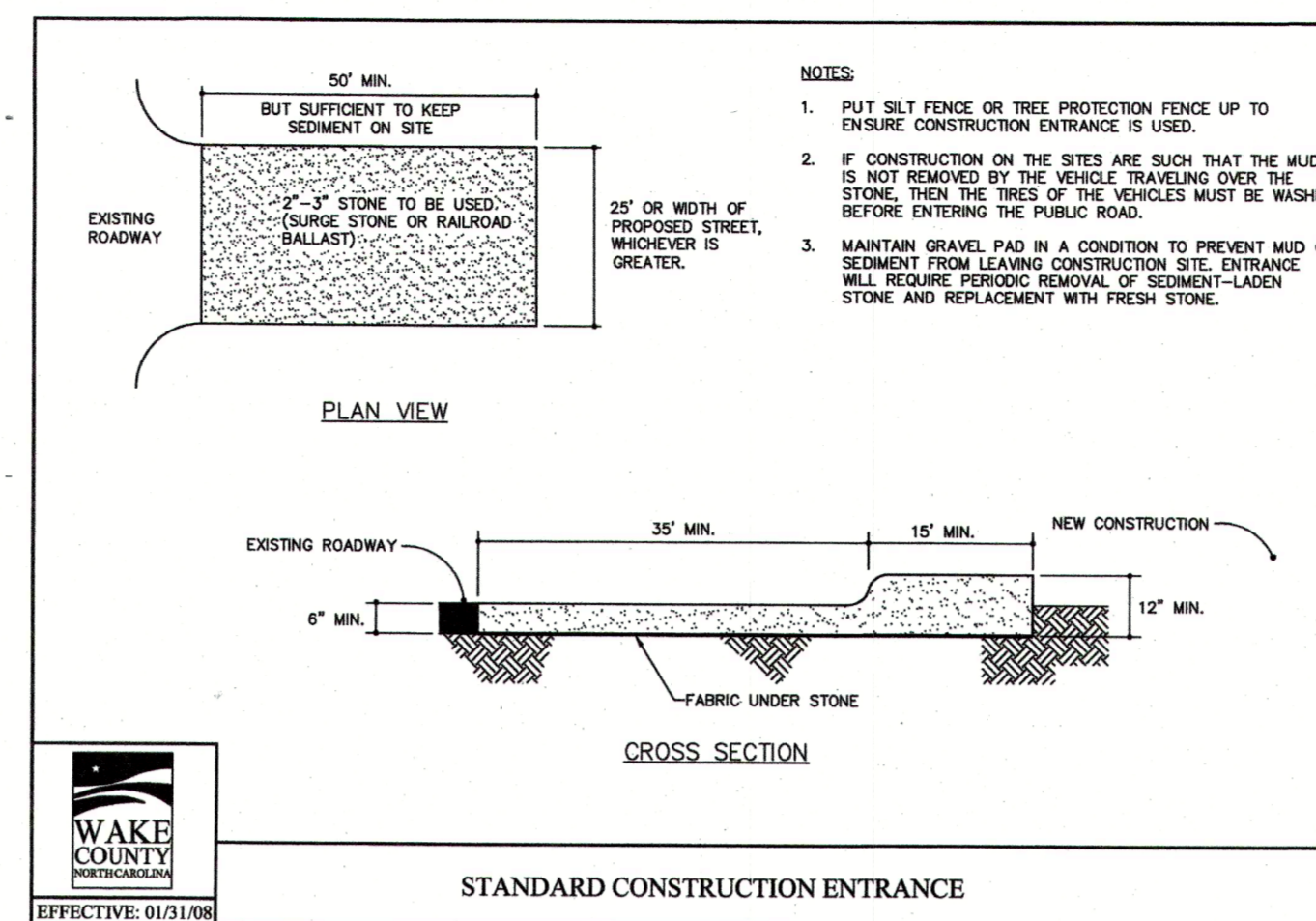
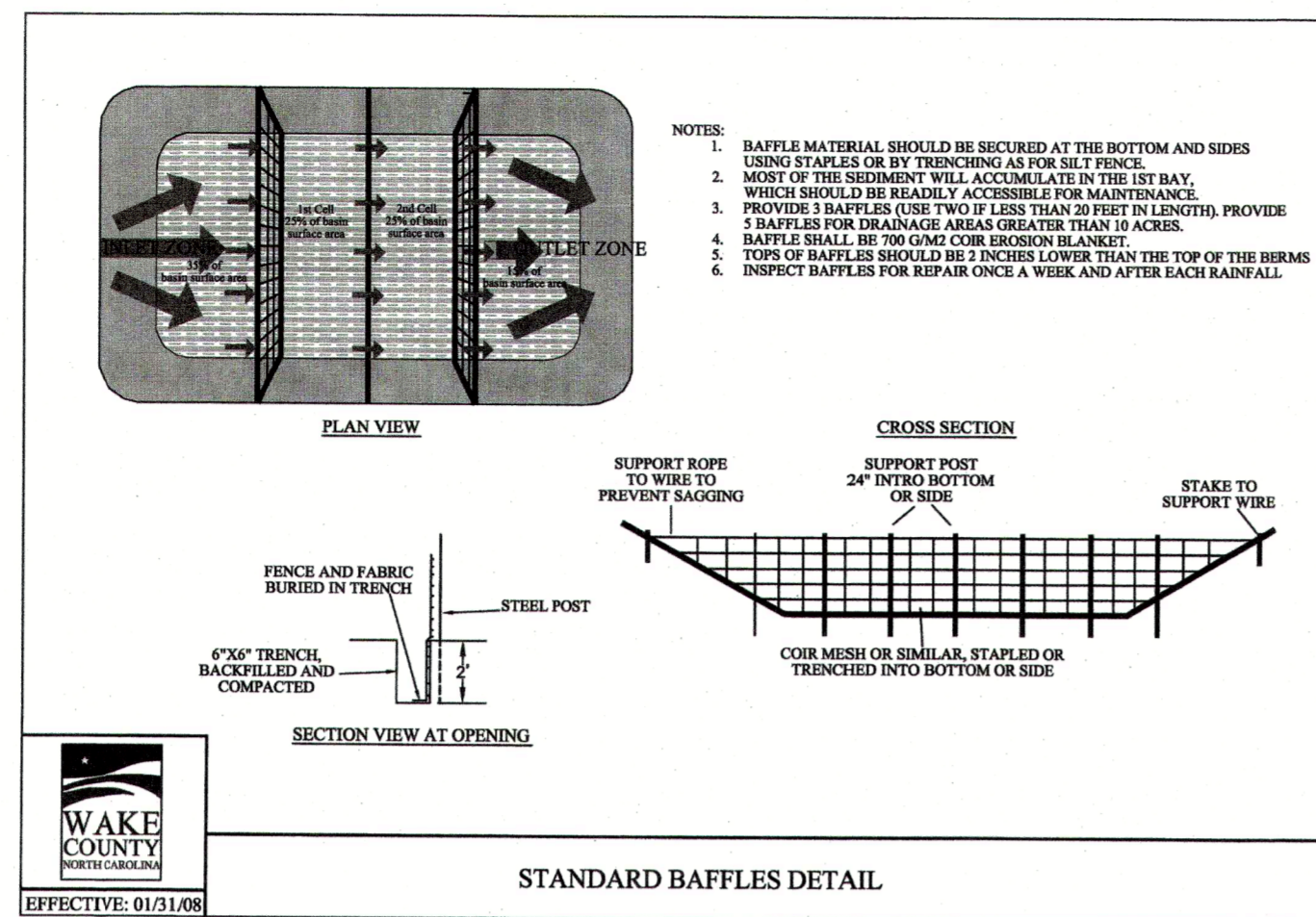
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO #: 362-09
DRAWING SCALE: AS SHOWN
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020

C-9.3

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

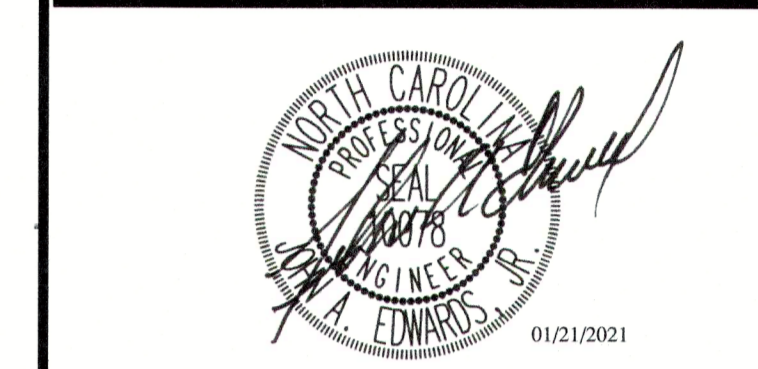
EFFECTIVE: 04/01/19



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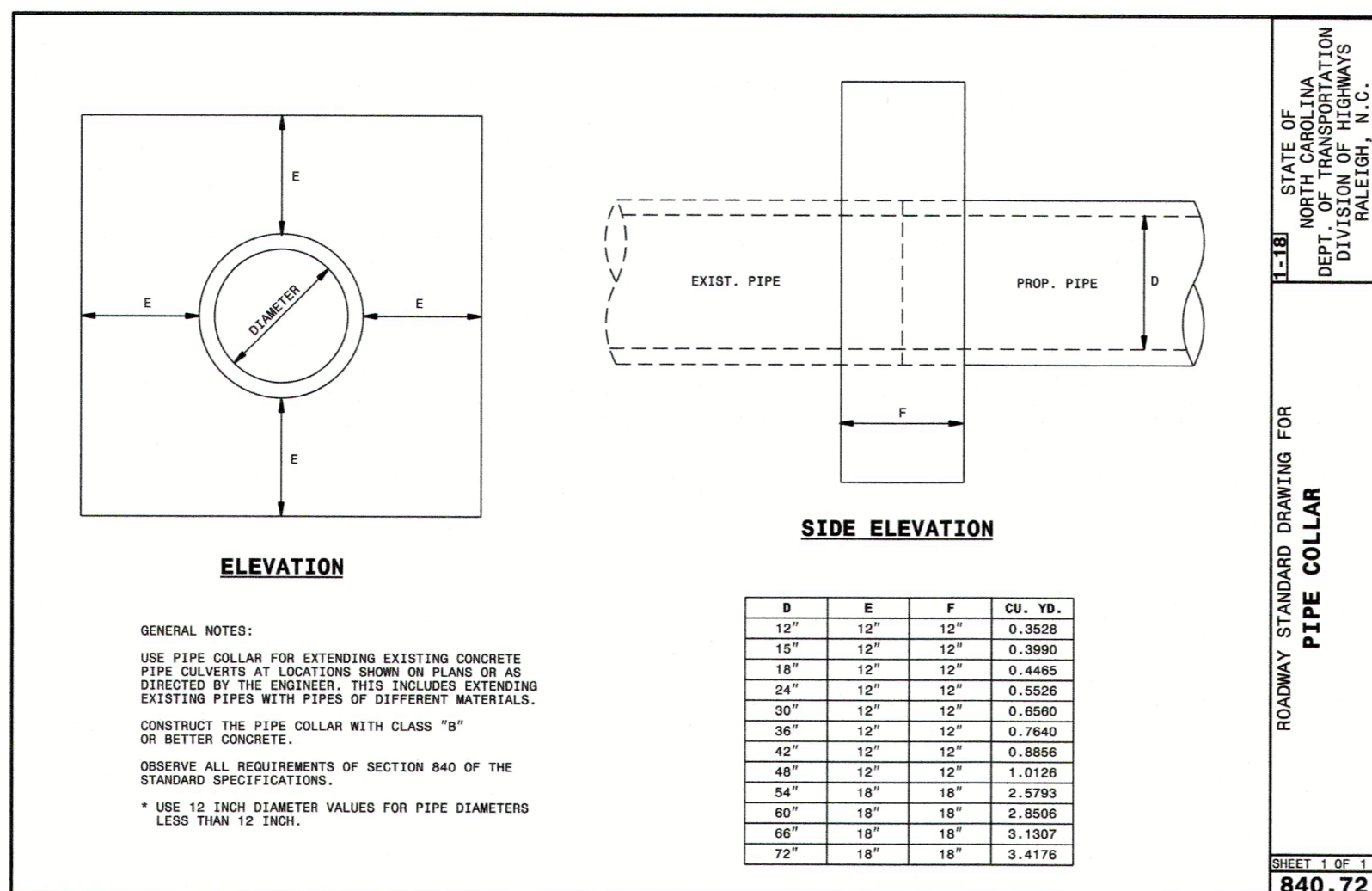
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EROSION CONTROL DETAILS

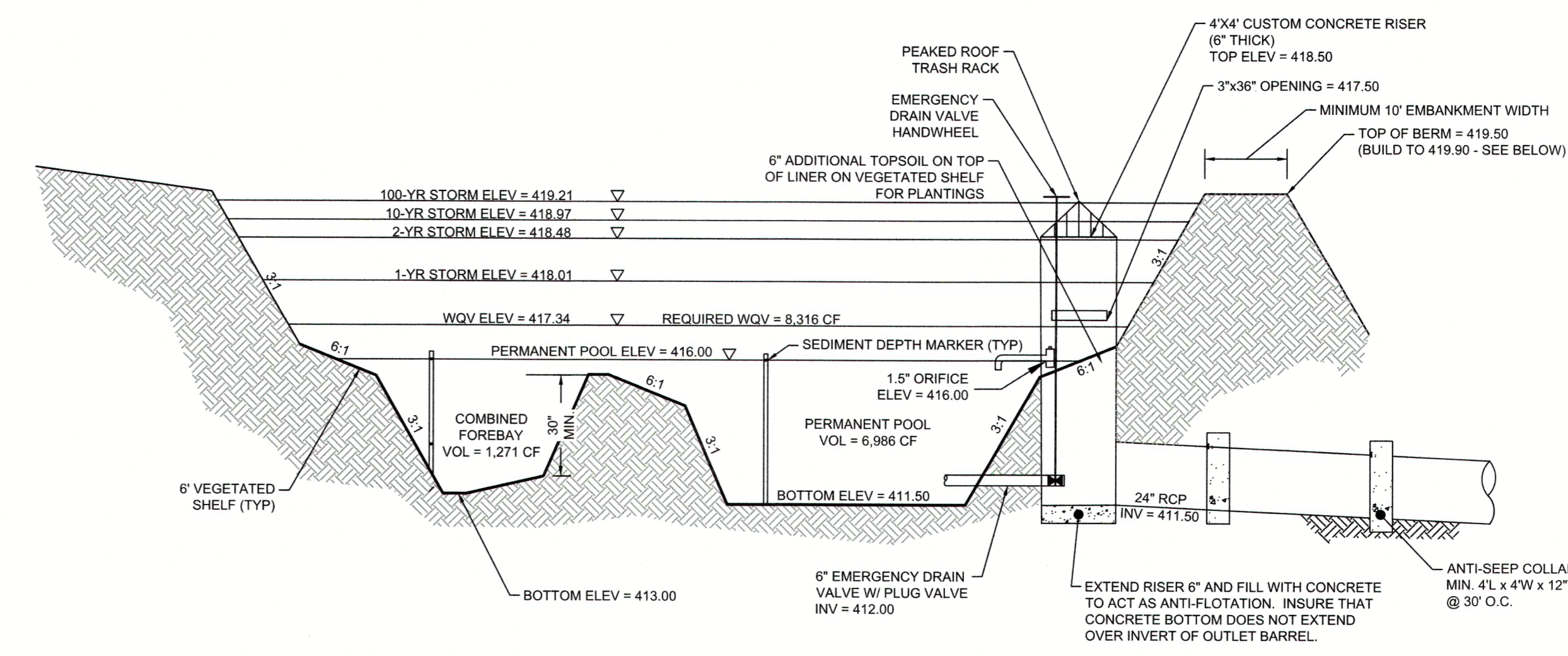
Revisions		
Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO #: 362-09
 DRAWING SCALE: AS SHOWN
 DRAWN BY: TT
 CHECKED BY: JAE, JR.
 DATE ISSUED: 06/22/2020

C-9.4



STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.
 ROADWAY STANDARD DRAWING FOR
PIPE COLLAR
 840.72



WET DETENTION POND
 N.T.S.

GENERAL NOTES AND SPECIFICATIONS

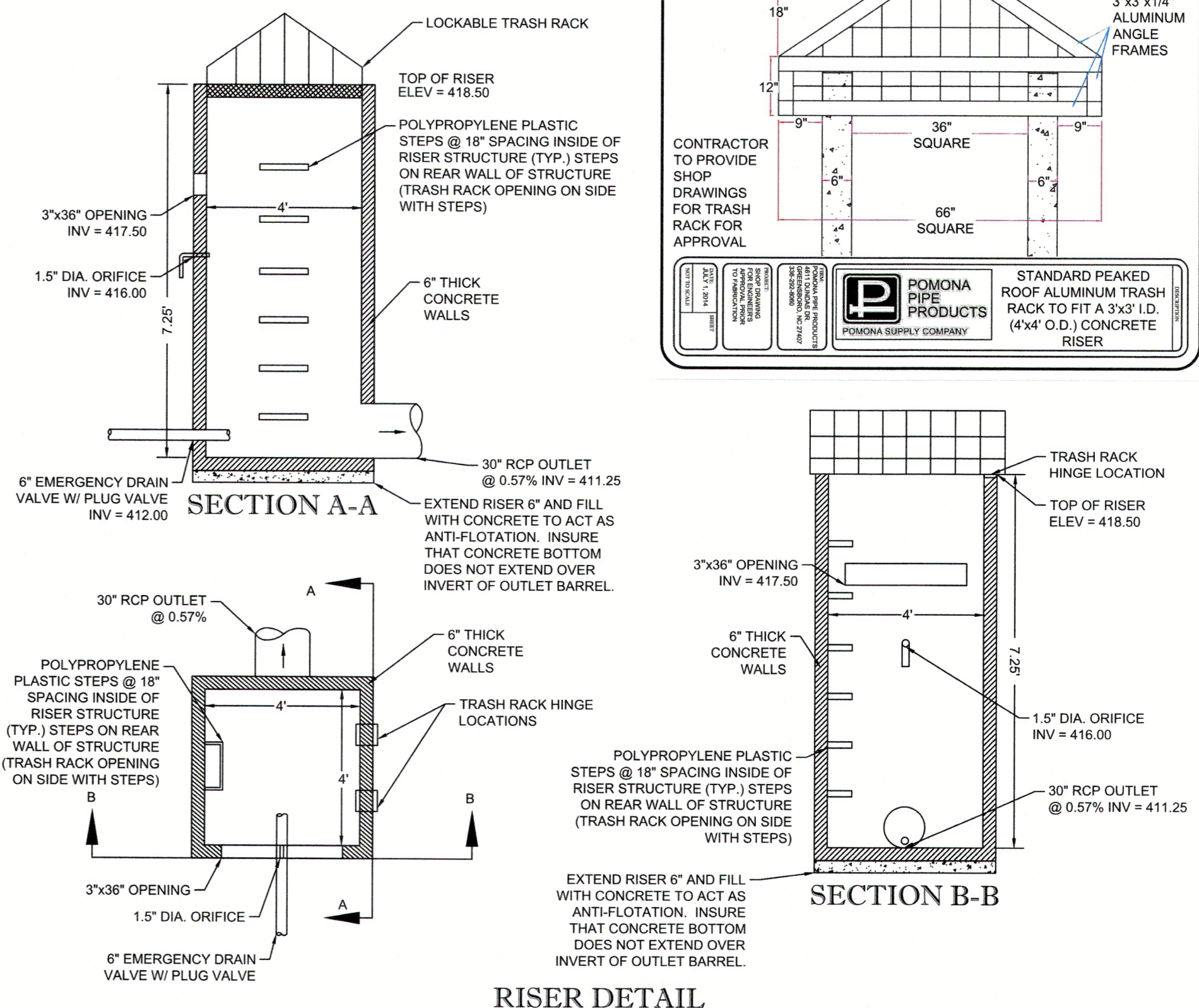
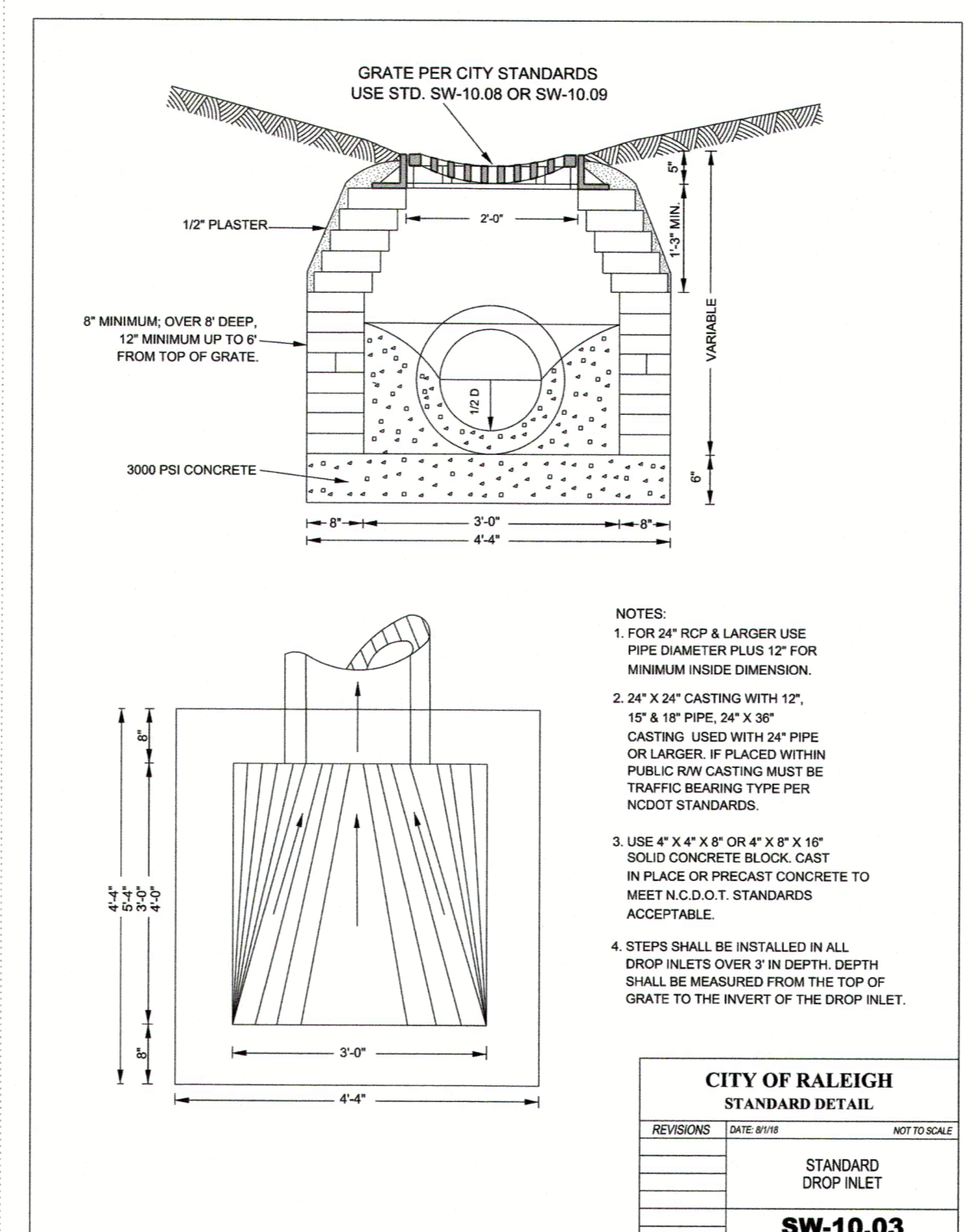
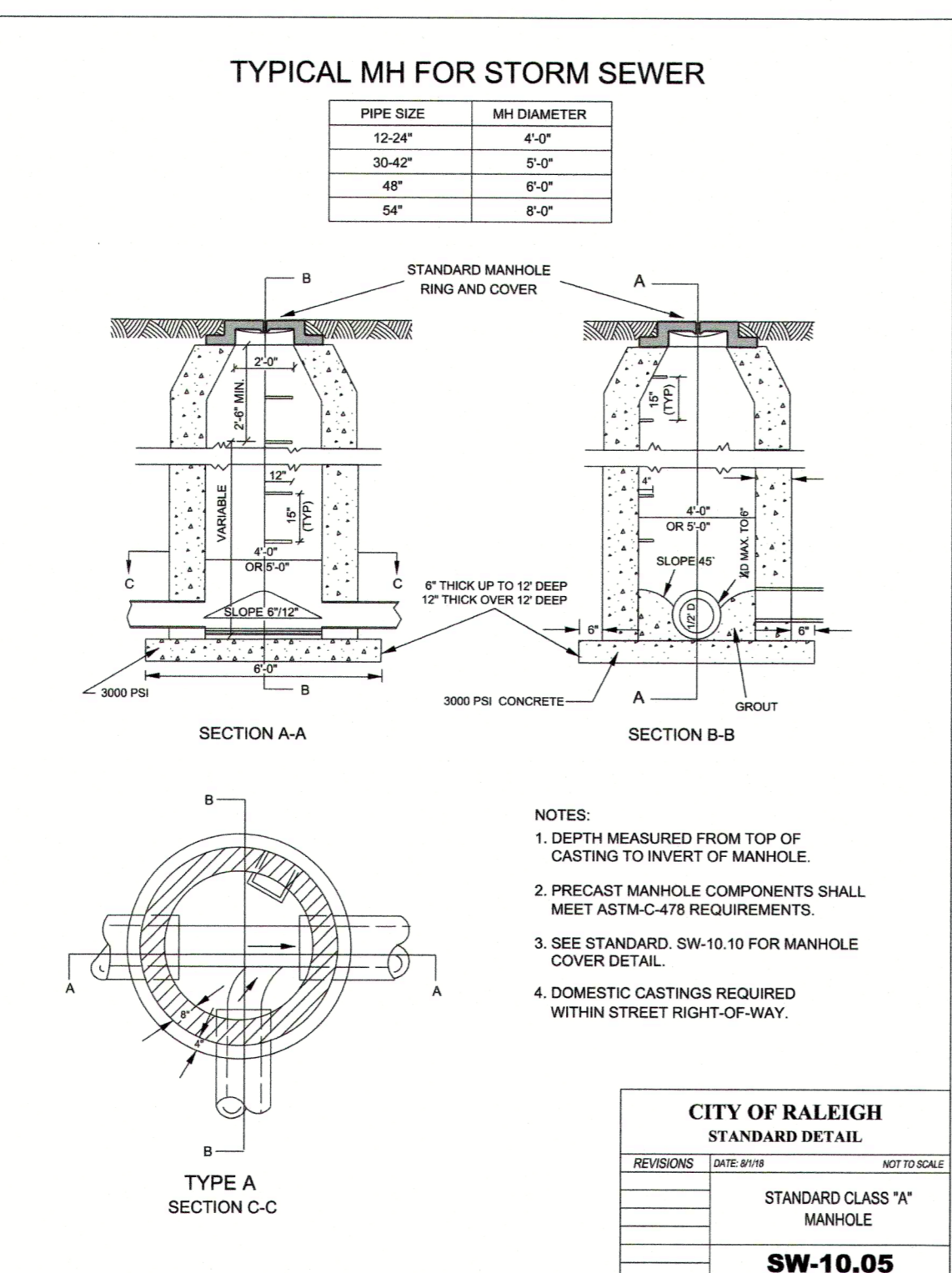
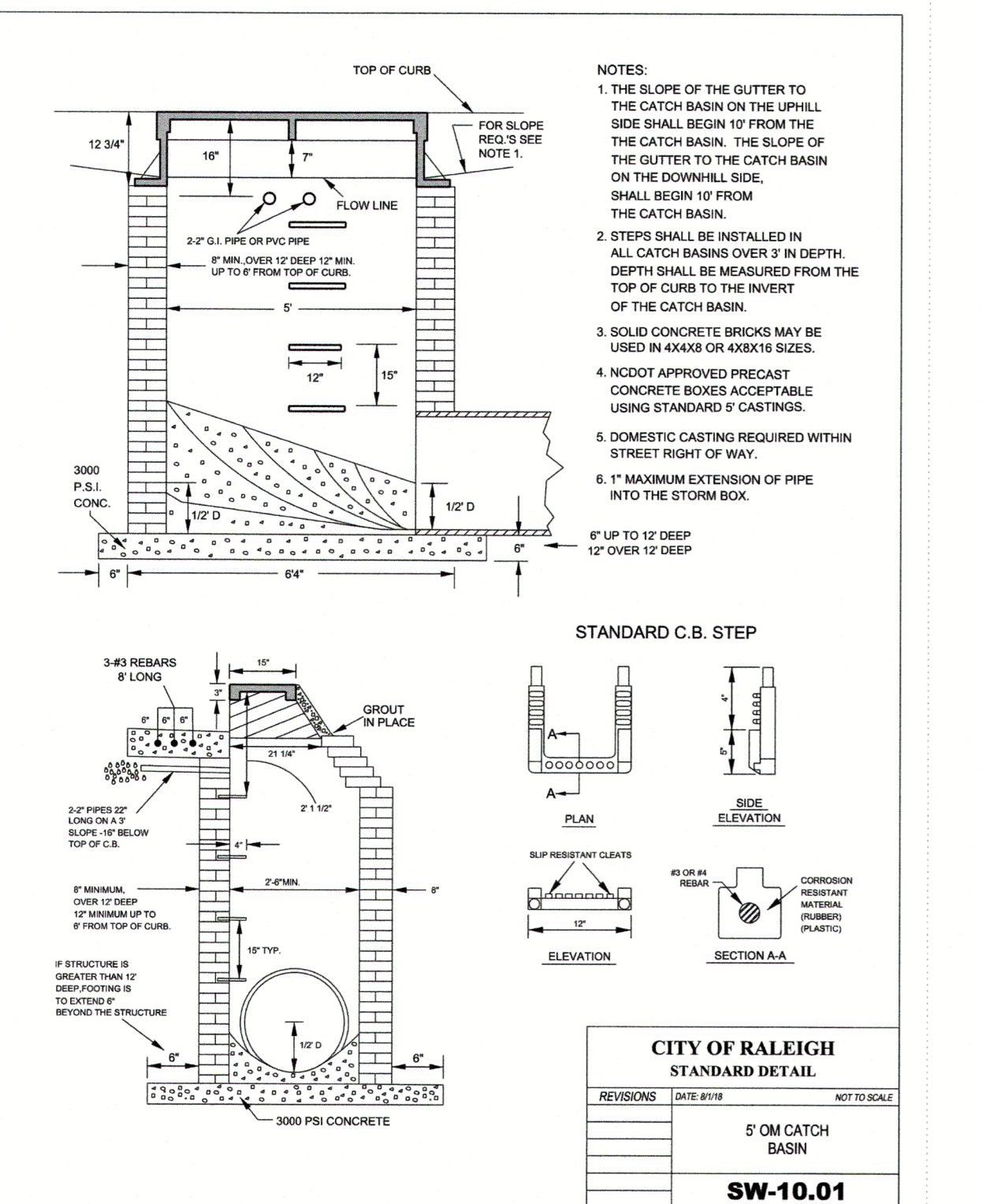
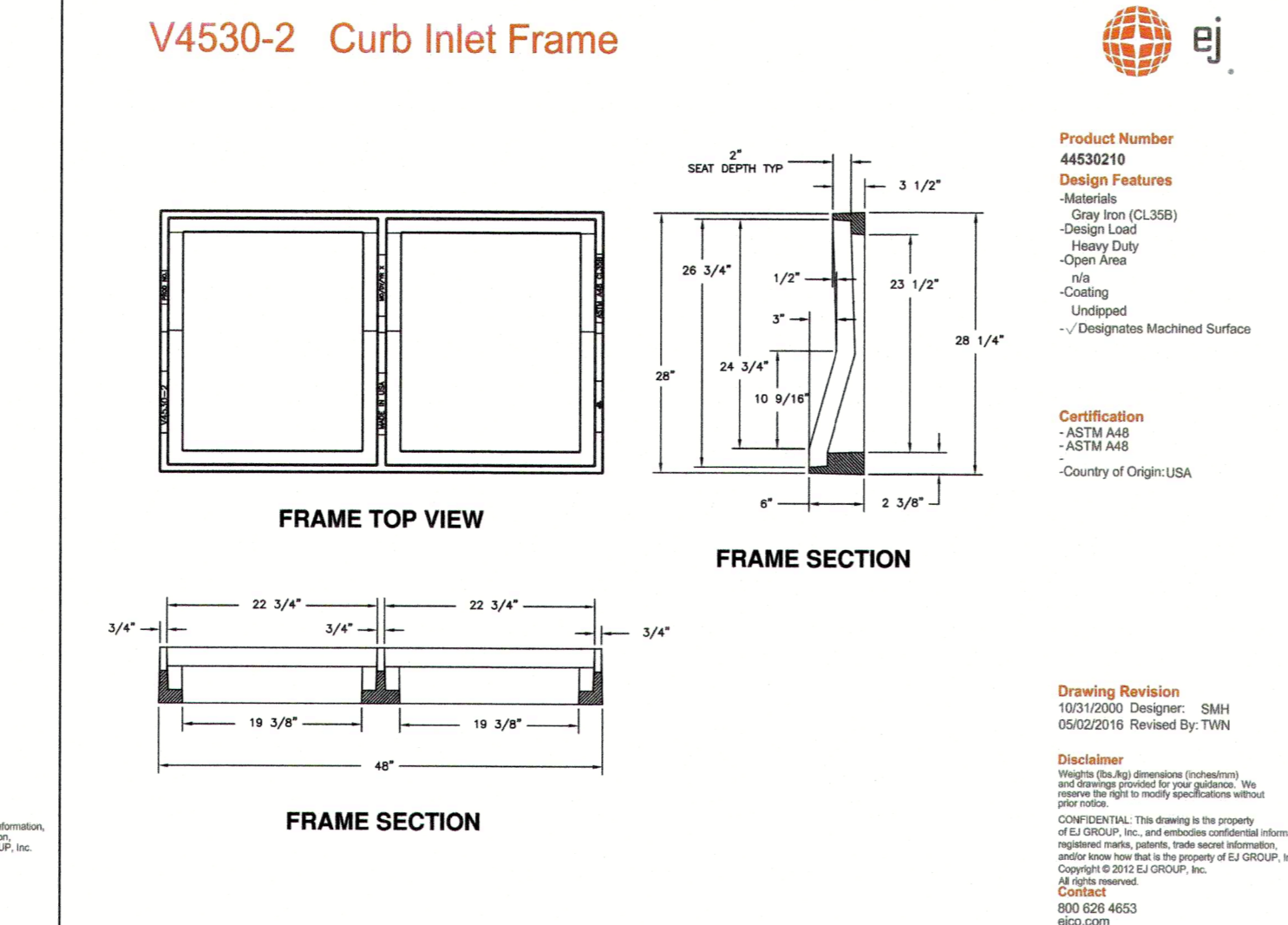
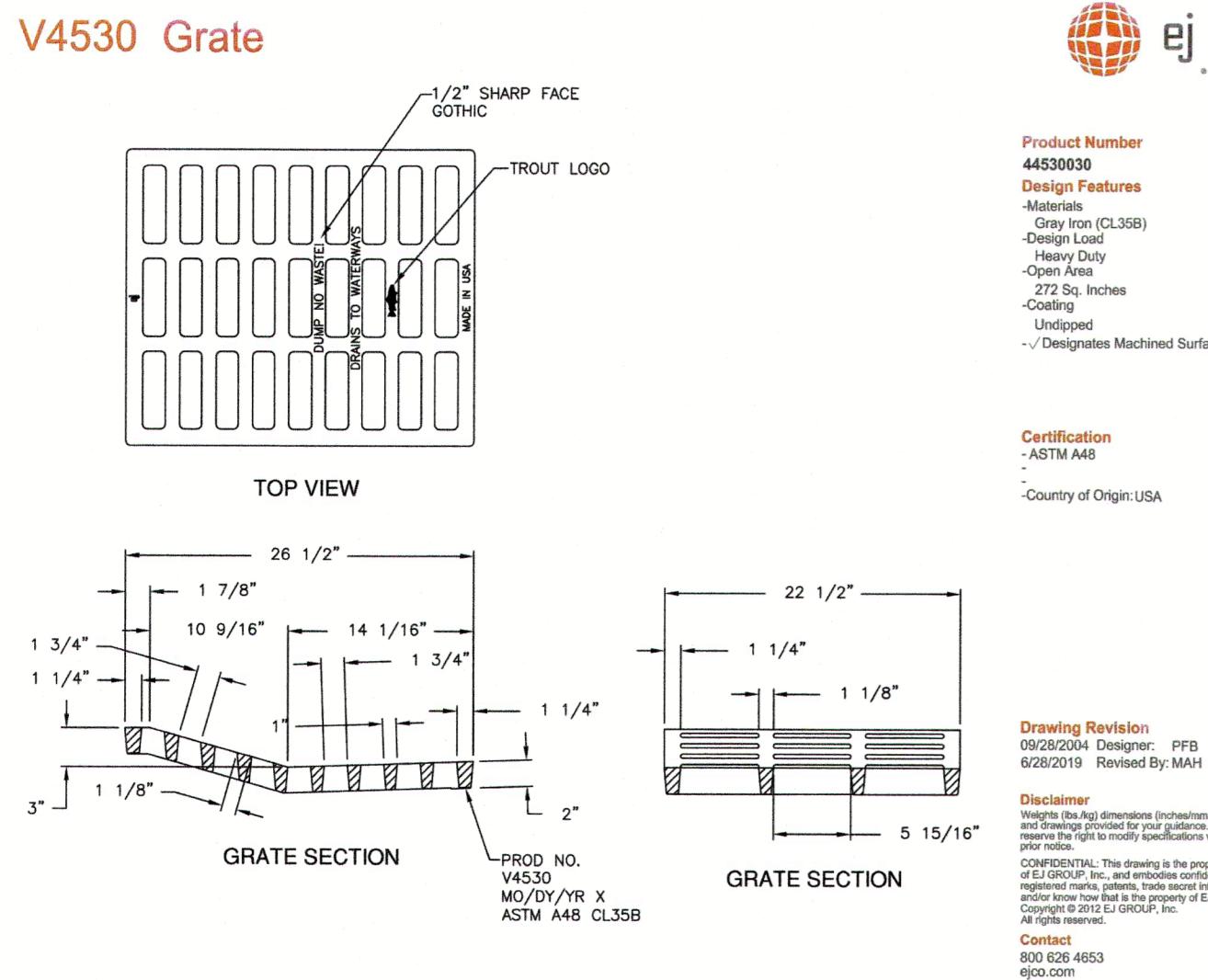
- BMP CONSTRUCTION SHALL BE IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) AS FOLLOWS:
 - SOILS SUITABLE FOR BERM CONSTRUCTION - ASTM D-2487
 - ENGINEERED SOIL MATERIALS - ASTM D-2940
 - SOIL COMPACTION - ASTM D-698
 - PRECAST CONCRETE RISERS - ASTM C-478, ASTM C-913
 - CEMENT - ASTM C-150, ASTM C-33
 - JOINT SEALANT - ASTM C-990
 - REINFORCED CONCRETE PIPING - ASTM C-76 CLASS III
- FILL MATERIALS SHALL BE MOISTURE CONDITIONED TO THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER, PLACED AND COMPACTED IN A MAXIMUM OF 8" LIFTS. MATERIAL SHALL BE FREE OF ORGANIC DEBRIS, AND HAVE A MAXIMUM ORGANIC CONTENT OF 5%. FILL MATERIAL SHALL BE FREE OF ROCK MATERIAL GREATER THAN 3" IN ANY DIRECTION.
- TESTING OF SOIL COMPACTION - SHALL BE PERFORMED BY A CERTIFIED TESTING AGENCY IN ACCORDANCE WITH ASTM E-329 AND ASTM D-3740.
- ALL FILL AND EARTH MOVING OPERATIONS SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER DURING CONSTRUCTION.
- FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO THE SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REWORKED OR REMOVED AND REPLACED WITH ACCEPTABLY PLACED MATERIALS.
- FILL PLACED ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED IN A MANNER WHERE LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
- TO REESTABLISH VEGETATION AFTER CONSTRUCTION, A TWO- TO THREE-INCH LAYER OF TOPSOIL SHALL BE PLACED AND THE AREA SEEDED AND MULCHED OR HYDROSEED. IF GRASS STABILIZATION IS ATTEMPTED DURING THE SUMMER MONTHS, THE PLACEMENT OF SOO AND THE IMPLEMENTATION OF AN AGGRESSIVE WATERING PROGRAM MAY BE NECESSARY TO ACHIEVE THE 85% STABILIZATION REQUIREMENT OF THE BCE CERTIFICATION PROGRAM. WHEN WATERING RESTRICTIONS ARE IN PLACE DURING DROUGHT CONDITIONS, OTHER AVENUES FOR WATERING (SUCH AS USING RECLAIMED WATER, ETC.) SHALL BE IMPLEMENTED.

CONTROL STRUCTURE NOTE

ALL ORIFICES TO HAVE SCREEN INSTALLED OVER OPENINGS TO PREVENT BLOCKAGE.

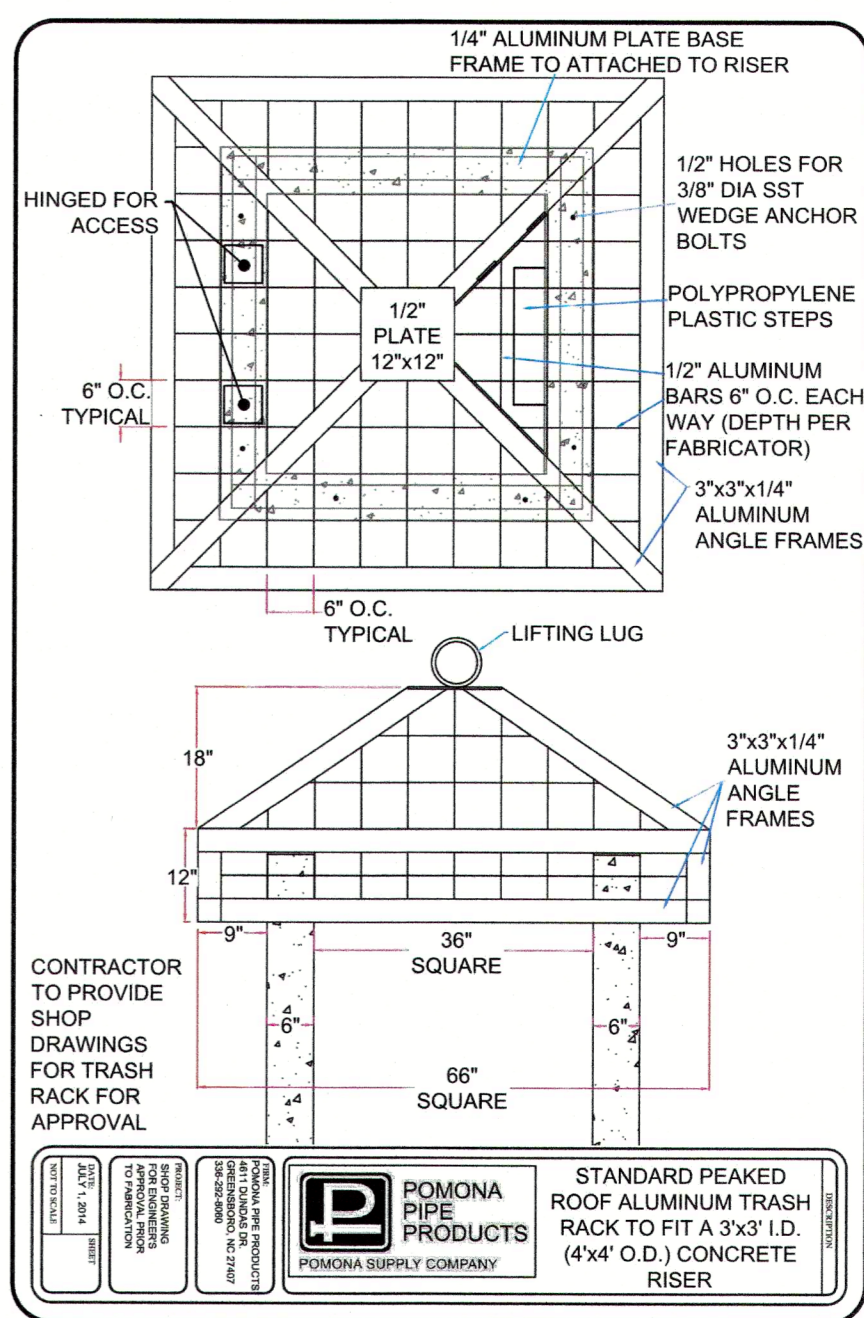
SETTLEMENT CALCULATION

EMBANKMENT SHALL BE CONSTRUCTED TO WITH AN ADDITIONAL 5% OF HEIGHT TO ALLOW FOR SETTLEMENT. MAXIMUM PROPOSED EMBANKMENT HEIGHT FROM FINISHED GRADE: 8' ADDITIONAL DAM HEIGHT REQUIRED: 0.40' (TOP OF EMBANKMENT 419.90')



GEOTEXTILE SPECIFICATIONS

GEOTEXTILE FABRIC TO BE NONWOVEN.



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01/21/2021

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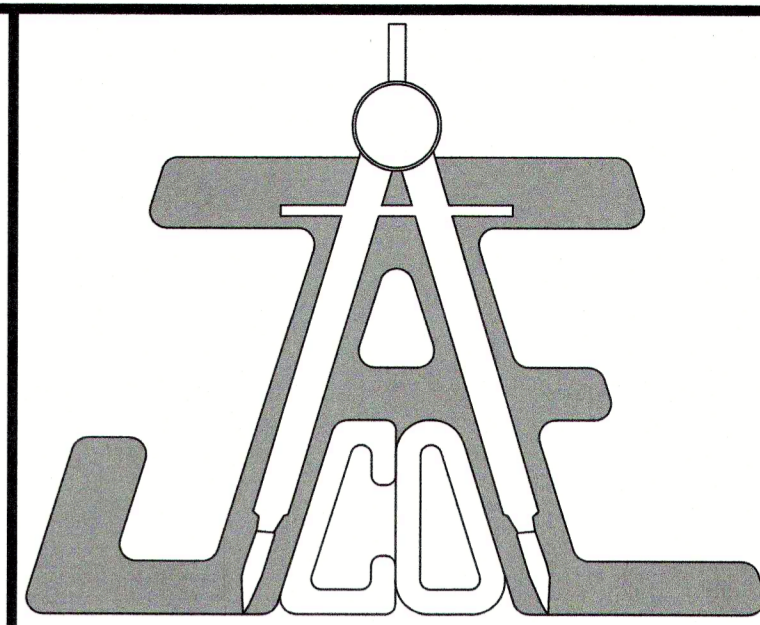
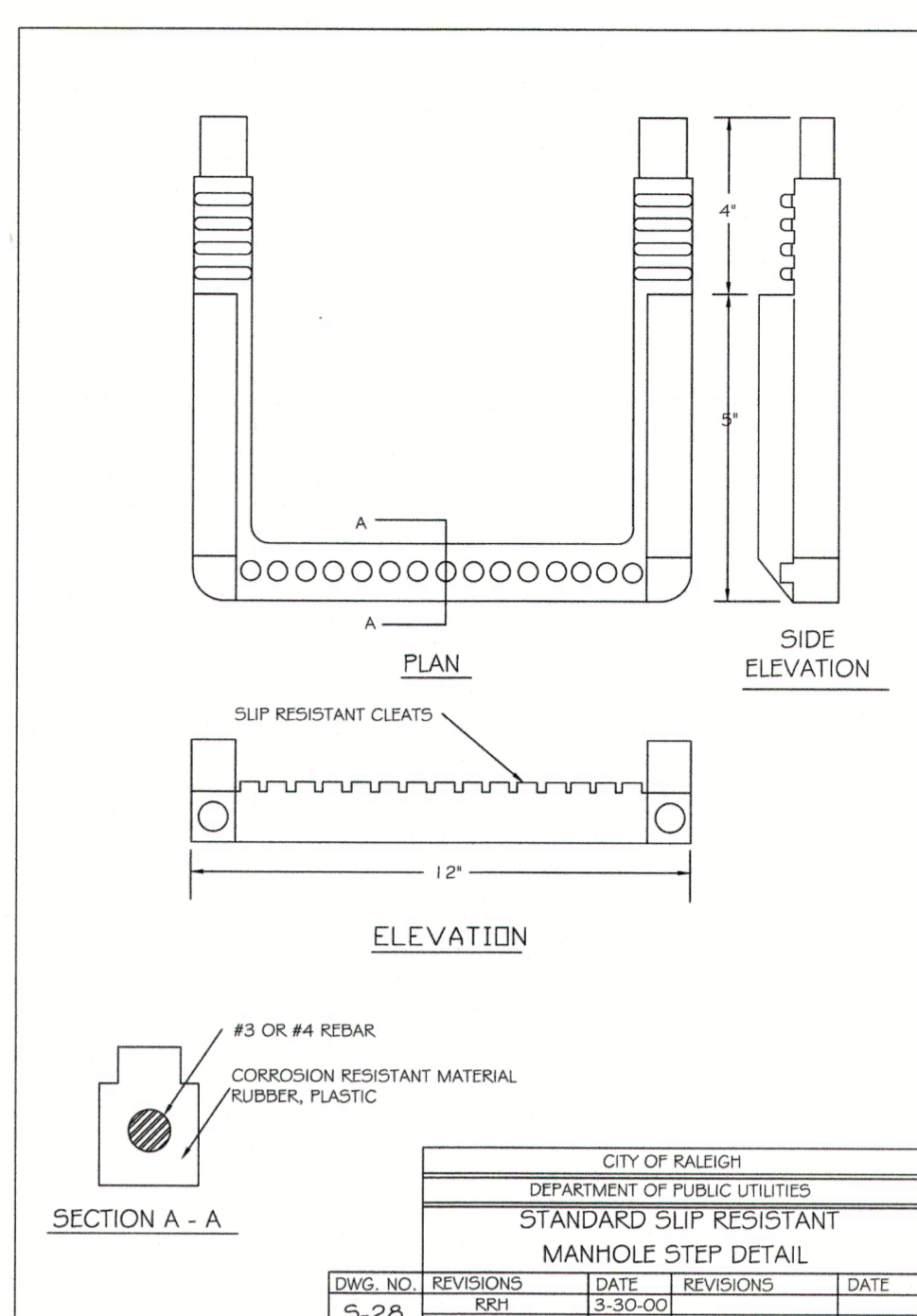
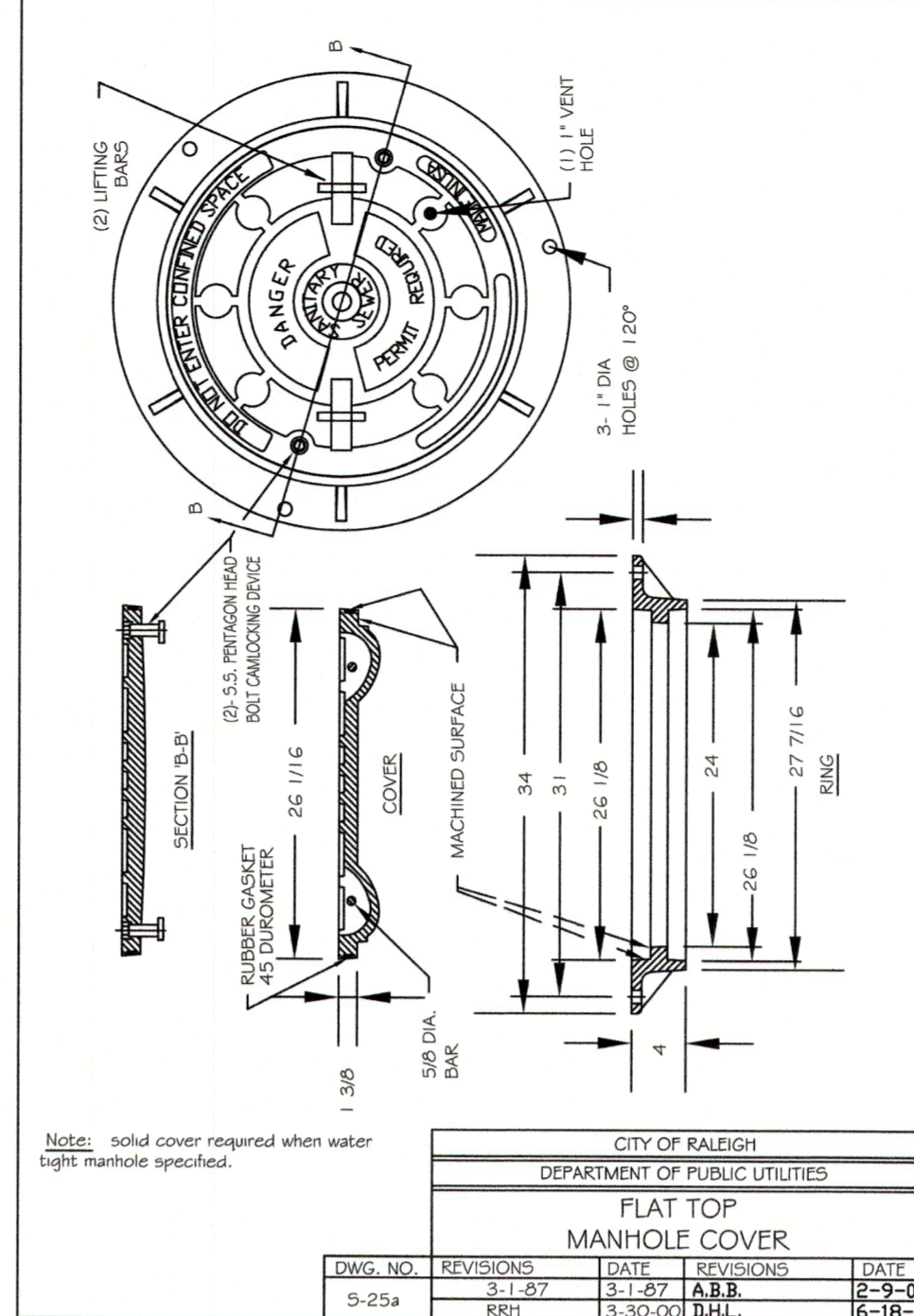
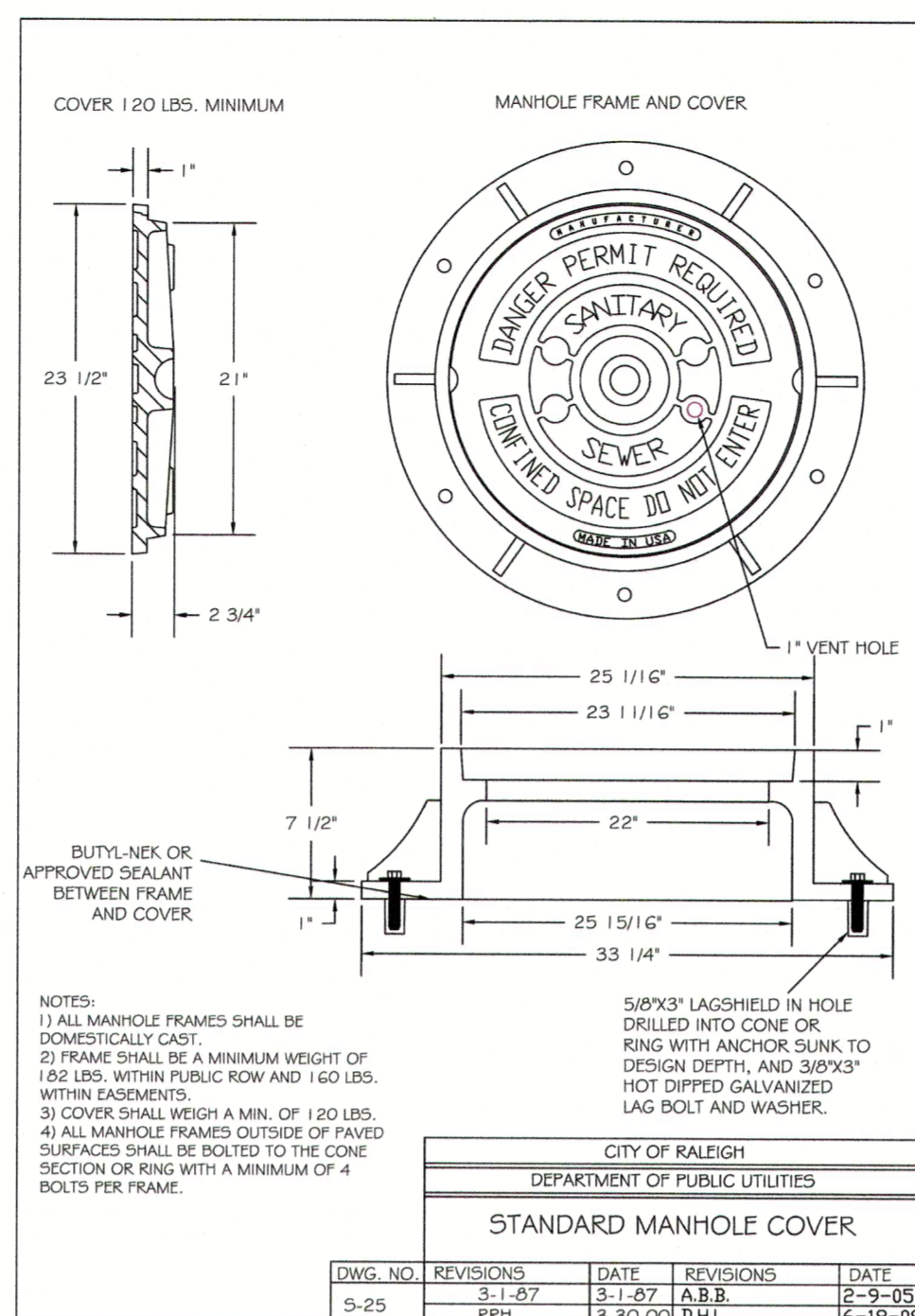
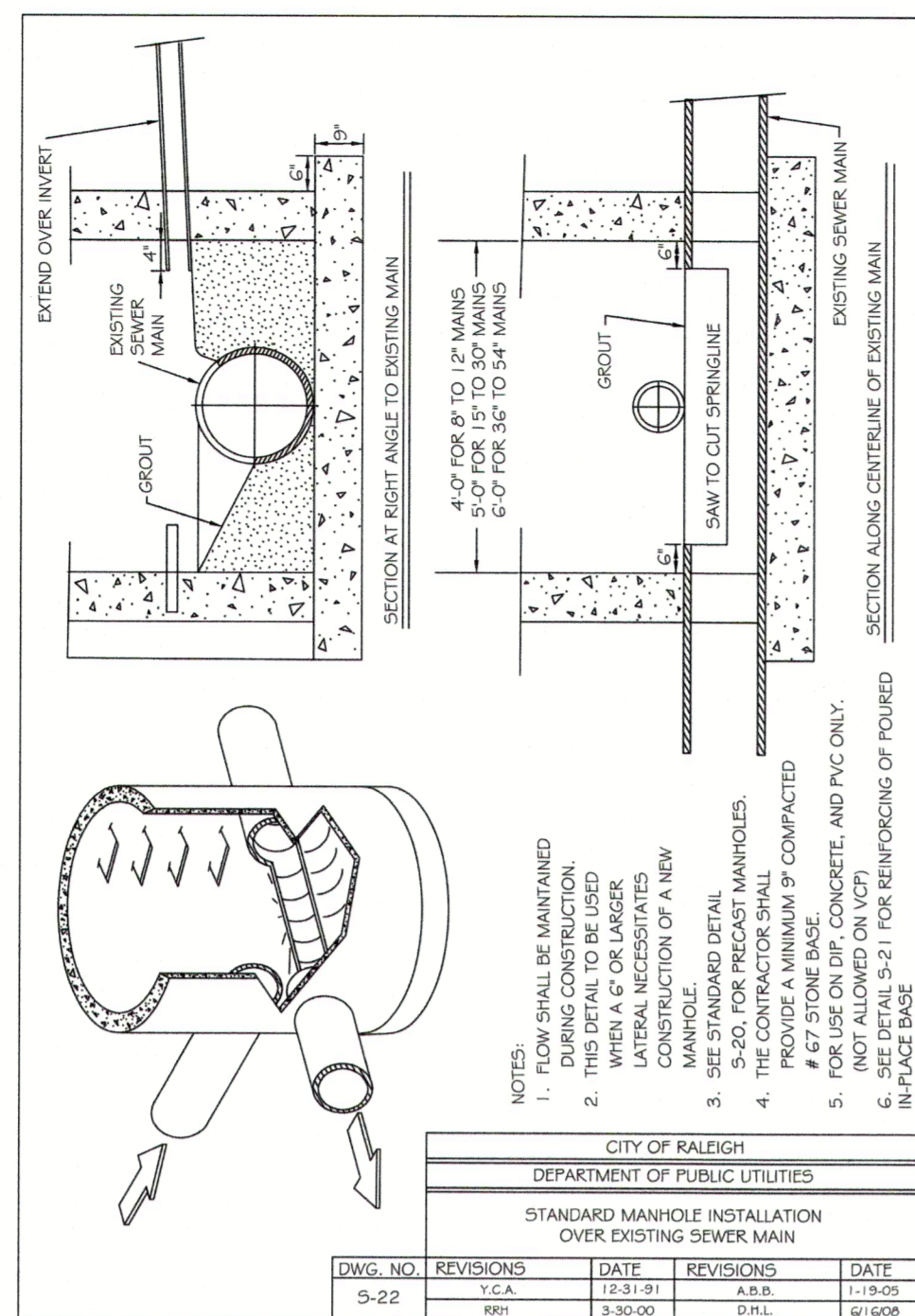
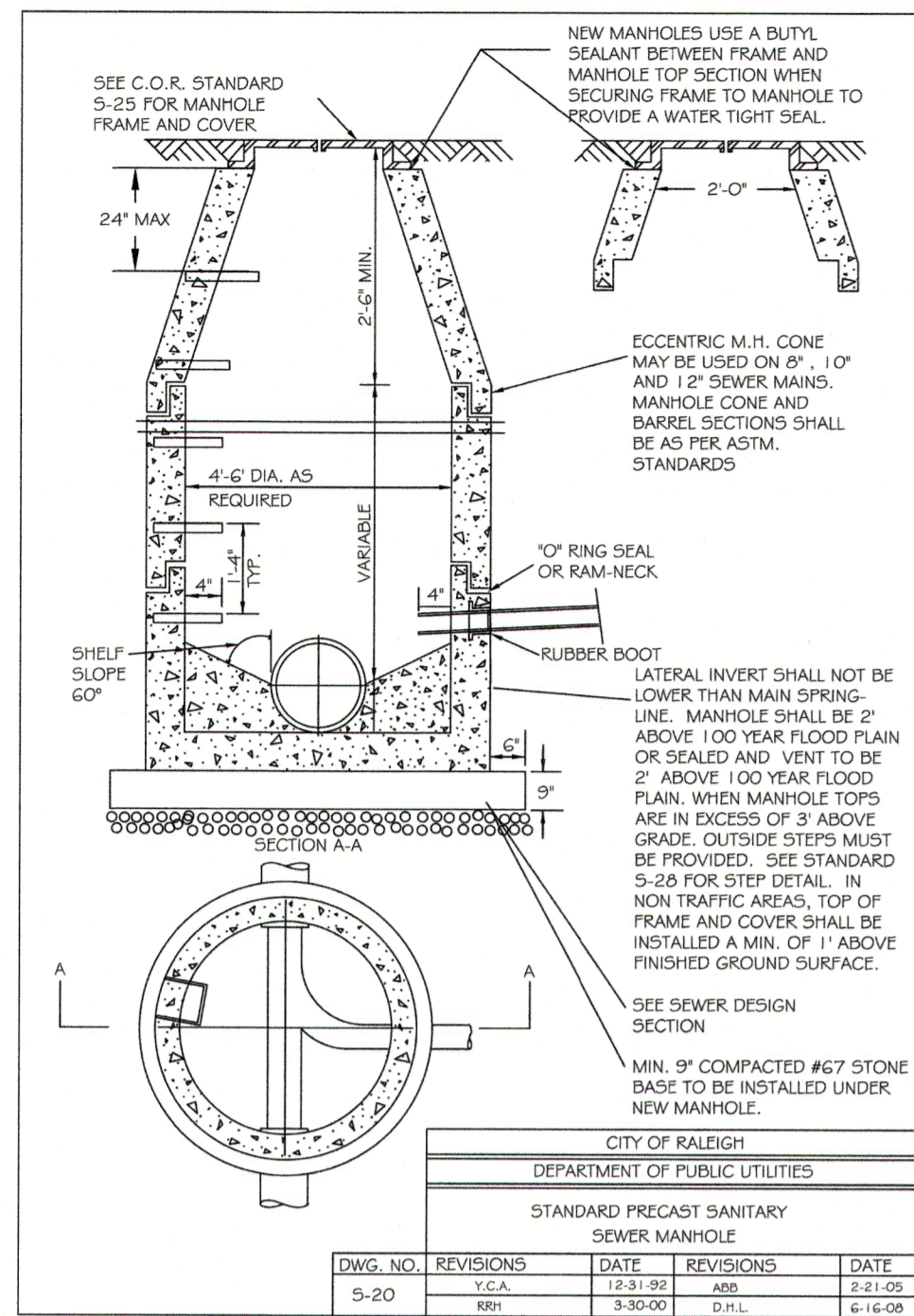
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STORMDRAIN DETAILS

Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO # 362-09
 DRAWING SCALE: AS SHOWN
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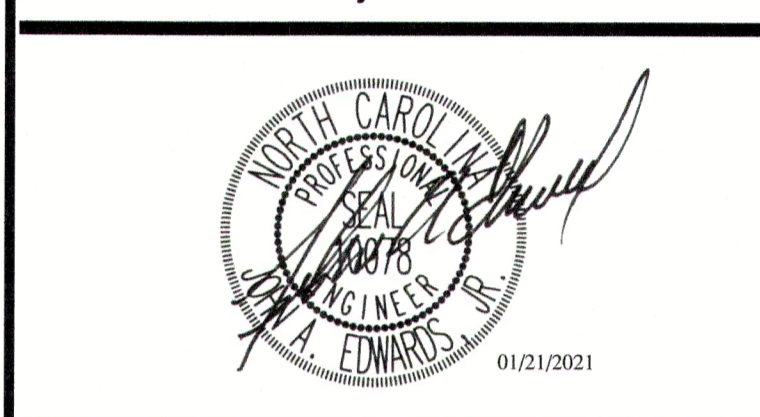
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LEGEND



PLANS NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED BY CITY OF RALEIGH

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh Public Utilities Department Permit # W-3745

City of Raleigh Public Utilities Department Permit # S-4760(P)

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

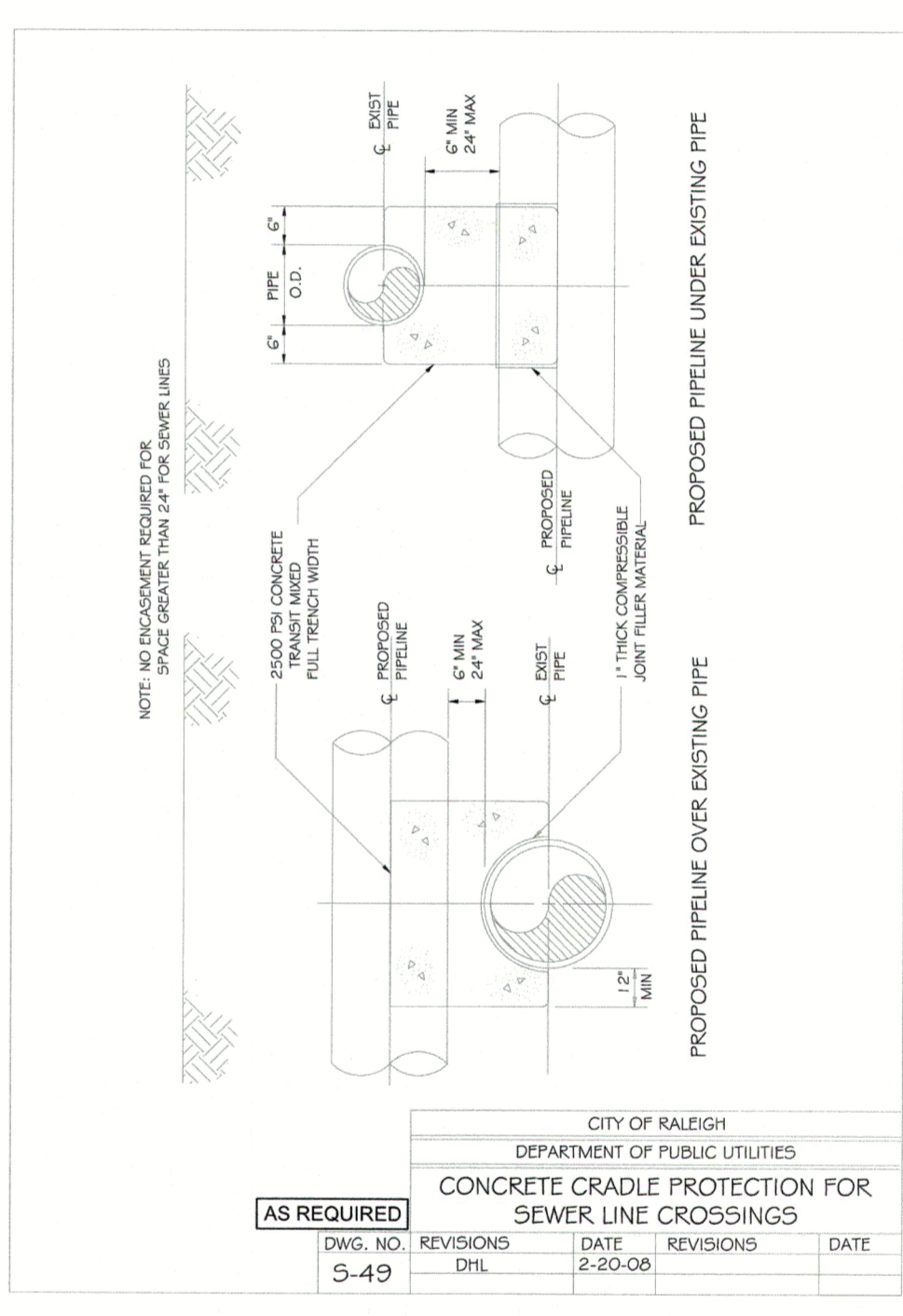
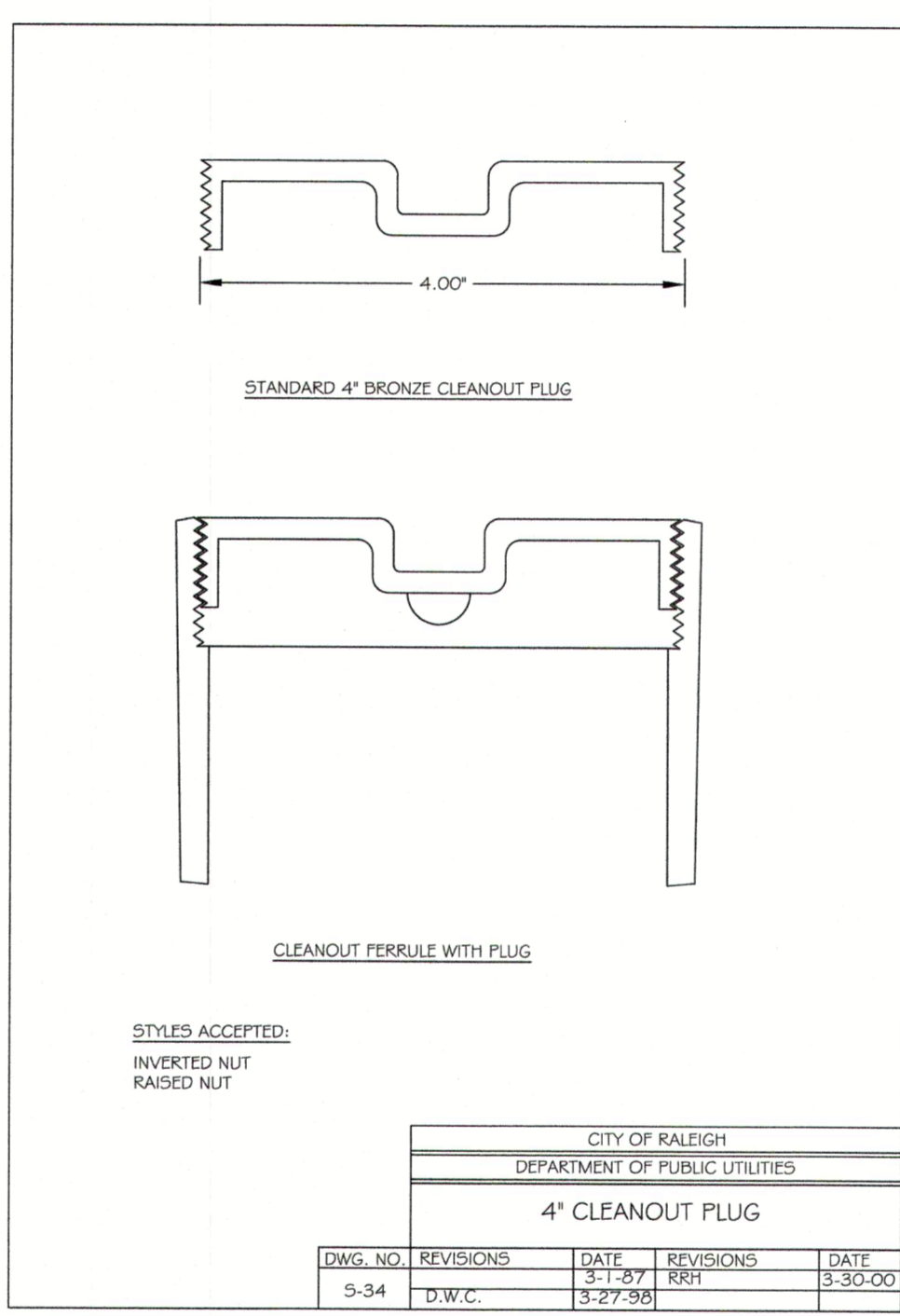
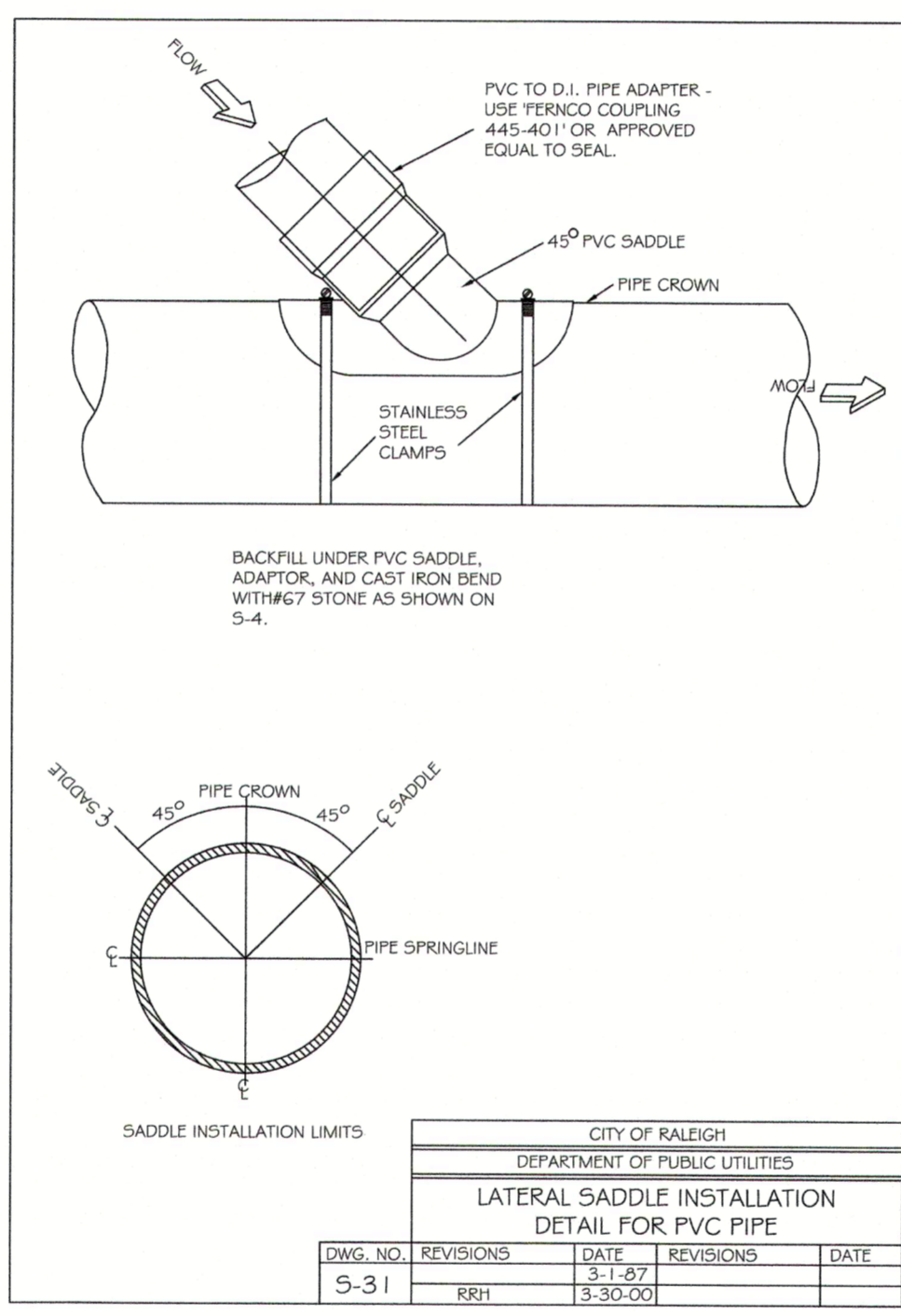
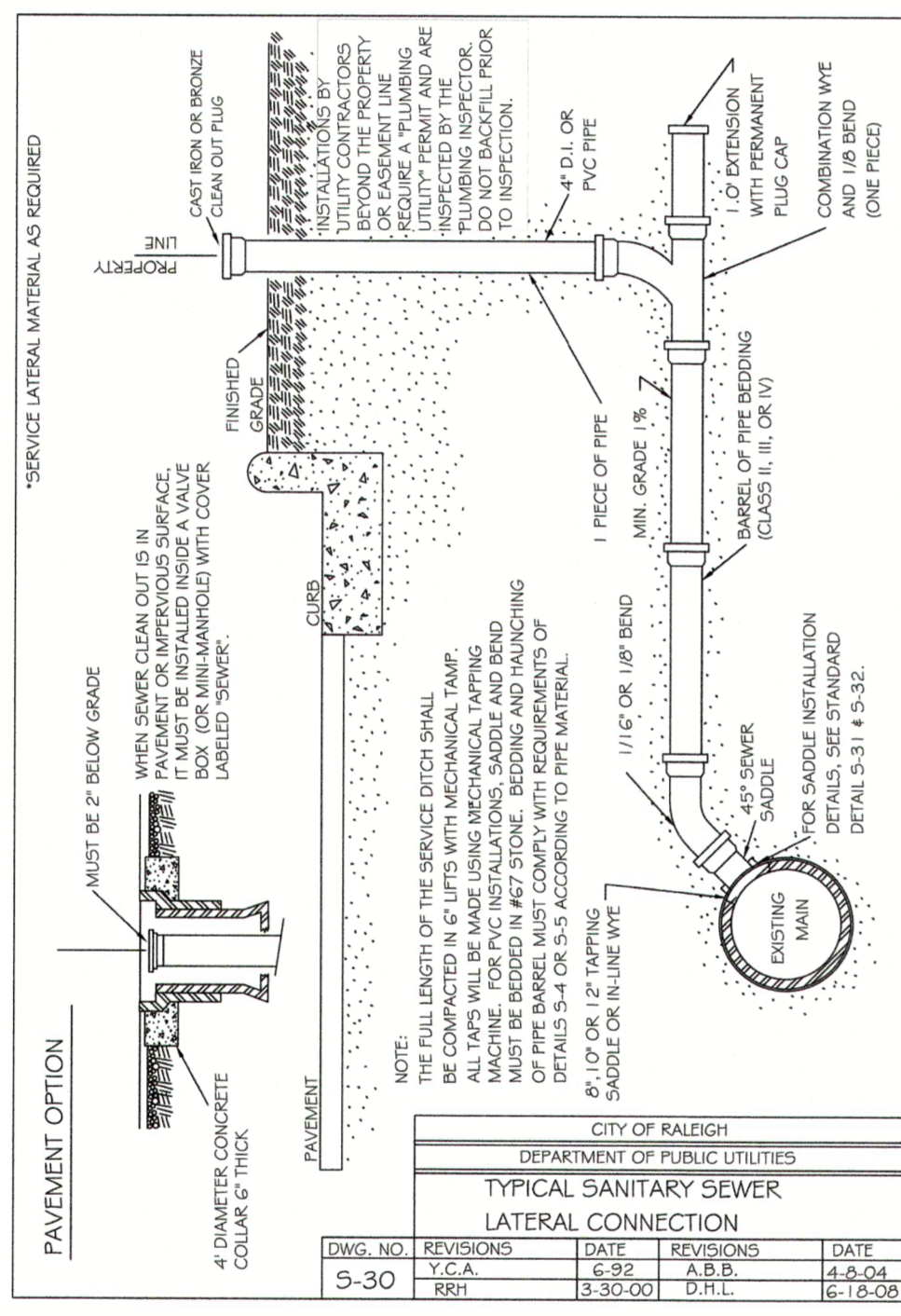
City of Raleigh Development Approval
Raleigh Water Review Officer

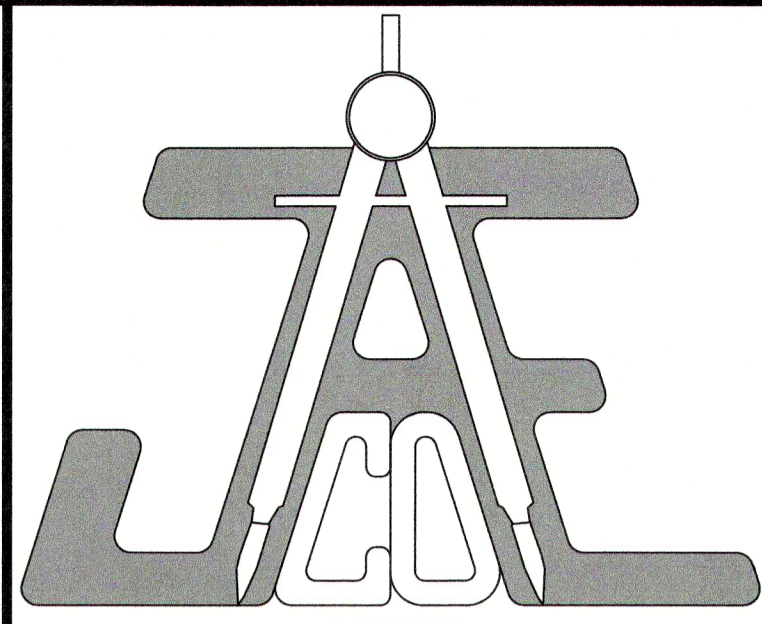
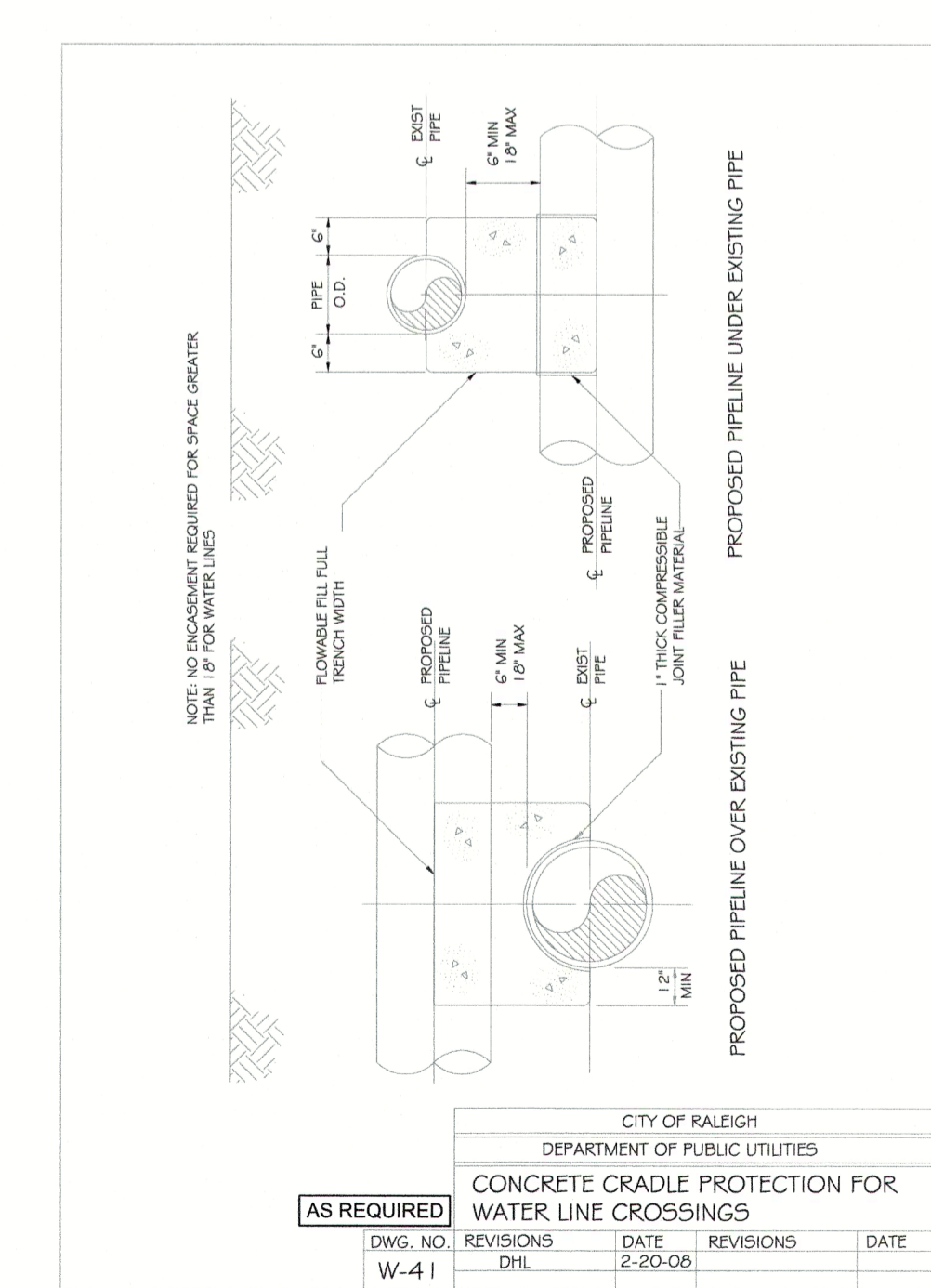
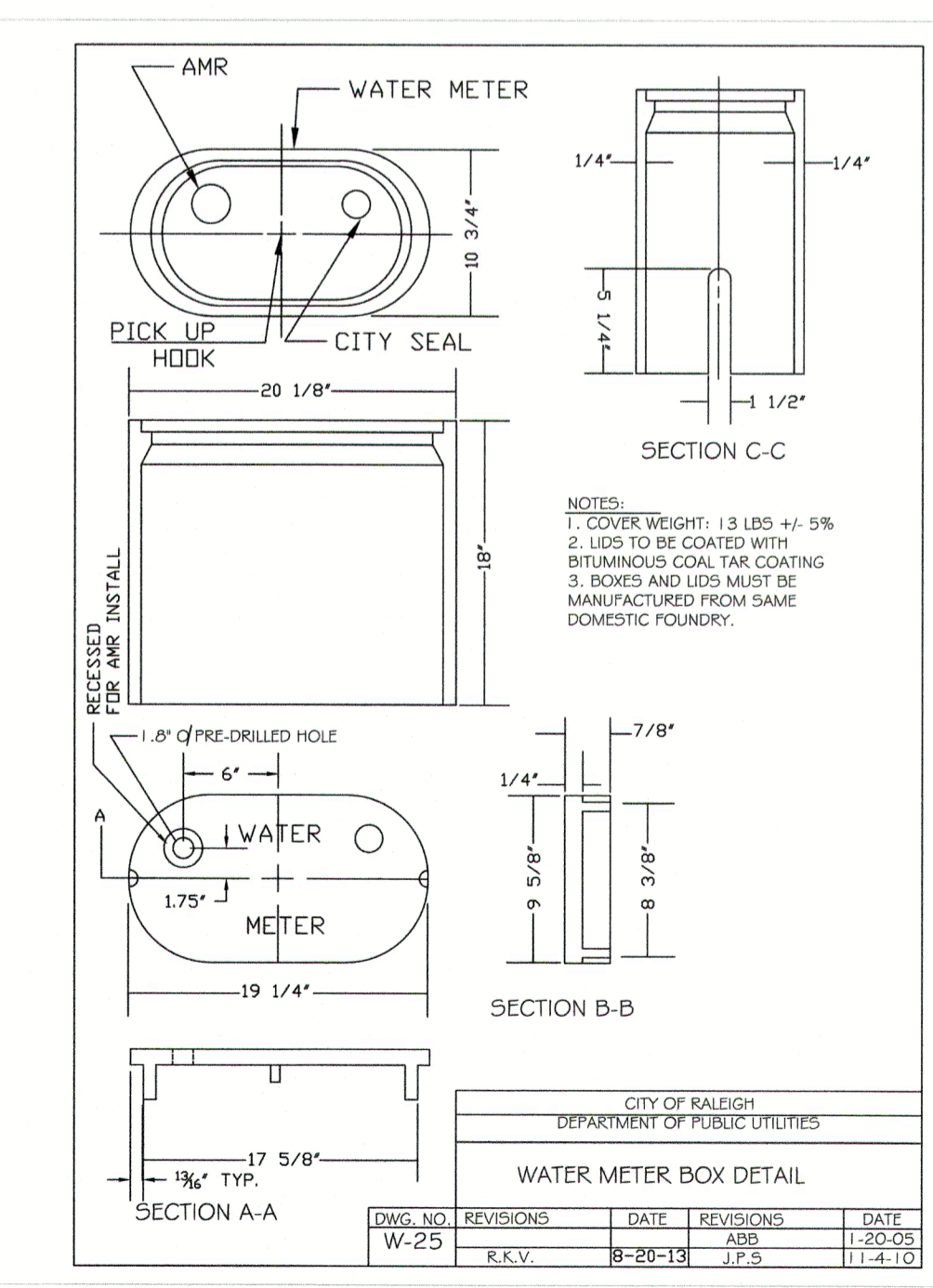
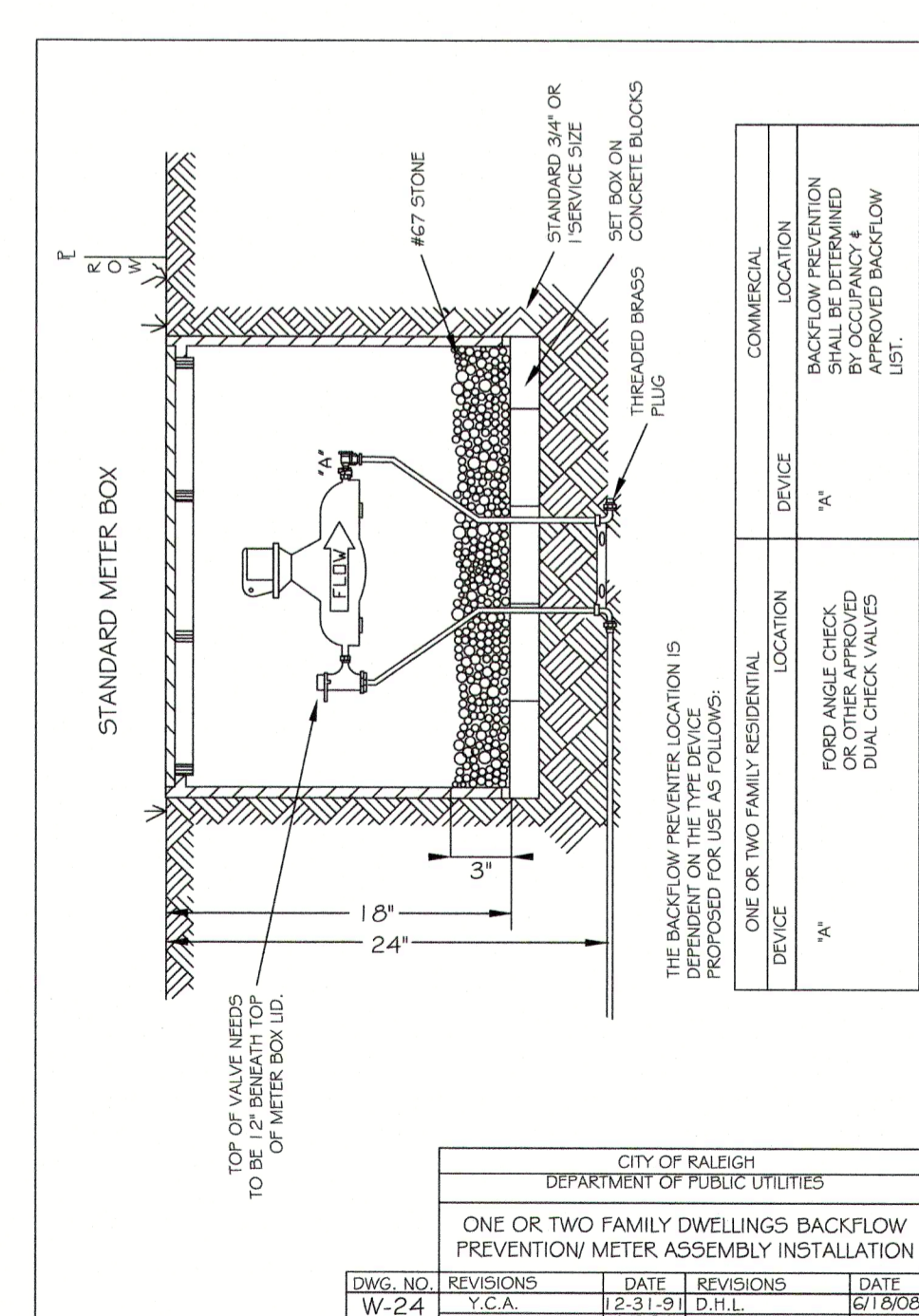
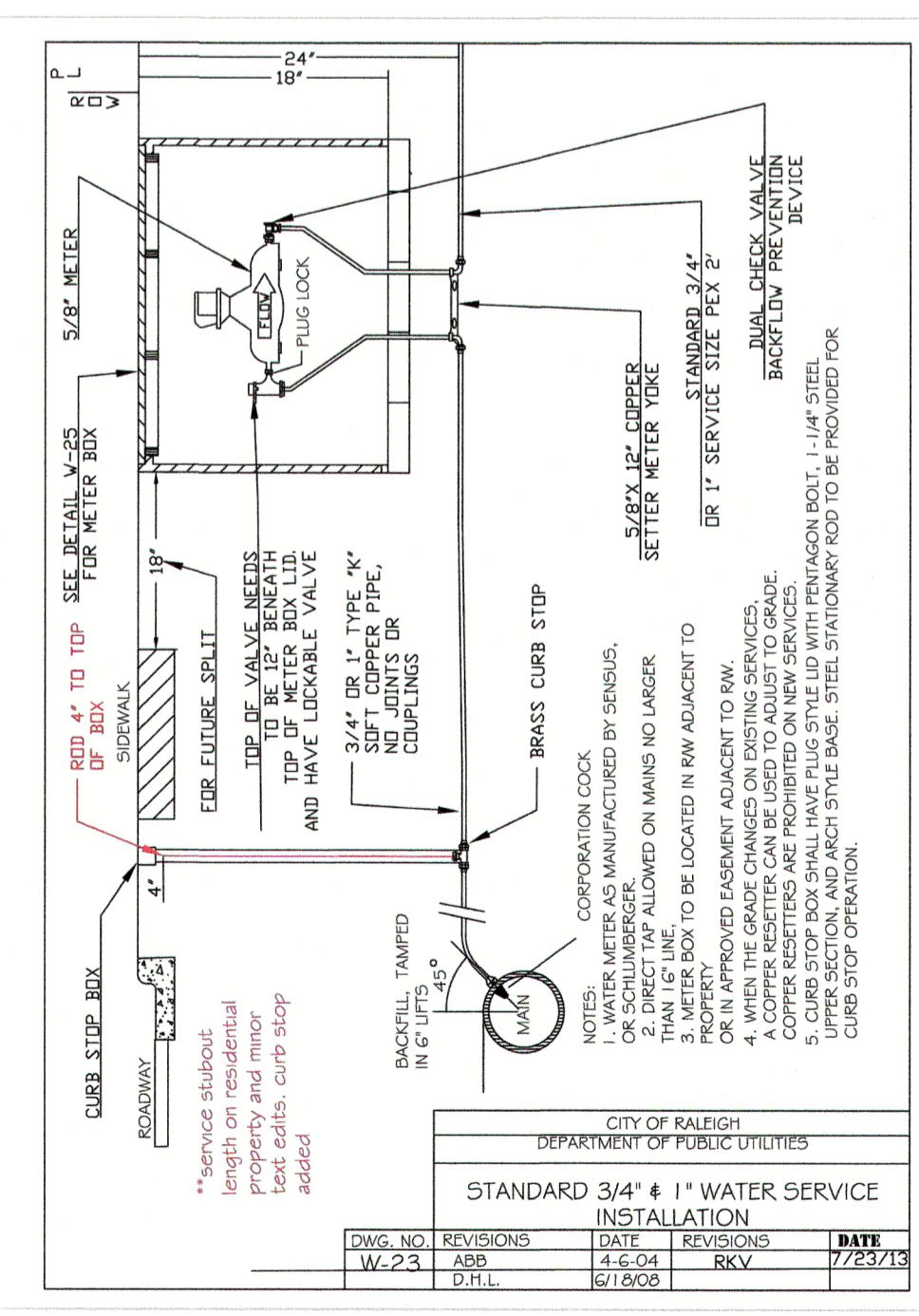
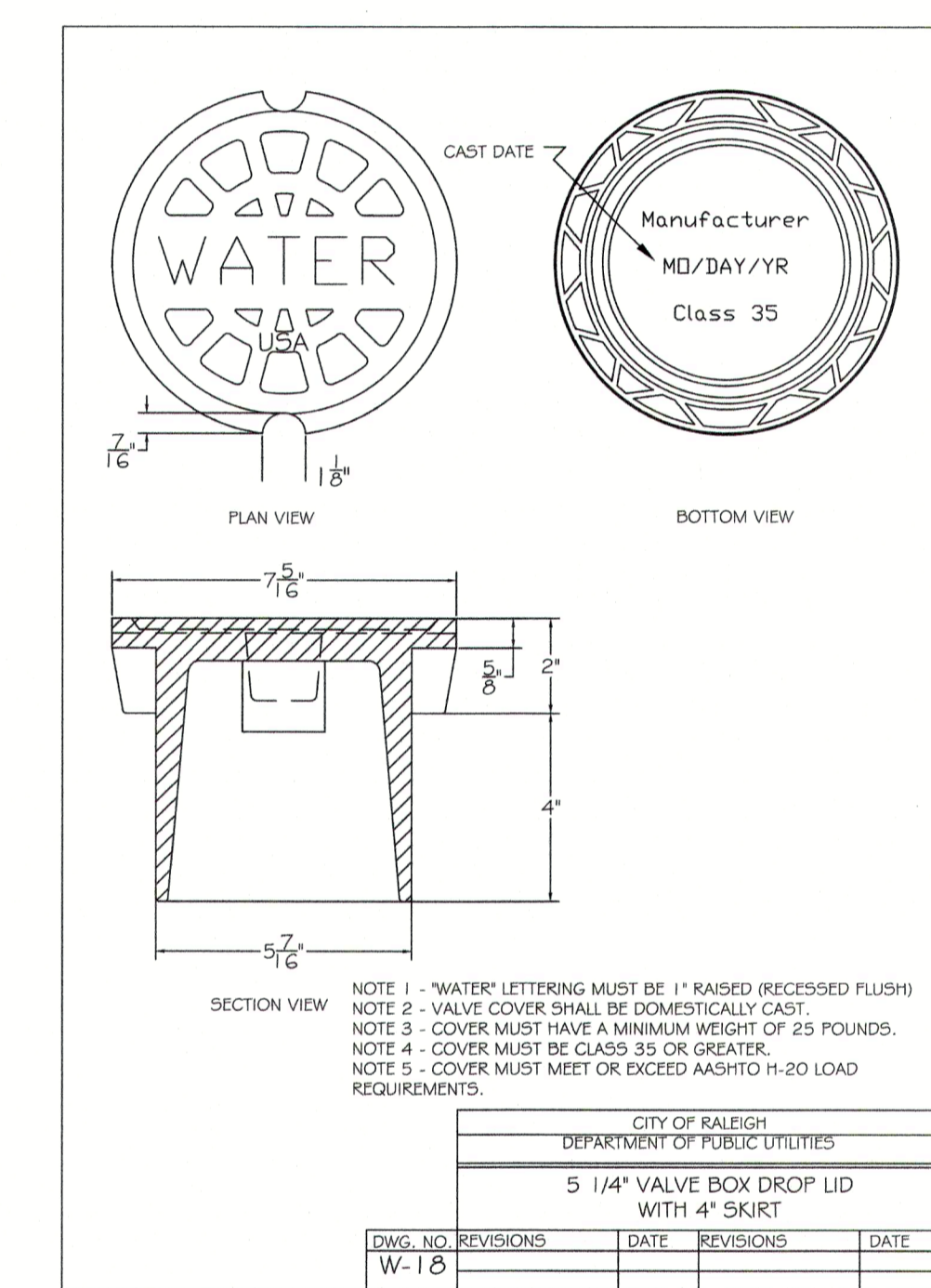
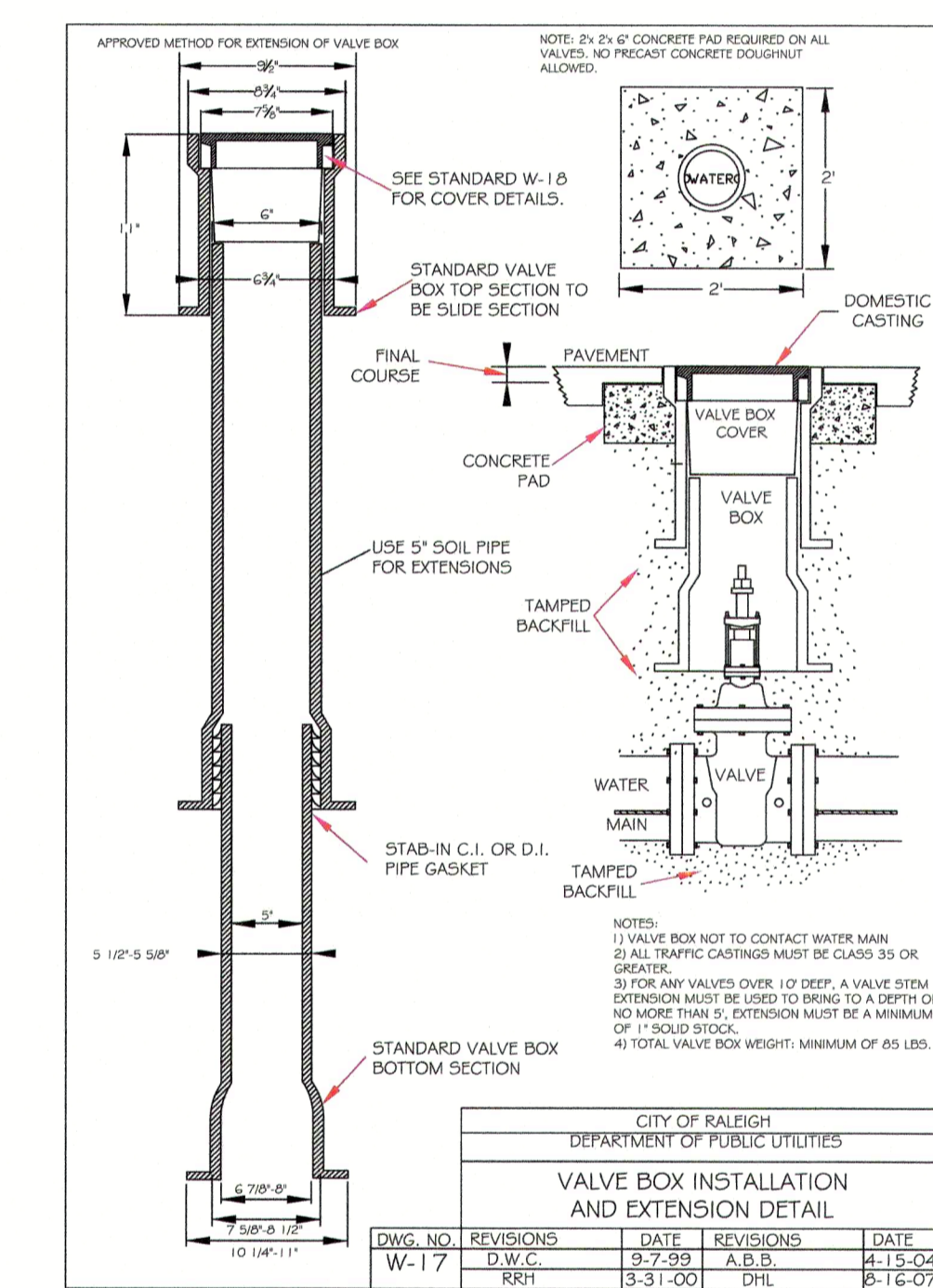
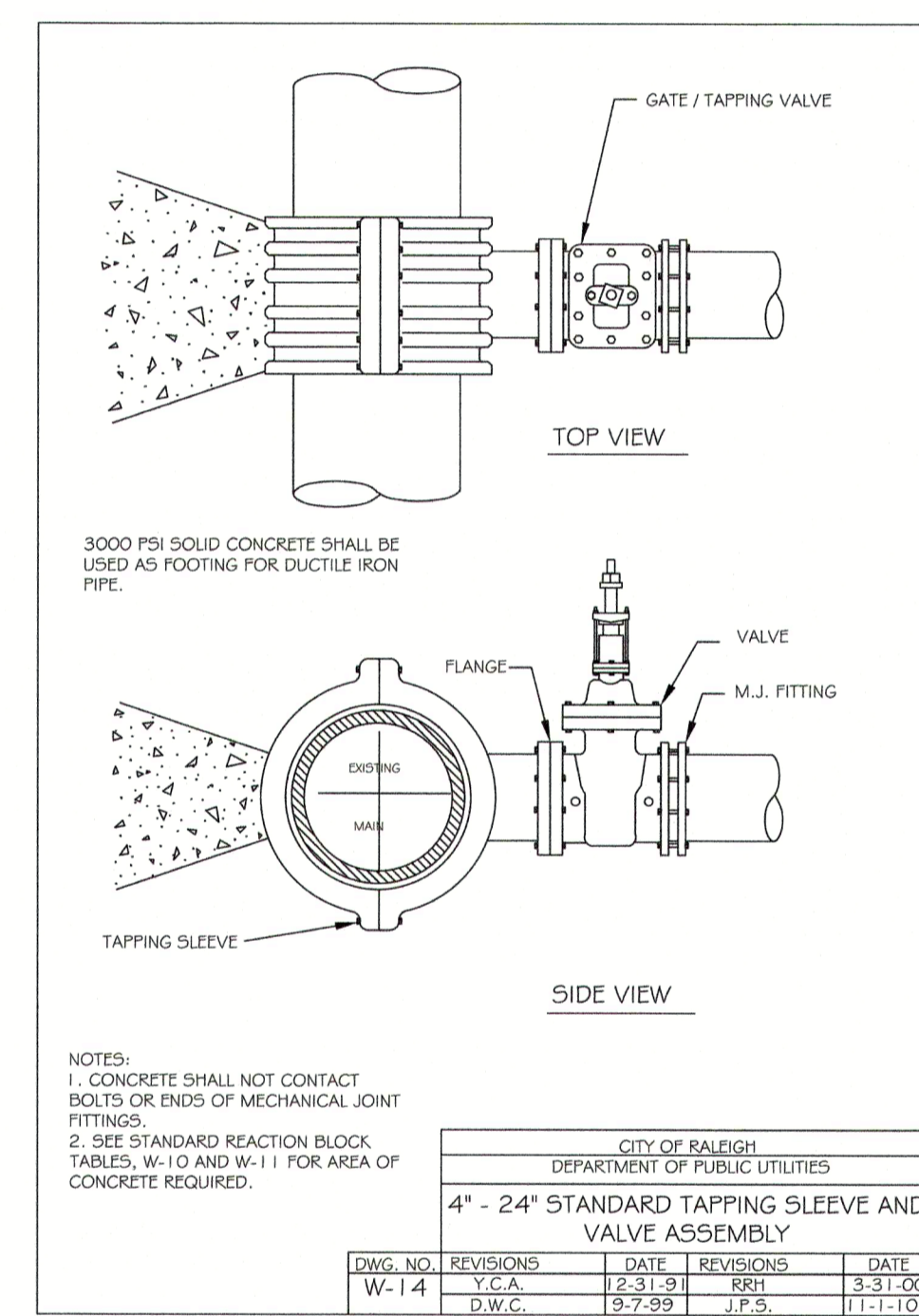
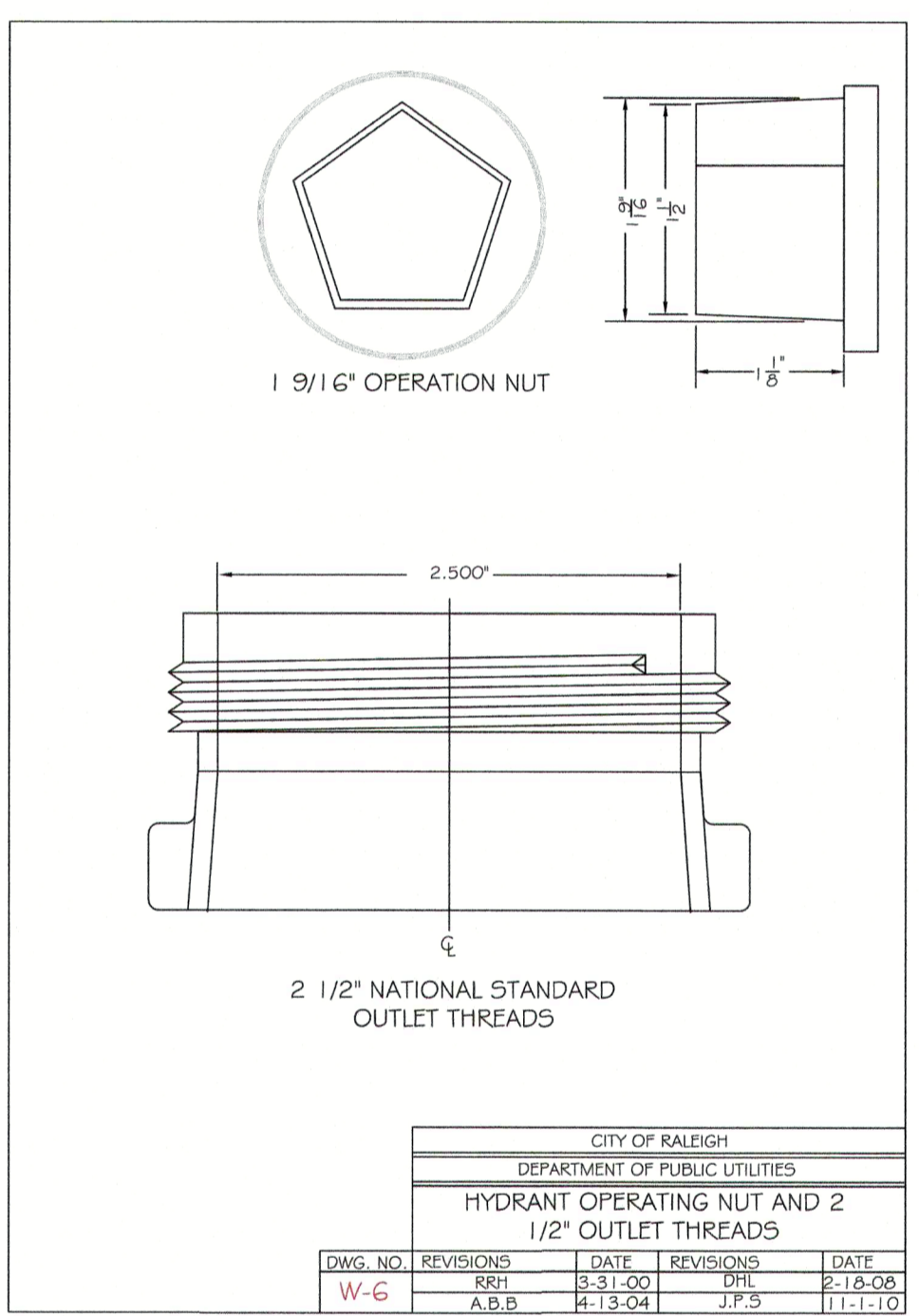
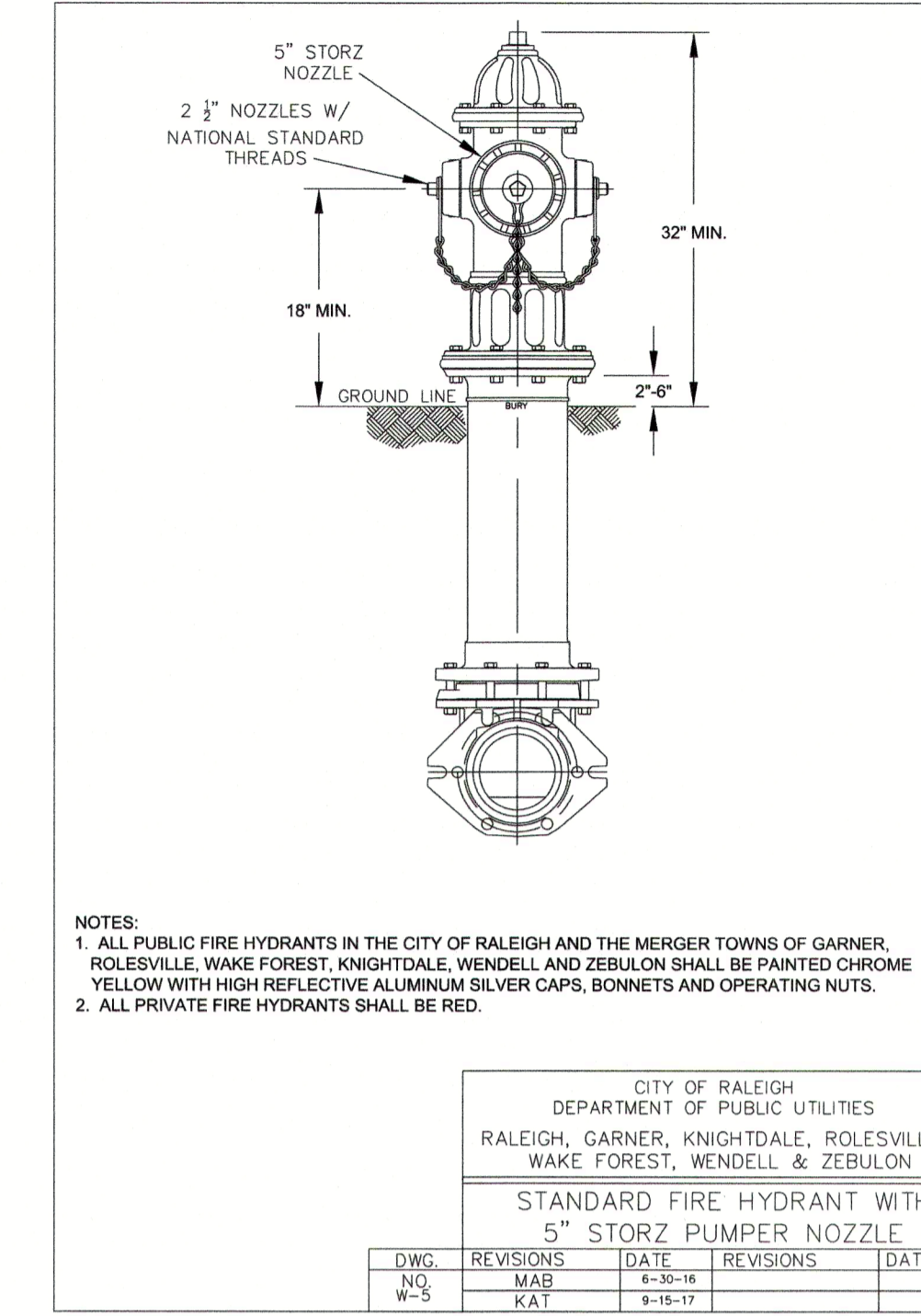
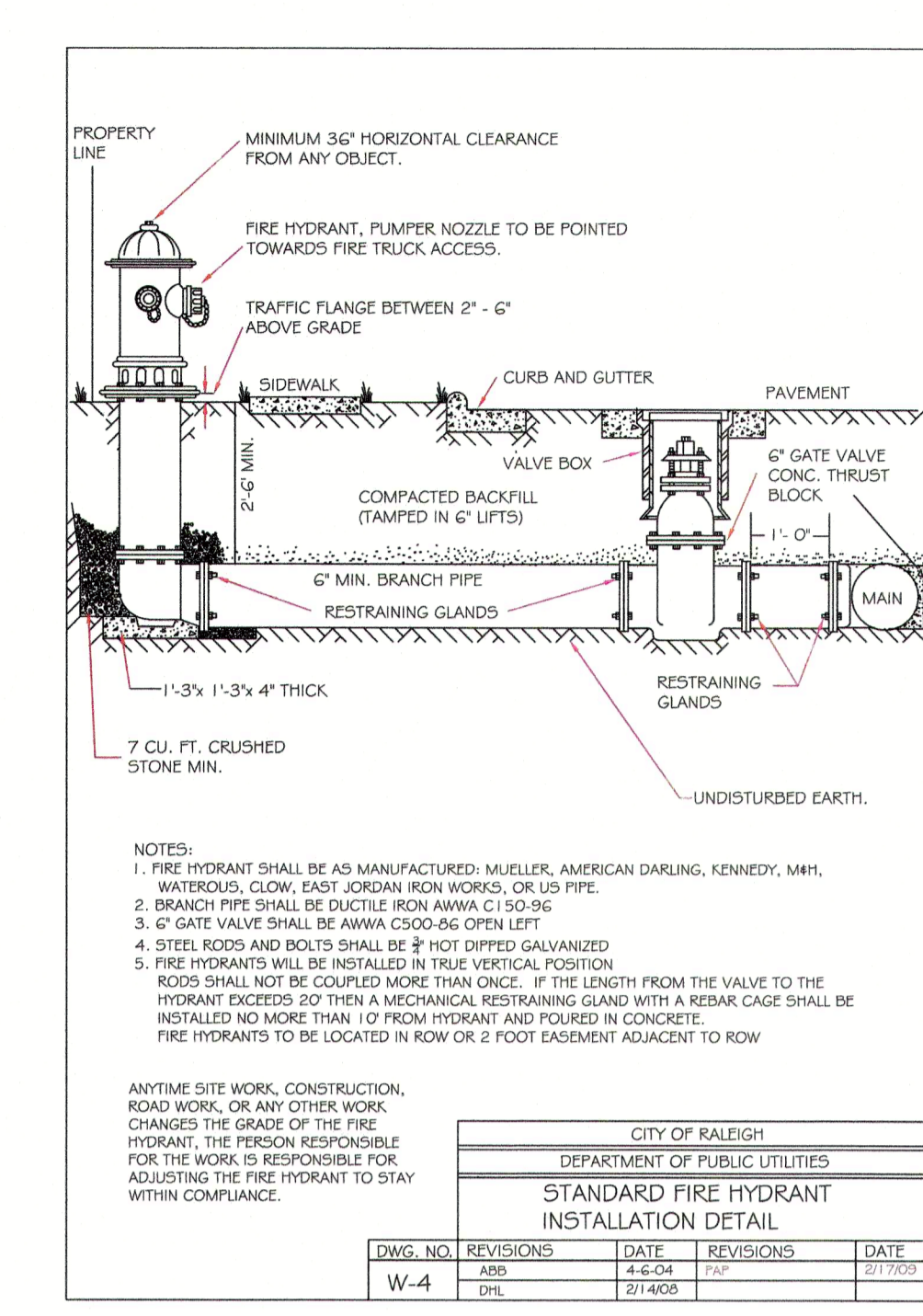
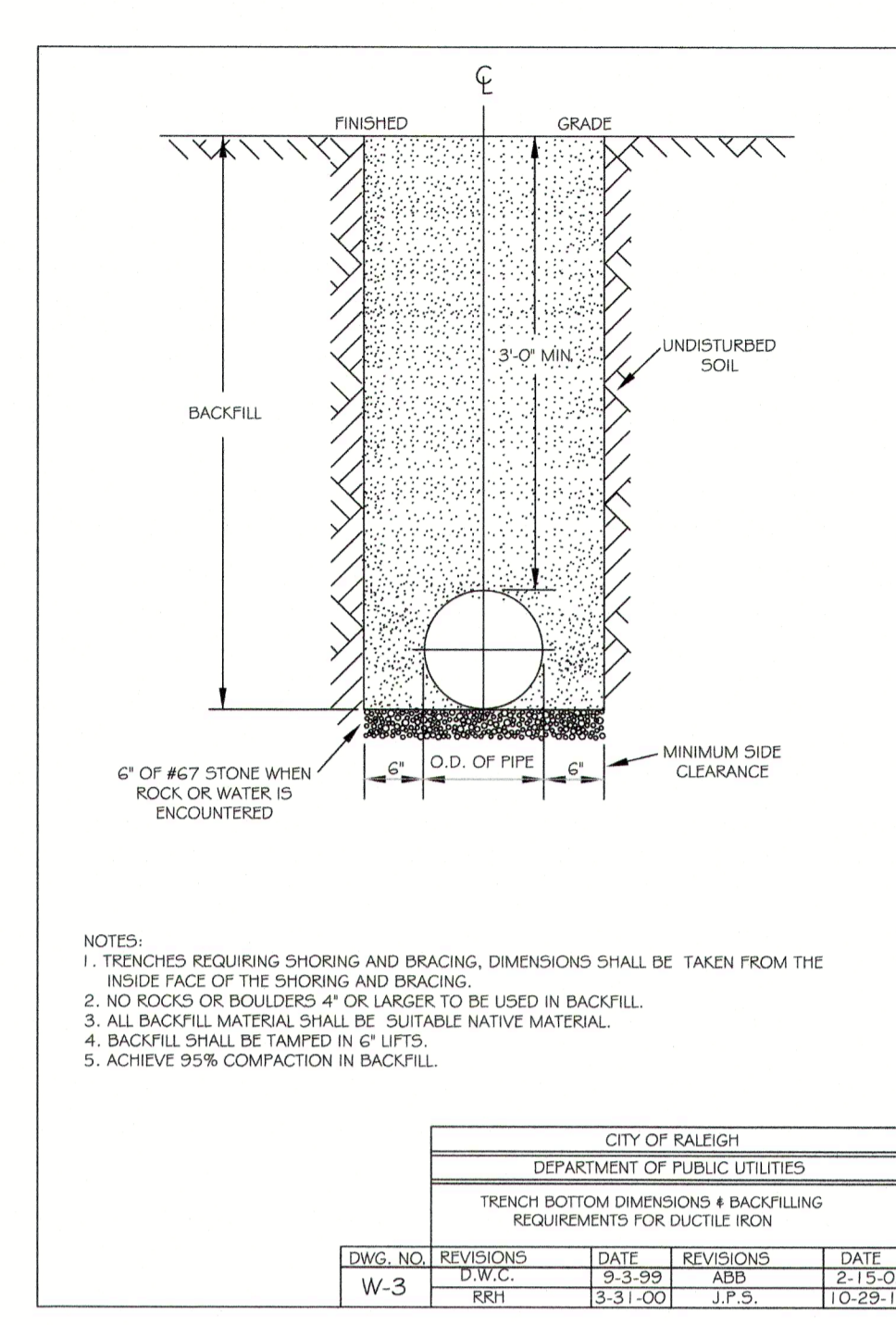
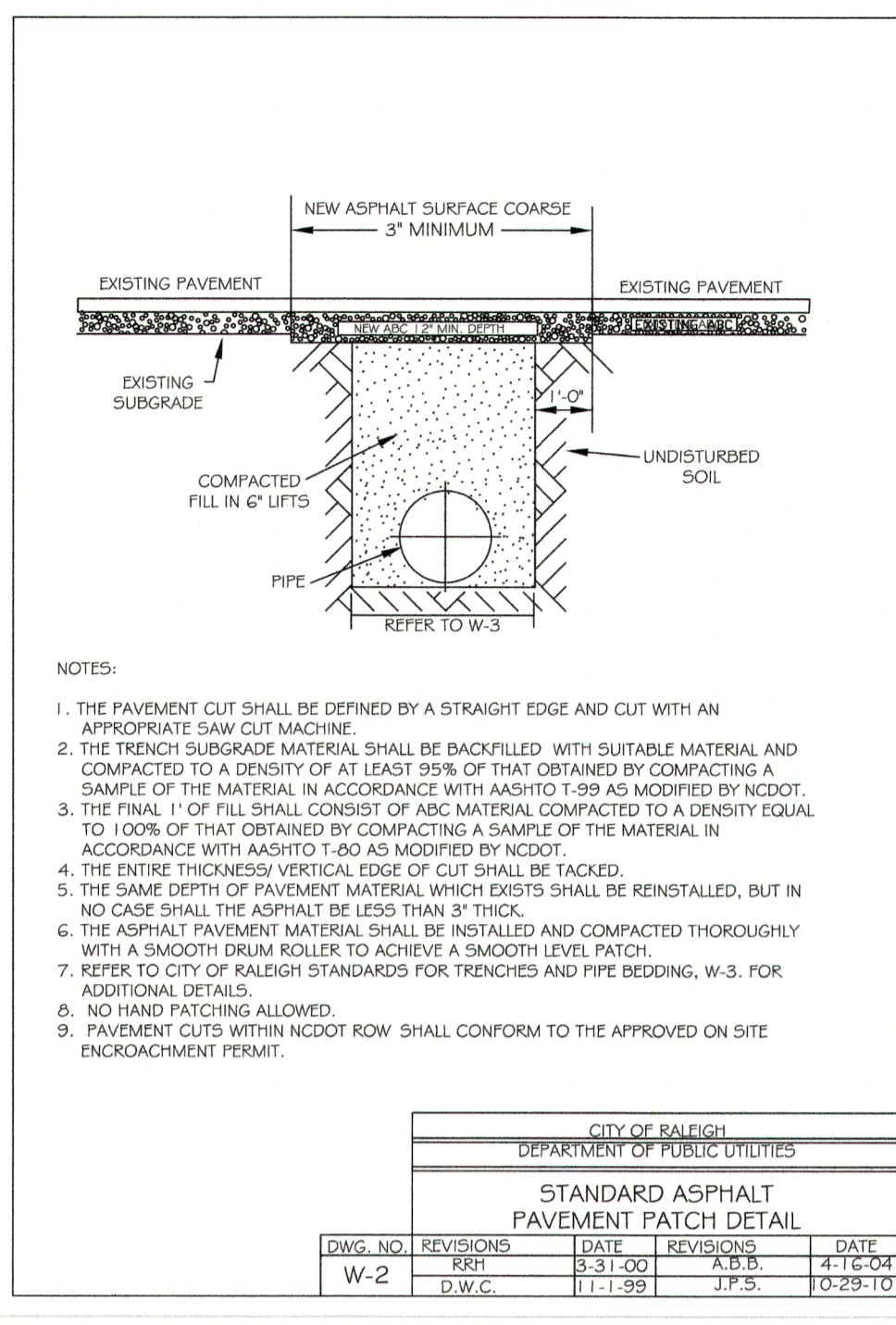
SANITARY DETAILS

Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

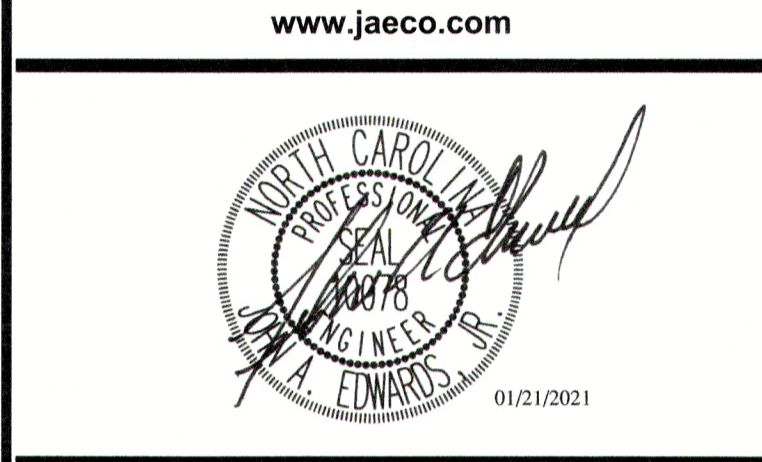
JAECO # 362-09
DRAWING SCALE: AS SHOWN
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020

C-9.6





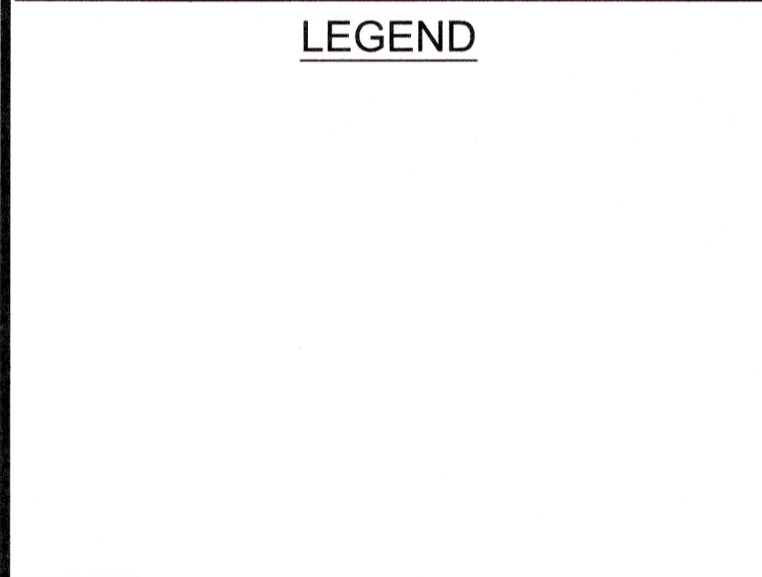
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333 Wade Ave., Raleigh, N.C. 27605
Phone: (919) 828-4428
Fax: (919) 828-4711
E-mail: info@jaeco.com



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PLANS NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED BY CITY OF RALEIGH

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # W-3745

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.
City of Raleigh Public Utilities Department Permit # S-4760(P)

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City of Raleigh Development Approval:

WATER DETAILS

Number	Description	Date
1	PER TRC COMMENTS	09/29/20
2	PER TRC COMMENTS	01/21/21

JAECO # 362-09
DRAWING SCALE: AS SHOWN
DRAWN BY: TT
CHECKED BY: JAE, JR.
DATE ISSUED: 06/22/2020

C-9.7